16 December

19 Ray Walker

22 January   Printer.

30 January   Installation i working order.

28th February

AGREEMENT TO PURCHASE A DECSYSTEM-10

AGREEMENT TO PURCHASE A DECSYSTEM-10

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CONTRACT
SECTIONS   SUBJECT

AGREEMENT

for the

PURCHASE OF A DECSYSTEM-10 COMPUTER SYSTEM

Agreement made this TWENTY EIGHTH day of JULY 1977

between Digital Equipment Australia Pty.Ltd.
        (hereinafter referred to as DIGITAL) and
University of Queensland
        (hereinafter referred to as the UNIVERSITY)

DIGITAL agrees to sell and the UNIVERSITY agrees to buy for
the Prentice Computer Centre, the DECsystem-10 Computer
equipment, licence to the DECsystem-10 software and
associated services and components described in this
contract, Schedule A (hereinafter referred to as the System)
and Schedule B, C and D, in accordance with the terms and
conditions contained herein.

AGREEMENT TO PURCHASE A DECSYSTEM-10
CONTRACT SECTIONS

1. PRICE

1.1 The prices for the products, the subject of this contract, shall be as specified in Schedules A, B, C and D and are expressed in Australian dollars. ✓

1.2 Prices are for the supply, delivery and installation of the equipment and associated software at the Prentice Computer Centre, University of Queensland. The prices specifically exclude all customs import duties, sales tax or any Federal, State Municipal or other government taxes or the like. Such items, if applicable, shall be invoiced separately. ✓

1.3 If a certificate of exemption or similar document or proceeding is to be made in order to exempt the products from import duty or the sale from sales tax or similar liability, the UNIVERSITY will obtain and pursue such certificate, document or proceeding. ✓

1.4 The prices will be subject to adjustment if the exchange rate of United States dollar to Australian dollar at the Date of Delivery varies by more than 2% from the quoted rate of $1.08. The quoted Gross Total will be adjusted according to the following formula:-

Adjusted Gross = Quoted Gross X $(0.3 + 0.7 \ C \ / \ F)$

C = Australian Bank U.S. $ T.T. Selling Rate quoted as $1.08.

F = Australian Bank U.S. $ T.T. Selling Rate at Delivery. ✗

Quoted Gross = The sum of Gross Totals in Schedules A, B, C and D.

If Date of Delivery is delayed beyond the end of 1977 due to reasons imputable to DIGITAL, the UNIVERSITY has the option to substitute the rate at the last banking day in 1977 for F.

1.5 In no event shall the UNIVERSITY be required to pay any price greater than the amount it would have been required to pay if the system had been delivered in accordance with the contract.

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AGREEMENT TO PURCHASE A DECSYSTEM-10
CONTRACT SECTIONS

2. PREPARATION OF THE SITE

2.1 During July, 1977 DIGITAL shall propose to the UNIVERSITY in writing a plan for the preparation of the installation site. The UNIVERSITY shall ready the site prior to the end of November, 1977 in accordance with the agreement reached between the parties on the basis of the proposed plan. The UNIVERSITY will issue a Site Readiness Advice to DIGITAL that the site is ready for installation. In the event of the site not being ready by the end of November 1977, the dates by which any action is required to be taken by DIGITAL shall be extended by a period equal to the period between 30th November 1977 and the date the site is ready. The UNIVERSITY will advise DIGITAL at intervals of not greater than one month of progress on the installation site.

3. DELIVERY

3.1 Delivery of all items the subject of this contract will be made to the Prentice Computer Centre, University of Queensland, St Lucia, Qld 4067. Delivery will not have been effected unless all items required for the conduct of Acceptance Tests have been delivered.

3.2 Delivery Date for the products in Schedules A, B, C and D shall be the date upon which the products are Delivered to the Prentice Computer Centre or as provided in Clause 3.6.

3.3 In case of delay in Delivery beyond 23 December 1977 imputable to DIGITAL or the Manufacturers of any Products, DIGITAL shall owe the UNIVERSITY liquidated damage of 0.5% per full week of delay up to a maximum of 5% of the purchase price of the delayed items or, if they are essential for the conduct of the Acceptance Tests, of the System.

This amount due hereunder will be deducted from the UNIVERSITY'S last payment and is in lieu of any other claims resulting from the delay.

3.4 Notwithstanding the above and in lieu of the liquidated damage, the UNIVERSITY is entitled to rescind the agreement and take recourse to the remedies provided by Law if a delay in delivery imputable to DIGITAL extends beyond 17th March 1978.

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3.5 It is expressly understood that DIGITAL is not responsible for the issue of US export or Australian import licenses and does not assume any responsibility by the fact that DIGITAL will assist the UNIVERSITY in obtaining these licenses.

3.6 If for reasons imputable to the UNIVERSITY DIGITAL is unable to effect Delivery to the Prentice Computer Centre subsequent to the 30th November 1977, DIGITAL will warehouse the equipment at a site nominated by the UNIVERSITY and acceptable to DIGITAL at the UNIVERSITY'S cost including warehousing and additional freight and handling charges. The Delivery Date will then be the first day of such storage.

4. INSTALLATION

4.1 DIGITAL shall furnish all labour required for unpacking and placing the equipment in the desired location and this work will be performed under DIGITAL's supervision and responsibility. The UNIVERSITY however will use its best endeavours to assist DIGITAL in unpacking the equipment and placing it in the desired locations provided that the UNIVERSITY accepts no risk or responsibility in so doing.

4.2 DIGITAL shall place the System in good working order. Notification to the UNIVERSITY that this is done marks the termination of installation.

5. ACCEPTANCE

5.1 GENERAL

The System will be subject to Acceptance Tests which are intended to satisfy the UNIVERSITY that:-

(a)   The System as delivered and installed is in good working order and conforms substantially with the specifications in DIGITAL's Option Bulletins listed in Schedule H.

(b)   The System operates in a reliable manner;

(c)   The Software supplied operates as described in the appropriate Software Product Descriptions listed in Schedule B, and

(d)   The documentation supplied with the system is in accordance with the requirements of the contract.

The acceptance tests shall comprise:-

(i)   Inspection of equipment and documentation;

(ii)   Acceptance tests of system hardware; and

(iii) System and Standard Software reliability tests.

5.2 HARDWARE ACCEPTANCE

Acceptance tests of the System's Hardware are designed principally to test the individual components of the System and comprise the series of tests set out in Schedules E and G.

For this purpose the Manufacturer provides Diagnostic Programs (as listed in Schedules E and G) and the parties agree that these are adequate and sufficient.

DIGITAL's demonstration of each test to the UNIVERSITY is intended to prove that the Hardware is in good working condition and free of defects. The UNIVERSITY shall sign an Acceptance Form, the pro-forma of which is included in Schedule E, for each demonstration in respect of which the UNIVERSITY's Representative is satisfied.

Successful completion of the last series of tests shall constitute Hardware Acceptance.

5.3 SYSTEM ACCEPTANCE

The System Acceptance Test is designed to test the reliability of the System's operation and its Standard Software as listed in Schedule A and consists of a period of continuous operation using the programs defined in Schedule F.

Upon successful demonstration of this test under the conditions also defined in Schedule F the System as a whole will be accepted and the UNIVERSITY shall issue a System Acceptance Certificate.

5.4 ACCEPTANCE CERTIFICATE

The UNIVERSITY may issue an Acceptance Certificate for the whole System which shall constitute Whole Acceptance, or for parts of the System which shall constitute Partial Acceptance, or the UNIVERSITY may issue Acceptance Certificates subject to stipulated conditions or reservations. With respect to other provisions herein these Certificates have the full effect of the System Acceptance Certificate.

The UNIVERSITY may not withhold Acceptance unnecessarily or withhold Partial Acceptance solely because some products have not been delivered and which are not necessary for the successful running of all Acceptance Tests.

If whole or Partial Acceptance is not achieved prior to June 1 1978 due to reasons imputable to DIGITAL, the parties shall negotiate further proceedings. If no agreement is reached the UNIVERSITY may rescind this agreement, and require DIGITAL to remove all items subject to this contract within a reasonable period and take recourse to the remedies provided by law, or exercise any right which may have accrued to the UNIVERSITY under this agreement or otherwise.

5.5 PROCEDURE

(a) Representatives:
   During the conduct of these Tests and for this purpose, DIGITAL shall be represented by its Queensland Manager and the UNIVERSITY by the Director of the Prentice Computer Centre or their respective nominees appointed in writing.

(b) DIGITAL's Responsibilities

   DIGITAL's representative shall:

   - be responsible for the System and all other products delivered and control their use and operation until System Acceptance;

   - supervise the tests and be entitled to delegate his responsibility temporarily;

   - prepare and ensure the accuracy of all input data used in any Tests submitted by DIGITAL;

- verify that the log maintained by the UNIVERSITY's
  representative during the conduct of the tests
  represent an accurate record of events.

DIGITAL shall supply the diskpacks and magnetic tapes
for the operation until the System's Acceptance and
during the hardware tests shall supply also all
consumable items (eg. line printer paper, punched
cards etc.) required for the conduct of the Tests.

(c) UNIVERSITY's Responsibilities

The UNIVERSITY's representative shall:

- ensure before the commencement of the Tests that all
  items of hardware, software and documentation as are
  specified herein, or such lesser quantity as he may
  determine, have been delivered;

- provide all facilities, communication media, access
  to the equipment etc. required for proper conduction
  of the Tests;

- keep a log of the progress of all Tests in the manner
  described in Schedules E and F.

(d) Structure of the Tests:

The Tests commence immediately following installation
(as notified according to Section 4.2).

Both Hardware Tests and System Tests will be preceded
by a sample trial run intended to familiarise both
parties with the procedures and records. Those runs
will not exceed two days' duration each. System faults
encountered during this period will not be counted as
part of the Tests.

(e) Environmental Conditions

During the course of acceptance tests, the UNIVERSITY's
representative may vary the environmental conditions
within the limits specified in DIGITAL's Option
Bulletins contained in the Tender.

If during a test, abnormal conditions arise which are
outside DIGITAL's control, and which would in the
opinion of the UNIVERSITY's Representative, invalidate
the results of the test, the UNIVERSITY's

Representative may suspend the tests until normal conditions are restored. The test which was in progress at the time of suspension shall be disregarded and restarted.

(f) Arbitration

Any dispute arising out of the conduct or results of the Acceptance Tests or the interpretation of this Section 5 and which cannot be settled amicably between the parties will be referred to an independent mediator on whom the parties agree, or in default of agreement appointed by the President of the Australian Computer Society. The mediator shall not be an arbitrator and neither party shall be bound to accept his decision or advice.

6. PAYMENT TERMS

6.1 Within 20 days of Delivery as defined in Section 3, the UNIVERSITY shall pay an amount of $150,000 as part payment of the Purchase Price. This amount shall be repayable by DIGITAL to the UNIVERSITY in the event that the UNIVERSITY rescinds the contract according to the terms of Section 5.4

6.2 Payment of the residual amount for accepted products is due within 20 days of System Acceptance.
In case the Acceptance Certificate is not signed 60 days after Delivery of the System, or by 28th February 1978, whichever is the later, and this being due to reasons imputable to the UNIVERSITY, payment for the residual products is due within 20 days of such date.

In case of Partial Acceptance (Section 5.4 Para. 1) the UNIVERSITY is entitled to withhold payment of a reasonable amount until full acceptance of all products. The amount will be up to 10% of the System's price or the price of the non-accepted products' price which ever is the greater.

