
SARGENT

TUNED RADIO FREQUENCY COMMUNICATION RECEIVERS

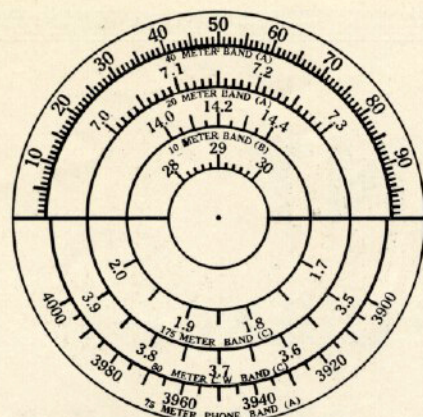
Model 11



Sargent Model 11 Universal

9.5 to 20,000 Meters

HIGHLY FLEXIBLE, EXTREMELY SENSITIVE, SELECTIVE, QUIET, EASY TO OPERATE, UNIVERSAL IN APPLICATION. THESE RECEIVERS ARE RECOGNIZED LEADERS IN THE FIELD.



Band Spread Dial
Model 11

THE tuned radio frequency receiver, by virtue of years of satisfactory service under all conditions, occupies a place of highest esteem among wireless operators. Many commercial and experienced amateur radiomen regard it as an old friend, and these in particular will be glad to know of the new standard of performance established by Model 11—a standard never before reached in a tuned radio frequency receiver. The extreme sensitivity, quietness and flexibility for which these receivers are noted have been retained in full, and the selectivity has been improved to such a point that it is matched only by the most expensive multi-tube receivers of other types. For code work in particular Model 11 has a world-wide range on short waves, and the operator who understands the handling of regeneration can also pick up many short-wave broadcast stations that are lost in the noise on larger sets. Due to its all-wave coverage, Model 11 is excellent for reception of time signals, weather reports, ship and airplane beacons, ship-to-shore telegraph, broadcast band, police, airplane and amateur signals of all kinds.

SELECTIVITY

The unusual selectivity of Model 11 may be attributed to the scrupulous care that has been used in the design and layout. Plenty of space has been allotted—Model 11 is not a "small" receiver. Everything is placed in position to assure shortest leads and most efficient wiring. Coil units, both short and long wave, are completely shielded within themselves and are then set into the receiver on studs arranged to give a six-point grounding to the receiver chassis. This is mechanically sufficient for firm anchorage and keeps the coil shield currents almost entirely out of the receiver chassis. A glance at the rear and bottom views of the receiver will show the care with which Model 11 is built.

TUNING RANGES

Model 11 is available in three tuning ranges, as follows:
AMATEUR TUNING RANGE—9.5 to 550 meters.
MARINE TUNING RANGE—9.5 to 3750 meters.
UNIVERSAL TUNING RANGE—9.5 to 20,000 meters.
 The receiver is exactly the same for all tuning ranges, the only difference being in the coil units.

THE COIL UNITS

Until recently it was impossible to build a receiver having the wave coverage of the Marine or Universal model without introducing serious losses at the short waves. Difficulties in the way of doing this have been completely overcome and it is now possible to build a multi-band coil unit

having losses as low or lower than those of any other type. Model 11 uses separate coils for each waveband. Antenna coil, secondary, and tickler have all been designed for best results on each band. Coils are well spaced, and the wave-change switch has an extra section to short-circuit all coils that could introduce losses into the waveband that is in use. As a result there is no apparent loss from the presence of the other coils, and the addition of the long wave tuning ranges makes no change in efficiency of short wave reception. Efficiency of long wave reception is on a par with that of short waves. Particular attention has been paid to reception in the vicinity of 600 and 2200 meters, and the wavebands have been so arranged as to give a high L/C tuning ratio at these important wavelengths. Model 11 for 3 volt Air Cell and 2 volt wet cell operation, tunes down only to 15 meters. Because of complications unavoidable in filament type tubes, operation of these models on 9.5 meters is not satisfactory.

