

digital

**1974
FIELD SERVICE
TECHNICAL MANUAL**

CONFIDENTIAL

digital	FIELD SERVICE TECHNICAL MANUAL				Option or Designator
	12 Bit <input type="checkbox"/>	16 Bit <input checked="" type="checkbox"/>	18 Bit <input checked="" type="checkbox"/>	36 Bit <input checked="" type="checkbox"/>	LA30

Title				Off-Line Testing of the LA30		Tech Tip Number	LA30 TT-#1
All	Processor Applicability			Author	Cloutier/Walker	Rev	0
X				Approval	W. Cummins	Date	07/31/72
							Cross Reference

To check out LA30 off-line (locally) you have to place a jumper from A15R2 to ground. This jumper is located on the M7712 module which qualifies key board in to work. Also, let it be known that the first slot to the left of the wire frame is slot A and B05 respectively.

Title				LA30 HEAD INSTALLATION		Tech Tip Number	LA30-TT-2
All	Processor Applicability			Author		Rev	0
X				Approval	H. Long	Date	8/2/72
							Cross Reference

On the initial start-up of an LA30 head, some solenoids may not print immediately. This condition comes about when the head has been sitting idle for a long period of time. In most cases the solenoid will free itself during normal printing but if it doesn't it may have to be freed by hand. To free the solenoid by hand, proceed as follows:

1. Turn off the LA 30 power
2. With paper and ribbon in position and the platten closed, insert the end of a paper clip through the hole in the rear of the solenoid and push gently against the solenoid spring.
3. Remove paper clip.
4. Check to make sure solenoid wire is not sticking in the ribbon.
5. Turn on LA30 power and print.
6. Once the solenoid starts printing run the head continuously for a minimum of two passes of the LA30 diagnostic.

NOTE: The longer the head is run there is less chance of this happening again.

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Title DECwriter Ribbons - Recall				Tech Tip Number LA30-TT-4	
All Processor Applicability		Author Bryan Dungey Rev 0		Cross Reference	
X		Approval Ed Dorr	Date 09-05-72		

We have discovered that one shipment of DECwriter ribbons, which were over inked, were put into stock sometime around the first of the year. The ribbons can be identified by the lot #35 which is printed on each ribbon carton.

These ribbons will smudge badly and should be recalled from all field stock areas. Maynard and Westfield Stockrooms have already been purged.

Title PASS ON SOME BASIC 8E MAINDECS BECAUSE OF NO BELL				Tech Tip Number LA30-TT-5	
All Processor Applicability		Author Daryl Rickards Rev 0		Cross Reference	
X		Approval J. Blundell	Date 09/20/72		

As there is no bell on the Basic 8E Maindecs, there is no indication of a pass on some of the Basic 8E Maindecs. The following changes give a "P" for pass when running these maindecs.

Instruction Test 1 ECO ~~change location #129 from #287 to #328~~
 Instruction Test 2 ECO ~~change location #761 from #287 to #328~~
 Random DCA MCN ~~change location #813 from #287 to #328~~
 Basic JMP-JMS ECO ~~change location #587 from #287 to #328~~
 EAE Inst. Test 2 TECH TIP ~~change location 2175 from #287 to #328~~

(N.B. this change will OBSOLETE (take a minute) -

Title LA30 INTERMITTENTLY STOPS PRINTING				Tech Tip Number LA30-TT-6	
All Processor Applicability		Author J. Blundell Rev 0		Cross Reference	
X		Approval F. Purcell	Date 09/20/72		

PROBLEM CAUSE: Right margin switch (N/O contact) floating into ML13 pins H1 and J1 at A17.

Cure: Add a jumper A17 H1 to A17 U1 to clamp the line to pins 3.

There will shortly be an ECO to make this a retrofit.

