

**knight-kit**  
AMATEUR GEAR



ONLY  
**\$99<sup>95</sup>**  
.....  
**\$5**  
DOWN

## R-100 Amateur Communications Receiver Kit

**AN ULTRA-SENSITIVE, DELUXE RECEIVER FOR THE HAM . . . A REAL "DX-GETTER"!**

Better Than 1.5-Microvolt Sensitivity on All Shortwave Frequencies

Continuously Variable Selectivity from 300 cps to 4.5 Kilocycles

Specially Designed Printed-Circuit Bandswitch —a Knight-Kit exclusive

Calibrated Electrical Bandspread on 80 through 10 Meter Ham Bands

An outstanding achievement in communications receiver engineering, this superb kit has gained phenomenal acceptance—there is no other receiver like it! Has all the features, selectivity and sensitivity of high-priced commercial units. Use of printed circuitry throughout assures stable, reliable operation and reduces assembly time—it's an unsurpassed value!

Covers 540 kc to 30 mc in 4 ranges; calibrated electrical bandspread on all Ham bands from 80-10; slug-tuned Hi-Q coils; continuous VR tube-regulated B+ applied to HF oscillator lets you switch from standby to receive with no drift; built-in Q-multiplier peaks desired signal or nulls interference (*60-db notch really takes out interference*); delayed AVC; built-in noise limiter; provision for "building in" crystal calibrator listed on the facing page.

Exceptional sensitivity is the keynote of this top-notch receiver—better than 1.5  $\mu$ v sensitivity for a 10:1 signal-to-noise ratio, *even on 10 meters*. On 40 and 80 meter bands, its sensitivity is actually  $\frac{1}{2}$  to  $\frac{3}{4}$   $\mu$ v for the same signal-to-noise ratio. Broadcast band sensitivity is 4  $\mu$ v. Selectivity is variable from 300 cps to 4.5 kc at 6 db down. Exalted BFO injection provides high-quality SSB reception.

Only a little wiring experience and a few ordinary tools are required for anyone to construct this fine communications receiver. Carefully written, step-by-step instructions and giant, wall-size picture diagrams make assembly an easy matter.

**Controls:** Main Tuning, Bandspread Tuning, Band Selector, Q-Multiplier Selectivity, Q-Multiplier Tune, Peak-Off-Null, BFO Pitch, RF Gain, AF Gain, BFO-MVC-AVC-ANL, Off-Stdby-Recv-Cal, antenna trimmer and headphone jack. Coaxial and screw-terminal antenna connectors for 50 to 300-ohm lines. Close-tolerance coils assure minimum alignment time. 455-kc IF. Gray metal case; chrome trim and black knobs.  $9\frac{5}{8} \times 16\frac{1}{8} \times 10\frac{3}{4}$ ". Complete with case, tubes, all parts, wire, solder, and instructions. Less speaker and S-meter, below. For operation from 105-125 volts, 60 cycle AC. Shpg. wt., 31 lbs.

83 YU 726. \$5 Down. ONLY. . . . . 99.95

**MODEL S-8 SPEAKER KIT.** Matching 4" speaker for Knight-Kit Communications Receiver. Features specially designed cone for peaking voice frequencies and reducing QRN. In matching gray metal cabinet with chrome trim. Voice coil impedance is 8 ohms. Size,  $6\frac{7}{8} \times 6\frac{5}{8} \times 5\frac{5}{8}$ ". Shpg. wt.,  $3\frac{1}{4}$  lbs.

