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4663
**INTERACTIVE
DIGITAL PLOTTER**
(VOLUME 2)
SERVICE MANUAL

Tektronix, Inc.
P.O. Box 500
Beaverton, Oregon 97077

MANUAL PART NO. 070-3453-00
PRODUCT GROUP 12

First Printing JUL 1980
Revised JUN 1983

WARNING

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MANUAL REVISION STATUS

PRODUCT: 4663 and 4663S Interactive Digital Plotters

This manual supports the following versions of this product: Serial Numbers B010100 and up.

REV DATE	DESCRIPTION
JUL 1980	Original Issue
DEC 1980	Revised: page 3-4.
JAN 1981	Revised: pages 3-3, 3-22.
MAR 1981	Revised: pages 3-4, 3-6.
JUN 1981	Revised: pages 2-1, 3-20, A-14, A-16 through A-18, A-20, and D-1.
MAY 1982	Revised: pages iii, iv, v, vi, 3-4, 3-6, 3-7, 3-16, 4-1, 4-11 through 4-18, A-1, A-4, A-8 through A-20, and B-5 through B-9.
MAY 1982	Deleted: pages 4-19 through 4-22, A-21, A-22, and B-10 through B-12.
JUL 1982	Revised: page 1-1.



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Figure 1-1. 4663 Interactive Digital Plotter.

Section 1

INTRODUCTION

ABOUT THIS MANUAL

The service documentation for the TEKTRONIX 4663 (and 4663S—see 4663 Operator's Manual) Interactive Digital Plotter consists of two volumes. Volume 1 contains specifications, preventive maintenance procedures (including detailed calibration instructions), circuit descriptions, signal descriptions, error codes, and a Plotter interface command summary. Volume 2 (this volume) contains a short form calibration check-

list, assembly/disassembly procedures for replacing parts, interconnecting cable diagrams, electrical and mechanical parts lists, schematics, strapping tables, instrument and option installation procedures, and diagrams of circuit board component locations.

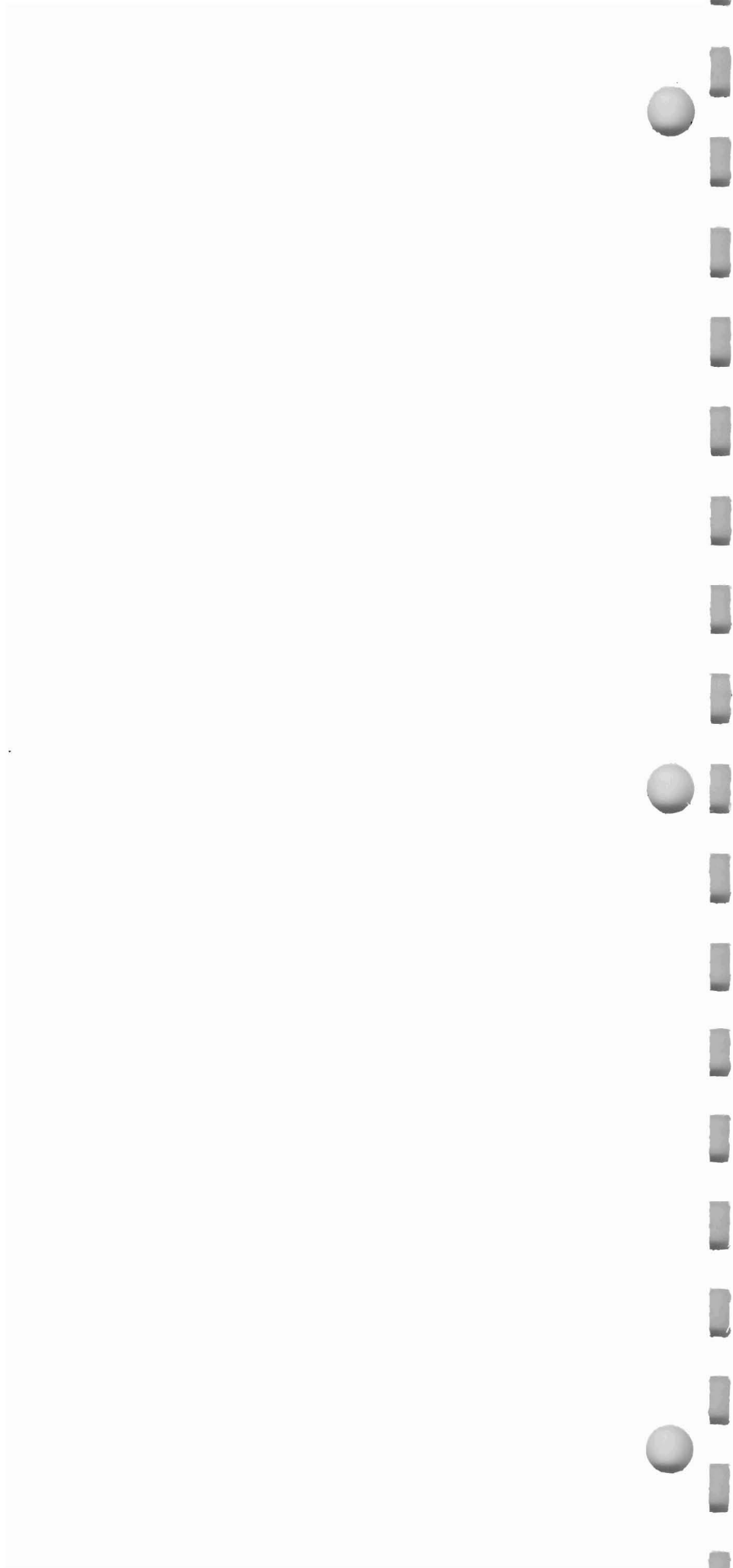
For detailed troubleshooting procedures, consult the 4663 Diagnostic Test Fixture Instruction Manual (see Section 8 of Volume 2).

GENERAL DESCRIPTION

The 4663 Interactive Digital Plotter uses three split-phase synchronous ac motors (two motors in the X-axis and one motor in the Y-axis). These motors move a carriage containing two pens through a system of cables and pulleys. The internal circuitry (including a 6800 and an 8X300 microprocessor) converts external commands into appropriate vector movements. The 6800 microprocessor oversees all general aspects of

the Plotter's operation. These include storing commands, communicating with the host computer, accepting front panel commands (including Parameter Entry), etc. Using information supplied by the 6800 microprocessor, the 8X300 microprocessor controls the generation of motor pen drive signals (including the pen lifters).

Clay Archer



Section 2

CALIBRATION CHECKLIST

INTRODUCTION

Because the Plotter is basically an electro-mechanical device, periodic adjustment is necessary for proper performance. The period between adjustments depends upon the amount of use that the Plotter receives. (Semi-annual or annual adjustments may be required.) It is recommended, however, that the three pen drive cables be adjusted after at least every 500 hours of Plotter operation. Adjustment should be preceded by a

thorough cleaning and inspection for loose, damaged, or worn parts. It is especially important to check the entire length of the three pen drive cables for broken strands, worn spots, etc. Cleaning is described in Section 2 of Volume 1. After inspecting and cleaning the plotter, a 30 minute warmup period must precede the adjustment procedures, which should be performed in a + 20 to + 30° C. environment (68 to 86° F.).

ABOUT THIS SECTION

This section is intended to present a checklist that a technician can use in calibrating the Plotter. Details concerning each item can be found in Section 2 of Volume 1.

Equipment Required

Large Screwdriver
7/16" Nutdriver (or screwdriver listed above)
Fish-weighing scale (0-6 lbs capacity)
Phillips Screwdriver
PBUS Extender Circuit Card (067-0813-00 and up or 670-5235-00 and up)
Voltmeter. Range, at least 0 to + 20 Vdc; accurate to at least 0.05%

Short Screwdriver with a narrow flat blade
5/64" Allen Wrench bent at a 90 degree angle
Two X-Axis Limit Switch Calibration Fixtures (003-0840-00)
Very Short Pozidrive Screwdriver
Y-Axis Limit Switch Calibration Fixture (003-0849-00)
Oscilloscope. (Tektronix 465 or equivalent.) Single trace with a vertical deflection factor of at least 5 mV per division, and a sweep rate of at least 10 ns per division. Bandwidth should be from dc to at least 100 MHz.
C Size Plotting Paper
Square

CALIBRATION CHECKLIST

Calibration Checklist

1. Clean Plotter.
2. Open up Plotter and check for worn, loose, or damaged equipment.
3. Check the three pen drive cables for damage.
4. Pen drive cable tension adjustments:
 - Front X-axis cable (6 lbs or 2.7 kg)
 - Rear X-axis cable (6 lbs or 2.7 kg)
 - Y-axis cable (3 lbs or 1.4 kg)
5. Check Commutator circuit board for wear.
6. Power Supply adjustment:
 - Pin 71 of backplane = + 12 V, ± 60 mVdc
7. Joystick sensitivity adjustments:
 - X-axis adjustment is set to midrange
 - Y-axis adjustment is set to midrange
8. X-axis limit switch adjustments:
 - Front X-axis — Pin 6 of backplane
 - Rear X-axis — Pin 8 of backplane
9. Y-axis limit switch adjustment:
 - Y-axis — Pin 10 of backplane
10. Processor timing adjustments:
 - Master Clock — Pin 77 of backplane should have a period of 67.8 ns.
 - Interrupt Timer — Pin 2 of backplane should have a period of 8 ms.
11. Pen-to-pen registration check (both pens should address the same point).
12. Orthogonality check (use OUTLINE VIEWPORT function while in C size HORIZONTAL mode).
13. Lamp test (Column 2 of Parameter Entry card's EXECUTE SELF TEST line).
14. Line quality and accuracy check:
 - Use self-test feature (Column 1 of Parameter Entry card's EXECUTE SELF TEST line).
15. Joystick operation.
16. Media Advance clutch tension check:
 - Clutch should rewind at least 1/2 to 3/4 revolution after paper is pulled out at least 6 in.
17. Media Advance adjustments:
 - Adjust for width of paper.
 - Adjust lateral paper drive mechanism.
18. Close up Plotter and restore to operation.

Section 3

ASSEMBLY/DISASSEMBLY (PARTS REPLACEMENT)

ABOUT THIS SECTION

This section describes the procedures for removing and replacing most parts, circuit boards, or mechanical assemblies that the service technician may find necessary to replace. This section also contains the procedures for stringing the pen drive cables.

The Contents lists the parts removal and replacement procedures described in this section. Refer to the mechanical exploded views in Section 7 when performing these removal and replacement procedures.

NOTE

In most instances, the procedures assume that the service technician has gained access to the Plotter's interior as shown in Figure 3-1. The procedure for opening the Plotter is outlined in Appendix C. Refer to this procedure as requested in the following instructions.

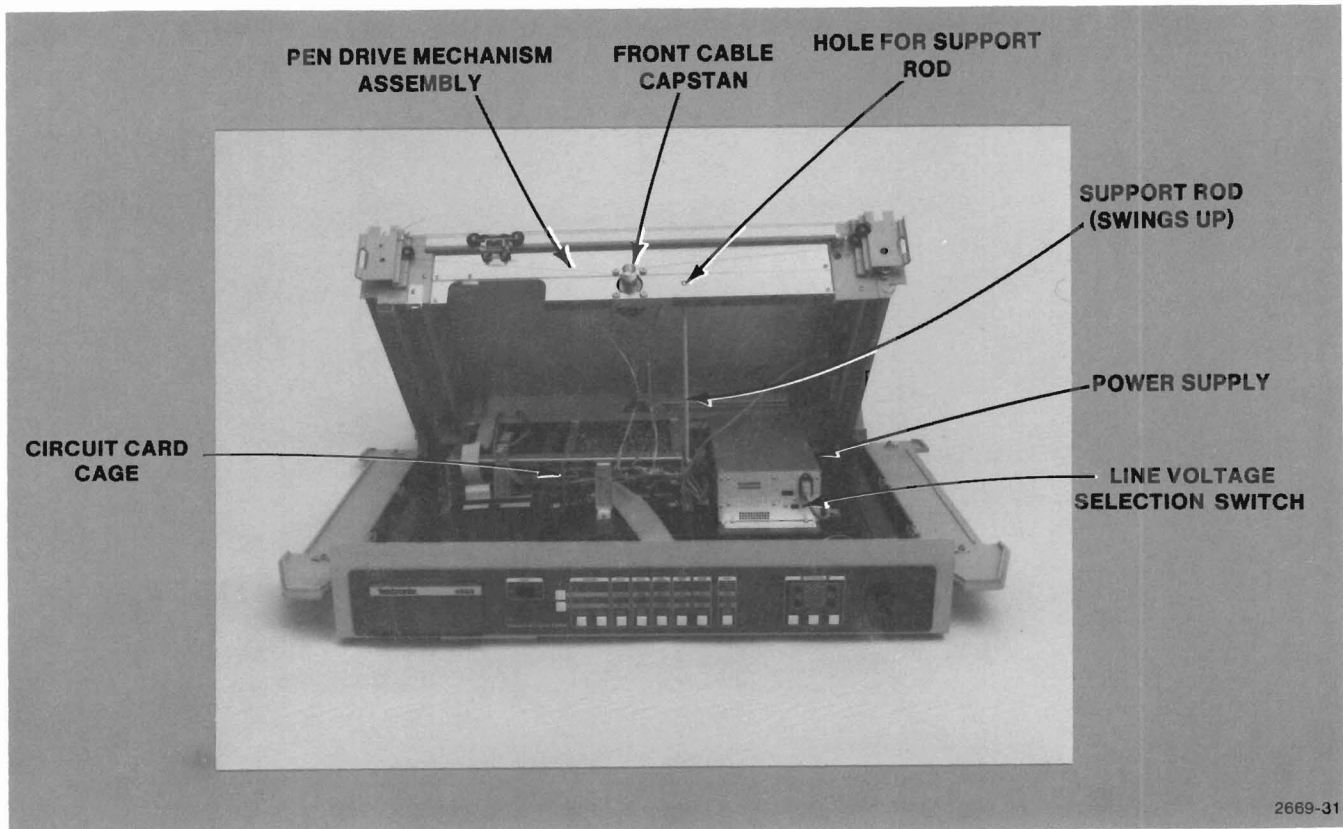


Figure 3-1. Access to Plotter's Interior.

CABLE STRINGING

The 4663 Plotter uses three separate motor and cable assemblies to move the Y-axis arm and pen carriage. Although the three motors and their corresponding cable assemblies operate independently of each other,

two of the motors operate in step with each other (although in opposite directions) to control carriage movement in the X direction. The three motor-cable assemblies are shown in Figure 3-2.

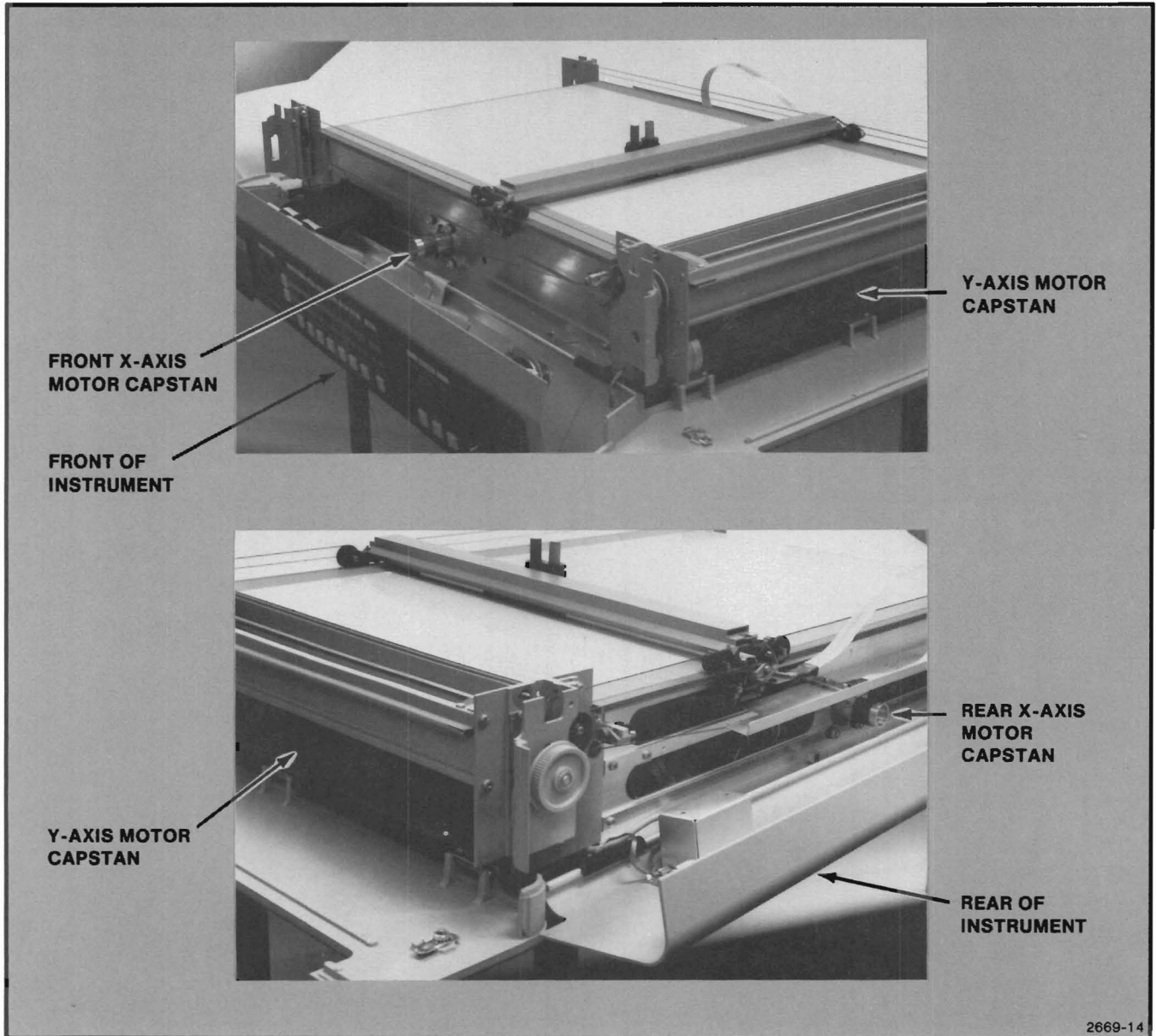


Figure 3-2. Motor-Cable Assembly Locations.

Initial Cable Stringing Procedure (Common to All Three Cables)

CAUTION

Exercise care when handling these cables because the plastic coating can easily be scraped off, especially when passing the cables through holes in the chassis.

The two X-axis cables (214-2958-00) are each 16 feet (4.9 m) long, while the Y-axis cable (214-2959-00) is 17 feet (5.2 m) long.

1. If the Plotter is equipped with a damper on the end of each pen drive motor capstan (shown in Figure 3-2), it should be removed. The damper is held by a hex-socket screw in the center of its outside face.
2. Take a length of cable (16 feet for an X-axis cable or 17 feet for the Y-axis cable), fold it in half, and crimp the fold with pliers. Place an eyelet (210-0696-00), brim first, over the folded cable and crimp the eyelet's body on the cable about 1/4 inch from the end of the loop (see Figure 3-3).

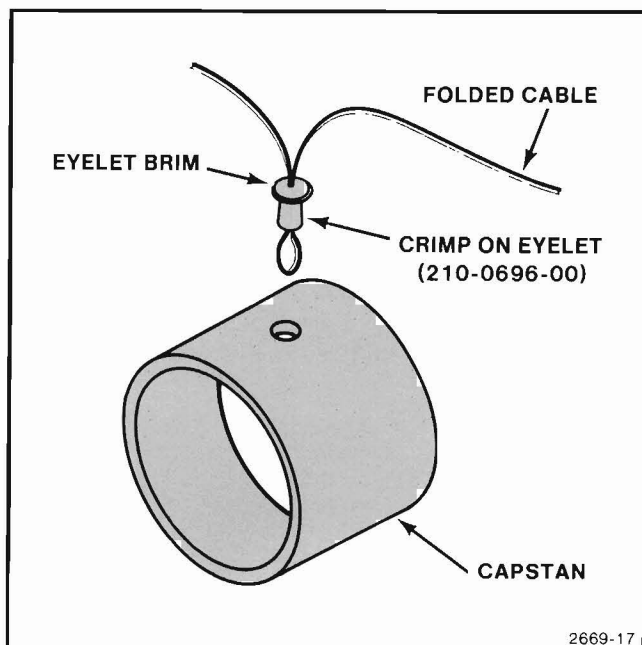


Figure 3-3. Cable Drive Capstan.

3. Position the capstan so that the hole is facing straight up and insert the cable loop and eyelet into the hole. The brim of the eyelet should be flush on the capstan surface and the two cables should emerge from the hole pointing straight up.
4. Proceed with the instructions listed for the cable assembly (front X, rear X, or Y) to be strung (these instructions follow immediately).

Front X-Axis Cable

NOTE

When wrapping the cables, it is critical that each wrap be tight and even. None of the wraps should be on top of previous wraps. A little extra effort will eliminate having to restring later.

1. Take one of the two cables emerging from the capstan hole and wind one turn CCW behind the hole (that is, wind the cable around the capstan between the hole and the Plotter chassis).
2. While holding the single turn on the capstan, take the other cable and wind 17 turns CW around the capstan with neat, tight wraps. Each wrap should move neatly toward the outside of the capstan.

NOTE

Keep the cables under constant tension as they are being wound around the capstan or strung through the pulley system to reduce the possibility of the wraps slipping off the capstan. Even if the cable holding tool is used, it still may be helpful to tape the cable to the capstan (and/or to some of the cable pulleys as the cable is being strung) to prevent the cable from slipping.

3. If a plastic cable holding tool (keeper) is available, slide it over the capstan (beveled slot up) to hold the cable wraps before releasing them. If the tool is not available, tape these wraps in place.
4. Move the Y-axis arm to the extreme right end of the platen (viewing the front of the instrument).

CAUTION

Silicone oils have insulating properties. Do not touch circuit boards or plug connectors without first washing your hands if the dampers have been handled. Oil may prevent electrical contact or result in excess capacitance on circuit boards and plugs.

ASSEMBLY/DISASSEMBLY

5. Thread the end of the cable (which was just wound 17 turns CW) around pulleys X1 and X2 (see Figure 3-4).
6. Run the cable between the tab washer and the flat washer of the cable tie-down screw #2. The cable should pass under the screw, and the tab should be rotated CW around the screw as far as possible before it touches the edge of the chassis (see inset on Figure 3-4).
7. Take the other end of the cable (with the single CCW wrap around the capstan) and string it around pulleys X3 and X4 (see Figure 3-4).
8. Run the cable between the tab washer and the flat washer of the cable tie-down screw #1 as in Step 6 above.
9. If the cable does not have a loop on this end, tie a loop (Bowline knot preferred) in the cable about six inches from the cable tie-down screw #1 (see Figure 3-4).
10. Attach a scale (fish-weighing scale) to the loop. While loosening (do not remove) the cable tie-down screw #1, maintain six pounds (2.7 kilograms) of tension in the cable.
11. Continue to maintain six pounds of cable tension and move the Y-axis arm back and forth across the platen several times.
12. Tighten the cable tie-down screw #1 while the scale continues to indicate six pounds of cable tension.
13. Trim the cables (if necessary), but leave the loop for future cable tension checks.
14. Replace the damper (if removed earlier). Make certain that the index pin on the end of the capstan is aligned with the hole in the back of the damper. Firmly tighten the screw which holds the damper.

Rear X-Axis Cable

1. Take one of the two cables emerging from the capstan hole and wind one turn CW behind the hole (that is, wind the cable around the capstan between the hole and the Plotter chassis).
2. While holding the single turn on the capstan, take the other end of the cable and wind 17 turns CCW with neat, tight wraps. Each wrap should move neatly toward the outside of the capstan.

NOTE

Keep the cables under constant tension as they are being wound around the capstan or strung through the pulley system to reduce the possibility of the wraps slipping off the capstan. Even if the cable holding tool is used, it still may be helpful to tape the cable to the capstan (and/or to some of the cable pulleys as the cable is being strung) to prevent the cable from slipping.

3. If a plastic cable holding tool (keeper) is available, slide it over the capstan (beveled slot up) to hold the cable wraps before releasing them. If the tool is not available, tape these wraps in place.
4. Move the Y-axis arm to the extreme left end of the platen (viewing from the rear of the Plotter).
5. Thread the end of the cable (which was just wound 17 turns CCW) around pulleys X3 and X4 (see Figure 3-4).
6. Run the cable between the tab washer and the flat washer of the cable tie-down screw #1. The cable should pass under the screw, and the tab should be rotated CW around the screw as far as possible before it touches the edge of the chassis (see inset on Figure 3-4).
7. Take the other end of the cable (with the single CW wrap around the capstan) and string it around pulleys X1 and X2 (see Figure 3-4).
8. Run the cable between the tab washer and the flat washer of the cable tie-down screw #2 as in Step 6 above.
9. If the cable does not have a loop on the end, tie a loop (Bowline knot preferred) in the cable about six inches from the cable tie-down screw #2 (see Figure 3-4).
10. Attach a scale (fish weighing scale) to the loop. While loosening (do not remove) the cable tie-down screw #2, maintain six pounds (2.7 kilograms) of tension in the cable.
11. Continue to maintain six pounds of cable tension and move the Y-axis arm back and forth across the platen several times.
12. Tighten the cable tie-down screw #2 while the scale continues to indicate six pounds of cable tension.
13. Trim the cables (if necessary), but leave the loop for future cable tension checks.

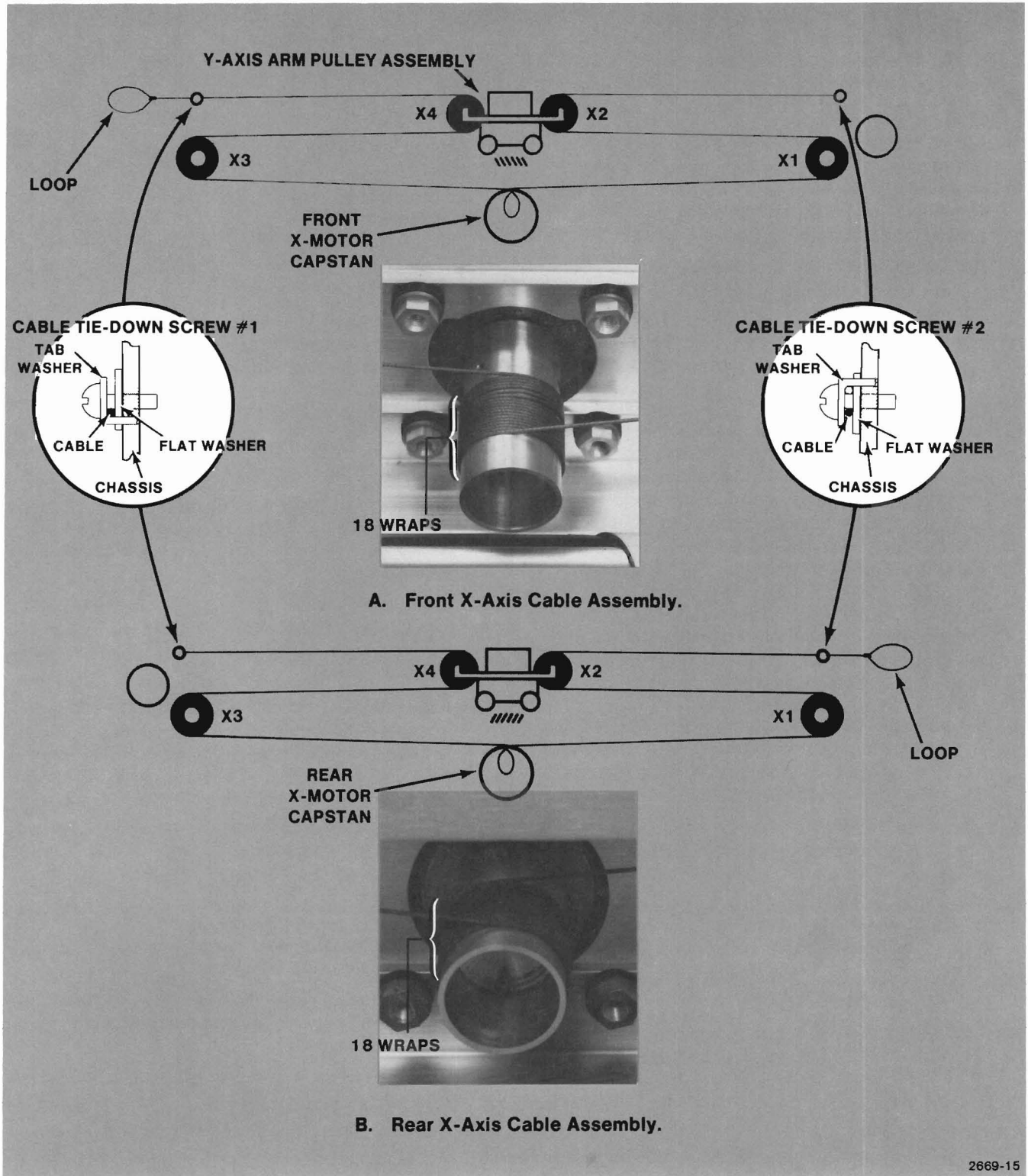


Figure 3-4. X-Axis Cable Diagram.

ASSEMBLY/DISASSEMBLY

14. Replace the damper (if removed earlier). Make certain that the index pin on the end of the capstan is aligned with the hole in the back of the damper. Firmly tighten the screw which holds the damper.

Y-Axis Cable

1. Take one of the two cables emerging from the capstan hole and wind one turn CCW behind the hole (that is, wind the cable around the capstan between the hole and the Plotter chassis).
2. While holding the single turn on the capstan, take the other end of the cable and wind 13 turns CW with neat, tight wraps. Each wrap should move neatly toward the outside of the capstan.

NOTE

Keep the cables under constant tension as they are being wound around the capstan or strung through the pulley system to reduce the possibility of the wraps slipping off the capstan. Even if the cable holding tool is used, it still may be helpful to tape the cable to the capstan (and/or to some of the cable pulleys as the cable is being strung) to prevent the cable from slipping.

3. If a plastic cable holding tool (keeper) is available, slide it over the capstan (beveled slot up) to hold the cable wraps before releasing them. If the tool is not available, tape these wraps in place.
4. Move the pen carriage assembly along the Y-axis arm until it reaches the rear-most position (viewed from the Plotter's front). The Y-axis arm can be located anywhere across the platen, although near the middle may be best.
5. Disconnect the 2-conductor electrical cable connector attached to the rear end of the Y-axis arm.
6. Thread the end of the cable (which was just wound 17 turns CW) through a hole in the chassis and around pulleys Y1, Y2, and Y3 (see Figure 3-5).
7. With pliers, make a 30 degree bend in the cable 1/8 inch (3 mm) from the end of the cable.
8. Grasp the cable about one inch (25 mm) from the end with long-nose pliers. With the 30 degree bend to the right, insert the cable around Y4 (go CW around this pulley). The cable must be inserted on the left side of the pulley.
9. Thread the cable around Y5 and run the cable between the tab washer and the flat washer (under the tab and over the screw). Then, tighten the cable tie-down screw (see inset on Figure 3-5).
10. Reconnect the 2-conductor electrical cable to the Y-axis arm that was disconnected in Step 5.
11. Maintain tension on the cable (pull on the other end of the cable — the end not yet strung), and remove the cable holding tool.
12. While maintaining tension on the cable, slowly slide the pen carriage along the Y-axis arm to the front-most position. This will cause the capstan to automatically wind the correct number of cable wraps around itself (the capstan actually maintains this number). However, care must be exercised to ensure neat, tight, non-overlapping wraps.
13. Pass the other end of the cable to the left (as shown in Figure 3-5) through the hole in the chassis (behind the media advance motor, if present), and around Y6, Y7, and Y8. It may be helpful to tape the wraps on the capstan at this point.
14. As in Step 7, make a 30 degree bend in the cable 1/8 inch (3 mm) from the end.
15. As in Step 8, thread the cable around Y9. However, this time, insert the bent cable (with the bend facing to the left) on the right side of Y9 and around it.
16. In the same manner as in Step 9, thread the cable around Y10 and pass the cable between the tab washer and the flat washer. Then, tighten the cable tie-down screw.
17. If the cable does not have a loop on the end, tie a loop (Bowline knot preferred) on either end of the Y-axis cable (as shown in Figure 3-5). The loop, however, may be tied on the other end of the cable at the other cable tie-down screw, if desired.
18. Attach a scale (fish-weighting scale) to the loop and while loosening the cable tie-down screw, maintain three pounds (1.4 kilograms) of tension in the cable.
19. Continue to maintain three pounds of cable tension and move the pen carriage back and forth along the Y-axis arm several times.
20. Tighten the cable tie-down screw while the scale continues to indicate three pounds of cable tension.
21. Trim the cables, if necessary, but leave the loop for future cable tension checks.
22. Replace the damper (if removed earlier). Make certain that the index pin on the end of the capstan is aligned with the hole in the back of the damper. Firmly tighten the screw which holds the damper.

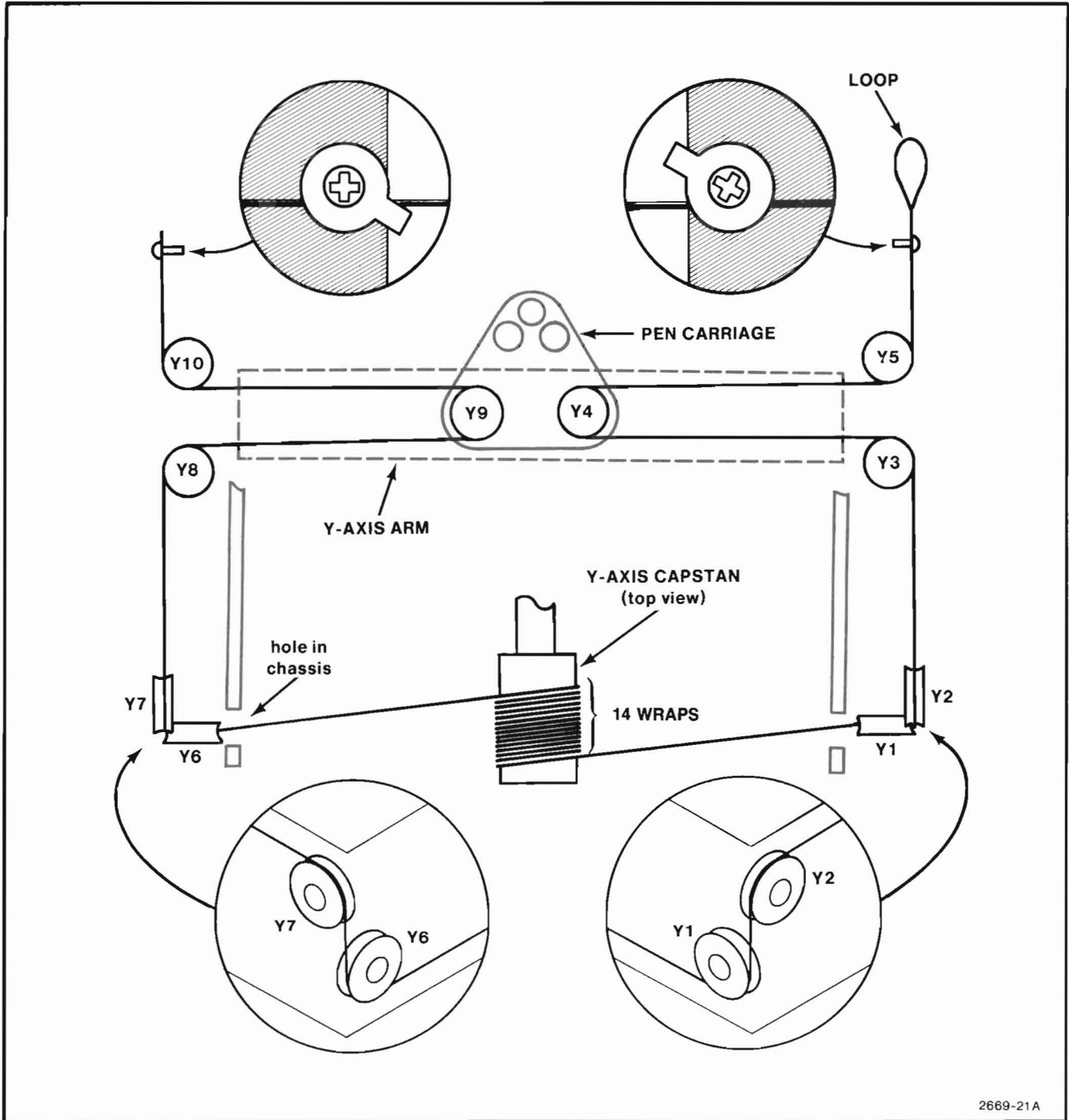


Figure 3-5. Y-Axis Cable Diagram.

CIRCUIT BOARD (CARD) REPLACEMENT

The Plotter's circuit board (card) locations are shown in Figures 3-6, 3-7, 3-8, and 3-9. The locations of the optional circuit boards (cards) are also shown.

Circuit Card Removal (Card Cage)

To remove the circuit cards from the card cage, use the following procedure (see Figure 3-6).

1. Do Steps 1-5 of the Access to Plotter's Interior procedure in Appendix C.
2. Remove the circuit card retainer on the side of the circuit card cage. This holds the circuit cards in place.
3. Remove any front cable connectors from the card(s) prior to removing the desired card(s).
4. Each circuit card has a circuit card ejector on one corner. This lever is used to pull the card out of the back-edge connector. The card then slides forward along a guide track and out of the circuit card cage.

NOTE

The Backplane circuit board, to which these boards connect, is located at the rear of the Circuit Card Cage.

NOTE

If any of the circuit cards on the left side are not used (i.e., option not present), all other cards underneath the "missing" card are usually moved up (except the Processor card which always occupies the lowest position). With some early model Plotters, there may be some variation with the arrangement of the top three cards on the left side.

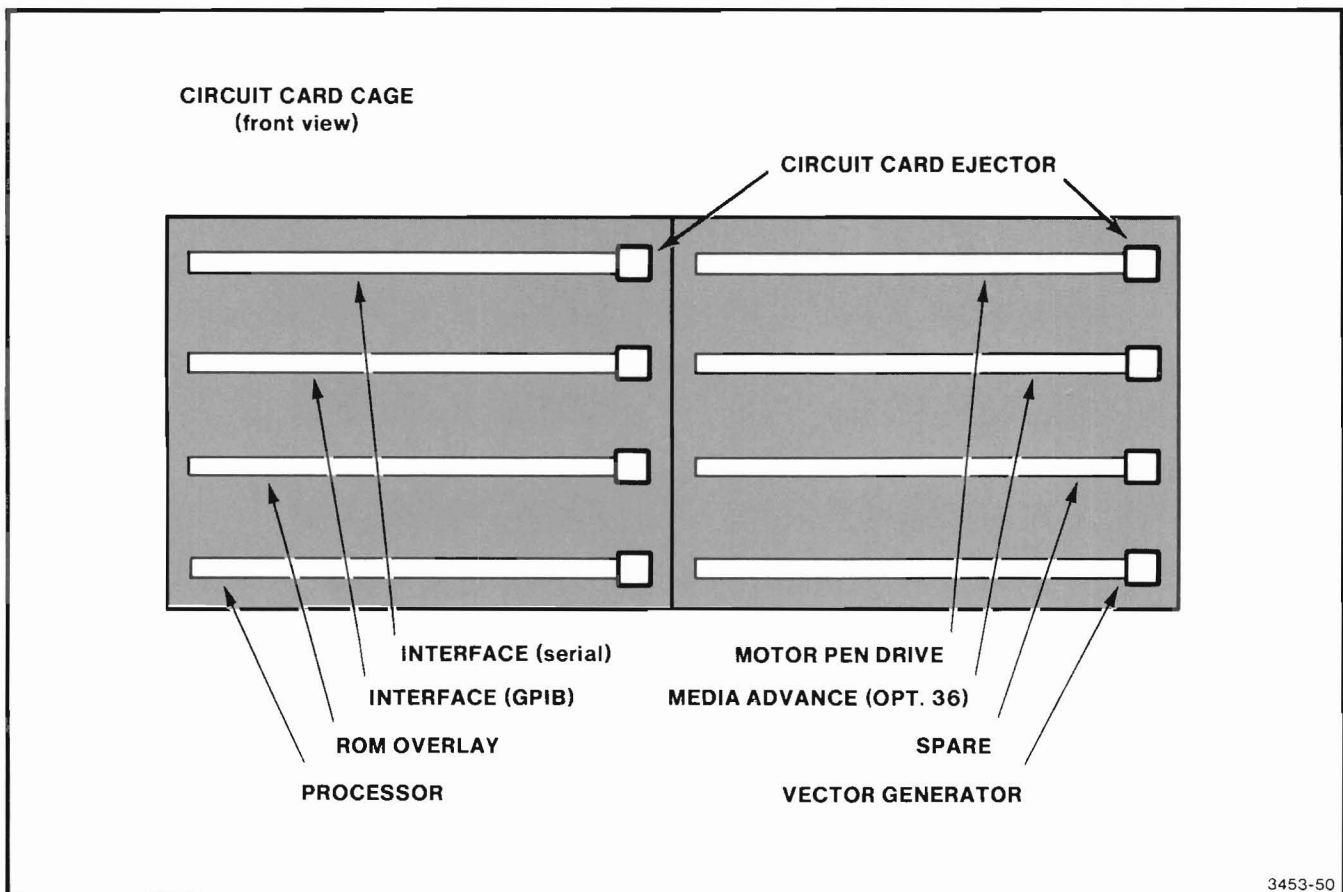


Figure 3-6. Circuit Card Locations in Circuit Card Cage.

5. To replace the cards, reverse the procedure described in Step 4. Be sure to firmly press against the front edge of the circuit card until it slips into the back-edge connector and seats. Then, if necessary, refer to the description of the cables and connectors (Section 4) for reconnecting the front cable connectors to some of these cards.

Front Panel Switches and Lights Circuit Board

Use the following procedure to remove the Front Panel Switches and Lights circuit board from the back side of the front panel (see Figure 3-7).

1. Do Steps 1, 2, and 3 of the Access to Plotter's Interior procedure in Appendix C. However, it is only necessary to lower the front panel to gain access to this circuit board; the back panel can be ignored.

2. Remove the four cable connectors attached to this circuit board.
3. Unscrew the 10 screws holding the circuit board to its spacer posts. Then, to avoid damage to the switch covers that protrude through the front panel, gently lift the circuit board away from the panel.
4. Reverse the procedure in Step 3 to replace the circuit board. If necessary, refer to the description of the cables and connectors (Section 4) for reconnection of the cables to this circuit board.

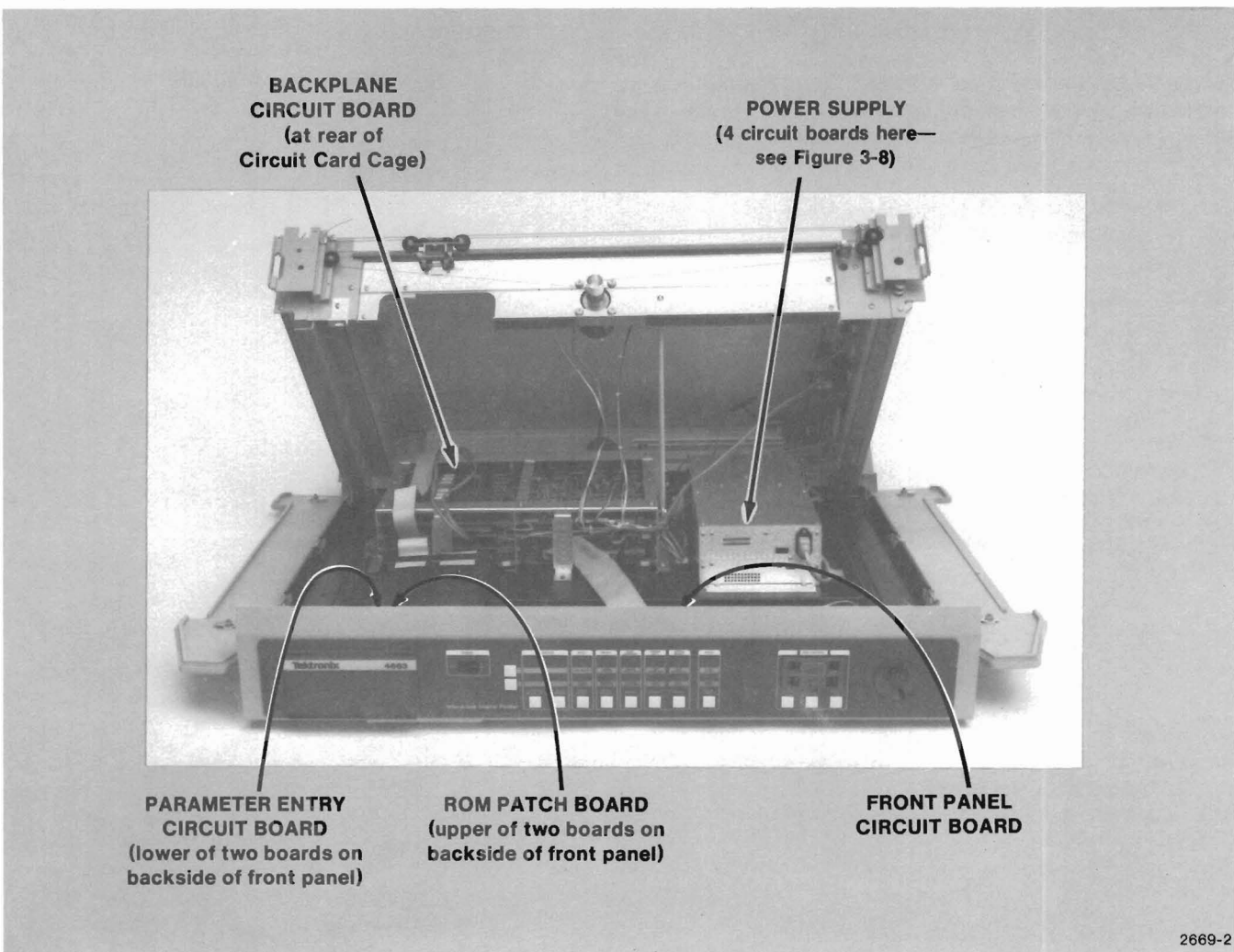


Figure 3-7. Front View of Plotter Showing Circuit Board Locations.

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Parameter Entry Circuit Board

To remove the Parameter Entry Circuit board, use the following procedure and refer to Figure 3-7.

1. Remove the Parameter Entry user card (menu) by pulling it straight out of the Parameter Entry module.
2. Use a small screwdriver to pry out the small flat plate above the Parameter Entry switches and lights.
3. Then, using a small screwdriver, gently pry out the plastic molding (bezel) surrounding the Parameter Entry switches, the user card opening, and the flat plate removed in the previous step.
4. Remove the four screws on the front panel. These screws were uncovered when the plastic molding was removed in Step 3.

CAUTION

Be sure that the Plotter's power is turned off and the power cord is disconnected before proceeding. Circuit damage may result if cards (or boards) are removed/replaced when the power is on.

5. Do Steps 1, 2, and 3 of Appendix C (Access to Plotter's Interior).

CAUTION

In the following steps, several small fragile parts will be encountered. Exercise care to avoid losing or damaging these parts.

6. Remove the six screws on the underside of the circuit board (four of these screws go through a metal shield plate). Use extreme care when removing the shield plate because there are two plastic assemblies directly under it. It is best if each assembly is carefully lifted out in whole, since the plastic assembly on the right (when looking at the underside of the circuit board with the front edge toward the technician) contains several small parts. These parts may pop out if the assembly is allowed to come apart (refer to the exploded mechanical parts drawings under Mechanical Parts Listing for reassembly of these small parts). This right plastic assembly also covers a small light bulb and three photo-transistors.
7. Remove the cable connector to the circuit board.
8. Lift the circuit board out gently.
9. The circuit board is replaced in the reverse manner.

Power Supply Circuit Boards

Perform the following steps to remove the Main Power Supply, 60 Watt Aux, and Fan circuit boards (see Figures 3-7 and 3-8).

WARNING

Be sure that the power is turned off and that the power cord is disconnected. Some power supply voltages remain energized from the input line, even though the front panel POWER switch is turned OFF. Also, after the line cord has been disconnected from the power supply, dangerous voltages will continue to exist in the power supply for another three to five minutes until several capacitors are discharged. A neon lamp near the front of the Main Power Supply circuit board flashes when the voltages on these capacitors exceed approximately 60 volts.

1. Follow Steps 1-5 of Appendix C (Access to Plotter's Interior) to gain access to the power supply (shown in Figures 3-7 and 3-8).

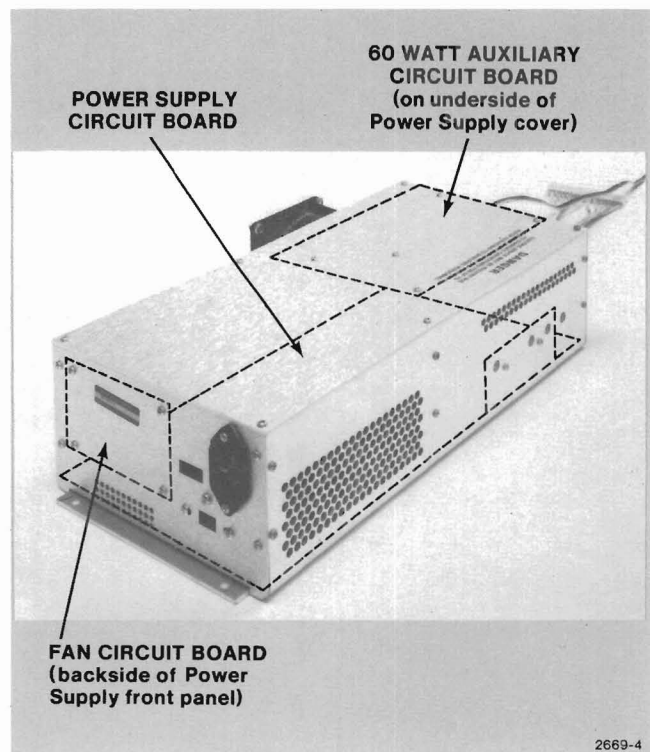


Figure 3-8. Power Supply Circuit Board Locations.

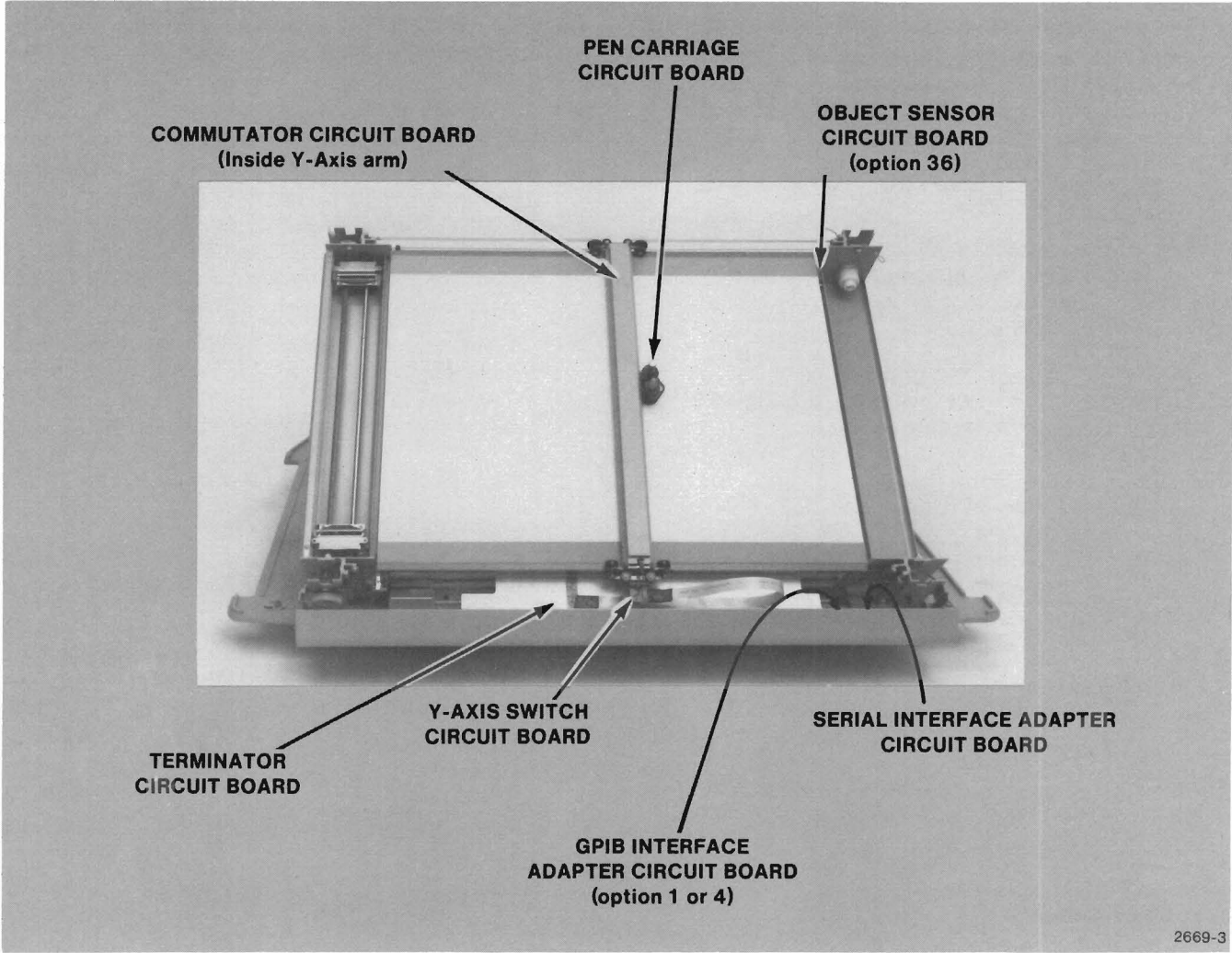


Figure 3-9. Rear View of Plotter Showing Circuit Board Locations.

ASSEMBLY/DISASSEMBLY

2. Disconnect the two cable connectors on the rear and the line cable on the front of the power supply (see Figure 3-10).
3. Remove the four screws that hold the power supply to the base of the Plotter (see Figure 3-10).
4. The power supply module is now free. Lift it out of the Plotter and take it to a workbench.

CAUTION

Use care when removing the cover in the next two steps, since a short cable connects the circuit board on the underside of the cover to the rest of the power supply chassis.

5. Remove the six screws, marked A-F in Figure 3-10, that hold the power supply cover.

6. Lift the cover gently and unplug the connector on the 60 Watt Aux circuit board mounted on the underside of the cover.
7. Take out the five screws holding the 60 Watt Aux circuit board to the power supply cover and remove the board.

CAUTION

The Fan Regulator board (described next) must be removed by pulling straight up, since it connects to the Main Power Supply circuit board directly below by two connectors.

8. To remove the Fan Regulator circuit board, unplug the two cable connectors and remove the four screws that hold it to the front of the power supply chassis. Pull the board straight up.

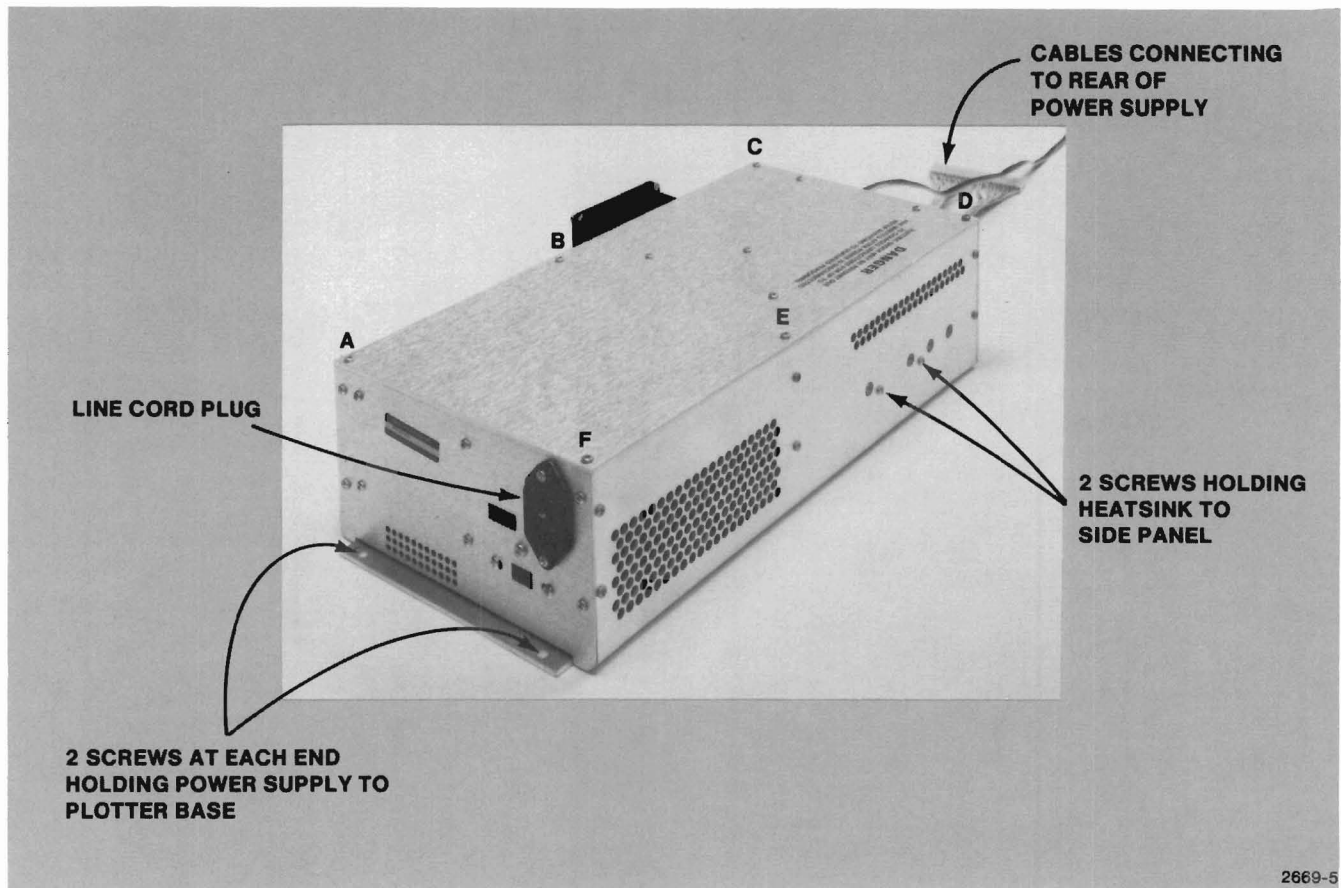


Figure 3-10. Power Supply Module.

NOTE

As an alternative to the following step, if the Main Power Supply circuit board is being repaired and not replaced, remove the four screws (not the four screws mentioned in the Caution below) holding the front end panel to the power supply chassis. Then, when the Main Power Supply circuit board is later removed from the chassis, this panel will also be free.

- To remove the Main Power Supply circuit board, first unsolder the three wires on the line cord socket (refer to Figure 3-11).

CAUTION

Do not remove the four screws that are recessed. These hold individual components to the heatsink.

- Remove the two screws that hold the heatsink against the right side panel of the power supply chassis. These screws are toward the rear and under some vent holes (see Figure 3-10).
- Remove the three screws on the underside of the power supply chassis. These screws hold the heatsink to the base of the power supply chassis.
- Remove the screws A, B, and C on Figure 3-11 and lift the metal cover (shield).
- Remove the three metal spacer posts now exposed.
- Remove the screws D through N on Figure 3-11. The board can now be lifted out of the metal chassis.

WARNING

If the power supply is to be energized at this point, the technician must exercise extreme care when bench testing the power supply with the switching transistor cover (shield) removed (removed in Step 12). Exploding switching transistors can inflict very serious injuries. Follow the instructions in Appendix D for Bench Test Energizing of the Power Supply.

- The Soft Start "daughter" circuit board plugs into two IC sockets. Pull straight up. (Note, however, that this small circuit board was not present on early model Plotters.)
- Reverse the previous steps to reassemble the power supply module.

Commutator Circuit Board

This circuit board is located on the underside of the Y-axis arm (see Figure 3-9).

- Do Steps 1, 2, and 3 of Appendix C (Access to Plotter's Interior).
- Center the Y-axis arm across the platen and then center the pen carriage on the Y-axis arm.
- Unscrew the four screws that hold the cover of the Y-axis arm (there are two screws on each end).
- Carefully slide the cover of the Y-axis arm toward the rear about 1/2 inch (1 cm). This separates the cover from the front pulley assembly.

NOTE

The rear pulley assembly can slide laterally (in this case rearward toward the edge of the platen), whereas the front pulley assembly cannot slide in either direction laterally. This is because the lower wheels of the front pulley assembly rest in a track under the front edge of the platen.

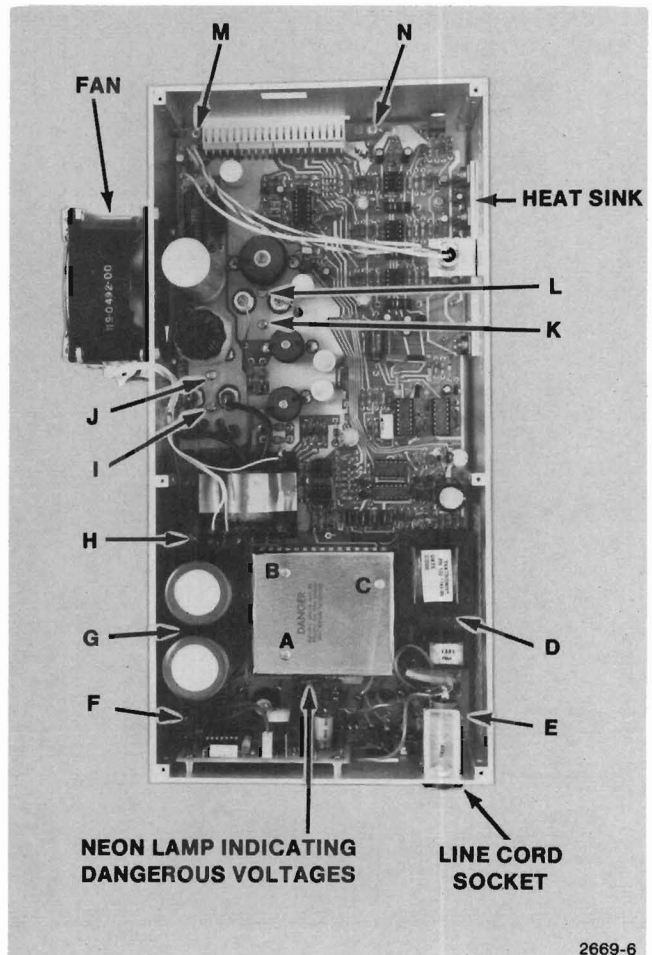


Figure 3-11. Power Supply Circuit Board Screw Locations.

ASSEMBLY/DISASSEMBLY

5. Lift up the front end of the Y-axis arm slightly (to clear the front pulley assembly) and slide the Y-axis arm cover forward approximately 2 inches (5 cm) over the front pulley assembly.
6. Remove the screw holding the end of the Commutator circuit board to the underside of the Y-axis arm cover. This screw should be visible underneath the end of the Y-axis arm that now protrudes past the front pulley assembly.



Step 7 is extremely important. If left uncovered, the hole in the circuit board will catch and damage the brushes on the pen carriage in Step 9 following.

7. Place a piece of tape over the screw hole on the foil side of the Commutator circuit board.
8. Disconnect the cable which connects to the rear of the Commutator circuit board.
9. Slide the Commutator circuit board to the rear and out from under the Y-axis arm cover.



Before replacing the Commutator circuit board in the Y-axis arm, make sure that a piece of tape is placed over the screw hole on the foil side of the circuit board (refer to the CAUTION in Step 7 above). This screw hole is located on the opposite end from the cable connector (and is on the front end of this circuit board when viewing the instrument from the front).

10. To replace the Commutator circuit board, reverse the procedure.

Pen Carriage Circuit Board

To replace or repair the Pen Carriage circuit board, use the following procedure and refer to Figures 3-9 and 3-12.

1. Follow Steps 1 through 3 of Appendix C (Access to Plotter's Interior).
2. Center the Y-axis arm across the platen and then move the pen carriage to the extreme rear position.

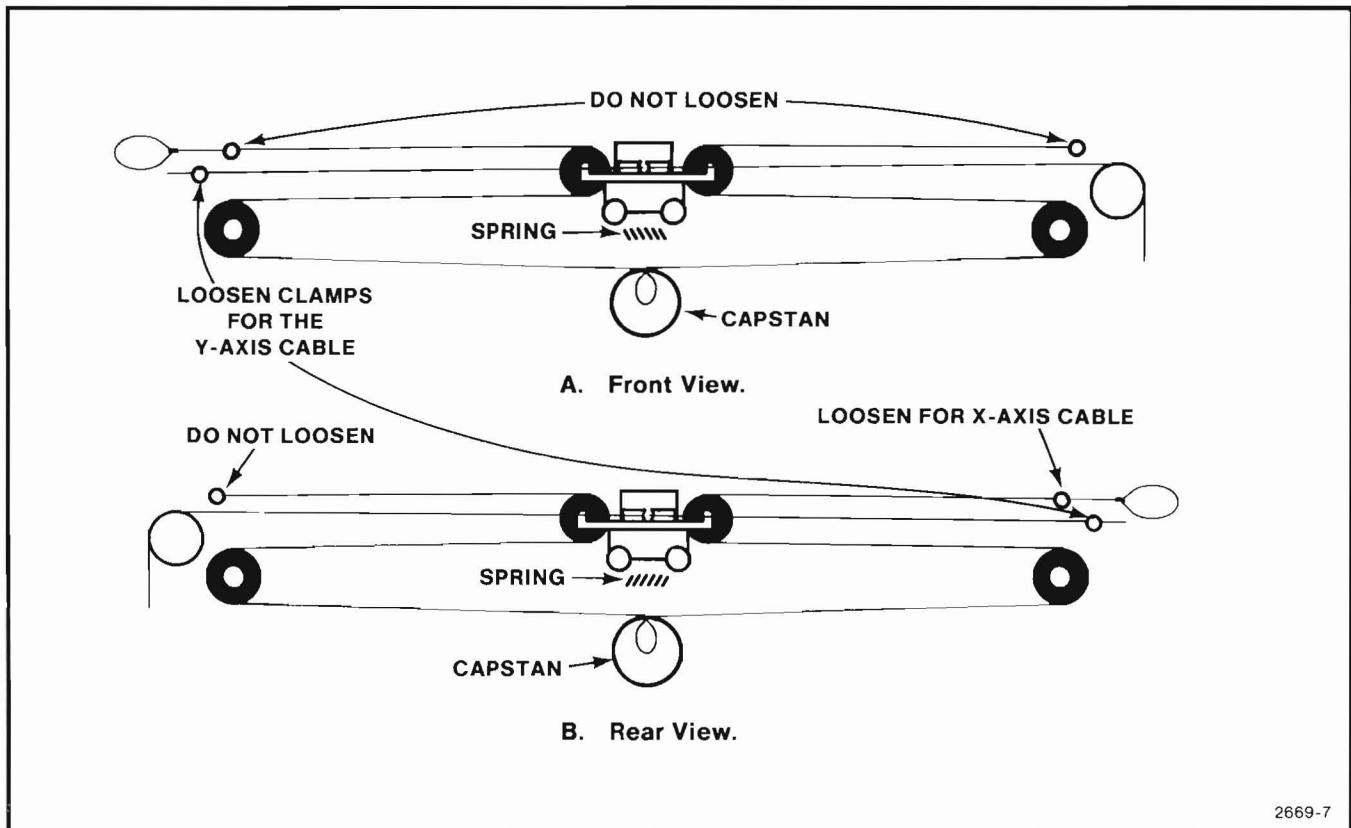


Figure 3-12. Cable Clamp Locations.

3. Remove the two screws that hold the rear end of the Y-axis arm cover to the rear pulley assembly.
4. Tape or clamp the cable wraps on the rear X-axis and Y-axis capstans to prevent the cable from slipping when the cable is loosened in the next step. It may also be helpful to tape the cable to some of the cable pulleys.
5. Next, loosen the clamps for the rear X-axis cable and the Y-axis cable. The clamps holding the appropriate cables are shown in Figure 3-12.
6. Pull the rear pulley assembly out of the Y-axis arm cover.
7. Lift the rear end of the Y-axis arm assembly slightly and pull the pen carriage assembly out of the Y-axis arm cover.
8. Unsolder the two wires that connect the Commutator brushes to the Pen Carriage circuit board.
9. Turn the pen carriage assembly over and remove the three screws that hold the Pen Carriage circuit board. Lift the circuit board out.
10. To replace the circuit board, reverse the above procedure.
11. If the cable slipped off the capstan, refer to the description of cable stringing (located earlier in this section). If the cable did not slip off the capstan, proceed to the next step.
12. Check the cable tension (refer to the description of cable stringing, located earlier in this section).

Y-Axis Limit Switch/Terminator Circuit Boards

The Y-Axis Limit Switch circuit board connects the rear end of the Y-axis arm to a 6-conductor flexible cable, which in turn loops back and connects to the Terminator circuit board (see Figure 3-9). Normally, these two circuit boards and the flexible cable are handled as one assembly and are treated as such in this manual. However, the technician can use appropriate parts of this procedure to remove and replace any portion of the assembly, if desired.

1. Follow Steps 1 through 3 of Appendix C (Access to Plotter's Interior) to open the rear panel of the Plotter. It is not necessary to open the front panel.
2. Disconnect J2 (6-conductor cable connector) from the Terminator circuit board.
3. Remove the two screws that hold the Terminator circuit board to the cable tray.
4. Remove the cable tray (held by two screws).

5. Unplug the 2-conductor cable that connects to the Y-Axis Limit Switch circuit board.

CAUTION

In the following steps, do NOT remove the two plastic screws near the Y-Axis Limit Switch circuit board.

6. Remove the screw under the Y-Axis Limit Switch circuit board to disconnect it from the rear pulley assembly.
7. Remove the horizontally oriented screw holding the Y-Axis Limit Switch circuit board to the rear pulley assembly. This screw is actually an adjustment screw. When replaced, it need not be tightened since it is adjusted later. The Y-Axis Limit Switch-Terminator circuit board assembly is now free of the instrument and can be lifted out.
8. To replace this assembly, reverse the preceding steps. For the proper setting of the Y-Axis Limit Switch adjustment screw (removed in Step 7 above), refer to the Calibration and Adjustment section in Volume 1 of this manual.

Object Sensor Circuit Board (Option 36)

The Object Sensor circuit board is used with Option 36 (Media Advance) to detect the presence of slightly more than enough paper to cover the length of the platen. This circuit board is located just off the front left corner of the platen (between the paper roll and the platen). Refer to Figure 3-9.

1. Follow Steps 1 through 5 of Appendix C (Access to Plotter's Interior).
2. Locate the Media Advance circuit board (see Figure 3-6) and unplug J110 (a four-wire connector that comes from the Object Sensor circuit board).
3. Remove the screw holding the Object Sensor circuit board bracket to the platen. This screw is underneath the platen.
4. Remove the two screws holding the Object Sensor circuit board to the bracket.
5. To replace this circuit board, follow the procedure described in Appendix A under the heading Object Sensor Assembly Installation. After performing this procedure, reverse Steps 1-5 of Appendix C (Access to Plotter's Interior) to restore the Plotter to operation.

GPIB Interface Adapter Circuit Board (Part of Option 1 or 4)

If Options 1 or 4 are installed, the GPIB Interface Adapter circuit board is located near the extreme right edge of the back panel (when viewed from the rear). This circuit board contains the GPIB connector (see Figure 3-9).

1. To remove this circuit board, follow Steps 1 through 3 of Appendix C (Access to Plotter's Interior). It is not necessary to open the Plotter's front panel.
2. Remove the four screws that hold the connector plate to the back panel.
3. Disconnect the cable connector to the GPIB Interface Adapter circuit board.
4. The GPIB Interface Adapter assembly can now be lifted out from the inside of the rear panel.
5. If it is necessary to separate the metal connector plate from the circuit board, remove (1) the two screws that hold the GPIB interface connector to the connector plate and (2) the screw that holds the GPIB Interface Adapter circuit board to the connector plate. The circuit board, with the GPIB interface connector, should then separate from the metal connector plate.
6. To replace the GPIB Interface Adapter circuit board, reverse the above procedure.

Serial Interface Adapter Circuit Board

The Serial Interface Adapter circuit board is located near the right edge of the back panel (when viewed from the rear). See Figure 3-9. A plotter equipped with a serial interface will use an RS-232-C circuit board.

1. To remove this circuit board, follow Steps 1 through 3 of Appendix C (Access to Plotter's Interior). It is not necessary to open the Plotter's front panel.
2. Remove the four screws that hold the connector plate to the back panel.
3. Disconnect the cable connector to the Serial Interface Adapter circuit board.
4. The Serial Interface Adapter assembly can be lifted out from the inside of the rear panel.
5. If it is necessary to separate the metal connector plate from the circuit board, remove the four screws that hold the two connectors to the metal connector plate (except in the case of the 20/60 mA Current Loop Interface Adapter circuit board). On the Current Loop circuit board, the four screws do not hold the two connectors to the metal plate. These screws must be removed to detach the circuit board from the plate, but the cable connectors must be disconnected in an additional step. On other boards, removing the four screws disconnects the cable connectors automatically.

LIGHT BULB REPLACEMENT

Front Panel Switches

To replace the lamps inside the front panel switches (except Parameter Entry), use the following procedure:

1. Use an IC extractor tool to pull the switch cover off; it snaps off by pulling straight up. Notice that there are notches on the sides of the cover.
2. To remove the light bulb, grasp it with long-nose pliers and pull it straight up.
3. Insert the replacement bulb (150-0139-00) in the same way. Care must be exercised to ensure that the lamp's leads are inserted correctly in the socket.
4. Be sure that the notches are on the left and right sides of the switch cover before placing it into the switch socket. Press the switch cover firmly until it snaps in place.
5. Use the lamp test to check the new lamp. (Pull the Parameter Entry card out to the Execute Self-Test line and press the switch in the second column. Press the switch again to turn the lamps off.)

Parameter Entry Circuit Board Light Bulb

To change the small light bulb soldered to the left edge of the Parameter Entry circuit board, follow the procedures for the removal of the Parameter Entry circuit board (described earlier in this section). The location of the lamp is described in that procedure. Unsolder the old lamp and replace it with a new one in the same manner. The part number of the lamp is 150-0057-00.

BATTERY REPLACEMENT

To gain access to the battery, follow the procedure in Appendix C (Access to the Plotter's Interior). The battery is located on the side of the circuit card cage. The leads are simply soldered to the battery such that

Pin 1 of J33 (connecting to the Processor circuit card) is the + side of the battery. Use a VOM to identify the + end of the replacement battery if it is not marked.

FUSES

The Plotter has four over-current type fuses and one thermo-acting fuse in its circuitry. The fuses are described in the following pages.

Line Fuse

This fuse is located in a fuseholder on the rear panel immediately to the left of the power cord connector.

WARNING

Be sure that the power is turned off and that the power cord is disconnected. Some power supply voltages remain energized from the input line, even though the front panel POWER switch is turned OFF.

After disconnecting the line cord from the power source, remove the fuse by turning the fuseholder cap 1/4 turn CCW with a small screwdriver. Be sure that a replacement fuse is exactly the same rating as the one removed and is listed below:

- 5 Ampere Fast-blo for 90 to 125 volt operation
- 2.5 Ampere Fast-blo for 180 to 240 volt operation

Be sure that the line voltage indicator on the rear panel of the Plotter indicates that the fuse size used matches the current operating line voltage.

Motor Pen Drive Fuses

Three 1.5 Ampere fast-blo fuses are located on the Motor Pen Drive circuit card. Each fuse provides over-current protection for one of the Plotter's three pen drive motors. To replace any of these fuses, refer to the Motor Pen Drive circuit board removal procedure (located earlier in this section). The locations of the fuses are shown in Figure 3-13. After changing the fuse(s) and replacing the circuit card, you may wish to refer to Section 4 for reconnecting the cables on this circuit card prior to restoring the Plotter back to operation.

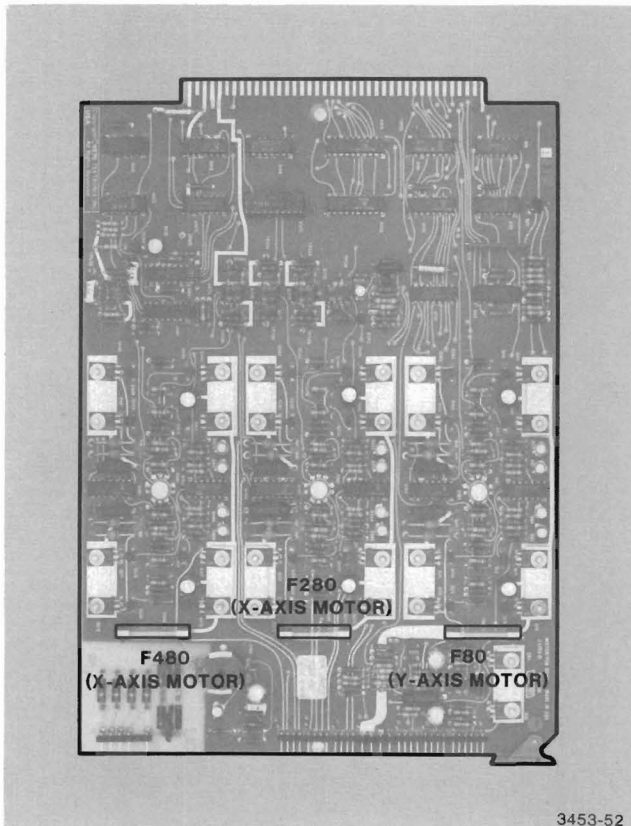


Figure 3-13. Motor Pen Drive Fuse Locations.

Power Supply Thermo-Acting Fuse

The power supply has a thermo-acting fuse which will open anytime the ambient air temperature in the power supply exceeds 82° C. (180° F.). If this fuse opens, it removes all output power supply voltages except those to the fan. Therefore, if this fuse is suspected to have opened, first check to see that the fan is operating properly before troubleshooting further.

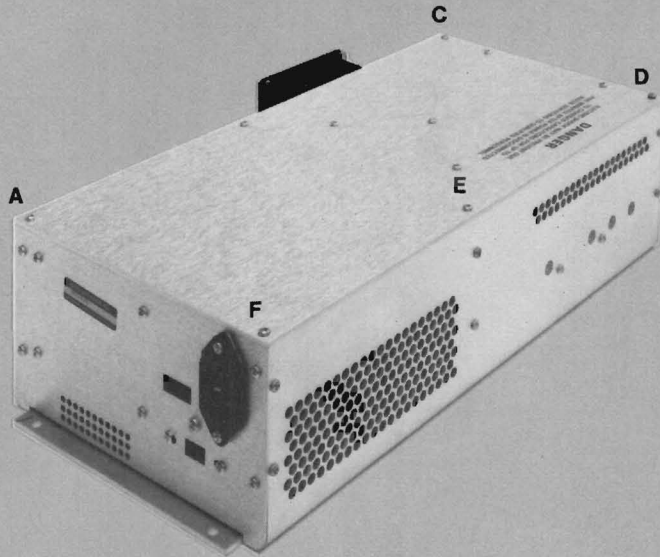
To replace this fuse, follow the Access to Plotter's Interior procedure (Appendix C) plus the following:

1. Unscrew the six screws located around the top outside edge of the power supply module — these screws hold the power supply cover and are shown in Figure 3-14A as A through F

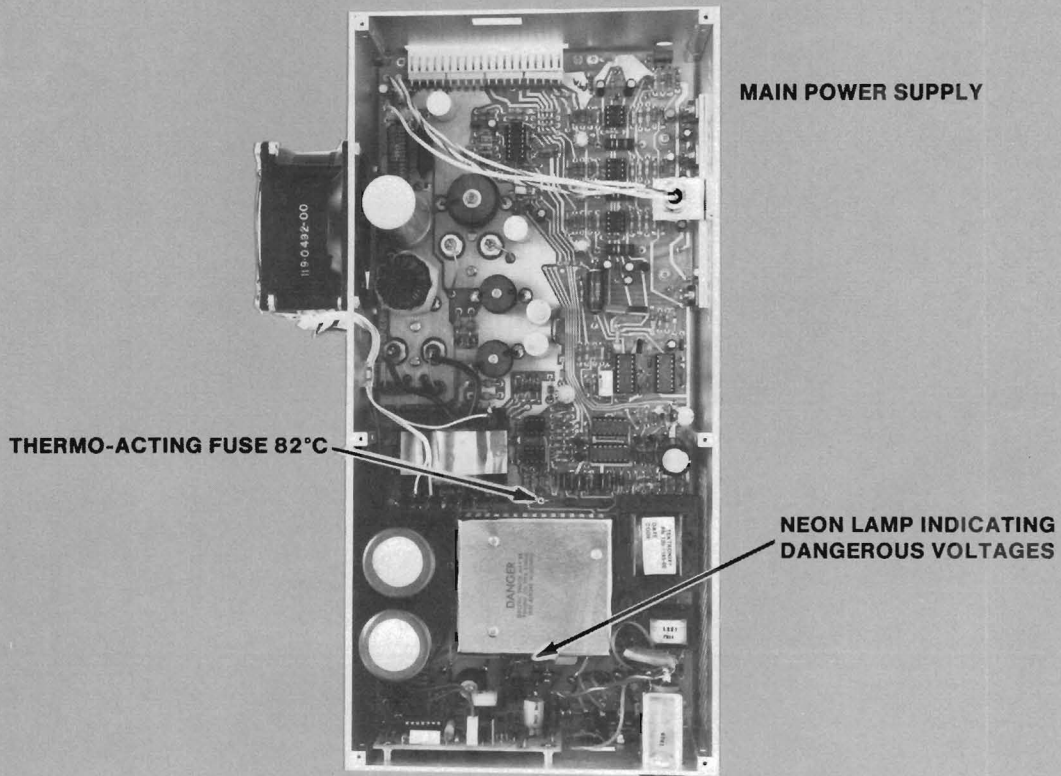
WARNING

*After opening the power supply cover, check to be sure that a small neon lamp, approximately centered near the front edge of the Main Power Supply circuit board (see Figure 3-14B), is not flashing. If this lamp is flashing, there are more than 60 volts present in some circuits in the power supply. After unplugging the line cord, it may be necessary to wait three to five minutes for the dc voltage to bleed down to this level. Remember that simply turning the POWER switch off will **NOT** remove power from these circuits in the power supply.*

2. Using long-nose pliers, pull the fuse out of its socket (see Figure 3-14B).
3. Replace the fuse (159-0166-00) by inserting its leads into the socket.
4. To restore the Plotter back to operation, follow Step 1 above and the Appendix C procedure in reverse.



A. Power Supply Cover Screw Locations.



B. Power Supply Thermo-Acting Fuse Location.

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Figure 3-14. Power Supply Fuse Location.

PEN HOLDER ASSEMBLY (SOLENOID) REPLACEMENT

To remove either Pen Holder Assembly from the pen carriage, use the following procedure:

1. Loosen (but do not remove) the screw just below the desired pen lifter solenoid (see Figure 3-15) two or three turns.

CAUTION

Lift the pen lifter straight up, and do not twist it in any direction; or the connector pins will be damaged.

2. Carefully lift the pen holder assembly out of the pen carriage frame.
3. To replace this assembly, reverse the above steps. Notice that the pen holder (solenoid) assembly can be oriented in only one direction as determined by the keyway and connector (see Figure 3-15). Take care not to damage the connector pins or the connector. It is advisable to place a plastic object (like a ruler) which is about 1/8 inch (3 mm) thick under the pen carriage frame near the crosshair cursor to prevent excessive strain on the frame while seating the pen holder assembly. Seat the assembly firmly into the frame after ensuring that the connector pins are properly aligned.

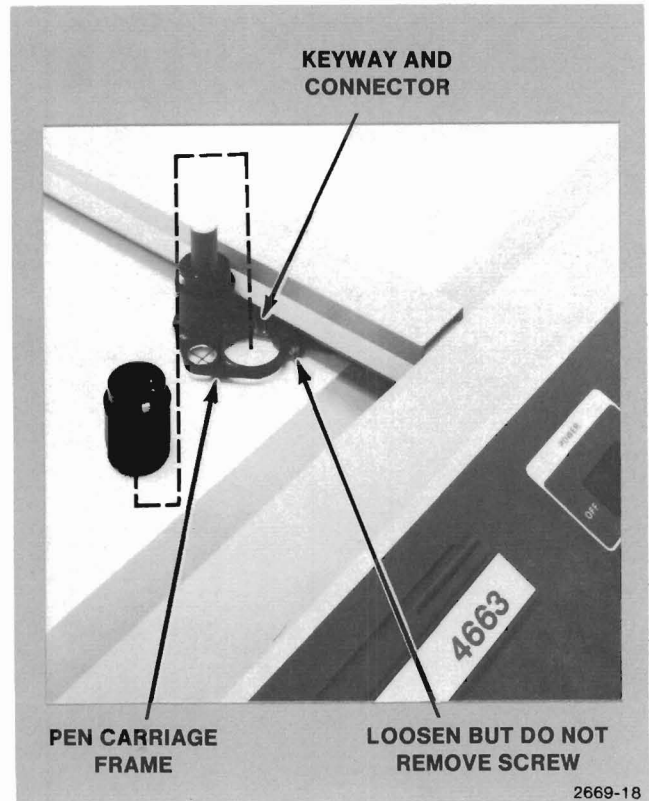
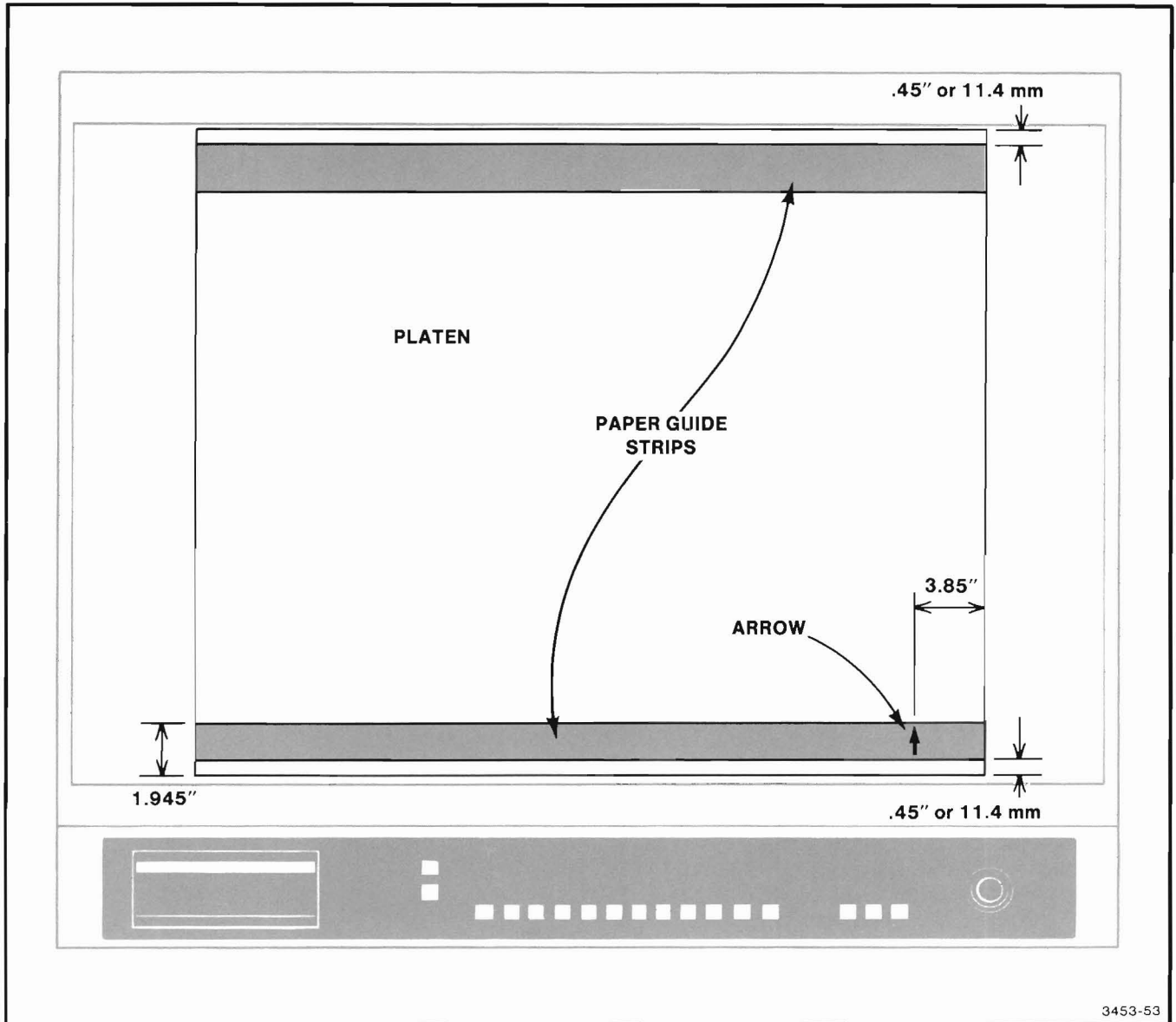


Figure 3-15. Pen Holder (Solenoid) Assembly Removal.

PLATEN REMOVAL/REPLACEMENT

To remove and replace the platen, follow this procedure:

1. Turn off the Plotter's power and unplug the line cord.
2. Move the Y-axis arm to the extreme right end of the platen.
3. Follow Steps 2 and 3 of Appendix C (Access to Plotter's Interior). This will tilt down all four side panels.
4. Remove the front and back paper guide strips from the top platen surface. These are held down with a sticky backing and can be carefully peeled off (see Figure 3-16).
5. Remove the 18 screws holding the platen to the remainder of the Plotter. These screws are all on the top surface of the platen and were originally under the paper guide strips (removed in the previous step).



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Figure 3-16. Paper Guide Strip Placement.

ASSEMBLY/DISASSEMBLY

6. Tape the cable wraps around each of the three capstans. Then, briefly loosen the three cable tie-down screws that are next to the loops on the cable ends (shown in Figure 3-17) and obtain about 1/2 to 1 inch of slack in each of these three cables. Finally, tighten each cable tie-down screw to retain the slack.
7. Remove the spring on the lower portion of each of the two Y-axis arm pulley assemblies (see Figure 3-17). Notice that there is one spring on each end of the Y-axis arm.

CAUTION

It is necessary that the platen not be completely removed in the following step because a cable under the platen is still connected to the Motor Pen Drive circuit card.

8. Lift up the platen's left end (viewing from the front of instrument) about 1.5 inches (4 cm) to clear the Plotter's left chassis, slide the platen carefully to the left until the platen is about half off, and then STOP.
9. Unplug the connector to J11 of the Motor Pen Drive circuit card. This connector is the left-most connector on the front edge of the Motor Pen Drive circuit card (see Section 4). It may be necessary to feel for this connector if it is still covered by the platen. Since the cable is held down by several cable ties and clamps, it will be necessary to work the cable through these. It might be helpful to remove the plastic harmonica connector at the Motor Pen Drive circuit card end of the cable.

10. Once this cable is free, continue sliding the platen off to the left until it is completely out of the Plotter.
11. To replace the platen, reverse the above steps and also make note of the following comments:
 - A. In replacing the two paper guide strips, arrange them such that the strip nearest the front panel has the arrow on the right end and that the edges of both strips are 0.45" (11.4 mm) from the respective front and back edges of the platen (see Figure 3-16). Attach these strips by simply pressing down on their sticky backing.
 - B. Follow Steps 4 through 10 of the Calibration procedure (in Volume 1) to properly tension the three pen drive cables.
 - C. When it comes time to reassemble the connector to the Motor Pen Drive circuit card, remember that the colors of the wires follow normal electronic color code (brown goes to Pin 1, red to Pin 2, etc.) except that since Pin 5 is not used, the green wire goes to Pin 6 instead.

DAMPER REPLACEMENT

To remove or replace the damper on the end of a pen drive motor capstan, use the following procedure. Early model Plotters did not use dampers.

1. Remove the hex-socket screw in the center of the damper's outside face.

2. When replacing the damper, make certain that the index pin on the end of the capstan is aligned with a hole on the back of the damper. Firmly tighten the screw that holds the damper. The damper must not be loose, or line quality may be affected.

CAUTION

Silicone oils have insulating properties. Do not touch circuit boards or plug connectors without first washing your hands if the dampers have been handled. Oil may prevent electrical contact or result in excess capacitance on circuit boards and plugs.

PEN DRIVE MOTORS

The following procedure to replace the Pen Drive Motors is common to all three motors:

1. Follow the Access to Plotter's Interior procedure in Appendix C.
2. If there is a damper on the cable capstan, it must be removed (this procedure is described earlier). Some early model Plotters did not use dampers.
3. Loosen (but do not remove) the two set screws that hold the cable capstan to the motor shaft. These set screws are on opposite sides of the capstan from each other. It may be necessary to move either the Y-axis arm or the pen carriage to uncover these set screws.
4. If a cable keeper is not available, tape the cable to the capstan.
5. Slide the capstan off the motor shaft.
6. Remove the four nuts from the screws that hold the motor to the frame.
7. Remove the four plastic bushings.
8. The motor is removed from inside the frame. Separate the gasket from the motor.
9. To replace the motor, reverse the above procedure. Fit the gasket between the motor and the frame.

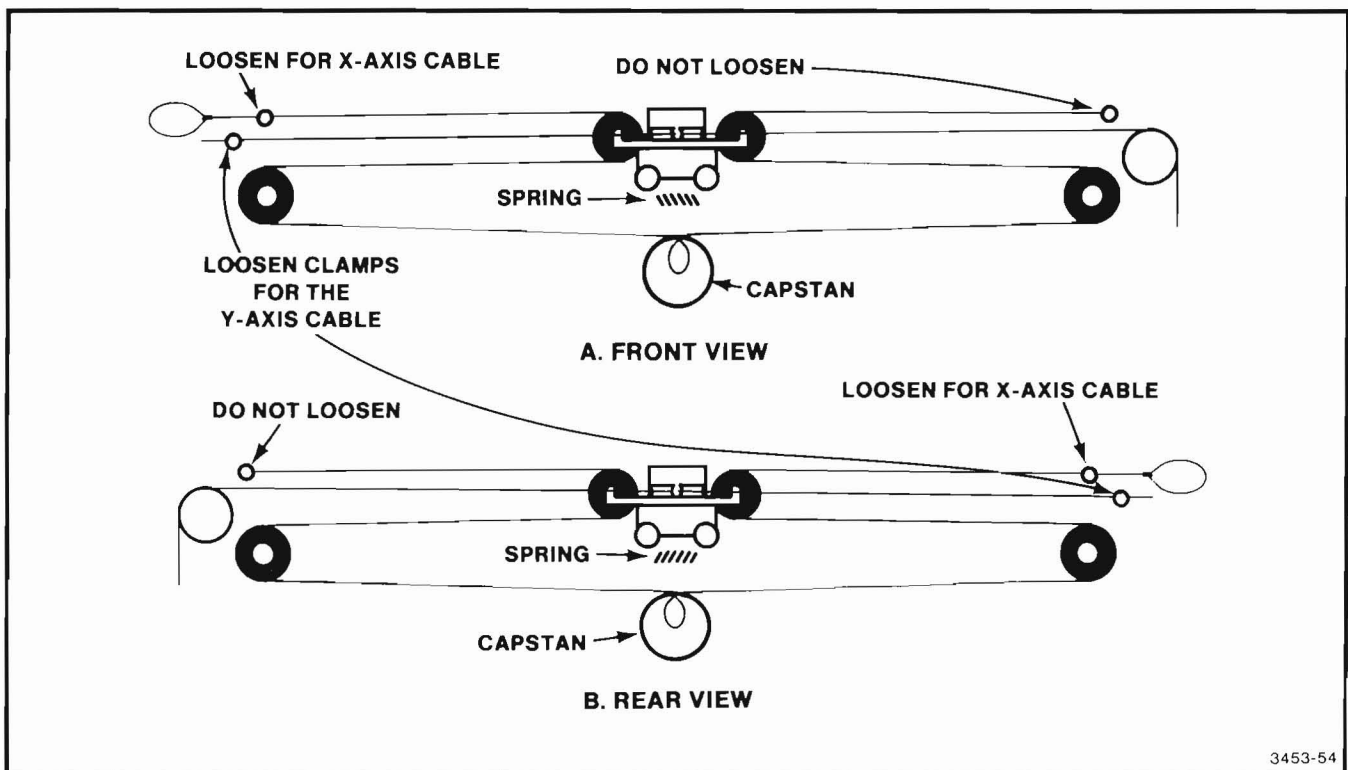


Figure 3-17. Cable Clamp Locations.

JOYSTICK

To remove the Joystick from the Plotter, use the following procedure (refer to Figures 3-18 and 3-19):

1. Follow steps 1 through 3 of Appendix C (Access to Plotter's Interior) to open the front panel of the Plotter. It is not necessary to open the rear panel.
2. Disconnect the 6-wire joystick cable connector from J99 of the Front Panel circuit board.
3. Remove the four nuts near the edge of the joystick's circular mounting plate.
4. Lift the joystick assembly from the front panel. Leave the round plastic molding in place.
5. Remove the two screws holding the ground bracket to the joystick assembly.
6. Unsolder the 6-wire cable from the joystick assembly.
7. Remove the four flat-head screws that hold the joystick to the circular mounting plate and remove the circular mounting plate.
8. Gently lift the joystick boot seal from the joystick.

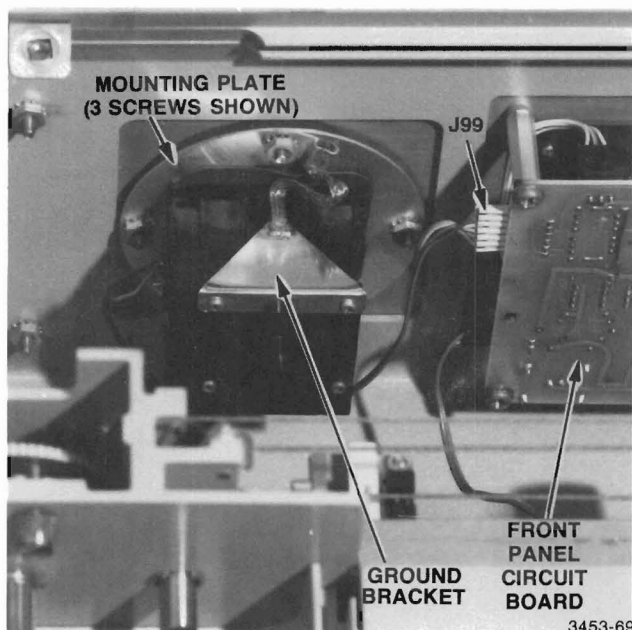


Figure 3-18. Joystick (rear view).

To replace the joystick to the Plotter, use the following procedure (refer to Figures 3-18 and 3-19):

1. Ensure that both trim adjustments are moved toward the corner as shown in Figure 3-19.
2. Place the joystick boot seal over the top of the joystick assembly. Make certain that it is arranged as shown in Figure 3-19, so that the two trim adjustments protrude through two holes in the seal.

CAUTION

Do not overtighten the four screws in the next step. In addition, the screw in the corner opposite the two trim adjustments must be tightened last. This will prevent the mounting plate from warp damage.

3. Attach the circular mounting plate to the joystick assembly with four flat-head screws. Make certain that it is arranged as shown in Figure 3-19, so that the two trim adjustments protrude through two holes in the seal.
4. Solder the six-wire cable to the solder contacts as shown in Figure 3-19.

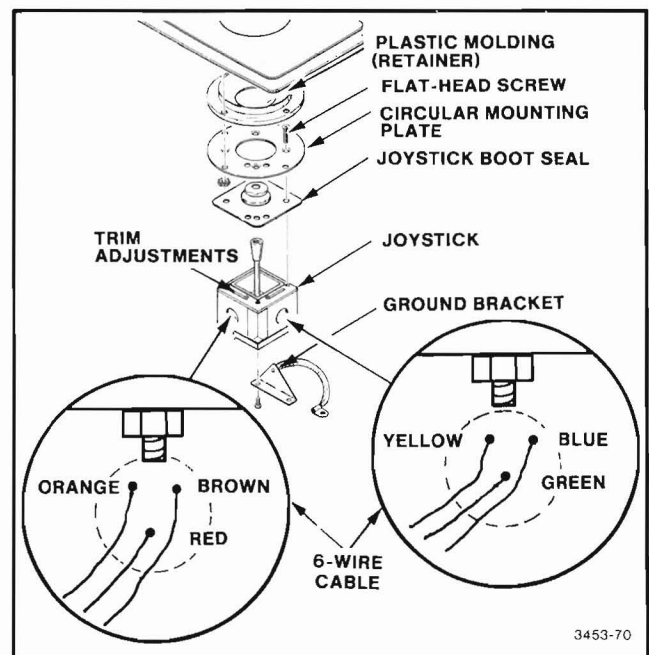
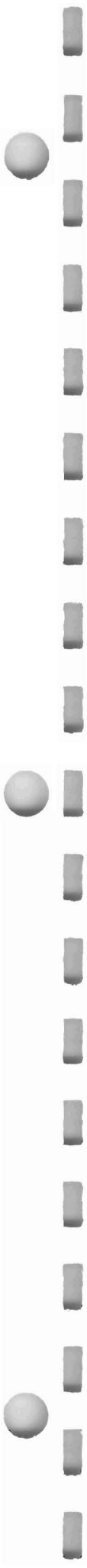


Figure 3-19. Joystick Assembly (exploded view).

5. Attach the grounding bracket to the joystick with two screws as shown in Figure 3-18. Do not overtighten these screws.
6. Mount the joystick assembly into the front panel with four nuts such that the cables emerge from the bottom and left sides (observing the rear of the joystick) of the joystick (see Figure 3-18 and 3-19). Be sure that the round plastic molding is still in place (see Step 4 of Joystick Removal earlier).
7. Attach the six-wire cable connector to J99 of the Front Panel circuit board.
8. To restore the Plotter to operation, reverse the procedure for opening the Plotter (see Step 1 for Joystick Removal earlier).
9. It is necessary to recalibrate the Plotter after installing the joystick. Note especially the Joystick Sensitivity Adjustments.



Section 4

INTERCONNECTING WIRING

INTRODUCTION

This section contains an interconnecting cable diagram and tables that describe the interconnecting cables and the connectors.

Figure 4-1 shows a diagram of all of the interconnecting cables within the Plotter and the associated cable connector numbers. Jack (or plug) numbers for multi-pin cable connectors appear on the circuit board next to that connection. A small arrow indicates Pin 1 on both the printed circuit board and connector (see Figure 4-2). Furthermore, the cable connectors are color coded from 0-9 to match the last digit of the jack number to which the plug is connected. For example, a yellow connector (color code of four) connects to a

jack with a number ending in four, for example, J34. The color codes are listed below:

0 Black	5 Green
1 Brown	6 Blue
2 Red	7 Violet
3 Orange	8 Grey
4 Yellow	9 White

Tables 4-1 through 4-21 list the signals on the pins of these connectors, while Appendix A of Volume 1 provides a functional description of each major signal in the Plotter.

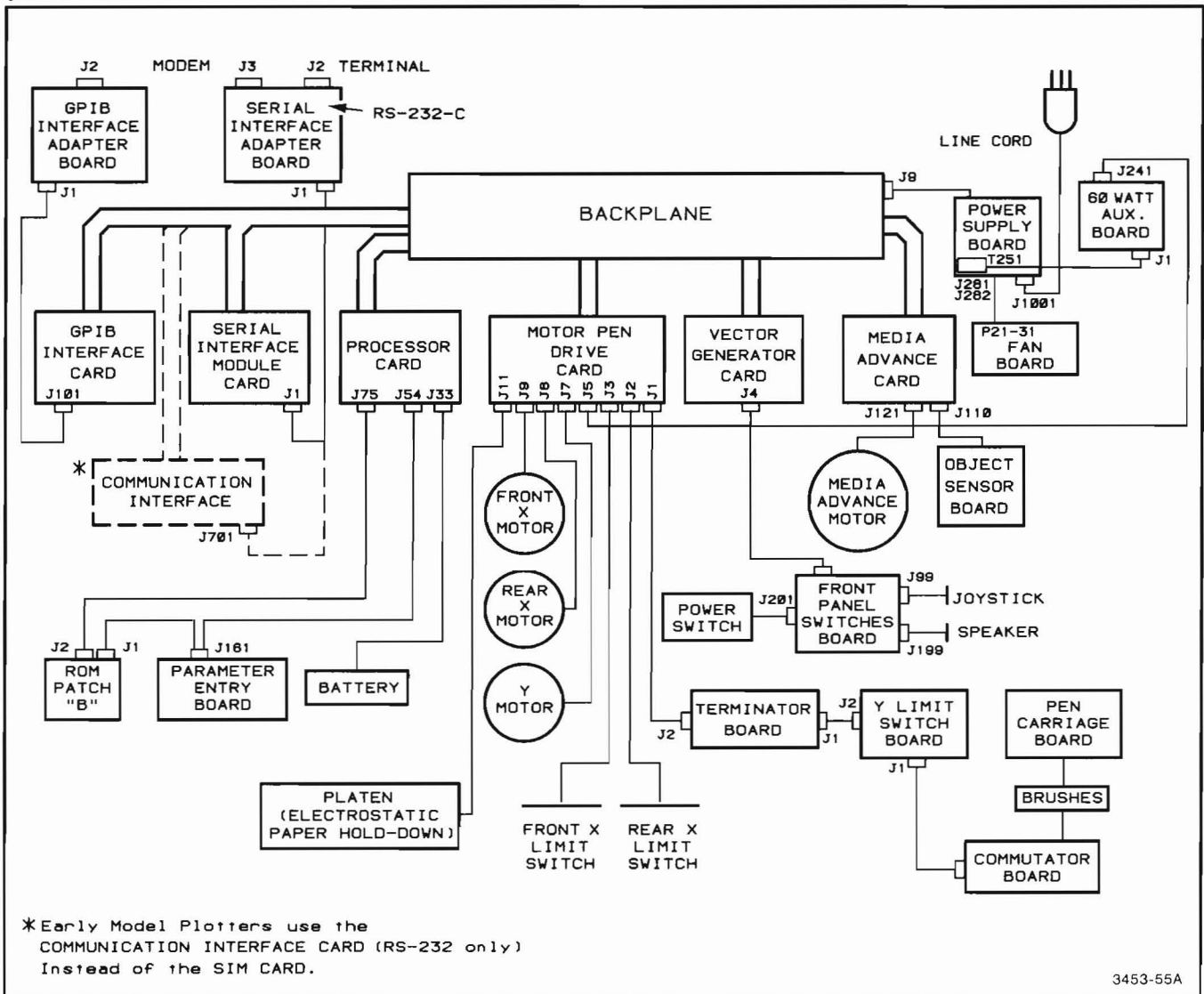


Figure 4-1. Interconnecting Cables and Cable Connectors Diagram.

INTERCONNECTING WIRING

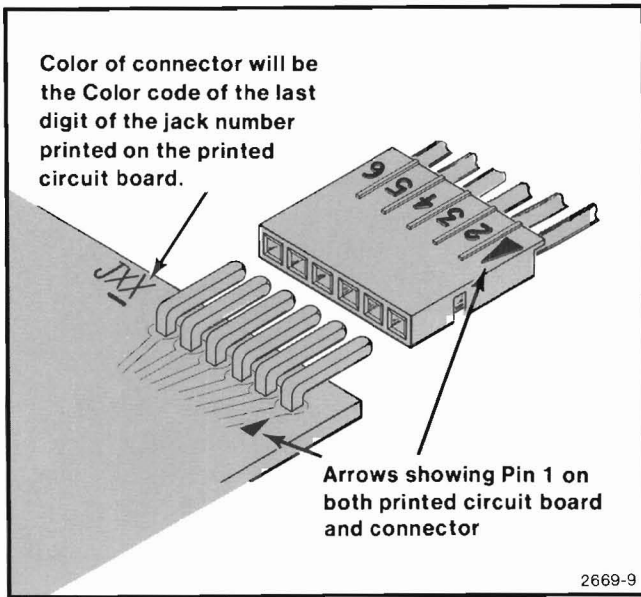


Figure 4-2. Connector-Pin Orientation.

