

PACKAGE CONTENTS

QTY	Description
4	220 pF capacitor, SMT (red stripe)
4	71.5K resistor, SMT ("7152")
1	12.1K resistor, SMT ("1212")
1	ERA-3 MMIC amp ("3", dot on pin 1)
1	130-ohm resistor, 1/4W, axial lead ("brn, ora, brn, gld")
1	49.9-ohm resistor, 1/4W, axial lead ("yel, wht, wht, gld")
1	274-ohm resistor, 1/4W, axial lead ("red, vio, yel, blk")

OVERVIEW

The components in this Service Pack should be applied on Micro908 Kits that shipped in the first round of September 2004. These kits are identified with the pcb marked as "rev A". Later rounds of kits have a hand-marked revision update (e.g., "A2")

The Service Pack provides replacement components that allow the Micro908 "Antenna Analyst" to be more easily calibrated and produce measurements with greater accuracy.

After these replacement components are put onto the Micro908 main pcb and the DDS Daughtercard, AA908 v4.0 (or later) should be used. This software has a greatly simplified calibration sequence that is enabled by the hardware changes. Further, the trim pot on the DDS card is no longer necessary.

Note: This Service Pak assumes the DDS Upgrade was previously performed, per Appendix H in the Micro908 Assembly Manual.

COMPONENT & FEATURE REVIEW

Why should you perform these part substitutions on your Micro908 and DDS Daughtercard?

1) ERA-3 MMIC amp – This change in the RF amplifier on the DDS Daughtercard provides a more constant signal level across the HF spectrum, as compared to the MAV device we previously used, thus making instrument calibration lots easier.

2) 12.1 K resistor – This change for R1 on the DDS Daughtercard programs a lower signal from the DDS for presentation to the new ERA-3 MMIC amplifier.

3) 130-ohm resistor – This new value for R4 on the DDS Daughtercard biases the ERA-3 amplifier at 35 ma, providing for much cooler operation.

4) 71.5K resistors – These lower values for R51, R19, R24 and R29 on the Micro908 pcb provide lower gain for different RF signal level coming from the ERA-3 amplifier.

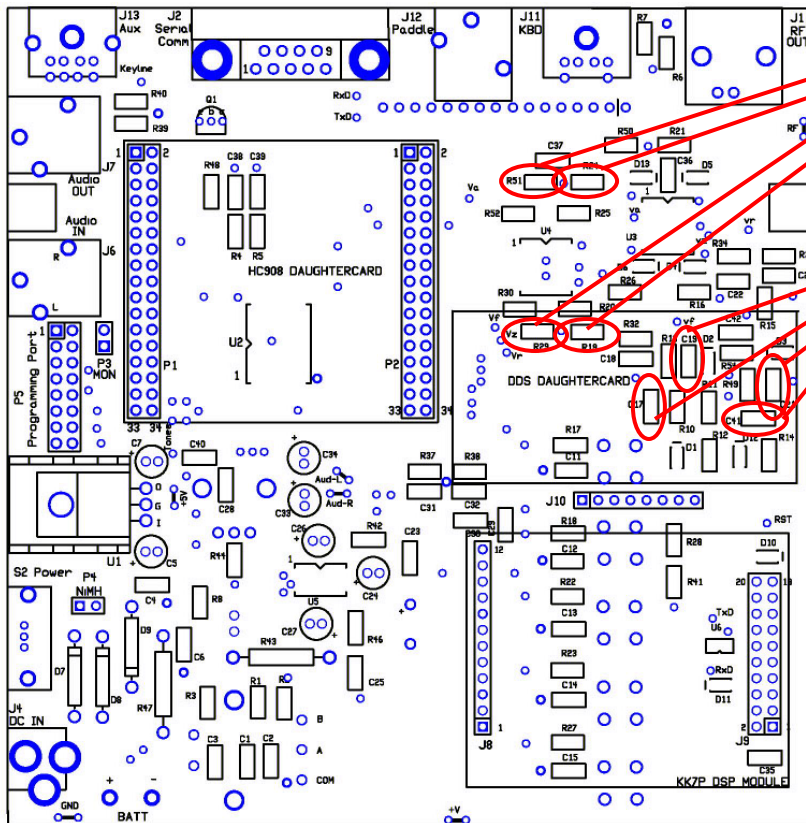
5) 220 pF caps – C17, C19, C21 and C41 are used in the reflector as the "integrating capacitors" on the Micro908 board, providing faster response in the signal detection process, as compared to the 0.1 uF values originally used.

6) 49.9-ohm and 274-ohm resistors – These 1% parts are provided so you can perform calibration without scrounging your junk box for appropriate valued resistors.

INSTALLATION

Just remove the original components, clean off the pads with the Easy Braid solder wick, and solder in the new components. Be careful about component value (double check markings in the Contents list) and ERA-3 orientation (the dot goes "up").

Micro908 PC Board



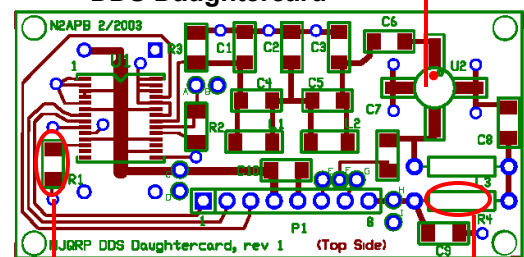
71.5K SMT resistors

- R51
- R24
- R29
- R19

220 pF SMT capacitors

- C19
- C17
- C21
- C41

DDS Daughtercard



R1
12.1K

R4
130 ohms