

UTILITY PROGRAMS FOR THE TS 816

Utility Program Format:

UTILITY	Name of the program, version number, release date, and copyright information.
PURPOSE	Description of what the utility is used for and tells when and how it should be used.
EXECUTION	Detailed explanation of how to call up the program and how to respond to each screen prompt.
COMMENTS	Additional useful information provided.

The following utilities are among those included on your system tape:

Name	Function
DISKDUMP	Backs up entire contents of hard disk onto tape.
FIXDISK	Scans the hard disk for bad sectors. When a bad sector is found, it is assigned to a "dummy file." Dummy files stop the system from writing onto bad sectors. It is used in conjunction with SCANDUP.
SCANDUP	Scans the hard disk for duplicate directory entries created by FIXDISK.
TAPEDUMP	Transfers information from tape to the hard disk.
TOD	Allows you to set and examine the current time and date on your screen.

Utility Program Descriptions

The following pages contain descriptions of the individual utility programs. The programs are listed in alphabetical order. **READ ALL USER INSTRUCTIONS BEFORE ENTERING ANY COMMANDS.**

All user responses are shown in bold print.

UTILITY**DISKDUMP**

For TS 816

Configuration: Service Processor Terminal
Version 1.0

Release date 4 September 1981

Copyright TeleVideo Systems, Inc. 1981

PURPOSE

DISKDUMP allows you to back-up all files on the hard disk onto tape.

DISKDUMP should be used on a daily basis in order to have a copy of current files.

When you run DISKDUMP, use a new tape or a tape with obsolete data. Any data on the tape used will be erased by DISKDUMP.

STOP!!

DISKDUMP WILL NOT WORK IF YOUR TAPE CARTRIDGE IS WRITE PROTECTED. MAKE SURE THE ARROW IS POINTED AWAY FROM THE WORD "SAFE."

EXECUTION**USER:**

1. Enter

[drive:]DISKDUMP<CR>

where:

[drive:] is the drive on which DISKDUMP is located if other than the currently active drive

NOTE!

The programs TAPEDUMP.DAT AND TPUTILI.DAT must also be on the currently active drive in order for DISKDUMP to be run successfully.

SYSTEM:

2. Displays

DISKDUMP image to tape. V 1.0

14.5 Megabyte on 1/4" tape cartridge

***CAUTION: ALL DATA ON THE CARTRIDGE TAPE
WILL BE DESTROYED***

Insert Cartridge Tape into Drive

Type "Return" when ready, or "Control C" to
Abort the program

USER: 3. Insert a tape cartridge into tape drive.

4. Press
<CR>

SYSTEM: 5. Displays
Tape Retension? ("Return" if NO, "Y" if YES)

USER: 6. Enter
Y

SYSTEM: 7. Displays
Tape retension in progress
Enter tape label (alphanumeric only), at end
type "RETURN"

USER: 8. Enter the name you wish to give the tape. The
name could include your name, date, time, etc.
Restrict tape name to one line.

9. Press
<CR>

SYSTEM: 10. Displays
The current logical drives in the hard disk are:

Drive A: Size of data image = xxx : Kilobyte
Drive B: Size of data image = xxx : Kilobyte
Drive C: Size of data image = xxx : Kilobyte
Hit "Control-C" to abort the program, or. . .

Enter drive name(s) (A,B,C,...) and hit "RETURN":

USER: 11. Enter one (or all) of the drive names that you
want to copy onto tape. The system only recog-
nizes A, B, C as drive names; it will not
recognize D, E, F, etc.

12. Press

<CR>

SYSTEM:

13. Displays

Total size of data image on drive(s) (x,x,x,) is:####

(This message tells how many megabytes of data are on the drive(s) to be copied to tape.)

CAUTION; ALL DATA ON THE CARTRIDGE TAPE WILL BE DESTROYED

Type "Return" when Ready or "Control-C" to Reselect Drive Name(s)

USER:

14. a. Press

<CR>

if you have typed in the correct drive names

b. Press

^C

if you have typed incorrect drive names. In this case, you will be prompted to reselect drives.