Backplane Circuit Board

The Backplane circuit board is shown in Figure 4-3.

NOTE

If any of the circuit cards on the left side are not used (i.e., option not present), all other cards underneath the "missing" card are usually moved up (except the Processor card which always occupies the lowest position). With some early model Plotters, there may be some variations with the arrangement of the top three cards on the left side (see Figure 4-3).

Table 4-1 shows the signal lines available at J1-J4 and J5-J8.

NOTE

Signal lines differ between J1-J4 and J5-J8. Table 4-1 shows these differences as well as showing the signal lines common to both sides of the backplane.

The remaining connector (J9) is described in Table 4-2.

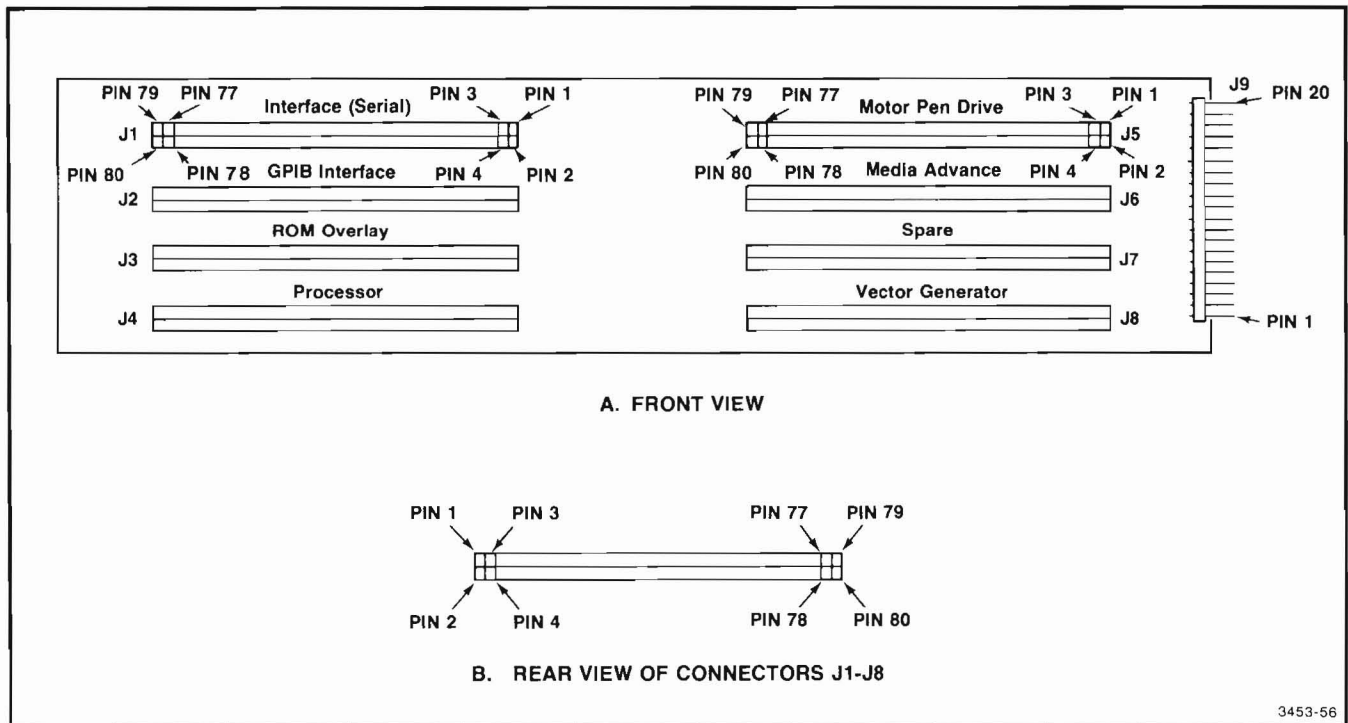


Figure 4-3. Backplane Connectors.

Table 4-1
BACKPLANE CIRCUIT BOARD CONNECTORS

J1-J4 Connectors		J5-J8 Connectors		J1-J4 Connectors		J5-J8 Connectors	
Pin	Signal Name	Pin	Signal Name	Pin	Signal Name	Pin	Signal Name
1	PGND	1	PGND	41	BD3-1	41	BD3-1
2	PGND	2	PGND	42	BD11-1	42	BD11-1
3	SPARE	3	PON-0	43	BD2-1	43	BD2-1
4	BDDIS-0	4	BDDIS-0	44	BD10-1	44	BD10-1
5	SPARE	5	XRATE-1	45	BD1-1	45	BD1-1
6	SPARE	6	XLIM-1	46	BD9-1	46	BD9-1
7	SPARE	7	XPLUS-1	47	BD0-1	47	BD0-1
8	SPARE	8	X'LIM-1	48	BD8-1	48	BD8-1
9	SPARE	9	PENMAG	49	BA7-1	49	BA7-1
10	SPARE	10	YLIM-1	50	BA15-1	50	BA15-1
11	SPARE	11	PIP	51	BA6-1	51	BA6-1
12	SPARE	12	POP	52	BA14-1	52	BA14-1
13	IN2	13	MOTEN-1	53	BA5-1	53	BA5-1
14	OUT2	14	SPARE	54	BA13-1	54	BA13-1
15	IN1	15	MCK-1	55	BA4-1	55	BA4-1
16	OUT1	16	INTCK-1	56	BA12-1	56	BA12-1
17	IN0	17	HVON-0	57	BA3-1	57	BA3-1
18	OUT0	18	S0-1	58	BA11-1	58	BA11-1
19	SPARE	19	S1-1	59	BA2-1	59	BA2-1
20	SPARE	20	S2-1	60	BA10-1	60	BA10-1
21	IRP2-1	21	IRP2-1	61	BA1-1	61	BA1-1
22	BRP2-1	22	BRP2-1	62	BA9-1	62	BA9-1
23	IRP1-1	23	IRP1-1	63	BA0-1	63	BA0-1
24	BRP1-1	24	BRP1-1	64	BA8-1	64	BA8-1
25	IRPQ-1	25	IRPQ-1	65	IOADD-1	65	IOADD-1
26	BRP0-1	26	BRP0-1	66	ASTB-0	66	ASTB-0
27	IRQ-0	27	IRQ-0	67	RST-0	67	RST-0
28	BRQ-0	28	BRQ-0	68	Not used	68	PFAIL-0
29	BTO-0	29	BTO-0	69	HALT-0	69	HALT-0
30	BGRNT-0	30	BGRNT-0	70	AGND	70	AGND
31	WRITE-0	31	WRITE-0	71	+ 12 VOLTS	71	+ 12 VOLTS
32	DSTB-0	32	DSTB-0	72	+ 12 VOLTS	72	+ 12 VOLTS
33	BD7-1	33	BD7-1	73	-12 VOLTS	73	-12 VOLTS
34	BD15-1	34	BD15-1	74	-5 VOLTS	74	-5 VOLTS
35	BD6-1	35	BD6-1	75	+ 5 VOLTS	75	+ 5 VOLTS
36	BD14-1	36	BD14-1	76	+ 5 VOLTS	76	+ 5 VOLTS
37	BD5-1	37	BD5-1	77	BCLK-1	77	BCLK-1
38	BD13-1	38	BD13-1	78	PG0DIS-0	78	PG0DIS-0
39	BD4-1	39	BD4-1	79	PGND	79	PGND
40	BD12-1	40	BD12-1	80	PGND	80	PGND

INTERCONNECTING WIRING

Table 4-2
BACKPLANE CONNECTOR J9

Pin	Signal Name	Pin	Signal Name
1	+ 12 VOLT SENSE	11	GND
2	+ 12 VOLTS	12	GND
3	-12 VOLT SENSE	13	GND
4	GND SENSE	14	GND
5	-12 VOLTS	15	GND
6	-5 VOLT SENSE	16	+ 5 VOLTS
7	PON-0	17	+ 5 VOLTS
8	RST-0	18	+ 5 VOLTS
9	Not used	19	+ 5 VOLTS
10	-5 VOLTS	20	+ 5 VOLT SENSE

Processor Circuit Card

The Processor circuit card is shown in Figure 4-4. Table 4-3 describes the signals on each pin of the Processor's cable connectors.

Parameter Entry Circuit Board

J161 is the same as J54 on the Processor circuit card or J1 on the ROM Patch "B" circuit board.

ROM Patch 'B' Circuit Board

J1 is the same as J54 on the Processor circuit card or J161 on the Parameter Entry circuit card.

J2 is the same as J75 on the Processor circuit card.

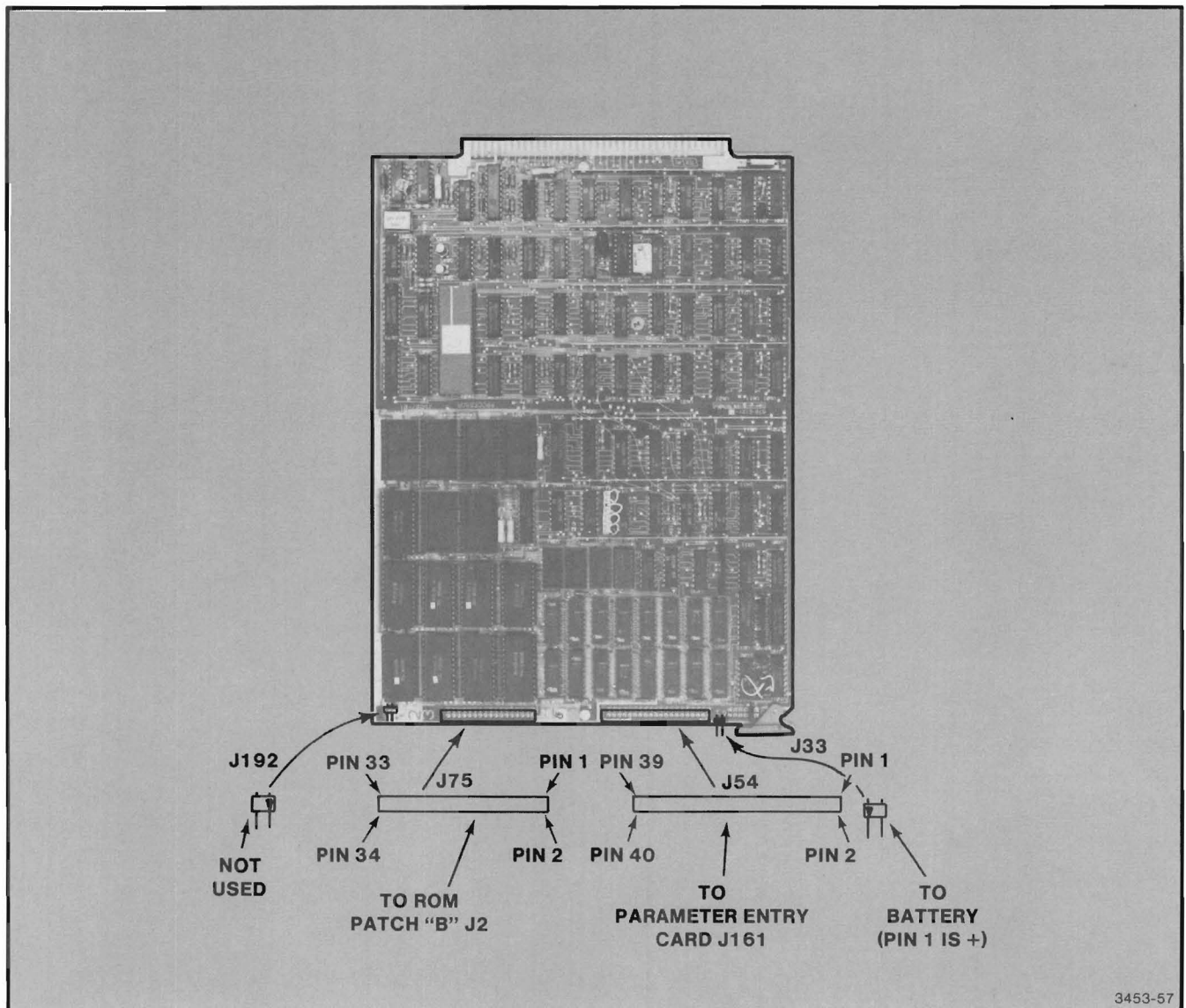


Figure 4-4. Processor Circuit Card Connectors.

Table 4-3
PROCESSOR CIRCUIT CARD CABLE CONNECTORS

Connector	Pin	Signal Name	Source or Destination
J33	1	+ Battery (+ 2.4 V)	To + Battery
	2	- Battery (GND)	To - Battery
J54	1	CLMVI-0	Note that J54 connects to both J161 of the Parameter Entry circuit card and J1 of the ROM Patch "B" circuit board.
	2	GND	
	3	RST-0	
	4	GND	
	5	PMVE-0	
	6	GND	
	7	PIRQ-1	
	8	GND	
	9	PDWE-0	
	10	GND	
	11	INITL-1	
	12	GND	
	13	CLSWI-0	
	14	GND	
	15	PAREN-1	
	16	GND	
	17	PDE-0	
	18	GND	
	19	PE0-0	
	20	GND	
	21	PE1-0	
	22	GND	
	23	DDIS-0	
	24	GND	
	25	MD0-1	
	26	GND	
	27	MD1-1	
	28	GND	
	29	MD2-1	
	30	GND	
	31	MD3-1	
	32	+ 5 VOLTS	
	33	MD4-1	
	34	+ 5 VOLTS	
	35	MD5-1	
	36	- 5 VOLTS	
	37	MD6-1	
	38	- 5 VOLTS	
	39	MD7-1	
	40	+ 12 VOLTS	

INTERCONNECTING WIRING

Table 4-3 (cont)

PROCESSOR CIRCUIT CARD CABLE CONNECTORS

Connector	Pin	Signal Name	Source or Destination
J75	1	MA15-1	J2-1
	2	GND	J2-2
	3	MA14-1	J2-3
	4	GND	J2-4
	5	MA13-1	J2-5
	6	GND	J2-6
	7	MA12-1	J2-7
	8	GND	J2-8
	9	MA11-1	J2-9
	10	GND	J2-10
	11	MA10-1	J2-11
	12	GND	J2-12
	13	MA9-1	J2-13
	14	GND	J2-14
	15	MA8-1	J2-15
	16	GND	J2-16
	17	MA7-1	J2-17
	18	GND	J2-18
	19	MA6-1	J2-19
	20	GND	J2-20
	21	MA5-1	J2-21
	22	GND	J2-22
	23	MA4-1	J2-23
	24	GND	J2-24
	25	MA3-1	J2-25
	26	GND	J2-26
	27	MA2-1	J2-27
	28	GND	J2-28
	29	MA1-1	J2-29
	30	GND	J2-30
	31	MA0-1	J2-31
	32	GND	J2-32
	33	PG0DIS-0	J2-33
	34	GND	J2-34

ROM Patch "B"
board

Motor Pen Drive Circuit Card

The Motor Pen Drive circuit card is shown in Figure 4-5. Table 4-4 discusses the cable connectors.

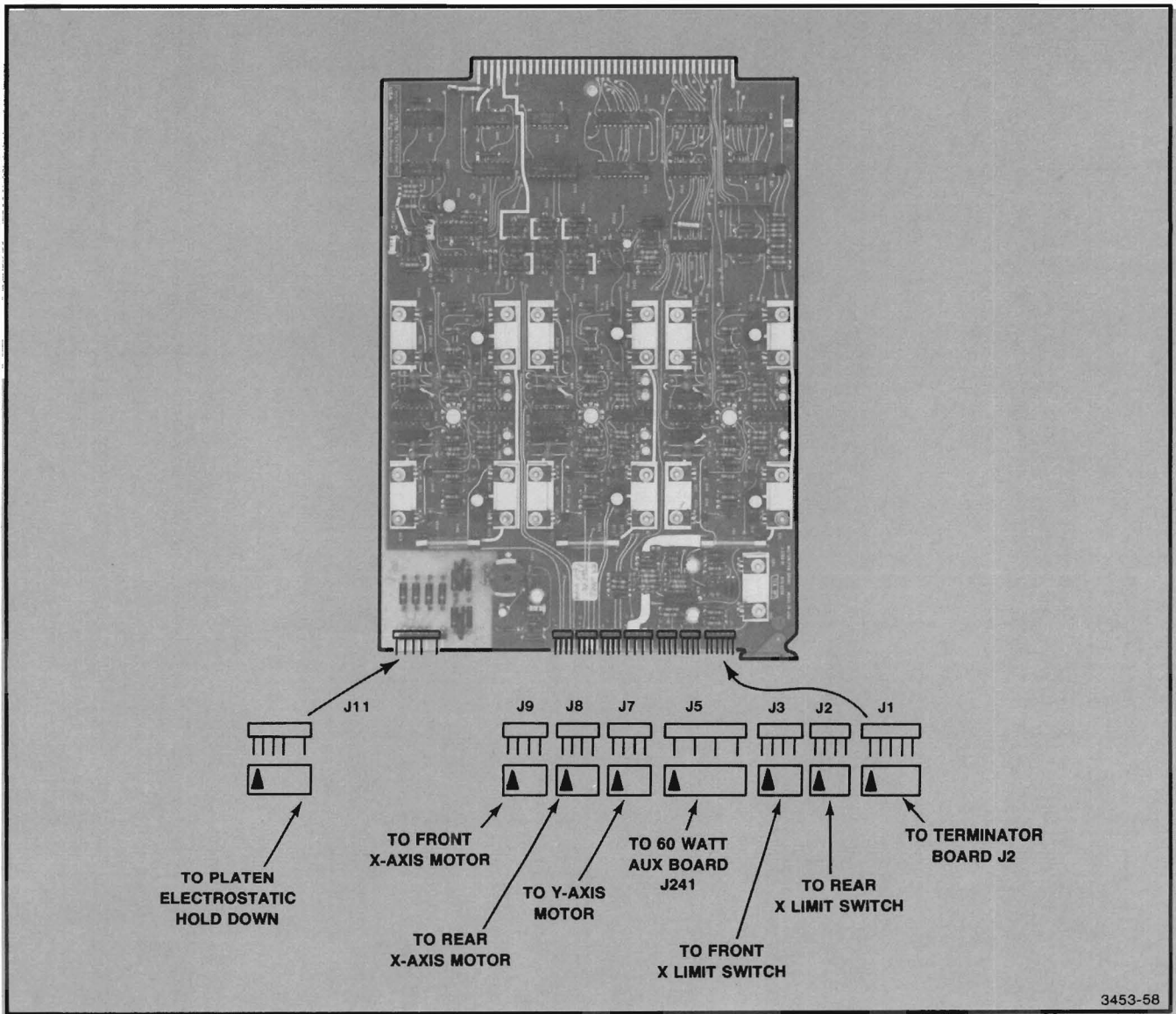


Figure 4-5. Motor Pen Drive Circuit Card Connectors.

INTERCONNECTING WIRING

Table 4-4
MOTOR PEN DRIVE CIRCUIT CARD CABLE CONNECTORS

Connector	Pin	Signal Name	Source or Destination
J1	1	YLIM-1	J2-1
	2	+ 5 VOLTS	J2-2
	3	+ 5 VOLTS	Terminator board J2-3
	4	GND	J2-4
	5	PEN RETURN	J2-5
	6	PEN OUT	J2-6
J2	1	X'LIM-1	Rear X Limit Switch
	2	+ 5 VOLTS	
	3	GND	
	4	+ 5 VOLTS	
J3	1	XLIM-1	Front X Limit Switch
	2	+ 5 VOLTS	
	3	GND	
	4	+ 5 VOLTS	
J5	1	+ 32 VOLTS	60 Watt Aux board
	2	+ 32 VOLTS	
	3	GND	
	4	GND	
J7	1	Y Motor Winding	Y-Axis Motor
	2	Y Motor Winding	
	3	Y Motor Winding	
	4	Y Motor Winding	
J8	1	X' Motor Winding	Rear X-Axis Motor
	2	X' Motor Winding	
	3	X' Motor Winding	
	4	X' Motor Winding	
J9	1	X Motor Winding	Front X-Axis Motor
	2	X Motor Winding	
	3	X Motor Winding	
	4	X Motor Winding	
J11	1	+ 800 VOLTS	Platen
	2	+ 800 VOLTS	
	3	+ 800 VOLTS	
	4	+ 800 VOLTS	
	5	No connection	
	6	HV COMMON	

Vector Generator Circuit Card

Table 4-5 describes the Vector Generator circuit card connector J4.

Table 4-5
VECTOR GENERATOR
CIRCUIT BOARD CONNECTOR J4

Pin	Signal Name	Source or Destination
1	+ 5 VOLTS	J41-1
2	GND	J41-2
3	+ 12 VOLTS	J41-3
4	GND	J41-4
5	YRATE-0	J41-5
6	GND	J41-6
7	YPLUS-0	J41-7
8	GND	J41-8
9	XRATE-0	J41-9
10	GND	J41-10
11	XPLUS-0	J41-11
12	BELL-0	J41-12
13	PON-0	J41-13
14	BRST-0	J41-14
15	FPCLK-1	J41-15
16	GND	J41-16
17	LTCLK-1	J41-17
18	GND	J41-18
19	LTEN-1	J41-19
20	EXKEY-1	J41-20
21	SWCHG-0	J41-21
22	LTDATA-1	J41-22
23	SWPOS4-1	J41-23
24	SWPOL-1	J41-24
25	SWPOS2-1	J41-25
26	SWPOS3-1	J41-26
27	SWPOS0-1	J41-27
28	SWPOS1-1	J41-28
29	DISCTR-1	J41-29
30	GND	J41-30
31	GND	J41-31
32	GND	J41-32
33	GND	J41-33
34	GND	J41-34
35	POP	J41-35
36	GND	J41-36
37	PIP	J41-37
38	- 12 VOLTS	J41-38
39	PENMAG	J41-39
40	+ 5 VOLTS	J41-40

Front Panel board

Front Panel Switches and Lights Circuit Board

The connectors on the Front Panel Switches and Lights circuit board are shown in Figure 4-6 and described in Table 4-6.

Table 4-6
FRONT PANEL SWITCHES AND LIGHTS
CIRCUIT BOARD CONNECTORS

Connector	Pin	Signal Name	Source or Destination
J41	Same as J4 on the Vector Generator circuit board		
J99	1	+ 12 VOLTS	Joystick
	2	Wiper arm of joystick X-axis pot	
	3	- 12 VOLTS	
	4	- 12 VOLTS	
	5	Wiper arm of joystick Y-axis pot	
	6	+ 12 VOLTS	
J199	1	+ 5 VOLTS	Speaker
	2	from U192	Speaker
J201	1	PON-0	POWER SWITCH
	2	GND	POWER SWITCH

INTERCONNECTING WIRING

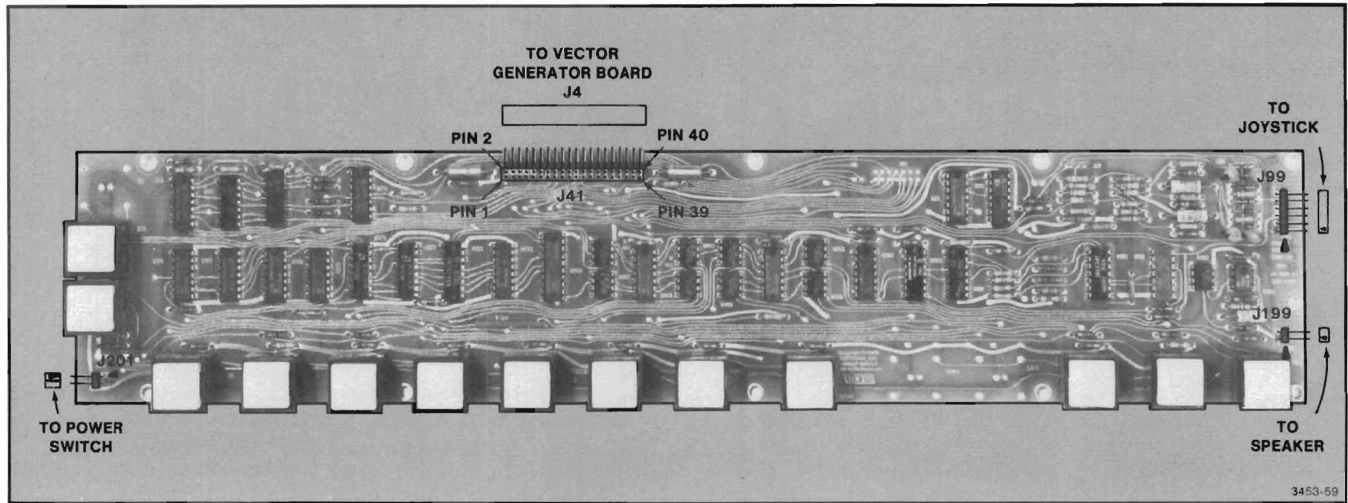


Figure 4-6. Front Panel Switches Circuit Board Connectors.

Terminator Circuit Board

Table 4-7 discusses the connectors on the Terminator circuit board.

Table 4-7

TERMINATOR CIRCUIT BOARD CONNECTORS

Connector	Pin	Signal Name	Source or Destination
J1	1	YLIM-1	Y Limit Switch board
	2	+ 5 VOLTS	
	3	+ 5 VOLTS	
	4	GND	
	5	PEN RETURN	
	6	PEN OUT	
J2	This connector is the same as J1 above.		

Y-Axis Limit Switch Circuit Board

The connectors of the Y-Limit Switch circuit board are described in Table 4-8.

Table 4-8

Y-AXIS LIMIT SWITCH CIRCUIT BOARD CONNECTORS

Connector	Pin	Signal Name	Source or Destination
J1	1	PEN OUT	Commutator board J1
	2	PEN RETURN	Commutator board J1
J2	This connector is the same as J1 or J2 of the Terminator board.		

Commutator Circuit Board

The J1 connector of the Commutator circuit board is the same as J1 of the Y-Axis Limit Switch circuit board described earlier.

RS-232-C Adapter Circuit Board

The RS-232 Adapter circuit board connectors are shown in Figure 4-7 and described in Tables 4-9 and 4-10.

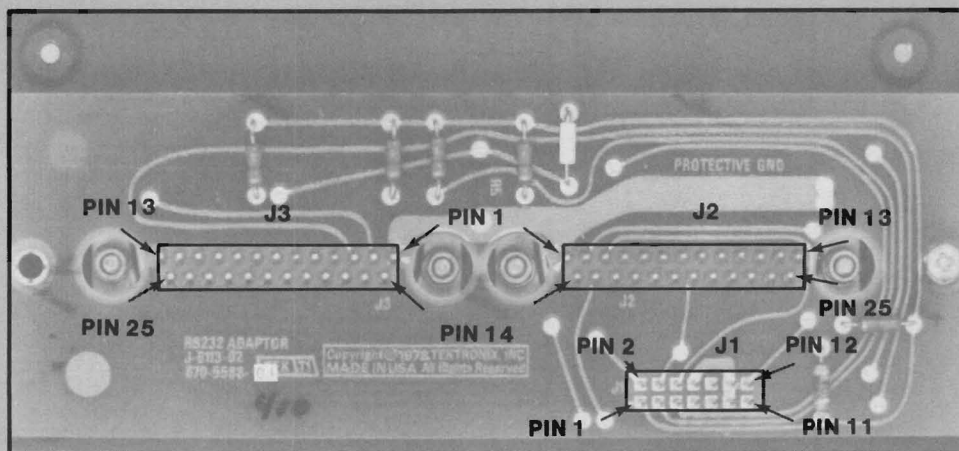
**Table 4-9
RS-232 ADAPTER
CIRCUIT BOARD CONNECTOR J1**

Pin	Signal Name	Source or Destination
1	+ 12 VOLTS	Serial Interface Module J1
2	- 12 VOLTS	
3	+ 5 VOLTS	
4	+ 5 VOLTS	
5	No connection	
6	No connection	
7	No connection	
8	No connection	
9	PMUTE-1	
10	No connection	
11	PLINE-1	
12	No connection	
13	No connection	
14	No connection	
15	No connection	
16	No connection	
17	No connection	
18	No connection	
19	PTDATA-1	
20	No connection	
21	PRDATA-1	
22	No connection	
23	PDTR-1	
24	No connection	
25	PCTS-0	
26	No connection	
27	PCTS-0	
28	No connection	
29	PRCLK-1	
30	No connection	
31	PTCLK-1	
32	POFF-1	
33	No connection	
34	No connection	

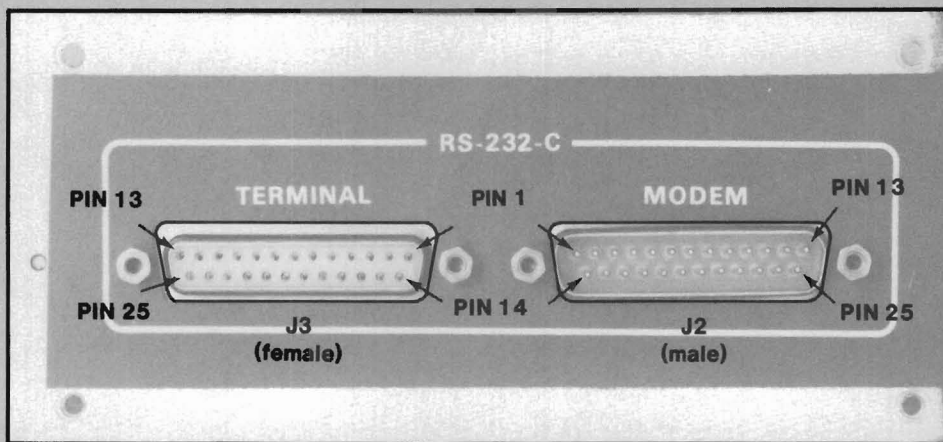
Table 4-10

RS-232 ADAPTER CIRCUIT BOARD CONNECTORS

J2 (TERMINAL)		J3 (MODEM)	
Pin	Signal Name	Pin	Signal Name
1	GND	1	GND
2	TTDATA-0	2	HTDATA-0
3	TRDATA-0	3	HRDATA-0
4	RTS	4	RTS
5	TCTS-1	5	HCTS-1
6	DSR	6	DSR
7	GND	7	GND
8	DCD-1	8	DCD-1
9	No connection	9	No connection
10	No connection	10	No connection
11	No connection	11	No connection
12	SDCD	12	SDCD
13	SCTS	13	SCTS
14	STD	14	STD
15	HTCLK-1	15	HTCLK-1
16	SRD	16	SRD
17	HRCLK-1	17	HRCLK-1
18	No connection	18	No connection
19	SRTS	19	SRTS
20	TDTR-1	20	HDTR-1
21	SQD	21	SQD
22	RI	22	RI
23	DSRS	23	DSRS
24	TSET	24	TSET
25	No connection	25	No connection



A. Component Side View.



B. Rear Panel View.

3453-60

Figure 4-7. RS-232 Adapter Circuit Board Connectors.

Communications Interface Circuit Card

The connectors to the Communications Interface circuit card are described in Tables 4-11 and 4-12. Table 4-11 describes connector J101; Table 4-12 lists signal names for pins of connector J701.

**Table 4-11
GPIB VERSION
COMMUNICATIONS INTERFACE
CONNECTORS J101**

Pin	Signal Name	Source or Destination
1	GND	GPIB Adapter J1
2	ATN-0	
3	GND	
4	SRQ-0	
5	GND	
6	IFC-0	
7	GND	
8	REN-0	
9	GND	
10	NDAC-0	
11	GND	
12	NRFD-0	
13	GND	
14	DAV-0	
15	GND	
16	EOI-0	
17	GND	
18	GND	
19	DIO8-0	
20	DIO4-0	
21	DIO7-0	
22	DIO3-0	
23	DIO6-0	
24	DIO2-0	
25	DIO5-0	
26	DIO1-0	

**Table 4-12
RS-232 VERSION
COMMUNICATIONS INTERFACE
CONNECTOR J701**

Pin	Signal Name	Source or Destination
1	+ 12 VOLTS	Serial Interface Adapter Circuit Board J1
2	DTR	
3	CTS	
4	DTR	
5	DCD	
6	TERM RDATA	
7		
8	GND	
9		
10	MODEM TDATA	
11	GND	
12	GND	
13	MODEM RDATA	
14	TERM TDATA	

INTERCONNECTING WIRING

GPIB Interface Adapter Circuit Board

The J1 connector is the same as J101 of the Communications Interface circuit card. The GPIB connector is shown in Figure 4-8.

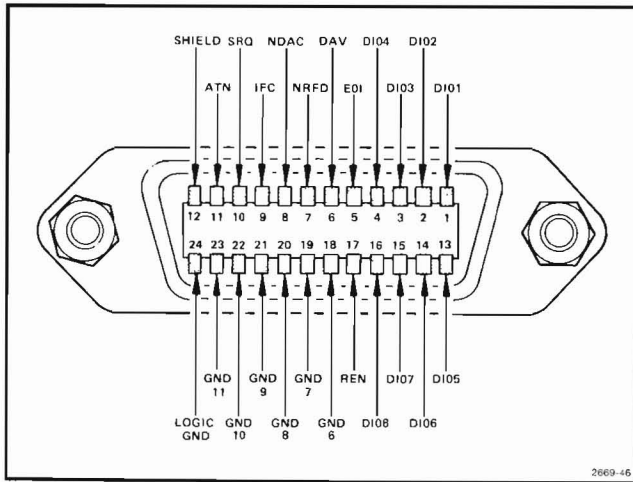
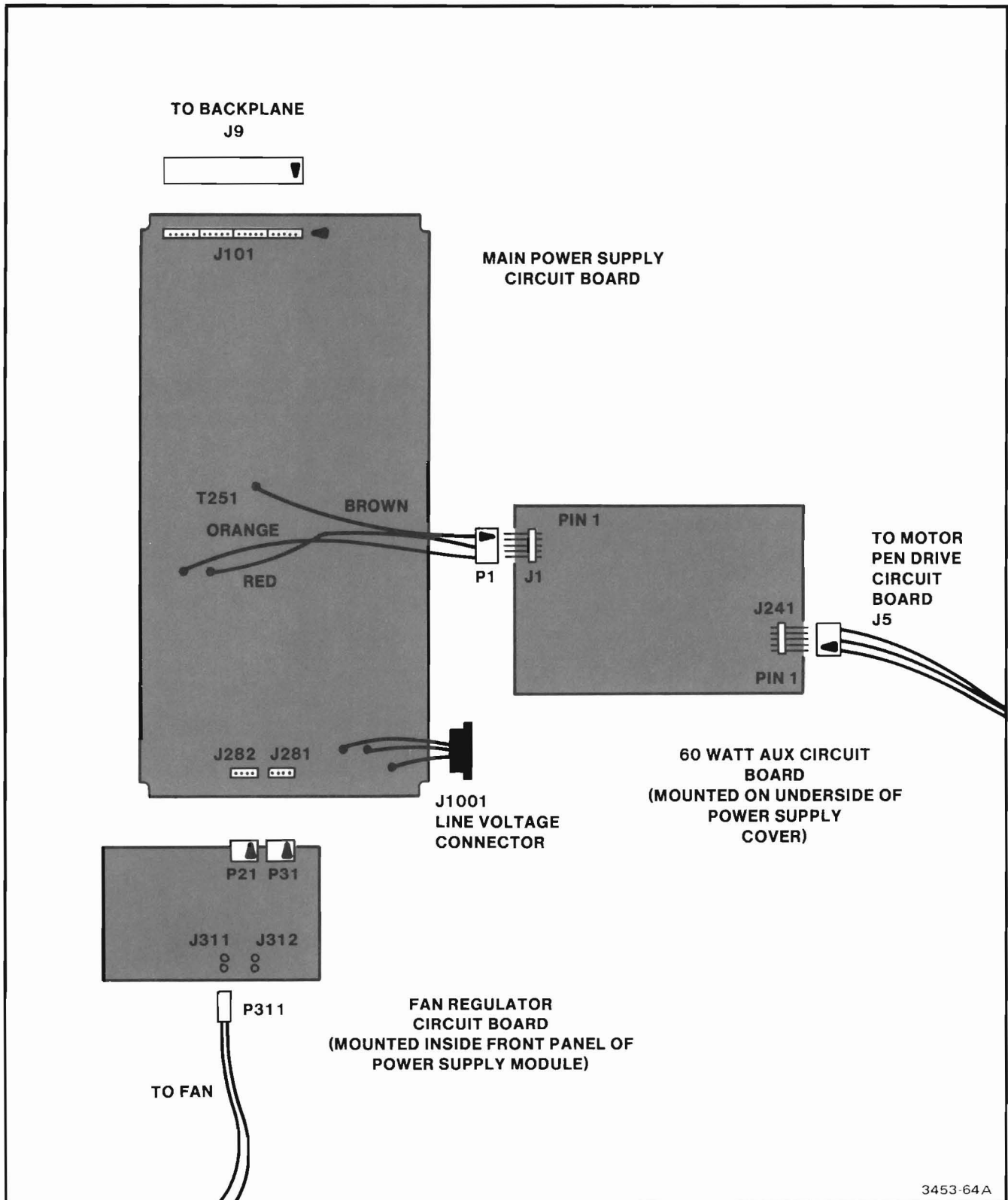


Figure 4-8. The GPIB Connector.

Power Supply Circuit Boards

Figure 4-9 shows the three Power Supply circuit boards: the Main Power Supply board, the 60 Watt Aux board, the Fan Regulator board. The connectors for these three boards are described in Tables 4-13, 4-14, and 4-15, respectively.



3453-64A

Figure 4-9. Power Supply Circuit Board Connectors.

INTERCONNECTING WIRING

**Table 4-13
MAIN POWER SUPPLY CIRCUIT BOARD CONNECTORS**

Connector	Pin	Signal Name	Source or Destination
J101	1	+ 12 VOLT SENSE	Backplane circuit board J9
	2	+ 12 VOLTS	
	3	- 12 VOLT SENSE	
	4	GND SENSE	
	5	- 12 VOLTS	
	6	- 5 VOLT SENSE	
	7	PON-0	
	8	RST-0	
	9	No connection	
	10	- 5 VOLTS	
	11	GND	
	12	GND	
	13	GND	
	14	GND	
	15	GND	
	16	+ 5 VOLTS	
	17	+ 5 VOLTS	
	18	+ 5 VOLTS	
	19	+ 5 VOLTS	
	20	+ 5 VOLT SENSE	
J281	1	No connection	Fan Regulator circuit board P31-2
	2	LINE	
	3	No connection	Fan Regulator circuit board P31-4
	4	+ 150 VOLTS	
J282	1	No connection	Fan Regulator circuit board P21-2
	2	COMMON	
	3	No connection	Fan Regulator circuit board P21-4
	4	- 150 VOLTS	
J1001	This is the input ac line connector.		

Table 4-14
60 WATT AUX CIRCUIT BOARD CONNECTORS

Connector	Pin	Signal Name	Source or Destination
J1	1	No connection	Center Tap of T251
	2		From Tap 8 of T251
	3	No connection	From Tap 7 of T251
	4		
	5		
J241	1	+ 32 VOLTS	J5-1
	2	+ 32 VOLTS	Motor Pen Drive J5-2
	3	GND	card J5-3
	4	GND	J5-4

Table 4-15
FAN REGULATOR CIRCUIT BOARD CONNECTORS

Connector	Pin	Signal Name	Source or Destination
J21	1	No connection	
	2	COMMON	Main Power Supply J282-2
	3	No connection	
	4	- 150 VOLTS	Main Power Supply J282-4
J31	1	No connection	
	2	LINE	Main Power Supply J281-2
	3	No connection	
	4	+ 150 VOLTS	Main Power Supply J281-4
J311	1	GND	Fan motor
	2	110 VOLTS (RMS)	Fan motor

INTERCONNECTING WIRING

Media Advance Circuit Card (Option 36)

Table 4-16 describes the connectors on the Media Advance circuit card.

Table 4-16
MEDIA ADVANCE CIRCUIT CARD CONNECTORS

Connector	Pin	Signal Name	Source or Destination
J110	1		Emitter of U1000 (Object Sensor)
	2	+ 5 VOLTS	Collector of U1000
	3	+ 5 VOLTS	Cathode of LED (U1000)
	4	GND	Anode of LED (U1000)
J121	1	PHASE 3	Media Advance motor
	2	PHASE 3	
	3	PHASE 2	
	4	PHASE 2	
	5	PHASE 1	
	6	PHASE 1	
	7	PHASE 0	
	8	PHASE 0	

Section 5

REPLACEABLE

ELECTRICAL PARTS

PARTS ORDERING INFORMATION

Replacement parts are available from or through your local Tektronix, Inc. Field Office or representative.

Changes to Tektronix instruments are sometimes made to accommodate improved components as they become available, and to give you the benefit of the latest circuit improvements developed in our engineering department. It is therefore important, when ordering parts, to include the following information in your order: Part number, instrument type or number, serial number, and modification number if applicable.

If a part you have ordered has been replaced with a new or improved part, your local Tektronix, Inc. Field Office or representative will contact you concerning any change in part number.

Change information, if any, is located at the rear of this manual.

SPECIAL NOTES AND SYMBOLS

X000 Part first added at this serial number
00X Part removed after this serial number

ITEM NAME

In the Parts List, an Item Name is separated from the description by a colon (:). Because of space limitations, an Item Name may sometimes appear as incomplete. For further Item Name identification, the U.S. Federal Cataloging Handbook H6-1 can be utilized where possible.

ABBREVIATIONS

ACTR	ACTUATOR	PLSTC	PLASTIC
ASSY	ASSEMBLY	QTZ	QUARTZ
CAP	CAPACITOR	RECP	RECEPTACLE
CER	CERAMIC	RES	RESISTOR
CKT	CIRCUIT	RF	RADIO FREQUENCY
COMP	COMPOSITION	SEL	SELECTED
CONN	CONNECTOR	SEMICOND	SEMICONDUCTOR
ELCTLT	ELECTROLYTIC	SENS	SENSITIVE
ELEC	ELECTRICAL	VAR	VARIABLE
INCAND	INCANDESCENT	WW	WIREWOUND
LED	LIGHT EMITTING DIODE	XFMR	TRANSFORMER
NONWIR	NON WIREWOUND	XTAL	CRYSTAL

REPLACEABLE ELECTRICAL PARTS

CROSS INDEX—MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip
000FG	RIFA WORLD PRODUCTS INC.	7625 BUSH LAKE RD P.O. BOX 35263	MINNEAPOLIS, MN 55435
000FJ	MARCOM SWITCHES INC.	67 ALBANY STREET	CAZENOVIA, N.Y. 13035
000KM	COMPONENTS WEST, INC.	13540 N.W. MILL CREEK DRIVE	PORTLAND, OR 97229
00853	SANGAMO ELECTRIC CO., S. CAROLINA DIV.	P O BOX 128	PICKENS, SC 29671
01121	ALLEN-BRADLEY COMPANY	1201 2ND STREET SOUTH	MILWAUKEE, WI 53204
01281	TRW ELECTRONIC COMPONENTS, SEMICONDUCTOR OPERATIONS	14520 AVIATION BLVD.	LAWNDALE, CA 90260
01295	TEXAS INSTRUMENTS, INC., SEMICONDUCTOR GROUP	P O BOX 5012, 13500 N CENTRAL EXPRESSWAY	DALLAS, TX 75222
01807	PETERSEN RADIO COMPANY, INC.	2800 WEST BROADWAY	COUNCIL BLUFFS, IN 51501
02735	RCA CORPORATION, SOLID STATE DIVISION	ROUTE 202	SOMERVILLE, NY 08876
02777	HOPKINS ENGINEERING COMPANY	12900 FOOTHILL BLVD.	SAN FERNANDO, CA 91342
03508	GENERAL ELECTRIC COMPANY, SEMI-CONDUCTOR PRODUCTS DEPARTMENT	ELECTRONICS PARK	SYRACUSE, NY 13201
04222	AVX CERAMICS, DIVISION OF AVX CORP.	P O BOX 867, 19TH AVE. SOUTH	MYRTLE BEACH, SC 29577
04713	MOTOROLA, INC., SEMICONDUCTOR PROD. DIV.	5005 E MCDOWELL RD, PO BOX 20923	PHOENIX, AZ 85036
07109	OAKTRON INDUSTRIES, INC.	704 30TH STREET	MONROE, WI 53566
07263	FAIRCHILD SEMICONDUCTOR, A DIV. OF FAIRCHILD CAMERA AND INSTRUMENT CORP.	464 ELLIS STREET	MOUNTAIN VIEW, CA 94042
09353	C AND K COMPONENTS, INC.	103 MORSE STREET	WATERTOWN, MA 02172
12954	SIEMENS CORPORATION, COMPONENTS GROUP	8700 E THOMAS RD, P O BOX 1390	SCOTTSDALE, AZ 85252
14099	SEMTECH CORP.	652 MITCHELL RD.	NEWBURY PARK, CA 91320
14193	CAL-R, INC.	1601 OLYMPIC BLVD.	SANTA MONICA, CA 90404
14433	ITT SEMICONDUCTORS	3301 ELECTRONICS WAY P O BOX 3049	WEST PALM BEACH, FL 33402
14752	ELECTRO CUBE INC.	1710 S. DEL MAR AVE.	SAN GABRIEL, CA 91776
15454	RODAN INDUSTRIES, INC.	2905 BLUE STAR ST	ANAHEIM, CA 92806
18324	SIGNETICS CORP.	811 E. ARQUES	SUNNYVALE, CA 94086
19209	GENERAL ELECTRIC CO., ELECTRONIC CAPACITOR AND BATTERY PRODUCTS DEPT. BATTERY PRODUCTS SEC.	P.O. BOX 114	GAINESVILLE, FL 32601
19396	ILLINOIS TOOL WORKS, INC. PAKTRON DIV.	900 FOLLIN LANE, SE	VIENNA, VA 22180
22526	BERG ELECTRONICS, INC.	YOUK EXPRESSWAY	NEW CUMBERLAND, PA 17070
24546	CORNING GLASS WORKS, ELECTRONIC COMPONENTS DIVISION	550 HIGH STREET	BRADFORD, PA 16701
27012	MICRO DEVICES, CORPORATION	1881 SOUTHLAND BLVD.	DAYTON, OHIO 45439
27014	NATIONAL SEMICONDUCTOR CORP.	2900 SEMICONDUCTOR DR.	SANTA CLARA, CA 95051
27264	MOLEX PRODUCTS CO.	5224 KATRINE AVE.	DOWNERS GROVE, IL 60515
32694	OPTRON, INC.	1201 TAPPAN CIRCLE	CARROLLTON, TX 75006
32997	BOURNS, INC., TRIMPOT PRODUCTS DIV.	1200 COLUMBIA AVE.	RIVERSIDE, CA 92507
34335	ADVANCED MICRO DEVICES	901 THOMPSON PL.	SUNNYVALE, CA 94086
34371	HARRIS SEMICONDUCTOR, DIV. OF HARRIS CORPORATION	P. O. BOX 883	MELBOURNE, FL 32901
50558	ELECTRONIC CONCEPTS, INC.	526 INDUSTRIAL WAY WEST	EATONTOWN, NJ 07724
50579	LITRONIX INC.	19000 HOMESTEAD RD.	CUPERTINO, CA 95014
51420	COMPU-LITE	711-F12 W. 17TH ST.	COSTA MESA, CA 92627
51642	CENTRE ENGINEERING INC.	2820 E COLLEGE AVENUE	STATE COLLEGE, PA 16801
53184	XCITON CORPORATION	5 HEMLOCK STREET	LATHAM, NY 12110
53944	ELT INC., GLOW LITE DIVISION	BOX 698	PAULS VALLEY, OK 73075
54473	MATSUSHITA ELECTRIC, CORP. OF AMERICA	1 PANASONIC WAY	SECAUCUS, NJ 07094
55680	NICHICON/AMERICA/CORP.	6435 N PROESEL AVENUE	CHICAGO, IL 60645
56289	SPRAGUE ELECTRIC CO.	87 MARSHALL ST.	NORTH ADAMS, MA 01247
57668	R-OHM CORP.	16931 MILLIKEN AVE.	IRVINE, CA 92713
59660	TUSONIX INC.	2155 N FORBES BLVD	TUCSON, AZ 85705
71400	BUSSMAN MFG., DIVISION OF MCGRAW- EDISON CO.	2536 W. UNIVERSITY ST	ST. LOUIS, MO 63107
71468	ITT CANNON ELECTRIC	666 E. DYER RD.	SANTA ANA, CA 92702
71744	CHICAGO MINIATURE LAMP WORKS	4433 RAVENSWOOD AVE.	CHICAGO, IL 60640
71785	TRW, CINCH CONNECTORS	1501 MORSE AVENUE	ELK GROVE VILLAGE, IL 60007
72982	ERIE TECHNOLOGICAL PRODUCTS, INC.	644 W. 12TH ST.	ERIE, PA 16512
73138	BECKMAN INSTRUMENTS, INC., HELIPOT DIV.	2500 HARBOR BLVD.	FULLERTON, CA 92634
74276	SIGNALITE DIV., GENERAL INSTRUMENT CORP.	1933 HECK AVE.	NEPTUNE, NJ 07753
75042	TRW ELECTRONIC COMPONENTS, IRC FIXED RESISTORS, PHILADELPHIA DIVISION	401 N. BROAD ST	PHILADELPHIA, PA 19108
76493	BELL INDUSTRIES, INC., MILLER, J. W., DIV.	19070 REYES AVE., P O BOX 5825	COMPTON, CA 90224
76854	OAK INDUSTRIES, INC., SWITCH DIV.	S. MAIN ST	CRYSTAL LAKE, IL 60014

CROSS INDEX—MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip
77342	AMF INC., POTTER AND BRUMFIELD DIV.	200 RICHLAND CREEK DRIVE	PRINCETON, IN 47670
78277	SIGMA INSTRUMENTS INC.	170 PEARL STREET	SOUTH BRAINTREE, MA 02185
80009	TEKTRONIX, INC.	P O BOX 500	BEAVERTON, OR 97077
82877	ROTRON, INC.	7-9 HASBROUCK LANE	WOODSTOCK, NY 12498
83003	VARO, INC.	P O BOX 411, 2203 WALNUT STREET	GARLAND, TX 75040
84411	TRW ELECTRONIC COMPONENTS, CAPACITORS	TRW112 W. FIRST ST.	OGALLALA, NE 69153
90201	MALLORY CAPACITOR CO., DIV. OF P. R. MALLORY AND CO., INC.	3029 E. WASHINGTON STREET P. O. BOX 372	INDIANAPOLIS, IN 46206
91418	RADIO MATERIALS COMPANY, DIV. OF P.R. MALLORY AND COMPANY, INC.	4242 W BRYN MAWR	CHICAGO, IL 60646
91637	DALE ELECTRONICS, INC.	P. O. BOX 609	COLUMBUS, NE 68601
92966	SYLVANIA MINIATURE LIGHTING PRODUCTS, INC., SUB OF GTE SYLVANIA, LIGHT. PROD.	526 ELM STREET	KEARNY, NJ 07032

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
ASSEMBLIES						
A1	670-5121-00	B010100	B010109	CKT BOARD ASSY:PROCESSOR	80009	670-5121-00
A1	670-5121-01	B010110	B020199	CKT BOARD ASSY:PROCESSOR	80009	670-5121-01
A1	670-5121-02	B020200	B020544	CKT BOARD ASSY:PROCESSOR	80009	670-5121-02
A1	670-6420-00	B020545	B030623	CKT BOARD ASSY:B PROCESSOR	80009	670-6420-00
A1	670-6420-01	B030624	B039999	CKT BOARD ASSY:B PROCESSOR	80009	670-6420-01
A1	670-6420-02	B040000	B051169	CKT BOARD ASSY:B PROCESSOR	80009	670-6420-02
A1	670-6420-04	B051170	B051298	CKT BOARD ASSY:B PROCESSOR	80009	670-6420-04
A1	670-6420-05	B051299	B061999	CKT BOARD ASSY:B PROCESSOR	80009	670-6420-05
A1	670-6420-06	B062000		CKT BOARD ASSY:PROCESSOR	80009	670-6420-06
A2	670-5221-01	B010100	B051799	CKT BOARD ASSY:PARAMETER ENTRY	80009	670-5221-01
A2	670-5221-02	B051800		CKT BOARD ASSY:PARAMETER ENTRY	80009	670-5221-02
A3	670-6114-00	B010100	B020359	CKT BOARD ASSY:ROM PATCH B	80009	670-6114-00
A3	670-6114-01	B020360	B020549	CKT BOARD ASSY:ROM PATCH B	80009	670-6114-01
A3	670-6114-02	B020550	B051169	CKT BOARD ASSY:ROM PATCH B	80009	670-6114-02
A3	670-6114-03	B051170	B061999	CKT BOARD ASSY:ROM PATCH B	80009	670-6114-03
A3	670-6114-04	B062000	B069999	CKT BOARD ASSY:ROM PATCH B	80009	670-6114-04
A3	670-6114-05	B070000		CKT BOARD ASSY:ROM PATCH	80009	670-6114-05
A4	670-5579-00	B010100	B020114	CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-00
A4	670-5579-01	B020115	B020354	CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-01
A4	670-5579-02	B020355	B020449	CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-02
A4	670-5579-03	B020450	B051169	CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-03
A4	670-5579-04	B051170	B050319	CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-04
A4	670-5579-05	B050320	B061999	CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-05
A4	670-5579-06	B062000		CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-06
A4	670-6218-00			CKT BOARD ASSY:SERIAL INTERFACE MODULE	80009	670-6218-00
A4	-----			(OPTION 3 ONLY)		
A5	670-5588-01			CKT BOARD ASSY:RS232 ADAPTER	80009	670-5588-01
A6	670-5237-00	B010100	B019999	CKT BOARD ASSY:VECTOR GENERATOR	80009	670-5237-00
A6	670-5237-01	B020000	B020254	CKT BOARD ASSY:VECTOR GENERATOR	80009	670-5237-01
A6	670-5237-02	B020255	B051169	CKT BOARD ASSY:VECTOR GENERATOR	80009	670-5237-02
A6	670-5237-03	B051170		CKT BOARD ASSY:VECTOR GENERATOR	80009	670-5237-03
A7	670-5236-01	B010100	B020349	CKT BOARD ASSY:MOTOR/PEN DRIVER	80009	670-5236-01
A7	670-5236-02	B020350	B051169	CKT BOARD ASSY:MOTOR/PEN DRIVER	80009	670-5236-02
A7	670-5236-03	B051170	B051319	CKT BOARD ASSY:MOTOR/PEN DRIVER	80009	670-5236-03
A7	670-5236-04	B051320		CKT BOARD ASSY:MOTOR/PEN DRIVER	80009	670-5236-04
A8	670-5589-00	B010100	B019999	CKT BOARD ASSY:FRONT PANEL SWITCH	80009	670-5589-00
A8	670-5589-01	B020000	B030909	CKT BOARD ASSY:FRONT PANEL SWITCH	80009	670-5589-01
A8	670-5589-02	B030910		CKT BOARD ASSY:FRONT PANEL SWITCH	80009	670-5589-02
A9	670-5858-00			CKT BOARD ASSY:Y AXIS LIMIT SWITCH	80009	670-5858-00
A10	670-5859-00	B010100	B020299	CKT BOARD ASSY:FLEX STRIP TERMINATION	80009	670-5859-00
A10	670-5859-01	B020300	B050314	CKT BOARD ASSY:FLEX STRIP TERMINATION	80009	670-5859-01
A10	670-5859-02	B050315		CKT BOARD ASSY:FLEX STRIP TERMINATION	80009	670-5859-02
A11	670-5468-00			CKT BOARD ASSY:PEN CARRIAGE	80009	670-5468-00
A12	670-5469-00			CKT BOARD ASSY:BACKPLANE	80009	670-5469-00
A12	-----			(SEE RMPL)		
A13	620-0275-00	B010100	B020129	POWER SPLY ASSY:	80009	620-0275-00
A13	620-0275-01	B020130	B051049	POWER SPLY ASSY:	80009	620-0275-01
A13	620-0275-02	B051050		POWER SPLY ASSY:	80009	620-0275-02
A13A1	670-5612-00	B010100	B020129	CKT BOARD ASSY:POWER SUPPLY	80009	670-5612-00
A13A1	670-5612-01	B020130	B050999	CKT BOARD ASSY:POWER SUPPLY	80009	670-5612-01
A13A1	670-5612-02	B051000	B051049	CKT BOARD ASSY:POWER SUPPLY	80009	670-5612-02
A13A1	670-5612-03	B051050		CKT BOARD ASSY:POWER SUPPLY	80009	670-5612-03

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix	Serial/Model No.		Name & Description	Mfr	Mfr Part Number
	Part No.	Eff	Dscont		Code	
A13A1A1	670-6983-00	B051050		CKT BOARD ASSY:SOFT START	80009	670-6983-00
A13A2	670-5614-00			CKT BOARD ASSY:60 W AUXILIARY	80009	670-5614-00
A13A3	670-5613-00			CKT BOARD ASSY:FAN REGULATOR	80009	670-5613-00
A14	670-6275-00	B020000	B020169	CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-00
A14	670-6275-01	B020170	B020379	CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-01
A14	670-6275-02	B030624	B039999	CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-02
A14	670-6275-03	B051170	B051184	CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-03
A14	670-6275-04	B051185	B051214	CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-04
A14	670-6275-05	B051215	B061999	CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-05
A14	670-6275-00	B062000		CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-00
A15	670-5503-00	B010100	B020114	CKT BOARD ASSY:GPIB INTERFACE	80009	670-5503-00
A15	-----			(OPTION 1 & 4 ONLY)		
A15	670-5503-01	B020115	B020354	CKT BOARD ASSY:GPIB INTERFACE	80009	670-5503-01
A15	-----			(OPTION 1 & 4 ONLY)		
A15	670-5503-02	B020355	B020449	CKT BOARD ASSY:GPIB INTERFACE	80009	670-5503-02
A15	-----			(OPTION 1 & 4 ONLY)		
A15	670-5503-03	B020450	B051169	CKT BOARD ASSY:GPIB INTERFACE	80009	670-5503-03
A15	-----			(OPTION 1 & 4 ONLY)		
A15	670-5503-04	B051170	B051319	CKT BOARD ASSY:GPIB INTERFACE	80009	670-5503-04
A15	-----			(OPTION 1 & 4 ONLY)		
A15	670-5503-05	B051320	B061999	CKT BOARD ASSY:GPIB INTERFACE	80009	670-5503-05
A15	-----			(OPTION 1 & 4 ONLY)		
A15	670-5503-06	B062000		CKT BOARD ASSY:GPIB INTERFACE	80009	670-5503-06
A15	-----			(OPTION 1 & 4 ONLY)		
A16	670-6135-00			CKT BOARD ASSY:GP:B ADAPTER	80009	670-6135-00
A16	-----			(OPTION 1 & 4 ONLY)		
A17	650-0104-00			PAPER CHNG ASSY:	80009	650-0104-00
A17	-----			(OPTION 36 ONLY)		
A17A1	670-5599-01	B010100	B019999	CKT BOARD ASSY:PAPER ADVANCE	80009	670-5599-01
A17A1	-----			(OPTION 36 ONLY)		
A17A1	670-5599-02	B020000	B020174	CKT BOARD ASSY:PAPER ADVANCE	80009	670-5599-02
A17A1	-----			(OPTION 36 ONLY)		
A17A1	670-5599-03	B020175		CKT BOARD ASSY:PAPER ADVANCE	80009	670-5599-03
A17A1	-----			(OPTION 36 ONLY)		
A17A2	670-5685-00			CKT BOARD ASSY:SENSOR	80009	670-5685-00
A17A2	-----			(OPTION 36 ONLY)		
A19	670-6277-02			CKT BOARD ASSY:CURRENT LOOP	80009	670-6277-02
A19	-----			(OPTION 3 ONLY)		
A20	670-7331-00			CKT BOARD ASSY:COMMUTATOR	80009	670-7331-00
A20	-----			(SEE RMPL FOR SUBPARTS)		
				A1 PROCESSOR		
A1	670-5121-00	B010100	B010109	CKT BOARD ASSY:PROCESSOR	80009	670-5121-00
A1	670-5121-01	B010110	B020199	CKT BOARD ASSY:PROCESSOR	80009	670-5121-01
A1	670-5121-02	B020200	B020544	CKT BOARD ASSY:PROCESSOR	80009	670-5121-02
A1	670-6420-00	B020545	B030623	CKT BOARD ASSY:B PROCESSOR	80009	670-6420-00
A1	670-6420-01	B030624	B039999	CKT BOARD ASSY:B PROCESSOR	80009	670-6420-01
A1	670-6420-02	B040000	B051169	CKT BOARD ASSY:B PROCESSOR	80009	670-6420-02
A1	670-6420-04	B051170	B051298	CKT BOARD ASSY:B PROCESSOR	80009	670-6420-04
A1	670-6420-05	B051299	B061999	CKT BOARD ASSY:B PROCESSOR	80009	670-6420-05
A1	670-6420-06	B062000		CKT BOARD ASSY:PROCESSOR	80009	670-6420-06
C131	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C141	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C155	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A1 PROCESSOR (CONT'D)		
C175	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C181	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C231	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C241	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C255	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C291	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C311	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C331	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C355	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C411	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C421	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C445	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C471	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C474	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C475	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C491	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C511	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C541	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C551	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C561	290-0134-00			CAP.,FXD,ELCTLT:22UF,20%,15V	56289	150D226X0015B2
C571	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C575	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C581	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C591	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C611	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C641	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C675	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C711	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C741	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C775	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C811	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C841	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C845	285-1056-00			CAP.,FXD,PLSTC:1UF,2%,50V	14752	650B1A105G
C851	283-0594-00			CAP.,FXD,MICA D:0.001UF,1%,100V	00853	D151F102F0
C875	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C881	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C891	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C901	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C911	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C941	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C971	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C975	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C981	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C982	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C985	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C991	283-0149-00			CAP.,FXD,CER DI:25PF,2%,200V	72982	865-528T2H250G
CR431	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR432	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR441	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
J13	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J13	-----			(QUANTITY OF 12)		

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
J33	131-1425-00			A1 PROCESSOR (CONT'D)		
J33	-----			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
J54	131-0608-00			(QUANTITY OF 12)		
J54	-----			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J75	131-0608-00			(QUANTITY OF 40)		
J75	-----			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J101	131-0608-00	B010100	B010120	(QUANTITY OF 34)		
J101	-----			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J101	-----			(QUANTITY OF 8)		
J101	131-1857-00	B010121		TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J101	-----			(QUANTITY OF 8)		
J102	131-0608-00	B010100	B010120	TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J102	-----			(QUANTITY OF 8)		
J102	131-1857-00	B010121		TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J102	-----			(QUANTITY OF 8)		
J192	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
J192	-----			(QUANTITY OF 2)		
J445	131-0608-00	B010100	B010120	TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J445	-----			(QUANTITY OF 9)		
J445	131-1857-00	B010121		TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J455	131-0608-00	B010100	B010120	TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J455	-----			(QUANTITY OF 2)		
J455	131-1857-00	B010121		TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J871	131-0608-00	B010100	B010120	TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J871	131-1857-00	B010121		TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J911	131-0608-00	B010100	B010120	TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J911	-----			(QUANTITY OF 2)		
J911	131-1857-00	B010121		TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J941	131-0608-00	B010100	B010120	TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J941	131-1857-00	B010121		TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J991	131-0608-00	B010100	B010120	TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J991	-----			(QUANTITY OF 2)		
J991	131-1857-00	B010121		TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
L991	108-0245-00			COIL,RF:3.9UH	76493	B6310-1
Q881	151-0457-00			TRANSISTOR:SILICON,NPN	07263	S39649
Q885	151-0457-00			TRANSISTOR:SILICON,NPN	07263	S39649
R205	307-0445-00			RES NTWK,FXD,FI:4.7K OHM,20%,(9) RES	91637	MSP10A01-472M
R301	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R321	307-0445-00			RES NTWK,FXD,FI:4.7K OHM,20%,(9) RES	91637	MSP10A01-472M
R421	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R422	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R423	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R431	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R661	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R665	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R671	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R675	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R745	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R761	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R785	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A1 PROCESSOR (CONT'D)						
R821	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R845	321-0328-00			RES.,FXD,FILM:25.5K OHM,1%,0.125W	91637	MFF1816G25501F
R851	315-0123-00			RES.,FXD,CMPSN:12K OHM,5%,0.25W	01121	CB1235
R871	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R875	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R883	315-0220-00			RES.,FXD,CMPSN:22 OHM,5%,0.25W	01121	CB2205
R884	315-0220-00			RES.,FXD,CMPSN:22 OHM,5%,0.25W	01121	CB2205
R885	315-0122-00			RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
R891	315-0122-00			RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
R945	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R946	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R951	315-0331-00	B010100	B051399	RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R951	315-0271-00	B051400		RES.,FXD,CMPSN:270 OHM,5%,0.25W	01121	CB2715
R961	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R971	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R972	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R973	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R974	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R975	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R985	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
R991	315-0122-00			RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
U101	156-0324-02			MICROCIRCUIT,DI:8 INPUT DATA SEL MULT,SEL	80009	156-0324-02
U111	156-0403-02			MICROCIRCUIT,DI:HEX INVERTER,SCRN	01295	SN74S05
U121	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U121	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U131	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U131	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U135	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U135	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U141	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U141	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U145	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U145	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U151	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U151	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U155	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U155	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U161	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U161	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U171	160-0240-00	B010100	B030623	MICROCIRCUIT,DI:4096 X 8 ROM,CUSTOM MASK	80009	160-0240-00
U171	160-0240-00	B040000		MICROCIRCUIT,DI:4096 X 8 ROM,CUSTOM MASK	80009	160-0240-00
U175	160-0241-00	B010100	B051169	MICROCIRCUIT,DI:4096 X 8 ROM,CUSTOM MASK	80009	160-0241-00
U175	160-0241-02	B062000		MICROCIRCUIT,DI:4096 X 8 EPROM,PRGM	80009	160-0241-02
U181	160-0242-01	B010100	B051169	MICROCIRCUIT,DI:4096 X 8 ROM,CUSTOM MASK	80009	160-0242-01
U181	160-0242-02	B062000		MICROCIRCUIT,DI:4096 X 8 EPROM,PRGM	80009	160-0242-02
U191	160-0280-01	B010100	B061999	MICROCIRCUIT,DI:4096 X 8 ROM,CUSTOM MASK	80009	160-0280-01
U191	160-0280-02	B062000		MICROCIRCUIT,DI:4096 X 8 EPROM,PRGM	80009	160-0280-02
U201	156-0865-02			MICROCIRCUIT,DI:OCTAL D-TYPE FF W/CLEAR	01295	SN74LS273NP3
U211	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U221	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U221	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A1 PROCESSOR (CONT'D)						
U231	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U231	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U235	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U235	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U241	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U241	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U245	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U245	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U251	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U251	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U255	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U255	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U261	156-1127-01	B010100	B051298	MICROCIRCUIT,DI:1024 X 4 STATIC RAM	80009	156-1127-01
U261	156-1461-01	B051299		MICROCIRCUIT,DI:1024 X 4 SCRAM,SCRN	80009	156-1461-01
U271	160-0236-00			MICROCIRCUIT,DI:4096 X 8 ROM,CUSTOM MASK	80009	160-0236-00
U275	160-0237-01			MICROCIRCUIT,DI:4096 X 8 ROM,CUSTOM MASK	80009	160-0237-01
U281	160-0238-01	B010100	B061999	MICROCIRCUIT,DI:4096 X 8 ROM,CUSTOM MASK	80009	160-0238-01
U281	160-0238-02	B062000		MICROCIRCUIT,DI:4096 X 8 EPROM,PRGM	80009	160-0238-02
U291	160-0239-00	B010100	B030623	MICROCIRCUIT,DI:4096 X 8 ROM,CUSTOM MASK	80009	160-0239-00
U291	160-0239-00	B040000	B051169	MICROCIRCUIT,DI:4096 X 8 ROM,CUSTOM MASK	80009	160-0239-00
U291	160-0239-03	B062000		MICROCIRCUIT,DI:4096 X 8 EPROM,PRGM	80009	160-0239-02
U301	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U311	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U331	156-0928-02			MICROCIRCUIT,DI:QUAD BUS XCVR,SCRN	01295	SN74LS243/NP3 OR
U335	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3
U341	156-0928-02			MICROCIRCUIT,DI:QUAD BUS XCVR,SCRN	01295	SN74LS243/NP3 OR
U345	156-0887-00			MICROCIRCUIT,DI:256 X 4 RAM	34371	HMI-6562-9
U351	156-0887-00			MICROCIRCUIT,DI:256 X 4 RAM	34371	HMI-6562-9
U351	-----			(OPTION 37 ONLY)		
U355	156-0887-00			MICROCIRCUIT,DI:256 X 4 RAM	34371	HMI-6562-9
U355	-----			(OPTION 37 ONLY)		
U361	156-0887-00			MICROCIRCUIT,DI:256 X 4 RAM	34371	HMI-6562-9
U361	-----			(OPTION 37 ONLY)		
U401	156-0479-02			MICROCIRCUIT,DI:QUAD 2-INP OR GATE	01295	SN74LS32NP3
U411	156-0390-02			MICROCIRCUIT,DI:DUAL 4/2 LINE DCDR/DEMUX	01295	SN74LS155
U421	156-0538-02			MICROCIRCUIT,DI:DUAL 4-INP NAND GATE	27014	DM74LS22
U431	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE	27014	DM74LS10N
U441	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE	27014	DM74LS10, ¹
U445	156-0718-03			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE	01295	SN74LS27
U451	156-0679-01			MICROCIRCUIT,DI:4 BIT BINARY ADDER,BURN-IN	04713	SN74LS283NDS
U461	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3
U471	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U475	160-0395-01	B010100	B020549	MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0395-01
U475	-----			(OPTION 31 ONLY)		
U475	160-0395-02	B020550	B051169	MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0395-02
U475	-----			(OPTION 31 ONLY)		
U475	160-0395-03	B051170	B061999	MICROCIRCUIT,DI:1024 X 8 EPROM,PRGM	80009	160-0395-03
U475	-----			(OPTION 31 ONLY)		
U475	160-0395-04	B062000		MICROCIRCUIT,DI:1024 X 8 EPROM,PRGM	80009	160-0395-04
U475	-----			(OPTION 31 ONLY)		

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A1 PROCESSOR (CONT'D)						
U481	160-0185-01	B010100	B020549	MICROCIRCUIT,DI:1024 X 8 STATIC ROM,PRGM	80009	160-0185-01
U481	-----			(OPTION 31 ONLY)		
U481	160-0185-02	B020550	B061999	MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0185-02
U481	-----			(OPTION 31 ONLY)		
U481	160-0185-03	B062000		MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0185-03
U481	-----			(OPTION 31 ONLY)		
U491	160-0243-00			MICROCIRCUIT,DI:2048 X 8 ROM,CUSTOM MASK	80009	160-0243-00
U501	156-0391-02			MICROCIRCUIT,DI:HEX LATCH W/CLEAR	01295	SN74LS174
U511	156-0387-02			MICROCIRCUIT,DI:DUAL J-K FF,BURN IN	01295	SN74LS73
U521	156-0383-02			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE	01295	SN74LS02
U531	156-0679-01			MICROCIRCUIT,DI:4 BIT BINARY ADDER,BURN-IN	04713	SN74LS283NDS
U541	156-0679-01			MICROCIRCUIT,DI:4 BIT BINARY ADDER,BURN-IN	04713	SN74LS283NDS
U545	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3
U551	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U561	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U571	160-0724-00			MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0724-00
U571	-----			(OPTION 32 ONLY)		
U575	160-0395-01			MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0395-01
U575	-----			(OPTION 31 ONLY)		
U575	160-0184-00			MICROCIRCUIT,DI:1024 X 8 STATIC PROM	80009	160-0184-00
U575	-----			(OPTION 32 ONLY)		
U581	160-0183-00			MICROCIRCUIT,DI:1024 X 8 STATIC PROM	80009	160-0183-00
U581	-----			(OPTION 32 ONLY)		
U591	160-0182-00	B010100	B061999	MICROCIRCUIT,DI:1024 X 8 STATIC PROM	80009	160-0182-00
U591	-----			(OPTION 32 ONLY)		
U591	160-0182-01	B062000		MICROCIRCUIT,DI:1024 X 8 EPROM,PRGM	80009	160-0182-01
U591	-----			(OPTION 32 ONLY)		
U601	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U611	156-0948-02			MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U621	156-0117-00			MICROCIRCUIT,DI:SYNC 4-BIT BINARY COUNTER	80009	156-0117-00
U631	156-0966-01			MICROCIRCUIT,DI:DUAL 5 INP NOR GATES	80009	156-0966-01
U641	156-0323-02			MICROCIRCUIT,DI:HEX INVERTER,BURN-IN	01295	SN74S04
U645	156-0718-03			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE	01295	SN74LS27
U651	156-0381-02			MICROCIRCUIT,DI:QUAD 2-INP EXCL OR GATE	01295	SN74LS86
U661	156-0383-02			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE	01295	SN74LS02
U671	156-0464-02			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	01295	SN74LS20
U675	156-0928-02			MICROCIRCUIT,DI:QUAD BUS XCVR,SCRN	01295	SN74LS243(NP3 OR
U681	156-0426-00	B010100	B020544	MICROCIRCUIT,DI:MICROPROCESSOR	04713	MC6800S
U681	156-0426-04			MICROCIRCUIT,DI:MICROPROCESSOR	80009	156-0426-04
U685	156-0464-02			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	01295	SN74LS20
U691	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U701	156-0404-01			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	80009	156-0404-01
U711	156-0383-02			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE	01295	SN74LS02
U721	156-0875-02			MICROCIRCUIT,DI:DUAL 2-W/2 INP AOI GATES	01295	SN74LS51
U731	156-0690-03			MICROCIRCUIT,DI:QUAD 2 INP NOR GATE,BURN IN	01295	SN74S02
U741	156-0391-02			MICROCIRCUIT,DI:HEX LATCH W/CLEAR	01295	SN74LS174
U745	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U751	156-0117-00			MICROCIRCUIT,DI:SYNC 4-BIT BINARY COUNTER	80009	156-0117-00
U761	156-0696-02			MICROCIRCUIT,DI:QUAD CMPLM-OUTPUT & NAND	01295	SN74265J4
U771	156-0331-03			MICROCIRCUIT,DI:DUAL D TYPE POS EDGE TRIG	80009	156-0331-03
U775	156-0928-02			MICROCIRCUIT,DI:QUAD BUS XCVR,SCRN	01295	SN74LS243(NP3 OR
U785	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE	27014	DM74LS10N

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No.		Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont			
				A1 PROCESSOR (CONT'D)		
U791	156-0955-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	04713	SN74LS241
U801	156-0404-01			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	80009	156-0404-01
U811	156-0703-02			MICROCIRCUIT,DI:4-2-3-2 INPUT & OR GATE	07263	74S64
U821	156-0180-04			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE	01295	SN74S00NP3
U831	156-0948-02			MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U841	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U845	156-0405-03			MICROCIRCUIT,DI:DUAL RETRIG MONOSTABLE MV	07263	9602
U851	156-0383-02			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE	01295	SN74LS02
U861	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE	27014	DM74LS10N
U871	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U875	156-0966-01			MICROCIRCUIT,DI:DUAL 5 INP NOR GATES	80009	156-0966-01
U881	156-0479-02			MICROCIRCUIT,DI:QUAD 2-INP OR GATE	01295	SN74LS32NP3
U885	156-0424-02			MICROCIRCUIT,DI:QUAD 2 INP NOR BFR,SCRN	18324	N7433(NB OR FB)
U891	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U901	156-0948-02			MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U921	156-0465-02	B010100	B020544	MICROCIRCUIT,DI:8 INP NAND GATE	01295	SN74LS30NP3
U931	156-0321-02			MICROCIRCUIT,DI:TRIPLE 3 INP NAND GATE	01295	SN74S10
U941	156-0117-00			MICROCIRCUIT,DI:SYNC 4-BIT BINARY COUNTER	80009	156-0117-00
U945	156-0418-01			MICROCIRCUIT,DI:8 INPUT NAND GATE,SCRN	01295	SN74S30
U951	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE	27014	DM74LS10N
U961	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U971	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U975	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U981	156-0383-02			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE	01295	SN74LS02
U985	156-0966-01			MICROCIRCUIT,DI:DUAL 5 INP NOR GATES	80009	156-0966-01
U991	156-0451-02			MICROCIRCUIT,DI:QUAD 2-INP NOR BFR,SCRN	01295	SN74128
Y991	158-0135-00			XTAL UNIT,QTZ:14.7456 MHZ,0.01%,SERIES	01807	OBD

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix	Serial/Model No.		Name & Description	Mfr	Mfr Part Number
	Part No.	Eff	Dscont		Code	
A2	670-5221-01	B010100	B051799	A2 PARAMETER ENTRY		
A2	670-5221-02	B051800		CKT BOARD ASSY:PARAMETER ENTRY	80009	670-5221-01
C141	281-0775-00			CKT BOARD ASSY:PARAMETER ENTRY	80009	670-5221-02
C221	285-0889-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
				CAP.,FXD,PLSTC:0.0027UF,5%,100V	84411	TEK180-27251
C261	290-0808-00			CAP.,FXD,ELCTLT:2.7UF,10%,20V	56289	162D275X9020CD2
C271	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
DS0	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
DS1	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
DS2	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
DS3	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
DS4	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
DS5	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
DS6	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
DS7	150-1031-00			LT EMITTING DIO:RED,650NM,40MA MAX	53184	XC209R
DS301	150-0057-01			LAMP,INCAND:5V,0.115A,WIRE LD,SEL	76854	17AS15
DS311	150-1050-00			LT EMITTING DIO:RED	50579	RL-T1
Q307	151-0629-00			TRANSISTOR:SILICON,NPN	07263	FPT110
Q309	151-0629-00			TRANSISTOR:SILICON,NPN	07263	FPT110
Q311	151-0629-00			TRANSISTOR:SILICON,NPN	07263	FPT110
R111	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R112	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R113	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R115	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R117	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R119	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R201	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
R205	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R209	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R211	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R221	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R241	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R245	315-0821-00			RES.,FXD,CMPSN:820 OHM,5%,0.25W	01121	CB8215
R261	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R307	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R309	315-0754-00			RES.,FXD,CMPSN:750K OHM,5%,0.25W	01121	CB7545
R311	315-0821-00			RES.,FXD,CMPSN:820 OHM,5%,0.25W	01121	CB8215
R312	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R313	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R314	315-0754-00			RES.,FXD,CMPSN:750K OHM,5%,0.25W	01121	CB7545
R315	315-0303-00	B010100	B051799	RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R315	315-0153-00	B051800		RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
R316	315-0303-00	B010100	B051799	RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R316	315-0153-00	B051800		RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
R317	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R318	315-0754-00			RES.,FXD,CMPSN:750K OHM,5%,0.25W	01121	CB7545
R319	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R321	307-0548-00			RES,NTWK,FXD,FI:9.390 OHM,5%,0.15W	91637	MSP10A01391J
R371	307-0503-00			RES NTWK,THK FI:(9)510 OHM,20%,0.125W	91637	MSP10A01-511G

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix	Serial/Model No.		Name & Description	Mfr	Mfr Part Number
	Part No.	Eff	Dscont		Code	
				A2 PARAMETER ENTRY (CONT'D)		
U111	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U121	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U131	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE	27014	DM74LS10N
U141	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U211	156-0411-00	B010100	B051633	MICROCIRCUIT,LI:QUAD-COMP,SGL SUPPLY	27014	LM339N
U211	156-0411-02	B051634		MICROCIRCUIT,LI:QUAD COMPARATOR,SEL	04713	LM339JDS
U221	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U231	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U241	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U251	156-0982-00	B010100	B051633	MICROCIRCUIT,DI:OCTAL D EDGE TRIG F-F	01295	SN74LS374
U251	156-0982-03			MICROCIRCUIT,DI:OCTAL-D-EDGE FF,SCRN	07263	74LS374
U261	156-0081-02			MICROCIRCUIT,DI:RETRIG MONOSTABLE MV,SCRN	80009	156-0081-02
U271	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U361	156-0465-02			MICROCIRCUIT,DI:8 INP NAND GATE	01295	SN74LS30NP3

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A3	670-6114-00	B010100	B020359	A3 ROM PATCH B CKT BOARD ASSY:ROM PATCH B	80009	670-6114-00
A3	670-6114-01	B020360	B020549	CKT BOARD ASSY:ROM PATCH B	80009	670-6114-01
A3	670-6114-02	B020550	B051169	CKT BOARD ASSY:ROM PATCH B	80009	670-6114-02
A3	670-6114-03	B051170	B061999	CKT BOARD ASSY:ROM PATCH B	80009	670-6114-03
A3	670-6114-04	B062000	B069999	CKT BOARD ASSY:ROM PATCH B	80009	670-6114-04
A3	670-6114-05	B070000		CKT BOARD ASSY:ROM PATCH B	80009	670-6114-05
C115	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C125	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C135	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C214	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C215	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C225	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C304	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C305	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C405	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C414	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C415	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C424	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C425	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C426	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C435	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C445	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
R144	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R145	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R404	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
U145	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U305	156-0541-02			MICROCIRCUIT,DI:DUAL 2 TO 4 LINE DCDR	01295	SN74LS139NP3
U315	160-0273-00	B010100	B020549	MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0273-00
U315	160-0273-01	B020550	B051169	MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0273-01
U315	160-0273-02	B051170	B061999	MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0273-02
U315	160-0273-04	B062000				
U325	160-0274-00	B020550	B051169	MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0274-00
U325	160-0274-01	B051170	B061999	MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0274-01
U325	160-0274-03	B062000	B069999	MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0274-03
U325	160-0274-04	B070000		MICROCIRCUIT,DI:1024 X 8 EPROM,PROGRAMMED	80009	160-0274-04
U335	160-0281-00	B010100	B020549	MICROCIRCUIT,DI:FPLA W/3 STATE OUT,PRGM	80009	160-0281-00
U335	160-0281-01	B020550	B051169	MICROCIRCUIT,DI:FPLA W/3 STATE OUT,PRGM	80009	160-0281-01
U335	160-0281-02	B051170	B061999	MICROCIRCUIT,DI:FPLA W/3 STATE OUT,PRGM	80009	160-0281-02
U335	160-0281-04	B062000	B069999	MICROCIRCUIT,DI:FPLA PROGRAMMED	80009	160-0281-04
U335	160-0281-05	B070000		MICROCIRCUIT,DI:16X48X8 FPLA,PRGM	80009	160-0281-05
U345	160-0282-00	B010100	B020549	MICROCIRCUIT,DI:FPLA W/3 STATE OUT,PRGM	80009	160-0282-00
U345	160-0282-01	B020550	B051169	MICROCIRCUIT,DI:FPLA W/3 STATE OUT,PRGM	80009	160-0282-01
U345	160-0282-02	B051170	B061999	MICROCIRCUIT,DI:FPLA W/3 STATE OUT,PRGM	80009	160-0282-02
U345	160-0282-02	B062000		MICROCIRCUIT,DI:FPLA W/3 STATE OUT,PRGM	80009	160-0282-02

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix	Serial/Model No.		Name & Description	Mfr Code	Mfr Part Number
	Part No.	Eff	Dscont			
A4 RS232 INTERFACE						
A4	670-5579-00	B010100	B020114	CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-00
A4	670-5579-01	B020115	B020354	CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-01
A4	670-5579-02	B020355	B020449	CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-02
A4	670-5579-03	B020450	B051169	CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-03
A4	670-5579-04	B051170	B051319	CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-04
A4	670-5579-05	B051320	B061999	CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-05
A4	670-5579-06	B062000		CKT BOARD ASSY:RS232 INTERFACE	80009	670-5579-06
A4	670-6218-00			CKT BOARD ASSY:SERIAL INTERFACE MODULE	80009	670-6218-00
C167	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C171	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C177	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C187	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C191	290-0134-00			CAP.,FXD,ELCTLT:22UF,20%,15V	56289	150D226X0015B2
C193	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C195	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C197	290-0134-00			CAP.,FXD,ELCTLT:22UF,20%,15V	56289	150D226X0015B2
C277	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C297	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C477	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C671	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C691	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C731	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C733	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C741	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C761	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C837	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C841	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C861	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C877	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C901	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C935	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C937	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C951	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C961	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C971	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C991	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
J101	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J101	---			(QUANTITY OF 26)		
J701A	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150° L,STR OF 36	22526	65521-136
J701B	131-1426-00			CONTACT SET,ELE:R ANGLE,0.250 L,STRIP OF 36	22526	65524-136
K811	148-0119-00			RELAY,ARMATURE:6 FORM C,12V,COIL,1A AT 12V	77342	T10-E2-Z6-12
R187	307-0502-00			RES NTWK,FXD,FI:(9) 1.8K OHM,20%,0.125W	91637	MSP10A01-182M
R477	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R731	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R781	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R791	307-0445-00			RES NTWK,FXD,FI:4.7K OHM,20%,(9) RES	91637	MSP10A01-472M
R837	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R851	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A4 RS232 INTERFACE (CONT'D)						
R871	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R877	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R881	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R941	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R942	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R943	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R949	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R950	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R960	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R961	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
U171	160-0306-00	B010100	B051169	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0306-00
U171	160-0306-01	B051170	B051319	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0306-01
U171	160-0306-02	B051320	B061999	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0306-02
U181	160-0307-00	B010100	B051169	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0307-00
U181	160-0307-01	B051170	B061999	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0307-01
U181	160-0307-03	B062000		MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0307-03
U191	156-1111-02			MICROCIRCUIT,DI:OCTAL BUS TRANSCEIVERS	01295	SN74LS245JP3
U271	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U277	156-0718-03			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE	01295	SN74LS27
U391	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U471	156-0718-03			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE	01295	SN74LS27
U477	156-0479-02			MICROCIRCUIT,DI:QUAD 2-INP OR GATE	01295	SN74LS32NP3
U481	156-0464-02			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	01295	SN74LS20
U671	156-0690-03			MICROCIRCUIT,DI:QUAD 2 INP NOR GATE,BURN IN	01295	SN74S02
U677	156-0948-02			MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U681	156-0541-02			MICROCIRCUIT,DI:DUAL 2 TO 4 LINE DCDR	01295	SN74LS139NP3
U691	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U731	156-0879-01			MICROCIRCUIT,DI:QUAD LINE DRIVER,SCRN	80009	156-0879-01
U737	156-0138-02			MICROCIRCUIT,DI:CORE LINE RECEIVER,SCREENED	01295	SN75154(NP3 OR J
U741	156-0658-00			MICROCIRCUIT,DI:ASYNCHRONOUS COMM INT ADPT	07263	F6850PC OR DC
U751	156-0865-02			MICROCIRCUIT,DI:OCTAL D-TYPE FF W/CLEAR	01295	SN74LS273NP3
U761	156-0865-02			MICROCIRCUIT,DI:OCTAL D-TYPE FF W/CLEAR	01295	SN74LS273NP3
U771	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U777	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U781	156-0739-02			MICROCIRCUIT,DI:QUAD 2 INP OR GATE,SCRN	01295	SN74S32
U831	156-0530-02			MICROCIRCUIT,DI:QUAD 2-INP MUX,SCRN	01295	SN74LS157P3
U837	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U841	156-0390-02			MICROCIRCUIT,DI:DUAL 4/2 LINE DCDR/DEMUX	01295	SN74LS155
U851	156-0530-02			MICROCIRCUIT,DI:QUAD 2-INP MUX,SCRN	01295	SN74LS157P3
U861	156-0852-02			MICROCIRCUIT,DI:HEX DRVR W/3 STATE INP	80009	156-0852-02
U871	156-0404-01			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	80009	156-0404-01
U877	156-0948-02			MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U881	156-0844-02			MICROCIRCUIT,DI:SYN 4 BIT CNTR,SCRN	01295	SN74LS161A
U891	156-0470-02			MICROCIRCUIT,DI:8 INP DATA SEL W/3 STATE	01295	SN74LS251
U911	156-0138-02			MICROCIRCUIT,DI:CORE LINE RECEIVER,SCREENED	01295	SN75154(NP3 OR J
U917	156-0480-02			MICROCIRCUIT,DI:QUAD 2 INP & GATE	01295	SN74LS08NP3
U931	156-0479-02			MICROCIRCUIT,DI:QUAD 2-INP OR GATE	01295	SN74LS32NP3
U937	156-0383-02			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE	01295	SN74LS02
U941	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U951	156-0850-02			MICROCIRCUIT,DI:PRGM BIT RATE GEN SCRN	07263	4702BDCQR
U961	156-0114-00			MICROCIRCUIT,DI:DIVIDE-BY-12,COUNTER	80009	156-0114-00

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix	Serial/Model No.		Name & Description	Mfr	Mfr Part Number
	Part No.	Eff	Dscont		Code	
U971	156-0481-02			MICROCIRCUIT,DI:TRIPLE 3 INP & GATE	27014	DM74LS11NA+
U977	156-0321-02			MICROCIRCUIT,DI:TRIPLE 3 INP NAND GATE	01295	SN74S10
U981	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U991	156-0403-02			MICROCIRCUIT,DI:HEX INVERTER,SCRN	01295	SN74S05

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff Dscnt	Name & Description	Mfr Code	Mfr Part Number
A4	670-6218-00		A4 RS232 SERIAL INTERFACE		
C45	281-0773-00		CKT BOARD ASSY:SERIAL INTERFACE MODULE	80009	670-6218-00
C60	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C90	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C91	290-0114-00		CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C92	290-0134-00		CAP.,FXD,ELCTLT:22UF,20%,15V	56289	150D226X0015B2
C93	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C95	290-0134-00		CAP.,FXD,ELCTLT:22UF,20%,15V	56289	150D226X0015B2
C115	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C125	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C135	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C175	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C193	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C215	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C225	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C235	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C285	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C325	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C335	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C375	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C415	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C425	281-0773-00		CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
J1	131-0608-00		TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J1	----		(QUANTITY OF 34)		
J2	131-0608-00		TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J2	----		(QUANTITY OF 2)		
J3	131-0608-00		TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J3	----		(QUANTITY OF 5)		
R65	315-0511-00		RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R75	315-0511-00		RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R140	307-0503-00		RES NTWK,THK FI:(9)510 OHM,20%,0.125W	91637	MSP10A01-511G
R275	307-0503-00		RES NTWK,THK FI:(9)510 OHM,20%,0.125W	91637	MSP10A01-511G
R315	307-0503-00		RES NTWK,THK FI:(9)510 OHM,20%,0.125W	91637	MSP10A01-511G
R445	315-0511-00		RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
TP180	214-0579-00		TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP220	214-0579-00		TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP228	214-0579-00		TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP321	214-0579-00		TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP366	214-0579-00		TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP370	214-0579-00		TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP385	214-0579-00		TERM,TEST POINT:BRS CD PL	80009	214-0579-00
U25	156-0388-03		MICROCIRCUIT,DI:DUAL D FLIP FLOP	07263	74LS74A
U35	156-1108-02		MICROCIRCUIT,DI:DIVIDE BY 12 COUNTER	01295	SN74LS92
U45	156-0850-02		MICROCIRCUIT,DI:PRGM BIT RATE	07263	4702BDCQR
U55	156-0383-02		MICROCIRCUIT,DI:QUAD 2-INP MUX,SCRN	01295	SN74LS05
U60	156-0388-03		MICROCIRCUIT,DI:DUAL D FLIP FLOP	07263	74LS74A
U65	156-0530-02		REPLACED BY:156-0530-02		

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A4 RS232 SERIAL INTERFACE (CONT'D)		
U75	156-0718-03			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE	01295	SN74LS27
U85	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3
U115	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U125	156-0321-02			MICROCIRCUIT,DI:TRIPLE 3 INP NAND GATE	01295	SN74S10
U135	156-0948-02			MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U145	156-0530-02			MICROCIRCUIT,DI:QUAD 2-INP MUX,SCRN	01295	SN74LS157P3
U155	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U165	160-0307-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0307-00
U175	160-0306-00			MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0306-00
U185	156-0473-02			MICROCIRCUIT,DI:DUAL 5-INP NAND GATE,SCRN	27014	DM8092N/A+
U215	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U225	156-1198-01			MICROCIRCUIT,DI:SYNCHRONOUS 4 BIT CNTR	01295	SN74S163J4
U235	156-0694-02			MICROCIRCUIT,DI:DCDR/3 LINE TO 8 LINE,SCRN	07263	74S138DCQR
U245	156-0390-02			MICROCIRCUIT,DI:DUAL 4/2 LINE DCDR/DEMUX	01295	SN74LS155
U255	156-0865-02			MICROCIRCUIT,DI:OCTAL D-TYPE FF W/CLEAR	01295	SN74LS273NP3
U265	156-0658-00			MICROCIRCUIT,DI:ASYNCHRONOUS COMM INT ADPT	07263	F6850PC OR DC
U285	156-1111-02			MICROCIRCUIT,DI:OCTAL BUS TRANSCEIVERS	01295	SN74LS245JP3
U325	156-0321-02			MICROCIRCUIT,DI:TRIPLE 3 INP NAND GATE	01295	SN74S10
U335	156-0404-01			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	80009	156-0404-01
U345	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U355	156-0391-02			MICROCIRCUIT,DI:HEX LATCH W/CLEAR	01295	SN74LS174
U365	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U375	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U385	156-0141-02			MICROCIRCUIT,DI:DUAL 2 TO 4 LINE DCDR/DEMUX	80009	156-0141-02
U415	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U425	156-0321-02			MICROCIRCUIT,DI:TRIPLE 3 INP NAND GATE	01295	SN74S10
U445	156-0530-02			MICROCIRCUIT,DI:QUAD 2-INP MUX,SCRN	01295	SN74LS157P3

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A5	670-5588-01			A5 RS232 ADAPTER	80009	670-5588-01
C9	281-0775-00			CKT BOARD ASSY:RS232 ADAPTER	04222	SA205E104MAA
J1	131-0608-00			CAP.,FXD,CER DI:0.1UF,20%,50V	22526	47357
				TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD		
J1	-----			(QUANTITY OF 14)		
J2	131-0971-00			CONN,RCPT,ELEC:CKT BD MT,25 CONT,FEMALE	71468	DB25-SH
J3	131-0813-00			CONN,RCPT,ELEC:CKT BD,25 CONT,FEM	80009	131-0813-00
R1	315-0682-00			RES.,FXD,CMPSN:6.8K OHM,5%,0.25W	01121	CB6825
R2	315-0682-00			RES.,FXD,CMPSN:6.8K OHM,5%,0.25W	01121	CB6825
R3	315-0682-00			RES.,FXD,CMPSN:6.8K OHM,5%,0.25W	01121	CB6825
R5	131-0566-00			BUS CONDUCTOR:DUMMY RES,2.375,22 AWG	57668	JWW-0200E0
R6	315-0682-00			RES.,FXD,CMPSN:6.8K OHM,5%,0.25W	01121	CB6825
R7	131-0566-00			BUS CONDUCTOR:DUMMY RES,2.375,22 AWG	57668	JWW-0200E0
R10	315-0682-00			RES.,FXD,CMPSN:6.8K OHM,5%,0.25W	01121	CB6825

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix	Serial/Model No.		Name & Description	Mfr	Mfr Part Number
	Part No.	Eff	Dscont		Code	
				A6 VECTOR GENERATOR		
A6	670-5237-00	B010100	B019999	CKT BOARD ASSY:VECTOR GENERATOR	80009	670-5237-00
A6	670-5237-01	B020000	B020254	CKT BOARD ASSY:VECTOR GENERATOR	80009	670-5237-01
A6	670-5237-02	B020255	B051169	CKT BOARD ASSY:VECTOR GENERATOR	80009	670-5237-02
A6	670-5237-03	B051170		CKT BOARD ASSY:VECTOR GENERATOR	80009	670-5237-03
C10	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C20	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C35	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C50	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C65	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C80	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C85	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C90	290-0114-00			CAP.,FXD,ELCTL:47UF,20%,6V	56289	150D476X0006B2
C95	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C110	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C120	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C135	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C140	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C150	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C180	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C185	290-0134-00			CAP.,FXD,ELCTL:22UF,20%,15V	56289	150D226X0015B2
C190	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C210	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C220	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C235	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C250	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C265	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C275	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C285	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C287	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C290	290-0134-00			CAP.,FXD,ELCTL:22UF,20%,15V	56289	150D226X0015B2
C305	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C315	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C320	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C345	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C350	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C367	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C377	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C450	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C465	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C475	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C490	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C505	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C520	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C545	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C550	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C565	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C575	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C590	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
J4	131-1857-00			TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J4	-----			(QUANTITY OF 2)		
J5	131-1857-00			TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A6 VECTOR GENERATOR (CONT'D)		
J26	131-1857-00			TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J34	131-1857-00			TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J50	131-1857-00			TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J50	-----			(QUANTITY OF 2)		
Q335	151-0334-00			TRANSISTOR:SILICON,NPN	04713	SJE914
R30	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R350	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R420	315-0470-00			RES.,FXD,CMPSN:47 OHM,5%,0.25W	01121	CB4705
R421	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R422	315-0470-00			RES.,FXD,CMPSN:47 OHM,5%,0.25W	01121	CB4705
R423	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R585	307-0349-00			RES.,FXD,FILM:13 RES. NTKW,1K OHM,2%,0.12	73138	899-1-R1K
U5	156-0331-03			MICROCIRCUIT,DI:DUAL D TYPE POS EDGE TRIG	80009	156-0331-03
U10	156-0718-03			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE	01295	SN74LS27
U15	156-0180-04			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE	01295	SN74S00NP3
U20	156-0141-02			MICROCIRCUIT,DI:DUAL 2 TO 4 LINE DCDR/DEMUX	80009	156-0141-02
U25	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U30	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U35	156-1059-01			MICROCIRCUIT,DI:DUAL J-K EDGE TRIGGERED	01295	SN74LS109A
U40	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U45	156-1059-01			MICROCIRCUIT,DI:DUAL J-K EDGE TRIGGERED	01295	SN74LS109A
U50	156-0966-01			MICROCIRCUIT,DI:DUAL 5 INP NOR GATES	80009	156-0966-01
U55	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U60	156-0966-01			MICROCIRCUIT,DI:DUAL 5 INP NOR GATES	80009	156-0966-01
U65	156-0464-02			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	01295	SN74LS20
U70	156-0304-02			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	01295	SN74S20
U75	156-0180-04			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE	01295	SN74S00NP3
U80	156-0404-01			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	80009	156-0404-01
U85	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE	27014	DM74LS10N
U90	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U110	156-0852-02			MICROCIRCUIT,DI:HEX DRVR W/3 STATE INP	80009	156-0852-02
U115	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U120	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U125	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U130	156-0784-02			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER	27014	DM74LS163ANA+
U135	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U140	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U145	156-0390-02			MICROCIRCUIT,DI:DUAL 4/2 LINE DCDR/DEMUX	01295	SN74LS155
U150	156-0459-02			MICROCIRCUIT,DI:QUAD 2 INPUT & GATE,BURN	01295	SN74S08
U155	156-0392-01	B010100	B051633	MICROCIRCUIT,DI:QUAD LATCH W/CLEAR	34335	AM25LS175
U155	156-0392-03	B051634		MICROCIRCUIT,DI:QUAD LATCH W/CLEAR	01295	SN74S175NP3
U160	156-0718-03			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE	01295	SN74LS27
U165	156-0479-02			MICROCIRCUIT,DI:QUAD 2-INP OR GATE	01295	SN74LS32NP3
U170	156-0948-02			MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U175	156-0948-02			MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U180	156-0404-01			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	80009	156-0404-01
U185	156-0383-02			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE	01295	SN74LS02
U190	156-0914-02			MICROCIRCUIT,DI:OCT ST BFR W/3 STATE OUT	01295	SN74LS240
U210	156-0480-02			MICROCIRCUIT,DI:QUAD 2 INP & GATE	01295	SN74LS08NP3

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A6 VECTOR GENERATOR (CONT'D)						
U215	156-0690-03			MICROCIRCUIT,DI:QUAD 2 INP NOR GATE,BURN IN	01295	SN74S02
U220	156-0966-01			MICROCIRCUIT,DI:DUAL 5 INP NOR GATES	80009	156-0966-01
U225	156-0323-02			MICROCIRCUIT,DI:HEX INVERTER,BURN-IN	01295	SN74S04
U230	156-0386-02			MICROCIRCUIT,DI:TRIPLE 3-INP NAND GATE	27014	DM74LS10N
U235	156-0479-02			MICROCIRCUIT,DI:QUAD 2-INP OR GATE	01295	SN74LS32NP3
U240	156-0693-02			MICROCIRCUIT,DI:DECODER/DEMULTIPLEXER	27014	DM74S139
U245	156-0390-02			MICROCIRCUIT,DI:DUAL 4/2 LINE DCDR/DEMUX	01295	SN74LS155
U250	156-0392-01	B010100	B051633	MICROCIRCUIT,DI:QUAD LATCH W/CLEAR	34335	AM25LS175
U250	156-0392-03	B051634		MICROCIRCUIT,DI:QUAD LATCH W/CLEAR	01295	SN74S175NP3
U260	156-0646-02			MICROCIRCUIT,DI:4 BIT BINARY COUNTER	01295	SN74LS93
U265	156-0646-02			MICROCIRCUIT,DI:4 BIT BINARY COUNTER	01295	SN74LS93
U270	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U275	156-0982-02	B010100	B051633	MICROCIRCUIT,DI:OCTAL D EDGE TRIG F-F	80009	156-0982-02
U275	156-0982-03	B051634		MICROCIRCUIT,DI:OCTAL-D-EDGE FF,SCRN	07263	74LS374
U280	156-0982-02	B010100	B051633	MICROCIRCUIT,DI:OCTAL D EDGE TRIG F-F	80009	156-0982-02
U280	156-0982-03	B051634		MICROCIRCUIT,DI:OCTAL-D-EDGE FF,SCRN	07263	74LS374
U285	156-0982-02	B010100	B051633	MICROCIRCUIT,DI:OCTAL D EDGE TRIG F-F	80009	156-0982-02
U285	156-0982-03	B051634		MICROCIRCUIT,DI:OCTAL-D-EDGE FF,SCRN	07263	74LS374
U290	156-0465-02			MICROCIRCUIT,DI:8 INP NAND GATE	01295	SN74LS30NP3
U310	160-0272-00	B010100	B050169	MICROCIRCUIT,DI:1024 X 8 PROM,PROGRAMMED	80009	160-0272-00
U310	160-0272-01	B050170		MICROCIRCUIT,DI:1024 X 8 PROM,PROGRAMMED	80009	160-0272-01
U330	156-1164-00			MICROCIRCUIT,DI:BIPOLAR MICROPROCESSOR	18324	8X300
U340	156-0865-02			MICROCIRCUIT,DI:OCTAL D-TYPE FF W/CLEAR	01295	SN74LS273NP3
U350	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U355	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U360	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U365	156-0982-00	B010100	B051633	MICROCIRCUIT,DI:OCTAL D EDGE TRIG F-F	01295	SN74LS374
U365	156-0982-03	B051634		MICROCIRCUIT,DI:OCTAL-D-EDGE FF,SCRN	07263	74LS374
U370	156-0982-00	B010100	B051633	MICROCIRCUIT,DI:OCTAL D EDGE TRIG F-F	01295	SN74LS374
U370	156-0982-03	B051634		MICROCIRCUIT,DI:OCTAL-D-EDGE FF,SCRN	07263	74LS374
U375	156-0982-00	B010100	B051633	MICROCIRCUIT,DI:OCTAL D EDGE TRIG F-F	01295	SN74LS374
U375	156-0982-03	B051634		MICROCIRCUIT,DI:OCTAL-D-EDGE FF,SCRN	07263	74LS374
U380	156-0982-00	B010100	B051633	MICROCIRCUIT,DI:OCTAL D EDGE TRIG F-F	01295	SN74LS374
U380	156-0982-03	B051634		MICROCIRCUIT,DI:OCTAL-D-EDGE FF,SCRN	07263	74LS374
U450	156-0694-02			MICROCIRCUIT,DI:DCDR/3 LINE TO 8 LINE,SCRN	07263	74S138DCQR
U455	156-0982-00	B010100	B051633	MICROCIRCUIT,DI:OCTAL D EDGE TRIG F-F	01295	SN74LS374
U455	156-0982-03	B051634		MICROCIRCUIT,DI:OCTAL-D-EDGE FF,SCRN	07263	74LS374
U460	156-0982-00	B010100	B051633	MICROCIRCUIT,DI:OCTAL D EDGE TRIG F-F	01295	SN74LS374
U460	156-0982-03	B051634		MICROCIRCUIT,DI:OCTAL-D-EDGE FF,SCRN	07263	74LS374
U465	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U470	156-0789-02			MICROCIRCUIT,DI:8 BIT SR,PRL LOAD,SCRN	80009	156-0789-02
U475	156-0391-02			MICROCIRCUIT,DI:HEX LATCH W/CLEAR	01295	SN74LS174
U480	156-0982-00	B010100	B051633	MICROCIRCUIT,DI:OCTAL D EDGE TRIG F-F	01295	SN74LS374
U480	156-0982-03	B051634		MICROCIRCUIT,DI:OCTAL-D-EDGE FF,SCRN	07263	74LS374
U485	156-0982-02	B010100	B051633	MICROCIRCUIT,DI:OCTAL D EDGE TRIG F-F	80009	156-0982-02
U485	156-0982-03	B051634		MICROCIRCUIT,DI:OCTAL-D-EDGE FF,SCRN	07263	74LS374
U490	156-1111-02			MICROCIRCUIT,DI:OCTAL BUS TRANSCEIVERS	01295	SN74LS245JP3
U510	160-0276-00	B010100	B051169	MICROCIRCUIT,DI:1024 X 8 PROM,PROGRAMMED	80009	160-0276-00
U510	160-0276-01	B051170		MICROCIRCUIT,DI:1024 X 8 PROM,PROGRAMMED	80009	160-0276-01
U540	160-0277-00	B010100	B051169	MICROCIRCUIT,DI:1024 X 8 PROM,PROGRAMMED	80009	160-0277-00
U540	160-0277-01			MICROCIRCUIT,DI:1024 X 8 PROM,PROGRAMMED	80009	160-0277-01
U550	156-0479-02			MICROCIRCUIT,DI:QUAD 2-INP OR GATE	01295	SN74LS32NP3

