



Customer Service Engineering Document
Technical Bulletin #010904

DCX Power Monitoring Upgrade

This upgrade involves the installation of a new PC board on the rear of the HPA controller. The new board, with average power detection and low pass filtering, replaces the present technique of peak power detection for a more precise and stable detection of 8-VSB RF power.

This upgrade consists of the insertion of a PCB assembly 46744185.02 into the path of the RF metering wiring and the recalibration of the metering circuits.

The following is the procedure to perform this retrofit:

1. Place the HPA to be retrofit into **INTERNAL CONTROL** and press **STOP MODE**.
2. Wait for approximately two minutes for the cool down cycle to complete.
3. Turn off the *CONTROL POWER* circuit breaker on the HPA circuit breaker panel.
4. Unplug 2 wire harness assemblies, A11-P1 and A6-P1, from the HPA controller backplane (452125-01).
5. Plug the new PCB assembly (46744185.02) into the connectors where the two wiring harness assemblies were just removed.
6. Plug the 2 cable assemblies onto the new metering board, matching the reference designators marked on the board.
7. Turn on the *CONTROL POWER* circuit breaker and wait for the power-on self-test to complete.
8. Press **RF DRIVE MODE** and wait for the HPA to complete its warm-up and enter RF DRIVE. The power meters will now read lower, more stable values.
9. Recalibrate the forward, reverse, and drive power meters.
10. Return the HPA to **EXTERNAL CONTROL**.

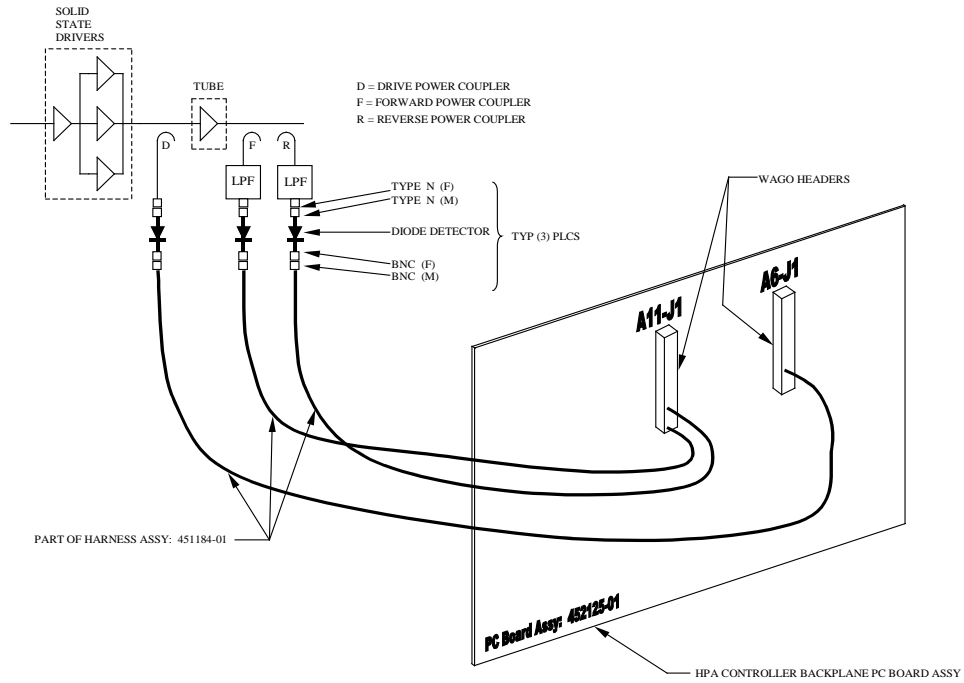


Figure 1: Original Configuration

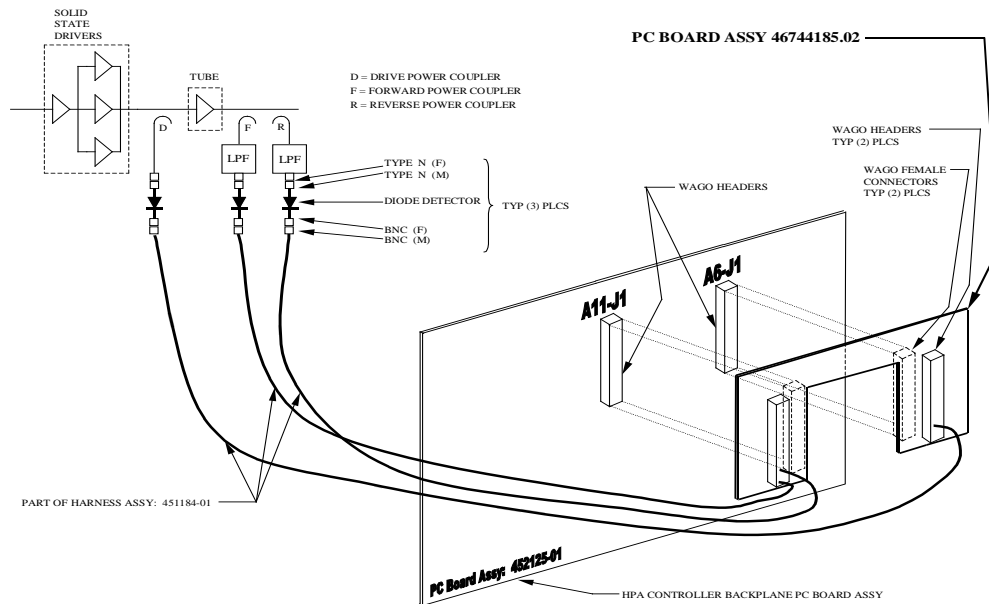


Figure 2: Installation of New PCB

When complete, this modification will yield stable and accurate RF power metering on each HPA.