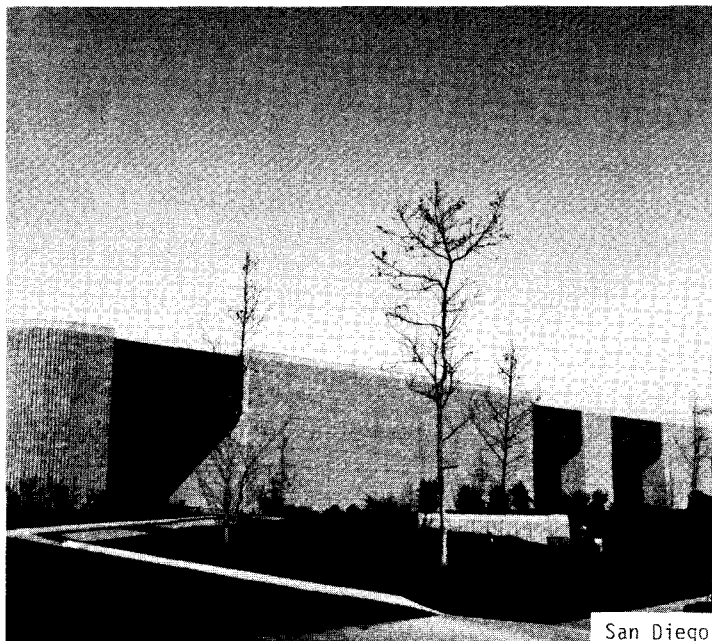


2215
7900

SERVICETEKNOTES



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TABLE OF CONTENTS

ANSWER SERVICE BULLETIN #22.	1
DC510/DC5010 INTERMITTENT OPERATION.	1
DM5010 OHMS CALIBRATION.	1
GMA125/4016/618 DM NEW H.V. TRANSFORMER.	2
R1340 TAC PR100 PROBER I/F, MOD #46750	2
S-3200 PDP-11 MULTI-INTERRUPT INTERFACE MODIFICATION #M47750	3
S-3200 RL02 DISK PART NUMBER	3
S-3200 SAMPLING VERDICT MANUAL	4
S-3200 SOFTWARE, PEDIT, DK6 AND DK7.	4
S-3200 SOFTWARE, TEKTEST III VERSION 4.2 AND 4.3 SUPPORT	4
S-3200 SOFTWARE VERSION 4.3 DLMAP.	5
TSG6 HI-LO RANGE FLATNESS.	7
TV MANUAL REVISIONS.	7
7D20 FIRMWARE UPDATE KIT	7
7L13/7L14 FREQUENCY TUNE ASSEMBLY.	8
143 REFERENCE OSCILLATOR CALIBRATION	8
528A EXCESSIVE BEAM CURRENT.	8
650A/650HR EHT REPLACEMENT	9
670A POWER SUPPLY RIPPLE	9
690SR/6942 COLORIMETRY SETTINGS.	9
834 CABLE CONVERSION MOD IMPLEMENTED IN TWO PHASES	10
1450 SERIES IF ATTENUATOR/AURAL DRIVE MOD.	10
1450 SERIES SEMI-RIGID COAX.	10
1450-1 ADJACENT CHANNEL INTERFERENCE	12
1450-2 OPTION 9.	12
1480 Z AXIS MODULATION	12
1800 TEST STATION STOP SIGNAL TIMING, M47482	13
2213/2215 IMPLOSION SHIELD HOUSING HARDWARE CHANGED.	13
4016/4116A DISPLAY LVPS MODULE	13
4041 ROLL PRINTER PAPER MAY BE THE WRONG TYPE, AND CAUSE DAMAGE TO THE THERMAL PRINTER.	13
4643 PRINTER SWITCH SETTINGS	14
4909 HEAD CRASH KITS	15
7700/7800/7900 MODE SWITCH REPLACEMENT	15

ANSWER SERVICE BULLETIN #22

RE: 1980 Service Manual (Interim),
061-2290-01

Beginning at serial number B030000, several modifications were made to the 1980 to enhance its performance. Two of these concern the Video Acquisition Memory, A18, 670-5692-00, and the Video Acquisition Memory Controller, A20, 670-5694-00.

In order to insure the operation of the Video Acquisition Memory at 4 times PAL subcarrier, this board was redesigned, and the Controller board got some wire straps added and a few circuit board runs cut. The results of this modification give us a compatibility problem, i.e. the 670-5692-00 board only works with the 670-5694-00 board, and the 670-5692-01 board only works with the 670-5694-01 board.

Those of you that have board kits to support the 1980 should have one of each of these boards in both versions in your kit in order to be able to support any given 1980 in the U.S.

1980's sold in Europe should all be serial #B030000 or greater, and should only have the latest versions of these boards installed from the factory.

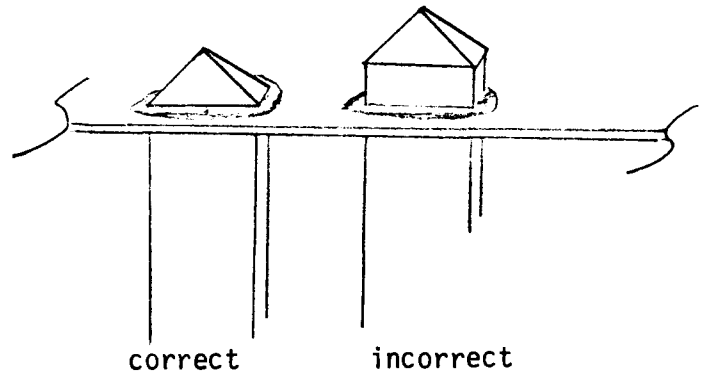
W² Issue 13-5

DC510/DC5010 INTERMITTENT OPERATION

Reference: A12, J1102 Analog Board

Intermittent operation of the counter can result when the pins of J1102 (A12) work loose at P1102 on the A18 auxiliary board. Manufacturing, on some instruments, failed to solder the pins of J1102 correctly to the board. The illustration shows correct positioning of the pins, with the pyramidal top just showing,

as compared to the incorrect positioning with too much of the shaft pushed through the board. The result of too much shaft pushed through the board is the pins of J1102 (A12) working away from their connection at P1102 of (A18) causing intermittent operation, and possibly a 313 serial path error.



