

Chart 17 PA Output Level Calibration

PURPOSE

Use this procedure to calibrate the UD-51() Power Amplifier (PA) output in radio configuration that is equipped with the optional PA. This procedure sets the ATPC limits, alarm trip points, and nominal output power level for Automatic Level Control (ALC).

TOOLS AND TEST EQUIPMENT REQUIRED

PC with RS-232 Interface Cable Alcatel PN 695-7848

DVM

Power Meter with:

High Power Sensor

Medium Power Sensor (optional)

Attenuator, 30 dB (optional)

Test Lead and Tool Kit

STEP	PROCEDURE
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Exposure to energy radiated at microwave frequencies can cause eye injury and eventual blindness. Do not operate the system with a waveguide port unterminated.



Wear ground straps according to local office procedures.

STEP PROCEDURE, CONTINUED

CAUTION
*Possibility of
Service
Interruption*

This is an out-of-service procedure when on a nonstandby (unprotected) system. On a hot-standby or frequency diversity system, switch traffic on the channel under test to protect.

CAUTION
*Possibility of
Service
Interruption*

*Do not operate a power amplifier unterminated. Set power supply PA POWER switch to **DISABLE** before connecting/disconnecting power meter.*

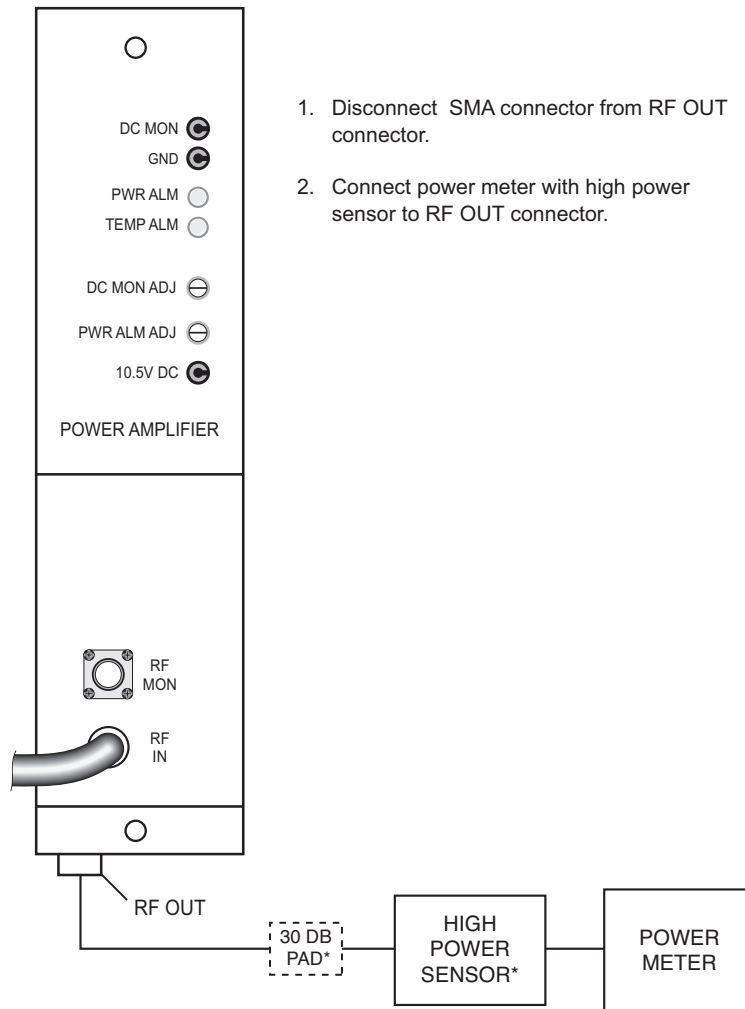
CAUTION
*Possibility of
Service
Interruption*

To ensure accurate readings, serial number on power sensor head and attenuator must match. The power sensor head cannot be used without the matching attenuator attached.

- 1 Connect test equipment See [Figure 9-26](#).
- 2 Open Transmit Power Calibration screen.
- 3 Perform transmit power calibration. See [Figure 9-27](#).

Note

If ATPC is enabled, disable (XMTR will go to high power).



* As an alternative procedure, replace high power sensor with a medium power sensor and install in-line 30dB attenuator. **Attenuator must be properly calibrated for 30 dB.**

LMW-3012
06/28/05

Figure 9-26 PA Output Level Check/Adjustment Test Setup

1. DETERMINE PA NOMINAL HIGH AND LOW OUTPUT LEVEL:

PA NOMINAL HIGH OUTPUT LEVEL = LEVEL AT TOP OF STACK + INSERTION LOSS OF DIPLEXER FILTER/XMT FILTER (MARKED ON LABEL ON FILTER).