SYSTEM:

15. Displays

Tape Reinitialization in progress
Dump disk image in progress
Current hard disk track number is: xxx

16. The system displays different track numbers as DISKDUMP progresses.

17. Displays

Dump disk to tape completed
A>

18. At this point, the tape will automatically rewind itself. Any commands entered during this time will not be recognized by the system.

NOTE!

If you receive an error message during DISKDUMP, refer to Table 5-3.

Table 5-3 Diskdump Error Messages

The following error messages may occur during the execution of DISKDUMP. Follow the user instructions to get back into the program.

ERROR MESSAGE 1

SYSTEM: 1. Displays

DRIVE DOES NOT EXIST IN SYSTEM

Hit "Control C" to abort the program, or . . .

Enter drive name(s) (a,b,c, . . .) and hit "Return":

USER: 2. Check your entry to the system prompt in Step 10 (refer to the description of DISKDUMP). You entered a drive name the system did not recognize. Your response should have been A, B, and/or C.

3. Press

<CR>

to reselect drive names

or

press

^C

to stop the program.

ERROR MESSAGE 2

SYSTEM: 1. Displays

FILE "TAPEDUMP.DAT" CANNOT BE FOUND

(The file TAPEDUMP.DAT is not on the currently selected drive. In order for DISKDUMP to run, TAPEDUMP.DAT must be on the same drive.)

- USER:**
2. Call up a directory (DIR) on each drive to locate TAPEDUMP.DAT.
 3. Use the CP/M PIP utility program to transfer this file to the drive on which DISKDUMP is located.
 4. Run DISKDUMP again.

ERROR MESSAGE 3

- SYSTEM:**
1. Displays
FILE "TPUTILI.DAT" CANNOT BE FOUND

(The file TPUTILI.DAT is not on the currently selected drive. In order for DISKDUMP to run, TPUTILI.DAT must be on the same drive.)

- USER:**
2. Call up a directory on each drive to locate TPUTILI.DAT.
 3. Use the CP/M PIP utility program to transfer this file to the drive on which DISKDUMP is located.
 4. Run DISKDUMP again.

ERROR MESSAGE 4

- SYSTEM:**
1. Displays
DISK SELECT ERROR

- USER:**
2. Run DISKDUMP again
or

run TAPEDUMP to perform disk diagnostics (the read test).

ERROR MESSAGE 5

SYSTEM: 1. Displays
DISK READ ERROR

USER: 2. Run DISKDUMP again
or
run TAPEDUMP to perform disk diagnostics (the
read test).

ERROR MESSAGE 6

SYSTEM: 1. Displays
TAPE WRITE ERROR

USER: 2. Remove the tape cartridge and insert a new one.
3. Run DISKDUMP again.

UTILITY

FIXDISK

For TS 816, TS 806

Configuration: Service Processor Terminal

Version 1.0

Release date: 4 September 1981

Copyright TeleVideo Systems, Inc. 1981

PURPOSE

FIXDISK inspects the hard disk for defective data areas. It builds a file called FILE.BAD containing the pointers associated with the defective data blocks. This file has a CP/M user designation of User 15 and the attributes of Read Only and System (no directory listing).

FIXDISK can be used on any CP/M-compatible disk drive. The program should be run immediately after formatting or whenever a disk is suspected of having defective areas. During the execution of the program, no data is destroyed. Directory areas are not scanned.

Run the program from the service processor terminal.

COMMENTS

While the program does not retrieve data which may already be on bad data blocks, it does prevent the system from using those areas for future data storage. This program is designed to be used in conjunction with the program SCANDUP. SCANDUP lists the files containing any resulting duplicate block pointers, allowing you to save and delete those files.

EXECUTION

USER:

1. Enter

[drive:]FIXDISK <drive name:><CR>

where

[drive] is the drive on which FIXDISK is located if other than the currently active drive

<drive name:> is the specified disk drive to be checked. Use A: for drive A and B: for drive B, etc. If no drive is specified, FIXDISK will check the currently-selected disk drive.

SYSTEM:

2. Displays

FIX DISK PROGRAM VER X.Y
CURRENT SCANNING BLOCK:#__

3. Displays the block numbers as they are scanned by the program.

4. Displays

FIXDISK COMPLETED WITH xxx DATA BLOCKS ERROR

USER:

5. Run the program SCANDUP if the number of defective data blocks is other than 0000 and if there were files on the disk before you ran FIXDISK.

