

ORIGINATOR: Jon Rubinsztein (CK)
 DIV. 40 ENT. 2678 DATE 6 20 85
 FOR C. VISIONS (KARDEX LOC.) MO. DAY YR.
 40 (58)

PURCHASED PART NUMBER REQUEST **M** 83149
 HP PART NUMBER
 PROJECT LEADER DIV. MFG. SPEC. MAT'L ENG. DIV. CORP. SPEC. CORP. MAT'L ENG.
 1820 - 4382

SPECIAL INSTRUCTIONS OR REMARKS
 Documentation will be submitted later
 (5061-6544 U67)
 John Rubenstein
 73 cat 025

ITEM: Programed 12L6 PAL
 DESCRIP. ①
 A-1820-4382-1
 A-5958-4365-1
 S-5958-4365-1
 FOR DIVISION USE ONLY
 DESCRIPTION AS ENTERED HERE
 OR PER ATTACHED FORMAT
 MANUFACTURER (DO NOT LIST DISTRIBUTORS) MFR. PART NO.
 A National Semiconductor PAL 12L6NC
 (N231D1)
 B

ITEM: IC Digital
 DESCRIP.
 CORP. MTL'S. ENG. USE ONLY
 MANUFACTURER MFR. PART NO.
 A
 B

INSTRUMENT MODEL NO. QTY./MATERIAL LIST QTY./FAB. PART FAB. PART-PART NO./TIMES USED PER INST. OVER-ALL TOTAL OF PURCH. PART/INST.
 3 98561B 4 1 5 1 6 98561-66519/1 7 1

QTY. ON HAND P.O. NUMBER/PRICE QTY. ON ORDER P.O. NUMBER/PRICE ALLOCATION PROTOTYPE PILOT RUN PRODUCTION

REPLACEMENT-SPECIFY IF OTHER THAN 10% REPLACES PART NO. ON THIS INST. ONLY ON ALL INST. USE UP STOCK ON HAND CHANGE NO. EFFECTIVE ON RUN NO.
 9 10 YES NO (CONTACT BUYER)

ESTIMATE MONTHLY USAGE IF NOT SHOWN IN SECTIONS 3-7 INCOMING INSPECTION? IF YES, SUBMIT INSTRUCTIONS TO INCOMING INSPECTION TOOLING CHARGE? IF YES, COMPLETE SECTION 14
 11 12 YES NO 13 YES NO

VENDOR AMOUNT DIV. APPROVAL ACCT. NO. LOC. CODE PAID FOR ON P.O. PROPERTY OF HP VENDOR

MATERIALS ENGINEERING TO COMPLETE
 PRICE CARD ATTACHED QUOTE REQUESTED CORPORATE AGREEMENT E. R. (DIV. NO.)
 RFQ DATE DUE DATE FROM VENDOR NO. UNIT PRICE
 MFG. TIME ARO (WKS.) A B OTHER MIN. SHIPMENT RULES 40

ACCOUNTING, MATERIALS CONTROL TO COMPLETE
 SHIPPING TIME WKS. DAYS SRM. QTY. LAB. STOCK LOC'N. DEPARTMENT BY DATE
 P.O. PROC. TIME WKS. ACCT. NO. 2150 ACCOUNTING SUP 6/25/85
 PURCHASING AUB 6/24/85
 MATERIALS CONTROL
 TOTAL LEAD TIME WKS. SAFETY FACTOR WKS. 1310

EXOTIC (METALS) CORP. SPEC. VSC CBC ER.



HEWLETT
PACKARD

PURCHASED PART CHANGE REQUEST

214325

-hp- PART NUMBER
(OR FAMILY JWG. NO.)

ORIGINATOR: Jon Rubinstein (CK) EXT. 267 DIVISION NO. 40 DATE 7 / 23 / 85

1820 - 4382

REASON FOR CHANGE: (CHECK APPROPRIATE BOXES AND STATE IN REMARKS WHY ACTION TO BE TAKEN IS NECESSARY)

- DELETE MFR.
- ADD MFR.
- NEW MFR. PART NO.
- NEW OR REVISED KARDEX DESCRIPTION
- NEW OR REVISED SPEC. DWG. PER ATTACHED MARK-UP
- OTHER:
- NO DWG. CHANGE REQUIRED

REMARKS: adding documentation

Indicate Kardex master changes below: Show information to be DELETED on the left side and information to be ADDED on the right side. For complete revision, check "ALL" on left side and enter new information on the right.

DELETE TITLE _____

ALL DESCRIPTION _____

DELETE

ADD TITLE A-1820-4382-1 Rev A

DESCRIPTION S-5958-4365-1
A-5958-4365-1

ADD

ALL MANUFACTURER _____ MFR. PART NO. _____

MANUFACTURER _____ MFR. PART NO. _____

AFFECTS OPEN P.O.'S: YES NO

AFFECTS STOCK ON HAND: YES NO

P.C.O. REQUIRED: YES NO

DIVISIONAL ACTION REQUIRED WHEN APPLICABLE				
ACTION	APPROVED	REJECTED*	BY	DATE
PROD. ENGR.				1
DIV. QA				1
R&D	JR			1
PURCHASING	✓		lo	7/29/85
MTL ENGR.	✓		R. Jansen	7/27
PRODUCT SAFETY				1
MFG. SPECS	✓		De Kelsey	8/11

* NOTE: SEE SPECIAL DIVISIONAL INSTRUCTIONS

ER-DIV. PART, ACTION COMPLETE DATE 8/12

*SPECIAL INSTRUCTIONS: (DIVISIONAL)