THE CIRCUIT

Model 11 uses one stage of tuned radio frequency amplification, regenerative detector and two stages of audio. Phone jack is placed at the output of the first audio stage, and the speaker is cut out when phone plug is inserted. A. C. models use an 80 rectifier and have a total of 5 tubes—D. C. and battery models have 4.

R. C. A. TUBES

A radio receiver can be no better than the tubes it uses. Having done our part in the receiver design, we have selected the best tubes that are available regardless of price. Standard since 1915, first known as the Cunningham and now as the R. C. A.-Cunningham, these tubes are the accepted standard by which others are judged. All of our receivers are equipped with these tubes.

Tube line-up is as follows: A. C. models use a 6D6 in the R. F. stage, 6C6 detector, 76 first audio, 42 second audio and 80 rectifier. Model 11 for 110 and 220 volts D. C. uses the same line-up as above for the R. F. stage, detector and first audio and uses a 43 output tube. For 6 volt battery model the line-up is the same except that a 41 output tube is used. The 3 volt and 2 volt models use a 34 R. F. stage, 32 detector, 30 first audio and 1F4 output tube.

JENSEN DYNAMIC SPEAKER

Model 11, for all voltages, uses a Jensen dynamic speaker. The battery receivers use the permanent magnet type of dynamic, which requires no field current.

POWER SUPPLY

A. C. models have built-in power supply, and these receivers are thus completely self-contained units. The hum level is so extremely low that it may properly be termed "humless".

BAND SPREAD

Sargent mechanical band spread is used. All amateur bands are spread on this receiver. See illustration of the band spread dial for details. In Model 11 this band spreader has been developed to a point where it is superior to any other type, being accurate, easy to adjust and free from backlash. On non-amateur wave lengths it is a very handy vernier.

MAIN DIAL CALIBRATION

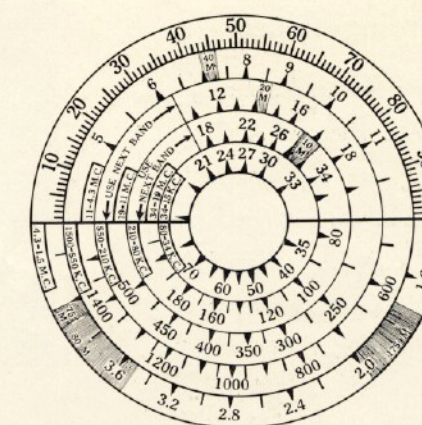
Illustration shows the scales on the main dial of the Universal Model 11. The frequency coverage of each scale is marked in the small enclosures to the left of the dial center. These markings correspond to those on the waveband switch. Once the operator has used the dial for a few moments, there is no confusion in locating frequencies. Calibration is furnished over the entire tuning range of each model.

BREAK-IN SWITCH

When the toggle switch at the right hand end of the receiver is in the DOWN position the cathode of the R. F. tube is biased to the cut-off point. This protects the tubes in the receiver from overload during transmission. This system has an advantage over the usual B break in that it is instantaneous in operation. Also there is enough leakage signal from the transmitter to operate the detector tube and this permits of monitoring the transmission. If desired, wires from a relay can be attached to the switch terminals for break-in telegraph or phone transmission.

OTHER CONTROLS

Model 11 has an R. F. stage trimmer on the panel. Thus the operator can be certain at all times that both sets of coils are in absolute resonance. An R. F. Gain Control gives the receiver sufficient flexibility so that it can be used on any size antenna and enables it to function properly under differing interference conditions. A headphone jack is provided at the left hand end of the receiver.



