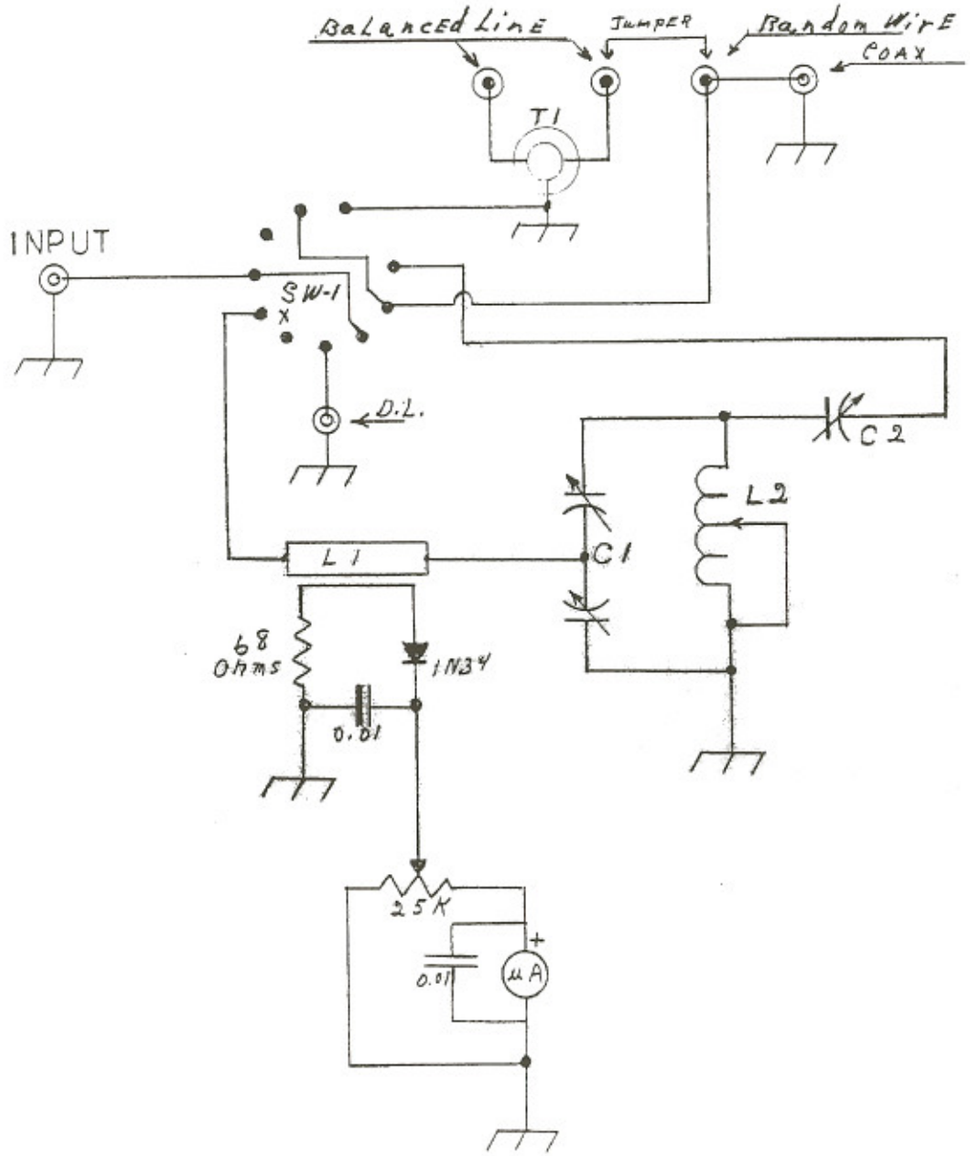


SCHEMATIC FOR UT2000B

INSTRUCTIONS FOR MODEL UT2000B with ANTENNA SWITCH

General operating instructions for model UT2000B with antenna switch are the same. Please follow diagram on back panel for proper antenna sequence with indicator marks on front panel, such as coax antenna (1, 2, 3) then random and open wire line. Jumper cable is no longer necessary on UT2000B with antenna switch.

