



## **instruction book**

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# **KWS-1 Transmitter**

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# Collins Amateur Equipment 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 workmanship or materials and which are returned to Collins at its factory or its designated Service Agency, transportation prepaid, provided:

- (a) Buyer presents properly executed Warranty Verification Certificate.
- (b) Notice of the claimed defect is given Collins or an authorized Service Agency, or an authorized Distributor, in writing, within 180 days from the date of purchase and goods are returned in accordance with Collins instructions.
- (c) Equipment, accessories, tubes, and batteries not manufactured by Collins or from Collins designs are subject to only such adjustments as Collins may obtain from the supplier thereof.
- (d) Any failure due to use of equipment for purposes other than those contemplated in normal amateur operations or in violation of Collins applicable Instruction Book shall not be deemed a defect within the meaning of these provisions.

This Warranty is void with respect to equipment which is altered, modified or repaired by other than Collins or Collins Authorized Service Agencies. However, alteration or modification in accordance with Collins Service Bulletins shall not affect this Warranty.

Collins reserves the right to make any change in design or to make additions to, or improvements in, Collins products without imposing any obligations upon Collins to install them in previously manufactured Collins products.

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 contained in these paragraphs. 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 inability to use them either separately or in combination with other equipment or materials or from any other cause.

**NOTICE:** With each equipment or set of equipments purchased, the distributor should furnish a Warranty Verification Certificate. It is necessary that this certificate accompany the equipment when it is returned for warranty repairs. Be sure that you get it from your distributor.

## Warranty Repairs

On the opposite page are listed the Service Agencies authorized to perform warranty repair on Collins Amateur Equipments.

If you should wish to return material or equipment direct to Collins under the guarantee, you should notify Collins, giving full particulars including the details listed below, insofar as applicable. If the item is thought to be defective, 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 you respecting the return. Failure to secure our advice prior to the forwarding of the goods or failure to provide full particulars may cause unnecessary delay in handling of your returned merchandise.

### ADDRESS:

Collins Radio Company  
Amateur Product Office  
Cedar Rapids, Iowa

### INFORMATION NEEDED:

- (A) Type number, name and serial number of equipment
- (B) Date of delivery of equipment
- (C) Date placed in service
- (D) Number of hours of service
- (E) Nature of trouble
- (F) Cause of trouble if known
- (G) Name of distributor from whom the equipment was purchased.

Equipment returned to the Service Agency or Collins for warranty repair must be accompanied with the Warranty Verification Certificate.

## Out-of-warranty Repair, Modifications, Addition of Accessories, Alignment, etc.:

For information on service of this type write to the address shown below. If you wish to return your equipment for repairs, etc., without prior correspondence, be sure to include the following information attached to the equipment ~~inside the packing carton:~~

### HOW TO ORDER REPLACEMENT PARTS:

When ordering replacement parts, you should direct your order to one of the listed Collins distributors.

Please furnish the following information insofar as

- (1) Complete instructions detailing work to be performed.
- (2) Your return address.
- (3) Method of shipment by which the equipment should be returned.
- (4) Special instructions.

### DIRECT YOUR CORRESPONDENCE TO:

Collins Radio Company  
Service Repair Department  
Third Street Building  
Cedar Rapids, Iowa

applicable:

### INFORMATION NEEDED:

- (A) Quantity required
- (B) Collins part number (9 or 10 digit number) and description
- (C) Item or symbol number obtained from parts list or schematic
- (D) Collins type number, name and serial number of principal equipment
- (E) Unit subassembly number (where applicable)

NOTE: See Distributor List.

## COLLINS AUTHORIZED AMATEUR DISTRIBUTORS AND SERVICE AGENCIES

### ALABAMA

Ack Radio Supply Company  
3101 4th Avenue South  
Birmingham 5  
Phone: FAirfax 2-0588  
Attn: E. C. Atkerson

\*Beddow Engineering Services  
2424 Tenth Avenue South  
Birmingham  
Phone: ALpine 1-7582  
Attn: Dr. C. P. Beddow  
SEE ALSO: Atlanta, Georgia (Ack)

### ALASKA

Yukon Radio Supply, Inc.  
(P.O. Box 406)  
545 I Street  
Anchorage  
Attn: A. E. Peterson

### ARIZONA

Elliott Electronics, Inc.  
418 N. 4th Avenue

Radio Products Sales, Inc.  
1501 S. Hill Street  
Los Angeles 15  
Phone: RIchmond 8-1271  
Attn: Ken Rausin