Title KEYBOARD SHORTS CAUSED BY PAPERCLIPS, ETC.				Tech Tip Number LA30-TT-7	
All Processor Applicability		Author Davis/Barnett Rev 0		Cross Reference	
X		Approval W. Cummins	Date 11/20/72		

Title APPARENT LINE FEED PROBLEMS IN 50 Cycle Land						Tech Tip Number LA30-TT-8		
All		Processor Applicability		Author Klaus Wunderlich		Rev 0		Cross Reference
X				Approval W. Cummins		Date 01/23/73		

Some LA30's in the Munich area have been found to be wired for 220 volts 60 cycles, resulting in a hot power supply, and low unregulated D.C. output voltages. We have seen this to cause line feed problems.

There is a jumper from the 2mfd resonating capacitor to the transformer that selects the correct circuit to match the power frequency.

Capacitor to Tag 9 - 50 cycles/second

Capacitor to Tag 10- 60 cycles/second.

Title CARRIAGE RETURN TIME ON SERIAL LA30						Tech Tip Number LA30-TT-9		
All		Processor Applicability		Author Carl Cline		Rev 0		Cross Reference
X				Approval W. Cummins		Date 02/26/73		

SUPPLEMENTAL ACTION TAKEN

The carriage return time is specified to be 300 ms or less. However it appears that only a small percentage of the G936 accelerator card achieve an acceptable time. This is due to the change in tolerance of the components on the G936, and will result in a loss of the second character following a carriage return.

An ECO will be listed to resolve this problem. In the mean time additional fill characters may be added following a CR.

TECH TIP
 OBSOLETE

Title LACK OF FUSING ON THE LINE FEED CIRCUITS						Tech Tip Number LA30-TT-10		
All		Processor Applicability		Author Carl Cline		Rev 0		Cross Reference
X				Approval W. Cummins		Date 02/26/73		

This problem causes the line feed resistors to smoke on the which can damage the board as well as be embarrassing to the customer. ECO 8 was generated to correct this problem, however, the value specified (2½ amps) is too large so a 1½ amp slow blow should be used.

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DIGITAL EQUIPMENT CORPORATION

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	12 Bit <input checked="" type="checkbox"/>	16 Bit <input checked="" type="checkbox"/>	18 Bit <input checked="" type="checkbox"/>	36 Bit <input checked="" type="checkbox"/>	LA30

Title LINE FEED PROBLEM				Tech Tip Number LA30-TT-11	
All	Processor Applicability		Author Carl Cline	Rev 0	Cross Reference
X			Approval W. Cummins	Date 02/23/73	

The LA30 line feed problem is a result of the machine missing one or more line feeds and as a result overprint the previous line. ECO #71 was generated and kits are available from the Field Service Stockroom.

SUPPLEMENTAL ACTION TAKEN

ECO LA30 071

MCN _____

TECH TIP _____

OBSOLETE _____

Title SENSITIVE PAPER OUT SWITCH				Tech Tip Number LA30-TT-12	
All	Processor Applicability		Author Carl Cline	Rev 0	Cross Reference
X			Approval W. Cummins	Date 02/26/73	

This problem causes the machine to either think it is out of paper when it isn't or that it has paper when it doesn't. The only adjustment provided is the clearance hole of the micro-switch, it therefore becomes necessary if the hole is not great enough to forceably bend the actuating arm.

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Title <i>SETTING LEFT AND RIGHT MARGIN</i>						Tech Tip Number <i>LA 30-TT-13</i>	
Processor Applicability				Author <i>Carl Cline</i>	Rev <i>0</i>	Cross Reference	
All				Approval <i>W. Cummins</i>	Date <i>02/26/73</i>		
<i>x</i>							

When the left-hand margin is properly set, the right hand margin will be set automatically. To adjust the margins, proceed as follows:

