

OLD MODEL

# BIG BOOMER

## INSTRUCTION MANUAL

*(Missing schematic)*



**KRIS  
KRIS  
KRIS** INC.

Cedarburg, Wisconsin 53012

## IMPORTANT NOTICE

DO NOT ATTEMPT TO OPERATE YOUR LINEAR AMPLIFIER OR MAKE ANY CONNECTIONS UNTIL YOU HAVE READ THIS MANUAL AND UNDERSTAND YOUR AMPLIFIER FULLY.

KRIS LINEAR AMPLIFIERS HAVE BEEN DESIGNED AND MANUFACTURED WITH CARE. THEY HAVE BEEN TESTED PRIOR TO SHIPMENT TO PERFORM AS SPECIFIED.

IMPROPER OR FAULTY INSTALLATION OR MODIFICATIONS TO THE AMPLIFIER IS HAZARDOUS AND MAY RESULT IN IRREPLACEABLE DAMAGE AND/OR PERSONAL INJURY.

### Warranty Registration

Fill in the enclosed Warranty Registration Card and mail it to Kris. Your warranty will be void unless this card is on file.

### Standard Warranty

Adopted and Recommended by the Electronics Industries Association.

Kris, Inc. warrants each new electronic product manufactured by it to be free from defective material and workmanship and agrees to remedy any such defect or to furnish a new part, in exchange for any part of any unit of its manufacture which under normal installation, use and service disclosed such defect, provided the unit is delivered by the owner to us or to our authorized radio dealer or wholesaler from whom purchased, or authorized service station, intact, for our examination, with all transportation charges prepaid to our factory, within 90 days from the date of sale to original purchaser and provided that such examination discloses, in our judgment that it is thus defective.

This warranty does not extend to any of our electronic products which have been subjected to misuse, neglect, accident, incorrect wiring not our own, improper installation, unauthorized modifications, or to use in violation of instructions furnished by us, nor extends to units which have been repaired or altered outside of our factory, nor to cases where the serial number thereof has been removed, defaced or changed, nor to accessories used therewith not of our own manufacture. This warranty does not cover tubes.

This warranty is in lieu of all warranties expressed or implied and no representative or person is authorized to assume for us any other liability in connection with the sale of our electronic products.

Note: These linear amplifiers have been designed to suppress spurious radiation that may cause television interference. There are, however, some types of TVI that cannot

be prevented within the amplifier. This is particularly true in weak signal areas. In such cases, a good commercial low-pass filter is recommended. In severe cases, usually in low television signal areas, it may be necessary for a TV repairman to install a high-pass filter on the affected TV set.

### GENERAL

Adequate ventilation is a must! Allow a minimum of 6" free air space around the sides and top of cabinet. In grounded grid amplifier operation, a considerable portion of the driving power is fed through the amplifier tube. The amplifier output is the approximate sum of the driver output and the power added by the amplifier. Both the driver and amplifier input powers must therefore be considered when calculating DC input power. The Kris "Big Boomer" was designed to operate into a load impedance of 50 ohms with maximum efficiency. Operating into a load impedance other than 50 ohms will not only reduce the radiated power but will drastically shorten the life of amplifier components, especially tubes. A number of improvements have been incorporated into the Kris "Big Boomer", some of which are as follows:

- A) A Mos-Fet pre-amp for increased sensitivity for reception of weak signals.
- B) Improved input circuitry to minimize VSWR between amplifier and transceiver.
- C) Printed circuit board Directional coupler for monitoring VSWR.
- D) Additional filtering to reduce hum.

### MULTIMETER FUNCTIONS

- A. Plate volts-meter is calibrated to read 0-1000 volts.
- B. Power out-indicates relative power output on a 0-300 watt scale.
- C. SWR (Fwd-Refl) With meter switch in SWR-FWD position, adjust meter for full scale deflection using calibrate knob. Switch to SWR-REFL position and read VSWR directly. Amplifier should never be operated with SWR greater than 3-1.

## INSTALLATION & TUNE UP

Connect antenna to coax connector marked antenna and connect transceiver to coax connector marked transmitter. Front panel controls should be adjusted as follows:

- A. Meter function – Power
- B. Tune & Drive – mid-range
- C. Operate/Tune – tune
- D. Transmit/Standby – standby

Apply power to amplifier and allow 45 seconds for proper warm-up. Activate Transmit/Standby switch to transmit position. Key transceiver and adjust tune-drive controls for maximum indication on Multimeter with meter function switch in power position. This procedure should be repeated due to slight interaction between the drive and tune controls.

Switch operate/tune switch to operate position. Your amplifier is now tuned and ready to use. These adjustments should preferably be made while using a dummy antenna.

After prolonged usage, let the amplifier run for several minutes without excitation, so the fan will cool the tubes before the amplifier is turned off. Use extreme caution when attempting service, as the Voltages in the amplifier are lethal. There are three (3) trimmers located underneath the chassis which are related to the drive and tune functions. They are factory adjusted and should never need servicing or adjustment during normal use.

