

Operating Manual

RT-3000 Antenna Tuner

Dentron

WPDC



Description

The model RT-3000 antenna tuner is a slim, compact, high performance unit with the most asked for features built-in to provide the operator with the latest design developments and ease of operations.

The RT-3000 is equipped with an in-line wattmeter, with front panel selectable ranges for 200 watts or 2000 watts forward and 200 watts reflected, 6:1 vernier control on transmitter and antenna matching, and a roller inductor with integral turns counter. This adds up to an antenna tuner to handle innumerable systems with utmost precision.

The RT-3000's low profile, modular design, makes it a most appealing addition to any HF communications station.

Specifications

Frequency Coverage:	1.8 - 30 MHz continuous
Input Impedance:	50 Ohms
Output Impedance:	Coax - 50 Ohms Nominal Wire - High or Low Z - Balance Feed Line with optional BL-1 Balun
Power Capability:	3000 watts P.E.P.
Dimensions:	4" (h) x 12" (w) x 13" (d)
Weight:	10 lbs.

Front panel controls are provided for transmitter matching, antenna matching (Vernier controlled), inductance (turns counter provided), bypass operate selector and wattmeter selector.

Warning

Do not apply more than 100 watts to the RT-3000 prior to tuning. Always tune with low power levels before increasing power level to maximum.

Installation

Unpacking

Carefully remove the RT-3000 from the shipping carton and examine it for evidence of damage. Immediately notify the shipping company should any damage be found.

Location

The RT-3000 will work properly in almost any location. Select a location on the operating table that will allow easy access to the control knobs.

Connections

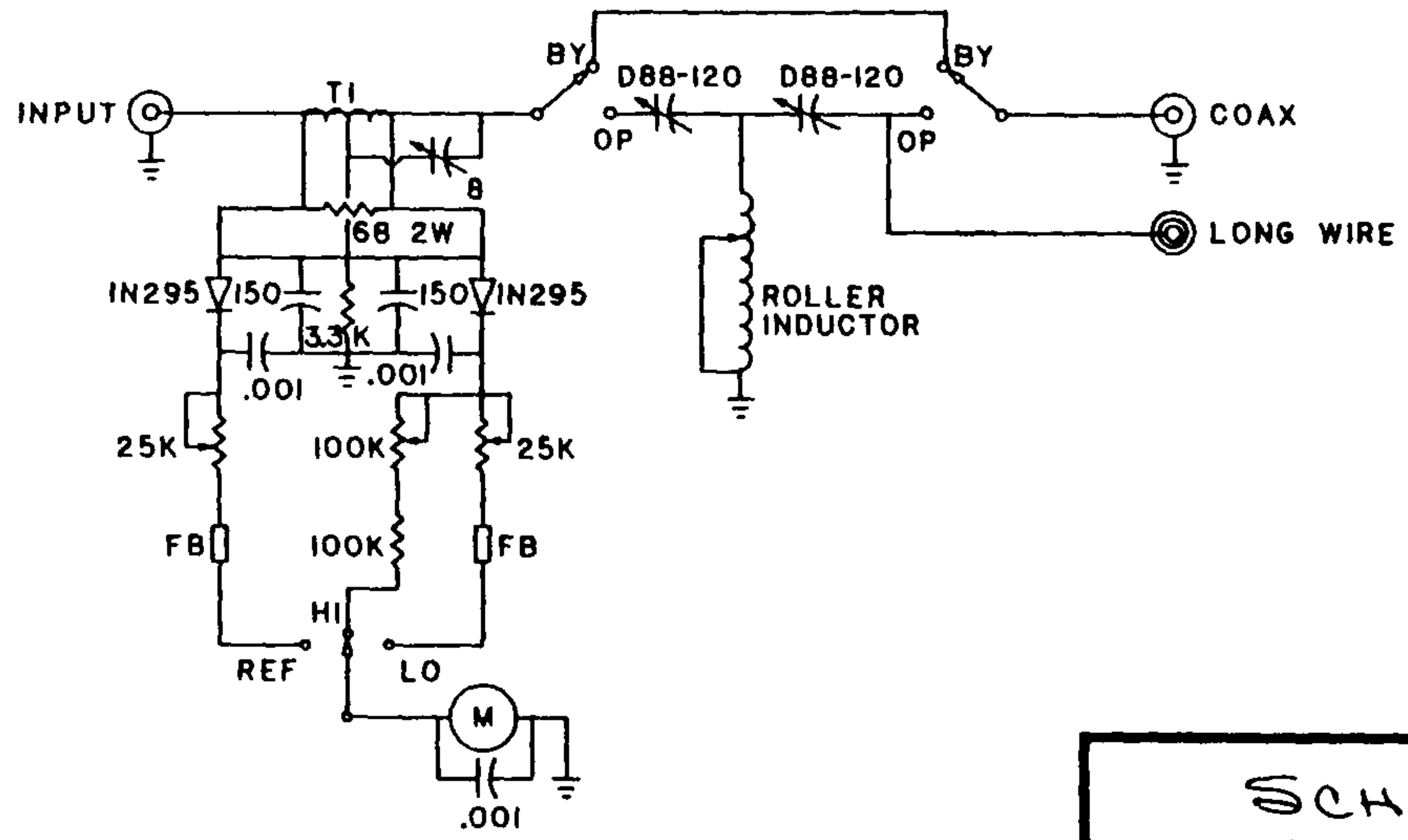
Connect the RF output of your exciter to the transmitter connector of the RT-3000, using 50 ohm coaxial cable such as RG8/U. Connect the coaxial line of your antenna to coax connector, or connect a long wire antenna to post marked Long Wire. Also, connect a good ground to GND post.

You now have a choice of using the tuner or bypassing the coax position. Both coax and long wire cannot be used at the same time.

Operation

1. Set transmitter matching and antenna matching controls to number 50.
2. Listen on receiver for maximum band noise while turning roller inductor for maximum noise. Caution: Do not turn counter below 00.00 or exceed 36.0 or serious damage may result to the roller inductor.
3. Apply enough power to the system to get a reading on the meter in the reflected position.
4. Rotate the roller inductor for a drop in reflected power reading.
5. Adjust "transmitter matching" and "antenna matching" controls for a minimum reading of reflected power.

RT 3000 SCHEMATIC



SCHEMATIC		
SCALE: —	APPROVED BY:	DRAWN BY: CD
DATE: 3-26-80		REVISED:
Denton RADIO CO.		
RT-3000	DRAWING NUMBER	25-007

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