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No.		Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont			
				A6 VECTOR GENERATOR (CONT'D)		
U555	156-0852-02			MICROCIRCUIT,DI:HEX DRVR W/3 STATE INP	80009	156-0852-02
U560	156-0914-02			MICROCIRCUIT,DI:OCT ST BFR W/3 STATE OUT	01295	SN74LS240
U565	156-1065-01			MICROCIRCUIT,DI:OCTAL D TYPE TRANS LATCHES	34335	AM74LS373
U570	156-1171-00			MICROCIRCUIT,DI:64 X 9 RAM W/OC OUT,SCRN	80009	156-1171-00
U580	156-1058-00	B010100	B051633	MICROCIRCUIT,DI:OCTAL SCHMITT TRIGGER BFR	01295	SN74S240J
U580	156-1058-01	B051634		MICROCIRCUIT,DI:OCTAL ST BFR W/3 STATE OUT	01295	SN74S240JP4
U590	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A7 MOTOR/PEN DRIVE						
A7	670-5236-01	B010100	B020349	CKT BOARD ASSY:MOTOR/PEN DRIVER	80009	670-5236-01
A7	670-5236-02	B020350	B051169	CKT BOARD ASSY:MOTOR/PEN DRIVER	80009	670-5236-02
A7	670-5236-03	B051170	B051319	CKT BOARD ASSY:MOTOR/PEN DRIVER	80009	670-5236-03
A7	670-5236-04	B051320		CKT BOARD ASSY:MOTOR/PEN DRIVER	80009	670-5236-04
C21	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C37	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C38	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C40	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C50	290-0779-00			CAP.,FXD,ELCTLT:10UF,+50-10%,50VDC	56289	502D237
C75	290-0779-00			CAP.,FXD,ELCTLT:10UF,+50-10%,50VDC	56289	502D237
C121	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C131	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C144	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C155	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C161	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C165	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C176	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C177	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C182	290-0746-00			CAP.,FXD,ELCTLT:47UF,+50-10%,16V	55680	16U-47V-T
C187	283-0024-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	72982	8121N083Z5U0104Z
C190	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C191	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C195	290-0746-00			CAP.,FXD,ELCTLT:47UF,+50-10%,16V	55680	16U-47V-T
C233	283-0620-00			CAP.,FXD,MICA D:470PF,1%,300V	00853	D153F471F0
C235	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C241	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C246	283-0067-00			CAP.,FXD,CER DI:0.001UF,10%,200V	59660	835-515-Z5D0102K
C250	290-0779-00			CAP.,FXD,ELCTLT:10UF,+50-10%,50VDC	56289	502D237
C275	290-0779-00			CAP.,FXD,ELCTLT:10UF,+50-10%,50VDC	56289	502D237
C282	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C283	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C292	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C330	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C332	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
C333	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C335	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
C340	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
C342	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C344	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C345	283-0077-00			CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
C355	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C361	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C365	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C376	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C377	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C390	290-0746-00			CAP.,FXD,ELCTLT:47UF,+50-10%,16V	55680	16U-47V-T
C391	281-0546-00			CAP.,FXD,CER DI:330PF,10%,500V	04222	7001-1380
C395	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C401	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C421	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C431	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C433	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
			A7 MOTOR/PEN DRIVE (CONT'D)		
C435	283-0077-00		CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
C440	283-0077-00		CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
C441	281-0775-00		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C442	281-0775-00		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C450	290-0779-00		CAP.,FXD,ELCTLT:10UF,-50-10%,50VDC	56289	502D237
C475	290-0779-00		CAP.,FXD,ELCTLT:10UF,+50-10%,50VDC	56289	502D237
C483	283-0279-00		CAP.,FXD,CER DI:0.001UF,20%,3000V	59660	878-530 Y5S0102M
C493	283-0279-00		CAP.,FXD,CER DI:0.001UF,20%,3000V	59660	878-530 Y5S0102M
C511	281-0775-00		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C532	281-0511-00		CAP.,FXD,CER DI:22PF,+/-2.2PF,500V	59660	301-000C0G0220K
C533	281-0775-00		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C534	281-0775-00		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C536	281-0542-00		CAP.,FXD,CER DI:18PF,10%,500V	59660	301-000C0G0180K
C540	281-0775-00		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C544	281-0775-00		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C555	281-0775-00		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C561	281-0775-00		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C565	281-0775-00		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C576	281-0775-00		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C577	281-0775-00		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
CR55	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR67	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR145	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR150	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR151	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR153	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR154	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR155	152-0655-00		SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR159	152-0655-00		SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR165	152-0655-00		SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR166	152-0655-00		SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR170	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR171	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR173	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR175	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR179	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR181	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR194	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR255	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR267	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR293	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR345	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR350	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR351	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR353	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR354	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR356	152-0655-00		SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR359	152-0655-00		SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR365	152-0655-00		SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR366	152-0655-00		SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR370	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
			A7 MOTOR/PEN DRIVE (CONT'D)		
CR371	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR373	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR375	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR379	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR394	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR455	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR467	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR482	152-0385-00		SEMICONV DEVICE:SILICON,2000V,100MA	83003	VB20-2
CR490	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR492	152-0385-00		SEMICONV DEVICE:SILICON,2000V,100MA	83003	VB20-2
CR541	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR545	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR550	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR551	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR553	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR554	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR556	152-0655-00		SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR559	152-0655-00		SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR565	152-0655-00		SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR566	152-0655-00		SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR570	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR571	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR573	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR575	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR579	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
F80	159-0016-00		FUSE,CARTRIDGE:3AG,1.5A,250V,FAST-BLOW	71400	AGC 1 1/2
F280	159-0016-00		FUSE,CARTRIDGE:3AG,1.5A,250V,FAST-BLOW	71400	AGC 1 1/2
F480	159-0016-00		FUSE,CARTRIDGE:3AG,1.5A,250V,FAST-BLOW	71400	AGC 1 1/2
J1	131-1425-00		CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
J2	131-1425-00		CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
J3	131-1425-00		CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
J5	131-1806-00		CONTACT ASSY,EL:31,0.025 SQ,0.15 CTR,0.39L	22526	65595-131
J7	131-1425-00		CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
J8	131-1425-00		CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
J9	131-1425-00		CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
J11	131-1806-00		CONTACT ASSY,EL:31,0.025 SQ,0.15 CTR,0.39L	22526	65595-131
Q21	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q45	151-0466-00		TRANSISTOR:SILICON,NPN	04713	SJE327
Q46	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q51	151-0466-00		TRANSISTOR:SILICON,NPN	04713	SJE327
Q52	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q55	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q61	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q64	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q65	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q71	151-0466-00		TRANSISTOR:SILICON,NPN	04713	SJE327
Q72	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q75	151-0466-00		TRANSISTOR:SILICON,NPN	04713	SJE327
Q76	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
			A7 MOTOR/PEN DRIVE (CONT'D)		
Q85	151-0335-00		TRANSISTOR:SILICON,PNP	04713	SJE917
Q95	151-0334-00		TRANSISTOR:SILICON,NPN	04713	SJE914
Q144	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q145	151-0465-00		TRANSISTOR:SILICON,PNP	80009	151-0465-00
Q150	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q151	151-0465-00		TRANSISTOR:SILICON,PNP	80009	151-0465-00
Q170	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q171	151-0465-00		TRANSISTOR:SILICON,PNP	80009	151-0465-00
Q174	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q175	151-0465-00		TRANSISTOR:SILICON,PNP	80009	151-0465-00
Q184	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q185	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q234	151-0199-00		TRANSISTOR:SILICON,PNP	04713	SPS6866K
Q235	151-0127-00		TRANSISTOR:SILICON,NPN	07263	S006075
Q242	151-0254-00		TRANSISTOR:SILICON,NPN	03508	X38L3118
Q245	151-0466-00		TRANSISTOR:SILICON,NPN	04713	SJE327
Q246	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q251	151-0466-00		TRANSISTOR:SILICON,NPN	04713	SJE327
Q252	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q255	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q261	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q264	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q265	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q271	151-0466-00		TRANSISTOR:SILICON,NPN	04713	SJE327
Q272	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q275	151-0466-00		TRANSISTOR:SILICON,NPN	04713	SJE327
Q276	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q344	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q345	151-0465-00		TRANSISTOR:SILICON,PNP	80009	151-0465-00
Q350	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q351	151-0465-00		TRANSISTOR:SILICON,PNP	80009	151-0465-00
Q370	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q371	151-0465-00		TRANSISTOR:SILICON,PNP	80009	151-0465-00
Q374	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q375	151-0465-00		TRANSISTOR:SILICON,PNP	80009	151-0465-00
Q445	151-0466-00		TRANSISTOR:SILICON,NPN	04713	SJE327
Q446	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q451	151-0466-00		TRANSISTOR:SILICON,NPN	04713	SJE327
Q452	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q455	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q461	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q464	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q465	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q471	151-0466-00		TRANSISTOR:SILICON,NPN	04713	SJE327
Q472	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q475	151-0466-00		TRANSISTOR:SILICON,NPN	04713	SJE327
Q476	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q490	151-0302-00		TRANSISTOR:SILICON,NPN	07263	S038487
Q530	151-0188-00		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q544	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q545	151-0465-00		TRANSISTOR:SILICON,PNP	80009	151-0465-00
Q550	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
			A7 MOTOR/PEN DRIVE (CONT'D)		
Q551	151-0465-00		TRANSISTOR:SILICON,PNP	80009	151-0465-00
Q570	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q571	151-0465-00		TRANSISTOR:SILICON,PNP	80009	151-0465-00
Q574	151-0190-02		TRANSISTOR:SILICON,NPN	04713	SM7706
Q575	151-0465-00		TRANSISTOR:SILICON,PNP	80009	151-0465-00
R21	315-0431-00		RES.,FXD,CMPSN:430 OHM,5%,0.25W	01121	CB4315
R29	307-0502-00		RES NTWK,FXD,FI:(9) 1.8K OHM,20%,0.125W	91637	MSP10A01-182M
R31	315-0511-00		RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R32	315-0681-00		RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R33	315-0334-00		RES.,FXD,CMPSN:330K OHM,5%,0.25W	01121	CB3345
R34	315-0334-00		RES.,FXD,CMPSN:330K OHM,5%,0.25W	01121	CB3345
R35	315-0682-00		RES.,FXD,CMPSN:6.8K OHM,5%,0.25W	01121	CB6825
R36	315-0682-00		RES.,FXD,CMPSN:6.8K OHM,5%,0.25W	01121	CB6825
R37	315-0682-00		RES.,FXD,CMPSN:6.8K OHM,5%,0.25W	01121	CB6825
R38	315-0682-00		RES.,FXD,CMPSN:6.8K OHM,5%,0.25W	01121	CB6825
R39	315-0682-00		RES.,FXD,CMPSN:6.8K OHM,5%,0.25W	01121	CB6825
R40	315-0682-00		RES.,FXD,CMPSN:6.8K OHM,5%,0.25W	01121	CB6825
R41	315-0334-00		RES.,FXD,CMPSN:330K OHM,5%,0.25W	01121	CB3345
R56	315-0681-00		RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R57	315-0511-00		RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R58	315-0681-00		RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R60	315-0511-00		RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R61	315-0242-00		RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R62	315-0242-00		RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R63	315-0511-00		RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R64	315-0681-00		RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R65	315-0511-00		RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R66	315-0681-00		RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R150	315-0181-00		RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R152	315-0181-00		RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R156	315-0822-00		RES.,FXD,CMPSN:8.2K OHM,5%,0.25W	01121	CB8225
R157	321-0177-00		RES.,FXD,FILM:681 OHM,1%,0.125W	91637	MFF1816G681R0F
R159	321-0105-00		RES.,FXD,FILM:121 OHM,1%,0.125W	91637	MFF1816G121R0F
R160	308-0799-00		RES.,FXD,WW:1 OHM,1%,4W	91637	NS21R000F
R161	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R164	308-0799-00		RES.,FXD,WW:1 OHM,1%,4W	91637	NS21R000F
R165	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R166	321-0105-00		RES.,FXD,FILM:121 OHM,1%,0.125W	91637	MFF1816G121R0F
R167	321-0177-00		RES.,FXD,FILM:681 OHM,1%,0.125W	91637	MFF1816G681R0F
R168	315-0822-00		RES.,FXD,CMPSN:8.2K OHM,5%,0.25W	01121	CB8225
R173	315-0181-00		RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R175	315-0181-00		RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R180	321-0392-00		RES.,FXD,FILM:118K OHM,1%,0.125W	91637	MFF1816G11802F
R181	131-0566-00		BUS CONDUCTOR:DUMMY RES,2.375,22 AWG	57668	JWW-0200E0
R182	315-0181-00		RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R183	315-0470-00		RES.,FXD,CMPSN:47 OHM,5%,0.25W	01121	CB4705
R184	321-0392-00		RES.,FXD,FILM:118K OHM,1%,0.125W	91637	MFF1816G11802F
R185	321-0193-00		RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
R186	321-0193-00		RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
R191	321-0222-00		RES.,FXD,FILM:2K OHM,1%,0.125W	91637	MFF1816G20000F
R192	321-0222-00		RES.,FXD,FILM:2K OHM,1%,0.125W	91637	MFF1816G20000F

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A7 MOTOR/PEN DRIVE (CONT'D)		
R193	308-0779-00			RES.,FXD,WW:2 OHM,1%,3W	91637	NS2B792R000K
R194	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R195	131-0566-00			BUS CONDUCTOR:DUMMY RES,2.375,22 AWG	57668	JWW-0200E0
R196	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R197	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R198	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R231	307-0103-00			RES.,FXD,CMPSN:2.7 OHM,5%,0.25W	01121	CB27G5
R232	315-0431-00			RES.,FXD,CMPSN:430 OHM,5%,0.25W	01121	CB4315
R234	315-0470-00			RES.,FXD,CMPSN:47 OHM,5%,0.25W	01121	CB4705
R235	321-0357-00			RES.,FXD,FILM:51.1K OHM,1%,0.125W	91637	MFF1816G51101F
R236	321-0339-00			RES.,FXD,FILM:33.2K OHM,1%,0.125W	91637	MFF1816G33201F
R240	321-0399-00			RES.,FXD,FILM:140K OHM,1%,0.125W	91637	MFF1816G14002F
R242	315-0821-00			RES.,FXD,CMPSN:820 OHM,5%,0.25W	01121	CB8215
R246	315-0431-00			RES.,FXD,CMPSN:430 OHM,5%,0.25W	01121	CB4315
R256	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R257	315-0511-00			RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R258	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R260	315-0511-00			RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R261	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R262	315-0242-00			RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R263	315-0511-00			RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R264	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R265	315-0511-00			RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R266	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R281	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R282	315-0681-00			RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R283	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R284	321-0394-00			RES.,FXD,FILM:124K OHM,1%,0.125W	91637	MFF1816G12402F
R285	321-0382-00			RES.,FXD,FILM:93.1K OHM,1%,0.125W	91637	MFF1816G93101F
R286	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R291	321-0382-00			RES.,FXD,FILM:93.1K OHM,1%,0.125W	91637	MFF1816G93101F
R292	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R293	321-0394-00			RES.,FXD,FILM:124K OHM,1%,0.125W	91637	MFF1816G12402F
R331	315-0431-00			RES.,FXD,CMPSN:430 OHM,5%,0.25W	01121	CB4315
R334	315-0431-00			RES.,FXD,CMPSN:430 OHM,5%,0.25W	01121	CB4315
R341	315-0431-00			RES.,FXD,CMPSN:430 OHM,5%,0.25W	01121	CB4315
R345	315-0431-00			RES.,FXD,CMPSN:430 OHM,5%,0.25W	01121	CB4315
R350	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R352	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R356	315-0822-00			RES.,FXD,CMPSN:8.2K OHM,5%,0.25W	01121	CB8225
R357	321-0177-00			RES.,FXD,FILM:681 OHM,1%,0.125W	91637	MFF1816G681R0F
R359	321-0105-00			RES.,FXD,FILM:121 OHM,1%,0.125W	91637	MFF1816G121R0F
R360	308-0799-00			RES.,FXD,WW:1 OHM,1%,4W	91637	NS21R000F
R361	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R364	308-0799-00			RES.,FXD,WW:1 OHM,1%,4W	91637	NS21R000F
R365	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R366	321-0105-00			RES.,FXD,FILM:121 OHM,1%,0.125W	91637	MFF1816G121R0F
R367	321-0177-00			RES.,FXD,FILM:681 OHM,1%,0.125W	91637	MFF1816G681R0F
R368	315-0822-00			RES.,FXD,CMPSN:8.2K OHM,5%,0.25W	01121	CB8225
R373	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R375	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R392	315-0220-00			RES.,FXD,CMPSN:22 OHM,5%,0.25W	01121	CB2205

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff Dscnt	Name & Description	Mfr Code	Mfr Part Number
			A7 MOTOR/PEN DRIVE (CONT'D)		
R393	307-0103-00		RES.,FXD,CMPSN:2.7 OHM,5%,0.25W	01121	CB27G5
R431	321-0197-00		RES.,FXD,FILM:1.1K OHM,1%,0.125W	91637	MFF1816G11000F
R432	321-0193-00		RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
R435	315-0431-00		RES.,FXD,CMPSN:430 OHM,5%,0.25W	01121	CB4315
R439	315-0431-00		RES.,FXD,CMPSN:430 OHM,5%,0.25W	01121	CB4315
R440	315-0681-00		RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R441	315-0181-00		RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R456	315-0681-00		RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R457	315-0511-00		RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R458	315-0681-00		RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R460	315-0511-00		RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R461	315-0242-00		RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R462	315-0242-00		RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R463	315-0511-00		RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R464	315-0681-00		RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R465	315-0511-00		RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R466	315-0681-00		RES.,FXD,CMPSN:680 OHM,5%,0.25W	01121	CB6815
R484	301-0226-00		RES.,FXD,CMPSN:22M OHM,5%,0.50W	01121	EB2265
R494	301-0226-00		RES.,FXD,CMPSN:22M OHM,5%,0.50W	01121	EB2265
R511	315-0102-00	B051320	RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R526	315-0242-00		RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R527	315-0242-00		RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R528	315-0242-00		RES.,FXD,CMPSN:2.4K OHM,5%,0.25W	01121	CB2425
R530	311-0605-01		RES.,VAR,NONWIR:200 OHM,10%,0.50W	73138	82-3-3
R531	321-0282-00		RES.,FXD,FILM:8.45K OHM,1%,0.125W	91637	MFF1816G84500F
R532	321-0267-00		RES.,FXD,FILM:5.9K OHM,1%,0.125W	91637	MFF1816G59000F
R536	321-0251-00		RES.,FXD,FILM:4.02K OHM,1%,0.125W	91637	MFF1816G40200F
R540	315-0392-00		RES.,FXD,CMPSN:3.9K OHM,5%,0.25W	01121	CB3925
R541	315-0155-00		RES.,FXD,CMPSN:1.5M OHM,5%,0.25W	01121	CB1555
R542	315-0821-00		RES.,FXD,CMPSN:820 OHM,5%,0.25W	01121	CB8215
R550	315-0181-00		RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R552	315-0181-00		RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R556	315-0822-00		RES.,FXD,CMPSN:8.2K OHM,5%,0.25W	01121	CB8225
R557	321-0177-00		RES.,FXD,FILM:681 OHM,1%,0.125W	91637	MFF1816G681R0F
R559	321-0105-00		RES.,FXD,FILM:121 OHM,1%,0.125W	91637	MFF1816G121R0F
R560	308-0799-00		RES.,FXD,WW:1 OHM,1%,4W	91637	NS21R000F
R561	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R564	308-0799-00		RES.,FXD,WW:1 OHM,1%,4W	91637	NS21R000F
R565	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R566	321-0105-00		RES.,FXD,FILM:121 OHM,1%,0.125W	91637	MFF1816G121R0F
R567	321-0177-00		RES.,FXD,FILM:681 OHM,1%,0.125W	91637	MFF1816G681R0F
R568	315-0822-00		RES.,FXD,CMPSN:8.2K OHM,5%,0.25W	01121	CB8225
R573	315-0181-00		RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R575	315-0181-00		RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R580	301-0205-00		RES.,FXD,CMPSN:2M OHM,5%,0.50W	01121	EB2055
R582	301-0205-00		RES.,FXD,CMPSN:2M OHM,5%,0.50W	01121	EB2055
R584	301-0205-00		RES.,FXD,CMPSN:2M OHM,5%,0.50W	01121	EB2055
R586	301-0205-00		RES.,FXD,CMPSN:2M OHM,5%,0.50W	01121	EB2055
T480	120-0929-00		XFMR,PWR,STU:POT CORE	80009	120-0929-00
TP115	214-0579-00		TERM,TEST POINT:BRS CD PL	80009	214-0579-00

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A7 MOTOR/PEN DRIVE (CONT'D)		
TP230	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP330	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP335	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP340	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP345	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP427	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP430	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP440	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP530	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
U15	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U25	156-0112-00			MICROCIRCUIT,DI:QUAD 2-INPUT POS NAND GATE	80009	156-0112-00
U35	156-0411-00	B010100	B051633	MICROCIRCUIT,LI:QUAD-COMP,SGL SUPPLY	27014	LM339N
U35	156-0411-02			MICROCIRCUIT,LI:QUAD COMPARATOR,SEL	04713	LM339JDS
U61	156-0384-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS03
U115	156-0117-00			MICROCIRCUIT,DI:SYNC 4-BIT BINARY COUNTER	80009	156-0117-00
U125	156-0874-02			MICROCIRCUIT,DI:8 BIT ADDRESSABLE LCH	80009	156-0874-02
U135	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U161	156-0570-00			MICROCIRCUIT,LI:DUAL HIGH SPEED COMPARATOR	27014	LM319H
U165	156-0384-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS03
U191	156-0067-00	B010100	B051633	MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	01295	MICROA741CP
U191	156-0067-13			MICROCIRCUIT,LI:OPNL AMPL,SELECTED	01295	UA741CJG4
U215	156-0865-02			MICROCIRCUIT,DI:OCTAL D-TYPE FF W/CLEAR	01295	SN74LS273NP3
U225	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U235	156-0067-00	B010100	B051633	MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	01295	MICROA741CP
U235	156-0067-13	B051634		MICROCIRCUIT,LI:OPNL AMPL,SELECTED	01295	UA741CJG4
U261	156-0384-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS03
U315	156-0844-02			MICROCIRCUIT,DI:SYN 4 BIT CNTR,SCRN	01295	SN74LS161A
U325	160-0275-00	B010100	B051319	MICROCIRCUIT,DI:PROM,PROGRAMMED	80009	160-0275-00
U325	160-0275-01	B051320		MICROCIRCUIT,DI:512 X 8 PROM,PROGRAMMED	80009	160-0275-01
U335	156-0158-00	B010100	B051633	MICROCIRCUIT,LI:DUAL OPERATIONAL AMPLIFIER	18324	MC1458N
U335	156-0158-07	B051634		MICROCIRCUIT,LI:DUAL OPNL AMPL,SCREENED	01295	MC1458JG4
U336	156-0158-00	B010100	B051633	MICROCIRCUIT,LI:DUAL OPERATIONAL AMPLIFIER	18324	MC1458N
U336	156-0158-07	B051634		MICROCIRCUIT,LI:DUAL OPNL AMPL,SCREENED	01295	MC1458JG4
U361	156-0570-00			MICROCIRCUIT,LI:DUAL HIGH SPEED COMPARATOR	27014	LM319H
U365	156-0384-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS03
U415	156-0321-02			MICROCIRCUIT,DI:TRIPLE 3 INP NAND GATE	01295	SN74S10
U425	156-0718-03			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE	01295	SN74LS27
U431	156-0509-00			MICROCIRCUIT,DI:8-BIT BINARY,MULT CUR	04713	MC1408L8
U435	156-0158-00	B010100	B051633	MICROCIRCUIT,LI:DUAL OPERATIONAL AMPLIFIER	18324	MC1458N
U435	156-0158-07	B051634		MICROCIRCUIT,LI:DUAL OPNL AMPL,SCREENED	01295	MC1458JG4
U441	156-0513-02			MICROCIRCUIT,DI:8-CHANNEL MUX,SEL	80009	156-0513-02
U461	156-0384-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS03
U515	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U525	156-0093-02			MICROCIRCUIT,DI:HEX INV BUFFER,BURN-IN	27014	DM8016
U535	156-0742-00			MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	27014	LM318N
U561	156-0570-00			MICROCIRCUIT,LI:DUAL HIGH SPEED COMPARATOR	27014	LM319H
U565	156-0384-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS03

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix	Serial/Model No.		Name & Description	Mfr	Mfr Part Number
	Part No.	Eff	Dscont		Code	
				A8 FRONT PANEL SWITCH		
A8	670-5589-00	B010100	B019999	CKT BOARD ASSY:FRONT PANEL SWITCH	80009	670-5589-00
A8	670-5589-01	B020000	B030909	CKT BOARD ASSY:FRONT PANEL SWITCH	80009	670-5589-01
A8	670-5589-02	B030910		CKT BOARD ASSY:FRONT PANEL SWITCH	80009	670-5589-02
C15	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C30	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C31	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C45	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C46	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C76	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C84	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C91	285-0598-00			CAP.,FXD,PLSTC:0.01UF,5%,100V	19396	DU490B103J
C92	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C93	285-0598-00			CAP.,FXD,PLSTC:0.01UF,5%,100V	19396	DU490B103J
C94	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C95	290-0530-00			CAP.,FXD,ELCTLT:68UF,20%,6V	90201	TDC686M006NLF
C96	290-0530-00			CAP.,FXD,ELCTLT:68UF,20%,6V	90201	TDC686M006NLF
C97	290-0530-00			CAP.,FXD,ELCTLT:68UF,20%,6V	90201	TDC686M006NLF
C98	290-0530-00			CAP.,FXD,ELCTLT:68UF,20%,6V	90201	TDC686M006NLF
C111	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C121	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C131	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C143	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C151	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C161	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C173	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C174	281-0773-00			CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C175	281-0773-00			CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C176	281-0773-00			CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C177	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C185	281-0773-00			CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C195	281-0773-00			CAP.,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
C196	285-0598-00			CAP.,FXD,PLSTC:0.01UF,5%,100V	19396	DU490B103J
CR95	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR96	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR97	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR98	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR197	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
DS15	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS15	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361
DS105	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS105	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361
DS211	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS211	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361
DS215	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS215	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361
DS225	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS225	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361
DS231	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS231	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A8 FRONT PANEL SWITCH (CONT'D)		
DS235	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS235	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361
DS241	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS241	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361
DS245	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS245	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361
DS255	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS255	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361
DS281	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS281	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361
DS291	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS291	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361
DS295	150-0139-00	B010100	B030909	LAMP,INCAND:5V,60MA	71744	CM7-3149
DS295	150-0194-00	B030910		LAMP,INCAND:5V,60MA,T-1.75 BULB,2-PIN	92966	7361
J41	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150° L,STR OF 36	22526	65521-136
J61	131-1426-00			CONTACT SET,ELE:R ANGLE,0.250 L,STRIP OF 36	22526	65524-136
J79	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J79	-----			(QUANTITY OF 3)		
J94	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J94	-----			(QUANTITY OF 3)		
J99	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150° L,STR OF 36	22526	65521-136
J199	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150° L,STR OF 36	22526	65521-136
J201	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150° L,STR OF 36	22526	65521-136
R9	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R10	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R12	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R21	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R22	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R23	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R24	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R27	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R28	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R75	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
R78	315-0563-00			RES.,FXD,CMPSN:56K OHM,5%,0.25W	01121	CB5635
R80	321-0294-00			RES.,FXD,FILM:11.3K OHM,1%,0.125W	91637	MFF1816G11301F
R81	321-0068-00			RES.,FXD,FILM:49.9 OHM,1%,0.125W	91637	MFF1816G49R90F
R82	321-0068-00			RES.,FXD,FILM:49.9 OHM,1%,0.125W	91637	MFF1816G49R90F
R83	315-0563-00			RES.,FXD,CMPSN:56K OHM,5%,0.25W	01121	CB5635
R84	321-0136-00			RES.,FXD,FILM:255 OHM,1%,0.125W	91637	MFF1816G255R0F
R85	321-0294-00			RES.,FXD,FILM:11.3K OHM,1%,0.125W	91637	MFF1816G11301F
R86	321-0068-00			RES.,FXD,FILM:49.9 OHM,1%,0.125W	91637	MFF1816G49R90F
R87	321-0068-00			RES.,FXD,FILM:49.9 OHM,1%,0.125W	91637	MFF1816G49R90F
R88	315-0563-00			RES.,FXD,CMPSN:56K OHM,5%,0.25W	01121	CB5635
R89	321-0136-00			RES.,FXD,FILM:255 OHM,1%,0.125W	91637	MFF1816G255R0F
R90	315-0563-00			RES.,FXD,CMPSN:56K OHM,5%,0.25W	01121	CB5635
R91	315-0114-00			RES.,FXD,CMPSN:110K OHM,5%,0.25W	01121	CB1145
R92	315-0114-00			RES.,FXD,CMPSN:110K OHM,5%,0.25W	01121	CB1145
R93	315-0474-00			RES.,FXD,CMPSN:470K OHM,5%,0.25W	01121	CB4745
R95	315-0474-00			RES.,FXD,CMPSN:470K OHM,5%,0.25W	01121	CB4745
R96	315-0474-00			RES.,FXD,CMPSN:470K OHM,5%,0.25W	01121	CB4745

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A8 FRONT PANEL SWITCH (CONT'D)		
R97	315-0474-00			RES.,FXD,CMPSN:470K OHM,5%,0.25W	01121	CB4745
R134	307-0446-00			RES,NTWK,FXD FI:10K OHM,20%,(9) RES	91637	MSP10A01-103M
R152	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R160	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R163	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R164	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R170	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R174	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
R175	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
R176	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
R177	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
R178	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
R192	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R193	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R195	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R196	321-0372-00			RES.,FXD,FILM:73.2K OHM,1%,0.125W	91637	MFF1816G73201F
R197	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R206	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R207	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R210	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R213	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R214	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R223	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R224	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R230	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R234	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R240	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R245	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R254	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R279	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R280	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R289	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R290	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
S15	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S15	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920
S105	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S105	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920
S211	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S211	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920
S215	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S215	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920
S225	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S225	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920
S231	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S231	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920
S235	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S235	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920
S241	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S241	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920
S245	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S245	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A8 FRONT PANEL SWITCH (CONT'D)		
S255	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S255	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920
S281	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S281	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920
S291	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S291	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920
S295	260-1903-00	B010100	B051538	SWITCH,PUSH:DPST,0.25A,125VAC	51420	854-1392-01A
S295	260-1903-01	B051539		SWITCH,PUSH:DPST,0.25A,125VAC	51420	854K13920
U11	156-0464-02			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	01295	SN74LS20
U13	156-0381-02			MICROCIRCUIT,DI:QUAD 2-INP EXCL OR GATE	01295	SN74LS86
U15	156-0453-01			MICROCIRCUIT,DI:QUAD 128-BIT SHIFT REG	80009	156-0453-01
U25	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U71	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U75	156-0383-02			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE	01295	SN74LS02
U111	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U113	156-0464-02			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	01295	SN74LS20
U115	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U121	156-0646-02			MICROCIRCUIT,DI:4 BIT BINARY COUNTER	01295	SN74LS93
U125	156-0784-02			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER	27014	DM74LS163ANA+
U127	156-0784-02			MICROCIRCUIT,DI:SYNC 4 BIT BINARY COUNTER	27014	DM74LS163ANA+
U131	156-0141-02			MICROCIRCUIT,DI:DUAL 2 TO 4 LINE DCDR/DEMX	80009	156-0141-02
U133	156-0994-00	B010100	B051633	MICROCIRCUIT,DI:8 INPUT DATA SEL/MUX	01295	SN74LS151N OR J
U133	156-0994-02	B051634		MICROCIRCUIT,DI:8 INPUT DATA SEL/MUX	01295	SN74LS151NP3
U135	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U141	156-0302-00			MICROCIRCUIT,DI:DUAL 2-INP NAND PRPHL DRVR	01295	SN75452BP
U142	156-0302-00			MICROCIRCUIT,DI:DUAL 2-INP NAND PRPHL DRVR	01295	SN75452BP
U143	156-0651-02			MICROCIRCUIT,DI:8 BIT PRL-OUT SER SHF RGTR	01295	SN74LS164
U145	156-0302-00			MICROCIRCUIT,DI:DUAL 2-INP NAND PRPHL DRVR	01295	SN75452BP
U146	156-0302-00			MICROCIRCUIT,DI:DUAL 2-INP NAND PRPHL DRVR	01295	SN75452BP
U147	156-0302-00			MICROCIRCUIT,DI:DUAL 2-INP NAND PRPHL DRVR	01295	SN75452BP
U148	156-0302-00			MICROCIRCUIT,DI:DUAL 2-INP NAND PRPHL DRVR	01295	SN75452BP
U151	156-0651-02			MICROCIRCUIT,DI:8 BIT PRL-OUT SER SHF RGTR	01295	SN74LS164
U155	156-0302-00			MICROCIRCUIT,DI:DUAL 2-INP NAND PRPHL DRVR	01295	SN75452BP
U156	156-0302-00			MICROCIRCUIT,DI:DUAL 2-INP NAND PRPHL DRVR	01295	SN75452BP
U161	156-1108-02			MICROCIRCUIT,DI:DIVIDE BY 12 COUNTER,SCRN	01295	SN74LS92(NP3 OR
U165	156-0970-03			MICROCIRCUIT,DI:QUAD HV NAND GATE W/OC OUT	01295	SN74LS26N OR J
U171	156-0387-02			MICROCIRCUIT,DI:DUAL J-K FF,BURN IN	01295	SN74LS73
U181	156-0411-00	B010100	B051633	MICROCIRCUIT,LI:QUAD-COMP,SGL SUPPLY	27014	LM339N
U181	156-0411-02	B051634		MICROCIRCUIT,LI:QUAD COMPARATOR,SEL	04713	LM339JDS
U191	156-0644-01	B010100	B051633	MICROCIRCUIT,DI:QUAD BILATERAL SW,CAK	80009	156-0644-01
U191	156-0644-03	B051634		MICROCIRCUIT,DI:QUAD BILATERAL SW,BURN-IN	80009	156-0644-03
U192	156-0302-00			MICROCIRCUIT,DI:DUAL 2-INP NAND PRPHL DRVR	01295	SN75452BP
U195	156-0402-00	B010100	B051633	MICROCIRCUIT,LI:TIMER	27014	LM555CN
U195	156-0402-03	B051634		MICROCIRCUIT,LI:TIMER,TESTED	80009	156-0402-03

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No.		Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont			
A9	670-5858-00			A9 Y AXIS LIMIT SWITCH		
J1	131-1425-00			CKT BOARD ASSY:Y AXIS LIMIT SWITCH	80009	670-5858-00
J2	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
				CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
U1009	156-0417-00			MICROCIRCUIT,DI:OPTOELECTRONIC	03508	H21B1
A10	670-5859-00	B010100	B020299	A10 FLEX STRIP TERMINATION		
				CKT BOARD ASSY:FLEX STRIP TERMINATION	80009	670-5859-00
A10	670-5859-01	B020300	B050314	CKT BOARD ASSY:FLEX STRIP TERMINATION	80009	670-5859-01
A10	670-5859-02	B050315		CKT BOARD ASSY:FLEX STRIP TERMINATION	80009	670-5859-02
C120	283-0077-00	B020000		CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
C125	283-0077-00	B020000		CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
C130	283-0077-00	B020000		CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
C135	283-0077-00	B020000		CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
C220	283-0077-00	B020000		CAP.,FXD,CER DI:330PF,5%,500V	59660	831-500B331J
L120	120-0382-00	B020000		XFMR,TOROID:14 TURNS,SINGLE	80009	120-0382-00
L125	120-0382-00	B020000		XFMR,TOROID:14 TURNS,SINGLE	80009	120-0382-00
L130	120-0382-00	B020000		XFMR,TOROID:14 TURNS,SINGLE	80009	120-0382-00
L135	120-0382-00	B020000		XFMR,TOROID:14 TURNS,SINGLE	80009	120-0382-00
L220	120-0382-00	B020000		XFMR,TOROID:14 TURNS,SINGLE	80009	120-0382-00
A11	670-5468-00			A11 PEN CARRIAGE		
				CKT BOARD ASSY:PEN CARRIAGE	80009	670-5468-00
CR1	152-0066-00			SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR2	152-0066-00			SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A13 POWER SUPPLY ASSEMBLY						
A13	620-0275-00	B010100	B020129	POWER SPLY ASSY:	80009	620-0275-00
A13	620-0275-01	B020130	B051049	POWER SPLY ASSY:	80009	620-0275-01
A13	620-0275-02	B051050		POWER SPLY ASSY:	80009	620-0275-02
B1001	119-0492-00			FAN,AXIAL:MUFFIN TYPE,3 INCH DIA,115	82877	SU2C5
C1001	283-0022-00	B010100	B020129	CAP.,FXD,CER DI:0.02UF,1400VDCAC	91418	AU203-Z142-1R0
FL1001	119-0389-00	B010100	B020129	FILTER,RAD INTE:115/230V,3A	02777	F11935-3
FL1001	119-0420-00	B020130		FILTER,RFI:6A,250VAC,400HZ	02777	F-11935-6
S181	260-1967-00	B010100	B020129	SWITCH,SLIDE:DPDT,5A/250V	000FJ	4021.0512
SW1001	260-1961-00	B020130		SWITCH,ROCKER:DPST,6(4)A,250V	000FJ	1802.1121
A13A1 POWER SUPPLY						
A13A1	670-5612-00	B010100	B020129	CKT BOARD ASSY:POWER SUPPLY	80009	670-5612-00
A13A1	670-5612-01	B020130	B050999	CKT BOARD ASSY:POWER SUPPLY	80009	670-5612-01
A13A1	670-5612-02	B051000	B051049	CKT BOARD ASSY:POWER SUPPLY	80009	670-5612-02
A13A1	670-5612-03	B051050		CKT BOARD ASSY:POWER SUPPLY	80009	670-5612-03
C1	283-0204-00			CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
C2	290-0778-00			CAP.,FXD,ELCTLT:1UF,+50-10%,50V	54473	ECE-A50N1
C11	290-0778-00			CAP.,FXD,ELCTLT:1UF,+50-10%,50V	54473	ECE-A50N1
C12	290-0778-00			CAP.,FXD,ELCTLT:1UF,+50-10%,50V	54473	ECE-A50N1
C21	290-0778-00			CAP.,FXD,ELCTLT:1UF,+50-10%,50V	54473	ECE-A50N1
C22	290-0778-00			CAP.,FXD,ELCTLT:1UF,+50-10%,50V	54473	ECE-A50N1
C23	290-0778-00			CAP.,FXD,ELCTLT:1UF,+50-10%,50V	54473	ECE-A50N1
C31	290-0778-00			CAP.,FXD,ELCTLT:1UF,+50-10%,50V	54473	ECE-A50N1
C32	290-0267-00	B010100	B020129	CAP.,FXD,ELCTLT:1UF,20%,35V	56289	162D105X0035CD2
C41	283-0114-00	B010100	B020129	CAP.,FXD,CER DI:0.0015UF,5%,200V	59660	534 Y5D0 152 J
C41	283-0203-00	B020130		CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
C42	283-0193-00	B010100	B020129	CAP.,FXD,CER DI:510PF,2%,100V	51642	200-100-NP0-511G
C42	283-0594-00	B020130		CAP.,FXD,MICA D:0.001UF,1%,100V	00853	D151F102F0
C43	290-0771-00			CAP.,FXD,ELCTLT:220UF,+50-10%,10VDC	56289	502D231
C44	283-0204-00	B010100	B020129	CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
C45	283-0204-00	B010100	B020129	CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
C51	290-0831-00			CAP.,FXD,ELCTLT:470UF,+50-10%,50V	55680	ULB1H471TKAANA
C52	283-0065-00	B010100	B020129	CAP.,FXD,CER DI:0.001UF,5%,100V	59660	0835-591-Y5E0102
C52	283-0203-00	B020130	B020879	CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
C52	283-0179-00	B020880		CAP.,FXD,CER DI:0.68UF,10%,100V	72982	8151N150 C684K
C61	283-0346-00	B010100	B020129	CAP.,FXD,CER DI:0.47UF,+80-20%,100V	72982	8131-M100F474Z
C71	285-1123-00	B010100	B020129	CAP.,FXD,PLSTC:1UF,20%,200V	50558	ME2-2190
C81	283-0059-00	B010100	B020129	CAP.,FXD,CER DI:1UF,+80-20%,50V	72982	8131N031Z5U0105Z
C101	283-0111-00			CAP.,FXD,CER DI:0.1UF,20%,50V	72982	8121-N088Z5U104M
C102	290-0778-00			CAP.,FXD,ELCTLT:1UF,+50-10%,50V	54473	ECE-A50N1
C111	290-0745-00			CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
C112	290-0745-00			CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
C113	283-0346-00	B010100	B020129	CAP.,FXD,CER DI:0.47UF,+80-20%,100V	72982	8131-M100F474Z
C113	281-0775-00	B020130		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C114	281-0775-00	B020130		CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C121	290-0745-00			CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A13 POWER SUPPLY ASSEMBLY (CONT'D)		
C122	290-0778-00			CAP.,FXD,ELCTLT:1UF,+50-10%,50V	54473	ECE-A50N1
C123	283-0203-00	B020130		CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
C131	283-0346-00	B010100	B020129	CAP.,FXD,CER DI:0.47UF,+80-20%,100V	72982	8131-M100F474Z
C131	283-0203-00	B020130		CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
C132	283-0346-00	B010100	B020129	CAP.,FXD,CER DI:0.47UF,+80-20%,100V	72982	8131-M100F474Z
C132	283-0203-00	B020130		CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
C141	285-1056-00	B010100	B020129	CAP.,FXD,PLSTC:1UF,2%,50V	14752	650B1A105G
C143	290-0770-00			CAP.,FXD,ELCTLT:100UF,+50-10%,25V	56289	502D230
C151	283-0032-00	B020130		CAP.,FXD,CER DI:470PF,5%,500V	72982	0831085Z5E00471J
C161	285-1171-00			CAP.,FXD,MTLZD:2 UF,10%,200 V	84411	X363UW(ADVISE)
C171	285-1171-00			CAP.,FXD,MTLZD:2 UF,10%,200 V	84411	X363UW(ADVISE)
C201	290-0778-00	B010100	B020129	CAP.,FXD,ELCTLT:1UF,+50-10%,50V	54473	ECE-A50N1
C201	290-0782-00	B020130		CAP.,FXD,ELCTLT:4.7UF,+75-10%,35V	55680	35ULA4R7V-T
C202	283-0204-00			CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
C203	283-0203-00	B020130		CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
C211	283-0204-00			CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
C212	283-0204-00			CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
C213	285-0598-00			CAP.,FXD,PLSTC:0.01UF,5%,100V	19396	DU490B103J
C221	290-0778-00	B010100	B020129	CAP.,FXD,ELCTLT:1UF,+50-10%,50V	54473	ECE-A50N1
C221	290-0782-00	B020130		CAP.,FXD,ELCTLT:4.7UF,+75-10%,35V	55680	35ULA4R7V-T
C222	290-0798-00			CAP.,FXD,ELCTLT:180UF,+100-10%,40V	56289	672D187HO4ODM5C
C231	290-0798-00			CAP.,FXD,ELCTLT:180UF,+100-10%,40V	56289	672D187HO4ODM5C
C232	290-0800-00			CAP.,FXD,ELCTLT:250UF,+100-10%,20V	56289	672D257H0200M5C
C241	283-0203-00	B020250		CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
C251	290-0745-00			CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
C261	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C271	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C281	283-0208-00	B010100	B020129	CAP.,FXD,CER DI:0.22UF,10%,200V	72982	8151N230 C 224K
C281	283-0008-00	B020130		CAP.,FXD,CER DI:0.1UF,20%,500V	56289	2C37X7R104M501B2
C301	290-0800-00			CAP.,FXD,ELCTLT:250UF,+100-10%,20V	56289	672D257H0200M5C
C311	283-0204-00			CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
C321	290-0571-00			CAP.,FXD,ELCTLT:5000UF,+100-10%,25V	90201	PPF20-36043
C341	283-0198-00			CAP.,FXD,CER DI:0.22UF,20%,50V	56289	1C10Z5U223M050B
C342	283-0198-00			CAP.,FXD,CER DI:0.22UF,20%,50V	56289	1C10Z5U223M050B
C351	283-0659-00	B020130		CAP.,FXD,MICA D:1160PF,2%,500V	00853	D195F1161G0
C361	283-0280-00	B010100	B020129	CAP.,FXD,CER DI:2200PF,10%,2000V	59660	0818590Y5500222K
C361	285-1192-00	B020130		CAP.,FXD,PPR DI:0.0022UF,20%,250VAC	000FG	PME271Y422
C362	290-0829-00			CAP.,FXD,ELCTLT:750UF,+100-10%,200V	90201	PPF751SR2J3P2
C371	290-0829-00			CAP.,FXD,ELCTLT:750UF,+100-10%,200V	90201	PPF751SR2J3P2
C381	283-0208-00			CAP.,FXD,CER DI:0.22UF,10%,200V	72982	8151N230 C 224K
C401	290-0782-00			CAP.,FXD,ELCTLT:4.7UF,+75-10%,35V	55680	35ULA4R7V-T
C451	283-0659-00	B010100	B020129	CAP.,FXD,MICA D:1160PF,2%,500V	00853	D195F1161G0
C481	283-0280-00	B010100	B020129	CAP.,FXD,CER DI:2200PF,10%,2000V	59660	0818590Y5500222K
C481	285-1192-00	B020130		CAP.,FXD,PPR DI:0.0022UF,20%,250VAC	000FG	PME271Y422
C482	283-0280-00	B010100	B020129	CAP.,FXD,CER DI:2200PF,10%,2000V	59660	0818590Y5500222K
C482	285-1192-00	B020130		CAP.,FXD,PPR DI:0.0022UF,20%,250VAC	000FG	PME271Y422
CR1	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
CR11	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
CR21	152-0141-02			SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
CR31	152-0141-02	B020130		SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R
CR32	152-0141-02	B020130		SEMICOND DEVICE:SILICON,30V,150MA	01295	1N4152R

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A13 POWER SUPPLY ASSEMBLY (CONT'D)		
CR41	152-0066-00			SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR42	152-0141-02			SEMICON D DEVICE:SILICON,30V,150MA	01295	1N4152R
CR51	152-0066-00			SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR52	152-0066-00			SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR53	152-0066-00			SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR54	152-0066-00			SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR55	152-0333-00	B010100	B020129	SEMICON D DEVICE:SILICON,55V,200MA	07263	FDH-6012
CR55	152-0066-00	B020130		SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR56	152-0333-00	B010100	B020129	SEMICON D DEVICE:SILICON,55V,200MA	07263	FDH-6012
CR56	152-0066-00	B020130		SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR57	152-0333-00	B010100	B020129	SEMICON D DEVICE:SILICON,55V,200MA	07263	FDH-6012
CR58	152-0333-00	B010100	B020129	SEMICON D DEVICE:SILICON,55V,200MA	07263	FDH-6012
CR59	152-0398-00	B010100	B020129	SEMICON D DEVICE:SILICON,200V,1A	04713	SR3609RL
CR61	152-0066-00	B010100	B020129	SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR62	152-0066-00	B010100	B020129	SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR81	152-0141-02	B010100	B020129	SEMICON D DEVICE:SILICON,30V,150MA	01295	1N4152R
CR82	152-0141-02	B010100	B020129	SEMICON D DEVICE:SILICON,30V,150MA	01295	1N4152R
CR83	152-0141-02	B010100	B020129	SEMICON D DEVICE:SILICON,30V,150MA	01295	1N4152R
CR84	152-0141-02	B010100	B020129	SEMICON D DEVICE:SILICON,30V,150MA	01295	1N4152R
CR101	152-0066-00			SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR111	152-0066-00			SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR121	152-0066-00			SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR131	152-0141-02	B010100	B020129	SEMICON D DEVICE:SILICON,30V,150MA	01295	1N4152R
CR141	152-0141-02	B010100	B020129	SEMICON D DEVICE:SILICON,30V,150MA	01295	1N4152R
CR142	152-0066-00			SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR143	152-0066-00			SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR151	152-0398-00			SEMICON D DEVICE:SILICON,200V,1A	04713	SR3609RL
CR152	152-0398-00			SEMICON D DEVICE:SILICON,200V,1A	04713	SR3609RL
CR181	152-0676-00	B020130		SEMICON D DEVICE:RECT,SI,400V,3A	03508	A115DX112
CR182	152-0676-00	B020130		SEMICON D DEVICE:RECT,SI,400V,3A	03508	A115DX112
CR183	152-0676-00	B020130		SEMICON D DEVICE:RECT,SI,400V,3A	03508	A115DX112
CR184	152-0676-00	B020130		SEMICON D DEVICE:RECT,SI,400V,3A	03508	A115DX112
CR221	152-0397-00			SEMICON D DEVICE:SILICON,50V,12A	80009	152-0397-00
CR241	152-0398-00			SEMICON D DEVICE:SILICON,200V,1A	04713	SR3609RL
CR242	152-0398-00			SEMICON D DEVICE:SILICON,200V,1A	04713	SR3609RL
CR243	152-0398-00			SEMICON D DEVICE:SILICON,200V,1A	04713	SR3609RL
CR244	152-0398-00			SEMICON D DEVICE:SILICON,200V,1A	04713	SR3609RL
CR245	152-0655-00			SEMICON D DEVICE:SILICON,100V,3A	03508	A115AX39
CR246	152-0655-00			SEMICON D DEVICE:SILICON,100V,3A	03508	A115AX39
CR247	152-0066-00			SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CR261	152-0400-00			SEMICON D DEVICE:SILICON,400V,1A	80009	152-0400-00
CR262	152-0400-00			SEMICON D DEVICE:SILICON,400V,1A	80009	152-0400-00
CR271	152-0400-00			SEMICON D DEVICE:SILICON,400V,1A	80009	152-0400-00
CR272	152-0400-00			SEMICON D DEVICE:SILICON,400V,1A	80009	152-0400-00
CR281	152-0676-00	B010100	B020129	SEMICON D DEVICE:RECT,SI,400V,3A	03508	A115DX112
CR281	152-0400-00	B020130		SEMICON D DEVICE:SILICON,400V,1A	80009	152-0400-00
CR282	152-0676-00	B010100	B020129	SEMICON D DEVICE:RECT,SI,400V,3A	03508	A115DX112
CR283	152-0676-00	B010100	B020129	SEMICON D DEVICE:RECT,SI,400V,3A	03508	A115DX112
CR284	152-0676-00	B010100	B020129	SEMICON D DEVICE:RECT,SI,400V,3A	03508	A115DX112
CR301	152-0066-00			SEMICON D DEVICE:SILICON,400V,750MA	14433	LG4016
CF:321	152-0397-00			SEMICON D DEVICE:SILICON,50V,12A	80009	152-0397-00
CR331	152-0655-00			SEMICON D DEVICE:SILICON,100V,3A	03508	A115AX39

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix		Serial/Model No.		Name & Description	Mfr Code	Mfr Part Number
	Part No.	Eff	Dscont				
					A13 POWER SUPPLY ASSEMBLY (CONT'D)		
CR332	152-0655-00				SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
CR333	152-0640-00				SEMICONV DEVICE:SILICON,35V,30A,DO-4	01281	SD-4101
CR431	152-0640-00				SEMICONV DEVICE:SILICON,35V,30A,DO-4	01281	SD-4101
DS381	150-0035-00	B020130			LAMP,GLOW:90V,0.3MA	53944	A1B-3
E81	119-0181-00				ARSR,ELEC SURGE:230V,GAS FILLED	74276	CG230L
E82	119-0181-00				ARSR,ELEC SURGE:230V,GAS FILLED	74276	CG230L
F251	159-0166-00	B020130			FUSE,THERMAL:15A,240V	27012	4178A1
J101	131-2182-00				TERM. SET,PIN:1 X 5,0.156 SPACING,RTANG	27264	09-47-1052
J101	-----				(QUANTITY OF 4)		
J281	131-2205-00				TERM,FEEDTHRU:4 PIN INSULATED	27264	H-2402-12KG
J282	131-2205-00				TERM,FEEDTHRU:4 PIN INSULATED	27264	H-2402-12KG
L131	108-0808-00				COIL,RF:FIXED,500UH	80009	108-0808-00
L211	108-0922-00				COIL,RF:FIXED,800UH	80009	108-0922-00
L231	108-0923-00				COIL,RF:FIXED,1.3MH	80009	108-0923-00
L232	108-0923-00				COIL,RF:FIXED,1.3MH	80009	108-0923-00
L281	108-0972-00				COIL,RF:FIXED,500UH	80009	108-0972-00
L311	108-0919-00				COIL,RF:FIXED,5.7UH	80009	108-0919-00
L321	108-0911-00				COIL,RF:FIXED,65UH	80009	108-0911-00
L381	108-0921-00	B010100	B020129		COIL,RF:FIXED,140UH	80009	108-0921-00
L381	108-0973-00	B020130			COIL,RF:FXD,140UH	80009	108-0973-00
Q2	151-0426-00				TRANSISTOR:SILICON,NPN	03508	X44H242
Q3	151-0302-00				TRANSISTOR:SILICON,NPN	07263	S038487
Q11	151-0352-00				TRANSISTOR:SILICON,NPN	03508	X44C282
Q12	151-0301-00				TRANSISTOR:SILICON,PNP	27014	2N2907A
Q13	151-0352-00				TRANSISTOR:SILICON,NPN	03508	X44C282
Q14	151-0301-00				TRANSISTOR:SILICON,PNP	27014	2N2907A
Q21	151-0224-00				TRANSISTOR:SILICON,NPN	07263	SA24850
Q31	151-0464-00				TRANSISTOR:SILICON,NPN	04713	SJE412
Q51	151-0224-00	B010100	B020129		TRANSISTOR:SILICON,NPN	07263	SA24850
Q51	151-0390-00	B020130			TRANSISTOR:SILICON,NPN	04713	SPS3414
Q52	151-0188-00	B010100	B020129		TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q81	151-0522-00	B010100	B020129		TRANSISTOR:SILICON,TRIAC,400V	03508	SC141DX164
Q131	151-0462-00				TRANSISTOR:SILICON,PNP	04713	SJE491
Q141	151-0224-00				TRANSISTOR:SILICON,NPN	07263	SA24850
Q151	151-0224-00	B010100	B020129		TRANSISTOR:SILICON,NPN	07263	SA24850
Q151	151-0391-00	B020130			TRANSISTOR:SILICON,PNP	80009	151-0391-00
Q152	151-0224-00	B010100	B020129		TRANSISTOR:SILICON,NPN	07263	SA24850
Q152	151-0390-00	B020130			TRANSISTOR:SILICON,NPN	04713	SPS3414
Q153	151-0390-00	B010100	B020129		TRANSISTOR:SILICON,NPN	04713	SPS3414
Q154	151-0391-00	B010100	B020129		TRANSISTOR:SILICON,PNP	80009	151-0391-00
Q155	151-0390-00	B010100	B020129		TRANSISTOR:SILICON,NPN	04713	SPS3414
Q211	151-0224-00				TRANSISTOR:SILICON,NPN	07263	SA24850
Q212	151-0188-00				TRANSISTOR:SILICON,PNP	04713	SPS6868K
Q261	151-0632-00				TRANSISTOR:SILICON,NPN	04713	SJE1946
Q271	151-0632-00				TRANSISTOR:SILICON,NPN	04713	SJE1946
Q1001	151-0526-00				SCR:SILICON,100V,35A	02735	2N3896

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A13 POWER SUPPLY ASSEMBLY (CONT'D)		
R1	311-1236-00			RES.,VAR, NONWIR:250 OHM,10%,0.50W	73138	72-22-0
R2	315-0751-00	B010100	B020129	RES.,FXD,CMPSPN:750 OHM,5%,0.25W	01121	CB7515
R2	315-0471-00	B020130		RES.,FXD,CMPSPN:470 OHM,5%,0.25W	01121	CB4715
R3	321-0636-00			RES.,FXD,FILM:100 OHM,0.5%,0.125W	91637	MFF1816D100R0D
R4	315-0471-00			RES.,FXD,CMPSPN:470 OHM,5%,0.25W	01121	CB4715
R5	321-0779-03			RES.,FXD,FILM:7.020K OHM,0.25%,0.125W	91637	MFF1816D70200C
R6	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
R7	315-0332-00			RES.,FXD,CMPSPN:3.3K OHM,5%,0.25W	01121	CB3325
R8	321-0197-00			RES.,FXD,FILM:1.1K OHM,1%,0.125W	91637	MFF1816G11000F
R11	308-0678-00			RES.,FXD,WW:0.1 OHM,5%,2W	75042	BWH-R1000J
R12	315-0222-00			RES.,FXD,CMPSPN:2.2K OHM,5%,0.25W	01121	CB2225
R13	321-1296-03			RES.,FXD,FILM:12K OHM,0.25%,0.125W	91637	MFF1816D12001C
R14	315-0332-00			RES.,FXD,CMPSPN:3.3K OHM,5%,0.25W	01121	CB3325
R15	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
R16	308-0678-00			RES.,FXD,WW:0.1 OHM,5%,2W	75042	BWH-R1000J
R21	315-0222-00			RES.,FXD,CMPSPN:2.2K OHM,5%,0.25W	01121	CB2225
R22	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
R23	315-0332-00			RES.,FXD,CMPSPN:3.3K OHM,5%,0.25W	01121	CB3325
R24	321-0816-03			RES.,FXD,FILM:5K OHM,0.25%,0.125W	91637	MFF1816D50000C
R25	308-0678-00			RES.,FXD,WW:0.1 OHM,5%,2W	75042	BWH-R1000J
R31	315-0103-00			RES.,FXD,CMPSPN:10K OHM,5%,0.25W	01121	CB1035
R32	315-0103-00			RES.,FXD,CMPSPN:10K OHM,5%,0.25W	01121	CB1035
R33	321-0297-00	B010100	B020129	RES.,FXD,FILM:12.1K OHM,1%,0.125W	91637	MFF1816G12101F
R33	315-0333-00	B020130		RES.,FXD,CMPSPN:33K OHM,5%,0.25W	01121	CB3335
R34	321-0288-00	B010100	B020129	RES.,FXD,FILM:9.76K OHM,1%,0.125W	91637	MFF1816G97600F
R34	315-0125-00	B020130		RES.,FXD,CMPSPN:1.2M OHM,5%,0.25W	01121	CB1255
R35	315-0224-00	B020130		RES.,FXD,CMPSPN:220K OHM,5%,0.25W	01121	CB2245
R36	315-0105-00	B020130		RES.,FXD,CMPSPN:1M OHM,5%,0.25W	01121	CB1055
R37	315-0105-00	B020130		RES.,FXD,CMPSPN:1M OHM,5%,0.25W	01121	CB1055
R38	315-0105-00	B020130		RES.,FXD,CMPSPN:1M OHM,5%,0.25W	01121	CB1055
R39	315-0472-00	B020130		RES.,FXD,CMPSPN:4.7K OHM,5%,0.25W	01121	CB4725
R41	315-0104-00	B010100	B020129	RES.,FXD,CMPSPN:100K OHM,5%,0.25W	01121	CB1045
R41	315-0752-00	B020130		RES.,FXD,CMPSPN:7.5K OHM,5%,0.25W	01121	CB7525
R42	315-0622-00	B010100	B020129	RES.,FXD,CMPSPN:6.2K OHM,5%,0.25W	01121	CB6225
R42	315-0243-00	B020130		RES.,FXD,CMPSPN:24K OHM,5%,0.25W	01121	CB2435
R43	315-0102-00	B010100	B020129	RES.,FXD,CMPSPN:1K OHM,5%,0.25W	01121	CB1025
R43	315-0105-00	B020130		RES.,FXD,CMPSPN:1M OHM,5%,0.25W	01121	CB1055
R44	315-0105-00	B020130		RES.,FXD,CMPSPN:1M OHM,5%,0.25W	01121	CB1055
R51	315-0104-00	B010100	B020129	RES.,FXD,CMPSPN:100K OHM,5%,0.25W	01121	CB1045
R51	315-0122-00	B020130		RES.,FXD,CMPSPN:1.2K OHM,5%,0.25W	01121	CB1225
R52	315-0103-00	B010100	B020129	RES.,FXD,CMPSPN:10K OHM,5%,0.25W	01121	CB1035
R52	315-0561-00	B020130		RES.,FXD,CMPSPN:560 OHM,5%,0.25W	01121	CB5615
R53	315-0272-00	B020130		RES.,FXD,CMPSPN:2.7K OHM,5%,0.25W	01121	CB2725
R61	315-0122-00	B010100	B020129	RES.,FXD,CMPSPN:1.2K OHM,5%,0.25W	01121	CB1225
R62	315-0104-00	B010100	B020129	RES.,FXD,CMPSPN:100K OHM,5%,0.25W	01121	CB1045
R71	308-0061-00	B010100	B020129	RES.,FXD,WW:1.5K OHM,5%,5W	91637	RS5-B15000J
R71	307-0353-00	B020130		RES.,FXD,FILM:5 OHM,10%,DISC	15454	5DA5RO-K-270SS
R72	308-0061-00	B010100	B020129	RES.,FXD,WW:1.5K OHM,5%,5W	91637	RS5-B15000J
R81	315-0331-00	B010100	B020129	RES.,FXD,CMPSPN:330 OHM,5%,0.25W	01121	CB3315
R83	308-0212-00	B010100	B020129	RES.,FXD,WW:10K OHM,5%,3W	91637	CW2B-B10001J
R101	315-0101-00			RES.,FXD,CMPSPN:100 OHM,5%,0.25W	01121	CB1015
R102	315-0620-00			RES.,FXD,CMPSPN:62 OHM,5%,0.25W	01121	CB6205

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A13 POWER SUPPLY ASSEMBLY (CONT'D)						
R103	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
R104	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R105	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R106	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R107	315-0243-00			RES.,FXD,CMPSN:24K OHM,5%,0.25W	01121	CB2435
R111	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
R112	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R113	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R114	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R115	315-0123-00			RES.,FXD,CMPSN:12K OHM,5%,0.25W	01121	CB1235
R116	321-0277-00			RES.,FXD,FILM:7.5K OHM,1%,0.125W	91637	MFF1816G75000F
R121	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
R122	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R123	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R124	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R125	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
R126	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R127	315-0221-00	B020130		RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R131	315-0333-00	B010100	B020129	RES.,FXD,CMPSN:33K OHM,5%,0.25W	01121	CB3335
R131	315-0222-00	B020130		RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
R132	315-0105-00	B010100	B020129	RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R132	315-0222-00	B020130		RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
R133	315-0564-00	B010100	B020129	RES.,FXD,CMPSN:560K OHM,5%,0.25W	01121	CB5645
R133	315-0103-00	B020130		RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R134	315-0103-00	B010100	B020129	RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R134	315-0221-00	B020130		RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R135	315-0102-00	B010100	B020129	RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R135	315-0472-00	B020130		RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R136	315-0472-00	B010100	B020129	RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R141	315-0154-00	B010100	B020129	RES.,FXD,CMPSN:150K OHM,5%,0.25W	01121	CB1545
R141	315-0333-00	B020130		RES.,FXD,CMPSN:33K OHM,5%,0.25W	01121	CB3335
R142	315-0134-00			RES.,FXD,CMPSN:130K OHM,5%,0.25W	01121	CB1345
R143	315-0103-00	B010100	B020129	RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R143	315-0104-00	B020130		RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
R144	315-0512-00	B010100	B020129	RES.,FXD,CMPSN:5.1K OHM,5%,0.25W	01121	CB5125
R144	315-0105-00	B020130		RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R145	315-0103-00	B010100	B020129	RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R145	315-0512-00	B020130		RES.,FXD,CMPSN:5.1K OHM,5%,0.25W	01121	CB5125
R146	315-0102-00	B010100	B020129	RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R146	315-0103-00	B020130		RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R151	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R152	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R153	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R154	315-0472-00	B010100	B020129	RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R154	315-0132-00	B020130		RES.,FXD,CMPSN:1.3K OHM,5%,0.25W	01121	CB1325
R155	315-0472-00	B010100	B020129	RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R155	315-0561-00	B020130		RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
R156	315-0472-00	B010100	B020129	RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R156	315-0272-00	B020130		RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
R157	315-0472-00	B010100	B020129	RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R157	315-0561-00	B020130		RES.,FXD,CMPSN:560 OHM,5%,0.25W	01121	CB5615
R158	321-0423-00			RES.,FXD,FILM:249K OHM,1%,0.125W	91637	MFF1816G24902F

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A13 POWER SUPPLY ASSEMBLY (CONT'D)						
R159	315-0472-00	B010100	B020129	RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R159	315-0272-00	B020130		RES.,FXD,CMPSN:2.7K OHM,5%,0.25W	01121	CB2725
R160	315-0102-00	B010100	B020129	RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R161	308-0399-00			RES.,FXD,WW:10 OHM,5%,5W	91637	RS2AK10R00J
R162	315-0514-00	B051050		RES.,FXD,CMPSN:510K OHM,5%,0.25W	01121	CB5145
R172	315-0514-00	B051050		RES.,FXD,CMPSN:510K OHM,5%,0.25W	01121	CB5145
R181	307-0353-00	B020130		RES.,FXD,FILM:5 OHM,10%,DISC	15454	5DA5RO-K-270SS
R182	308-0212-00	B010100	B020129	RES.,FXD,WW:10K OHM,5%,3W	91637	CW2B-B10001J
R201	321-0271-00			RES.,FXD,FILM:6.49K OHM,1%,0.125W	91637	MFF1816G64900F
R202	321-0932-00			RES.,FXD,FILM:2.5K OHM,1%,0.125W	24546	NA55D2501F
R203	321-0289-00			RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
R204	315-0122-00			RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
R205	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R206	321-0289-00			RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
R207	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R208	321-0289-00			RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
R209	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R211	321-0423-00			RES.,FXD,FILM:249K OHM,1%,0.125W	91637	MFF1816G24902F
R212	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R213	321-0242-00	B010100	B020129	RES.,FXD,FILM:3.24K OHM,1%,0.125W	91637	MFF1816G32400F
R213	321-0252-00	B020130		RES.,FXD,FILM:4.12K OHM,1%,0.125W	91637	MFF1816G41200F
R214	321-0242-00	B010100	B020129	RES.,FXD,FILM:3.24K OHM,1%,0.125W	91637	MFF1816G32400F
R214	321-0252-00	B020130		RES.,FXD,FILM:4.12K OHM,1%,0.125W	91637	MFF1816G41200F
R215	315-0152-00			RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
R216	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
R217	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
R218	315-0104-00			RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
R219	315-0222-00			RES.,FXD,CMPSN:2.2K OHM,5%,0.25W	01121	CB2225
R241	321-0779-03			RES.,FXD,FILM:7.020K OHM,0.25%,0.125W	91637	MFF1816D70200C
R251	321-1313-08			RES.,FXD,FILM:18K OHM,1%,0.125W	91637	MFF1816D18001F
R252	321-0289-00			RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
R253	321-0779-03			RES.,FXD,FILM:7.020K OHM,0.25%,0.125W	91637	MFF1816D70200C
R254	321-0320-00			RES.,FXD,FILM:21K OHM,1%,0.125W	91637	MFF1816G21001F
R255	305-0101-00	B020130		RES.,FXD,CMPSN:100 OHM,5%,2W	01121	HB1015
R262	315-0201-00	B051050		RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
R272	315-0201-00	B051050		RES.,FXD,CMPSN:200 OHM,5%,0.25W	01121	CB2015
R281	315-0221-00	B020130		RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R282	316-0565-00	B020130		RES.,FXD,CMPSN:5.6M OHM,10%,0.25W	01121	CB5651
R301	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R311	308-0802-00			RES.,FXD,WW:0.01 OHM,5%,5W	91637	LVR5 .01 OHM 5%
R341	306-0150-00			RES.,FXD,CMPSN:15 OHM,10%,2W	01121	HB1501
R351	305-0101-00			RES.,FXD,CMPSN:100 OHM,5%,2W	01121	HB1015
R352	305-0101-00	B010100	B020129	RES.,FXD,CMPSN:100 OHM,5%,2W	01121	HB1015
R361	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R371	303-0104-00			RES.,FXD,CMPSN:100K OHM,5%,1W	01121	GB1045
R381	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
R382	303-0104-00			RES.,FXD,CMPSN:100K OHM,5%,1W	01121	GB1045
R401	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R441	306-0150-00			RES.,FXD,CMPSN:15 OHM,10%,2W	01121	HB1501
RT71	307-0353-00	B010100	B020129	RES.,FXD,FILM:5 OHM,10%,DISC	15454	5DA5RO-K-270SS
RT181	307-0353-00	B010100	B020129	RES.,FXD,FILM:5 OHM,10%,DISC	15454	5DA5RO-K-270SS

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A13 POWER SUPPLY ASSEMBLY (CONT'D)						
T61	120-1185-00	B010100	B020129	XFMR,PWR,STPDN:	80009	120-1185-00
T61	120-1252-00	B020130		XFMR,PWR,STPDN:	80009	120-1252-00
T71	120-1121-00	B010100	B020129	XFMR,PWR,STPDN:	80009	120-1121-00
T161	120-1119-00	B010100	B050999	TRANSFORMER,RF:BASE DRIVE	80009	120-1119-00
T161	120-1119-01	B051000		TRANSFORMER,RF:BASE DRIVE	80009	120-1119-01
T251	120-1182-00			XFMR,PWR,STPDN:HIGH FREQUENCY	80009	120-1182-00
T381	120-0743-00			XFMR,TOROID:13 TURNS,BIFILAR	80009	120-0743-00
TP1	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP2	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP11	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP21	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP22	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP23	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP31	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP32	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP41	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP101	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP102	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP111	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP121	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP141	214-0579-00	B010100	B051049	TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP151	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP201	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
TP221	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
U31	156-0285-00			MICROCIRCUIT,LI:VOLTAGE REGULATOR	27014	LM340T-12
U41	156-0750-00	B010100	B020129	MICROCIRCUIT,DI:DUAL MONOSTABLE MV	80009	156-0750-00
U41	156-1225-00	B020130	B051633	MICROCIRCUIT,LI:DUAL COMPARATOR,8 DIP	27014	LM393N
U41	156-1225-01	B051634		MICROCIRCUIT,LI:DUAL COMPARATOR,SCREENED	27014	LM393N/AT
U45	156-0767-00	B010100	B020129	MICROCIRCUIT,DI:HEX GATE	04713	MC14572UBC
U101	156-0853-00	B010100	B051633	MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER,DUAL	27014	LM358N
U101	156-0853-02	B051634		MICROCIRCUIT,LI:DUAL OPNL AMPL,CHK	04713	LM358J
U111	156-0853-00	B010100	B051633	MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER,DUAL	27014	LM358N
U111	156-0853-02	B051634		MICROCIRCUIT,LI:DUAL OPNL AMPL,CHK	04713	LM358J
U121	156-0853-00	B010100	B051633	MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER,DUAL	27014	LM358N
U121	156-0853-02	B051634		MICROCIRCUIT,LI:DUAL OPNL AMPL,CHK	04713	LM358J
U141	156-0366-02	B010100	B020129	MICROCIRCUIT,DI:DUAL D FLIP-FLOP,CHK	80009	156-0366-02
U141	156-0767-00	B020130	B051049	MICROCIRCUIT,DI:HEX GATE	04713	MC14572UBC
U142	156-0366-02	B020130	B051049	MICROCIRCUIT,DI:DUAL D FLIP-FLOP,CHK	80009	156-0366-02
U151	156-0575-03			MICROCIRCUIT,DI:3 INPUT NOR GATE,SELECTED	80009	156-0575-03
U211	156-0411-00			MICROCIRCUIT,LI:QUAD-COMP,SGL SUPPLY	27014	LM339N
U241	156-0853-00	B010100	B051633	MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER,DUAL	27014	LM358N
U241	156-0853-02	B051634		MICROCIRCUIT,LI:DUAL OPNL AMPL,CHK	04713	LM358J
U251	156-0853-00	B010100	B051633	MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER,DUAL	27014	LM358N
U251	156-0853-02	B051634		MICROCIRCUIT,LI:DUAL OPNL AMPL,CHK	04713	LM358J
VR1	152-0461-00			SEMICOND DEVICE:ZENER,0.4W,6.2V,5%	04713	1N821
VR31	152-0590-00			SEMICOND DEVICE:ZENER,18V,5% AT 7MA	04713	SZG35014K2
VR32	152-0590-00			SEMICOND DEVICE:ZENER,18V,5% AT 7MA	04713	SZG35014K2
VR51	152-0461-00	B020130	051049	SEMICOND DEVICE:ZENER,0.4W,6.2V,5%	04713	1N821
VR61	152-0461-00	B010100	B020129	SEMICOND DEVICE:ZENER,0.4W,6.2V,5%	04713	1N821

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No.		Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont			
				A13 POWER SUPPLY ASSEMBLY (CONT'D)		
VR101	152-0149-00			SEMICONV DEVICE:ZENER,0.4W,10V,5%	04713	SZG35009K3
VR121	152-0149-00			SEMICONV DEVICE:ZENER,0.4W,10V,5%	04713	SZG35009K3
VR151	152-0655-00	B010100	B020129	SEMICONV DEVICE:SILICON,100V,3A	03508	A115AX39
VR151	152-0662-00	B020130		SEMICONV DEVICE:ZENER,0.4W,5V,1%	04713	SZG195
VR301	152-0175-00			SEMICONV DEVICE:ZENER,0.4W,5.6V,5%	04713	SZG35008

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A13A1A1	670-6983-00	B051050		A13A1A1 SOFT START		
C44	283-0203-00			CKT BOARD ASSY:SOFT START	80009	670-6983-00
C45	281-0812-00			CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
				CAP.,FXD,CER DI:1000PF,10%,100V	72982	8035D9AADX7R102K
Q142	151-0224-00			TRANSISTOR:SILICON,NPN	07263	SA24850
Q143	151-0224-00			TRANSISTOR:SILICON,NPN	07263	SA24850
R46	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R47	315-0243-00			RES.,FXD,CMPSN:24K OHM,5%,0.25W	01121	CB2435
R48	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R49	315-0184-00			RES.,FXD,CMPSN:180K OHM,5%,0.25W	01121	CB1845
R50	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R147	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R148	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
TP141	214-0579-00			TERM,TEST POINT:BRS CD PL	80009	214-0579-00
U141	156-0767-00	B05150	051633	MICROCIRCUIT,DI:HEX GATE	04713	MC14572UBC
U141	156-0767-02	B051634		MICROCIRCUIT,DI:HEX GATE 4 INV,SCRN	04713	MC14572UBCLD
U142	156-0366-02			MICROCIRCUIT,DI:DUAL D FLIP-FLOP,CHK	80009	156-0366-02
U143	156-0411-00			MICROCIRCUIT,LI:QUAD-COMP,SGL SUPPLY	27014	LM339N
A13A2	670-5614-00			A13A2 60W AUXILIARY		
C11	290-0831-00			CKT BOARD ASSY:60 W AUXILIARY	80009	670-5614-00
C21	290-0831-00			CAP.,FXD,ELCTLT:470UF,+50-10%,50V	55680	ULB1H471TKAANA
				CAP.,FXD,ELCTLT:470UF,+50-10%,50V	55680	ULB1H471TKAANA
C31	283-0111-00			CAP.,FXD,CER DI:0.1UF,20%,50V	72982	8121-N088Z5U104M
C141	283-0111-00			CAP.,FXD,CER DI:0.1UF,20%,50V	72982	8121-N088Z5U104M
C241	283-0203-00	B020250		CAP.,FXD,CER DI:0.47UF,20%,50V	72982	8131M058Z5U0474M
CR1	152-0686-00			SEMICONV DEVICE:RECT,SI,100V,5A	04713	SR3273
CR101	152-0686-00			SEMICONV DEVICE:RECT,SI,100V,5A	04713	SR3273
CR131	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR133	152-0333-00			SEMICONV DEVICE:SILICON,55V,200MA	07263	FDH-6012
CR134	152-0333-00			SEMICONV DEVICE:SILICON,55V,200MA	07263	FDH-6012
CR241	152-0066-00			SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
J1	131-2182-00			TERM. SET,PIN:1 X 5,0.156 SPACING,RTANG	27264	09-47-1052
J241	131-2182-00			TERM. SET,PIN:1 X 5,0.156 SPACING,RTANG	27264	09-47-1052
L21	108-0337-00			COIL,RF:25UH	80009	108-0337-00
L121	108-0337-00			COIL,RF:25UH	80009	108-0337-00
L201	108-0920-00	B020130		COIL,RF:FIXED,2.3MH	80009	108-0920-00
Q131	151-0301-00			TRANSISTOR:SILICON,PNP	27014	2N2907A
Q221	151-0477-00			TRANSISTOR:SILICON,NPN	04713	SJE374
Q231	151-0462-00			TRANSISTOR:SILICON,PNP	04713	SJE491
R31	321-0179-00			RES.,FXD,FILM:715 OHM,1%,0.125W	91637	MFF1816G715R0F
R32	321-0816-00			RES.,FXD,FILM:5K OHM,1%,0.125W	24546	NA55D5001F
R33	321-0816-00			RES.,FXD,FILM:5K OHM,1%,0.125W	24546	NA55D5001F

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A13A2 60W AUXILIARY (CONT'D)		
R34	308-0643-00			RES.,FXD,WW:0.1 OHM,3%,3W	91637	RS2B-ER1000H
R35	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
R36	315-0202-00			RES.,FXD,CMPSN:2K OHM,5%,0.25W	01121	CB2025
R41	315-0302-00			RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
R42	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R43	315-0512-00			RES.,FXD,CMPSN:5.1K OHM,5%,0.25W	01121	CB5125
R121	308-0643-00			RES.,FXD,WW:0.1 OHM,3%,3W	91637	RS2B-ER1000H
R122	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
R131	301-0512-00			RES.,FXD,CMPSN:5.1K OHM,5%,0.50W	01121	EB5125
R132	315-0302-00			RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
R133	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R134	301-0622-00			RES.,FXD,CMPSN:6.2K OHM,5%,0.50W	01121	EB6225
R141	315-0153-00			RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
R142	315-0105-00			RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R143	308-0425-00			RES.,FXD,WW:0.35 OHM,1%,8W	14193	SP1151-S
U131	156-1225-00	B010100	B051633	MICROCIRCUIT,LI:DUAL COMPARATOR,8 DIP	27014	LM393N
U131	156-1225-01	B051634		MICROCIRCUIT,LI:DUAL COMPARATOR,SCREENED	27014	LM393N/AT
VR31	152-0282-00			SEMICONV DEVICE:ZENER,0.4W,30V,5%	04713	1N972B
VR41	152-0688-00			SEMICONV DEVICE:ZENER,2.4V,5%,0.4W	04713	1N4370A
VR132	152-0662-00			SEMICONV DEVICE:ZENER,0.4W,5V,1%	04713	SZG195

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A13A3	670-5613-00		A13A3 FAN REGULATOR	80009	670-5613-00
C1	283-0032-00		CKT BOARD ASSY:FAN REGULATOR	72982	0831085Z5E00471J
C11	290-0768-00		CAP.,FXD,CER DI:470PF,5%,500V	54473	ECE-A100V10L
C211	285-1050-00		CAP.,FXD,ELCTLT:10UF,+50-10%,100V	14752	230B1C104F
C212	285-1050-00		CAP.,FXD,PLSTC:0.1UF,1%,200V	14752	230B1C104F
C321	290-0768-00		CAP.,FXD,ELCTLT:10UF,+50-10%,100V	54473	ECE-A100V10L
C421	290-0758-00		CAP.,FXD,ELCTLT:2.2UF,+50-10%,160V	56289	502D227
CR101	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR102	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR103	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR111	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR112	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR211	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR212	152-0141-02		SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR311	152-0400-00		SEMICONV DEVICE:SILICON,400V,1A	80009	152-0400-00
CR321	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR411	152-0400-00		SEMICONV DEVICE:SILICON,400V,1A	80009	152-0400-00
J21	131-2206-00		CONN,RCPT,ELEC:CKT BD,4 CONT FEMALE	27264	09-62-3041
J31	131-2206-00		CONN,RCPT,ELEC:CKT BD,4 CONT FEMALE	27264	09-62-3041
J311	131-0589-00		TERMINAL,PIN:0.46 L X 0.025 SQ	22526	48283-029
J311	-----		(QUANTITY OF 2)		
J312	131-0589-00		TERMINAL,PIN:0.46 L X 0.025 SQ	22526	48283-029
J312	-----		(QUANTITY OF 2)		
Q311	151-0634-00		TRANSISTOR:SILICON,NPN	04713	SJE1937
Q411	151-0634-00		TRANSISTOR:SILICON,NPN	04713	SJE1937
R1	315-0104-00		RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
R2	315-0104-00		RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
R11	315-0104-00		RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
R101	315-0105-00		RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R102	315-0104-00		RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
R103	315-0474-00		RES.,FXD,CMPSN:470K OHM,5%,0.25W	01121	CB4745
R104	315-0914-00		RES.,FXD,CMPSN:910K OHM,5%,0.25W	01121	CB9145
R105	315-0105-00		RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R106	315-0474-00		RES.,FXD,CMPSN:470K OHM,5%,0.25W	01121	CB4745
R111	315-0103-00		RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R112	321-0340-00		RES.,FXD,FILM:34K OHM,1%,0.125W	91637	MFF1816G34001F
R113	315-0331-00		RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R114	315-0104-00		RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
R115	315-0104-00		RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
R201	321-0441-00		RES.,FXD,FILM:383K OHM,1%,0.125W	91637	MFF1816G38302F
R202	321-0441-00		RES.,FXD,FILM:383K OHM,1%,0.125W	91637	MFF1816G38302F
R211	315-0364-00		RES.,FXD,CMPSN:360K OHM,5%,0.25W	01121	CB3645
R212	315-0105-00		RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R213	315-0105-00		RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
R311	321-0441-00		RES.,FXD,FILM:383K OHM,1%,0.125W	91637	MFF1816G38302F
R411	308-0230-00		RES.,FXD,WW:2.7K OHM,5%,3W	91637	CW2B-D27000J
R421	308-0230-00		RES.,FXD,WW:2.7K OHM,5%,3W	91637	CW2B-D27000J

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
T221	120-1164-00			A13A3 FAN REGULATOR (CONT'D)	80009	120-1164-00
U211	156-0495-00	B010100	B051633	TRANSFORMER,RF:FAN BASE DRIVE	27014	LM324N
U211	156-0495-02	B051634		MICROCIRCUIT,LI:OPNL AMPL	01295	LM324J4
VR11	152-0514-00			MICROCIRCUIT,LI:QUAD OPNL AMPL,SELECTED	80009	152-0514-00
VR12	152-0590-00			SEMICONV DEVICE:ZENER,0.4W,10V,1%	04713	SZG35014K2
				SEMICONV DEVICE:ZENER,18V,5% AT 7MA		

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix	Serial/Model No.		Name & Description	Mfr	Mfr Part Number
	Part No.	Eff	Dscont		Code	
				A14 ROM OVERLAY		
A14	670-6275-00	B020000	B021169	CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-00
A14	670-6275-01	B021170	B020299	CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-01
A14	670-6275-02	B030624	B039999	CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-02
A14	670-6275-03	B051170	B051184	CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-03
A14	670-6275-04	B051185	B051214	CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-04
A14	670-6275-05	B051215	B061999	CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-05
A14	670-6275-06	B062000		CKT BOARD ASSY:ROM OVERLAY	80009	670-6275-06
C250	283-0421-00	B030624	B051169	CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C255	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C260	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C263	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C265	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C270	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C275	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C280	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C283	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C285	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C380	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C385	290-0134-00			CAP.,FXD,ELCTLT:22UF,20%,15V	56289	150D226X0015B2
C435	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C436	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C440	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C445	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C446	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C450	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C455	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C456	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C460	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C465	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C466	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C470	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C480	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C535	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C540	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C545	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C550	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C555	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C560	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C565	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C570	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C576	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C580	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C640	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C650	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C660	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C670	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C675	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
J2603	131-1857-00			TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J2632	131-1857-00			TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
J2655	131-1857-00			TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A14 ROM OVERLAY (CONT'D)						
R149	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R155	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R157	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R165	307-0445-00			RES NTWK,FXD,FI:4.7K OHM,20%,(9) RES	91637	MSP10A01-472M
R167	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R173	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R177	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R179	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R255	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R257	315-0473-00	B030624		RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
R265	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R357	315-0473-00	B020000	B020299	RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
R576	307-0547-00	B030624	B050169	RES NTWK,FXD,FI:DUAL,180 X 390 OHM,5%,1.5W	73138	898-5-R180/390
R580	307-0547-00	B050170	B151214	RES NTWK,FXD,FI:DUAL,180 X 390 OHM,5%,1.5W	73138	898-5-R180/390
R580	307-0658-00	B151215		RES NTWK,FXD,FI:14,220 OHM,14,330 OHM,2%	01121	316E221331
U150	156-0948-02			MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U155	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3
U160	156-0694-02			MICROCIRCUIT,DI:DCDR/3 LINE TO 8 LINE,SCRN	07263	74S138DCQR
U165	156-0472-03			MICROCIRCUIT,DI:13 INPUT NAND GATE,SCRN	01295	SN74S133
U170	156-0948-02			MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U175	156-0118-03			MICROCIRCUIT,DI:1 DUAL J-K FF,BURN-IN	01295	SN74S112JP3
U180	156-0403-02			MICROCIRCUIT,DI:HEX INVERTER,SCRN	01295	SN74S05
U255	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3
U260	156-0469-02			MICROCIRCUIT,DI:3/8 LINE DCDR	01295	SN74LS138NP3
U263	156-0480-02			MICROCIRCUIT,DI:QUAD 2 INP & GATE	01295	SN74LS08NP3
U265	156-0739-02			MICROCIRCUIT,DI:QUAD 2 INP OR GATE,SCRN	01295	SN74S32
U270	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U275	156-0739-02			MICROCIRCUIT,DI:QUAD 2 INP OR GATE,SCRN	01295	SN74S32
U280	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U380	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U435	156-1101-00	B020000	B020169	MICROCIRCUIT,DI:2048 X 8 EPROM	80009	156-1101-00
U435	160-0290-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0290-00
U440	156-1101-00	B020000	B020169	MICROCIRCUIT,DI:2048 X 8 EPROM	80009	156-1101-00
U440	160-0289-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0289-00
U445	156-1101-00	B020000	B020169	MICROCIRCUIT,DI:2048 X 8 EPROM	80009	156-1101-00
U445	160-0292-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0292-00
U445	160-0292-01	B051170		MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0292-01
U450	156-1101-00	B020000	B020169	MICROCIRCUIT,DI:2048 X 8 EPROM	80009	156-1101-00
U450	160-0291-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0291-00
U450	160-0291-01	B051170		MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0291-01
U455	156-1101-00	B020000	B020169	MICROCIRCUIT,DI:2048 X 8 EPROM	80009	156-1101-00
U455	160-0294-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0294-00
U455	160-0294-01	B051170		MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0294-01
U460	156-1101-00	B020000	B020169	MICROCIRCUIT,DI:2048 X 8 EPROM	80009	156-1101-00
U460	160-0293-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0293-00
U460	160-0293-01	B051170		MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0293-01
U465	160-0296-00	B020170	B039999	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0296-00
U470	160-0295-00	B020170	B051169	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0295-00
U480	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U535	160-0298-00	B020170	B051169	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0298-00
U535	160-0298-01	B051170		MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0298-01

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix	Serial/Model No.		Name & Description	Mfr	Mfr Part Number
	Part No.	Eff	Dscont		Code	
				A14 ROM OVERLAY (CONT'D)		
U540	160-0297-00	B020170	B051169	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0297-00
U540	160-0297-01	B051170		MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0297-01
U545	160-0300-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0300-00
U550	160-0299-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0299-00
U555	160-0302-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0302-00
U560	160-0301-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0301-00
U565	160-0304-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0304-00
U570	160-0303-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0303-00
U575	160-0305-00	B020170	B020299	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0305-00

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A15	670-5503-00	B010100	B020114	A15 GPIB OPTION 1 021-0242-00	80009	670-5503-00
A15	-----			CKT BOARD ASSY:GPIB INTERFACE		
A15	670-5503-01	B020115	B020354	(OPTION 1 AND OPTION 4 ONLY)	80009	670-5503-01
A15	-----			CKT BOARD ASSY:GPIB INTERFACE		
A15	670-5503-02	B020355	B020449	(OPTION 1 AND OPTION 4 ONLY)	80009	670-5503-02
A15	-----			CKT BOARD ASSY:GPIB INTERFACE		
A15	670-5503-03	B020450	B051169	(OPTION 1 AND OPTION 4 ONLY)	80009	670-5503-03
A15	-----			CKT BOARD ASSY:GPIB INTERFACE		
A15	670-5503-04	B051170	B051319	(OPTION 1 AND OPTION 4 ONLY)	80009	670-5503-04
A15	-----			CKT BOARD ASSY:GPIB INTERFACE		
A15	670-5503-05	B051320	B061999	(OPTION 1 AND OPTION 4 ONLY)	80009	670-5503-05
A15	-----			CKT BOARD ASSY:GPIB INTERFACE		
A15	670-5503-06	B062000		(OPTION 1 AND OPTION 4 ONLY)	80009	670-5503-06
A15	-----			CKT BOARD ASSY:GPIB INTERFACE		
C111	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C137	283-0140-00			CAP.,FXD,CER DI:4.7PF,5%,50V	72982	8101E003A479C
C141	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C145	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C151	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C157	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C167	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C171	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C177	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C187	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C191	290-0134-00			CAP.,FXD,ELCTLT:22UF,20%,15V	56289	150D226X0015B2
C193	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C195	290-0114-00			CAP.,FXD,ELCTLT:47UF,20%,6V	56289	150D476X0006B2
C197	290-0134-00			CAP.,FXD,ELCTLT:22UF,20%,15V	56289	150D226X0015B2
C211	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C277	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C297	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C321	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C331	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C341	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C351	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C357	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C477	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C517	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C521	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C531	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C537	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C551	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C561	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C671	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C691	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C877	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C971	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
C991	281-0775-00			CAP.,FXD,CER DI:0.1UF,20%,50V	04222	SA205E104MAA
J101A	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
J101B	131-1426-00			CONTACT SET,ELE:R ANGLE,0.250 L,STRIP OF 36	22526	65524-136

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A15 GPIB OPTION 1 021-0242-00 (CONT'D)		
R187	307-0502-00			RES NTWK,FXD,FI:(9) 1.8K OHM,20%,0.125W	91637	MSP10A01-182M
R351	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R357	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R477	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R531	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R537	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R781	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R791	307-0445-00			RES NTWK,FXD,FI:4.7K OHM,20%,(9) RES	91637	MSP10A01-472M
R871	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R877	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R881	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
U111	156-0600-00			MICROCIRCUIT,DI:QUAD BUS XCVR	80009	156-0600-00
U117	156-0865-02			MICROCIRCUIT,DI:OCTAL D-TYPE FF W/CLEAR	01295	SN74LS273NP3
U121	156-0865-02			MICROCIRCUIT,DI:OCTAL D-TYPE FF W/CLEAR	01295	SN74LS273NP3
U131	156-0852-02			MICROCIRCUIT,DI:HEX DRVR W/3 STATE INP	80009	156-0852-02
U137	156-0763-00			MICROCIRCUIT,DI:HEX CONT BOUNCE ELIMINATOR	80009	156-0763-00
U141	156-0480-02			MICROCIRCUIT,DI:QUAD 2 INP & GATE	01295	SN74LS08NP3
U147	156-0480-02			MICROCIRCUIT,DI:QUAD 2 INP & GATE	01295	SN74LS08NP3
U151	156-0479-02			MICROCIRCUIT,DI:QUAD 2-INP OR GATE	01295	SN74LS32NP3
U161	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U171	160-0309-00	B010100	B051169	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0309-00
U171	160-0309-01	B051170	B051319	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0309-01
U171	160-0309-02	B051320	B061999	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0309-02
U171	160-0309-04	B062000				
U181	160-0308-00	B010100	B051169	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0308-00
U181	160-0308-01	B051170	B051319	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0308-01
U181	160-0308-02	B051320	B061999	MICROCIRCUIT,DI:2048 X 8 EPROM,PROGRAMMED	80009	160-0308-02
U191	156-1111-02			MICROCIRCUIT,DI:OCTAL BUS TRANSCEIVERS	01295	SN74LS245JP3
U271	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U277	156-0718-03			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE	01295	SN74LS27
U311	156-0600-00			MICROCIRCUIT,DI:QUAD BUS XCVR	80009	156-0600-00
U317	156-0852-02			MICROCIRCUIT,DI:HEX DRVR W/3 STATE INP	80009	156-0852-02
U321	156-0852-02			MICROCIRCUIT,DI:HEX DRVR W/3 STATE INP	80009	156-0852-02
U331	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U337	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U341	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U347	156-0383-02			MICROCIRCUIT,DI:QUAD 2-INP NOR GATE	01295	SN74LS02
U351	156-0645-02			MICROCIRCUIT,DI:HEX INV ST NAND GATES,SCRN	01295	SN74LS14
U361	156-0382-02			MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U391	156-0956-02			MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U471	156-0718-03			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE	01295	SN74LS27
U477	156-0479-02			MICROCIRCUIT,DI:QUAD 2-INP OR GATE	01295	SN74LS32NP3
U481	156-0464-02			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	01295	SN74LS20
U511	156-0600-00			MICROCIRCUIT,DI:QUAD BUS XCVR	80009	156-0600-00
U517	156-0852-02			MICROCIRCUIT,DI:HEX DRVR W/3 STATE INP	80009	156-0852-02
U521	156-0600-00			MICROCIRCUIT,DI:QUAD BUS XCVR	80009	156-0600-00
U531	156-0388-03			MICROCIRCUIT,DI:DUAL D FLIP-FLOP	07263	74LS74A
U537	156-0845-00	B010100	B051633	MICROCIRCUIT,DI:6-BIT COMPARATOR	27014	DM8160N
U537	156-0845-02	B051634		MICROCIRCUIT,DI:6 BIT COMPARATOR,BURN-IN	80009	156-0845-02
U541	156-0391-02			MICROCIRCUIT,DI:HEX LATCH W/CLEAR	01295	SN74LS174
U547	156-0391-02			MICROCIRCUIT,DI:HEX LATCH W/CLEAR	01295	SN74LS174

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
			A15 GPIB OPTION 1 021-0242-00 (CONT'D)		
U551	156-0382-02		MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U561	156-0390-02		MICROCIRCUIT,DI:DUAL 4/2 LINE DCDR/DEMUX	01295	SN74LS155
U671	156-0690-03		MICROCIRCUIT,DI:QUAD 2 INP NOR GATE,BURN IN	01295	SN74S02
U677	156-0948-02		MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U681	156-0541-02		MICROCIRCUIT,DI:DUAL 2 TO 4 LINE DCDR	01295	SN74LS139NP3
U691	156-0956-02		MICROCIRCUIT,DI:OCTAL BFR W/3 STATE OUT	01295	SN74LS244NP3
U771	156-0385-02		MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U777	156-0382-02		MICROCIRCUIT,DI:QUAD 2-INP NAND GATE	01295	SN74LS00
U781	156-0739-02		MICROCIRCUIT,DI:QUAD 2 INP OR GATE,SCRN	01295	SN74S32
U871	156-0404-01		MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	80009	156-0404-01
U877	156-0948-02		MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U881	156-0844-02		MICROCIRCUIT,DI:SYN 4 BIT CNTR,SCRN	01295	SN74LS161A
U891	156-0470-02		MICROCIRCUIT,DI:8 INP DATA SEL W/3 STATE	01295	SN74LS251
U971	156-0481-02		MICROCIRCUIT,DI:TRIPLE 3 INP & GATE	27014	DM74LS11NA+
U977	156-0321-02		MICROCIRCUIT,DI:TRIPLE 3 INP NAND GATE	01295	SN74S10
U981	156-0385-02		MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U991	156-0403-02		MICROCIRCUIT,DI:HEX INVERTER,SCRN	01295	SN74S05

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix		Serial/Model No.		Name & Description	Mfr Code	Mfr Part Number
	Part No.	Eff	Dscont				
A16	670-6135-00				A16 GPIB ADAPTER		
A16	-----				CKT BOARD ASSY:GPIB ADAPTER	80009	670-6135-00
J1	131-0608-00				(OPTION 1 & 4 ONLY)		
J1	-----				TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J2	131-2203-01				(QUANTITY OF 26. OPTION 1 & 4 ONLY)		
J2	-----				CONN,RCPT,ELEC:CKT BD,24 CONT,FEMALE	71785	57-20240-11
					(QUANTITY OF 1. OPTION 1 & 4 ONLY)		
					A17A1 MEDIA ADVANCE		
A17A1	670-5599-01	B010100	B019999		CKT BOARD ASSY:PAPER ADVANCE	80009	670-5599-01
A17A1	-----				(OPTION 36 ONLY)		
A17A1	670-5599-02	B020000	B020174		CKT BOARD ASSY:PAPER ADVANCE	80009	670-5599-02
A17A1	-----				(OPTION 36 ONLY)		
A17A1	670-5599-03	B020175			CKT BOARD ASSY:PAPER ADVANCE	80009	670-5599-03
A17A1	-----				(OPTION 36 ONLY)		
C106	283-0024-00				CAP.,FXD,CER DI:0.1UF,+80-20%,50V	72982	8121N083Z5U0104Z
C107	290-0246-00				CAP.,FXD,ELCTLT:3.3UF,10%,15V	56289	162D335X9015CD2
C108	283-0190-00				CAP.,FXD,CER DI:0.47UF,5%,50V	72982	8141N077X7R0474J
C116	283-0204-00				CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
C200	281-0783-00				CAP.,FXD,CER DI:0.1UF,20%,100V	72982	8045-D-Z5U104M
C366	281-0783-00				CAP.,FXD,CER DI:0.1UF,20%,100V	72982	8045-D-Z5U104M
C380	285-1050-00				CAP.,FXD,PLSTC:0.1UF,1%,200V	14752	230B1C104F
C385	285-1050-00				CAP.,FXD,PLSTC:0.1UF,1%,200V	14752	230B1C104F
C400	283-0204-00				CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
C430	281-0783-00				CAP.,FXD,CER DI:0.1UF,20%,100V	72982	8045-D-Z5U104M
C460	281-0783-00				CAP.,FXD,CER DI:0.1UF,20%,100V	72982	8045-D-Z5U104M
C480	281-0783-00				CAP.,FXD,CER DI:0.1UF,20%,100V	72982	8045-D-Z5U104M
C520	281-0783-00				CAP.,FXD,CER DI:0.1UF,20%,100V	72982	8045-D-Z5U104M
C530	281-0783-00				CAP.,FXD,CER DI:0.1UF,20%,100V	72982	8045-D-Z5U104M
C600	285-1098-00	B010100	B020174		CAP.,FXD,PLSTC:0.22UF,10%,80V	56289	192P2249R8
C600	285-0835-00	B020175			CAP.,FXD,PLSTC:0.22UF,2%,100V	56289	LP66A1B224G002
C620	281-0783-00				CAP.,FXD,CER DI:0.1UF,20%,100V	72982	8045-D-Z5U104M
C680	281-0783-00				CAP.,FXD,CER DI:0.1UF,20%,100V	72982	8045-D-Z5U104M
C720	285-0703-00				CAP.,FXD,PLSTC:0.1UF,5%,100V	56289	192P10452
C735	283-0204-00				CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
C760	281-0783-00				CAP.,FXD,CER DI:0.1UF,20%,100V	72982	8045-D-Z5U104M
C860	281-0783-00				CAP.,FXD,CER DI:0.1UF,20%,100V	72982	8045-D-Z5U104M
C880	281-0783-00				CAP.,FXD,CER DI:0.1UF,20%,100V	72982	8045-D-Z5U104M
CR85	152-0198-02				SEMICONV DEVICE:SILICON,200V,3A	14099	SS4986
CR120	152-0141-02				SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR130	152-0066-00				SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR155	152-0066-00				SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR160	152-0141-02				SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR220	152-0141-02				SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR230	152-0066-00				SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR255	152-0066-00				SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR260	152-0141-02				SEMICONV DEVICE:SILICON,30V,150MA	01295	1N4152R
CR285	152-0198-02				SEMICONV DEVICE:SILICON,200V,3A	14099	SS4986
J110	131-1425-00				CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
J121	131-1425-00				CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No.		Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont			
				A17A1 MEDIA ADVANCE (CONT'D)		
J822	131-1857-00			TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
Q118	151-0190-02			TRANSISTOR:SILICON,NPN	04713	SM7706
Q125	151-0352-00			TRANSISTOR:SILICON,NPN	03508	X44C282
Q155	151-0352-00			TRANSISTOR:SILICON,NPN	03508	X44C282
Q180	151-0625-00			TRANSISTOR:SILICON,PNP	03508	D45H11
Q225	151-0352-00			TRANSISTOR:SILICON,NPN	03508	X44C282
Q255	151-0352-00			TRANSISTOR:SILICON,NPN	03508	X44C282
Q280	151-0625-00			TRANSISTOR:SILICON,PNP	03508	D45H11
Q281	151-0190-02			TRANSISTOR:SILICON,NPN	04713	SM7706
Q285	151-0190-02			TRANSISTOR:SILICON,NPN	04713	SM7706
R105	315-0820-00			RES.,FXD,CMPSN:82 OHM,5%,0.25W	01121	CB8205
R106	315-0302-00			RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
R109	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
R115	315-0473-00			RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
R117	315-0332-00			RES.,FXD,CMPSN:3.3K OHM,5%,0.25W	01121	CB3325
R185	308-0431-00			RES.,FXD,WW:120 OHM,5%,3W	91637	RS2B-B120R0J
R189	315-0203-00			RES.,FXD,CMPSN:20K OHM,5%,0.25W	01121	CB2035
R190	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R230	315-0121-00			RES.,FXD,CMPSN:120 OHM,5%,0.25W	01121	CB1215
R280	308-0431-00			RES.,FXD,WW:120 OHM,5%,3W	91637	RS2B-B120R0J
R281	315-0203-00			RES.,FXD,CMPSN:20K OHM,5%,0.25W	01121	CB2035
R285	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R286	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R330	315-0121-00			RES.,FXD,CMPSN:120 OHM,5%,0.25W	01121	CB1215
R335	315-0121-00			RES.,FXD,CMPSN:120 OHM,5%,0.25W	01121	CB1215
R336	315-0121-00			RES.,FXD,CMPSN:120 OHM,5%,0.25W	01121	CB1215
R365	321-0402-00			RES.,FXD,FILM:150K OHM,1%,0.125W	24546	NA55D1503F
R380	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R385	321-0402-00			RES.,FXD,FILM:150K OHM,1%,0.125W	24546	NA55D1503F
R500	315-0155-00	B010100	B020174	RES.,FXD,CMPSN:1.5M OHM,5%,0.25W	01121	CB1555
R500	315-0564-00	B020175		RES.,FXD,CMPSN:560K OHM,5%,0.25W	01121	CB5645
R630	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
R660	315-0102-00	B010100	B051633	RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R660	315-0102-02	B051634		RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R730	315-0472-00			RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
U110	156-0067-00	B010100	B051633	MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	01295	MICROA741CP
U110	156-0067-13	B051634		MICROCIRCUIT,LI:OPNL AMPL,SELECTED	01295	UA741CJG4
U320	156-0381-02			MICROCIRCUIT,DI:QUAD 2-INP EXCL OR GATE	01295	SN74LS86
U330	156-0140-02			MICROCIRCUIT,DI:HEX BUFFERS W/OC HV OUT	27014	DM8017NA+/JA+
U360	156-0487-00	B010100	B051633	MICROCIRCUIT,DI:DUAL RETRIG,ONE SHOT	80009	156-0487-00
U360	156-0487-02	B051634	B051689	MICROCIRCUIT,DI:DUAL RETRIGGERABLE MONO MV	07263	96L02
U400	156-0402-00	B010100	B051633	MICROCIRCUIT,LI:TIMER	27014	LM555CN
U400	156-0402-03	B051634		MICROCIRCUIT,LI:TIMER,TESTED	80009	156-0402-03
U420	156-0646-02			MICROCIRCUIT,DI:4 BIT BINARY COUNTER	01295	SN74LS93
U430	156-0041-05			MICROCIRCUIT,DI:DUAL D-TYPE FF,BURN-IN	01295	SN7474
U460	156-0110-02			MICROCIRCUIT,DI:DUAL 2 TO 4 LINE DCDR/DEMUX	01295	SN74155(NP3 OR J
U480	156-0321-02			MICROCIRCUIT,DI:TRIPLE 3 INP NAND GATE	01295	SN74S10
U520	156-0646-02			MICROCIRCUIT,DI:4 BIT BINARY COUNTER	01295	SN74LS93
U530	156-0391-02			MICROCIRCUIT,DI:HEX LATCH W/CLEAR	01295	SN74LS174

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				A17A1 MEDIA ADVANCE (CONT'D)		
U560	156-0392-00	B010100	B051633	MICROCIRCUIT,DI:QUAD LATCH W/CLEAR	34335	SN74LS175N OR J
U560	156-0392-03	B051634		MICROCIRCUIT,DI:QUAD LATCH W/CLEAR	01295	SN74S175NP3
U580	156-0948-02			MICROCIRCUIT,DI:QUAD D F-F,BURN-IN	01295	SN74S175J4
U620	156-0041-05			MICROCIRCUIT,DI:DUAL D-TYPE FF,BURN-IN	01295	SN7474
U630	156-0041-05			MICROCIRCUIT,DI:DUAL D-TYPE FF,BURN-IN	01295	SN7474
U660	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
U680	156-0404-01			MICROCIRCUIT,DI:DUAL 4 INP NAND GATE	80009	156-0404-01
U720	156-0041-05			MICROCIRCUIT,DI:DUAL D-TYPE FF,BURN-IN	01295	SN7474
U730	156-0402-00	B010100	B051633	MICROCIRCUIT,LI:TIMER	27014	LM555CN
U730	156-0402-03	B051634		MICROCIRCUIT,LI:TIMER,TESTED	80009	156-0402-03
U760	156-0180-04			MICROCIRCUIT,DI:QUAD 2-INPUT NAND GATE	01295	SN74S00NP3
U780	156-0718-03			MICROCIRCUIT,DI:TRIPLE 3-INP NOR GATE	01295	SN74LS27
U820	156-0141-02			MICROCIRCUIT,DI:DUAL 2 TO 4 LINE DCDR/DEMX	80009	156-0141-02
U830	156-0852-02			MICROCIRCUIT,DI:HEX DRVR W/3 STATE INP	80009	156-0852-02
U860	156-0465-02			MICROCIRCUIT,DI:8 INP NAND GATE	01295	SN74LS30NP3
U880	156-0385-02			MICROCIRCUIT,DI:HEX INVERTER	01295	SN74LS04
VR360	152-0281-00			SEMICONV DEVICE:ZENER,0.4W,22V,5%	12954	1N969B
				A17A2 SENSOR		
A17A2	670-5685-00			CKT BOARD ASSY:SENSOR	80009	670-5685-00
A17A2	-----			(OPTION 36 ONLY)		
U1000	156-1217-00			MICROCIRCUIT,LI:OPTOELECTRONIC ISOLATOR	32694	OPB706A

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A19	670-6277-02			A19 CURRENT LOOP		
A19	-----			CKT BOARD ASSY:CURRENT LOOP	80009	670-6277-02
C374	283-0060-00			(OPTION 3 ONLY)		
C391	283-0060-00			CAP.,FXD,CER DI:100PF,5%,200V	72982	855-535U2J101J
				CAP.,FXD,CER DI:100PF,5%,200V	72982	855-535U2J101J
C465	283-0421-00			CAP.,FXD,CER DI:0.1UF,+80-20%,50V	04222	DG015E104Z
C571	290-0782-00			CAP.,FXD,ELCTLT:4.7UF,+75-10%,35V	55680	35ULA4R7V-T
C574	290-0782-00			CAP.,FXD,ELCTLT:4.7UF,+75-10%,35V	55680	35ULA4R7V-T
C577	290-0782-00			CAP.,FXD,ELCTLT:4.7UF,+75-10%,35V	55680	35ULA4R7V-T
CR170	152-0066-00			SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR187	152-0066-00			SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR221	152-0066-00			SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR234	152-0066-00			SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR258	152-0066-00			SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
CR374	152-0460-00			SEMICONV DEVICE:SILICON,25V,1MA	04713	SCL072
CR390	152-0460-00			SEMICONV DEVICE:SILICON,25V,1MA	04713	SCL072
J1	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J1	-----			(QUANTITY OF 34)		
J2	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J2	-----			(QUANTITY OF 4)		
J3	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J3	-----			(QUANTITY OF 6)		
J4	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J4	-----			(QUANTITY OF 2)		
J5	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J5	-----			(QUANTITY OF 2)		
J6	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J6	-----			(QUANTITY OF 2)		
J7	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J7	-----			(QUANTITY OF 2)		
J8	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
J8	-----			(QUANTITY OF 2)		
K421	148-0085-00			RELAY,ARMATURE:8PDT,12VDC,2A,28VDC	77342	R10-E1-E2181-1
Q174	151-0331-00			TRANSISTOR:SILICON,NPN	03508	X40C115
Q191	151-0331-00			TRANSISTOR:SILICON,NPN	03508	X40C115
Q321	151-0190-00			TRANSISTOR:SILICON,NPN	07263	S032677
Q326	151-0302-00			TRANSISTOR:SILICON,NPN	07263	S038487
Q334	151-0190-00			TRANSISTOR:SILICON,NPN	07263	S032677
Q341	151-0302-00			TRANSISTOR:SILICON,NPN	07263	S038487
Q358	151-0190-00			TRANSISTOR:SILICON,NPN	07263	S032677
Q361	151-0302-00			TRANSISTOR:SILICON,NPN	07263	S038487
Q366	151-0301-00			TRANSISTOR:SILICON,PNP	27014	2N2907A
Q384	151-0301-00			TRANSISTOR:SILICON,PNP	27014	2N2907A
R114	308-0252-00			RES.,FXD,WW:390 OHM,5%,3W	91637	CW2B-B390R0J
R116	301-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.50W	01121	EB1025
R121	311-1252-00			RES.,VAR,NONWIR:500K OHM,20%,0.50W	32997	3386F-T04-504
R127	308-0252-00			RES.,FXD,WW:390 OHM,5%,3W	91637	CW2B-B390R0J
R129	301-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.50W	01121	EB1025

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix	Serial/Model No.		Name & Description	Mfr Code	Mfr Part Number
	Part No.	Eff	Dscont			
				A19 CURRENT LOOP (CONT'D)		
R134	311-1252-00			RES.,VAR,NONWIR:500K OHM,20%,0.50W	32997	3386F-T04-504
R143	308-0252-00			RES.,FXD,WW:390 OHM,5%,3W	91637	CW2B-B390R0J
R145	301-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.50W	01121	EB1025
R158	311-1252-00			RES.,VAR,NONWIR:500K OHM,20%,0.50W	32997	3386F-T04-504
R165	301-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.50W	01121	EB1025
R167	308-0252-00			RES.,FXD,WW:390 OHM,5%,3W	91637	CW2B-B390R0J
R183	301-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.50W	01121	EB1025
R185	308-0252-00			RES.,FXD,WW:390 OHM,5%,3W	91637	CW2B-B390R0J
R221	315-0220-00			RES.,FXD,CMPSN:22 OHM,5%,0.25W	01121	CB2205
R234	315-0200-00			RES.,FXD,CMPSN:20 OHM,5%,0.25W	01121	CB2005
R258	315-0220-00			RES.,FXD,CMPSN:22 OHM,5%,0.25W	01121	CB2205
R274	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R275	315-0680-00			RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
R276	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R291	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R292	315-0680-00			RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
R295	315-0303-00			RES.,FXD,CMPSN:30K OHM,5%,0.25W	01121	CB3035
R306	301-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.50W	01121	EB1015
R321	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R326	315-0332-00			RES.,FXD,CMPSN:3.3K OHM,5%,0.25W	01121	CB3325
R334	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R341	315-0332-00			RES.,FXD,CMPSN:3.3K OHM,5%,0.25W	01121	CB3325
R361	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R372	301-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.50W	01121	EB1015
R380	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
R381	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
R390	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
R391	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
R392	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R433	301-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.50W	01121	EB1015
R435	301-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.50W	01121	EB1015
R472	301-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.50W	01121	EB1015
R491	315-0331-00			RES.,FXD,CMPSN:330 OHM,5%,0.25W	01121	CB3315
R590	315-0332-00			RES.,FXD,CMPSN:3.3K OHM,5%,0.25W	01121	CB3325
U221	156-0907-00			MICROCIRCUIT,LI:OPTOELECTRONIC ISOLATOR	04713	4N26
U234	156-0907-00			MICROCIRCUIT,LI:OPTOELECTRONIC ISOLATOR	04713	4N26
U258	156-0907-00			MICROCIRCUIT,LI:OPTOELECTRONIC ISOLATOR	04713	4N26
U274	156-0907-00			MICROCIRCUIT,LI:OPTOELECTRONIC ISOLATOR	04713	4N26
U291	156-0907-00			MICROCIRCUIT,LI:OPTOELECTRONIC ISOLATOR	04713	4N26
U439	156-0479-02			MICROCIRCUIT,DI:QUAD 2-INP OR GATE	01295	SN74LS32NP3
U447	156-0530-02			MICROCIRCUIT,DI:QUAD 2-INP MUX,SCRN	01295	SN74LS157P3
U461	156-0724-02			MICROCIRCUIT,DI:HEX INV W/OC OUT,BURN-IN	01295	SN74LS05
A20	670-7331-00			A20 COMMUTATOR		
A20	-----			CKT BOARD ASSY:COMMUTATOR	80009	670-7331-00
				(SEE RMPL FOR SUBPARTS)		

REPLACEABLE ELECTRICAL PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
				CHASSIS PARTS		
A1005	119-0748-00			JOYSTICK:2 AXIS GIMBLE	80009	119-0748-00
B1005	147-0040-02			MOTOR,DC:1.8 DEG STEP ANGLE,200 STEP	78277	20-2223D-24173
B1007	147-0040-02			MOTOR,DC:1.8 DEG STEP ANGLE,200 STEP	78277	20-2223D-24173
B1009	147-0040-02			MOTOR,DC:1.8 DEG STEP ANGLE,200 STEP	78277	20-2223D-24173
B1011	147-0051-01			MOTOR,DC:7.5 DEG STEP ANGLE,48 STEPS	80009	147-0051-01
BT1001	146-0037-00			BATTERY STORAGE:2.4V,150 MAH	19209	41B021AC00101
F1001	159-0014-00			FUSE,CARTRIDGE:3AG,5A,250V,FAST-BLOW	71400	MTH5
F1001	159-0126-00			FUSE,CARTRIDGE:3AG,2.5A,250V,0.65 SEC	71400	AGC2-1/2
F1001	-----			(OPTION A1,A2,A3,A4)		
LS1003	119-0305-00			LOUDSPEAKER,PM:PERMANENT MAGNET,45 OHM,2W	07109	35A45C
R79	311-2037-00			RES.,VAR,NONWIR:PNL,5K OHM,20%0.2W	000KM	VJ30M8-50
R94	311-2037-00			RES.,VAR,NONWIR:PNL,5K OHM,20%0.2W	000KM	VJ30M8-50
R1000	311-2037-01			RES.,VAR,NONWIR:PNL,5K OHM,20%,0.2W	80009	311-2037-01
R1003	311-2037-01			RES.,VAR,NONWIR:PNL,5K OHM,20%,0.2W	80009	311-2037-01
S1	260-1916-00			SWITCH,ROCKER:SPST,0.4VA	09353	7101-J3WBE BLACK
U1011	156-0417-00			MICROCIRCUIT,DI:OPTOELECTRONIC	03508	H21B1
U1013	156-0417-00			MICROCIRCUIT,DI:OPTOELECTRONIC	03508	H21B1

Section 6

SCHEMATICS

Symbols and Reference Designators

Electrical components shown on the diagrams are in the following units unless noted otherwise:

- Capacitors = Values one or greater are in picofarads (pF).
Values less than one are in microfarads (μ F).
- Resistors = Ohms (Ω).

