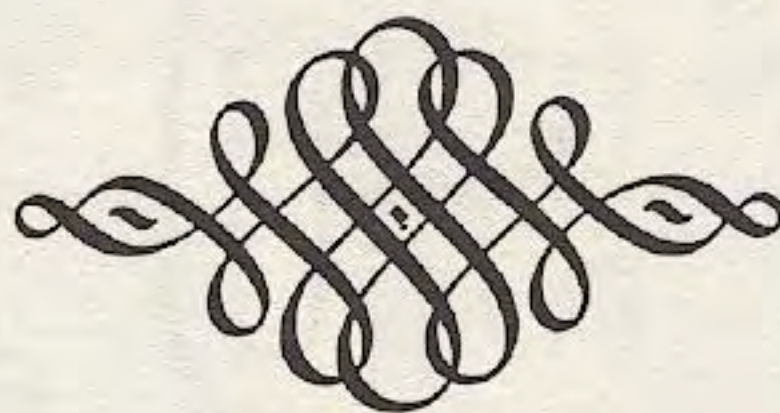




NATIONAL'S ANNIVERSARY PHOTO ALBUM



*fifty years of the world's finest
communications equipment*



NATIONAL RADIO COMPANY, INC.
37 Washington Street
Melrose, Massachusetts 02176



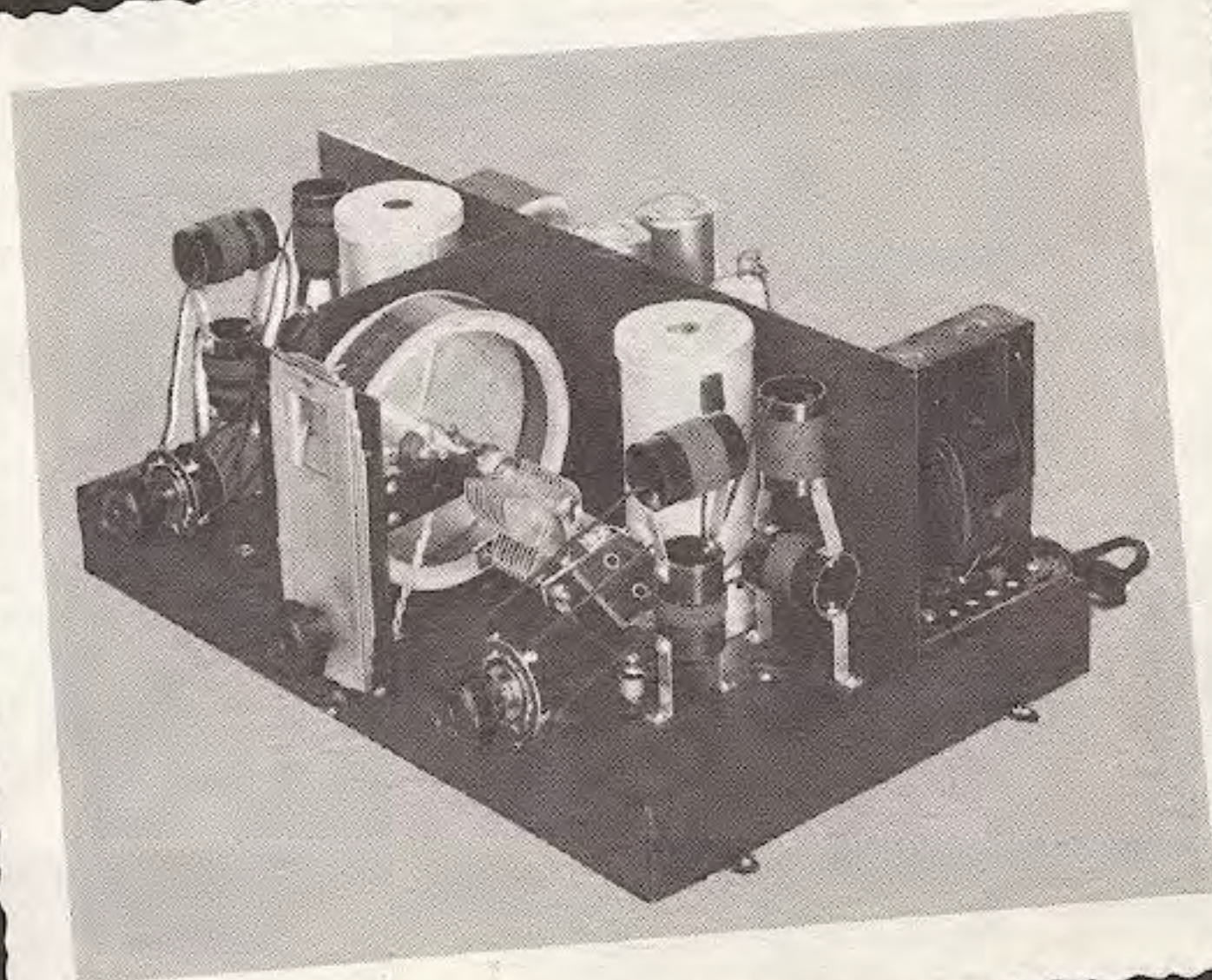
For half a century National products have been recognized as the finest communications equipment available. As America's oldest, most highly respected manufacturer of superior amateur and shortwave receivers, National has engineered a long line of products that have dramatically influenced the development of the entire communications industry. □ These were the grand old receivers that introduced today's old-timers to amateur radio—names like the FB-7 and FBX-A, the AGS, the mighty HRO series, the NC-100 and '101X, the NC-200 and '240D, right up through the NC-300, '303, and the new NCX-3 SSB transceiver. □ 1964 marks our Golden Anniversary ... and we take a certain pride in maintaining National's acknowledged reputation for leadership in workmanship and performance for over half a century. The advanced products we build today for both the military and amateur markets are pretty fancy compared to our early units, but are still old fashioned in one important respect ... our built-in determination to make the very best.



