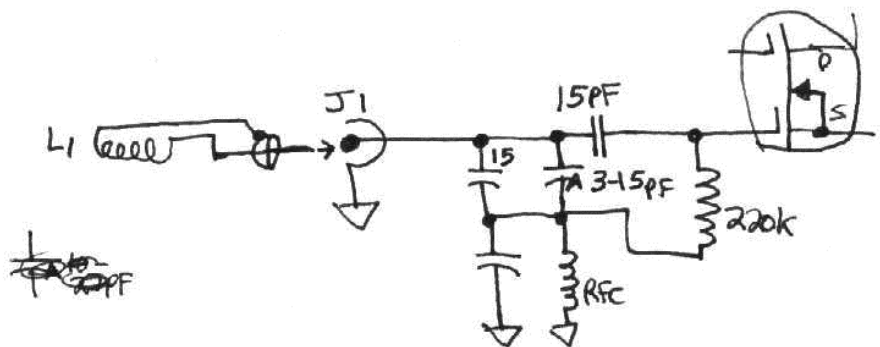


# BIG BOOMER (New)

## INSTRUCTION MANUAL



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# KRIS BIG BOOMER INSTRUCTION MANUAL

## INTRODUCTION:

THE KRIS BIG BOOMER — Solidly designed, all purpose linear amplifier for AM, SSB and FM use. The use of vacuum tubes and solid state devices results in maximum durability and reliability. As with all High Power RF devices, a great deal of care is required in tuning and operating this unit to avoid damage to tubes and components. Read and follow the tuning instructions carefully to avoid damaging the unit.

## SPECIFICATIONS:

### MECHANICAL:

Height..... 7"  
Width..... 11 - 1/4"  
Depth..... 11 - 1/4"  
Weight..... 22 LBS.  
Construction..... Steel &  
Aluminum

### ELECTRICAL:

Power Requirements: 220 VAC 10A  
Frequency Range: 25 - 35 MHz  
Power Output: ( Nom. )  
SSB 300 Watts PEP  
AM 125 Watts 200 Peak  
FM, CW 200 Watts  
Pre-Amplifier Gain (receive): 10 db Nom.  
Maximum Drive: AM - 3.5 Watts  
SSB - 12 Watts PEP  
FM/CW - 5 Watts  
Input/Output Impedence: 50 ohms unbalanced  
Tube Compliment: 4 Tubes  
( 1 driver 6JG6 )  
( 3 finals 6LQ6 )  
Semiconductor Diodes: 13  
Transistors: 2 FET's  
2 Bipolars  
Cable Connectors: Input & Output  
SO - 239  
Fuse: 10 Amp. Max.

## TRANSMIT/STANDBY SWITCH:

This switch allows the amplifier and receiver pre-amplifier to be shut off, while leaving the tube filaments on. With the switch in the "STANDBY" position, the driving transceiver can be used as if the linear were not connected.

## POWER SWITCH:

Controls the 115 VAC to the unit. CAUTION.....Even with this switch in the OFF position certain capacitors in the unit may remain charged for a period of time. Service personnel should always short the power supply to ground after the unit has been turned off before servicing any interior parts.

## UNPACKING

To avoid shipping damage to the unit, protective cardboard strips are placed around the tubes inside the cabinet. When you receive the unit these strips must be removed and the top "plate caps" must be placed on the three final amplifier tubes. When placing the "Caps" on the tubes be sure that the leads which go to the caps are positioned so that they will not touch the top cover of the unit. It is also wise at this time to check the unit over both internally and externally for any damage which might have been sustained in shipping.

## INSTALLATION

**LOCATION** - Although the Big Boomer has an internal cooling fan for the tubes, the unit should not be placed in a hot location such as near a heating duct or atop a radiator. Always allow at least four inches of clearance around the unit to assure good ventilation.

The Big Boomer should be mounted close to the driving transceiver. A short piece of 52 ohm coax should be used to connect the antenna connector of the transceiver to the connector marked Transmitter on the Big Boomer. (The cable should be under three feet in length and have a PL-259 connector.)