6. Press

^S^C

to abort the program any time during execution.

UTILITY

SCANDUP

For TS 816, TS 806

Configuration: Service Processor Terminal

Version 2.0

Release date: 24 February 1982

Copyright TeleVideo Systems, Inc. 1982

PURPOSE

SCANDUP searches for duplicate data block pointers which may exist on the directories of the specified logical disk drive. Duplicate pointers indicate that two files are attempting to "own" the same data, an improper and potentially harmful condition. (The pointers may be those placed by the program FIXDISK. FIXDISK places all pointers to bad disk blocks in a file named FILE.BAD.)

SCANDUP lists the names of files which contain duplicate pointers so they can be erased. No data on the disk will be affected by running SCANDUP.

SCANDUP should be run immediately after FIXDISK.

EXECUTION

USER:

1. Enter

[drive:]SCANDUP<CR>

where

[drive:] is the logical drive on which SCANDUP is located, if other than the currently active drive

SYSTEM:

2. Displays

SCAN DRIVE?

USER:

3. Enter the logical drive that you wish to scan -- A, B, C, etc.. SCANDUP scans one drive at a time, so only enter one drive name.

4. Press

<CR>

NOTE!

This program cannot be aborted.

SYSTEM: 5. Displays (if no duplicate pointers are found)
no allocation blocks are duplicated in directory
End of Execution
A>

or

Displays (if duplicate pointers are found in the directory) a list files that contain the duplicate pointers.

USER: 6. Enter

TYPE <filename>

to determine which file contains incorrect information.

7. Erase the file(s) that contain incorrect data.

8. Press

^C

(this enables the service processor to read the latest directory)

The example below shows SCANDUP run against a drive that had two files with identical data block pointers.

USER: 1. Enter

SCANDUP<CR>

SYSTEM: 2. Displays

SCAN DRIVE?

USER: 3. Enter

A

SYSTEM:

4. Displays

block	count	sector	entry	filename	user
035A	2	14	2	TEXT	DOC 00
035B	2	14	2	TEXT	DOC 00
035C	2	14	2	TEXT	DOC 00
035D	2	14	2	TEXT	DOC 00
035A	2	14	3	FILE	BAD 15
035B	2	14	3	FILE	BAD 15
035C	2	14	3	FILE	BAD 15
035D	2	14	3	FILE	BAD 15

4 allocation blocks are duplicated in directory
End of execution
A>

NOTE!

Block refers to the disk allocation block number that is owned by multiple files in filename.

The term count indicates the number of times the block is owned (if more than once).

The sector tells the user the directory sector number where filename is located.

Entry is an index into the directory sector for filename.

Filename is the file which owns the block, and user is the CP/M-assigned user number that owns this file.

The error message tells the user that blocks 035A, 035B, 035C, and 035D are "pointed to" by the files TEXT.DOC and FILE.BAD. This indicates that TEXT.DOC has a bad sector.

USER:

5. Transfer the file TEXT.DOC to drive B or C.
6. Erase TEXT.DOC from drive A. DO NOT ERASE FILE.BAD.
7. Enter

TYPE <drive:>TEXT.DOC<CR>

to read the file and to determine how much incorrect data it contains.

8. Press

^C

SYSTEM:

9. Displays

A>

USER:

10. Enter

DIR<CR>

SYSTEM:

11. Displays the latest directory.

UTILITY**TAPEDUMP**

For TS 816

Configuration: Service Processor Terminal

Version 1.0

Release date: February 1982

Copyright TeleVideo Systems, Inc. 1982

PURPOSE

TAPEDUMP performs three functions:

1. Executes disk diagnostics to find and fix bad sectors on the hard disk
2. Transfers the system disk image (which includes CP/M and MmmOST) from tape to hard disk
3. Transfers files (by drive) from tape to hard disk.

The above TAPEDUMP functions are divided into three separate procedures. They are as follows:

Description**Refer to**

Running disk diagnostics

Procedure A

Installing CP/M and MmmOST
from tape to hard disk

Procedure B

Transferring files from tape
to hard disk

Procedure C

TAPEDUMP

PROCEDURE A RUNNING DISK DIAGNOSTICS

Disk diagnostics should be run:

- a. When you install the system disk image (which includes CP/M and MmmOST). By running diagnostics during system disk image installation, any bad sectors will be fixed before data is on the hard disk.
- b. If you have been storing data on the hard disk, and now suspect it contains defective areas.