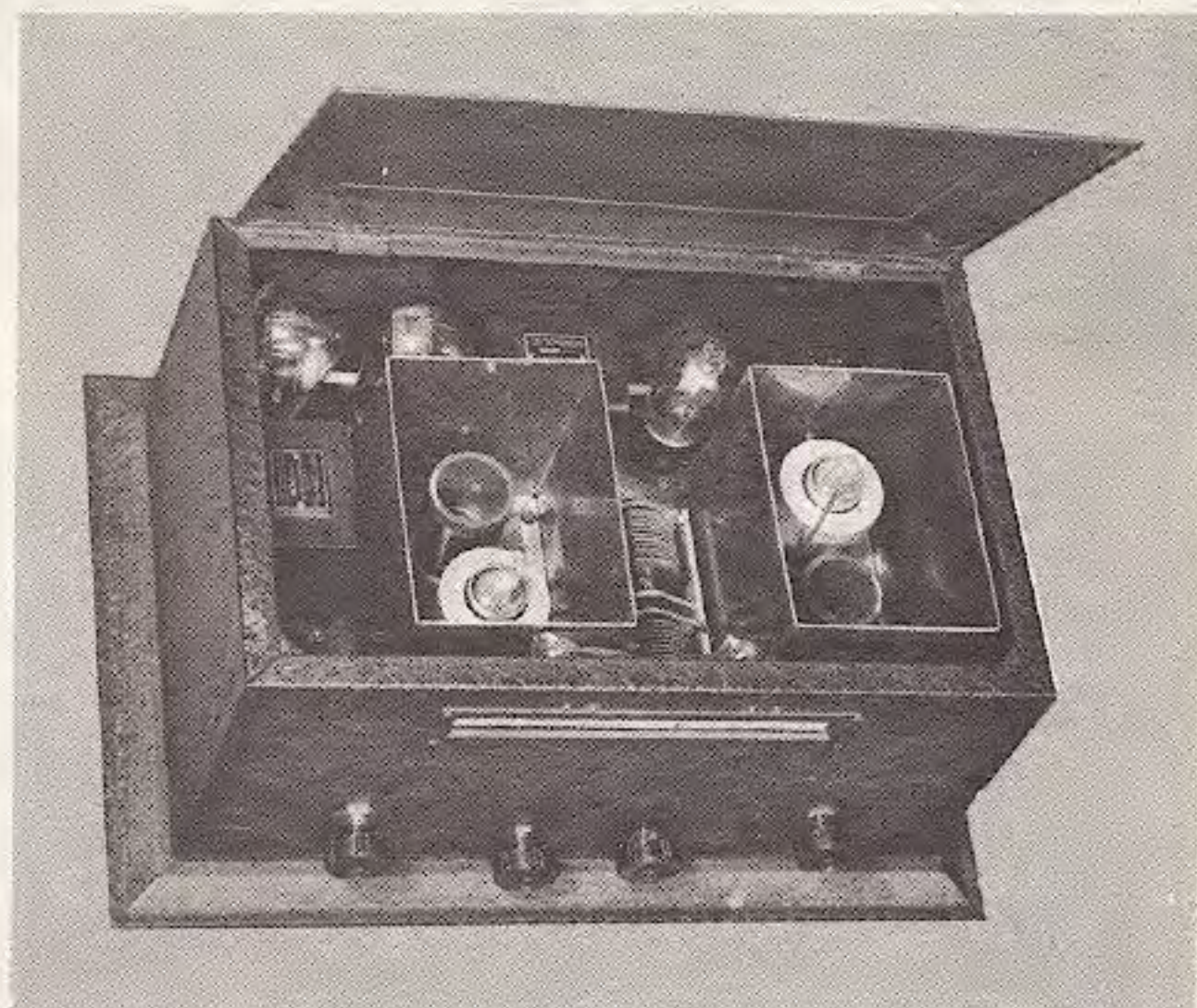
A corner of National's Engineering Laboratory in the early 20's.



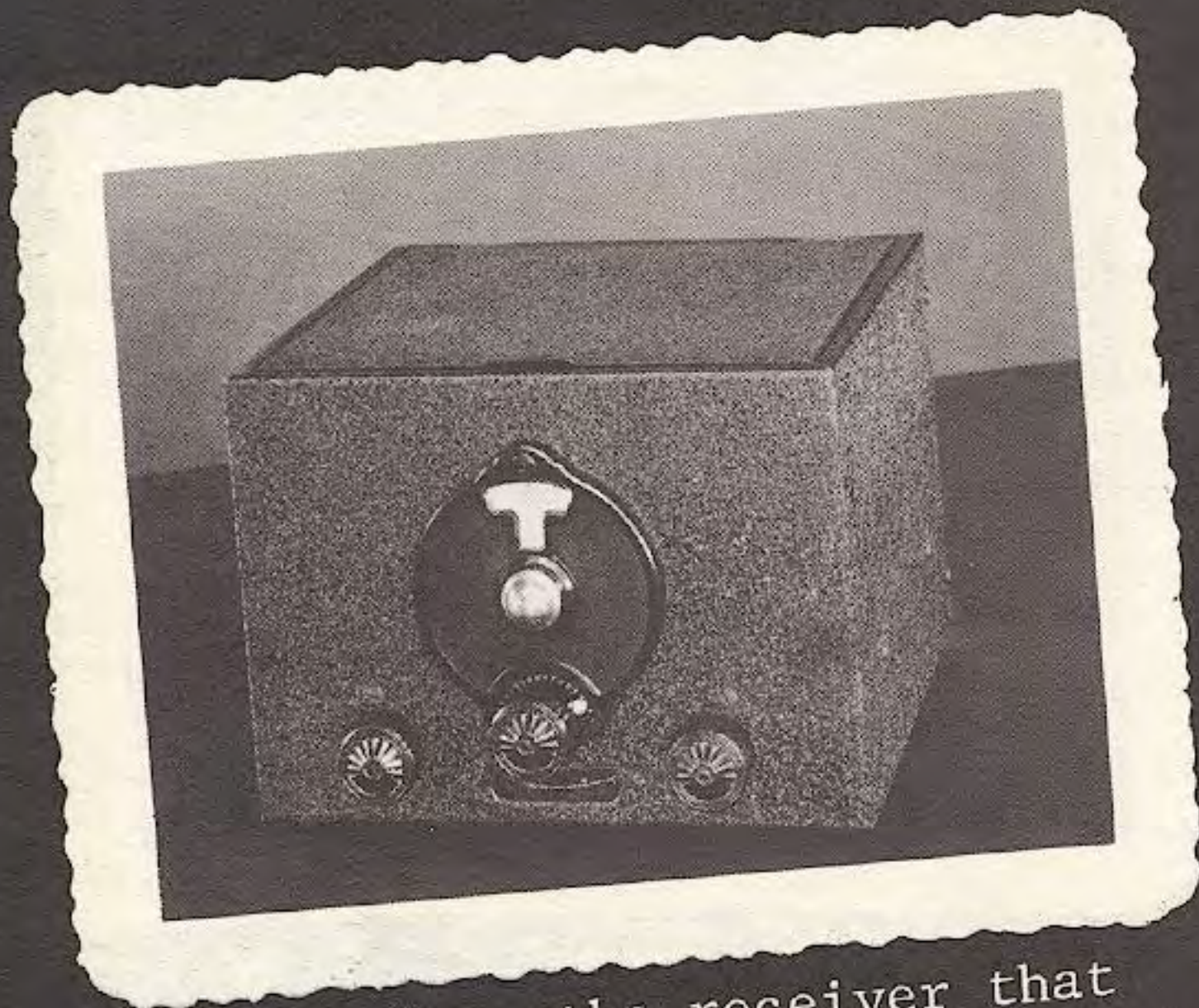
One of the TRF SW series receivers in an appropriate period setting -- circa 1923.



