

Great events

**and stirring adventures
out of thin air,
from around the world
... and beyond!**



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hallicrafters

professional quality communications

SHORT WAVE PLUS LOCAL BROADCAST RECEIVERS

The amazing world of short

From outer space . . . from a ship in distress far at sea . . . from the grim wilderness of a village in Viet Nam . . . the great events of history and excitement of the moment are yours with the twist of a dial through Hallicrafters Short Wave Radio!

The world we live in is vastly more complex than it was just a few short years ago. Today, it is possible to travel between continents faster than news can reach you through your newspaper.

Every moment of every day and night, the voices of adventure are around you, ready to bring into your home an absorbing new interest . . . a thrilling new way to keep up with events, to be informed and stay informed.

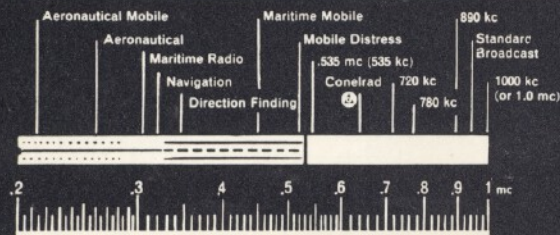
Now, more than ever before, Hallicrafters Short Wave Radio can keep you in tune with the world.



Amateur Radio—In America alone, there are more than 275,000 licensed amateur radio stations operated by individuals from all walks of life—scientists, schoolboys, mechanics, housewives—people with a wonderful spirit of adventure.

Friendships among radio amateurs span borders, oceans and continents. Conversations between amateurs in America and Europe, Asia or Africa are frequent—and make fascinating listening.

The bands on the dial of a Short Wave receiver actually are greatly enlarged segments of the useful Short Wave spectrum shown on this and the next three pages. Type of broadcast is shown opposite approximate frequency where it may be heard.



wave listening . . .



Not only is theirs a fascinating hobby, but amateurs every day perform services in the public interest at times of disaster and emergency when normal communications break down—floods, tornadoes, air and sea emergencies, etc.

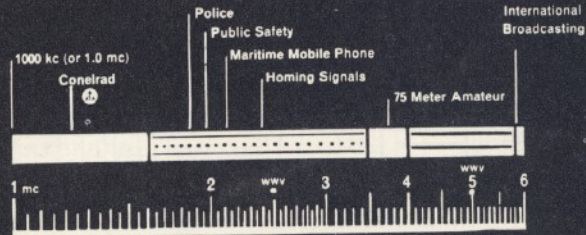
Foreign Stations—From every country in the world, powerful short wave stations beam broadcasts regularly, many of them in the English language.

Short wave provides you with the perfect means of keeping up with world events through on-the-spot news broadcasts from the trouble areas of the world—from the Middle East to Alaska . . . from Australia to outer space!

And for entertainment . . . a disc jockey in Djakarta . . . genuine Swiss yodelling . . . the bells of St Peter's in the Vatican . . . Radio Free Europe . . . a marimba dance orchestra in a Guatemalan night club . . . these and hundreds of other fascinating adventures are yours through the wonder of short wave radio!

Aviation, Ships at Sea—A great ocean liner, fogbound in the north Atlantic . . . a giant bomber running low on fuel . . . a fishing fleet heading home in pitch blackness—these are some of the "routine" events that make short wave listening a truly thrilling experience!

Commercial overseas airliners, ship-to-shore radio, the Coast Guard, some military and private aviation frequencies are among the many commercial and industrial short wave activities you can hear on Hallicrafters short wave receivers.





Emergency Channels—Within your own local area, special-frequency receivers let you pick up many short wave broadcasts that can provide fascinating listening. Among these are state and local police, taxicab, fire departments and radio telephone.

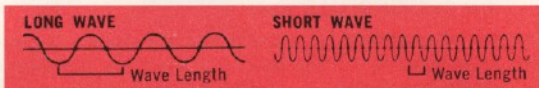
Since these sources need not be heard outside your locality, they usually transmit on the type of higher frequencies that can be heard only in the immediate area.

Additional Sources—Armed Forces ground communications . . . Civil Defense . . . Government . . . Weather Stations . . . In-land Waterways . . . W.W.V. (Bureau of Standards time signal).

