HP 3000 Series 37 Computer System

System Support Log

HEWLETT PACKARD
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PRINTING HISTORY

New editions are complete revisions of the manual. Update packages, which are issued between editions, contain additional and replacement pages to be merged into the manual by the customer. The dates on the title page change only when a new edition or a new update is published. No information is incorporated into a reprinting unless it appears as a prior update; the edition does not change when an update is incorporated.

The software code printed alongside the date indicates the version level of the software product at the time the manual or update was issued. Many product updates and fixes do not require manual changes and, conversely, manual corrections may be done without accompanying product changes. Therefore, do not expect a one to one correspondence between product updates and manual updates.

First Edition . . . . . Feb 1985. . . . . //

LIST OF EFFECTIVE PAGES

The List of Effective Pages gives the date of the most recent version of each page in the manual. To verify that your manual contains the most current information, check the dates printed at the bottom of each page with those listed below. The date on the bottom of each page reflects the edition or subsequent update in which that page was printed.

Effective Pages	Date
all	Feb 1985

PREFACE

This binder contains the necessary forms to record the complete history of HP 3000 Series 37 system serial number _____. It is important to maintain these records. This binder is partitioned into the sections described below.

1. The Installation Record section contains the documents that define the parts and configuration of the entire system at the time it was shipped. The index at the beginning of the section describes the documents and lists them in sequence.

2. The Available Services section provides an area to insert a copy of your Maintenance Agreement and provides a page for filing the names and phone numbers of local HP representatives. This section can be expanded to include any documents that portray the field support capabilities of Hewlett-Packard.

3. The Preventive Maintenance section provides a convenient means to schedule and log preventive maintenance activities.

4. The Historical Records section contains the System and Peripheral History Logs. These forms provide the operator with a means to communicate important information in writing to the Customer Engineer. This section should provide a quick overview of the system's performance.

5. A record of hardware and software revisions to the system is kept in the Change Records section. The hardware record is created and maintained automatically by the Field Change Order (FCO) program. The Customer Engineer (CE) and the Systems Engineer (SE) must create and maintain software records.

6. As remedial maintenance is performed on the system, copies of the Customer Service Orders are filed in the Customer Service Orders section provided for that purpose. These forms are also known as Repair Orders (RO).

7. The Current System I/O Configuration/Segment List section provides a location for the CE to keep a record of the on-site configuration changes. As the system expands or changes, it should be recorded in this section.

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INSTALLATION RECORD

Section 2
AVAILABLE SERVICES

Section 3
PREVENTIVE MAINTENANCE

Section 4
HISTORICAL RECORDS

Section 5
CHANGE RECORDS

Section 6
CUSTOMER SERVICE ORDERS

Section 7
CURRENT SYSTEM I/O CONFIGURATION

INSTALLATION RECORD

SECTION 1

INTRODUCTION

This section will contain the four types of documents listed below:

- Packing Lists
- Hardware Configuration Record
- Software Record
- System Installation Report

File the packing lists as you receive each shipment.

Once the system hardware is installed, use the MPE I/O Configuration Map to fill in the hardware configuration forms. Note that the customer- installable version of the Series 37 will NOT have an extender and will have a maximum of two PICs.

Keep a record of the installed software in this section.

Also keep the green copy of the System Installation Report in this section for future reference.

This section is not intended to track the hardware and software revisions made to the system after installation. That is the function of the Change Records and Current System I/O Configuration/Segment List sections.