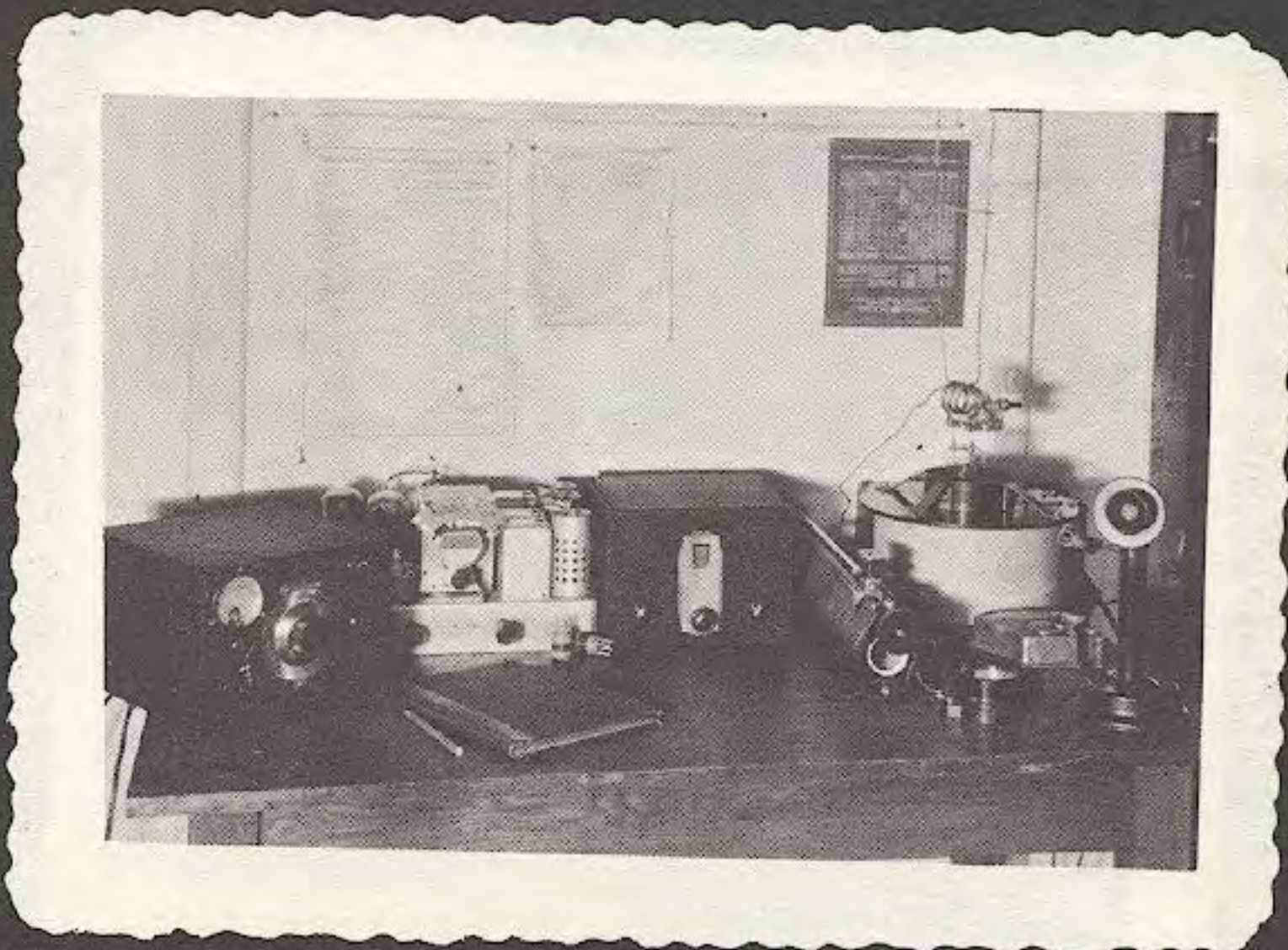
The earliest attempt at bandswitching a communications receiver -- perhaps the reason why plug-in coils stayed popular for so many years!



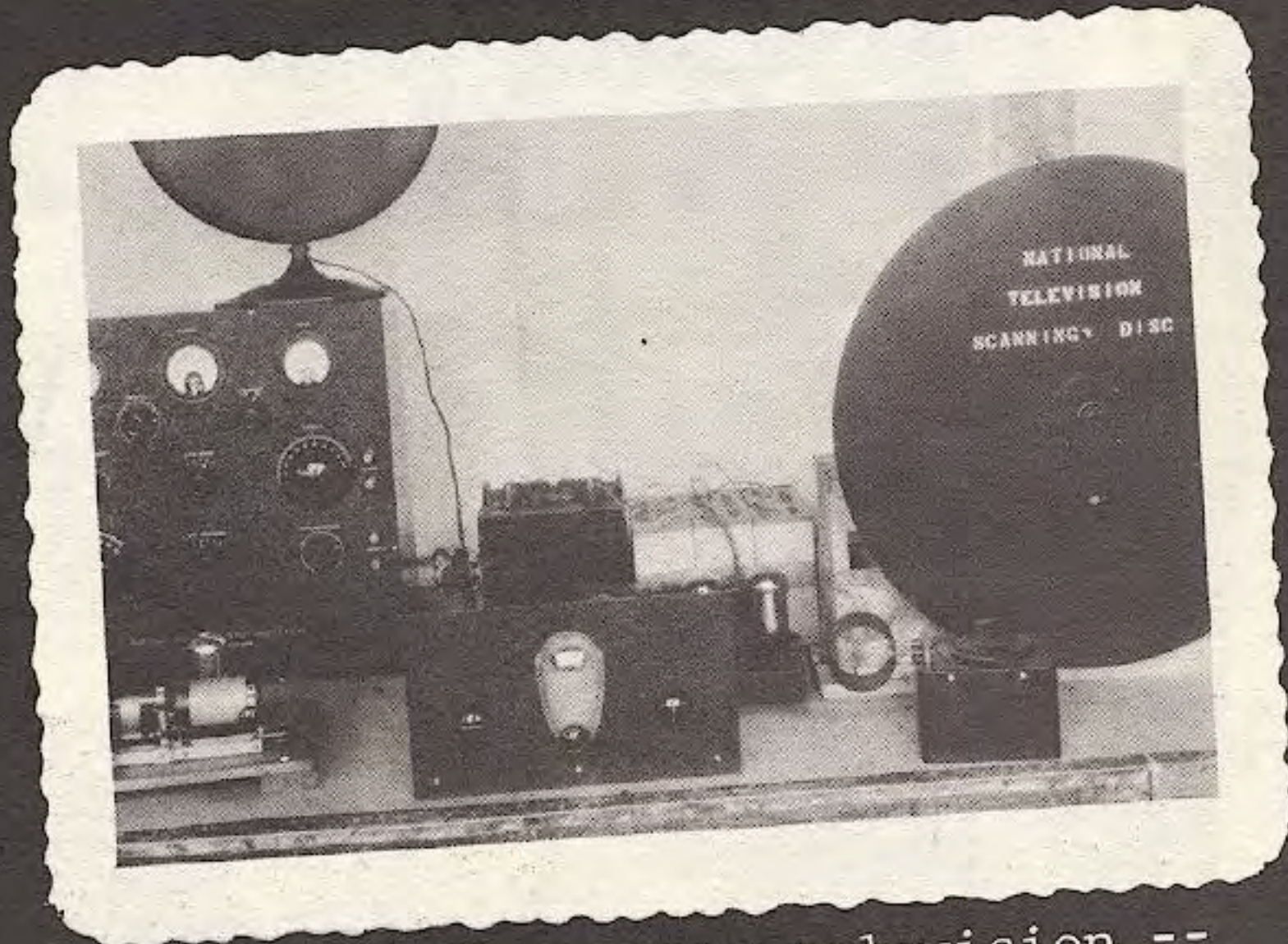
The "innards" of the famous SW-5 Thrillbox -- which covered 9 to 2000 meters using two type 235, one 27, and two 45 tubes in a TRF -- regenerative detector -- push-pull audio set-up.