Main Tuning Dial
Model 11 Universal

CABINET CONSTRUCTION

Model 11 uses the same "tray-type" panel and chassis construction that was introduced with Sargent Model 12. Remove 6 thumb screws and the entire panel and chassis can be drawn out the front of the cabinet, available immediately for tube changing or inspection. Power wires need not be disturbed while doing this, and the cabinet may be permanently anchored in place if desired without in any way interfering with servicing of the receiver. Cabinet and panel are finished in black crackle, a handsome, permanent finish. Etched name plates are provided for all controls.

ANTENNA REQUIREMENTS

Either a doublet or a straight antenna may be used. For all-wave work, particularly above 550 meters, the straight antenna will give best results, and the longer and higher, the better. Many prefer this type for short waves also, but doublet connections are provided for those who want them.

D. C. AND BATTERY MODELS

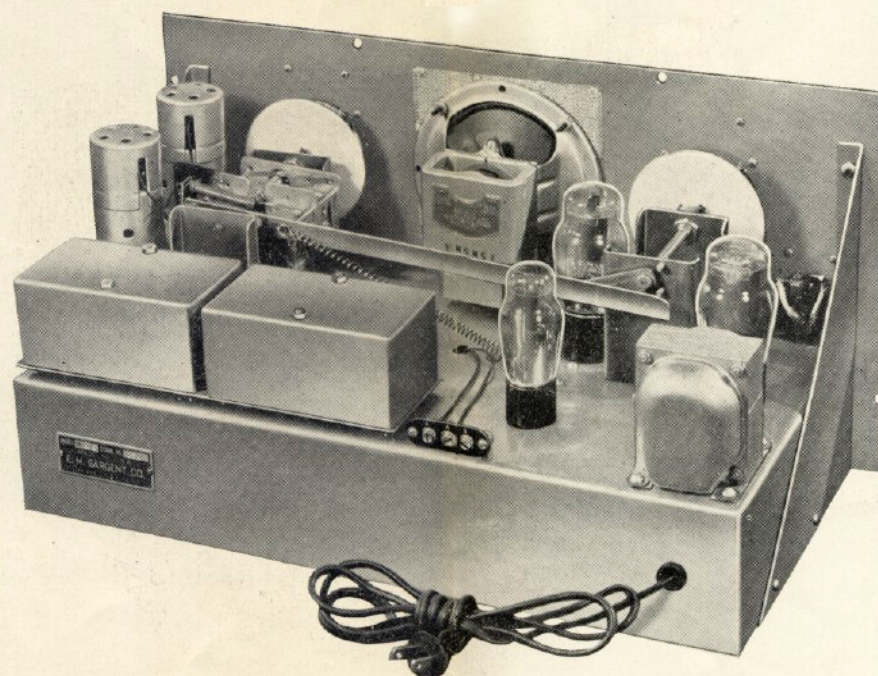
D. C. and battery models have been engineered as separate receivers, not re-hashed from A. C. designs. While the fundamental circuits are identical, other features are not, particularly in the D. C. receivers. Models for operation from 110 and 220 volts D. C. are wired with both positive and negative lines completely filtered and insulated from the chassis. Thus the receiver cabinet may be permanently grounded without damage to the power lines and insuring protection for the operator.

A. C. - D. C. OPERATION

An A. C.-D. C. model, as such, is not listed. However, the 110 volt D. C. Model 11 can be operated from A. C. with power packs listed on the last page. These power packs supply D. C. for the B voltages and A. C. for the heaters. Special heater terminals are brought out on the receiver so that these connections can be made externally. Power pack can also be provided for operating the 6 volt battery model.