DISPOSITION: 40 FAB. ASSY. _____ CLASS. _____

CORPORATE MATERIALS SPECIFICATIONS ACTION ONLY

FINAL FORMAT TITLE _____

DESCRIPTION _____

PART STATUS CODE: STANDARD NOTE CODE:

MANUFACTURER _____ MFR. PART NO. _____

*SPECIAL INSTRUCTIONS: (CORPORATE)

DIVISIONS CONTACTED BY CMS (LOG ACTION)

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DIVISIONS REQUIRING DOCUMENTATION

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ACTION	BY	DATE
APPROVED		
REJECTED* } SEE SPECIAL CORPORATE INSTRUCTIONS	MTL ENGR.	
CANCELLED* }	MDB ENTRY	
CORP. SPECS	DATE	COMPLETE

83148

PURCHASED PART NUMBER REQUEST

ORIGINATOR Ron Rubinstein (CK)
 DIV. 40, EXT. 2678 DATE 6/20/85
 FOR DIVISIONS (KARDEX LOC.) MO. DAY YR.
40(58)

PROJECT LEADER	DIV. MFG. SPEC.	DIV. MAT'L ENG.	CORP. SPECS.	CORP. MAT'L ENG.	HP PART NUMBER
	<i>JKH</i>	<i>HRS</i>	<i>Qml</i>	<i>Qml</i>	1820 - 4381
	6/25	6/24	7/8	7/16	

SPECIAL INSTRUCTIONS OR REMARKS
 Documentation will follow later (5061-6543 U96) cat 025

ITEM: Programed 10L8 PAL
 DESCRIP. ①
 FOR DIVISION USE ONLY DESCRIPTION AS ENTERED HERE OR PER ATTACHED FORMAT
A-1820-4381-1
A-5958-4365-1
J-5958-4365-1
 MANUFACTURER (DO NOT LIST DISTRIBUTORS) MFR. PART NO.
 A National Semiconductor PAL10L8NC
123121
 B

ITEM: IC Digital
 DESCRIP.
 CORP. MTL'S. ENG. USE ONLY
 MANUFACTURER MFR. PART NO.
 A
 B

INSTRUMENT MODEL NO.	QTY./MATERIAL LIST	QTY./FAB. PART	FAB. PART-PART NO./TIMES USED PER INST.	OVER-ALL TOTAL OF PURCH. PART/INST.
3 98561B	4 1	5 1	6 98561-66519/1	7 1

QTY. ON HAND	P.O. NUMBER/PRICE	QTY. ON ORDER	P.O. NUMBER/PRICE	ALLOCATION	PROTOTYPE	PILOT RUN	PRODUCTION
8 0							

9 REPLACEMENT-SPECIFY IF OTHER THAN 10% %
 10 REPLACES PART NO. ON THIS INST. ONLY ON ALL INST. USE UP STOCK ON HAND YES NO (CONTACT BUYER) CHANGE NO. EFFECTIVE ON RUN NO.

11 ESTIMATE MONTHLY USAGE IF NOT SHOWN IN SECTIONS 3-7
 12 INCOMING INSPECTION? YES NO
 IF YES, SUBMIT INSTRUCTIONS TO INCOMING INSPECTION
 13 TOOLING CHARGE? YES NO
 IF YES, COMPLETE SECTION 14

VENDOR	AMOUNT	DIV. APPROVAL	ACCT. NO.	LOC. CODE	PAID FOR ON P.O.	PROPERTY OF
14						HP <input type="checkbox"/> VENDOR <input type="checkbox"/>

MATERIALS ENGINEERING TO COMPLETE
 PRICE CARD ATTACHED
 RFQ DATE DUE DATE FROM A B OTHER
 MFG. TIME ARO (WKS.)
 VENDOR NO. UNIT PRICE
 MIN. SHIPMENT RULES
 E R. (DIV. NO.) 40

ACCOUNTING, MATERIALS CONTROL TO COMPLETE
 SHIPPING TIME WKS. DAYS SRM. QTY. LOC. CODE
 P.O. PROC. TIME WKS. ACCT. NO. 2150
 TOTAL LEAD TIME WKS. SAFETY FACTOR WKS. 1310
 DEPARTMENT BY DATE
 ACCOUNTING SLW 6/25/85
 PURCHASING SLW 6/24/85
 MATERIALS CONTROL

EXOTIC (METALS)
 CORP. SPECS. YSC EBC ER.
Qml 7/8/85

ORIGINATOR: Jon Rubinstein (CK) EXT. 2678 DIVISION NO. 40 DATE 7 / 25 / 85 1820 - 4381

REASON FOR CHANGE: (CHECK APPROPRIATE BOXES AND STATE IN REMARKS WHY ACTION TO BE TAKEN IS NECESSARY)

DELETE MFR. ADD MFR. NEW MFR. PART NO. NEW OR REVISED KARDEX DESCRIPTION NO DWG. CHANGE REQUIRED

NEW OR REVISED SPEC. DWG. PER ATTACHED MARK-UP OTHER: _____

REMARKS: * adding documentation

Indicate Kardex master changes below: Show information to be DELETED on the left side and information to be ADDED on the right side. For complete revision, check "ALL" on left side and enter new information on the right.

