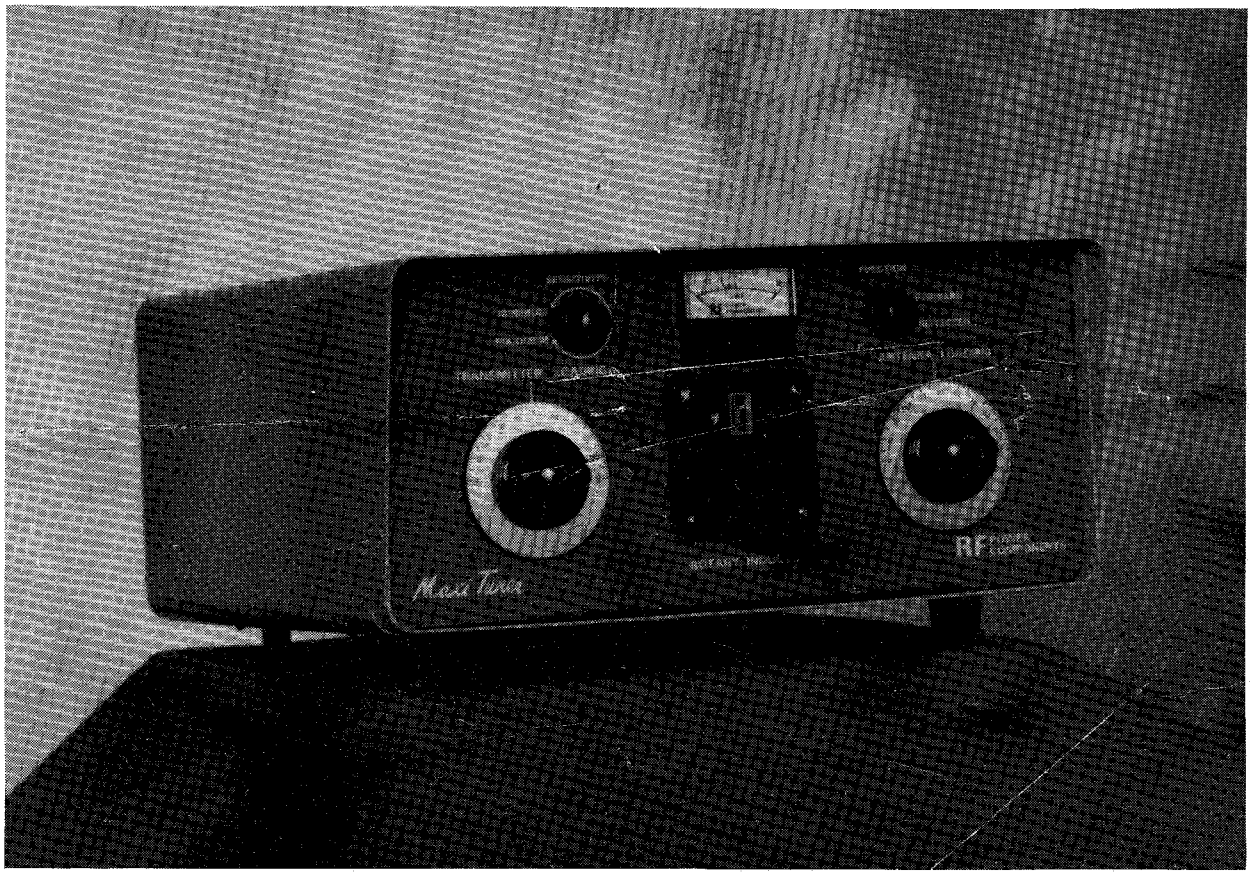
Operating Hints

RF POWER COMPONENTS

MAXI TUNER



NO-COMPROMISE MAXI ANTENNA TUNER

Operating

THE MAXI TUNER

1) Connect transmitter to Maxi Tuner "TRANSMITTER" connector with 50 or 75 Ohm coax cable.
2) Connect antenna to appropriate Maxi Tuner connector:
   a) coax-fed antenna to connector marked "COAX".
   b) long-wire or random wire antenna to feed-thru insulator marked "WIRE".
   c) balanced open-wire or twin-lead fed antenna to feed-thru marked "BALANCED". Attach an external jumper wire between the left "BALANCED" feed-thru and the "WIRE" feed-thru. This connects the balun transformer to the output of the Maxi Tuner.