Recommended repair of J1102 is replacement of the pins with a new set (pulling out and replacing the pins is easier than realigning the old pins).

W² Issue 13-6

DM5010 OHMS CALIBRATION

Reference: Adjustment Procedure, Pg. 6-5, Step 4, Table 6-5

The procedure for adjustment the Ohms gain calibration factors, step 4, lists Table 6-5 with the values shown in multiples of 19 (example: .1900 M Ohms, 1.900 M Ohms, etc.). To enter the calibration value, key in the number as a value of Ohms. For example 1.9 K Ohms would be entered as 1900.0, or if the standard value is 1.8998 K Ohms the value would be keyed in as 1899.8, 1.9 M Ohms would be 1900000, or 190 Ohms would be 190.00. For large numbers, as the zero or numbers are pushed

(ARTICLE CONTINUED ON THE NEXT PAGE)

DM5010 OHMS CALIBRATION (cont.)

the display will show the range and the decimal point according to the range. (Example: 1900.00 punched in will display 1.9000 with the kilo L.E.D. lit.) Failure to enter the values correctly will produce a 232 error code after pressing the enter key. Remember, to enter the calibration value, key in the number as a value of Ohms for correct operation.

W² Issue 13-4

GMA125/4016/618 DM NEW H.V. TRANSFORMER

A new high voltage transformer, 120-1215-01, is now available from Customer Service. The old transformer, 120-1215-00, located on high voltage Z-axis board, 670-5682-0X, was redesigned to increase the reliability of that part. A typical symptom is arcing at the bobbin of the old transformer.

W² Issue 13-6

R1340 TAC PR100 PROBER I/F, MOD #46750

Reference:

TACPR100 Prober I/F, 021-0269-00
Option 658 Mode
070-4240-00, TAC PR100 Instruction
Manual

Modification M46750 Corrects two TACPR100 problems.

1. X address information overwrites Y address information causing incorrect wafer placement when operating in the Option 658 mode.
2. The Test System will intermittently cycle to "INTEST" when the handler is powered off.

All modifications are done to the backside of the TAC PR100 Prober Output IF Circuit Board. The board P/N 670-5654-00 changes to 670-5654-01 after the mod is installed.

Modifications:

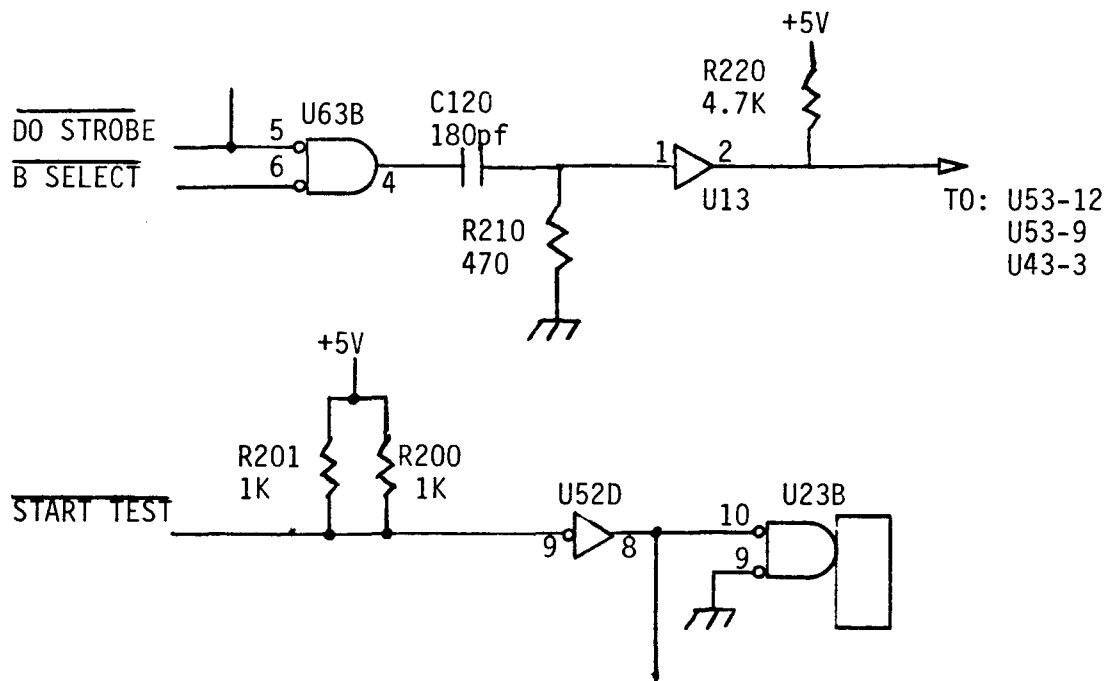
1. Cut run between U63 pin 4 and U53 pin 9.
2. Add capacitor C120 (180PF, 283-0641-00) between U63 pin 4 and U13 pin 1.
3. Add resistor R220 (4.7K, 315-0472-00) between U13 pin 14 and U13 pin 2.
4. Add resistor R210 (470 ohm, 315-0471-00) between U13 pin 7 and U13 pin 1.
5. Add wire (0.4 ft., stranded, 26AWG, 9-0, 300V, from U13 pin 2 to U43 pin 3.
6. Add wire strap from R200 pin 8 to R201 pin 8. Use same type wire as in Step 5.

STEP 1 through 5 will shorten the X and Y load signals to 80 NS eliminating the problem of data changing state during an enabled condition.

STEP 6 will lower the value of R200 to 500 ohms. This will raise the voltage level and increase the noise immunity eliminating the cycle to "INTEST" when the handler is powered off.

(ARTICLE CONTINUED ON THE NEXT PAGE)

R1340 TAC PR100 PROBER I/F, MOD
#46750 (cont.)



070-4240-00 Prober Output, Page 4

Schematic shown with mod M46750 installed.