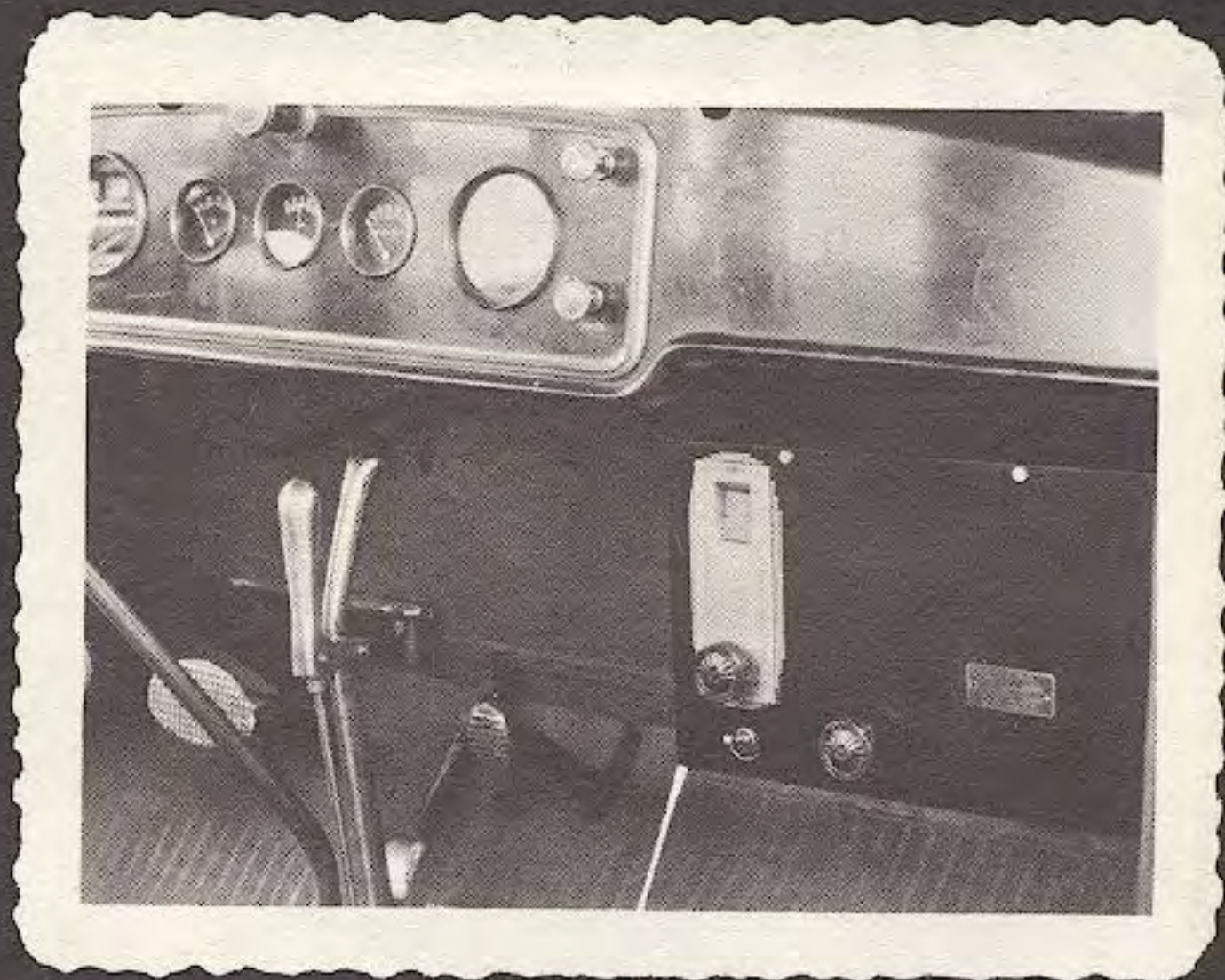
The SW-3 -- the receiver that started nine out of ten old-timers in amateur radio.