XMTR NOMINAL LOW OUTPUT LEVEL = XMTR NOMINAL HIGH OUTPUT LEVEL - 10 dB.

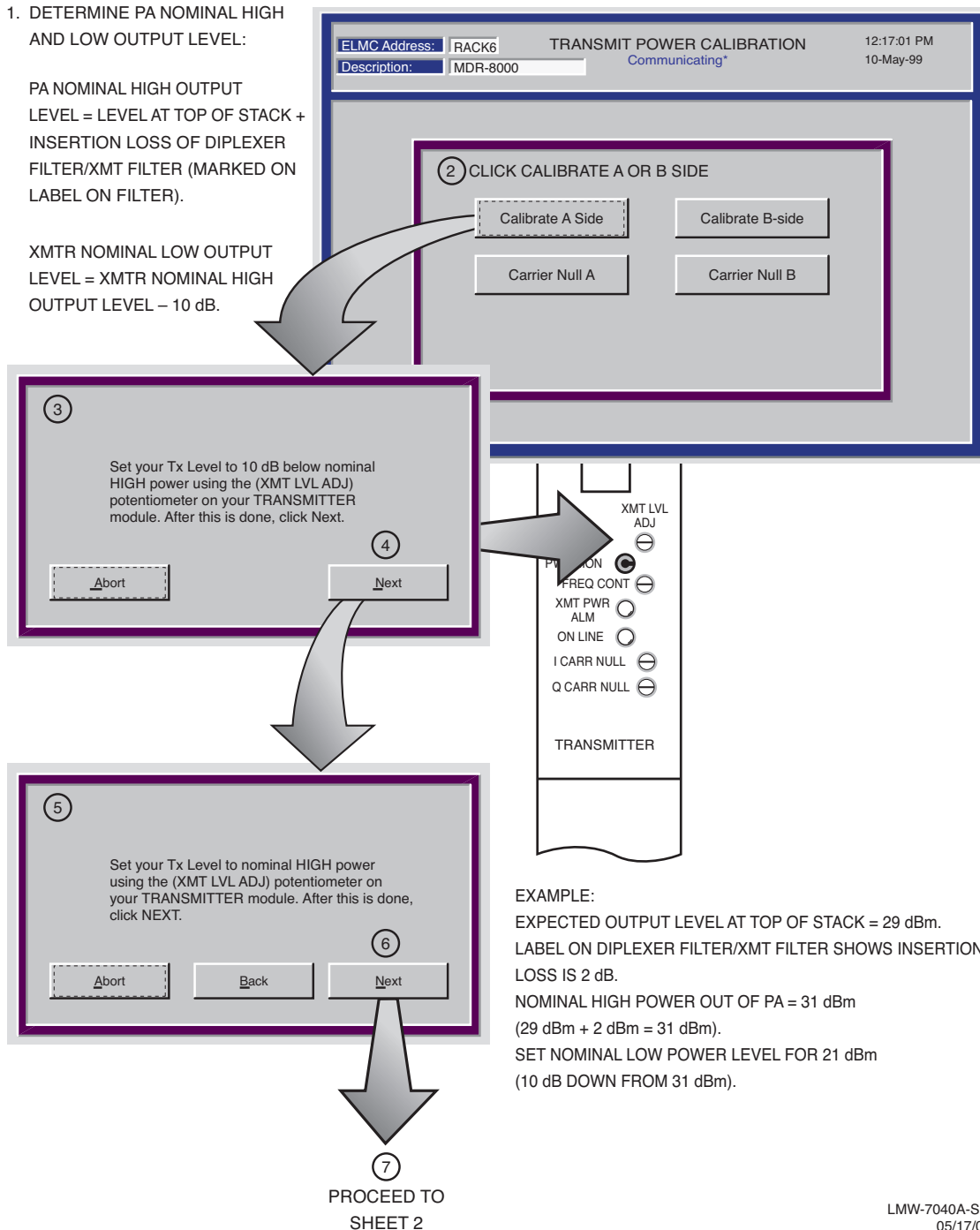
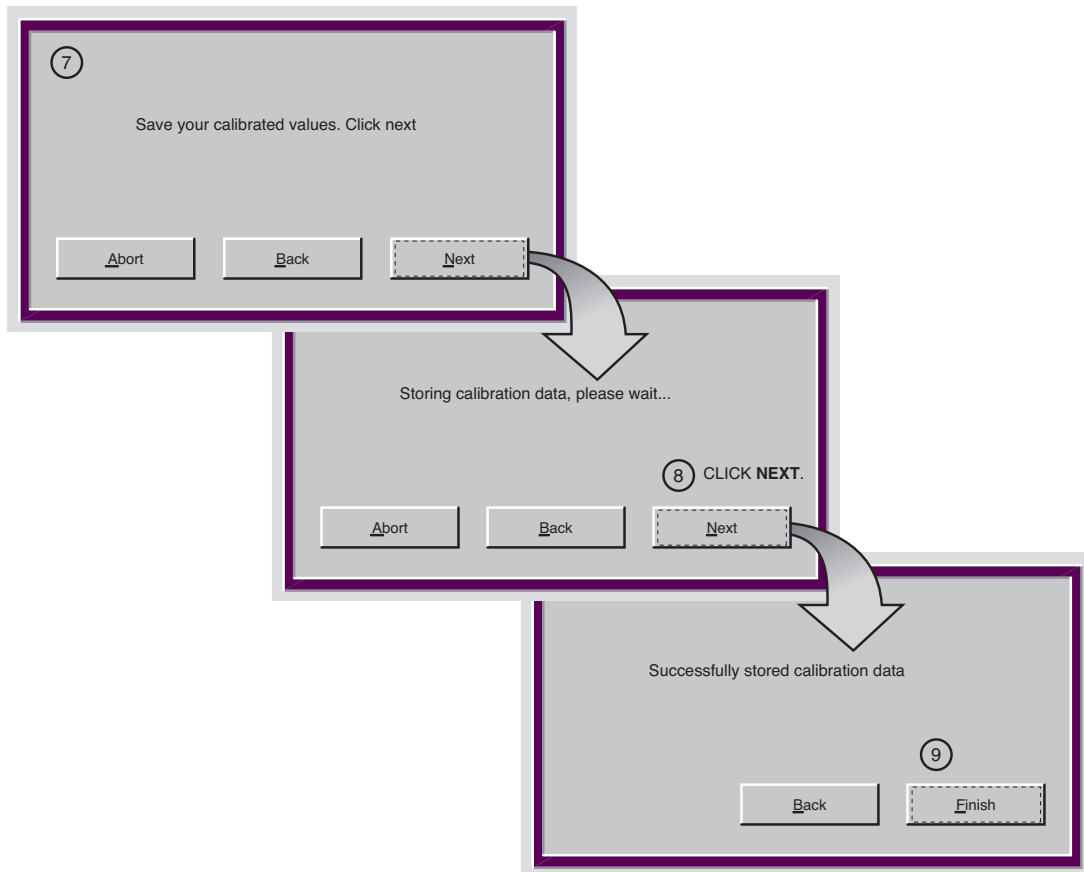


