

32V 2

**AMATEUR TRANSMITTER**

**INSTRUCTION BOOK**

3 2 V - 2

A M A T E U R   T R A N S M I T T E R

Manufactured by

COLLINS RADIO CO., CEDAR RAPIDS, IOWA

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# COLLINS

## GUARANTEE

The Collins Amateur equipment described herein is sold under the following guarantee:

Collins agrees to repair or replace, without charge, any equipment, parts, or accessories which are defective as to design, workmanship or material, and which are returned to Collins at its factory in Cedar Rapids, Iowa, transportation prepaid provided buyer has completed and returned to Collins promptly following his purchase the Registration Card included in the Instruction Book furnished with the equipment and provided Buyer has given to Collins written notice of the claimed defect in equipment or accessories within ninety (90) days from date of purchase.

The foregoing guarantee shall not be applicable to:

- (a) equipment and accessories manufactured by others than Collins, tubes and batteries, all of which are subject only to such adjustment as Collins may obtain from supplier thereof;
- (b) equipment or accessories which shall fail to operate in a normal or proper manner due to exposure to excessive moisture in the atmosphere or otherwise after delivery, any such failure not being deemed a defect within the meaning of the foregoing provisions;
- (c) any failure due to use of equipment in excess of that contemplated in normal amateur operations, any such failure not being deemed a defect within the meaning of these provisions.

The guarantee of these paragraphs is void if equipment is altered or repaired by others than Collins or its authorized service centers.

Notice of any claimed defect must be given to Collins prior to return of any item. Such notice must give full information as to nature of defect and identification (including part number if possible) of part considered defective. Upon receipt of such notice, Collins will promptly advise respecting return of equipment. Failure to secure our advice prior to the forwarding of goods for return may cause unnecessary delay in the handling of such merchandise.

No other warranties, expressed or implied, shall be applicable to said equipment, and the foregoing shall constitute the Buyer's sole right and remedy under the agreements in this paragraph contained. In no event shall Collins have any liability for consequential damages, or for loss, damage or expense directly or indirectly arising from the use of the products, or any liability to use them either separately or in combination with other equipment or materials, or from any cause.

**IMPORTANT!** It is necessary that the attached business reply card be filled out and mailed to the Company promptly in order for this guarantee to be effective.