What is Short Wave?

Understanding the mechanics of Short Wave radio will aid you to receive the most enjoyment and the greatest thrills for the hours you spend at the dials.

You may often have heard the term "wave length" applied to the radio signals transmitted by a broadcasting station. The signals travel of course, in "waves"; the wave length being the distance between the "crests" of the waves.



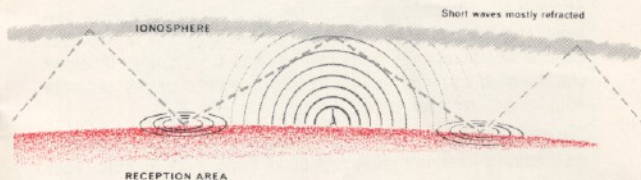
The total number of complete waves (or cycles) that a station can send out per second is referred to as "frequency." The broadcasting frequency, therefore, is determined by the wave length on which a particular station is transmitting. The shorter the wave length, the higher the frequency.

Every radio station in the world is licensed to broadcast on certain assigned frequencies or bands of frequencies. The standard broadcasting stations such as those in your home town are assigned to lower frequencies, or "longer" wave lengths. The high frequency bands are reserved for other types of transmitting stations throughout the world known as Short Wave Stations.

Why Short Wave for Long-Distance?

The chief characteristic of Short Waves is their amazing ability to span enormous distances.

The drawings on this page illustrate the manner in which all radio signals travel in "waves" as they leave the transmitter antenna. Some of the signal "hugs" the ground, while the rest travels upward and outward away from the earth.



You are able to hear Short Wave radio signals over great distances because they are refracted back to earth from layers of rarified gases high in the ionosphere. Short Wave signals enter the ionosphere and bounce from the layer's electrical particles. The physical action is similar to skipping a stone on smooth water. If the stone is of the correct size and shape and is thrown with enough power at the right angle, it will "skip" over the water's surface.

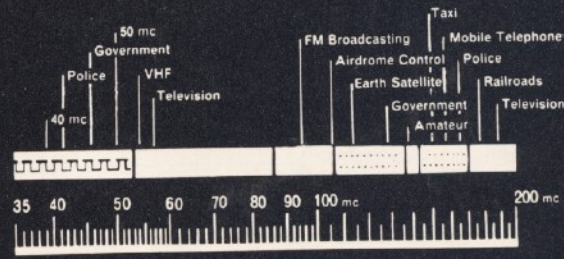
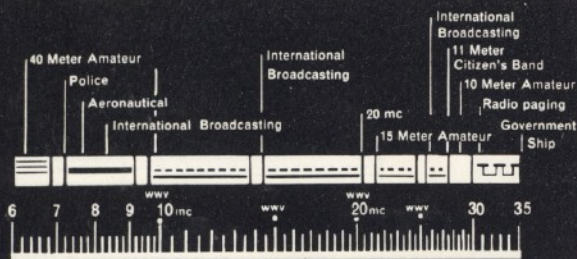
The Short Wave signal finds the ionosphere just as particular. Similarly, the Short Wave signal must be of the right size (frequency).

It must strike or enter the ionosphere at precisely the correct angle, and it must have sufficient power.

It may take "several skips" (just like a stone) for the signal to travel from the distant transmitter to your receiver. And with each consecutive bounce the signal becomes weaker, until it is too weak to continue its process of refracting from the ionosphere back to earth (where it is heard), back off the earth into the ionosphere, and then again back to earth.

At different periods of the year, Short Wave reception improves "above the normal value" between your receiving site and various areas of the world. As an example, the Spring months bring the strongest signals from Australia and the South Pacific. In the Fall months, signals from Europe and the Far East dominate the dials.

And, as daylight changes into darkness each day, so does the nature of your reception. Day to day variations are also present.



Choosing a Receiver

Many special receivers are manufactured for reception of only one type of broadcasting (police calls, for instance).

For the Short Wave Listener, however, a general coverage receiver is the most useful type.

Unlike the familiar home radio, a general coverage receiver is a communications instrument of professional quality, appearance and performance. Even the least expensive ones offer reception on three or more separate short wave bands plus AM, or Standard Broadcast.