6.3 The UNIVERSITY agrees to pay interest at the rate of interest charged per month at the time to DIGITAL by its bankers on overdraft account on the amount of any overdue payment from the day following the due date until the date payment is made.

6.4 Title to the equipment and the right to use it and/or the Software pass to the UNIVERSITY upon payment in full for the accepted products.

6.5 DIGITAL carries the risk of loss or damage for items in Schedules A, C and D until System Acceptance and for items in Schedule B until Hardware Acceptance with the exception that deliberate physical damage to the equipment not imputable to DIGITAL on the UNIVERSITY premises will be the UNIVERSITY's responsibility.

6.6 The purchase price for the products in Schedule B is due within 20 days of Hardware acceptance of those products. Hardware acceptance procedures for the products in Schedule B are contained in Schedule G.

7. WARRANTY

7.1 All equipment in Schedule A is warranted for a period of 90 days from the date of Acceptance.

In case Acceptance is delayed due to reasons imputable to the UNIVERSITY the warranty period starts not later than 60 days after the date of notification that the System has been installed in good working order as provided in Section 4.2

The warranty for repaired or replaced parts ends with the warranty period of the System, provided that replacement parts meet the requirements of the Hardware Acceptance tests as provided in Schedule E.

The UNIVERSITY will ship defective parts prepaid against a DIGITAL return authorisation number with System serial number and a report of the defect observed to the Product Repair Centre, 40 Albany Street, Crows Nest, Sydney, N.S.W. DIGITAL pays return charges.

If the parts prove not to be defective within the terms of the warranty, the UNIVERSITY shall pay all costs of handling, transportation and repairs.

The spare parts listed in Schedule C are warranted for a period of 90 days following System Acceptance.

The products listed in Schedule B are warranted for a period of 90 days following Hardware Acceptance tests which will be conducted concurrently with the System Hardware tests in

Schedule E and are as detailed in Schedule G.

DIGITAL's sole responsibility under these warranties shall be, at its option, to repair or replace any subassembly part which fails during the period of warranty due to a defect in workmanship and material.

7.2   Software with DIGITAL Support Category of A or B is warranted to conform to the DIGITAL Software Product Description (SPD) applicable at the time of order. DIGITAL's sole obligation hereunder shall be to remedy any nonconformance of the Software to the SPD. Such remedy shall be provided as specified in the Software Support Categories Addendum to the SPD for non-conformances reported to DIGITAL during the one (1) year period following delivery. Software with a designated Support Category of C is furnished on an "as is" basis.   *Date of delivery of software 1·7·2·78.*

8.   SOFTWARE PRODUCT LICENCE

8.1   Licenced software including related documentation, provided hereunder is furnished to the UNIVERSITY under a non-transferable and non-exclusive licence for use on the system and may only be copied, in whole or in part, with inclusion of the DIGITAL copyright notice for use on this CPU. The UNIVERSITY shall use its best endeavours not to provide or otherwise make available the software or any part of copies thereof to any third party. Title to and ownership of the Software shall at all times remain with DIGITAL. DIGITAL shall have the right to terminate the licence if the UNIVERSITY fails to comply with these licence terms and the UNIVERSITY agrees, upon notice of such termination to immediately return the Software and all portions and copies thereof.

8.2   Binary and Source codes are provided under the Licence Agreements in Schedule I to this contract.

9.   COPYRIGHT

Any System drawings and documentation provided to the UNIVERSITY hereunder are furnished only for the UNIVERSITY's own internal use within the Prentice Computer Centre. The UNIVERSITY shall have the right to make copies of such

System drawings or documentation to satisfy the Prentice Computer Centre's internal requirements provided that the UNIVERSITY includes DIGITAL's copyright notice on each such copy. No other copies or use of the System drawings or documentation or any portion thereof, shall be made with the authority of the UNIVERSITY without the prior written approval of DIGITAL.

10. PATENTS AND COPYRIGHT PROTECTION

10.1 If notified in writing of any action (and all prior claims related) brought against the UNIVERSITY claiming that its use of DIGITAL's product infringes an Australian patent or copyright DIGITAL will defend such action at its expense and will pay the costs and damages awarded in such action provided DIGITAL shall have the sole control of the defence and all negotiations for settlement and shall indemnify the UNIVERSITY on such terms and on such conditions as may be agreed between the parties or in default of agreement as Messrs Chambers McNab & Co., Solicitors, Brisbane may determine against all costs, damages, expenses or other monies the UNIVERSITY may become liable for in taking such action.

In the event that an injunction shall be obtained against the UNIVERSITY's use of the product by reason of such infringement, DIGITAL will, at its option and at its expense, either procure the right to continue using the product, or replace or modify the same so that it becomes non-infringing, or - if the above is not reasonably feasible - pay to the UNIVERSITY forthwith a sum equal to the actual purchase price of the product against its return.

10.2 DIGITAL shall not be liable if the alleged infringement is based upon use of the product in combination with products not sold by DIGITAL.

The forgoing states the entire liability of DIGITAL for patent or copyright infringement by the product purchased.

11. SPARE PARTS

11.1 DIGITAL warrants that the set of spare parts defined in Schedule C includes all special tools required for the normal regular maintenance of the System and the spares which to DIGITAL's best knowledge are likely to be needed in the normal course of operation.

11.2 DIGITAL will provide the UNIVERSITY with further spare parts subject to availability and under its standard term and conditions applicable at the time.

11.3 DIGITAL will use its best endeavours to help the UNIVERSITY to benefit from its Express Spare Parts Service upon the UNIVERSITY's request and against payment of the applicable extra charge, however, only in priority after DIGITAL's own needs and conditioned upon the UNIVERSITY replenishing its spare parts kit in a timely manner.

12. ENGINEERING DOCUMENTS AND DIAGNOSTIC PROGRAMS

12.1 DIGITAL shall supply at the time of Delivery all documentation (including engineering drawings, wire and cable listings with signal names, parts breakdown and descriptive theory of operation) and diagnostic programs and procedures for preventive and remedial maintenance including Preventive Maintenance Schedules and one microfiche reader.

All documentation shall be at the revision level of each unit supplied.

12.2 Further, DIGITAL shall supply all periodic revisions and amendments to documentation and diagnostics, engineering and field changes, parts documentation, "DEC-O-Log", maintenance manuals and schedules of prices of spares.

12.3 Subscription fees and handling charges or like for the above will not rise faster in comparison to the first subscription year than justified by inflation in Australia or the USA and the increase in costs of production and administration of these products and services.

12.4 DIGITAL warrant to provide training for the UNIVERSITY's maintenance engineers in the USA prior to the commencement of Hardware acceptance of the System.

12.5 DIGITAL warrants that following Acceptance, DIGITAL will make available a maintenance advice service on a per-call basis , as required by the UNIVERSITY.

13. SPECIAL SOFTWARE

DIGITAL will make available to the UNIVERSITY as soon as is practicable after the signing of this contract the following software items:-

(1) All PDP-11 Operating Systems and associated software included in Schedule D.

(2) DN87S Source code,

(3) DAS80 Source code.

14. SOFTWARE MAINTENANCE SERVICE

DIGITAL will continue to offer the UNIVERSITY the Customer Software Maintenance Service with its usual options and at the normal price applicable. Only one subscription to a nominated option for software in Schedule A is required to cover both the KA10 System and the KL10 System.

15. TOPS-20 MIGRATION

DIGITAL warrants that the maximum cost of migration from the TOPS-10 to the TOPS-20 Operating System will be $75,000. This amount will cover all required changes to the 1090 Central Processor, exchange of card reader and line printer interfaces if necessary, operating System license and binaries and sources for the software as listed in Schedule A.

16. SPECIFICATIONS

DIGITAL reserves the right to make substitutions and modifications to the specifications of the equipment and software included in the System providing that such substitutions or modifications will not adversely affect the performance or the life of the System.

If the UNIVERSITY modifies the equipment or software included in the System or attaches non-DIGITAL manufactured equipment or software to the System, the System may be adversely affected and DIGITAL assumes no responsibility that the System will perform according to DIGITAL specifications.

17. TRADE-IN

17.1 As an integral part of this purchase agreement the UNIVERSITY agrees to sell to DIGITAL and DIGITAL agrees to buy from the UNIVERSITY the following parts of its present computer system for the stated amounts:

1 X KA10, serial number 17, 3 X MA10 $120,000

1 X DF10, serial number 4, $ 7,080

The equipment is understood to be in good operating condition and is complete with associated manuals, drawings and cables and is sold as is.

17.2 Three months after Acceptance, DIGITAL shall:

(i)   take possession of this equipment;

(ii) assume the risk of loss or damage;

(iii) remove it from the UNIVERSITY's premises at no cost to the UNIVERSITY.

17.3 Payment is due at the time of change of possession, and title passes to DIGITAL upon payment in full. However, if required by the UNIVERSITY, DIGITAL will offset these amounts against the purchase price in Schedule A provided that the UNIVERSITY pays interest at the rate of interest charged per month at the time to DIGITAL by its bankers on overdraft account on the amount stated in 17.1 herein for the period commencing at the date of payment for the

Accepted System and concluding three months after the Date of Acceptance.

18. <u>MISCELLANEOUS</u>

18.1 The proper law of this agreement shall be the law of Queensland for the time being in force. All questions arising out of or in connection with the agreement shall be determined according to laws of Queensland in force from time to time and the parties hereto submit to the jurisdiction of the Courts of Queensland.

18.2 This Agreement is not assignable.

In the event either party shall on any occasion fail to perform any terms of this contract and the other party shall not enforce that term, the failure to enforce on that occasion shall not prevent any enforcement on any other occasion.

18.3 Deviations from or modifications to these terms and conditions are not valid unless signed by authorised representatives of both parties.

18.4 In any case in which rights, duties or obligations of the parties to this agreement depend in whole or in part on the existance of or a reason for delay fault or other matter the onus of establishing all relevant facts shall be upon the party relying upon that existance or reason.

18.5 This contract is subject in all respects to Statute No. 46 of the Statutes of the UNIVERSITY and no right conferred hereunder shall be deemed to confer upon any person any right or authority to do any act which would constitute a breach of that Statute or to deprive the UNIVERSITY of any power to take action to enforce that Statute against any person.

18.6 In no event will DIGITAL be liable for indirect or consequential damage; on any of these events DIGITAL's liability is limited strictly to the indemnities and warranties hereof.

19.   NOTICES

All notices given by either party to the other   under   this
agreement shall be in writing addressed to:-

        General Manager
        Digital Equipment Australia Pty.ltd.,
        50 Water Street,
        SPRING HILL. QLD. 4000

and address to the UNIVERSITY:

        The Registrar,
        University of Queensland,
        ST.LUCIA.   QLD. 4067

IN WITNESS WHEREOF, the parties set their hands, the date first above mentioned.

THE UNIVERSITY OF QUEENSLAND :

    BY   _____

    TITLE   THE REGISTRAR

    DATE   _____

DIGITAL EQUIPMENT AUSTRALIA PTY. LTD.