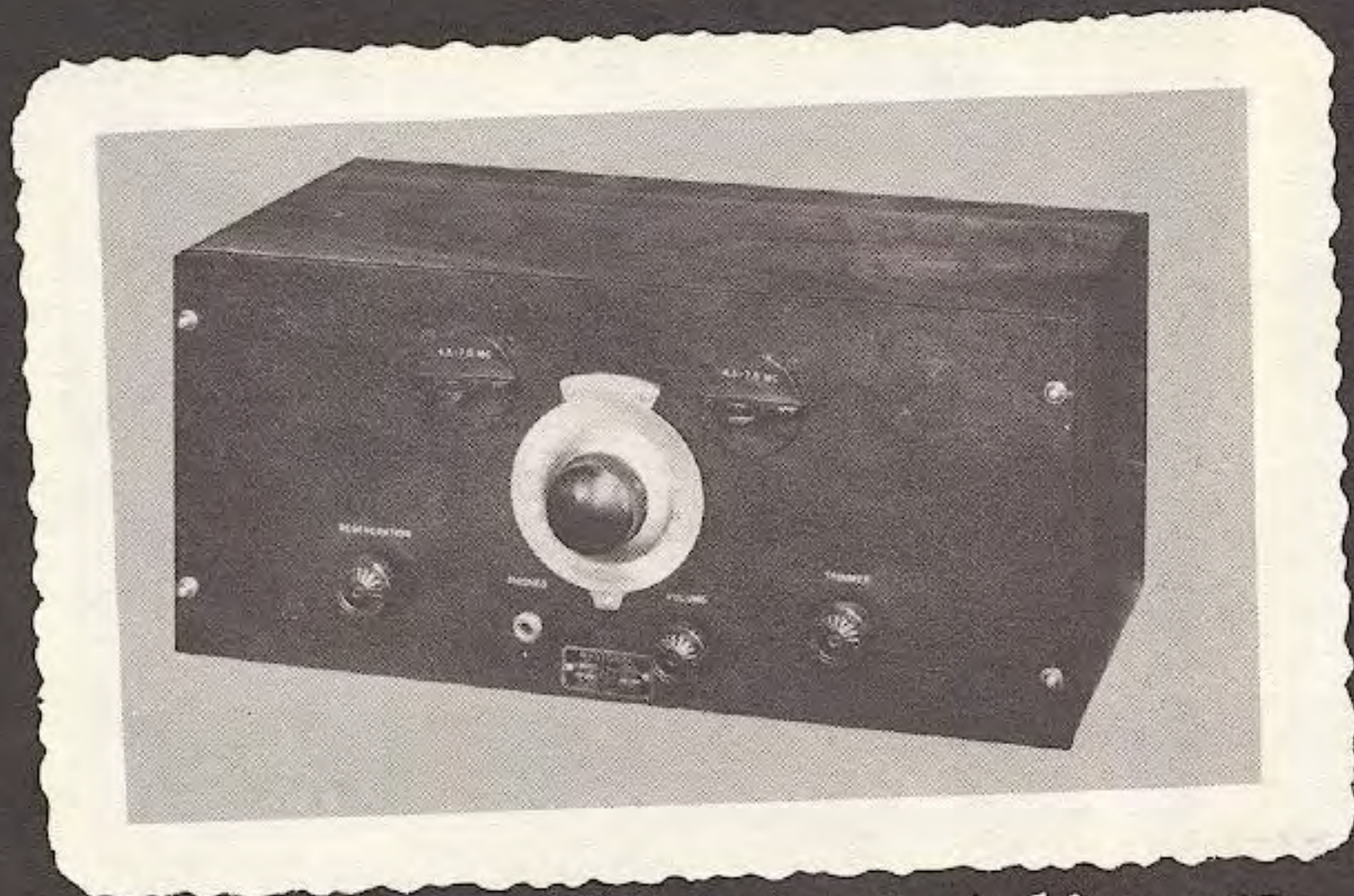
National's HFC 54-60 Mc converter (center) shown in an early 5 meter station.



Early experiments in television -- the National "Flying Spot" scanner, about 1921.



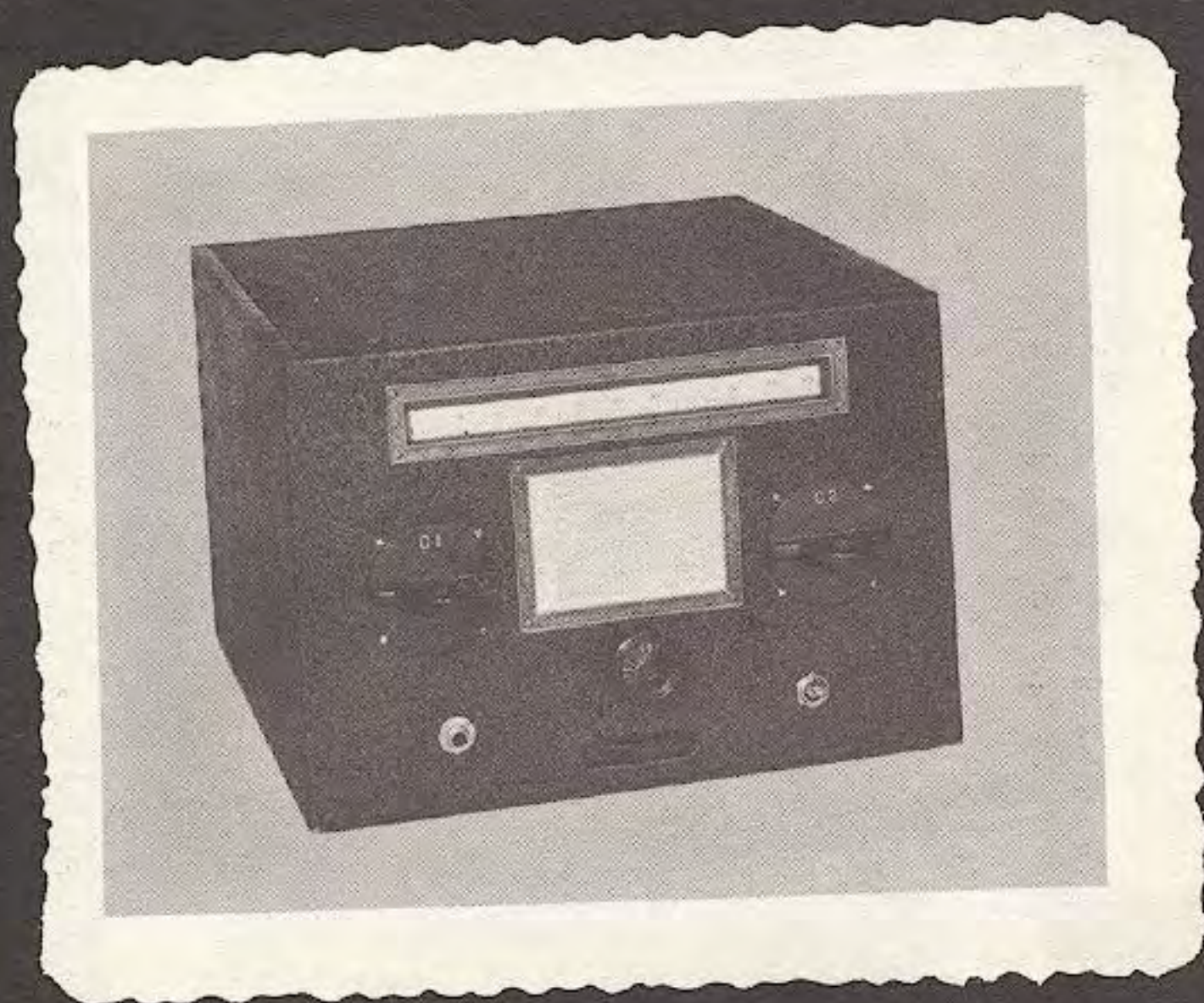
A mobile version of the SW-45 -- the object in the left center of the photo must be the "grip-to-talk" switch!