**POWER** - The primary power connection is a three prong 220 VAC connector. This plug should be plugged into a wall socket capable of 220 VAC at the 10 amps minimum. The use of two prong adapters and extension cords is dangerous.

**ANTENNA** - The Big Boomer is designed to operate into a 52 ohm antenna system having a SWR of less than three to one. The use of low loss coax is recommended for most efficient operation. The antenna coax should be equipped with a PL-259 connector which is to be connected to the connector on the rear panel marked "ANTENNA".

## TUNE UP PROCEDURE

The Big Boomer is a high power linear amplifier. If it is improperly tuned the power which normally is sent to the antenna will be dissipated by the internal components causing catastrophic damage. FOLLOW THE TUNING INSTRUCTIONS TO AVOID COSTLY REPAIRS.

## AM OPERATION

1. Set the front panel switches to the following positions before turning the power switch on.
  - a. TRANSMIT/STANDBY switch to "STANDBY"
  - b. AM-FM/SSB switch to AM-FM
  - c. PRE-AMP switch to either position
  - d. OPERATE/TUNE switch to "TUNE"
  - e. METER FUNCTION switch to "POWER"
  - f. Set TUNE and DRIVE controls to mid-range
2. Turn the Power switch to On and wait 60 seconds for the tubes to reach operating temperature. Then turn TRANSMIT/STANDBY switch to TRANSMIT
3. Key the driving transceiver by pressing the mike button. Quickly rotate the DRIVE control for a maximum indication on the panel meter. Then rotate the TUNE control for maximum reading on the meter. Since there is some interaction between the TUNE and DRIVE controls, touch up the tuning of these two controls for maximum indication on the meter. The tuning operation should be done quickly to avoid harming the unit.
4. Place the TUNE/OPERATE switch to the OPERATE position.
5. Key the transmitter by pressing the mike button and quickly adjust the TUNE and DRIVE controls for a maximum on the meter.
6. for AM operation it is necessary to reduce the power output by approximately 10% for crisp modulation. This is done by rotating the DRIVE control so that the power output, as indicated by the panel meter, drops approximately 10%. Modulation quality should be checked "on the air" or by means of a scope. Always reduce the drive just enough to insure good quality modulation.

## SSB OPERATION

For SSB operation place the AM-FM/SSB switch to the SSB position. Tune the amplifier in the AM mode according to the above steps. If audio quality is observed to be poor "on the air", either reduce the Microphone Gain setting of the driving transceiver, or detune the drive control for best modulation.

## FM AND CW OPERATION

For FM or CW operation the AM-FM/SSB switch is placed in the AM-FM position. The unit is tuned for maximum output as in step 5 of the previously-mentioned procedure. It is not necessary to reduce drive as in step 6 of the procedure.

## SWR MEASUREMENT

SWR may be measured by placing the METER FUNCTION switch in the SWR FWD position. With the transmitter keyed, adjust the CALIBRATE knob so that the meter pointer rests on the SWR CAL point on the meter face. To read SWR simply place the METER FUNCTION switch in SWR REFL and read the SWR from the meter.

## PLATE VOLTAGE MEASUREMENT

Plate voltage can be read by placing the METER FUNCTION switch in the PL VOLTS position.

## PREAMPLIFIER

The built-in receiver Pre-Amp is factory tuned. To operate the Pre-Amp, turn the PRE-AMP Switch on as indicated by the Pre-Amp Pilot Light. Depending on the particular transceiver used an increase of from 2 to 5 "S" units should be indicated. The Pre-Amp is useful for long distance or weak signal communications. CAUTION: Excessive drive (more than 5 watts) from the driving transceiver may damage the Pre-Amp.