    BY   _____

    TITLE   GENERAL MANAGER

    DATE   _____

SCHEDULE A

SYSTEM			$
(1)	1090-HB	1090 System, RTP06-B, 256KWord, DN87S, 16 Async Lines, LA36-C	731,600
(1)	MH10-L	256KWord Memory	153,400
(3)	DN81-ED	3 x 16 Async lines	24,143
(8)	DN81-FC	8 x 8 EIA Signal lines	21,146
(1)	TTU45-EX	Magtape, Massbus Control	31,150
(1)	TU45A-EF	Second magtape drive	16,520
(1)	LP100-BB	Charaband printer with LP07-YC	76,700
(1)	RTP06-AB	Massbus control and drive	55,633
(1)	RPO6-AB	Additional drive	38,000
(3)	RP-06-P	Disk Packs	3,015
(1)	DF10-CB	Data channel	25,960
(1)	CR10	Interface only, incl. BA10	5,000
		GROSS TOTAL	1,182,267
		Trade-in KA10, 3 x MA10, DF10	127,080
		Special discount	100,000
		NET TOTAL	$955,187

These prices are based on the exchange rate of A$1.00 = US$1.08.

These prices include all associated cables, connectors and the like to allow the proper installation operation of the equipment.

SCHEDULE A   (cont.)

Items to be supplied at no charge:-

STANDARD SOFTWARE:

Monitor Package TOPS-10 Operating System
                Virtual Memory (VMSER)
                LINK-10 loader with overlays
                Assembler, Editor and
                Utilities as described in Software
                Product Description SPD7.1.5 (May 1977).

DN87 Software

FORTRAN-10

ALGOL-10

BASIC-10

COBOL-10

GALAXY-10

SORT-10

FORTRAN-40

TRAINING:

13 training credits to be used in DEC Training Courses to cover
programming, administration and operating.

SCHEDULE B

ADDITIONAL HARDWARE ITEMS $

(6)	DMC11-AR	Microprocessor	10,770
(6)	DMC11-DA	Sync. line unit	6,030
(1)	DD11-D	Mounting Unit	780
		GROSS TOTAL	$ 17,580

These prices are based on the exchange rate of A$1.00 = US$1.08.

PS-59-50   DATE : 06-23-77   CUSTOMER : UNIVERSITY OF QUEENSLAND   QUOTE # : 172711   TYPE : S
COUNTRY : UNITED STATES   CURRENCY : DOLLARS
SORTED BY: CONFIGURATION

AGREEMENT TO PURCHASE DECSYSTEM-10
SCHEDULES SECTION

SCHEDULE   C

SPARES AND TOOLS

ITEM NUMBER	QTY	DEC PART NUMBER	DESCRIPTION	UNIT PRICE	EXTD PRICE	OPTION	LEAD TIME
1	1	00861-B	POWER CONTROL			KL10-BB	99
2	1	0B124-00	INVERTER			DF10	03
3	1	0B130-00	3 PARITY CIRCUIT			DF10	A
4	1	0B133-00	DIODE GATE			DF10	A
5	1	0B134-00	DIODE GATE			DF10	A
6	1	0B135-00	DHODE GATE			DF10	A
7	1	0B163-00	DIODE GATE			DF10	A
8	1	0B165-00	DIODE INVERTER			DF10	03
9	1	0B167-00	ADDER GATE			DF10	A
10	1	0B214-00	FOUR FLIP FLOPS			DF10	A
11	1	0B311-00	DELAY LINE			DF10	02
12	1	0B611-00	PULSE AMPLIFIER			DF10	A
3	1	0B683-00	5 OHM OR BUS DRIVER			DF10	A
14	1	0B685-00	DIODE GATE DRIVER			DF10	A
15	1	0G114-00	16K SENSE/INHIBIT G112 W			KL10-BB	A
6	1	0G255-00	16K X-Y DRIVE			KL10-BB	A
17	1	0G704-00	2 MA LEVEL TERMINATOR			DF10	03
18	1	0G742-00	CARD, POSITIVE LOGIC JUMP			KL10-BB	A
19	1	0G847-00	MOTOR POWER CONTROL			KL10-BB	A
20	1	0G848-00	MOTOR CONTROL			KL10-BB	A
21	1	0G851-00	RELAY			KL10-BB	A
22	1	0G859-00	CLOCK & REGULATOR			KL10-BB	A
23	1	0H217-C	MEMORY STACK			KL10-BB	04
24	1	0H732-00	POWER SUPPLY			KL10-BB	A
25	1	0H742-B	PS CHASSIS 11/45 230 VAC			H742-B	A
26	1	0H744-00	POWER REGULATOR			H742-B *MHID*	07
27	1	0H745-00	POWER REGULATOR			KL10-BB / H742-B	03
28	1	0H754-00	+ 20 VOLT REGULATOR			KL10-BB *HHID*	07
29	1	0H758-B	POWER SUPPLY DH11-AC			DH11-AC	03
30	1	0H770-00	+15V 10A REGULATOR FOR H7			KL10-BB *MHID*	03
31	1	0KM11-A	MAINTENANCE MODULE			KL10-BB	02
32	1	0M040-00	H040 E			KL10-BB	99
33	1	0M050-00	INDICATOR AND RELAY DRIVE			KL10-BB	99
34	1	0M105-00	ADDRESS SELECTOR			DM11-BB	A
35	1	0M111-00	INVERTER			KL10-BB	99
36	1	0M112-00	NOR GATE			KL10-BB	99
37	1	0M113-00	10-2 INPUT NAND GATE			KL10-BB	99
38	1	0M115-00	INPUT NAND GATE			KL10-BB	99

COUNTRY : UNITED STATES   CURRENCY : DOLLARS

SORTED BY: CONFIGURATION

ITEM NUMBER	QTY	DEC PART NUMBER	DESCRIPTION	UNIT PRICE	EXTD PRICE	OPTION	LEAD TIME
39	1	0M117-00	INPUT NAND GATE			KL10-BB	99
40	1	0M119-00	3-8 INPUT NAND GATE			KL10-BB	99
41	1	0M121-00	GATES			KL10-BB	99
42	1	0M127-00	2-2-2-3-ANDINOR GATE			KL10-BB	02
43	1	0M141-00	2 2 2 2 AND NOR GATES			KL10-BB	99
44	1	0M149-00	OPEN COLLECTOR BUS DRIVER			KL10-BB	A
45	1	0M161-00	BINARY TO OCTAL DECODER			KL10-BB	99
46	1	0M202-00	TRIPLE JK FLIP FLOP			KL10-BB	99
47	1	0M203-00	SET-RESET FLIP FLOP			KL10-BB	99
48	1	0M205-00	50 FLIP FLOP			KL10-BB	99
49	1	0M206-00	SIX FLIP FLOPS			KL10-BB	99
50	1	0M208-00	BUFFER SHIFT REGISTER			KL10-BB	99
51	1	0M228-00	MARK TRACK DECODER			KL10-BB	A
52	1	0M239-00	REGISTER, THREE 4-BIT COU			KL10-BB	A
53	1	0M302-00	ONE SHOT DELAY			KL10-BB	99
54	1	0M307-00	2 INTEGRATING ONE SHOT			KL10-BB	A
55	1	0M502-00	NEGATIVE INPUT CONVERTER			KL10-BB	99
56	1	0M594-00	CONVERTER, EIA LEVEL			DM11-DC	A
57	1	0M787-00	50-08774-5			KL10-BB	A
58	1	0M786-00	UNIBUS MASTER CONTROL			DH11-AC	A
59	1	0M873-YD	BOOT STRAP LOADER			KL10-BB	09
60	1	0M920-00	INTERNAL BUSS CONNECTOR			DH11-AC	99
61	1	0M941-00	JUMPER EXTENDER BOARD			KL10-BB	A
62	1	0M971-00	CABLE INTERFACE BD #2			DH11-AC	99
63	1	0M974-00	DM11 MAINTENANCE JUMPER			DH11-AC	03
64	1	0M981-00	INTERNAL BUS JUMPER			KL10-BB	99
65	1	0S202-00	FLIP FLOP			DF10	07
66	1	0S603-00	PULSE AMPLIFIER			DF10	02
67	1	0W102-00	PULSED BUS TRANSCEIVER			DF10	A
68	1	0W516-00	3 PHASE LOW VOLTAGE DETEC			KL10-BB	07
69	1	BC05J-06	LINE CORD SET 230 V 6 FT			TM02-FF	99
70	1	BC06R-10	CABLE I/O 10FT TM02			TM02-FF	99
71	1	BC06R-12	CABLE I/O 12FT (MJ11)			KL10-BB	09
72	1	BC08S-15	3M SHIELD ST CONI5FT			DH11-AC	09
73	1	BC11A-02	CABLE ASSY PDP-11 M919-M9			KL10-BB	99
74	1	BC11A-17	CABLE			KL10-BB	09
75	1	BC20C-0K	CABLE CONN ASSY 11 INCH			KL10-BB	09
76	1	BC20C-6C	CABLE CONN ASSY 6FT-3INCH			KL10-BB	09
77	1	G7360-00	G7367/2 SOCKETS			DH11-AC	99
78	1	G8010-00	-5.2V CONTROL KL10			KL10-BB	A

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ITEM NUMBER	QTY	DEC PART NUMBER	DESCRIPTION	UNIT PRICE	EXTD PRICE	OPTION	LEAD TIME
79	1	G8011-00	-2V CONTROL KL10			KL10-BB	A
80	1	G8013-00	+10V REFERENCE KL10			KL10-BB	A
81	1	G8014-00	-.2V DETECTOR 1 INPUTS			KL10-BB	A
82	1	G8015-00	POWER CTRL LOGIC KL10			KL10-BB	A
83	1	G8017-00	863 INDICATOR DRIVER			KL10-BB	A
84	1	M4540-00	M454 W MORE FREQ AVILABLE			DH11-AC	A
85	1	M5903-00	DRIVE TRANCEIVER			RP06	03
86	1	M5904-00	MASS BUS CONTROL TRANSCEI			TM02-FF	A
87	1	M5960-00	REPLACEMENT M596			KL10-BB	A
88	1	M7231-00	DATA PATHS, KD11-A			DM11-DA	A
89	1	M7232-00	U WORD			KL10-BB	A
90	1	M7233-00	KD11-A IR DECODE			KL10-BB	A
91	1	M7234-00	KD11-A TIMING			KL10-BB	A
92	1	M7235-00	KD11-A STATUS PROCESSOR			KL10-BB	A
93	1	M7205-00	DM11 RECEIVER			DM11-BB	A
94	1	M7247-00	MODEM CONTROL MUX			DM11-BB	A
95	1	M7259-00	MODULE , PARITY CONTROL			KL10-BB	04
96	1	M7277-00	SCANNERS & NPR,DHI,HEX B			DH11-AC	04
97	1	M7278-00	REG & BYTE CNT			DH11-AC	04
98	1	M7279-00	1ST IN 1ST OUT BUFFER DH1			DH11-AC	A
99	1	M7280-00	MULTIPLE UART CARD			DH11-AC	A
100	1	M7288-00	DH11 LINE PARAMETERS CONT			DH11-AC	A
101	1	M7289-00	DH11 RECV SCANNER			DH11-AC	03
102	1	M7294-00	DATA BUFFER & CONT RH11			KL10-BB	A
103	1	M7295-00	BUS CONTROL RH11			KL10-BB	A
104	1	M7296-00	CONTROL & STATUS REG			KL10-BB	A
105	1	M7297-00	PARITY CONTROL			KL10-BB	A
106	1	M7773-00	ASYNCHRONOUS LOGIC-RP04			RP06	07
107	1	M7774-00	REGISTER LOGIC-RP04			RP06	07
108	1	M7776-00	ERROR CORRECT LOGIC-RP0H			RP06	04
109	1	M7786-00	SEEK & SEARCH CNTL LOGIC			RP06	07
110	1	M7787-00	INTERFACE CONTROL			RP06	A
111	1	M7788-00	INTERFACE TRANSMITTER			RP06	07
112	1	M7789-00	INTERFACE RECEIVER			RP06	07
113	1	M7800-00	ASYNCHRONOUS LINE INTERFA			KL10-BB	07
114	1	M7800-YA	M7800 WITHOUT EIA CHIPS			KL10-BB	A
115	1	M7821-00	INTERRUPT CONTROL			DH11-AC	A
116	1	M8293-00	M7293 W NO 8838'S			DMII-BB	A