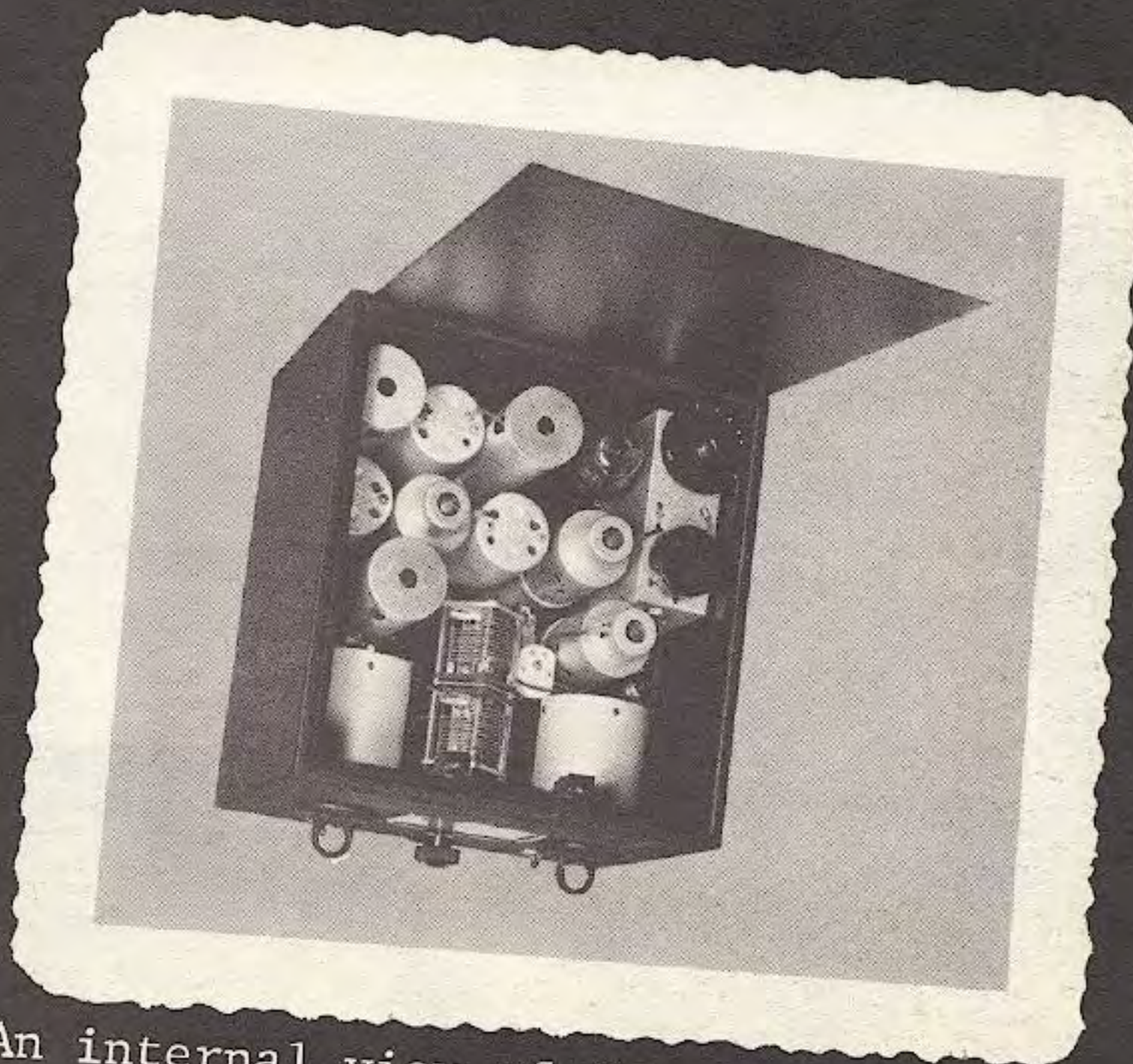
One of National's famous airline communication equipments -- the 1932 SW-58. 9 to 850 meters.



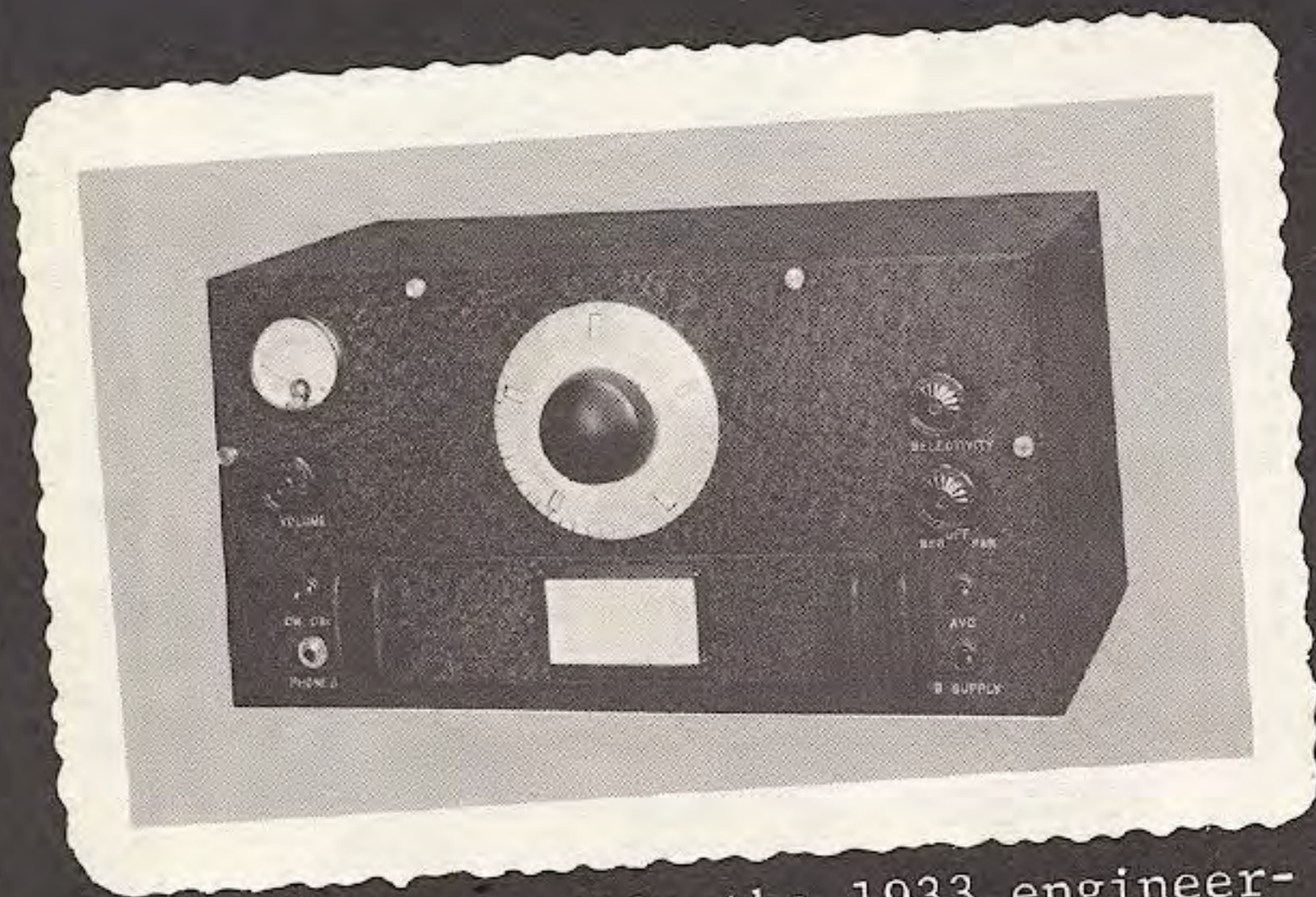
1933 -- The AGS 1.5-20 Mc. superheterodyne (right side of rack).