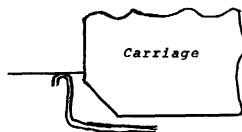
1. Observe location of switch (left hand), to see if the lever on the switch will hit the carriage at the correct attitude and accuate the switch in the center of the 45° angle. See attached sketch for correct setting.
2. Prepare a length of paper from the LA30 paper supply by drawing in a reference line in pencil or ink 0.0750 ± 0.010 inches in from the left hand sprocket hole center line. (Figure 5-7)
3. Using this paper, the margin in the printer will be set correctly when the left edge of the character "E" printed in the first position after a carriage return coincides with the center of the reference line.
4. The position of the first character is adjusted by loosening the splined set screw on the drive pulley and then rotating the drive pulley on the shaft extension to correct the error found in step 3. Retighten set screw to at least 14 inches/pounds before testing.
5. If the above conditions cannot be met, it is probable that the left-hand margin switch is damaged, worn, or improperly mounted. Readjust or replace the switch and repeat steps 2 and 3.
6. CAUTION: Check to see if set screw on timing belt pulley is stripped or loose. This also causes similar problems as Step 4. If so retighten or replace.

CC:mt

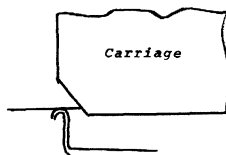
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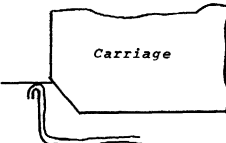
Title <i>SETTING LEFT AND RIGHT MARGIN (Continued)</i>				Tech Tip Number LA30-TT-13	
All Processor Applicability		Author <i>Carl Cline</i>	Rev <i>0</i>	Cross Reference	
<i>X</i>		Approval <i>W. Cummins</i>	Date <i>02/27/73</i>		



SWITCH TOO HIGH
Carriage Runs into
Switch



SWITCH TOO LOW
Carriage will not
activate Switch



SWITCH RIGHT
Contact will be made

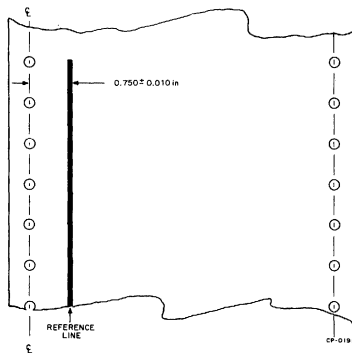


Figure 5-7 Checking Left Margin

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Title <i>SETTING LEFT AND RIGHT MARGIN (Continued)</i>					Tech Tip Number <i>LA30-TT-13</i>	
All	Processor Applicability			Author <i>Carl Cline</i>	Rev <i>0</i>	Cross Reference
X				Approval <i>W. Cummins</i>	Date <i>02/27/73</i>	

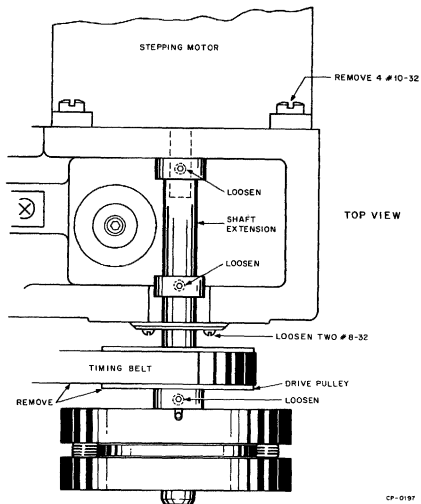


Figure 5-9 Stepping Motor Removal

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	12 Bit <input checked="" type="checkbox"/>	16 Bit <input checked="" type="checkbox"/>	18 Bit <input checked="" type="checkbox"/>	36 Bit <input checked="" type="checkbox"/>	LA30

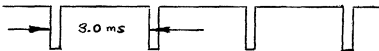
Title ADJUSTMENT PROCEDURE				Tech Tip Number LA30 TT-14	
All	Processor Applicability		Author C. Cline	Rev 0	Cross Reference
X			Approval W.E. Cummins	Date 5/31/73	G936

The G936 clock accelerator does not meet the 300 ms carriage return spec required by the LA30.

