

GLB ELECTRONICS MODEL AF-10 AUDIO PROCESSOR PARTS LIST: PAGE 1

11/14/80

RESISTORS	DESCRIPTION	QUANTITY	COLOR CODE
R1	1M OHMS 1/4 W CARBON	() 2	BROWN-BLACK-GREEN
R2	1M OHMS 1/4 W CARBON	() 2	BROWN-BLACK-GREEN
R3	1K OHMS 1/4 W CARBON	() 2	BROWN-BLACK-RED
R4	100K TRIMPOT	() 3	
R5	1K OHMS 1/4 W CARBON	() 1	BROWN-BLACK-RED
R6	180K OHMS 1/4 W CARBON	() 1	BROWN-GRAY-YELLOW
R7	220K OHMS 1/4 W CARBON	() 1	RED-RED-YELLOW
R8	10K OHMS 1/4 W CARBON	() 1	BROWN-BLACK-ORANGE
R9	100K OHMS 1/4 W CARBON	() 1	BROWN-BLACK-YELLOW
R10	82K OHMS 1/4 W CARBON	() 3	GRAY-RED-ORANGE
R11	82K OHMS 1/4 W CARBON	() 1	GRAY-RED-ORANGE
R12	82K OHMS 1/4 W CARBON	() 1	GRAY-RED-ORANGE
R13	100K TRIMPOT	() 1	
R14	220 OHMS 1/4 W CARBON	() 1	RED-RED-BROWN
R15	100K TRIMPOT	() 1	
R16	100 OHMS 1/4 W CARBON	() 1	BROWN-BLACK-BROWN

CAPACITORS	DESCRIPTION	QUANTITY
C1	.01 UF MYLAR	() 3
C2	100 PF CERAMIC	() 1
C3	1 UF 10 V TANTALUM	() 2
C4	NOT USED	
C5	100 UF 16 V ELECTROLYTIC	() 1
C6	.001 UF CERAMIC	() 1
C7	.005 UF MYLAR	() 1
C8	39 PF CERAMIC	() 1
C9	.01 UF MYLAR	() 2
C10	.047 UF MYLAR	() 2
C11	.01 UF MYLAR	() 1
C12	1 UF 10 V TANTALUM	() 1
C13	.01 UF CERAMIC	() 1
C14	.047 UF MYLAR	() 1

INTEGRATED CIRCUITS	QUANTITY
Z1 4136	() 1

DIODES	QUANTITY
D1 9V ZENER	() 1

MISCELLANEOUS	QUANTITY
14-PIN IC SOCKET	() 1
CIRCUIT BOARD	() 1
INSTRUCTIONS	() 1

END OF LIST

AUDIO ADJUSTMENTS.

The audio processor section of the T144 requires an independent B+ connection (see section on INTERCONNECTIONS). Connect as shown in fig. 4 For these adjustments.

The three potentiometers on the audio section of the transmitter are:

- R4 Microphone gain
- R15 Tone level adjustment
- R13 Deviation limit adjustment

The deviation limit adjustment is just that - when properly set it is impossible to cause the transmitter to be overmodulated, regardless of the setting of the gain adjustment or how loudly the operator speaks. Once set, never disturb the setting without a good method of checking. Never use the deviation limit adjustment as a substitute for a gain adjustment. In many commercial transceivers proper deviation settings yield reports of "low audio" because there is insufficient gain built into the radio. Because of the generous amount of microphone gain built into the T144 it is possible to have too much gain, and you can afford to set the deviation limit properly.