W² Issue 13-3

S-3200 PDP-11 MULTI-INTERRUPT INTERFACE
MODIFICATION #M47750

U450A P/N 156-0481-02, which is used to gate the set signal for the ASSERT select circuitry may generate noise causing random failures. The intermittent condition may be observed while running PPVR1.TST:VDT. U450 is located on the smaller piggyback board P/N 670-3263-03 which is part of the P3 Control assembly P/N 672-0705-01. The original U450 should be replaced with a triple three input AND gate which is a checked type 7411 microcircuit. The part number is 156-0163-01. The part number of the board and of the control assembly 672-0705-01 will not change due to this mod.

W² Issue 13-4

S-3200 RL02 DISK PART NUMBER

An error-free (checked) disk cartridge for the D.E.C. RL02 Disk Drive is now orderable. The part number is 119-1585-00. Only an error-free RL02 disk can be used with Tektest software.

W² Issue 13-3

S-3200 SAMPLING VERDICT MANUAL

Manual 062-3415-00

ADDENDUM TO VERDICT III SYSTEM
DIAGNOSTIC PROGRAMS

The S-3200 Series Semiconductor Test Systems may have a sampling option used to digitize DUT signals. This option was previously called System Option 20 and is now called the S-3032. The 062-3415-00 manual contains the Waveform Digitizer Verdict Tests. A brief description of these tests follows:

F210.TST, VMOD20.EDT; VERTICAL TEST

The VMOD20 Test checks the sampling head bridge balance, 3S6 programmable offset, 3S6 vertical gain, digitizing of both channels simultaneously, and digitizing in the park mode.

F215.TST, VMOD21.EDT; HORIZONTAL TEST

The VMOD21 Test Checks the 3T6/651C sweep rates and delays.

F220.TST, VMOD22.EDT; CHOPPER REEDS TO GROUND

The VMOD22 Tests the continuity of the DUT ground chopper reeds 1 and 2 in the I/O panel 015-0242-00.

F230.TST, VMOD23.EDT; VERTICAL AUTO CAL

The VMOD23 test checks vertical reference of the sampling with the DC Subsystem and then the sampling option. A review of the test description is highly advised prior to troubleshooting problems related to this test.

F235.TST, VMOD24.EDT; HORIZONTAL AUTO CAL

The VMOD24 Test checks the 3T6 sweep rates and delays with the horizontal reference.

Note: The F230 and F235 Autocal Tests require the 3T6 to be triggered prior to test measurements.

The 062-3415-00 manual provides information regarding the signal paths and the system circuits used for each test. This manual is very beneficial to service personnel in troubleshooting sampling problems.

W² Issue 13-3S-3200 SOFTWARE, PEDIT, DK6 AND DK7

The Tektest III PEDIT program will not operate on the last 2/3's of DK6 or any of DK7. It is, therefore, recommended that only DK0 through DK5 be used when operating the PEDIT Program.

W² Issue 13-6S-3200 SOFTWARE, TEKTEST III VERSION 4.2 AND 4.3 SUPPORT

Tektest III operating software Versions 4.2 and 4.3 are currently being sold. Tektest III, Version 4.2 supports RK05 disk drives only. Tektest III, Version 4.3 supports both RL02 and RK05 disk drives.

All users of Version 4.0 should consider updating to Tektest III, Version 4.2 (RK05 compatible) or Version 4.3 (RK05 and RL02 compatible). Both Versions 4.2 and 4.3 have enhanced operating software plus the capability of adding the networking software option. All programs written in Tektest III, Version 4.0 are compatible with Version 4.2 and 4.3. For the system programmer some user generated functions and subroutines may need to be reprogrammed.

For those using the Software Update Program complete support of Versions

(ARTICLE CONTINUED ON THE NEXT PAGE)

S-3200 SOFTWARE, TEKTEST III VERSION
4.2 AND 4.3 SUPPORT (cont.)

4.2 and 4.3 is available. Because all software fixes and enhancements are in Version 4.2 and 4.3 these will be the only programs needed on the update. This will improve and ease the software updating task.

Users of Tektest III system software can obtain updates to current software per either of the following two options.

A. For those under Maintenance Agreement

1. Users having a maintenance agreement can receive updated system software by contacting the Field Service Center responsible for maintaining their system. There is no charge for this service. However, Tektest III, Version 4.3 as a complete package is a salable product. It will, therefore, not be provided as an update to a system that is currently being operated with Version 4.2 software.

B. For those not under a Maintenance Agreement

1. User may order a complete system update by contacting their Field Sales Office. There will be a nominal charge.

All requests will need to be accompanied by a completed system configuration worksheet to ensure that an accurate formatter is sent with the software update.

W² Issue 13-4

S-3200 SOFTWARE VERSION 4.3 DLMAP

In Tektest III, Version 4.3 each disk has its own disk assignment map which is brought into the system

monitor when the disk is booted. The purpose of the disk assignment map is to control access to the disk drives. Any RK05 or RK05 image on an RL02 can receive a DK number ("0" through "7") in the disk assignment map. There needn't be any correspondence between device name (DKn) and the physical device (hardware).

The changing of this assignment map is done with "DLMAP" or "DLMAP,DKn" (n being the device number desired). Each of these two DLMAP commands serves a different purpose. DLMAP will allow modification of the disk assignment map in the monitor for those physical devices already declared. DLMAP,DKn will allow the modification of disk assignment map on the disk. To access those physical devices not declared on the map DLMAP,DKn must be used.

DLMAP

For DLMAP an example would be, if RK05 Drive 0 was declared as DK3, DLMAP would allow the user to declare it as DK0. The real advantage of DLMAP is with RL02 drives. An RL02 contains up to 4 RK05 images and is divided into sections A, B, C and D. For an example, imagine an assignment map that declares RK05 drives 0 through 5 as corresponding to DK0 through DK5, and DK6 and DK7 corresponding to RL02 Drive 0 Parts A and B. Access to parts C and D of the RL02 can be accomplished by using DLMAP to change the assignment map in monitor. Again remember, DLMAP will only allow access to those physical devices (RK05 or RL02) declared in the disk assignment map.