The program offers the choice of running one of the following diagnostic checks: a) the read test, b) the write test, or c) the format test.

Read Test

The read test reads all the sectors on the hard disk. If a bad sector is found, it is reassigned to another area on the hard disk. The read test should be run whenever you suspect the hard disk has defective areas. When the read test is executed, data contained in the bad sector(s) is destroyed. Remaining data on the hard disk is not affected. The read test takes approximately 7 minutes to complete.

Write Test

The write test program performs an extensive write test followed by the read test. If a bad sector is found, it is reassigned to another area on the hard disk. The write test should be run the first time CP/M and MmmOST are installed. It should also be run if you have executed the read test (to fix bad sectors) and the hard disk still malfunctions. When the write test is executed, all data on the hard disk is destroyed. Be sure to back-up all files before running the write test. The write test takes approximately 12 minutes to complete.

Format Test

The format test program formats the hard disk and then performs the write test. The format test should only be executed if the read and write tests failed to fix the hard disk. When the format test is executed, all data on the hard disk is destroyed. Be sure to back-up all files before running the format test. The format test takes approximately one-half hour to complete.

TAPEDUMP

PROCEDURE A RUNNING DIAGNOSTICS

Follow this procedure to run a diagnostic check during TAPEDUMP.

USER: 1. Enter

[drive:]TAPEDUMP<CR>

where

[drive:] is the drive on which TAPEDUMP is located if other than the currently active drive

SYSTEM: 2. Displays

TELEVIDEO SYSTEM TS 816
Restore disk image from tape, V1.X
14.5 Megabyte on 1/4" tape cartridge

Do you want to run disk diagnostics?
("Return" if No, "Y" if Yes)

USER: 4. Enter

Y

SYSTEM: 5. Displays

Select Test Function ("CONTROL-C" to abort)---
("R" Read Test, "W" Write Test, "F" Format Test)---

USER: 6. Enter

R or W or F

STOP!

**BE SURE TO BACK-UP ALL FILES ON THE HARD DISK
BEFORE RUNNING THE WRITE OR FORMAT TEST. THESE
TESTS WILL DESTROY ALL DATA ON THE HARD DISK.**

SYSTEM: 7. Displays
Function "X" is ready. (Type "Return" when Ready,
"Space to Reselect")

USER: 8. Press

<CR>

if you entered the correct test

or

press the **space bar** to reselect the test.

SYSTEM: 9. Displays one of the following (depending on the
test you selected)

Read test in progress
Current hard disk track number is:
xxx

or

Write test in progress
Current hard disk track number is:
xxx

or

Format test in progress
Current hard disk track number is:
xxx

10. Displays (when test is complete)

Insert cartridge tape into drive
Type "Return" when Ready, "Control-C" to Abort the
program

USER: 11. Press

^C

to stop the program

or

press

<CR>

to install CP/M or MmmOST (Procedure B) or
restore files from tape to the hard disk
(Procedure C).

TAPEDUMP

PROCEDURE B INSTALLING CP/M AND MmmOST

CP/M and MmmOST must be installed on the hard disk

1. the first time you operate the TS 816
2. if you run the write or the format test to correct a malfunctioning hard disk

Follow this procedure to install CP/M and MmmOST.

USER: 1. Enter

[drive:]TAPEDUMP<CR>

where

[drive:] is the drive on which TAPEDUMP is located if other than the currently active drive

SYSTEM: 2. Displays

TELEVIDEO SYSTEM TS 816
Restore disk image from tape, V1.X
14.5 Megabyte on 1/4" tape cartridge

Do you want to run disk diagnostics?
("Return" if No, "Y" if Yes)

USER: 3. Press

<CR>

SYSTEM: 4. Displays

Insert cartridge tape into drive
Type "Return" when ready, "Control-C" to Abort
the program

USER: 5. Insert the system tape into the tape drive.