Correction: Add three potentiometers to adjust high speed ramp, low speed ramp and high speed running rate. (ECO G936-00002)

Following is the adjustment procedure required for setting these three pots.

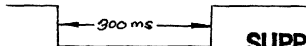
1. Place the modified G936 on an extender board.
2. Stall the print head by switching motor circuit breaker "OFF" while unit is running.
3. Place the scope probe on S2 of G936 module. Depress head warning switch (second micro switch from left) and adjust R7 (100K bottom pot) to result in 3.0 milsec between pulses.



4. Release warning switch then adjust R4 (5K middle pot) for 550 usec between pulses.



5. Switch main frame power off. Adjust R15 (5K Top pot) fully clockwise. Turn on motor breaker then switch main frame power on. Trigger sweep on G936 S2 then place second probe on C2 + (2.2uf CAP) on G936; while unit is printing adjust R15 for a negative going ramp of 55.0 milsec.
6. Check time of PRINT INH L on M7710 (A12-S2) to be less than 300 milsec.



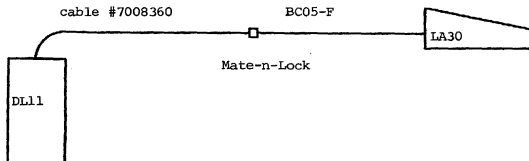
SUPPLEMENTAL ACTION TAKEN

- ECO G936-002
- MCN _____
- TECH TIP _____
- OBSOLETE _____

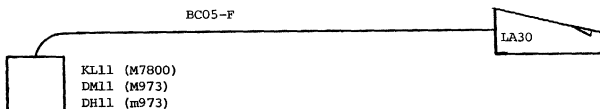
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Title LA30 11 Family interconnections						Tech Tip Number LA30-TT-15	
All 11's	Processor Applicability				Author John Alston	Rev #	Cross Reference
					Approval B. Dimbat	Date 6/1/73	

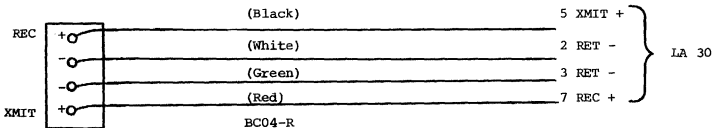
1. Current Mode (20 ma)



+XMIT	AA	(White)	5	5	(White)	7	REC +
-RET	KK	(BLK)	2	2	(Black)	3	RET -
+REC	K	(Green)	7	7	(Green)	5	XMIT +
-RET	S	(Red)	3	3	(Red)	2	RET -



+XMIT	C1	5	(White)	7	REC +
-RET	D1	2	(Black)	3	RET -
+REC	J1	7	(Green)	5	XMIT +
-RET	M1	3	(Red)	2	RET -



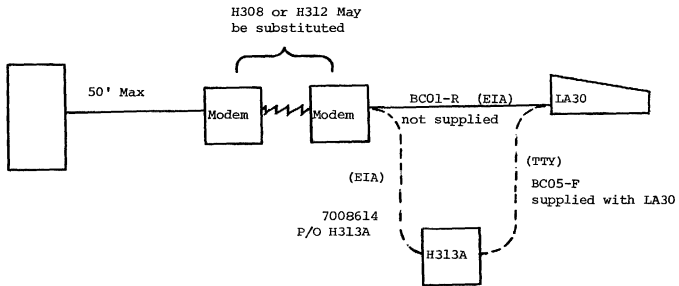
.DJ11 - H317 A Dist. Panel

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Title LA30 11 Family Interconnections				Tech Tip Number LA30-TT-15	
All Processor Applicability		Author J. Alston	Rev g	Cross Reference	
11's		Approval B. Dimbat	Date 6/1/73		