DELETE TITLE _____

ALL DESCRIPTION _____

DELETE

ADD TITLE A-1820-4381-1 Rev A

DESCRIPTION S-5958-4365-1
A-5858-4365-1

ADD

ALL MANUFACTURER _____ MFR. PART NO. _____

MANUFACTURER _____ MFR. PART NO. _____

AFFECTS OPEN P.O.'S: YES NO

AFFECTS STOCK ON HAND: YES NO

P.C.O. REQUIRED: YES NO

*SPECIAL INSTRUCTIONS: (DIVISIONAL)

DISPOSITION: 40 FAB. ASSY. _____ CLASS: _____

DIVISIONAL ACTION REQUIRED WHEN APPLICABLE

ACTION	APPROVED	REJECTED*	BY	DATE
PROD. ENGR.				1
DIV. QA				1
R&D	<i>JR</i>			1
PURCHASING	<i>✓</i>		<i>Jo</i>	7/29/85
MTL ENGR.	<i>✓</i>		<i>R. Marcus</i>	7/22
PRODUCT SAFETY				1
MFG. SPECS	<i>✓</i>		<i>St. Kelly</i>	8/11

* NOTE: SEE SPECIAL DIVISIONAL INSTRUCTIONS

ER-DIV. PART, ACTION COMPLETE *JRS* DATE 8/12

CORPORATE MATERIALS SPECIFICATIONS ACTION ONLY

FINAL FORMAT TITLE _____

DESCRIPTION _____

PART STATUS CODE: STANDARD NOTE CODE:

MANUFACTURER _____ MFR. PART NO. _____

*SPECIAL INSTRUCTIONS: (CORPORATE)

DIVISIONS CONTACTED BY CMS (LOG ACTION)

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DIVISIONS REQUIRING DOCUMENTATION

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ACTION

APPROVED	<input type="checkbox"/>	MTL ENGR.		DATE	/
REJECTED*	<input type="checkbox"/>	SEE SPECIAL CORPORATE INSTRUCTIONS			
CANCELLED*	<input type="checkbox"/>	MDB ENTRY	YES <input type="checkbox"/>	NO <input type="checkbox"/>	
CORP. SPECS	DATE	COMPLETE	DATE	DATE	/

92135

PURCHASE PART NUMBER REQUEST

ORIGINATOR: **Jon Rubinstein (CK)**
 40 2678 DATE 6 / 20 / 85
 DIV. EXT. FOR DIVISIONS (KARDEX LOC.) MO. DAY YR.

PROJECT LEADER	DIV. MFG. SPEC.	DIV. MAT'L ENG.	CORP. SPECS.	CORP. MAT'L ENG.	HP PART NUMBER
	cat	HRD	gmt	DM	1820 - 4390
	6/25	6/24	7/8	7/16	

SPECIAL INSTRUCTIONS OR REMARKS
 Documentation will follow (5061-6545 U66) Cat025

ITEM: **programed 16R8A PAL**
 DESCRIP. ①
 A-1820-4390-1
 A-5958-4365-1
 S-5958-4365-1

FOR DIVISION USE ONLY
 DESCRIPTION AS ENTERED HERE
 OR PER ATTACHED FORMAT

MANUFACTURER (DO NOT LIST DISTRIBUTORS) MFR. PART NO.
 A ² **Advanced Micro Devices AMPAL16R8APC (ALS3DI)**
 B

ITEM: **IC Digital**
 DESCRIP.

CORP. MTL'S. ENG. USE ONLY

MANUFACTURER MFR. PART NO.
 A
 B

INSTRUMENT MODEL NO.	QTY./MATERIAL LIST	QTY./FAB. PART	FAB. PART-PART NO./TIMES USED PER INST.	OVER-ALL TOTAL OF PURCH. PART/INST.
3 98561B	4 1	5 985615	66519 → /1	7 1

QTY. ON HAND	P.O. NUMBER/PRICE	QTY. ON ORDER	P.O. NUMBER/PRICE	ALLOCATION	PROTOTYPE	PILOT RUN	PRODUCTION
8 0							

9 REPLACEMENT-SPECIFY IF OTHER THAN 10% _____%
 10 REPLACES PART NO. ON THIS INST. ONLY ON ALL INST. USE UP STOCK ON HAND YES NO (CONTACT BUYER) CHANGE NO. EFFECTIVE ON RUN NO.

11 ESTIMATE MONTHLY USAGE IF NOT SHOWN IN SECTIONS 3-7 _____
 12 INCOMING INSPECTION? YES NO
 IF YES, SUBMIT INSTRUCTIONS TO INCOMING INSPECTION
 13 TOOLING CHARGE? YES NO IF YES, COMPLETE SECTION 14

VENDOR	AMOUNT	DIV. APPROVAL	ACCT. NO.	LOC. CODE	PAID FOR ON P.O.	PROPERTY OF
14						HP <input type="checkbox"/> VENDOR <input type="checkbox"/>

MATERIALS ENGINEERING TO COMPLETE

<input type="checkbox"/> PRICE CARD ATTACHED	RFQ DATE	DUE DATE	FROM	QUOTE REQUESTED	VENDOR	CORPORATE AGREEMENT NO.	UNIT PRICE	E. R. (DIV. NO.)
MFG. TIME ARO (WKS.)			A <input type="checkbox"/> B <input type="checkbox"/> OTHER		MIN. SHIPMENT RULES			40

ACCOUNTING, MATERIALS CONTROL TO COMPLETE

SHIPPING TIME _____ WKS. _____ DAYS	UNIT OF MEASURE	LAB. STOCK LOC'N.	DEPARTMENT	BY	DATE
P.O. PROC. TIME _____ WKS.	SRM. QTY.	LOC. CODE	ACCOUNTING	SLW	4/25/85
TOTAL LEAD TIME _____ WKS.	SAFETY FACTOR _____ WKS.	ACCT. NO.	PURCHASING	AWB	6/24/85
		1310	MATERIALS CONTROL		