An extremely important feature found on all good general coverage receivers is called "Bandspread." This is a separate control which may be described as ultra-fine tuning; it allows you to pick out and isolate stations impossible to separate with a conventional tuning control.

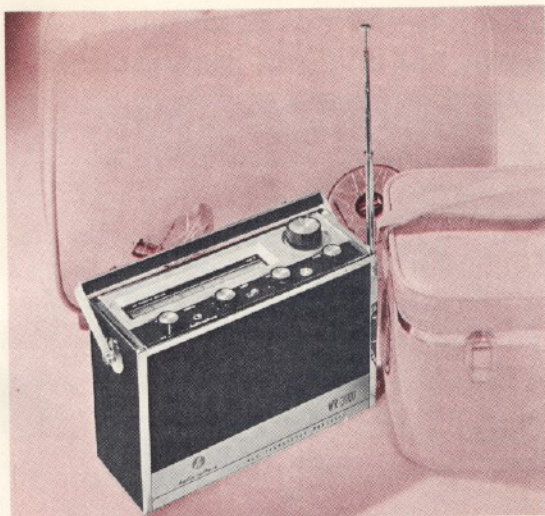
The more expensive receivers contain more tubes; thus they will amplify weaker signals and make them more audible. They also have other features such as voltage regulation (which helps the receiver stay on frequency); "S" meters (which measure for the listener the strength of a signal); and noise limiters for the elimination of interference.

These devices make the receiver more expensive—but they also increase its range and flexibility, adding considerably to its usefulness and enjoyment.

The world-famous Hallicrafters Short Wave Receivers described on the following pages offer you the widest available selection of features and performance to measure up to any need—from beginner to professional.



The new ideas in communications



WR-300—transistorized, 6-band portable communication receiver

No sportsman, camper or pilot should make a move without this professionally-engineered, 18-transistor portable "information center". This one's not built for the beach or playroom. It's the **radio man's portable**, designed with hand-wired precision for incomparable reception of low-frequency aviation weather broadcasts, Consolan marine navigation, long-range standard broadcast and hundreds of foreign stations.

FEATURES: Extended-range reception of standard broadcast stations; high-sensitivity, continuous coverage of short wave (four separate bands) from 1.8 through 23 Mc.—performance comparable with many professional communications receivers; completely handwired; extremely rugged, lightweight aluminum chassis and case, just 12 lbs.; rotating drum-type dial for pinpoint tuning accuracy.

ANTENNA: Five-foot telescoping whip is built-in, recesses completely into chassis when not in use, swivels upright when set is either in vertical or tabletop position.

POWER SOURCE: Nine ordinary "D" type flashlight batteries obtainable everywhere. Battery life, up to 500 hours.

DIAL: Drum-type rotating. Single band in use appears in window—easy to read, no confusion. Dial illuminates with spring switch (you can't leave it on accidentally).

FRONT PANEL CONTROLS: Vol./Off/On; three-position Tone/CW (code); Vernier fine tuning knob; Band Selector; Dial Light switch; Headphone jack.

PHYSICAL DATA: Size: 12 $\frac{3}{4}$ " x 4 $\frac{1}{8}$ " x 8 $\frac{1}{2}$ ".
Weight: 12 lbs.; aluminum chassis and case finished in rich black with brushed silver face and chrome trim.



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SX-62A—Professional short wave, FM and AM receiver

Hallicrafters most versatile general coverage receiver—used by hundreds of universities, schools and scientists as well as experienced short wave experimenters.

FREQUENCY COVERAGE: Standard Broadcast from 550 kc. through 1620 kc.; three short wave bands, 1.62 mc.—32 mc.; and FM or AM from 27 mc. to 109 mc. **Intermediate frequencies:** Bands 1, 2, 3 and 4—455 kc.; Bands 5 and 6—10.7 mc.

FEATURES: Single tuning control covers wide-visibility dial with one band lighting at a time. A 500 kc. crystal calibration oscillator built-in to check dial pointer accuracy. Temperature compensated, voltage regulated. Audio flat 50-15,000 cycles, 10 watt push-pull audio output. Automatic Noise Limiter; Series diode; AFC on FM; multiplex output jack.

TYPE OF SIGNALS: Bands 1,2,3, and 4; AM/CW. Bands 5 and 6; AM/FM/CW.

