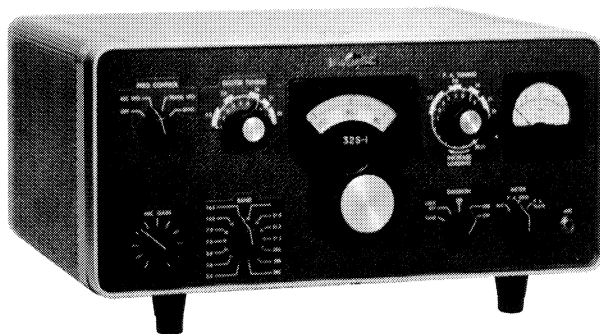
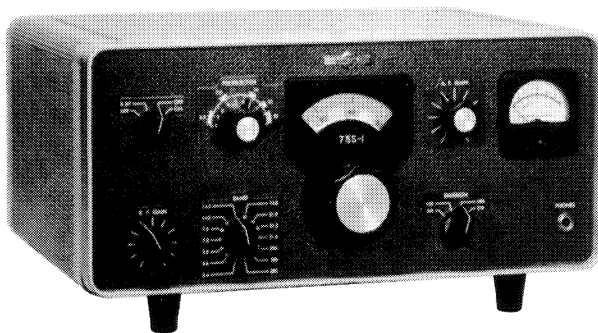




COLLINS amateur
equipment

S/LINE AMATEUR SYSTEM

75S-1



32S-1

75S-1 RECEIVER — Provides SSB, CW and AM reception on all amateur bands between 3.5 and 29.7 mc. It is normally supplied with crystal sockets, band switch positions and crystals for 3.4-3.6, 3.6-3.8, 3.8-4.0; 7.0-7.2, 7.2-7.4; 14.0-14.2, 14.2-14.4; 21.0-21.2, 21.2-21.4 and 21.4-21.6 mc. Facilities are also included for three 200 kc bands between 28 and 29.7 mc, with one crystal supplied for the 28.5 to 28.7 band. A crystal is also provided for reception of frequency and time data from WWV or WWVH. Reception of other bands in the receiver frequency range may be accomplished by crystal substitution. Features include double conversion circuit with crystal controlled HF oscillator, good cross modulation characteristics, product detector for SSB and excellent AVC characteristic for SSB reception with full RF gain. Three degrees of selectivity include 2.1 or optional 0.5 kc with Mechanical Filters, or 4.5 kc conventional IF transformers for AM. Silicon diode rectifiers are used in a self-contained power supply. The 75S-1 may be used to control the 32S-1 Transmitter frequency for transceiver operation. Provision is made for the use of an external 516E-1, 12 v, or 516E-2, 28 v, Power Supply for mobile operation. *Frequency Stability:* After warmup, drift



30S-1

will not exceed 100 cps. Dial accuracy 1 kc. *CW Sensitivity:* 1 uv for 10 db S/N ratio. *Spurious Response:* IF rejection more than 70 db. Image rejection more than 60 db. Cross-over down more than 50 db.

32S-1 TRANSMITTER — With a PEP input of 175 watts on SSB and 160 watts on CW, the 32S-1 covers 13 200 kc segments in the 3.5 to 29.7 mc range, corresponding to those covered by the receiver. Transmitting on upper or lower sideband, the 32S-1 features Mechanical Filter type sideband generation, stable permeability tuned VFO, and crystal controlled high frequency oscillator. The final amplifier consists of two 6146's operating in class AB₁ with approximately 10 db of RF feedback to decrease distortion. Automatic Load Control is utilized to provide a higher average output without distortion. A loading control, concentric with the tuning control, is factory set for 50 ohm antennas and need not be changed unless antennas with impedances other than 50 ohms are used. The 32S-1 employs the 516F-2 Power Supply for ac operation. With an adapter cable, the 516E-1 or 516E-2 dc Power Supply may be used. *Power Output:* 100 watts into a 50 ohm load.

Frequency Stability: Over-all stability with temperature, humidity, pressure and voltage variation 100 cps. Calibration accuracy 1 kc. *Harmonic and Other Spurious Radiation:* Carrier Suppression -50 db, unwanted sideband -50 db, second harmonic -50 db, third order distortion -30 db.

30S-1 LINEAR AMPLIFIER — Completely self-contained in a floor mounting cabinet. It employs a single Eimac 4CX1000A ceramic seal tetrode as a linear amplifier. The 30S-1 is capable of full legal input on SSB as specified by the FCC and 1 kw input on CW. Any exciter with 70 to 100 watt output into a 50 ohm line will drive the 30S-1 without the need for attenuator pads. The output of the amplifier is a pi network with a variable loading control. Correct tuning and loading are indicated by a meter with its zero at 20% of full scale. The loading control is simply adjusted for zero meter reading, while the PA tuning control is operated in the usual manner to obtain minimum plate current. The 30S-1/32S-1 combination may be operated at three power levels with a panel control. HIGH VOLTAGE OFF automatically switches the exciter to the antenna. In the SSB position, the average indicated input is 1 kw. In CW the input is 1 kw. A special type metering circuit is used which indicates when the 30S-1 is properly loaded — even at low power. At any power level, any deviation of the loading indicator from zero provides immediate warning of malfunction. Uses RF feedback and includes ALC circuit for connection to 32S-1. Power supply is in the lower portion and fulfills high voltage and bias requirements. Step starting and full overload relay protection are included.

