

This update package contains changes occurring to the A1X since the 10 Dec. 2006 release, based largely on feedback from the ARCI design team and errors noted during the layout as follows:

- 1) One builder has requested a view of the prototype layout showing the positions of the pads only. **See sheet 3.**
- 2) Two builders have requested all components be labeled. **See sheet 4**

Changes to the schematic diagram:

R10 changed from 470 to 100 (470 was a typo)

Pin number assignments on 74HC00 U5 changed to reflect layout.

Pin number assignments on TX Mixer ADE-1 U6 changed to reflect layout (LO and RF ports swapped for easier layout).

Pin number assignments on comparator U7 changed for device LM360, a high speed comparator used in previous designs.

This may not be the final device for U7, but chosen for the purposes of completing the layout.

R48 added to U7 (required for the LM360 only).

Reference voltage resistor R26D (on U3 comparator pin 6) changed to discrete resistor R47. This resistor sets CW switching point and 56K SIP may prevent time constant from being properly set. (Basically makes prototyping easier to modify value).

Voltages on Q15-Q16 T-R switch were in error. Changed to "+7v RX" and "+7v TX" from +8v RX/TX.

Changes to the prototype layout:

A couple of wiring changes to correct connection errors.

Web address on back panel label changed to "www.qrparci.ORG"