2. EIA Level



DL11 BC05-C (Supplied)
 DC11 BC01-R (Supplied)
 DM11 BC01-R (Supplied)
 DJ11 BC05-D (Not Supplied)

EIA to TTY
 Level Converters

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Title LA30 - LINE FEED ADJUSTMENT						Tech Tip Number LA30-TT#16	
All Processor Applicability						Author V. Erdekian Rev 0	
X						Approval J. Sarasin Date 12/20/73	
						Cross Reference	

Appendix I

PROCEDURE FOR ADJUSTING LINE FEED SOLENOID

SUMMARY: Find a range of values within which the line feed solenoid operates properly (diagnostic test passes). Use the center of the range for the final adjustment.

DETAILED PROCEDURE

1. On line feed solenoid, loosen adapter locknut. (Index #79 in LA30 manual, figure A-1.)
2. With solenoid in rest position, rotate the solenoid armature (CCW as viewed from top) until the tooth of the pawl contacts the ratchet tooth. Mark a reference line on the solenoid and armature.
3. Back the armature off (CW) 3/4 turn and lock it in place with the locknut.
4. Run part 2 of the line feed quality test in the exerciser test* and note if it passes the test. If it does (see note at end of section). If it does not pass the test, then do the following:
 - a. Loosen locknut
 - b. Back armature (CW) 1/8 of a turn
 - c. Run diagnostic test

If it does operate properly this is the lower limit of your range; if not, keep testing at increments of 1/8 until you find the first place where it operates properly. (Note this as your lower limit.)

5. Having found your lower limit, at increments of 1/8 CW, apply the diagnostic test until it stops operating properly (this is the upper range of acceptance).

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Title LA30 LINE FEED ADJUSTMENT				Tech Tip Number	LA30 TT#16
All	Processor Applicability	Author V Erdekian	Rev g	Cross Reference	
X		Approval J. Sarasin	Date 12/20/73		

6. Finally, adjust armature at the halfway distance between operating limits that were found.

NOTE: Turn armature back CCW at increments of 1/8th turns and do the diagnostic test until it is not operating properly (this is your lower limit now). Go to step 5 and continue.

*Note: Maindec 08 DHELLA-B, Decwriter (LA30) control-exerciser test. For an 11 system toggle in program given in Appendix III. The diagnostic for the 11 system is being updated to include the new test.

In a PDP-15 system use MAINDEC-15-DZLAA-B, LA30 diagnostic as follows:

- Set ACS 03 and 05 = 1
Set ACS 15 = 1 if 300 baud
Set ACS 16 = 1 if LA30P
- Start program at 202. When the line feed quality test begins, raise ACS 02 to lock onto this section, and proceed with your adjustments. (The LFQ test is preceded by 80 column margin and carriage return tests. Either of these may be aborted by typing "Control C").

Title										Tech Tip	
LA30 LINE FEED ADJUSTMENT										Number	
Processor Applicability										LA30-TT#16	
All										Author	Rev
X										V. Emekian	g
										Approval	Date
										I Sarasin	12/20/73
										Cross Reference	

TECH. TIP

LA30 Line Feed (L/F) adjustment.

NOTE: This adjustment is for LA30's using one or two part paper.

First: Follow the procedure outlined in Appendix I for adjusting the L/F solenoid.

Second: If the L/F still does not operate correctly, follow the procedure outlined in Appendix II.

Third: If the L/F still does not operate correctly, change the L/F solenoid assembly, i.e. DEC Part Numbers:

12-11026
12-10473
12-10495
90-09061
12-10496
12-10342
90-06563

Note: Before putting the parts together check that part number 12-10473 (spring) fits over part number 90-09061 (nut) loosely. (At least .010" clearance.) Part number 90-09225 (mylar washer) is not part of the assembly. It has been taken out by ECO #71.