Graphic symbols and class designation letters are based on ANSI Standard Y32.2-1975.

Logic symbology is based on ANSI Y32.14-1973 in terms of positive logic. Logic symbols depict the logic function performed and may differ from the manufacturer's data.

Abbreviations are based on ANSI Y1.1-1972.

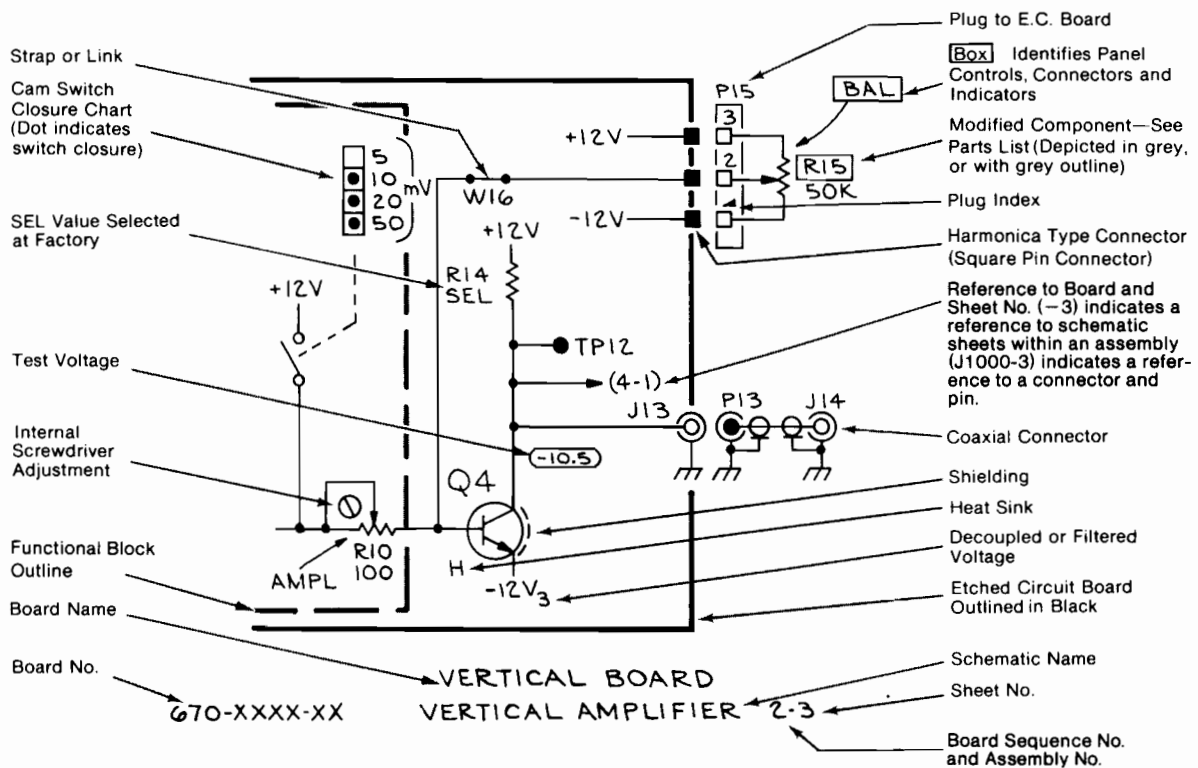
Other ANSI standards that are used in the preparation of diagrams by Tektronix, Inc. are:

- Y14.15, 1966 Drafting Practices.
- Y14.2, 1973 Line Conventions and Lettering.
- Y10.5, 1968 Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering.

The following prefix letters are used as reference designators to identify components or assemblies on the diagrams.

A	Assembly, separable or repairable (circuit board, etc.)	H	Heat dissipating device (heat sink, heat radiator, etc.)	S	Switch or contactor
AT	Attenuator, fixed or variable	HR	Heater	T	Transformer
B	Motor	HY	Hybrid circuit	TC	Thermocouple
BT	Battery	J	Connector, stationary portion	TP	Test point
C	Capacitor, fixed or variable	K	Relay	U	Assembly, inseparable or non-repairable (integrated circuit, etc.)
CB	Circuit breaker	L	Inductor, fixed or variable	V	Electron tube
CR	Diode, signal or rectifier	M	Meter	VR	Voltage regulator (zener diode, etc.)
DL	Delay line	P	Connector, movable portion	W	Wirestrap or cable
DS	Indicating device (lamp)	Q	Transistor or silicon-controlled rectifier	Y	Crystal
E	Spark Gap, Ferrite bead	R	Resistor, fixed or variable	Z	Phase shifter
F	Fuse	RT	Thermistor		
FL	Filter				

The following special symbols may appear on the diagrams:



SCHEMATICS

1. TRUE HIGH and TRUE LOW Signals

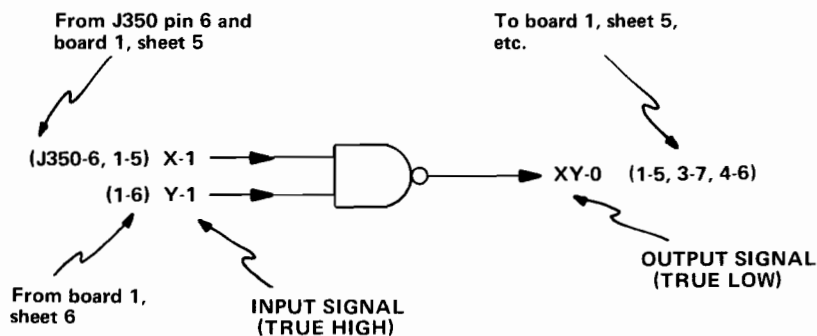
Signal names on the schematics are followed by -1 or -0. A TRUE HIGH signal is indicated by -1, and a TRUE LOW signal is indicated by -0.

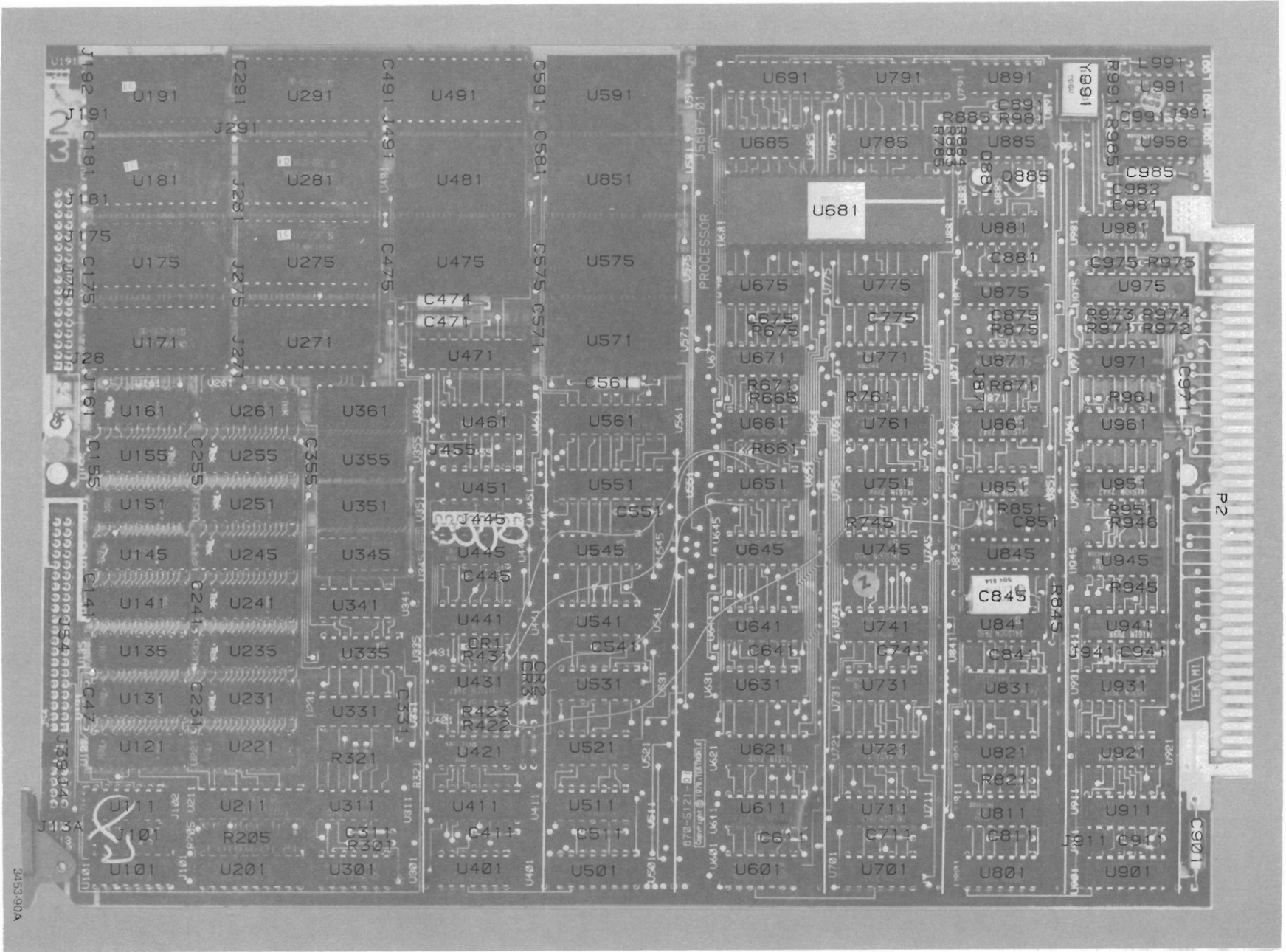
SIGNAL-1 = TRUE HIGH

SIGNAL-0 = TRUE LOW

2. Cross-References

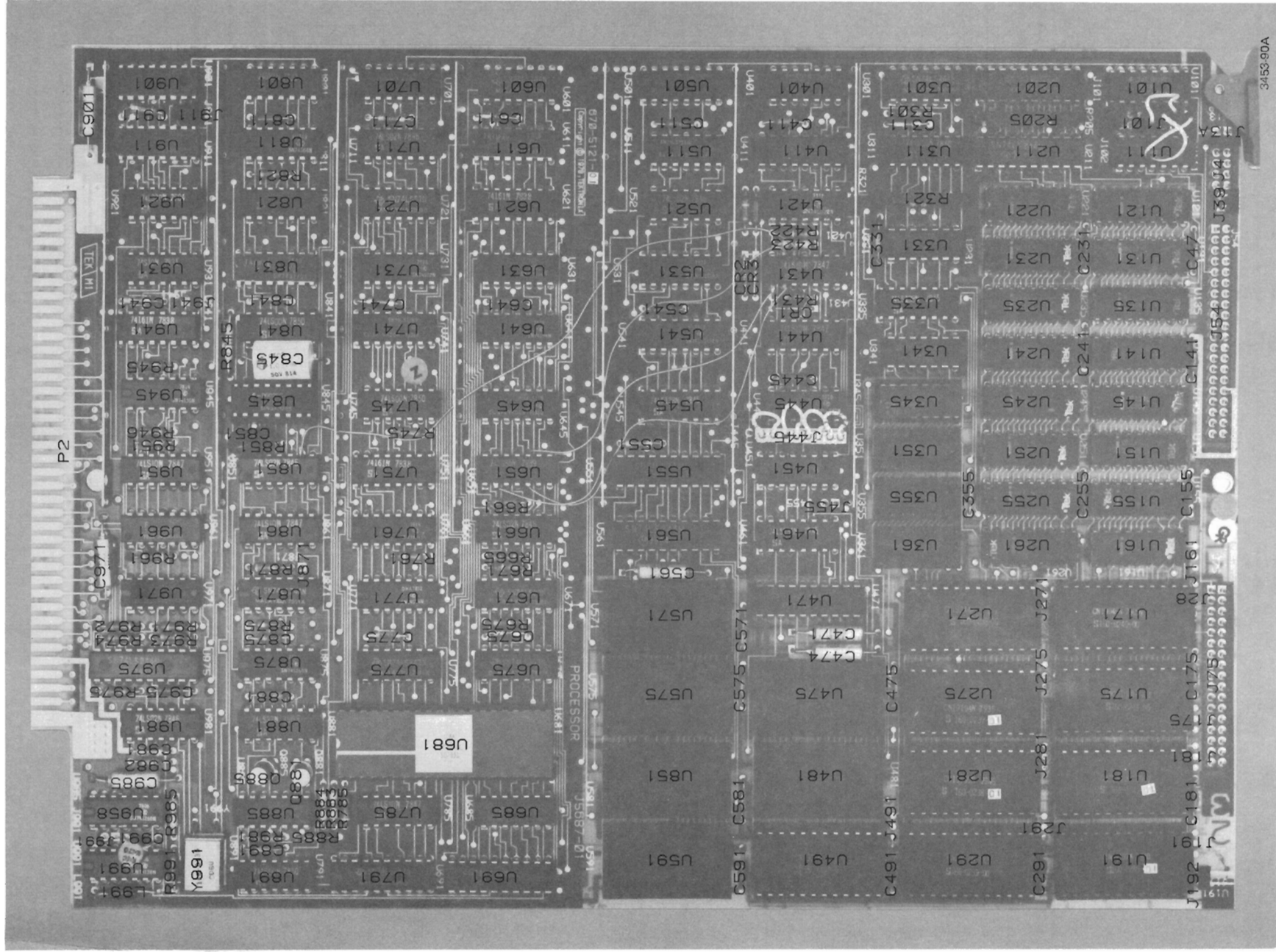
Schematic cross-references (from/to information) are included on the schematics. The "from" reference only indicates the signal "source," and the "to" reference lists all loads where the signal is used. All from/to information will be enclosed in parentheses.





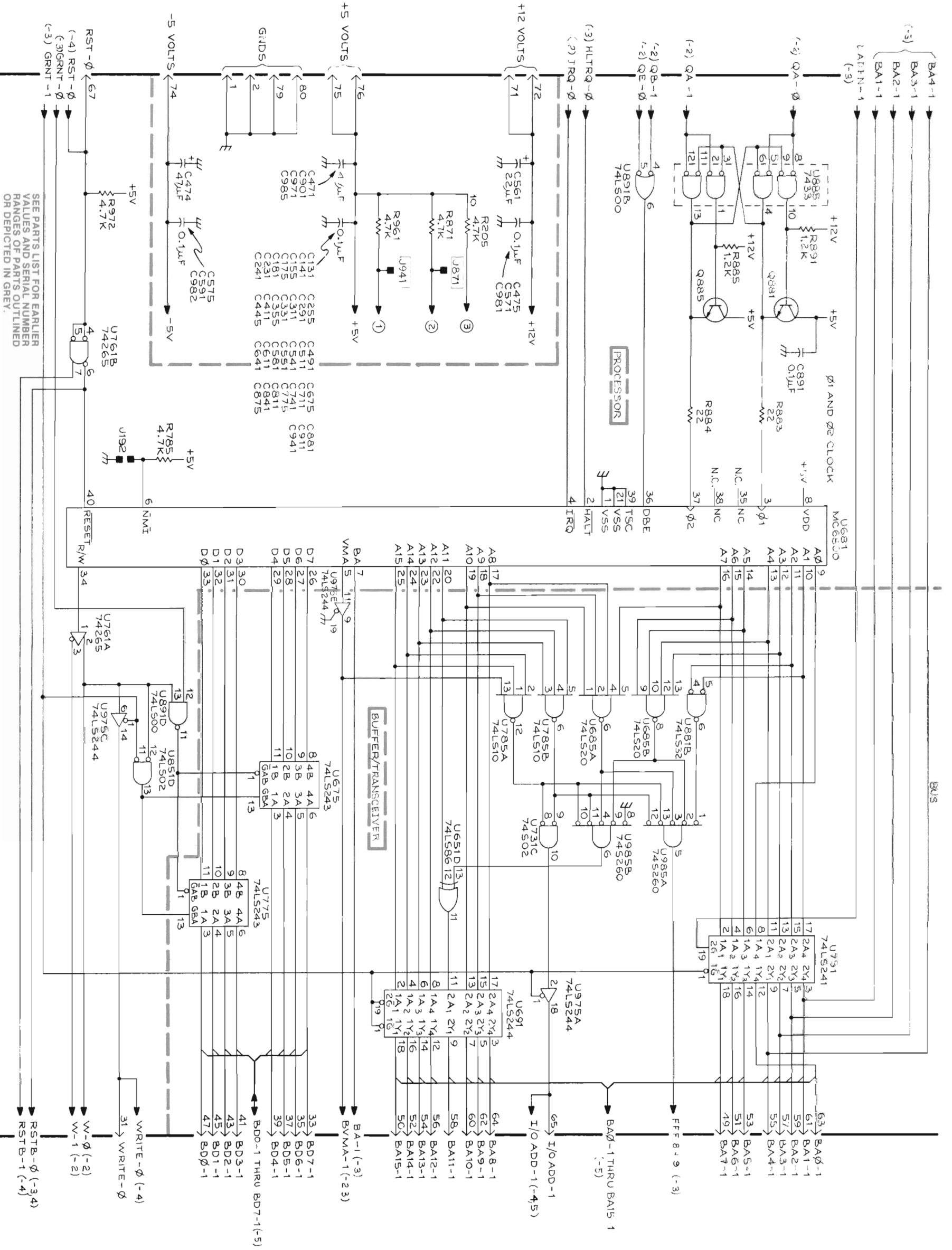
Processor Card (670-5121-00,01,02) Component Locations.

PROCESSOR CARD
COMPONENT LOCATION



3453-90A

Processor Card (670-5121-00,01,02) Component Locations.

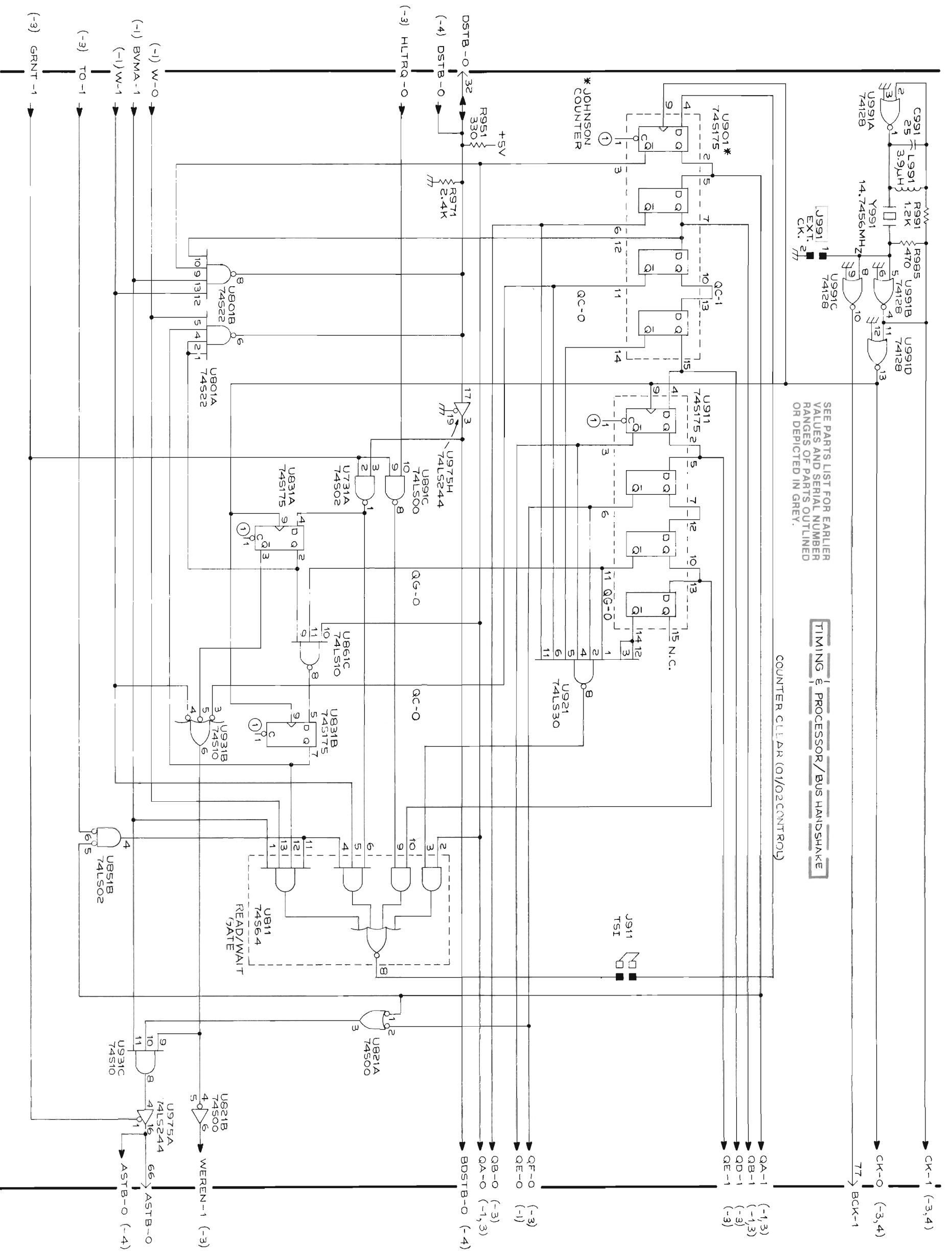


4663

@3453-1 A1 670-5121-00,01,02 PROCESSOR BOARD

1.1

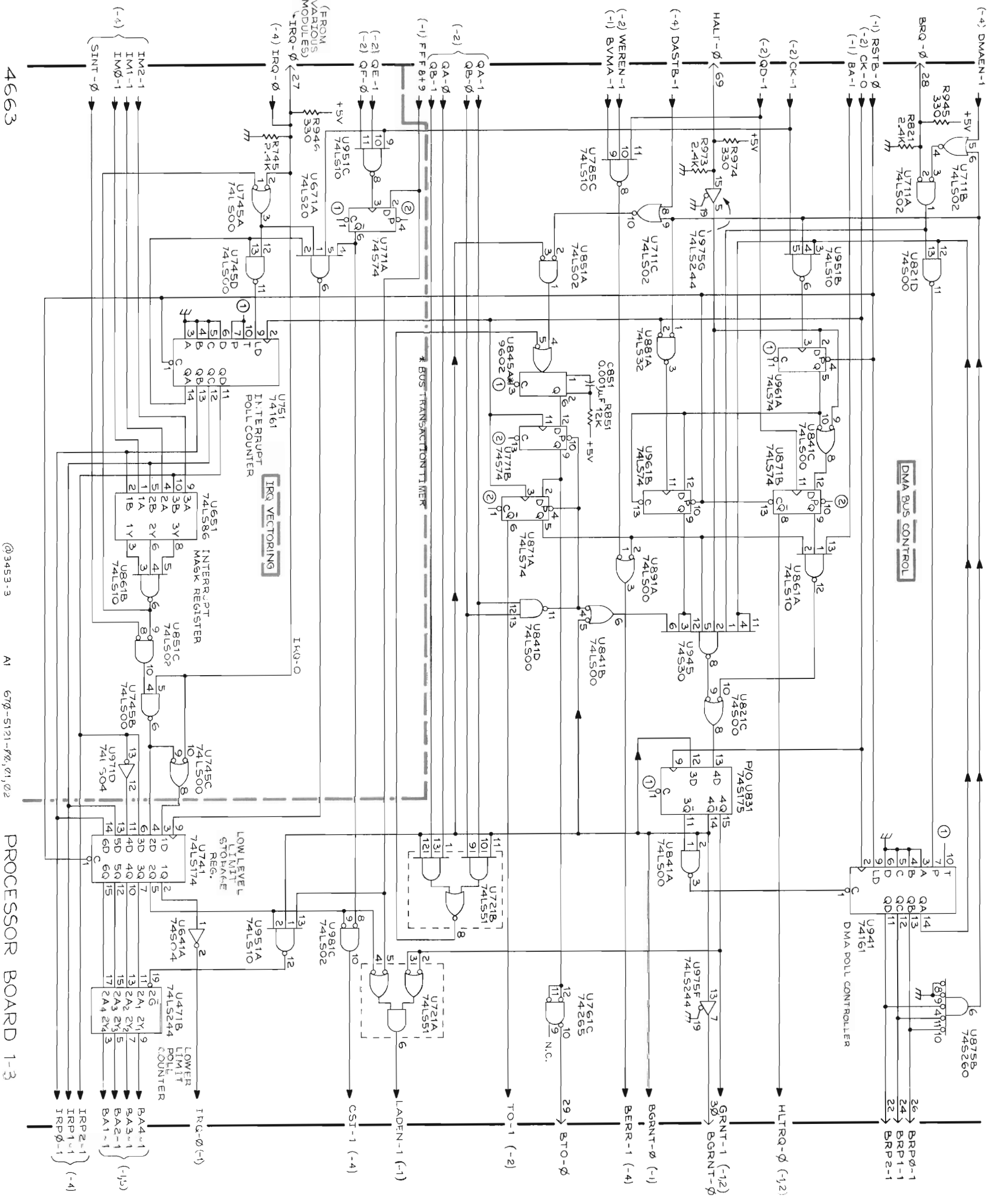
670-5121-00,01,02



4663

(0)3453-2

A1 670-5121-00,01,02 PROCESSOR BOARD 1-2



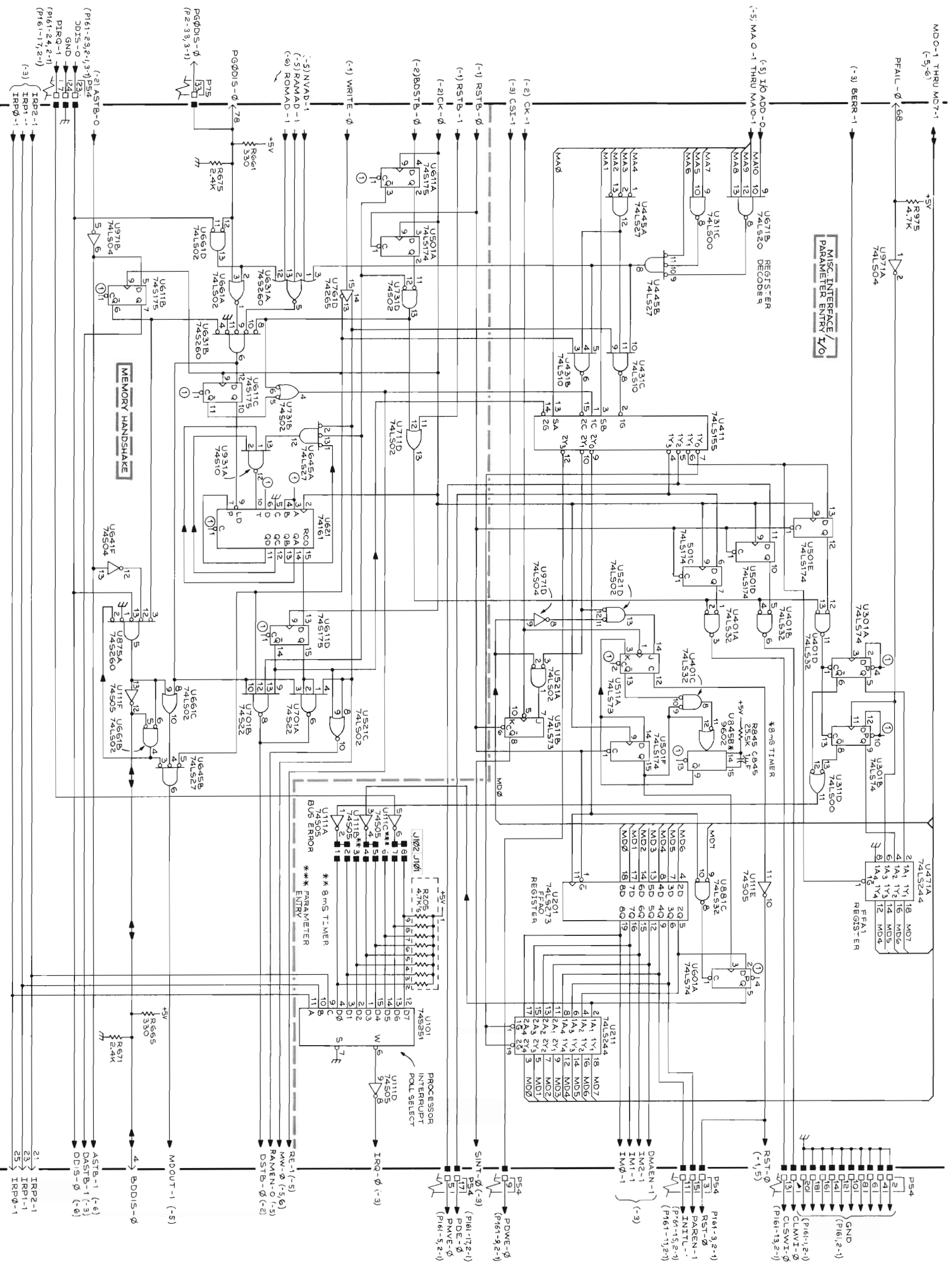
4663

(03453-3

A1

670-5121-P0, P1, P2

PROCESSOR BOARD 1-3



4663

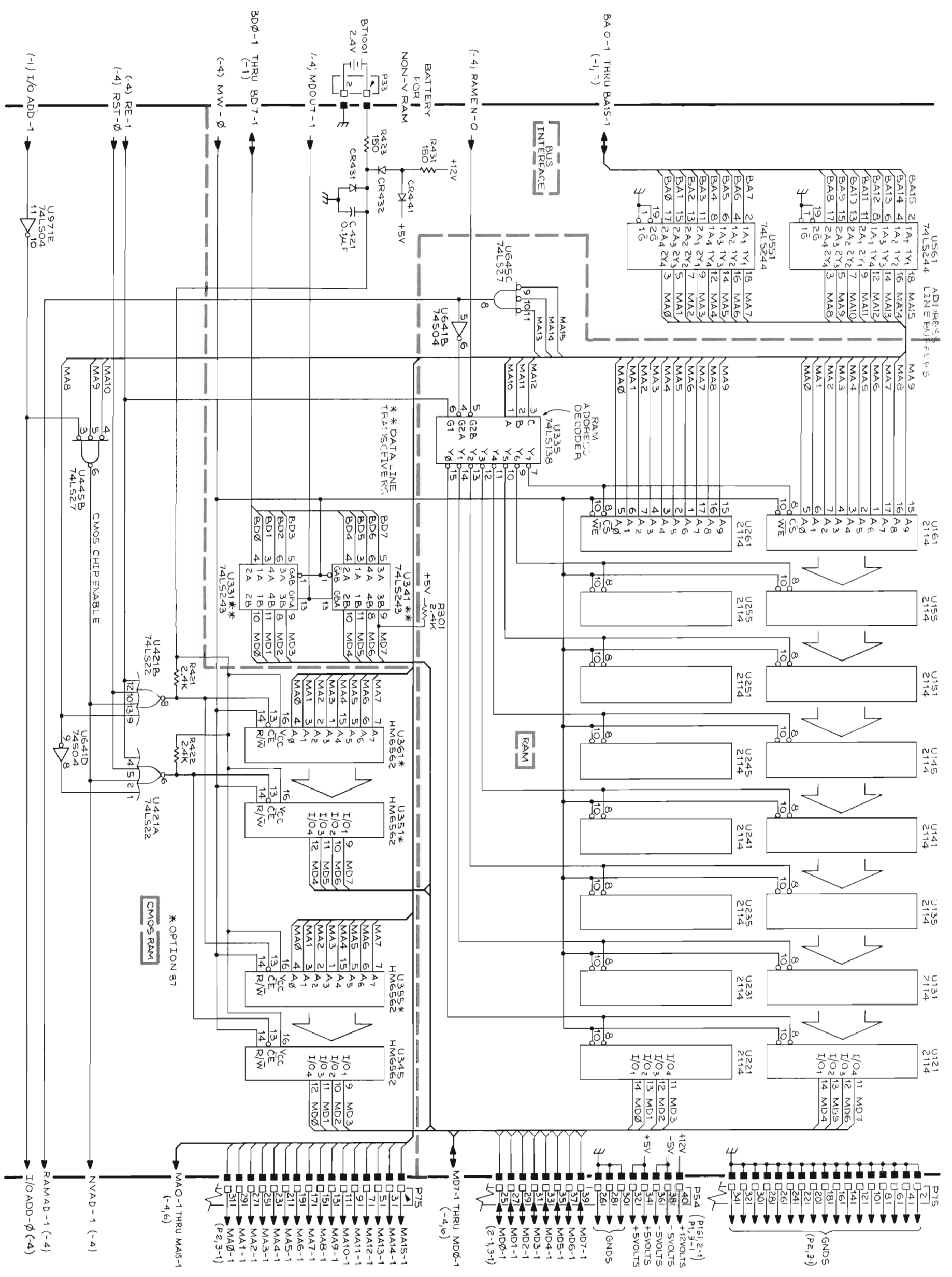
@3453-4

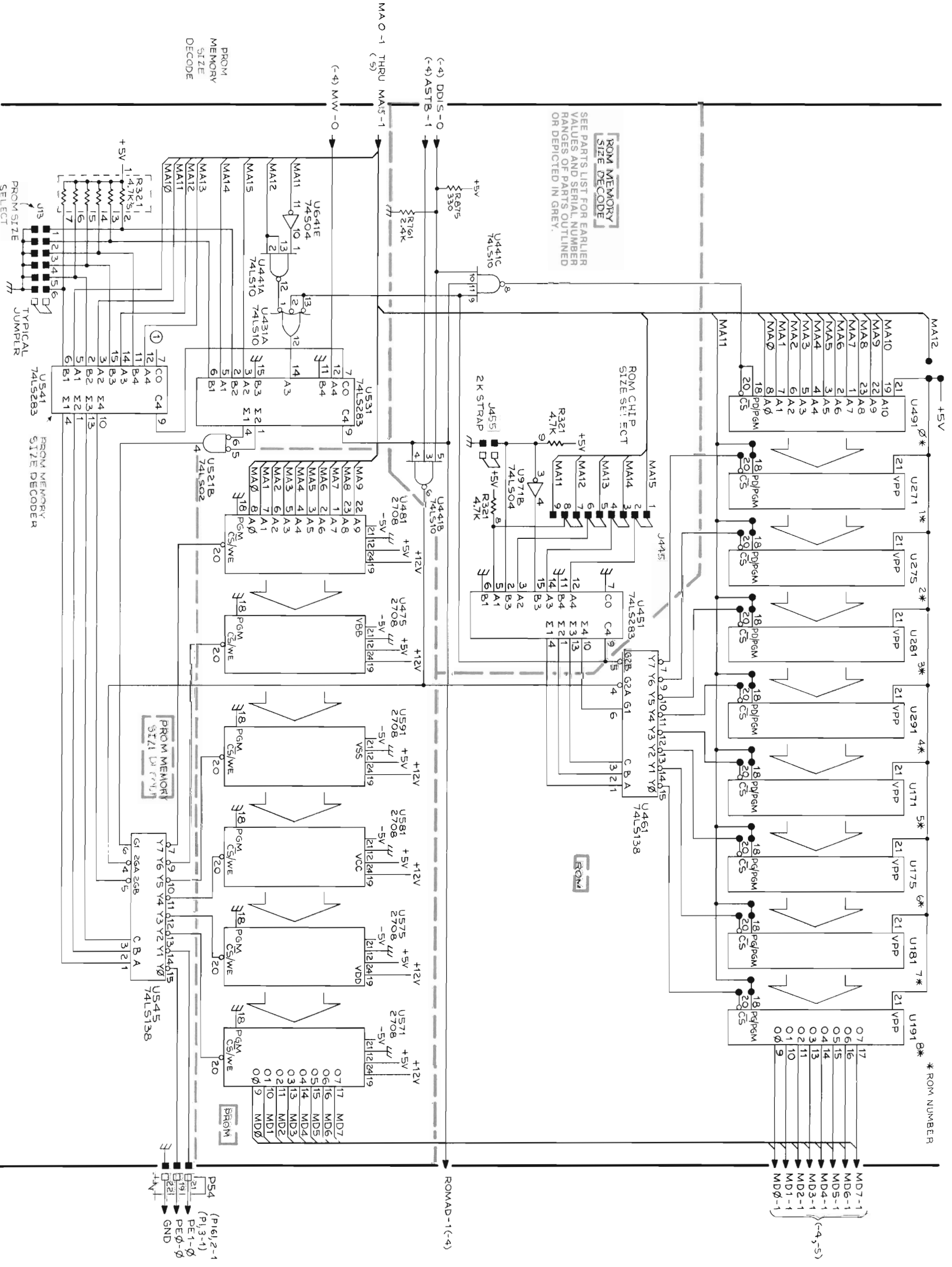
A1

670-5121-00,01,02 PROCESSOR BOARD

1-4

670-5121-00,01,02 1-4



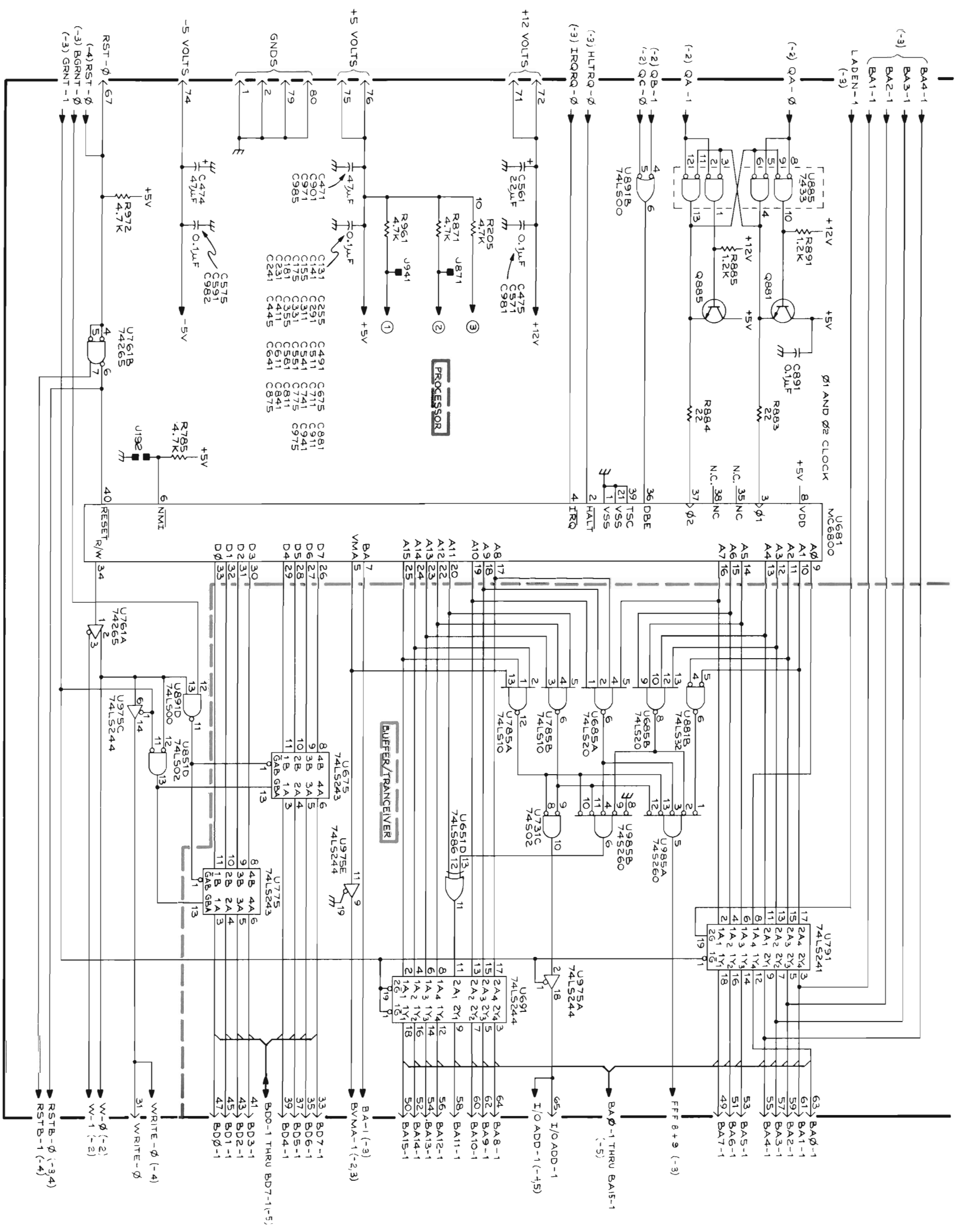


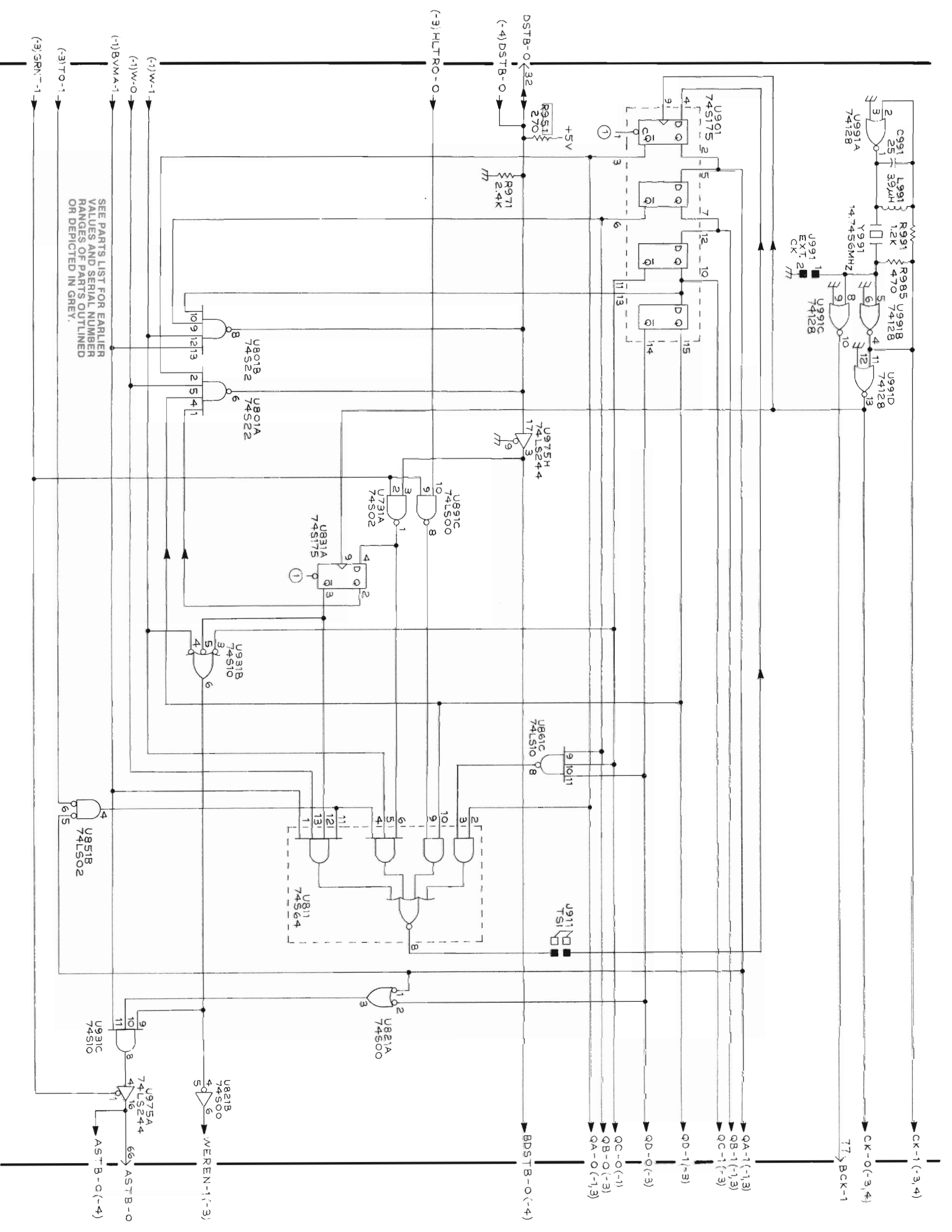
4663

@3453-6

A1 670-5121-00,01,02 PROCESSOR BOARD

1-6



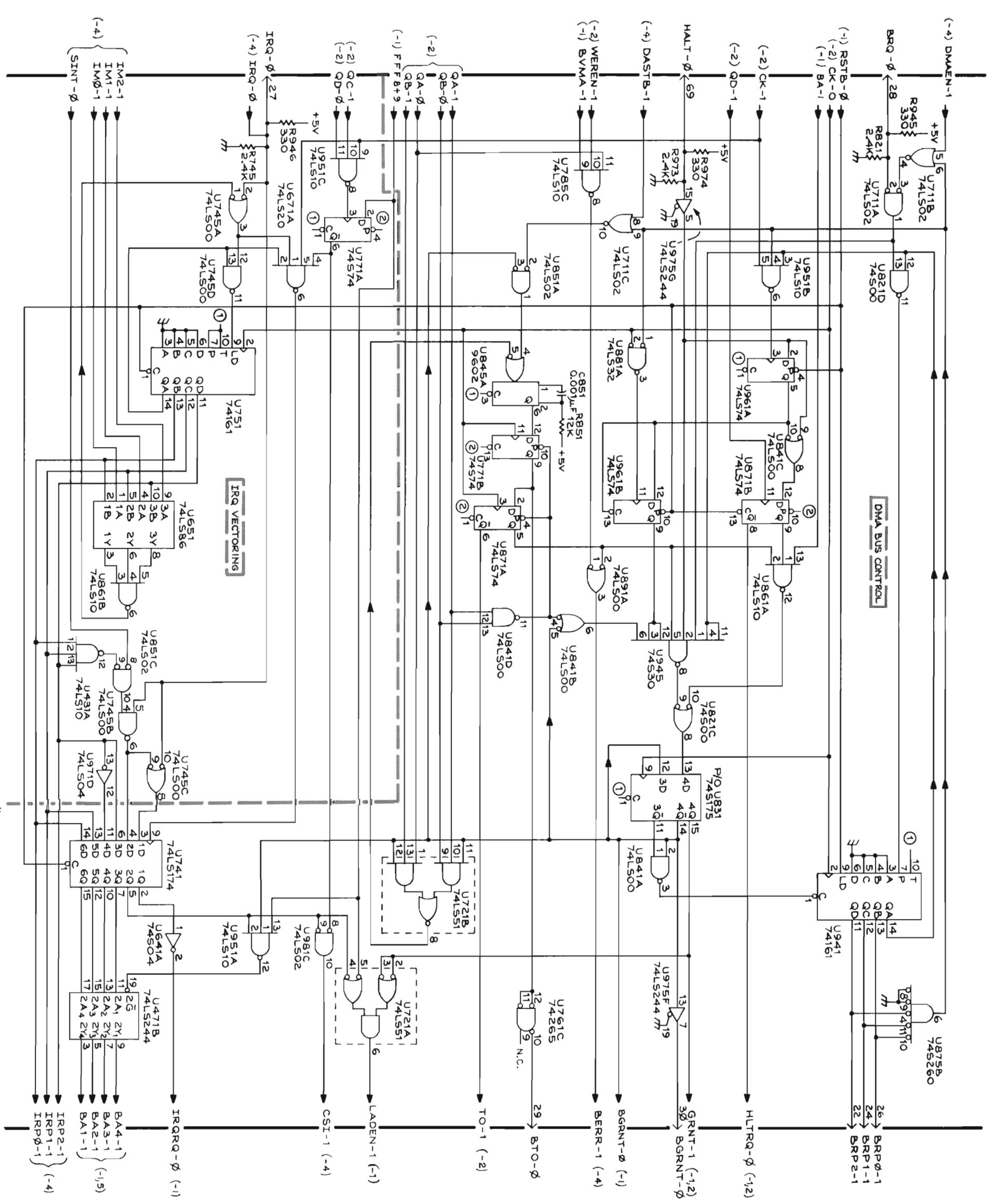


SEE PARTS LIST FOR EARLIER
VALUES AND SERIAL NUMBER
RANGES OF PARTS OUTLINED
OR DEPICTED IN GREY.

4663

3453-8
REV, JUN1983

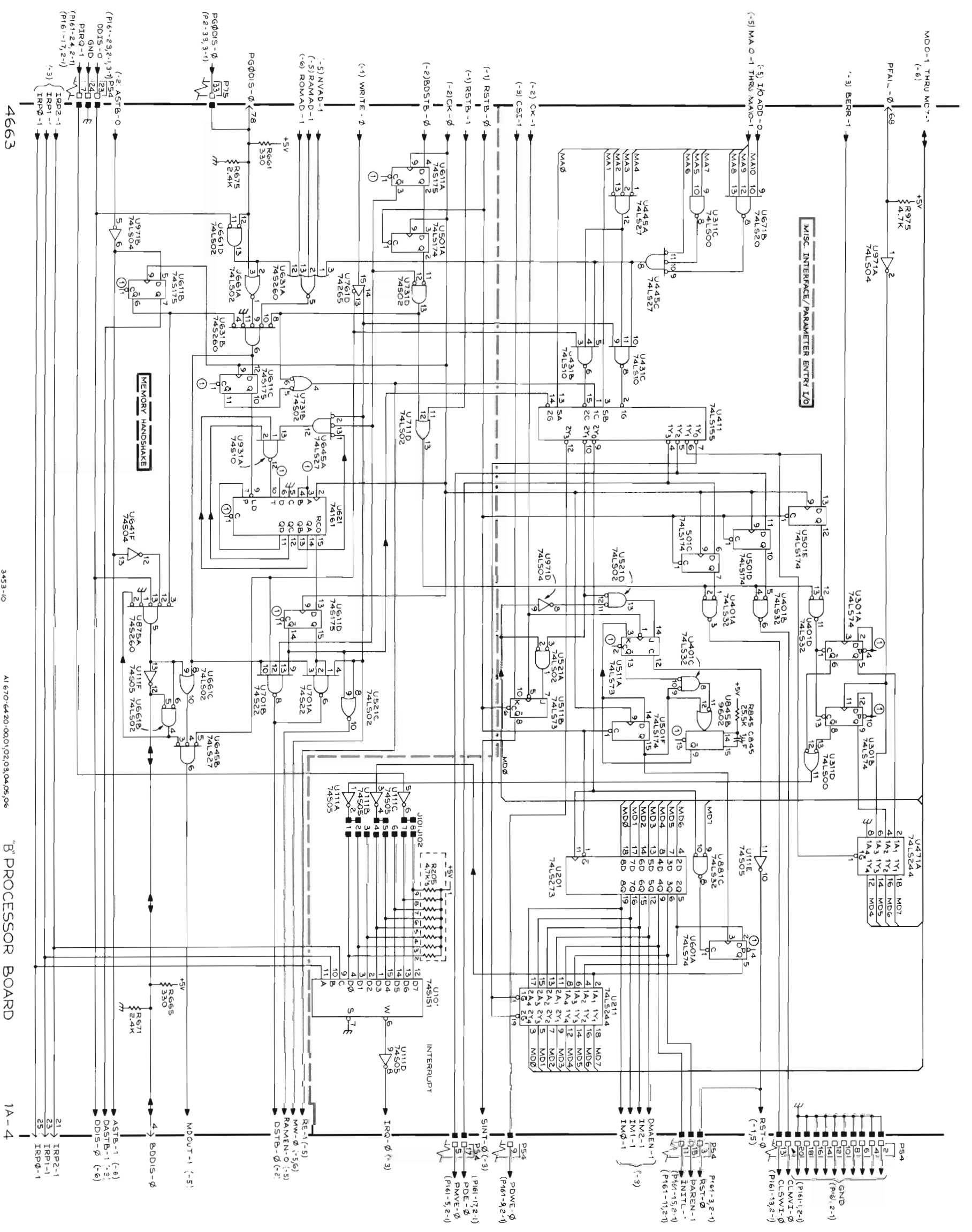
AI670-6420-00,01,02,03,04,05,06 "B" PROCESSOR BD.
TIMING & PROCESSOR/PBUS HANDSHAKE 1A-2



4663

3453-9
REV. JUN 1985

Al670-6720-00.01.02.03.04.05.06
"B" PROCESSOR BOARD 1A-3



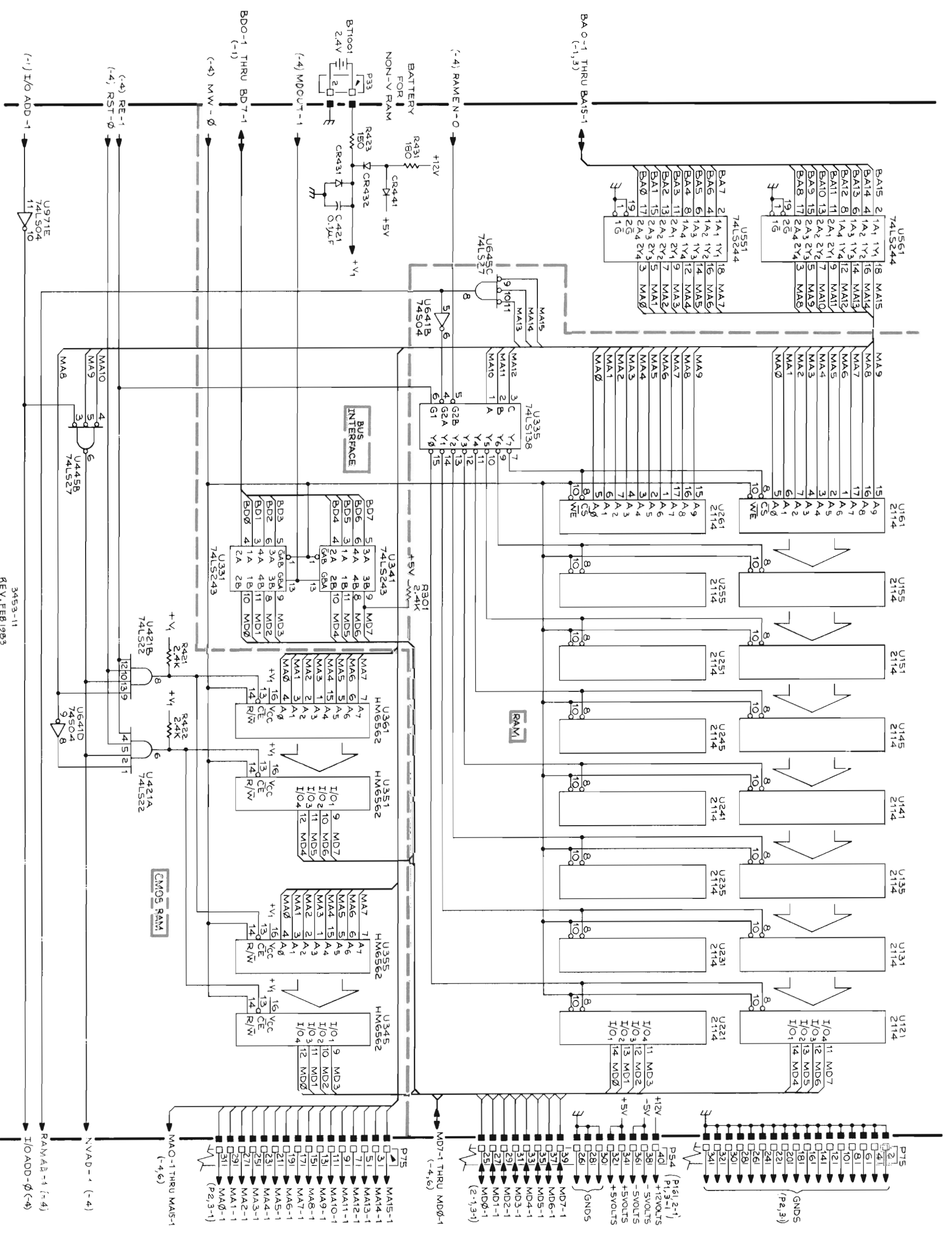
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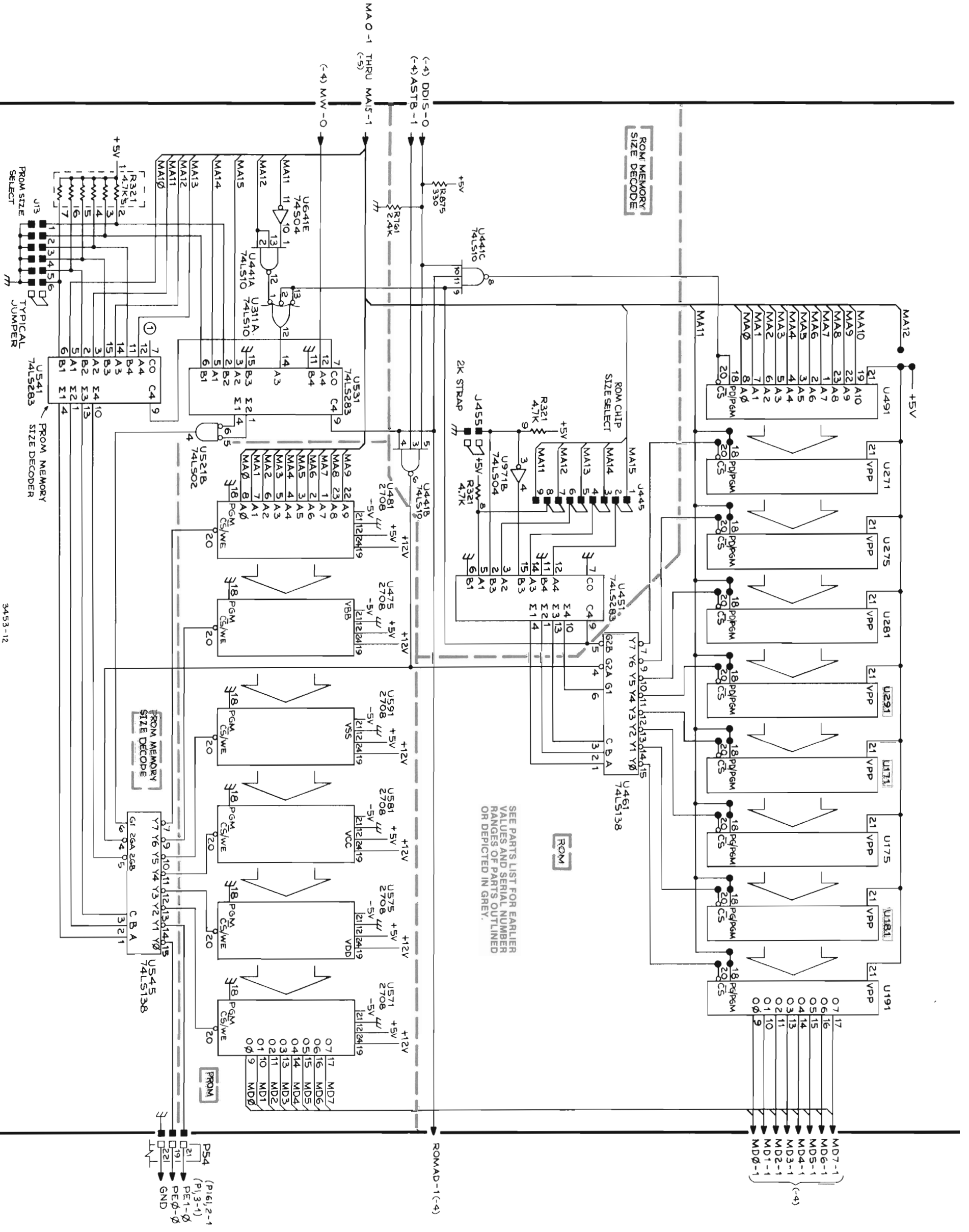
3453-10
REV. FEB 1983

AI 670-64-20-0001.02.03.04.05.06

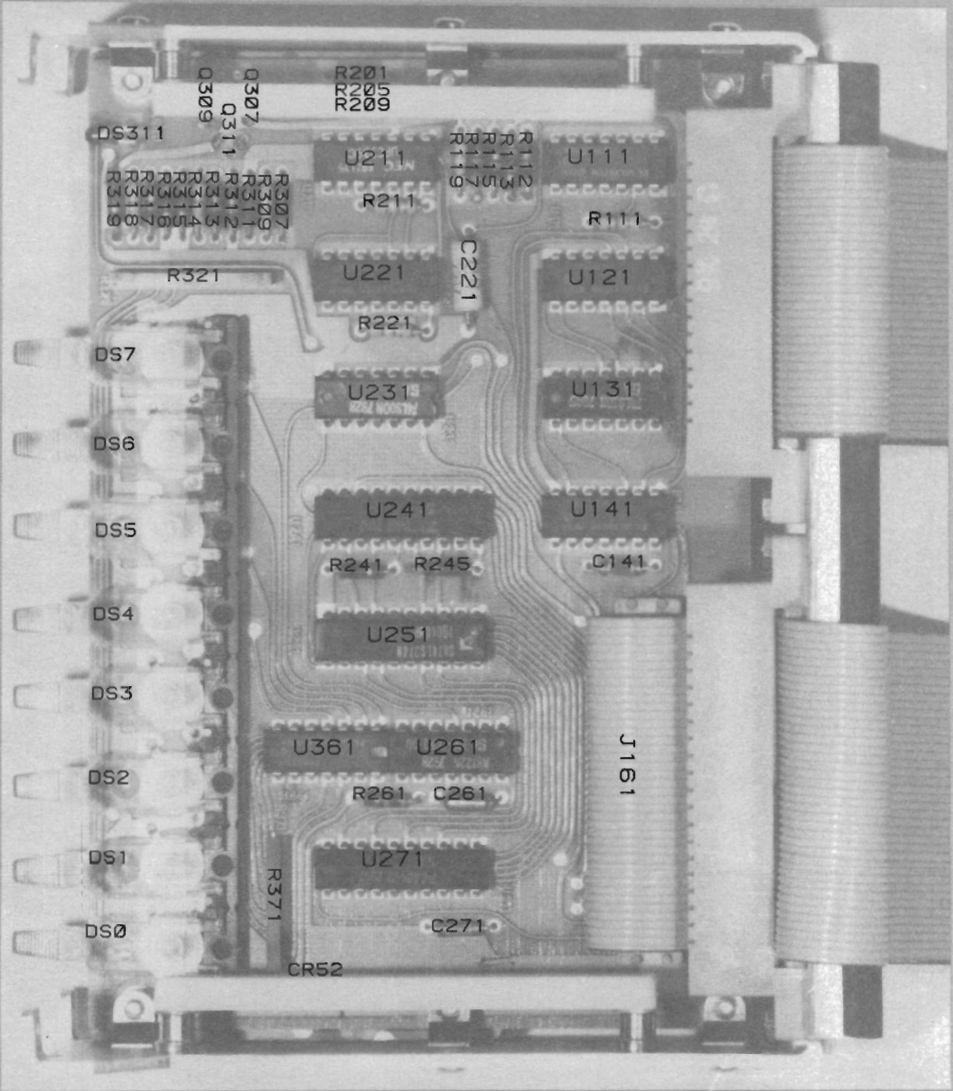
"B" PROCESSOR BOARD

1A-4

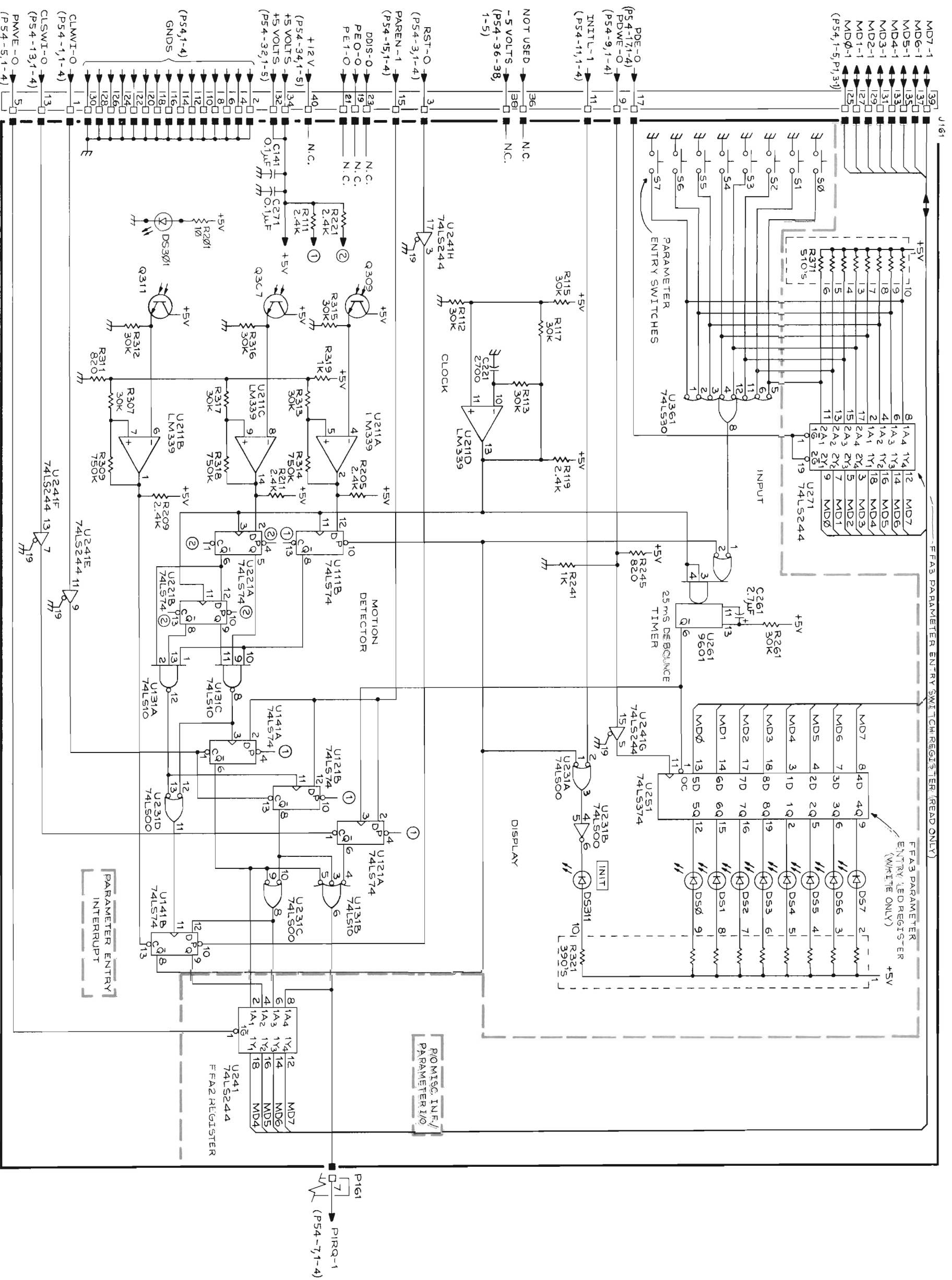




SEE PARTS LIST FOR EARLIER
VALUES AND SERIAL NUMBER
RANGES OF PARTS OUTLINED
OR DEPICTED IN GREY.



Parameter Entry (670-5221-01) Component Locations.



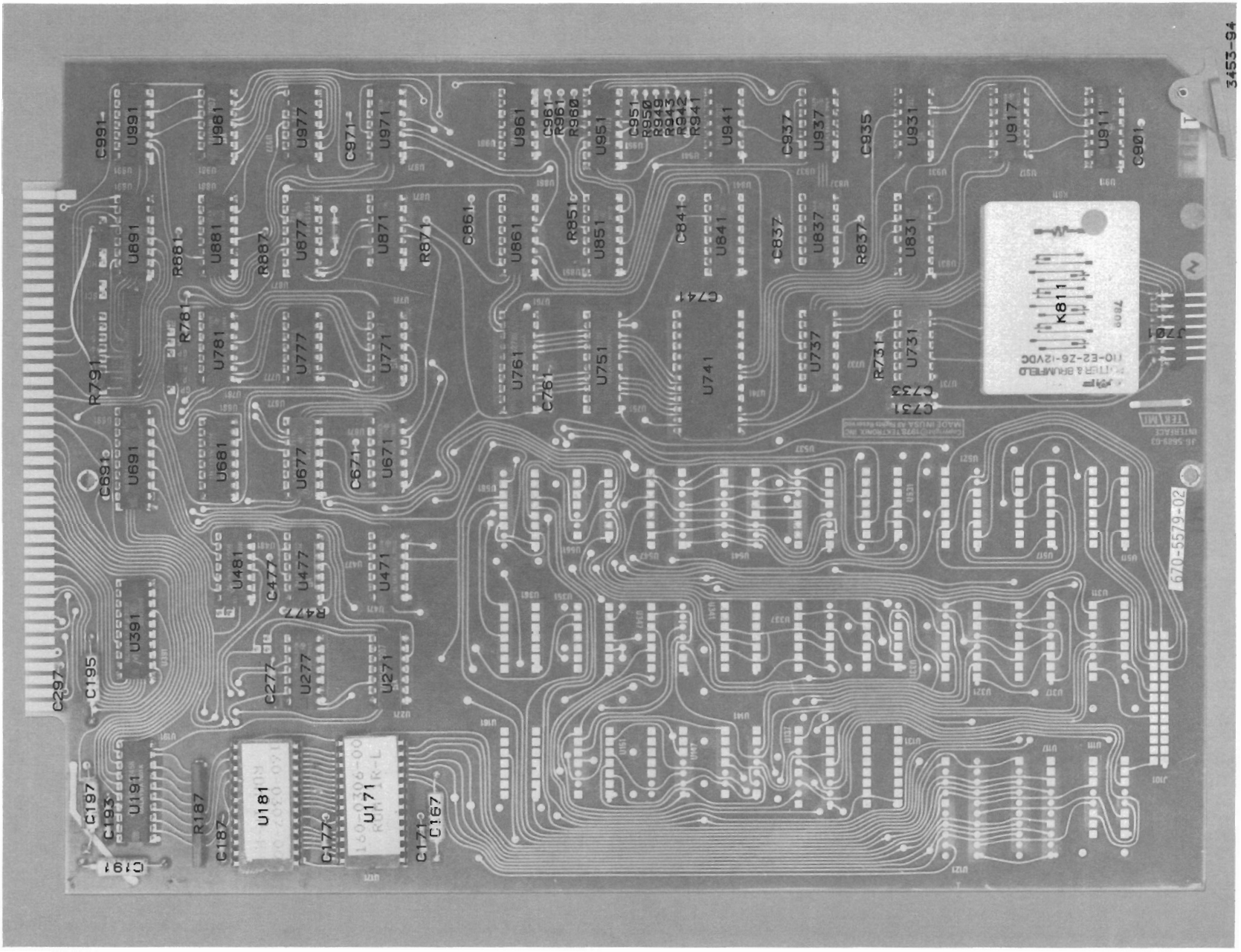
4663

@3453-13

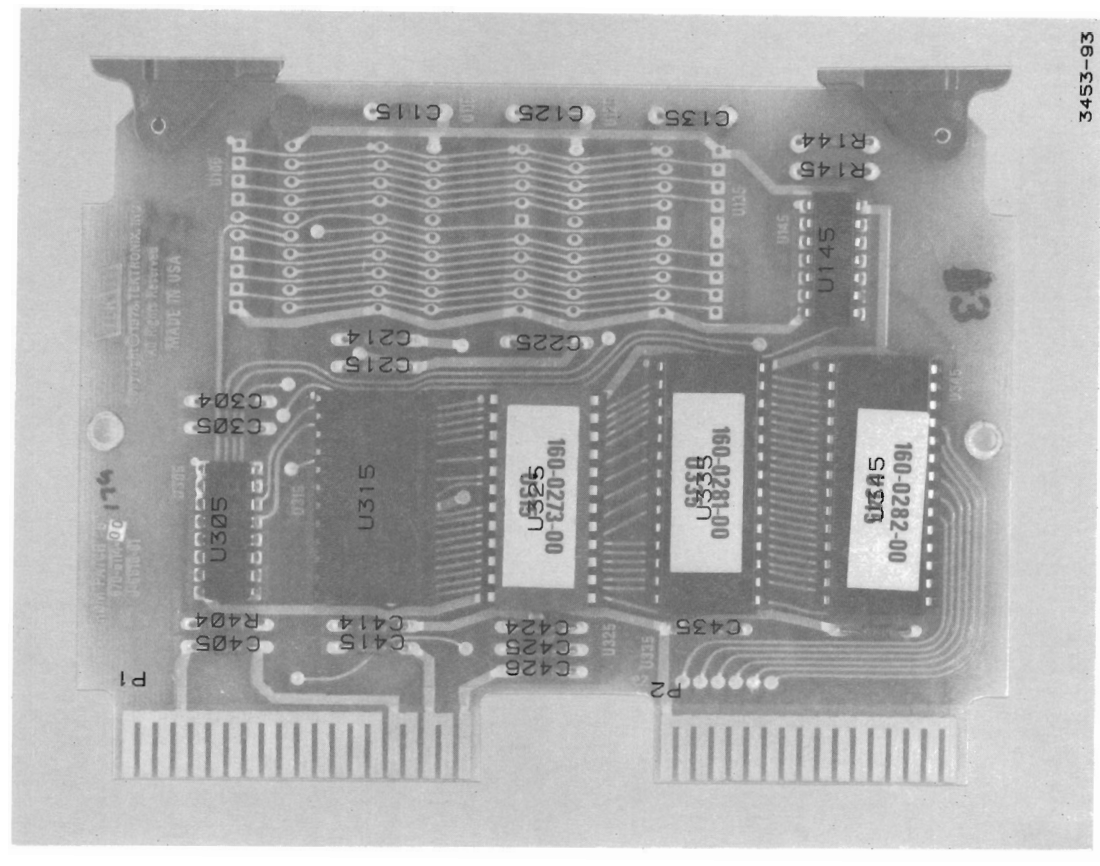
A2

670-5221-01

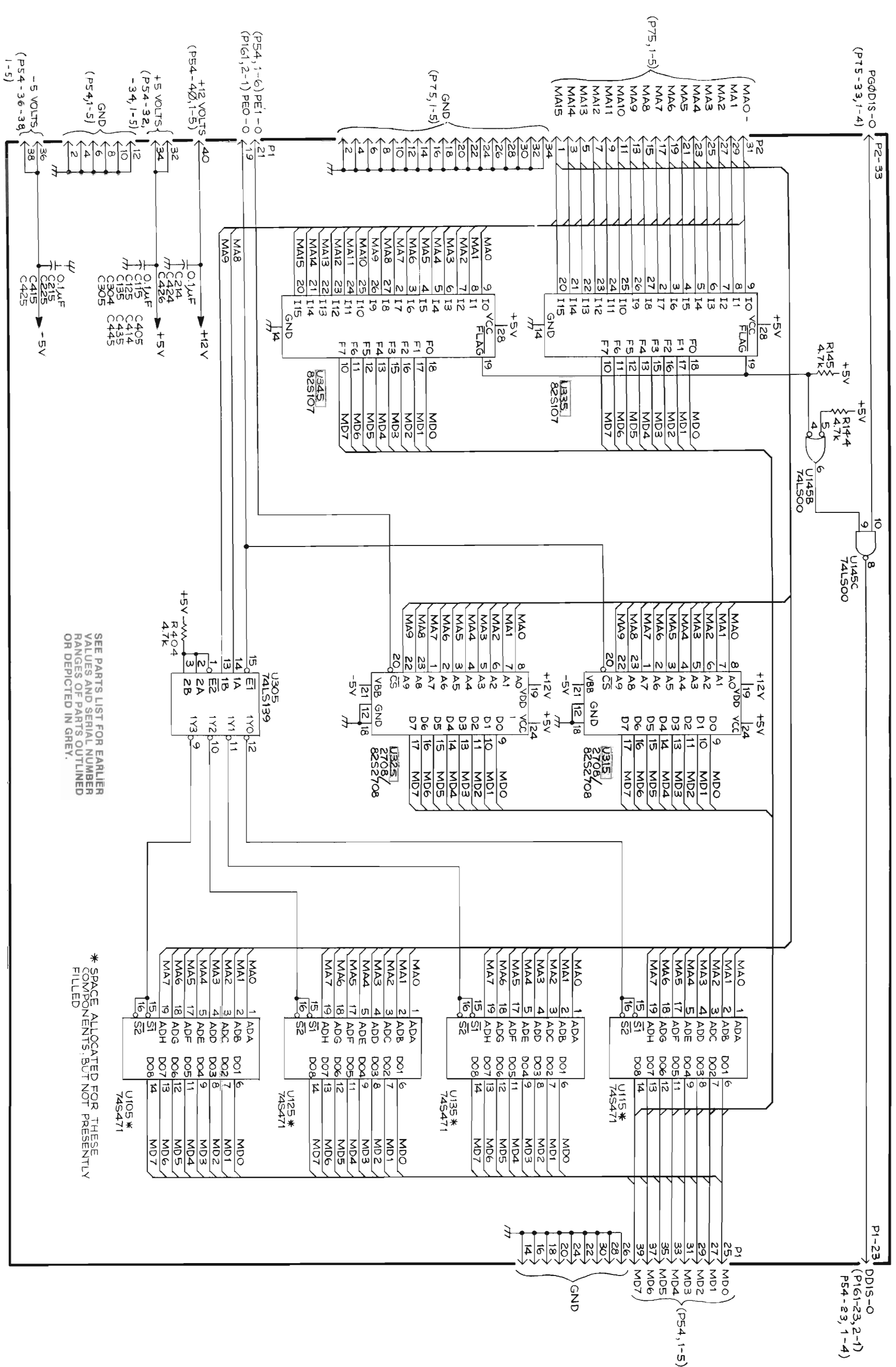
PARAMETER ENTRY 2-1



RS-232 Interface (670-5579-01,02,03,04,05,06) Component Locations.



ROM Patch "B" (670-6114-00,01,02,03,04,05) Component Locations.



4663

3453-14
REV, FEB 1983

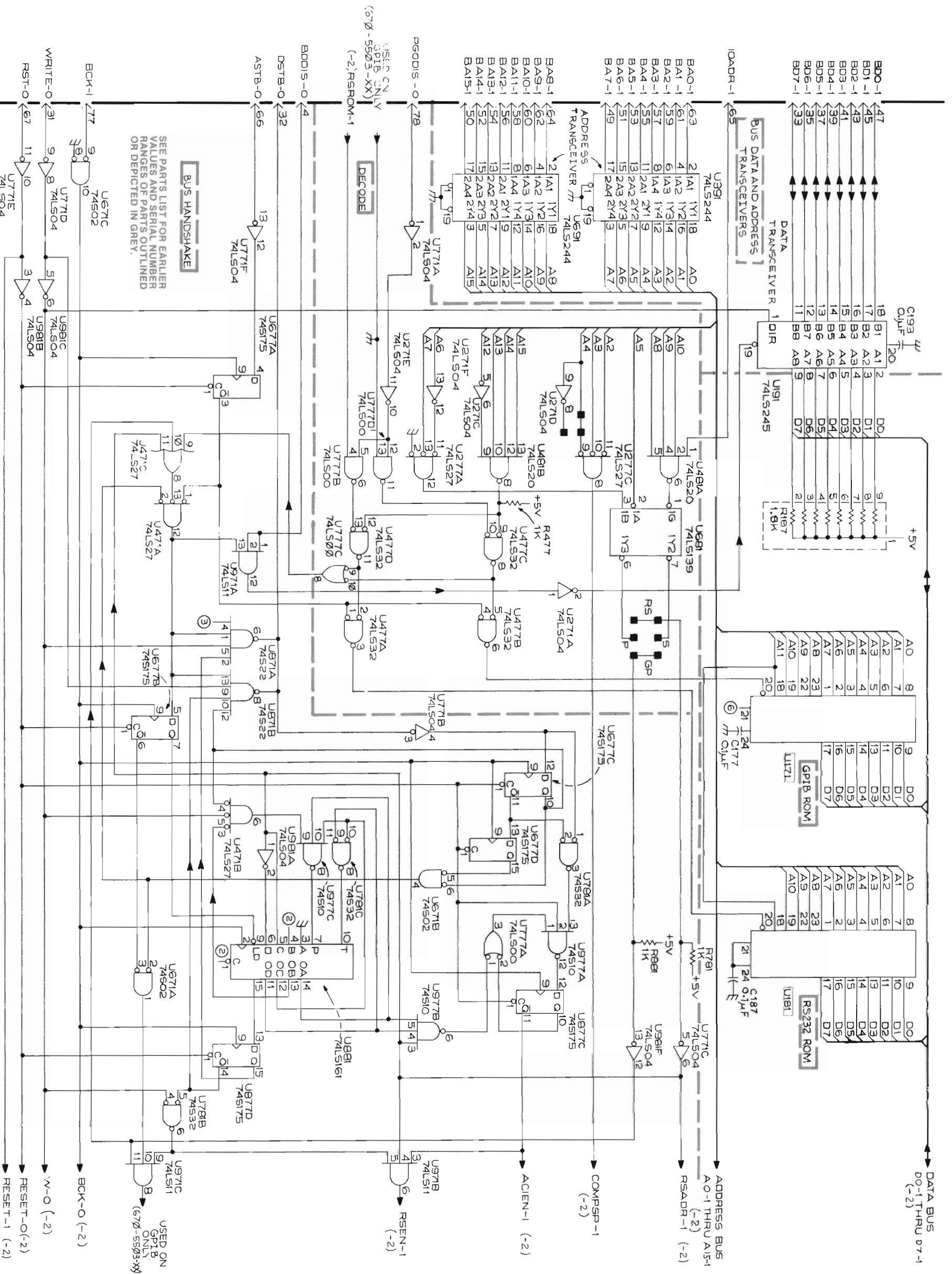
A3 670-6114-00,01,02,03,04,05

ROM PATCH B 3-1

SEE PARTS LIST FOR EARLIER
VALUES AND SERIAL NUMBER
RANGES OF PARTS OUTLINED
OR DEPICTED IN GREY.

* SPACE ALLOCATED FOR THESE
COMPONENTS, BUT NOT PRESENTLY
FILLED

ROM PATCH B 3-1
670-6114-00,01,02,03,04,05

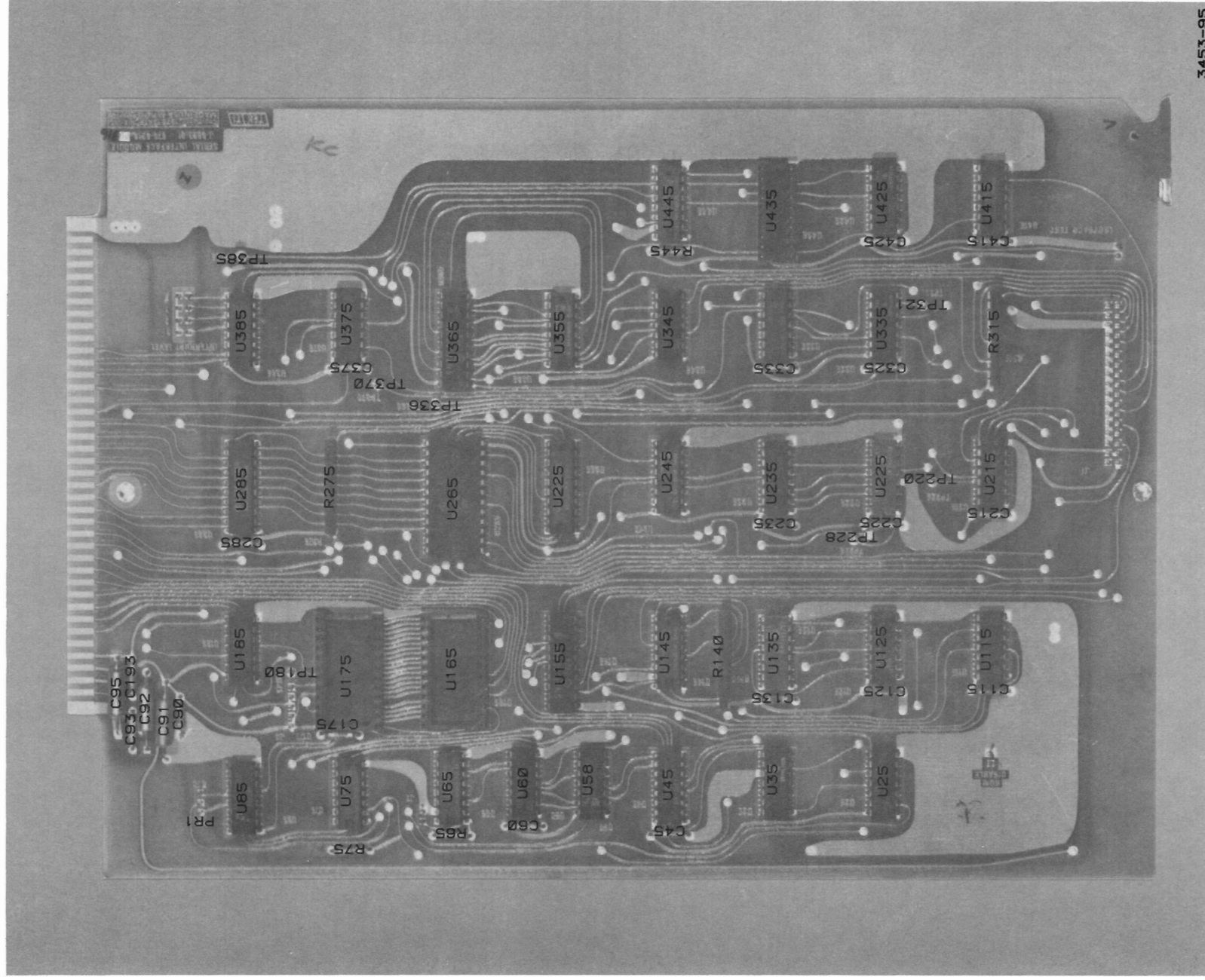


SEE PARTS LIST FOR EARLIER
VALUES AND SERIAL NUMBER
RANGES OF PARTS OUTLINED
OR DEPICTED IN GREY.

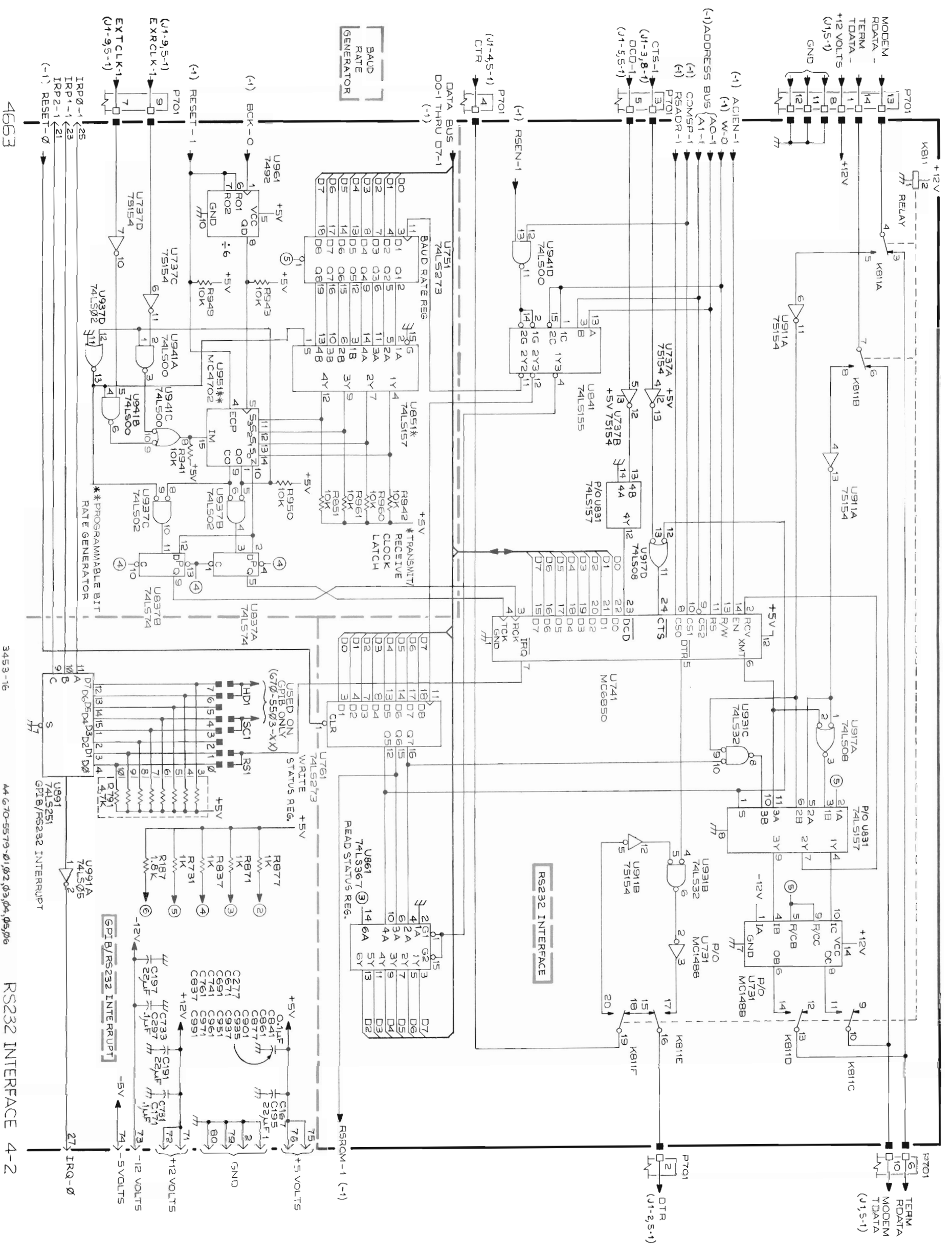
BUS HANDSHAKE

GP18 ROM

RS232 ROM



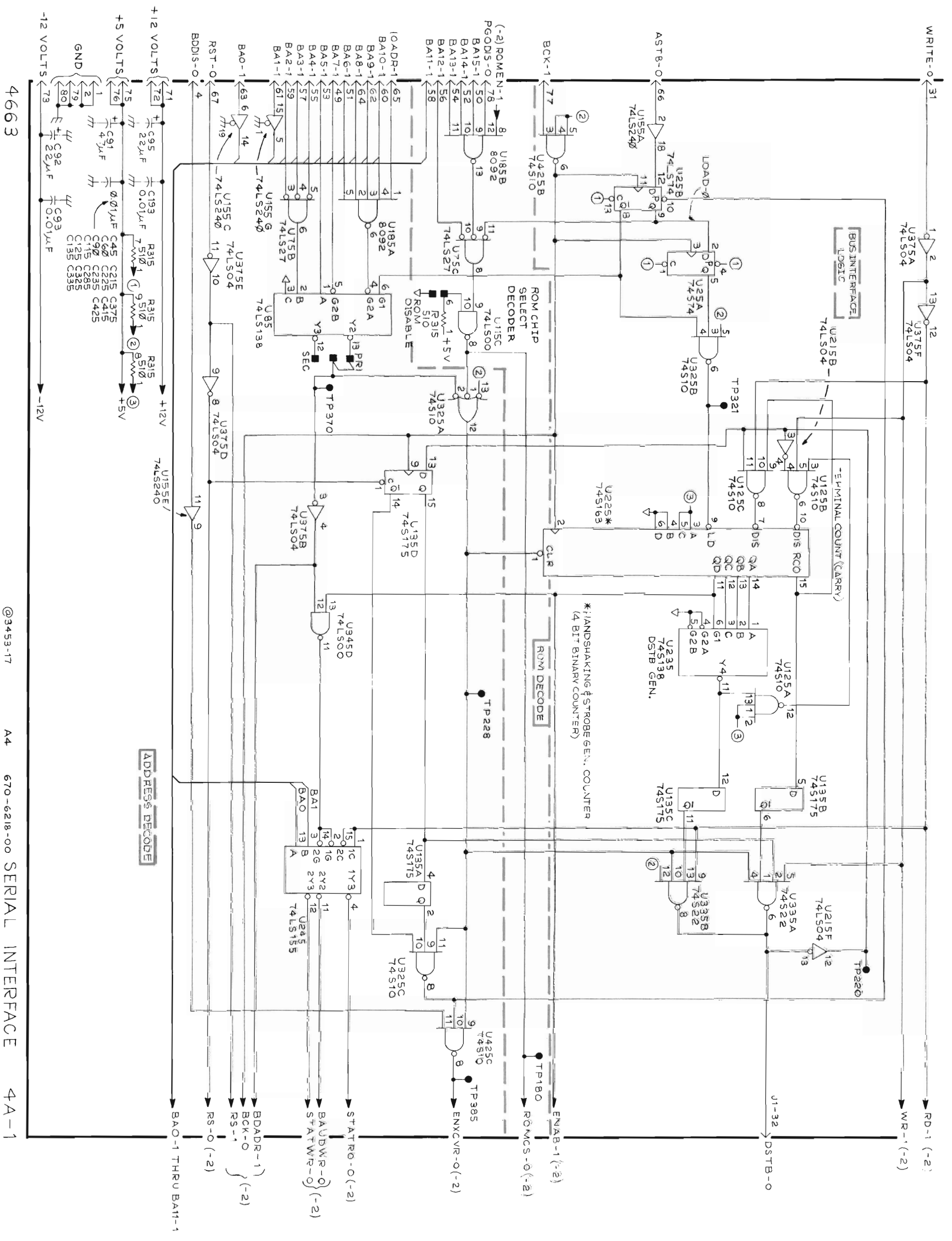
Serial Interface Module (670-6218-00) Component Locations.