83 Y 728. ONLY. . . . . 9.75

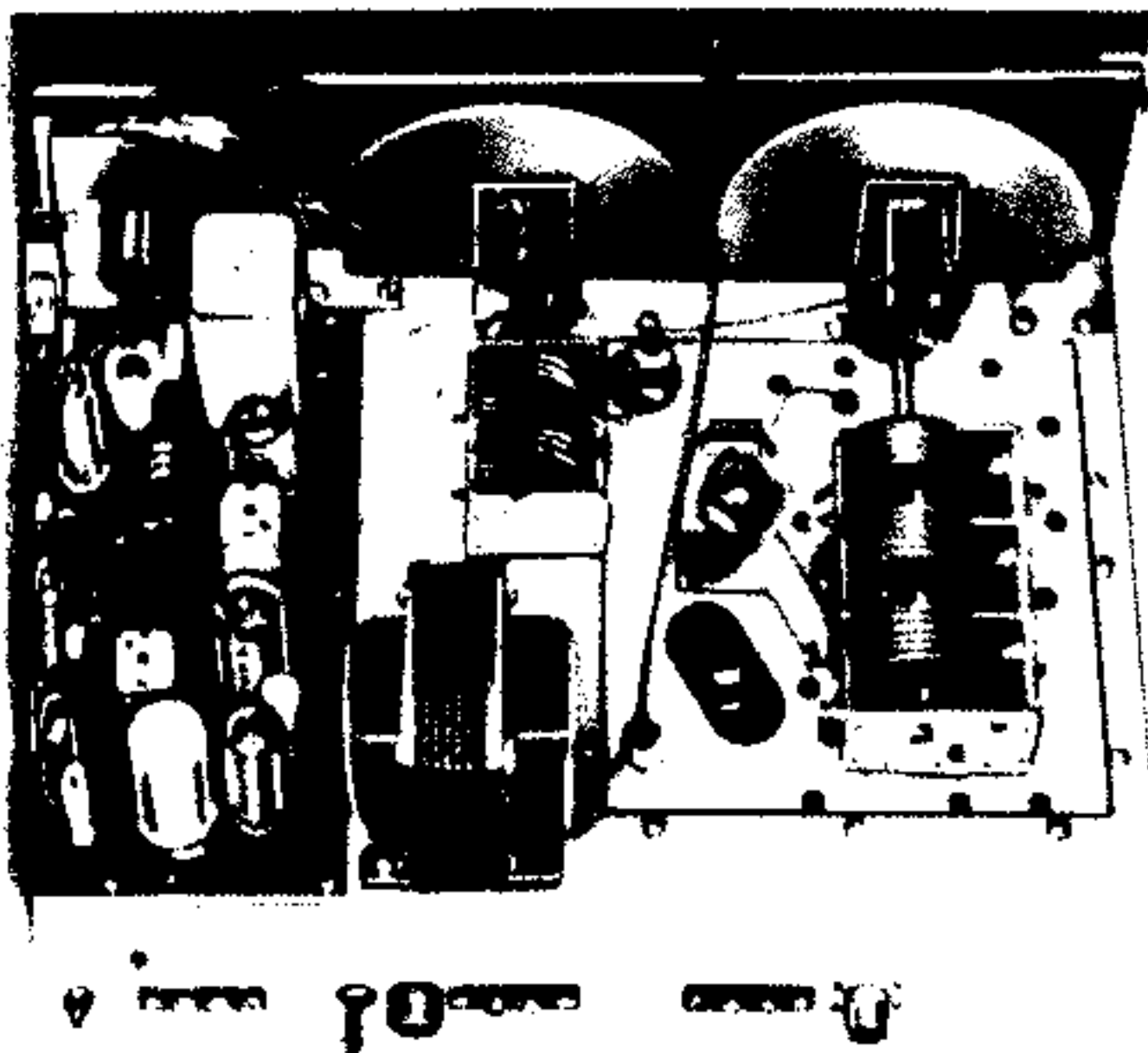
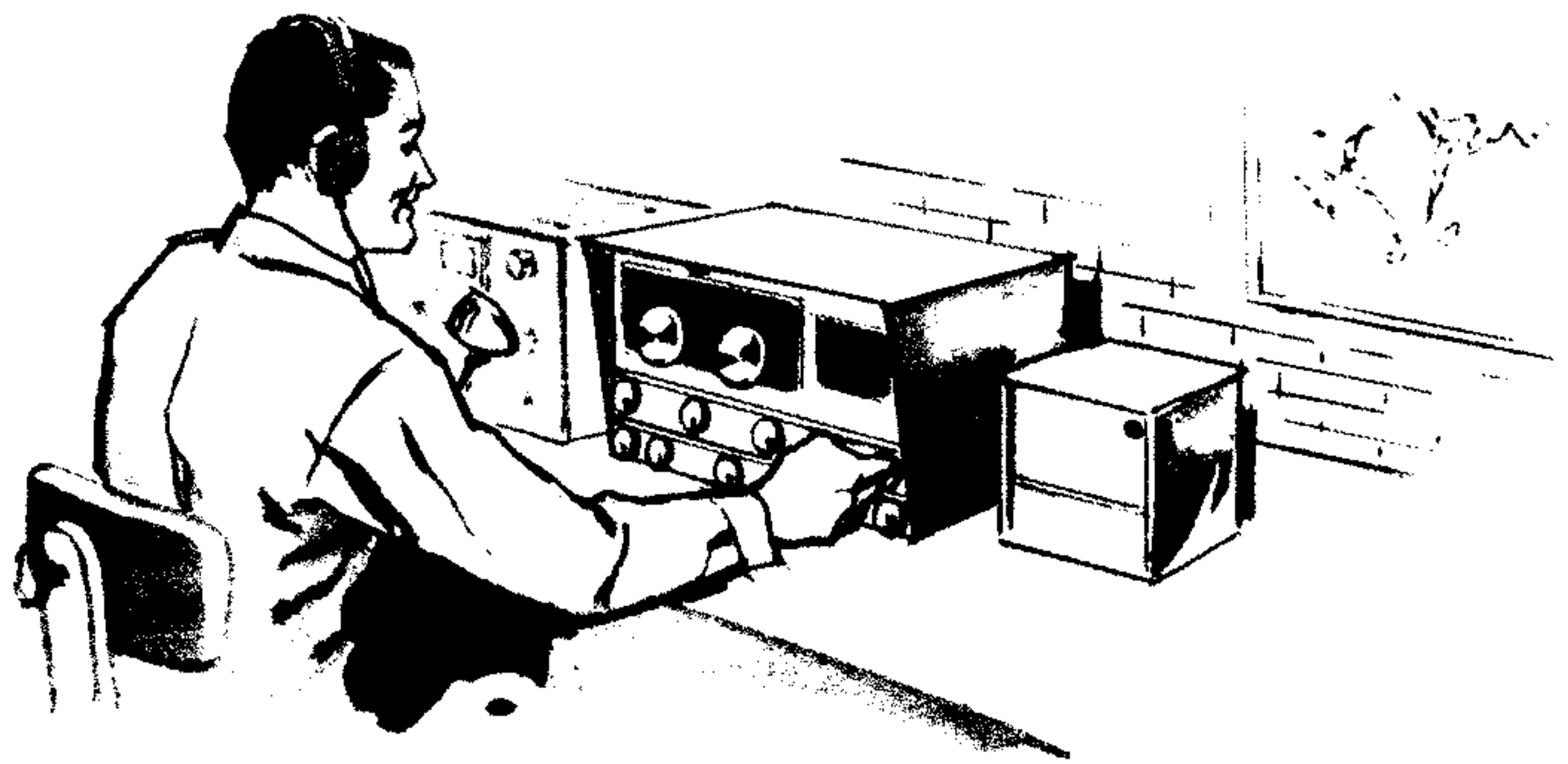
**M-5 S-METER KIT.** For the Knight-Kit Communications Receiver Kit, above. Calibrated in nine "S" units of approximately 6 db each so that each step is double the signal strength of the preceding one. The last two calibrations read +10 db and +20 db over S9. With all parts, wire and solder. Shpg. wt., 12 oz.