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Title LA30 - LINE FEED ADJUSTMENT				Tech Tip Number	LA30 TT#16
All	Processor Applicability	Author V. Erdkian	Rev 0	Cross Reference	
X		Approval J. Sarasin	Date 12/20/73		

Appendix II

PROCEDURE FOR CHECKING THE ELECTRICAL PORTION OF THE L/F SYSTEM.

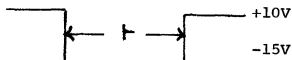
Examine the signal on the terminals of the G381 module while local line feed switch is depressed.

Terminal

Waveform

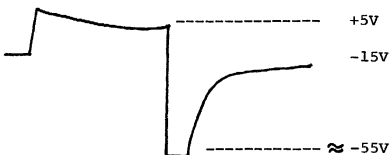
Specification

G381-TB1



$t = 12$ to 18 msec.

G381-TB4



These waveforms indicate that the line feed solenoid is receiving the proper electrical signal.

Title						Tech Tip	
LA30 LINE FEED ADJUSTMENT						Number	
Processor Applicability						LA30 TT#16	
All						Author	Rev
X						V. Erdekian	g
						Approval	Date
						J. Sarasin	12/20/73
							Cross Reference

Appendix III

Toggle in the following program for an 11/05, 11/20 and 11/45.
 (This will serve as a test for line feed until the 11 diagnostic
 is updated).

<u>Location</u>	<u>Data</u>
0	012700
2	000030
4	012701
6	177564
10	010102
12	005722
14	005003
16	105711
20	100376
22	012712
24	000015
26	010005
30	006205
32	006205
34	006205
36	060500
40	010004
42	005304
44	100404
46	010405
50	005305
52	100773
54	000775
56	105711
60	100376
62	012712
64	000012
66	105711
70	100376
72	012712
74	000134
76	005203
100	022703
102	000040

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Title LA30 LINE FEED ADJUSTMENT					Tech Tip Number TT#16
Processor Applicability			Author V.Erdekian	Rev 0	Cross Reference
All			Approval J.Sarasin	Date 12/20/73	
X					

104 001735
106 000747

To run program:

- a. Load Address 0
- b. Start

The program will stay in a loop, until you halt.

Title LA-30 Special Tools					Tech Tip Number LA30 TT #17
Processor Applicability			Author Jerry Sarasin	Rev 0	Cross Reference
All			Approval Chris Ball	Date 1-29-74	
X					

When attempting repair or adjustment, a special tool is needed. Lack of a bristol wrench will prevent any adjustment of the left hand margin or installation of the carriage stepping motor. The following bristol wrench has proven adequate, or a complete set can be ordered under the DEC part number.

DEC NUMBER
29-16131

BRISTOL NUMBER
DA-096

Title LA30 Voltage & Hertz Conversion Chart						Tech Tip Number LA30-TT-#18		
All X	Processor Applicability					Author Jerry Sarasin	Rev 0	Cross Reference
						Approval Chris Ball	Date 1-29-74	

LA30 VOLTAGE & HERTZ CONVERSION CHART
(CHANGES TO H735 POWER SUPPLY PER PRINT SET)

PRIMARY TERMINAL CONNECTIONS

LA30 CONFIGURATIONS

<u>INPUT VOLTAGE</u>	<u>JUMPERS</u>	<u>LINE CONN.</u>	
+15 ± 1Hz			
115V 60Hz	4-7, 5-2	4,5	PA-CA-EA
240V 60Hz	2-7	4,5	PB-CB-EB
115V 50Hz	4-8, 5-1	4,5	PC-CC-EC
240V 50Hz	1-8	4,5	PC-CD-ED

