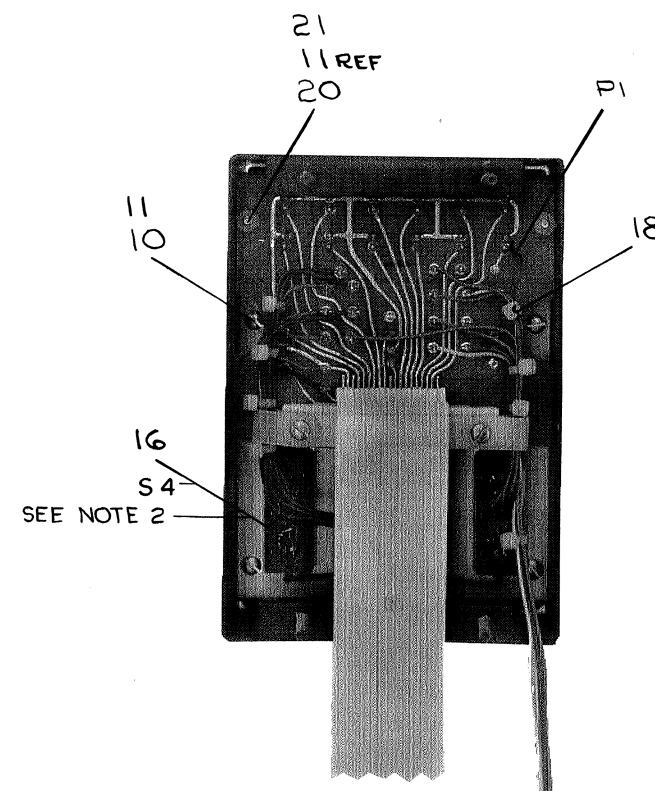
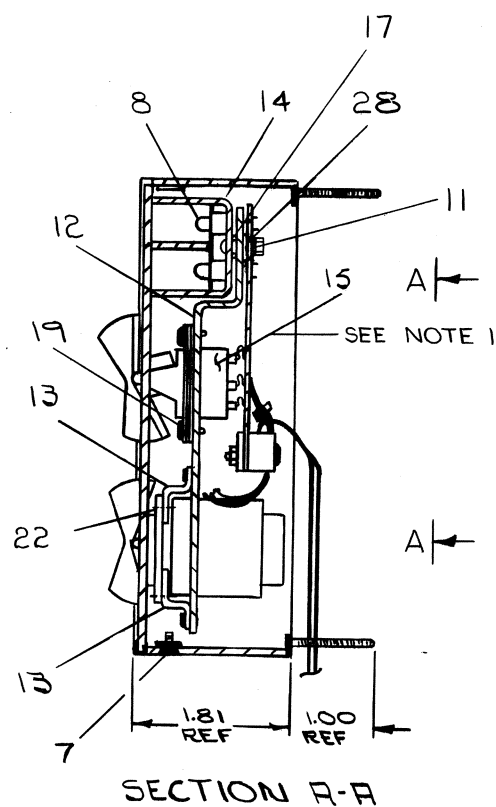
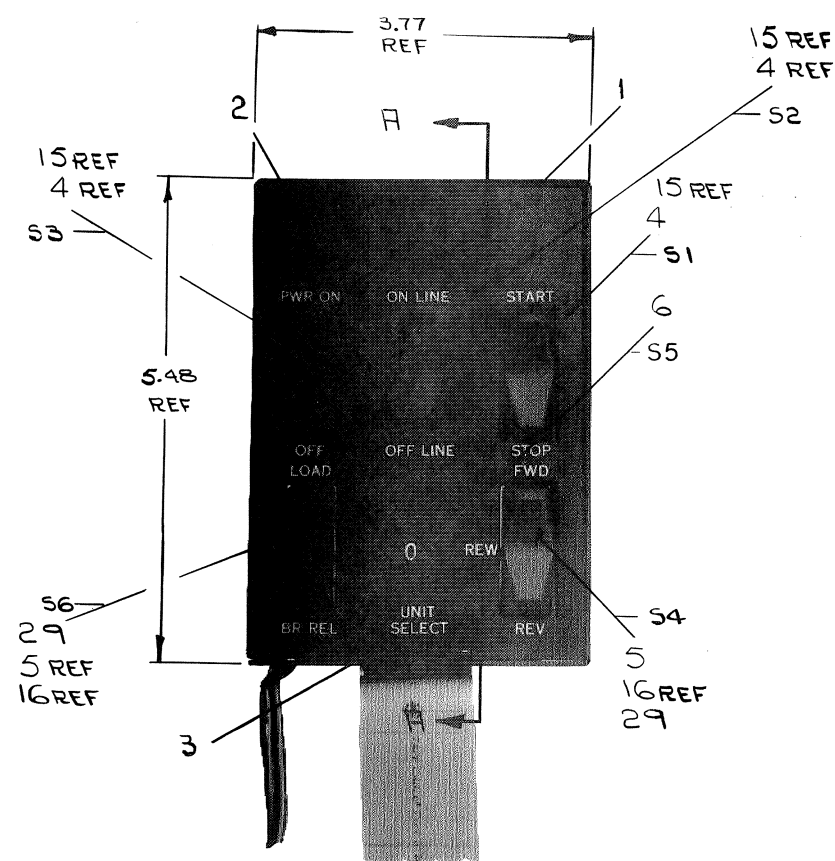
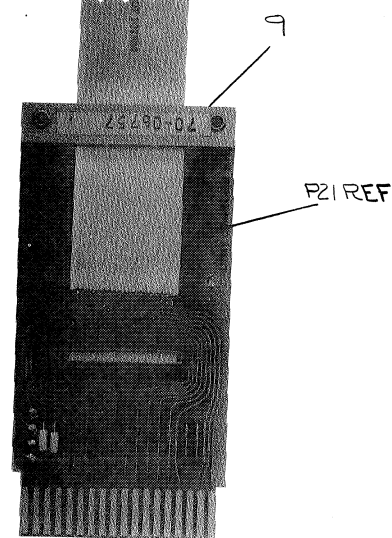
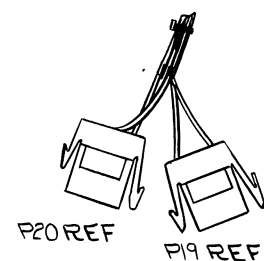