DLMAP,DKn

To access those physical devices not declared in the disk assignment

(ARTICLE CONTINUED ON THE NEXT PAGE)

S-3200 SOFTWARE VERSION 4.3 DLMAP (cont.)

map use DLMAP,DKn (n=number of the disk that will be changed). An example of this might be the use of the system build mag tape. When the system disk is built from this mag tape, the default map is RK05 Drive 0 through 3 as DK0 through DK3 and RL02 Drive 0, part A through D as DK4 through DK7, as shown below:

\$DLMAP

Device Name	Physical Device
DK0	RK05-DRIVE 0
DK1	RK05-DRIVE 1
DK2	RK05-DRIVE 2
DK3	DK05-DRIVE 3
DK4	RL02-DRIVE 0 PART A
DK5	RL02-DRIVE 0 PART B
DK6	RL02-DRIVE 0 PART C
DK7	RL02-DRIVE 0 PART D

As an example for a system that has two RL02 drives, the above default map will allow a user access to only RL02 Drive 0. Using DLMAP to modify the monitor would not allow access to the second RL02. The second RL02 is not a physical device in the map, therefore, it is not accessible. At the console terminal, run DLMAP,DK <and the number of the system drive>. This example uses a system build from mag tape to RL02 drive 0, so the DK number is DK4. The drive map will then be displayed and the user will be asked if they wish to modify the current map. By answering yes, the disk pack assignment map can be changed.

The program will ask for the Device Name. This will be the DKn you wish to change. The program will then display what is currently assigned to that DKn. Next the user will enter the type of physical device to be assigned, RL for RL02 and RK for RK05. For this example, enter

"RL." The unit number will then be requested. This will be the physical device drive number of the unit. Because, in this example, an RL02 is being assigned the program will request which part of the RL02 is desired - A, B, C, or D. The last statement will show what DKn is now assigned. The program will then display "Device Name." By pressing "return," the program will end and the new assignment map will be on the disk pack. For this example, there would be a need to repeat the assignment of the DKn until parts A, B, C, and D of both RL02's have each been assigned a DKn. Below is an example of the first reassignment of the just described procedure.

Device Name: DK0

DK0 Currently Assigned to RK05-Drive 0
 New Physical Device (RK, RL) : RL
 Unit Number: 0
 Part (A,B,C,D): A
 DK0 RL01/02-Drive 0, Part A

Device Name:

Once the assignment map is completed, the system must be rebooted so that the new map assignment is loaded into the monitor.

Now by running DLMAP the map for the RL02 could look as shown below. Remember this is an example. The user can arrange the assignments as desired.

DL MAP

Device Name	Physical Device
DK0	RL02 DRIVE 0 PART A
DK1	RL02 DRIVE 0 PART B
DK2	RL02 DRIVE 0 PART C
DK3	RL02 DRIVE 0 PART D
DK4	RL02 DRIVE 1 PART A
DK5	RL02 DRIVE 1 PART B
DK6	RL02 DRIVE 1 PART C
DK7	RL02 DRIVE 1 PART D

(ARTICLE CONTINUED ON THE NEXT PAGE)

S-3200 SOFTWARE VERSION 4.3 DLMAP (cont.)

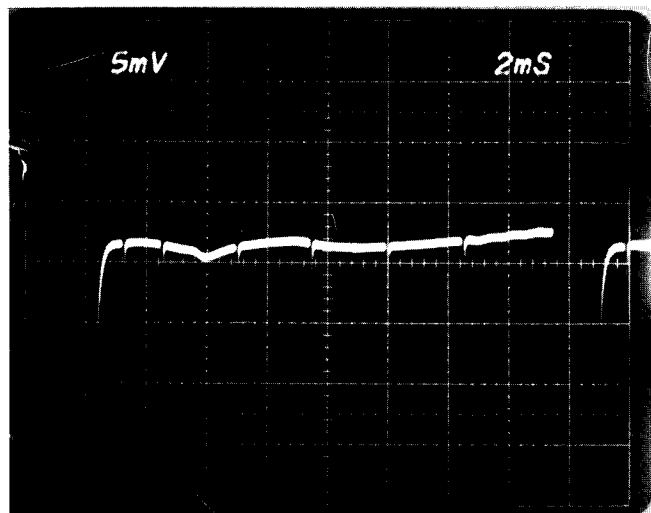
The temporary description for version 04.3A;7 of the description for DLMAP that has been supplied with Tektest III, Version 4.3, needs to be corrected. The last line in the first paragraph following the display for modifying the current map on page 12 should read:

"If the physical devices are not assigned in the default assignment map, they cannot be specified later when attempting to modify the monitor copy of the map by using the DLMAP command."

NOTE: It should be "physical devices" not "virtual devices."

W² Issue 13-4

LOW RANGE



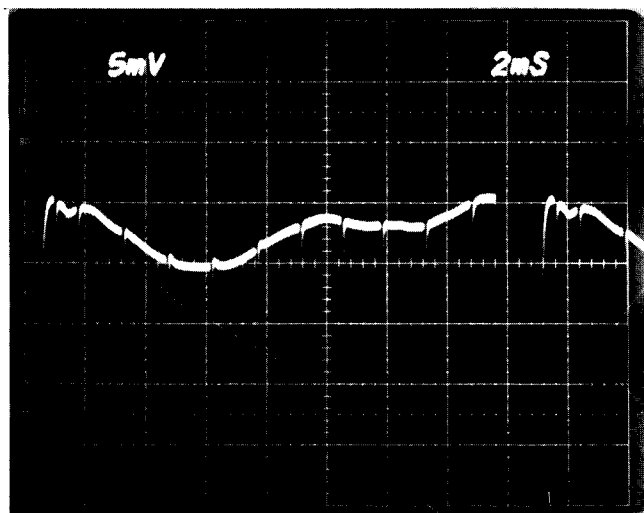
W² Issue 13-6

TSG6 HI-LO RANGE FLATNESS

REF: TSG-6 Manual P/N 070-2528-00

While calibrating the frequency response flatness of the TSG-6, some technicians have noticed that the waveforms are somewhat irregular. The two photos below show typical flatness waveforms. The irregularity is acceptable provided that the response specs are met in each case.

HIGH RANGE



TV MANUAL REVISIONS

The following manuals were revised/updated as of January 1983.

653HR/656HR	070-2647-00
381	070-3422-00
TSG3	070-2108-01
1470	070-2096-00
143	070-2204-00
1480 (B060000 & Above)	070-2338-00
528AWJ	070-4241-00

W² Issue 13-5

7D20 FIRMWARE UPDATE KIT

RE: CORPORATE MOD #M49406

The 7D20 firmware version 1.01 has been found to contain a problem in the GPIB Talk Only mode. A kit has been generated to clear up this problem. The kit contains new parts and installation instructions plus new signature tables. It can be ordered by P/N 050-1741-00.