SECONDARY TERMINAL CONNECTIONS

<u>OUT PUT CONN.</u>	<u>JUMPERS</u>	<u>POWER SUPPLY W/RATINGS</u>	
•12-15-18	-	15-16.6 VDC 8A. 60Hz	PA-CA-EA
14-15-16	-	10-11.5 VDC 8A. 60Hz	PB-CB-EB
11-15-19	-	15-16.6 VDC 8A. 50 Hz	PC-CC-EC
13-15-17	-	10-11.5 VDC 8A. 50 Hz	PD-CD-ED
CAP. (2MF-660V) 10		60 Hz	PA-CA-EA-PB-CB-EB
CAP. (2MF-660V) 9		50 Hz	PC-CC-EC-PD-CD-ED

NOTE: For input voltages 200VAC and above replace 5AMP Circuit breaker (12-10191-1 with 2.5 AMP circuit breaker (12-10191-2).

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	12 Bit <input checked="" type="checkbox"/>	16 Bit <input checked="" type="checkbox"/>	18 Bit <input checked="" type="checkbox"/>	36 Bit <input checked="" type="checkbox"/>	LA30	
Title Conversion of LA30 Parallel to LA30 Serial					Tech Tip Number LA30 TT #19	
All X	Processor Applicability			Author Jerry Sarasin	Rev 0	Cross Reference
				Approval Chris Ball	Date 1-29-74	

CONVERSION OF LA30 PARALLEL TO LA30 SERIAL *

PARTS REQUIRED:

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
74-9541	Serial Bezel	1
54-9914-2	Serial Switch Ass'y	1
M7389	Module	1
M7731	Module	1
M598	Module	1
M973	Module	1
BC05F-15	Cable	1
12-2116-1	Light	1
90-07129	Clip	1

PROCEDURE :

1. Remove Parallel Keyboard Bezel and Switch Ass'y from machine.
2. Remove Switch Assembly from Keyboard Bezel.
3. Pre-Assemble Serial Switch Ass'y to Serial Bezel using same hardware used on Parallel Switch Ass'y.
4. Install Serial Keyboard Bezel and Switch Ass'y onto base, using same hardware used on Parallel Ass'y.
5. Remove G8004 Module from Logic (Slot AØ8).
6. Insert M7389 Module into Slot A/B-20.
7. Insert M7731 Module into Slot A/R-19.
8. Insert M598 Module into Slot A-18.
9. Insert M973 Module into Slot B-18.
10. Insert one end of BC05F-15 Cable into M973 Module.

NOTE: The above procedure assumes that the parallel LA30 has the latest revision which is as follows:

1. New style Logic Hinge (90 degree bend on hinge that fastens to control box) (12-10908).
2. New style Rear Door accomodate new logic hinge (74-9491).
3. ECO #75 is installed in machine and logic to K rev.

* LA30PA-PB-PD to LA30CA-CB-CC-CD.

Title Conversion of LA30P to LA30E							Tech Tip Number LA30 TT #20		
All X	Processor Applicability						Author Jerry Sarasin	Rev 0	Cross Reference
							Approval Chris Ball	Date 1-29-74	

CONVERSION OF LA30P TO LA30E*

PARTS REQUIRED:

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
74-9541	Serial Bezel	1
54-9914-2	Switch Ass'y	1
M7389	Module	1
M7731	Module	1
M594 (REV "B")	Module	1
M970	Module	1
BC01R-25	Cable	1

PROCEDURE:

1. Remove parallel keyboard bezel and switch ass'y.
2. Remove switch ass'y from keyboard bezel.
3. Pre-assemble serial switch ass'y to serial bezel using same hardware used on parallel switch ass'y.
4. Install serial keyboard bezel and switch ass'y to base.
5. Remove G8004 module from logic (A08).
6. Insert M7389 into slot A/B/-20.
7. Insert M7731 into slot A/B-19.
8. Insert M594 into slot A-18.
9. Insert M970 into slot B-18.
10. Insert one end of BC01R-25 into M970 module.

NOTE: The above procedure assume that the parallel LA30 has the following parts.

1. New logic hinge (12-10908).
2. New style door (74-9491).
3. ECO #75 installed in unit.

*LA30PA-PB-PC-PC to LA30EA-EB-EC-ED.