COUNTRY : UNITED STATES   CURRENCY : DOLLARS

SORTED BY : CONFIGURATION

ITEM NUMBER	QTY	DEC PART NUMBER	DESCRIPTION	UNIT PRICE	EXTD PRICE	OPTION	LEAD TIME
117	1	M8510-00	SHIFT MATRIX			KL10-BB	A
118	1	M8511-00	CTRL ROM ADDR KL10			KL10-BB	A
119	1	M8512-00	DATA PATH BOARD KL10			KL10-BB	A
120	1	M8513-00	CACHE CONTROL KL10			KL10-BB	05
121	1	M8514-00	1			KL10-BB	A
122	1	M8515-00	MODULE			KL10-BB	A
123	1	M8516-00	FCL/TTL TRANSLATOR KL10			KL10-BB	A
124	1	M8517-00	MEMORY BUFFER KL10			KL10-BB	A
125	1	M8518-00	PHYSICAL MEM ADDR MODULE			KL10-BB	A
126	1	M8519-00	INTERNAL MEM BUS TRANSLAT			KL10-BB	05
127	1	M8520-00	PAGING BOARD KL10			KL10-BB	A
128	1	M8521-00	MODULE			KL10-BB	05
129	1	M8522-00	TR D RAM AND CARRY KL10			KL10-BB	A
130	1	M8523-00	VIRTUAL MEMORY ADDRESS			KL10-BB	A
131	1	M8524-00	SCAD PC13-17 PC FLAGS			KL10-BB	05
132	1	M8525-00	APR CONTROL REGISTER			KL10-BB	05
133	1	M8526-00	CLOCK CTRL KL10			KL10-BB	05
134	1	M8527-00	E BOX CTRL LOGIC KL10			KL10-BB	06
135	1	M8528-00	CONTROL RAM KL10			KL10-BB	A
136	1	M8529-00	M BOX CONTROL LOGIC KL10			KL10-BB	05
137	1	M8530-00	E BOX MEMORY CONTROL KL10			KL10-BB	A
138	1	M8531-00	M BOX CONTROL 3 KL10			KL10-BB	A
139	1	M8532-00	PRIORITY INTERRPT EBUS IN			KL10-BB	05
140	1	M8533-00	CHANNEL CONTROL			KL10-BB	A
141	1	M8534-00	CHANNEL CONTROL WORD			KL10-BB	03
142	1	M8535-00	CHANNEL RAM CTRL 4			KL10-BB	A
143	1	M8536-00	CHANNEL CTR LOGIC			KL10-BB	03
144	1	M8537-00	M BOX CTRL 4			KL10-BB	05
145	1	M8538-00	METER (70-9418) KL10			KL10-BB	05
146	1	M8539-00	ARITHMETIC PROCESS REGIST			KL10-BB	05
147	1	M8550-00	I/O BUS ADAPT DATA PATH-K			KL10-BB	05
148	1	M8551-00	CTRL BRD FOR KL10 I/O ADA			KL10-BB	A
149	1	M8552-00	10/11 DATA PATCH 4			KL10-BB	05
150	1	M8553-00	10/11 BUS AND DATA CONTRO			KL10-BB	08
151	1	M8554-00	10/11 BUS + DATA CONTROL			KL10-BB	08
152	1	M8555-00	E BUS INTERFACE KL10			KL10-BB RH20	03
153	1	M8556-00	MASS BUS DATA PATCH 4			KL10-BB RH20	03
154	1	M8557-00	MASS BUS CONTROL 4			KL10-BB RH20	A
155	1	M8558-00	KI MEMORY BUS ADAPTER			KL10-BB	04
156	1	M8559-00	CLOCK DISTRIBUTION			KL10-BB	A

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ITEM NUMBER	QTY	DEC PART NUMBER	DESCRIPTION	UNIT PRICE	EXTD PRICE	OPTION	LEAD TIME
157	1	M8560-00	DHA20 BRDL			KL10-BB	A
158	1	M8563-00	DMA20 BOARD 2 4 LAYER HEX			KL10-BB	A
159	1	M8901-00	DATA SYNCHRONIZER-TM02			TM02-FF	A
160	1	M8902-00	5010468			TM02-FF	A
161	1	M8903-00	TAPE CONT COMMON MODE-TM0			TM02-FF	A
162	1	M8904-00	TAPE CONT NRZI (TM02)			TM02-FF	A
163	1	M8905-00	MAINTENANCE REGISTER-TM02			TM02-FF	A
164	1	M8906-00	16-BIT FIDDLER (TM02)			TM02-FF	A
165	1	M8907-00	CONN TERM			TM02-FF	A
166	1	M8908-00	RECEIVER/TERM			TM02-FF	03
167	1	M8908-YA	M8908/TERM RESISTOR			TM02-FF	A
168	1	M8909-00	MASS BUSS INTFACE (TM02)			TM02-FF	A
169	1	M8913-YA	TERMINATED DATA DRIVER			TM02-FF	A
170	1	M9001-YB	M9001 TERMINATED			TM02-FF	03
171	1	M9001-YC	M9001-YA TERMINATED			TM02-FF	03
172	1	M9006-00	MODULE			KL10-BB	09
173	1	W7000-00	AUX POW SUPPLY-KL10			KL10-BB	A
174	1	W9017-00	UNIVERSAL EXTENDER BOARD			KL10-BB	03
175	10	12-05303-00	LAMP, PILOT IND DEVICES #			861-B	A
176	10	12-05843-00	FILTER #X1431			DF10	A
177	1	12-09120-00	RLY,G.P.,115V COIL,DPDT,1			KL10-BB	05
178	10	12-09169-00	LAMP, 15V @ .040AMP MAX,			DF10	A
179	1	12-09349-00	RLY,G.P., 12V COIL,DPDT,			RP06	A
180	10	12-09350-03	MATE-N-LOK 3PIN,HOUSING,			861-B	99
1 1	10	12-09351-04	MATE-N-LOK 4PIN(HOUSING)			861-B	99
182	10	12-09378-00	MATE-N-LOK PIN 20-14AWG S			DH11-AC	A
183	10	12-09378-01	MATE-N-LOK PIN 20-14AWG L			861-B	99
184	10	12-09379-01	MATE-N-LOK PIN 20-14AWG L			861-B	99
185	2	12-09403-01	FAN,115CFM,SLEEVE BRNG IM			DF10 LP87 / RP06	A
186	10	12-09456-01	MATE-N-LOK SKT PCB TAB LO			861-B	A
187	1	12-09602-00	MOTOR, KAD T6DH0-7 40 CYC			KL10-BB	A
188	1	12-09691-00	HEAD, TAPE MAG 10 TRACK			KL10-BB	A
189	1	12-10191-03	CKT BKR 15.0 A 250V 2P MA			H742-B	A
190	1	12-10191-06	CKT BKR 20.0 A 250V 2P MA			KL10-BB	06
191	2	12-10719-00	FAN,BOXER,115AC,25-35 CU			H742-B	A
192	10	12-10821-02	MATE-N-LOK 2PIN,HOUSING,S			861-B	05
193	10	12-10821-04	MATE-N-LOK 4PIN,HOUSING,S			861-B	06
194	10	12-10822-02	MATE-N-LOK 2PIN,HOUSING			861-B	A
195	10	12-10823-00	MATE-N-LOK PIN W"PCB TAB			861-B	06

ITEM NUMBER	QTY	DEC PART NUMBER	DESCRIPTION	UNIT PRICE	EXT'D PRICE	OPTION	LEAD TIME
196	1	12-10890-01	SW,RKR 1P.4A ON/NONE/O			KL10-BB	06
197	1	12-10891-01	SW,TOG SP ON(NO)ON W/RED			KL10-BB	06
198	2	12-10930-01	FAN 230VAC #756 OR #WS2			KL10-BB	06
199	1	12-11037-02	CKT BKR 30.0 A 240V 4P SE			KL10-BB	02
200	1	12-11142-00	CKT BKR 20.0 A 277V 3P SE			861-B	A
201	1	12-11147-01	CONTACTOR, 30A,3P DBL BRK			861-B	A
202	1	12-11157-00	LINE FILTER 3P 4W 50-60H			861-B	A
203	10	12-11158-00	THERMOSTAT,O@120,C@160,SP			861-B	A
204	1	12-11179-00	RLY,REED, 48V COIL,SPST,-			861-B	A
205	1	12-11180-00	SW,TOG SP3T ON OF ON#7103			861-B	A
206	1	12-11191-00	CONN,POWER 2PIN RCPT NEM			KL10-BB	A
207	1	12-11204-00	CONN,POWER 2PIN RCPT, DU			KL10-BB	A
208	10	12-11239-00	LAMP 28V 40MA@T1-3/4 WITH			RP06	A
209	1	12-11496-00	CKT BKR 75.0 A 240V 4P			KL10-BB	06
210	2	12-11534-00	FAN AXIAL FLOW 250CFM 220			KL10-BB	06
211	1	12-11746-00	CONTACTOR, 40A,4P			KL10-BB	06
212	1	12-12749-00	LIGHT,PNL INDICATOR,LED,R			KL10-BB	06
213	10	12-13237-01	FUSE, RECTIFIER 15A,			H742-B	06
214	1	16-11491-00	XFMRF P=AB S=12DC @200A			KL10-BB	06
215	1	29-10193-00	19BLOWER PAMOTOR			RP06	A
216	1	29-13180-00	19RELAY DPDT 25A STV PR11			RP06	05
217	1	29-13243-00	19FILTER			DF10	02
218	1	29-21290-00	96AIR MEASURE KIT 29			RP06	04
219	1	29-22067-00	19PCBA INPUT			RP06	A
220	1	29-22068-00	19PCBA OUTPUT			RP06	A
221	1	29-22069-00	19PCBA PRECOMPENSATION			RP06	A
222	1	29-22070-00	19PCBA INDEX			RP06	A
223	1	29-22071-00	19PCBA VARIABLE FREQUENCY			RP06	A
224	1	29-22072-00	19PCBA SEQUENCE			RP06	A
225	1	29-22073-00	19PCBA SERVO CONTROL			RP06	A
226	1	29-22074-00	19PCBA VELOCITY SERVO			RP06	A
227	1	29-22075-00	19PCBA POSITION SERVO			RP06	A
228	1	29-22076-00	19PCBA WRITE LOGIC			RP06	A
229	1	29-22077-00	19PCBA LINEAR AMP 1			RP06	A
230	1	29-22078-00	19PCBA DETECTOR/SELECT 1			RP06	A
231	1	29-22079-00	19PCBA DATA SAFETY/HEAD S			RP06	A
232	1	21-22080-00	19SWITCH,SUBMIN E63-10A			RP06	A
233	1	29-22082-00	19SWITCH, TOGGLE SPDT			RP06	A
234	1	29-22083-00	19SWITCH, TOGGLE SPDT			RP06	A
235	1	29-22084-00	19PCBA OPERATOR CONTROL			RP06	A