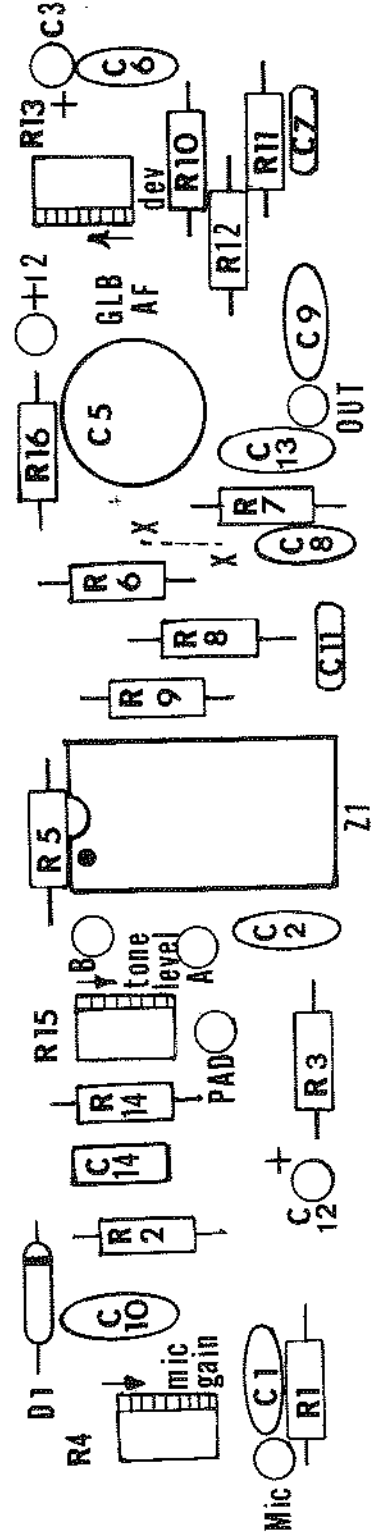
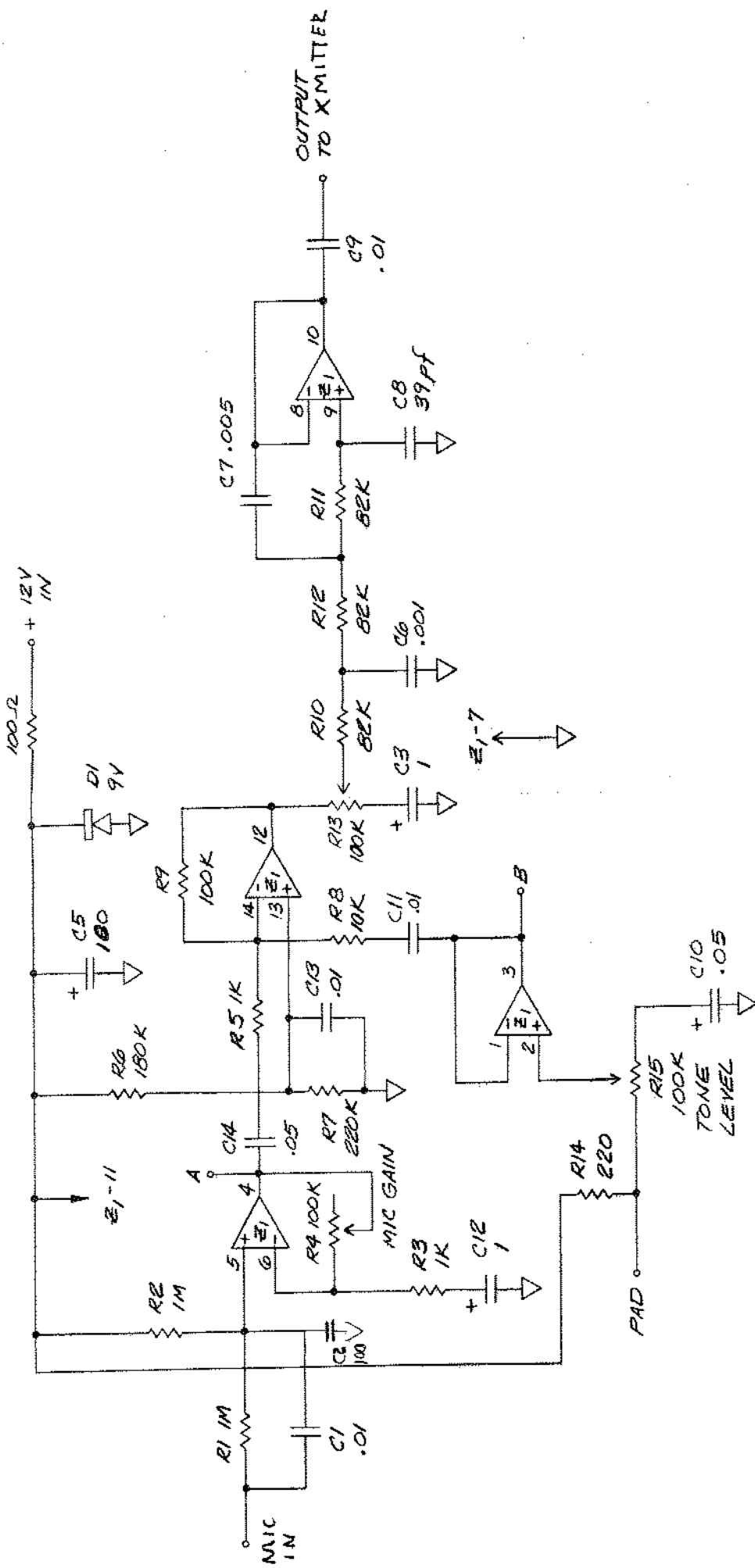
DEVIATION ADJUSTMENT.