W² Issue 13-4

7LXX SERVICE WRENCH

There is available an extra thin 5/16 x 5/16 six point box and open end wrench designed for use on the 3MM connectors of the 7L18 and also useful with the 7L12, 7L13, and 7L14. The part number is 003-0838-00.

W² Issue 13-6

7L13/7L14 FREQUENCY TUNE ASSEMBLY

RE: M46539

Because of the lack of positive release in the clutches of the 7L14 Frequency Tune Assembly (A70), new clutches have been installed and the part number changed from 119-1307-00 to 119-1307-01. The replacement of the clutches required changes on the Tune Control Circuit Board (A72), P/N 670-6055-00, and its part number changed to 670-6055-01.

The 119-1307-00 Frequency Tune Assembly will no longer be available from the Exchange Center and replacement will require installation of Parts Replacement Kit 050-1719-00. This 050 Kit must also be used for replacement of any of the following: 119-0514-00 Clutch, 119-0514-01 Clutch, and 670-6055-00 Tune Control Board. The new 119-1307-01 Frequency Tune Assembly will be available from the Exchange Center.

For the 7L13 the following applies. For field replacement of A2200 Frequency Tune Assembly or A2200A1 Tune Control Circuit Board, use 050-0700-01 if S/N is B060225 and below and use 050-1718-00 for S/N B060226 and above.

W² Issue 13-6

143 REFERENCE OSCILLATOR CALIBRATION

REF: 143 Manual 070-2204-00
Mod 48141

While adjusting the 8.5 MHz oscillator on the Reference Oscillator circuit board,

C208 has been almost completely meshed in order to work properly.

If L207 were to be replaced, it had to be selected for a value near the high end of its specifications in order to function.

This modification changes the nominal value of C148 to 190pf (P/N 283-0665-00) and designates the part as test selectable, thereby allowing this tank circuit to operate near the design center of its range.

The replaceable circuit board assembly becomes a 672-0679-01.

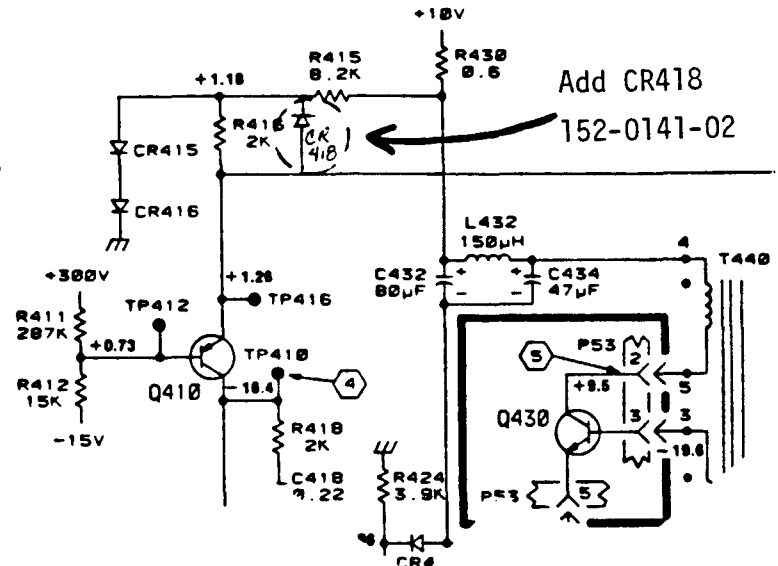
W² Issue 13-5

528A EXCESSIVE BEAM CURRENT

REF: 528A Manual 070-3662-00
Mod 49237

During high intensity operation, excessive beam current has caused Fuse F542 to beam.

Figure A
Partial Schematic



(ARTICLE CONTINUED ON THE NEXT PAGE)

528A EXCESSIVE BEAM CURRENT (cont.)

Mod 49237 adds a catch diode (P/N 152-0141-02) to the circuit, and changes F542 to a 1 Amp fuse (F/N 159-0020-00). This will prevent failures of the fuse irregardless of where the screen intensity is set.

Add this mod (see Figure A) where this problem has occurred.

W² Issue 13-4

Equipment settings are:

1410 HI = 100IRE LO = 7.5IRE
1411 HI = 100% LO = 0%
067-1039-00 HI = WHITE LO = BLACK

NOTE: The 7.5IRE Flat Field from the 1410 is from Black Burst with setup. Black from the 067-1039-00 is obtained with all left hand side push-buttons out.

650A/650HR EHT REPLACEMENT

REF: 650A Manual 070-2234-00
650HR Manual 070-2646-01

When replacing the EHT supply with the latest version, an anode tool, P/N 003-0891-00, should be added to the 650. This tool replaces previous P/N 003-0728-00, and is only needed where a 119-0320-06 or older version is replaced with a 119-0320-08.

W² Issue 13-4

670A POWER SUPPLY RIPPLE

REF: 670A Manual 070-2201-01

The following is a list of maximum ripple specs for the 670A power supplies.

SUPPLY	RIPPLE
+120V	100mV
+15V	30mV
-15V	10mV
+5V	30mV

W² Issue 13-5

690SR/6942 COLORIMETRY SETTINGS

W² Issue 13-5

REF: 690SR Manual 070-2870-00

The following numbers are currently being used for setting colorimetry with a J16 on the 690SR and 6942.

	RED μW/CM ²	GREEN μW/CM ²	BLUE μW/CM ²	EQUIP. SETTING
Standard CRT	5.7	6.0	4.1	HI
510XMB22	0.029	0.030	0.021	LO
119-1522-00				
Option 25CRT	4.6	6.1	4.2	HI
510XNB22(CA)	0.023	0.031	0.021	LO
119-1523-00				
Controlled Phosphors				
Option 26CRT	4.5	3.8	4.1	HI
510XMB22(TA)N	0.023	0.019	0.021	LO
119-1524-00				
6942CRT	4.5	3.8	4.1	WHITE
510XMB22(TA)N	0.045	0.038	0.041	GREY
119-1524-00				
Option 27CRT	5.1	6.3	4.1	HI
510XMB22(EA)	0.026	0.032	0.021	LO
119-1546-00				
EBU Phosphors				

If a CRT is changed from one type to another, install a new colorimetry label over the old one (P/N 334-3412-00) and enter the new numbers as appropriate.