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digital	FIELD SERVICE TECHNICAL MANUAL				Option or Designator
	12 Bit <input checked="" type="checkbox"/>	16 Bit <input checked="" type="checkbox"/>	18 Bit <input checked="" type="checkbox"/>	36 Bit <input checked="" type="checkbox"/>	LA30
Title Conversion of LA30 Serial to LA30 Parallel				Tech Tip Number	LA30 TT #21
All x	Processor Applicability	Author	Jerry Sarasin	Rev	0
		Approval	Chris Ball	Date	1-29-74
					Cross Reference

CONVERSION OF LA30 SERIAL TO LA30 PARALLEL*

PARTS REQUIRED:

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
74-9542	Parallel Bezel	1
54-9914-1	Parallel Switch Ass'y	1
G8004	Module	1
12-2116-1	Light	1
90-07129	Clip	1

PROCEDURE:

1. Remove serial keyboard bezel and switch ass'y from unit using the same hardware used on the serial ass'y.
2. Remove switch ass'y from keyboard bezel.
3. Pre-assemble parallel switch ass'y to parallel keyboard.
4. Install parallel keyboard bezel and switch ass'y onto base.
5. Remove M7389, M7731, M598, M973, and BC05P-15 cable from unit.
6. Install G8004 module into Slot A08.

NOTE: The above procedure assumes that the serial unit has ECO #75 installed and the logic is up to K revision.

*LA30CA-CB-CC-CD to LA30PA-PB-PC0Pd.

Title Conversion of IA30C to IA30E						Tech Tip Number IA30 TT # 22				
All x	Processor Applicability					Author	Jerry Sarasin	Rev	0	Cross Reference
						Approval	Chris Ball	Date	1-29-74	

CONVERSION OF IA30C TO IA30E*

PARTS REQUIRED:

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
M594 (REV "B")	Module	1
M970	Module	1
BC01R-25	Cable	1

NOTE: The above parts constitute an option called DF11A.

PROCEDURE:

1. Remove M598, M973, and BC05F15 cable from unit.
2. Insert M594, M970, and BC01R-25 into slots A-18, B-18, respectively.
3. Attach BC01R-25 to M970 Module.

*IA30CA-CB-CC-CD to IA30EA-EB-EC-ED.

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digital	FIELD SERVICE TECHNICAL MANUAL				Option or Designator LA30
	12 Bit <input type="checkbox"/>	16 Bit <input checked="" type="checkbox"/>	18 Bit <input checked="" type="checkbox"/>	36 Bit <input checked="" type="checkbox"/>	

Title Instructions for Installing Dura Head on LA30 Decwriters				Tech Tip Number LA30 TT #23	
All X	Processor Applicability		Author Jerry Sarasin	Rev 0	Cross Reference
			Approval Chris Ball	Date 1/31/74	

SUBJ: INSTRUCTIONS FOR INSTALLING DURA HEAD ON
LA30 DECWRITERS

- On slot A5 (head cable connector M963), unsolder the 3 black wires. These wires connect to ground lugs on power supply.
- Two wires will be crimped together on the power supply end. These may, or may not both go to slot A5. One may go to the chassis, insure that the wire from the chassis physically remains connected. (Clip extra black wire if needed.) Remove the 3 black wires from the power supply to module slot A5.
- Install green wire from module A5, (any of the pins that a black wire was disconnected from will do), and run to the power supply +10V lug. Use the double spade lug included if necessary.
- On older LA30s, insure there is still enough clearance to close module logic rack without interfering with +10 lugs.
- Install new head in the same manner as old head. Use 1/2 inch screws and washers included. The new head is a different thickness.
- Adjust the head gap to .012", using feeler stock. The new head has a lip on both the top and bottom. Use caution to insure feeler stock is not on the lips. (see diagram 2)

-- NOTES --