JERROLD

INSTRUCTION SHEET

converter 10 to 2 - .5 MC

1 - Gray
2 - yellow
4 - red.

#I-CONW-554

VHF CONVERTERS, MODEL WCON

(High to Low and Low to Low Converters)

Jerrold VHF converters are crystal controlled, designed for rugged continuous duty.

Technical Data

MODEL: WCON (High) to (Low), Series 2

Input: Double tuned any specified high channel (7 to 13), 6 mc bandwidth, 72 ohms.

Output: Double tuned any specified low channel (2 to 6). 6 mc bandwidth, 72 ohms.

Tube Complement: (1) 5654 Oscillator, crystal controlled*
(1) 5654 Mixer

Loss in Conversion: Series 2 models incorporate a higher mode crystal and a tube mixer for increased conversion efficiency.

-6 db maximum

0 db average
(*Crystal accuracy within .005%)

Typical Operating Levels: 10,000 uv to 200,000 uv input signal depending on output desired to next equipment

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MODEL: WCON (Low) to (Low)

Input: Double tuned any specified low channel (2 to 6), 6 mc bandwidth, 72 ohms.

Output: Double tuned to a specified low channel (2 to 6), 6 mc bandwidth, 72 ohms.

Tube Complement: (1) 6J6 Oscillator, crystal controlled*
(2) 6AG5 Balanced Detector
(*Crystal accuracy within .02%)

Loss in Conversion: 8 to 12 db depending on channel frequencies.

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Typical Operating Levels

20,000 uv min input
60,000 uv max input
40,000 uv typical input (or as required to supply proper output to next equipment).

Balancing: (This is a factory adjustment to balance out the input channel at the converter output. In the event unbalance occurs in shipment the following steps should be taken - example (3-2.)

a. With converter installed and operating with an input signal connect Model 704(A) Field Strength Meter to converter output. (Model 704A tuned to Channel 3 picture carrier).

b. With 6 mc crystal removed (reached through opening in one side of the converter), adjust the balancing pot on converter for minimum reading on Field Strength Meter.

c. Replace 6 mc crystal.

Rejection of Spurious Conversion: Adjacent channel conversions require use of 6 mc crystals and produce a spurious conversion 12 mc removed from the desired output. A 3-2 converter for example, contains a Channel 4 component in its output which should be minimized to prevent possible interference with other channels carried by the system.

Removal of the spurious conversion may be accomplished by inserting an open one-quarter ($\frac{1}{4}$) wave coaxial stub in the output of the converter:

a. Length of RG-59/U stub in inches equals $\frac{1949}{f(mc)}$ (a stub cut to Channel 4 Pix, equals approximately 28").

b. Cut stub a few inches longer than calculated and insert in converter output cable. (Use C-41 tee connector for 59/U type cable).

c. Adjust length of stub, observing Model 704 meter (connected to converter output) for minimum at Channel 4 picture. Check readings at Channel 2 sound before and after adjusting stub, making sure the stub has little effect on the desired channel. Tape open end with poly tape.

d. If a stub is too broad in its trapping effect a Jerrold High-Q trap, Model TLB should be used.

POWER SUPPLY

Accommodates any two Jerrold VHF converters.

B+: 150 vdc, (regulated VR-150), at 60 ma (2 converters)

Fil: 6.3 vac at 3 amperes

Line Voltage: 117 vac 50-60 cps

Power Consumption: 60 watts (2 converters)

Dimensions: 13¼" x 10" x 6¼"

Fuses: (1) Main fil 1A; (2) B+, 1/8A.

INSTALLATION

1. Converters should be mounted and connected to the power supply. (Red equals B+, Yellow equals Fil, Grey equals ground).

2. A 5K ohm current limiting resistor is in the B+ circuit of the power supply for adjusting the VR-150 current at operating line voltage, under full load. This adjustment is made in the factory at 117 vac for either one or two converters as specified in the initial order.

   a. When adding a converter the current limiting resistor should be adjusted for a 15 ma current measured from pin 2 VR-150 to ground (remove pin 2 from ground and insert milliameter).

   b. When operating converters from line voltage stabilizers, adjust the VR-150 current in the same manner (2a).

3. Converter should be installed in accordance with radiation proofing practices, using metal cabinet, power line filter, and double shielded cable to inputs and outputs.

MAINTENANCE

In the event of failure of a converter, check line voltage, fuses, connections and tubes.

Defective converters should be returned as complete units (with power supply) to Jerrold Service Corporation for repair.