ITEM NUMBER	QTY	DEC PART NUMBER	DESCRIPTION	UNIT PRICE	EXTD PRICE	OPTION	LEAD TIME
236	2	29-22086-00	1)FILTER, ABSOLUPE			RP06	A
237	1	29-22088-00	19AMP ASSY, SERVO POWER			RP06	A
238	1	29-22089-00	19POWER SUPPLY ASSY			RP06	06
239	1	29-22090-00	19FILTER, RFI 30A			RP06	A
240	1	29-22098-00	19EXHAUST ASSY AIR DEFLEC			RP06	06
241	1	29-22099-00	19PCBA RD/WR MATRIX 1			RP06	A
242	1	29-22100-00	19PCBA SERVO PREAMP			RP06	A
203	1	29-22104-00	10HEAD ASSY AD 200MB			RP06	A
244	1	29-22105-00	19HEAD ASSY, AU 200MB			RP06	A
245	1	29-22106-00	19HEAD ASSY, BD 200MB			RP06	A
256	1	29-22107-00	19HEAD ASSY, BU 200MB			RP06	A
247	1	29-22108-00	19HEAD ASSY, A SERVO 200M			RP06	06
248	1	29-22111-00	19T-BLOCK ASSY, CARRIAGE			RP06	A
249	1	29-22111-00	19GROUND ASSY, CARRIAGE			RP06	A
250	1	29-22113-00	19COIL ASSY, TACH			RP06	06
251	1	29-22114-00	19ROD ASSY, TACH			RP06	A
252	1	29-22115-00	19SWITCH, HEAD RETRACT			RP06	A
253	1	29-22116-00	19MOTOR, LINER			RP06	06
254	1	29-22117-00	19BOBBIN ASSY			RP06	A
255	1	29-22120-00	19FLEX CONDUCTOR ASSY			RP06	06
256	1	29-22121-00	19SPINDLE ASSY			RP06	06
257	1	29-22123-00	19SENSOR ASSY, PACK COVER			RP06	A
258	1	29-22124-00	19GROUND ASSY, SPINDLE			RP06	06
259	1	29-22126-00	19BELT, FLAT 50HZ			RP06	06
260	1	29-22129-00	19MOTOR,DRIVE 50HZ			RP06	06
261	1	29-22131-00	19SWITCH ASSY, COVER PM			RP06	06
262	1	29-22132-00	19CABLE ASSY, SPNDL MOTOR			RP06	06
263	1	29-22137-00	19PCBA +5V REGULATOR			RP06	A
264	1	29-22138-00	19PCBA -5.2V REGULATOR			RP06	A
265	1	29-22139-00	19PCBA +15V REGULATOR			RP06	A
266	1	29-22140-00	19PCBA -15V REGULATOR			RP06	A
267	1	29-22141-00	19RECTIFIER, ASSY PWR SUP			RP06	06
268	1	29-22146-00	81RECTIFIER, FW BRIDGE			RP06	06
269	1	29-22155-00	19CABLE, PWR SUP FAN			RP06	06
270	1	29-22161-00	19PCBA DYNAMIC BREAKING			RP06	A
271	1	29-22162-00	19CIRCUIT BREAKER,3 POLE			RP06	06
272	1	29-22163-00	19RELAY, POWER			RP06	A
273	1	29-22164-00	19PCBA ARC SUPPRESSOR			RP06	A
274	1	29-22171-00	19CABLE ASSY, RD/WR PREAM			RP06	06
275	1	29-22172-00	19CABLE ASSY, SERVO CONTR			RP06	06

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COUNTRY : UNITED STATES   CURRENCY : DOLLARS

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ITEM NUMBER	QTY	DEC PART NUMBER	DESCRIPTION	UNIT PRICE	EXPD PRICE	OPTION	LEAD TIME
276	1	29-22173-00	19CABLE ASSY, LINEAR MOTO			RP06	06
277	1	29-22179-00	96HEAD ALIGNMENT TOOL 19			RP06	06
278	1	29-22180-00	96HEAD INSTALLATION TOOL			RP06	06
279	1	29-22181-00	96HEAD TPRQUE TOOL 19			RP06	06
280	1	29-22183-00	96KIT, MECHANICAL ALIGN 1			RP06	06
281	1	29-22190-00	96EXTENDER, PCBA 19			RP06	A
282	1	29-22191-00	96GAUGE, ABSOLUTE FILTER			RP06	06
2(3	1	29-22193-00	19CE PACK			RP06	A
284	1	29-22195-00	19SWITCH, UP SPEED			RP06	A
285	1	29-22196-00	19ACTUATOR, SWITCH			RP06	A
286	1	29-22200-00	19BAFFLE ASSY			RP06	06
287	1	29-22201-00	19CLAMP ASSY, RH			RP06	06
288	1	29-22202-00	19CLAMP ASSY, LH			RP05	05
289	1	29-22203-00	19DEFLECTOR, AIR LINEAR M			RP06	06
290	1	29-22206-00	19ROD, ACTUATOR			RP06	06
291	1	29-22211-00	19CIRCUIT BREAKER 1-3 POL			RP06	06
292	1	29-22215-00	19PCBA LAMP MATRIX			RP06	06
293	1	29-22216-00	19PLUG-0 LOGIC ADDRESS			RP05	06
294	1	29-22217-00	19PLUG-1, LOGIC ADDRESS			RP06	06
295	1	29-22219-00	19PLUG-3, LOGIC ADDRESS			RP06	06
296	1	29-22221-00	19PLUG-5, LOGIC ADDRESS			RP06	06
297	1	29-22222-00	19PLUG-6, LOGIC ADDRESS			RP06	06
2?8	1	28-22223-00	19PLUG-7, LOGIC ADDRESS			RP06	A
299	1	29-22237-00	19SHAFT ASSY LOCK			RP06	06
300	10	29-22241-00	86FUSE, 12A SB FIBER			RP06	A
301	10	21-22402-00	19BRACKET, GUIDE			RP06	06
302	1	29-22404-00	19PANEL, IND 200MB			RP06	06
303	1	29-22406-00	19BRACKET, GUIDE			RP06	06
304	1	29-22412-00	19IND PANEL ASSY 100MB			RP06	06
305	1	29-22445-00	97SOCKET SET, SPECIAL 3/8			RP06	06
306	1	54-09728-00	BOARD REGULATOR			TM02-FF	A
307	1	54-09730-00	POWER CONTROL BD 11/45			H742-B	A
308	1	54-10206-00	CONTROL PILOT			861-B	A
						KL10-BB	
309	1	54-10817-00	POWER MONITOR-RP04			RP06	A
310	1	54-11159-00	BOARD RESISTOR (863)			KL10-BB	07
311	1	70-08746-00	SUB ASSEMBLY			DF10	09
312	1	70-09404-00	HEAT SINK ASSY #3 (H761)			KL10-BB	A
313	1	70-09405-00	HEAT SINK ASSY #2 (H761)			KL10-BB	A
314	1	70-09409-00	DIODE HEAT SINK ASSY (H76			KL10-BB	A

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COUNTRY : UNITED STATES   CURRENCY : DOLLARS

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ITEM NUMBER	QTY	DEC PART NUMBER	DESCRIPTION	UNIT PRICE	EXTD PRICE	OPTION	LEAD TIME
315	1	70-09561-00	HARNESS-DH11			DH11-AC	99
316	1	70-09808-00	HARNESS DUAL PORT (70-973			RP06	09
317	1	70-09861-00	RECEPT HOUSING ASSY-RP04			KL10-BB	A
318	1	70-10466-00	SWITCH MARGIN CHECK ASSY			KL10-BB	09
319	1	70-12064-00	MDL1 HARNESS RP05/RP06			RP06	09
320	1	70-12066-00	MASS BUS CABLE			RP06	09
321	10	90-07217-00	FUSE, REG BLOW, 3.000A			KL10-BB	09

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QTY	PART NUMBER	DESCRIPTION
1	12-10477-00	Sensor, Low Pressure
1	29-22300-00	Tachometer
1	29-22301-00	Guide Assy. Tape
1	29-22302-00	Write Protect Assy.
1	29-22299-00	Motor, Reel DC
1	29-22298-00	Motor, Capstan AC
1	29-22295-00	Motor, Vacuum
1	29-22277-00	Head Dual Gap 9 Trk.
1	29-22289-00	Switch Assy, Load/Rese
1	29-22290-00	Switch Assy, Load
1	29-22291-00	Switch Assy, On-Line
1	29-22292-00	Switch Assy, Rewind
1	29-22288-00	Switch Assy, 1600 - CPI
1	29-22293-00	Switch, FPT
1	29-22276-00	Switch, Power
1	29-22286-00	Sensor Assy, Photo
1	29-22285-00	PCBA PE/NRZ Write
1	29-22287-00	PCBA Data KI
1	29-22296-00	PCBA Tape Control K
1	29-22297-00	PCBA Power Supply G
1	29-22303-00	PCBA Power Supply G
1	29-22283-00	Blade Tape Cleaner
10	29-22278-00	Shim .010
10	29-22279-00	Shim .015
10	29-22280-00	Shim .005
10	29-22281-00	Shim .002
1	29-22282-00	Filter Air

MH10 RECOMMENDED SPARES LIST

(50 HZ)

857-00   Power Supply

MB20-M   Memory 32K X 19

H7420-B   Power Supply Hi Power

M8565   Timing

M8566   Cycle Timing

M8588   Parity Check

M8590   Priority Control

M8591   Address Receiver

M8592   Port Address

M8593   Data Register

M8593-YA   Data Register

M8594   Data Transceiver

M9005   Terminator

12-04826   Fan #CL2L

                                                    TOTAL

LP100 Recommended Spares

M163   Dual Binary to Decimal Decode

M304   One Shot Delay

M3070   Dual Integrating One Shot

M311   Tap Delay

M564   Receiver, -3V I.O. Bus

M664   I/O Bus Driver

W519   Power Sequence & Crowbar

TOTAL

ITEM	QTY	DEC PART #	DESCRIPTION
1	10	12-02986-00	Lamp 330 14V
2	1	12-11581-00	Belt-V-Polyflex
3	1	29-15026-00	Switch Micro
4	10	29-15027-00	Actuator
5	1	29-15036-00	Indicator Base
6	1	29-15038-00	Indicator Lens
7	1	29-16158-00	Extender PCBA 14
8	1	29-17916-00	Tachometer
9	1	29-18205-00	Belt, Top of Form
10	1	29-19945-00	PCBA AP-17 Ribbon Con
11	1	29-19946-00	PCBA AS-40 Hammer Drv
12	1	29-19947-00	PCBA AZ-111 Volt Reg
13	1	29-19948-00	PCBA AZ-126 Bridge Bd
14	1	29-20122-00	Belt 260XL012
15	1	29-20135-00	Belt 240XL075
16	10	29-20148-00	Spring
17	1	29-20313-00	Switch, Snap Spot 311
18	1	29-20325-00	Motor Assy PF
19	1	29-20333-00	Blower, 115V 50/60HZ
20	1	29-20334-00	PCBA AZ-113 5 Volt Re
21	1	29-20346-00	Switch Rocker Dpdt
22	1	29-20351-00	PCBA ETM
23	1	29-20354-00	Relay K1 ETM
24	1	29-20370-00	Idler Assy
25	1	29-20371-00	Idler Wheel
26	1	29-20372-00	Idler Wheel
27	1	29-20376-00	Clutch Sup Assy
28	1	29-20396-00	Switch, Rocket Spot
29	1	29-20669-00	PCBA AV-18 HB Pwr Sup
30	10	29-21118-00	Screw, Backstop
31	1	29-21145-00	Xducer
32	10	29-21452-00	Switch Act
33	1	29-21465-00	PCBA AV-21 Pap FD Con
34	1	29-22320-00	Sensor Assy, Temperat
35	10	29-22321-00	Filter, Air
36	1	29-22322-00	Spring, Torsion
37	1	29-22323-00	Power Supply Assy, Re
38	1	29-22324-00	PCBA AH-28 Hmmr Drvr
39	1	29-22325-00	PCBA Regulator H/B Pw
40	1	29-22326-00	PCBA AB-21 Hmmr Cont
41	1	29-22327-00	PCBA AS-51 Hmmr Trggr
42	1	29-22328-00	Bearing Assy
43	1	29-22329-00	PCBA AG-64 Mstr Clr S
44	1	29-22330-00	Bearing Assy
45	1	29-22331-00	PCBA Led
46	1	29-22332-00	PCBA AP-24 Pap Ed Amp
47	1	29-22333-00	PCBA AR-45 Line Bffr
48	1	29-22334-00	PCBA AR-47 Band Inden
49	1	29-22335-00	PCBA AG-66 Tape Chan