NOTES:

1. THE 6 CONTACTS OF THESE 3 SWITCHES SHOULD BE BENT AT 90° AWAY FROM EACH OTHER.
2. THESE 2 SWITCHES SHOULD BE MOUNTED SO THAT THE LONG EARS OF EACH SWITCH ARE FACING THE TOP OF THE CONTROL BOX.



VIEW A-A



REVISIONS		
CHK	CHANGE NO.	REV.
204	TU10-00068	A

J BARDONE

Bardone 2/23/73

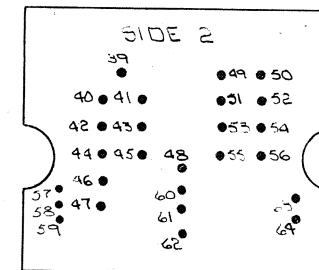
FIRST USED ON OPTION/MODEL
TU10

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS FRACTIONS ANGLES
± .005 ± 1/32 ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

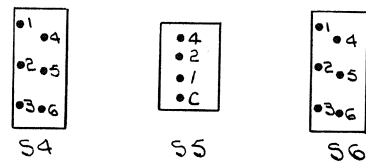
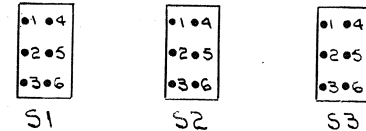
MATERIAL	_____
FINISH	_____

QTY.		DESCRIPTION	PARTS LIST	PART NO.	ITEM NO.
DRAWN <i>J. B. Bond</i>	DATE 17 Dec 70	 DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			
CHECKED <i>G. Goring</i>	DATE 18 Dec 70				
ENGINEER <i>J. B. Bond</i>	DATE 18 Dec 70				
PROD. ENG. <i>G. B. Bond</i>	DATE 19 Jan 71				
PROD. <i>G. C. Bond</i>	DATE 19 Jan 71				
NEXT HIGHER ASSY		TITLE	CONTROL BOX ASSEMBLY		
D-AD-7006756-0-0					
SCALE NONE					
SHEET OF 2		SIZE/CODE	NUMBER	REV.	
		DJAD	7006757-0-0	A	
		DIST.	()		

