

2000 watts P. E. P. SSB \*

1000 watts CW

800 watts AM phone

# Viking "Invader-2000"

Here is the most versatile . . . and the most advanced SSB Transmitter/Exciter/Amplifier package ever designed for the amateur service! Excitingly different — from exclusive filter-type circuitry to distinctive front panel and cabinet design — the Viking "Invader-2000" offers flexibility and performance for a lifetime of operating pleasure.

Available completely factory wired and assembled, the "Invader-2000" offers all of the fine features of the "Invader" plus the added power and flexibility of an integral linear amplifier and remote controlled power supply. Here's desk-top operating convenience unsurpassed by any other high power transmitter . . . with a solid 2000 watts P.E.P. input on SSB, 1000 watts CW, and 800 watts AM input!

The "Invader-2000" was extensively field-tested by dozens of unbiased amateurs. Ease of operation was paramount in the design of the control system. Unique, single knob wide range loading control — slide rule dial with individually calibrated bands — highly simplified tuning . . . just tune for maximum meter reading (meter indicates actual RF power output).



**POWER SUPPLY** — Heavy duty, multi-section power supply uses 865A High Voltage Rectifiers. Screen supply employs a 5U4GA rectifier and uses heavy bleeder and high filter capacity for excellent dynamic screen voltage regulation in Class AB<sub>2</sub> operation. An OC2 bias regulator provides regulated bias for the two PL-175A final amplifier tubes.

**THE FEATURES AND POWER YOU WANT** . . . Full band-spread coverage of 80, 40, 20, 15 and 10 meters — no extra crystals to buy — no retuning necessary! Exclusive high frequency bandpass crystal filter gives you unwanted sideband suppression of 60 db or more! Highly stable, differentially compensated VFO with exclusive "Keep-Warm" heater element maintains VFO at operating temperature even with equipment turned off, thus eliminating warm-up drift!

Yes, in exciting distinctive styling . . . in advanced circuitry, operating ease, performance, coverage, and flexibility, the "Invader" and the "Invader-2000" are the transmitters that experienced amateurs have dreamed about . . . now a practical reality . . . and yours at a modest price!

**FILTER-TYPE SIDEBAND** — Highly stable operation and unusually sharp response on sideband is obtained by the use of a specially developed, multi-section high frequency band-pass crystal filter. This special crystal filter provides unwanted sideband suppression of 60 db and carrier suppression of 55 db or more. Select either upper or lower sideband instantly, with front panel "mode" switch.

**FREQUENCY CONTROL** — Instant band-switching coverage 80, 40, 20, 15 and 10 meters — no extra crystals or retuning required. Large, easy-to-read slide rule dial individually calibrated for each band . . . bands over-lap slightly to further simplify tuning. Highly stable, built-in VFO is differentially compensated and voltage regulated — factory adjusted for maximum stability . . . no warm-up drift! (Stability — better than 75 cycles.)

**FINAL AMPLIFIER** — The "Invader-2000" amplifier employs two rugged, high efficiency, low replacement cost Type PL-175A pentode tubes in parallel. Pi-network output matches 40 to 600 ohm resistive antenna loads, tunes out large amounts of reactance as well.

**METERING** — The meter switch is located on the front panel of the "Invader-2000" — permits instantaneous selection of any of the following: plate voltage; grid current; screen current; driver output. Plate current meter is always in circuit.

**PUSH-PULL COOLING** — Two fans located within the "Invader-2000" cabinet operate in a push-pull arrangement to draw cooling air through the chassis, cooling all component parts as well as filament and plate seals for extended tube life.

## SPECIFICATIONS

**FREQUENCY RANGE:**  
80, 40, 20, 15, and 10 meters  
3.5 — 4.1; 7.0 — 7.6;  
13.9 — 14.5; 20.9 — 21.5;  
28.0 — 28.6; 28.5 — 29.1;  
29.1 — 29.7 Mcs.

**POWER REQUIREMENTS:**  
1600 watts; 105-125 V AC,  
2-wire; or 210-250 V AC,  
3-wire, 50-60 cycles.  
1640 watts maximum.

**POWER INPUT:**  
2000 Watts PEP Single  
Sideband  
1000 Watts Continuous Wave  
800 Watts Amplitude  
Modulated Phone

**SUPPRESSION:**  
Unwanted Sideband; 60 db  
or better

Carrier Suppression: 55 db  
or better

Spurious Frequencies: 55 db  
or better

Distortion Products: Better  
than 30 db down

**VFO STABILITY:**  
Better than 75 cycles

**FUSE PROTECTION:**  
Transmitter fuses are located  
in the 115 V. power plug

## TUBE AND DIODE COMPLEMENT

12AU7	Carrier Oscillator	IN294	Balanced Modulator Diodes (4)
6AH6	9 MC Amplifier	IN294	Output Indicator Diode
6CX8	1st Mixer & Hetro- dyne Oscillator	IN294	Sideband Switching Diode
6AU6	VFO	5U4	Low Voltage Rectifier
12AT7	1st Audio & Relay Amplifier	5R4	High Voltage Rectifier
12AT7	2nd Audio & VOX Amplifier	6X4	Bias Rectifier
6U8	3rd Audio & AT Amplifier	OA2	Bias Regulator
6AH6	2nd Mixer	PL-175A	RF Power Amplifier (2)
12BY7	RF Driver	OC2	Bias Regulator
6146	RF Power Amplifier (2)	866A	High Voltage Rectifier (2)
6TB	ALC and Audio AGC	5U4	Screen Voltage Rectifier
6AL5	VOX and AT Rectifier		
OA2	Voltage Regulator		



Cat. No. 240-304-2 Viking "Invader-2000", wired and tested with remote power supply, tubes, crystals and crystal filter, less key and microphone.

AMATEUR NET **\$1229<sup>00</sup>**



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



FILTER-TYPE  
SIDEBOARD

The "Invader-2000" is furnished completely wired and factory tested. The sturdy steel cabinet is finished in attractive two-tone warm grey with maroon nomenclature and control identification. Cabinet trim and dial escutcheon are satin-finish aluminum — knobs are an attractive maroon which harmonizes with the grey cabinet finish. Dimensions of the "Invader-2000": 11 1/4" high x 21" wide x 17 1/2" deep. Weight: 53 pounds. Dimensions of the "Power Supply": 11 1/4" high x 19 1/2" wide x 14 1/2" deep. Weight: 102 pounds. Total Shipping Weight of both units: 183 pounds.

\*The F.C.C. permits a maximum one-kilowatt average power input for the amateur service. In SSB operation under normal conditions, this results in Peak Envelope Power inputs of 2,000 watts or more depending on individual voice characteristics.



FREQUENCY CONTROL



FINAL AMPLIFIER



METERING



PUSH-PULL COOLING