ITEM	QTY	DEC PART #	DESCRIPTION	UNIT	EXT
50	1	29-22336-00	PCBA AR-49 Data Regst		
51	1	29-22337-00	PCBA AC-25 Char Count		
52	1	29-22338-00	PCBA AC-27 Data Compa		
53	1	29-22339-00	PCBA AT-50 Time + Int		
54	1	29-22340-00	PCBA AR-53 Mode Regis		
55	1	29-22341-00	PCBA AC-29 Column Cou		
56	1	29-22342-00	PCBA AG-68 VFU Logic		
57	1	29-22343-00	PCBA AP-17 VFU Control		
58	1	29-22344-00	PCBA AP-25 Control LO		
59	1	29-22345-00	PCBA AG-70 Aux Contro		
60	1	29-22346-00	PCBA AP-29 Motor Cont		
61	1	29-22347-00	PCBA Hand Gate Electr		
62	1	29-22348-00	PCBA AT-52 Hmmr Tim I		
63	1	29-22349-00	Sheild, Ribbon		
64	1	29-22350-00	Hammer		
65	1	29-22351-00	Reader, Tape 12 Chann		
66	1	29-22352-00	PCBA AL-68 Drv/Rcv Co		
67	1	29-22353-00	Power Supply, Pap Fee		
68	1	29-22354-00	Clamp, Bearing		
69	1	29-22355-00	Clamp, Bearing		
70	1	29-22356-00	Bearing Assy		
71	1	29-22357-00	Clamp, Bearing		
72	1	29-22358-00	Bearing Assy		
73	1	29-22359-00	Motor, 2 Speed 115V 5		
74	1	29-22360-00	Motor Assy Ribbon		
75	1	29-22361-00	Tractor Assy		
76	1	29-22362-00	Tractor Assy		
77	1	29-22363-00	Tractor Assy		
78	1	29-22364-00	Tractor Assy		
79	1	29-22365-00	Motor Assy Deskew		
80	1	29-22366-00	PCBA Pap Fd Sw Cont		
81	1	29-22367-00	Sensor Assy Paper Mot		
82	1	29-22368-00	PCBA AG-76 Aux Logic		
83	1	29-22369-00	Switch Spdt W/Actuator		
84	1	29-22370-00	Switch, Spdt W/Actuator		
85	1	29-22371-00	Lens Ind Red		
86	1	29-22372-00	Lens Ind White		
87	1	29-22373-00	Lens Ind White (Run)		
88	1	29-22374-00	Lens Ind Red		
89	1	29-22375-00	Lens Ind Red		
90	1	29-22376-00	Lens Ind Red		
91	1	29-22377-00	Spring, Latch		
92	1	29-22378-00	Spring, Extension		
93	1	29-22379-00	Relay 25A 24VDC 120/2		
94	1	29-22380-00	Switch Rocket Spdt		
95	1	29-22381-00	Pickup Mag 8V		
96	1	29-22382-00	Bearing, Ball Radial		
97	1	29-22501-00	PCBA Long Line Driver		
98	1	29-22548-00	PCBA AG-38 Data Sele		
99	1	29-22549-00	PCBA AV-22 PS Regulat		
100	1	29-22550-00	PCBA AM-33 Memory		
101	1	29-22551-00	PCBA AG82 Davfu I		
102	1	29-22552-00	PCBA AG84 Davfu II		
103	1	29-22553-00	PCBA Logic Driver		
104	1	29-22553-00	PCBA AP-33 PF Amplifi		
105	1	29-22555-00	PCBA AP-34 PF Pwr Amp	34	
106	10	29-22557-00	Pinn Drive Link Tract		

LP07-AA

MISCELLANEOUS PARTS AND SPECIAL TOOLS

ITEM	QTY	DEC PART #	DESCRIPTION
107	10	90-07211-00	Fuse, Reg Blow, 1.000A, 250V, Glass
108	10	90-07226-00	Fuse, Reg Blow, 15.000A, 32V, Glass
109	10	90-08390-00	Ruse, Reg Blow, 10.000A, 250V, Ceramic

TOTAL

DN87S-AB SPARES

ITEM	QTY	DEC PART #	DESCRIPTION
1	1	M7100	I/O Device Ctrl
2	1	M7251	XOR and CRC Block
3	1	M787	50-08774-E
4	1	W106	Module

TOTAL

	$
CROSS TOTAL SCHEDULE C	207,000
Less discount on spares	103,000
	$104,000

These prices are based on the exchange rate of A$1.00 = US$1.08.

SCHEDULE D

DIAGNOSTICS, OTHER SOFTWARE AND TRAINING

			$
(1)	ZH005-CD	MDS Service	44,000
(1)	QH110	MACY-LNKX11 Software	N/C
(1)	Decnet-10	Binaries and Sources	11,800
(1)	QR430-AE	RSTS-E license, support	7,140
(1)	QR430-FR	RSTS-E Listing on fiche	1,685
(1)	QJ628-AE	RSX-11M license, support	3,245
(1)	QJ638-EE	RSX-11M V3 Sources	6,490
(1)	QJ681-AE	DECNET-11M license, support	1,945
(1)	QJ681-FR	DECNET-11M listing on fiche	710
(1)	QP230-AE	FIV/RSX-11M license	1,040
(1)	20 man-weeks Engineering Training		10,000
		GROSS TOTAL	88,055
		less discount	34,055
		NET TOTAL	$ 54,000

These prices are based on the exchange rate of A$1.00 = US$1.08.

SCHEDULE E

ACCEPANCE TESTS OF THE SYSTEM'S HARDWARE

1. The Tests will be conducted in series as grouped on the following pages; one series will be running at a time, the following being initiated only after successful completion of the previous series.

2. The Tests will be conducted during the hours of 9 a.m. to 5 p.m., unless the duration of a test carries on longer, Monday to Friday, exclusive of public holidays and with one hour being allowed for lunch.

3. The UNIVERSITY'S representative shall be present during the running of all the Tests and keep a Test Log, a sample of which is in Appendix A.

4. The UNIVERSTY retains the right to request DIGITAL'S representative to attach a Cathode Ray Oscilloscope to the appropriate monitoring point in the System Hardware prior to the running of any of the Hardware tests for the purposes of checking various transfer rates.

5. Definitions of Defects

   Class A. Class A defects include operator errors, defective indicator lamps and bad spots on tape, etc. These are defects that do not affect the basic integrity of the sysem.

   Class B. Class B defects include errors in programs, bad data or bad source programs, missing files or errors in files, etc. They are not hardware problems.

   Class C. Class C defects are all defects (other than Class A defects) in the processor(s), the memory system, and the peripheral equipment of the system.

   Correction Procedures

   Class A. A Class A defect is fixed immediately if necessary to complete a test. The only requirement, however, is that it be fixed before the acceptance period can be completed successfully. No test need be rerun for a Class A defect unless the defect precludes the successful completion of the test.

Class B.   A Class B defect must be fixed or circumvented and the program with the error rerun prior to completion of the acceptance test.

Class C.   If the defect occurs on a device not currently being tested, the defective device will be fixed, and

a.   if the acceptance test on the defective device has already been run, it will be rerun.

b.   if the acceptance test on the defective device has not been run, it will not be run until originally scheduled.

In either case, the interrupted test will be continued if possible. Otherwise, it will be restarted.

6.   Procedure

The following pro-forma's together constitute the Hardware Acceptance Test procedures for the System:-

KL10 Acceptance Procedure

The following Maindec-10 diagnostics will be run through four passes or for at least five minutes without error.

Test started at...
(Date and Time)

Maindec-10	DGDTE	DTE Interface Tests
	DGKAA	KL10 E-box Tests
	DGKAB	KL10 E-box Tests
	DGKBA	KL10 M-box Tests
	DGKBB	DMA20 Memory Controller Tests
	DGKBC	Paging Logic Tests
	DGMCA	Cache Tests
	DGKCA	Meter Tests
	DGKBD	KL10 Channel Control Diagnostic
	DGKBE	KL10 Channel Loop-Back Tests
	DFKAA	Processor Diagnostic
	DFKAB	Basic Instruction Diagnostic
	DFKAC	Basic Instruction Diagnostic
	DFKAD	Basic Instruction Diagnostic
	DFKCA	KL10 Advanced Instruction Test
	DFKBA	KL10 Instruction Reliability Test
	DFKEA	KL10 Paging Hardware Diagnostic
	KFKEB	KL10 Monitor UUO Test
	DFDTE	KL10 DTE Functional Test
	DFKDA	KL10 Arithmetic/Random/Interrupt/ Memory Reliability Test

Tests Completed Satisfactorily at ....
(Date and Time)

Comments:

UNIVERSITY Representative

Signature ....

Title ....

Date ....

DIGITAL Representative

Signature ....

Title ....

Date ....

Front End Test Procedure

The 11/40 console processor will have the following tests completed
with no errors for one pass.

Test started at ....
                        (date and time)

       DBQEA   Basic 11/40 Exerciser
       BZQMC   Basic Memory Exerciser
       DZBMC   BM783-YD, YF Test
       DZRXA   RX11/RX01 Reliability
       SY1090   System Exerciser (1 hour)

Tests completed satisfactorily at ....
                                        (date and time)

Comments:

UNIVERSITY Representative: DIGITAL Representative:

Signature ....   Signature ....

Title........................   Title ....

Date ....   Date ....

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MH1Ø Memory Acceptance Procedure

Each MH1Ø memory module will have the following Maindec diagnostic programmes run for a period of 12 hours without failure:-

DIGITAL will demonstrate 2 and 4 way interleaving and the addressing of each memory unit as the lower address unit. (5 minute test in each mode to be done before the main 12 hour test.

Test started at ....
                                (date and time)

MAINDEC-10 - DDMMD - Memory Test

Test completed satisfactorily at ....
                                                (date and time)

Comments:

UNIVERSITY Representative   DIGITAL Representative

Signature ....   Signature ....

Title ....   Title ....

Date ....   Date ....

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Disk Subsystem Acceptance Procedure

The KL10 Disk Subsystem comprises:-

1. 2 x RH20 Channels and RP06 Controllers
2. 2 x RP06-AB Single-Port Disks
3. 1 x RP06-BB Dual-Ported Disk

The following Maindec-10 diagnositc tests will be run for the specified mumber of passes. The allowable error rates for the RP06's are:-

Irrecoverable   - none

Recoverable   - 1 error in $10*9$ bits read

Seek   - 1 error in $10*6$ bits read

All disk packs must have less than six bad spots or be replaced.

