

SPECIFICATIONS

FREQUENCY RANGES

Model 420 Frequency Control Unit

Full frequency coverage of 80, 40, 20, 15, and 10 meter amateur radio bands in 20 ranges of 200 kc each, and WWV, as follows:
3.4-3.6, 3.6-3.8, 3.8-4.0, 7.0-7.2, 7.2-7.4,
14.0-14.2, 14.2-14.4, 14.8-15.0, 21.0-21.2,
21.2-21.4, 21.4-21.6, 28.0-28.2, 28.2-28.4,
28.4-28.6, 28.6-28.8, 28.8-29.0, 29.0-29.2,
29.2-29.4, 29.4-29.6, 29.6-29.8 mc.

Model 406 Frequency Control Unit

Full phone band coverage of 30, 40, 20, and 15 meters, plus two 200 kc segments of 10 meters, as follows:
3.8-4.0, 7.1-7.3, 14.15-14.35, 21.25-21.45,
28.5-28.7, 28.7-28.9 mc.

POWER INPUT

Single Sideband Suppressed Carrier

400 Watts PEP, minimum, on all bands.

CW

320 Watts DC input on all bands.

AM (Single Sideband With Carrier)

125 Watts DC input on all bands.

DISTORTION

Distortion products down at least 30 db,

UNWANTED SIDEBAND SUPPRESSION

Unwanted sideband down at least 40 db.

CARRIER SUPPRESSION

Carrier suppression at least 50 db.

RECEIVER SENSITIVITY

Less than 0.5 microvolt at 50 ohms impedance for signal-plus-noise to noise ratio of 10 db.

AUDIO OUTPUT AND RESPONSE

Audio output through built-in speaker approx. 3 watts to 3.2 ohm load. Response essentially flat 300 to 3000 cps on both receive and transmit.

METERING

PA Cathode current, 0-800 ma on transmit
S-Meter, 0-70 db over S9 on receive.

FRONT PANEL CONTROLS

Function Switch, Sideband Selector, Phone-CW, AF Gain, Bandswitch, Mic. Gain, Carrier Balance, PA Plate Tune, PA Grid Tune, PA Load Coarse, PA Load Fine, VOX-PTT

REAR PANEL CONTROLS AND CONNECTORS

Bias Potentiometer, Grid-Block CW key jack, Jones plug power connector, VOX Connector, Frequency Control Unit Connector, Antenna, S-Meter Zero, SPDT Relay Terminal.

FREQUENCY CONTROL UNIT CONTROLS

Bandswitch, Main Tuning, RF Gain

VACUUM TUBE COMPLEMENT

V1- 6EW6 VFO Amplifier
V2- 12BE6 Transmitter Mixer
V3- 6GK6 Driver
V4- 6HF5 Power Amplifier
V5- 6HF5 Power Amplifier
V6- 12BZ6 Receiver RF Amplifier
V7- 12BE6 Receiver Mixer
V8- 6EW6 First IF Amplifier
V9- 12BA6 Second IF Amplifier
V10- 12AX7 Product Detector/Receiver Audio
V11- 6BN8 AGC Amplifier/Detector
V12- 6GK6 Audio Output
V13- 12BA6 100 KC Crystal Calibrator
V14- 7360 Balanced Modulator
V15- 12BA6 Carrier Oscillator
V16- 12AX7 Mic. Amplifier/Transmit Audio
V17- OA2 Voltage Regulator

DIODE AND TRANSISTOR COMPLEMENT

Q1* 2N706 Oscillator
Q2* 2N706 Emitter Follower
D401 TS-2 ALC Diode
D402 TS-2 ALC Diode
D601 TS-2 S-Meter Delay
D1701 1N2974 Zener Voltage Regulator
*Transistor complement identical for either Model 420 or Model 406 Frequency Control Unit.

TRANSMITTER OUTPUT IMPEDANCE

Wide-range Pi-network output matches antennas essentially resistive at 20 to 300 ohms impedance with provisions for both coarse and fine adjust.

POWER REQUIREMENTS

Filaments 12.6 volts, 5.5 amp ac or dc
Relay 12 volts dc, 250 ma
Bias -110 volts dc, 100 ma
Medium Voltage 275 volts dc, 150 ma trans.
High Voltage 800 volts dc, 500 ma

DIMENSIONS

Model 400 Transceiver

5-1/2 in. high, 13 in. wide, 11 in. deep

Model 420 Frequency Control Unit

5-1/2 in. high, 6-1/2 in. wide, 11 in. deep

Model 406 Frequency Control Unit

3 in. high, 4-3/4 in. wide, 5 in. deep.

WEIGHT

Model 400 Transceiver 17 lb.
Model 420 Frequency Control Unit 9 lb.
Model 406 Frequency Control Unit 3 lb.