

2000 watts P.E.P.\*

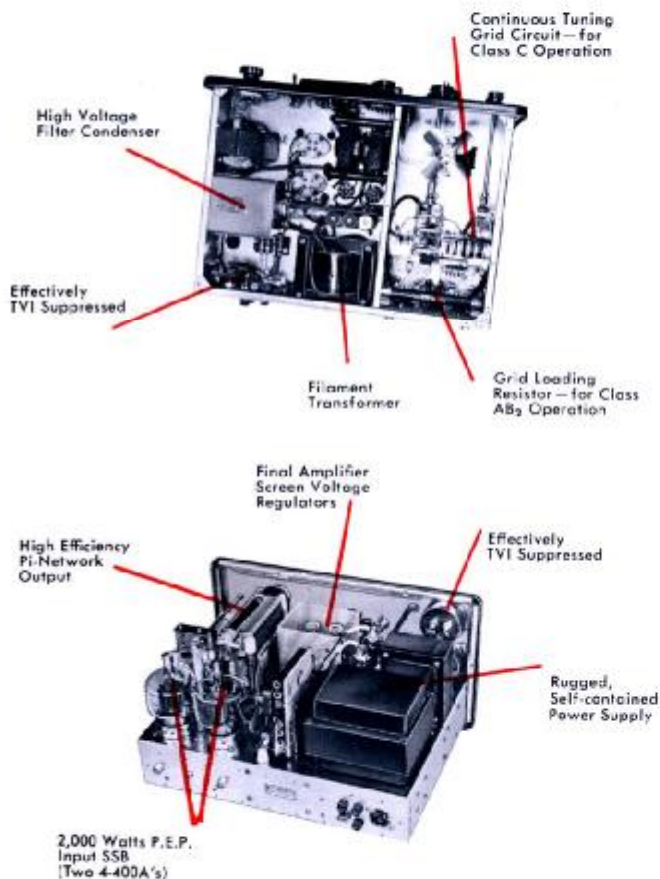
1000 watts CW

800 watts AM linear

\* with an auxiliary SSB exciter

# Viking "Thunderbolt"

Introducing the Viking "Thunderbolt" — the hottest linear amplifier on the market today! Here's solid communication power — 2,000 watts P.E.P.\* input; 1,000 watts CW; 800 watts AM linear; in a completely self-contained desk top package. The "Thunderbolt" may be driven by the Viking "Navigator," "Ranger," "Invader" or other unit of comparable output. Continuous coverage 3.5 to 30 megacycles (bandswitched) — wide range pi-network output circuit. The "Thunderbolt" has been engineered to provide maximum "talk-power" to smash through QRM — delivers a dominant signal on all amateur bands. Completely self-contained with internal blocking bias, voltage regulated screen and bias supplies, and plate power supply.



## "THUNDERBOLT" POWER GAIN

Driver	Power increase-times
Adventurer ..... CW	20.0
Navigator ..... CW	25.0
Challenger ..... CW	8.3
Challenger ..... AM	11.3**
Ranger ..... CW	13.3
Ranger ..... AM	5.7
Viking I & II ..... CW	5.6
Viking I & II ..... AM	3.8
Invader ..... SSB	10.0
Invader ..... CW	5.0
Invader ..... AM	6.9

\*\*Based on output power.

**EXCITATION REQUIREMENTS** — Drive requirements are approximately 10 watts in class AB<sub>2</sub> linear, 20 watts class C continuous wave. When used with the Viking "Invader" or similar exciter, the non-inductive input circuit of the "Thunderbolt" requires no grid tuning. Use of the Viking I, II or similar unit as an exciter for the Viking "Thunderbolt" requires use of the Johnson Attenuator, Cat. No. 250-42-1.

**OPERATING CONTROLS** — The operating controls for the "Thunderbolt" are conveniently located on the front panel within easy reach of the operator. These controls include: grid tuning and bandswitch; plate tuning with slide rule indicator dial; coarse and fine coupling controls; filament; plate; "mode"; and meter switches. Two meters provide a constant visual check of operation. Plate current meter also reads watts input and the second meter will read either grid current or plate voltage.

**OUTPUT CIRCUIT** — The Viking "Thunderbolt" amplifier employs two Type 4-400A tetrode tubes in parallel, bridge neutralized. The pi-network output is designed to match nominal 40 to 600 ohm antenna loads and will tune out large amounts of load reactance as well. Two fans, located within the amplifier cabinet, cool filament and plate seals for extended tube life.

**TVI SUPPRESSION** — In addition to complete shielding and the use of double "L" section filters in all outgoing leads, the "Thunderbolt" cabinet is electrically sealed with flexible monel braid — cup-type shields seal the meters, and 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** — The high voltage power supply uses 866-A rectifiers and delivers adequate voltage and current for the rated input power. The screen supply employs a 5U4GA rectifier and uses four VR tubes for screen voltage regulation in Class AB<sub>2</sub> operation. A 6BY5 rectifier and VR 90 regulator comprise the bias supply for the two 4-400A final amplifier tubes.

## SPECIFICATIONS

### FREQUENCY RANGE:

Continuous coverage 3.5 through 30 megacycles (Bandswitched).

### POWER INPUT:

1,000 Watts CW.....Class C  
 800 Watts AM Linear.....Class AB<sub>2</sub>  
 2,000 Watts P.E.P.\* Linear.....Class AB<sub>2</sub>

### POWER REQUIREMENTS:

115 volts AC two wire or 230 volts AC three wire, 50-60 cycle single phase. 1750 watts maximum. Fuses accessible on rear of chassis.