Figure 9-27 PA Output Level Check/Adjustment (Sheet 1 of 2)



- 10 CLICK FINISH. CALIBRATION IS COMPLETE.
- 11 RECONNECT CABLE TO **RF OUT** CONNECTOR.
- 12 GO TO CHART STEP 4 (□ 4) ON THE NEXT PAGE.

LMW-5087-SM
02/23/04

Figure 9-27 PA Output Level Check/Adjustment (Sheet 2 of 2)

STEP PROCEDURE, CONTINUED

- 4 Observe RF MON label on PA front panel. On label, is the measured READ level in dBm or Vdc?

If labeled READ X.X dBm, perform PA RF Power Monitor Level Measurement, Figure 9-28.

If labeled READ X.X Vdc, perform PA DC Monitor Level Adjustment, Figure 9-29.

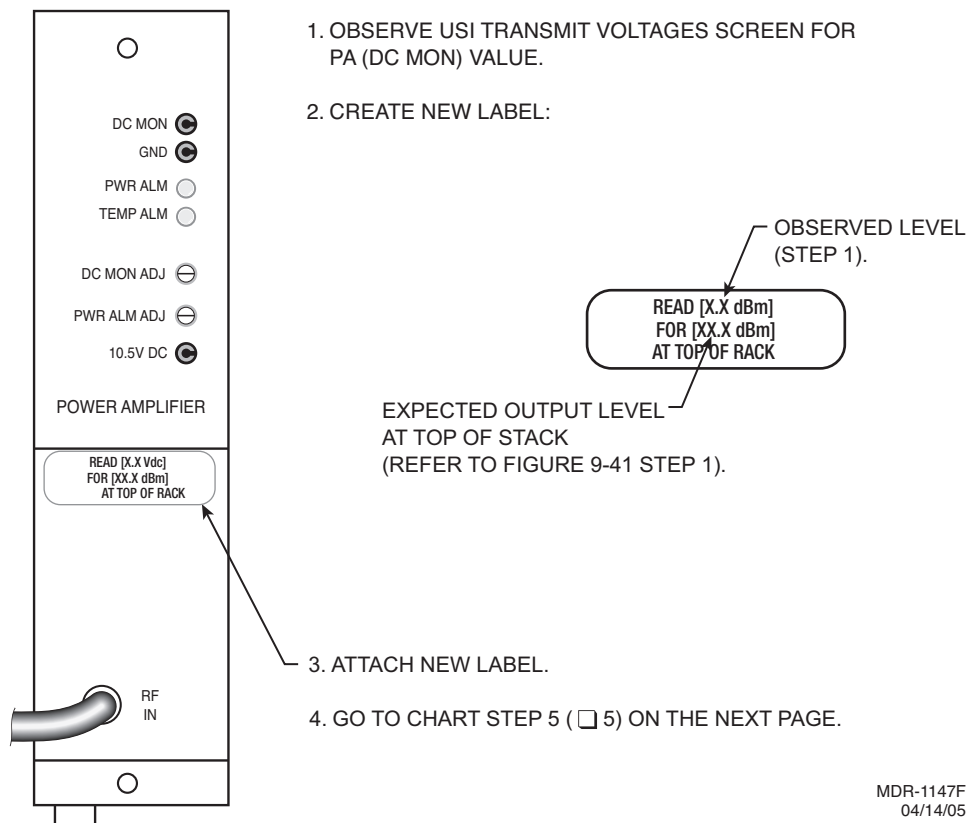


Figure 9-28 PA RF Power Monitor Level Measurement

Note

If ATPC was enabled prior to performance of this procedure, re-enable.

STEP PROCEDURE, CONTINUED

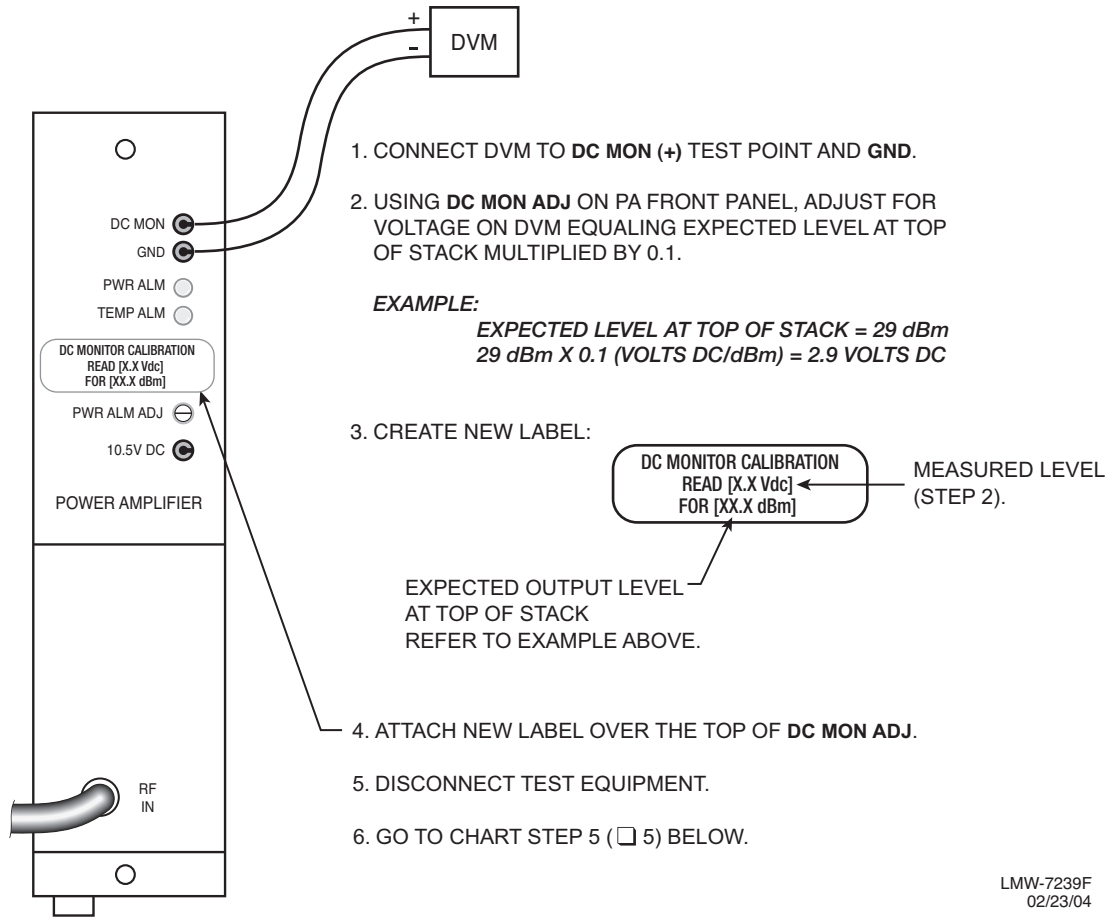


Figure 9-29 PA DC Monitor Level Adjustment

- 5 STOP. This procedure is complete.