CONTROLS: Band selector, Receive/standby, calibration osc. on/off, noise limiter, tuning, AF gain, Phono/FM/AM/CW, six-position selectivity, four-position tone, r-f gain, calibration reset.

ANTENNA INPUT IMPEDANCE: 52 to 600 ohms.

AUDIO OUTPUT IMPEDANCE: 3.2/8/500.

TUBE COMPLEMENT: Fourteen tubes plus voltage regulator and rectifier. (2) 6AG5, r-f amp.-7F8, conv.-6SK7, (i-f amp.-6SG7, i-f amp.-6SG), FM limiter and AM det.-6H6, FM det.-6H6, FM det.-6J5, BFO-6H6, ANL-6SL7, phase inverter-(2) 6V6, push-pull audio output-6C4, calibration osc.-VR-150, regulator-5U4G, rectifier.

POWER SUPPLY: 105/125 V., 50/60 cycles AC.

EXTERNAL CONNECTIONS: Terminals for doublet or single wire antenna on rear. 3.2/8/500 ohm audio outputs. External antenna provided. Phone jack, socket for external power and remote control connections. Phone jack. MX output jack.

PHYSICAL DATA: Satin black steel cabinet with light gray front panel and chrome trim. Piano hinge top. Size 20" wide x 10½" high x 16" deep. Shipping weight approximately 64 lbs.



S-120—far and away the world's most popular short wave receiver!

The clean, compact beauty of this precision-engineered receiver is more than skin deep! The famous S-120 brings you superlative performance on three short wave bands plus standard broadcast, and a three-way antenna system for maximum flexibility. The finest buy available in a low-cost receiver!

FEATURES: Coverage of 540-1650 kc. plus short wave from 1650 kc. through 31 mc., Electrical bandspread; slide-rule dial with imprinted guide to frequencies of foreign, government, aviation, etc.; Three-way antenna system—built-in, high-gain ferrite loop for AM, 45" collapsible whip, plus terminals for long wire or doublet antenna, all bands; Front panel B.F.O./sensitivity control; built-in 5" speaker; front-panel headphone jack (disables speaker).

FRONT PANEL CONTROLS: Main Tuning; Bandspread Tuning; Band Switch; Audio Vol. AC Off; B.F.O./Sensitivity.

TUBES AND FUNCTIONS: 12BE6 converter; 12BA6 I.F. amplifier, B.F.O.; 12AV6 1st audio AVC and detector; 50C5 power amplifier. Selenium rectifier. Two dial lamps. 105-125V AC/DC at 30 watts. U/L listed.

PHYSICAL DATA: Gray steel cabinet with bright chrome trim, black dial. Size: 13½" wide by 5¾" high by 8¾" deep. Shipping wt.: 11¾ lbs.

Model WR-600

Same as S-120 but with brown, wood-grained steel cabinet.



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SX-110—Communications-type, high performance short wave (3 bands) plus AM receiver

FREQUENCY COVERAGE: Broadcast Band 538-1600 kc. plus three short-wave bands—1550 kc-34 mc.

FEATURES: Slide rule bandspread dial calibrated for 80, 40, 20, 15 and 10 meter amateur bands, 11 meter citizens' band and logging scale. Separate bandspread tuning condenser, crystal filter, antenna trimmer, "S" Meter, one r-f, two i-f stages.

INTERMEDIATE FREQUENCY: 455 kc.

TUNING ASSEMBLY AND DIAL DRIVE MECHANISM: Ganged, 3 section tuning capacitor assembly with electrical bandspread. Main tuning dial calibrated in megacycles, has 0-100 logging scale.

AUDIO OUTPUT IMPEDANCE: 3.2 and 500 ohms.

CONTROLS: Sensitivity, band selector, tuning bandspread, volume, AVC, noise limiter, AM/CW, on/off/tone, pitch control, standby/receive.

TUBE COMPLEMENT: Seven tubes plus one rectifier: 6SG7, r-f amplifier—6SA7, converter—6SG7, 1st i-f amplifier—6SK7, 2nd i-f amplifier—6SC7, BFO and audio amplifier—6K6GT, Audio output—6H6, ANL-AVC-detector—5Y3GT, rectifier.

AUDIO POWER OUTPUT: 2 watts.