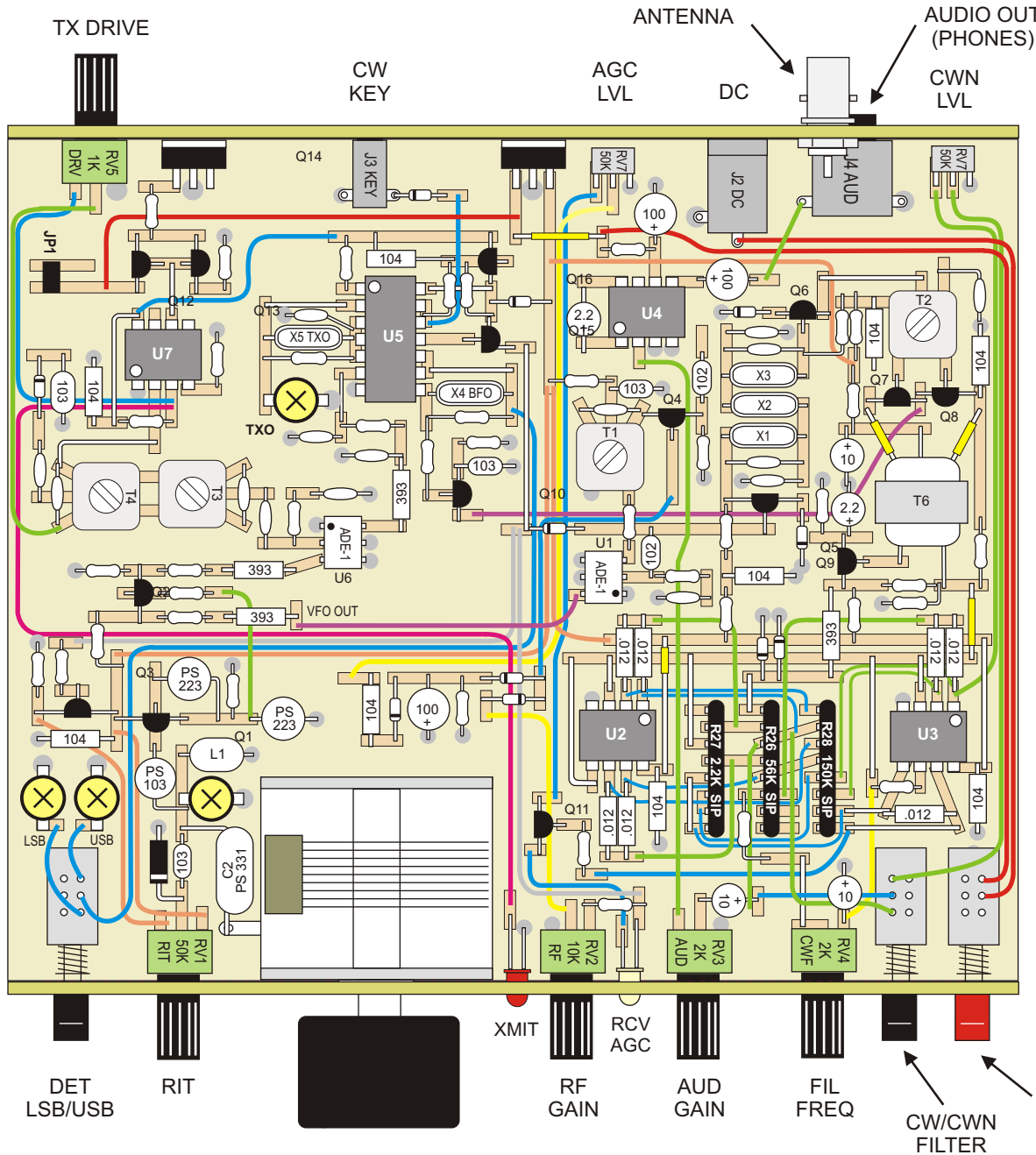
A1X

UPDATE NO. 1

EFFECTIVE 27 JAN 2006

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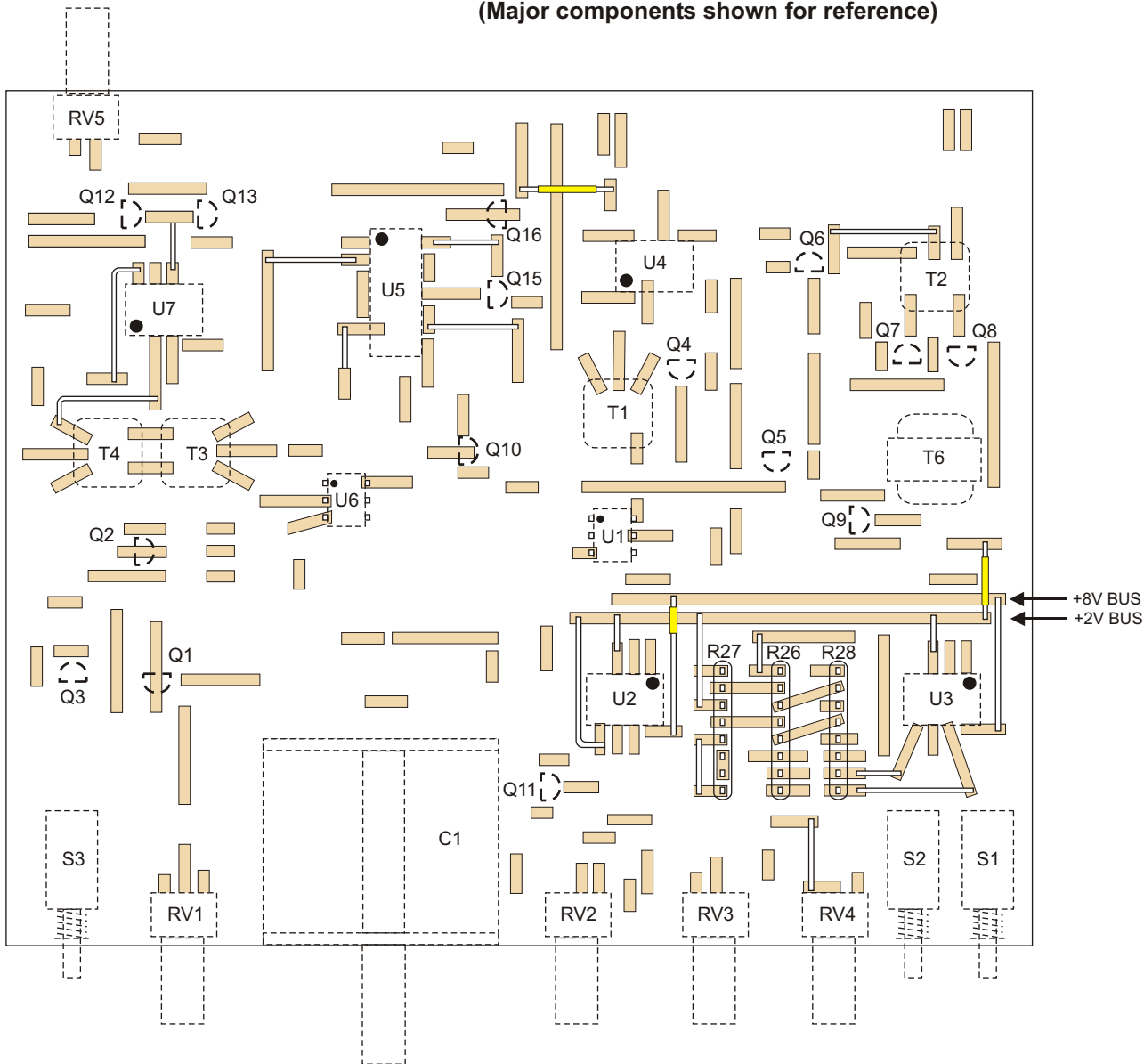
- SHT. 2 PROTOTYPE LAYOUT
- SHT. 3 LAYOUT – PADS ONLY
- SHT. 4 LAYOUT – COMPONENT ID
- SHT. 5 FRONT PANEL DETAILS
- SHT. 6 REAR PANEL DETAILS