EXOTIC (METALS)
 CORP. SPECS. VSC CPT ER. *gmt/HRD*

ORIGINATOR: Jon Rubinstein (CK) EXT. 2678 DIVISION NO. 40 DATE 7 / 23 / 85 1820 - 4390

REASON FOR CHANGE: (*CHECK APPROPRIATE BOXES AND STATE IN REMARKS WHY ACTION TO BE TAKEN IS NECESSARY)

DELETE MFR. ADD MFR. NEW MFR. PART NO. NEW OR REVISED KARDEx DESCRIPTION NO DWG. CHANGE REQUIRED
 NEW OR REVISED SPEC. DWG. PER ATTACHED MARK-UP OTHER: _____

REMARKS: * adding documentation

Indicate Kardex master changes below: Show information to be DELETED on the left side and information to be ADDED on the right side. For complete revision, check "ALL" on left side and enter new information on the right.

DELETE TITLE _____

ALL DESCRIPTION _____

DELETE

ADD TITLE A-1820-4390-1 Rev A

DESCRIPTION S-5958-4365-1
~~XXXXXXXXXX~~ A-5958-4365-1

ADD

ALL MANUFACTURER _____ MFR. PART NO. _____

MANUFACTURER _____ MFR. PART NO. _____

AFFECTS OPEN P.O.'S: YES NO AFFECTS STOCK ON HAND: YES NO P.C.O. REQUIRED: YES NO

DIVISIONAL ACTION REQUIRED WHEN APPLICABLE				
ACTION	APPROVED	REJECTED*	BY	DATE
PROD. ENGR.				1
DIV. QA				1
R&D	<i>JR</i>			1
PURCHASING	<i>✓</i>		<i>ls</i>	7/29/85
MTL. ENGR.	<i>✓</i>		<i>D. Johnson</i>	7/25
PRODUCT SAFETY				1
MFG. SPECS	<i>✓</i>		<i>John Rubinstein</i>	8/11

* NOTE: SEE SPECIAL DIVISIONAL INSTRUCTIONS

ER-DIV. PART, ACTION COMPLETE *Yes* DATE 8/12

*SPECIAL INSTRUCTIONS: (DIVISIONAL)

FR 40 DISPOSITION _____ FAB. ASSY. _____ CLASS _____

CORPORATE MATERIALS SPECIFICATIONS ACTION ONLY

FINAL FORMAT TITLE _____

DESCRIPTION _____

PART STATUS CODE: STANDARD NOTE CODE:

MANUFACTURER _____ MFR. PART NO. _____

*SPECIAL INSTRUCTIONS: (CORPORATE)

DIVISIONS CONTACTED BY CMS (LOG ACTION)

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DIVISIONS REQUIRING DOCUMENTATION

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ACTION	BY	DATE
APPROVED		
REJECTED*		
CANCELLED*		
CORP. SPECS.	DATE	COMPLETE

MTL ENGR. YES NO
 SEE SPECIAL CORPORATE INSTRUCTIONS MDB ENTRY

92131

PURCHASED PART NUMBER REQUEST

ORIGINATOR Jon Rubinstein (CK)
 DIV. 40 EXT. 2678 DATE 6/29/85
 FOR DIVISIONS (KARDEX LOC.)

PROJECT LEADER	DIV. MFG. SPEC.	DIV. MAT'L ENG.	CORP. SPECS.	CORP. MAT'L ENG.	HP PART NUMBER
	<i>SAH</i>	<i>HRD</i>	<i>gmw</i>	<i>RM</i>	1820 -4387
	<i>6/25</i>	<i>6/24</i>	<i>7/8</i>	<i>7/30</i>	

SPECIAL INSTRUCTIONS OR REMARKS
 Documentation will follow (5061-6550 U83) cat 025

ITEM: Programed 22V10A Pal
 DESCRIP. ①
A-1820-4387-1
A-5958-4365-1
S-5958-4365-1

FOR DIVISION USE ONLY
 DESCRIPTION AS ENTERED HERE
 OR PER ATTACHED FORMAT

MANUFACTURER (DO NOT LIST DISTRIBUTORS) MFR. PART NO.
 A Advanced Micro Devices 22V10 APC
(A15301)
 B

ITEM: IC DIGITAL
 DESCRIP.

CORP. MTL'S ENG. USE ONLY

MANUFACTURER MFR. PART NO.
 A
 B

INSTRUMENT MODEL NO.	QTY./MATERIAL LIST	QTY./FAB. PART	FAB. PART-PARTNO./TIMES USED PER INST.	OVER-ALL TOTAL OF PURCH. PART/INST.
3 98561B	4 1	5 1	6 98561-66519/1	7 1

QTY. ON HAND	P.O. NUMBER/PRICE	QTY. ON ORDER	P.O. NUMBER/PRICE	ALLOCATION	PROTOTYPE	PILOT RUN	PRODUCTION
8 0							

9 REPLACEMENT-SPECIFY IF OTHER THAN 10% 10 REPLACES PART NO. ON THIS INST. ONLY ON ALL INST. USE UP STOCK ON HAND YES NO (CONTACT BUYER) CHANGE NO. EFFECTIVE ON RUN NO.