3453-16
 REV, FEB 1983
 44 G-70-5579-01,02,03,04,05,06

4663

RS232 INTERFACE 4-2



4663

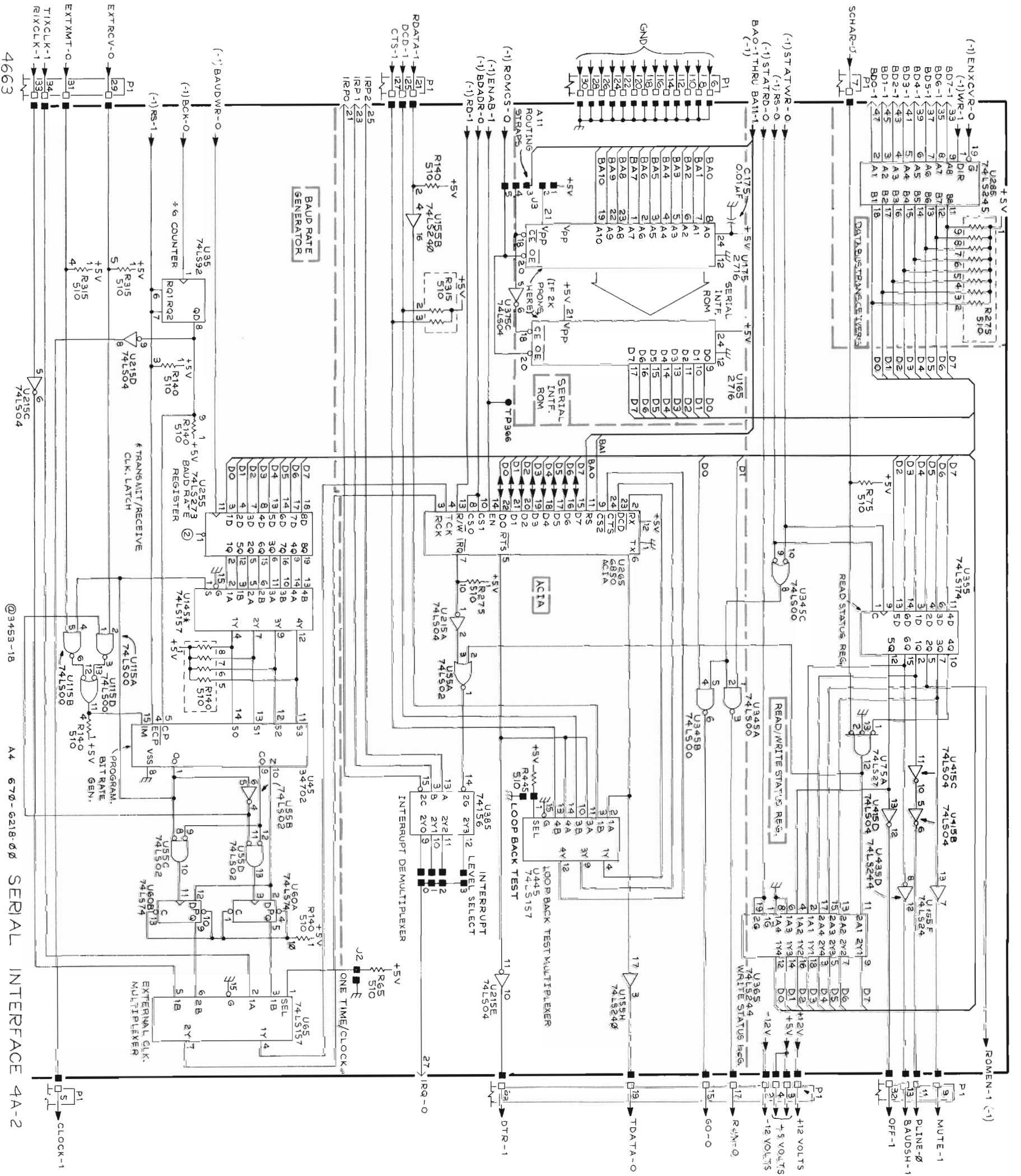
@3453-17

A4

670-6218-00 SERIAL INTERFACE

4A-1

4A-1 SERIAL INTERFACE MODULE 670-6218-00

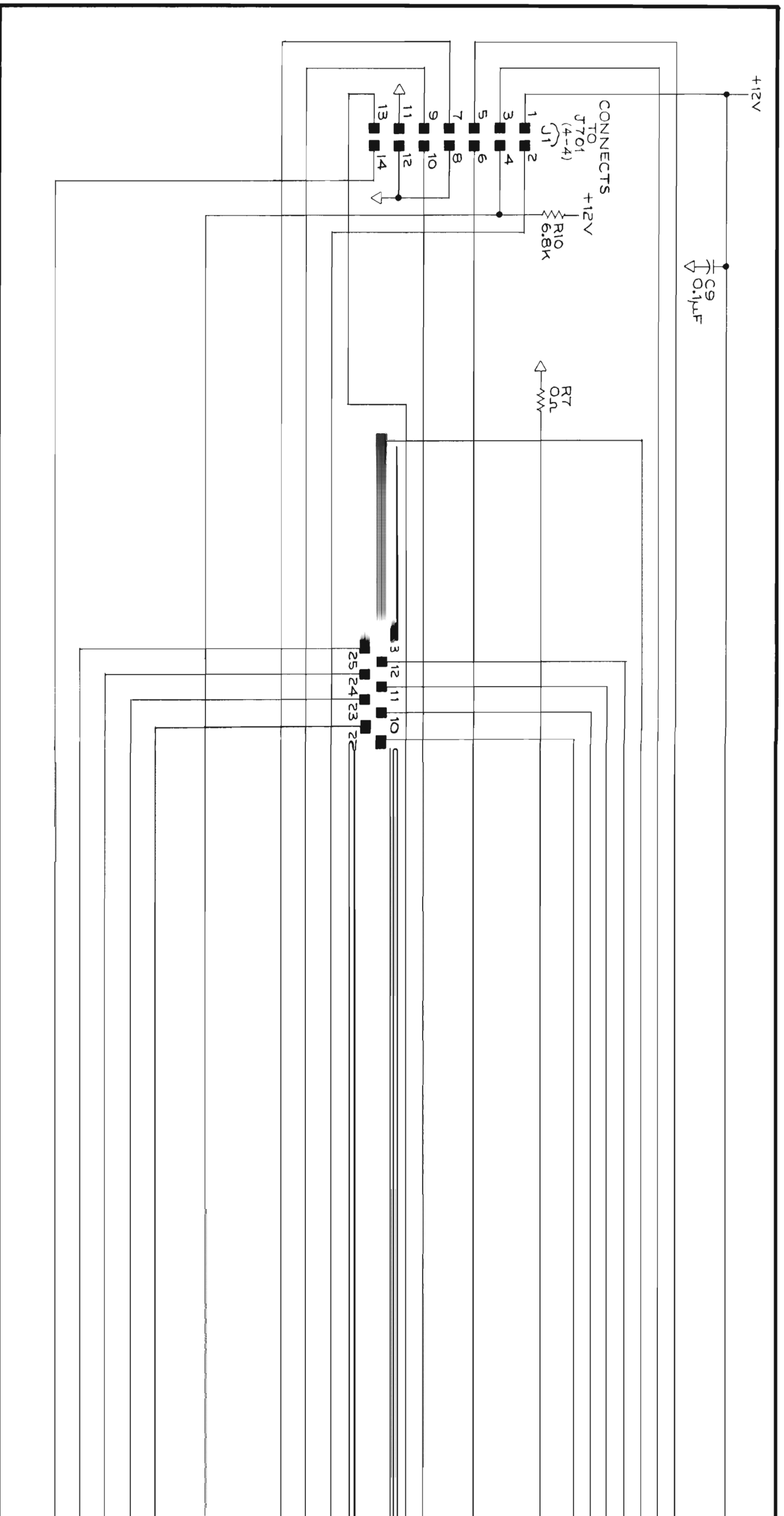


4663

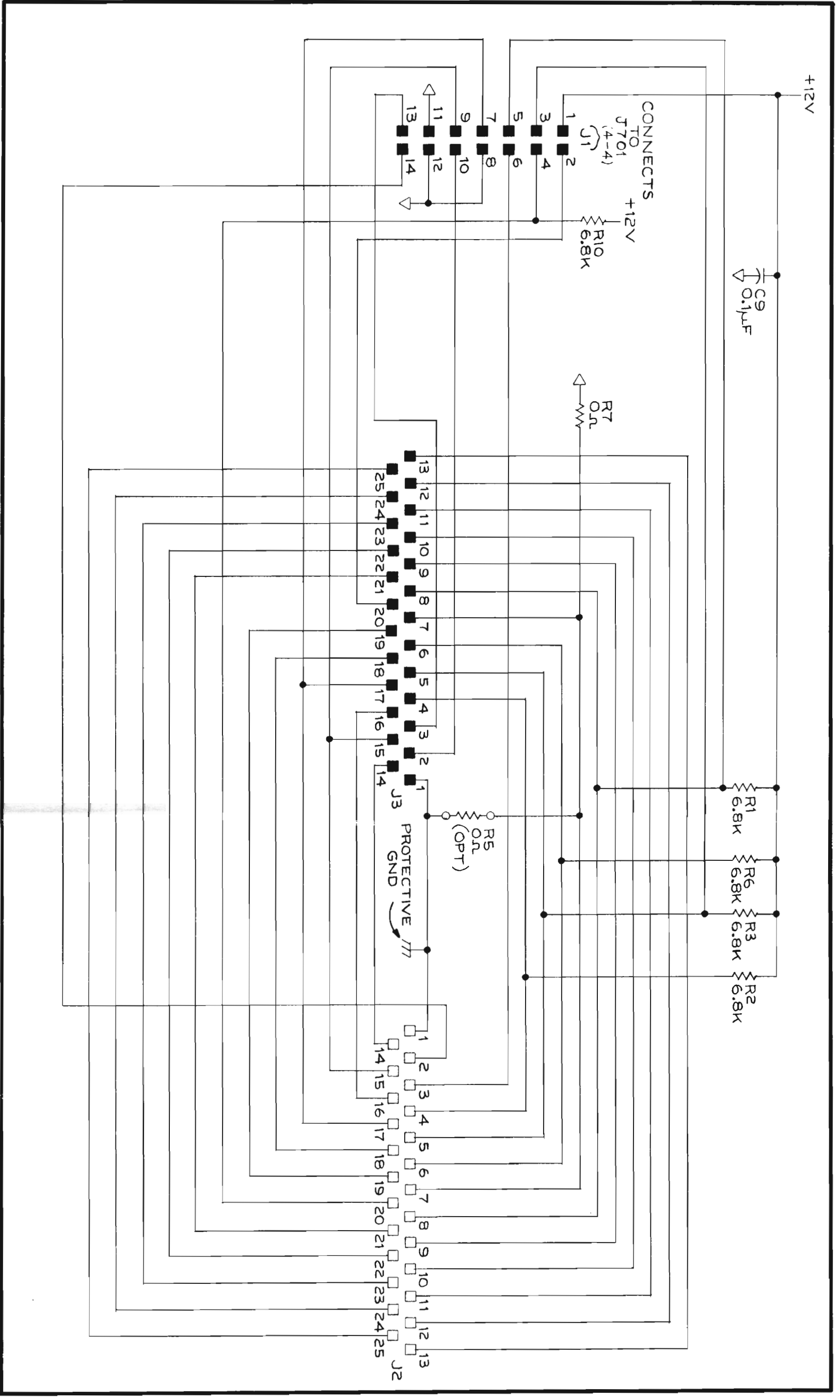
@3453-18

A4 670-6218-00

SERIAL INTERFACE 4A-2



46663



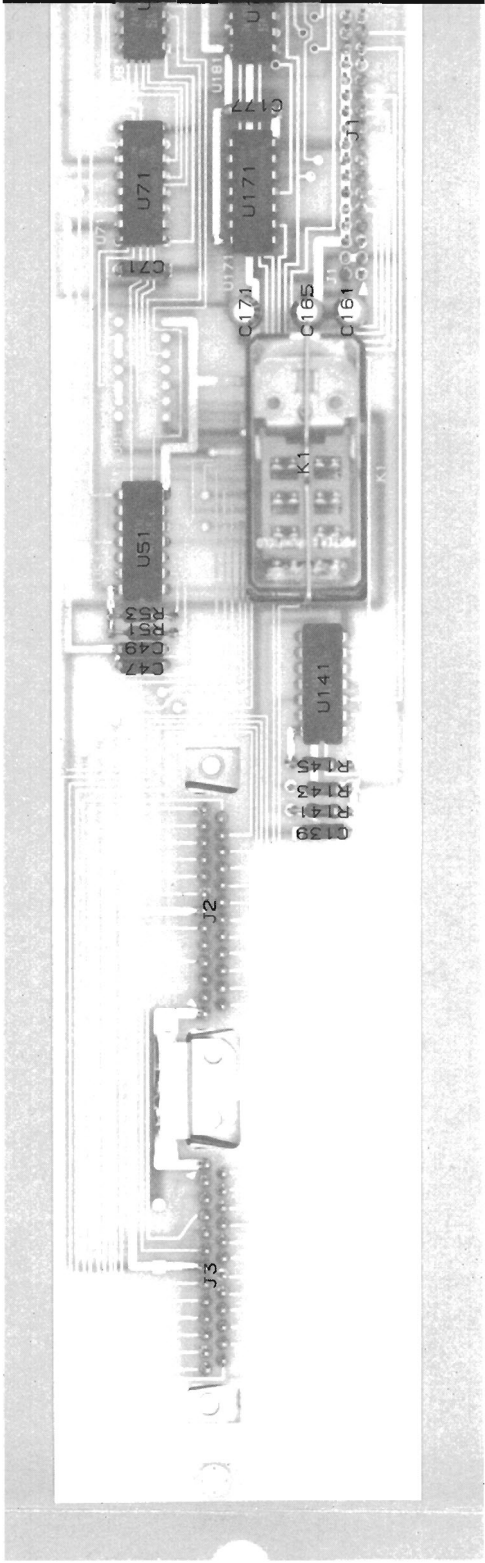
4663

@3453-19

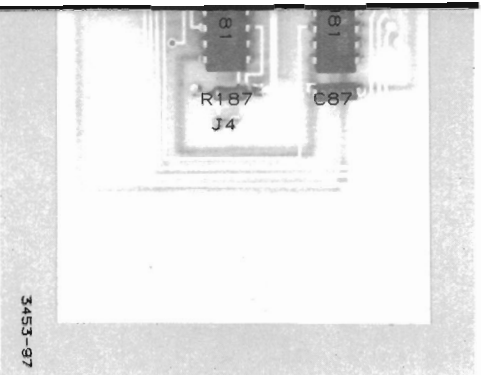
A5 670-5588-01

RS232 ADAPTER

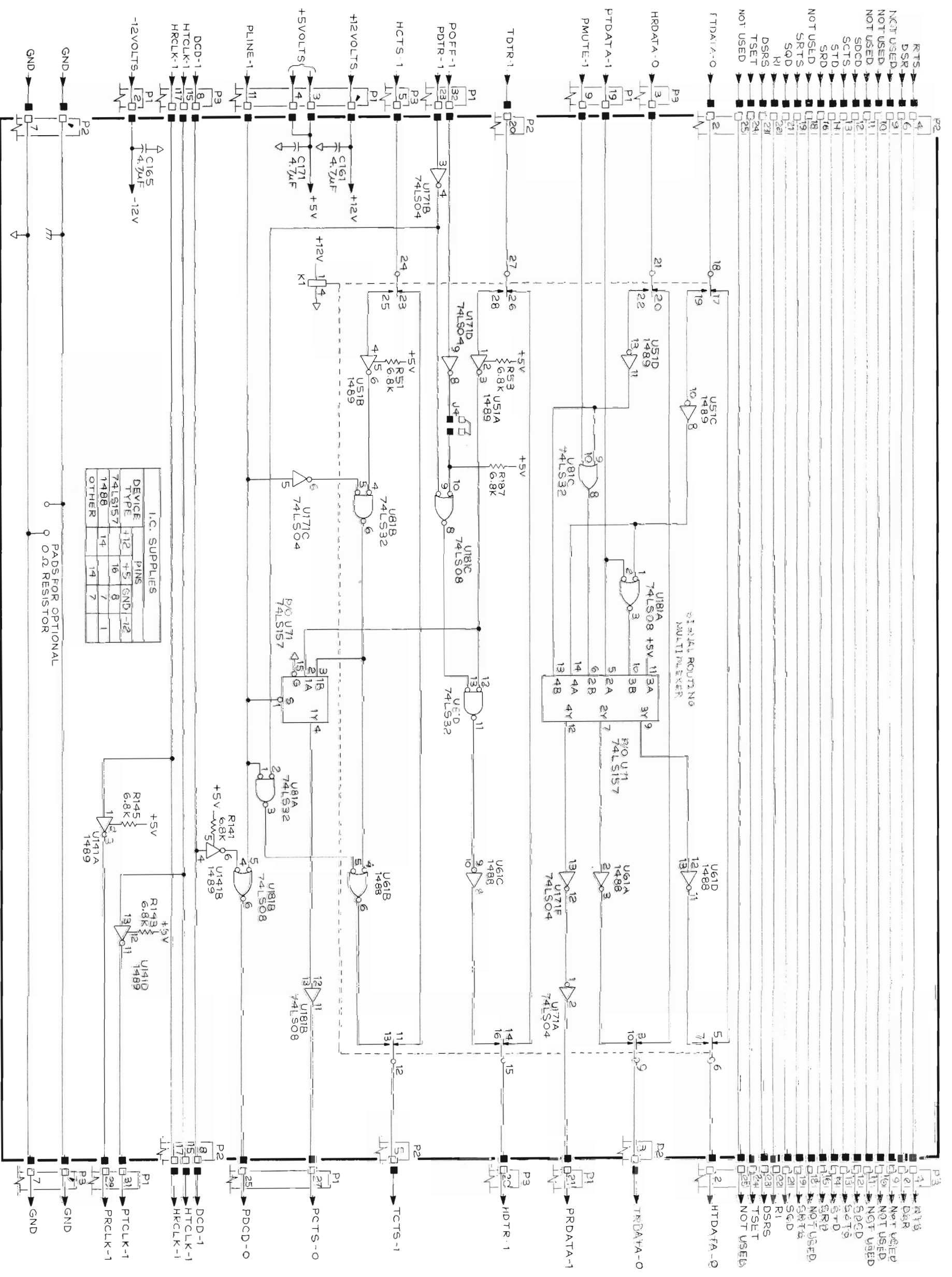
5-1



RS-232 Adapter (670-6442-00) Component Locations.



3453-87



I.C. SUPPLIES		
DEVICE TYPE	PINS	
74LS157	12	+5 GND -12
1488	16	8
OTHER	14	7
		1

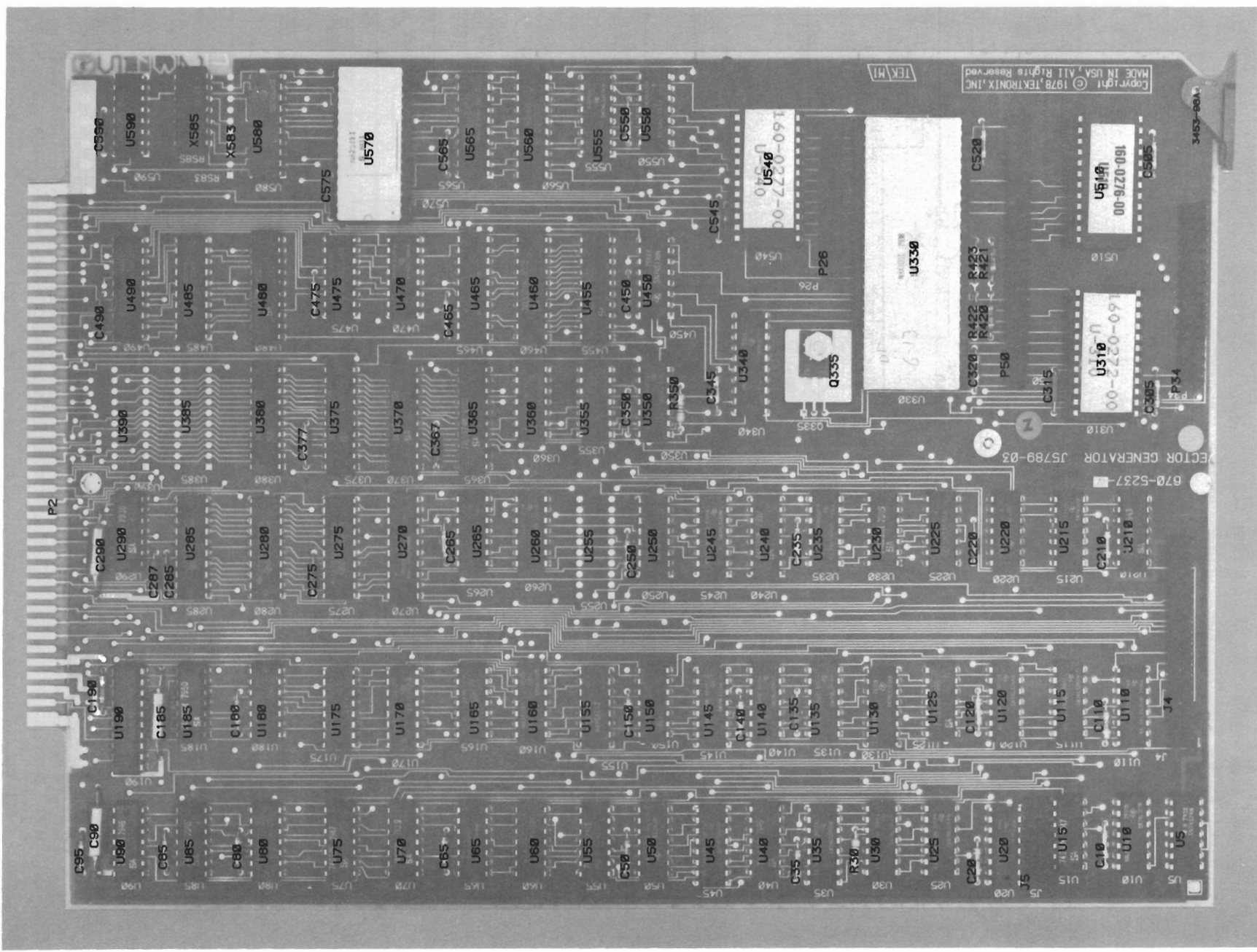
PADS FOR OPTIONAL 0 Ω RESISTOR

4663

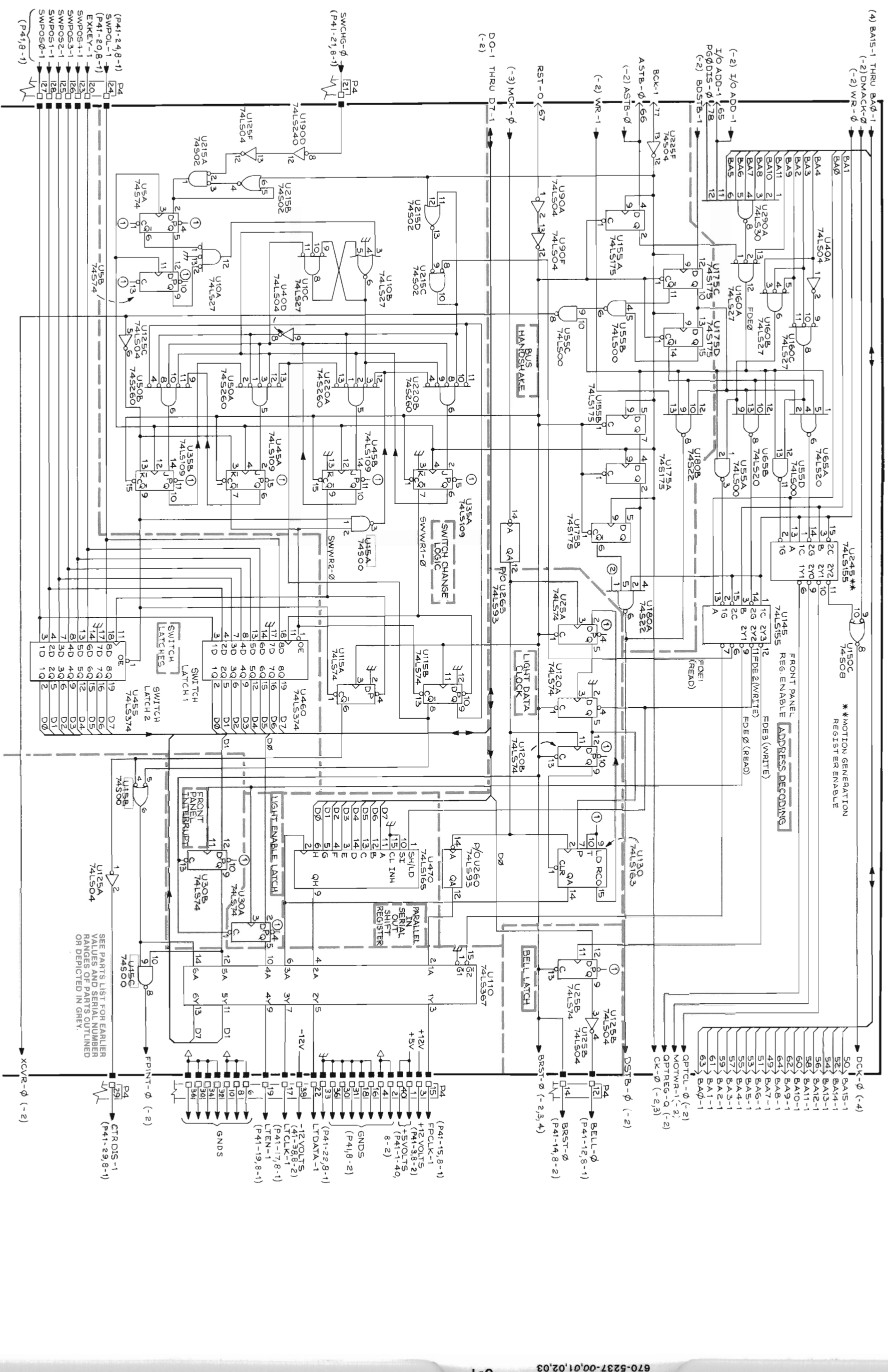
@ 3453-20

AS

670-6442-00 RS232 ADAPTER 5A-1



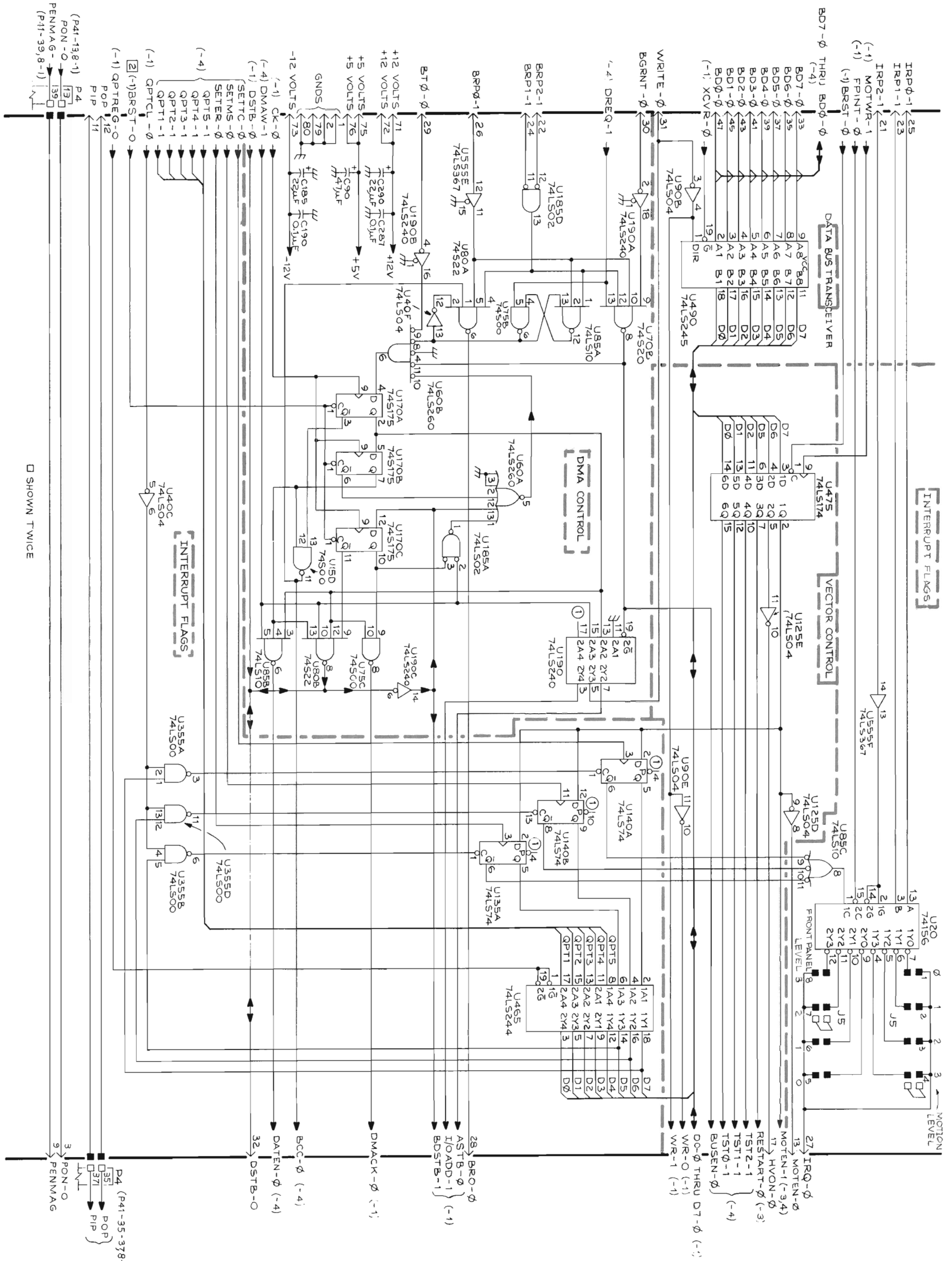
Vector Generator (670-5237-00,01,02,03) Component Locations.



4663

3453-21
REV. JUN 1981

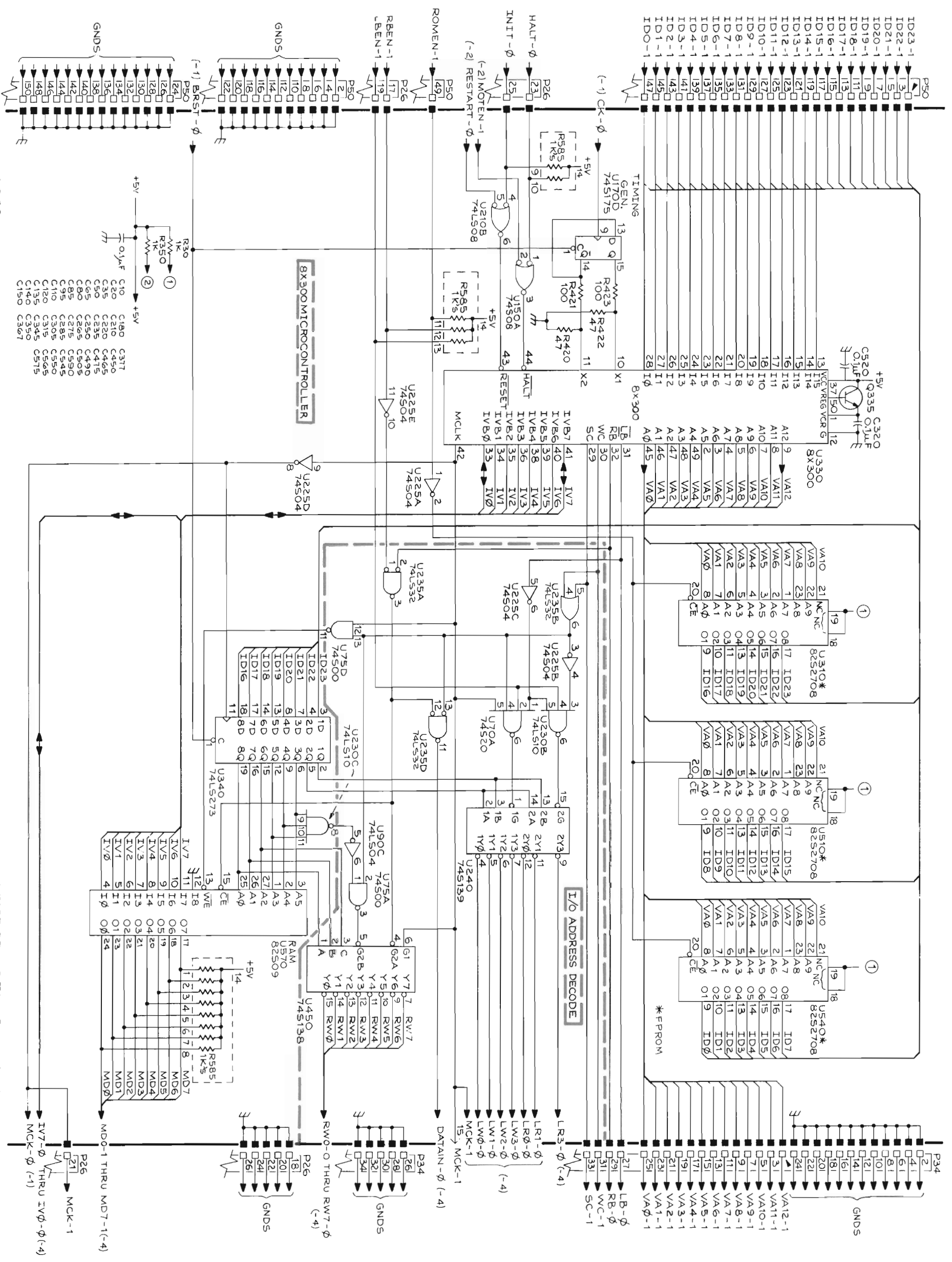
AG 670-5237-00, 01, 02, 03 VECTOR GENERATOR 6-1



4663

3453-22
REV, JUN 1981

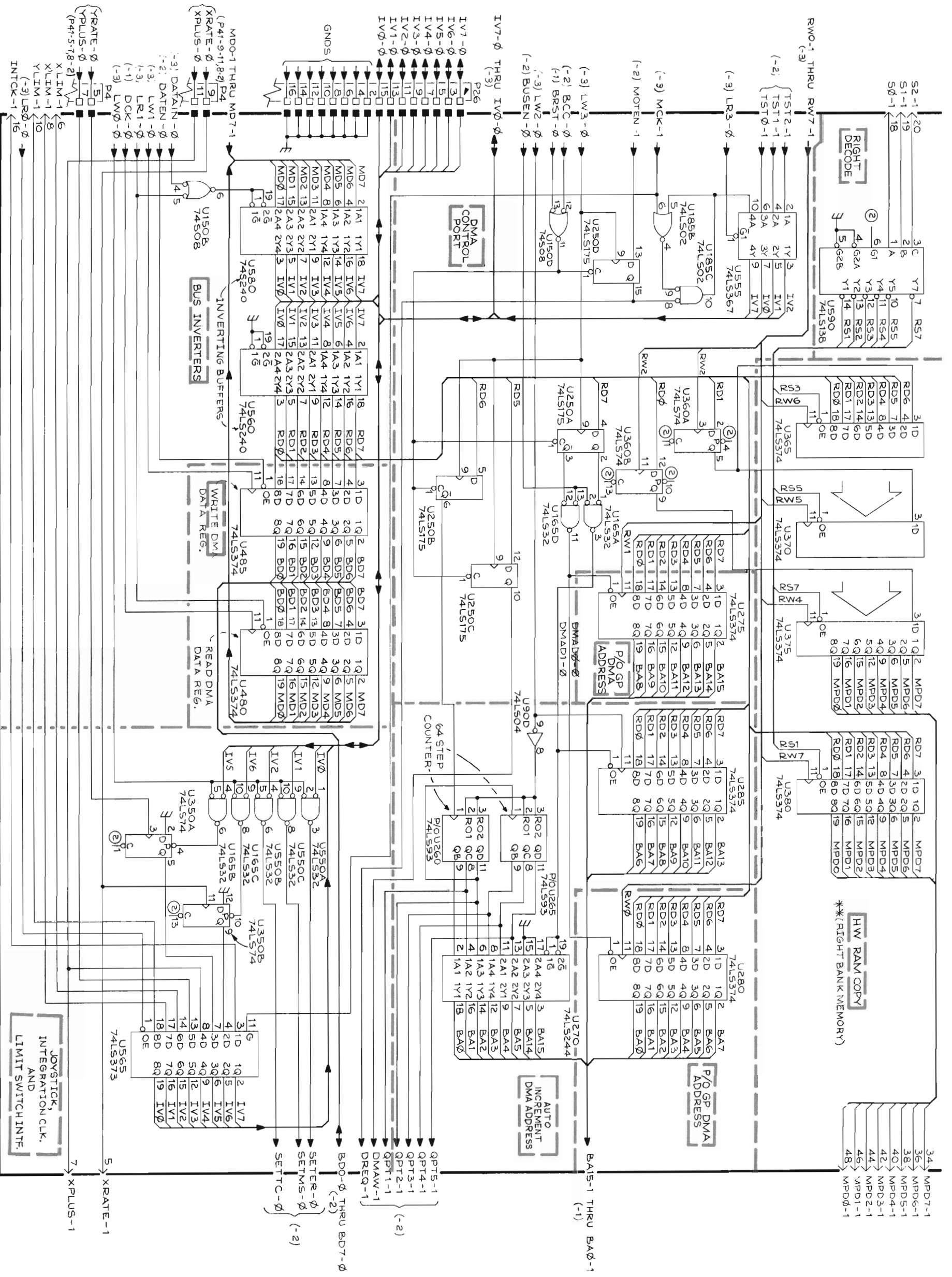
AG 670-5237-00, 01, 02, 03 VECTOR GENERATOR 6-2



4663

3453-23
REV. JUN 1981

A6 670-5237-00,01,02,03 VECTOR GENERATOR 6-3

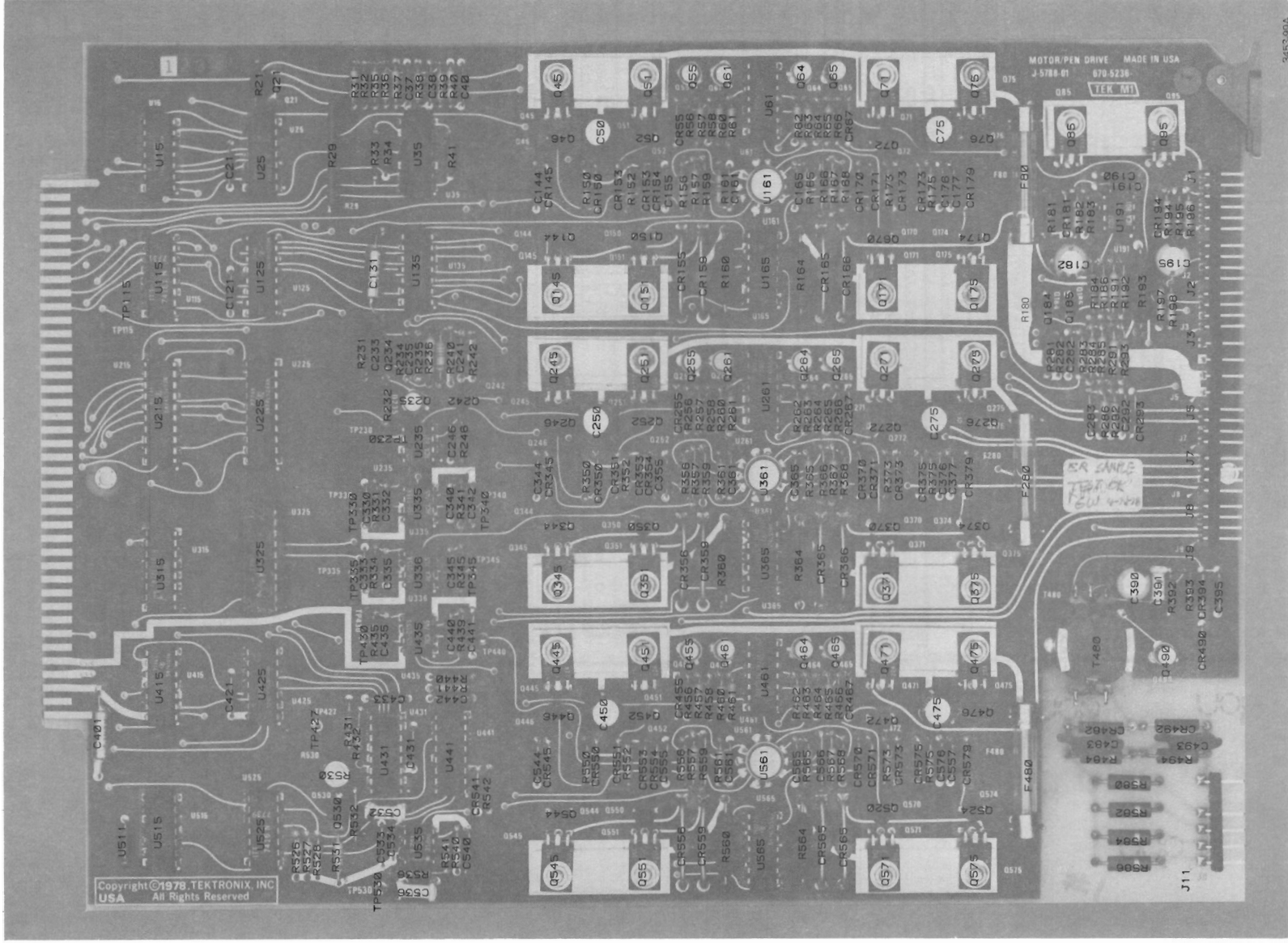


4663

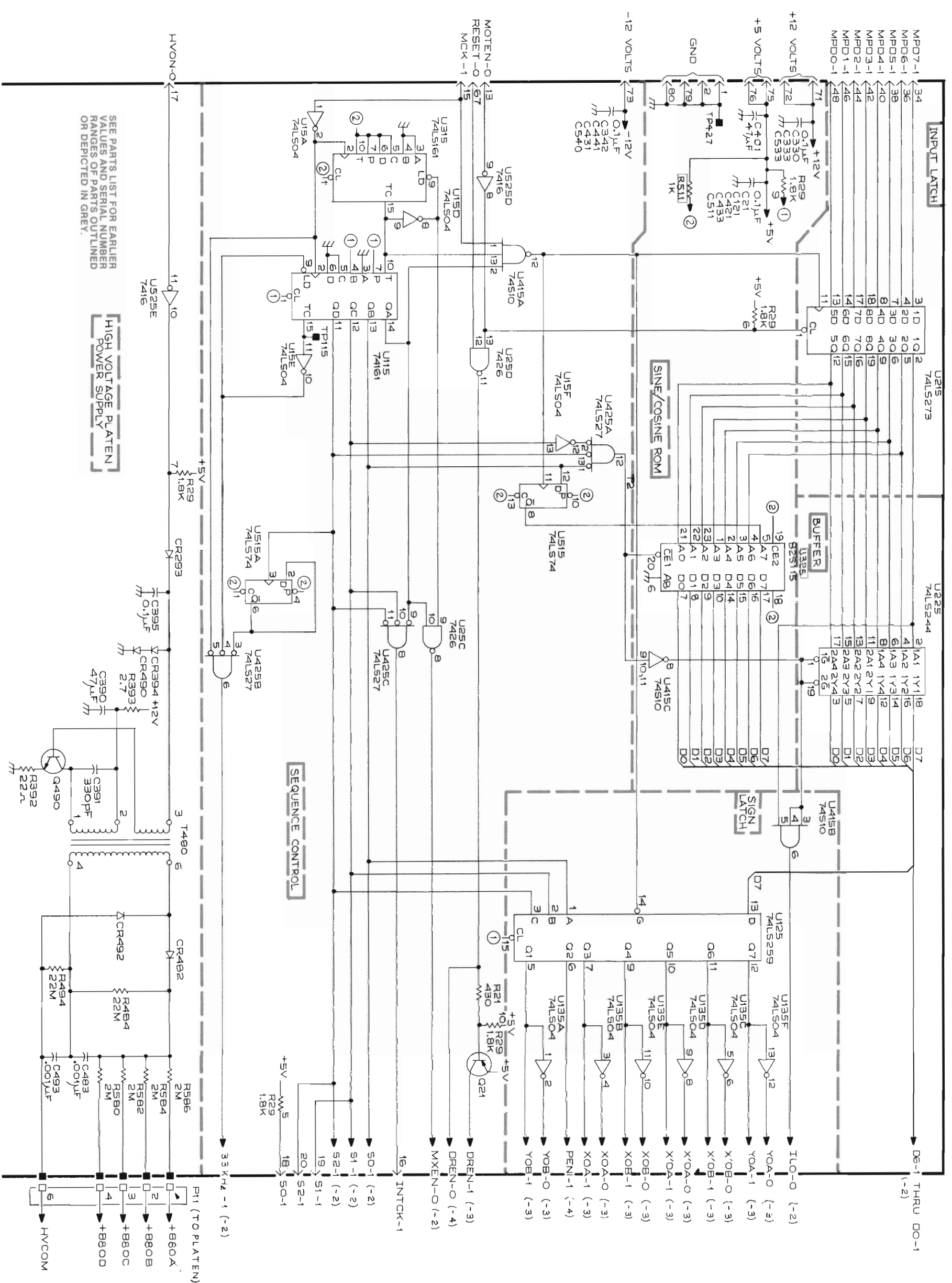
3453-24
REV, JUN 1981

AG 670-5237-00,01,02,03 VECTOR GENERATOR 6-4

**MOTOR PEN DRIVE
COMPONENT LOCATIONS**



Motor Pen Drive (670-5236-Q0,01,02,03,04) Component Locations.



SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES OF PARTS OUTLINED OR DEPICTED IN GREY.

HIGH VOLTAGE PLATEN

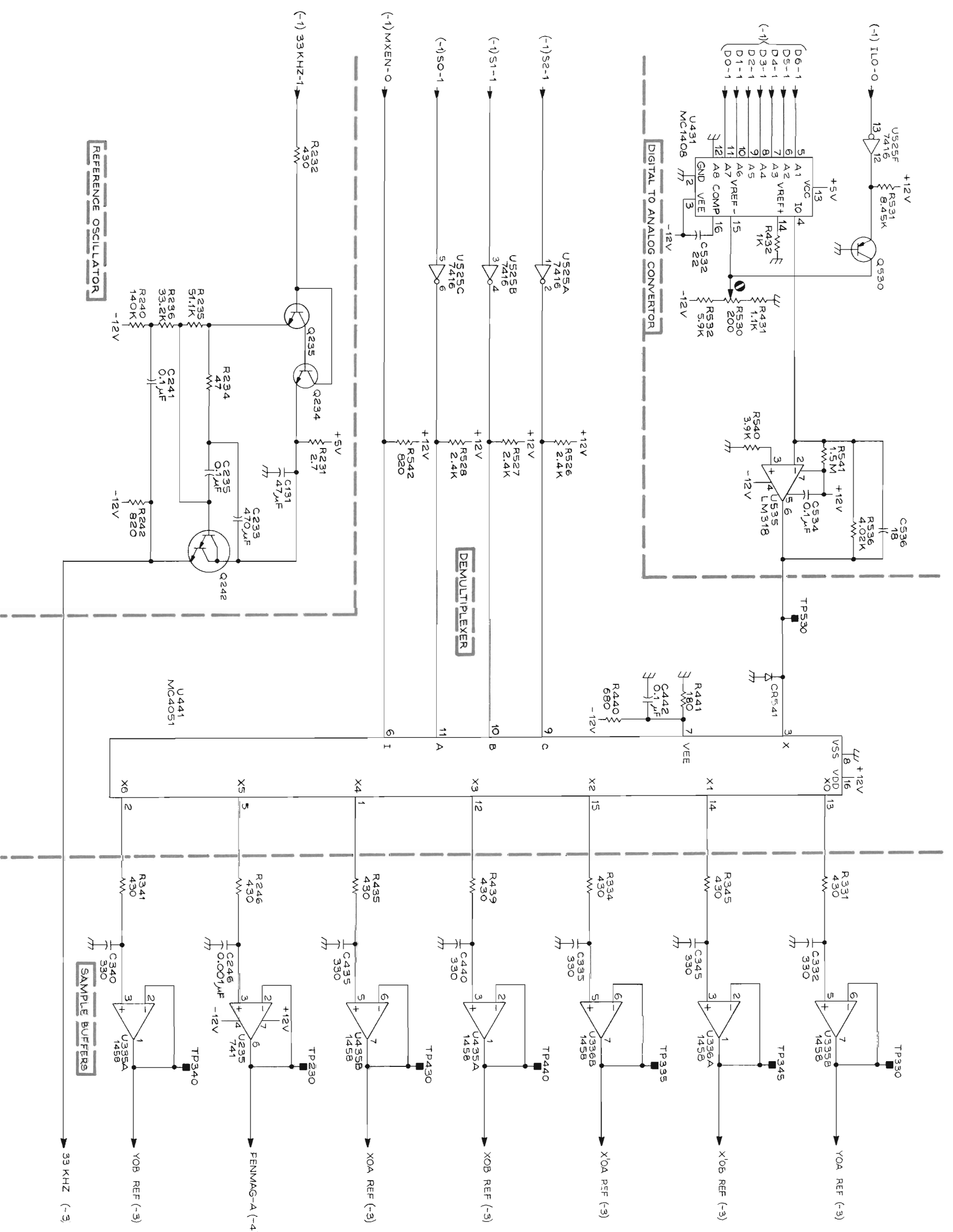
SEQUENCE CONTROL

SINE/COSINE ROM

BUFFER

SIGN LATCH

INPUT LATCH



REFERENCE OSCILLATOR

DEMULTIPLEXER

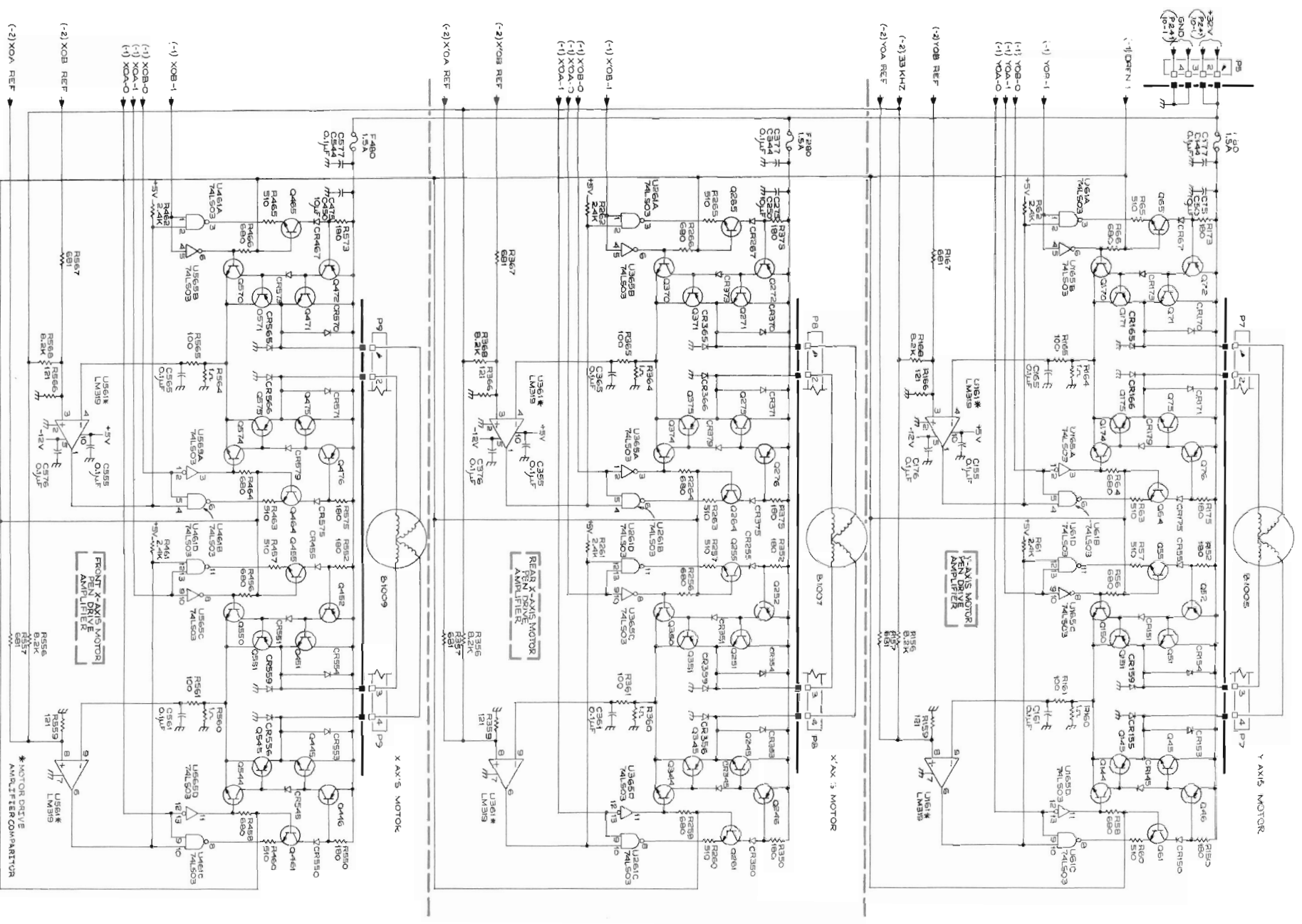
DIGITAL TO ANALOG CONVERTER

SAMPLE BUFFERS

4663

REV. JUN 1981
3453-26

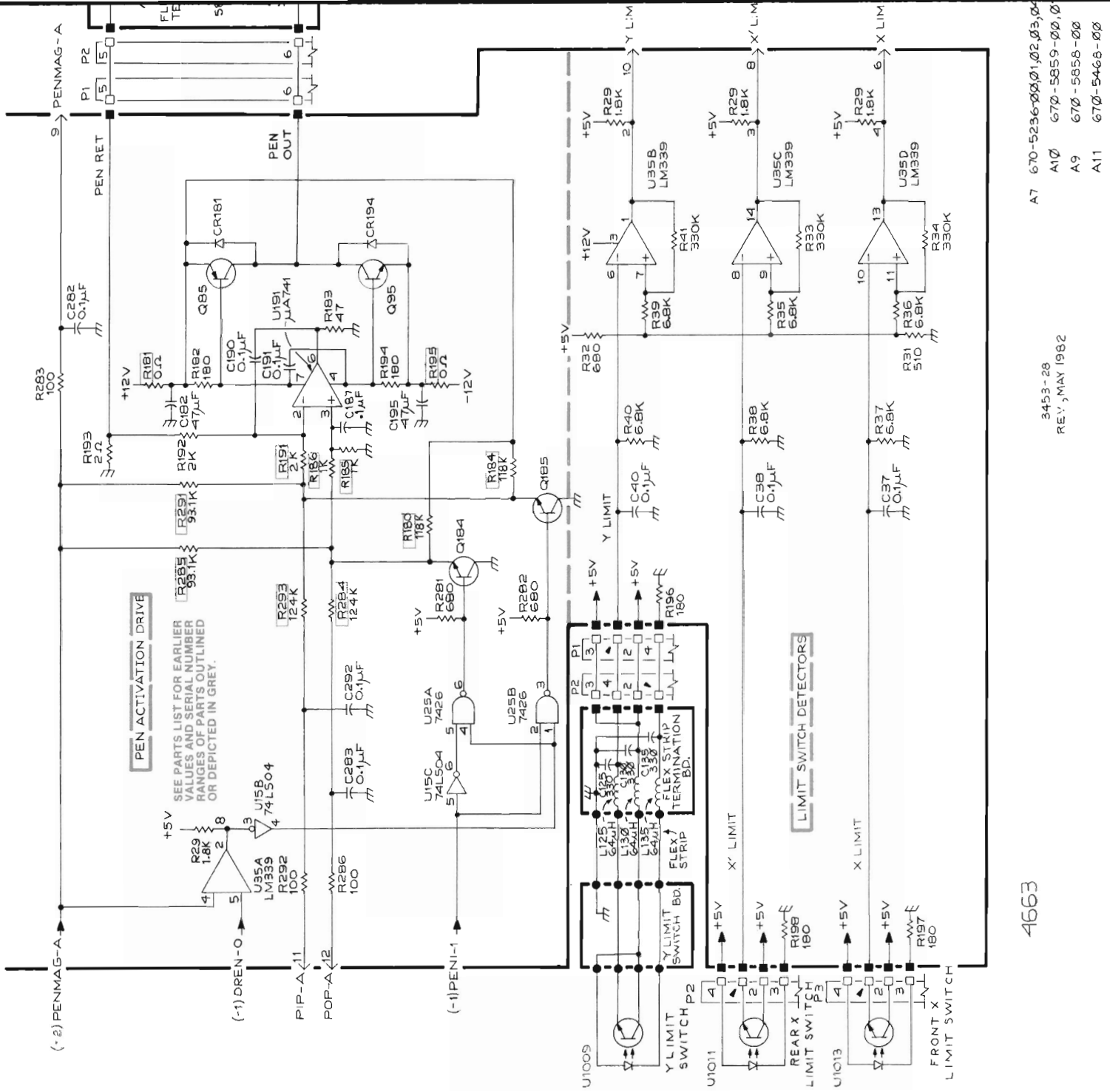
A7 670-5236-00,01,02,03,04 MOTOR/PEN DRIVE 7-2



4563

5453-27
REV. JAN 1982

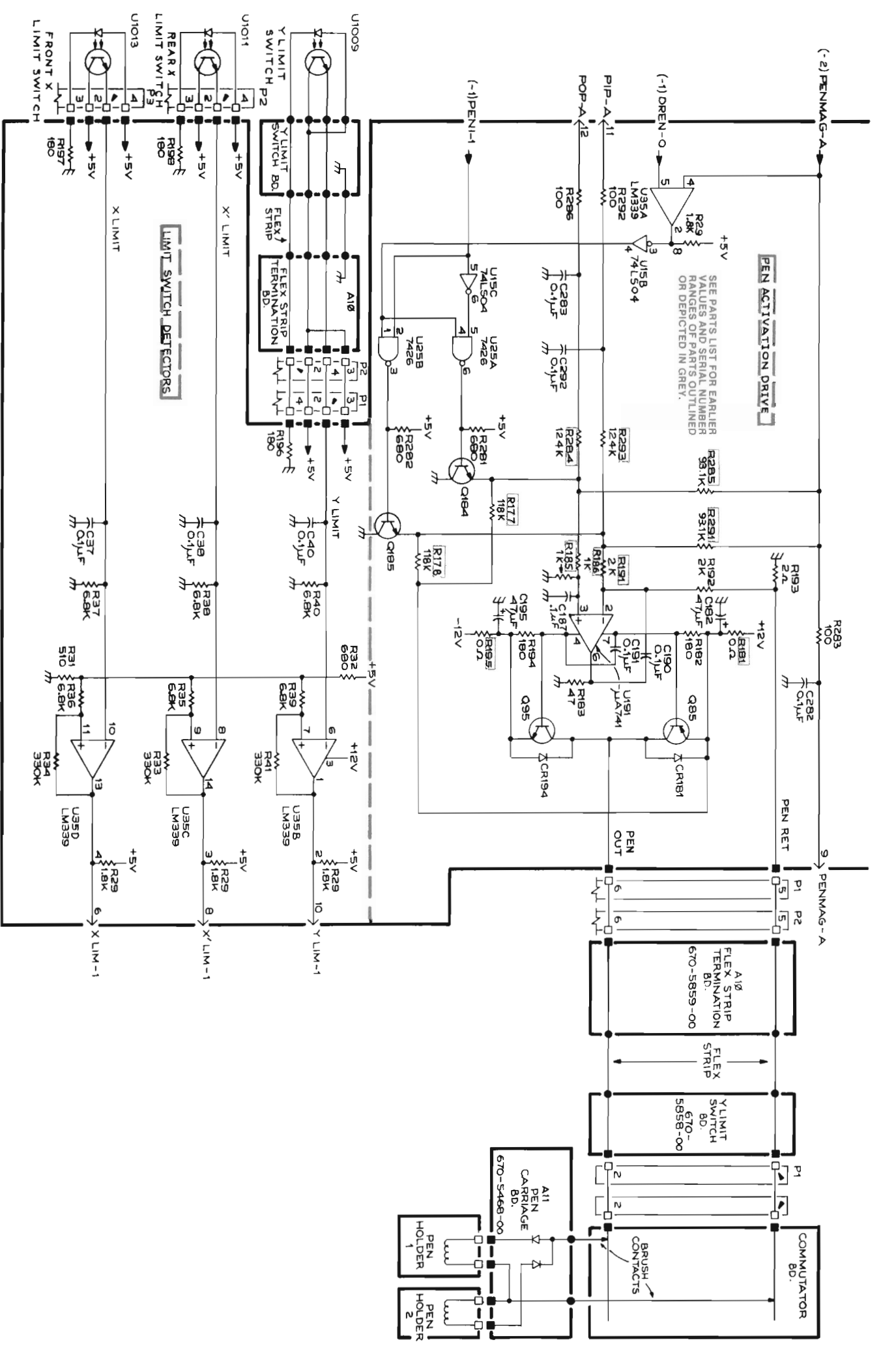
A1 670-6236-00/01/02/03/04 MOTOR/PEN DRIVE 7-3



4663

3453-28
REV. MAY 1982

- A7 670-5236-001,02,03,04
- A10 670-5859-00,0
- A9 670-5858-00
- A11 670-5466-00

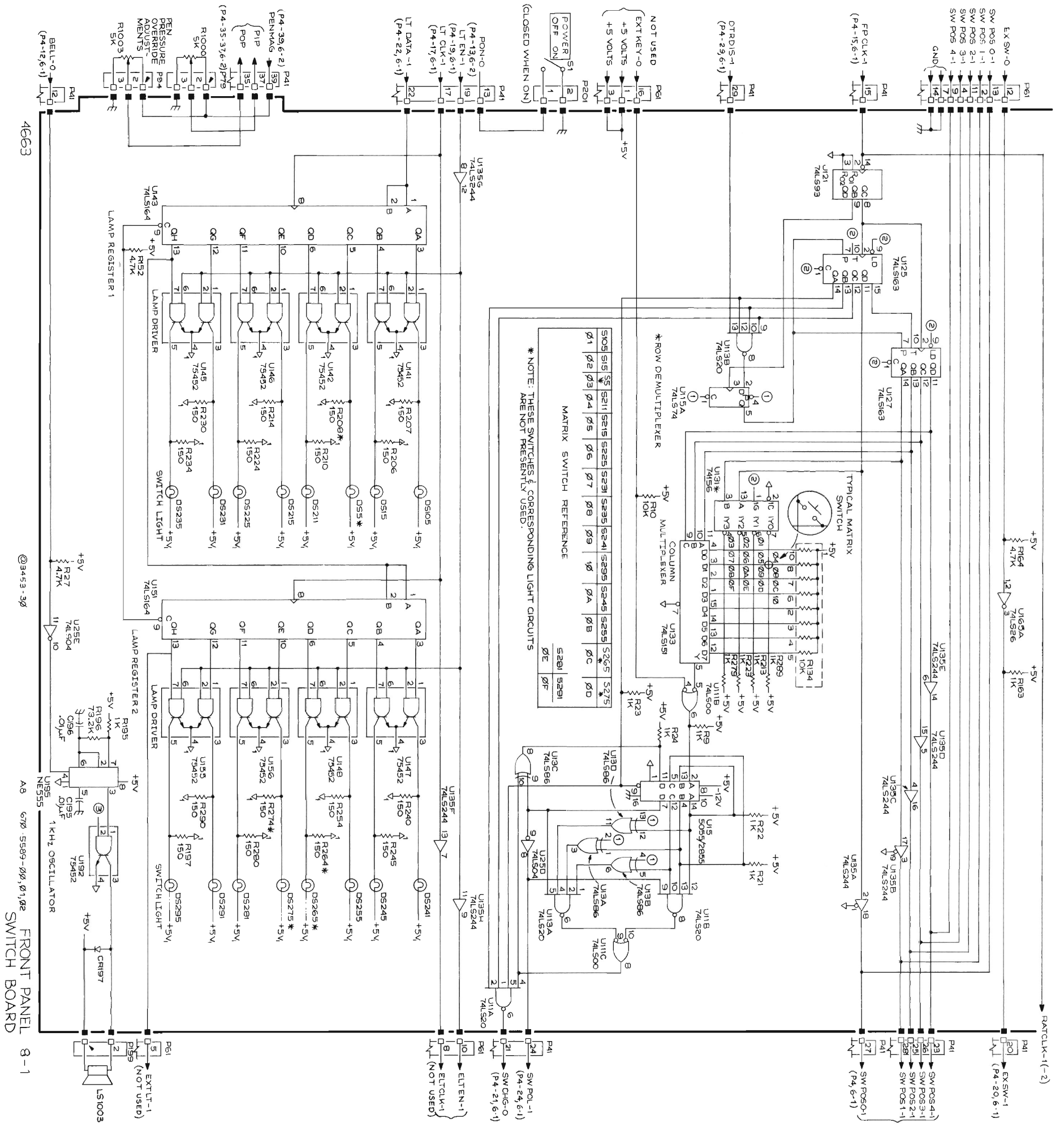


MOTOR/PEN DRIVE 7-4
 FLEX STRIP TERMINATION BD.
 Y-AXIS LIMIT SWITCH BD.
 PEN CARRIAGE BD.

4663

3453-29
 REV. JUN 1981

A7 670-5236-00,01,02,03,04 MOTOR/PEN DRIVE 7-4A



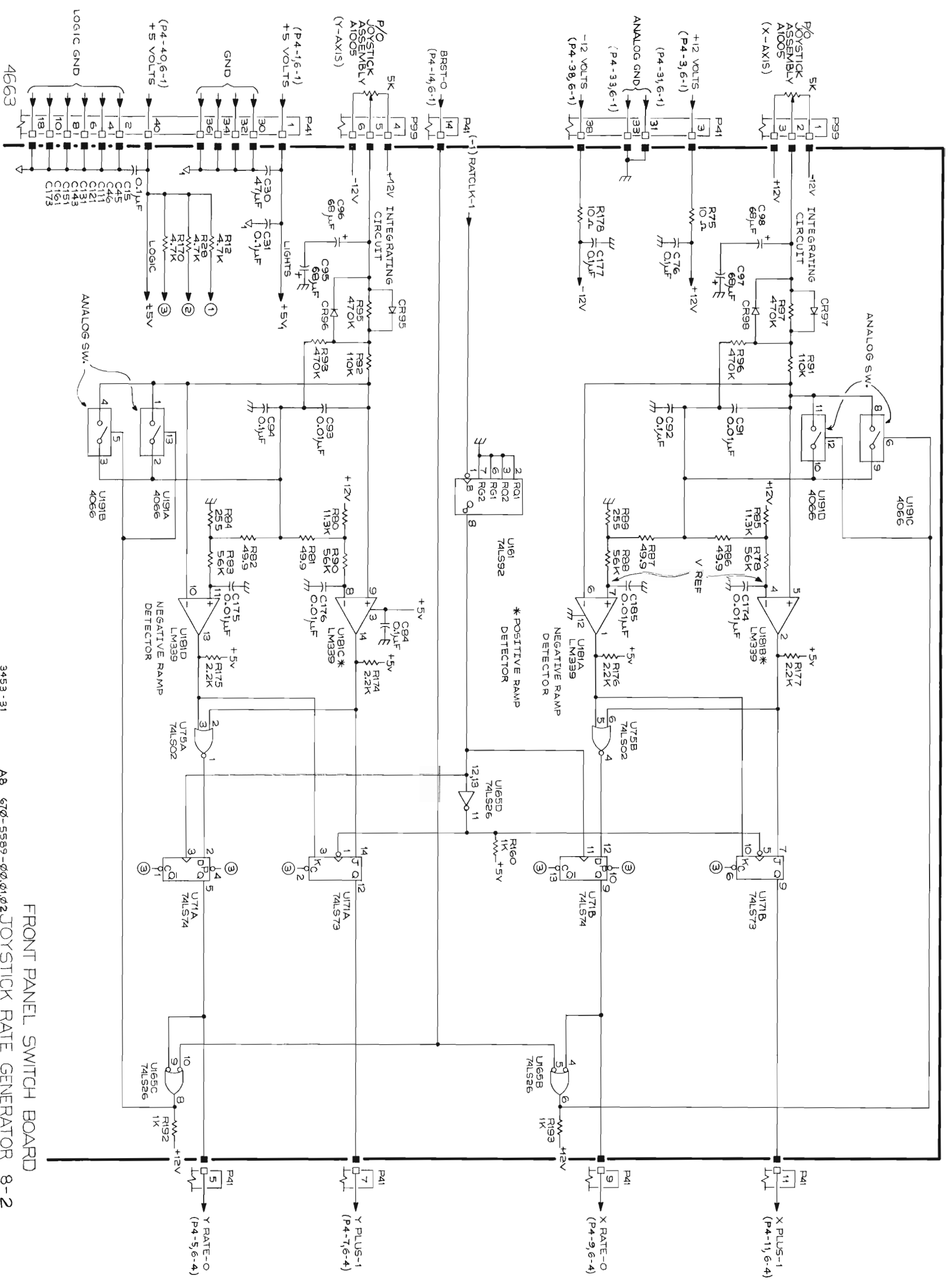
4663

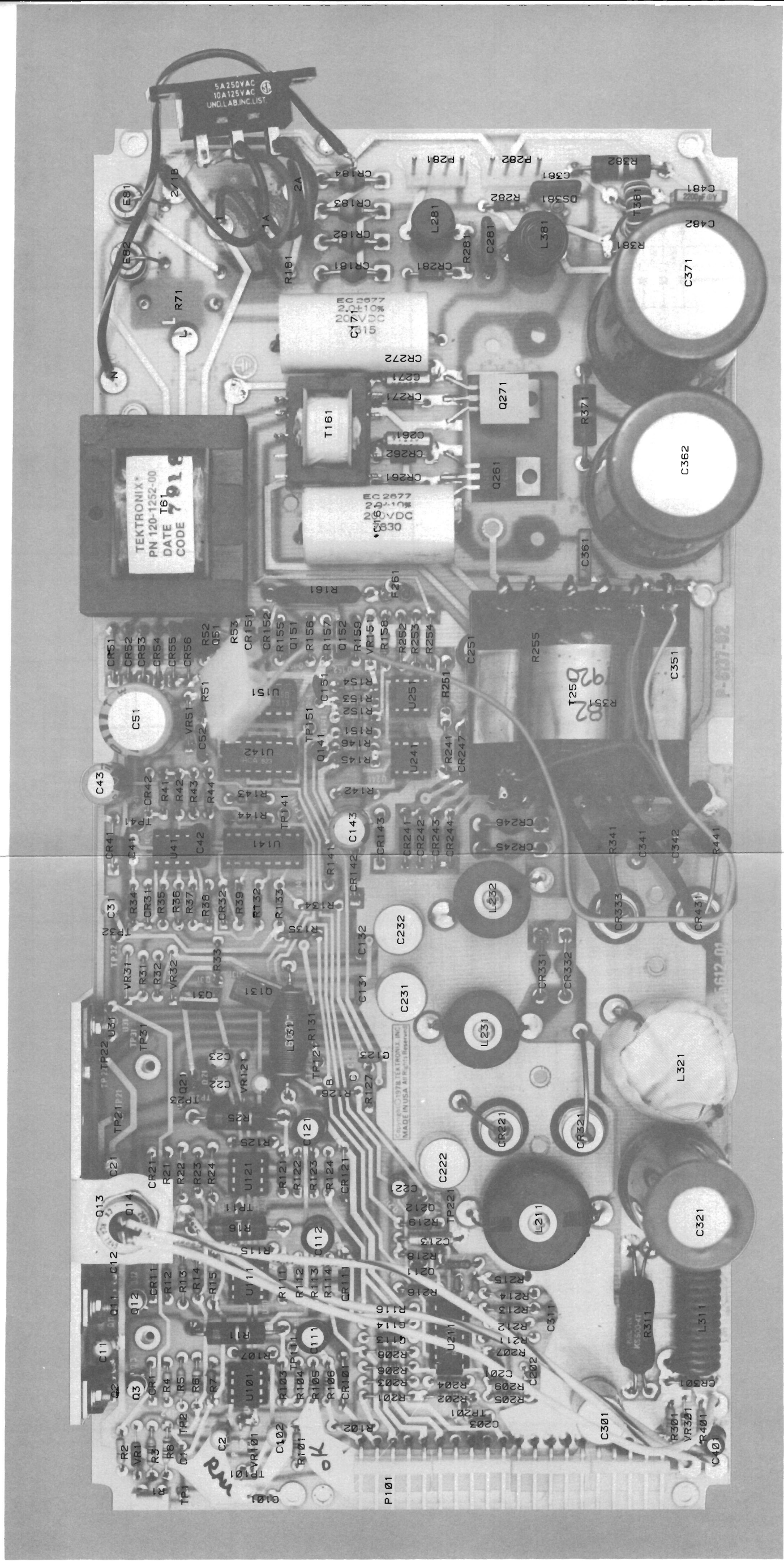
©3453-53

A8

FRONT PANEL SWITCH BOARD 8-1

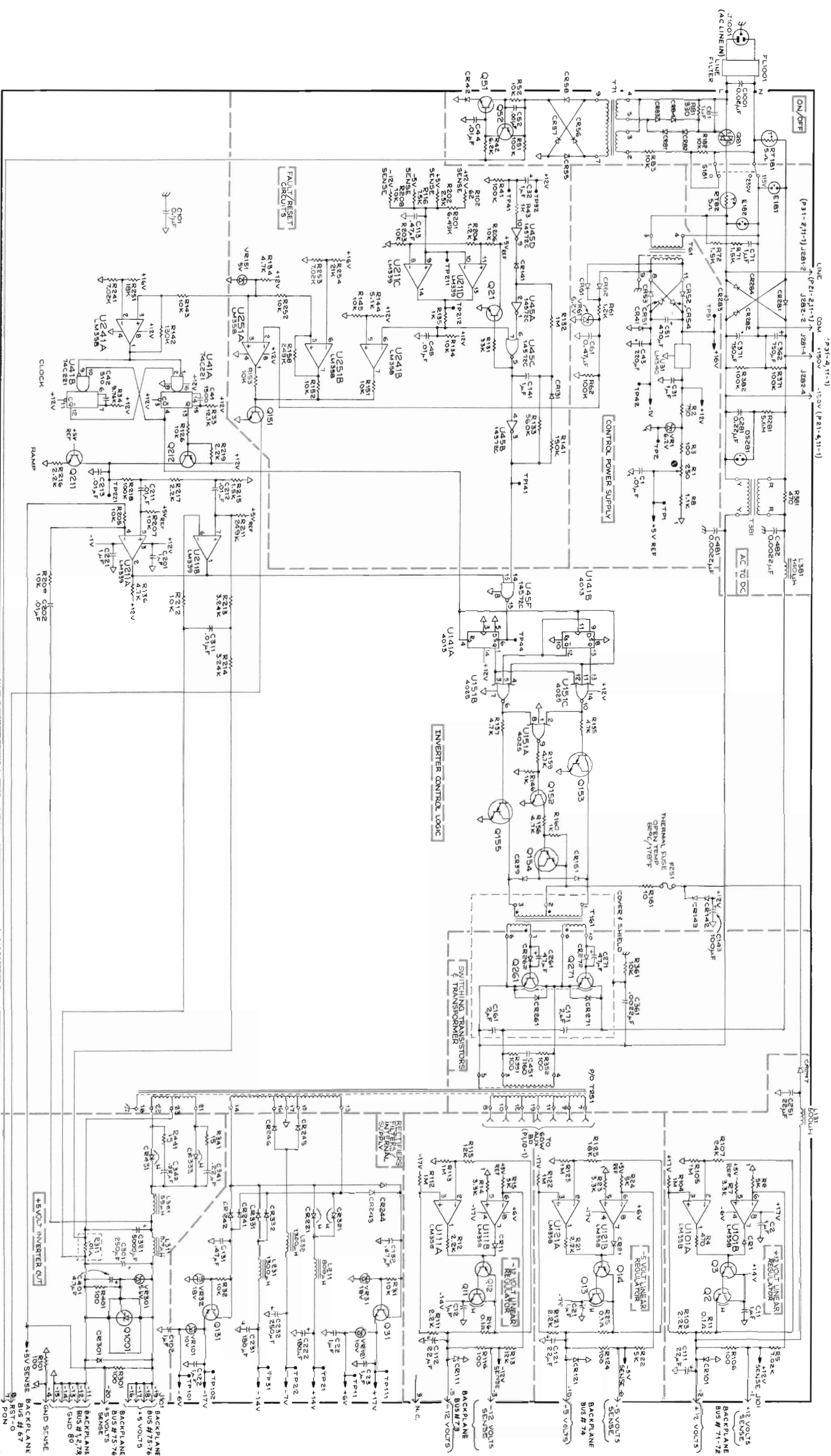
FRONT PANEL SWITCH BOARD 8-1 670-5589-00,01,02





POWER SUPPLY
COMPONENT LOCATIONS

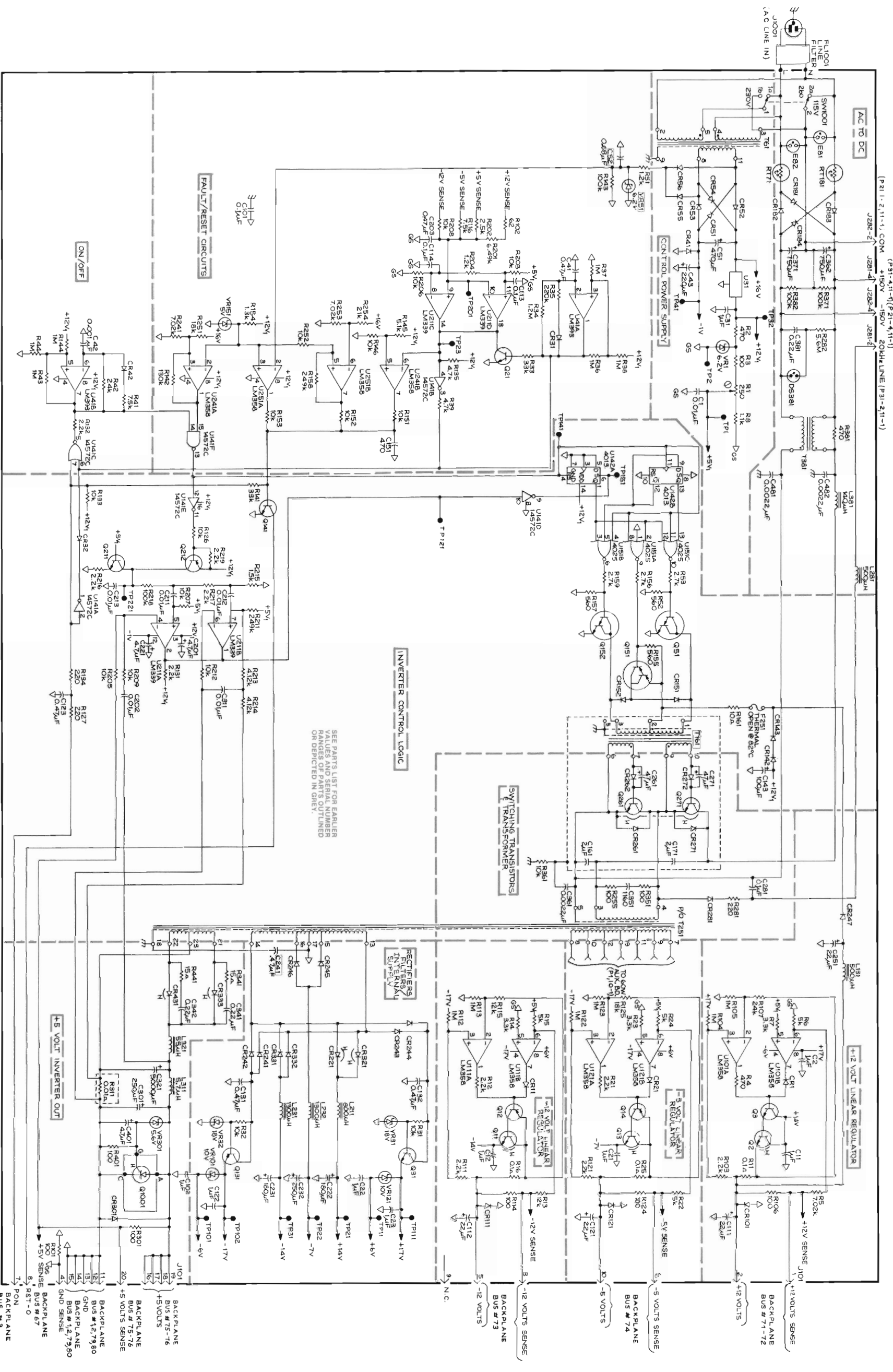
Power Supply (670-5612-01,02) Component Locations.



4663

3453 .93
REV. JUN 1961

670-8612-00 POWER SUPPLY 9-1
BACKPLANE BUS #3 (RIGHT SIDE)
BUS #67
BUS #74
BUS #75-76
BUS #77
GND SENSE

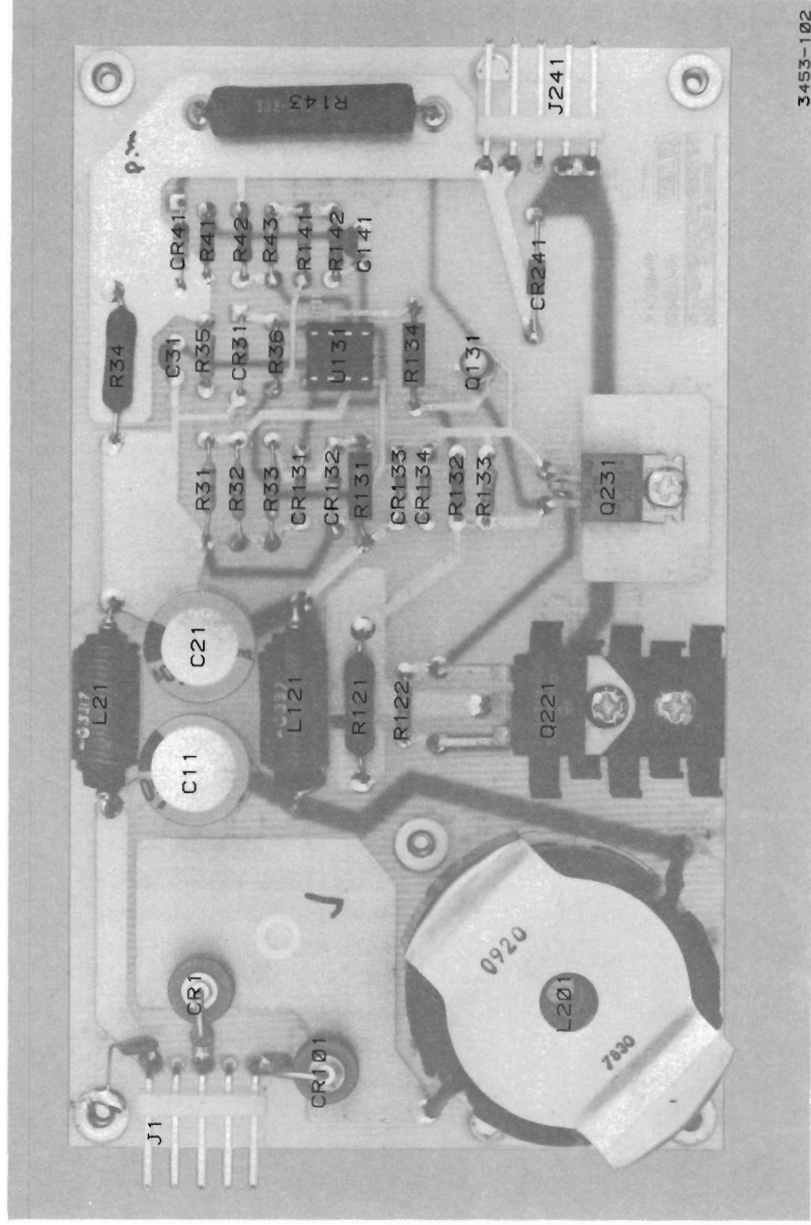


4663

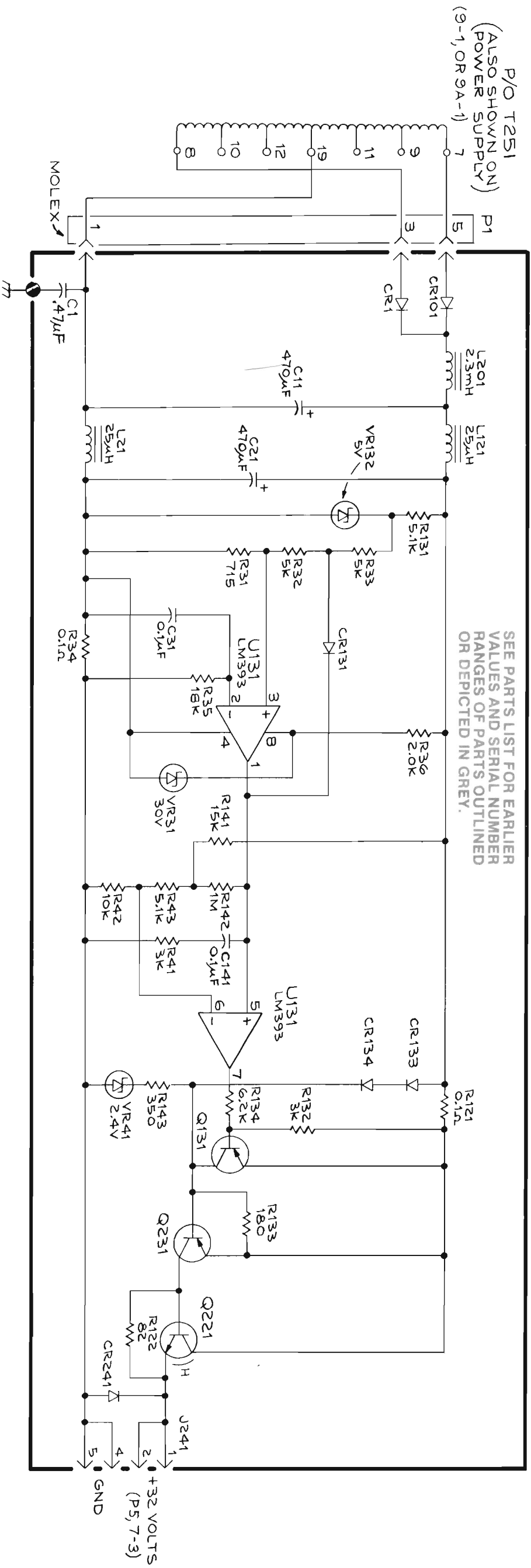
34531-32
REV. JUN 1981

A13A1 670-5612-01,02 POWER SUPPLY 9A-1

BACKPLANE
BUS #3
BACKPLANE
BUS #75-76
BACKPLANE
BUS #75-76
BACKPLANE
BUS #12,79,80
BACKPLANE
BUS #12,79,80
GND SENSE
BACKPLANE
BUS #67
BACKPLANE
BUS #67
RST-0
PONI



60 W Aux Board (670-5614-00) Component Locations.



SEE PARTS LIST FOR EARLIER
VALUES AND SERIAL NUMBER
RANGES OF PARTS OUTLINED
OR DEPICTED IN GREY.

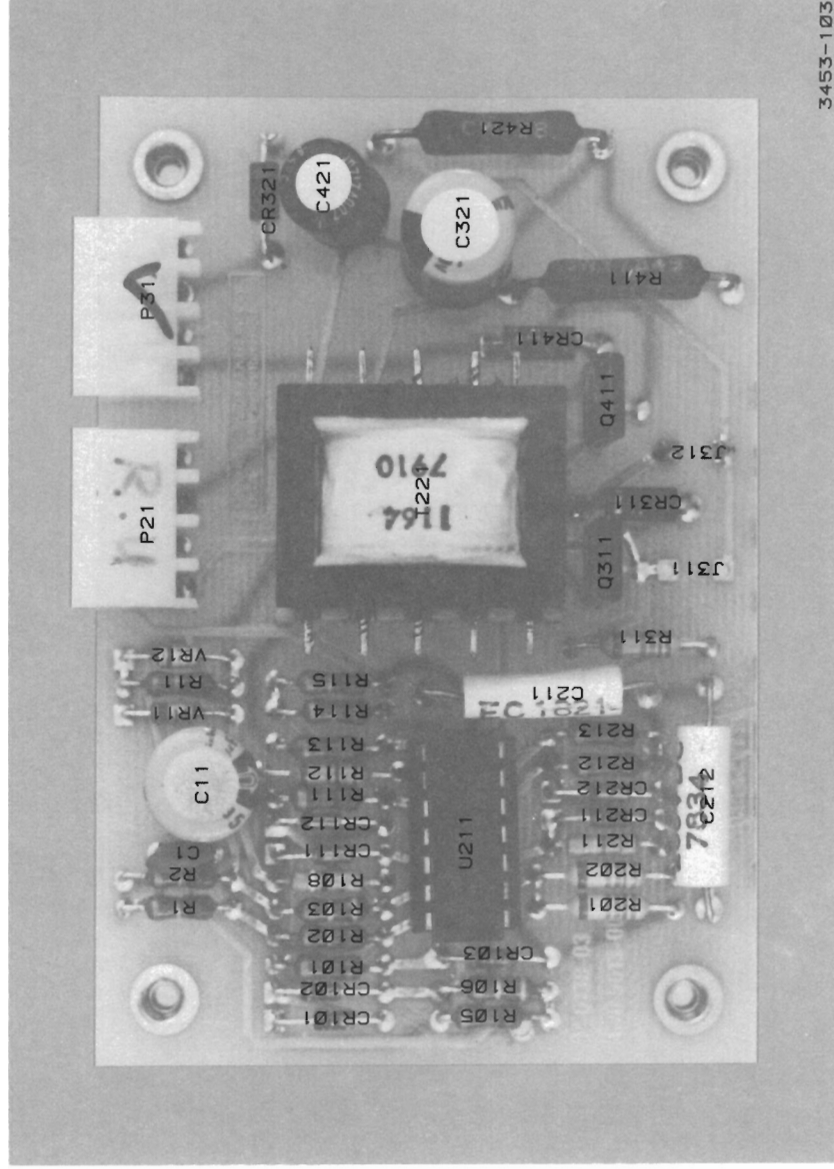
4663

@3453-34

A13A2

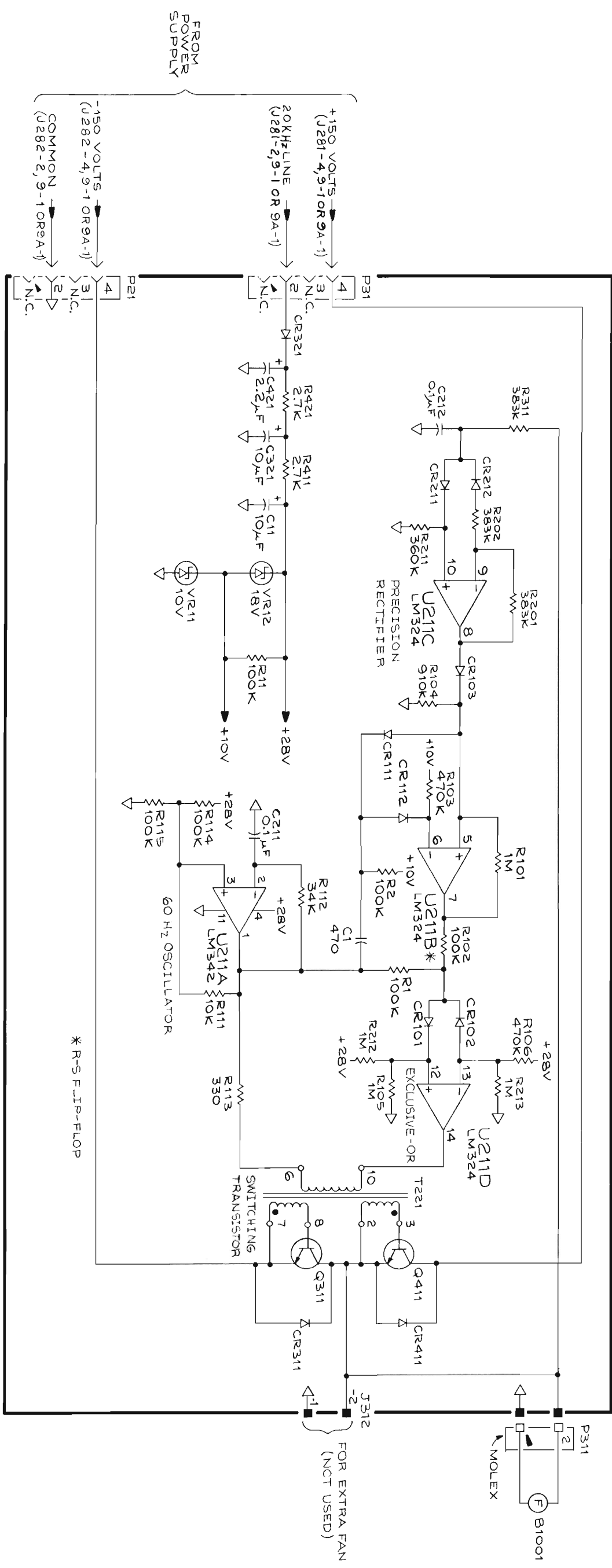
670-5614-00

60W AUXILIARY BOARD 10-1



Fan Regulator (670-5613-00) Component Locations.

3453-103



4663

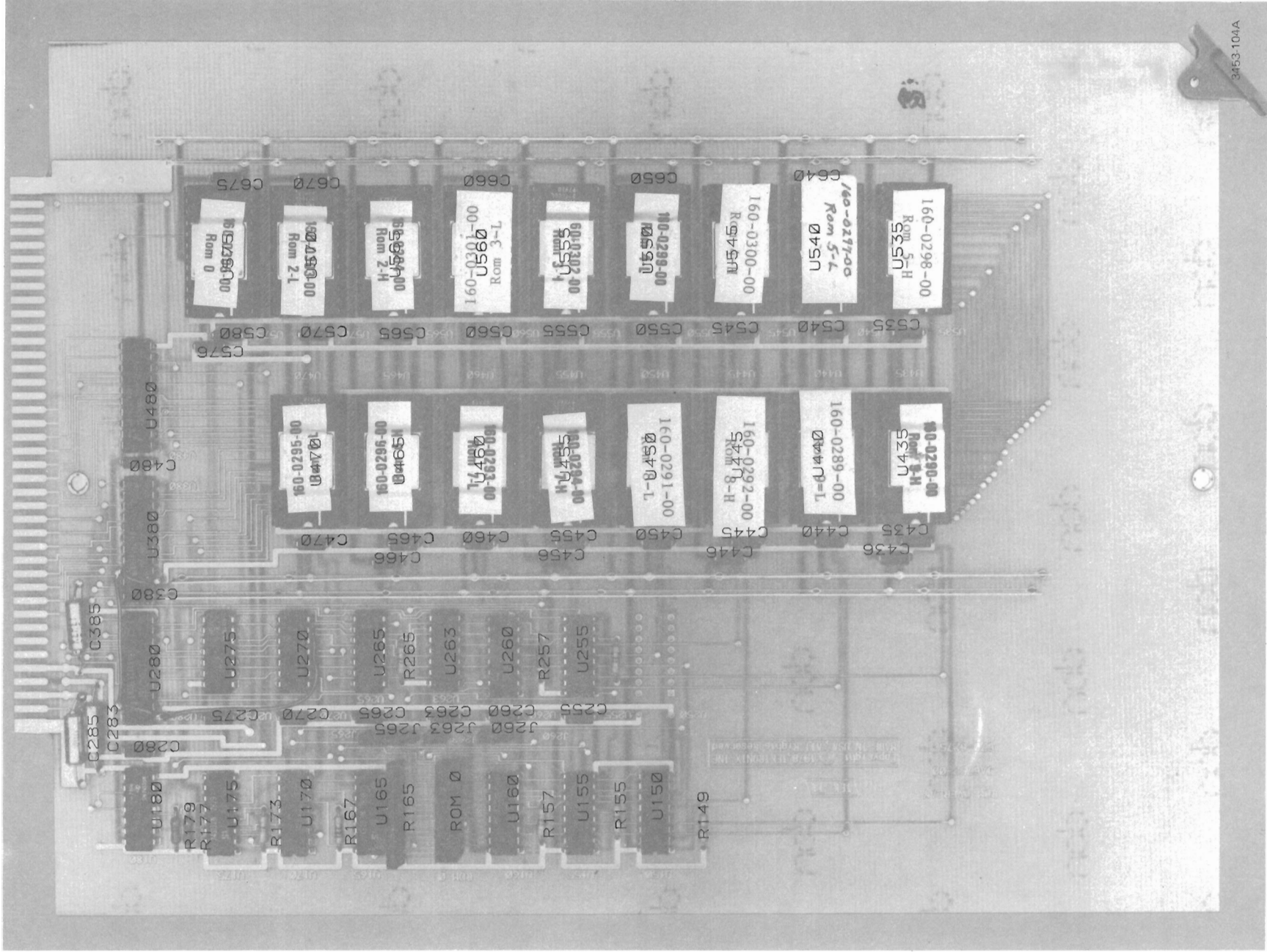
@ 3453-35

A13A3

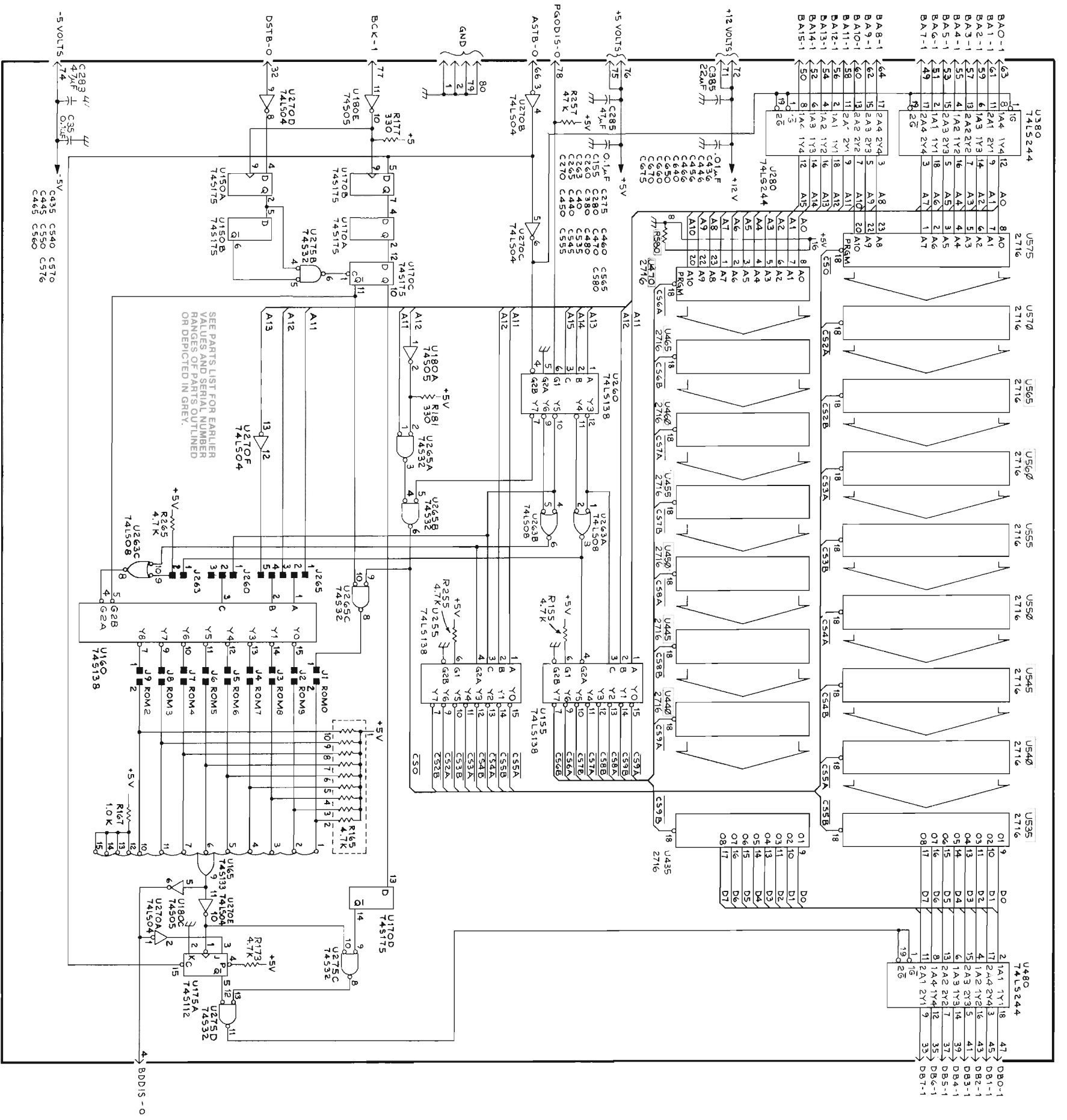
670-5613-00

FAN REGULATOR BOARD

11-1



ROM Overlay (670-6275-01,02,03,04,05) Component Locations.

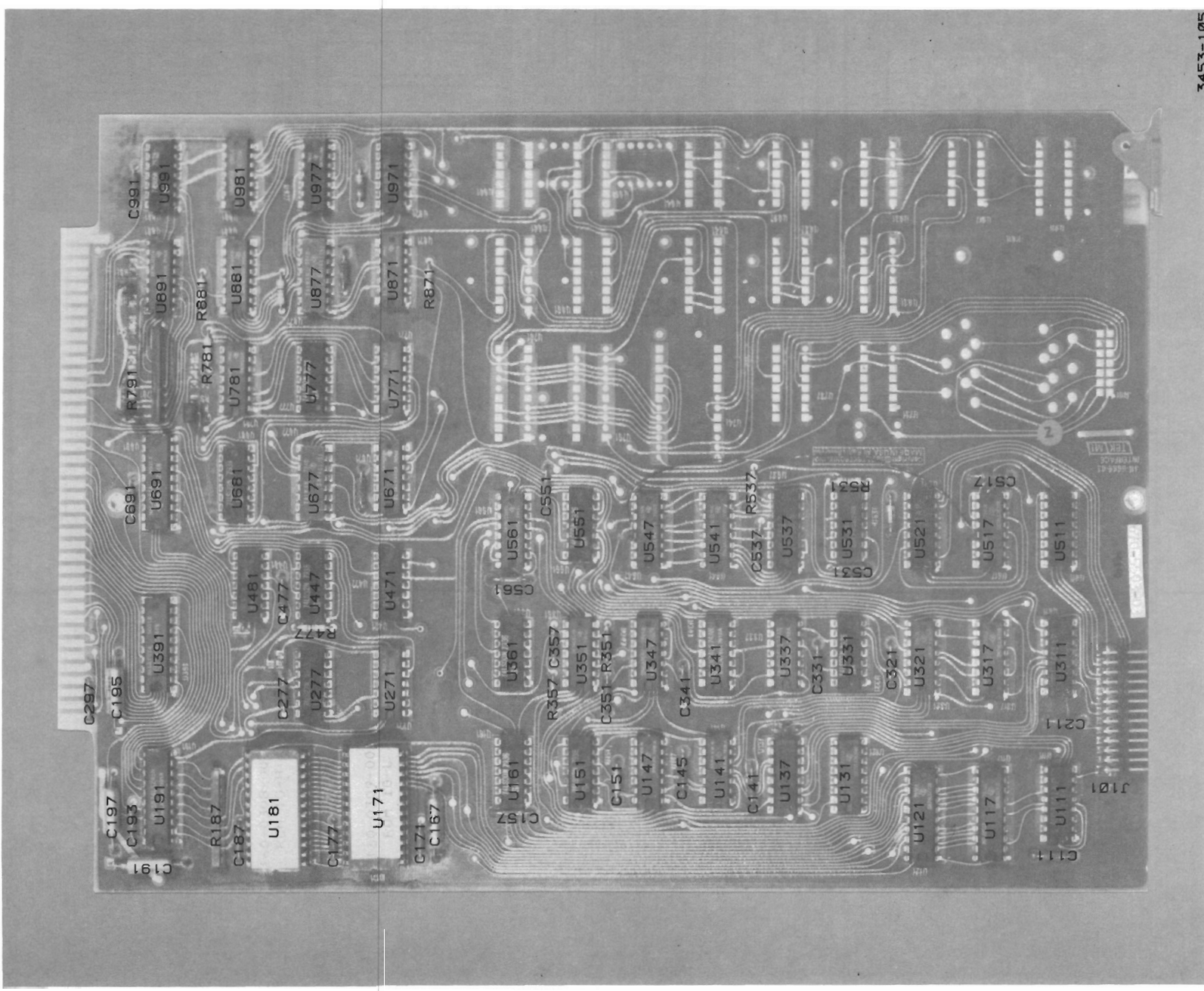


4663

REV, JUN 1981
3453-36

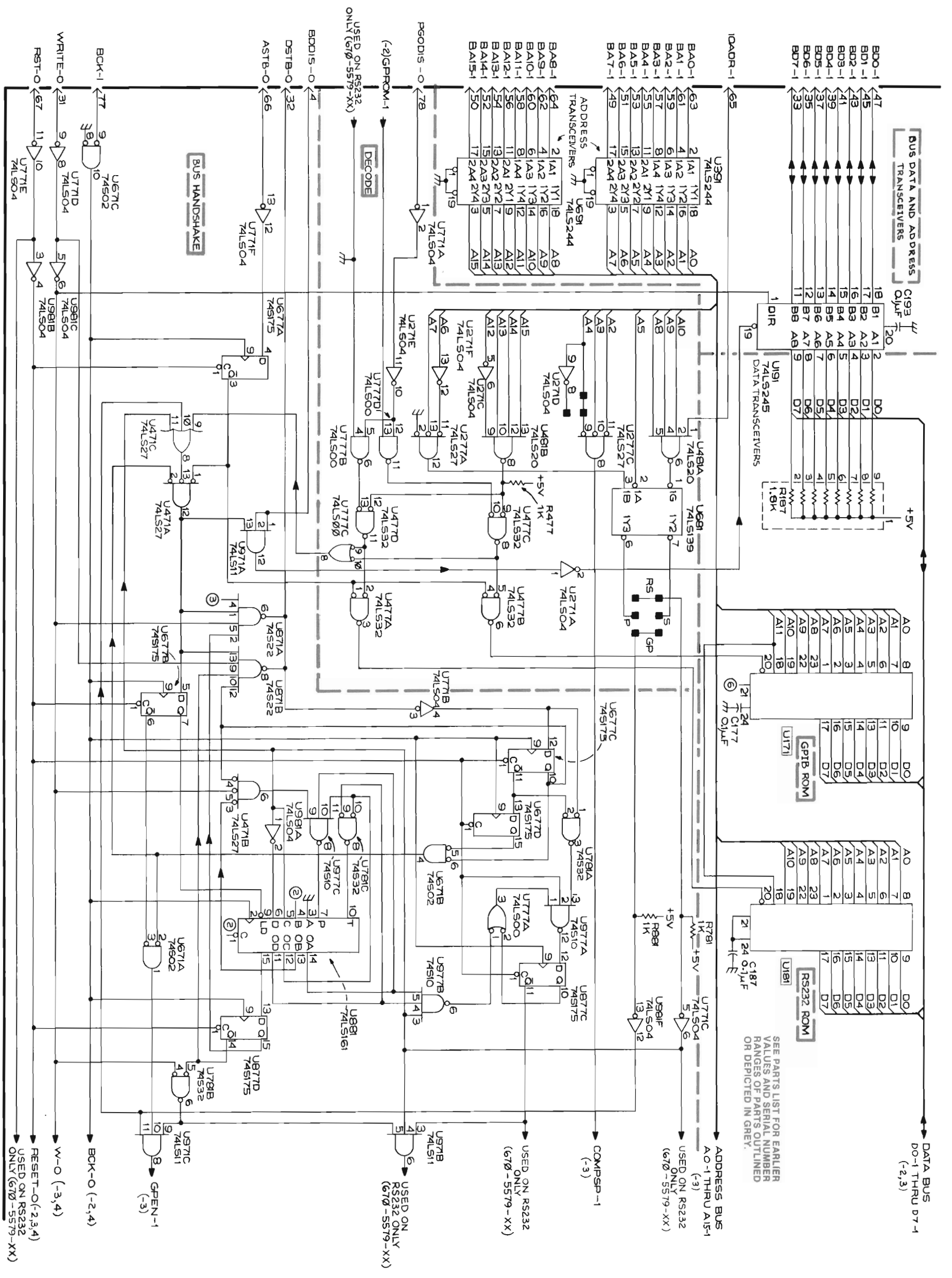
A14 670-6275-01,02,03,04,05 ROM OVERLAY BD. 12-1

GPIB INTERFACE
COMPONENT LOCATIONS

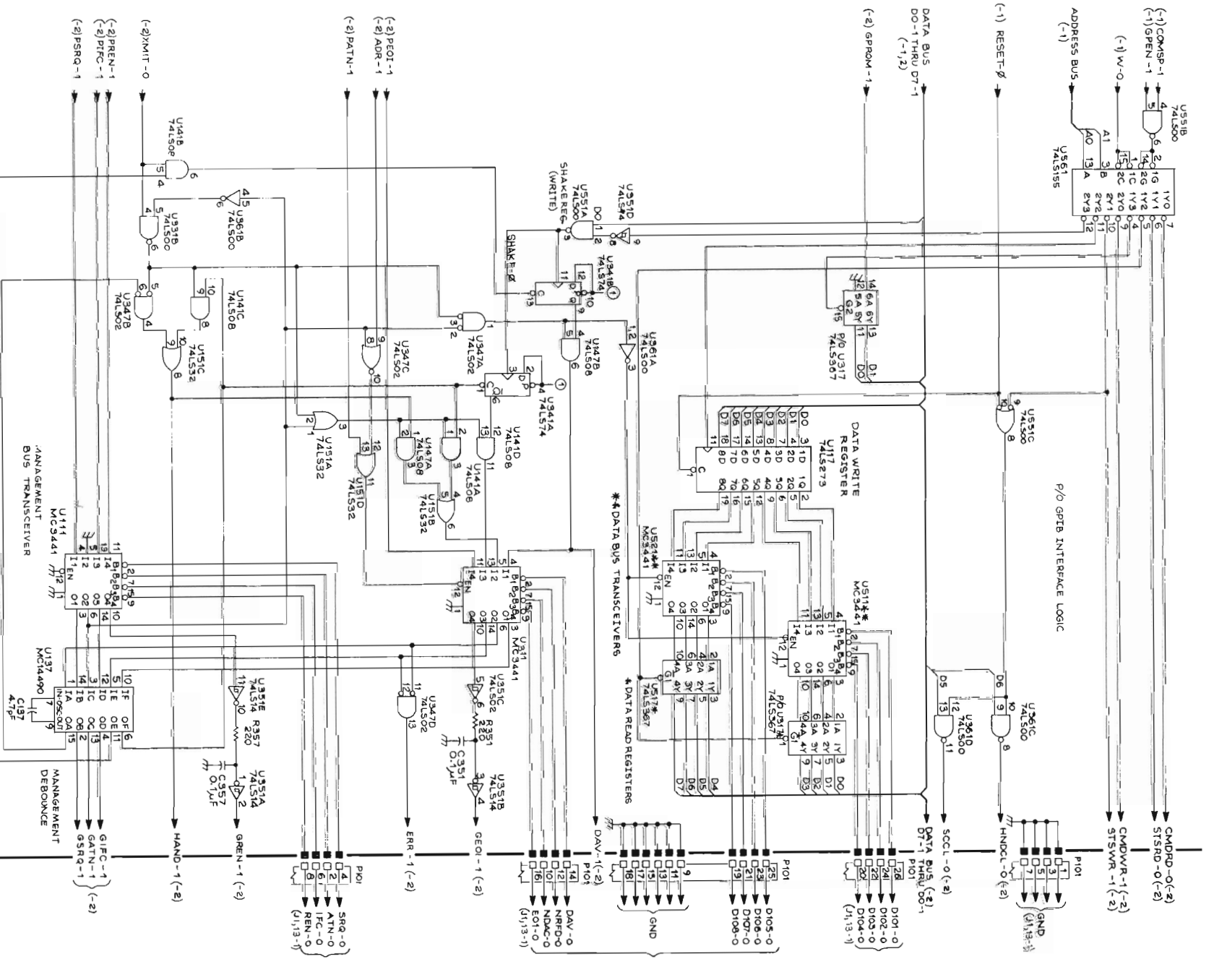
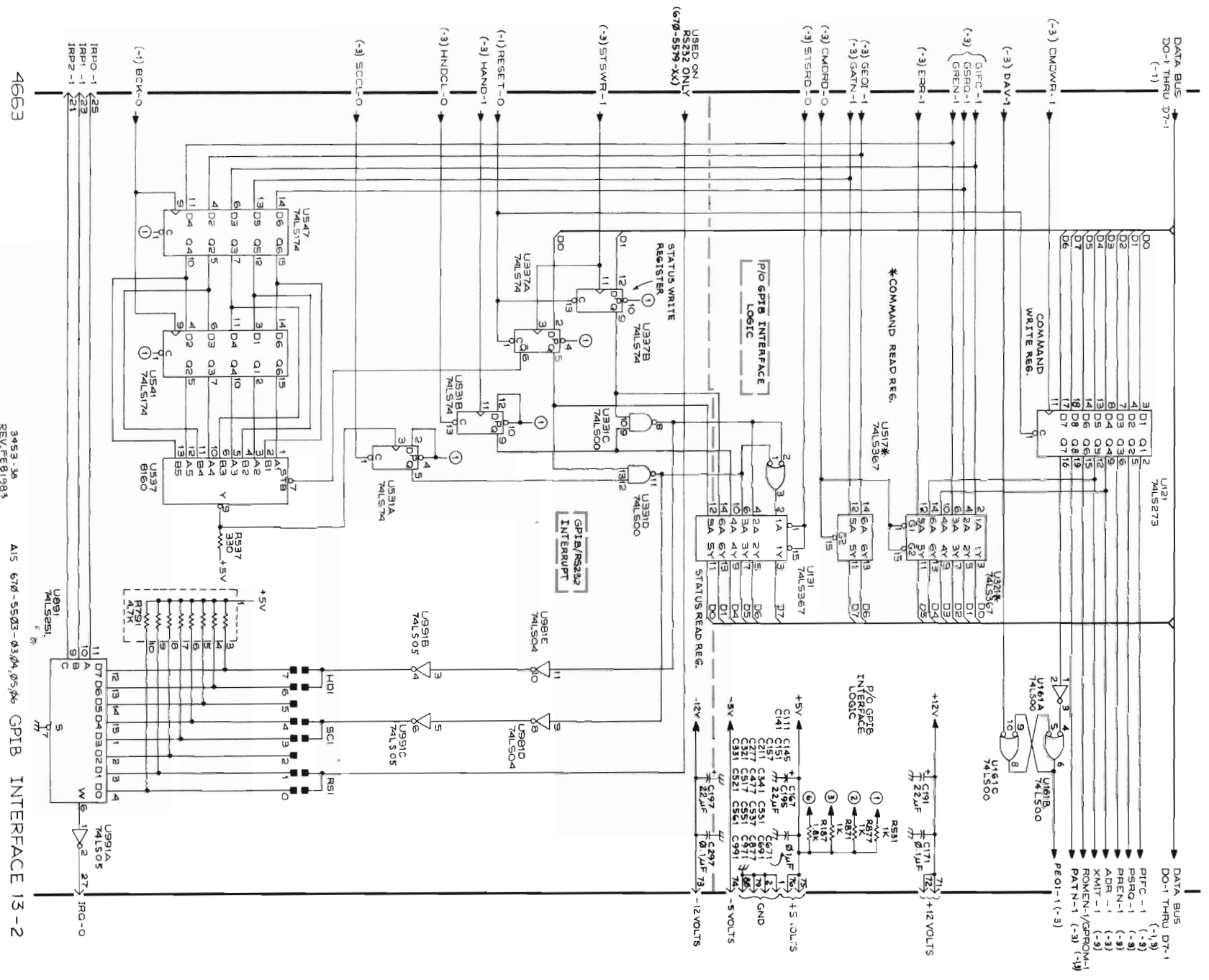


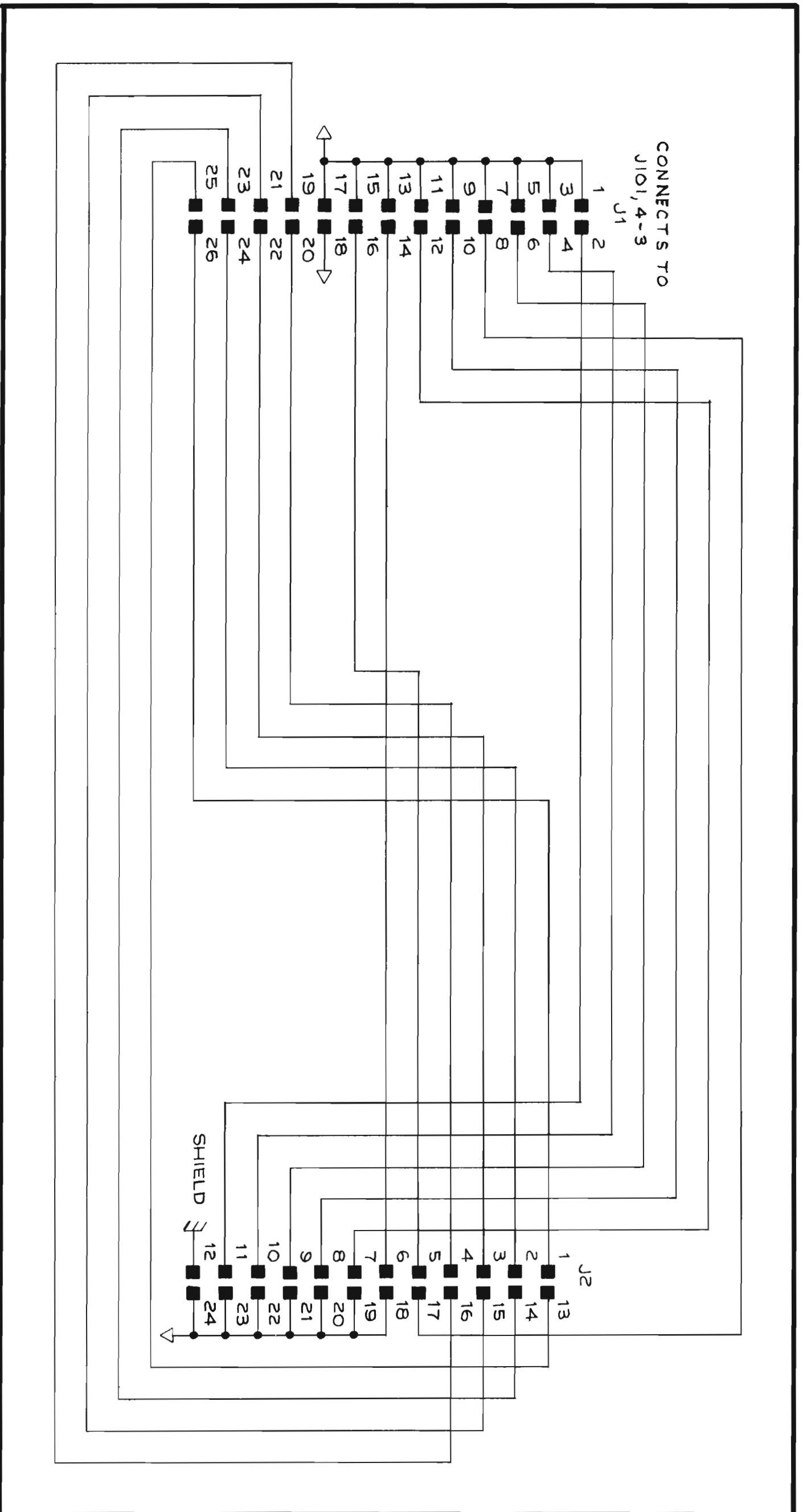
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GPIB Interface (670-5503-03,04,05,06) Component Locations.