POWER SUPPLY: 105/125 V. 50/60 cycle AC.

PHYSICAL DATA: Gray steel cabinet with brushed chrome trim. Size 18¾" wide x 8" high x 10¼" deep. Shipping weight approximately 32 lbs.

S-108 Receiver (Not illustrated)

Same as SX-110 less crystal filter and S-meter; but has built-in speaker.

FREQUENCY COVERAGE: Broadcast band 538-1600 kc. plus three S/W bands 1550 kc.-34 mc.

SX-122—Hallicrafters' newest and finest general coverage receiver

The ideal unit for the amateur, serious hobbyist or professional—every feature you could want for complete versatility and superior stability.

FREQUENCY COVERAGE: Standard Broadcast; 538-1580 kc.; three S/W bands, 1720 kc.-34 mc. Band 1: 538 kc.-1580 kc.—Band 2: 1720 kc.-4.9 mc.—Band 3: 4.6 mc.-13 mc.—Band 4: 12 mc.-34 mc. Band spread calibrated for 80, 40, 20, 15, 10 meter bands.

SELECTIVITY: Three steps—0.5, 2.5 and 5.0 kc. at 6 db. down.

FEATURES: Selectable side band operation. Dual conversion on all bands. Antenna trimmer. Amplified AVC. Product detector for SSB/CW. Envelope detector for AM. Series noise limiter. Second conversion oscillator crystal controlled—greater stability through crystal control and additional temperature compensation of high frequency oscillator circuits. 50 kc. highly selective i.f. system is used. Upper or lower side band is selectable. Optional accessory—Plug in laboratory type evacuated 100 kc. quartz crystal calibrator (HA-7).

FRONT PANEL CONTROLS: BFO. Function. Phone jack. Antenna trimmer. Calibrator on/off. R.F. gain. Audio gain. Band selector. Noise limiter on/off. Selectivity. Main tuning. Bandspread tuning.

TUBES AND FUNCTIONS: 6DC6 R.F. amplifier. 6AU6 1st mixer. 6C4 H.F. oscillator. 6DC6 1650 kc. i.f. amplifier. 6EA8 2nd mixer and crystal oscillator. 6BA6 50 kc. i.f. amplifier. 6BE6 BFO and product detector. 6BN8 AVC amplifier, AVC rectifier, AM detector. 6GW8 1st AF amplifier and audio output. 5Y3 Rectifier. IN456 ANL diode. 1 OA 2 Voltage regulator.



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S-118—5 band long wave/AM/ short wave receiver

This hand wired, professionally-styled communications instrument brings you not only excellent extended range AM and continuous short wave coverage from 1.7 mc. to 31 mc. . . . but marine navigation, weather frequencies, and international distress freq. (500 kc.) as well.

FREQUENCY COVERAGE: Standard Broadcast plus 185 kc.-420 kc., 495 kc.-31 mc. in 5 bands. Intermediate frequency 455 kc.

CONTROLS: Main tuning. Separate electrical bandspread with logging scale. Band selector. Volume AC On/Off. Sensitivity, Rec/Stby. BFO On/Off. ANL On/Off.

FEATURES: Front panel—headphone jack, 4" PM speaker. Loopstick antenna for low frequency and broadcast band. Phono jack can be used either for tuner output or phono input. Universal impedance headphone output.

TUBES AND FUNCTIONS: 6BL8 converter and oscillator, 12BA6 IF amp, 6BL8 IF amp and BFO, 6T8A detector, AVC, ANL and 1st audio, 6AQ5A audio output. Plus 2 silicon power diodes.

POWER REQUIRED: 105—125V, 50/60 cycles AC. 33 watts.

PHYSICAL DATA: Gray steel cabinet with bright chrome trim. Black slide-rule dial. Size: 12½" wide, 8½" deep by 5¾" high. Shipping weight 17½ lbs.

Special purpose receivers

The three special-frequency receivers described below are designed for the continuous, rugged duty of professional applications in aviation, public service or industry.

GENERAL FEATURES: Adjustable electronic squelch with 2 μ v. sensitivity. Built-in speaker and provision for external speaker, including switch. Manual tuning plus two crystal positions. Dual range tuning—high speed plus vernier.

