DenTron 160 - 10 Super Tuner and 3 kw Models

The DenTron 160 - 10 AT Antenna Tuner (Transmatch), will couple a 160 - 10 meter Transmitter to almost any type antenna system.

The 160 - 10 AT, when properly adjusted, will tune out load reactance, and transform the load impedance to 50 - 70 ohms.

The 160 - 10 AT also includes a highly effecient balun, so antennas fed with open - wire line may be properly tuned to desired frequency.

The 160 - 10 AT may be used with coax-fed antennas as well as end-fed single wire types.

INSTALLATION

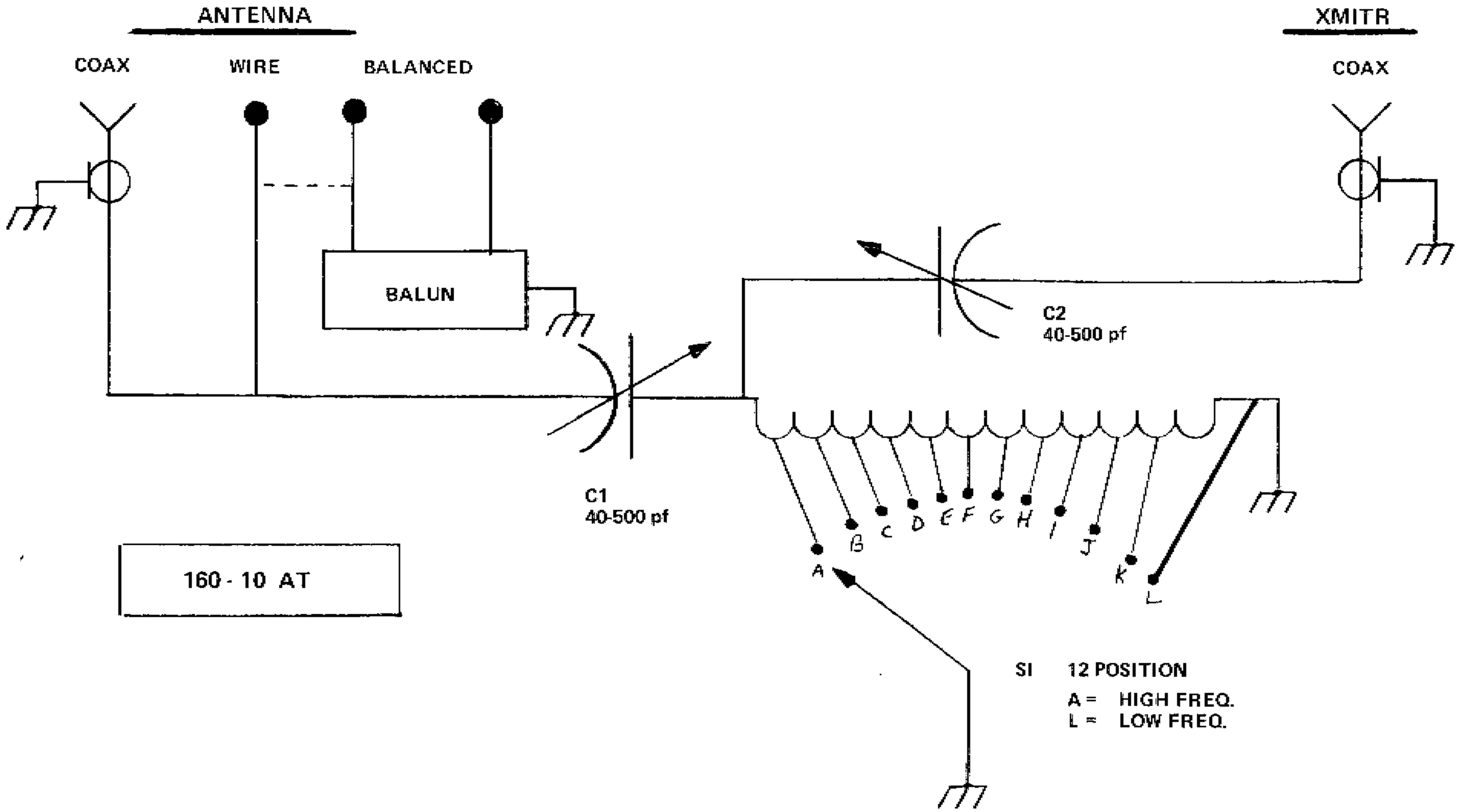
1. Hook ground wire on back of tuner.
   a. a good ground is very important when using end-fed wire antennas.