NO.	REV.	SYM.	DESCRIPTION	NO.	REV.	SYM.	DESCRIPTION
27	1	PLW	PI-45	27	1	SOLDER	M RELV
27	1	BLU	PI-42	27	1	SOLDER	M FWD
27	1	BLU	PI-41	27	1	SOLDER	M REW
27	1	BLU	PI-40	27	1	SOLDER	-15 V
26	1	BLK	PI-47	25	1	SOLDER	LOGIC COMMON
23	1	VIO	PI-39	25	1	SOLDER	UNIT SELECT 1
23	1	VIO	PI-41	25	1	SOLDER	UNIT SELECT 1
23	1	VIO	PI-42	25	1	SOLDER	UNIT SELECT 0
27	1	BLU	PI-45	26	1	SOLDER	OFF
27	1	BLU	PI-49	26	1	SOLDER	LOAD
27	1	BLU	PI-51	26	1	SOLDER	BRAKE REL
24,25	1	BUS/BLU	S4-1	24	1	SOLDER	-15V
24	1	BUS	S4-5	24	1	SOLDER	-15V
24,25	1	BUS/BLU	S4-3	24	1	SOLDER	-15V
24,25	1	BUS/BLU	S6-6	24	1	SOLDER	-15V
24,25	1	BUS	S6-2	24	1	SOLDER	-15V
27	1	BLU	PI-57	27	1	SOLDER	STOP
27	1	BLU	PI-58	27	1	SOLDER	-15V
27	1	BLU	PI-59	27	1	SOLDER	START
27	1	BLU	PI-60	27	1	SOLDER	OFF LINE
27	1	BLU	PI-61	27	1	SOLDER	-15V
27	1	BLU	PI-62	27	1	SOLDER	ON LINE
26	1	BLK	PI-63	26	1	SOLDER	LOGIC COMMON
26	22	BLK	PI-64	26	1	SOLDER	POWER ON L



P1



REAR VIEW

FIRST USED ON OPTION/MODEL
TU10

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS FRACTIONS ANGLES
±.005 ±.005 ±.005
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			
TITLE		REV.	
CONTROL BOX ASSEMBLY		A	
NEXT HIGHER ASSY		REV.	
D AD-7006756-0-0		A	
SCALE NONE		REV.	
SHEET 2 OF 2		A	

REVISIONS
CHANGE NO.
REV.
CHK

DEC FORM NO
DRD 100

8

7

6

5

4

3

2

1

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

PARTS LIST

MADE BY	P. J. LEBLANC	CHECKED	J. FLEMING	SECTION
DATE	12-17-70	DATE	12-21-70	1
ENG	<i>P. Baudry</i>	PROD		
DATE	1/9/71	DATE	<i>3 E Gora</i> 4-9-71	ISSUED SECT. 1

ITEM NO.	DWG NO./ PART NO.	DESCRIPTION
1	D-IA-7407942-0-0	CONTROL BOX
2	C-IA-7407945-0-0	CONTROL PANEL
3	C-IA-7408000-0-0	PANEL, CLIP
4	1205317-13	BUTTON ROCKER SWITCH
5	1209711-1	BUTTON ROCKER SWITCH
6	1210078	SWITCH, DIGITRAN #8-D-97
7	9006009-2	SCR PHL HD FLAT #4-40 X ½ SST
8	1209169	LAMP, OSLINE #2335 "0"
9	D-IA-7007057-0-0	CABLE CONTROL BOX
10	9006010-4	SCR SLOTTED BND HD #4-40 X 5/16 SST
11	9006632	LOCK WASH #4 INT TOOTH
12	B-MD-7407941-0-0	PANEL, SUB PLATE
13	A-MD-7407938-0-0	BRACKET, DIGISWITCH
14	D-MD-7407937-0-0	EGG CRATE
15	1205941	SWITCH, ROCKER #RS-50-FB-PC
16	1209614	SWTICH, ROCKER
17	9007835	"O" RING BUNA-N #006 1/8 I.D. X 1/4 O.D.
18	9007031	TIE WRAP #SST1-M PANDUIT
19	9008327	SCR SELF TAPPING #4-40 X ½ SST
20	9006013-1	SCR PHL HD, PAN #4-40 1/2 SST
21	9006556	NUT HEX SST #4-40 X ½ X 1/16
22	9008449	SCR PHL HD FLAT #2-56 X ½ SST

TITLE CONTROL BOX ASSEMBLY	ASSY NO. D-AD-7006757-0-0		SIZE	CODE	NUMBER 7006757-0-C	REV. A	ECO NO. TUIØ 00068
	SHEET 1 OF 2		A	PL			
			DIST.	6			

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY		CHECKED		SECTION
DATE	P.J. LEBLANC	DATE	J. FLEMING	
ENG	12-17-70	PROD	12-21-70	ISSUED SECT.
DATE	<i>J. Bardon</i>	DATE	<i>EE Cross</i>	
	<i>4/9/71</i>		<i>4-9-71</i>	