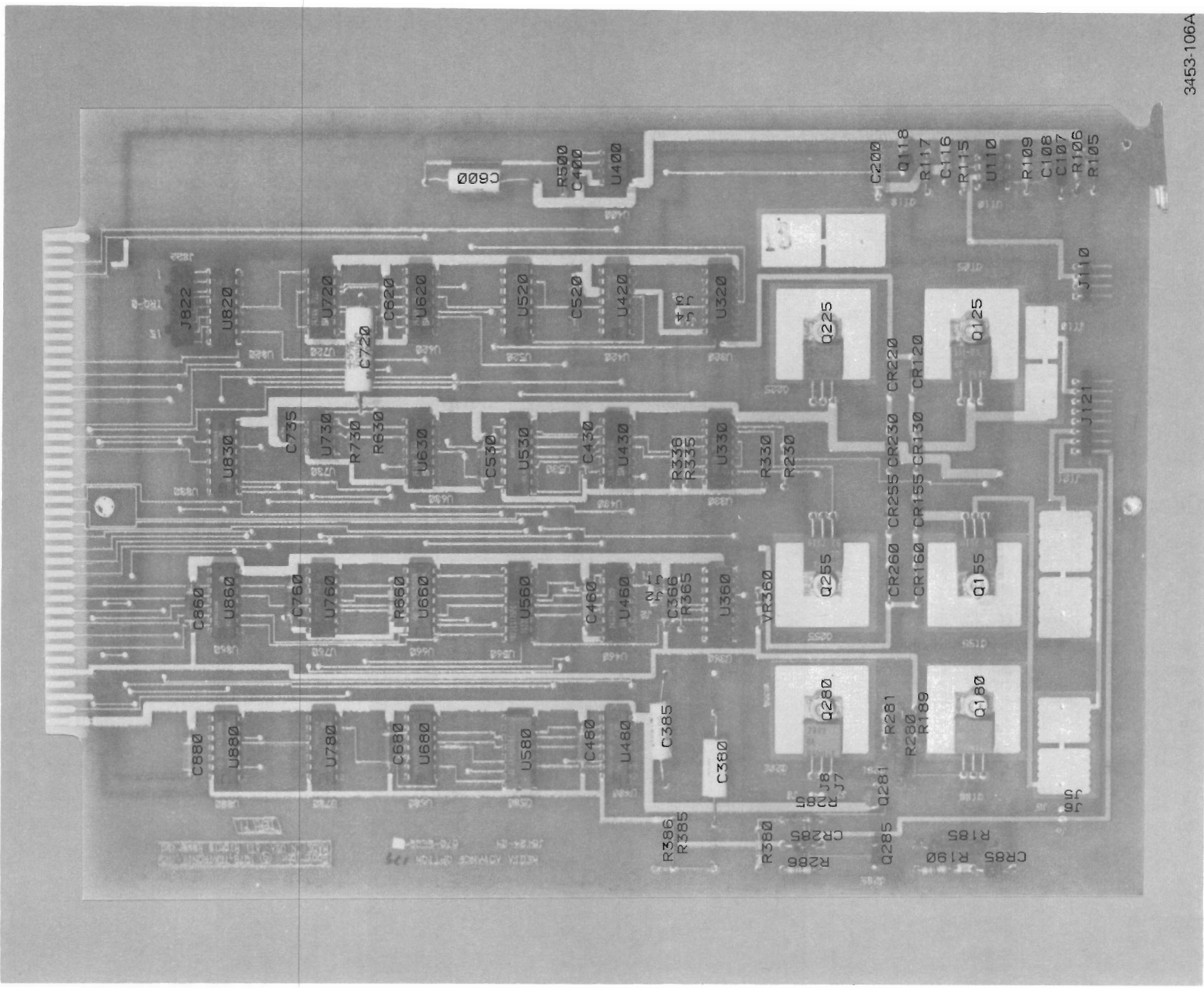
SEE PARTS LIST FOR EARLIER
VALUES AND SERIAL NUMBER
RANGES OF PARTS OUTLINED
OR DEPICTED IN GREY.





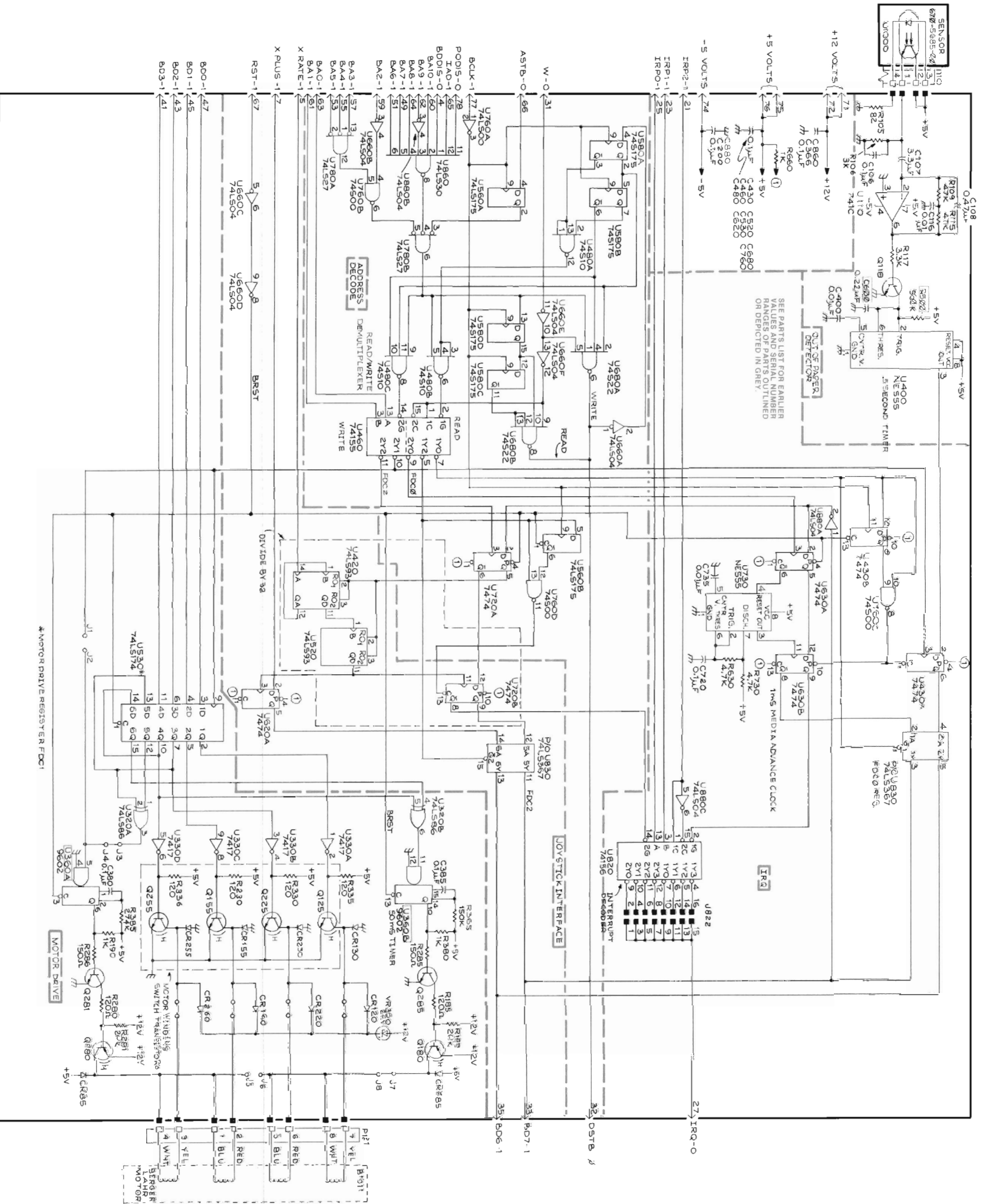
4663

@3453-40 A16 670-6135-00 GPIB ADAPTER 14-1



3453-106A

Media Advance (670-5599-01,02,03) Component Locations.



* MOTOR DRIVE REGISTRY ER FCC1

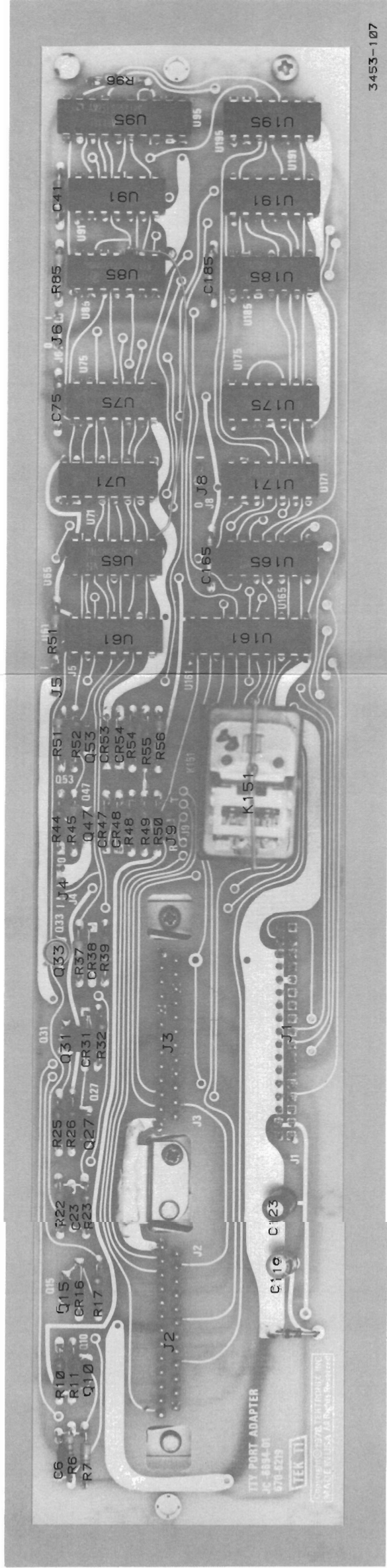
4663

3453-41
REV. JUN 1981

A17A1
A17A2

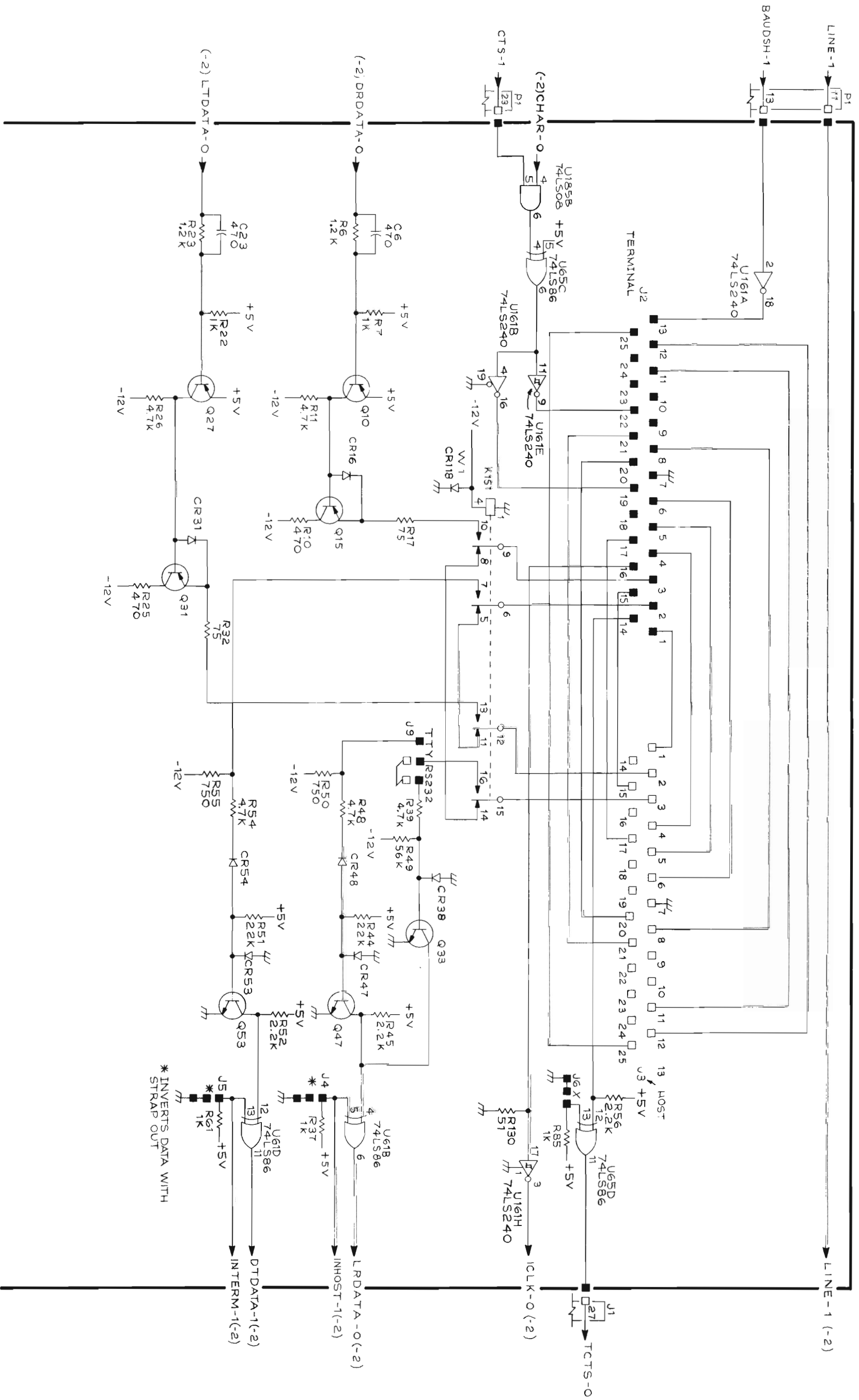
670-5599-01/02.03
670-5665-00

MEDIA ADVANCE 15-1
SENSOR



3453-107

TTY Port Adapter (670-6219-00) Component Locations.



4663 OPT.2

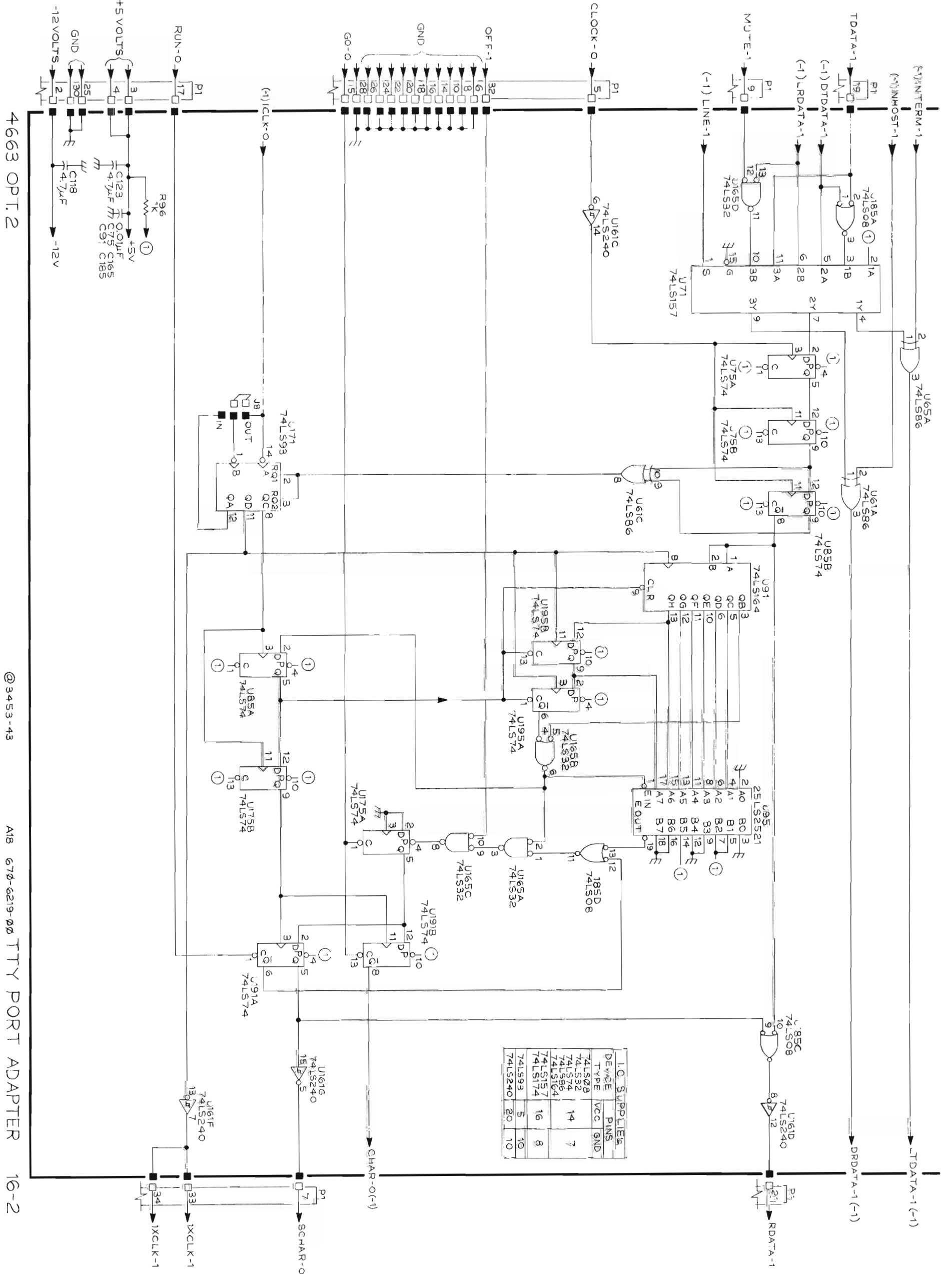
@3453-42

A18

670-6219-00

TTY PORT ADAPTER

16-1

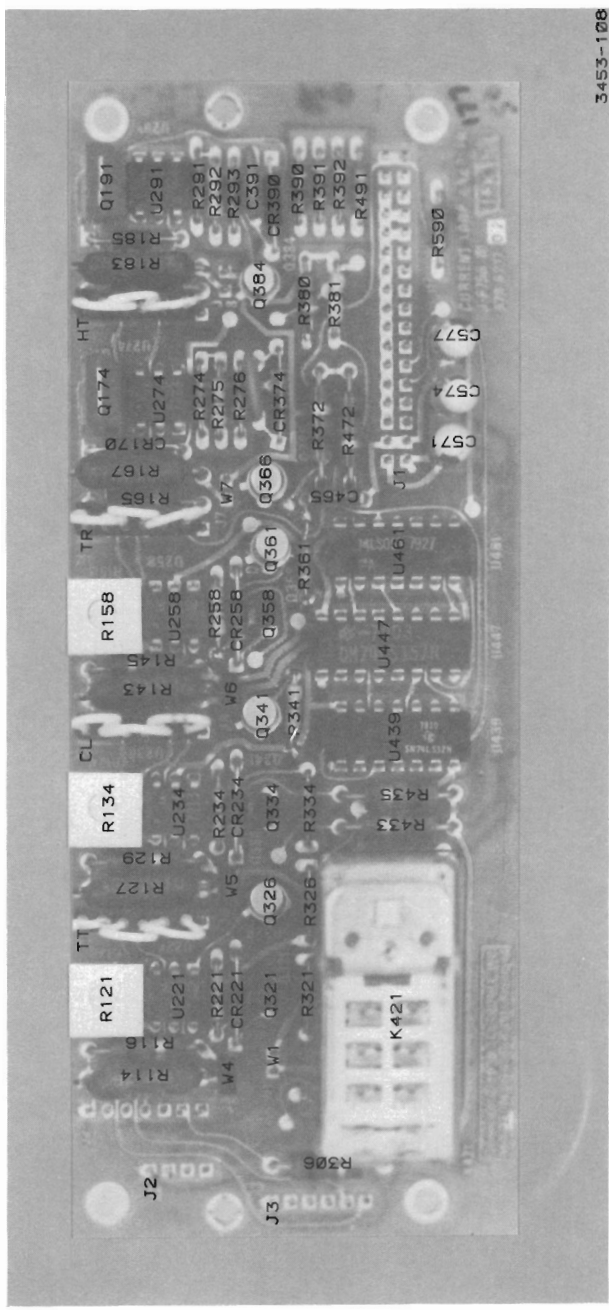


I/O SUPPLIES		
DEVICE	VCC	PINS
74LS08	5	10
74LS240	20	10
74LS09	14	7
74LS32	14	7
74LS74	14	7
74LS56	14	7
74LS164	14	7
74LS157	16	8
74LS93	5	10
74LS240	20	10

4663 OPT.2

© 3453-43

A18 670-6219-00 TTY PORT ADAPTER 16-2



Section 7

REPLACEABLE MECHANICAL PARTS

PARTS ORDERING INFORMATION

Replacement parts are available from or through your local Tektronix, Inc. Field Office or representative.

Changes to Tektronix instruments are sometimes made to accommodate improved components as they become available, and to give you the benefit of the latest circuit improvements developed in our engineering department. It is therefore important, when ordering parts, to include the following information in your order: Part number, instrument type or number, serial number, and modification number if applicable.

If a part you have ordered has been replaced with a new or improved part, your local Tektronix, Inc. Field Office or representative will contact you concerning any change in part number.

Change information, if any, is located at the rear of this manual.

SPECIAL NOTES AND SYMBOLS

X000 Part first added at this serial number
00X Part removed after this serial number

FIGURE AND INDEX NUMBERS

Items in this section are referenced by figure and index numbers to the illustrations.

INDENTATION SYSTEM

This mechanical parts list is indented to indicate item relationships. Following is an example of the indentation system used in the description column.

```

1 2 3 4 5           Name & Description
Assembly and/or Component
Attaching parts for Assembly and/or Component
    --- * ---
Detail Part of Assembly and/or Component
Attaching parts for Detail Part
    --- * ---
Parts of Detail Part
Attaching parts for Parts of Detail Part
    --- * ---
    
```

Attaching Parts always appear in the same indentation as the item it mounts, while the detail parts are indented to the right. Indented items are part of, and included with, the next higher indentation. The separation symbol --- * --- indicates the end of attaching parts.

Attaching parts must be purchased separately, unless otherwise specified.

ITEM NAME

In the Parts List, an Item Name is separated from the description by a colon (:). Because of space limitations, an Item Name may sometimes appear as incomplete. For further Item Name identification, the U.S. Federal Cataloging Handbook H6-1 can be utilized where possible.

ABBREVIATIONS

#	INCH NUMBER SIZE	ELCTRN	ELECTRON	IN	INCH	SE	SINGLE END
ACTR	ACTUATOR	ELEC	ELECTRICAL	INCAND	INCANDESCENT	SECT	SECTION
ADPTR	ADAPTER	ELCTLT	ELECTROLYTIC	INSUL	INSULATOR	SEMICOND	SEMICONDUCTOR
ALIGN	ALIGNMENT	ELEM	ELEMENT	INTL	INTERNAL	SHLD	SHIELD
AL	ALUMINUM	EPL	ELECTRICAL PARTS LIST	LPHLDR	LAMPHOLDER	SHLDR	SHOULDERED
ASSEM	ASSEMBLED	EQPT	EQUIPMENT	MACH	MACHINE	SKT	SOCKET
ASSY	ASSEMBLY	EXT	EXTERNAL	MECH	MECHANICAL	SL	SLIDE
ATTEN	ATTENUATOR	FIL	FILLISTER HEAD	MTG	MOUNTING	SLFLKG	SELF-LOCKING
AWG	AMERICAN WIRE GAGE	FLEX	FLEXIBLE	NIP	NIPPLE	SLVG	SLEEVING
BD	BOARD	FLH	FLAT HEAD	NON WIRE	NOT WIRE WOUND	SPR	SPRING
BRKT	BRACKET	FLTR	FILTER	OBD	ORDER BY DESCRIPTION	SQ	SQUARE
BRS	BRASS	FR	FRAME or FRONT	OD	OUTSIDE DIAMETER	SST	STAINLESS STEEL
BRZ	BRONZE	FSTNR	FASTENER	OVH	OVAL HEAD	STL	STEEL
BSHG	BUSHING	FT	FOOT	PH BRZ	PHOSPHOR BRONZE	SW	SWITCH
CAB	CABINET	FXD	FIXED	PL	PLAIN or PLATE	T	TUBE
CAP	CAPACITOR	GSKT	GASKET	PLSTC	PLASTIC	TERM	TERMINAL
CER	CERAMIC	HDL	HANDLE	PN	PART NUMBER	THD	THREAD
CHAS	CHASSIS	HEX	HEXAGON	PNH	PAN HEAD	THK	THICK
CKT	CIRCUIT	HEX HD	HEXAGONAL HEAD	PWR	POWER	TNSN	TENSION
COMP	COMPOSITION	HEX SOC	HEXAGONAL SOCKET	RCPT	RECEPTACLE	TPG	TAPPING
CONN	CONNECTOR	HLCPS	HELICAL COMPRESSION	RES	RESISTOR	TRH	TRUSS HEAD
COV	COVER	HLEXT	HELICAL EXTENSION	RGD	RIGID	V	VOLTAGE
COPLG	COUPLING	HV	HIGH VOLTAGE	RLF	RELIEF	VAR	VARIABLE
CRT	CATHODE RAY TUBE	IC	INTEGRATED CIRCUIT	RTNR	RETAINER	W/	WITH
DEG	DEGREE	ID	INSIDE DIAMETER	SCH	SOCKET HEAD	WSHR	WASHER
DWR	DRAWER	IDENT	IDENTIFICATION	SCOPE	OSCILLOSCOPE	XFMR	TRANSFORMER
		IMPLR	IMPELLER	SCR	SCREW	XSTR	TRANSISTOR

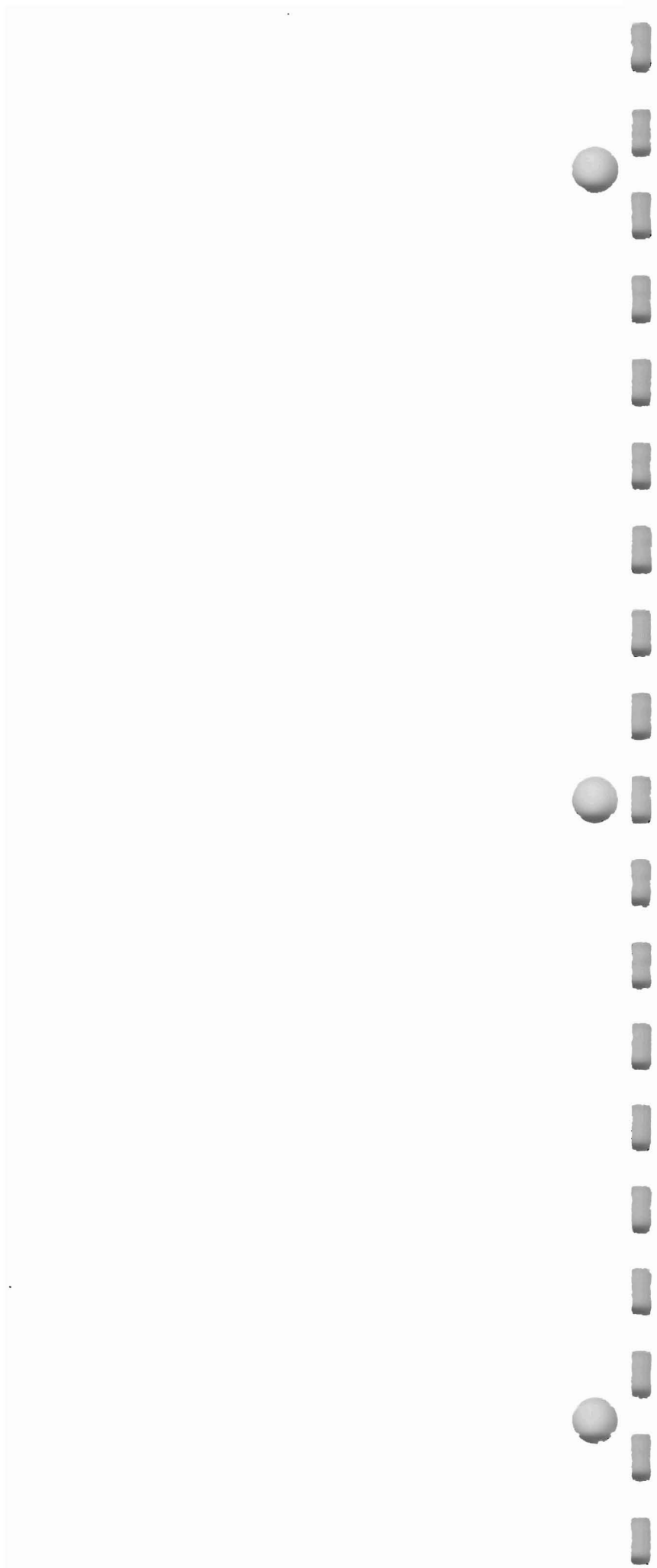
REPLACEABLE MECHANICAL PARTS

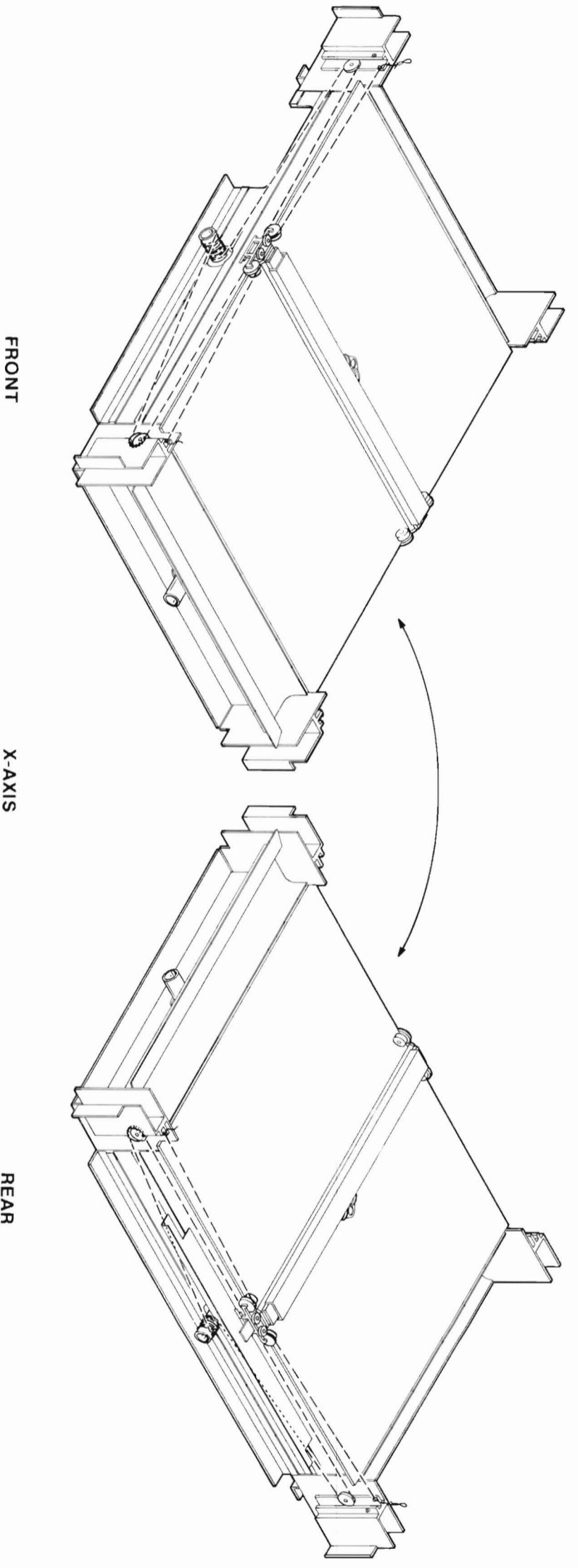
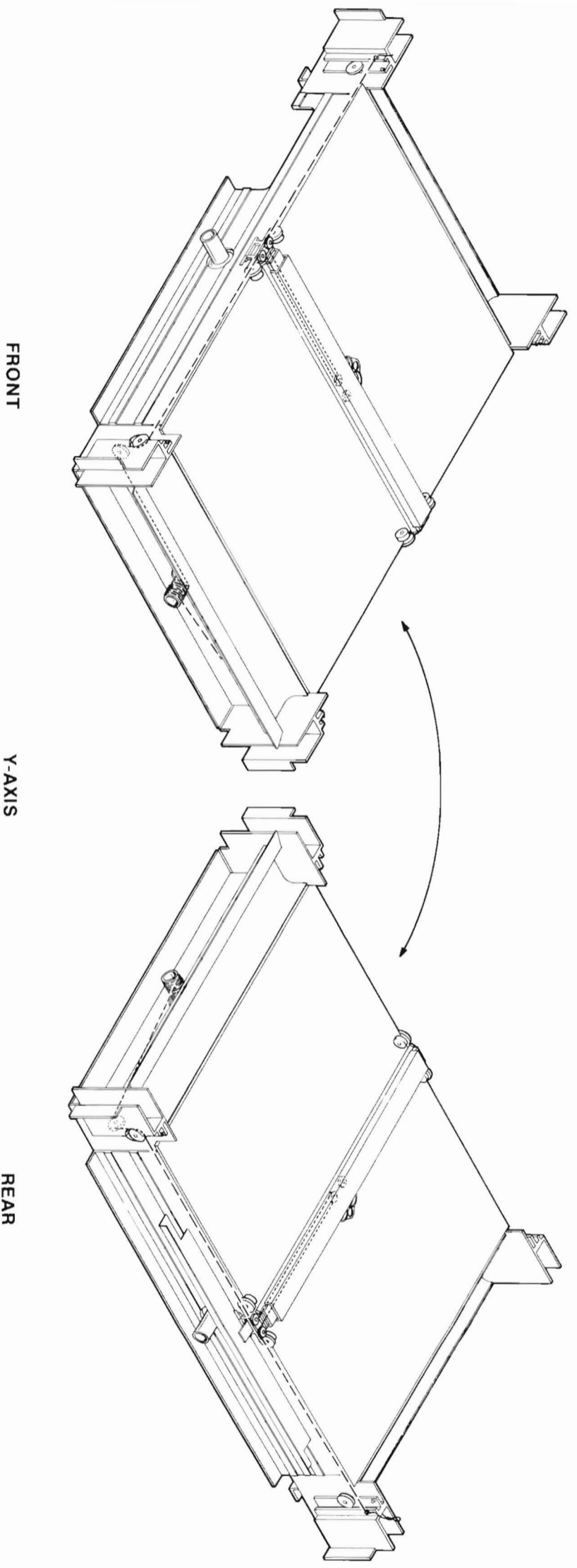
CROSS INDEX—MFR. CODE NUMBER TO MANUFACTURER

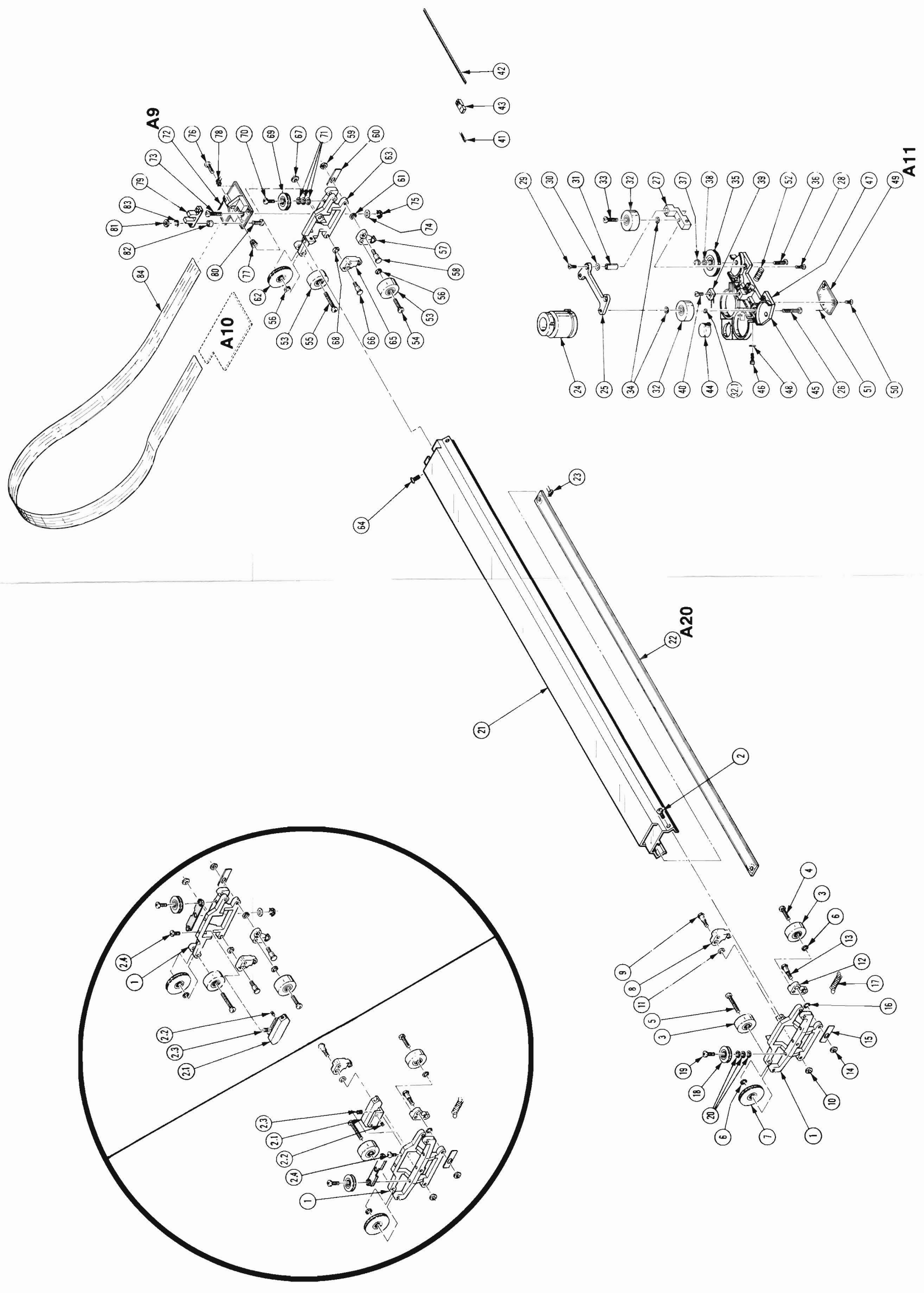
Mfr. Code	Manufacturer	Address	City, State, Zip
000BK	STAUFFER SUPPLY	105 SE TAYLOR	PORTLAND, OR 97214
000BL	CAMCAR	533 PENGUIN CT, SE	OLYMPIA, WA 98503
000CW	STOCK DRIVE PRODUCTS	55 S DENTON AVENUE	NEW HYDE PARK, NY 11040
000CY	NORTHWEST FASTENER SALES, INC.	7923 SW CIRRUS DRIVE	BEAVERTON, OR 97005
000EO	ZEPHER ELECTRONIC SALES CORP.	647 INDUSTRY DRIVE	SEATTLE, WA 98188
000EP	AROW FASTENERS INC.	2112 AMERICAN AVENUE	HAYWARD, CA 94545
000FW	WESTERN SINTERING CO INC.	2620 STEVENS DRIVE	RICHLAND, WA 99352
000HA	BAHRS DIE & STAMPING CO., INC.	4375 ROSS PLAIN RD.	CINCINNATI, OH 45236
000HH	SHANNON & CO.	605 SW 10TH	PORTLAND, OR 97205
000HI	CABLE MFG & ASS CO.	19 GARDNER RD.	FAIRFIELD, NJ 07006
00779	AMP, INC.	P O BOX 3608	HARRISBURG, PA 17105
03508	GENERAL ELECTRIC COMPANY, SEMI-CONDUCTOR PRODUCTS DEPARTMENT	ELECTRONICS PARK	SYRACUSE, NY 13201
04963	MINNESOTA MINING AND MFG. CO., ADHESIVES COATINGS AND SEALERS DIVISION	3M CENTER	ST. PAUL, MN 55101
06383	PANDUIT CORPORATION	17301 RIDGELAND	TINLEY PARK, IL 60477
06776	ROBINSON NUGENT INC.	800 E. 8TH ST., BOX 470	NEW ALBANY, IN 47150
07111	PNEUMO DYNAMICS CORPORATION	4800 PRUDENTIAL TOWER	BOSTON, MA 02199
07707	USM CORP., USM FASTENER DIV.	510 RIVER RD.	SHELTON, CT 06484
08261	SPECTRA-STRIP CORP.	7100 LAMPSON AVE.	GARDEN GROVE, CA 92642
08530	RELIANCE MICA CORP.	342-39TH ST.	BROOKLYN, NY 11232
12327	FREEWAY CORPORATION	9301 ALLEN DRIVE	CLEVELAND, OH 44125
12360	ALBANY PRODUCTS CO., DIV. OF PNEUMO DYNAMICS CORPORATION	145 WOODWARD AVENUE	SOUTH NORWALK, CT 06586
14438	USM CORP., NYLOK FASTENER DIV.	3730 W. MORSE	LINCOLNWOOD, IL 60645
14917	GAF CORP., INDUSTRIAL FABRICATION DEPT., INDUSTRIAL PRODUCTS DIVISION	GLENVILLE STATION P. O. BOX 1331	GLENVILLE, CT 06830 RICHMOND, IN 47374
16428	BELDEN CORP.	CRESTWOOD ROAD	MOUNTAINTOP, PA 18707
18722	RCA CORP., SOLID STATE DIVISION	YOUK EXPRESSWAY	NEW CUMBERLAND, PA 17070
22526	BERG ELECTRONICS, INC.	16150 STAGG STREET	VAN NUYS, CA 91409
22599	ESNA, DIV. OF AMERACE CORPORATION	2040 15TH AVENUE WEST	SEATTLE, WA 98119
22670	G.M. NAMEPLATE, INC.	26181 AVENIDA AEROPUORTO	
24796	AMF, INC., POTTER AND BRUMFIELD DIV.	P O BOX 116 2620 ENDRESS PLACE	SAN JUAN CAPISTRANO, CA 9267 GREENWOOD, IN 46142
24931	SPECIALITY CONNECTOR CO., INC.		
26365	GRIES REPRODUCER CO., DIV. OF COATS AND CLARK, INC.	125 BEECHWOOD AVE.	NEW ROCHELLE, NY 10802
27264	MOLEX PRODUCTS CO.	5224 KATRINE AVE.	DOWNERS GROVE, IL 60515
32674	GRAPHIC CONTROLS CORPORATION, TECHNICAL PRODUCTS AND INSTRUMENTS DIVISION	2 SPRINGDALE ROAD	CHERRY HILL, NJ 08003
45722	USM CORP., PARKER-KALON FASTENER DIV.		CAMPBELLSVILLE, KY 42718
49671	RCA CORPORATION	30 ROCKEFELLER PLAZA	NEW YORK, NY 10020
50293	GENERAL ELECTRIC COMPANY, INSTALLATION AND SERVICE ENGINEERING DEPT.	1 RIVER ROAD	SCHENECTADY, NY 12306
52905	SIMPLEX MFG. COMPANY	5224 NE 42ND AVENUE	PORTLAND, OREGON 97218
52961	PRODUCTS SERVICES CO.	86365 COLLEGE VIEW RD.	EUGENE, OR 97405
55175	SAVA INDUSTRIES INC.	P.O. BOX 150	POMPTON LAKES, NJ 07442
55285	BERGQUIST CO. INC.	5300 EDINA INDUSTRIAL BLVD	MINNEAPOLIS, MN 55435
56878	STANDARD PRESSED STEEL COMPANY	BENSON EAST	JENKINTOWN, PA 19046
70485	ATLANTIC INDIA RUBBER WORKS, INC.	571 W. POLK ST.	CHICAGO, IL 60607
70903	BELDEN CORP.	2000 S BATAVIA AVENUE	GENEVA, IL 60134
71468	ITT CANNON ELECTRIC	666 E. DYER RD.	SANTA ANA, CA 92702
71785	TRW, CINCH CONNECTORS	1501 MORSE AVENUE	ELK GROVE VILLAGE, IL 60007
73743	FISCHER SPECIAL MFG. CO.	446 MORGAN ST.	CINCINNATI, OH 45206
73803	TEXAS INSTRUMENTS, INC., METALLURGICAL MATERIALS DIV.	34 FOREST STREET	ATTLEBORO, MA 02703
74445	HOLO-KROME CO.	31 BROOK ST. WEST	HARTFORD, CT 06110
74868	BUNKER-RAMO CORP., THE AMPHENOL RF DIV.	33 E. FRANKLIN ST.	DANBURY, CT 06810
76381	MINNESOTA MINING AND MFG. CO.	3M CENTER	ST. PAUL, MN 55101
76854	OAK INDUSTRIES, INC., SWITCH DIV.	S. MAIN ST.	CRYSTAL LAKE, IL 60014
77132	DOT FASTENER CO., A UNITED-CARR DIV. OF TRW INC.	ROUND HOUSE INDL PK, PO BOX 710	WATERBURY, CT 06720
77250	PHEOLL MANUFACTURING CO., DIVISION OF ALLIED PRODUCTS CORP.	5700 W. ROOSEVELT RD.	CHICAGO, IL 60650
77342	AMF INC., POTTER AND BRUMFIELD DIV.	200 RICHLAND CREEK DRIVE	PRINCETON, IN 47670
78189	ILLINOIS TOOL WORKS, INC.		
78584	SHAKEPROOF DIVISION STEWART STAMPING CORP.	ST. CHARLES ROAD 630 CENTRAL PARK AVE.	ELGIN, IL 60120 YONKERS, NY 10704

CROSS INDEX—MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip
79136	WALDES, KOHINOOR, INC.	47-16 AUSTEL PLACE	LONG ISLAND CITY, NY 11101
80009	TEKTRONIX, INC.	P O BOX 500	BEAVERTON, OR 97077
80126	PACIFIC ELECTRICORD CO.	747 W. REDONDO BEACH,P O BOX 10	GARDENA, CA 90247
82389	SWITCHCRAFT, INC.	5555 N. ELSTON AVE.	CHICAGO, IL 60630
83385	CENTRAL SCREW CO.	2530 CRESCENT DR.	BROADVIEW, IL 60153
83553	ASSOCIATED SPRING CORP., SEABOARD DIV.	15001 S BROADWAY, P O BOX 231	GARDENA, CA 90248
85471	BOYD, A. B., CO.	2527 GRANT AVENUE	SAN LEANDRO, CA 94579
86044	CALIFORNIA GASKET COMPANY	1601 W. 134 STREET	GARDENA, CA 90249
86445	PENN FIBRE AND SPECIALTY CO., INC.	2032 E. WESTMORELAND ST.	PHILADELPHIA, PA 19134
86928	SEASTROM MFG. COMPANY, INC.	701 SONORA AVENUE	GLENDALE, CA 91201
87308	N. L. INDUSTRIES, INC., SOUTHERN SCREW DIV.	P. O. BOX 1360	STATESVILLE, NC 28677
87506	STAEDTLER, J.S. INC.	PO BOX 68, BOONTON AVENUE	MONTVILLE, NJ 07045
91260	CONNOR SPRING AND MFG. CO.	1729 JUNCTION AVE.	SAN JOSE, CA 95112
91506	AUGAT, INC.	33 PERRY AVE.	ATTLEBORO, MA 02703
93907	TEXTRON INC. CAMCAR DIV	600 18TH AVE	ROCKFORD, IL 61101
95987	WECKESSER CO., INC.	4444 WEST IRVING PARK RD.	CHICAGO, IL 60641
98978	INTERNATIONAL ELECTRONIC RESEARCH CORP.	135 W. MAGNOLIA BLVD.	BURBANK, CA 91502
S3109	C/O PANEL COMPONENTS CORP.	P.O. BOX 6626	SANTA ROSA, CA 95406
S3629	PANEL COMPONENTS CORP.	2015 SECOND ST.	BERKELEY, CA 94170







REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	1	2	3	4	5	Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont									
2-1	214-2679-01	B010100	B062073	1						CARRIAGE,PLTR:	80009	214-2679-01
	214-2679-02	B062074		2						CARRIAGE,PLTR: ***** (ATTACHING PARTS) *****	80009	214-2679-02
-2	213-0203-00			2						SCREW,MACHINE:5-40 X 0.25,PNH,STL CD PL,P	83385	OBD
-2.1	214-3246-00	B062074		2						ADJUSTER,RAIL:0.5 X 1.5 ALUMINUM	80009	214-3246-00
-2.2	213-0299-00	B062074		4						SETSCREW:4-40 X 0.125 INCH,HEX SOC S	56878	OBD
-2.3	214-1226-00	B062074		4						SPRING,HLCPS:0.18 OD X 0.44 L,MUSIC WIRE	83553	C0180-016-0440M
-2.4	211-0114-00	B062074		4						SCREW,MACHINE:4-40 X 0.438 INCH,FLH STL ***** (END ATTACHING PARTS) *****	83385	OBD
-3	401-0398-01			4						ROLLER,CARRIAGE:W/BEARING ***** (ATTACHING PARTS) *****	80009	401-0398-01
-4	211-0272-00			2						SCREW,MACHINE:5-40 X 0.5 L,PNH,STEEL CD	000CY	OBD
-5	211-0274-00			2						SCREW,MACHINE:5-40 X 0.875 L,PNH,STEEL	000BK	OBD
-6	210-0994-00			4						WASHER,FLAT:0.125 ID X 0.25" OD,STL ***** (END ATTACHING PARTS) *****	86928	5702-201-20
-7	401-0442-01			2						PULLEY,GROOVE:DELFIN,0.372 ID X 1.0 OD	80009	401-0442-01
-8	214-2664-02			1						ARM,RLR PIVOT:RIGHT ***** (ATTACHING PARTS) *****	80009	214-2664-02
-9	211-0258-00			1						SCREW,SHOULDER:4-40 X 0.512,RND HD,SLOT	80009	211-0258-00
-10	210-0449-00			1						NUT,PLAIN,HEX.:5-40 X 0.250 INCH,BRS	73743	3030-402
-11	210-0994-00			1						WASHER,FLAT:0.125 ID X 0.25" OD,STL ***** (END ATTACHING PARTS) *****	86928	5702-201-20
-12	214-2664-01			1						ARM,RLR PIVOT:LEFT ***** (ATTACHING PARTS) *****	80009	214-2664-01
-13	211-0258-00			1						SCREW,SHOULDER:4-40 X 0.512,RND HD,SLOT	80009	211-0258-00
-14	210-0449-00			1						NUT,PLAIN,HEX.:5-40 X 0.250 INCH,BRS	73743	3030-402
-15	337-2512-00			1						SHIELD,LIGHT:LED/PHOTOTRANSISTOR	80009	337-2512-00
-16	210-0994-00			1						WASHER,FLAT:0.125 ID X 0.25" OD,STL ***** (END ATTACHING PARTS) *****	86928	5702-201-20
-17	214-2846-00			1						SPRING,HLEXT:0.25 OD X 1.0 L,XLOOP,SST	91260	OBD
-18	401-0460-01			2						PULLEY,GROOVE:ACETAL,0.59 OD X 0.156 W ***** (ATTACHING PARTS) *****	80009	401-0460-01
-19	211-0271-00	B010100	B051483	2						SCREW,MACHINE:5-40 X 0.312 L,PNH,STEEL	000BK	OBD
	211-0104-00	B051484		2						SCREW MACHINE:5-40 X 0.375,PNH,STL,CD,PL	83385	OBD
-20	210-0994-00	B010100	B020649	2						WASHER,FLAT:0.125 ID X 0.25" OD,STL	86928	5702-201-20
	361-1052-00	B020650		2						SPACER,PULLEY:POLYCARBONATE,GRAY ***** (END ATTACHING PARTS) *****	80009	361-1052-00
-21	122-0159-00			1						RAIL,CARRIAGE:21.89 L,ALUMINUM	80009	122-0159-00
-22	388-6000-03	B010100	B051533	1						CIRCUIT BOARD:COMMUTATOR	80009	388-6000-03
	----	B051534		1						CKT BOARD ASSY:COMMUTATOR(SEE A20 REPL) (SEE 198-4019-01 FOR SUBPARTS)		
	----			-								
-22.1	198-4019-01	B051534		1						.WIRE SET,ELEC:	80009	198-4019-01
-22.2	175-0825-00			AR						.WIRE,ELECTRICAL: WIRE RIBBON	80009	175-0825-00
-22.3	131-0707-00			2						.CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOLD	22526	47439
-22.4	352-0169-00			1						.HLDR,TERM CONN:2 WIRE BLACK	80009	352-0169-00
-23	131-1425-00	B010100	B051533	1						CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
-24	119-1154-01	B010100	B051169	2						PEN HOLDER ASSY:	80009	119-1154-01
	650-0235-01	B051170		2						PEN LIFTER ASSY:	80009	650-0235-01
-25	426-1485-01			1						FR,PEN CARRIAGE:TOP,AL,FINISHED ***** (ATTACHING PARTS) *****	80009	426-1485-01
-26	211-0273-00			2						SCREW,MACHINE:5-40 X 0.75 L,PNH,STEEL ***** (END ATTACHING PARTS) *****	000BK	OBD
-27	214-2680-00			2						ARM,CRG ROLLER: ***** (ATTACHING PARTS) *****	80009	214-2680-00
-28	211-0030-00			2						SCREW,MACHINE:2-56 X 0.25" 82 DEG,FLH STL	83385	OBD
-29	211-0062-00			2						SCREW,MACHINE:2-56 X 0.312,PNH,STL	83385	OBD
-30	210-1108-00			2						WASHER,SPR TNSN:0.161 ID X 0.01 THK,STL	78189	3502-07-07-0511
-31	129-0741-00			2						SPACER,POST:0.519 L X 2-56 BOTH THD ***** (END ATTACHING PARTS) *****	80009	129-0741-00
-32	401-0398-01			4						ROLLER,CARRIAGE:W/BEARING ***** (ATTACHING PARTS) *****	80009	401-0398-01
-32.1	210-1360-00	B051170		2						WASHER,FLAT:0.125 ID X 0.005 THK,BRASS (USE AS NEEDED)	86928	5714-232-5
	----			-								

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	1 2 3 4 5					Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont									
2-33	211-0272-00			4						SCREW,MACHINE:5-40 X 0.5 L,PNH,STEEL CD	000CY	OBD
-34	210-0994-00			4						WASHER,FLAT:0.125 ID X 0.25" OD,STL ***** (END ATTACHING PARTS)*****	86928	5702-201-20
-35	401-0461-01			2						PULLEY,GROOVE:ACETAL,0.875 OD X 0.156 W ***** (ATTACHING PARTS)*****	80009	401-0461-01
-36	211-0272-00			2						SCREW,MACHINE:5-40 X 0.5 L,PNH,STEEL CD	000CY	OBD
-37	220-0543-00			2						NUT,PLAIN,SPLN:5-40 X 0.25 HEX,STL CD PL	22599	22-NM-50
-38	210-1240-00			2						WASHER,FLAT:0.125 ID X 0.016 THK,BRS ***** (END ATTACHING PARTS)*****	80009	210-1240-00
-39	147-0207-00			1						BRUSH,ELEC CONT: ***** (ATTACHING PARTS)*****	80009	147-0207-00
-40	211-0001-00			1						SCREW,MACHINE:2-56 X 0.25 INCH,PNH STL ***** (END ATTACHING PARTS)*****	87308	OBD
	198-4019-00	B010100	B051533	1						WIRE SET,ELEC:	80009	198-4019-00
	198-4019-01	B051534		1						WIRE SET,ELEC:	80009	198-4019-01
-41	131-0707-00	B010100	B051533	4						.CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOLD	22526	47439
	131-0707-00	B051534		2						.CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOLD	22526	47439
-42	175-0825-00			AR						.WIRE,ELECTRICAL:2 WIRE RIBBON	80009	175-0825-00
-43	352-0169-00	B010100	B051533	2						.HLDR,TERM CONN:2 WIRE BLACK (A9P1)	80009	352-0169-00
	352-0169-00	B051534		1						.HLDR,TERM CONN:2 WIRE BLACK (A9P1)	80009	352-0169-00
-44	378-0869-00			1						LENS,LIGHT:0.499 DIA X 0.225 H,ACRYLIC	80009	378-0869-00
-45	426-1494-00			1						FRAME,CARTRIDGE:	80009	426-1494-00
-46	211-0265-00			2						SCREW,CAP:2-56 X 0.375,SCH,SST	000BK	OBD
-47	210-0405-00			2						NUT,PLAIN,HEX.:2-56 X 0.188 INCH,BRS	73743	12157-50
-48	210-1008-00			2						WASHER,FLAT:0.09 ID X 0.188" OD,BRS	12360	OBD
-49	-----			1						CKT BOARD ASSY:PEN CARRIAGE(SEE A11 REPL) ***** (ATTACHING PARTS)*****		
-50	211-0030-00			3						SCREW,MACHINE:2-56 X 0.25"82 DEG,FLH STL	83385	OBD
-51	214-2678-00			4						PIN,STR,HDLS:0.125 OD X 0.65 L,BRASS ***** (END ATTACHING PARTS)*****	80009	214-2678-00
-52	214-0840-00			1						SPRING,HLCP:0.184 OD X 0.55 L,CLOSED EN	80009	214-0840-00
-53	401-0398-01			2						ROLLER,CARRIAGE:W/BEARING ***** (ATTACHING PARTS)*****	80009	401-0398-01
-54	211-0272-00			1						SCREW,MACHINE:5-40 X 0.5 L,PNH,STEEL CD	000CY	OBD
-55	211-0274-00			1						SCREW,MACHINE:5-40 X 0.875 L,PNH,STEEL	000BK	OBD
-56	210-0994-00			2						WASHER,FLAT:0.125 ID X 0.25" OD,STL ***** (END ATTACHING PARTS)*****	86928	5702-201-20
-57	214-2664-02			1						ARM,RLR PIVOT:RIGHT ***** (ATTACHING PARTS)*****	80009	214-2664-02
-58	211-0258-00			1						SCREW,SHOULDER:4-40 X 0.512,RND HD,SLOT	80009	211-0258-00
-59	210-0449-00			1						NUT,PLAIN,HEX.:5-40 X 0.250 INCH,BRS	73743	3030-402
-60	337-2512-00			1						SHIELD,LIGHT:LED/PHOTOTRANSISTOR	80009	337-2512-00
-61	210-0994-00			1						WASHER,FLAT:0.125 ID X 0.25" OD,STL	86928	5702-201-20
-62	401-0442-01			2						PULLEY,GROOVE:DELFIN,0.372 ID X 1.0 OD ***** (END ATTACHING PARTS)*****	80009	401-0442-01
-63	214-2679-01			1						CARRIAGE,PLTR: ***** (ATTACHING PARTS)*****	80009	214-2679-01
-64	213-0203-00			2						SCREW,MACHINE:5-40 X 0.25,PNH,STL CD PL,P ***** (END ATTACHING PARTS)*****	83385	OBD
-65	214-2664-01			1						ARM,RLR PIVOT:LEFT ***** (ATTACHING PARTS)*****	80009	214-2664-01
-66	211-0258-00			1						SCREW,SHOULDER:4-40 X 0.512,RND HD,SLOT	80009	211-0258-00
-67	210-0449-00			1						NUT,PLAIN,HEX.:5-40 X 0.250 INCH,BRS	73743	3030-402
-68	210-0994-00			1						WASHER,FLAT:0.125 ID X 0.25" OD,STL ***** (END ATTACHING PARTS)*****	86928	5702-201-20
-69	401-0460-01			2						PULLEY,GROOVE:ACETAL,0.59 OD X 0.156 W ***** (ATTACHING PARTS)*****	80009	401-0460-01
-70	211-0271-00	B010100	B051483	1						SCREW,MACHINE:5-40 X 0.312 L,PNH,STEEL	000BK	OBD
	211-0104-00	B051484		1						SCREW MACHINE:5-40 X 0.375,PNH,STL,CD,PL	83385	OBD
-71	210-0994-00	B010100	B051483	1						WASHER,FLAT:0.125 ID X 0.25" OD,STL	86928	5702-201-20
	361-1052-00	B051484		1						SPACER,PULLEY:POLYCARBONATE,GRAY ***** (END ATTACHING PARTS)*****	80009	361-1052-00

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	1 2 3 4 5	Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont					
2-72	----- -----			1		CKT BOARD ASSY:Y AXIS LIMIT SWITCH (SEE A9 REPL) *****ATTACHING PARTS)*****		
-73	211-0012-00	B010100	B010142	1		SCREW,MACHINE:4-40 X 0.375,PNH STL CD PL	83385	OBD
	211-0016-00	B010143		1		SCREW,MACHINE:4-40 X 0.625 INCH,PNH STL	83385	OBD
-74	210-0054-00	B010100	B010142	1		WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD S	83385	OBD
	210-0994-00	B010143		1		WASHER,FLAT:0.125 ID X 0.25" OD,STL	86928	5702-201-20
-75	210-0586-00	B010143		1		NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
-76	211-0012-00			1		SCREW,MACHINE:4-40 X 0.375,PNH STL CD PL	83385	OBD
-77	214-2043-00			1		SPRING,HLCPS:CONICAL,0.20 INCH LONG *****END ATTACHING PARTS)*****	80009	214-2043-00
	-----			-		CKT BOARD ASSY INCLUDES:		
-78	131-1425-00			1		.CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 3	22526	65521-136
-79	-----			1		.MICROCIRCUIT,DI:OPTOELECTRONIC(SEE U1009 *****ATTACHING PARTS)*****		
-80	211-0012-00			2		.SCREW,MACHINE:4-40 X 0.375,PNH STL CD PL	83385	OBD
-81	210-0406-00			2		.NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS	73743	12161-50
-82	361-0158-00			2		.SPACER,SLEEVE:0.093 L X 0.116 ID BRS CD	76854	3-5115-105
-83	210-0994-00			2		.WASHER,FLAT:0.125 ID X 0.25" OD,STL *****END ATTACHING PARTS)*****	86928	5702-201-20
-84	175-2257-00			1		PRINTED CA ASSY:FLEX,6 CNDCT,21.5 L (J2 TO J1 ON Y AXIS LIMIT)	00779	OBD

REPLACEABLE MECHANICAL PARTS

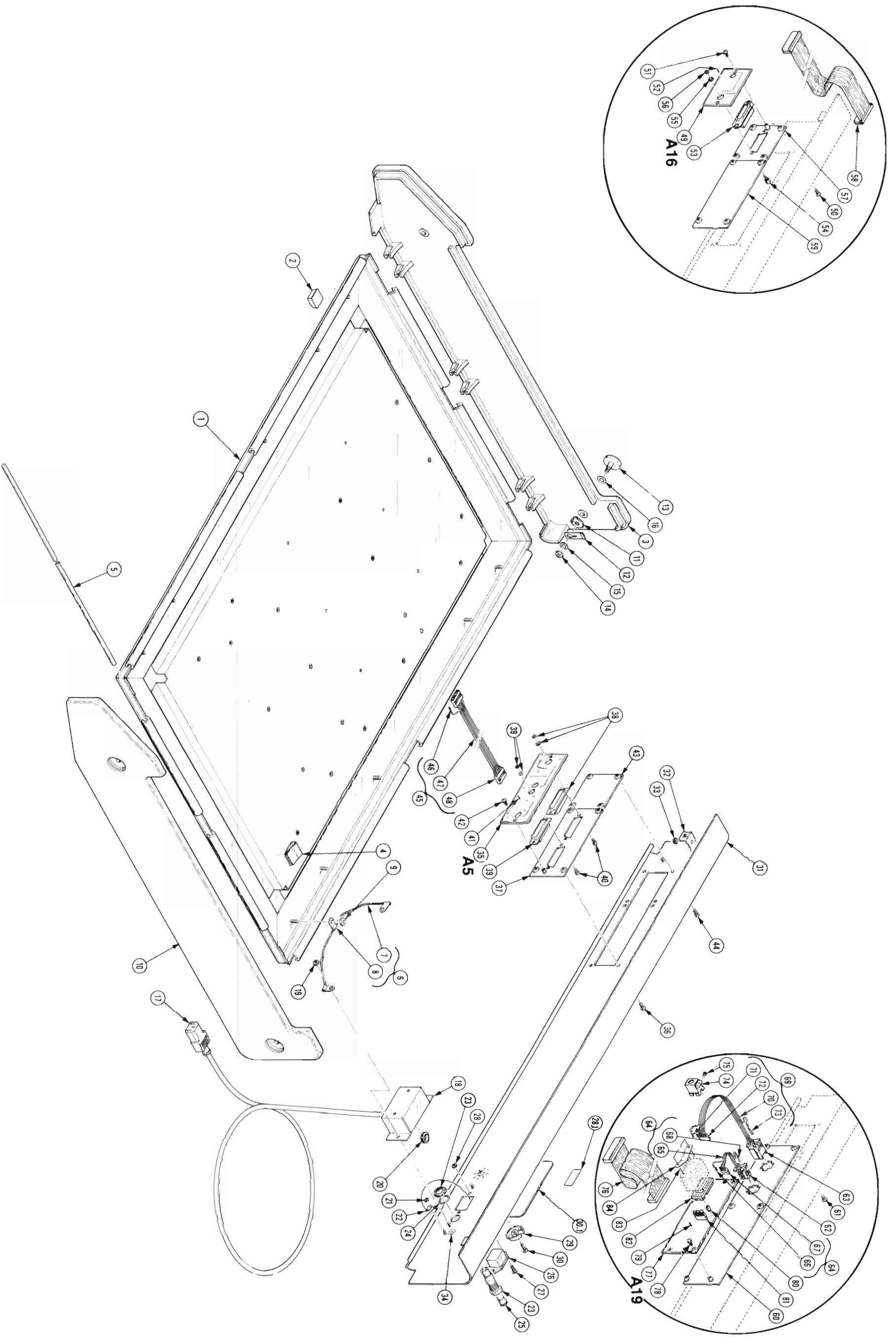
Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1	2	3	4	5	Name & Description	Mfr Code	Mfr Part Number
3-1	432-0121-00			1						BASE,PLOTTER:	80009	432-0121-00
-2	348-0502-00			4						FOOT,CABINET:0.812 SQ X 0.3 HIGH	04963	SJ-5023GRAY
-3	390-0614-01			1						CABINET SIDE:LEFT	80009	390-0614-01
-4	343-0775-00			4						CLIP,SPR TNSN:	76381	3484-1000
-5	214-2756-00			2						PIN,HINGE:21.062 L X 0.281 OD,BRASS	80009	214-2756-00
	124-0377-00	B010100	B020229	2						STRIP GROUND:DIGITAL PLOTTER	80009	124-0377-00
-6	198-4112-00			1						WIRE SET,ELEC:	80009	198-4112-00
	-----			-						(ALSO SEE FIGURE 4)		
-7	176-0047-00			AR						.BRAID,WIRE:0.156 W,FLAT	70903	8660
-8	210-0335-00			12						.TERMINAL,LUG:#10 COPPER,TIN PLATED	00779	36271
										*****ATTACHING PARTS*****		
-9	210-0457-00			4						NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL	83385	OBD
										*****END ATTACHING PARTS*****		
-10	390-0613-01			1						CABINET SIDE:RIGHT	80009	390-0613-01
-11	386-0227-04			4						STOP,CLP,RIM CL:SIL GY DELRIN	80009	386-0227-04
-12	386-1633-00			4						PLATE,LCH LKG:STEEL,CD PL	80009	386-1633-00
										*****ATTACHING PARTS*****		
-13	214-2813-00			4						FASTENER,PAWL:0.25 TURN,AL	80009	214-2813-00
-14	220-0410-00			4						NUT,EXTENDED WA:10-32 X 0.375 INCH,STL	83385	OBD
-15	210-0905-00			4						WASHER,FLAT:0.256 ID X 0.05 THK,BRS	83385	OBD
-16	210-1015-00			4						WASHER,SPR TNSN:0.254 ID X 0.01 THK,STL	78189	3502-14-47
										*****END ATTACHING PARTS*****		
-17	161-0066-05			1						CABLE ASSY,PWR:3,18 AWG,115V,32.0 L,GRAY	80009	161-0066-05
-18	337-1953-02			1						SHIELD,ELEC:POWER SWITCH	80009	337-1953-02
										*****ATTACHING PARTS*****		
-19	210-0457-00			2						NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL	83385	OBD
										*****END ATTACHING PARTS*****		
-20	348-0006-00			1						GROMMET,RUBBER:0.562 ID X 0.875 INCH OD	70485	1720
-21	210-0407-00			1						NUT,PLAIN,HEX.:6-32 X 0.25 INCH,BRS	73743	3038-0228-402
	198-4150-00			1						WIRE SET,ELEC:	80009	198-4150-00
-22	210-0202-00			1						.TERMINAL,LUG:0.146 ID,LOCKING,BRZ TINNED	78189	2104-06-00-2520N
-23	204-0832-00			1						BODY,FUSEHOLDER:3AG,5 X 20MM FUSES	S3629	031.1673(MDLFEU)
-24	210-1039-00			1						WASHER,LOCK:INT,0.521 ID X 0.625 INCH O	24931	OBD
-25	200-2264-00			1						CAP.,FUSEHOLDER:3AG FUSES	S3629	FEK 031 1666
-26	131-1084-00			1						CONNECTOR,RCPT.:3 BLADE,6A,250V	82389	EAC-302
										*****ATTACHING PARTS*****		
-27	211-0012-00			2						SCREW,MACHINE:4-40 X 0.375,PNH STL CD PL	83385	OBD
-28	210-0586-00			2						NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
-28.1	334-4055-00			1						MARKER,IDENT:MKD 1.75 AMPS (MAX) AT 230V	80009	334-4055-00
	-----			-						(OPTION A1,A2,A3,A4)		
										*****END ATTACHING PARTS*****		
-29	366-1522-00			1						KNOB:LINE VOLTAGE INDICATOR	80009	366-1522-00
										*****ATTACHING PARTS*****		
-30	211-0507-00			1						SCREW,MACHINE:6-32 X 0.312 INCH,PNH STL	83385	OBD
-30.1	334-3578-00			1						MARKER,IDENT:MARKED 4663 CONFIGURATION	80009	334-3578-00
										*****END ATTACHING PARTS*****		
-30.1	334-3578-00			1						MARKER,IDENT:MARKED 4663 CONFIGURATION	80009	334-3578-00
-31	333-2462-00			1						PANEL,REAR:	80009	333-2462-00
-32	407-2139-00	B010100	B051438	2						BRACKET,ANGLE:PANEL LATCH,ALUMINUM	80009	407-2139-00
	407-2139-01	B051439		2						BRACKET,ANGLE:PANEL LATCH,ALUMINUM	80009	407-2139-01
										*****ATTACHING PARTS*****		
-33	210-0457-00			4						NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL	83385	OBD
										*****END ATTACHING PARTS*****		
-34	334-3379-01			1						MARKER,IDENT:MARKED GROUND SYMBOL	80009	334-3379-01
	021-0246-00	B010100	B050169	1						INTERFACE:	80009	021-0246-00
	-----			-						(ALSO SEE FIG. 4-46)		
	021-0246-01	B050170	B051319	1						INTERFACE:	80009	021-0246-01
	-----			-						(ALSO SEE FIG. 4-46)		
	021-0246-02	B051320	B061999	1						INTERFACE:	80009	021-0246-02
	-----			-						(ALSO SEE FIG. 4-46)		
	021-0246-03	B062000		1						INTERFACE:	80009	021-0246-03
	-----			-						(ALSO SEE FIG. 4-46)		

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	1 2 3 4 5	Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont					
3-35	-----			1		.CKT BOARD ASSY:RS232 ADAPTER(SEE A5 REPL) .***** (ATTACHING PARTS)*****		
-36	211-0504-00			4		.SCREW,MACHINE:6-32 X 0.25 INCH,PNH STL .***** (END ATTACHING PARTS)*****	83385	OBD
	-----			-		.CIRCUIT BOARD ASSY INCLUDES:		
-37	386-3943-01			1		..PLATE,CONN MTG:ALUMINUM	80009	386-3943-01
-38	-----			1		..CONN,RCPT,ELECT:(SEE J3 REPL)		
-39	-----			1		..CONN,RCPT,ELECT:(SEE J2 REPL)		
-40	131-0890-00			4		..LOCK,CONNECTOR:4-40 X 0.312 L	71468	D 20418-2
-41	-----			14		..TERM,PIN:(SEE J1 REPL)		
-42	211-0033-00			2		..SCR,ASSEM WSHR:4-40 X 0.312 PNH,STL,CD P	83385	OBD
-43	200-2387-00			1		.COVER,HOLE:ALUMINUM .***** (ATTACHING PARTS)*****	80009	200-2387-00
-44	211-0504-00			8		.SCREW,MACHINE:6-32 X 0.25 INCH,PNH STL .***** (END ATTACHING PARTS)*****	83385	OBD
-45	175-2324-00			1		.CA ASSY,SP,ELEC:14,26 AWG,29.0 L	80009	175-2324-00
-46	131-0707-00			20		..CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOL	22526	47439
-47	175-0830-00			AR		..WIRE,ELECTRICAL:7 WIRE RIBBON	08261	SS-0726-710610C
-48	352-0390-01			2		..CONN BODY,PL,EL:28 WIRE,14 DBL ROW ..(A4P701,A5P1)	80009	352-0390-01
	021-0242-00	B010100	B050169	1		INTERFACE: (OPTION 01 ONLY)	80009	021-0242-00
	021-0242-01	B050170	B051319	1		INTERFACE: (OPTION 01 ONLY)	80009	021-0242-01
	021-0242-02	B051320	B061999	1		INTERFACE: (OPTION 01 ONLY)	80009	021-0242-02
	021-0242-03	B062000		1		INTERFACE: (OPTION 01 ONLY)	80009	021-0242-03
-49	-----			1		.CKT BOARD ASSY:GPIB(SEE A16 REPL) (OPTION 1) .***** (ATTACHING PARTS)*****		
-50	211-0504-00			4		.SCREW,MACHINE:6-32 X 0.25 INCH,PNH STL .***** (END ATTACHING PARTS)*****	83385	OBD
	-----			-		.CKT BOARD ASSY INCLUDES:		
-51	211-0033-00			1		..SCR,ASSEM WSHR:4-40 X 0.312 PNH,STL,CD P	83385	OBD
-52	-----			26		..TERM,PIN:(SEE J1 REPL)		
-53	-----			1		..TERM,PIN CONN:(SEE J2 REPL)		
-54	129-0774-00			2		..SPACER,POST:0.25 L,W/4-40 EXT THD ONE	80009	129-0774-00
-55	210-0004-00			2		..WASHER,LOCK:#4 INTL,0.015 THK,STL CD PL	000BK	OBD
-56	210-0406-00			2		..NUT,PLAIN,HEX:4-40 X 0.188 INCH,BRS	73743	12161-50
-57	386-4166-00			1		.PLATE,CONN MTG:ALUMINUM	80009	386-4166-00
-58	175-2265-00			1		.CA ASSY,SP,ELEC:26,28 AWG,32.0 L	80009	175-2265-00
-59	200-2388-00			1		.COVER,HOLE:ALUMINUM (NOT USED FOR OPTION 1)	80009	200-2388-00
	021-0258-00			1		INTERFACE:4663 OPT 03 TO TELETYPE (4663 OPT 3 TO TELETYPE)	80009	021-0258-00
-60	386-4248-00			1		.PLATE,ADAPTER:ALUMINUM .***** (ATTACHING PARTS)*****	80009	386-4248-00
-61	211-0504-00			4		.SCREW,MACHINE:6-32 X 0.25 INCH,PNH STL .***** (END ATTACHING PARTS)*****	83385	OBD
-62	204-0797-00			1		.CONN BODY,PLUG:6 CONTACTS,MALE	00779	1-350234-9
-63	204-0798-00			1		.CONN BODY,PLUG:6 CONTACTS,FEMALE	00779	1-350241-9
-64	175-2786-00			1		.CA ASSY,SP,ELEC:4,26 AWG,3.5 L	80009	175-2786-00
-65	175-0827-00			AR		..CABLE,SP,ELEC:4,26 AWG,STRD.PVC JKT,RBN	08261	SS04267(1061)0C
-66	131-0707-00			4		..CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOL	22526	47439
-67	352-0162-02			1		..CONN BODY,PL,EL:4 WIRE RED	80009	352-0162-02
-68	131-1818-00			4		..CONTACT,ELEC:SERIES MR,MALE,GOLD PL	00779	35009-7
-69	175-2787-00			1		.CA ASSY,SP,ELEC:6,26 AWG,4.75 L	80009	175-2787-00
-70	175-0829-00			AR		..WIRE,ELECTRICAL:6 WIRE RIBBON	08261	SS-0626-710610C
-71	131-0707-00			6		..CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOL	22526	47439
-72	352-0164-00			1		..CONN BODY,PL,EL:6 WIRE BLACK	80009	352-0164-00
-73	131-1819-00			6		..CONTACT,ELEC:26-18 AWG,MALE,GOLD PL	00779	350018-3
-74	337-2523-00			2		..SHIELD,ELEC:UPPER REAR SUBPANEL	80009	337-2523-00

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty						Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont		1	2	3	4	5			
3-75	213-0761-00			2						..SCREW,TPG,TF:6-20 X 0.438 L,PNH,TYPE B S	000BL	OBD
-76	175-2701-00			1						..CA ASSY,SP,ELEC:34,28 AWG,22.5 L	22526	80578-001
-77	-----			1						..CKT BOARD ASSY:CURRENT LOOP(SEE A19 REPL) .....(ATTACHING PARTS).....		
-78	211-0244-00			4						..SCR,ASSEM WSHR:4-40 X 0.312 INCH,PNH STL .....(END ATTACHING PARTS).....	78189	OBD
-79	131-0608-00			37						..TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-80	131-0993-00			54						..BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
	-----			-						..(SEE J1 TO J8 REPL)		
-81	131-2165-00			3						..BUS CONDUCTOR:6,26 AWG,1.5 L	80009	131-2165-00
-82	136-0468-00			1						..SOCKET,PLUG-IN:28 PIN,CKT CARD MTG	24796	27E712 W/20C266
-83	214-3047-00			1						..RTNR,ELEC RELAY:STAINLESS STEEL	77342	20C250
-84	343-0342-00			1						..RTNR,MICROCKT:CU BE,CU-SN-ZN PL	80009	343-0342-00



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4663 SERVICE VOL. 2

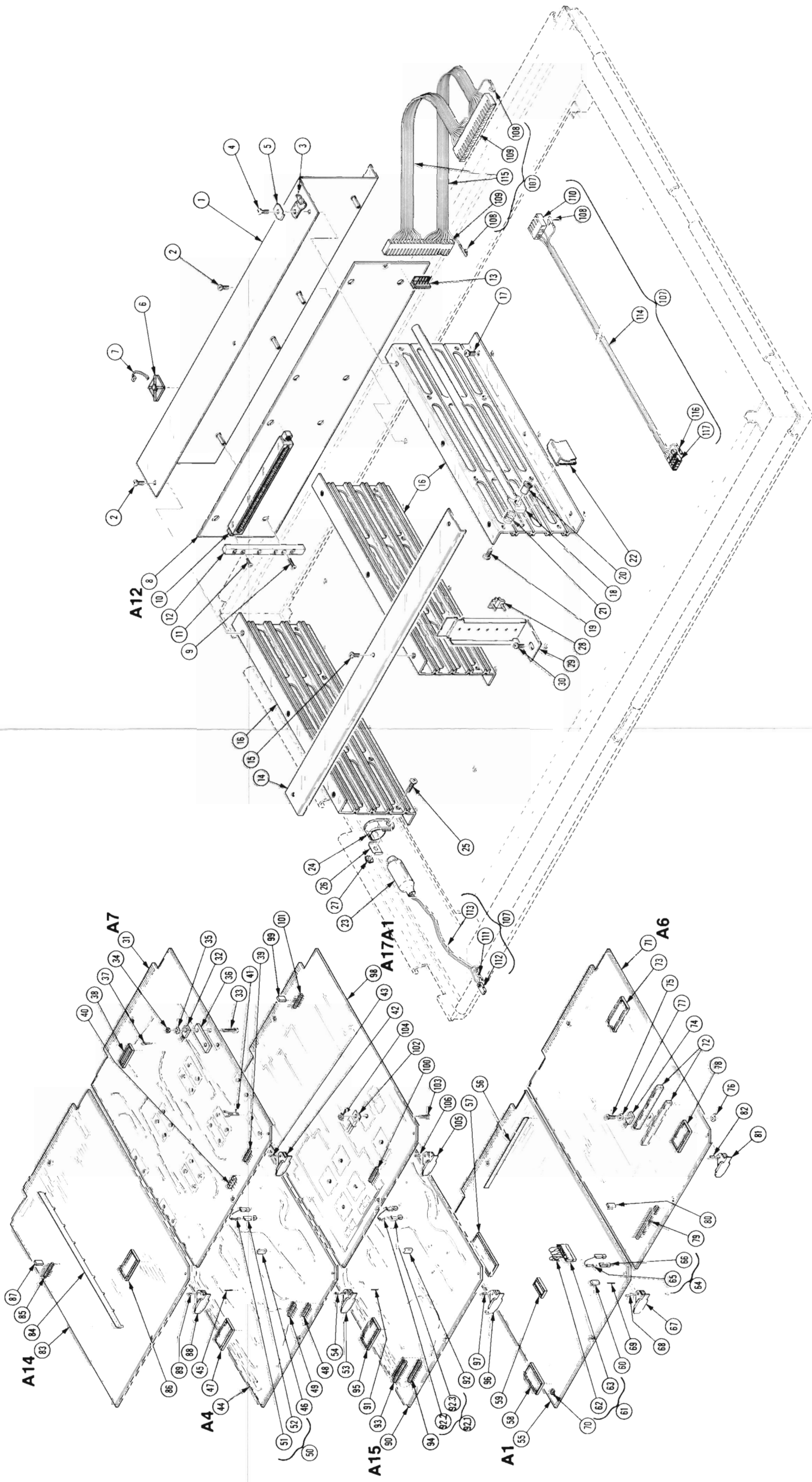


FIG. 4 CARD CAGE & CIRCUIT BOARDS

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	Name & Description					Mfr Code	Mfr Part Number
		Eff	Dscont		1	2	3	4	5		
4-1	200-2150-00			1	COVER,CKT BOARD:TOP ALUMINUM ***** (ATTACHING PARTS) *****					80009	200-2150-00
-2	212-0004-00			5	SCREW,MACHINE:8-32 X 0.312 INCH,PNH STL ***** (END ATTACHING PARTS) *****					83385	OBD
-3	343-0042-00			1	CLAMP,LOOP:0.287 INCH DIA ***** (ATTACHING PARTS) *****					95987	5-16-6BH
-4	212-0023-00	B010100	B051299	1	SCREW,MACHINE:8-32 X 0.375,PNH,STL CD PL					83385	OBD
	212-0039-00	B051300		1	SCREW,MACHINE:8-32 X 0.375 INCH,TRH STL					83385	OBD
-5	210-0863-00	B010100	B051299	1	WSHR,LOOP CLAMP:0.187 ID U/W 0.5 W CLP,STL ***** (END ATTACHING PARTS) *****					95987	C191
-6	352-0482-00			4	HOLDER,CA,TIE:0.75 SQ,STICKY BACK,PLASTIC					06383	ABMM-A
-7	343-0549-00			4	STRAP,TIEDOWN:0.091 W X 3.62 INCH LONG					06383	PLT1M
-8	-----			1	CKT BOARD ASSY:BACK PLANE(SEE A12 REPL) ***** (ATTACHING PARTS) *****						
-9	211-0102-00			8	SCREW,MACHINE:4-40 X 0.500",FLH,STL ***** (END ATTACHING PARTS) *****					83385	OBD
-10	131-2059-00			8	.CONN,RCPT,ELEC:CKT CD,40/80 FEM,W/4-40 TH ***** (ATTACHING PARTS) *****					00779	3-530683-0
-11	211-0025-00			16	.SCREW,MACHINE:4-40 X 0.375 100 DEG,FLH ST					83385	OBD
-12	386-3857-00			4	.SUPPORT,CONN:4.18 L X 0.25 SQ,STEEL ***** (END ATTACHING PARTS) *****					80009	386-3857-00
-13	131-2182-00			4	.TERM. SET,PIN:1 X 5,0.156 SPACING,RTANG					27264	09-47-1052
-14	386-4031-00			1	SPRT,CKT BD CAG:ALUMINUM ***** (ATTACHING PARTS) *****					80009	386-4031-00
-15	212-0004-00			3	SCREW,MACHINE:8-32 X 0.312 INCH,PNH STL ***** (END ATTACHING PARTS) *****					83385	OBD
-16	386-3859-00			3	PANEL,SIDE:CIRCUIT CARD ***** (ATTACHING PARTS) *****					80009	386-3859-00
-17	212-0004-00			9	SCREW,MACHINE:8-32 X 0.312 INCH,PNH STL ***** (END ATTACHING PARTS) *****					83385	OBD
-18	384-1520-00			1	ROD,SUPPORT:12.65 L X 0.25 SQ,AL ***** (ATTACHING PARTS) *****					80009	384-1520-00
-19	212-0518-00			1	SCREW,MACHINE:10-32 X 0.312,PNH,STL,CD PL ***** (END ATTACHING PARTS) *****					83385	OBD
-20	129-0133-00			1	SPACER POST:0.495 L X 0.375,STEP TO					80009	129-0133-00
-21	214-0428-00			1	SPRING,HANDLE:0.375 OD X 0.4 L,CLOSED					80009	214-0428-00
-22	343-0775-00			1	CLIP,SPR TNSN:					76381	3484-1000
-23	-----			1	BATTERY STORAGE:(SEE BT1001 REPL)						
-24	343-0007-00			1	CLAMP,LOOP: ***** (ATTACHING PARTS) *****					95987	5-8-6B
-25	212-0008-00			2	SCREW,MACHINE:8-32 X 0.500 INCH,PNH STL					83385	OBD
-26	210-0863-00			1	WSHR,LOOP CLAMP:0.187 ID U/W 0.5 W CLP,STL					95987	C191
-27	210-0458-00			1	NUT,PL,ASSEM WA:8-32 X 0.344 INCH,STL ***** (END ATTACHING PARTS) *****					83385	OBD
-28	352-0509-00			8	HOLDER,CKT CD:					80009	352-0509-00
-29	407-2291-00			2	BRACKET,CKT BD:SST ***** (ATTACHING PARTS) *****					80009	407-2291-00
-30	212-0004-00			2	SCREW,MACHINE:8-32 X 0.312 INCH,PNH STL ***** (END ATTACHING PARTS) *****					83385	OBD
-31	-----			1	CKT BOARD ASSY:MOTOR PEN DRIVE(SEE A7 REPL)						
-32	-----			26	.TRANSISTOR:(SEE Q45,Q51,Q71,Q75,Q85,Q95, Q145,Q151,Q171,Q175,Q245,Q251,Q271,Q275, Q345,Q351,Q371,Q375,Q445,Q451,Q471,Q475,Q Q551,Q571, AND Q575 REPL) ***** (ATTACHING PARTS) *****						
-33	211-0015-00			26	.SCREW,MACHINE:4-40 X 0.500,RDH,STL,CD PL					83385	OBD
-34	210-0406-00			26	.NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS					73743	12161-50
-35	210-1122-00			26	.WASHER,LOCK:0.12 ID,DISHED,0.025 THK ***** (END ATTACHING PARTS) *****					86928	OBD
-36	386-3959-00			13	.PLATE,HEAT SINK:ALUMINUM					80009	386-3959-00
-37	-----			10	.TERMINAL,TEST POINT:(SEE TP115,TP230,TP33 TP335,TP340,TP345,TP427,TP430,TP440, AND TP530 REPL)						

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	Name & Description					Mfr Code	Mfr Part Number
		Eff	Dscont		1	2	3	4	5		
4-38	136-0634-00	B010100	B051319	1	.SOCKET,PLUG-IN:20 LEAD DIP,CKT BD MTG					73803	CS9002-20
	136-0743-00	B051320		1	.SKT,PL-IN ELEK:MICROCKT,24 PIN,LOW PROFIL					00779	640361-1
-39	-----			1	.SQUARE PIN STRIP:R/A MINI(SEE J1,J2,J3,J7						
	-----			-	.J8,J9 REPL)						
-40	-----			1	.SQUARE PIN STRIP:R/A MAXI(SEE J5,J11 REPL						
-41	344-0154-00			6	.CLIP,ELECTRICAL:FUSE,CKT BD MT					80009	344-0154-00
-42	105-0160-02			1	.EJECTOR,CKT CD:BLUE PLASTIC					80009	105-0160-02
					. ***** (ATTACHING PARTS) *****						
-43	214-1337-00			1	.PIN,SPRING:0.10 OD X 0.25 INCH L,STL					80009	214-1337-00
					. ***** (END ATTACHING PARTS) *****						
-44	-----			1	CKT BOARD ASSY:RS232 INTERFACE(SEE A4 REPL						
	-----			-	(P/O 021-0246-00 FIG.3-35)						
-45	-----			26	.TERM.,PIN:(SEE J101 REPL)						
	-----			41	.TERM.,PIN:(SEE J1,J2,J3 REPL)						
	131-0608-00			15	.TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD					22526	47357
	-----			-	. (AT ROM.DIS.-2,L.T.-2,PRI-SEC-3,INT.LEV.-						
-46	131-0993-00			2	.BUS,CONDUCTOR:2 WIRE BLACK					00779	850100-01
-47	136-0634-00	B010100	B020354	2	.SOCKET,PLUG-IN:20 LEAD DIP,CKT BD MTG					73803	CS9002-20
	136-0743-00	B020355		2	.SKT,PL-IN ELEK:MICROCKT,24 PIN,LOW PROFIL					00779	640361-1
-48	-----			1	.TERM.,SET,PIN:(SEE J701 REPL)						
-49	-----			1	.TERM.,SET,PIN:(SEE J701 REPL)						
-50	198-3011-00			3	.WIRE SET,ELEC:					80009	198-3011-00
-51	131-0707-00			6	..CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOL					22526	47439
-52	352-0171-00			6	..HLDR,TERM CONN:1 WIRE BLACK					80009	352-0171-00
-53	105-0160-02			1	.EJECTOR,CKT CD:BLUE PLASTIC					80009	105-0160-02
					. ***** (ATTACHING PARTS) *****						
-54	214-1337-00			1	.PIN,SPRING:0.10 OD X 0.25 INCH L,STL					80009	214-1337-00
					. ***** (END ATTACHING PARTS) *****						
-55	-----			1	CKT BOARD ASSY:PROCESSOR(SEE A1)						
-56	124-0301-00			7	.TERMINAL STRIP:CKT BD MT,6 TAB,BRASS					80009	124-0301-00
-57	136-0623-00	B010100	B020544	1	.SOCKET,PLUG-IN:40 DIP,LOW PROFILE					73803	CS9002-40
-58	136-0578-00	B010100	B020349	15	.SKT,PL-IN ELEK:MICROCKT,24 PIN,LOW PROFIL					73803	C S9002-24
	136-0743-00	B020350		15	.SKT,PL-IN ELEK:MICROCKT,24 PIN,LOW PROFIL					00779	640361-1
-59	136-0260-02	B010100	B020349	4	.SKT,PL-IN ELEK:MICROCIRCUIT,16 DIP,LOW CL					71785	133-51-92-008
	136-0742-00	B020350		4	.SKT,PL-IN ELEK:MICROCKT,16 PIN LOW PROFIL					00779	640358-1
-60	131-0993-00			3	.BUS,CONDUCTOR:2 WIRE BLACK					00779	850100-01
-61	131-1777-00			1	.LINK,TERM.CONNE:WHITE,3,26 AWG,600V					80009	131-1777-00
-62	131-0707-00			8	..CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOL					22526	47439
-63	352-0166-02			1	..HLDR,TERM CONN:8 WIRE,RED					80009	352-0166-02
-64	131-1270-00			2	.BUS,CONDUCTOR:					80009	131-1270-00
-65	131-0707-00			4	..CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOL					22526	47439
-66	352-0171-00			4	..HLDR,TERM CONN:1 WIRE BLACK					80009	352-0171-00
-67	105-0160-02			1	.EJECTOR,CKT CD:BLUE PLASTIC					80009	105-0160-02
					. ***** (ATTACHING PARTS) *****						
-68	214-1337-00			1	.PIN,SPRING:0.10 OD X 0.25 INCH L,STL					80009	214-1337-00
					. ***** (END ATTACHING PARTS) *****						
-69	131-0608-00			86	.TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD					22526	47357
-70	131-1425-00			1	.CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 3					22526	65521-136
-71	-----			1	CKT BOARD ASSY:VECTOR GENERATOR(SEE A6 REP						
-72	136-0449-00			2	.SKT,PL-IN ELEK:MICROCIRCUIT,25 CONTACT					06776	SB-25-G
-73	136-0694-00	B010100	B020349	1	.SKT,PL-IN ELEK:MICROCIRCUIT,28 CONTACT					73803	CS9002-28
	136-0744-00	B020350		1	.SKT,PL-IN ELEK:MICROCKT,28 PIN,LOW PROFIL					00779	640362-1
-74	-----			1	.TRANSISTOR:(SEE Q335 REPL)						
					. ***** (ATTACHING PARTS) *****						
-75	211-0097-00			1	.SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL					83385	OBD
-76	210-0586-00			1	.NUT,PL,ASSEM WA:4-40 X 0.25,STL					83385	OBD
-77	210-1122-00			1	.WASHER,LOCK:0.12 ID,DISHED,0.025 THK					86928	OBD
					. ***** (END ATTACHING PARTS) *****						
-78	136-0578-00	B010100	B020349	3	.SKT,PL-IN ELEK:MICROCKT,24 PIN,LOW PROFIL					73803	C S9002-24
	136-0743-00	B020350		3	.SKT,PL-IN ELEK:MICROCKT,24 PIN,LOW PROFIL					00779	640361-1
-79	-----			5	.TERM.,SET,PIN:(SEE J4,J26,J34,J50 REPL)						
-80	131-0993-00			2	.BUS,CONDUCTOR:2 WIRE BLACK					00779	850100-01
-81	105-0160-02			1	.EJECTOR,CKT CD:BLUE PLASTIC					80009	105-0160-02
					. ***** (ATTACHING PARTS) *****						
-82	214-1337-00			1	.PIN,SPRING:0.10 OD X 0.25 INCH L,STL					80009	214-1337-00
					. ***** (END ATTACHING PARTS) *****						

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	1 2 3 4 5	Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont					
4-83	-----	B020000	B020379	1		CKT BOARD ASSY:ROM OVERLAY(SEE A14 REPL)		
-84	131-0998-00			4		.BUS BAR:9 TERM,8.132" LONG,CUT TO F	80009	131-0998-00
-85	-----			1		.SQ PIN STRIP:(SEE J2603,J2632,J2655 REPL)		
-86	136-0578-00	B010100	B051169	17		.SKT,PL-IN ELEK:MICROCKT,24 PIN,LOW PROFIL	73803	C S9002-24
	136-0743-00	B051170		17		.SKT,PL-IN ELEK:MICROCKT,24 PIN,LOW PROFIL	00779	640361-1
-87	131-0993-00			8		.BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-88	105-0160-02			1		.EJECTOR,CKT CD:BLUE PLASTIC	80009	105-0160-02
						. ***** (ATTACHING PARTS) *****		
-89	214-1337-00			1		.PIN,SPRING:0.10 OD X 0.25 INCH L,STL	80009	214-1337-00
						. ***** (END ATTACHING PARTS) *****		
-90	-----			1		CKT BOARD ASSY:GPIB OPT 1(SEE A15 REPL)		
-91	131-0608-00			25		.TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD	22526	47357
-92	131-0993-00			2		.BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-92.1	198-3011-00	B051170		1		WIRE SET,ELEC:	80009	198-3011-00
-92.2	131-0707-00	B051170		2		.CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOLD	22526	47439
-92.3	352-0171-00	B051170		2		.HLDR,TERM CONN:1 WIRE BLACK	80009	352-0171-00
-93	131-1425-00			1		.CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 3	22526	65521-136
-94	131-1426-00			1		.CONTACT SET,ELE:R ANGLE,0.250 L,STRIP OF	22526	65524-136
-95	136-0578-00	B010100	B020354	2		.SKT,PL-IN ELEK:MICROCKT,24 PIN,LOW PROFIL	73803	C S9002-24
	136-0743-00	B020355		2		.SKT,PL-IN ELEK:MICROCKT,24 PIN,LOW PROFIL	00779	640361-1
-96	105-0160-02			1		.EJECTOR,CKT CD:BLUE PLASTIC	80009	105-0160-02
						. ***** (ATTACHING PARTS) *****		
-97	214-1337-00			1		.PIN,SPRING:0.10 OD X 0.25 INCH L,STL	80009	214-1337-00
						. ***** (END ATTACHING PARTS) *****		
-98	-----			1		CKT BOARD ASSY:MEDIA ADVANCE(SEE A17 REPL)		
-99	131-0993-00			1		.BUS,CONDUCTOR:2 WIRE BLACK	00779	850100-01
-100	131-1425-00			1		.CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 3	22526	65521-136
-101	131-1857-00			1		.TERM. SET,PIN:36/0.025 SQ PIN,ON 0.1 CTRS	22526	65500136
-102	-----			6		.TRANSISTOR:(SEE Q125,Q155,Q180,Q225,Q255,		
	-----			-		.AND Q280 REPL)		
						. ***** (ATTACHING PARTS) *****		
-103	211-0008-00			6		.SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
-104	210-0586-00			6		.NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
						. ***** (END ATTACHING PARTS) *****		
-105	105-0160-02			1		.EJECTOR,CKT CD:BLUE PLASTIC	80009	105-0160-02
						. ***** (ATTACHING PARTS) *****		
-106	214-1337-00			1		.PIN,SPRING:0.10 OD X 0.25 INCH L,STL	80009	214-1337-00
						. ***** (END ATTACHING PARTS) *****		
-107	198-4112-00			1		WIRE SET,ELEC:	80009	198-4112-00
-108	131-1790-00			44		.CONTACT,ELEC:18-24 AWG,FEMALE,BRASS	27264	08-56-0105
-109	131-2204-00			2		.CONN,PLUG,ELEC:20 CONT,FEMALE	27264	09-50-7201
-110	204-0749-00			1		.CONN BODY,PLUG:CKT CD,5 CONT W/O LKG RAMP	27264	2139-052
-111	131-0707-00			2		.CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOLD	22526	47439
-112	352-0169-00			1		.HLDR,TERM CONN:2 WIRE BLACK	80009	352-0169-00
-113	175-0825-00			AR		.WIRE,ELECTRICAL:2 WIRE RIBBON	80009	175-0825-00
-114	175-0861-00			AR		.WIRE,ELECTRICAL:4 WIRE RIBBON	08261	SS-0422-7(1061)
-115	175-0855-00			AR		.WIRE,ELECTRICAL:10 WIRE RIBBON	08261	SS-1022(1061)OC
-116	131-0621-00			4		.CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOLD	22526	46231
-117	352-0200-05			1		.CONN BODY,PL,EL:4 WIRE GREEN	80009	352-0200-05

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	1 2 3 4 5					Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont									
5-1	426-1486-01			1						FRAME SECT,PLTR:FRONT	80009	426-1486-01
-2	426-1486-00			1						FRAME SECT,PLTR:FRONT & REAR ***** (ATTACHING PARTS) *****	80009	426-1486-00
-3	212-0008-00			10						SCREW,MACHINE:8-32 X 0.500 INCH,PNH STL ***** (END ATTACHING PARTS) *****	83385	OBD
-4	352-0482-00			5						HOLDER,CA,TIE:0.75 SQ,STICKY BACK,PLASTIC (STANDARD ONLY)	06383	ABMM-A
	352-0482-00			6						HOLDER,CA,TIE:0.75 SQ,STICKY BACK,PLASTIC (OPTION 36 ONLY)	06383	ABMM-A
-5	343-0549-00			5						STRAP,TIEDOWN:0.091 W X 3.62 INCH LONG (STANDARD ONLY)	06383	PLT1M
	343-0549-00			6						STRAP,TIEDOWN:0.091 W X 3.62 INCH LONG (OPTION 36 ONLY)	06383	PLT1M
-6	401-0407-00	B010100	B051169	1						PULLEY,FLAT:Y-AXIS	80009	401-0407-00
	401-0513-01	B051170		1						PULLEY,FLAT:BRASS,0.989 OD X 1.675 W ***** (ATTACHING PARTS) *****	80009	401-0513-01
-7	213-0022-00	B010100	B051169	2						SETSCREW:4-40 X 0.188 INCH,HEX SOC S	74445	OBD
	213-0885-00	B051170		2						SETSCREW:6-32 X 0.25,STL BLK OXD ***** (END ATTACHING PARTS) *****	14438	OBD
-7.1	650-0246-01	B051170		1						VIB DAMPER ASSY: ***** (ATTACHING PARTS) *****	80009	650-0246-01
-7.2	211-0255-00	B051170		1						SCREW,MACHINE:4-40 X 1.0 L,HEX SKT,STEEL	000BK	OBD
-7.3	210-0054-00	B051170		1						WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD S ***** (END ATTACHING PARTS) *****	83385	OBD
-8	401-0400-00	B010100	B051169	2						PULLEY,FLAT:X-AXIS	80009	401-0400-00
	401-0514-01	B051170		2						PULLEY,FLAT:AL,0.982 OD X 1.65W ***** (ATTACHING PARTS) *****	80009	401-0514-01
-9	210-0696-00	B010100	B051169	3						EYELET,METALLIC:0.121 OD X 0.187 L,BRS GOL	07707	SE46
-10	213-0022-00	B010100	B051169	4						SETSCREW:4-40 X 0.188 INCH,HEX SOC S	74445	OBD
	213-0885-00	B051170		4						SETSCREW:6-32 X 0.25,STL BLK OXD ***** (END ATTACHING PARTS) *****	14438	OBD
-10.1	650-0246-01	B051170		2						VIB DAMPER ASSY: ***** (ATTACHING PARTS) *****	80009	650-0246-01
-10.2	211-0255-00	B051170		2						SCREW,MACHINE:4-40 X 1.0 L,HEX SKT,STEEL	000BK	OBD
-10.3	210-0054-00	B051170		2						WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD S ***** (END ATTACHING PARTS) *****	83385	OBD
-11	-----			3						MOTOR,DC:(SEE B1005,B1007 & B1009 REPL) ***** (ATTACHING PARTS) *****		
-12	212-0509-00			12						SCREW,MACHINE:10-32 X 0.625 INCH,PNH STL	83385	OBD
-13	220-0759-00			12						NUT,SLEEVE:10-32 X 0.375 HEX,0.58 L	80009	220-0759-00
-14	210-0010-00			12						WASHER,LOCK:INT,0.20 ID X 0.376" OD,STL	78189	1210-00-00-0541C
-15	210-0853-00			12						WASHER,FLAT:0.25 ID X 0.50 OD	86044	OBD
-16	348-0459-00			12						MOUNT RESILIENT:MOTOR,0.25 ID X 0.5 OD ***** (END ATTACHING PARTS) *****	80009	348-0459-00
-17	361-0889-00			3						SPACER,MOTOR:1.25 SQ,1.562 ID,PLASTIC	80009	361-0889-00
-18	386-4197-00			2						SUPPORT,FRAME:MAIN,ALUMINUM ***** (ATTACHING PARTS) *****	80009	386-4197-00
-19	212-0008-00			8						SCREW,MACHINE:8-32 X 0.500 INCH,PNH STL ***** (END ATTACHING PARTS) *****	83385	OBD
-20	426-1483-00	B010100	B041068	1						FR SECT,PLATEN:RIGHT,ALUMINUM	80009	426-1483-00
	426-1483-01	B041069		1						FR SECT,PLATEN:RIGHT,ALUMINUM	80009	426-1483-01
-21	426-1484-00	B010100	B041068	1						FR SECT,PLATEN:LEFT,ALUMINUM	80009	426-1484-00
	426-1484-01	B041069		1						FR SECT,PLATEN:LEFT,ALUMINUM ***** (ATTACHING PARTS) *****	80009	426-1484-01
-22	212-0008-00			8						SCREW,MACHINE:8-32 X 0.500 INCH,PNH STL ***** (END ATTACHING PARTS) *****	83385	OBD
-23	252-0511-00			AR						FELT:GRAY 50 FT X 1.0 X 0.125	14917	8533
-24	386-3903-00			2						SUPPORT,SWITCH: ***** (ATTACHING PARTS) *****	80009	386-3903-00
-25	211-0271-00			4						SCREW,MACHINE:5-40 X 0.312 L,PNH,STEEL ***** (END ATTACHING PARTS) *****	000BK	OBD
-26	386-3902-00			2						PLATE,SW MTG: ***** (ATTACHING PARTS) *****	80009	386-3902-00
-27	211-0008-00			2						SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
-28	210-0803-00			2						WASHER,FLAT:0.15 ID X 0.032 THK,STL CD ***** (END ATTACHING PARTS) *****	12327	OBD