834 CABLE CONVERSION MOD IMPLEMENTED IN TWO PHASES

Modification M43241 changes several interconnect cables from solder-on to plug-on connectors. This mod will be implemented in two phases. In phase one, the cabling to and from the Control Assembly, 670-6927-01, will be changed to the plug-on type. In phase two, the processor and display assemblies, 670-6926-05 and 670-6928-01 respectively, will be changed. As a result, you may encounter instruments which have a mixed set of cables.

Part numbers for the new cables are:

A1P135: 175-5473-00
 A1P121: 175-2582-00
 A2P175: 175-5473-00
 A2P445: 175-5473-00
 A3P226: 175-2582-00

W² Issue 13-5

1450 SERIES IF ATTENUATOR/AURAL DRIVE MOD

REF: 1450-1 Manual 070-2200-01
 1450-2 Manual 070-2998-00
 1450-3 Manual 070-3660-00
 Mod 45746

In order to make calibration easier and insure specifications, two resistors were changed on the IF Atten/Mixer/Filter board (A22). R62 was changed from a 49.9 ohm resistor to a 154 ohm resistor (P/N 321-0115-00), and R74 was changed from a 49.9 ohm resistor to an 80 ohm resistor (P/N 321-0607-00).

These new parts have been designated as test selectable. The selection criteria is based upon the need to satisfy the following requirements.

A. Aural Signal-to-Noise should be a minimum of 75dB down. (Step 28 in the cal procedure.)

B. Gain through the board should be at least -20dBm. (Step 32 in the cal procedure.)

C. Mixer Balance should be at least 60dB down. (Step 13 in the cal procedure.)

NOTE: All three conditions should be satisfied together. The new nominal values have had a high success rate in Manufacturing.

If you have trouble making these specs in your present instrument, this mod should help.

W² Issue 13-4

1450 SERIES SEMI-RIGID COAX

RE: 1450-1 MANUAL, 070-2200-01
 MOD 40160

Mod 40160 changes the Phase Lock Interface board (670-5021-00) to a -01 version.

The main impact of this mod was to slightly lengthen the semi-rigid coaxial cables on the rear of the board, thereby insuring a better mechanical connection. The new cables are:

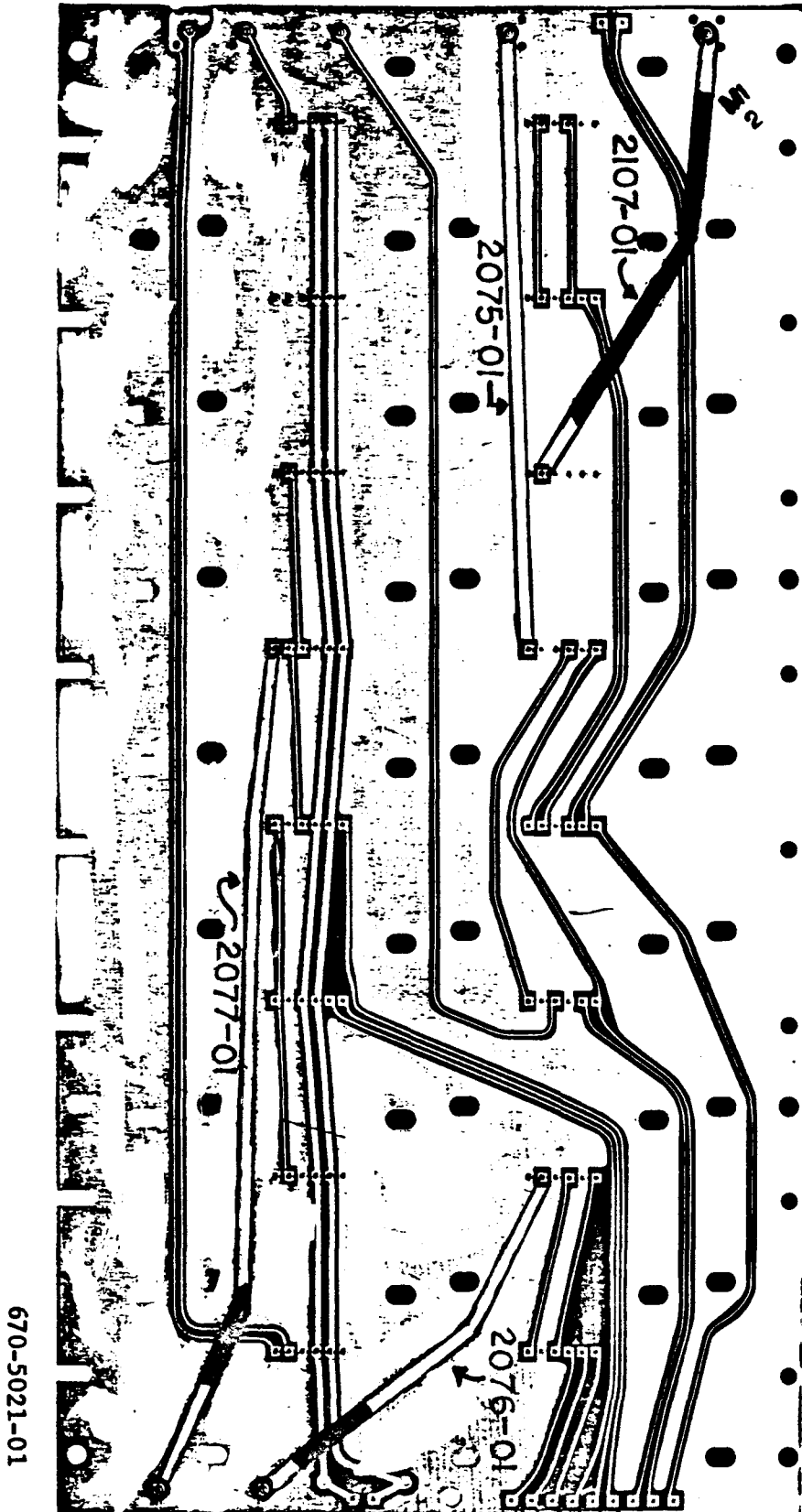
175-2075-01 1 ea
 175-2076-01 1 ea
 175-2077-01 1 ea
 175-2107-01 1 ea

The replacement of these cables is illustrated in the attached diagram.

