

THE COLLINS 30K-1

amateur transmitter



500 watts input on CW, 275 watts input on phone

THE COLLINS 30K-1 AMATEUR TRANSMITTER

300 watts input on CW, 175 watts input on phone

The 30K-1 is for you who want quality and reliability. It combines the desires and dreams of hams with hams in their blood and also those who want only a push-to-talk button. It was designed by engineers to whom CQ is a cherished and friendly word. Every detail has been worked out carefully to provide efficient, economical operation. Select quality components are used throughout to assure long, trouble-free life.

Versatile and reliable, it is thoroughly engineered for continuous operation. The 30K-1 simply meets the exacting requirements of amateur radio.

These features are for your advantage:

fully automatic	speech clipper
PTO* controlled	11.5 v. ac power source
smooth, modern styling	3 pairs antenna terminals
clean, sharp keying	band switching
unit construction	100% modulation
	fixed primaries
	30, 40, 20, 15, 11, 10 meters

BANDSWITCHING

All circuits are bandswitched with the exception of the antenna tuning network. Two separate plug-in units are supplied for that position—one covers 30 and 40 meters, the other covers 20, 15, 11, and 10 meters.

REMOTE CONTROL

The carrier unit, in a receiver type cabinet, sits on the operating desk right at your finger tips. With PTO* control, you can vary the operating frequency several kilocycles up or down, without retuning the final. A push-to-talk switch can be connected for phone operation.

SPEECH CLIPPER

The audio peak clipping circuit permits running the audio gain at a high level, thus maintaining a

high level of modulation. With this circuit set to become operative at 90% modulation, the carrier will not be overmodulated, and the high audio power in the carrier side bands strengthens the signal. Intelligibility is also improved, cutting the QRM during QRM or static. The clipper circuit is followed by a cut-off filter which attenuates all frequencies above 8000 cps.

CIRCUIT PROTECTION

Primary power circuits are well fused. The power amplifier bias circuit includes a plate power relay which opens if bias should fail.

EFFICIENCY

High efficiency is obtained on all bands. The low grid-plate capacity of the 4-125A eliminates the requirement for neutralization and makes the plate to grid reaction very small even on ten meters.

TUBE LINE-UP

- 1—4-125A of power amplifier
- 1—6X4 speech amplifier
- 1—6X50 audio amplifier
- 1—6BE speech clipper
- 1—6BA6 modulator driver
- 2—12BH Class B modulators
- 1—6BE6 bias oscillator
- 1—6BE6 low voltage rectifier
- 2—650A high voltage rectifiers

METHODS

Modulator plate current, filament voltage, power amplifier grid current, power amplifier plate current, c.f. output.

RELAY OPERATION

An extra section is placed on the P. A. grid band-switch for operating automatically antenna relays, or other external relays.

* The Collins MRA Personality Tuned Oscillator

CONTROLS

- Plate ON-OFF switch
- Filament ON-OFF switch
- Phone-CW switch
- Audio gain control
- Filament voltage adjustment
- Low voltage-two-operate switch
- F. A. grid tuning
- F. A. grid handswitch
- F. A. plate tuning
- F. A. plate handswitch
- Antenna loading

ANTENNA MATCHING

An antenna impedance matching circuit is incorporated in the output. It efficiently couples the 30K-1 to any antenna or transmission line that approximates an integral number of quarter wave lengths. A separate antenna tank is utilized, thus providing additional harmonic attenuation.

The antenna tank with its coupling link is plug-in. Only two coils are necessary to cover all bands from 80 meters through 10 meters. Either parallel or series tuning may be used, and adjustment is simple. The carrier frequency can be shifted over a considerable range without exceeding the amplifier tube plate dissipation rating.

DIMENSIONS

22" wide, 36½" deep, 66½" high.

FINISH

St. James Corp.

POWER SOURCE

115 volts ac, 60 cps, single phase.

OTHER COLLINS EQUIPMENT FOR AMATEURS

22V-2 transmitter—150 watts input on CW, 170 watts on phone, 6 bands, handswitching, P100 control, table model.

22A-2 receiver—precision calibration, double conversion, extreme stability, high image rejection on all bands.

20E-2A, PTO—precision unit, 3600 kc. to 1500 kc. range, linear tuning.

20B-1—4-Ln. all band exciter—40 watts input.

20B-2—Same as 20B-1, but with antenna network.

For use as low power transmitter or exciter.

24K-1—50 meter frequency control unit.

24K-2—Same as 24K-1, but with power supply.

30K-1

rear view



THE COLLINS 310A-3 EXCITER UNIT



The 310A-3 exciter unit for the 30K-4 has a Collins 30K-4A PTO, and an π - π output of 10 watts. All circuits are ganged together and controlled by a single tuning knob. The slide rule dial gives a rough indication of operating frequency, while the counter dial provides a direct reading in kilocycles. Both accuracy and stability are very high. The PTO operates in the 160 meter band. The output tube in the exciter is an 887 which is used as a doubler on all bands except 80 meters.

One control handle switches all circuits simultaneously. The 30K-4 covers the 80, 40, 20, 15, 11, and 10 meter bands. The mode/voice switch has four positions—CW, Calibrate, Receive, and Send. In the Calibrate position, the exciter can be tuned to zero beat with a received signal without tuning on the transmitter. This switch has extra positions which can be used to operate a transmitter relay and disable a receiver in the Send position.

A low sidetone oscillator is controlled at the front panel for pitch and volume. Grid block keying is provided. A keying filter eliminates key clicks. When the key is removed from the jack, the circuit is auto-

atically closed for phase operation. The exciter output is controlled at the front panel and is fed through a 15 ohm coaxial transmission line to a matching circuit associated with the grid coil in the transmitter.

The multi-range panel-mounted meter has a 5 position switch, and indicates the low voltage supply, and the grid and plate currents in the two 887 multiplier stages.

- Tube Lineup:**
- 1—6X5 PTO
 - 1—6AG5 buffer amplifier
 - 1—6AG5 doubler
 - 1—887 multiplier
 - 1—887 multiplier
 - 1—6BE6GT var sidetone oscillator
 - 2—VR100 voltage regulators
 - 2—VR100 voltage regulators

Dimensions: 17 1/2" w, 10 1/2" h, 11 1/2" d.

Power Source: 30K-4 power supply.

Net price of 30K-3, complete with 310A-3 Exciter, Tuner, Microphone Cord, R. F. Cable, Power Cable, and Instruction Book.....\$1,650.00

SEE US IN AMATEUR RADIO, IRE . . .

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