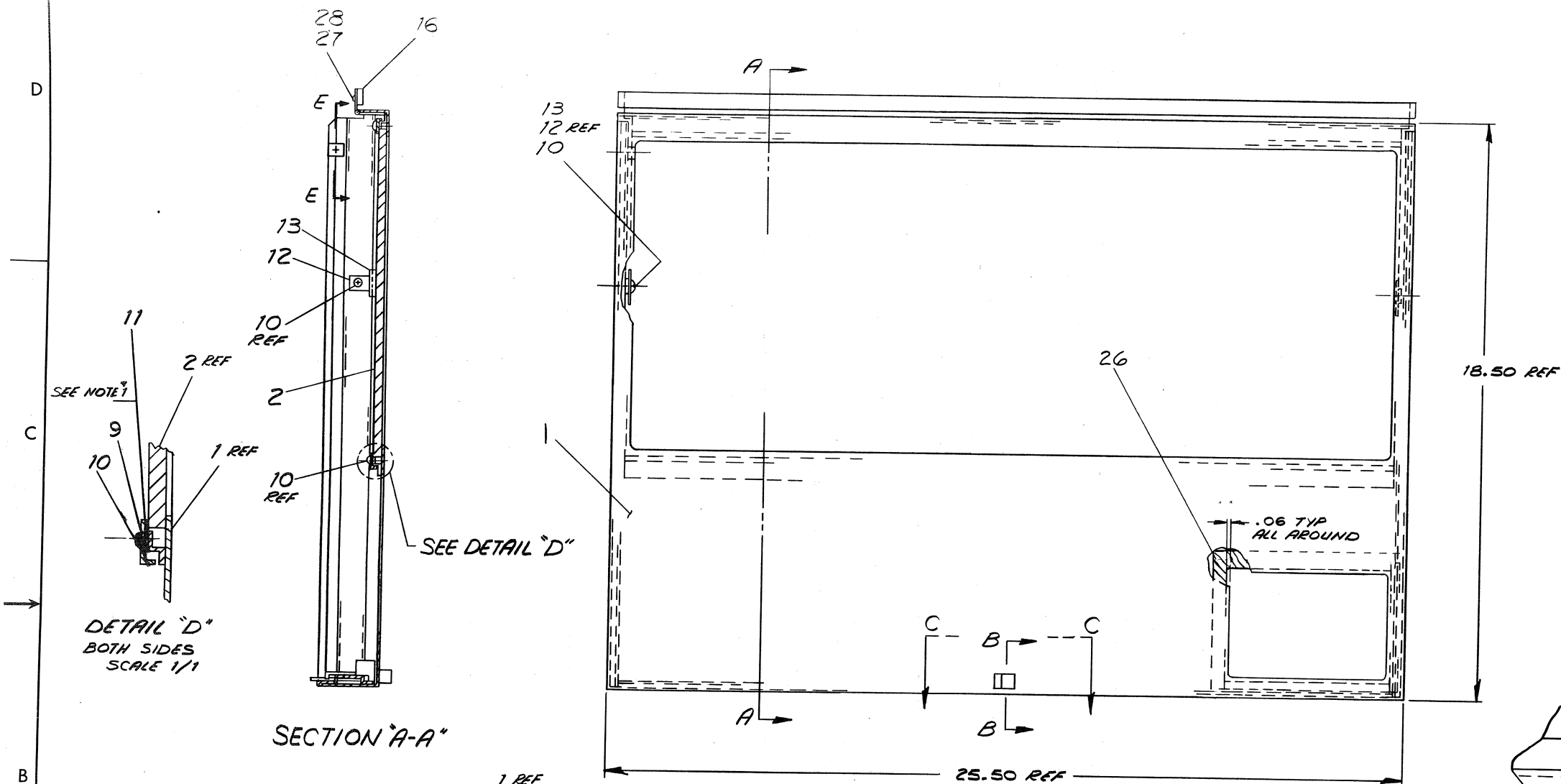
[illegible]

TITLE CONTROL BOX ASSEMBLY	ASSY NO. D-AD-7006757-0-0		SIZE A	CODE PL	NUMBER 7006757-0-0	REV. A	ECONO.
	SHEET 2 OF 2		DIST.				