One of the most popular ham receivers in history -- the 1933 FB-7 seven tube superhet.



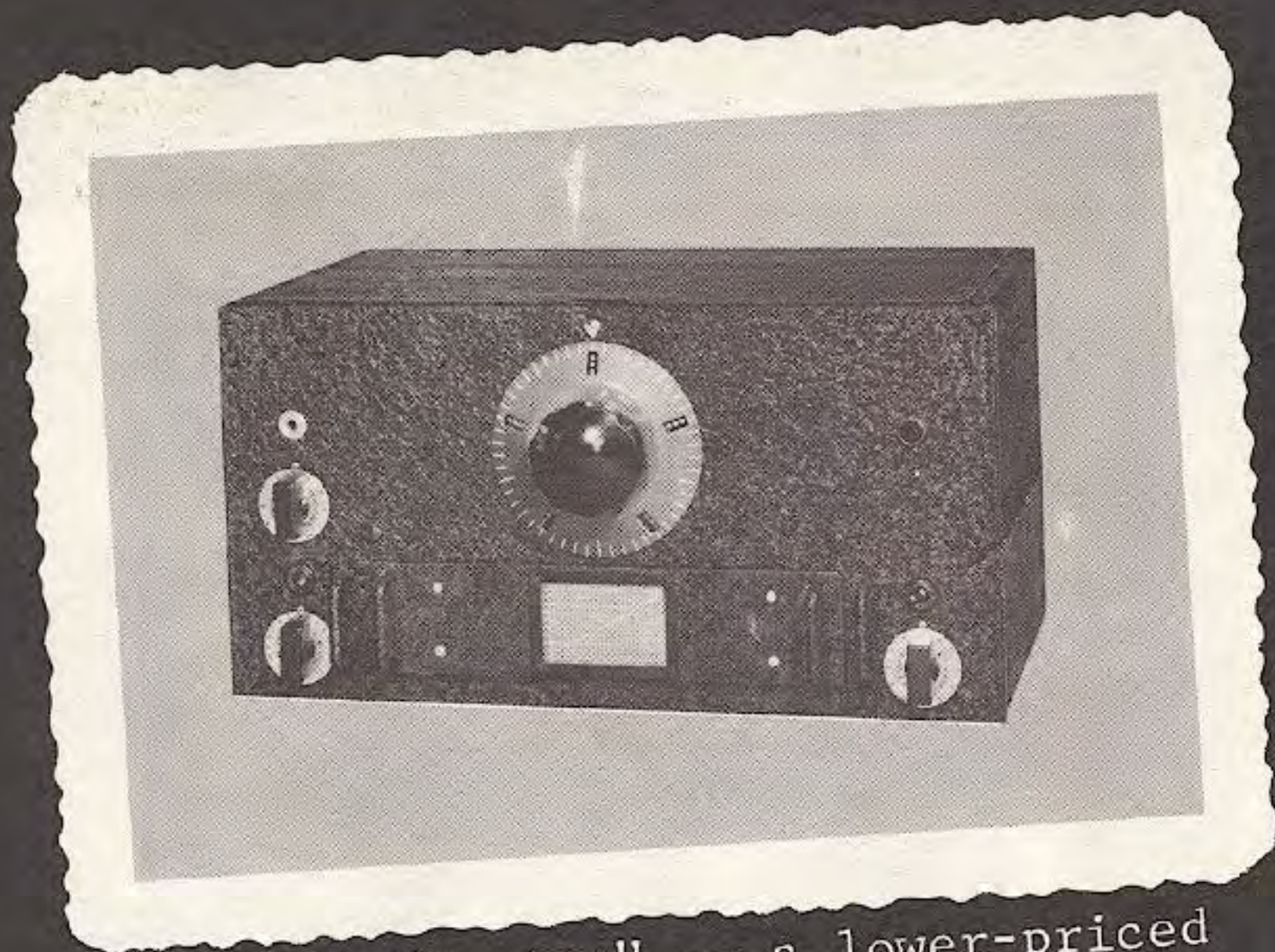
An internal view of the first ham-band receiver with a built-in crystal filter -- the National FB-X.



The very first HRO--the 1933 engineering prototype!