The new numbers should be used when replacing the corresponding cable on an earlier board.

(DIAGRAM ON FOLLOWING PAGE)

1450 SERIES SEMI-RIGID COAX (cont.)



1450-1 ADJACENT CHANNEL INTERFERENCE

RE: 1450-1 MANUAL, 070-2200-01

A field technician recently troubleshooting a 1450-1 for a spurious interference problem, found that an airport marker beacon transmitter was causing noise in a channel 5 unit.

The standard marker beacon transmitter is at 75.0 MHz and he was unable to determine why the 1450 under test was not filtering this signal out. Upon investigation by the factory, a transistor had failed, but was undetectable by manual stated procedures. Q85 had failed on the Narrow Band SAW Filter board, 670-5004-01.

To allow the technician to properly determine out-of-band characteristics, please change step 2, page 4-7 as follows:

Step 2c should read- ... zero is -54dBm.

Fig 4-4 power levels should be:
 Channel Carrier (F3) -28dBm
 Adjacent Carrier (F1) -28dBm
 Adjacent Sideband (F2) -34dBm

The manual will be updated as appropriate.

W² Issue 13-5

1450-2 OPTION 9

REF: 1450-2 Instruction Manual
 P/N 070-2998-00

Option 9 specified a group delay of +90/-170 nanoseconds for the 1450-2. Since this is the spec that all 1450-2's are using, the Option will be dropped from the catalog.

W² Issue 13-4

1480 Z AXIS MODULATION

RE: 1480 MANUAL, 070-2338-00
 MOD 45114

TV Manufacturing has implemented a mod (#45114) to eliminate a slight Z Axis or intensity modulation problem.

R6682 (diagram 13) becomes a 315-0122-00
 C6805 (diagram 14) becomes a 285-1104-00

If a customer indicates the presence of some Z Axis modulation, try changing these parts to the new values.

Once this change has been made and the modulation still exists, C6805 may be selected to tune the HV oscillator by the following procedure.

1. Measure the frequency of the HV Oscillator using a counter.
2. Measure the frequency of the unblanking rate at 10 μ sec/div.
3. Select C6805 for an HV oscillator frequency that is 225-300 Hz greater than 3 times the unblanking rate.
4. Only use the same type of capacitor as the 285-1104-00, i.e. a fixed plastic cap with a \pm 5% tolerance and a 200V rating. (Another 285-1104-00 may do the job).

These procedures will insure that the beat frequency of the HV Oscillator and the unblanking rate is fast enough not to be seen.

W² Issue 13-6

) 1800 TEST STATION STOP SIGNAL TIMING,
M47482

Reference: Connector Board #1

670-5573-04 1804, 1804A, 1804B,
1805 Test Stations
670-7510-01 1807 Test Station
670-7802-00 S3220 Automated LSI
Test System

Changing Diode CR111 (152-0141-02, 30V, 150mA 1N4152) on Connector Board #1 will speed up the Stop Signal to Octant #3. The new diode CR111 (152-0457-00, 25V, 150mA) will cause Q106's emitter voltage to drop causing it to turn on sooner and harder. The new diode ensures that the stop signal reaches all sector cards within the 110ns specified.

The connector Board #1 part numbers do not change.

) W^2 Issue 13-4

2213/2215 IMPLOSION SHIELD HOUSING
HARDWARE CHANGED

RE: 2215 MANUAL, P/N 070-3826-00
FIG 1 - 12

The 2 screws holding the Implosion shield housing have been changed to a new type that adds a slot in the head. This will allow removal with a T15 Torx bit or a standard screwdriver.

The new part number is 211-0690-01.

W^2 Issue 13-3

4016/4116A DISPLAY LVPS MODULE

REF: Mod M47770

) To maintain commonality between the 4016 and 4116A, a new number (620-0001-0X) has been picked up for the display LVPS module. This change became effective in

the 4016 beginning with serial number B061277. The new 620-0001-0X is the same as the 620-0310-0X except for the power cable (175-2464-00) and strain relief (343-0003-00) which have been deleted. When sending in a LVPS module from a 4016 or 4116A for exchange, be sure to leave the power cable pigtail and strain relief (with hardware) in the display unit.

W^2 Issue 13-5

4041 ROLL PRINTER PAPER MAY BE THE
WRONG TYPE, AND CAUSE DAMAGE TO THE
THERMAL PRINTER

RE: PART #'S 006-3557-00 (SINGLE
ROLL) AND 006-3557-01 (4 ROLLS)

The part numbers referenced are correct, but there is a possibility that there is mixed stock.

The correct Roll Printer Paper should have the following correct dimensions.

Paper Width = 60mm (2 3/8 inch,
approximately)
Roll Diameter = 50.8mm (2 inches,
approximately)

It is important that the "Roll Printer Paper" is of the proper dimensions (especially width) because if the wrong paper is used, it could cause damage to the thermal printer.

Return incorrect stock for credit.