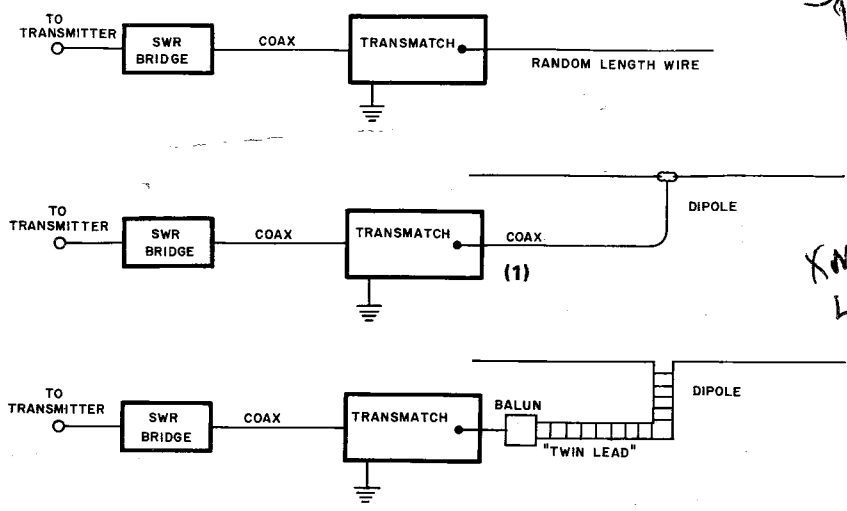
   NOTE: Only one antenna at a time can be connected to the Maxi Tuner. See coaxial switch suggestion next page.
3) Set "TRANSMITTER LOADING" and "ANTENNA LOADING" capacitors to 100 on the vernier dial skirt (Maximum Capacitance).
4) Set SWR "FUNCTION" switch to "REFLECTED" and set SWR "SENSITIVITY" to "MINIMUM".
5) Apply low power thru Maxi Tuner, increase "SENSITIVITY" until a usable reflected meter reading is obtained (Mid-scale).
6) Tune "ROTARY INDUCTOR" thru it's range until there is a dip in the reflected meter reading. Adjust "SENSITIVITY" to maintain a usable reading if necessary.
7) Tune "TRANSMITTER LOADING" and "ANTENNA LOADING" for minimum reflected meter indication while increasing "SENSITIVITY" as required.
8) Make fine adjustments to "ROTARY INDUCTOR", "TRANSMITTER LOADING", and "ANTENNA LOADING" to minimize reflected power.

Maxi Tuner is now tuned for operation. Transmitter tuning should be checked and adjusted if necessary and power can be increased for normal operation.

NOTE: All tuning of the MAXI TUNER should be done at LOW power levels. Different combinations of capacitance and inductance can produce apparent indication of matched conditions. Always use the combination that uses the greatest amount of capacitance. Logging scales on the front panel controls for capacitance and inductance are for recording settings for matched conditions on various frequencies and antennas. Keeping accurate records of these settings for favorite operating frequencies and antennas will greatly facilitate quick band changes and tune-up.

Additional useful information on tuner operation can be found in Lew McCoy's Ultimate Transmatch articles in July 1970 QST and the ARRL Handbook. Walt Maxwell's recent QST series on Reflections covers transmatch theory in depth and has a detailed analysis of the Maxi Tuner circuit in August 1976 QST (Modified Ultimate Transmatch).