312B-3 SPEAKER — Contains a 5 x 7 inch speaker and connecting cable. Attractively styled to match the 75S-1 Receiver and 32S-1 Transmitter or KWM-1 Transceiver.

312B-4 SPEAKER CONSOLE — Integrates the 75S-1, 32S-1, 30S-1 and accessories into an operating system. It contains a speaker, an RF directional wattmeter with 200 and 2000 watt scales and a hybrid type phone patch for interconnection of the telephone line to transmitter and receiver.

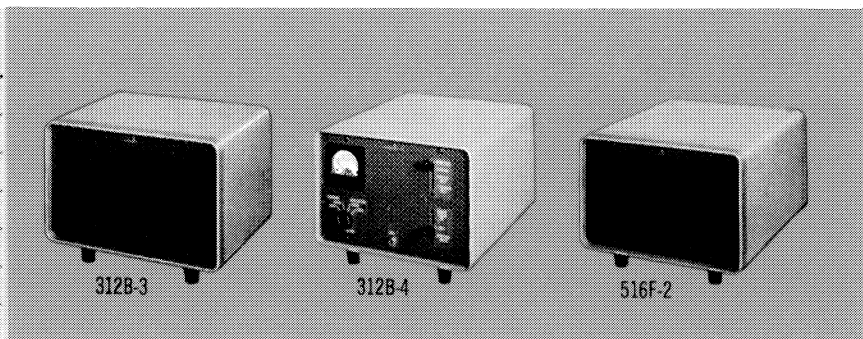
516F-2 AC POWER SUPPLY — Used with the 32S-1, supplying all voltages for it. 115 v, 50-60 cps. (The 516F-1 Power Supply for the KWM-1 Mobile Transceiver may also be used for the 32S-1 with the addition of an adapter cable.)

516E DC POWER SUPPLIES — The 516E-1 operates from 12 v dc. Provides all operating voltages for the 32S-1 and 75S-1 for mobile or portable operation. Transistorized for maximum efficiency and minimum maintenance. The 516E-2 is a similar power supply for 28 v dc operation.

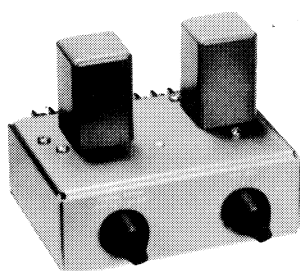
136 SERIES NOISE BLANKERS — Very effective in eliminating broadband random noise of the type caused by ignition systems and power line leakage. It utilizes an RF noise amplifier tuned to 42.5 mc in conjunction with a bridge type blanker circuit to remove the IF signal during noise pulses. Blanking time is determined by the strength of the noise pulse. Three models are available: the 136A-1 for use with the 75S-1, 136B-1 for the KWM-1 and the 136C-1 for the 75A-4.

351E MOUNTING PLATES — May be used to secure the S/Line equipments to bench or table in shipboard, airborne or vehicular installations. The 351E-1 will accommodate either the 75S-1 Receiver or 32S-1 Transmitter; the 351E-2 will mount either the 516F-2 Power Supply or the 312B-4 Station Control, and the 351E-3 will accommodate the 312B-3 Speaker. Equipment may be easily unclamped for removal without the use of tools. The unit is removed by pulling forward and lifting.

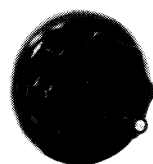
Unit	H	Size (inches) W	D	Weight (lbs.)
75S-1	6 $\frac{7}{8}$	14 $\frac{1}{2}$	11 $\frac{5}{8}$	20
32S-1	6 $\frac{7}{8}$	14 $\frac{1}{2}$	11 $\frac{5}{8}$	16
30S-1	30 $\frac{3}{4}$	17	16 $\frac{3}{4}$	160
312B-4	7 $\frac{3}{4}$	10	12 $\frac{3}{4}$	8 $\frac{1}{2}$
312B-3	7 $\frac{3}{4}$	10	8	4
516F-2	7 $\frac{3}{4}$	10	12	28
516E-1	5 $\frac{1}{4}$	11 $\frac{1}{8}$	7 $\frac{1}{4}$	12 $\frac{1}{2}$



AMATEUR ACCESSORIES



189A-2



307E-1

307E-1 GEAR REDUCTION TUNING KNOB — Provides new ease and accuracy in tuning SSB signals. Operating on a 4 to 1 ratio, it has no detectable backlash. Simple installation on KWS-1 and all 75A models.

189A-2 PHONE PATCH — Provides the necessary apparatus for phone patch operation. It utilizes hybrid circuitry to insure no interaction between the receiver and the telephone for proper VOX operation. Output and input impedances are 600 ohms. Operates equally well on AM or voice operated single sideband. Only two connections to phone line are necessary. Terminal connections are provided on the 32S-1 and 75S-1, KWS-1 and 75A-4, KWM-1 and the back of the 189A-2.