83 Y 727. ONLY. . . . . 12.95

See Crystal Calibrator Accessory at Right

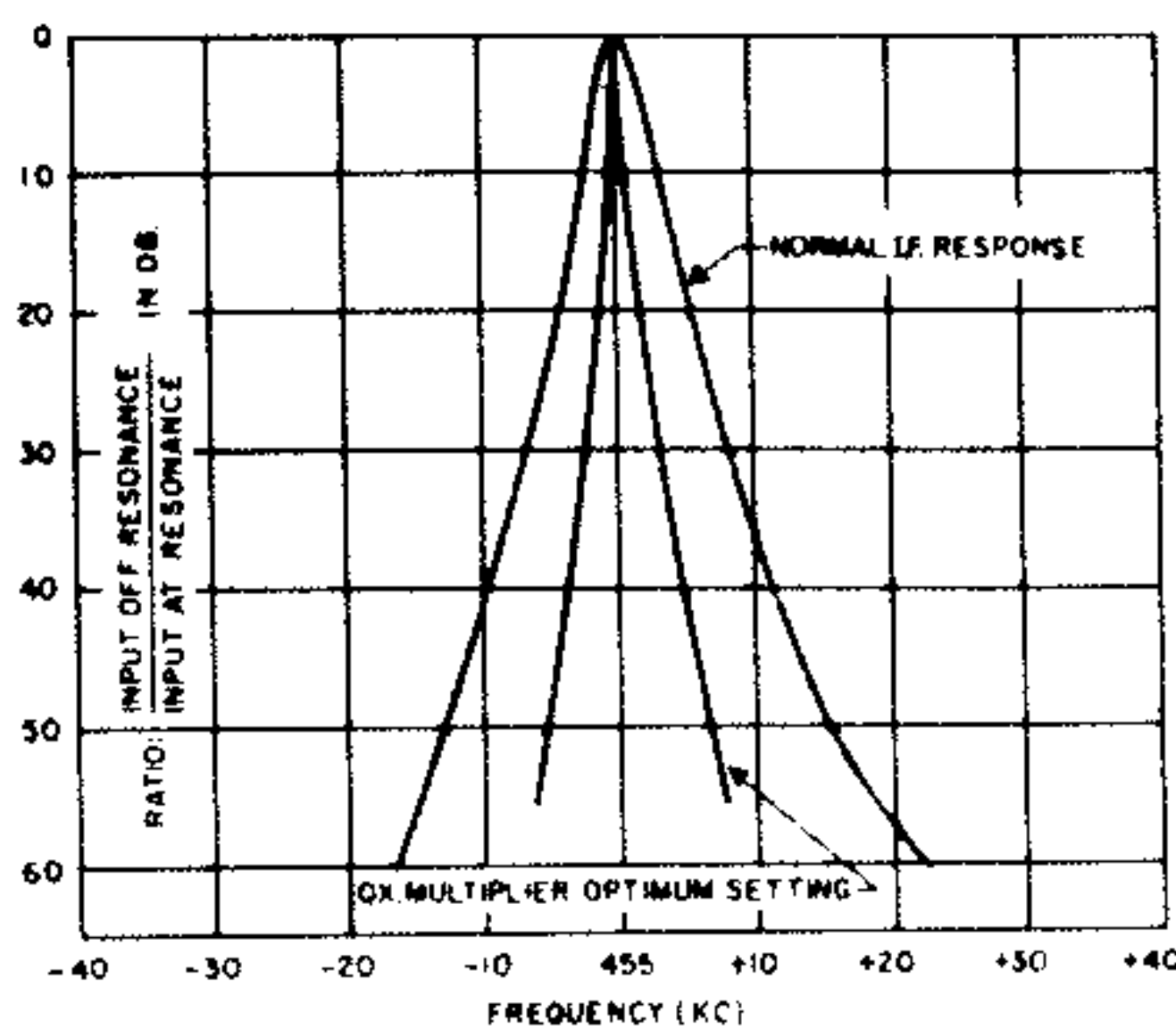
# Build This Exciting Professional-Type Receiver

This outstanding receiver kit incorporates the most up-to-date advances of modern receiver engineering. It was designed by engineers, who are themselves licensed Amateur operators, to meet the highest standards of Amateur performance. As a result, they have produced an exceptionally capable receiver that is truly worthy of the advanced Ham—it's easily comparable to factory-built units costing far more.