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	Name & Description					Mfr Code	Mfr Part Number
		Eff	Dscont		1	2	3	4	5		
5-29	214-2043-00			2	SPRING,HLCPS:CONICAL,0.20 INCH LONG ***** (ATTACHING PARTS) *****					80009	214-2043-00
-30	213-0204-00			2	THUMBSCREW:4-40 X 0.375,0.312 OD HD,SS ***** (END ATTACHING PARTS) *****					80009	213-0204-00
-31	156-0417-00			2	MICROCIRCUIT,DI:OPTOELECTRONIC ***** (ATTACHING PARTS) *****					03508	H21B1
-32	211-0097-00			4	SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL					83385	OBD
-33	210-0406-00			4	NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS					73743	12161-50
-34	210-0054-00			4	WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD S ***** (END ATTACHING PARTS) *****					83385	OBD
-35	386-3864-00	B010100	B041168	1	SUPPORT,PULLEY:RIGHT FRONT,ALUMINUM					80009	386-3864-00
	386-3864-01	B041169		1	SUPPORT,PULLEY:RIGHT FRONT,ALUMINUM ***** (ATTACHING PARTS) *****					80009	386-3864-01
-36	212-0008-00			5	SCREW,MACHINE:8-32 X 0.500 INCH,PNH STL ***** (END ATTACHING PARTS) *****					83385	OBD
-37	348-0063-00			2	GROMMET,PLASTIC:0.50 INCH DIA					80009	348-0063-00
-38	386-3884-00	B010100	B041168	1	SUPPORT,PULLEY:RIGHT REAR					80009	386-3884-00
	386-3884-01	B041169		1	SUPPORT,PULLEY:RIGHT REAR ***** (ATTACHING PARTS) *****					80009	386-3884-01
-39	212-0008-00	B010100	B051169	5	SCREW,MACHINE:8-32 X 0.500 INCH,PNH STL					83385	OBD
	212-0008-00	B051170		3	SCREW,MACHINE:8-32 X 0.500 INCH,PNH STL ***** (END ATTACHING PARTS) *****					83385	OBD
-39.1	214-3201-00	B051170	B051428	2	HINGE,CABINET:REAR,ALUMINUM					80009	214-3201-00
	214-3201-01	B051429		2	HINGE,CABINET:REAR ***** (ATTACHING PARTS) *****					80009	214-3201-01
-39.2	212-0649-00	B051170		2	SCREW,MACHINE:8-32 X 0.75,HEX HD STL					93907	OBD
-39.3	210-0804-00	B051170		2	WASHER,FLAT:0.17 ID X 0.375 INCH OD,STL ***** (END ATTACHING PARTS) *****					12327	OBD
-39.4	214-3202-00	B051170	B051428	2	COLLAR,HINGE:ALUMINUM					80009	214-3202-00
	214-3202-00	B051755		2	COLLAR,HINGE:ALUMINUM ***** (ATTACHING PARTS) *****					80009	214-3202-00
-39.5	213-0006-00	B051170	B051428	2	SETSCREW:8-32 X 0.188 INCH,HSS STL					50293	28701-98C-3B
	213-0006-00	B051755		2	SETSCREW:8-32 X 0.188 INCH,HSS STL ***** (END ATTACHING PARTS) *****					50293	28701-98C-3B
-40	386-3866-00	B010100	B041168	1	SUPPORT,PULLEY:LEFT REAR,ALUMINUM					80009	386-3866-00
	386-3866-01	B041169		1	SUPPORT,PULLEY:LEFT REAR,ALUMINUM ***** (ATTACHING PARTS) *****					80009	386-3866-01
-41	212-0008-00			4	SCREW,MACHINE:8-32 X 0.500 INCH,PNH STL ***** (END ATTACHING PARTS) *****					83385	OBD
-42	386-3867-00	B010100	B041168	1	SUPPORT,PULLEY:LEFT FRONT,ALUMINUM					80009	386-3867-00
	386-3867-01	B041169		1	SUPPORT,PULLEY:LEFT FRONT,ALUMINUM ***** (ATTACHING PARTS) *****					80009	386-3867-01
-43	212-0008-00			4	SCREW,MACHINE:8-32 X 0.500 INCH,PNH STL ***** (END ATTACHING PARTS) *****					83385	OBD
-44	401-0442-01			8	PULLEY,GROOVE:DELRI,0.372 ID X 1.0 OD ***** (ATTACHING PARTS) *****					80009	401-0442-01
-45	211-0104-00			8	SCREW MACHINE:5-40 X 0.375,PNH,STL,CD,PL					83385	OBD
-46	210-0994-00			8	WASHER,FLAT:0.125 ID X 0.25" OD,STL ***** (END ATTACHING PARTS) *****					86928	5702-201-20
-47	210-1263-00			6	WASHER,KEY:0.156 ID X 0.375 OD,STL ***** (ATTACHING PARTS) *****					80009	210-1263-00
-48	211-0104-00			6	SCREW MACHINE:5-40 X 0.375,PNH,STL,CD,PL					83385	OBD
-49	210-0852-00			6	WASHER,FLAT:0.188 ID X 0.091 THK,STL CD ***** (END ATTACHING PARTS) *****					12327	OBD
-50	351-0545-00			1	GUIDE,PAPER:LOWER,PLASTIC					22670	OBD
-51	351-0562-00			1	GUIDE,PAPER:UPPER					80009	351-0562-00
-52	386-3862-04			1	PLATE,PLATEN:W/CABLE AND CONNECTOR					80009	386-3862-04
-53	175-2299-00			1	.CA ASSY,SP,ELEC:6,26 AWG,25.5 L					80009	175-2299-00
-54	131-0621-00			5	..CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOL					22526	46231
-55	352-0202-01			1	..CONN BODY,PL,EL:6 WIRE BROWN ..(A7P11)					80009	352-0202-01
-56	175-0828-00			AR	..WIRE,ELECTRICAL:5 WIRE RIBBON					08261	SS-0526-710610C
-57	436-0145-00			1	TRAY,CABLE:FLEX STRIP ***** (ATTACHING PARTS) *****					80009	436-0145-00
-58	211-0271-00			2	SCREW,MACHINE:5-40 X 0.312 L,PNH,STEEL					000BK	OBD
-59	210-0005-00	B020200		2	WASHER,LOCK:#6 EXT,0.02 THK,STL ***** (END ATTACHING PARTS) *****					78189	1106-00

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5	Name & Description	Mfr Code	Mfr Part Number
5-60	----			1		CKT BOARD ASSY:TERM(SEE A10 REPL) *****ATTACHING PARTS)*****		
-61	211-0244-00	B010100	B020199	2		SCR,ASSEM WSHR:4-40 X 0.312 INCH,PNH STL	78189	OBD
	211-0012-00	B020200		3		SCREW,MACHINE:4-40 X 0.375,PNH STL CD PL	83385	OBD
-62	361-0122-00			3		SPACER,SLEEVE:0.125 L X 0.12 ID BRS	80009	361-0122-00
-63	210-0586-00			3		NUT,PL,ASSEM WA:4-40 X 0.25,STL *****END ATTACHING PARTS)*****	83385	OBD
-64	131-1425-00			1		.CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 3	22526	65521-136
-65	214-2958-00			AR		WIRE CORD:0.037 DIA,SST W/VINYL & NYL (REQUIRES 18 FEET PER SIDE)	80009	214-2958-00
-66	214-2360-00			2		SLEEVE,CRP LOOP:0.027-0.038 OD X 0.28,CU P	55175	SAVA-702
-67	214-2959-00			AR		WIRE CORD:0.03 DIA,SST W/VINYL COAT (REQUIRES 17 FEET PER SIDE)	000HI	CF-2474
-68	214-2360-00			1		SLEEVE,CRP LOOP:0.027-0.038 OD X 0.28,CU P	55175	SAVA-702
-69	198-4020-00			3		WIRE SET,ELEC:	80009	198-4020-00
-70	175-0827-00			AR		.CABLE,SP,ELEC:4,26 AWG,STRD.PVC JKT,RBN	08261	SS04267(1061)OC
-71	352-0162-09			2		.CONN BODY,PL,EL:4 WIRE WHITE (A7P9)	80009	352-0162-09
	352-0162-08			2		.CONN BODY,PL,EL:4 WIRE GRAY (A7P8)	80009	352-0162-08
	352-0162-07			2		.CONN BODY,PL,EL:4 WIRE VIOLET (A7P7)	80009	352-0162-07
-72	131-0707-00			24		.CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOLD	22526	47439
-73	175-0827-00			AR		.CABLE,SP,ELEC:4,26 AWG,STRD.PVC JKT,RBN	08261	SS04267(1061)OC
-74	352-0162-03			1		.CONN BODY,PL,EL:4 WIRE ORANGE	80009	352-0162-03
-75	131-0707-00			8		.CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOLD	22526	47439
-76	175-0829-00			AR		.WIRE,ELECTRICAL:6 WIRE RIBBON	08261	SS-0626-710610C
-77	352-0164-01			1		.CONN BODY,PL,EL:6 WIRE BROWN	80009	352-0164-01
	352-0164-02			1		.CONN BODY,PL,EL:6 WIRE RED	80009	352-0164-02
-78	131-0965-00			12		.CONTACT,ELEC:0.25" SQ,22-26 AWG WIRE	22526	47792
-79	----			1		MOTOR,DC:(SEE B1011 REPL) (OPTION 36 ONLY) *****ATTACHING PARTS)*****		
-80	210-0586-00			2		NUT,PL,ASSEM WA:4-40 X 0.25,STL (OPTION 36 ONLY)	83385	OBD
-81	211-0012-00			2		SCREW,MACHINE:4-40 X 0.375,PNH STL CD PL (OPTION 36 ONLY) *****END ATTACHING PARTS)*****	83385	OBD
-82	----			1		CKT BOARD ASSY:SENSOR BOARD(SEE A17A2 REPL) (OPTION 36 ONLY) *****ATTACHING PARTS)*****		
-83	211-0198-00			2		SCREW,MACHINE:4-40 X 0.438 PNH,STL,POZ (OPTION 36 ONLY)	77250	OBD
-84	361-0532-00			1		SPACER,SLEEVE:0.22 L X 0.132 ID,BRASS (OPTION 36 ONLY) *****END ATTACHING PARTS)*****	80009	361-0532-00
-85	----			1		CKT BOARD ASSY INCLUDES: .MICROCIRCUIT:(SEE U1 A16A2 REPL) (OPTION 36 ONLY)		
-86	386-4262-00			1		PLATE,CMPNT MTG:OPTOISOLATOR,ALUMINUM (OPTION 36 ONLY)	80009	386-4262-00
-87	211-0007-00			1		SCREW,MACHINE:4-40 X 0.188 INCH,PNH STL (OPTION 36 ONLY) *****END ATTACHING PARTS)*****	83385	OBD
-88	198-4111-00			1		WIRE SET,ELEC: (OPTION 36 ONLY)	80009	198-4111-00
-89	175-0831-00			AR		.WIRE,ELECTRICAL:8 WIRE RIBBON (OPTION 36 ONLY)	08261	SS-0826-710610C
-90	352-0166-00			2		.CONN BODY,PL,EL:8 WIRE BLACK (OPTION 36 ONLY)	80009	352-0166-00
-91	131-0965-00			8		.CONTACT,ELEC:0.25" SQ,22-26 AWG WIRE (OPTION 36 ONLY)	22526	47792
	131-0707-00			8		.CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOLD (OPTION 36 ONLY)	22526	47439

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	Name & Description					Mfr Code	Mfr Part Number
		Eff	Dscont		1	2	3	4	5		
5-92	175-0827-00			AR	.CABLE,SP,ELEC:4,26 AWG,STRD.PVC JKT,RBN					08261	SS04267(1061)0C
	-----			-	.(OPTION 36 ONLY)						
-93	352-0162-00			1	.HLDR,TERM CONN:4 WIRE BLACK					80009	352-0162-00
	-----			-	.(OPTION 36 ONLY) (P110)						
-94	131-0707-00			4	.CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOLD					22526	47439
	-----			-	.(OPTION 36 ONLY)						
-95	381-0399-00			1	BAR,PAPER CTR:ALUMINUM					80009	381-0399-00
	-----			-	(OPTION 36 ONLY)						
-96	220-0595-00			2	NUT,BLOCK:8-32 INCH THREADS					26365	OBD
	-----			-	(OPTION 36 ONLY)						
					***** (ATTACHING PARTS) *****						
-97	211-0507-00			2	SCREW,MACHINE:6-32 X 0.312 INCH,PNH STL					83385	OBD
	-----			-	(OPTION 36 ONLY)						
-98	210-0055-00			2	WASHER,LOCK:SPLIT,0.145 ID X 0.253 OD,S					83385	OBD
	-----			-	(OPTION 36 ONLY)						
-99	210-0407-00			2	NUT,PLAIN,HEX.:6-32 X 0.25 INCH,BRS					73743	3038-0228-402
	-----			-	(OPTION 36 ONLY)						
-100	212-0008-00			2	SCREW,MACHINE:8-32 X 0.500 INCH,PNH STL					83385	OBD
	-----			-	(OPTION 36 ONLY)						
					***** (END ATTACHING PARTS) *****						
-101	214-2843-00			1	FEEDER,PAPER:LEFT					80009	214-2843-00
	-----			-	(OPTION 36 ONLY)						
-102	214-2676-00			1	FEEDER,PAPER:RIGHT					80009	214-2676-00
	-----			-	(OPTION 36 ONLY)						
-103	213-0823-00			2	SCREW,CAP:0.25-28 X 0.375 L,SKT HD,ST					000BK	OBD
	-----			-	(OPTION 36 ONLY)						
-104	384-1498-00			1	SHAFT,PAPER DR:ALUMINUM					80009	384-1498-00
	-----			-	(OPTION 36 ONLY)						
-105	384-1499-00			1	SHAFT,PAPER DR:STAINLESS STEEL					80009	384-1499-00
	-----			-	(OPTION 36 ONLY)						
-106	354-0376-00			2	RING RETAINING: BASIC INT,0.375 HSG ID					79136	N5000-37SMD
	-----			-	(OPTION 36 ONLY)						
-107	358-0606-00			1	BUSHING,SLEEVE:0.119 ID X 0.687 L,AL					80009	358-0606-00
	-----			-	(OPTION 36 ONLY)						
-108	401-0404-00			1	SPROCKET WHEEL:0.25 ID,0.635 OD,18 T,AL					000CW	6A6-18F03108
	-----			-	(OPTION 36 ONLY)						
-109	214-2741-00			1	BELT,POS DRIVE:8.976 L X 1 82W,110 TEETH					000CW	6R6-110018
	-----			-	(OPTION 36 ONLY)						
-110	401-0403-00			1	SPROCKET WHEEL:0.25 ID X 1.546 OD,60 TEETH					000CW	6Z6-60SF02508
	-----			-	(OPTION 36 ONLY)						
-111	401-0409-01			2	BEARING,SLEEVE:0.252 ID X 0.375 L,BRONZE					80009	401-0409-01
	-----			-	(OPTION 36 ONLY)						
-112	354-0390-00			2	RING,RETAINING:0.338 ID X 0.025" THK,STL					79136	5100-37MD
	-----			-	(OPTION 36 ONLY)						
-113	105-0770-00			1	DRUM,CABLE:					80009	105-0770-00
	-----			-	(OPTION 36 ONLY)						
-114	376-0032-00			1	CPLG,SHAFT,RIGI:0.252 & 0.268 ID,AL					80009	376-0032-00
	-----			-	(OPTION 36 ONLY)						
-115	407-2282-00			1	BRACKET,PPR ADJ:SST					80009	407-2282-00
	-----			-	(OPTION 36 ONLY)						
					***** (ATTACHING PARTS) *****						
-116	211-0271-00			1	SCREW,MACHINE:5-40 X 0.312 L,PNH,STEEL					000BK	OBD
	-----			-	(OPTION 36 ONLY)						
					***** (END ATTACHING PARTS) *****						
-117	214-0368-00			1	SPRING,HLCP:0.24 DIA X 0.438 INCH LONG					80009	214-0368-00
	-----			-	(OPTION 36 ONLY)						
-118	211-0272-00			1	SCREW,MACHINE:5-40 X 0.5 L,PNH,STEEL CD					000CY	OBD
	-----			-	(OPTION 36 ONLY)						
-119	220-0854-00			7	NUT,SHOULDERED:10-32,0.437 HEX,STEEL					80009	220-0854-00
	-----			-	(OPTION 36 ONLY)						
-120	386-4196-00			1	SUPPORT,FRAME:ALUMINUM					80009	386-4196-00
	-----			-	(OPTION 36 ONLY)						
-121	212-0008-00			1	SCREW,MACHINE:8-32 X 0.500 INCH,PNH STL					83385	OBD
	-----			-	(OPTION 36 ONLY)						
-122	644-0182-00			1	CLUTCH ASSY:					80009	644-0182-00
	-----			-	(OPTION 36 ONLY)						
-123	401-0467-00			1	BRG,PAPER ROLL:					80009	401-0467-00
	-----			-	(OPTION 36 ONLY)						

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty						Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont		1	2	3	4	5			
5-124	213-0262-00			4						THUMBSCREW:8-32 THD X 0.45" L KNURLED	80009	213-0262-00
-125	354-0393-00			4						RING,RETAINING:	79136	555-15MD
-126	134-0138-00			2						BUTTON,PLUG:SNAP-IN	77132	SS48172
-127	200-2232-00	B010100	B051338	2						COVER,HOLE:LEFT	80009	200-2232-00
	644-0170-01	B051339		2						CABINET ASSY:	80009	644-0170-01
	252-0571-00	B051339		AR						.NEOPRENE EXTR:CHAN,0.234 X 0.156	85471	DIE#1353
	200-2232-00			2						.COVER,HOLE:LEFT	80009	200-2232-00
-128	343-0721-00			1						RTNR,PAPER ROLL:DELFIN,BLACK	80009	343-0721-00
	-----			-						(OPTION 36 ONLY)		
-129	401-0399-00			1						BRG,PAPER ROLL:	80009	401-0399-00
	-----			-						(OPTION 36 ONLY)		
-130	214-0428-00			3						SPRING,HANDLE:0.375 OD X 0.4 L,CLOSED	80009	214-0428-00
	-----			-						(OPTION 36 ONLY)		
-131	354-0376-00			1						RING RETAINING:BASIC INT,0.375 HSG ID	79136	N5000-37SMD
	-----			-						(OPTION 36 ONLY)		

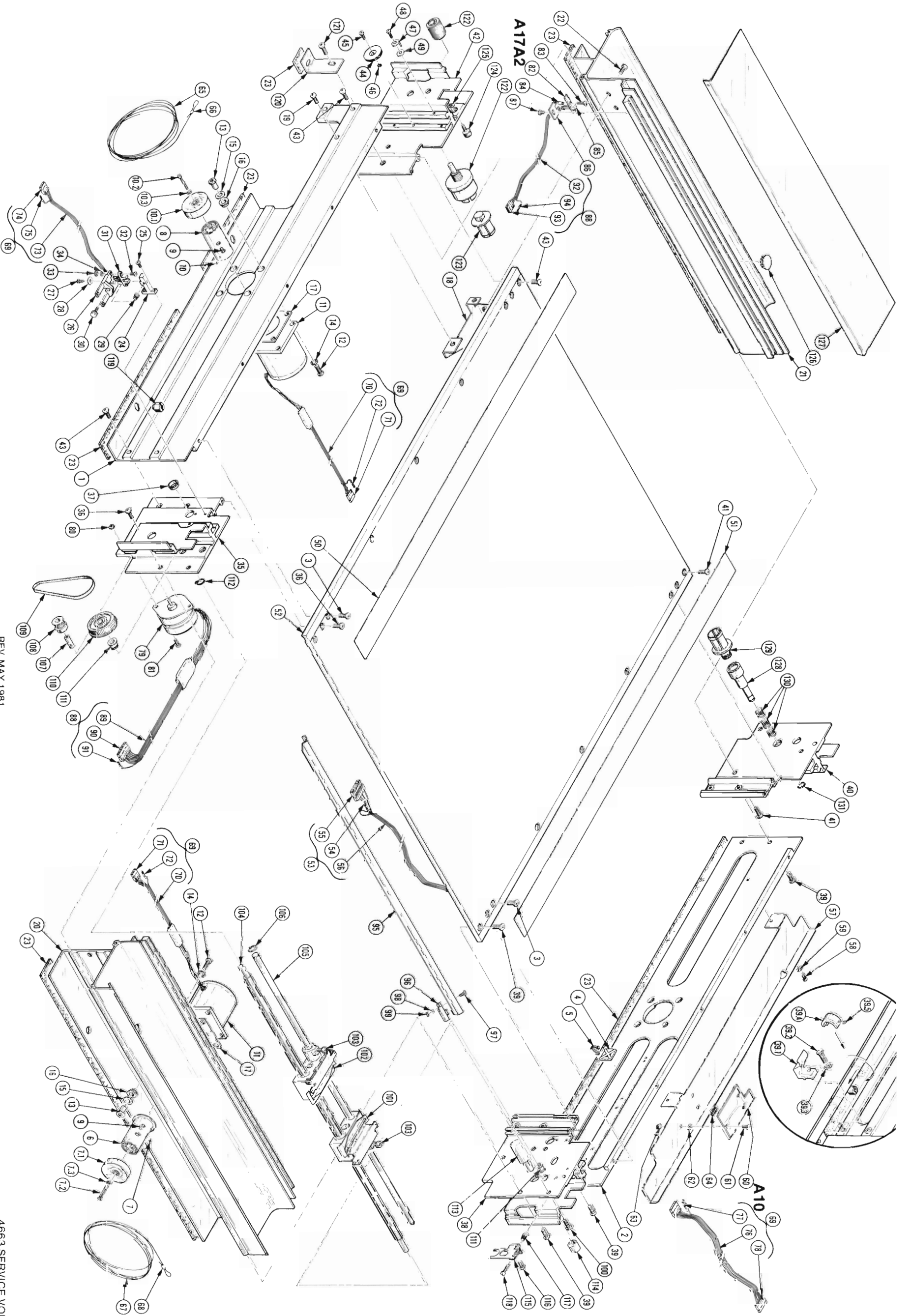


FIG. 5 PLATEN & FRAMES

REV. MAY 1981

4663 SERVICE VOL. 2

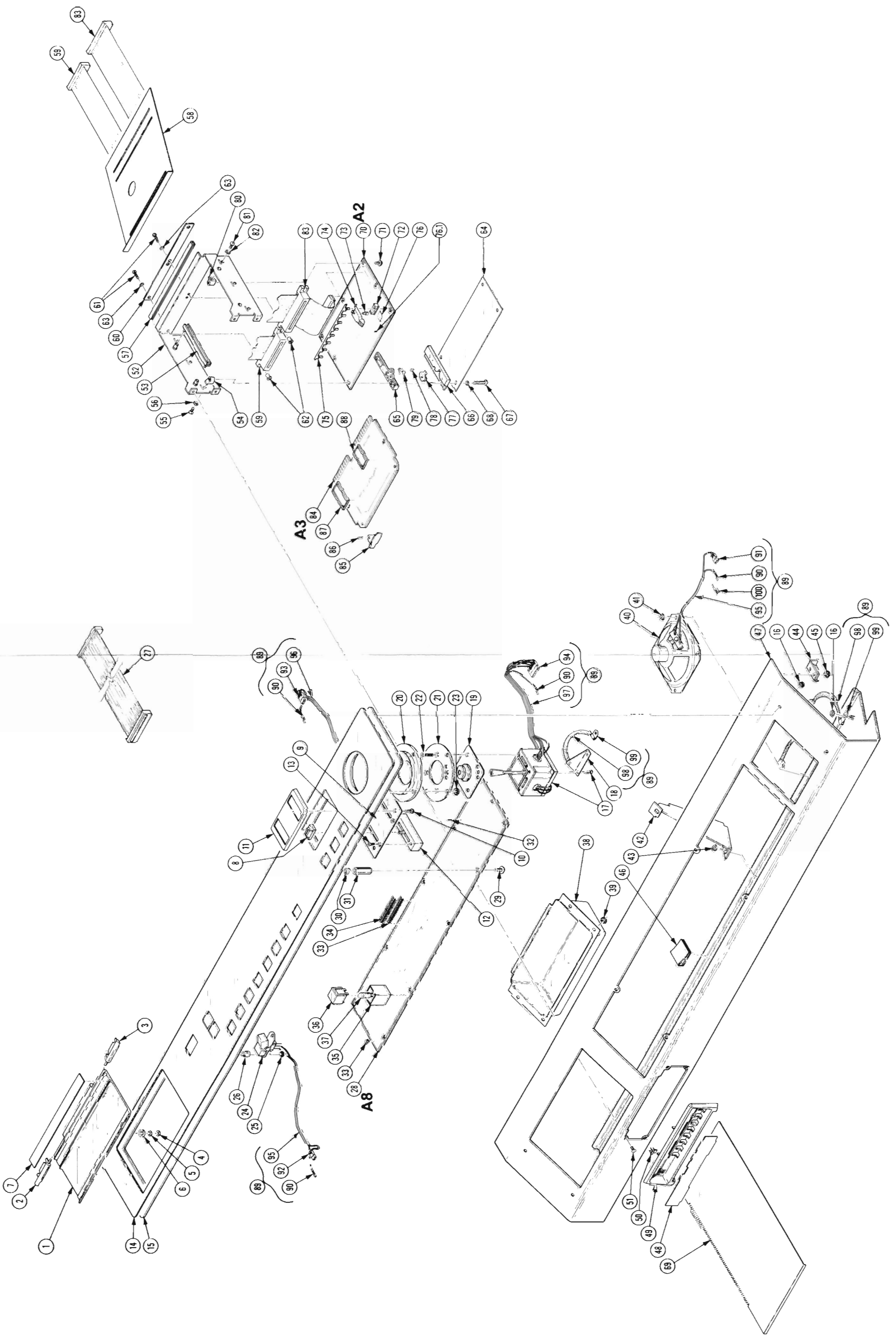


FIG. 6 FRONT PANEL & PARAMETER ENTRY

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	1 2 3 4 5	Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont					
6-1	200-2261-00			1		COV,STOR COMPT: ***** (ATTACHING PARTS)*****	80009	200-2261-00
-2	214-2808-01			1		HINGE,COVER:STORAGE COMPT,LEFT,W/PIN	80009	214-2808-01
-3	214-2809-01			1		HINGE,COVER:STORAGE COMPT,RIGHT,W/PIN	80009	214-2809-01
-4	210-0407-00			4		NUT,PLAIN,HEX.:6-32 X 0.25 INCH,BRS	73743	3038-0228-402
-5	210-0055-00			4		WASHER,LOCK:SPLIT,0.145 ID X 0.253 OD,S	83385	OBD
-6	210-0803-00			2		WASHER,FLAT:0.15 ID X 0.032 THK,STL CD ***** (END ATTACHING PARTS)*****	12327	OBD
-7	334-3435-00			1		MARKER,IDENT:MARKED TEKTRONIX	80009	334-3435-00
-8	366-1769-00			2		KNOB:GRAY,PEN PRESS CONT,0.7 OD	80009	366-1769-00
-9	386-4046-00			1		PLATE,PEN PRESS:2.2 W X 3.556 L,AL ***** (ATTACHING PARTS)*****	80009	386-4046-00
-10	213-0254-00	B010100	B020189	4		SCREW,TPG,TF:2-32 X 0.250,100 DEG,FLH	45722	OBD
	213-0055-00	B020190		4		SCR,TPG,THD FOR:2-32 X 0.188 INCH,PNH STL	93907	OBD
-11	331-0450-00			1		SCALE,PEN PRESS:GRAY,3.1 L X 1.8,PLASTIC ***** (END ATTACHING PARTS)*****	80009	331-0450-00
-12	-----			2		RES,VAR,NONWW:(SEE R1001,R1003 REPL) ***** (ATTACHING PARTS)*****		
-13	213-0107-00			4		SCR,TPG,THD FOR:4-40 X 0.25 INCH,FLH STL ***** (END ATTACHING PARTS)*****	93907	OBD
-14	334-3386-00	B010100	B051499	1		OVERLAY,FR PNL:	80009	334-3386-00
-15	333-2454-00	B000100	B010193	1		PANEL FRONT:	80009	333-2454-01
	333-2454-02	B010194	B051499	1		PANEL,FRONT:	80009	333-2454-02
	333-2454-03	B051500		1		PANEL,FRONT: ***** (ATTACHING PARTS)*****	80009	333-2454-03
-16	210-0457-00			8		NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL ***** (END ATTACHING PARTS)*****	83385	OBD
-17	-----			1		JOYSTICK:2 AXIS GIMBLE(SEE A1005 REPL)		
-18	131-2400-00			1		CONTACT ELEC:GROUNDING,CU BE WIRE	80009	131-2400-00
-19	348-0474-00			1		BOOT,DUMR SEAL:JOY STICK	80009	348-0474-00
-20	343-0755-00			1		RTNR,JOYSTICK:POLYCARBONATE,GRAY	80009	343-0755-00
-21	343-0756-00			1		RETAINER,COVER:ALUMINUM ***** (ATTACHING PARTS)*****	80009	343-0756-00
-22	213-0811-00			4		SCREW,TPG,TF:4-24 X 0.625,TYPE B,FLH,ST,	000EP	OBD
-23	210-0457-00			4		NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL ***** (END ATTACHING PARTS)*****	83385	OBD
-24	-----			1		SWITCH,ROCKER:SPST(SEE S1 REPL) ***** (ATTACHING PARTS)*****		
-25	210-0586-00			2		NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
-26	129-0222-00	B010100	B051499	2		SPACER,POST:0.27 L,W/4-40 THD THRU,PLST ***** (END ATTACHING PARTS)*****	80009	129-0222-00
-27	175-2266-00			1		CA ASSY,SP,ELEC:40,28 AWG,19.75 L (A8P41,A6P4)	22526	OBD
-28	-----			1		CKT BD ASSY:FRONT PANEL SWITCH(SEE A8 REPL) ***** (ATTACHING PARTS)*****		
-29	211-0658-00			10		SCR,ASSEM WSHR:6-32 X 0.312 L,PNH,STL	78189	OBD
-30	166-0029-00	B010100	B051909	10		SPACER,SLEEVE:0.125 L X 0.18 ID,AL	80009	166-0029-00
-31	385-0122-00	B010100	B051909	10		SPACER,POST:0.937 L W/6-32 THD EA END,A	80009	385-0122-00
	361-0278-00	B051910		10		SPACER,POST:1.06 L W/6-32 THD EA END,AL ***** (END ATTACHING PARTS)*****	80009	361-0278-00
-32	-----			-		CKT BOARD ASSY INCLUDES:		
-33	-----			6		.TERM.,PIN:(SEE J79,J94 REPL)		
-34	-----			1		.TERM.,PIN:(SEE J41,J99,J199,J201 REPL)		
-35	-----			1		.TERM.,PIN:(SEE J61 REPL)		
-36	366-1822-00			13		.SWITCH,PUSH:(SEE S15 THRU S95 REPL)		
-37	-----			13		.PUSH BUTTON:WHITE,0.18 H	80009	366-1822-00
	-----			-		.LAMP,INCND:(SEE DS15,DS105,DS211,DS215, .DS225,DS231,DS235,DS241,DS245,DS255, .DS291,DS295 REPL)		
-38	436-0148-00			1		COMPT,STORAGE: ***** (ATTACHING PARTS)*****	80009	436-0148-00
-39	210-0457-00			4		NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL ***** (END ATTACHING PARTS)*****	83385	OBD
-40	-----			1		LOUDSPEAKER,PM:(SEE LS1003 REPL) ***** (ATTACHING PARTS)*****		
-41	210-0586-00			4		NUT,PL,ASSEM WA:4-40 X 0.25,STL ***** (END ATTACHING PARTS)*****	83385	OBD

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	Name & Description					Mfr Code	Mfr Part Number
		Eff	Dscont		1	2	3	4	5		
6-	124-0377-00	B010100	B020229	1	STRIP GROUND: DIGITAL PLOTTER ***** (ATTACHING PARTS) *****					80009	124-0377-00
	220-0410-00	B010100	B020229	1	NUT, EXTENDED WA: 10-32 X 0.375 INCH, STL ***** (END ATTACHING PARTS) *****					83385	OBD
-42	386-4202-00			2	SPRT, SUBPANEL: ALUMINUM ***** (ATTACHING PARTS) *****					80009	386-4202-00
-43	210-0457-00			4	NUT, PL, ASSEM WA: 6-32 X 0.312, STL CD PL ***** (END ATTACHING PARTS) *****					83385	OBD
-44	407-2139-00			2	BRACKET, ANGLE: PANEL LATCH, ALUMINUM ***** (ATTACHING PARTS) *****					80009	407-2139-00
-45	210-0457-00			4	NUT, PL, ASSEM WA: 6-32 X 0.312, STL CD PL ***** (END ATTACHING PARTS) *****					83385	OBD
-46	343-0775-00			1	CLIP, SPR TNSN:					76381	3484-1000
-47	386-3932-00	B010100	B020709	1	SUBPANEL, FRONT:					80009	386-3932-00
	386-3932-01	B020710		1	SUBPANEL, FRONT:					80009	386-3932-01
-48	386-3941-00			1	PANEL, BLANK: PARAMETER ENTRY					80009	386-3941-00
-49	124-0352-00			1	TRIM FRONT: PARAMETER ENTRY					80009	124-0352-00
-50	378-0110-00			1	DIFFUSER, LIGHT: CLEAR					80009	378-0110-00
	614-0143-00			1	FRONT PNL ASSY: PARAMETER ENTRY ***** (ATTACHING PARTS) *****					80009	614-0143-00
-51	213-0107-00			4	SCR, TPG, THD FOR: 4-40 X 0.25 INCH, FLH STL ***** (END ATTACHING PARTS) *****					93907	OBD
	-----			-	FRONT PNL ASSY INCLUDES:						
-52	426-1526-00			1	.FRAME, CKT BOARD: PARAMETER					80009	426-1526-00
-53	351-0303-00			2	.GUIDE, CKT CARD: 3 INCH LONG, PLASTIC					80009	351-0303-00
-54	220-0547-01			4	.NUT, BLOCK: 0.38 X 0.26 X 0.282 (2) 4-40 ***** (ATTACHING PARTS) *****					000FW	OBD
-55	211-0008-00			4	.SCREW, MACHINE: 4-40 X 0.250, PNH, STL, CD PL					83385	OBD
-56	210-0004-00			4	.WASHER, LOCK: #4 INTL, 0.015 THK, STL CD PL ***** (END ATTACHING PARTS) *****					000BK	OBD
-57	252-0571-00			AR	.NEOPRENE EXTR: CHAN, 0.234 X 0.156					85471	DIE#1353
-58	351-0613-00			1	.GUIDE, CABLE: PLASTIC					80009	351-0613-00
-59	175-2258-00			1	.CA ASSY, SP, ELEC: 34, 28 AWG, 15.0 L					000EO	ZCA-08196
-60	343-0819-00			1	.RETAINER, CRT: REAR, AL ***** (ATTACHING PARTS) *****					80009	343-0819-00
-61	211-0185-00			4	.SCREW, MACHINE: 2-56 X 0.438", PNH, STL					07111	OBD
-62	220-0432-00			4	.NUT, PLAIN, HEX: 2-56 X 0.187 HEX, BRS CD PL					80009	220-0432-00
-63	210-0053-00			4	.WASHER, LOCK: INTL, 0.092 ID X 0.175" OD, S ***** (END ATTACHING PARTS) *****					83385	OBD
-64	361-0977-00			1	.SPACER, PLATE: 0.04 X 2.5 X 5.943, AL					80009	361-0977-00
-65	380-0538-00			1	.HOUSING, INDEX: TOP, ABS					80009	380-0538-00
-66	380-0539-00			1	.HOUSING, INDEX: BOTTOM, ABS ***** (ATTACHING PARTS) *****					80009	380-0539-00
-67	211-0017-00			2	.SCREW, MACHINE: 4-40 X 0.375 INCH, PNH STL					83385	OBD
-68	210-0054-00			2	.WASHER, LOCK: SPLIT, 0.118 ID X 0.212" OD, S ***** (END ATTACHING PARTS) *****					83385	OBD
-69	334-3368-00	B010100	B051121	1	.CARD, PRMTR ENTR: MARKED W/OPERATORS INFO					80009	334-3368-00
	334-3368-01	B051122		1	.CARD, PRMTR ENTR: MARKED W/OPERATORS INFO					80009	334-3368-01
-70	-----			1	.CKT BOARD ASSY: PARAMETER ENTRY (SEE A2 REP) ***** (ATTACHING PARTS) *****						
-71	211-0244-00			2	.SCR, ASSEM WSHR: 4-40 X 0.312 INCH, PNH STL ***** (END ATTACHING PARTS) *****					78189	OBD
-72	352-0510-00			8	.HOLDER, SWITCH:					80009	352-0510-00
-73	105-0776-00			8	.ACTUATOR, SWITCH: ***** (ATTACHING PARTS) *****					80009	105-0776-00
-74	366-1756-00			8	.PUSH BUTTON: RED, 0.28 X 0.125 X 1.17					80009	366-1756-00
-75	407-2127-00			1	.BRACKET, SW Hldr: ABS ***** (END ATTACHING PARTS) *****					80009	407-2127-00
-76	131-2202-00			8	.CONTACT, ELEC: BERYLLIUM COPPER					52961	ENG#8000
-76.1	136-0252-04	B010100	B010193	18	.SOCKET, PIN TERM: U/W 0.016-0.018 DIA PINS					22526	75060-007
-77	378-0111-00			1	.LENS, LIGHT: CLEAR					80009	378-0111-00
-78	214-1127-00			1	.ROLLER, DETENT: 0.125 DIA X 0.125, SST					80009	214-1127-00
-79	214-2762-00			1	.SPRING, DETENT: BERYLLIUM COPPER					80009	214-2762-00

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	1	2	3	4	5	Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont									
6-80	220-0547-01			2						..NUT,BLOCK:0.38 X 0.26 X 0.282 (2)4-40 .. ***** (ATTACHING PARTS)*****	000FW	OBD
-81	211-0008-00			2						..SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL	83385	OBD
-82	210-0004-00			2						..WASHER,LOCK:#4 INTL,0.015 THK,STL CD PL .. ***** (END ATTACHING PARTS)*****	000BK	OBD
	380-0538-00			1						..HOUSING,INDEX:TOP,ABS	80009	380-0538-00
	380-0539-00			1						..HOUSING,INDEX:BOTTOM,ABS .. ***** (ATTACHING PARTS)*****	80009	380-0539-00
	211-0017-00			2						..SCREW,MACHINE:4-40 X 0.375 INCH,PNH STL	83385	OBD
	210-0054-00			2						..WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD S .. ***** (END ATTACHING PARTS)*****	83385	OBD
-83	175-2259-00			1						..CA ASSY,SP,ELEC:40,28 AWG,17.0 L	000EO	ZCA-08172
-84	-----			1						CKT BOARD ASSY:(SEE A3 REPL)		
-85	105-0160-02			2						.EJECTOR,CKT CD:BLUE PLASTIC .. ***** (ATTACHING PARTS)*****	80009	105-0160-02
-86	214-1337-00			2						.PIN,SPRING:0.10 OD X 0.25 INCH L,STL .. ***** (END ATTACHING PARTS)*****	80009	214-1337-00
-87	136-0694-00	B010100	B020354	2						.SKT,PL-IN ELEK:MICROCIRCUIT,28 CONTACT	73803	CS9002-28
	136-0744-00	B020355		2						.SKT,PL-IN ELEK:MICROCKT,28 PIN,LOW PROFIL	00779	640362-1
-88	136-0578-00	B010100	B020354	2						.SKT,PL-IN ELEK:MICROCKT,24 PIN,LOW PROFIL	73803	C S9002-24
	136-0743-00	B020355		2						.SKT,PL-IN ELEK:MICROCKT,24 PIN,LOW PROFIL	00779	640361-1
-89	198-4110-00			1						WIRE SET,ELEC:	80009	198-4110-00
-90	131-0707-00			16						.CONNECTOR,TERM:22-26 AWG,BRS & CU BE GOLD	22526	47439
-91	352-0169-00			1						.HLDR,TERM CONN:2 WIRE BLACK	80009	352-0169-00
-92	352-0169-02			1						.CONN BODY,PL,EL:2 WIRE RED	80009	352-0169-00
-93	352-0161-00			2						.HLDR,TERM CONN:3 WIRE,BLACK	80009	352-0161-00
-94	352-0164-09			1						.CONN BODY,PL,EL:6 WIRE WHITE	80009	352-0164-09
-95	175-0863-00			AR						.WIRE,ELECTRICAL:2 WIRE RIBBON	08261	SS-0222-7(1061)
-96	175-0826-00			AR						.WIRE,ELECTRICAL:3 WIRE RIBBON	80009	175-0826-00
-97	175-0829-00			AR						.WIRE,ELECTRICAL:6 WIRE RIBBON	08261	SS-0626-710610C
-98	176-0047-00			AR						.BRAID,WIRE:0.156 W,FLAT	70903	8660
-99	210-0335-00			1						.TERMINAL,LUG:#10 COPPER,TIN PLATED	00779	36271
-100	131-0861-00	B010100	B010119	2						.TERM,QIK DISC:16-20 AWG,0.22 W X 0.02 THK	00779	42617-2

REPLACEABLE MECHANICAL PARTS

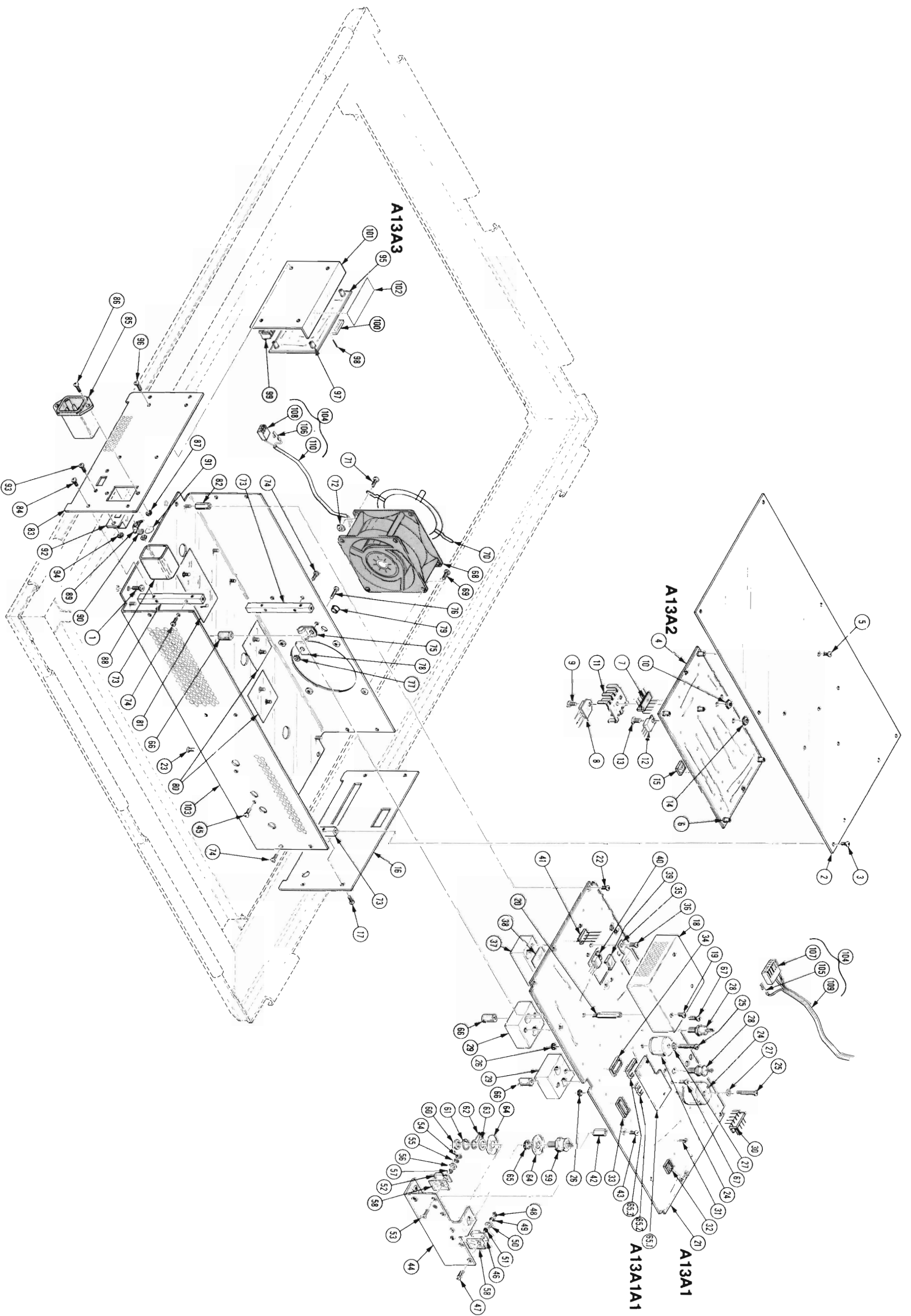
Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5	Name & Description	Mfr Code	Mfr Part Number
7-	620-0275-01			1		POWER SPLY ASSY: ***** (ATTACHING PARTS) *****	80009	620-0275-01
-1	212-0004-00			4		SCREW, MACHINE: 8-32 X 0.312 INCH, PNH STL ***** (END ATTACHING PARTS) *****	83385	OBD
-2	200-2187-00			1		.COVER, PWR SPLY: TOP ***** (ATTACHING PARTS) *****	80009	200-2187-00
-3	211-0097-00			6		.SCREW, MACHINE: 4-40 X 0.312 INCH, PNH STL ***** (END ATTACHING PARTS) *****	83385	OBD
-4	-----			1		.CKT BOARD ASSY: 60W AUX (SEE A13A2 REPL) ***** (ATTACHING PARTS) *****		
-5	211-0097-00			5		.SCREW, MACHINE: 4-40 X 0.312 INCH, PNH STL ***** (END ATTACHING PARTS) *****	83385	OBD
-6	129-0160-00			5		.CKT BOARD ASSY INCLUDES: ..SPACER POST: 0.25 L X 0.2188 TO MT SEAT	80009	129-0160-00
-7	131-2182-00			2		..TERM. SET, PIN: 1 X 5, 0.156 SPACING, RTANG	27264	09-47-1052
-8	-----			2		..TRANSISTOR: (SEE Q221, Q231 REPL) .. ***** (ATTACHING PARTS) *****		
-9	211-0504-00			2		..SCREW, MACHINE: 6-32 X 0.25 INCH, PNH STL	83385	OBD
-10	210-0457-00			2		..NUT, PL, ASSEM WA: 6-32 X 0.312, STL CD PL .. ***** (END ATTACHING PARTS) *****	83385	OBD
-11	214-1914-00			1		..HEAT SINK, ELEC:	98978	PB1-ZCB
-12	-----			1		..TRANSISTOR: (SEE Q131 REPL) .. ***** (ATTACHING PARTS) *****		
-13	211-0504-00			1		..SCREW, MACHINE: 6-32 X 0.25 INCH, PNH STL	83385	OBD
-14	210-0457-00			1		..NUT, PL, ASSEM WA: 6-32 X 0.312, STL CD PL .. ***** (END ATTACHING PARTS) *****	83385	OBD
-15	136-0514-00			1		..SKT, PL-IN ELEC: MICRO CIRCUIT, 8 DIP	73803	CS9002-8
-16	200-2186-00			1		.COVER, PWR, SPLY: END ***** (ATTACHING PARTS) *****	80009	200-2186-00
-17	211-0097-00			4		.SCREW, MACHINE: 4-40 X 0.312 INCH, PNH STL ***** (END ATTACHING PARTS) *****	83385	OBD
-18	200-2185-00			1		.COVER, XSTR: ***** (ATTACHING PARTS) *****	80009	200-2185-00
-19	211-0097-00			3		.SCREW, MACHINE: 4-40 X 0.312 INCH, PNH STL ***** (END ATTACHING PARTS) *****	83385	OBD
-20	129-0457-00			3		.SPACER, POST: 1.07L, W/4-40 TAP 1 END	80009	129-0457-00
-21	-----			1		.CKT BOARD ASSY: (SEE A13A1 REPL) .. ***** (ATTACHING PARTS) *****		
-22	211-0097-00			7		.SCREW, MACHINE: 4-40 X 0.312 INCH, PNH STL	83385	OBD
-23	211-0038-00			3		.SCREW, MACHINE: 4-40 X 0.312, FLH, 100 DEG ***** (END ATTACHING PARTS) *****	83385	OBD
-24	-----			3		.CKT BOARD ASSY INCLUDES: ..COIL: (SEE L211, L231, L232 REPL) .. ***** (ATTACHING PARTS) *****		
-25	211-0019-00			3		..SCREW, MACHINE: 4-40 X 1.0 INCH, PNH STL	83385	OBD
-26	210-0586-00			2		..NUT, PL, ASSEM WA: 4-40 X 0.25, STL	83385	OBD
	210-0406-00			1		..NUT, PLAIN, HEX: 4-40 X 0.188 INCH, BRS .. (L231 ONLY)	73743	12161-50
-27	210-0851-00			2		..WASHER, FLAT: 0.119 ID X 0.375 INCH OD, ST	12327	OBD
	210-0054-00			1		..WASHER, LOCK: SPLIT, 0.118 ID X 0.212" OD S .. (L231 ONLY) .. ***** (END ATTACHING PARTS) *****	83385	OBD
-28	-----			4		..DIODE: (SEE CR221, CR321, CR333, CR431 REPL) .. ***** (ATTACHING PARTS) *****		
-29	361-0909-00			2		..SPACER, PLATE: 0.562 X 1.3 X 1.25 AL ***** (END ATTACHING PARTS) *****	80009	361-0909-00
-30	-----			4		..CONNECTOR: (SEE P101 REPL)		
-31	-----	B010100	B051049	17		..TEST POINT: (SEE TP1, 2, 11, 21, 22, 23, 31, 32 .. TP41, 101, 102, 111, 121, 141, 201, 221 REPL)		
	-----	B051050		16		..TEST POINT: (SEE TP1, 2, 11, 21, 22, 23, 31, 32 .. TP41, 101, 102, 111, 121, 141, 201, 221 REPL)		
-32	136-0514-00			6		..SKT, PL-IN ELEC: MICRO CIRCUIT, 8 DIP	73803	CS9002-8
-33	136-0260-02			1		..SKT, PL-IN ELEC: MICRO CIRCUIT, 16 DIP, LOW C	71785	133-51-92-008

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	Name & Description					Mfr Code	Mfr Part Number
		Eff	Dscont		1	2	3	4	5		
7-34	136-0269-02			3	..SKT,PL-IN ELEK:MICROCIRCUIT,14 DIP,LOW C					73803	CS9002-14
-35	386-3928-00			1	..SUPPORT,XSTR: .. ***** (ATTACHING PARTS) *****					80009	386-3928-00
-36	211-0008-00			1	..SCREW,MACHINE:4-40 X 0.250,PNH,STL,CD PL					83385	OBD
-37	361-0908-00			1	..SPACER,PLATE:0.562 X 2.4 X 1.0 AL .. ***** (END ATTACHING PARTS) *****					80009	361-0908-00
-38	342-0425-00			1	..INSULATOR,FILM:TRANSISTOR,PLASTIC					80009	342-0425-00
-39	342-0389-00			2	..INSULATOR,PLATE:TRANSISTOR,PLASTIC					80009	342-0389-00
-40	-----			2	..TRANSISTOR:(SEE Q261,Q271 REPL)						
-41	-----			2	..CONNECTOR:(SEE J281,J282 REPL)						
-42	129-0717-00			2	..SPACER POST:0.525 L,W/4-40 THD THRU,AL .. ***** (ATTACHING PARTS) *****					80009	129-0717-00
-43	211-0097-00			2	..SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL .. ***** (END ATTACHING PARTS) *****					83385	OBD
-44	407-2126-00			1	..BRACKET,XSTR:ALUMINUM .. ***** (ATTACHING PARTS) *****					80009	407-2126-00
-45	211-0097-00			2	..SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL .. ***** (END ATTACHING PARTS) *****					83385	OBD
-46	-----			3	..TRANSISTOR:8SEE Q2,Q11,Q13 REPL .. ***** (ATTACHING PARTS) *****						
-47	211-0025-00			3	..SCREW,MACHINE:4-40 X 0.375 100 DEG,FLH S					83385	OBD
-48	210-0406-00			3	..NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS					73743	12161-50
-49	210-0054-00			3	..WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD S					83385	OBD
-50	210-0994-00			3	..WASHER,FLAT:0.125 ID X 0.25" OD,STL					86928	5702-201-20
-51	210-1178-00	B010100	B051049	3	..WASHER,SHLDR:U/W T0-220 TRANSISTOR					49671	DF137A
	210-1171-00	B051050		3	..WSHR,SHOULDERED:0.116 ID X 0.138 INCH OD .. ***** (END ATTACHING PARTS) *****					52905	A7148516P2
-52	-----			1	..MICROCIRCUIT:(SEE U31 REPL) .. ***** (ATTACHING PARTS) *****						
-53	211-0025-00			1	..SCREW,MACHINE:4-40 X 0.375 100 DEG,FLH S					83385	OBD
-54	210-0406-00			1	..NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS					73743	12161-50
-55	210-0054-00			1	..WASHER,LOCK:SPLIT,0.118 ID X 0.212"OD S					83385	OBD
-56	210-0994-00			1	..WASHER,FLAT:0.125 ID X 0.25" OD,STL					86928	5702-201-20
-57	210-1178-00	B010100	B051049	1	..WASHER,SHLDR:U/W T0-220 TRANSISTOR					49671	DF137A
	210-1171-00	B051050		1	..WSHR,SHOULDERED:0.116 ID X 0.138 INCH OD .. ***** (END ATTACHING PARTS) *****					52905	A7148516P2
-58	342-0203-00			4	..INSULATOR,PLATE:XSTR,0.675 X 0.625 X 0.0					18722	DF103C
-59	-----			1	..TRANSISTOR:(SEE Q1001 REPL) .. ***** (ATTACHING PARTS) *****						
-60	210-0455-00			1	..NUT,PLAIN,HEX.:0.25-28 X 0.375 INCH,BRAS					73743	3089-402
-61	210-0046-00			1	..WASHER,LOCK:0.261 ID,INTL,0.018 THK,BRS					78189	1214-05-00-0541C
-62	210-0269-00			1	..TERMINAL,LUG:NON LOCKING,0.257" MTG HOLE					78584	905-020
-63	210-0905-00			1	..WASHER,FLAT:0.256 ID X 0.05 THK,BRS					83385	OBD
-64	342-0044-00			2	..INSULATOR,WSHR:0.26 ID X 8.55 INCH OD,MI					08530	OBD
-65	210-1115-00			1	..WASHER,FLAT:0.27 ID X 0.062 THK,0.37 OD					86445	OBD
-65.1	-----	B051050		1	..CKT BOARD ASSY:SOFT START ..(SEE A13A1 A1 REPL)						
-65.2	131-2620-00			1	..CONN,RCPT,ELEC:HEADER,ADPTR,2 X 8,0.1 C					91506	616AG1
-65.3	131-2619-00			1	..CONN,RCPT,ELEC:HEADER,ADPTR,2 X 7,0.1 C .. ***** (END ATTACHING PARTS) *****					91506	614AG1
-66	385-0012-00			7	..SPACER,POST:0.312 OD,0.562 L W/8-32 THD .. ***** (ATTACHING PARTS) *****					80009	385-0012-00
-67	211-0097-00			6	..SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL					83385	OBD
-68	-----			1	..FAN:(SEE B1001 REPL) .. ***** (ATTACHING PARTS) *****						
-69	211-0510-00			4	..SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL .. ***** (END ATTACHING PARTS) *****					83385	OBD
-70	378-0780-00			1	..GRILLE,FAN:3.182 X 3.182 INCH .. ***** (ATTACHING PARTS) *****					80009	378-0780-00
-71	211-0510-00			4	..SCREW,MACHINE:6-32 X 0.375,PNH,STL,CD PL					83385	OBD
-72	210-0457-00			4	..NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL .. ***** (END ATTACHING PARTS) *****					83385	OBD
-73	220-0821-00			6	..NUT BAR:3.24L,W/(4)6-32 & (1)4-40 T .. ***** (ATTACHING PARTS) *****					80009	220-0821-00
-74	211-0097-00			12	..SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL .. ***** (END ATTACHING PARTS) *****					83385	OBD

REPLACEABLE MECHANICAL PARTS

Fig. & Index No.	Tektronix Part No.	Serial/Model No.		Qty	1	2	3	4	5	Name & Description	Mfr Code	Mfr Part Number
		Eff	Dscont									
7-75	343-0003-00			1						.CLAMP,LOOP:0.25 ID,PLASTIC .....(ATTACHING PARTS).....	95987	1-4-6B
-76	211-0198-00			1						.SCREW,MACHINE:4-40 X 0.438 PNH,STL,POZ	77250	OBD
-77	210-0586-00			1						.NUT,PL,ASSEM WA:4-40 X 0.25,STL	83385	OBD
-78	210-0863-00			1						.WSHR,LOOP CLAMP:0.187 ID U/W 0.5 W CLP,ST .....(END ATTACHING PARTS).....	95987	C191
-79	348-0055-00			1						.GROMMET,PLASTIC:0.25 INCH DIA	80009	348-0055-00
-80	342-0426-00			2						.INSULATOR,FILM:HEAT SINK,PLASTIC	80009	342-0426-00
-81	342-0424-00			1						.INSULATOR,FILM:HEAT SINK,PLASTIC	55285	OBD
-82	129-0697-00			7						.SPACER POST:0.562 L,W/4-40 THRU THD,AL	80009	129-0697-00
-83	200-2188-00			1						.COVER,PWR SPLY:END .....(ATTACHING PARTS).....	80009	200-2188-00
-84	211-0097-00			4						.SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL .....(END ATTACHING PARTS).....	83385	OBD
-85	-----			1						.FILTER,RFI:(SEE FL1001 REPL) .....(ATTACHING PARTS).....		
-86	211-0012-00			2						.SCREW,MACHINE:4-40 X 0.375,PNH STL CD PL	83385	OBD
-87	210-0586-00			2						.NUT,PL,ASSEM WA:4-40 X 0.25,STL .....(END ATTACHING PARTS).....	83385	OBD
-88	200-1788-01			1						.COV,PROT,LINE:	80009	200-1788-01
-89	210-0204-00			1						.TERMINAL,LUG:0.146 INCH DIA DE,45 DEG BE .....(ATTACHING PARTS).....	78189	2157-06-01-2520N
-90	210-0407-00			2						.NUT,PLAIN,HEX.:6-32 X 0.25 INCH,BRS .....(END ATTACHING PARTS).....	73743	3038-0228-402
-91	334-3379-01			1						.MARKER,IDENT:MARKED GROUND SYMBOL	80009	334-3379-01
-92	-----			1						.SWITCH,SLIDE:(SEE S181 REPL) .....(ATTACHING PARTS).....		
-93	211-0097-00			2						.SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL	83385	OBD
-94	210-0586-00			2						.NUT,PL,ASSEM WA:4-40 X 0.25,STL .....(END ATTACHING PARTS).....	83385	OBD
-95	-----			1						.CKT BOARD ASSY:FAN REG(SEE A13A3 REPL) .....(ATTACHING PARTS).....		
-96	211-0097-00			4						.SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL .....(END ATTACHING PARTS).....	83385	OBD
-97	129-0160-00			4						..SPACER POST:0.25 L X 0.2188 TO MT SEAT	80009	129-0160-00
-98	131-0589-00			4						..TERMINAL,PIN:0.46 L X 0.025 SQ	22526	48283-029
-99	-----			2						..CONNECTOR:(SEE J21,J31 REPL)		
-100	136-0269-02			1						..SKT,PL-IN ELEK:MICROCIRCUIT,14 DIP,LOW C	73803	CS9002-14
-101	337-2649-00			1						.SHIELD ELEC:CIRCUIT BOARD	80009	337-2649-00
-102	334-3003-00			1						.MARKER,IDENT:MKD DANGER PWRER LINE	80009	334-3003-00
-103	141-1425-00			1						. CHAS,PWR SUPPLY:	80009	441-1425-00
-104	198-3934-00			1						.WIRE SET,ELEC:	80009	198-3934-00
-105	131-1790-00			3						..CONTACT,ELEC:18-24 AWG,FEMALE,BRASS	27264	08-56-0105
-106	131-1815-00			2						..CONTACT,ELEC:22-30 AWG,FEMALE,BRASS	27264	08-56-0110
-107	204-0749-00			1						..CONN BODY,PLUG:CKT CD,5 CONT W/O LKG RAM	27264	2139-052
-108	204-0678-00			1						..CONN BODY,PL,EL:FOR 3 FEMALE CONTACTS	27264	10-17-2032
-109	175-0862-00			AR						..WIRE,ELECTRICAL:3 WIRE RIBBON	08261	SS-0322-1910610C
-110	175-1364-00			AR						..CABLE,SP,ELEC:2.23 AWG STRD,GRY VNL JCKT	80009	175-1364-00



REV FEB 1983

4663 SERVICE VOL. 2

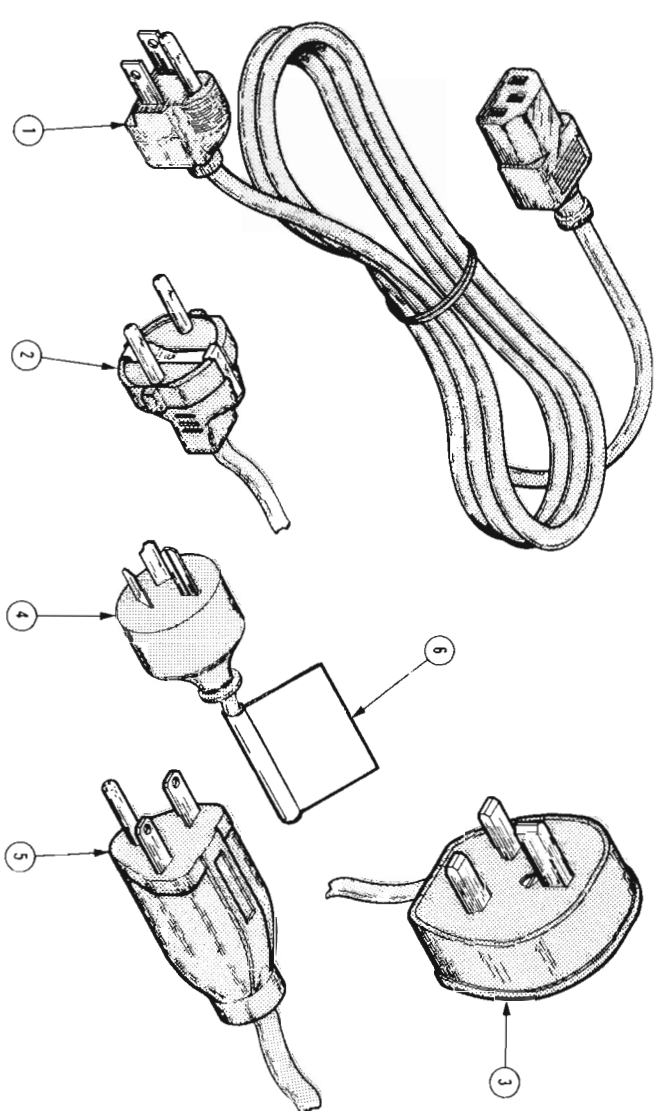
Fig. & Index No. Tektronix Part No. Serial/Model No. Discont Qty 1 2 3 4 5 Name & Description Mfr Code Mir Part Number

OPTIONAL ACCESSORIES

006-2968-00	.....	1	KIT MAINTENANCE U/W 016-0442-01, 016-0443-01				80009	006-2968-00
016-0649-00	.....	1	016-0444-01 CARTRIDGE, INK EMPTY				80009	016-0649-00
016-0444-01	.....	1	PEN ASSEMBLY				80009	016-0444-01
016-0442-01	.....	1	PEN ASSEMBLY				80009	016-0442-01
016-0443-01	.....	1	PEN ASSEMBLY				80009	016-0443-01
214-2706-00	.....	1	POINT, PEN TUNGSTEN CARBIDE				87506	214-2706-00
214-2706-01	.....	1	PEN POINT PLS, TUNGSTEN CARBIDE				87506	214-2706-01
214-2706-02	.....	1	PEN POINT PLR, TUNGSTEN CARBIDE				87506	214-2706-02
016-0428-00	.....	1	INK, WRITING, BLACK, USE ON PAPER				000HA	016-0428-00
016-0427-00	.....	1	INK, WRITING, BLACK, USE ON MYLAR				000HA	016-0427-00
016-0426-00	.....	1	INK, WRITING, RED, USE ON MYLAR				000HH	016-0426-00
016-0425-00	.....	1	INK, WRITING, RED, USE ON MYLAR				000HH	016-0425-00
016-0424-00	.....	1	INK, WRITING, BLUE, USE ON MYLAR				000HH	016-0424-00
016-0423-00	.....	1	INK, WRITING, BLUE, USE ON MYLAR				000HH	016-0423-00
016-0419-00	.....	1	PEN, RECORDER, BLACK, BALL TIP, PKG OF 3				80009	016-0419-00
016-0419-01	.....	1	PEN, RECORDER, RED, BALL TIP, PKG OF 3				80009	016-0419-01
016-0419-02	.....	1	PEN, RECORDER, GREEN, BALL TIP, PKG OF 3				80009	016-0419-02
016-0419-03	.....	1	PEN, RECORDER, BROWN, BALL TIP, PKG OF 3				80009	016-0419-03
016-0418-00	.....	1	PEN, RECORDER, BLACK, FIBER TIP, PKG OF 3				80009	016-0418-00
016-0418-01	.....	1	PEN, RECORDER, BROWN, FIBER TIP, PKG OF 3				80009	016-0418-01
016-0418-02	.....	1	PEN, RECORDER, RED, FIBER TIP, PKG OF 3				80009	016-0418-02
016-0418-03	.....	1	PEN, RECORDER, ORANGE, FIBER TIP, PKG OF 3				80009	016-0418-03
016-0418-04	.....	1	PEN, RECORDER, YELLOW, FIBER TIP, PKG OF 3				80009	016-0418-04
016-0418-05	.....	1	PEN, RECORDER, GREEN, FIBER TIP, PKG OF 3				80009	016-0418-05
016-0418-06	.....	1	PEN, RECORDER, BLUE, FIBER TIP, PKG OF 3				80009	016-0418-06
016-0418-07	.....	1	PEN, RECORDER, MAGENTA, FIBER TIP, PKG OF 3				80009	016-0418-07
016-0418-08	.....	1	PEN, RECORDER, PURPLE, FIBER TIP, PKG OF 3				80009	016-0418-08
016-0668-00	.....	1	PEN, RECORDER, BLACK, PLASTIC TIP, PKG OF 3				80009	016-0668-00
016-0668-01	.....	1	PEN, RECORDER, GREEN, PLASTIC TIP, PKG OF 3				80009	016-0668-01
016-0668-02	.....	1	PEN, RECORDER, BLUE, PLASTIC TIP, PKG OF 3				80009	016-0668-02
006-2837-00	.....	1	PPR, TRANSLUCENT, 18.0 X 200 FT, PERF. 0.5 P				80009	006-2837-00
006-2836-00	.....	1	PPR, TRANSLUCENT, 17.0 X 22.0, NO GRID				80009	006-2836-00
006-2835-00	.....	1	PPR, ANTISTATIC, 17.0 X 22.0, NO GRID				80009	006-2835-00
200-2392-00	.....	1	COVER PROT. 38.25 L X 30.0 W, VINYL				80009	200-2392-00
070-3453-00	.....	1	MANUAL, TECH, SERVICE				80009	070-3453-00

STANDARD ACCESSORIES

006-3150-00	.....	1	PAPER, CHART, DRAFTING, 17.0 X 22.0				80009	006-3150-00
016-0414-00	.....	1	PEN, RECORDER, BLACK, PKG OF 3				32674	581-16
016-0415-00	.....	1	PEN, RECORDER, RED, PKG OF 3				32674	581-17
016-0416-00	.....	1	PEN, RECORDER, BLUE, PKG OF 3				32674	581-15
016-0417-00	.....	1	PEN, RECORDER, GREEN, PKG OF 3				32674	581-18
012-0829-00	.....	1	CABLE, INTCON, 180.0 L				80009	012-0829-00
161-0123-00	.....	1	CABLE ASSY, PWR, 3.16 AWG, 125V, 96.0 L				70903	KH9028
161-0066-00	.....	1	CABLE ASSY, PWR, 3.0 75MM SQ, 220V, 96.0 L				16428	KH8481
161-0066-09	.....	1	CABLE ASSY, PWR, 3.0 75MM SQ, 220V, 96.0 L (OPTION A1 EUROPEAN ONLY)				80126	OBD
161-0066-10	.....	1	CABLE ASSY, PWR, 3.0 75MM SQ, 240V, 96.0 L (OPTION A2 UNITED KINGDOM ONLY)				80126	OBD
161-0066-11	.....	1	CABLE ASSY, PWR, 3.0 75MM SQ, 240V, 96.0 L (OPTION A3 AUSTRALIAN ONLY)				S3109	OBD
161-0066-12	.....	1	CABLE ASSY, PWR, 3.18 AWG, 240V, 96.0 L (OPTION A4 NORTH AMERICAN ONLY)				80126	OBD
334-3995-00	.....	1	MARKER, IDENT-MARKED CAUTION (OPTION A3 ONLY)				80009	334-3995-00
070-2670-00	.....	1	MANUAL, TECH, OPERATORS (OPTION A3 ONLY)				80009	070-2670-00
070-3807-00	.....	1	MANUAL, TECH, OPERATORS				80009	070-3807-00
070-2828-00	.....	1	MANUAL, TECH, OPERATORS				80009	070-2828-00
070-2828-01	.....	1	MANUAL, TECH, OPERATORS				80009	070-2828-01
070-2806-00	.....	1	MANUAL, TECH, OPERATORS				80009	070-2806-00
012-0630-03	.....	1	CABLE, INTCON, 2 METERS L (OPTION 1 & 4 ONLY)				74868	AC30147-102
070-3424-00	.....	1	MANUAL, TECH, INSTALLATION (OPTION 1 ONLY)				80009	070-3424-00
070-3426-00	.....	1	MANUAL, TECH, INSTALLATION (OPTION 31 ONLY)				80009	070-3426-00
070-3387-00	.....	1	MANUAL, TECH, INSTRUCTION (OPTION 32 ONLY)				80009	070-3387-00
070-3425-00	.....	1	MANUAL, TECH, INSTALLATION (OPTION 36 ONLY)				80009	070-3425-00
012-0900-00	.....	1	CABLE, INTCON, 180.0 L (OPTION 37 ONLY)				80009	012-0900-00
.....	.....	1	CABLE, INTCON, 180.0 L (OPTION 2 ONLY)				80009	012-0900-00



4663 OPTIONS

Opt	Order PN	Description	80009	021-0242-03
1	021-0242-03	INTERFACE:4663 TO OPTION	80009	021-0242-03
2	021-0257-00	INTERFACE:	80009	021-0257-00
3	021-0258-00	INTERFACE:4663 OPT 03 TO TELETYPE	80009	021-0258-00
4	021-0242-03	GPIB ONLY — DELETES STANDARD INTERFACE	80009	021-0242-03
30	021-0203-00	INTERFACE:	80009	021-0203-00
		(SEE 4081 SERVICE MANUAL)	80009	020-0355-03
31	020-0355-03	CIRCULAR INTERPOLATION & PROGRAMMABLE MACROS	80009	020-0388-03
32	020-0388-03	COMPONENT KIT:PRESTRESSED RAM W/TEK LOGO	80009	650-0104-00
36	650-0104-00	MEDIA PAPER CHNG ASSY.	80009	020-0392-00
37	020-0392-00	COMPONENT KIT	80009	
A1		220V, EUROPEAN PLUG		
A2		240V, UNITED KINGDOM PLUG		
A3		240V, AUSTRALIAN PLUG		
A4		240V, NORTH AMERICAN PLUG		

Section 8

TROUBLESHOOTING

The 4663 Plotter accepts the separate 4663 Diagnostic Test Fixture (067-0859-00) when troubleshooting. This test fixture and the accompanying instruction manual (070-2842-00) permit the technician to test nearly every electrical circuit in the Plotter. Therefore, when troubleshooting the Plotter, refer to these test fixture procedures.

Other symptoms and possible solutions include:

- **Continuous INIT Light When Parameter Entry Card Is Fully Inserted.**

There is a small light bulb soldered to the left edge of the Parameter Entry circuit board. The Plotter uses this lamp, which is on continuously during Plotter operation, with photo-detection transistors to detect any Parameter Entry card movement. The lamp is also used to detect the full insertion of the card following initial power-up and to permit the completion of the initialization process. If this lamp does not turn on at power-up, the Plotter can not complete its initialization procedure and the front panel INIT light will continue to glow regardless of operator attempts to "home" the Parameter Entry card.

- **Plotter Does Not Respond to Parameter Entry Changes (Card Movements).**

If the lamp just described should fail after power-up, the Plotter will not detect any further Parameter Entry card movement.

- **Plotter Does Not Power Up in the Same Configuration as When It Powered Down.**

Whenever the Plotter's power is turned off, a small Ni-Cad battery applies power to the RAM which stores active Parameter Entry card operating configurations. Normally this battery provides enough power to keep the RAM alive for about 90 days, and each time the Plotter is operated, the battery is recharged. Since there are many factors that affect useful battery life, it is advisable to replace the battery on a periodic basis rather than to let it deteriorate to the point where it will not keep the RAM alive. (Replacing the battery at least every 2000 to 3000 operating hours is recommended.) A defective battery causes the Plotter to power up in a different operating configuration than what was used prior to the last power-down. If this occurs and the last power-down was considerably less than 90 days ago, the battery is certainly defective.

- **Plotter Does Not Appear to Have Power but Cooling Fan Operates.**

The power supply has a thermo-acting fuse which opens anytime the ambient air temperature in the power supply exceeds about 82° C. (180° F.). If this fuse opens, it removes all output power supply voltages except those to the cooling fan.



Appendix A

INSTRUMENT AND OPTION INSTALLATION

ABOUT THIS APPENDIX

This appendix provides the information necessary for installing, connecting, and testing the Plotter. This

appendix also provides installation instructions for all of the 4663 options.

PLOTTER INSTALLATION

The Plotter can be placed on any flat surface, such as a table or desk, that is at least 38 x 30 inches (97 x 77 cm) in size. For servicing, access should be available to all four sides and an additional six inches of space will be needed for all sides and end panels to fold down.

CAUTION

Do not plug the Plotter into any line voltage source without reading the following description of line voltage selection.

Line Voltage Selection

CAUTION

Several power supply circuits are energized whenever the Plotter's line cord is plugged into a line source even when the POWER switch is turned to OFF. Therefore, you must verify that the Plotter is wired to operate on the available line voltage before plugging it in.

The Plotter can be operated with a line frequency of 48 to 440 Hz on either a nominal 110 or 220 volt (with Option 48) line voltage source. In its standard configuration, the Plotter is wired to operate only off a 110 volt line voltage. However, the power supply can be readily reconfigured to operate on the 220 volt line source (this is the installation of Option 48).

Checking the Line Voltage Setting

Look at the yellow indicator on the rear panel to see whether the Plotter is set for the line voltage in use in your area. Also, refer to the list of options installed in the Plotter (this list is on the Plotter's rear panel). The presence of Option 48 indicates that the Plotter is wired to operate on a 220 volt line source.

Power Cord Options

Options A1, A2, A3, and A4 provide the electronics, line fuses, power cords, and back panel rating labels for the following:

- Option A1 — 220V 50 Hz operation, Universal European plug.
- Option A2 — 240V 50 Hz operation, United Kingdom plug.
- Option A3 — 240V 50 Hz operation, Australian plug.
- Option A4 — 240V 60 Hz operation, North American plug.

INSTALLATION

Changing the Line Voltage Selection (Option 48 Installation)

To change the line voltage range, use the following procedure:

WARNING

Be sure to disconnect the Plotter from the power source (if not already disconnected) before opening the cabinet. Dangerous voltages exist inside the Plotter when the Plotter is opened.

1. Use the procedure in Appendix C to gain access to the Plotter's interior. Figure C-4 shows the location of both the power supply module and the Line Voltage Selection switch.
2. The Line Voltage Selection switch indicates the line voltage range to which the Plotter is wired to operate. If the other voltage is desired, simply flip the switch to the other position and the switch will indicate the new operating voltage range. If the switch indicates 220 volts, Option 48 is present.
3. Reverse the procedure in Appendix C to restore the Plotter to its normal operating condition.
4. Replace the line fuse with a new fuse of the appropriate rating as follows:

Line Voltage	Fuse
90-130 volts	5 Amp Fast-Blo
180-250 volts	2.5 Amp Fast-Blo
5. Loosen (but do not remove) the screw that holds the yellow indicator on the rear panel. Rotate the indicator to show the new voltage setting. Then, tighten the screw. You may also change the list of installed options on the Plotter's rear panel to reflect that Option 48 is (or is not) present in the Plotter.
6. The Plotter may now be plugged into the line voltage source.

OPERATIONAL TEST

Perform a brief operational test on the Plotter as follows:

1. Turn the Plotter on and allow it to initialize (approximately 10 to 15 seconds).
2. Verify that the INIT light is off (this light is located immediately above the Parameter Entry card and to the left of the Parameter Entry switches). If the light is on, push the Parameter Entry card fully in. The light should go out.
3. Move the joystick handle around. The pen carriage should move in the same direction as the handle. To draw in this test, first install a pen in the pen holder whose PEN SELECT light is on. Then, press the UP/DOWN switch. Now, when the joystick is moved, the Plotter should draw.
4. Pull the Parameter Entry card out to the Execute Self-Test line and press the switch above Column 2. All of the front panel switches should light up. Press the switch again to extinguish these lamps.
5. Press the switch above Column 1 (on the Self-Test line). The Plotter will draw the pattern shown in Figure A-1.

If these tests are successful, the Plotter can be considered operational.

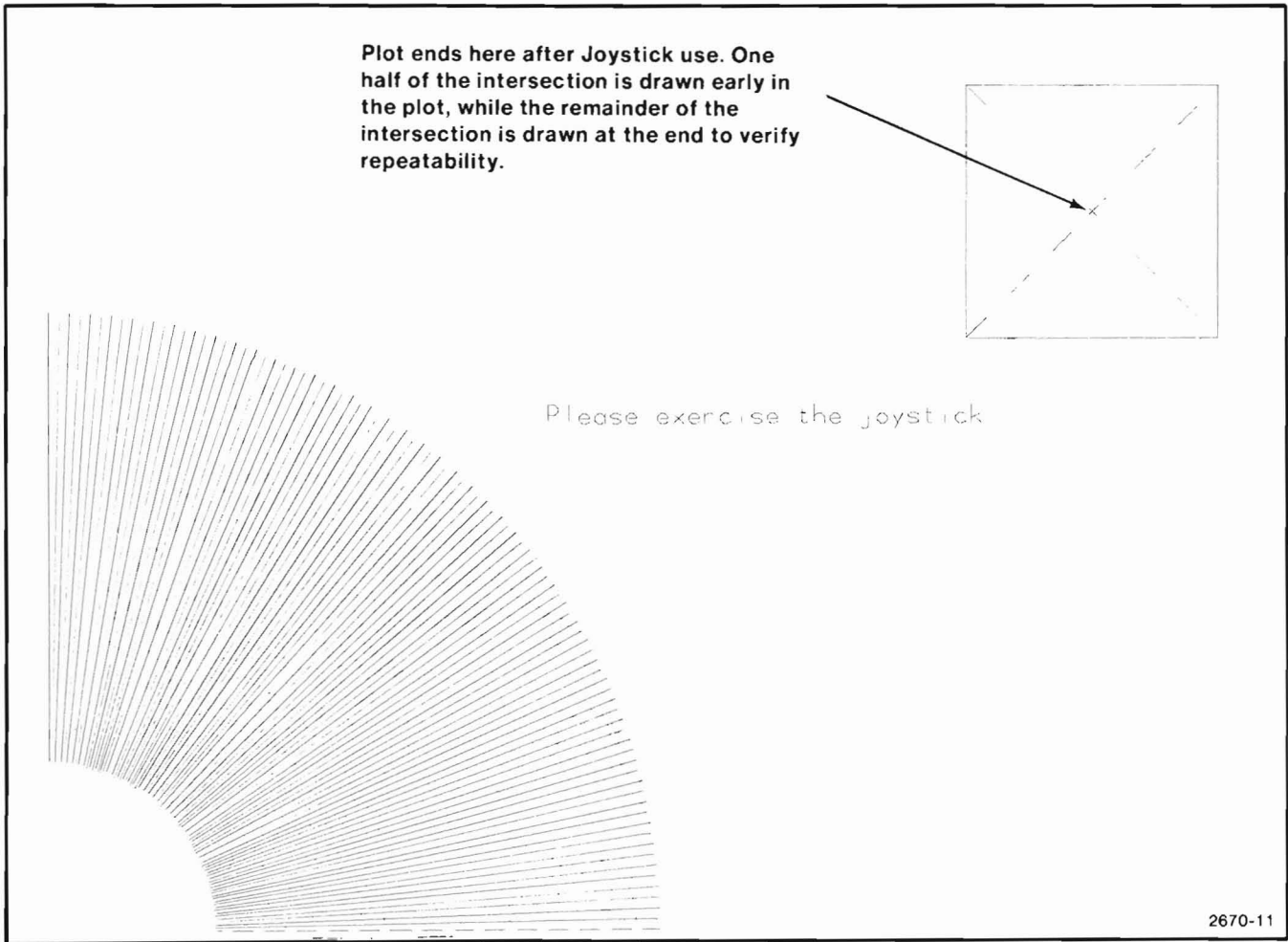


Figure A-1. Test Pattern Produced by Self-Test Feature.

HOST-SERIAL INTERFACE CONNECTION

The Plotter's serial interface has two connection ports on the rear panel. One is for a terminal and the other is for a modem or host computer. This arrangement allows the Plotter to be "chained" to other serial interface devices. The connector labeled TERMINAL is wired to appear as an active modem (or host), while the connector labeled MODEM (or HOST) is wired to appear as an active terminal. This arrangement allows the Plotter to be used alone with either a modem or a terminal, or with both. Simply connect the serial interface cable from a terminal to the Plotter connector labeled TERMINAL, and/or connect the serial interface cable from a modem (or computer) to the Plotter connector labeled MODEM (or HOST). See Figure A-2.

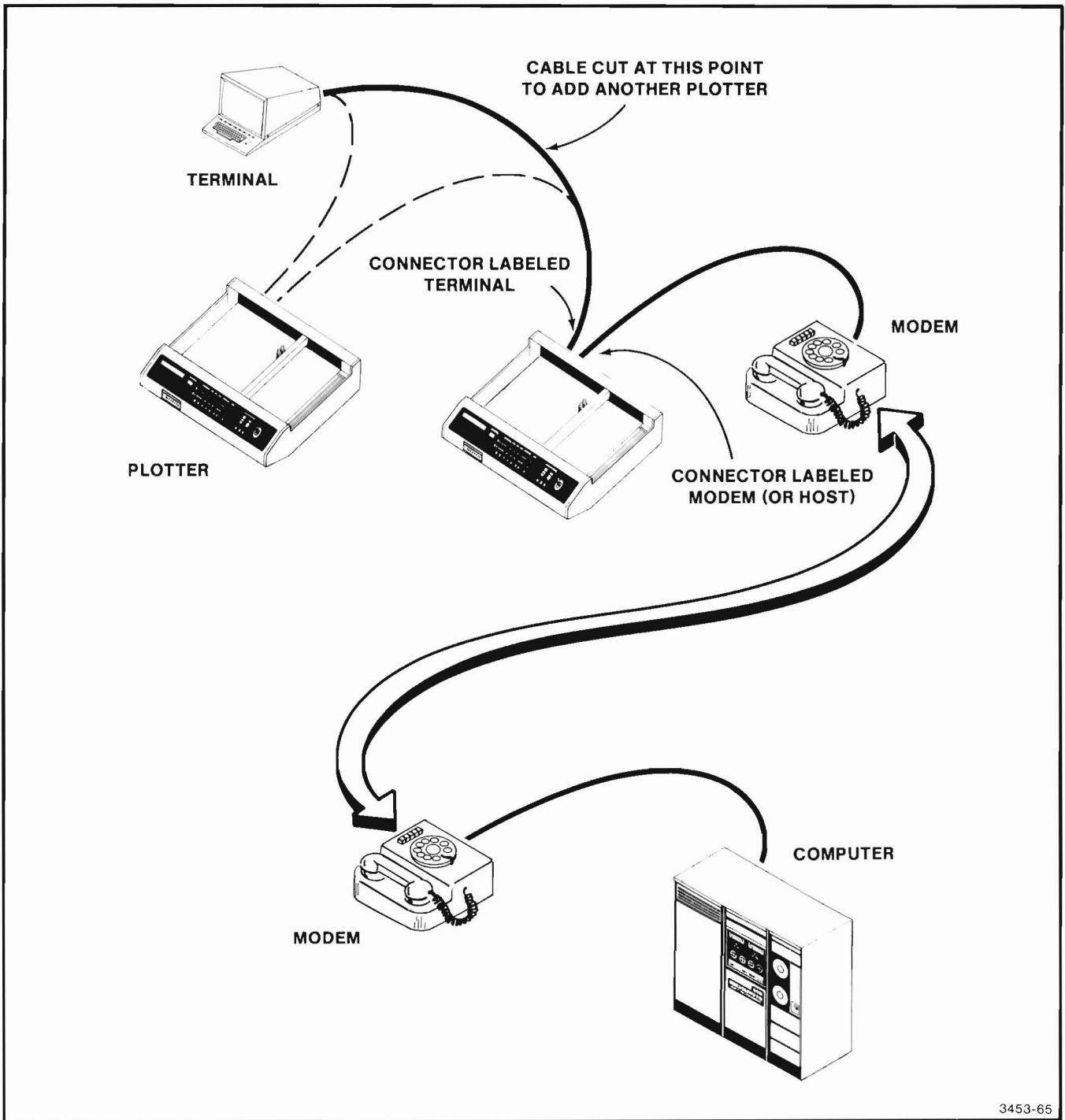
Before the Plotter can communicate, it is necessary to first activate the serial interface. After turning on the power, allow the Plotter to initialize (approximately 10 seconds). Verify that the INIT light is out (see the discussion under Installation), pull the Parameter Entry card out to the INTERFACE SELECT line, and select

the serial interface. Usually this is 1 (press any switch in columns 1-4). The Plotter will repeat the initialization process (unless already in Serial mode). Then, push the Parameter Entry card fully in to turn off the INIT light (turned on by the initialization process).

If only a terminal is connected to the Plotter, set the INTERFACE switches to ON-LINE LOCAL. Otherwise, with a modem or host computer connected, set the INTERFACE switches to ON-LINE REMOTE.

Finally, set the appropriate Parameter Entry card selections to match the system configuration — ADDRESS, BAUD RATES, ATTENTION CHARACTER, etc.

Refer to the 4663 Operator's Manual for further information concerning operation of the Plotter using a serial interface.



3453-65

Figure A-2. Serial Interface Connections.

HOST-GPIB INTERFACE CONNECTION (WITH OPTION 1 OR OPTION 4)

Refer to the option installation information later in this appendix for installation instructions for the GPIB interface.

This procedure provides the information to connect the Plotter to a host (controller).

The standard GPIB interconnecting cable allows devices to be linked sequentially or branched out from a central controller, as shown in Figure A-3. Connect the GPIB cable between the Plotter and controller or other GPIB device(s) as shown in Figure A-4. (A TEKTRONIX 4051 Graphic System is shown as a controller in this figure.)

Before the Plotter can communicate, it is necessary to activate the GPIB interface. If the Plotter has only the GPIB interface (Option 4), the GPIB interface will be activated each time the Plotter is turned on. Otherwise use the following procedure:

1. Turn the Plotter's power ON. Allow the Plotter to initialize (about 10 seconds).
2. Verify that the INIT light is out (INIT light is immediately to the left of the Parameter Entry switches). If the INIT light is on, push the Parameter Entry card fully in to turn it off.

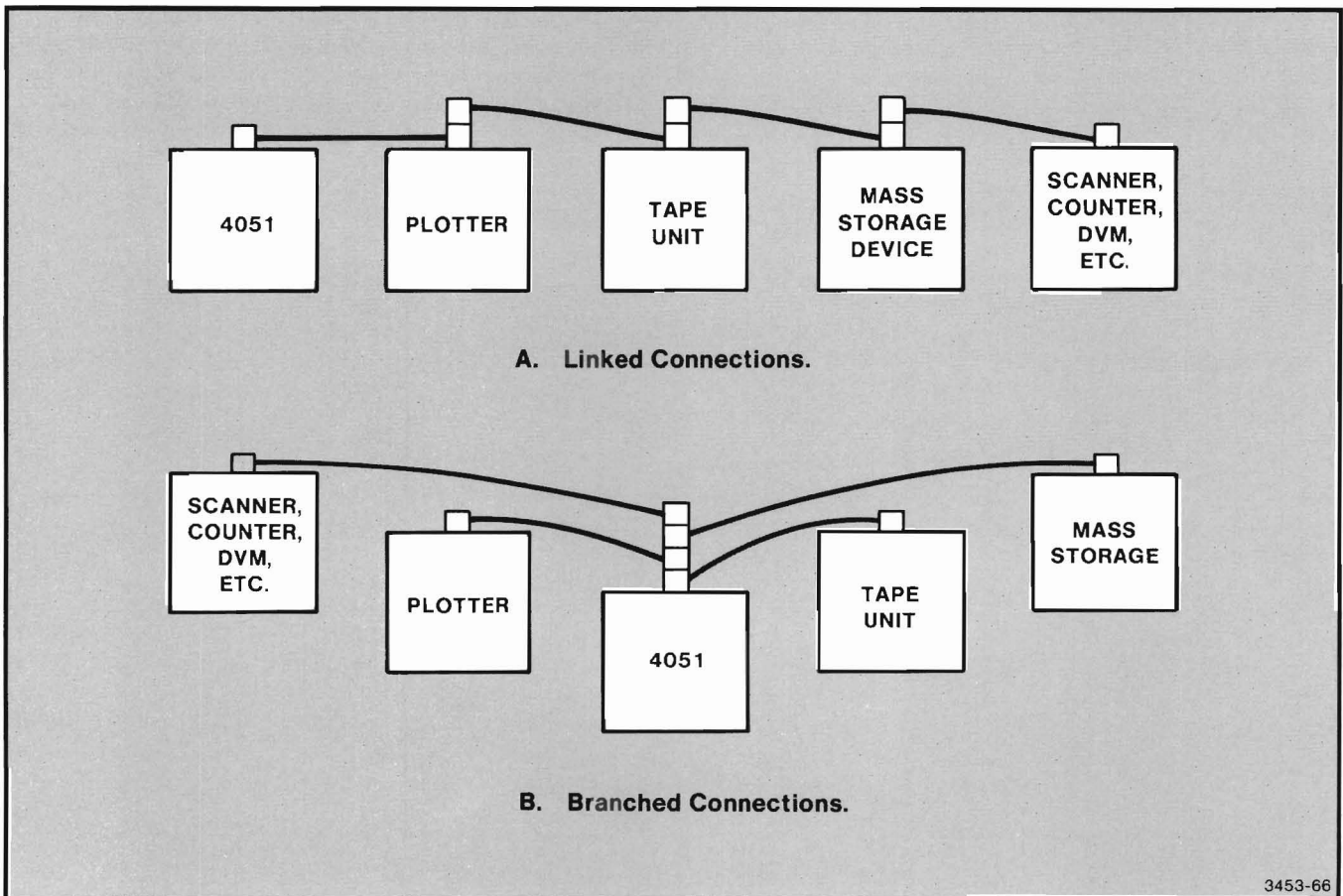


Figure A-3. Two Types of GPIB Connection Using a 4051 Controller.

3. Pull the Parameter Entry card out to the INTER-FACE SELECT line and select the GPIB Interface. If the Plotter is equipped with both a serial interface and the GPIB (Option 1), press "2" (any switch in columns 5-8). The Plotter will repeat the 10-second initialization process.
4. Push the Parameter Entry card fully in to turn off the INIT light (which was turned on by the initialization process).

5. Pull the Parameter Entry card back out and set the appropriate selections to match the system configuration — ADDRESS, FORMAT, MODE, etc.

Refer to the 4663 Operator's Manual for further information concerning operation of the Plotter with GPIB.

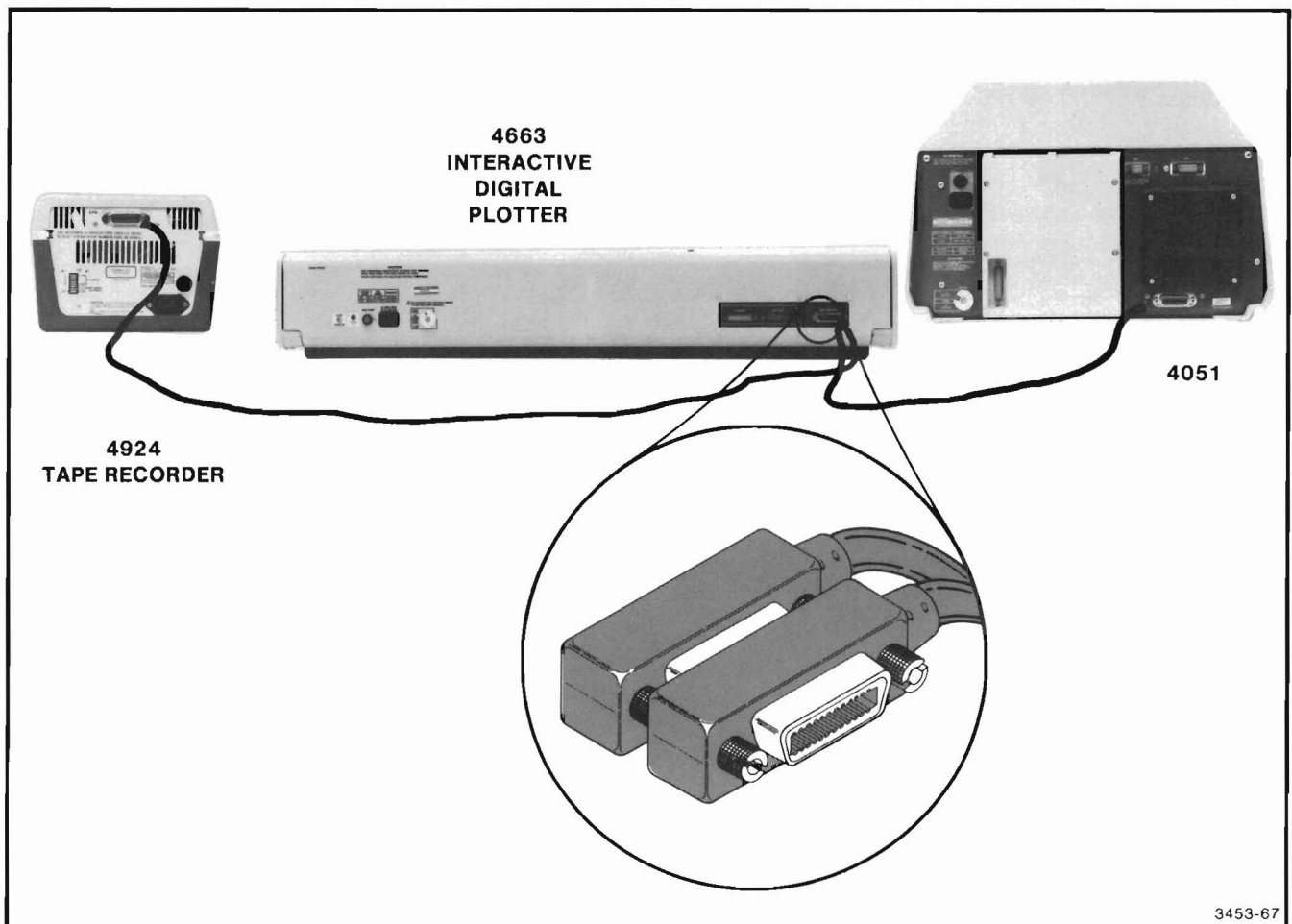


Figure A-4. GPIB Cable Connections.

OPTION INSTALLATION

The remainder of this appendix describes the procedures for installing each Plotter option.

Option 1 (GPIB Interface With RS-232)

1. Do Steps 1 through 5 of Appendix C to gain access to the Plotter's interior.
2. Remove the circuit card retainer on the left side of the circuit card cage.
3. Rearrange the circuit cards in the left side of the card cage according to Figure A-5. Notice that if there is no ROM Overlay circuit card, the cards underneath may be moved up. In this case, the Serial Interface circuit card will become the top card, if present.
4. Set the straps on the GPIB Interface circuit card according to Appendix B.
5. Install the GPIB Interface card. Be sure to firmly press against the front edge of the circuit card until it slips into the back-edge connector and seats.
6. Remove the right-most blank cover on the end of the rear panel (when viewing from the rear). The cover is held by four screws.
7. Install the GPIB Adapter circuit board in the space created by Step 6 above.
8. Connect the ribbon cable between J101 of the GPIB Interface circuit card and J1 of the GPIB Adapter circuit board. Dress this cable along the outside left panel of the circuit card cage and out under the left rear corner bracket (viewing from the front of the instrument).
9. Install the circuit card retainer (removed in Step 2 above).
10. Pull the Parameter Entry card out to the INTERFACE SELECT line. Label (in pencil) columns 5-8 as "GPIB" if there is also a serial interface in the Plotter, or columns 1-4 as "GPIB" if there is no serial interface installed in the Plotter.

This completes the installation of the Option 1 (or Option 4) GPIB Interface. To return the Plotter to operation, reverse the procedure for opening the Plotter (Steps 1-5 of Appendix C).

Option 4 (GPIB Only)

The installation of this option is exactly the same as Option 1. Notice that there is no serial interface installed and the GPIB straps are set accordingly (see Appendix B).

Option 30 (Tektronix 4081 Interface)

Refer to Appendix H of the 4663 Operator's Manual for details concerning the installation and operation of this interface.

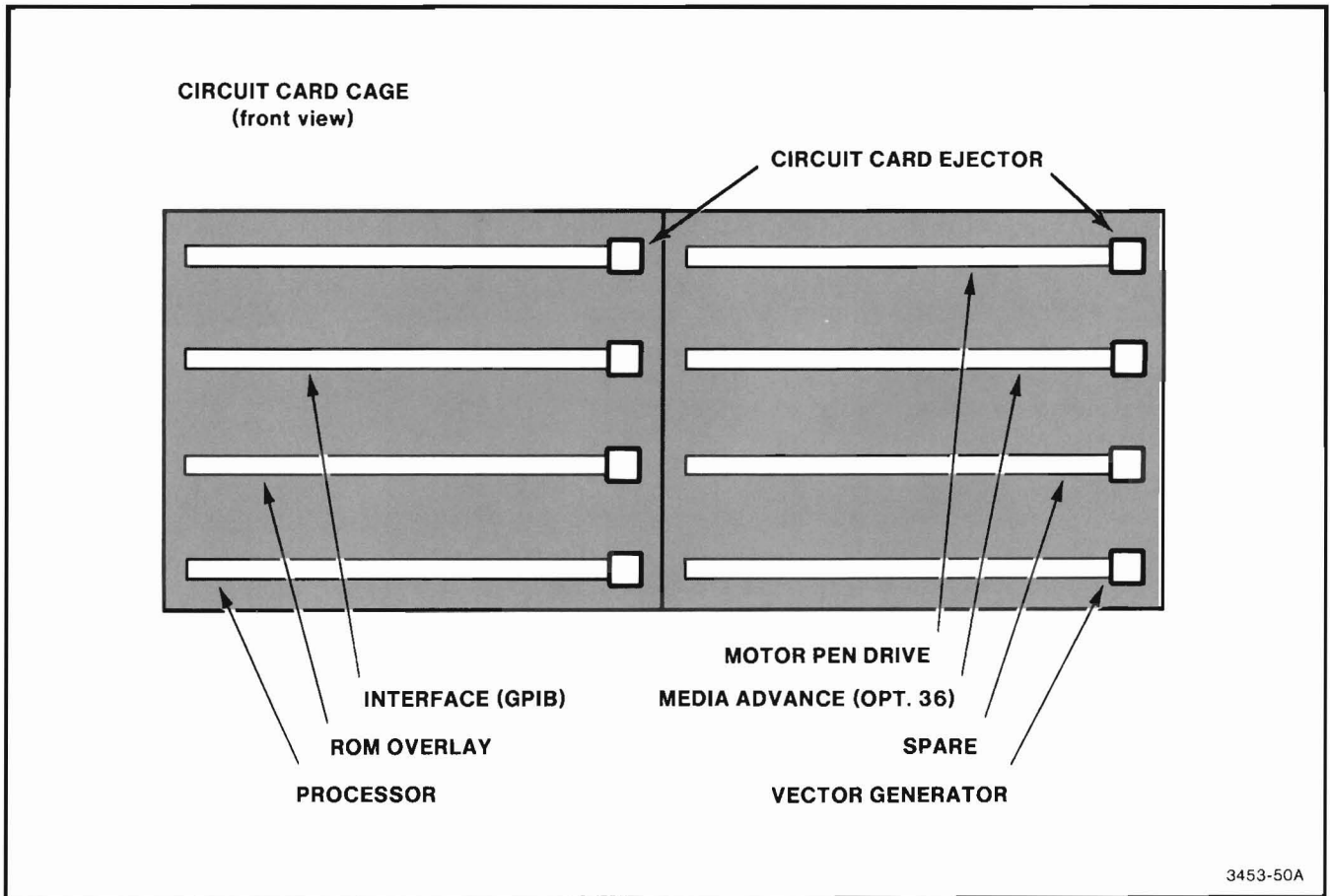


Figure A-5. Circuit Card Locations in Circuit Card Cage.

INSTALLATION

Option 31 (Circular Interpolation and Programmable Macros)

1. Turn on the Plotter and allow it to initialize (about 10 seconds).
2. Verify that the INIT light is out (the INIT light is located to the left of the Parameter Entry switches). If the INIT light is on, push the Parameter Entry card fully in to turn the light off.
3. Pull out the Parameter Entry card line by line and record the current operating configuration (indicated by the lighted switches).
4. Do Steps 1 through 5 of Appendix C to gain access to the Plotter's interior.
5. Remove the circuit card retainer on the left side of the circuit card cage.
6. Prior to removing the Processor circuit card, which is usually the bottom card, remove the three cable connectors. Then, remove the Processor card. This card has a circuit card ejector on the right corner which is used to pull the card out of the back-edge connector.
7. Option 31 consists of two ROM/EROMs. The 160-0185-01 ROM/EROM goes in socket U481 and the 160-0395-01 ROM/EROM goes in socket U475. Be sure to note the proper orientation of the component with reference to Pin 1 of the socket (see Figure A-6).
8. Replace the Processor circuit card. Firmly press against the front edge of the circuit card until it slips into the back-edge connector and seats. Then, reconnect the three front cable connectors.
9. Replace the circuit card retainer.
10. To return the Plotter to operation, reverse the procedure for opening the Plotter (Steps 1-5 of Appendix C).
11. Do Steps 1 and 2 above.
12. Pull out the Parameter Entry card line by line and restore the operating configuration recorded in Step 3.

This completes the installation of Option 31.

Option 32 (Math Character Set and Downloadable Characters)

In order for Option 32 to operate in the 4663 Plotter, it is necessary for the Plotter to be equipped with Version 2 or higher firmware (system memory). To check and/or install Version 2 (or any other version), follow the procedures in Appendix F.

To install Option 32:

1. Turn the Plotter's power on and allow it to initialize (about 10 seconds).
2. Verify that the INIT light is off (the INIT light is located to the left of the Parameter Entry switches). If the INIT light is on, push the Parameter Entry card fully in to turn the INIT light off.
3. Pull the Parameter Entry card out line by line and record the current operating configuration (indicated by a lighted switch).
4. Do Steps 1 through 5 of Appendix C to gain access to the Plotter's interior.
5. Remove the circuit card retainer on the left side of the circuit card cage.
6. Before removing the Processor circuit card, which is usually the bottom card, remove the three cable connectors. Then, remove the Processor card. This card has a circuit card ejector on the right corner which is used to pull the card out of the back-edge connector.
7. Option 32 consists of four EPROMs and is installed on the Processor circuit card as follows (see Figure A-6):

160-0182-00 goes in U591
160-0183-00 goes in U581
160-0184-00 goes in U575
160-0724-00 goes in U571

Be sure to note the proper orientation of the component with reference to Pin 1 of the socket.

8. Replace the Processor circuit card. Firmly press against the front edge of the circuit card until it slips into the back-edge connector and seats. Then, reconnect the three front cable connectors. Match Pin 1 of the connector (marked by an arrow) with Pin 1 on the circuit card (marked with a dot or a triangle).
 9. Replace the circuit card retainer.
 10. To return the Plotter to its operating configuration, reverse the procedure for opening it (Steps 1-5 of Appendix C).
 11. Do Steps 1 and 2 above.
 12. Pull the Parameter Entry card out line by line and enter the selections recorded in Step 3.
- This completes the installation of Option 32.