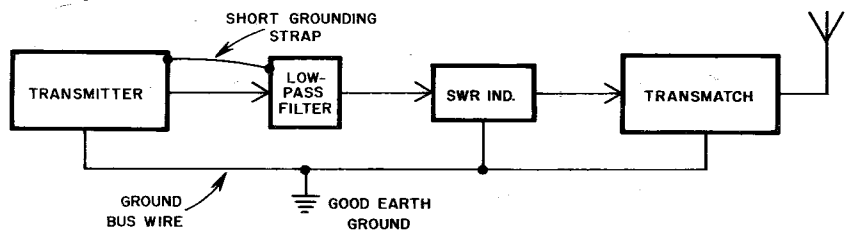
Hints

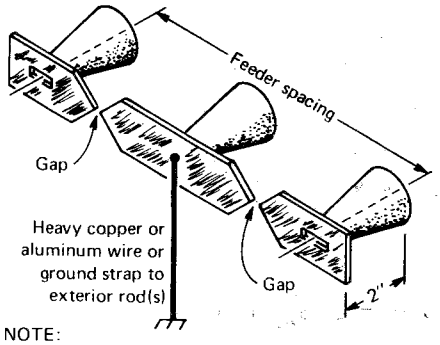


Three typical antenna systems used

(1) Suggest use of B & W Model 590G Coaxial Switch at this point for multiple antenna selection.

Station setup for using a low-pass filter.





NOTE:
Adapted from W4ZG's lightning arrester design appearing in the July 1955 issue of *QST*. Also see the current edition of the ARRL *Antenna Book*.

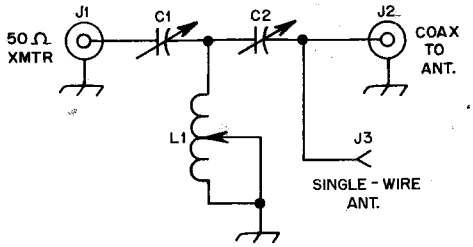
Lightning Protection

Illustrated is an easy-to-make outdoor lightning arrestor for use with parallel-conductor lines; it is especially suited for use with *open-wire* lines. The objective is for lightning discharges to "shoot the gap" and be passed harmlessly into the ground.

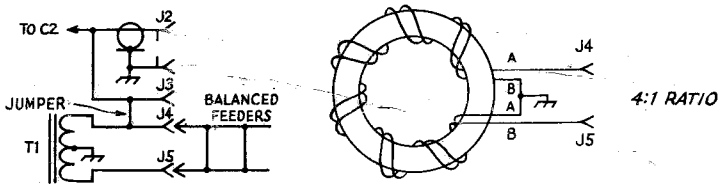
MAXI TUNER

SPECIFICATIONS

Transmatch network



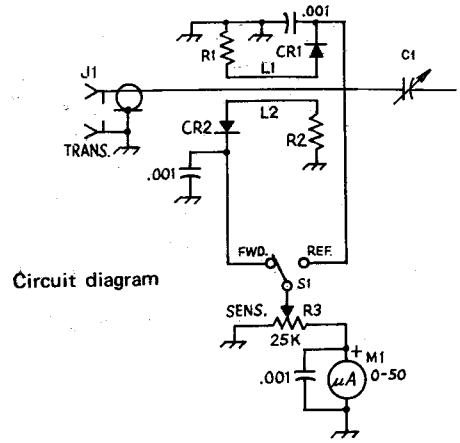
Optional Balun



NOTE: 2 KW Power Limit With Balun In Use.

Optional

- MONIMATCH SWR METERING



Circuit diagram

M1 – 50 μA.
R1, R2 – 68-ohm, 1/2-watt carbon or composition.
R3 – 25,000-ohm control, linear taper.
S1 – Spst

The .001-μF capacitors used are disk

CR1, CR2 – 1N34A germanium diode.

TAUT BAND METER

Accuracy: ±2%

FEATURES:

- PRESENTS 50-75 OHM RESISTIVE LOAD TO YOUR TRANSMITTER
- DUAL 500 PF CAPACITORS
- HANDLES 3 KW PEP *
- ROTARY INDUCTOR (28 UH)
- MATCHES UNBALANCED COAX LINES, RANDOM LENGTH END—FED WIRES
- IMPROVED ULTIMATE TRANSMATCH CIRCUIT (SEE QST AUGUST '76, PAGE 18)
- CONTINUOUS COVERAGE 1.7-30 MHZ, INCLUDING ANY WARC '79 CHANGES
- 14½ INCHES WIDE, 6½ INCHES HIGH, 13½ INCHES DEEP, 15 POUNDS
- ONE YEAR WARRANTY

* 2 KW PEP WITH BALUN IN USE

by RF POWER COMPONENTS

Phone: (715) 251-4118
1249 GARFIELD ST.
NIAGARA, WIS. 54151