1. Set R4 to maximum (direction of arrow on board).
2. Connect a microphone to the input. Tune a receiver or a deviation meter to the output frequency of the T144. With the transmitter keyed, make sure the receiver is exactly centered on the transmit frequency, preferably by metering the discriminator.
3. Speaking as closely as possible to the microphone and in a loud voice, adjust the deviation limit control, R13 to the highest setting possible before an increase in distortion is noted. If an audio oscillator is available, set it to 1KHZ and substitute it for the microphone. Output should be sufficient to overdrive the "mike" circuits, but it takes only a few millivolts.

On a deviation meter, set R13 so that the desired bandwidth is not exceeded under these conditions.

4. Using the microphone, reduce the GAIN adjustment (R4) until the recovered audio is pleasing to the listener, as required. After this, adjust ONLY R4 for the "amount" of audio.

3. Tone pad adjustment. Connect a standard telephone-type tone pad to the tone input terminal and ground as shown in fig. 2. Adjust R15 for the highest level possible before audible distortion sets in. Either too high or too low a level may prevent the decoding system from responding properly.



GLB MODEL
AF 10
AUDIO PROCESSOR
11/14/90

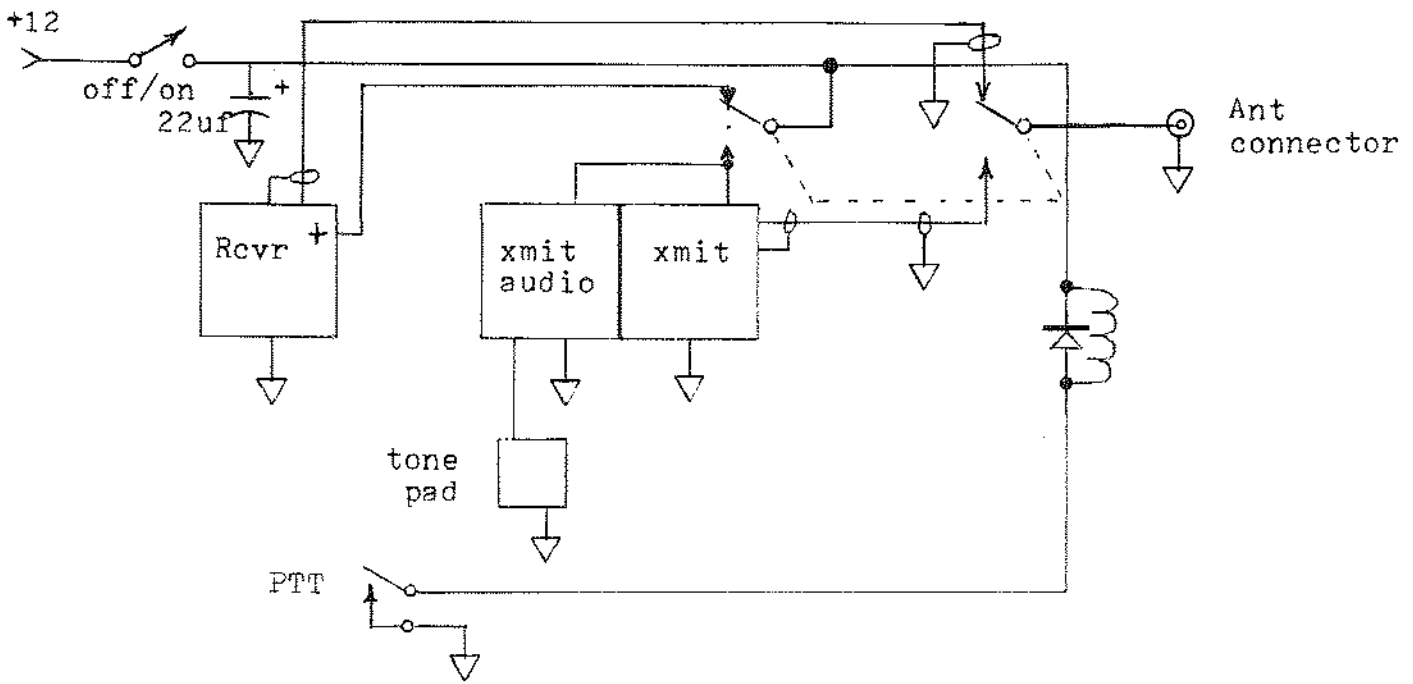


Fig. 1B.
Conventional PTT circuit with separate PTT switch.
Tone pad operation requires operating PTT switch.

