S E R V I C E N O T E

SUPERSEDES: None

37717A PDH/SDH/Jitter Test Set

Modification to Correct Jitter Receiver HP2 Filter Characteristics

To Be Performed By: Agilent-Qualified Personnel

Instruments Covered:
All units with Build Status below 1.17 fitted with Jitter Receiver Module

Situation:
An incorrect component value has been loaded into the 37717A Jitter Receiver Module on instruments in the above Build Status range. This results in the user-selectable HP2 filter characteristics being outwith typical specified limits. The cut-off frequency is around 6.5KHz instead of the 10KHz typically specified.

Solution/Action:
Perform the following procedure to correct the problem.

Parts Required:

Part No.	Qty.	Description	Reference
0160-6100	1	1000pF Capacitor (Surface-mount)	C140 on Jitter RX Assembly

Continued

DATE: May 1995

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

MODIFICATION RECOMMENDED

ACTION CATEGORY:	☐ IMMEDIATELY ☐ ON SPECIFIED FAILURE ■ AGREEABLE TIME	STANDARDS: Labor 1.0 Hour	
LOCATION CATEGORY:	☐ CUSTOMER INSTALLABLE ☐ ON-SITE ■ SERVICE CENTER	SERVICE INVENTORY: ☐ RETURN ☐ SCRAP ■ SEE TEXT	USED PARTS: ☐ RETURN ■ SCRAP ☐ SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	AGILENT RESPONSIBLE UNTIL: May 1996	
AUTHOR: GH	ENTITY: 1400	ADDITIONAL INFORMATION:	

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Retrofit Procedure:
The following procedure should be used when fitting the above parts to the 37717A.

C A U T I O N

This procedure should only be carried out by qualified Service Personnel with facilities for working on SURFACE MOUNT type components.

Anti-static precautions must be observed at all times. Use the anti-static wrist-strap provided in this kit if an anti-static work-area conforming to Corporate Standard 741.808 is unavailable.

Procedure:

1. Switch off the instrument and disconnect the power cord.
2. Remove the rear panel feet.
3. If Optical Modules are fitted (option UH1 or UH2), unscrew the optical shield from each input and output connector.
4. Withdraw the outer cabinet sleeve back and out of the instrument.
5. Remove the clamp screws along the top and bottom right-hand side of the chassis which secure blanking plates and modules.

C A U T I O N

Modules must be removed and fitted in the correct sequence to prevent damage.
From front to back when removing.
From back to front when fitting.

6 Withdraw modules/blanking plates back to and including the Jitter Receiver Module using the two knobs on the module to help with removal (the jitter Receiver module is a half-width module marked “JITTER RX” on the metal panel).
7. With the Jitter Receiver Module on the bench, locate the capacitor C140 (see Figure 1).
8. Remove C140 using surface mount de-soldering equipment.

C A U T I O N

Take great care when soldering/unsoldering this component, as excess heat can easily damage it and/or lift the copper pads on the PCB. Use a low temperature type soldering iron fitted with a suitable bit. Hold the new capacitor with tweezers and carefully align with the PCB pads before soldering - a magnifying glass will help with alignment.

9. Solder the new capacitor into C140 position.
10. Re-fit the Jitter Receiver Module and all other modules and blanking plates back into the instrument in the same order as they were removed.
11. Secure each module with the two clamp screws.
12. Replace the outer cabinet sleeve, optical module shields and rear panel feet - this is a reversal of the removal procedure.

Testing

1. Obtain a pass on all instrument Selftests.
2. Connect the 37717A Unbalanced 75 ohm PDH Signal Out to the Unbalanced 75 ohm PDH Signal In.
3. Select 140Mb/s Bit Rate and All Ones Pattern on both Transmitter and Receiver.
4. Select the 1.6 UI Range and HP2 filter on the Jitter Receiver display.
5. Set the Jitter Transmit amplitude to 1 UI and jitter modulation frequency to 10KHz.
6. Press the RESULTS key, select Jitter results and check that the received jitter level is typically between 0.67 UI and 0.74 UI (0.707 +/-5%).

The instrument is now ready for use.

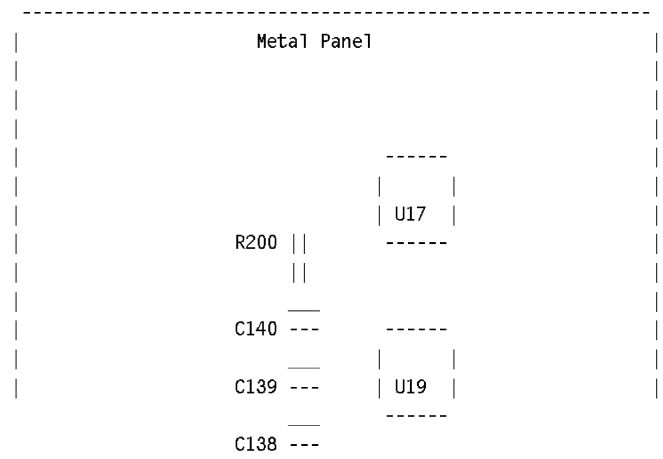

Figure 1 - Location of C140 on Jitter Receiver Module