PHYSICAL DATA: Gray steel cabinet with silver trim. Size: 13½" x 5¾" x 8¾". Shipping wt. approx. 15 lbs.

Model CRX-1 30-50 mc. base station receiver. Split-channel, narrow band FM—triple conversion (Illustrated).

Model CRX-2 Same as CRX-1, only gives coverage of 151-174 mc. band.

Model CRX-3 High quality VHF receiver covering 108-135 mc. aviation frequencies. AM reception.



Speakers:

R-48A Speaker Latest design uses new 5½" x 7½" elliptical assembly. Alnico V 3.16 oz. magnet has fully saturated air gap for exceptional damping, distortion-free response. Switch at rear for selection of music or voice response. Use with SX-122, SX-110, SX-62A, or any receiver with 3.2 ohm output. Size: 6½" x 13¼" x 8¼".



Model R-47A Brand new, designed for superior SSB and other voice applications. Essentially flat response from 300 to 2850 c.p.s., drops off rapidly in output beyond cut off points. Perfect match for SX-122, SX-110 receivers. Input impedance: 3.2 ohms. Dimensions: 5½" x 5¼" x 3½".



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WR-2000—the ideal combination of FM, AM and short wave reception.

If you want the versatility of standard broadcast, superb FM quality and world-wide reception of short wave—then you want the unequalled communications experience of Hallicrafters!

FREQUENCY COVERAGE: This compact, professionally-styled receiver brings you not only extended-range standard broadcast and high fidelity FM . . . but continuous coverage (in two separate bands) of the most-wanted short wave frequencies from 2 through 18 Mc. (intermediate freqs.: 455 kc. and 10.7 Mc.).

FEATURES: Large crisply-marked slide rule dial for sharpest tuning; jack for remote speaker or headphones (built-in speaker may be used simultaneously or disabled); adapter plug for FM Multiplex; triple antenna system; Automatic Frequency Control on FM.

ANTENNAS: High performance ferrite loop for broadcast; 15-foot wire for short wave; line cord antenna for FM.

CONTROLS: Band selector; Tuning; Tone; A.F.C. switch; and Power Off/On.

TUBES AND FUNCTIONS: 5 tubes plus silicon rectifier. 6C9 FM R.F. amplifier, oscillator, rectifier; 6BL8 mixer, oscillator, first FM IF; 6BA6 IF amplifier; 6KL8 FM limiter, AM detector; 6GW8 1st A.F. amplifier, power output. 2 silicon diodes for FM detector.

PHYSICAL DATA: Beige and brown steel cabinet with silver trim. Size: 14½" x 5¼" x 8½". Weight: 16 lbs.

Model WR-2500

Same as WR-2000 but with walnut veneer cabinet, gold trim. Size: 6½" x 15½" x 8¾". Weights 17 lbs.

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NEW! HIGH-PERFORMANCE,
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FOR THE HOBBYIST
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■ "Fail-Proof" soldering terminal strips that take all the guesswork out of making neat, electrically-perfect soldered connections;



■ Factory assembly of mechanical parts that would otherwise call for tedious handwork;



■ Crystal-clear assembly instructions.

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Write for FREE CATALOG describing these outstanding test instrument kits!



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**... known throughout
the world for new ideas and
old-fashioned quality in communications**

For over 30 years, Hallicrafters has been synonymous with "communications" to professionals and amateurs alike throughout the world. In an age of massive, automated production the pioneer engineering and painstaking handcraftsmanship behind each Hallicrafters instrument are the extraordinary ingredients that set them entirely apart in performance and reliability.

Military electronics. Hallicrafters countermeasures, reconnaissance and other electronic warfare devices are today the backbone of America's airborne electronic defenses. Other complex equipment is at work in our space program, too.



Citizens Band Radio. Hallicrafters is a leading producer of reliable, high-performance two-way radio for the Citizens Band—communications for personal use available to any U.S. citizen over 16 for farm, business or pleasure.



Industrial Communications. Two-way FM radios for America's business and industrial needs is a major contribution of Hallicrafters to the growing efficiency of our economy.



Amateur Radio. Hallicrafters is the pioneer and world's largest manufacturer of transmitters and receivers for Amateur Radio. Nearly 300,000 individuals from all walks of life, throughout the world, devote their spare time to this fascinating and useful hobby.



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