

275 watts CW and SSB\*

200 watts phone

Bandswitching 160 through 10 meters

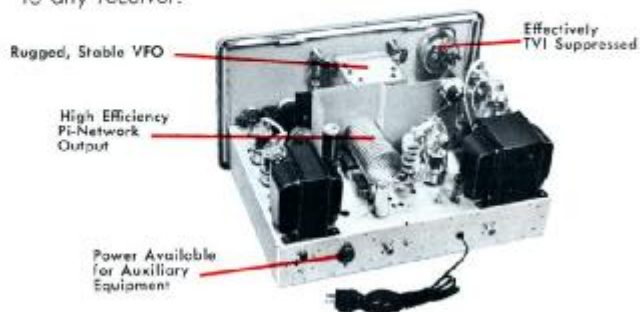
\* with an auxiliary SSB exciter

This compact transmitter gives you outstanding flexibility and performance . . . power to punch through terrific QRM! Built-in VFO or crystal controlled, the "Valiant" is completely bandswitching on all amateur bands 160 through 10 meters . . . delivers a full 275 watts input on CW and SSB (with an auxiliary SSB exciter) and 200 watts on AM. VFO is temperature compensated and extremely stable—operates in the 1.75 to 2.0 mc and 7.0 to 7.45 mc ranges.

The "Valiant" is designed with a high efficiency pi-network tank circuit which will match antenna loads from 50 to 600 ohms and tune out large amounts of reactance—final tank coil is silver plated. Other features: complete TVI suppression; timed sequence (grid block) keying; high gain push-to-talk audio system for use with high impedance crystal or dynamic microphones; low level audio clipping; built-in low pass audio filter; self contained power supplies; and single control mode switching.

As an exciter, the "Valiant" will drive any of the popular kilowatt level tubes and will provide a high quality speech driver system for high powered modulators. A nine pin receptacle on the rear of the transmitter brings out TVI filtered control and audio leads for exciter operation. This receptacle permits the "Valiant" to be used as a filament and plate power source, and also as a modulator for auxiliary equipment such as a VHF transmitter.

**FREQUENCY CONTROL**—The "Valiant" may be operated by built-in VFO or crystal control. The VFO is temperature compensated and extremely stable . . . each band has separate bandspread calibration. Dual tank circuit operates on 1.7 to 2.0 and 7.0 to 7.45 mcs with separate compensation for each frequency range. Excellent tuning accuracy and extremely smooth control is possible with the 6 to 1 planetary drive mechanism which controls tuning. Plexiglas dial is edge-lighted, Plexiglas pointer is positioned to insure a minimum of parallax. Each band is divided into precise 10 kc increments for accurate dial readings and interpolation. The broad range of the VFO permits coverage of an entire band and VFO is easy to tune . . . may be zeroed to any receiver.



## Viking "Valiant"

**TUNING**—The "Valiant's" basic tuning controls are located on the VFO dial escutcheon. QSY within the phone or CW portion of a band is usually possible by merely changing the VFO frequency setting. For larger frequency excursions, simply touch up the exciter tuning, adjust loading, and dip the final.

**OUTPUT CIRCUIT**—An efficient pi-network tank circuit with a silver plated inductor is used in the final amplifier. Designed to handle 50 to 600 ohm resistive antenna loads, it will also tune out large amounts of reactance. Final amplifier tubes are three 6146's. RF output is available through a standard SO-239 coaxial connector at the rear of the chassis.

**AUDIO SYSTEM**—The "Valiant" has a high gain audio circuit which provides reserve gain for use with high impedance crystal or dynamic microphones and features push-to-talk control. Low level audio clipping prevents overmodulation and increases average modulation level and intelligibility. Built-in low pass audio filter restricts the audio range to 3500 CPS, thus providing maximum communication effectiveness with minimum bandwidth.

**TIMED SEQUENCE KEYING**—This highly flexible keying system applies wave shaping to the keyed amplifier stages for perfect "make" and "break" on your keyed signal. Signal clicks and chirps are eliminated, yet the "break-in" advantages of a keyed VFO are retained. The system operates so fast that a breaking station may be heard between transmitted dots! Electronically operated, this timed sequence keying system uses no relays and only one dual triode plus a rectifier tube for the grid block bias.

**TVI SUPPRESSION**—Completely TVI suppressed, the "Valiant" cabinet is electrically sealed with flexible monel braid on the inside of the front panel and large cabinet overlap—a cup type shield seals the meter. Power line and relay jack have double "L" type filters—all auxiliary socket, meter, key, and dial lamp leads have "L" filter networks. Interior harness leads and filaments are by-passed. Careful by-passing of the final and special circuit techniques minimize harmonics in the output circuit.

**POWER SUPPLIES**—Self-contained high voltage power supply uses choke input filtering—delivers 620 volts at 500 ma. Self-contained low voltage power supply will deliver 300 volts at 90 ma and 6.3 volts AC at 6 amps. A separate relay jack provides 115 V AC for antenna change-over and control relays, and is energized by the "operate" switch on the front panel or the push-to-talk circuit. Two VR-105 voltage regulators are used to regulate the final amplifier screen voltage in SSB operation and the modulator screen voltage during AM operation. VFO screen voltage is regulated by an OA2 voltage regulator.



## SPECIFICATIONS

### FREQUENCY RANGE:

160, 80, 40, 20, 15, and 10 meters

### POWER REQUIREMENTS:

105-120 V AC, 50-60 cycles, single phase, 600 watts maximum.

### FUSE PROTECTION:

Transmitter fuses are located in the 115 V. power plug. Separate internal fuse furnishes protection for low voltage power transformer and associated components.

### POWER INPUT:

275 Watts Continuous Wave  
275 Watts Single Sideband  
(With auxiliary SSB exciter)  
200 Watts Amplitude Modulated  
Phone

## TUBE COMPLEMENT

6AU6—Variable Frequency Oscillator	12AU7—Parallel Audio Driver
0A2—VFO Screen Voltage Regulator	6146—Push-Pull Class AB2 Modulator (2)
6CL6—Crystal Oscillator/VFO Isolator	12AU7—Timed Sequence Keyer
5763—R.F. Driver	6AQ5—Clamper
6146—Parallel Final Amplifier, Bridge Neutralized (3)	864A—High Voltage Rectifiers (2)
12AX7—Cascade Speech Amplifier	5V4G—Low Voltage Rectifier
6AL5—Audio Clipper	6BY5GA—Bias Rectifier
6C4—Audio Amplifier	VR-105—Screen Voltage Regulators (2)

The Viking "Valiant" is available completely wired and tested or as an easy to assemble kit. The 18 gauge steel cabinet is finished in attractive maroon and grey, with green nomenclature. Complete kit includes assembly instructions, photographs, diagrams and step-by-step wiring directions. Wiring harness, all necessary hardware furnished—no drilling or metal work necessary. Dimensions: 21" wide x 11 $\frac{3}{8}$ " high x 16 $\frac{1}{4}$ " deep. Net Weight: 73 lbs. Shipping Weight: 83 lbs.



Cat. No. 240-104-1 Viking "Valiant" Kit with tubes, less crystals, key and microphone

AMATEUR NET **\$349.50**

Cat. No. 240-104-2 Viking "Valiant" wired and tested with tubes, less crystals, key and microphone

**\$439.50** Amateur Net



For information concerning Civil Defense Certification—See inside back cover.