11 ESTIMATE MONTHLY USAGE IF NOT SHOWN IN SECTIONS 3-7 12 INCOMING INSPECTION? YES NO IF YES, SUBMIT INSTRUCTIONS TO INCOMING INSPECTION 13 TOOLING CHARGE? YES NO IF YES, COMPLETE SECTION 14

VENDOR	AMOUNT	DIV. APPROVAL	ACCT. NO.	LOC. CODE	PAID FOR ON P.O.	PROPERTY OF
14						HP <input type="checkbox"/> VENDOR <input type="checkbox"/>

MATERIALS ENGINEERING TO COMPLETE

<input type="checkbox"/> PRICE CARD ATTACHED	RFQ DATE	DUE DATE	FROM	VENDOR	CORPORATE AGREEMENT NO.	UNIT PRICE	E. R. (DIV. NO.)
MFG. TIME ARO (WKS.)			A <input type="checkbox"/> B <input type="checkbox"/> OTHER	MIN. SHIPMENT RULES			40

ACCOUNTING, MATERIALS CONTROL TO COMPLETE

SHIPPING TIME	UNIT OF MEASURE	LAB. STOCK LOC'N.	DEPARTMENT	BY	DATE
WKS. / DAYS	SRM. QTY.	LOC. CODE	ACCOUNTING	<i>SW</i>	<i>6/25/85</i>
P.O. PROC. TIME		ACCT. NO.	PURCHASING	<i>JWS</i>	<i>6/29/85</i>
WKS.			MATERIALS CONTROL		
TOTAL LEAD TIME	SAFETY FACTOR				
WKS.	WKS.				

EXOTIC (METALS) CORP. SPECS. *gmw* MFG. *HRD* CPC *RM* ER.

92131

PURCHASED PART NUMBER REQUEST

ORIGINATOR Jon Rubinstein (CK)
DIV. 40 EXT. 2678 DATE 6/29/85
FOR DIVISIONS (KARDEX LOC.) MO. DAY YR.

PROJECT LEADER	DIV. MFG. SPEC.	DIV. MAT'L ENG.	CORP. SPECS.	CORP. MAT'L ENG.	HP PART NUMBER
	<u>JAH</u>	<u>HR</u>	<u>gm</u>	<u>RM</u>	1820 - 4387
	<u>6/25</u>	<u>6/24</u>	<u>7/8</u>	<u>7/30</u>	

SPECIAL INSTRUCTIONS OR REMARKS
Documentation will follow (5061-6550 U83) cat 025

ITEM: Programed 22V10A Pal

DESCRIP. ①
A-1820-4387-1
A-5958-4365-1
S-5958-4365-1

FOR DIVISION USE ONLY
DESCRIPTION AS ENTERED HERE
OR PER ATTACHED FORMAT

MANUFACTURER (DO NOT LIST DISTRIBUTORS) MFR. PART NO.
A Advanced Micro Devices 22V10 APC
(A153D1)
B

ITEM: IC DIGITAL

DESCRIP.

CORP. MTL'S ENG. USE ONLY

MANUFACTURER MFR. PART NO.
A
B

INSTRUMENT MODEL NO.	QTY./MATERIAL LIST	QTY./FAB. PART	FAB. PART-PART NO./TIMES USED PER INST.	OVER-ALL TOTAL OF PURCH. PART/INST.
3 98561B	4 1	5 1	6 98561-66519/1	7 1

QTY. ON HAND	P.O. NUMBER/PRICE	QTY. ON ORDER	P.O. NUMBER/PRICE	ALLOCATION	PROTOTYPE	PILOT RUN	PRODUCTION
8 0							

9 REPLACEMENT-SPECIFY IF OTHER THAN 10% 10 %
10 REPLACES PART NO. ON THIS INST. ONLY ON ALL INST.
USE UP STOCK ON HAND YES NO (CONTACT BUYER)
CHANGE NO. EFFECTIVE ON RUN NO.

11 ESTIMATE MONTHLY USAGE IF NOT SHOWN IN SECTIONS 3-7
12 INCOMING INSPECTION? YES NO
IF YES, SUBMIT INSTRUCTIONS TO INCOMING INSPECTION
13 TOOLING CHARGE? YES NO
IF YES, COMPLETE SECTION 14

VENDOR	AMOUNT	DIV. APPROVAL	ACCT. NO.	LOC. CODE	PAID FOR ON P.O.	PROPERTY OF
14						HP <input type="checkbox"/> VENDOR <input type="checkbox"/>

MATERIALS ENGINEERING TO COMPLETE

<input type="checkbox"/> PRICE CARD ATTACHED	RFQ DATE	DUE DATE	FROM	VENDOR	CORPORATE AGREEMENT NO.	UNIT PRICE	E. R. (DIV. NO.)
MFG. TIME ARO (WKS.)			A <input type="checkbox"/> B <input type="checkbox"/> OTHER	MIN. SHIPMENT RULES			40

ACCOUNTING, MATERIALS CONTROL TO COMPLETE

SHIPPING TIME	UNIT OF MEASURE	LAB. STOCK LOC'N.	DEPARTMENT	BY	DATE
WKS. / DAYS	SRM. QTY.	LOC. CODE	ACCOUNTING	<u>SW</u>	<u>6/25/85</u>
P.O. PROC. TIME		ACCT. NO.	PURCHASING	<u>Sub</u>	<u>6/29/85</u>
WKS.			MATERIALS CONTROL		
TOTAL LEAD TIME	SAFETY FACTOR				
WKS.	WKS.				

EXOTIC (METALS)

CORP. SPECS. gm HR gm rm 7/30/85



HEWLETT
PACKARD

PURCHASED PART CHANGE REQUEST

214331

-hp-

PART NUMBER

(OR FAMILY DWG. NO.)