6. Press
 <CR>

SYSTEM: 7. Displays
 Tape Retension? ("Return" if NO, "Y" if YES)

USER: 8. Enter
 Y

SYSTEM: 9. Displays
 Tape Retension in progress
 Reading of tape label in progress
 Label of current tape is:
 <system will read tape label>
 Correct tape? ("Return" if NO, "Y" if YES)

USER: 10. Read the tape label. This name was given to
 the tape during the DISKDUMP process.

11. Make sure this is the tape that contains the
 data you want to transfer.

12. Enter
 Y
 if it is the correct tape
 or
 press
 <CR>
 if it is the incorrect tape. Insert the correct
 tape into the tape drive. You will receive the
 prompt in Step 5 again.

SYSTEM: 13. Displays
 Restore system image onto disk from tape,
 ("Return" if NO, "Y" if YES)

USER: 14. Enter

Y

SYSTEM: 15. Displays

Restore system complete
Continue? ("Return" if NO, "Y" if YES)

USER: 16. Press

Y

to install MmmOST.

SYSTEM: 17. Displays

Restore disk A: from tape, ("Return" if NO, "Y" if YES)

USER: 18. Press

Y

SYSTEM: 19. Displays

Restore disk B: from tape, ("Return" if NO, "Y" if YES)

USER: 20. Press

Y

SYSTEM: 21. Displays

Restore disk C: from tape, ("Return" if NO, "Y" if YES)

USER: 22. Press

Y

SYSTEM: 23. Displays

***CAUTION: ALL DATA ON SPECIFIED DISK(S) WILL BE
DESTROYED***

Type "Return" when ready, or "Control-C" to reselect drive

USER: 24. Press

<CR>

SYSTEM: 25. Displays

Restore from tape in progress
Current hard disk track number is:
xxxx

Self-testing in progress (TS-816 PROM VX.X)
HIT ESCAPE KEY TO BOOT FROM TAPE

USER: 26. Do not press the escape key and wait five seconds.

27. Listen for a humming sound after five seconds have passed. The TS 816 is booting from the hard disk that contains the entire system disk image.

TAPEDUMP

PROCEDURE C TRANSFERRING FILES FROM TAPE TO THE HARD DISK

Follow this procedure to transfer data files from tape to the hard disk.

USER: 1. Enter

[drive:]TAPEDUMP<CR>

where

[drive:] is the drive on which TAPEDUMP is located if other than the currently active drive

SYSTEM: 2. Displays

TELEVIDEO SYSTEM TS 816
Restore disk image from tape, V1.X
14.5 Megabyte on 1/4" tape cartridge

Do you want to run disk diagnostics?
("Return" if No, "Y" if Yes)

USER: 4. Press

<CR>

SYSTEM: 5. Displays

Insert cartridge tape into drive
Type "Return" when Ready, "Control-C" to Abort
the program

USER: 6. Insert the tape cartridge containing the data
to be copied to the hard disk into the tape drive.

7. Press

<CR>

SYSTEM: 8. Displays
Tape Retension? ("Return" if NO, "Y" if YES)

USER: 9. Enter
Y

SYSTEM: 10. Displays
Tape Retension in progress
Reading of tape label in progress
Label of current tape is:
<system will read tape label>
Correct tape? ("Return" if NO, "Y" if YES)

USER: 11. Read the tape label. This name was given to
the tape during the DISKDUMP process.

12. Make sure this is the tape that contains the
data you want to transfer.

13. Enter
Y
if it is the correct tape
or
press
<CR>
if it is the incorrect tape. Insert the correct
tape into the tape drive. You will receive the
prompt in Step 5 again.

SYSTEM: 14. Displays
Restore system image onto disk from tape,
("Return" if NO, "Y" if YES)

USER: 15. Press
<CR>

SYSTEM: 16. Displays
Continue? ("Return" if NO, "Y" if YES)

USER: 17. Enter
Y

SYSTEM: 18. Displays
Restore disk A: from tape, ("Return" if NO,
"Y" if YES)
Restore disk B: from tape, ("Return" if NO,
"Y" if YES)
Restore disk C: from tape, ("Return" if NO,
"Y" if YES)

NOTE!

