

Section 3

of operation

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Dummy load R41
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is due to sideband
citor C95 and coil
at 455 kc. Oscil-
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duct detector tube.
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ole capacitor C61
t with WWV. The
l to the receiver
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The vfo uses fixed
e to produce the
p 2.70135 mc for
865 mc for USB,
r C303, in the
s paralleled by
with diode CR301.
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voltage impressed
DE switch in the
verse biased and
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c signal desired.
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49865- to 2.69865-
C308 is properly
cy by an amount
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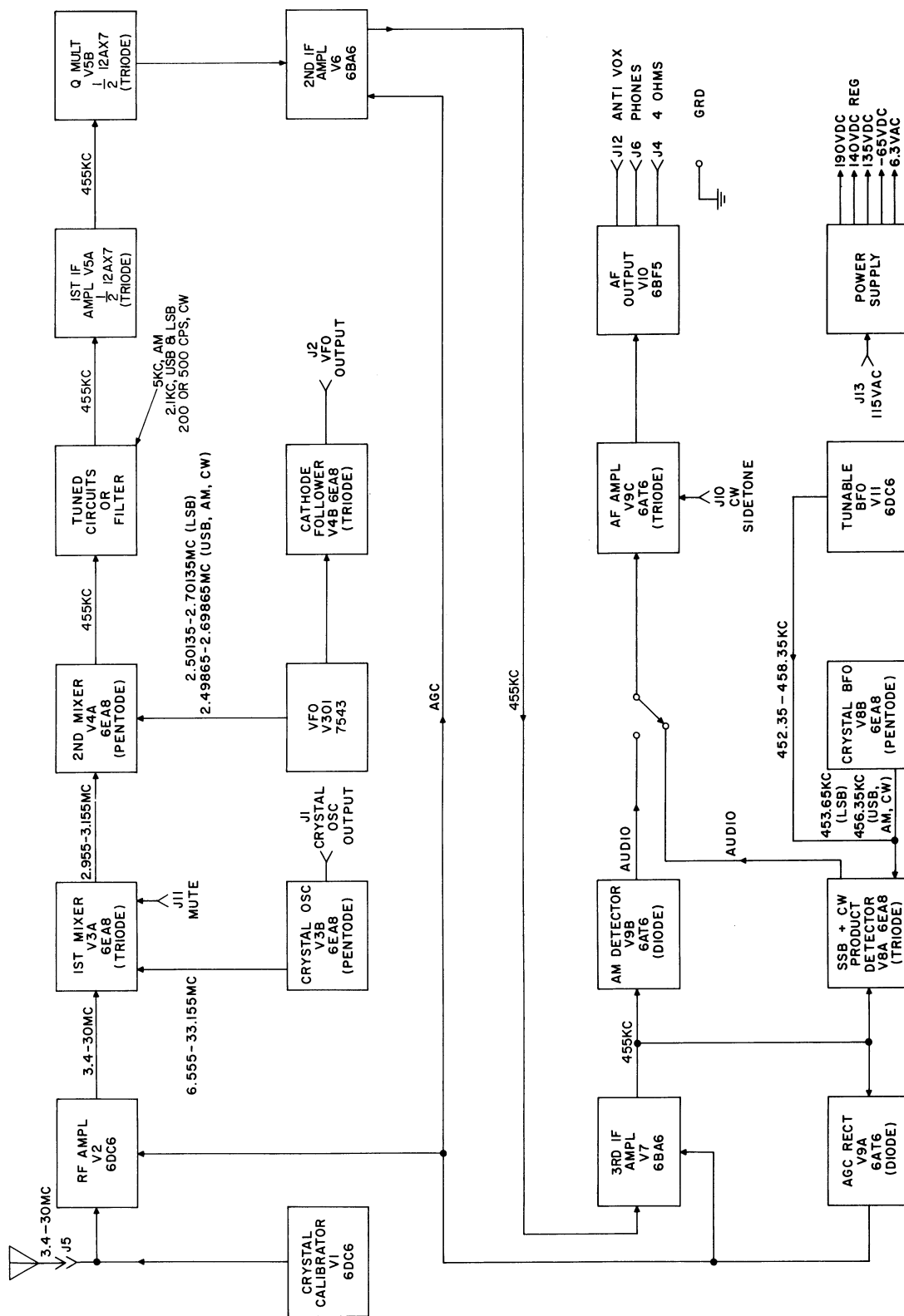


Figure 3-1. Block Diagram

SECTION 3

Principles of Operation

3.8 Power Supply Circuits.

The internal power supply furnishes filament, plate, and bias voltages for the receiver. Three high voltage values are developed consisting of a 190-volt dc unregulated voltage at the positive side of C59B, a 140-volt dc regulated voltage at the cathode of zener diode CR6, and a 135-volt dc unregulated voltage at the positive side of C59A. The high voltage winding of transformer T8; diode CR1, CR2, and CR6; resistor R86; and the filter network consisting of capacitors

C59A, C59B, and C59C, resistor R51, and choke L6 make up the full-wave rectifier system which generates the three high voltage values mentioned above. Bias voltage is obtained by rectifying ac voltage from a voltage divider connected between one leg of the high voltage secondary and ground. The tube heaters and pilot lamps are connected to allow operation from a 6-, 12-, or 24-volt source. Heater, plate, and bias voltages may be furnished by an external source such as a mobile power supply. Figure 7-1 illustrates the proper connections to the power plug for this type of operation.

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SECTION 4
Service Instructions

maximum S-meter indication
(power loss). See figure 4-2 for
transformers T4 and T5.

at switch S7, pin 5. Connect a length
of this switch pin. Connect the other
end of the wire with one lead of 135-uuf
capacitor to pin 1 on the SPARE filter socket
(nearest to transformer T4). Connect
the other lead to a ground pin adjacent to the
connections.

one wire at transformer T5, pin 1, and
the other on the SPARE filter socket (one of
transformer T5). To the same filter
socket, connect one lead of a 130-uuf capacitor (see note).
Solder the other capacitor lead to a ground pin adja-
cent to the connections. Solder all connections.

Insert the required AM mechanical filter into the



T4



T5

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SECTION 4

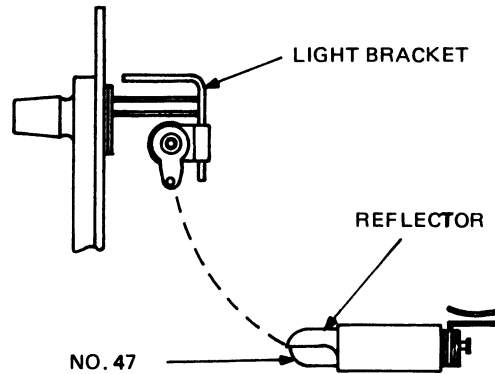
Service Instructions

7 Replacement of Dial Lamps.

To replace the dial lamp, refer to figure 6-2 (index 4) for location of dial lamp DS1.

4.7.1 DIAL LAMP INSTALLATION.

Refer to figure 4-3 for lamp installation. Remove light bracket from lamp shield to allow access to the lamp bulb. After replacing lamp (use no 47), position the reflector to direct the light in the direction that illuminates the tuning dial.



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Figure 4-3. Dial Lamp Replacement

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ACCESSORIES (Sheet 2 of 2)

DESCRIPTION	COLLINS PART NUMBER
Type 312B-4	522-2666-00
d coverage	(See parts list.)
ss filter	526-9496-00
ss filter	526-9497-00
ss filter	526-9498-00
pass filter	526-9495-00
pass filter	526-9446-00
pass filter	526-9494-00
al lattice filter	526-7677-00