Scott Radio Supply, Inc.  
266 Alamos Avenue  
Long Beach  
Phone: HEMlock 6-1452/7-8629  
Attn: Evelyn E. Scott

Valley Electronic Supply Company  
1302 W. Magnolia Blvd.  
Burbank  
Phone: VICTORIA 9-3944  
Attn: Frank Eckert/Bud Rand

Western Radio & TV Supply Company  
(P. O. Box 1728)  
1415 India Street  
San Diego 1  
Phone: BELmont 9-0361  
Attn: A. W. Prather/Art Stewart

### COLORADO

Specialty Distributing Co., Inc.  
763 Juniper St. N.E.  
Atlanta 8  
Phone: TRinity 3-2521  
Attn: J. E. Eaton

### HAWAII

\*\*Honolulu Electronics  
819 Keeaumoku Street  
Honolulu 14  
Phone: 995-466  
Attn: Thomas Teruya

### IDAHO

Robbie's Radio & TV, Inc.  
(P. O. Box 5021)  
3715 State Street  
Boise  
Phone: 28892  
Attn: W. A. Robinson, Jr.

### ILLINOIS

Allied Radio Corp.  
100 N. Western Avenue,  
Chicago 80  
Phone: HAVmarket 1-6800

### MASSACHUSETTS

DeMambro Radio Supply, Inc.  
1095 Commonwealth Avenue  
Boston 15  
Phone: ALgonquin 4-9000  
Attn: Frank DeMambro

Graham Radio, Inc.  
505 Main Street  
Reading  
Phone: 944-4000  
Attn: Robert T. Graham, Sr.

Radio Shack Corp.  
730 Commonwealth Avenue  
Boston 17  
Phone: REgency 4-1000  
Attn: A. E. Coe

\*Two-Way Radio Engineers, Inc.  
109-115 Ward Street  
Boston  
Phone: GARRISON 7-3511  
Attn: Sherman M. Wolf

### MICHIGAN

Inc.  
5)  
reet  
wood 8-6618  
ul Hargis Joe Fooshe

(Company  
set

rd 2-9501  
ward

rella Street

2936  
cNicol

ision Parts Co.  
Mary's St.  
:  
l 6-5329  
Hildebrand

lectronics Co.  
son Avenue

lway 2-3181  
orberg

lectronics Co.  
enue

4-4355  
Ranier

ctronics Distributors  
 Avenue

2644  
Goldrick

Wholesale Company

e 2-6303  
aker

ronic Supply  
son Avenue

3-3262  
otyandy/Terry Serman

Corporation  
n Street

t 2-4670  
erman/Harris E. Serman

ctronics, Inc.  
k Street

e 7-4801  
atterfield/W. E. Uhalt

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rsal Service  
orth Third Street  
bus 15  
: Capitol 1-2335  
Francis R. Gibb

ker Electronic Equipment  
pany, Inc.  
Box 13204)  
V. Clay Street  
on 19  
: Jackson 6-2578  
Garth L. Johnson

unications Service, Inc.  
anton Street  
26  
: Riverside 7-1852  
Cecil A. White, Jr.

rd Radio Company  
Pine Street  
e  
: Orchard 2-9501  
R. L. Howard

TON

Radio Electronics Co.  
3 Jefferson Avenue  
na 2  
: BRoadway 2-3181  
Lloyd Norberg



## instruction book

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# KWS-1 Transmitter

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ing in kilocycles on

00 cps.

ot more than 1000 cps.  
ot more than 500 cps.

er 20 minutes, within  
cps of starting frequency.  
er 30 minutes, within  
cps over 10-minute  
iod.

e: Within plus or  
0 to 2900 cps.

t less than fifty decibels.

ession: Not less than

ast 35 decibels down.

Input: High impedance.

nection: 52 ohms.  
(or suggested antennas.)

Connection: 600 ohms

ch: 0.1 volt.

inkle.

**CANADA.**

a are modified to  
Transport Power  
plate voltage reduced  
e reduced to 300-V.  
be operated at 700  
h must not be changed.

Function

elch Amplifier  
Relay Amplifier  
kc) Oscillator/Amplifier  
rs  
Rectifiers  
or

Amplifiers

r

Control Rectifier

late voltage  
reen voltage  
r, PA screen voltage  
r, PA screen voltage  
r, PA screen voltage  
, low voltage

ot

phone assembly with plain stand.

302C-1 Directional Wattmeter

SC-101 Station Control System

raph Key