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NOTES

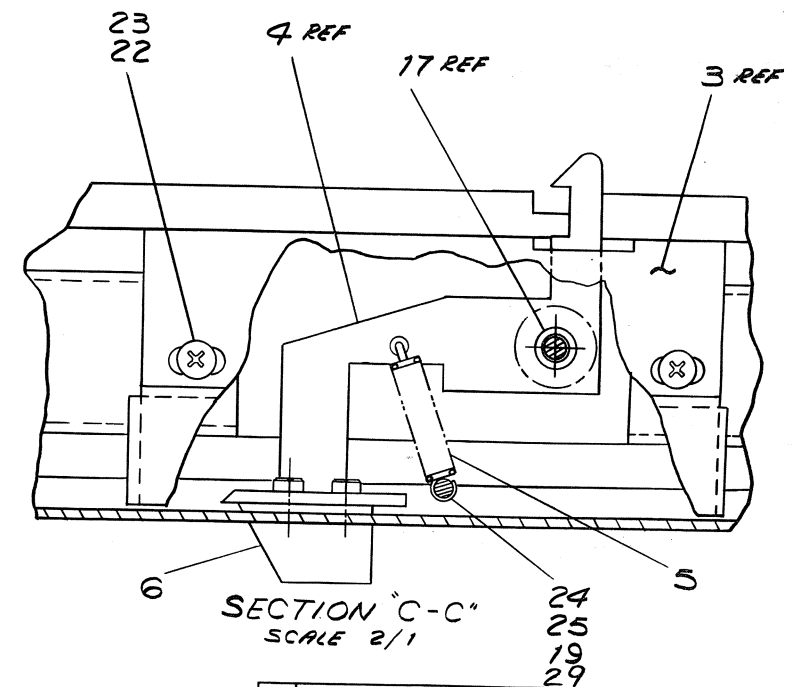
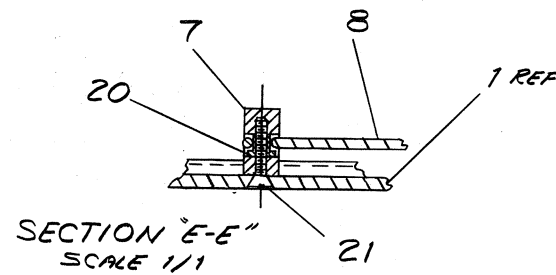
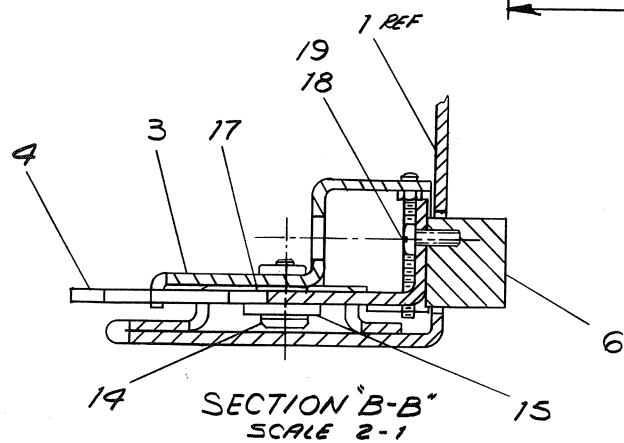
1. ITEM #1 (STICKY FOAM) USED ON UNDERSIDE OF ITEM #3 (WINDOW CLAMP) TO ADHERE TO ITEM #2 (WINDOW) TO PREVENT RATTLE OF PLEXIGLASS.



SEE NOTE 1

DETAIL "D"
BOTH SIDES
SCALE 1/1

SECTION "A-A"