HARDWARE CONFIGURATION RECORDS

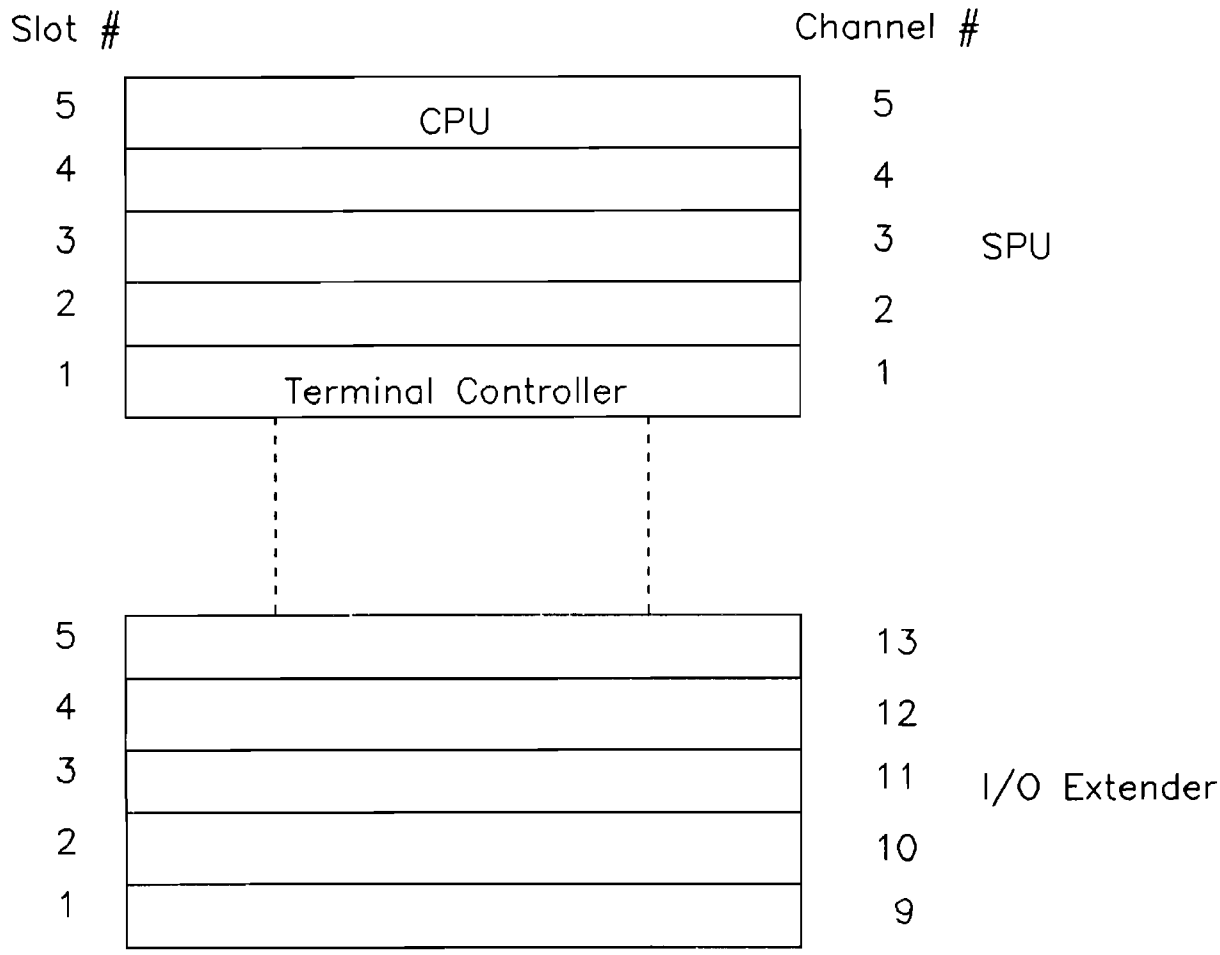
Use the following forms to make a permanent record of the hardware included in this Series 37 computer system.

Printed Circuit Assembly Locations

Use this form to record the physical location of each Printed Circuit Assembly (PCA) in the SPU and the I/O Extender.

NOTE

The I/O Extender is NOT customer-installable and will not be included in all Series 37 computer systems.



Peripheral Interface Channel

Record information about the HP-IB devices connected to the Peripheral Interface Channel (PIC) PCA(s) on the following forms:

NOTE

There will be one, two, or three PICs in the Series 37 computer system. Fill in the number of forms appropriate for your system.

PERIPHERAL INTERFACE CHANNEL (Slot # _____)

Device Address	Product Number	Description	LDEV #	DRT #
1	HP7945A	55 Mbyte Disc Drive	1	33
2			2	34
3	HP9144A	Cartridge Tape Unit	7	35

PERIPHERAL INTERFACE CHANNEL (Slot # _____)

Device Address	Product Number	Description	LDEV # DRT #

PERIPHERAL INTERFACE CHANNEL (Slot # _____)

Device Address	Product Number	Description	LDEV # DRT #

Terminal Controller

Record information about the RS-232C devices connected to the terminal controller(s) on the following forms:

TERMINAL CONTROLLER (Slot #___1___)