W^2 Issue 13-4

4643 PRINTER SWITCH SETTINGS

SWITCH DESCRIPTIONS:

- S1-1) STOP BITS: ON-ONE STOP BIT OFF-TWO STOP BITS
 -2) DTR (DATA TERMINAL READY) FLAGGING METHOD: ON-NORMAL OFF-ADDITIONAL FALSE PULSE
 -3) DTR (DATA TERMINAL READY) ON-MARK (LOW) OFF-SPACE (HIGH)
 -4) DC1/DC3 FLAGGING ENABLE: ON-ENABLED OFF-DISABLED
- S2-1) RECEIVE LINE SIGNAL DETECTOR (CARRIER DETECT): ON-DISABLED OFF-ENABLED
 -2) RS232 OPERATION: ON-ENABLED OFF-DISABLED
 -3) DSR (DATA SET READY) DETECTION: ON-DISABLED OFF-ENABLED
 -4) CTS (CLEAR TO SEND) FLAGGING: ON-DISABLED OFF-ENABLED
- S3-1 THRU 4) BAUD RATE SELECT...SEE TABLE BELOW
- S14-1) (SPARE)
 -2) (SPARE)
 -3) EXPANDED CHARACTERS: ON-DISABLES OFF-ENABLES (REQUIRES CNTL CHAR "SO" IN TEXT LINE)
 -4) CONDENSED CHARACTERS: ON-ENABLES OFF-DISABLES (REQUIRES CNTL CHAR "DC2" IN TEXT LINE)
 -5) DAVFU ENABLE: -NOT USED...KEEP "OFF"
 -6) CODE CONVERSION: -NOT USED...KEEP "OFF"
 -7) TCVFU ENABLE: -NOT USED...KEEP "OFF"
 -8) (SPARE)

- S15-1) PERFORATION SKIPOVER...SEE TABLE
 -2) 12" FORM ENABLE: -NOT USED...KEEP OFF
 -3) DATA BITS: ON-7 DATA BITS OFF-8 DATA BITS
 -4) PARITY CHECKING: ON-ENABLED OFF-DISABLED...SEE TABLE
 -5) AUTO LINE FEED AFTER CARRIAGE RETURN: ON-ENABLED OFF-DISABLED
 -6) PARITY TYPE (ODD, EVEN, NONE, DON'T CARE)...SEE TABLE
 -7) PERFORATION SKIPOVER...SEE TABLE
 -8) (SPARE)

411X PARAMETERS	
PASSIGN PO:	4643
PBAUD PO:	0600
PBITS PO:	1 8
PPARITY PO:	NONE
PFLAG PO:	DTR
PEOF PO:	' '
PEOL PO:	-OFF- 'CR'

SKIPS	S15-1	S15-7
0	ON	ON
3	OFF	OFF
4	OFF	ON
8	ON	OFF

PARITY CHECKING	S15-4	S15-6
NO PARITY	OFF	OFF
DON'T CARE	OFF	ON
ODD	ON	OFF
EVEN	ON	ON

4643 SWITCH SETTINGS BY PRODUCT GROUP

DESCRIPTION	SWITCH	4050	4020	4110	8500
STOP BIT(S) ON-1 OFF-2	S1-1	ON	ON	ON	ON
NORMAL DTR FLAGGING	-2	ON	OFF	ON	ON
DTR ENABLE	-3	OFF	OFF	OFF	OFF
DC1/DC3 FLAGGING ENABLED	-4	OFF	A/D	A/D	A/D
RECEIVE LINE SIGNAL DETECTOR	S2-1	ON	ON	ON	ON
ENABLE RS232 OPERATION	-2	ON	ON	ON	ON
DISABLE DSR DETECTION	-3	ON	ON	ON	ON
ENABLE CTS FLAGGING	-4	OFF	A/D	A/D	ON
(SPARE)	S14-1	OFF	OFF	OFF	OFF
(SPARE)	-2	OFF	OFF	OFF	OFF
DISABLE EXPANDED CHARACTERS	-3	OFF	OFF	OFF	OFF
ENABLE CONDENSED CHARACTERS	-4	ON	ON	ON	ON
ENABLE DAVFU	-5	OFF	OFF	OFF	OFF
ENABLE CODE CONVERSION	-6	OFF	OFF	OFF	OFF
ENABLE TCVFU	-7	OFF	OFF	OFF	OFF
(SPARE)	-8	OFF	OFF	OFF	OFF
PERFORATION SKIPS	S15-1	A/D	A/D	A/D	A/D
ENABLE 12" FORMS	-2	OFF	OFF	OFF	OFF
DATA BITS ON-7 OFF-8	-3	ON	ON	OFF	A/D
ENABLE PARITY CHECKING	-4	OFF	OFF	OFF	OFF
AUTO LF AFTER CR	-5	ON	OFF	ON	OFF
PARITY TYPE	-6	ON	ON	OFF	OFF
PERFORATION SKIPS	-7	A/D	A/D	A/D	A/D
(SPARE)	-8	OFF	OFF	OFF	OFF
BAUD RATE	S3-1	S3-2	S3-3	S3-4	
110	OFF	OFF	ON	ON	
150	OFF	ON	OFF	ON	
300	ON	OFF	OFF	ON	
600	OFF	OFF	OFF	ON	
1200	OFF	ON	ON	OFF	
2400	OFF	OFF	ON	OFF	
4800	OFF	ON	OFF	OFF	
9600	OFF	OFF	OFF	OFF	

A/D - APPLICATION DEPENDENT

4909 HEAD CRASH KITS

REF: Hard Disk Drive (4909) Service manual 070-3999-00

Replacement Fixed Disk Packs with heads, part numbers 118-1080-00 (32 M Byte) and 118-1100-00 (96 M Byte) are no longer available. When replacing Fixed Disk Packs and heads, the heads must be ordered separately. Part numbers are listed in the "CDC to Tektronix Replaceable Parts" list in the above referenced manual on pages 9-3 and 9-4. Listed below are the different configurations and Tek part numbers.

Disk Drive -- 96 M Byte

<u>Qty</u>	<u>Part</u>	<u>Tek P.N.</u>
1	80 M Byte Disk Pack	118-1085-00
2	Servo Head	118-1071-00
2	Upper Data Head	118-1072-00
4	Lower Data Head	118-1073-00

Disk Drive -- 32 M Byte

<u>Qty</u>	<u>Part</u>	<u>Tek P.N.</u>
1	16 M Byte Disk Pack	118-1079-00
2	Servo Head	118-1071-00
2	Lower Data Head	118-1073-00

Removable Disk Packs can be ordered using:

<u>Part</u>	<u>Tek P.N.</u>
Disk Cartridge	119-1462-00

W² Issue 13-6

7700/7800/7900 MODE SWITCH REPLACEMENT

It has been brought to our attention that there could be some needless replacements of both horizontal and vertical mode switches. If a switch seems sticky or sluggish, all that may need to be done is the tightening of the mounting hardware. Using Fig. 2 out of the 7704A Manual, these screws are Items 24 and 31. These screws can be tightened by just removing the buttons from the front.

W² Issue 13-5

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