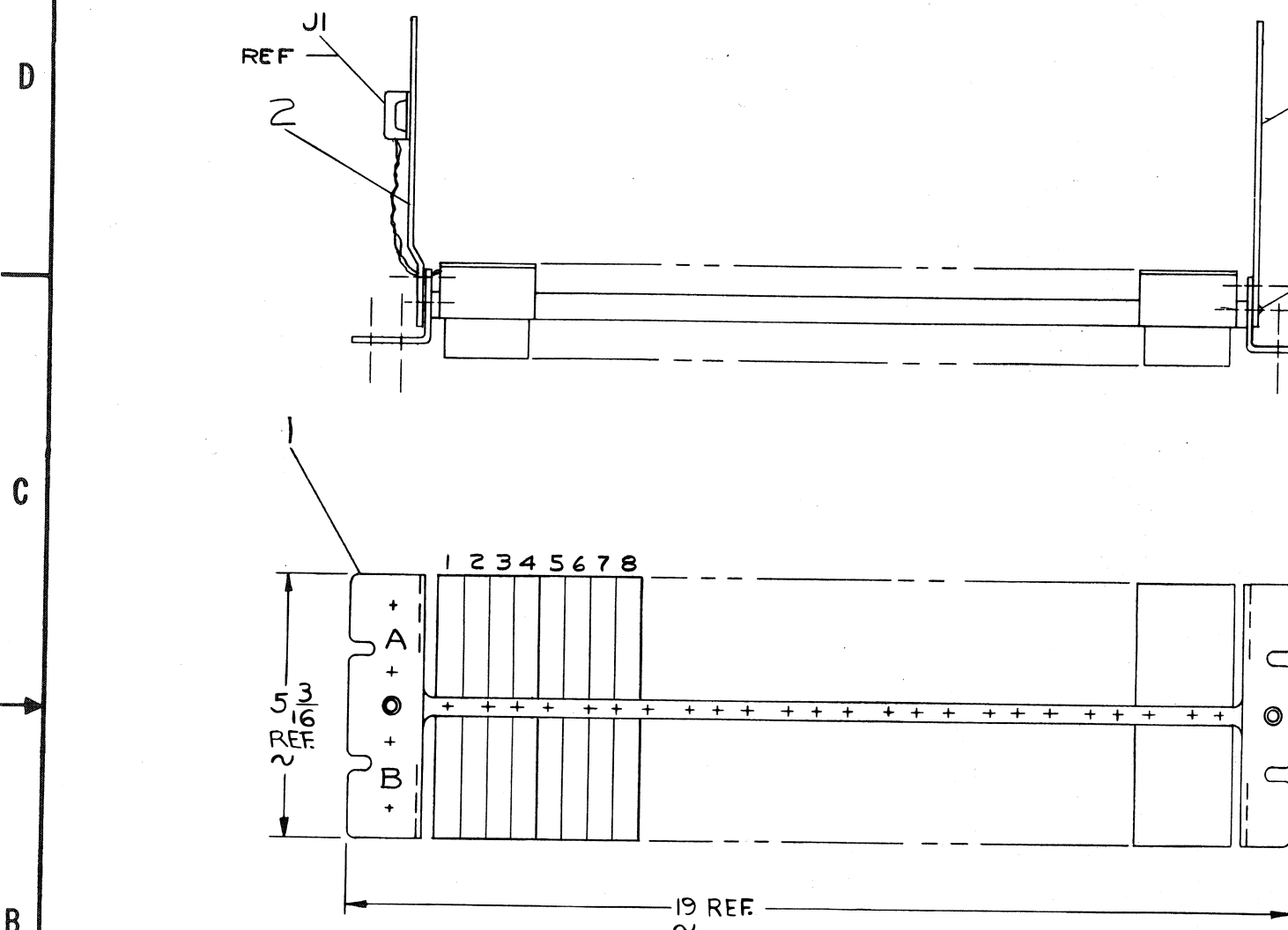


REV.	CHG.	NO.	DATE	BY	CHK.
A		1	5/13/71	BARDONE	J. BARDONE

DEC FORM NO. 100

FIRST USED ON OPTION/MODEL TU/10		DO NOT SCALE DRAWING		DRN. <i>R. H. H. H.</i> DATE <i>5-2-70</i>	
TOLERANCES DECIMALS .XXX = ±.005 .XX = ±.02 .X = ±.1		UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES ANGLES ± 0°30'		DATE <i>5-2-70</i>	
MATERIAL		FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS		DATE <i>11-17-71</i>	
FINISH		NEXT HIGHER ASSY D-AD-7006756-0-0		DATE <i>1-19-71</i>	
SCALE 1/2		SHEET 1 OF 1		TITLE UNIT DOOR ASSY	
PARTS LIST		digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		REV. A	
SIZE CODE DAD7006743-0-0		NUMBER DAD7006743-0-0		DIST.	

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EXTERNAL COMPONENT TABLE

ITEM NO.	DESCRIPTION	FROM CONNECTION	TO CONNECTION
13	ELAPSED TIME ASSY	A25 R2	A25 T1
8	1UF 250VDC	A05A2	A07C2
8		A04B2	A06C2
8		A16B2	A18C2
8		A17A2	A19C2
8		A24B2	A26C2
8		A25A2	A27C2
8		A32B2	A30C2
8		A31A2	A29C2
8		B24B2	B22C2
8		B23A2	B21C2
8		B14B2	B12C2
8		B13A2	B11C2
8		B02A2	B04C2
8	1UF 250VDC	B29B2	B27C2
9	7407751	A15A2	A15C1
10	7408234	A15C1	A14C2
* 11	47Ω	A15P2	A18T2
* 11	47Ω	A15M2	A18S2
* 12	.001μf.	A15P2	A15T1
* 12	.001μf.	A15M2	A16T1

WIRE TABLE

ITEM NO.	DESCRIPTION	FROM CONNECTION	TO CONNECTION
5	22 RED	J1- +5	A01-A2
6	22 BLU	J1- -15	A01-B2
7	22 BLK	J1- GND	A05-C2
5	22 RED	J1- +5	B01-A2
6	22 BLU	J1- -15	B01-B2
7	22 BLK	J1- GND	B01-C2

NOTES: * ADD THESE COMPONENTS ON TUIØ MASTERS ONLY ACCORDING TO A-SP-TUIØ-Ø-2Ø
** ITEM 13 COMES WITH ADHESIVE BACKING AND SHOULD BE PLACED ON THE CRUCIFORM, BELOW THE LOGIC ASSY.