Port/Unit #	Product #	Description	LDEV #	DRT #
0		console	20	8
1			21	8
2			22	8
3			23	8
4			24	8
5			25	8
6			26	8
7			27	8

TERMINAL CONTROLLER (Slot #_____)

Port/Unit #	Product #	Description	LDEV #	DRT #

TERMINAL CONTROLLER (Slot #_____)

Port/Unit #	Product # Description	LDEV #	DRT #

TERMINAL CONTROLLER (Slot #_____)

Port/Unit #	Product # Description	LDEV #	DRT #

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SYSTEM INSTALLATION REPORT

To better assist in insuring a quality product to our customer, we request that you complete this form and mail as soon as possible.

Sales Order No.:	Installed by:
System Model:	Tech No:
System Serial No.:	WARRANTY START DATE:
Field Office:	WARRANTY PERIOD:

Installation Record Any NO Responses Should Be Explained in the Remarks

	YES	NO (REMARKS)
1. WAS SITE ADEQUATELY PREPARED?	☐	☐
2. DID SHIPMENT ARRIVE WITHOUT SHIPPING DAMAGE?	☐	☐
3. WAS SHIPMENT COMPLETE?	☐	☐
4. PHYSICAL APPEARANCE OK?	☐	☐
5. MECHANICAL CONDITION OK?	☐	☐
6. ARE MANUALS ADEQUATE?	☐	☐
7. HARDWARE OPERATE OK?	☐	☐
8. SOFTWARE OPERATE OK?	☐	☐
9. IS CUSTOMER SATISFIED?	☐	☐
10. INSTALLATION ADEQUATE TO START WARRANTY?	☐	☐
11. WAS COORDINATED DELIVERY WINDOW MET?	☐	☐

(If "NO" indicate Product(s) not deliverd in window)

RATE HP OVERALL PERFORMANCE: HI ☐ 10 ☐ 9 ☐ 8 ☐ 7 ☐ 6 ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 **LOW**

REMARKS: (PLEASE BE SPECIFIC, USE ADDITIONAL SHEETS IF NECESSARY)

5955-1741

WHITE: DIVISION SUPPORT MANAGER
GREEN: CUSTOMER LOG BOOK
YELLOW: LOCAL FIELD OFFICE
BLUE: DIST/COUNTY SALES MANAGER

AVAILABLE SERVICES

SECTION 2

INTRODUCTION

This section provides a page to file the business cards of your current Hewlett-Packard representatives and to record the service request telephone numbers. Service Request Forms are also filed in this section for your convenience. If you purchased a Maintenance Contract with your system, file your copy of the contract at the end of this section.

PREVENTIVE MAINTENANCE

SECTION 3

INTRODUCTION

Following a sound preventive maintenance (PM) program can help maintain a high level of computer system performance. This section provides Preventive Maintenance Timetable Worksheets, general Customer Preventive Maintenance Procedures, and general Customer Engineer Preventive Maintenance Procedures.

The basic purpose of PM is to keep unscheduled interruptions to a minimum. Performing the proper amount of PM accomplishes this purpose at minimum cost. PM consists of cleaning, lubricating, visually inspecting, replacing worn parts (for example, air filters), observing equipment operation, and running one pass of the self-test diagnostic. Only those adjustments known to require periodic attention should be checked.

There is no PM on the Series 37 System Processor Unit (SPU).

There are two types of PM: customer preventive maintenance and Customer Engineer preventive maintenance.

CUSTOMER PREVENTIVE MAINTENANCE

The customer should fill in a timetable worksheet when the computer system is installed. The preventive maintenance procedures - along with maintenance schedules - are provided in the manuals that accompany each computer peripheral. IT IS IMPORTANT TO PERFORM PREVENTIVE MAINTENANCE ON A REGULAR BASIS. When creating the maintenance schedule, take the environment into consideration. For example, if it is extremely dusty, the peripherals will require frequent cleaning.

Terminals and Personal Computers

Terminals and personal computers need to be cleaned and to have the batteries replaced on a regular basis. Refer to the user's manual that comes with each terminal for specific preventive maintenance schedules and procedures.

Plotters

Clean plotters on a regular basis. The operator's manual that comes with each plotter describes the preventive maintenance procedures.

Tape Drives

Clean the tape path on a regular basis to remove oxide build-up. Refer to the operator's manual that comes with each tape drive for specific preventive maintenance schedules and procedures.