2. From the rear panel marked "transmitter", connect a coax cable to an SWR bridge that is connected to the station transceiver.

3. ANTENNA CONNECTIONS:
   a. Coax fed antennas to coax feedline.
   b. End-fed wire to SINGLE WIRE TERMINAL.
   c. OPEN WIRE FEED to BALANCED FEED LINE TERMINALS and also JUMPER WIRE to SINGLE WIRE TERMINAL (dotted line).

OPERATION

1. Set "Transmitter Matching" and "Antenna Matching" Controls to "5".
2. Listen on receiver for maximum band noise while turning inductance control for maximum noise.
   (A is highest frequency, L is lowest frequency)
3. Feed enough power through the system to get a reading on the SWR bridge in the reflected position.
4. Rotate Inductance Control for a drop in SWR reflected reading.
5. Adjust "Transmitter Matching" and "Antenna Matching" control for minimum SWR.
6. Now apply full power and touch up "Transmitter Matching" control if necessary.



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BASIC CONTROL SETTINGS
(into a 50 ohm resistive load)

BAND & FREQ.	TRANS.	INDUCTANCE	ANT.
160- 1.830	1	L	2.5
75- 3.8	3	E	4
40- 7.2	5.5	C	6
20- 14.2	4	B	1
15- 21.3	3.5	B	3
10- 28.6	8.25	A	8

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The DenTron 160 – 10 AT Antenna Tuner (Transmatch), will couple a 160 – 10 meter Transmitter to almost any type antenna system.
The 160 – 10 AT, when properly adjusted, will tune out load reactance, and transform the load impedance to 50 – 70 ohms.
The 160 – 10 AT also includes a highly efficient balun, so antennas fed with open-wire line may be properly tuned to the desired frequency.
The 160 – 10 AT may be used with coax-fed as well as end-fed single wire type antennas.
MAXIMUM 500 Watts of Carrier or 1200 Watts PEP

INSTALLATION

1. Connect ground wire to the back of tuner.
    a. A good ground is very important when using end-fed wire antennas.

2. On the rear panel, marked "Transmitter," connect a coax cable to an SWR bridge that is connected to the station transceiver.

3. Antenna Connections:
    a. Coax fed antenna to coax feedline.
    b. End-fed wire to SINGLE WIRE TERMINAL.
    c. OPEN WIRE FEED to BALANCED FEED LINE TERMINALS and also JUMPER WIRE to SINGLE WIRE TERMINAL (dotted line).

OPERATION

1. Set "Transmitter Matching" and "Antenna Matching" Controls to "5."

2. Listen on transceiver for maximum band noise while turning Inductance Control for maximum noise. (A is the highest frequency, L is the lowest frequency)

3. Feed enough power through the system to get a reading on the SWR bridge in the reflected position.

4. **NEVER** rotate the Inductance Control while transmitting! Stop transmitting, rotate Inductance Control to another position, transmit and check for a drop in the SWR reflected reading. Repeat this step until you see a drop in the SWR reflected reading.

5. Adjust "Transmitter Matching" and "Antenna Matching" Controls for minimum SWR.

6. Now apply full power and touch-up "Transmitter Matching" Control if necessary.

Since this tuner doesn’t have a bypass switch, you should tune like this.

1. Connect the radio to the amplifier the amplifier to a watt/SWR meter, the watt/SWR meter to a dummy load.
2. Tune the amplifier into the dummy load on the operating frequency only use enough drive to get 50% or less of the amplifier’s rated output.
3. Connect the radio to the amplifier, the amplifier to the watt/SWR meter, the watt/SWR meter to the tuner and the tuner to the antenna.
4. Place the amplifier in standby or bypass position.
5. Tune the radio through the bypassed amplifier, through the watt/SWR meter, through the tuner to the antenna with reduced power, no more than 25 watts on the operating frequency.
6. Place the amplifier in the operate position and drive it to no more than 50% of its rated output and check the match through the tuner. If need be, very carefully and very slowly adjust the “Transmitter Matching” and “Antenna Matching” Controls on the tuner for minimum SWR.
7. Adjust the drive on the transmitter so the amplifier puts out no more than 1000 watts.
8. Have fun!