<b>SPECIFICATIONS</b>		
<b>BAND COVERAGE</b> – 10 and 6 meter Bands <b>DRIVING POWER REQUIRED</b> – 3 watts <b>MAXIMUM POWER INPUT:</b> <b>SSB</b> – 400 Watts <b>PEP</b> <b>CW</b> – Continuous (maximum key-down 5 minutes) <b>AM</b> – 190 Watts		
<b>FRONT PANEL . . .</b>	Drive & Tune Meter Function Calibrate Operate/Tune Pre-amp	<b>AM-FM/SSB</b> Transmit/Stand-by Power Lights (pre-amp, transmit, power) Multimeter (Power, Plate volts, and VSWR)
<b>REAR PANEL . . .</b>	Line Cord Fuse	<b>RF input SO239</b> <b>RF output SO239</b>

SYMBOL	PART NO.	DESCRIPTION	QUANTITY
R2	1041022	Res 1K 1/4 W	1
R6, R7	1031023	Res 1K 2 W	2
R3	1041031	Res 10K 1/4 W	1
R4	1042712	Res 270 1/4 W	1
R5	1023992	Res 3.9 1 W	2
R8, R9, R10	1023313	Res 330 1 W	3
R11, R12	1011043	Res 100K 1/2 W	2
R13	1013313	Res 330 1/2 W	1
R14	1011532	Res 15K 1/2 W	1
R15	1013323	Res 3.3K 1/2 W	1
R16, R17	1031042	Res 100K 2 W	2
R18, R21	1041032	Res 10K 1/4 W	2
R19	1041041	Res 100K 1/4 W	1
R20	1043931	Res 39K 1/4 W	1
R22	1041012	Res 100 1/4 W	1
R23	1046802	Res 68 1/4 W	1
R24	1044722	Res 4.7K 1/4 W	1
R25	1100008	Potentiometer 50K	1
R26	1031002	Res 100 2 W	1
C1	1204028	CAP 50PF CGNA70	1
C2, 3	1201021	CAP .1UF TA 80/20	2
C4	1204031	CAP 330PF JEX 5F10	1
C5, 26, 28, 29, 33, 34	1204026	CAP .001 UF JEX 5F10	6
C9, 10, 17, 23, 25	1201018	CAP .001 UF 3K LG	5
C7, 14, 30, 31	1201002	CAP H001MFD-1K	4
C12, 13	1202002	CAP 30MFD-500V	2
C15, 16	1203004	CAP 500MFD-15V	2
C20, 21	1202004	CAP CD-BR-100-450	2
C8	1204008	CAP 15PF CGNPO	1
C19	1209004	CAP 130PF ROM15	1
C22	1201020	CAP .05UF M258020	1
C32	1208007	CAP 47MF 16V PC	1
C6, 18	1302001	Trimmer 463	2
C27	1302004	Trimmer 466	1
C11, 24	1301002	Var CAP V2394	2
T1	1402004	Transformer 93P11	1
RFC1	1500003	Choke 3H6UH	1
RFC5	1500014	Choke 8.3UH	1
RFC6	1500004	Choke 192UH	1
RFC7	1500002	Choke 100UH	1
RFC8	1500015	Choke 2UH	1
L3	1500010	Inductor 85R	1
L2	1600005	Coil TPD-HB-Red	1
L1	1600012	Coil TPD-1/4-Blk	1
Q1	1700016	MOS-FET RCA 40841	1
Q2	1700001	MPS 3702 (TXTOR)	1
Q3	1700014	2N3567 (TXTOR)	1
CR1, 2	1800009	Diode 1N4148	2
CR3, 9, 10, 11, 12	1800005	Diode 1500 PIV-1A	5
CR4, 5	1800006	Diode 1N4001	2
CR6, 7, 8	1800002	Diode 1N34	3
RL1	1900005	Relay 20084-81	1
RL2	1900007	Relay 20082-81	1
M1	2100005	Meter 400 NAMP	1
F1	2201001	Fuse Holder Assy.	1
PL1	2301003	Fuse 10 Amp.	1
PL2	2401007	Pilot Lite Amber	1
PL3	2401005	Pilot Lite Red	1
PL3	2401006	Pilot Lite Green	1
SW1	2601001	Rotary SW 2PAT	1
SW2, 3, 5, 6	2600009	51202LR Rocker Sw.	1
SW4A, B	1600010	51206LR Rocker Sw.	1
	2801001	Tube Socket	4
	2802001	Coax Conn W/Nut	2
	2805001	Term Strip 3PT	2
	2806002	Term Strip 4PT	2
	2805005	Term Strip 10PT	2
V1	2900002	Tube 6JG8A	1
V2, 3, 4	2900004	Tube 6LQ6	3
	3100014	P.C. Board	1
	3400010	Tube Shield	1
	3400019	Fan Bracket	1
	3400051	Front Panel	1
	3400052	Chassis	1
	3400053	Rear Panel	1
	3400054	Upper Enclosure	1
	3400055	Lower Enclosure	1
	3400057	Sw. Mtg. Bracket	1
	3500029	Back Panel	1
	3700001	Thru-Panel Insulator	2
	8100073	6/32 Speed Nut	8
	9112002	Fan	1
	9102005	3/8 Snap Bush	4
	9102006	1/2 Snap Bush	2
	9103001	Cord 18-2X6	1
	9104001	Knob S-1853-IL	2
	9104003	Knob S-1847-IL	2
	9105002	Tube Cap	3
	9106003	Tube Cap Insert	3
	9106007	3/8 Nylon STD-OFF	4
	9107004	MTS FEET	4
	9108001	Solder Lug No. 6	2
	9108002	Solder Lug No. 6	12
	9108004	Solder Lug 810	2