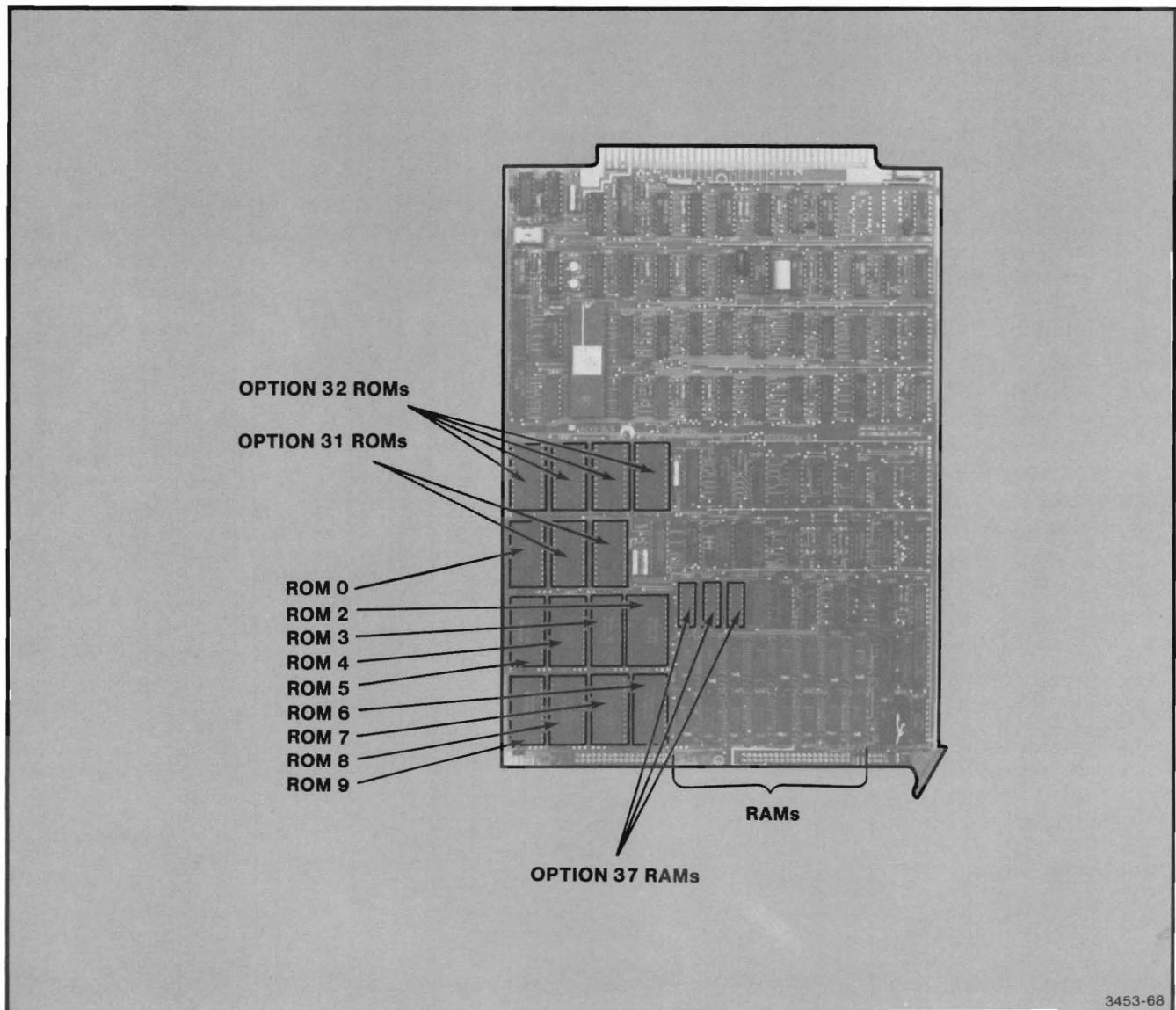


Figure A-6. Processor Circuit Card Standard and Option ROM/RAM Locations.

INSTALLATION

Option 36 (Media Advance)

To install the Media Advance option, use the following procedure. This procedure is divided into eleven short procedures.

Stepper Motor Installation

1. Do steps 1 through 5 of Appendix C to gain access to the Plotter's interior.
2. Install the stepper motor on the right front pulley support. The motor mounts on the rear surface of the support with the shaft facing forward. Secure with two screws (211-0012-00) and two nuts (210-0586-00). The nuts should be on the outside of the panel. Refer to Figure A-7.
3. Insert the sleeve bushing (358-0606-00) into the drive pulley (401-0404-00), aligning the holes for the set screws in the pulley. Tighten the set screws only enough to keep the bushing in place (refer to Figure A-7).
4. Attach the drive pulley (with bushing) to the motor shaft. Leave a small space (1" or so) between the pulley and corner bracket. Tighten the two set screws (refer to Figure A-7).
5. To the outside of the right frame section, attach two cable tie holders (352-0482-00) and two cable ties (343-0549-00). (Refer to Figure A-8.)
6. Slide a piece of heat shrink tubing over the connector on the cable from the motor.
7. Connect the 8-conductor cable from the wire kit (198-4111-00) to the motor cable connector (Pin 1 on both connectors should be connected). Slide heat shrink tubing over the connector and shrink in place with gentle heat.
8. Dress this cable through the cable ties (installed in Step 5), through the large hole in the chassis, and over to the front of the right half of the circuit card cage.

Media Advance Circuit Card Installation

1. Remove the circuit card cage retainer which holds the circuit cards in the right half of the circuit card cage.
2. Set the straps on the Media Advance circuit card according to Appendix B.
3. Insert the Media Advance circuit card into a vacant slot. Normally the Media Advance circuit card is inserted in the slot next to the top on the right side of the circuit card cage (see Figure A-5). Push firmly until the card seats.
4. Connect the Media Advance motor cable to J121 on the Media Advance circuit card.
5. Reinstall the circuit card retainer. It might be helpful to lower the pen drive mechanism assembly at this time for the remaining steps. Do not replace the eight nuts holding this assembly to the Plotter's base.

Drive Tractor Preassembly

1. Preassemble the paper drive tractors on the two shafts as shown in Figure A-9. The smooth "idler" shaft is located closest to the platen. The longer "turned" smooth end of the splined shaft points to the rear of the instrument.

NOTE

Each tractor drive has a "key" and these keys should be in the same spline shaft groove. Also make sure that the tractors are "facing" each other as shown in Figure A-9.

2. Add a retaining ring (354-0390-00) to the short end (front) of the splined shaft.
3. Install a retaining ring (354-0376-00) on each end of the smooth shaft (idler shaft), approximately 1" from each end.

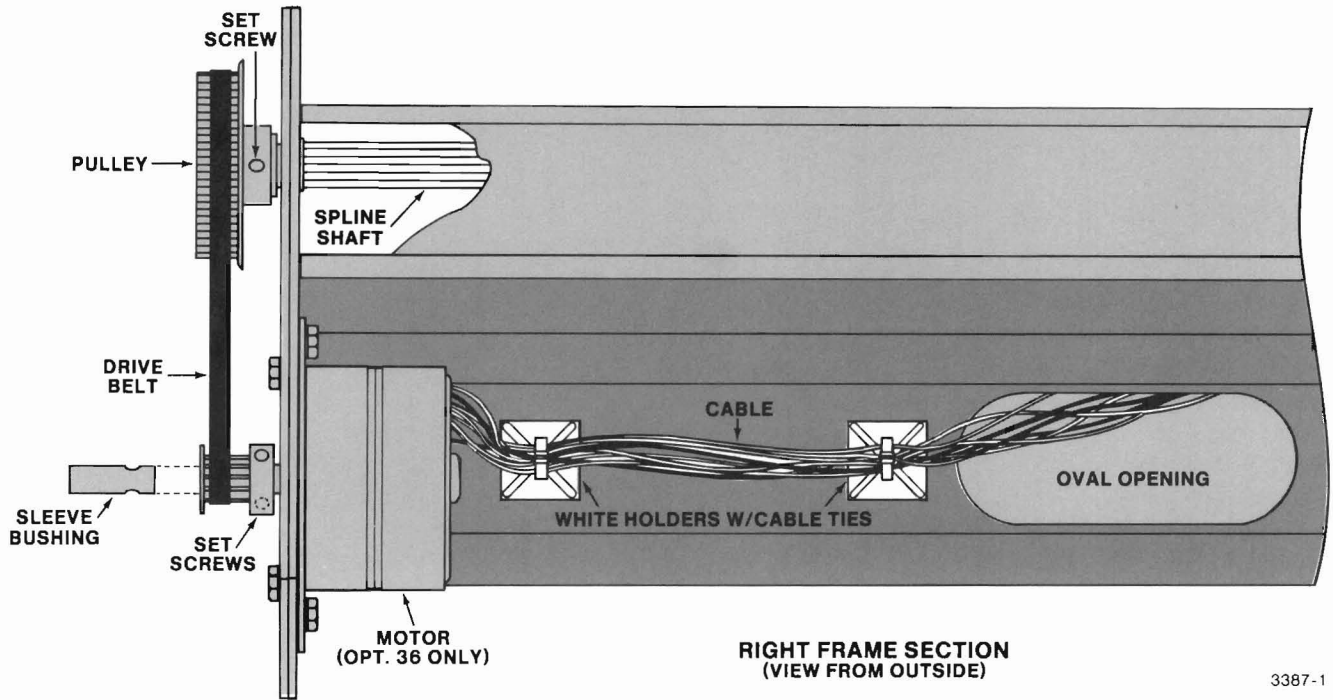


Figure A-7. Paper Drive Motor Mounting Details.

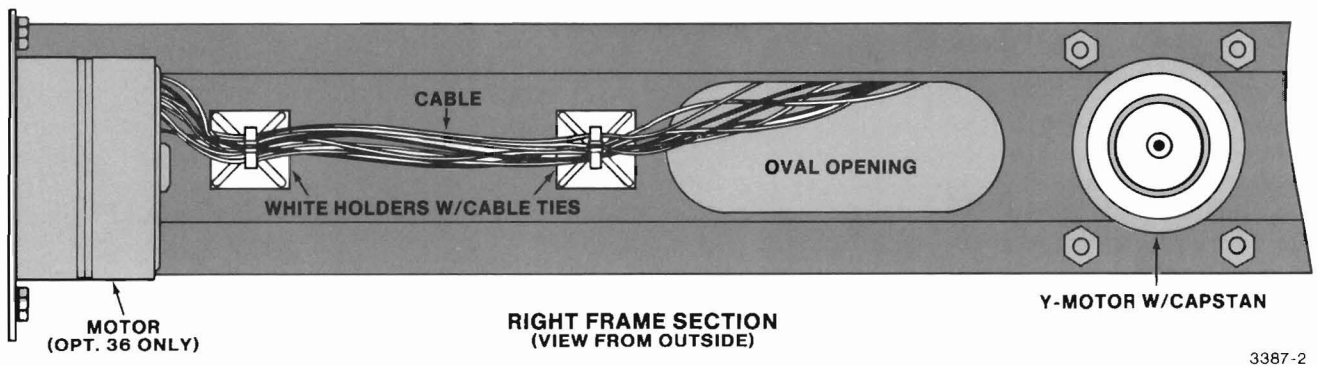


Figure A-8. Media Advance Drive Motor Cable Detail.

INSTALLATION

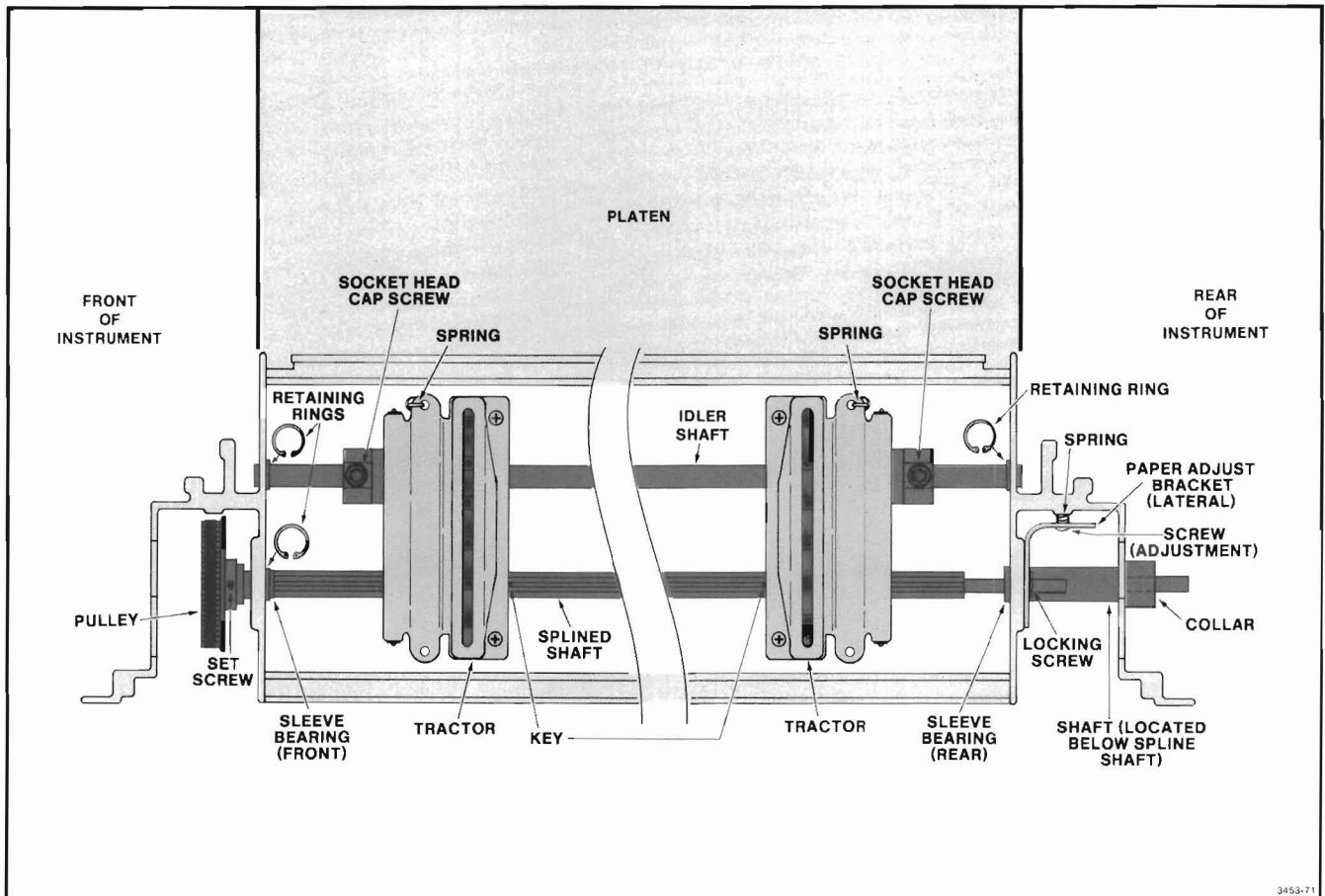


Figure A-9. Paper Drive Tractor Assembly.

Installing Drive Tractor Assembly

1. Remove the large plate immediately to the right of the platen (when viewing the front of instrument). Plate must be pried up with a screwdriver.
2. Insert the drive tractor assembly into the right end of the Plotter. First, slide both shafts into the rear bearings far enough to enable the shafts to slide forward into the front bearings (do not slide these shafts into the front bearings yet).
3. Slide a sleeve bearing (401-0409-00) on the front end of the spline shaft. The groove in the sleeve bearing points to the rear of the instrument.
4. Insert the two shafts into the front bearings. Push the splined shaft forward until it clears the rear bracket, then add the rear bearing (401-0409-01) to the rear of the splined shaft, with the grooved end pointing toward the rear of the unit. Center the smooth idler shaft and push the splined shaft forward as far as possible (the splines should touch the front sleeve bearing as shown in Figure A-9).
5. Slide the three retaining rings into their proper positions in the grooves on the shafts. The retaining ring on the front end of the spline shaft goes in the groove of the sleeve bearing.
6. To the short end (front) of the splined shaft, add a pulley (401-0403-00). Tighten the set screw.
7. Install the drive belt (14-2741-00) between the motor shaft pulley and the tractor drive pulley. For proper tension, the belt should deflect about 1" midway between the pulleys. It should be as loose as possible without allowing it to slip on the gears.
8. Insert the small shaft (105-0770-00) into the hole (small end first) on the right rear corner bracket located just under the spline shaft's rear sleeve bearing (see Figure A-10). Shaft is inserted from inside the corner bracket to the outside. Push the shaft rearward as far as possible. Then install a small collar (376-0032-00) on the outside over the small end of this shaft. Slide the collar tight against the corner bracket, and secure it with two set screws.

9. Mount the lateral paper adjust bracket (407-2282-00) on the rear end of the splined shaft and inside the rear corner bracket. Secure the lateral bracket with a screw (211-0272-00) and a spring (214-0368-00). (See Figure A-10.) This bracket's slot fits in the outside groove of the sleeve bearing on the spline shaft. The spring goes over the screw between the lateral paper adjust bracket and the corner bracket of the Plotter.

10. Secure the lateral bracket with the locking screw (211-0271-00) just above the end of the spline shaft. (Lateral paper adjustments will be done later in this procedure.)
11. To each paper tractor, add a sprocket head cap screw (213-0823-00).

NOTE

Paper width adjustments will also be done later in this procedure.

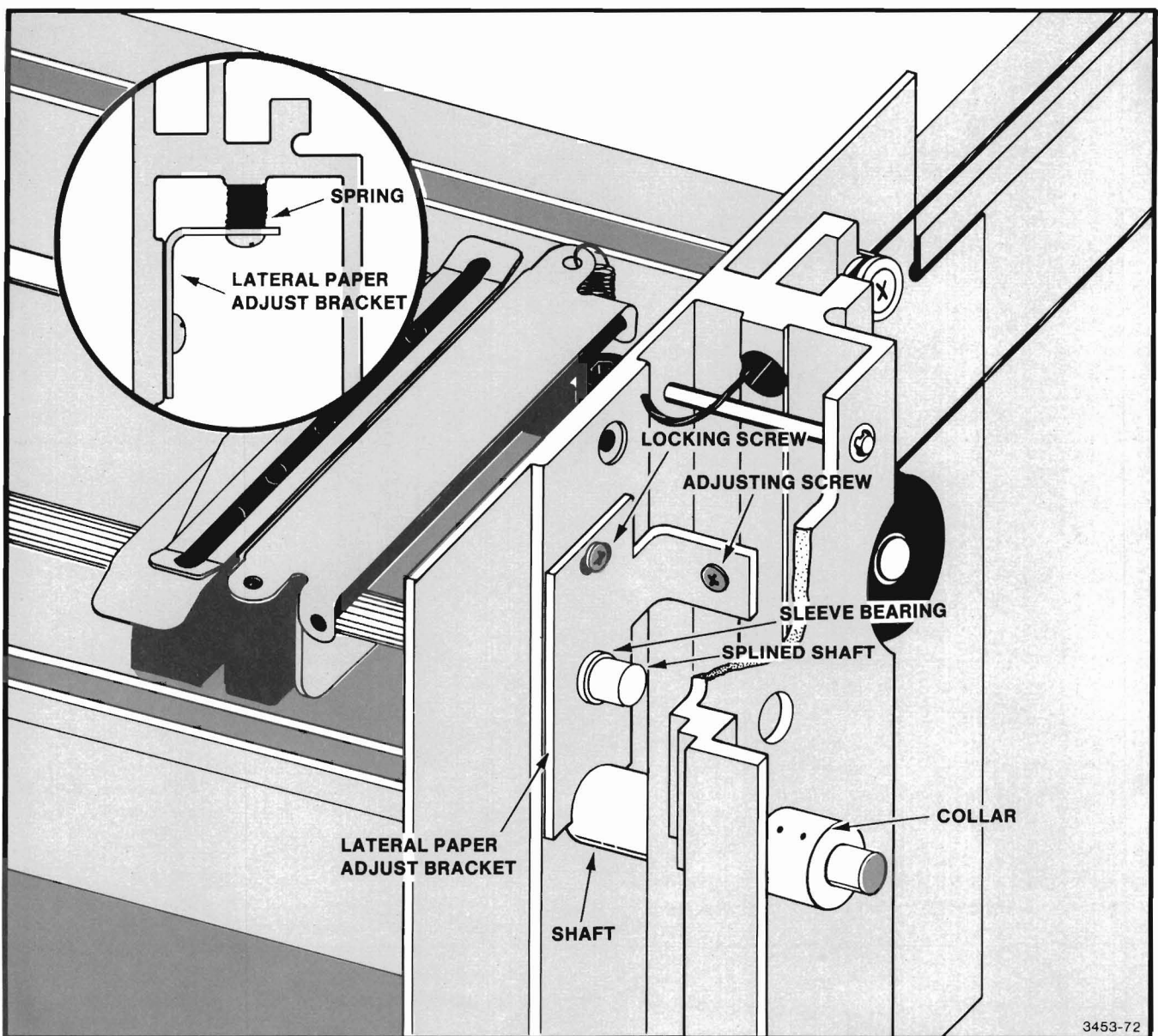


Figure A-10. Lateral Paper Adjust Bracket Assembly Detail.

INSTALLATION

Left Paper Roll Retainer Assembly Installation

1. To the left rear corner bracket, install the paper roll retainer (343-0721-00) so that the three springs (214-0428-00) fit over the shaft of this retainer and between the walls of the corner bracket. Then install a retaining ring (354-0376-00) on the end of the paper roll retainer and outside the rear most corner bracket wall (see Figure A-11).

Paper Roll Clutch Assembly Installation

1. Grip the shaft and nut end of the paper roll clutch assembly (Figure A-12) in one hand and rotate the rotor (white plastic portion) CCW 1/2 or 3/4 of a turn. Release the rotor; it should spin CW and "snap" against the internal limit stop. Repeat several times to verify this.

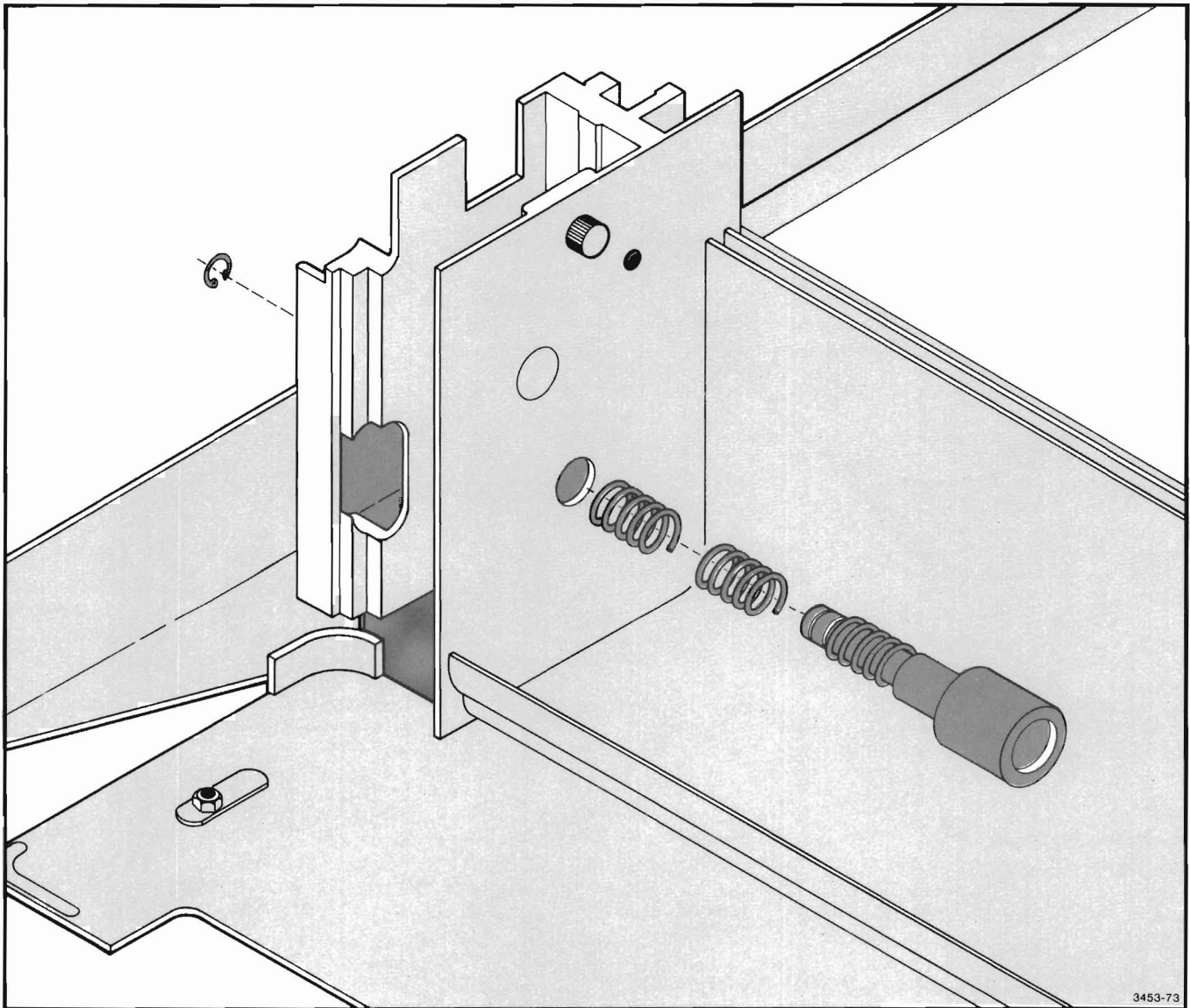
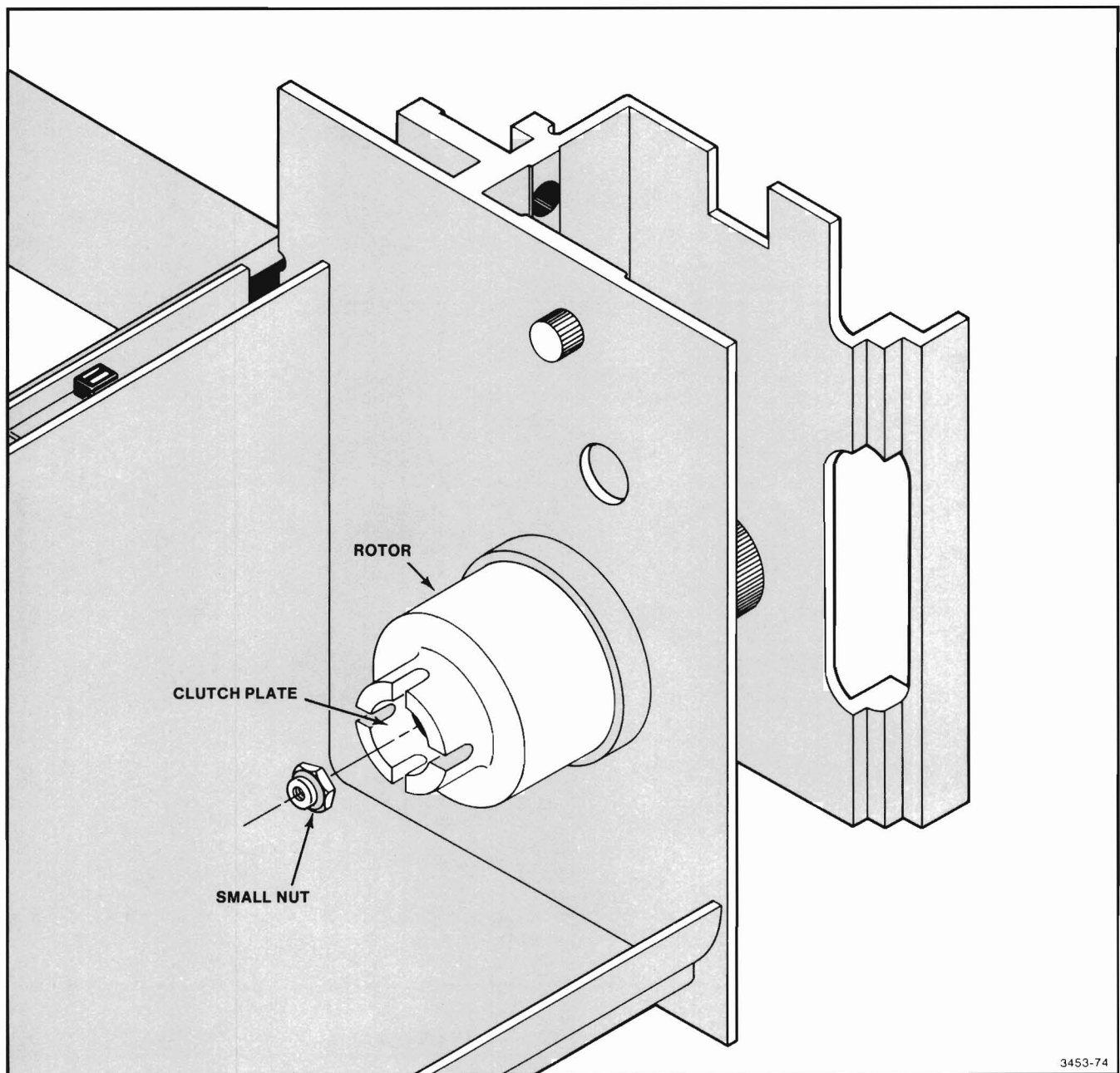


Figure A-11. Left Paper Roll Retainer Assembly Detail.

2. While still gripping the shaft of the clutch assembly in one hand, turn the rotor CCW several turns and stop. Hold the rotor still and observe the small nut and the end of the clutch plate in the end of the rotor (Figure A-12). The nut must not move or creep back. If it moves back, tighten it slightly and repeat. Hold the rotor while tightening, and tighten in 1/8 to 1/4 turn increments.
3. Holding the shaft of the clutch assembly, rotate the rotor CCW about 3/4 turn. You should be able to feel the internal limit stop. Further CCW rotation of the rotor should allow the internal mechanism to slip smoothly with no binding or excessive force required. If so, the assembly is functioning properly.



3453-74

Figure A-12. Paper Roll Clutch Assembly.

INSTALLATION

4. Unscrew the large nut on the clutch assembly shaft (this is on the opposite end from the plastic rotor).
5. Install the clutch assembly on the Plotter by inserting its shaft into the 1/2" hole in the left front corner bracket (Figure A-12).
6. Thread the nut (removed in the previous step) onto the shaft and tighten FINGER TIGHT only. The clutch rotor should "free-wheel" when rotated CCW (when viewing from the front of the Plotter) and should wind 3/4 turn when turned CW. With further CW rotation, the internal mechanism should continue to slip smoothly.

Object Sensor Assembly Installation

1. Lift the front of the pen drive assembly mechanism and prop it in the up position with the support arm (see Step 5 of Appendix C).
2. Mount the Object Sensor circuit board (670-5685-00) to the bracket (386-4262-00) with two spacers (361-0532-00) and two screws (211-0198-00) as shown in Figure A-13. Notice the orientation of the circuit board — the numbered end of the circuit board points to the rear of the instrument. Also notice that the spacers go between the bracket and the Object Sensor circuit board.
3. Pass the object sensor assembly up through the hole just to the left of the platen and near the front of the Plotter. The bracket is held with a single screw (211-0007-00) under the platen.
4. The cable is then connected to J110 of the Media Advance circuit card.

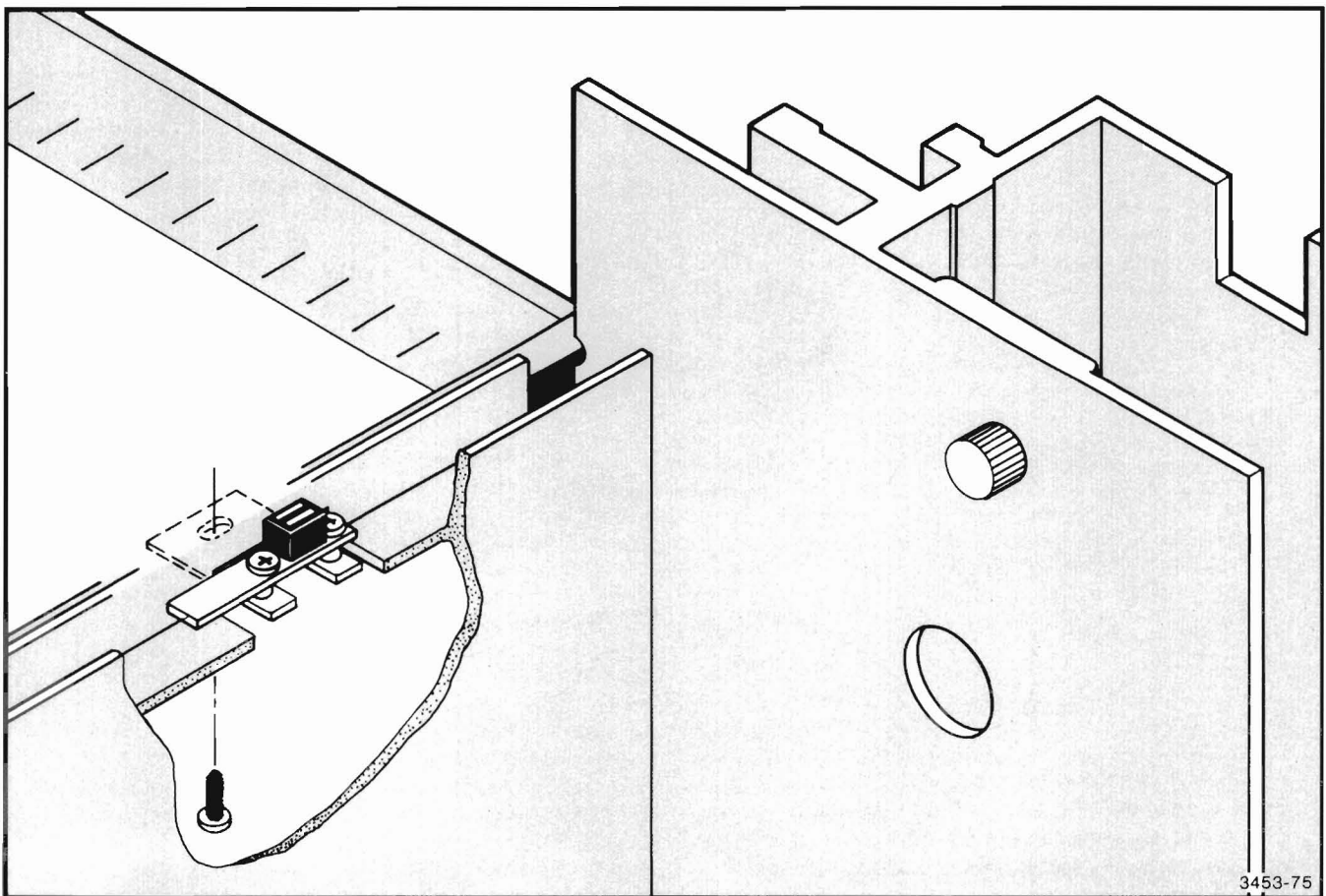


Figure A-13. Object Sensor Assembly.

Paper Cutter Bar Installation

1. Lower the pen drive mechanism assembly from its propped up position.
2. To each end of the paper cutter bar, mount a nut block (220-0595-00) using a screw (211-0507-00), washer (210-0055-00), and nut (210-0407-00). (Refer to Figure A-14.)
3. Install the paper cutter bar on the right end of the Plotter and just outside the paper drive tractor assembly. Mount the paper cutter bar between the right front and rear corner brackets with two screws (212-0008-00). Orient the paper cutter bar such that the cutting edge is approximately 1/16" above the right frame.

Paper Tractor Adjustments

1. Plug in the line cord and turn on the Plotter's power.
2. Install the paper roll using the instructions in the 4663 Operator's Manual.
3. The paper tractors can be properly positioned at this time. The front edge of the paper should be positioned such that it is a constant distance from (or even touching) the front paper guide on the front of the platen. If adjustment is required, loosen the socket-head screw next to the FRONT paper tractor. This enables the front paper tractor to slide back and forth. Position this tractor so that as the paper comes off the roll it moves parallel to the front paper guide. Tighten the front paper tractor screw.

Then, loosen the rear tractor socket-head screw and position the rear tractor such that the drive pins are centered in the paper sprocket holes. The paper should lay smoothly between the paper tractors without being stretched or wrinkled. Tighten the rear tractor screw.

4. Select ROLL mode on the Parameter Entry card. If the Plotter is already in ROLL mode, skip to Step 5. Press MEDIA CHANGE. If the Plotter was in SHEET mode previously, the MEDIA CHANGE switch will blink when the MEDIA CHANGE function is pressed. Internally the Plotter is converted to ROLL mode after this current media change operation. So, it is necessary to press MEDIA CHANGE again. This completes the current media change cycle and places the Plotter in ROLL mode for the next MEDIA CHANGE.

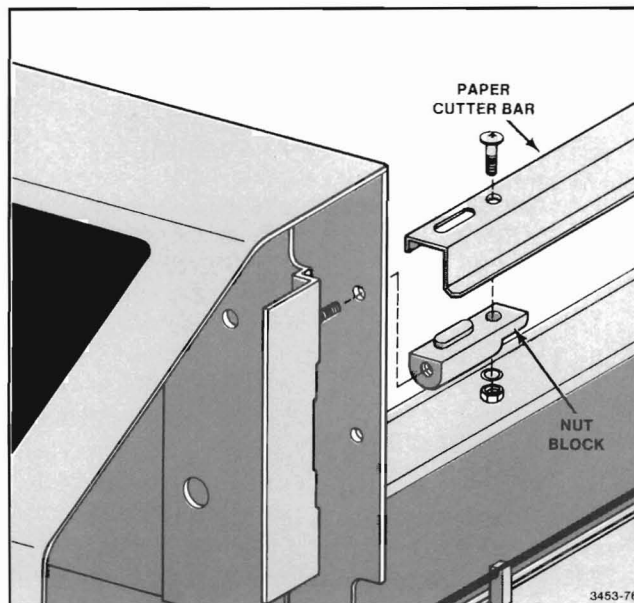


Figure A-14. Paper Cutter Bar Assembly and Mounting.

5. Press MEDIA CHANGE. The paper should advance an amount determined by selections on the Parameter Entry card (INITIAL PAGE SIZE, FORMAT, ORIENTATION, etc.). The paper should move without tearing or the motor stalling or skipping in steps. If the motor stalls, skips, or paper is torn, the clutch is too tight. Remove the paper roll. While holding the rotor of the clutch assembly (plastic portion of the clutch housing), use a 5/16 inch nut-driver to loosen the nut at the top of the rotor less than 1/4 turn. Install the paper roll again and repeat the test.
6. As the paper comes off the roll, its "edge tension" should be constant for both edges. If one edge is tighter than the other, one tractor is slightly ahead of the other. Refer to Figure A-10 and loosen the locking screw. Then, while the paper is advancing, turn the adjustment screw either way for equal tension on the edges of the paper. Tighten the locking screw when the adjustment is complete.

INSTALLATION

Manual Motion Check

1. Activate the MANUAL MOTION function. Move the joystick to the right. The paper should feed smoothly (no skips, jumps, or tearing of paper). Release the joystick; paper movement should stop. Move the joystick gently to the left. The paper should move to the left and the paper roll should rewind approximately 1/2 to 3/4 revolution before stopping. If the paper roll does not rewind at least 1/4 revolution, the clutch is too loose. Remove the paper roll. Tighten the nut on the clutch assembly rotor approximately 1/8 to 1/4 turn (hold the rotor while tightening the nut). Install the paper roll again and repeat Step 5 of Paper Tractor Adjustments and this step.
2. When the clutch is adjusted and operates smoothly, apply one drop of semi-hard thread adhesive to the nut on the rotor. Allow this to dry before proceeding. Also tighten the nut holding the clutch assembly to the Plotter (installed in Step 6 of Paper Roll Clutch Assembly).

Out-of-Paper Operational Check

1. Disengage the paper from the paper tractors.
2. Press MEDIA CHANGE. The paper tractors should turn (as if advancing paper), but since the paper is not engaged, no paper is advanced. When the paper tractors stop, the PAUSE light should start blinking, indicating an "out of paper" condition. In this case, no paper advanced, but the Plotter still indicates "out of paper." The same indication is shown if there is no paper present or if the end of the roll passes by the left side of the platen.
3. Press the PAUSE light to turn it off.
4. Engage the paper in the paper drive tractors.
5. Press MEDIA ADVANCE and verify that the paper advances normally and that the PAUSE light does not come on.

This completes the installation of the Option 36 Media Advance. To return the Plotter to operation, reverse the procedure for opening the Plotter (Steps 1 through 5 of Appendix C).

Option 37 (Additional Parameter Entry Set-up Memory)

1. Turn on the Plotter's power and allow the Plotter to initialize (about 10 seconds).
2. Verify that the INIT light is out (located to the left of the Parameter Entry switches). If the INIT light is on, push the Parameter Entry card fully in to turn the INIT light off.
3. Pull the Parameter Entry card out one line at a time and record the current operational settings (indicated by lighted switches).
4. Do Steps 1 through 5 of Appendix C to gain access to the Plotter's interior.
5. Remove the circuit card retainer on the left side of the circuit card cage.
6. Before removing the Processor circuit card, detach the three cable connectors. Then, remove the Processor card. This card has a circuit card ejector on the right corner which is used to pull the card out of the back-edge connector.
7. Option 37 consists of three CMOS RAMs (156-0887-00). These three components go into sockets U351, U355, and U361. Be sure to note the proper orientation of the components with reference to Pin 1 of the socket (see Figure A-6).
8. Replace the Processor circuit card. Be sure to firmly press against the front edge of the circuit card until it slips into the back-edge connector and seats. Then, reconnect the three front cable connectors.
9. Replace the circuit card retainer.
10. Reverse the procedure for opening the Plotter (Steps 1-5 of Appendix C).
11. Do Steps 1 and 2 above.
12. Pull the Parameter Entry card out one line at a time and enter the settings recorded in Step 3.

This completes the installation of Option 37.

Option 48 (220 Volt Operation)

To install Option 48 (or convert to 220 volt operation), refer to the description of the Line Voltage Selection earlier in this Appendix.

Appendix B

STRAPS AND JUMPERS

INTRODUCTION

Throughout the Plotter's electrical circuitry, provision has been made to modify some operations. These modifications are usually selected by moving a wire jumper or strap. Jumpers or straps connect two square pins, thereby bridging the otherwise open connection (see Figure B-1). Usually the jumpers are arranged such that when one desired circuit modification is enabled, the other possible circuit configurations are disabled. This automatically happens when a jumper is moved from one pair of square pins (disabling that circuit) to another set of square pins (enabling that circuit).

However, some Plotter straps are placed in the circuitry for proper operation and no other options are given. These straps are also discussed in the following diagrams and tables.

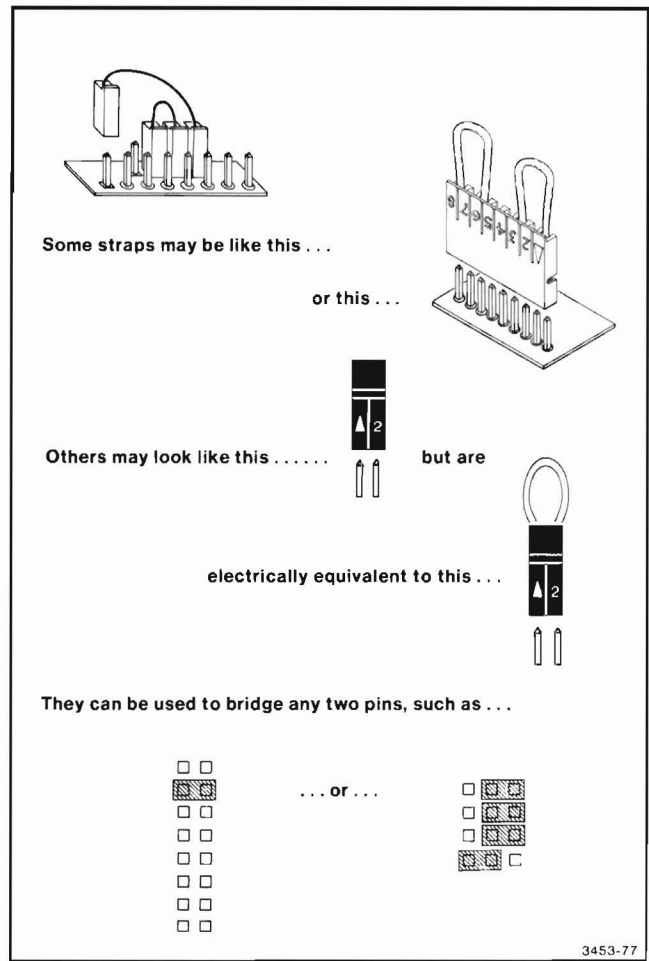


Figure B-1. Example of Jumpers or Straps.

PROCESSOR CIRCUIT CARD STRAPS

All of the straps on the Processor circuit card are shown in Figure B-2. A summary of these straps and their normal factory settings then follows.

J13 – PROM Size Select

This strap is used to choose the size of the PROM portion of the system firmware.

If Pins 1 are strapped together, PROM equals 32K bytes.

If Pins 2 are strapped together, PROM equals 16K bytes.

If Pins 3 are strapped together, PROM equals 8K bytes.

If Pins 4 are strapped together, PROM equals 4K bytes.

If Pins 5 are strapped together, PROM equals 2K bytes.

If Pins 6 are strapped together, PROM equals 1K bytes.

J101-J102 – Interrupt Level

This strap establishes the interrupt level for Bus Error, eight millisecond timer, and the Parameter Entry device.

The column labeled J102 corresponds to three interrupt sources: Pin 1 or 2 is Bus Error, Pin 4 or 5 is the eight millisecond timer, and Pin 7 or 8 is the Parameter Entry device. (Pins 3 and 6 are not used.) J101 pins select the particular interrupt level desired by the three interrupt sources in J102. Pin 1 (of J101) is level 0, Pin 2 is level 1, Pin 3 is level 2, and so on.

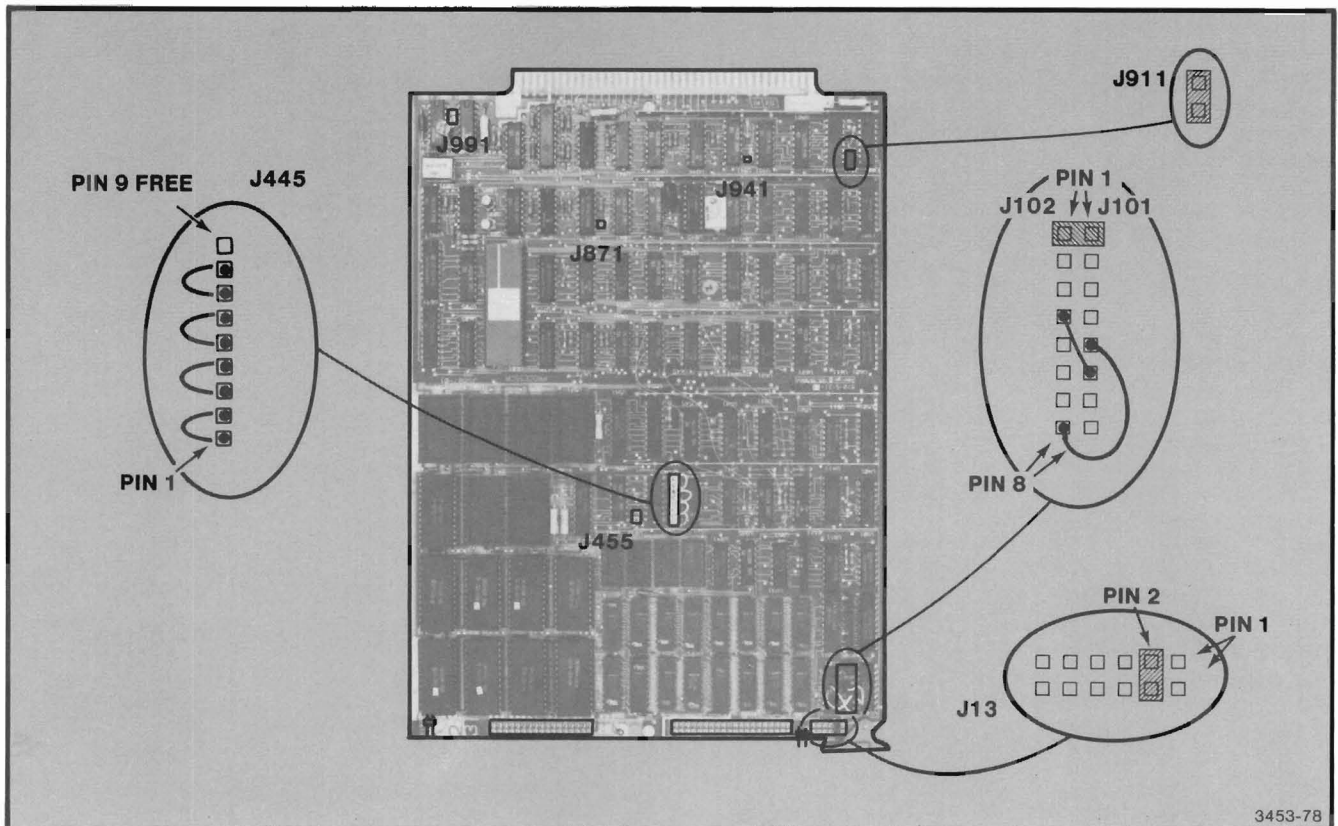


Figure B-2. Processor Circuit Card Straps.

J445 — ROM Chip Size Select

This strap enables the ROM chip size selection to decode the various size ROMs which can be used.

If 2K ROMs are used, the straps are arranged such that Pin 2 connects Pin 3, Pin 4 connects Pin 5, Pin 6 connects Pin 7, and Pin 8 connects Pin 9. If 4K ROMs are used, the straps are arranged such that Pin 1 connects Pin 2, Pin 3 connects Pin 4, Pin 5 connects Pin 6, and Pin 7 connects Pin 8. If 8K ROMs are used, the straps are arranged such that Pin 1 connects Pin 2, Pin 3 connects Pin 4, and Pin 5 connects Pin 6.

J455 — 2K Chip Size Select

This strap is used when the memory consists of 2K ROMs.

J911 — Timing Feedback Enable

This strap (when used) provides feedback for the internal Plotter master clock.

Processor Circuit Card Strap Summary

Normally, the straps on the Processor circuit card are set as follows:

J13 — Second pin in each column connected (Pin 2 to Pin 2).

J101-J102 — Pin 1 of J101 is connected to Pin 1 of J102.

Pin 6 of J101 is connected to Pin 4 or 5 of J102.

Pin 5 of J101 is connected to Pin 7 or 8 of J102.

J192 is not used.

J445 — Pin 1 connects Pin 2, Pin 3 to Pin 4, Pin 5 to Pin 6, and Pin 7 to Pin 8 (4K ROMs).

J455 is not used.

J871 is not used.

J911 is jumpered.

J941 is not used.

J991 is not used.

MOTOR PEN DRIVE CIRCUIT CARD STRAPS

There are no jumpers or straps on this circuit card.

VECTOR GENERATOR CIRCUIT CARD STRAPS

The strap locations for the Vector Generator circuit card are shown in Figure B-3.

J5 – Interrupt Level

J5 selects the interrupt level for both the front panel switch change interrupt and one of the three motion generation interrupts: task complete, motion synchronization, or error.

Pins 1-4 refer to levels 0 to 3 for the motion generation interrupts, while Pins 5-8 refer to levels 0 to 3 for the front panel interrupts (see Figure B-3).

Normally, the Vector Generator straps bridge both number four pins and both number seven pins (see Figure B-3).

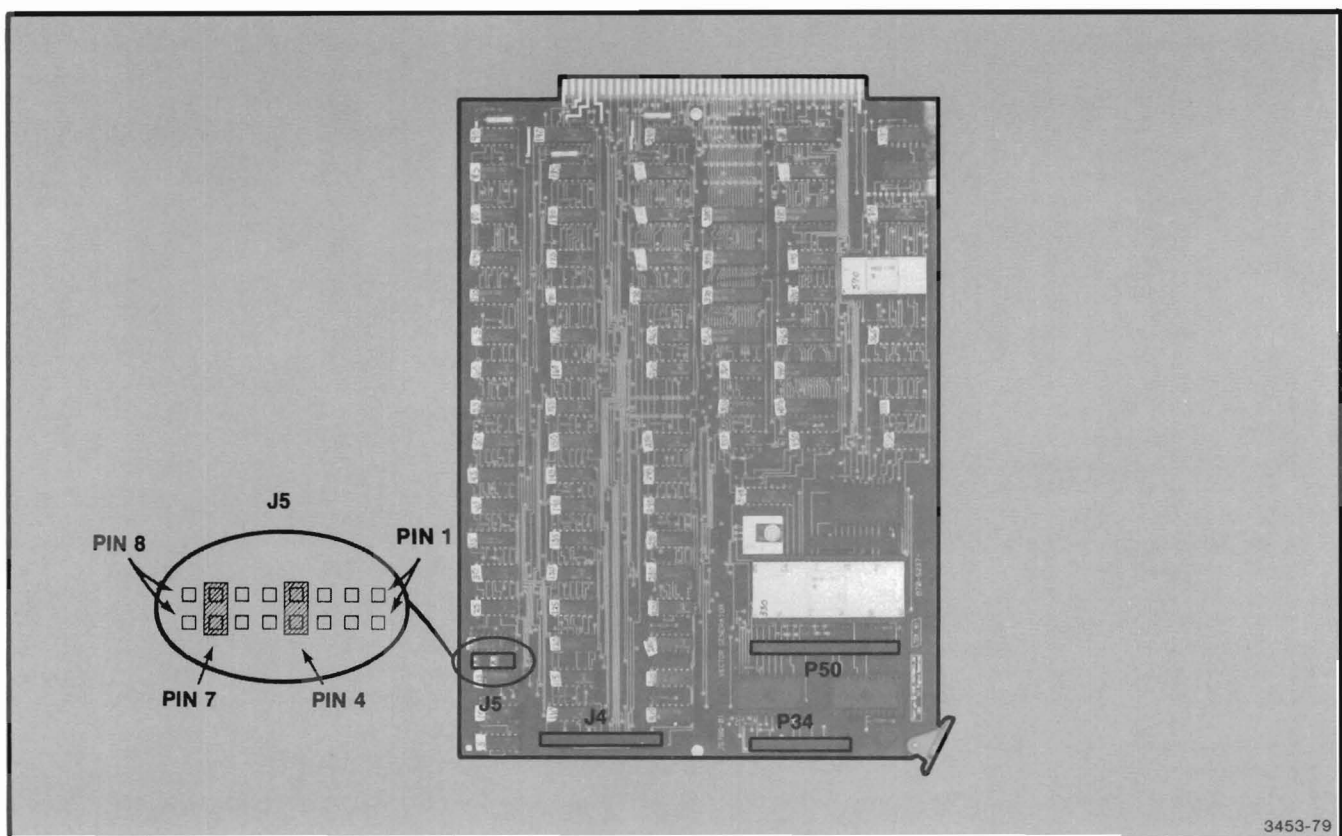


Figure B-3. Vector Generator Circuit Card Straps.

COMMUNICATIONS INTERFACE CIRCUIT CARD STRAPS

RS-232 Version (670-5579-00,01,02...)

The RS-232 version of the Communications Interface circuit card is shown in Figure B-4.

NOTE

If the serial interface is strapped for PRIMARY, the GPIB interface must be set for SECONDARY.

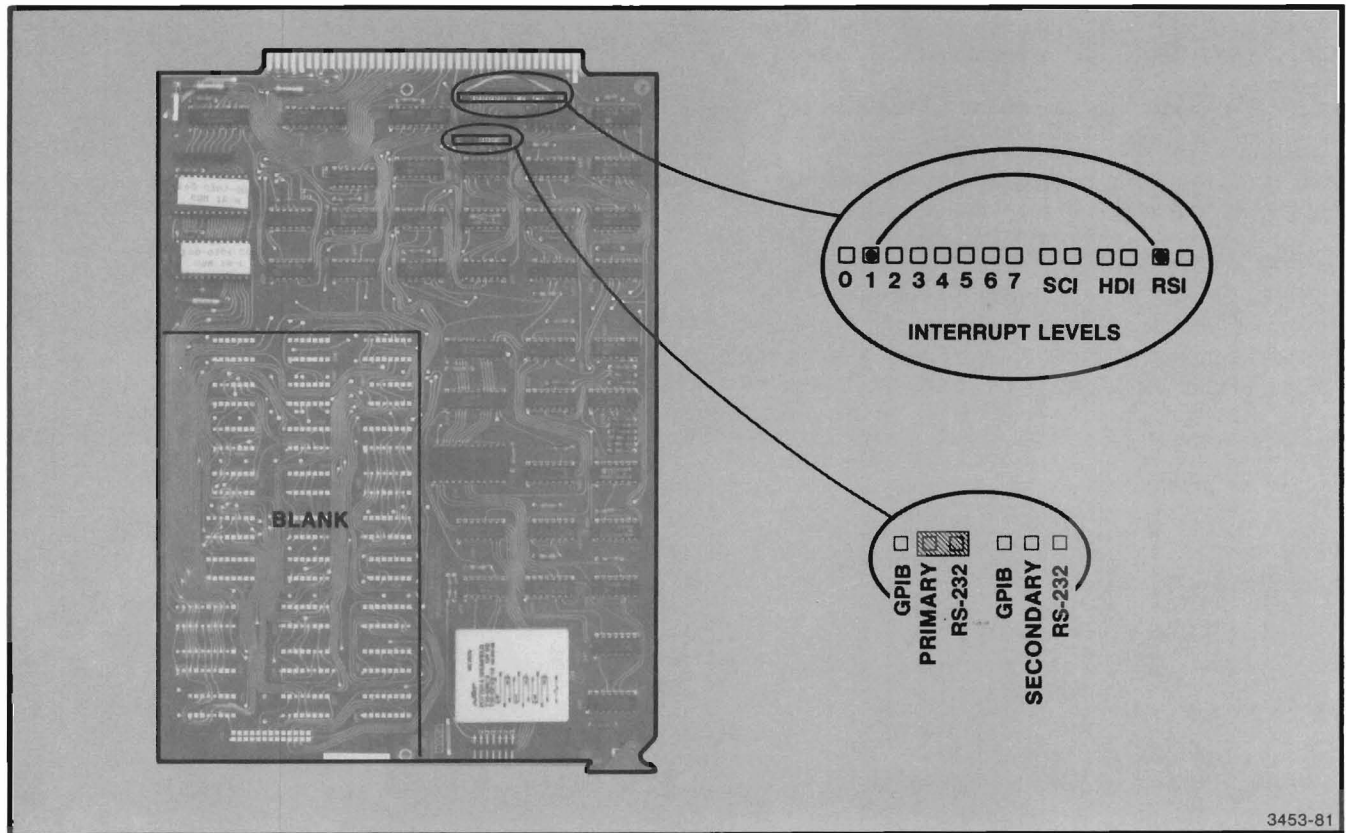


Figure B-4. Communications Interface Circuit Card (RS-232 Version) Straps.

STRAPS AND JUMPERS

GP-P-RS-GP-S-RS

The GP-P-RS-GP-S-RS strap selects whether the installed RS-232 interface is active or inactive when the operator presses "1" on the Parameter Entry card's INTERFACE SELECT line. If the strap connects P and RS, pressing "1" on the Parameter Entry's INTERFACE SELECT line activates the RS-232 interface, and pressing "2" deactivates the interface. If the strap connects S and RS, pressing "2" activates the RS-232 interface, and pressing "1" deactivates the interface.

For GP-P-S combinations, see the GPIB description later in this section.

RSI-HDI-SCI-0 Through 7

The RSI-HDI-SCI-0 through 7 pins permit the selection of Processor IRQ interrupt levels when operating the interface. RSI is the RS-232 Interrupt which indicates the receipt of a character from the host. Either of these two RSI pins is connected to one of the 0 through 7 pins to select an interrupt level for the Processor. SCI and HDI are not used when this circuit card is wired for RS-232 operation.

Serial Version of Communications Circuit Card Strap Summary

Normally, the straps on the RS-232 Communications Interface circuit card are set as follows (even when GPIB is also installed in the Plotter):

- A jumper connects P and RS.
- A jumper connects either of the two "RSI" pins and the pin labeled "1."

GPIB Version (670-5503-00,01,02. . .)

The GPIB version of the Communications Interface circuit card is shown in Figure B-5.

GP-P-RS-GP-S-RS

THE GP-P-RS-GP-S-RS strap selects whether the installed GPIB interface is active or inactive when the

operator presses "1" on the Parameter Entry card's INTERFACE SELECT line. If the strap connects P and GP, pressing "1" on the Parameter Entry's INTERFACE SELECT line activates the GPIB interface, and pressing "2" deactivates the GPIB interface. If the strap connects S and GP, pressing "2" activates the GPIB interface, and pressing "1" deactivates the GPIB interface.

For RS-P-S combinations, see the RS-232 description earlier in this section.

RSI-HDI-SCI-0 Through 7

The RSI-HDI-SCI-0 through 7 pins permit the selection of Processor IRQ interrupt levels 0 through 7 when operating the interface. HDI is Hand Interrupt (part of the GPIB handshaking sequence) and SCI is Status Change Interrupt (which reflects a change of any GPIB management bus lines). RSI is not used when this circuit card is wired for GPIB operation.

GPIB Version of Communications Interface Circuit Card Strap Summary

Normally, the straps on the GPIB version of the Communications Interface circuit card are as follows:

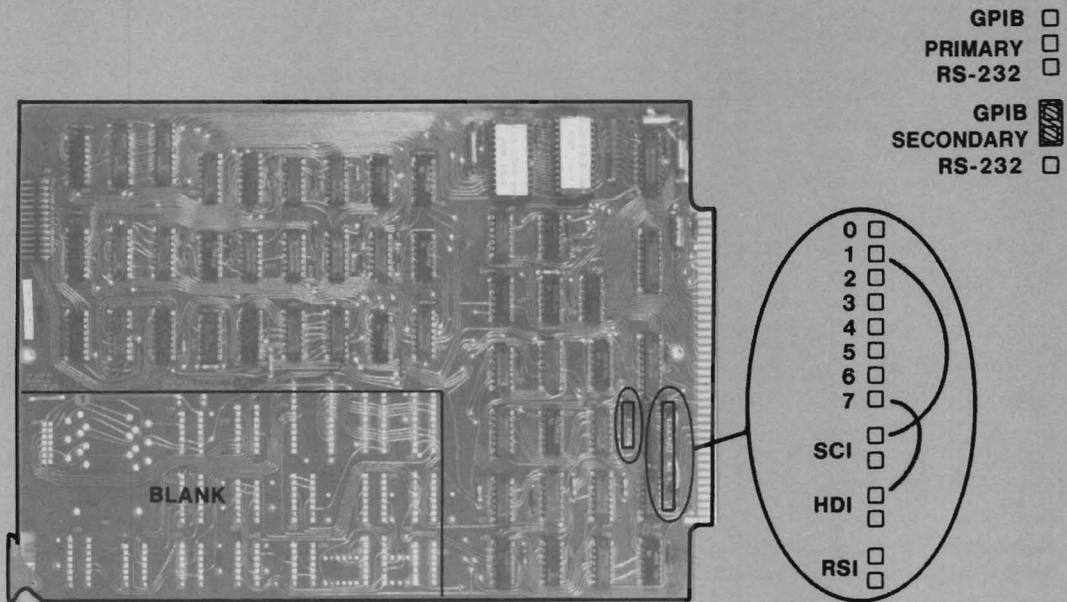
With a serial interface (RS-232, TTY, or Current Loop) installed:

- A jumper connects S and GP.
- A jumper connects either SCI pin and the pin labeled "1."
- A jumper connects either HDI pin and the pin labeled "7."¹

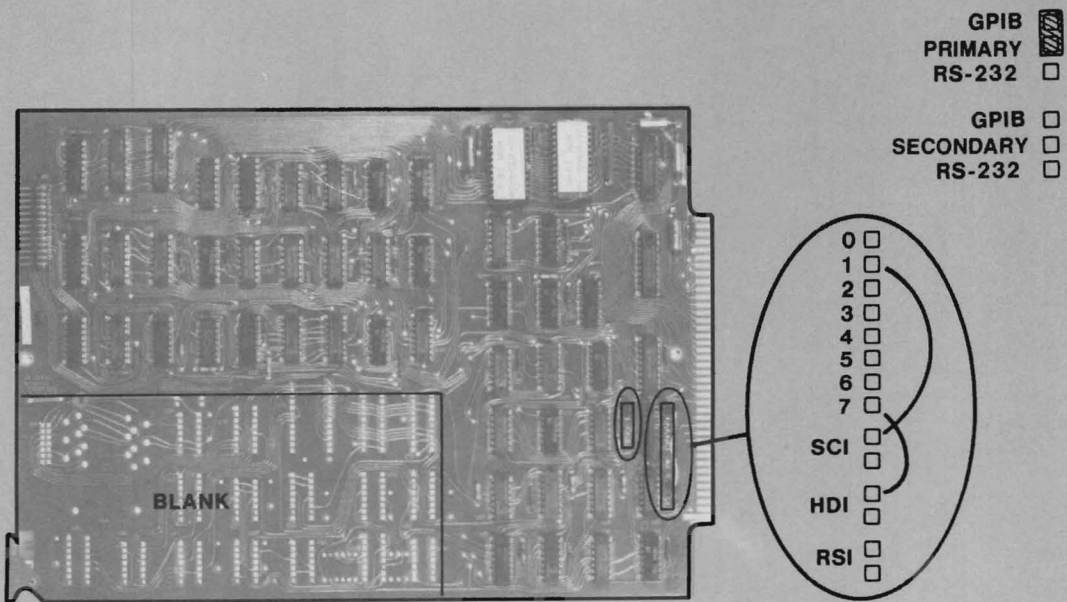
With no serial interface installed in the Plotter:

- A jumper connects P and GP.
- A jumper connects either SCI pin and the pin labeled "1."
- A jumper connects either HDI pin and the pin labeled "7."¹

¹All early model Plotters with a firmware version less than 3 do not use this strap.



A. GPIB Straps With Serial Interface Installed.



B. GPIB Straps With No Serial Interface Installed.

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Figure B-5. Communications interface Circuit Card (GPIB Version) Straps.

STRAPS AND JUMPERS

RS-232 ADAPTER CIRCUIT BOARD STRAPS

There are no straps on this circuit board.

MEDIA ADVANCE CIRCUIT CARD STRAPS

The Media Advance circuit card straps are shown in Figure B-6.

J822 – Interrupt Level

The straps on J822 select the Processor IRQ-0 level for both the joystick-controlled incremental media advance interrupts and the media advance clock pulse interrupts used for host-controlled media advances.

The joystick-controlled media advance interrupts are set as follows: Pins 1 and 2 are bridged for level 4, Pins 3 and 4 are bridged for level 5, Pins 5 and 6 are bridged for level 6, and Pins 7 and 8 are bridged for level 7.

The host-controlled media advance interrupts are set as follows: Pins 9 and 10 are bridged for level 4, Pins 11 and 12 are bridged for level 5, Pins 13 and 14 are bridged for level 6, and Pins 15 and 16 are bridged for level 7.

Media Advance Circuit Card Strap Summary

Normally, J822 is set as follows:

- Pins 5 and 6 are bridged (level 6).
- Pins 13 and 14 are bridged (level 6).

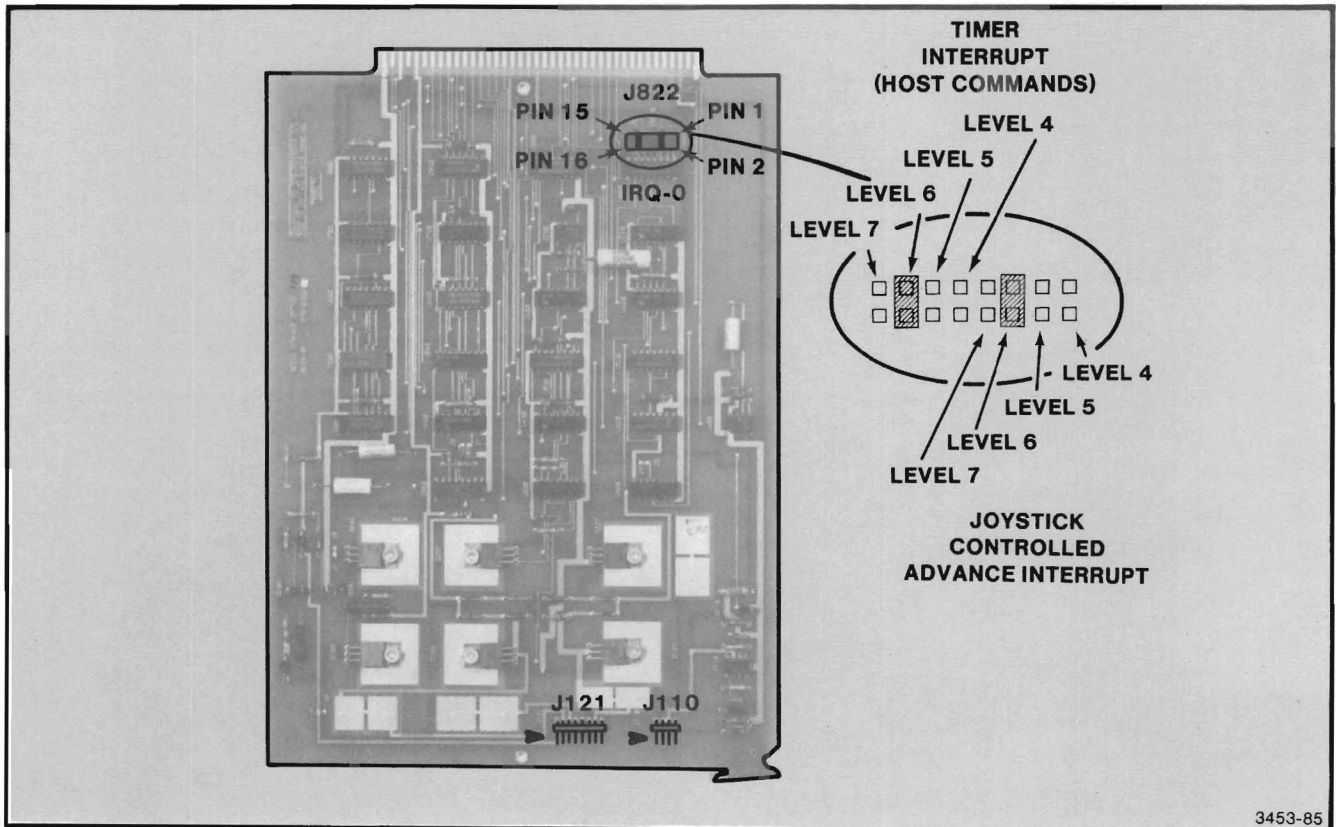


Figure B-6. Media Advance Circuit Card Straps.

ROM OVERLAY CIRCUIT CARD STRAPS

The ROM Overlay circuit card straps are shown in Figure B-7.

J260, J263, and J265

The J260, J263, and J265 straps are used in address decoding and must be set in the positions shown in Figure B-7.

ROM 0

The series of straps labeled "ROM 0" provides the enables for each ROM (PROM pair, except ROM 0, which uses only one PROM). A strap is used whenever a PROM pair is located on the ROM Overlay circuit card. Notice the numbering sequence as shown in Figure B-7.

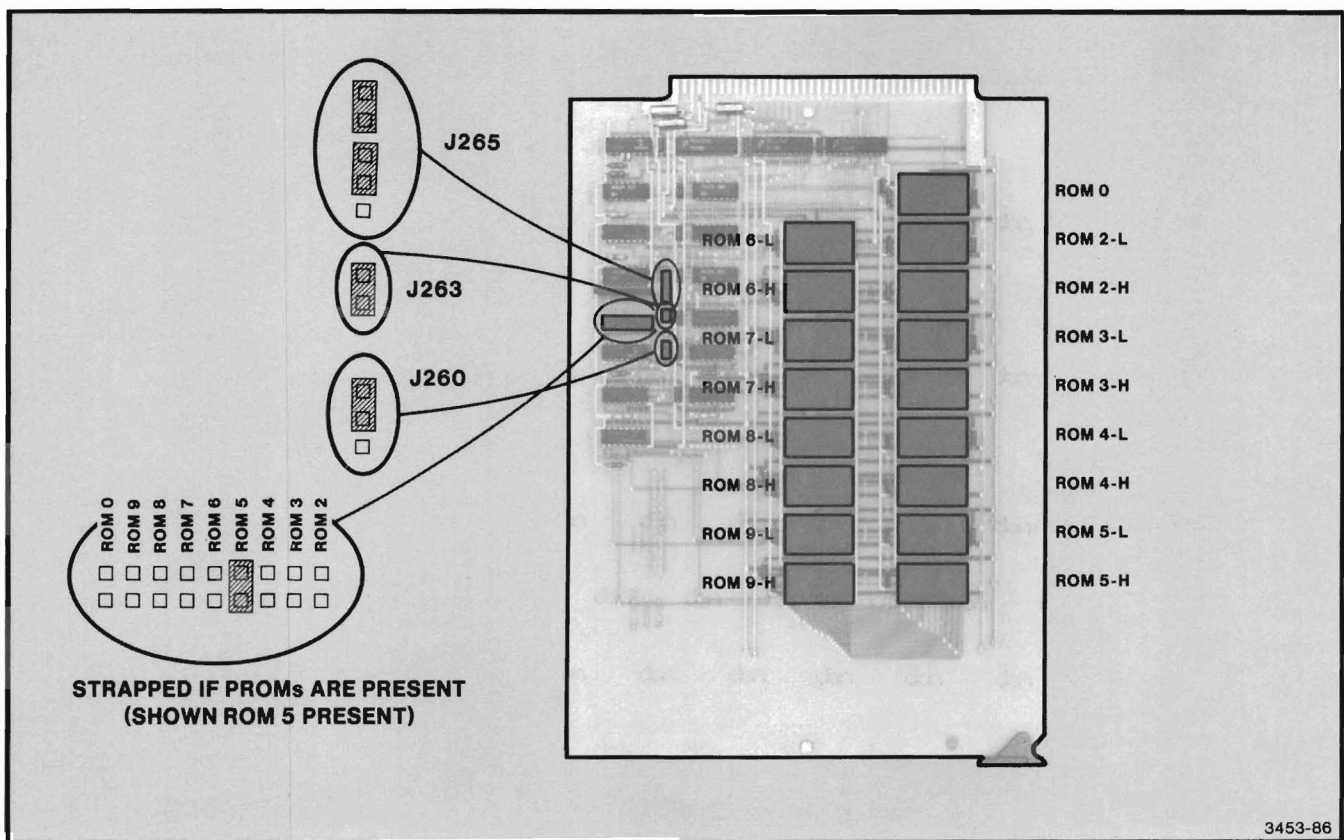


Figure B-7. ROM Overlay Circuit Card Straps and ROM (PROM) Locations.



Appendix C

GAINING ACCESS TO THE PLOTTER'S INTERIOR

The following instructions are used prior to nearly every maintenance activity described in this manual. In the interest of space and to avoid having to repeat this basic procedure, the instructions are given here. When requested by other maintenance procedures in this manual, this procedure (or portions thereof) should be followed.

1. Turn off the power to the Plotter and disconnect the power cord.

WARNING

It is important to remove the power cord because some power supply circuits remain energized from the input line even though the front panel POWER switch is turned to "OFF." Dangerous voltages exist inside this instrument.

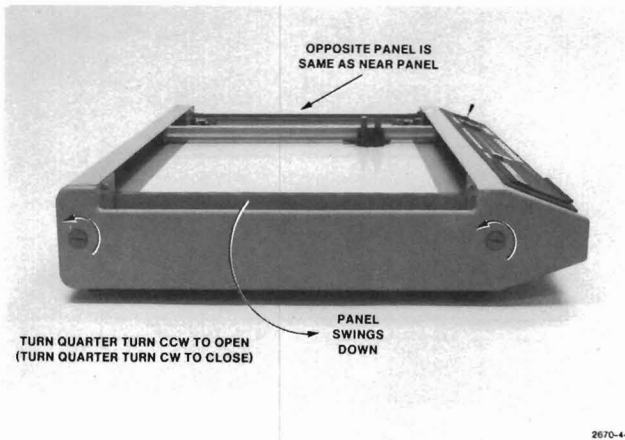


Figure C-1. Side Panel Quarter-Turn Latches.

2. There are two large quarter-turn latches on each end panel. Turn these latches CCW on one end panel and lower the panel on its hinge. Then, repeat for the other panel (see Figure C-1).
3. When both end panels have been lowered, the front and back panels can be lowered on their hinges. To do this, unscrew each of the four knurled thumbscrews that hold the front and back panels in place. These screws are located near the top corners of the instrument and face in toward the instrument's center (see Figure C-2).

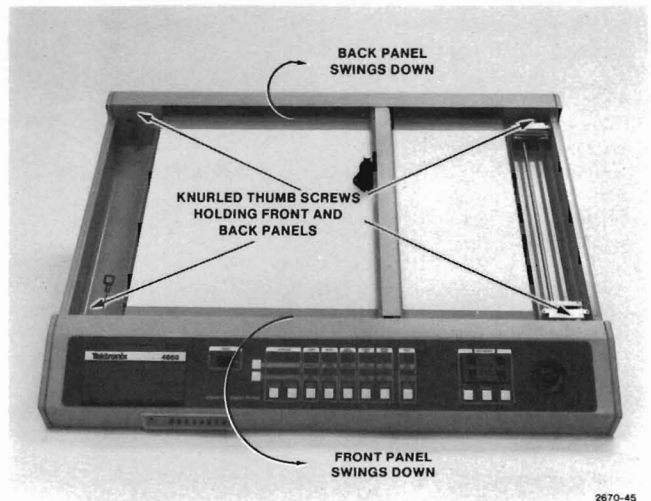


Figure C-2. Front and Back Panel Thumbscrew Locations.

ACCESS INSTRUCTIONS

4. Unscrew the eight nuts on studs which secure the pen drive assembly mechanism to the Plotter's base (see Figure C-3). Two of these nuts are located under chrome chassis plugs. One plug is located below the paper roll (if equipped with Option 36). The other plug is located below the paper tractor mechanism (if equipped with Option 36) or under the large plate to the right of the platen (if Plotter is not equipped with Option 36). Pry out the plate and the plugs with a small screwdriver.

CAUTION

Before tilting up the pen drive mechanism assembly, make sure that the rear panel has been opened and swung down out of the way. Otherwise, damage to the rear panel could result.

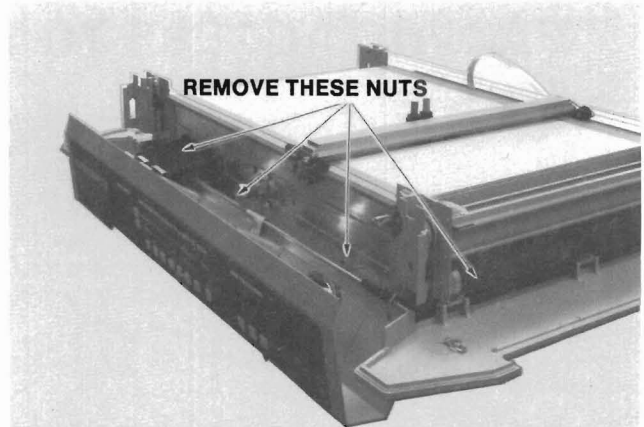
5. Grasp the front of the pen drive mechanism assembly under the corner brackets. Lift the front of the assembly only, and tilt it back to about a 45-degree angle. Care must be exercised not to damage or stretch the pen drive cables in this operation. A support rod is provided (stored along the right side of the circuit card cage) to hold this assembly up for access to the Plotter's electrical circuitry. Insert the free end of the support rod into a hole located approximately 3 in. (75 mm) to the right of the front cable capstan (see Figure C-4).

At this point, the interior of the Plotter is accessible for subsequent maintenance activity. Return to the next step of the maintenance procedure that referred you to this procedure.

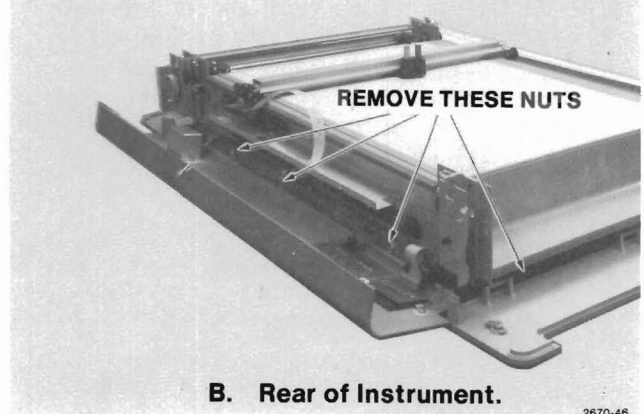
CAUTION

Before closing the rear panel, it may be helpful to manually move the Y-axis arm to the far left side of the instrument (when viewed from the front). This will minimize the possibility of damaging the flexible cable to the Y-axis arm at the rear of the instrument.

To return the Plotter to operation, reverse Steps 1-5 of the procedure for opening the Plotter.



A. Front of Instrument.



B. Rear of Instrument.

Figure C-3. Nuts Holding Pen Drive Mechanism Assembly.

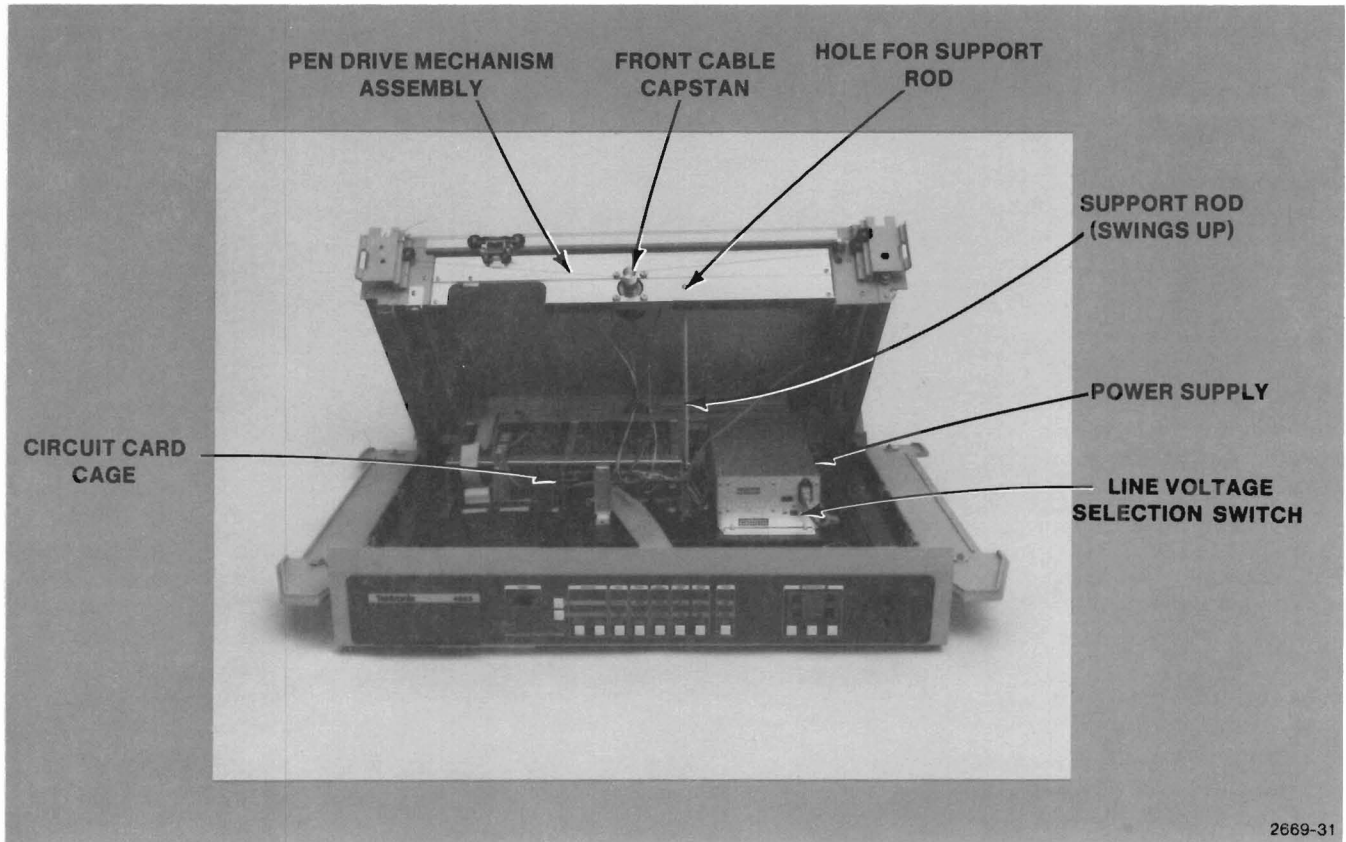


Figure C-4. Access to Plotter's Interior.



Appendix D

PRETEST OF 4663 POWER SUPPLY

If the 4663 power supply has been removed from the Plotter and the technician wishes to test the power supply before installing it in the Plotter, the following procedure should be used:

Equipment:

Power Supply Load
(a wire-wound 1.4 Ω , 25 W resistor).
Voltmeter (such as a VOM).

WARNING

The 4663 power supply requires a load on the +5 volt output in order to start up when powered on. As with all switching power supplies, there is the danger of the switching transistors exploding if the power supply should fail. Therefore, be sure that the shield cover is installed over the switching transistors and the load is connected before the power supply is turned on or plugged in.

1. Connect the load (a wire-wound, 1.4 Ω , 25 W resistor) between the + 5 volt output (any of the Pins 16, 17, 18, or 19 of J101) and ground (any of the Pins 11, 12, 13, 14, or 15 of J101).
2. Be sure that the shield cover over the switching transistors is installed.
3. Plug the Plotter's line cord into the power supply and the line source.

CAUTION

Do not handle the load resistor as it will become quite hot dissipating about 15 watts.

4. Turn on the power supply by grounding Pin 7 of J101 (PON-0).
5. Measure the voltages on the pins of J101. If the voltages agree with those in Table 4-18, the power supply can be considered operational.



Appendix E

INTERRUPT LEVEL SUMMARY

The 4663 Plotter can be classified as an interrupt-driven device. This means that when one functional block (or in some cases, a circuit card such as the Front Panel circuit board) receives a command or generates a request for Processor attention (like the active interface, for example), that functional block interrupts the Processor. However, these interrupts are prioritized for two main purposes. One purpose is to help determine the order in which tasks are accomplished if several interrupts are received together; secondly, the priority level informs the Processor which device issued the interrupt request. Knowing this priority level, the Processor can access the proper address in the system firmware to obtain the appropri-

ate service routine. The interrupt priority levels range from 0-7. 0 is the highest priority level; 7 is the lowest. A summary of these interrupt levels is as follows:

- Level 0: Bus Error (Processor Circuit Card)
- Level 1: RSI/SCI (Serial or GPIB Interface)
- Level 2: Front Panel
- Level 3: Vector Generator (Motion Generation)
- Level 4: Parameter Entry Card
- Level 5: Eight Millisecond Timer (Processor)
- Level 6: Media Advance Option
- Level 7: HDI for GPIB Option (if present)



Appendix F

PLOTTER FIRMWARE VERSION CHECK AND UPDATE INSTRUCTIONS

In order for Option 32 to operate properly in the 4663 Plotter, it is necessary for the Plotter to be equipped with at least Version 2 firmware (system memory). The presence of Version 2 (or any other version) can be

verified by checking the part numbers of the EPROMs on the ROM Patch "B" circuit card. Use the following procedure.

FIRMWARE VERSION CHECK

WARNING

It is important to remove the power cord because some power supply circuits remain energized from the input line even though the front panel POWER switch is turned to "OFF." Dangerous voltages exist inside this instrument.

1. Turn off the power to the Plotter and disconnect the power cord.
2. Use a small screwdriver to pry out the small plastic panel above the Parameter Entry switches (left front of the Plotter). This panel is approximately $\frac{3}{4}$ x $5\frac{1}{4}$ inches (19 x 133 mm) in size.
3. Push the two circuit card ejectors out (apart) to withdraw the ROM Patch B circuit card from its connector.
4. Pull the circuit card out of the opening.

5. If the Plotter is equipped with at least Version 2, the ROM Patch B circuit card will have four EPROMs with the following part numbers:

160-0273-01
160-0274-00
160-0281-01
160-0282-01

Notice that the first seven digits of Tektronix part numbers refer to the identity of the item, while the last two digits refer to any revision or improvement for that item. For example, 160-0273-00 and 160-0273-01 both refer to the same type of device. However, 160-0273-01 is a newer version and replaces 160-0273-00.

If the last two digits of the part numbers are greater than or equal to those listed above, the Plotter is equipped with a firmware version greater than or equal to two and Option 32 will be compatible. If it is necessary to upgrade the Plotter's firmware, use the procedure described next.

UPGRADING THE PLOTTER FIRMWARE (INSTALLING VERSION 2)

This procedure updates the Plotter's system firmware to at least Version 2. It must be noted that if the Plotter is equipped with Option 31 (Circular Interpolation and Programmable Macros), it will also be necessary to replace the Option 31 EPROMs to maintain a defined level of firmware. The procedure for upgrading Option 31 is the same as installing Option 31 (see Appendix A).

1. Remove the ROM Patch B circuit card (if not already accomplished) using Steps 1-4 of the Firmware Version Check.
2. Remove any applicable "outdated" EPROMs from the ROM Patch B circuit card and replace with new EPROMs in the following locations (refer to Step 5 of the Firmware Version Check for a description of the Tektronix part number system):
 - 160-0273-01 goes in U315
 - 160-0274-00 goes in U325
 - 160-0281-01 goes in U335
 - 160-0282-01 goes in U345

Make sure the devices are oriented correctly with respect to Pin 1. Pin 1 of the device is identified by a small symbol in one corner of the device. Pin 1 of the socket is identified with a small dot or triangle on the circuit card.

3. Slide the ROM Patch B circuit card back into the slot above the Parameter Entry switches. Push firmly until the card seats in its connector.
4. Replace the plastic panel removed in Step 1. The panel simply snaps into place.

Appendix G

ROM OVERLAY CIRCUIT CARD LOCATIONS

Early versions of the Plotter used PROMs instead of ROMs. Because of the differences in pin configurations and device memory capacities, these PROMs were located on the ROM Overlay circuit card (see Figure G-1). Later, as ROMs became available, these PROMs were removed, and corresponding ROMs were placed

on the Processor circuit card. Appendix H and Figure A-7 in Appendix A show the locations of the various ROMs or PROMs in the Plotter, including the Processor ROMs.

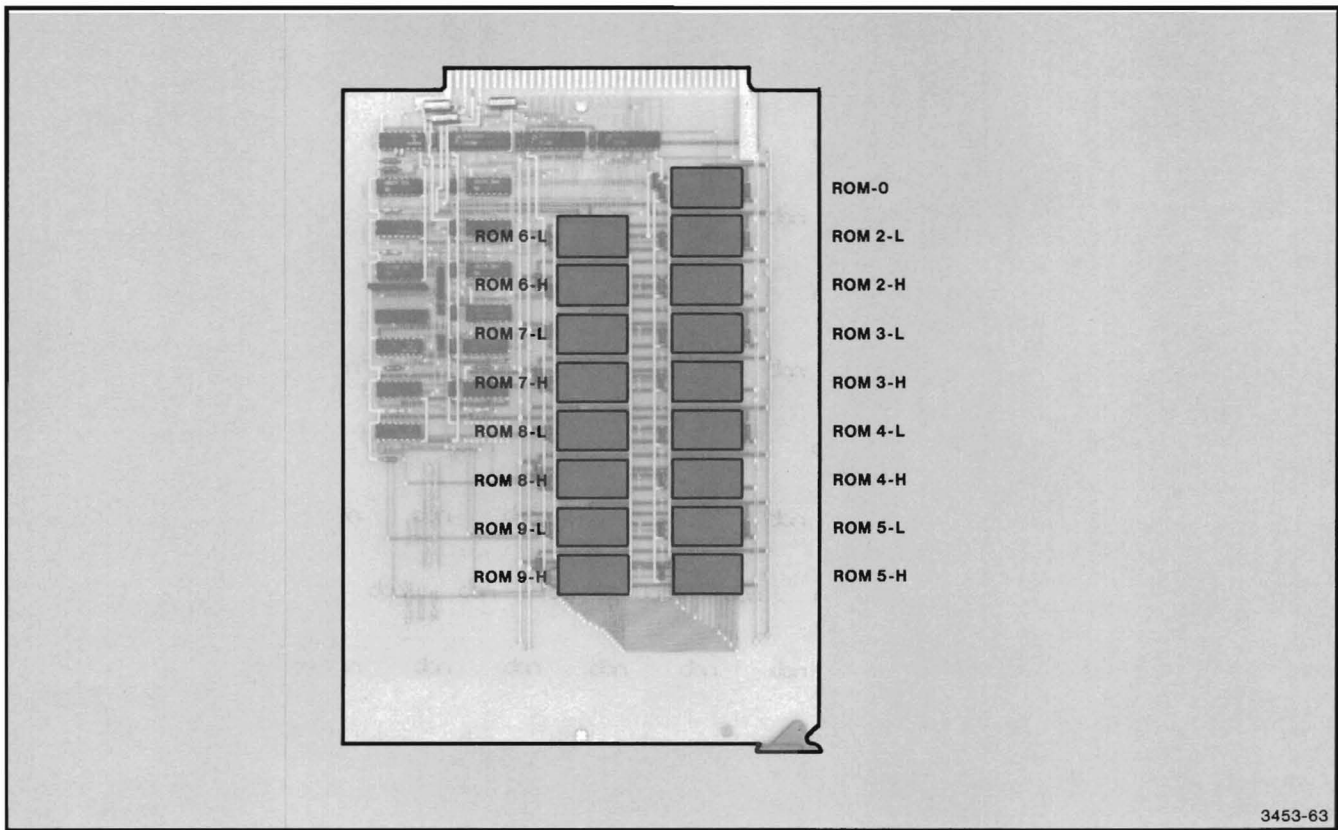


Figure G-1. ROM Overlay Circuit Card ROM (PROM) Locations.



Appendix H

PLOTTER FIRMWARE LOCATIONS

ROM/PROM locations in the Plotter are shown in the following figures. Some early model Plotters used a ROM Overlay circuit card to hold all or a portion of the

system firmware. The ROM Overlay circuit card is shown in Figure G-1 of Appendix G.

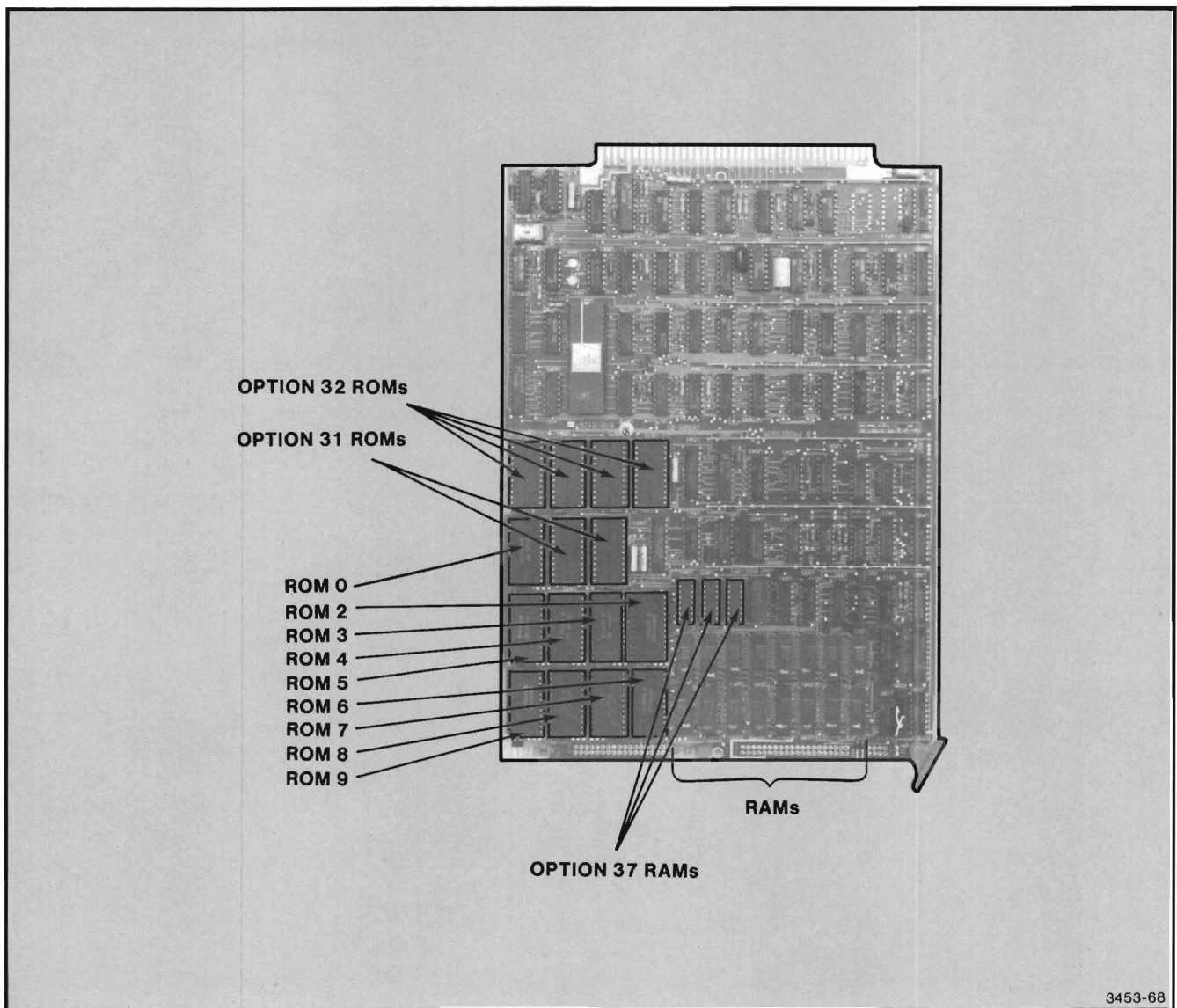


Figure H-1. Processor Circuit Card ROM Locations.

PLOTTER FIRMWARE LOCATIONS

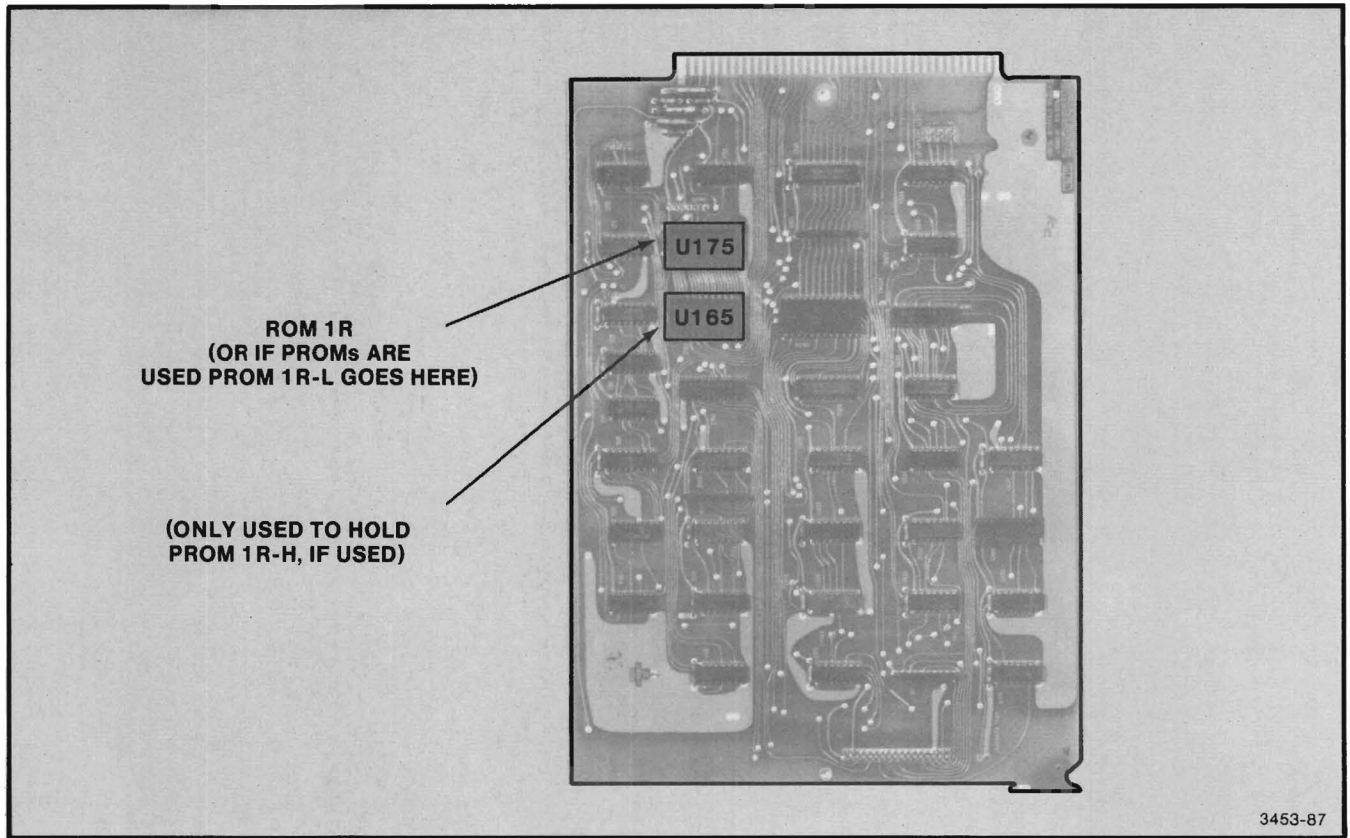
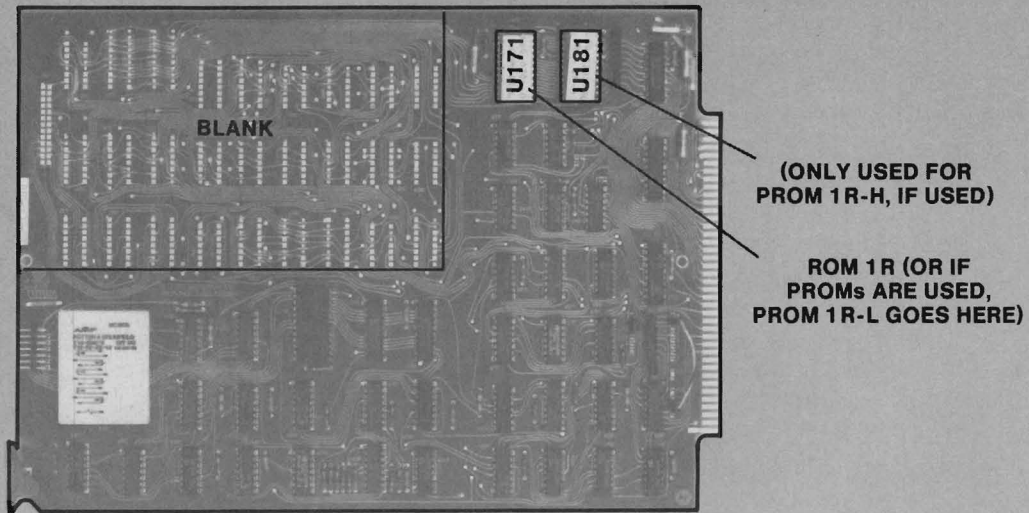
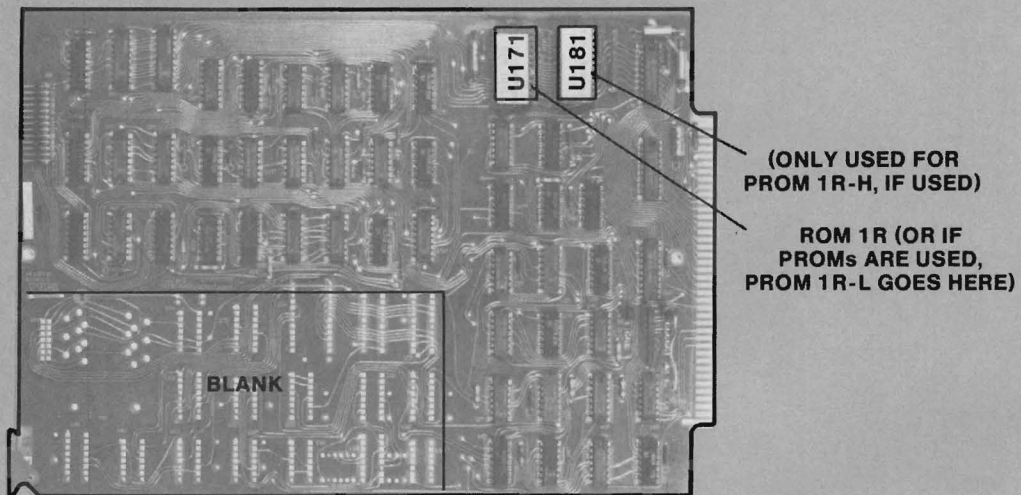


Figure H-2. Serial Interface Module Circuit Card ROM Locations.



A. RS-232-C Version.



B. GPIB Version.

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Figure H-3. Communications Interface Circuit Card ROM Locations (Both GPIB and RS-232-C).

PLOTTER FIRMWARE LOCATIONS

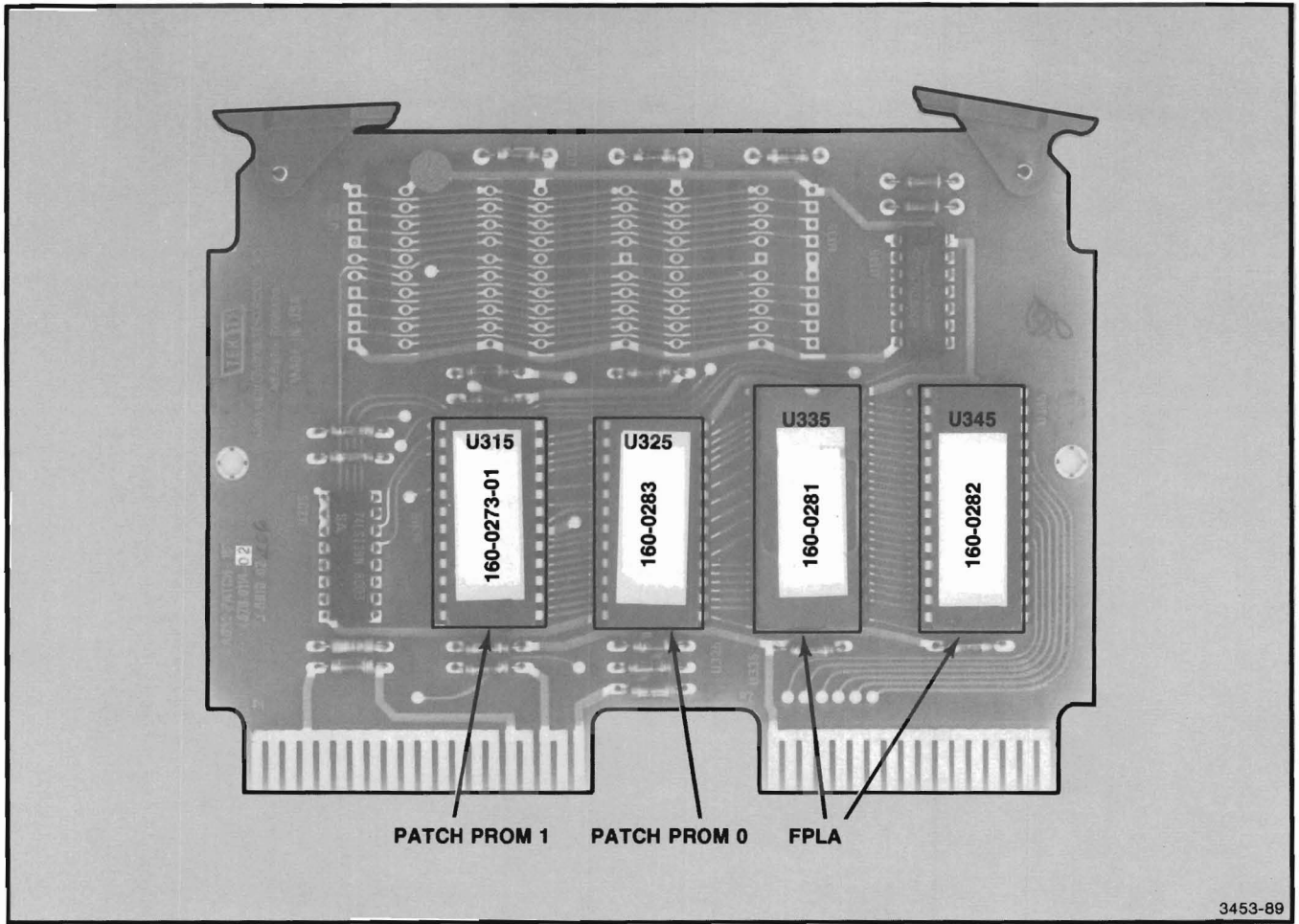


Figure H-4. ROM Patch "B" Circuit Board PROM Locations.