## PROOF OF OUTSTANDING SELECTIVITY

The Knight-Kit receiver offers excellent selectivity characteristics. Note the selectivity curves shown at right: 1) Normal selectivity curve with the "Q" multiplier in the off position. 2) "Q" multiplier in the Peak position provides single-signal CW reception—makes stations "pop out" of the interference; "Q" multiplier Tune control lets you slide the "peak" across IF bandpass.



## SPECIFICATIONS

**Frequency Range:** Continuous coverage from 540 kilocycles to 30 megacycles in 4 ranges.

**Sensitivity:** Better than 1.5  $\mu$ v for 10 db s/n ratio; 4  $\mu$ v on BC band.

**Variable Selectivity:** Q-multiplier, in Peak position, provides continuously adjustable IF bandpass from 300 cps to 4.5 kc at 6 db down; provides 60 db notch in Null position for rejection of interference.

**Q Multiplier:** Choice of peak or null across IF bandpass.

**Intermediate Frequency:** 455 kc.

**Image Rejection:** 540-1650 kc—80 db on low end, 40 db on high; 1.6-4.6 mc—68 db on low end, 40 db on high; 4.4-12.4 mc—30 db on low end, 25 db on high; 12-30 mc—40 db on low end, 20 db on high end.

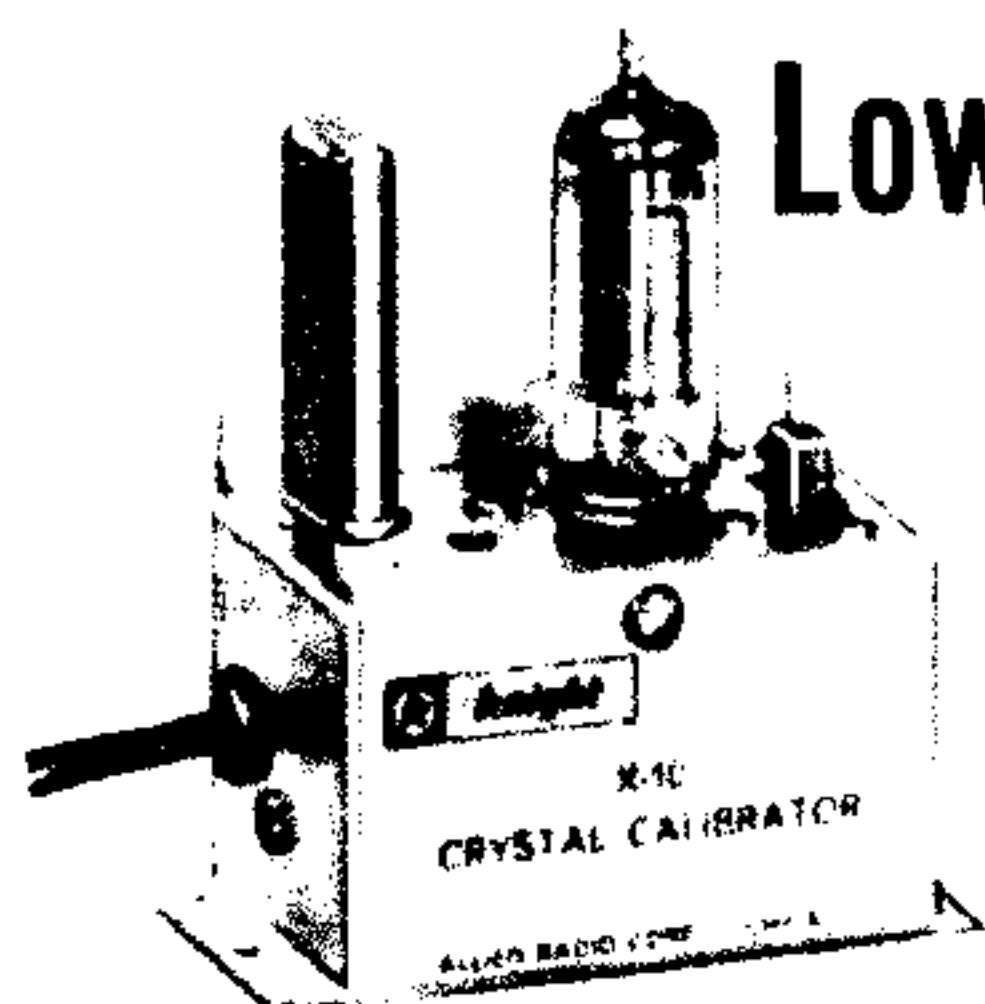
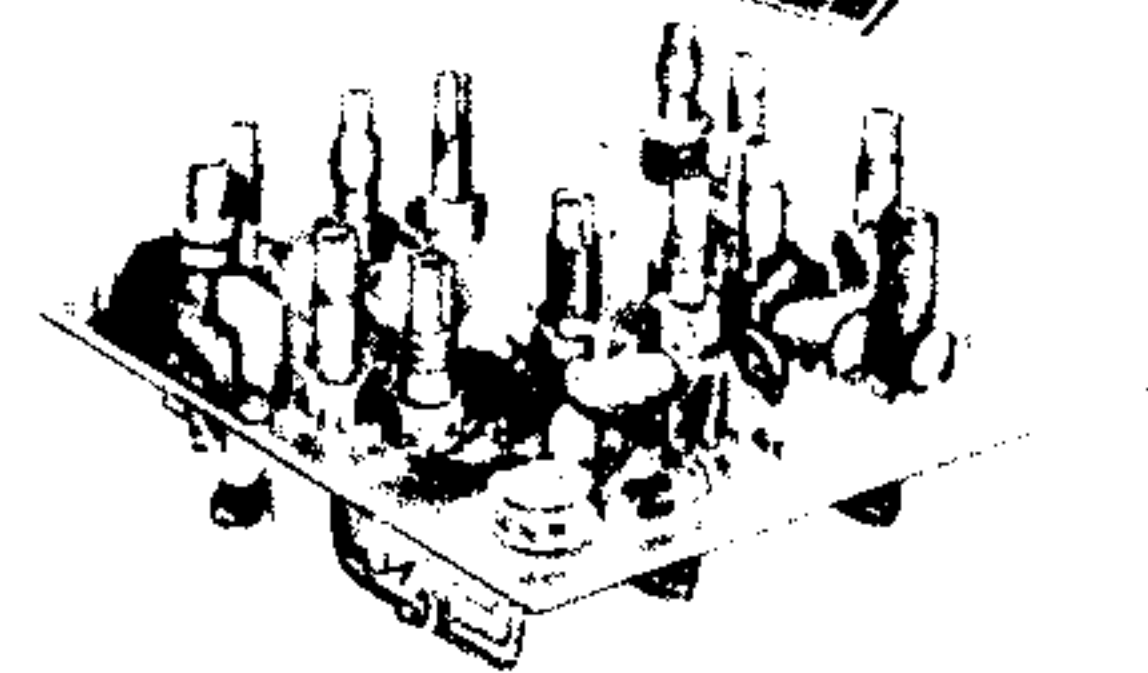
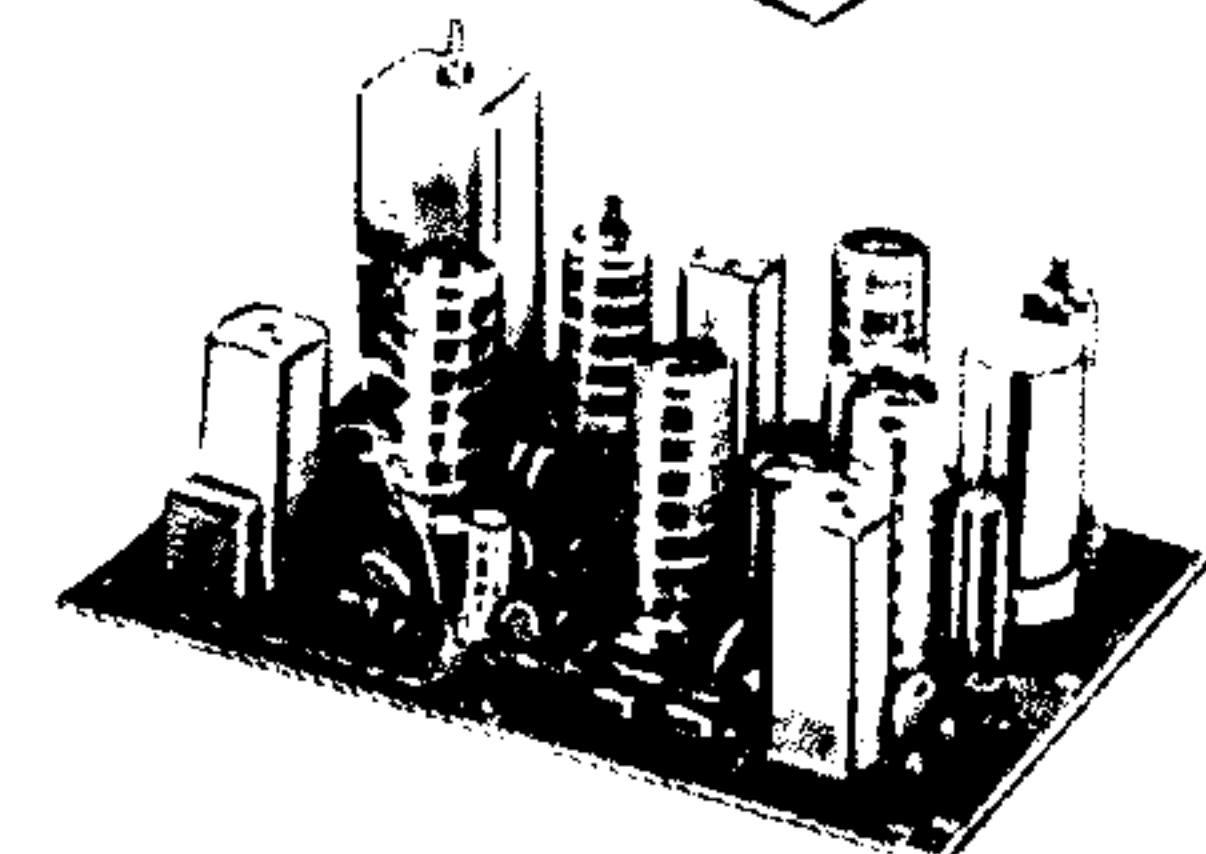
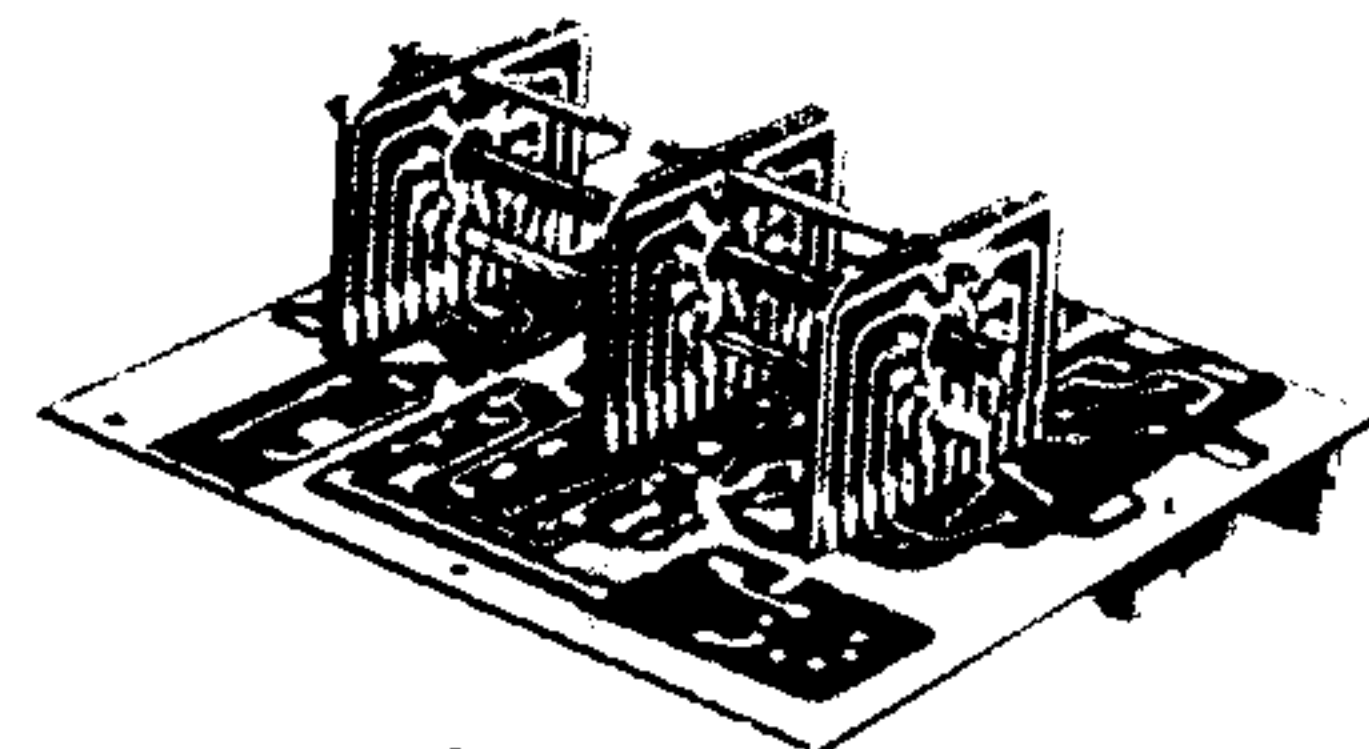