ORIGINATOR: Jon Rubinstein (CK) EXT. 2678 DIVISION NO. 40 DATE 7 / 23 / 85

1820 - 4387

REASON FOR CHANGE: (CHECK APPROPRIATE BOXES AND STATE IN REMARKS WHY ACTION TO BE TAKEN IS NECESSARY)

- DELETE MFR.
- ADD MFR.
- NEW MFR. PART NO.
- NEW OR REVISED KARDEX DESCRIPTION
- NO DWG. CHANGE REQUIRED
- NEW OR REVISED SPEC. DWG. PER ATTACHED MARK-UP
- OTHER: _____

REMARKS: * adding documentation

Indicate Kardex master changes below: Show information to be DELETED on the left side and information to be ADDED on the right side. For complete revision, check "ALL" on left side and enter new information on the right.

DELETE TITLE _____

ALL DESCRIPTION _____

DELETE

ADD TITLE A-1820-4387-1 Rev A

DESCRIPTION S-5958-4365-1
A-5958-4365-1

ADD

ALL MANUFACTURER _____ MFR. PART NO. _____

MANUFACTURER _____ MFR. PART NO. _____

AFFECTS OPEN P.O.'S: YES NO

AFFECTS STOCK ON HAND: YES NO

P.C.O. REQUIRED: YES NO

DIVISIONAL ACTION REQUIRED WHEN APPLICABLE				
ACTION	APPROVED	REJECTED*	BY	DATE
PROD. ENGR.				1
DIV. QA				1
R&D	<i>JR</i>			1
PURCHASING	<i>✓</i>		<i>ls</i>	7/29/85
MTL ENGR.	<i>✓</i>		<i>R. Turner</i>	7/25
PRODUCT SAFETY				1
MFG. SPECS	<i>✓</i>		<i>Stalvey</i>	8/1
* NOTE: SEE SPECIAL DIVISIONAL INSTRUCTIONS				
ER-DIV. PART, ACTION COMPLETE				<i>Yes</i> 8/12

* SPECIAL INSTRUCTIONS: (DIVISIONAL) _____

ER 40 DISPOSITION _____ FAB. ASSY. _____ CLASS. _____

CORPORATE MATERIALS SPECIFICATIONS ACTION ONLY

FINAL FORMAT TITLE _____

DESCRIPTION _____

PART STATUS CODE: STANDARD NOTE CODE:

* SPECIAL INSTRUCTIONS: (CORPORATE) _____

DIVISIONS CONTACTED BY CMS (LOG ACTION)

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DIVISIONS REQUIRING DOCUMENTATION

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

MANUFACTURER _____ MFR. PART NO. _____

ACTION APPROVED REJECTED* CANCELLED*

SEE SPECIAL CORPORATE INSTRUCTIONS

MTL ENGR. _____ BY _____ DATE _____

MDB ENTRY YES NO

CORP. SPECS. _____ DATE _____ COMPLETE _____ DATE _____



**HEWLETT
PACKARD**

PAL12L6

PAL DESIGN SPEC

PART NUMBER: 1802-4382 Rev A

JON RUBINSTEIN 5/29/84

PERIPHERAL ADDRESS DECODE

HEWLETT PACKARD FORT COLLINS COLORADO

PA23 PA22 PA21 PA20 PA19 PA18 PA17 PA16 SIOTMOUT GND

/BDRV /EBM IIO /BOOT /SIO /CPUPER /ROMDT /SIODT /PAS VCC

ROMDT =/PA23*/PA22*/PA21*/BDRV*PAS

BOOT =/PA23*/PA22*/PA21*/PA20*/PA19*/PA18*/PA17*/BDRV*PAS

SIO =/PA23*PA22*/PA21*/PA20*PAS

CPUPER=/PA23*PA22*/PA21*PA20*PA19*PA18*PA17*PA16*/BDRV*PAS

/IIO =PA23

+PA22

+PA21

+EBM ;REV 2 IIO FIX

SIODT =/PA23*PA22*/PA21*/PA20*PAS*SIOTMOUT



HEWLETT
PACKARD

PAL CROSS REFERENCE

NAME	CHECKSUM	HP PART #	TEMP PART #	REF	TYPE	FAMILY CODE *
J4381	0F84	1820-4381	(5061-6543 Rev2)	U96	10L8	XX13
J4382	15A4	1820-4382	(5061-6544 Rev2)	U67	12L6	XX14
J4383	76F6	1820-4383	(5061-6548 Rev1)	U122	16R8	XX24
J4384	75F6	1820-4384	(5061-6546 Rev1)	U107	20R6	XX27
J4385	9080	1820-4385	(5061-6547 Rev1)	U105	20R8	XX27
J4386	764E	1820-4386	(5061-6549 Rev1)	U43	22V10	XX28
J4387	E1A8	1820-4387	(5061-6550 Rev1)	U83	22V10	XX28
J4388	012A	1820-4388	(5061-6551 Rev1)	U117	22V10	XX28
J4389	1552	1820-4389	(5061-6552 Rev2)	U118	22V10	XX28
J4390	69EC	1820-4390	(5061-6545 Rev2)	U66	16R8	XX24