COLLINS RADIO COMPANY

**PURCHASER  
MUST fill out  
this card and  
mail to Collins  
in order to  
assure full  
coverage under  
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Postage  
Will be Paid  
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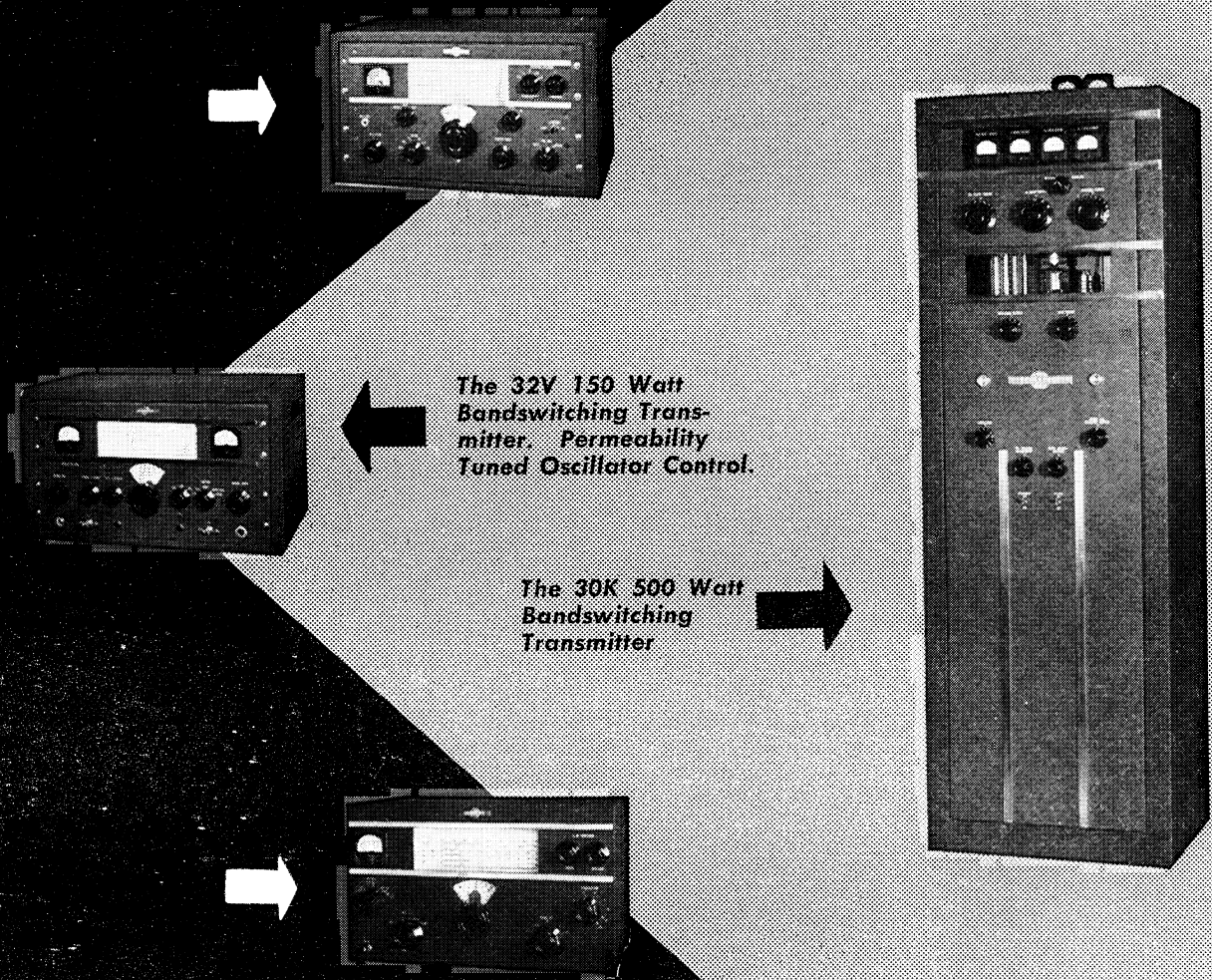
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## REGISTRATION CARD

Gentlemen:

Date \_\_\_\_\_

I have purchased the following unit of Collins Amateur Radio Equipment:

Model No. \_\_\_\_\_

Date Purchased \_\_\_\_\_ Serial No. \_\_\_\_\_

Purchased From: \_\_\_\_\_

Dealer's Name: \_\_\_\_\_

Dealer's Address: \_\_\_\_\_

I am familiar with the Collins Guarantee of Amateur equipment as printed in the instruction book and request that you register ownership of the above described equipment in my name.

Owner's Name \_\_\_\_\_ Call \_\_\_\_\_

Address \_\_\_\_\_

Please send data on the following equipment: \_\_\_\_\_

BE SURE TO FILL IN THIS CARD COMPLETELY. THANK YOU.

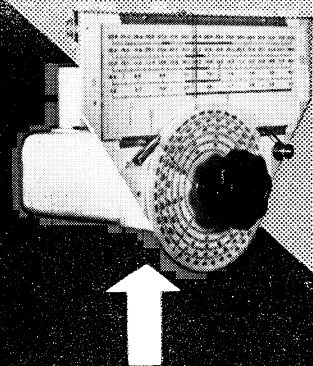








FIGURE I-1 MODEL 32V AMATEUR TRANSMITTER

## GENERAL DESCRIPTION

Section 1

### SECTION 1

#### GENERAL DESCRIPTION

##### 1.1. GENERAL.

1.1.1. This instruction book has been prepared to assist in the proper installation, adjustment, operation and maintenance of the Collins 32V-2 amateur transmitter.