Tests started at ....
                          (date and time)

Maindec-10   DFRHB   RH20 Controller Test   5 passes
                DFRPI   TotalDisk Diagnostic   overnight for
                                                     14 hours minimum

Tests completed satisfactorily at ....
                                            (date and time)

Comments:

UNIVERSITY Representative   DIGITAL Representative

Signature ....   Signature ....

Title ....   Title ....

Date ....   Date ....

TU45 Tape Subsystem Acceptance Procedure

The KL10 tape subsystem comprises:-

1. 1 x RH20 Channel and Tape Control
2. 2 x TU45 9 track tape units

The following Maindec-10 diagnostic tests will be run without hard errors when run the specified number of times:-
All magnetic tape tests to be run in both densities.

Tests started at ....
                        (date and time)

Maindec-10   DFRHB   Channel Controller
                 DFTUE   Tape Reliability Test
                 Section B1   2 passes
                 Section B2   2 passes
                 Section R1   2 passes
                 IW/IR   Compatability with all drives
                 DFTUF   1 pass

The maximum allowable soft error rates per 2400ft. tape will be:

        NRZI   4 write errors
                         2 read forward errors
                         2 read reverse errors

        PE   4 write errors
                         2 read forward errors
                         10 read reverse errors

Tests completed satisfactorily at ....
                                        (date and time)

Comments:

UNIVERSITY Representative   DIGITAL Representative

Signature ....   Signature ....

Title ....   Title ....

Date ....   Date ....

LP100 Lineprinter Acceptance Procedure

The following Maindec diagnostic test will be run through one pass and produce no errors and satisfactory copy:-

Test started at ....
                              (date and time)

Maindec-10   DDLPA   Lineprinter Test

Tests completed satisfactorily at...............................
                                    (date and time)

Comments:

UNIVERSITY Representative   DIGITAL Representative

Signature ....   Signature ....

Title ....   Title ....

Date ....   Date.........................

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Communication Front End Subsystem Acceptance Procedure

The communication front end consists of:-

1. 1 DN87S with 64 Async Lines

The following maindec diagnostic tests will be run for the specified number of passes without errors.   ALL LINES WILL BE CHECKED WITH TURNAROUND CONNECTIONS.

Test started at ....
                (date and time)

        1.   DECX 11   System Exercisor   - 2 passes
        2.   DFDTE   10/11 Interface   - 15 minutes
        3.   DZDHM   DH11 Diagnostic   - 4 passes

Tests completed satisfactorily at ....
                                  (date and time)

Comments:

UNIVERSITY Representative   DIGITAL Representative

Signature ....   Signature ....

Title ....   Title ....

Date ....   Date ....

DF1ØC Acceptance Procedure

The following stand alone test for the data channel should be run for half an hour without error.

Test started at ....
<div align="center">(date and time)</div>

<div align="center">DDDFA   I/O DF1ØC Test</div>

Test completed satisfactorily at ....
<div align="center">(date and time)</div>

Comments:

UNIVERSITY Representative   DIGITAL Representative

Signature ....   Signature ....

Title ....   Title ....

Date ....   Date ....

SCHEDULE F

ACCEPTANCE TEST OF THE SYSTEM'S OPERATION AND ITS STANDARD SOFTWARE

(HEREINAFTER "SYSTEM TEST")

1.   The System Test consists of keeping the System continuously running with a mix of the programs defined below.

2.   Definitions

   2.1   Effectiveness Level (E) shall be Operational Use Time (O) divided by the sum of O plus Downtime (D)

   $$E = O / (O + D)$$

   It shall be computed daily.

   The Effectiveness Level of added, substituted or replacement equipment contributes to the compilation of the System's Effectiveness Level and its average only in proportion to this equipment's participation in the test.

   2.2   Operational Use Time is any time not classified as Non-Operational Time.

   2.3   Non-Operational Time shall be the period between occurrence of a System Failure and the moment the System recommences or is ready to recommence the System Test. Non-Operational time will be classified as either Downtime or Idletime.

   2.4   Downtime shall be the Non-Operational Time between 9 a.m. and 5 p.m. Monday to Friday and any time outside this period of which DIGITAL makes use for remedial maintenance.

   2.5   Idletime shall be any Non-Operatonal Time which cannot be classified as Downtime.

   In the event, that a dispute arises as to the cause or nature of a failure, the time taken to determine the cause will be counted as Idletime.

   2.6   A System Failure is the occurrence of a failure of any part of the Hardware or Standard System Software or any error condition reported on the controlling console which causes a termination of a user job except that

failure of a terminal shall not constitute a System Failure.

Notwithstanding the above, a System Failure includes any error condition which is judged to cause a degradation of the system operation below that which would be acceptable to the relevant "Hardware Acceptance Test Procedure".

Without limiting the generality of the above, the contents of the error file ERROR.SYS will be printed each day by the DEC program SYSERR and agreement will be reached each day between the representatives of DIGITAL and the UNIVERSITY as to the acceptability or not of the error rates printed therein. In particular the number of recoverable errors each day of effective 23 hours of operation, or pro rata for a lesser period of effective use, shall not exceed 25 in the case of each disk drive and 25 in the case of each tape drive; the number of operator interventions to allow any particular device to continue in normal operation will not exceed 2 per device in each day of effective 23 hours of operation or pro rata for a lesser period of effective use.

3. Acceptance Criteria

The System Test starts after completion of the Trial run following Hardware Acceptance. It will end and be deemed a successful demonstration of the System's reliability when:-

(a) the System has been running for a period of 12 days, 24 hours each (with the exception of scheduled preventive maintenance) and a minimum of 100 hours Operational Use Time; and

(b) the average Effectiveness Level during that period has been 95% or better; and

(c) the System did not experience during that period more than 6 System Failures.

The System Test shall continue on a day-by-day basis until these criteria are satisfied, but not after 31st May, 1978.

4. Conduct of Test

The UNIVERSITY shall keep a log of all events during the System Test, a sample of which is in Appendix B.

5. DIGITAL agrees to accept the record of progress and events made by the UNIVERSITY during the hours when no DIGITAL

representative witnessed the Test.

6.   Programs

Prior to Installation date, the parties shall agree on the specific programs to be used in the System Test.

Any such program not provided by DIGITAL shall be demonstrated to DIGITAL'S satisfaction by the University to be error free and runable on the System by way of demonstration on the KL10B at W.A.I.T. prior to Installation date.

The programs for the System Test will provide the following:

(a)   Batch jobs to form a fairly high background load consisting of various production programs, e.g. Payroll from the current KA10 system, DEC SCRIPT simulations, compiles, etc.

(b)   Continuous monitoring of the System, for example, by a single simple program which wakes every five minutes or so and types date and time.

(c)   Random interactive monitoring, for example, by asking the program in (b) above to type date and time.

(d)   Monitoring of response by measuring the response to perform a simple constant task such as a DIRECTORY command. Such a task would be set up in an ATO file to run every five minutes or so and the response will be plotted for the period.

(e)   Interactive simulation of a large number of terminal jobs.

(f)   Interactive jobs using one or several live terminals to run interactive jobs such as compiling and running using standard source files.

(g)   Standard DIGITAL supplied diagnostic programs.

The jobs in (b), (c) and (d) above are designed to provide a continuous indication that the System is running in a normal or expected manner and is not in some hung or abnormal state.

The UNIVERSITY may choose to run any programs from the agreed list of programs in any order or mix as its representative so decides at any time during the Reliability Test Period.

SCHEDULE G

HARDWARE TEST PROCEDURES FOR PRODUCTS IN SCHEDULE B

The following Maindec-11 diagnostic tests will be run so that each device is exercised by at least one pass of each test or for fifteen minutes for all tests, whichever is the greater.

No errors are acceptable.

Maindec-11   DZDMC-A   Basic W/R and Microprocessor test

       DZDME-A   DDCMP mode line unit test

       DZDMF-A   Bitstuff mode line unit test

The UNIVERSITY will provide a PDP11-34 with at least 16 Kwds of memory and sufficient space to mount the DD11-D back plane and one console terminal.

Test started ....

Test Completed ....

Comments:

UNIVERSITY Representative   DIGITAL Representative

Signature ....   Signature ....

Title ....   Title ....

Date ....   Date ....

SCHEDULE H

SYSTEM DESCRIPTION DOCUMENTS

HARDWARE OPTION BULLETINS

DESCRIPTION	DATE
KL10 Central Processing Unit	October 1976
MG10 and MH10 Memory Systems	October 1976
RP04/05/06 Disk Pack Subsystems	September 1976
TJU45 Magnetic Tape System	May 1975
LP100-BA, -BB Printer Systems	August 1976

DN87S Front End — pages 2-22 to 2-26 of the Tender dated 28/02/77 received from DIGITAL.

SCHEDULE H (Cont.)

SOFTWARE PRODUCT DESCRIPTIONS

SPD No.	DATE	DESCRIPTION
7.1.5	May 1977	TOPS-10, Version 6.03
7.32.1	May 1977	GALAXY-10, Version 2
7.15.3	February 1977	DECsystem-10 COBOL-68, Version 11.
7.10.0	October 1974	BASIC-10
7.5.4	February 1977	ALGOL-10, Version 10.
7.20.3	January 1977	FORTRAN-10, Version 5.
8.35.2	June 1975	VMSER
7.31.2	February 1977	DECsystem-10 SORT/MERGE, Version 3
8.60.0	April 1975	DECNET-10 NETWORK SOFTWARE
14.63.2	January 1977	FORTRAN IV/IAS-RSX, Version 1C
10.75.4	March 1977	DECNET-11M, Version 1.2
14.35.5	February 1977	RSX-11M, Version 3
13.1.8	March 1977	RSTS/E, Version 6B
8.25.1	April 1975	MACY11-LINKX11

SCHEDULE I

DECsystem-10 Software Licence Agreement

Licensor: DIGITAL EQUIPMENT CORPORATION, (hereinafter called "DEC").

Licensee: UNIVERSITY OF QUEENSLAND (hereinafter called the "UNIVERSITY")

Digital Equipment Australia Pty.Ltd., (hereinafter called "DIGITAL", a subsidiary company of DEC, agrees to grant and "the UNIVERSITY" agrees to accept a non-transferable and non-exclusive licence to use each of the programs and such related materials, software support services and documentation, all as described on Rider A, attached hereto and made a part hereof, hereinafter singularly and/or collectively referred to as Licenced Program), on the following terms and conditions:

1. Term

   Each Licence shall be effective from the date hereof and shall remain in force until the UNIVERSITY discontinues the use of such Licenced Program, or the Licence is otherwise terminated as provided herein.

2. Licence

   The UNIVERSITY shall have the right to use each Licenced Program or any portion thereof on a single DEC Computer System described on Rider A (hereinafter referred to as DEC system), and for no other purpose.

3. Licence Fee

   The Licence shall be at no charge.

4. Right to Use

   a) The UNIVERSITY may edit, format or otherwise modify the Licensed Program provided, however, that any portion thereof included in a modified work shall remain subject to all

terms and conditions of this Licence and shall remain the property of DEC.

b) The UNIVERSITY may copy each Licenced Program for the purpose of (i) using the Licence Program on a single DEC system, (ii) modifying each Licenced Program as provided above, (iii) to replace a worn or deteriorated copy and (iv) for archive or emergency restart purposes.

c) The UNIVERSITY agrees to reproduce and include DEC's copyright notice on all copies of each Licenced Program, or any modifications thereof in any form.