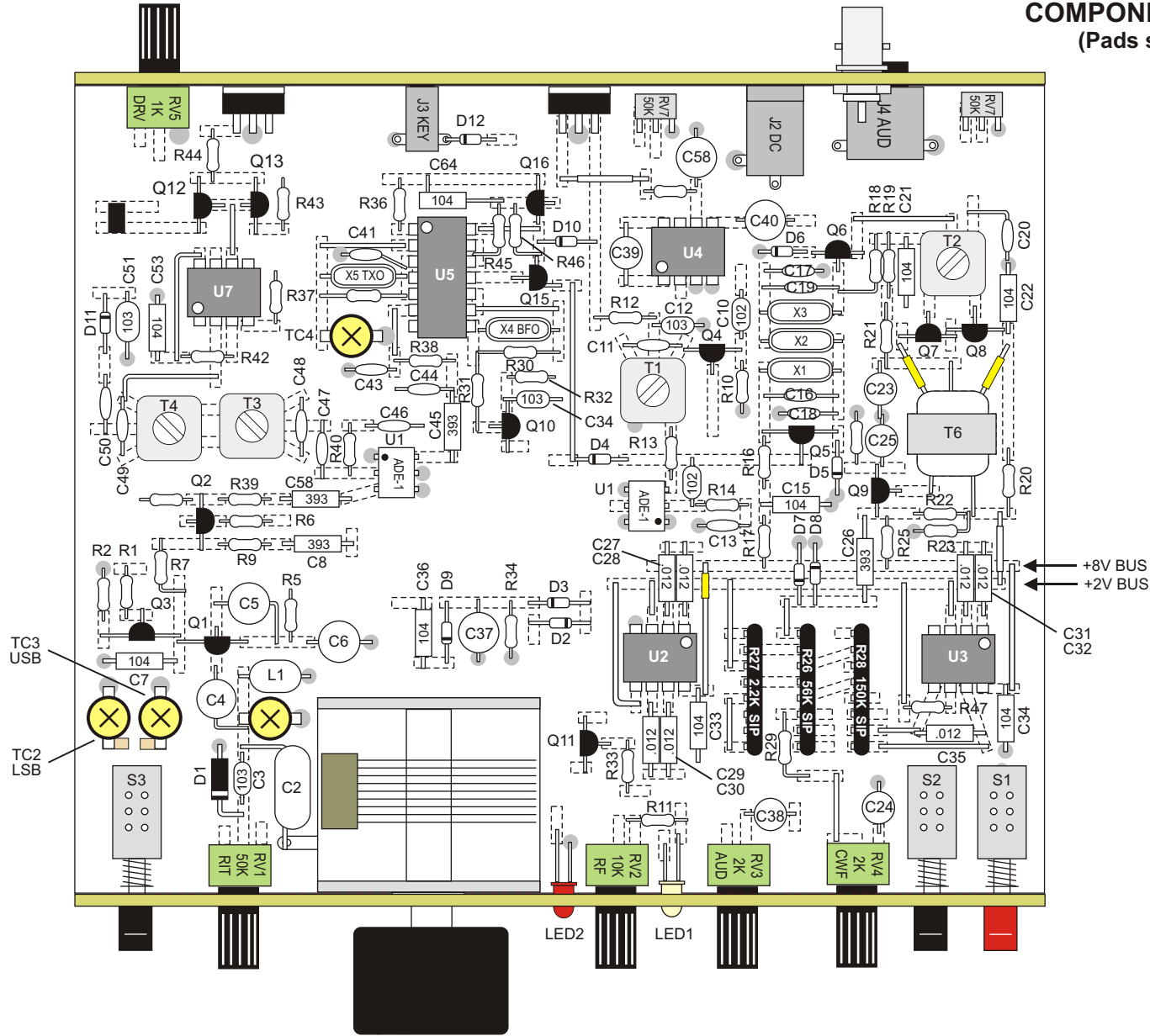
NOTES:

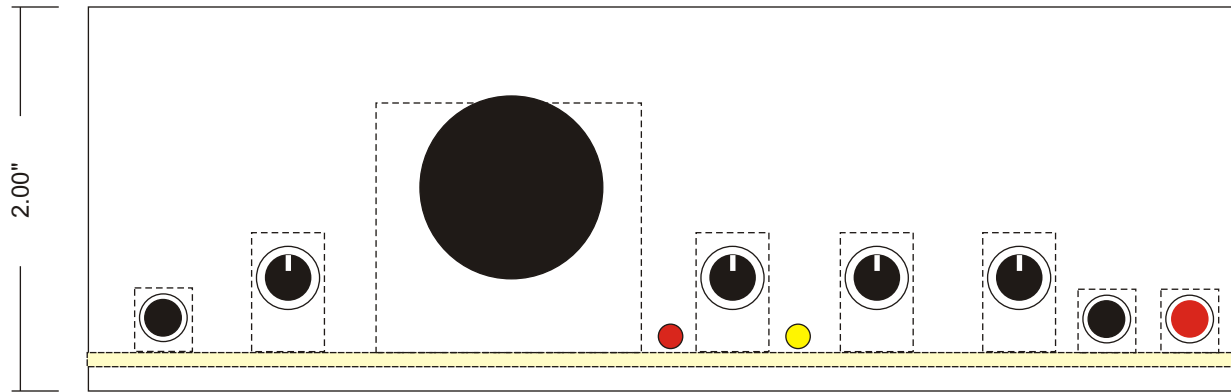
1. LAYOUT SHOWN BASED ON MANHATTAN STYLE CONSTRUCTION TO APPROXIMATE PCB LAYOUT
2. BOARD SIZE: 6.0 x 5.0 IN.
3. LAYOUT BASED ON 1/8W RESISTORS. 1/4W RESISTORS MAY REQUIRE A SLIGHTLY LARGER BOARD
4. PROTOTYPE LAYOUT MAY BE EASIER TO USE DISCRETE RESISTORS IN AUDIO FILTER INSTEAD OF THE SIPs

MANHATTAN LAYOUT SCHEME – PADS ONLY (Major components shown for reference)

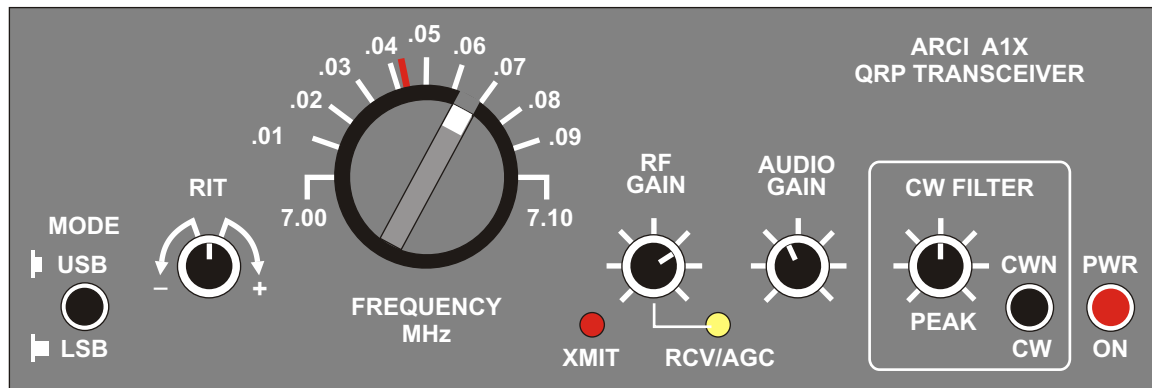


MANHATTAN LAYOUT SCHEME
COMPONENT IDENTIFICATION
(Pads shown for reference)