* AMD --- XX=97
MMI --- XX=22



PAL10L8

PART NUMBER: 1820-4381 Rev A

MMU REGISTER CONTROL NO DTACK FOR IDPROM

HEWLETT PACKARD FORT COLLINS COLORADO

/CPUPER /SIO /BOOT PA4 /PAS /PWR /PENDT ASDT PA15 GND

PA14 /MMUREG NC /WRTST /TMRCs /BOOTROM /IOW /IOR /CPU DTACK VCC

PAL DESIGN SPEC

JON RUBINSTEIN 4/09/84

MMUREG =/PA15*PA14*/PWR*CPUPER*PAS*/PA4
+/PA15*PA14* PWR*CPUPER*PAS*PENDT*/ASDT*/PA4

WRTST =PA14*PWR*BOOT*PAS*PENDT*/ASDT

TMRCs =PA15*/PA14*CPUPER*PAS

BOOTROM =BOOT*/PWR*PAS

IOR =/PWR*PENDT*PAS*SIO

IOW =PWR*PENDT*PAS*SIO*/ASDT

CPU DTACK =/PA15*CPUPER*PENDT*PA14*/PA4 ;NO DTACK ON IDPROM
+BOOT*PENDT



FUNCTION TABLE

PA4 /CPUPER /SIO /BOOT /PAS /PWR /PENDT ASDT PA15 PA14
/MMUREG /WRTST /TMRCS /BOOTROM /IOW /IOR /CPUDTACK

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;
;
; /
; C / M // O U
; P / P M W T O D
;/ U / B // E A P P U R M T // T
;P S O P P N S A A R T R R I A
;A E I O A W D D 1 1 E S C O O O C
;4 R O T S R T T 5 4 G T S M W R K

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L H L H L H H L L L H H H H H H H ; PAS*/PWR
H H H H L H H H H H H H H H H H H H
L L L H L H H L L H L H H H H H H ; MMUREG
L L L H L H H H L H L H H H H H H ; SIO,ASDT=X
L L H H L H H H L H L H H H H H H
H L H H L H H H L H H H H H H H ; PA4
L L H H L H H H H H H H H H H H ; PA15
L L H H L H H H L L H H H H H H ; /PA14
L H H H L H H H L L H H H H H H ; /CPUPER
L L L H L H H L H L H H L H H H H ; TMRCS
L L L H L H H H H L H H L H H H H ; PA4,SIO,ASDT=X
L L H H L H H H L H L H H L H H H H
L L H H L H H H H L H H L H H H H
H L L H L H H L H L H H L H H H H
H L H H L H H H H L H H L H H H H
H L H H L H X X H L H H L H H H H ; TMRCS
H L H H L H L L H L H H L H H H H ; PENDT,ASDT=X
H L H H L H L H H L H H L H H H H
H L H H L H H H H L H H L H H H H
H L H H L H H H H L H H L H H H H ; BOOTROM
L H L L L H H L L H H H H L H H H ; PA4,SIO,ASDT,PA15,PA14=X
L H L L L H H L H L H H H L H H H
L H L L L H H L H H H H H L H H H
L H L L L H H H L L H H H L H H H
L H L L L H H H L H H H H L H H H
L H L L L H H H H L H H H L H H H
L H L L L H H H H H H H H L H H H
L H H L L H H L L L H H H L H H H
L H H L L H H L L H H H H L H H H
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L H H L L H H H H H H H H L H H H
H H L L L H H L L L H H H L H H H
H H L L L H H L L H H H L H H H

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H H L L L H H L H L   H H H L H H H
H H L L L H H L H H   H H H L H H H
H H L L L H H H L L   H H H L H H H
H H L L L H H H L H   H H H L H H H
H H L L L H H H H L   H H H L H H H
H H L L L H H H H H   H H H L H H H
H H H L L H H L L L   H H H L H H H
H H H L L H H L L H   H H H L H H H
H H H L L H H L H L   H H H L H H H
H H H L L H H L H H   H H H L H H H
H H H L L H H H L L   H H H L H H H
H H H L L H H H L H   H H H L H H H
H H H L L H H H H L   H H H L H H H
H H H L L H H H H H   H H H L H H H
L H L H L H L L L L   H H H H H L H ; IOR
L H L H L H L L L H   H H H H H L H ; PA4,ASDT,PA15,PA14=X
L H L H L H L L H L   H H H H H L H
L H L H L H L L H H   H H H H H L H
L H L H L H L H L L   H H H H H L H
L H L H L H L H L H   H H H H H L H
L H L H L H L H H L   H H H H H L H
L H L H L H L H H H   H H H H H L H
H H L H L H L L L L   H H H H H L H
H H L H L H L L L H   H H H H H L H
H H L H L H L L H H   H H H H H L H
H H L H L H L H L L   H H H H H L H
H H L H L H L H L H   H H H H H L H
H H L H L H L H H L   H H H H H L H
H H L H L H L H H H   H H H H H L H
L H H L L L L L L L   H H H H H H L ; CPU DTACK   PAS*PWR
L H H L L L L H L L   H H H H H H L ; PA4,ASDT=X
H H H L L L L L L L   H H H H H H L ;
H H H L L L L H L L   H H H H H H L ;
L H H L L L L L L H   H L H H H H L ; WRTST
H H H L L L L L L H   H L H H H H L ; PA4,PA15=X
H H H L L L L L H H   H L H H H H L ;
L H L H L L L L L L   H H H H L H H ; IOW
L H L H L L L L H L   H H H H L H H ; PA4,PA15=X
H H L H L L L L L L   H H H H L H H
H H L H L L L L L L   H H H H L H H
H H L H L L L L H L   H H H H L H H
L H L H L L L L L L   H H H H L H H ; PA4,PA14,PA15=X
L H L H L L L L L H   H H H H L H H
L H L H L L L L H H   H H H H L H H
L H L H L L L L L L   H H H H L H H
H H L H L L L L L H   H H H H L H H
H H L H L L L L L H   H H H H L H H
H H L H L L L L H L   H H H H L H H
H H L H L L L L H H   H H H H L H H ; /PAS
H H L H H L L H H H   H H H H H H H ; SIO,PWR,-X
H H L H H H L H H H   H H H H H H H