The type 32V-2 is a transmitter designed for those amateurs who want medium power, bandswitching, and VFO control in a small cabinet. It may be used for either permanent or portable installations. All that is needed for putting it into operation is a 115 volt ac source, an antenna, and a key or microphone. The 32V-2 can also be used to drive a kilowatt final amplifier.

The 32V-2 transmitter is designed for table mounting. The complete transmitter is housed in a single cabinet 21-1/8" wide, 12-7/16" high and 13-7/8" deep and weighs approximately 105 lbs. Ventilating openings are provided in the back, two sides and bottom of the cabinet to assure adequate ventilation for all heat producing elements.

The components of the transmitter are so arranged that unit construction is possible and are broken down in five units as follows:

- 7OE-8A Oscillator
- R-F Unit
- Output Network
- Speech Amplifier and Modulator
- Power Supply

All wiring is independent of the cabinet, and the complete unit may be removed from the cabinet for inspection or maintenance.

Complete coverage of the 80, 40, 20, 15, 11 and 10 meter bands is obtained with the 32V-2. Quick band-change is accomplished by bandswitching on all stages. The permeability tuned circuits of the 1st, 2nd and 3rd multipliers have their tuning controls ganged with the oscillator. The final tank consists of impedance matching network with two separate controls located on the front panel, one for tuning and one for loading.

Two heavy duty toggle switches control the low voltage and high voltage circuits. The switches are arranged so that the high voltage cannot be applied until the low voltage circuits have been energized. A push-to-talk switch, associated with the microphone, may be used to apply the high voltage instead of the HV toggle switch for added convenience.

A CW sidetone oscillator is incorporated in this unit with which CW transmissions can be monitored.

An additional feature, the receiver muting connection, can be used to silence a type 75A receiver during CW transmission for CW break-in operation.

A meter selector switch on the front panel enables the operator to meter all important circuits of the transmitter. This switch can be rotated to five different positions. Each position inserts a meter into the selected circuit to be metered. A separate meter reads FINAL AMPLIFIER plate current only. The CW-CAL-PH switch is used to select the type of emission desired and to calibrate the accuracy of the dial reading against a known standard frequency. In the CW position, the modulator is disabled, the master oscillator operates continuously with the HV switch on and the CW sidetone oscillator is connected to the audio amplifier stages. On "CAL" position a signal of strength suitable for zero-beating with incoming signals may be heard in the associated receiver without operating the final amplifier. On phone position, the key is closed and the modulator is operative. Keying is accomplished by means of grid block keying of the buffer stages. This keying is done on the buffer and first and second multiplier stages.

The AUDIO GAIN Control is used to control the level of modulation and the strength of CW sidetone output.

### 1.2. REFERENCE DATA.

Power Source: 115 volts ac 50/60 cps single phase.

Power Input Requirements: The maximum overall input power requirement is 500 watts at 90% power factor.

PA Plate Power Input: The nominal rated power input of the 32V-2 is 120 watts on phone and 150 watts CW.

Audio Distortion: Audio distortion is less than 8% at 90% modulation with a 1000 cps input frequency.

Frequency Response: Within 2 db from 200-3000 cps.

### 1.3. TUBE COMPLEMENT.

<u>Quantity</u>	<u>Tube Type</u>	<u>Function</u>
1	6SJ7 -	Oscillator
1	6AK6 -	Buffer Amplifier
1	6AG7 -	First Multiplier
1	7C5 -	Second Multiplier
1	7C5	Third Multiplier
1	4D32	RF Power Amplifier
1	6SL7	Audio Amplifier
1	6SN7	Audio Driver
2	807	Modulators
1	5Z4	LV Rectifier
2	5R4GY	HV Rectifier
1	VR-75	Bias Regulator
1	6SL7GT	CW Sidetone Oscillator
2	0A2	Screen voltage limiters