**Tube Complement:** 6BZ6 RF Amplifier, 6BH6 Mixer and HFO, 6AZ8 1st IF Amplifier, 6AZ8 2nd IF and 1st Audio, 6BC7 Detector-AVC-ANL, 6AW8A BFO and Power Amplifier, ECC83/12AX7 Q Multiplier; 6X4 Full-Wave Rectifier and 0B2 Voltage Regulator.

**Audio Output Impedance:** 8 ohms. For PM speaker.

## UNSURPASSED DESIGN FEATURES

**Unique Printed Circuit Bandswitch.** A Knight-Kit innovation—reduces assembly time to a minimum. Simply plug the bandswitch into the RF printed circuit board—makes 32 error-free connections simultaneously! Eliminates critical lead dress—you can't go wrong.

**Two Printed Circuit Boards.** Virtually all circuitry (RF, oscillator, converter, voltage regulator, IF, audio, BFO and rectifier stages) is on two printed circuit boards. Greatly simplifies construction, and makes an extremely important contribution to stability and overall performance.



## Low-Cost 100-kc Crystal Calibrator Kit

Low-cost frequency standard for Knight-Kit or other receiver. Gives marker every 100 kc up to 54 mc. May be powered by R-100 receiver or any source of 6.3 v. at 0.15 amp and 150-300 v. DC at 3-6 ma. Trimmer for zero-beating with WWV; on-off switch. 3½x2½x1½". Complete with wire and solder. Shpg. wt., 12 oz.

83 Y 256. ONLY..... 10.95