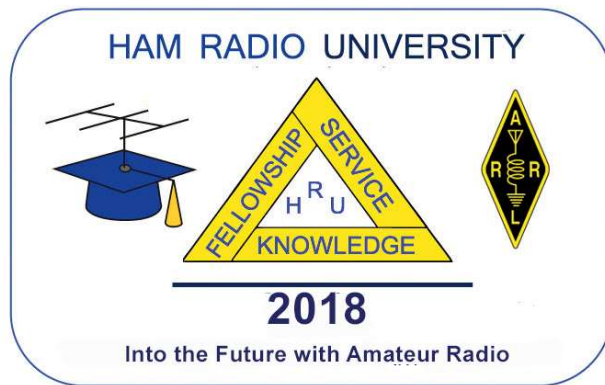


Building Your First HF Station



Phil Lewis - N2MUN
Ham Radio University
January 6, 2018

GETTING STARTED

Interest : CW, SSB, Digital

Time invested in hobby

Money available : 1/2 antenna system, 1/4 radio, 1/4 extras

Shack Location: Remote station option

Antenna Location: Town restrictions /XYL

Feed Line/Coax cables : Remote antenna switch

What Radio should I Buy : Elmer's/Club/HRU

Computer/Radio Software needed

Extra's needed : Test Equipment, Headset, Keyer, Power Supply

STARTING POINT

SHACK LOCATION

Away from house traffic
Easy access to feed line entrance
2 sets of 4 110VAC outlets
One 220VAC outlet (for amplifier)

ANTENNAS

BEAM -- Advantages : Directional, Gain Disadvantages: Cost

VERTICAL -- Advantage : Limited small needed Disadvantage: Omni-Directional, Noisy

DIPOLE/WIRES -- Advantage: Low Cost, Easy to setup Disadvantage: Space required, support

RADIOS

NEW -- Kenwood, Icom, Yaesu, Elecraft -- Cost \$1200-1800

USED -- Many available at Hamfests -- Cost \$500-1200

EXTRAS

Test Equipment, Headset, Keyer , Power Supply, Tuners

TUNERS

- MFJ -949E --300 WATTS



- MFJ-962D -- 1.5K WATTS



- LDG



- PALSTAR



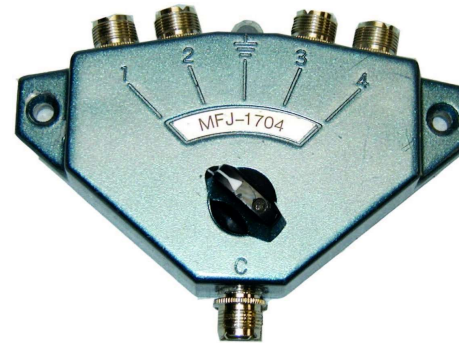
FEED LINES



- . RG213/U ---> 1.0 DB LOSS PER 100FT
- . LMR400 ---> 0.80 DB LOSS PER 100FT
- . RG8X or MINI8 ---> 1.4 DB LOSS PER 100FT

Antenna Switches

MFJ ANTENNA SWITCHES



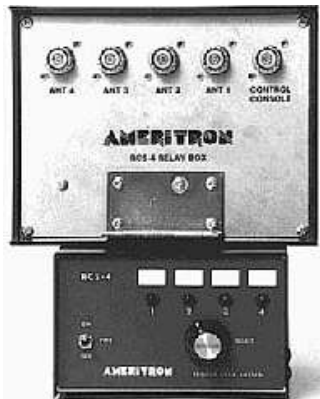
LDG-4R



ALPHA DELTA



AMERITRON REMOTE SWITCHES



AMERITRON REMOTE SW



TOWERS / ROTATORS

TOWERS:

- ROHN
- TRIPOD ROOF
- US TOWER
- UNIVERSAL



ROTATORS:

- YAESU
- HY-GAIN



TEST EQUIPMENT

J ANALYZERS MFJ-259C

GEXPERT ANTENNA ANALYZER AA-30

ULTI METER WAVETEK

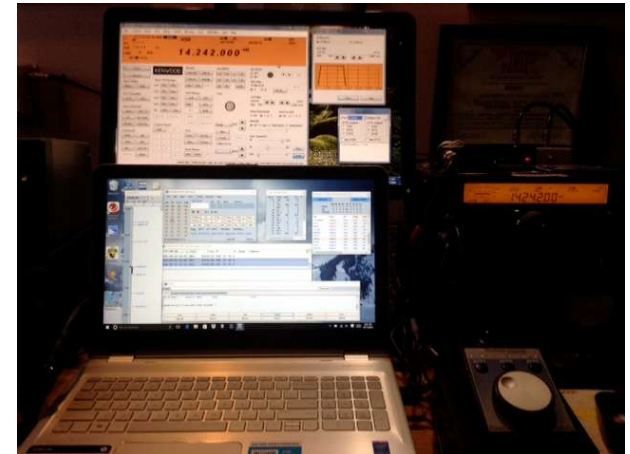
ENGINEERING ULTRA CRIMING KIT



INTERFACE

REMOTE RIG INTERFACE SET

FOR RADIO'S WITH DETACHABLE FRONT
PANELS(TS480HX,TS2000,IC706,ELECRAFT



SIGNAL LINK USB



RIGBLASTER



EXTRAS

MFJ KEYS/PADDLE COMBO

MFJ VOICE KEYS

HEIL HEADSET

STRON POWER SUPPLY

LOGGING PROGRAM

1MM Plus

AM RADIO DeLUXE



HELPFUL TRICKS

After setting up your station take pictures
and draw schematic

Take screen shots of program settings (N1MM)

In the spring and fall check coax cables and antennas

Download Manuals
On Air Signal Reports
Listen!!

HF DURING LOW PROP CYCLE

- 40 AND 80 METERS
 - 17 METERS
 - DIGITAL MODES
 - CW
 - SATELLITE
- ARRL BOOK “LOW BAND Dxing” BY ON4UN



Any questions?