Disc Drives

There are no specific preventive maintenance procedures for disc drives. Refer to the operator's manual that comes with each disc drive for general handling procedures.

Printers

It is especially important to keep printers clean. Refer to the operator's manual that comes with each printer for specific preventive maintenance schedules and procedures.

CUSTOMER ENGINEER PREVENTIVE MAINTENANCE

The Customer Engineer (CE) will fill in a timetable worksheet after the computer system is installed. The preventive maintenance procedures - along with maintenance schedules - are provided in the peripheral manuals. It is important to perform PM on a regular basis. The CE should determine if the conditions at a particular site affect the PM schedule and perform PM accordingly.

General Procedures

The following are general preventive maintenance procedures to perform on every PM visit. Specific procedures for each device are described in the CE manuals for that device. Use this list as a guide only.

1. Review the Historical Record for any problems logged since the last visit. Investigate any problems.
2. Check all lamps and indicators.
3. Check all switches and controls.
4. Check all fans and blowers.
5. Check all air filters.
6. Run the diagnostics.
7. Perform general cleaning on device exteriors.

Reference Material

For each device, refer to the training manual, the installation manual, the diagnostic manual(s), and the Customer Engineer handbook.

PREVENTIVE MAINTENANCE TIMETABLE WORK SHEET

PRODUCT / MONTH	1	2	3	4	5	6	7	8	9	10	11	12
TOTAL REQ'D. HRS.												
SCHEDULED DATE												
SCHEDULED TIME												
CE OR CUSTOMER INITIAL												

PREVENTIVE MAINTENANCE TIMETABLE WORK SHEET

PRODUCT \ MONTH	1	2	3	4	5	6	7	8	9	10	11	12
TOTAL REQ'D. HRS.												
SCHEDULED DATE												
SCHEDULED TIME												
CE OR CUSTOMER INITIAL												

HISTORICAL RECORDS

SECTION 4

INTRODUCTION

This section is for filing Historical Records. Copies of the System History Log are provided and must be completed by the customer and HP's Customer Engineer (CE). Two other forms -- the Monthly Report of Hard System Failures and the Console Log -- may be used at HP's District Manager's option. The history logs allow the system user, the CE and HP management to obtain vital operating information. This information is used to ensure the successful operation of the system.

SERVICE CALL ENTRIES

When arriving on-site, the CE enters time of arrival, system symptoms, and any other pertinent information in the history log(s). The CE reviews the logs and tells the customer the plan of action.

Before leaving, the CE completes all paper work and calculates elapsed maintenance time according to the formulas below. The formulas apply only the customer's contractual support period. For example, given contract coverage from 8 to 5 (8 hours), a call for service at 4:00 p.m., and completion of maintenance by 11:00 the next day, there would be 4 hours of elapsed maintenance time.

The CE tells the customer what was found, what corrective action was taken, and the current status of the system. If further action is required, the customer is told the estimated completion date. Any commitments are recorded in the System History Log and the CE's schedule.

PREVENTIVE MAINTENANCE ENTRIES

At each preventive maintenance (PM) time, the same routine is followed as with a service call. In addition, the following information is entered in the log.

1. System performance (SP) is calculated as follows:

$$SP = \frac{PPM - Downtime}{PPM} \times 100$$

PPM (Principal Period of Maintenance) per month is:

Hours of Coverage Per Day	Days of Coverage Per Week		
	5	6	7
8	173	208	242
16	346	416	485
24	520	624	728

2. Contract-to-Date SP is calculated as follows:

$$\text{AVERAGE SP} = \frac{\text{No. prior periods x prev. avg. + current avg.}}{\text{Total number of periods}}$$

3. Example:

Assume monthly PM's for which records have been kept for 3 months on a 16-hour, 5-day week contract. Downtime is 16 hours in Month 1, 12 hours in Month 2, and 29 hours in Month 3.

$$\text{Month 1 SP} = \frac{346 - 16}{346} \times 100 = 95\%$$

$$\text{AVERAGE SP} = \frac{0 + 95}{1} = 95\%$$

$$\text{Month 2 SP} = \frac{346 - 29}{346} \times 100 = 95\%$$

$$\text{AVERAGE SP (at month 2)} = \frac{1 \times 95 + 97}{2} + = 96\%$$

$$\text{Month 3 SP} = \frac{346 - 29}{346} \times 100 = 92\%$$

$$\text{AVERAGE SP (at month 3)} = \frac{2 \times 96 + 92}{3} = 95\%$$

These values are entered in the history log(s) along with a list of all items given preventive maintenance.