REV.	CHANGE NO.	REV.
A	TUIØ-00029	A
B	TUIØ-00050	B
C	TUIØ-00052	C
D	TUIØ-00053	D
E	TUIØ-00054	E
F	TUIØ-00055	F
G	TUIØ-00056	G
H	TUIØ-00057	H
I	TUIØ-00058	I
J	TUIØ-00059	J
K	TUIØ-00060	K
L	TUIØ-00061	L
M	TUIØ-00062	M
N	TUIØ-00063	N
O	TUIØ-00064	O
P	TUIØ-00065	P
Q	TUIØ-00066	Q
R	TUIØ-00067	R
S	TUIØ-00068	S
T	TUIØ-00069	T
U	TUIØ-00070	U
V	TUIØ-00071	V
W	TUIØ-00072	W
X	TUIØ-00073	X
Y	TUIØ-00074	Y
Z	TUIØ-00075	Z

TOLERANCE DECIMALS
XXX = ±.005
XX = ±.02
X = ±.1

FIRST USED ON OPTION/MODEL TUIØ	QTY.	DESCRIPTION	PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES ±.005 ±.005 ±.005 FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	DATE 12/28/70 CHK'D R. Cook DATE 12-30-70 ENG J. Barone DATE 1-19-71 PROJ. ENG. J. Barone DATE 1-19-71 PROD. B. Elers DATE 1-19-71	PARTS LIST		
MATERIAL SEE PARTS LIST	SCALE NONE	TITLE LOGIC ASSY (TUIØ)		
FINISH 11	SHEET 1 OF 1	SIZE CODE C	NUMBER AD7006754-0-0	REV. C

[illegible]

DEC FORM NO.16-1031
DRA 110

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DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 3/23/71

TITLE TU10 Acceptance Criteria, Seven and Nine Track Slave

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	CHANGE PER ECO	TU10-00052	M. MORGAN-STERN	10-18-71	M. Morgan	10/19/71
B	CHANGE PER ECO	TU10-00078	H. DRAB	11-16-73	H. Drab	11/21/73

Scope: To define the criteria necessary to accept for shipment the TU10 Tape Transports.

Test Software:

D9AA MainDEC-08-D9AA-D
D9BA MainDEC-08-D9BA-D
D9CA MainDEC-08-D9CA-D
D9XA MainDEC-08-D9XA-D
1 new reel magnetic Tape

Test Hardware:

Computer DEC P.D.P.-8 w/TC58 and 3-cycle Data break facility.
Magnetic tape cleaning kit

Procedure:

Note: The following times are for 1 transport, for 2 transports times double, for 3 times triple, etc.

- Complete the standard option checklist form for prints, cables etc. See note 5.
- Run the following mainDECs for 10 minutes without error.
Note #1 - gives TU10 7 track timing
Note #2 - gives TU10 9 track timing
a) Instruction test - D9XA
b) Drive Function timer - D9BA
- Run D9AA data reliability test, one pass per test sequence
a) Test 4, Pattern 6, Density 800 B.P.I., Odd Parity
b) Test 5, Pattern 7, Density 800 B.P.I., Odd Parity
c) Repeat 3-B
d) See Note 3

ENG J. Bardone	APPD Fred Galt	SIZE A	CODE SP	NUMBER TU10-0-19	REV B
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DEC FORM NO.
DRA 107

SHEET 1 OF 5

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE TU10 Acceptance Criteria, Seven and Nine Track Slave

4. Run D9CA random exercise for 2 hrs.

a) See Note #3

A unit is accepted for shipment to a customer when the above has been completed.

Shipping Software:

Manual
Manual TU10 Instruction Manual
Prints A-ML-TU10- See #
Programs
D9AA Maindec-08-D9AA-D
D9BA Maindec-08-D9BA-D
D9CA Maindec-08-D9CA-D
D9XA Maindec-08-D9XA-D
One new reel magnetic tape. (Used for acceptance).

Shipping Hardware:

- I/O cables 15 feet unless otherwise specified number of cables according to system configurations.
- 1 cleaning kit.