WARNING

Do not switch antenna switch or function switch while under load conditions. Switch damage or failure may occur.

Model: UT2000B – 10 to 160 Meters
Installation and Operation Instructions
Please Read Instructions Carefully Before Using The Unit

Connect transmitter to input of Transmatch with suitable lengths of 52 ohm coax. Connect coax fed antennas to fitting marked COAX. Connect random wire antennas, or any antenna with a single wire feed, to connection marked Random Wire. If balanced line is used connect balanced line to connection marked Balanced Line with Jumper as indicated on back panel. Attach ground wire to lug marked Ground. If dummy load is used connect to Dummy Load fitting.

Function Switch

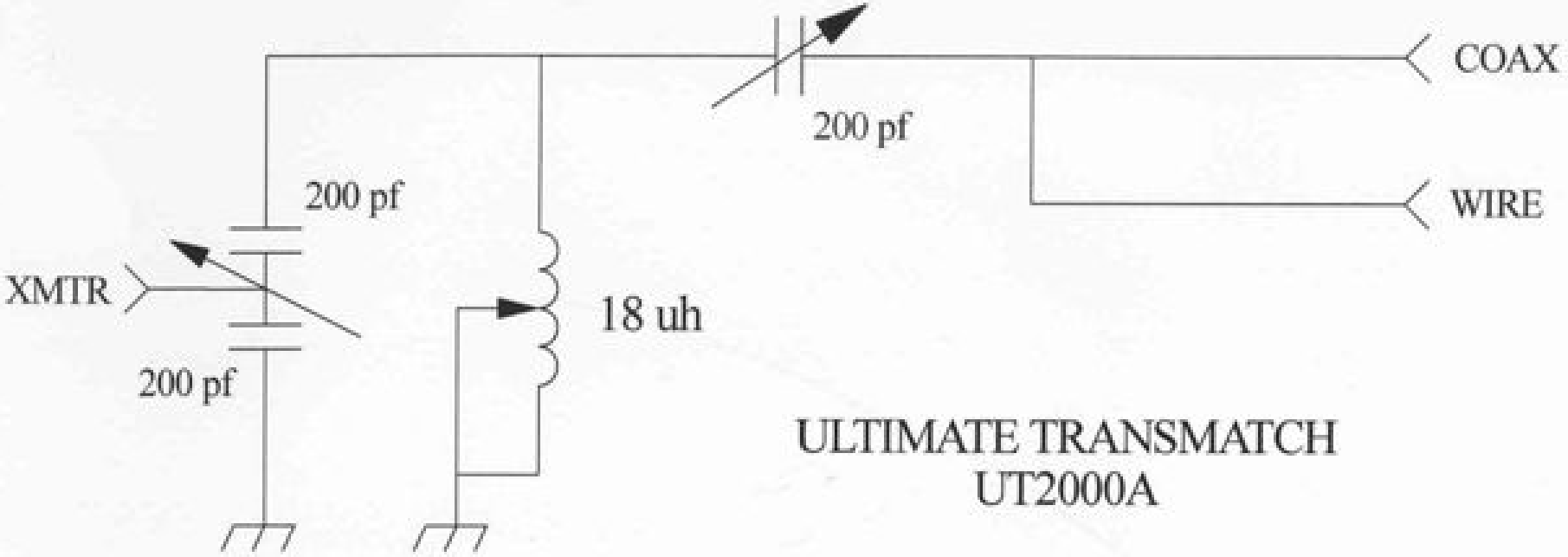
IN - The unit is in the circuitry to output
OUT - The unit is out of the circuitry, input is directed to output
DL - Transmitter is direct to dummy load and unit is disconnected
- Antenna system is grounded
Do not switch under load.

Initial Tune-Up - 75-80 Meter Band

1 - Set function switch to "in"
2 - Set inductor to #0 - Do not force stops at 0 and 38 turns.
3 - Set input capacitor to mid-scale
4 - Set output capacitor to mid-scale
5 - Apply reduced power. Meter should read about half scale. Meter adjustment may be necessary.
6 - Increase inductor until meter shows maximum dip. Do not go beyond this point.
7 - Adjust input capacitor for further dip
8 - Adjust output capacitor for further dip
9 - Follow this procedure with input and output capacitors until satisfactory match is obtained (near zero on meter).