The only "Restore . . ." prompts which you will see on the screen are the ones which apply to the tape. For instance, if drive A and drive C were the only drives originally copied to the tape, you will see the following:

Restore disk A: from tape, <etc.>
Restore disk C: from tape, <etc.>

These prompts will appear one at a time. If you elect to restore the data on the drives, the data will be restored to the original drives on the hard disk. (Data originally from drive A will be restored to drive A.)

USER: 19. Look at the restore prompt on your screen.

20. Enter
Y
to copy the drive to the hard disk
or
press
<CR>
to bypass the drive.

21. Follow the procedure in Step 20 for each restore prompt you see.

22. To stop the program at this point, press
<CR>
for all restore prompts.

SYSTEM: 23. Displays
*** CAUTION: ALL DATA ON SPECIFIED DISK(S)
WILL BE DESTROYED***
Type "Return" when ready, or "Control-C" to
reselect drive

USER: 24. Press
<CR>
if you correctly selected the drive(s)
or
press
^C
to reselect drives.

SYSTEM: 25. Displays
Restore from tape in progress
Current hard disk track number is:
xxxx

26. Displays (if system was booted from the hard
disk)
Restore disk image from tape completed
or
displays (if system was booted from the system
tape)
Self-testing in progress. (TS-816 PROM VX.X)
HIT ESCAPE KEY TO BOOT FROM TAPE

USER: 27. Do not press the escape key if you received the
second prompt in Step 26.

28. Wait five seconds.

29. Listen for a humming sound after five seconds have passed. The TS 816 is booting from the hard disk. When the sound stops, user stations are operable.

UTILITY

TOD

For TS 816

Configuration: ServiceProcessorTerminal/User Station
Version 3.0

Release Date: September 1982

Copyright TeleVideo Systems, Inc. 1982

PURPOSE

The TOD utility program allows you to examine and set the correct time and date on your screen. When you power on or reset your system, the local time and date are reset to 0. Use TOD to change this initial value, at your option, to the current date and actual time.

The date is represented as a month value in the range from 1 to 12, a day value in the range of 1 to 31, and a four-digit year value.

Time is represented as a twenty-four hour clock, with the hour value from 00 to 11 for morning, and 12 to 23 for the afternoon.

COMMENTS

User must specify a four-digit value for the year (yy). If a two-digit value is entered, the program will assume that the specified year is to be relative to the year 1900.

EXECUTION

There are three ways to use this program:

1. To set the time and date from service processor terminal or user station
2. To display the time and date continuously on a user station
3. To call up the time and date on a user station or service processor terminal

To set the time and date on the system:

USER: 1. Enter

TOD S>mm/dd/yy hh:mm:ss<CR>

where

mm/dd/yy = month/day/year

hh:mm:ss: = hour:minute:second

Note!

This can be done at a service processor terminal or at a user station.

SYSTEM: 2. Displays

Press any key to set time and date

USER: 3. When the "time" you specified in your command occurs, press any key. TOD begins timing at that instant. The system time has been set at this point.

To display local time (previously set in user stations at power on/reset) continuously on the user station screens, enter the following command:

USER: 1. Enter

TOD P<CR>

SYSTEM: 2. Displays

Current data and time is:

mm/dd/yy/ hh:mm:ss

(This message will remain on the screen until you press another key.)

After setting the time and day at power on, user stations can call up the local and system current date and time using the following command:

USER: 1. Enter

TOD<CR>

SYSTEM: 2. Displays

Current system date and time is: mm/dd/yy hh:mm:ss
Current local date and time is: mm/dd/yy hh:mm:ss

**** TS-816 TAPEDUMP UTILITY WARNING ****
8/27/82

WHEN BACKING UP THE TS-816 TO DATA CASSETTE TAPE IT IS IMPORTANT THAT DRIVE 'B' AND 'C' BE DUMPED TO THE SAME TAPE. DUMP DRIVE 'A' ON ONE TAPE AND THEN PLACE DRIVES 'B' AND 'C' TOGETHER ON A SECOND TAPE.

***** WARNING - WARNING - WARNING *****

DO NOT ATTEMPT TO SAVE DRIVE 'C' ON A TAPE BY ITSELF
THIS WILL RESULT IN THE LOSS OF ALL DATA ON DRIVE 'C'.

***** WARNING - WARNING - WARNING *****