The UNIVERSITY's right to copy and/or modify any Licenced Program shall be limited to the conditions set forth in this Paragraph 4.

5. Security

The UNIVERSITY agrees that it will use its best endeavours not to provide or otherwise make available any Licenced Program or any portion thereof, including but not limited to flow charts, logic diagrams and source codes, in any form, to any person other than the UNIVERSITY or DIGITAL employees without the prior written approval of DIGITAL.

6. Title

Title to and ownership of the Licenced Program shall at all times remain with DEC.

7. Taxes

Where applicable and on production of documentary evidence, there shall be added to the fee payment by the UNIVERSITY hereunder amounts equal to any charges, assessments, sales, excise or other taxes now hereinafter imposed by any governmental body or agency based on such fees or on this Licence paid or payable by DEC, other than taxes, fees or charges on or measured by the net income of DEC.

8. Termination

In the event the UNIVERSITY or any sublicensee neglects or fails to perform or observe any of its obligations under this Agreement or a sublicence or if any assignment shall be made of its business for the benefit of creditors, or if a receiver, trustee in bankruptcy or a similar officer shall be appointed to take

charge of all or part of its property, any sublicense as to a sublicensee, shall immediately terminate. Such termination shall be limited to the Licence(s) to the UNIVERSITY or sublicencee in default.

9. Certification

Within two weeks after the termination of any Licence granted hereunder, in accordance with the terms hereof, the UNIVERSITY shall certify in writing to DIGITAL that through its best efforts and to the best of his knowledge the original and all copies, in any form, in whole or in part, and including partial copies and modifications of the Licenced Program, received from DIGITAL or made in connection with the Licence have been destroyed except as may be authorised in writing by DIGITAL.

10. Assignment

This Licence Agreement, the Licences granted hereunder and the Licenced Program may not be assigned, sublicenced or otherwise transferred by the UNIVERSITY except as otherwise provided herein without prior written consent from DIGITAL. No right to reprint or copy in whole or in part the Licenced Program is granted hereby except as otherwise provided herein.

11. General

This Licence Agreement supercedes all prior agreements and understandings between the parties concerning the subject matter herein and may not be changed or terminated except by a writing signed by the party against whom the same is sought to be enforced.

If any of the provisions of this Licence Agreement are invalid under any applicable statute or rule of law, such provisions or portions thereof are to that extent deemed to be omitted. The UNIVERSITY's remedies in this Licence Agreement are exclusive.

This Licence Agreement shall be governed by the laws of the State of Queensland.

SCHEDULE I   (Continued)

RIDER A TO SOFTWARE LICENCE AGREEMENT

This Rider A is attached to and made a part of the Licence Agreement.

1. Programs, Related Materials and Documentation, Software Support
Services and Licence Fee

The software items of Schedule A, DECNET-10, MACY-11 - all items
at no charge.

2. DEC Computer System

The subject of this Contract.

3. Warranty

The Licenced Program will substantially conform to the applicable
DEC Software specification manual when it is shipped to the
UNIVERSITY. DEC's and DIGITAL's sole obligation under this
warranty shall be to correct errors which were present at the
time of shipment of the Licenced Program and which result from
failure to perform substantially in accordance with such
specification manual provided that the UNIVERSITY notifies
DIGITAL in writing of such errors within 180 days from the date
of shipment. EXCEPT FOR THE EXPRESS WARRANTY STATED ABOVE IN
THIS PARAGRAPH, DEC DISCLAIM ALL WARRANTIES OF MERCHANTABILITY
AND FITNESS; and the stated express warranties are in lieu of
all obligations or liability on the part of DEC or DIGITAL for
indirect or consequential damages arising out of or in connection
with the use or performance of the Licenced Program.

The foregoing is hereby approved and agreed to as a Rider to and
a part of the Licence Agreement for DEC Programs.

SCHEDULE I   (Continued)

DIGITAL EQUIPMENT CORPORATION
LICENSE AGREEMENT FOR DEC SOFTWARE PROGRAM SOURCES

Customer Name: University of Queensland (hereinafter referred to
as the UNIVERSITY)

Address: St. Lucia
           Queensland 4067
           Australia

Digital Equipment Australia Pty.Ltd., (hereinafter referred to as
"DIGITAL") a subsidiary company of DIGITAL EQUIPMENT CORPORATION,
agrees to grant hereby and the UNIVERSITY agrees to accept a
non-transferable and non-exclusive licence to use each of the
software program sources and listings available from DIGITAL
(hereinafter   singularly and/or collectively referred to as
"Source") on the following terms and conditions:

1.   TERM

      Each Source shall be under a separate Licence effective from the
      date of delivery thereof and shall remain in force until the
      UNIVERSITY discontinues the use of such Source, or the Licence is
      otherwise terminated as provided herein.

2.   LICENCE

      The UNIVERSITY shall have the right to copy and use this source
      or any portion thereof, or the binaries/object codes generated
      therefrom, on any DIGITAL Computer System located within the
      facility or campus specified below for which the UNIVERSITY has
      purchased a separate binary License.

      Facility: Prentice Computer Centre
      Name: University of Queensland
      Address: St. Lucia
                     Qld. 4067

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3. RIGHT TO USE

The UNIVERSITY may modify or copy the Source (with the inclusion of DIGITAL's copyright notice) provided, however, that any portion thereof included in a modified work shall remain subject to all terms and conditions of this License.

4. SECURITY

The UNIVERSITY agrees that it will use its best endeavours not to provide or otherwise make available any Source or any portion thereof, including but not limited to flowcharts, logic diagrams, binaries/ object codes, source codes, and listings in any form, to any person other than the UNIVERSITY or DIGITAL employees without the prior written approval of DIGITAL or in the case of binaries/object codes, a separate License.

5. TITLE

Title to and ownership of the Source shall at all times remain with DIGITAL.

6. WARRANTY

DIGITAL DISCLAIMS ALL WARRANTIES WITH REGARD TO THE SOURCE LICENSED HEREUNDER, INCLUDING ALL WARRANTIES OF MERCHANTABILITY AND FITNESS, and any stated express warranties are in lieu of all obligations or liability on the part of DIGITAL for indirect or consequential damages arising out of or in connection with the use of performance of the Source licensed hereunder.
or

7. TERMINATION

In the event the UNIVERSITY neglects or fails to perform or observe any of its obligations under this Agreement, or if any assignment shall be made of its business for the benefit of creditors, or if a receiver, trustee in bankruptcy or a similar officer shall be appointed to take charge of all or part of its property, or if it is adjudged a bankrupt and such condition(s) is not remedied within ten (10) days after written notice thereof has been given to the UNIVERSITY, this License Agreement and all licenses granted hereunder as to the UNIVERSITY shall immediately terminate.

Within two (2) weeks after such termination, the UNIVERSITY shall certify in writing to DIGITAL that through its best efforts and to the best of its knowledge the original and all copies, in any form, including partial copies and modifications of the Source,

received from DIGITAL or made in connection with the License have been destroyed.

8.   ASSIGNMENT

This License Agreement, the licenses granted hereunder and the Source may not be assigned, sublicensed or otherwise transferred by the UNIVERSITY without prior written consent from DIGITAL. No right to reprint or copy the Source, in whole or in part, is granted hereby except as otherwise provided herein.

PRENTICE COMPUTER CENTRE

KL10B SYSTEM ACCEPTANCE TEST LOG

DATE................. PAGE ..../.........

TIME	EVENT - REMARKS	OPERATIONAL TIME	DOWN TIME	IDLE TIME

CUMULATIVE EFFECTIVENESS LEVEL %	CUMULATIVE CRASH COUNT		DAY TOTALS
			B/F
DEA REPRESENTATIVE	U.Q. REPRESENTATIVE		CUMULATIVE TOTALS

PRENTICE COMPUTER CENTRE

KL10B HARDWARE ACCEPTANCE TEST LOG

DATE .... PAGE ....../......

DEVICE/PROCEDURE	START TIME	FINISH TIME	COMMENTS	TEST OK?

digital

77432.14.7

14 July 1977

University of Queensland
St. Lucia
Queensland, Australia 4067

Attention: The Registrar

Dear Sir:

This is to advise you that Digital Equipment Australia
Pty. Ltd. is a wholly owned subsidiary of Digital Equipment
Corporation and that in consideration of your entering into
the agreement referred to below we hereby guarantee due perfor-
mance by Digital Equipment Australia Pty. Ltd. of all of its
obligations to you under or in connection with a sales agree-
ment with you for the delivery of a DECsystem-10 90-HB and
associated items to be signed in July 1977, and we submit to
the jurisdiction of the Courts of the State of Queensland in
connection with this guarantee and agree that the law of
Queensland shall be the proper law of the guarantee.

Very truly yours,

DIGITAL EQUIPMENT CORPORATION

Edward A. Schwartz
Vice President
General Legal Counsel and
Secretary

EAS/r

28th July, 1977

Mr. A.W. Coulter,
Director,
Prentice Computer Centre,
University of Queensland,
ST. LUCIA   QLD   4067

Dear Sir,

This is to confirm that the airflow into cabinets on the DECSystem 1090
contracted will be from bottom to top.

Yours faithfully,

Bruce Tannock,
Queensland Manager

**Digital Equipment
Australia Pty Limited**

50 WATER STREET
SPRING HILL
BRISBANE 4000
QLD. AUSTRALIA
TELEPHONE 229 3088
TELEX 40616

OTHER BRANCHES AT
ADELAIDE, CANBERRA
HOBART, MELBOURNE
PERTH, SYDNEY.

28th July, 1977.

The Registrar,
University of Queensland,
ST. LUCIA   QLD   4067

Dear Sir,

We refer to the contract for the supply of the DECSystem 1090 and associated items.
We agree that in addition to the items, the subject of that contract, we will, at
the request of the University, and at no charge, supply software licenses for each
system manufactured by DEC, to a maximum of ten systems, being substantially
connected to the DECSystem 10.

The licences granted for each system will cover one operating, up to two languages,
and the appropriate DECnet product.   FIU 8   ∧

The granting of such licenses will be conditional on:-

(a)   the licensed configuration as purchased from Digital is sufficient
        to fulfill the minimum hardware configuration as per the appropriate
        Software Product Descriptions;

(b)   the license applies to that software which has been previously
        purchased from or otherwise provided by Digital.

The agreement applies to DEC systems ordered by 30th June, 1979.

                                        Yours faithfully,

                                        Bruce Tannock,
                                        Queensland Manager.

28th July, 1977

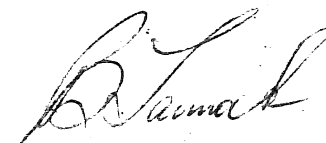The Registrar,
University of Queensland,
ST. LUCIA   QLD   4067

Dear Sir,

We refer to the contract for the supply of the DECSystem 1090 and associated items.
We agree that in addition to the items, the subject of that contract, we will
reimburse the University of Queensland for the cost of three economy return
airfares Brisbane to Boston, as follows:

1.   One return fare in regard to DECSystem 10 Engineer Training.

2.   Two return fares in regard to Management and/or Software
     training on the DECSystem 10.

The relevant fares claimed must be in relation to travel prior to 31st
December, 1978.

Yours faithfully,

Bruce Tannock,
Queensland Manager.