Note 1: If input capacitor reaches full scale and a match is not obtained, increase inductor by one or two positions.
Note 2: Tune-up on other bands similar.
Note 3: When using balanced line, set input capacitor full scale and set output capacitor full scale. If a meter dip is not obtained when adjusting inductor, reduce capacitor readings by like amounts until dip is observed.
Note 4: A dummy load is desirable but not mandatory. If a dummy load is used, the function switch may be tuned to DL and the transmitter tuned directly to the dummy load in the usual manner.

Murch Electronics, Inc.
Box 69, Franklin, Maine 04634
Phone 207-565-3312



ULTIMATE TRANSMATCH
UT2000A

PLEASE READ INSTRUCTIONS CAREFULLY BEFORE USING THE UNIT.

Installation and operation instructions Model UT - 2000 A Transmatch

Connect transmitter to input of any SWR bridge or watt-meter, and output of SWR bridge or watt-meter to input of Transmatch with suitable lengths of 52 ohm coax. Connect coax fed antennas to fitting marked ANTENNA. Connect random wire antennas, or any antenna with a single wire feed, to connection marked RANDOM WIRE. Attach ground wire to lug marked GROUND.

DIALS:

Left hand dial — input capacitor
Center dial — Rotary inductor and turns counter
Right hand dial — output capacitor

TUNING:

Tune up initially with low power, on 3500 to 4000 KC band.
Tune transmitter in usual manner.
Set input capacitor (left hand dial) at 1½.
Set output capacitor (right hand dial) to mid scale.
Set rotary inductor (center dial) to 0 turns.
Turn SWR meter to forward position.
Bring up power from exciter until a near full scale reading is obtained on meter. Meter adjustments may be necessary.
Turn meter to reflected position and rapidly increase turns on rotary inductor until a minimum meter reading occurs, DO NOT go by this point.
Rotate output capacitor in either direction, whichever is necessary to obtain a minimum meter reading.
Rotate input capacitor clockwise slightly for an increase in meter reading.
Rotate output capacitor in direction previously used for minimum reading.
Continue this procedure until a zero or very near zero reading is obtained.
Slight adjustment of the rotary inductor should now be made for lowest meter reading. Readjust capacitors if necessary for final zero reading.
The input capacitor should now be toward full capacity and output capacitor in a position to accommodate the particular antenna used. If the input capacitor reaches full capacity and a very low meter reading is not obtained, slightly increase turns on rotary inductor and retune as above.
Turn meter switch to forward position and adjust meter control for a full scale reading.
Turn meter switch to reflected position and meter should read zero or very near, if not retune.
A 50 ohm load is now presented to the transmitter, retune transmitter. With meter switch in forward position, bring transmitter up to full power while adjusting meter sensitivity control for full scale reading. Meter in reflected position should now read zero. Slight tuning adjustments may be necessary. Transmitter is now ready to operate.
Note: Although a zero meter reading is easily possible a slight indication of reflected power is not objectionable.

TUNE-UP OTHER BANDS

Initial tune-up on other bands is the same as the 3500 to 4000 KC band, except input and output capacitor settings may be different.

GENERAL

Settings of input and output capacitors may vary considerably due to differences in antennas. Initial tune-up and compiling notes should be carefully done. When making notes for any one frequency, record exact number of turns required on the rotary inductor. When a change in frequency of a few kilocycles is made, a slight adjustment of the rotary inductor will normally produce a satisfactory reading. If not readjust input and output capacitors. Be certain the meter is in the reflected position while tuning for minimum meter readings. As initial tune-up is made on each band, make notes of dial settings for future use. If a change in antennas is made, additional notes should be made. By referring to notes the unit may be quickly and easily retuned to any frequency, or antenna system compatible with the unit. Due to the many combinations of frequencies and antennas possible, it is necessary to use patience to familiarize yourself with the many capabilities of the unit.

Be certain the transmitter is well neutralized when using the Ultimate Transmatch.

See QST July '70 article by Lewis McCoy also ARRL Handbook.

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