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H H L H H H H H H H H H H H H H H H H H H H
H H L H H L H H H H H H H H H H H H H H H H
H H L H H H L H H H H H H H H H H H H H H H
H H L H H H H H H H H H H H H H H H H H H H
H H H L H L H H H H H H H H H H H H H H H H
H H H L H L H H H H H H H H H H H H H H H H
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H H H H H L L H H H H H H H H H H H H H H H
H H H H H L H H H H H H H H H H H H H H H H
H H H H H L H H H H H H H H H H H H H H H H
H H



PAL16R8
PART NUMBER: 1820-4390 Rev A
6800 PERIPHERAL CONTROL
HEWLETT PACKARD FORT COLLINS COLORADO
CLK /PURST SVPA NC NC NC NC NC TEST GND
/EN /ST1 /ST2 /ST3 /ST4 /ST5 /VMA E /VPADTK VCC

PAL DESIGN SPEC
JON RUBINSTEIN 4/30/85

ST1: =/ST1*/ST2*/ST3*/ST4*ST5*/TEST
+/ST1*ST2*ST3*/ST4*/ST5*/TEST
+ST1*/ST2*/ST3*ST4 */TEST

ST2: =/ST1*ST3*ST4*/ST5*/TEST
+/ST1*ST2*/ST3*/ST5*/TEST
+/ST1*ST2*ST4*/TEST
+/ST1*ST2*ST3*ST5*/TEST
+ST1*/ST2*/ST3*/ST4*/ST5 */TEST

ST3: =/ST1*/ST2*ST3*ST5*/TEST
+/ST1*ST3*ST4*/ST5*/TEST
+/ST1*/ST3*/ST4*/ST5*/TEST
+ST1*/ST2*/ST3*/ST4 */TEST

ST4: =/ST1*/ST2*/ST4*/ST5*/TEST
+/ST2*/ST3*/ST4*/TEST
+/ST2*/ST3*ST5*/TEST
+/ST1*/ST3*/ST4*/ST5*/TEST
+/ST1*ST2*ST4*ST5 */TEST

ST5: =/ST1*ST2*ST3*ST4*/TEST
+/ST1*ST3*ST4*ST5*/TEST
+/ST1*ST2*ST3*ST5*/TEST
+/ST2*/ST3*/ST5*/TEST
+/ST1*/ST2*/ST3*/ST4*/TEST
+/ST1*/ST2*/ST4*/ST5*/TEST

/E: =/ST2*ST5
+ST1*ST3
+ST1*ST2
+/ST1*/ST2*/ST4
+/ST2*/ST3*ST4

VMA: =VMA*ST1*/ST2*/ST3
+VMA*/ST1*ST2
+VMA*/ST2*/ST3*/ST4*/ST5*/TEST
+VMA*/ST1*ST3*ST4*/ST5
+SVPA*/ST1*/ST2*/ST3*/ST4*ST5

VPADTK: =VMA*/ST1*ST2*/ST4*ST5



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C L L H H H H H L L L
C L L H H H H H H L H L
C L L H H H H H H L H H
C L L H H H H H H L L L
C L L H H H H H H H L H
C L L H H H H H H H H L
C L L H H H H L H H L L
C L L H H H H L H H L H
C L L H H H H H H L L H
C L L H L H H H L L H H
C L L H L H H L H H H H



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PAL22V10

PART NUMBER: 1820-4387 Rev A

MMU STATE MACHINE PAL 2

HEWLETT PACKARD FORT COLLINS COLORADO

CLK /OE /SRSA /WR68 /FC2 /LOOKUP /DERR /DRDY /ST3 /ST2 /ST1 GND /ST4 /ENURP
/ENSRP /LEMP /MDEN /WRTRAM SPINDX /ENTRAM /WALKEN /MMUWR /MMUCY VCC

PAL DESIGN SPEC

JON RUBINSTEIN 10/11/84

IF (OE) ENSRP:=FC2*/ST1*ST2*/ST3
+FC2*LOOKUP*/ST1*/ST3*/ST4

IF (OE) ENTRAM:=-ST1*ST2*/ST3*ST4
+/DERR*DRDY*ST1*ST2*ST3*/ST4
+SRSA

;Added by hand for sel purge

IF (OE) ENURP:=-FC2*/ST1*ST2*/ST3
+/FC2*LOOKUP*/ST1*/ST3*/ST4

IF (OE) LEMTP:=-/ST1*/ST3*ST4

IF (OE) MDEN:=-ST1*ST2*/ST4
+ST1*ST2*/ST3
+/ST1*/ST2*ST3
+/ST1*/ST2*ST4
+/ST1*ST3*ST4
+/DERR*/DRDY*/ST2*ST3*ST4

IF (OE) MMUCY:=-ST2*ST3*/ST4
+/ST1*ST2*/ST4
+DERR*/ST2*ST3*ST4
+/DRDY*/ST2*ST3*ST4
+/ST1*ST3*ST4

IF (OE) MMUWR:=-ST1*ST2*/ST3*/ST4
+/DERR*/DRDY*ST1*/ST2*ST3*ST4

IF (OE) SPINDX:=-/ST1*ST2*/ST4
+/ST1*ST2*/ST3
+/ST1*/ST2*ST3*ST4

IF (OE) WALKEN:=-ST2*/ST4
+ST2*/ST3
+/ST2*ST3*ST4
+ST1*/ST3*/ST4
+/ST1*ST4
+/ST1*ST3
+LOOKUP*WALKEN*ST3*/ST4

IF (OE) WRTRAM:=-/DERR*DRDY*ST1*ST2*ST3*/ST4
+SRSA*/ENTRAM*WR68 ;Added by hand for sel purge