## TUBE COMPLEMENT

- 4-400A tetrode—Final Amplifier (2)
- 866A—High Voltage Rectifier (2)
- 6BY5GA—Bias Rectifier
- 5U4GA—Screen Voltage Rectifier
- VR 90—Bias Regulator
- VR-105 (2) } Screen Voltage
- VR-150 (2) } Regulators


The Viking "Thunderbolt" 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 $\frac{1}{2}$ " high x 16 $\frac{3}{4}$ " deep. Net Weight: 120 lbs. Shipping Weight: 140 lbs.

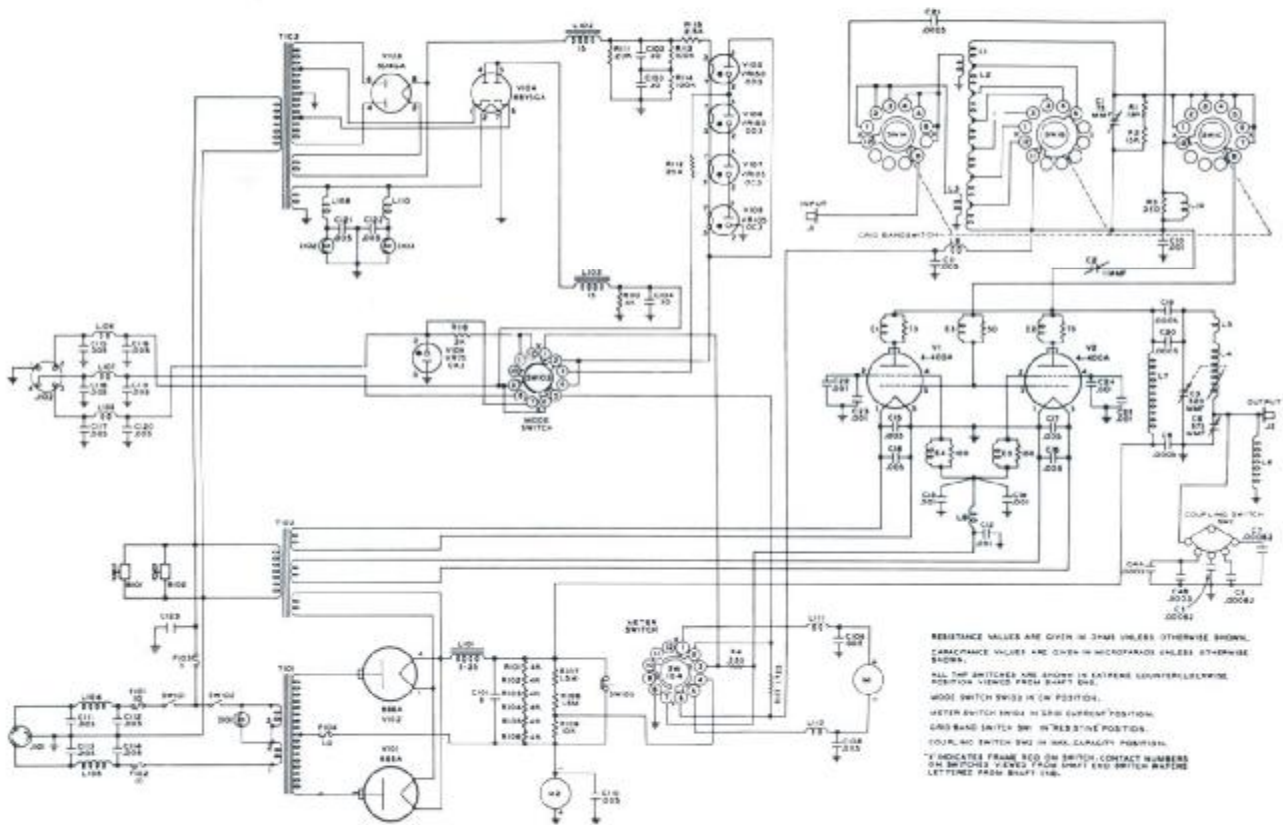


Cat. No. 240-353-1 Viking "Thunderbolt" Kit with tubes

**AMATEUR NET \$524.50**

Cat. No. 240-353-2 Viking "Thunderbolt" wired and tested, with tubes **\$589.50 Amateur Net**

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



RESISTANCE VALUES ARE GIVEN IN OHMS UNLESS OTHERWISE SHOWN.  
 CAPACITANCE VALUES ARE GIVEN IN MICROFARADS UNLESS OTHERWISE SHOWN.  
 ALL DIP SWITCHES ARE SHOWN IN EXTREME COUNTERCLOCKWISE POSITION UNLESS NOTED FROM SHUNT SW.  
 MODE SWITCH SW12 IN CW POSITION.  
 METER SWITCH SW14 IN ZERO CURRENT POSITION.  
 GEAR BAND SWITCH SW1 IN "RES" POSITION.  
 COUPLING SWITCH SW13 IN MAX. CAPACITY POSITION.  
 \*INDICATES FRAME RED SW SWITCH CONTACT NUMBERS OR SWITCH LEADS FROM SHUNT SW SWITCH WELDING LETTERS FROM SHUNT SW.