## 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

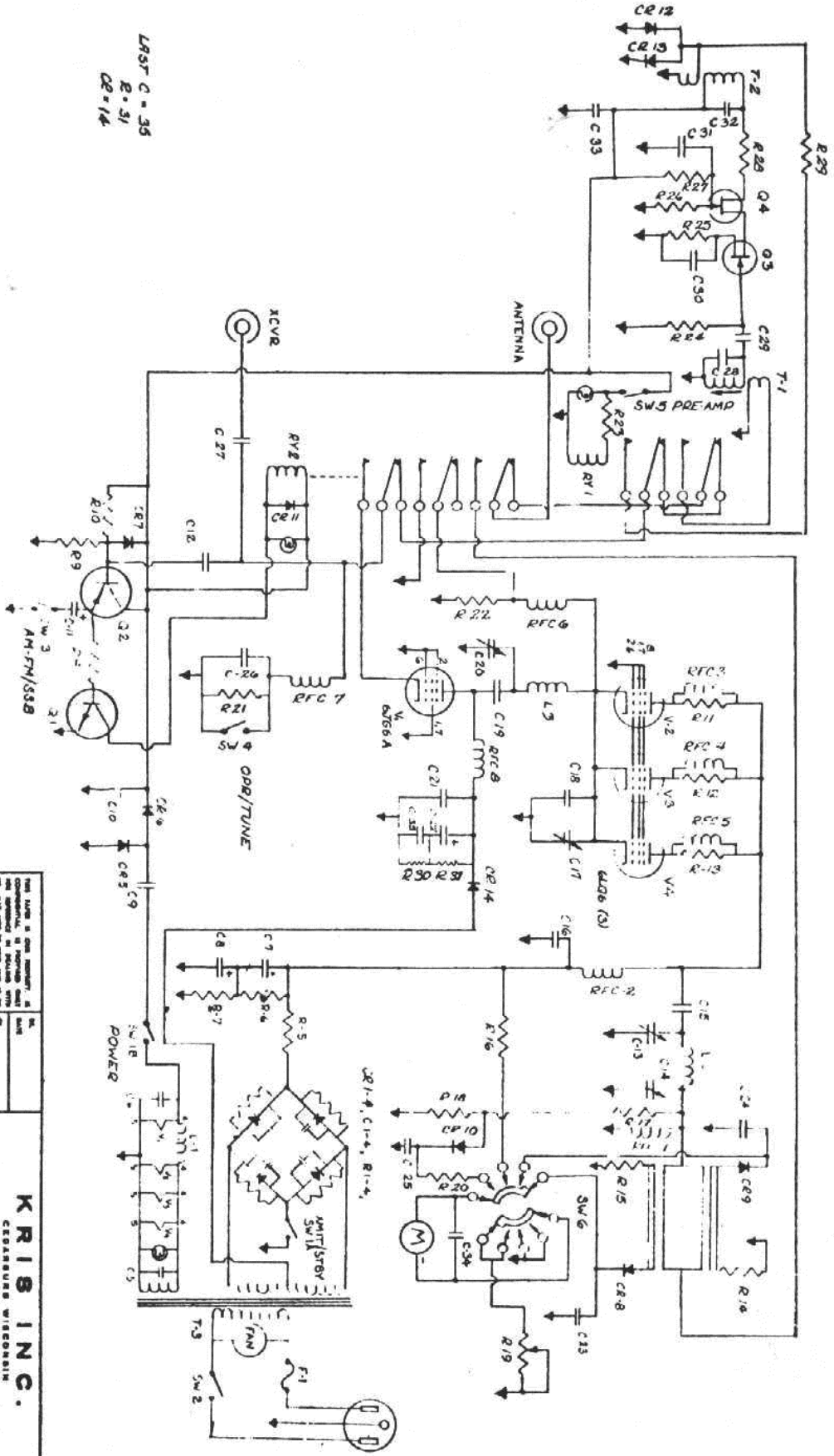
Adopted and Recommended by the Electronics Industries Association.

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.

LB37 C = 35  
 R = 51  
 CR = 14



**KRIS INC.**  
 GREENBUSH WISCONSIN

REVISED C-15 POWER SCHEMATIC

NO.	DATE	BY	REVISION

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