DIMENSIONS TO BE ADDED AFTER PROTOTYPING

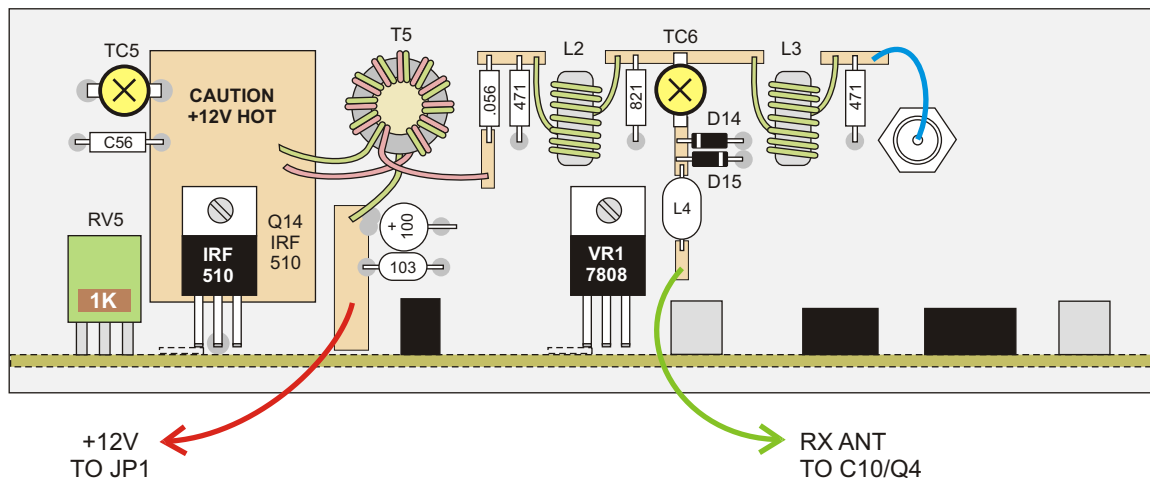


PROPOSED FRONT PANEL

.062 DOUBLE SIDED PCB
BLACK SOLDER MASK
WHITE SCREENED LAYER TO
FORM CONTROL LEGENDS

FRONT PANEL MOUNTED TO
MAIN PCB VIA VARIABLE
CAPACITOR AND SOLDERED
ALONG MATING FACES.

BLACK FINISH GIVES IT THAT
"AVIONICS" LOOK.



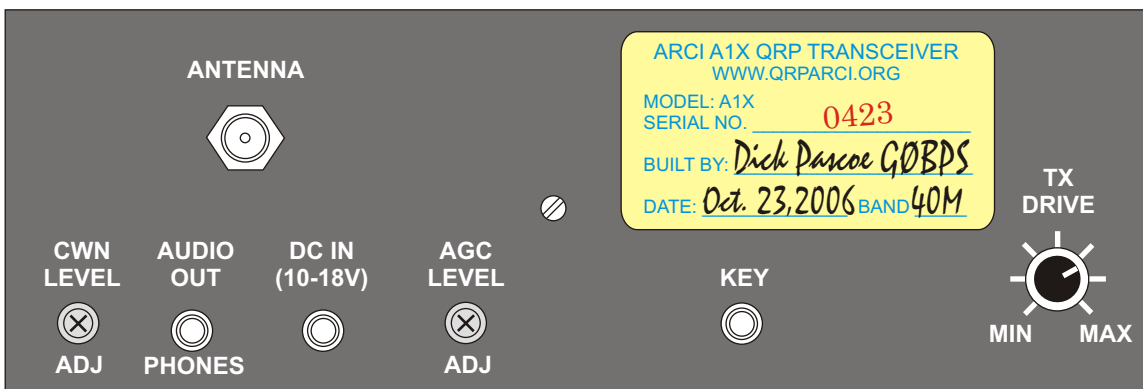
INSIDE BACK PANEL

CONTAINS PA AND OUTPUT FILTER COMPONENTS

PART OF FRONT/REAR PANEL PCB (BLACK SOLDER MASK)

LAYOUT SHOWN FOR MANHATTAN STYLE – PCB VERSION HZAS FEW TRACES, COMPONENTS MOUNTED SURFACE MOUNT STYLE.

STICK-BACK LABEL FOR BUILDER TO FILL OUT AND APPLY WITH SEQUENTIAL SERIAL NUMBER. QRPers GOTTA HAVE A NUMBER! PRENUMBERED TO ALSO HELP WITH INVENTORY CONTROL.



PROPOSED BACK PANEL

.062 DOUBLE SIDED PCB
BLACK SOLDER MASK
WHITE SCREENED LAYER TO FORM CONTROL LEGENDS

BACK PANEL MOUNTED TO MAIN PCB BY SOLDERING ALONG MATING FACES TO MAIN PCB - MAY NEED SIDE PIECES OR BRACKET TO STIFFEN FOR BNC (EVERYTHING ELSE MOUNTED TO MAIN PCB)