DIMENSIONS AND SHIPPING WEIGHT

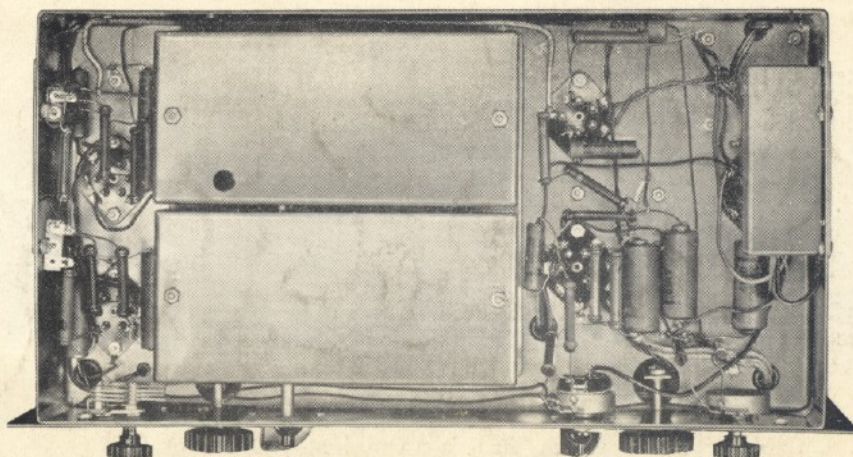
Length of cabinet, 19". Height, 9 1/2". Front to back, 9 3/8"—add 1" for knob clearance. Shipping weight, 35 lbs.



Sargent Model 11—Rear View

Regarding Prices—

All prices are Net and not subject to further discounts. Prices of A. C. models include tubes, power supply and Jensen dynamic speaker. Battery model prices include tubes and speaker but not batteries. All prices are f. o. b. Oakland, California.



Model 11—Bottom View

Net Prices Model 11

Operating Voltage	Amateur Tuning Range 9.5-550 Meters			Marine Tuning Range 9.5-3750 Meters			Universal Tuning Range 9.5-20,000 Meters		
	Cat. No.	Price	Code Word	Cat. No.	Price	Code Word	Cat. No.	Price	Code Word
110 Volts 50/60 cycles A. C.....	11-AA	\$46.00	ELAAA	11-MA	\$54.00	ELMMA	11-UA	\$75.00	ELUUA
110 Volts 25 cycles A. C.....	11-AB	\$48.00	ELAAB	11-MB	\$56.00	ELMMB	11-UB	\$77.00	ELUUB
220 Volts 50/60 cycles A. C.....	11-AC	\$48.00	ELAAC	11-MC	\$56.00	ELMMC	11-UC	\$77.00	ELUUC
110 Volts D. C.....	11-AD	\$53.00	ELAAD	11-MD	\$61.00	ELMMD	11-UD	\$82.00	ELUUD
220 Volts D. C.....	11-AE	\$53.00	ELAAE	11-ME	\$61.00	ELMME	11-UE	\$82.00	ELUUE
6 Volt Storage Battery..... 135-180 Volt B.	11-AF	\$49.00	ELAAF	11-MF	\$57.00	ELMMF	11-UF	\$78.00	ELUUF
3 Volt Air Cell Battery***..... 135-180 Volt B.	11-AG	\$55.00	ELAAG	11-MG	\$63.00	ELMMG	11-UG	\$84.00	ELUUG
2 Volt Wet Cell Battery***..... 135-180 Volt B.	11-AJ	\$55.00	ELAAJ	11-MJ	\$63.00	ELMMJ	11-UJ	\$84.00	ELUJ
*** Lowest wavelength 15 meters.									
Power Pack to operate 110 Volt, D.C. Receiver from A.C.							57-DA	\$15.00	PWRAA
Power Pack to operate 6 Volt Battery Receiver from A.C.							57-FA	\$15.00	PXSAA
Above Power Packs supplied for 110 volts 50/60 cycles unless otherwise specified.									
Genemotor, with special all-wave filter, to operate 6 Volt Battery Receiver without B Batteries (Drain 3.15 amperes)							5200-F	\$25.00	ELGEN

E. M. SARGENT CO.

212 Ninth Street, Oakland, California, U. S. A.

MANUFACTURERS OF INTERNATIONALLY KNOWN
AMATEUR AND SHORT WAVE EQUIPMENT

CABLE ADDRESS, "EMSCO"