When all records are complete, the CE reviews the log entries made since the last PM with the customer.

MONTHLY REPORT OF HARD SYSTEM FAILURES

For: SEP (mo.) / 76 (yr.)

Environment – Changes	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MPE Version:	C-8	→																													
Hardware Changes:										X																					
Software Changes:																															
PM Done:																														X	
System Halts Due To Malfunctions/ Maintenance 07:00																															
08:00										D△																				D△	
09:00										D		20*																		D	
10:00										D														000012†						D	
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	Date																														

EXAMPLE

Typical Information Coding:

* System halt with console message – enter error number.

† System halt without console message – enter contents of status register if available. Underline bits 8-15 (segment number).

‡ System looping in run mode and no response – enter "L."

△ System down and not in operation mode – enter "D."

Exact details of error printouts and all system malfunctions, mainframe and peripheral, should be entered in the Console Log.

MONTHLY REPORT OF HARD SYSTEM FAILURES

For: ____ / ____
mo. yr.

Environment – Changes	Date 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MPE Version:																															
Hardware Changes:																															
Software Changes:																															
PM Done:																															
System Halts Due To Malfunctions/ Maintenance 07:00																															
08:00																															
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	Date																														

CHANGE RECORDS

SECTION 5

INTRODUCTION

This section consists of Product Record Sheets and Software Record Sheets.

On the Product Record Sheet, record the configuration change history and the field change order (FCO) history of each hardware product. The sheet is filled as FCO's are installed. As a result, there may eventually be more than one sheet per product. This section should contain a complete history of configuration changes. If a configuration change is initiated in the field, note this fact on the form and return a copy to Systems Engineering in the manufacturing division. A number of blanks are provided for this reason. These sheets reflect the beginning and on-going history of each product. If an installed FCO causes a change in the systems I/O configuration or segment list, this change must be logged in the Current System I/O Configuration/Segment List section.

On the Software Record Sheet, record the software product changes (versions, updates, and fixes) that have been installed. These sheets are provided in tablet form and must be supplied by the Customer Engineer or Systems Engineer. The form is designed so that one copy should exist for each software product in the system. The forms should be initiated when the system is installed or when a change is installed on a software product for which no form exists.

PRODUCT RECORD SHEET

System Serial Number	Product Number
Sales Order Number	Serial Number
Initial Date Shipped	Warranty Code

ASSEMBLY REVISION LEVELS		
Part Number	Date Code	Last FCO Installed

CONFIGURATION	WHEN SHIPPED	CHANGED TO
Device Number		
Interrupt Request Number		
Service Request Number		
Data Poll Sequence		
Rack Location		
Interrupt Mask		

OPTIONS		

GENERAL REMARKS

LIST FCO's INSTALLED		
FCO Date	FCO Number	Date Installed

LIST FCO's INSTALLED			LIST FCO's INSTALLED		
FCO Date	FCO Number	Date Installed	FCO Date	FCO Number	Date Installed

CUSTOMER SERVICE ORDERS

SECTION 6

INTRODUCTION

When remedial maintenance is performed on the system, file copies of the Customer Service Orders in this section.

READER COMMENT SHEET

HP 3000 System Support Log

30457-90013 March 1985

We welcome your evaluation of this manual. It is one of several that serve as a reference source for HP 3000 Computer Systems. Your comments and suggestions help us to improve our publications and will be reviewed by appropriate technical personnel. HP may make any use of the submitted suggestions and comments without obligation.

Is this manual technically accurate?	**Yes [] No []**	(If no, explain under Comments, below.)
Are the concepts and wording easy to understand?	**Yes [] No []**	(If no, explain under Comments, below.)
Is the format of this manual convenient in size, arrangement and readability?	**Yes [] No []**	(If no, explain or suggest improvements under Comments, below.)

Comments:

We appreciate your comments and suggestions. This form requires no postage stamp if mailed in the U.S. For locations outside the U.S., your local HP representative will ensure that your comments are forwarded.

Date: _____

FROM:

Name _____

Company _____

Address _____

_____

_____

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