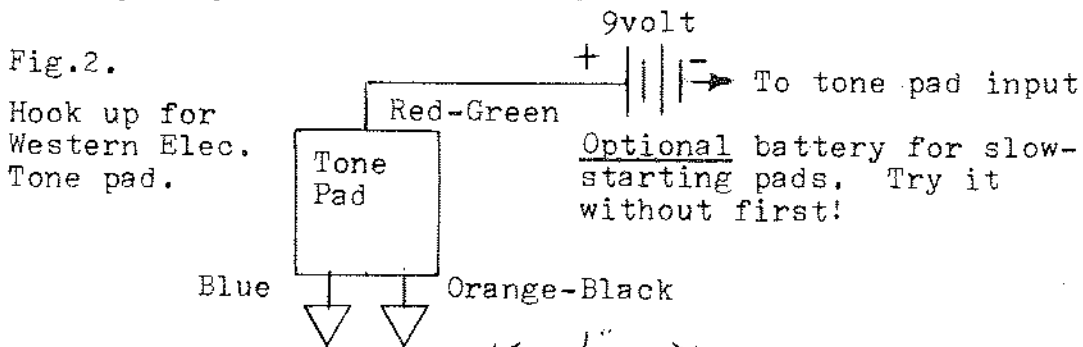


Fig. 2.
Hook up for Western Elec. Tone pad.

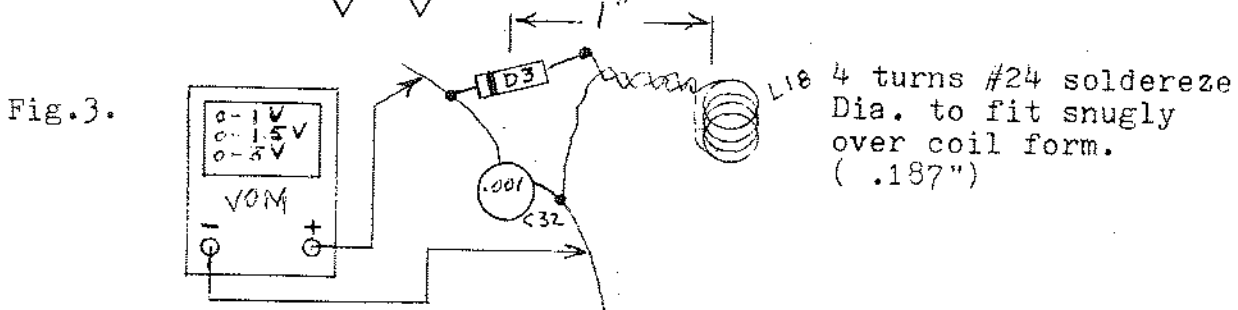


Fig. 3.

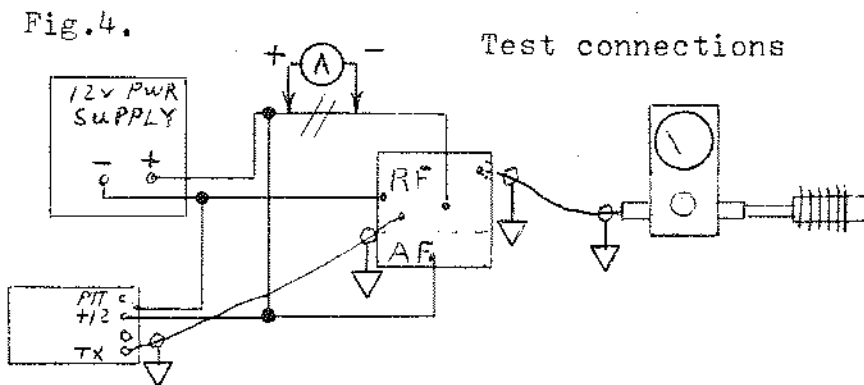


Fig. 4.