Note #1: TU10 7 track
PDP-8 delay tolerances in milliseconds.
Drive X

182.9	Write Load Point Delay	+10
.9	Write Shutdown	-.5, +1.5
12.5	Write Start	-.5, +1.5
12.0	Settle Down	+4
010.5	Write to erase head	+3
13.5	Write Nonstop gap	+1
05.20	BKSP Shutdown	+0.5
.9	Read Shutdown	+0.5

Drive X Gap Consistency

20.8	Gap 1
19.8	Gap 2
19.8	Gap 3
27.8	Gap 4
35.0	Gap 5

ACCUMULATIVELY

SIZE A	CODE SP	NUMBER TU10-0-19	REV B
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DEC FORM NO 16-1022
DRA 108

SHEET 2 OF 5

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE TU10 Acceptance Criteria, Seven and Nine Track Slave

Drive X Gap Consistency

42.3 Gap 6 + 1
 48.9 Gap 7 -
 56.3 Gap 8

Gaps 8>7>6>5>4>1>

Gap 2 = GAP 3 +1.1
 -0.2

Drive X

12.5 Write start -.5, +1.5
 096.4 Write X IRG ±5.0
 087. Read from BOT delays ±5.0
 00.89 Last charctr. to MTF + 0.2
 105.8 Write EOF ±5.0
 106.2 EOR to EOF sp time status=4101 ±5.0
 .9 Space shutdown ± 0.5

Drive X functions at 556 bpi

182.9 Write start ± 10
 022.1 1" data time + 1
 .9 Write shutdown ±0.5, +1.5
 05.20 BKSP shutdown + 0.5
 00.90 Last charctr. to MTF ± 0.2
 .9 Read shutdown ± 0.5

Drive X functions at 200 bpi

12.5 Write load point delay -.5, +1.5
 022.1 1" Data time + 1
 .9 Write shutdown ± .5, +1.5
 5.20 BKSP shutdown ± 0.5
 1.05 Last charctr. to MTF ± 0.2
 .9 Read shutdown ± 0.5

Drive X

2.33 Forward acceleration < 3.5
 75. Forward deceleration N.A. to TU10
 1.33 Forward deceleration < 3.0
 (calculated)
 .83 BKW deceleration N.A. to TU10
 40.90 BKW deceleration (calculated) N.A. to TU10

SIZE	CODE	NUMBER	REV
A	SP	TU10-0-19	B

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE TU10 Acceptance Criteria, Seven and Nine Track Slave

End of Timing

Note No.2: TU10, nine track
 PDP8 delay tolerances in milliseconds

Drive X

180.0 Write load point delay + 10
 0.9 Write shutdown -5, +1.5
 9.0 Write start ± 1.0
 12.0 Settle down + 4
 10.0 Write to erase head + 5, -2.5
 10.0 Write non-stop gap -1.0, +2.0
 0.9 BKSP shutdown .8 to 1.0
 0.9 Read shutdown .8 to 1.0

Drive X gap consistency

14.0 Gap 1 Normal range 10.0 to 16.0
 13.3 Gap 2 Less than gap 1
 13.2 Gap 3 Approx. equal to gap 2
 18.0 Gap 4
 21.9 Gap 5
 26.2 Gap 6
 30.0 Gap 7
 34.3 Gap 8

Gaps 8>7>6>5>4>1, Gap 1 - Gap 2 < 1.7
 Gap 2 = Gap 3 +1.1
 -.2

Drive X

9.0 Write start + 0.5
 95. Write X IRG ±5
 . Read from BOT delays ±5
 .9 Last char. input to MTF + 0.2
 100 Write EOF times ±5
 100 EOR to EOF SP time status=4101 ±5
 .9 Space shutdown + 0.5
 2.8 Forward acceleration 3.5 max.
 78. Forward deceleration N.A. TU10
 2.0 Forward deceleration
 (calculated) 3. max.
 .85 BKW deceleration N.A.
 41.0 BKW deceleration (calculated) N.A.

SIZE	CODE	NUMBER	REV
A	SP	TU10-0-19	B

ENGINEERING SPECIFICATION

digital

CONTINUATION SHEET

TITLE TU10 Acceptance Criteria, Seven and Nine Track Slave

Note No. 3:

- (a) Tape must be of known condition and unit must be clean.
- (b) Permanent write error is a function of tape condition.
- (c) Maximum temporary write error = +7 TOTAL
- (d) Maximum temporary read error = 20% of line C.
- (e) Permanent read error = 0, see (a) of Note No.3.
- (f) No logic, data (without parity or error flag), or control errors are allowed.

Note No. 4: PDP11 Systems

Due to program differences, the shutdown times (write shutdown, space shutdown, read shutdown) printed out on PDP11 systems will be 0.9 msec longer than published here. The actual drive performance is the same.

Note No. 5: Unit Cleanliness

Before final acceptance test is run, clean both TU10 reel motor brakes. Follow the procedure for cleaning and adjusting the brakes outlined in the TU10 Maintenance Manual, DEC-TU10S-D.

SIZE
ACODE
SPNUMBER
TU10-0-19REV
B