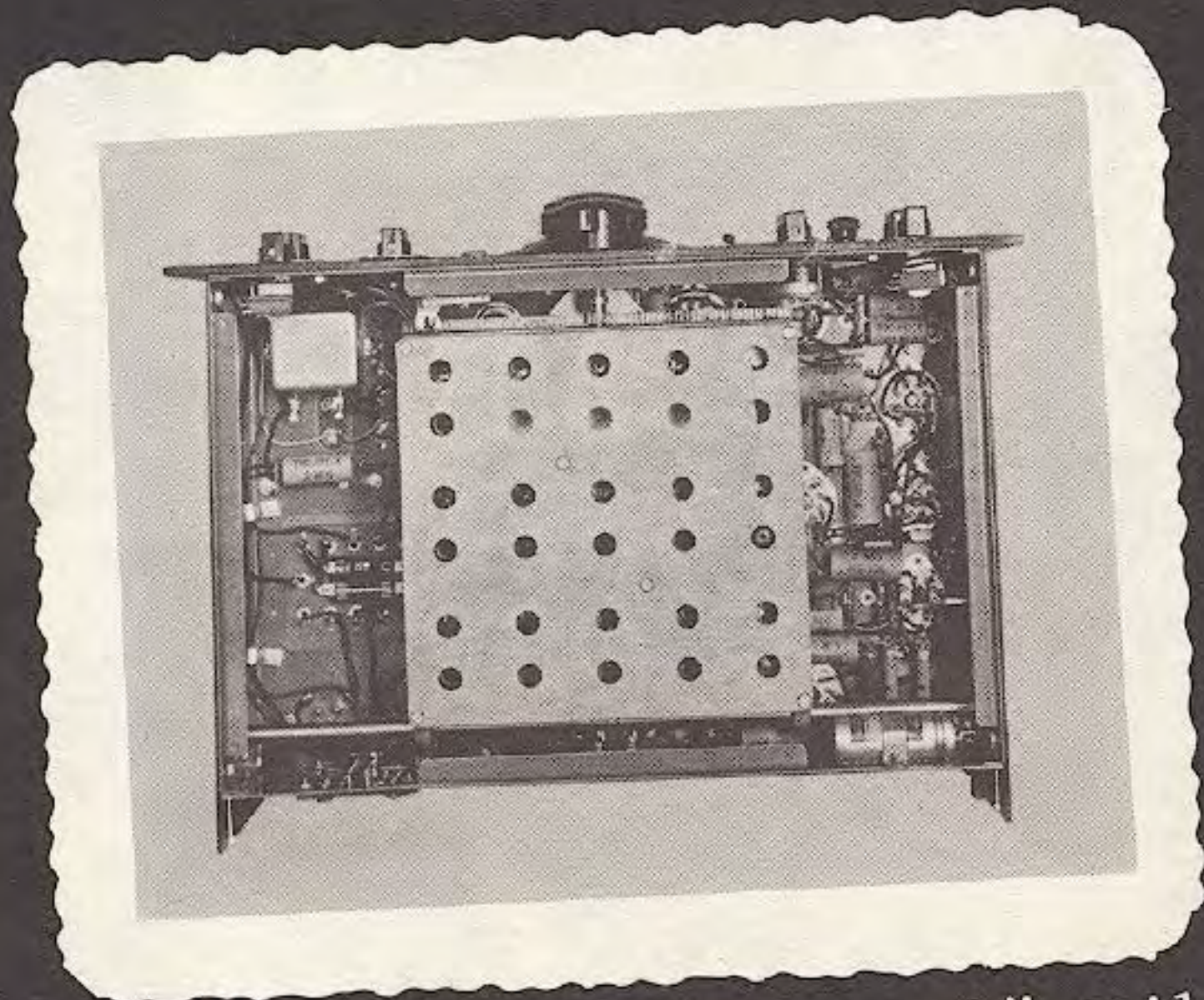
A nostalgic photo of the 1934 HRO "Senior" -- thousands of which are still in use all over the world.



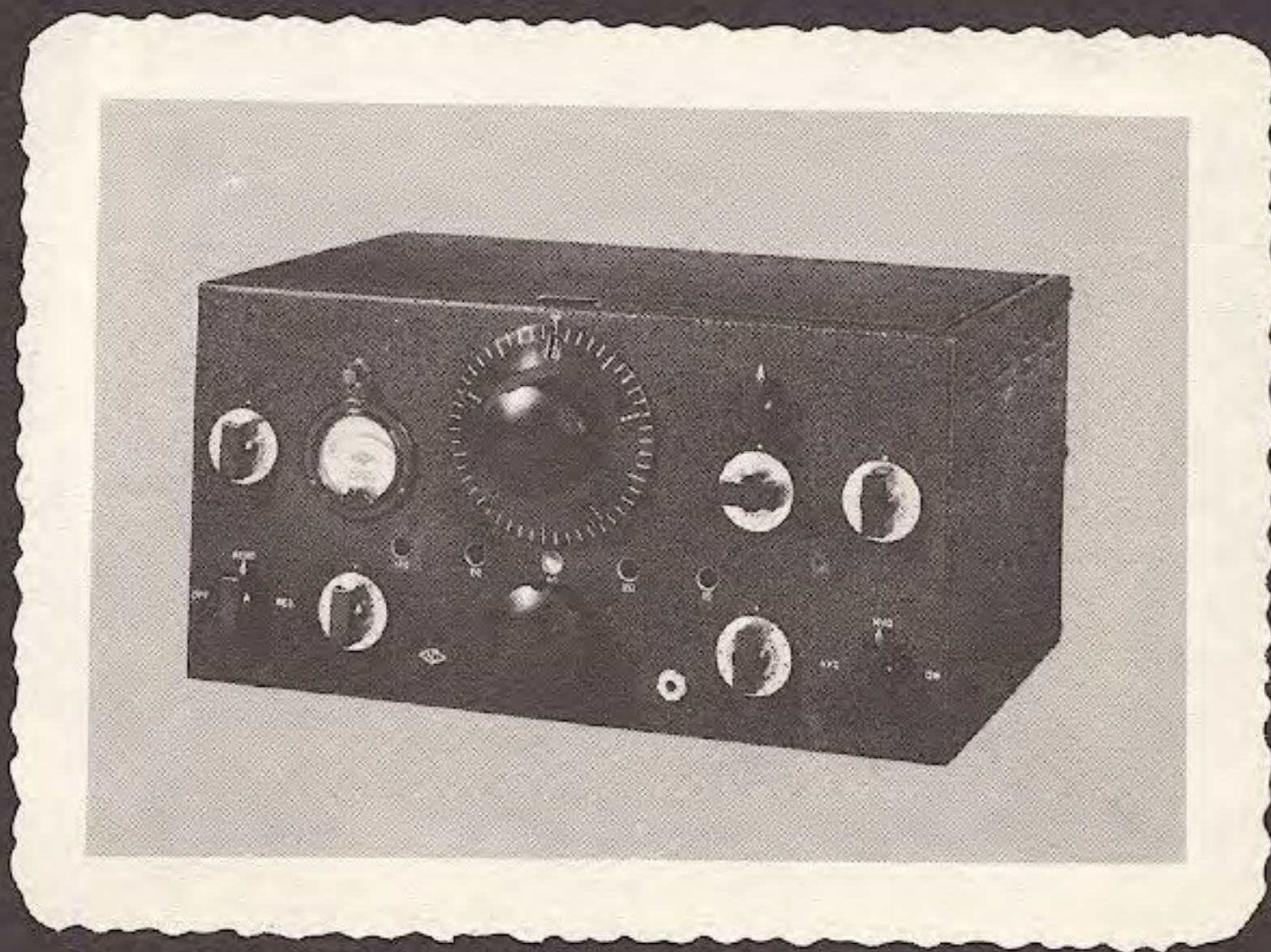
The HRO "Junior" -- a lower-priced version of the HRO without crystal filter or S-meter.



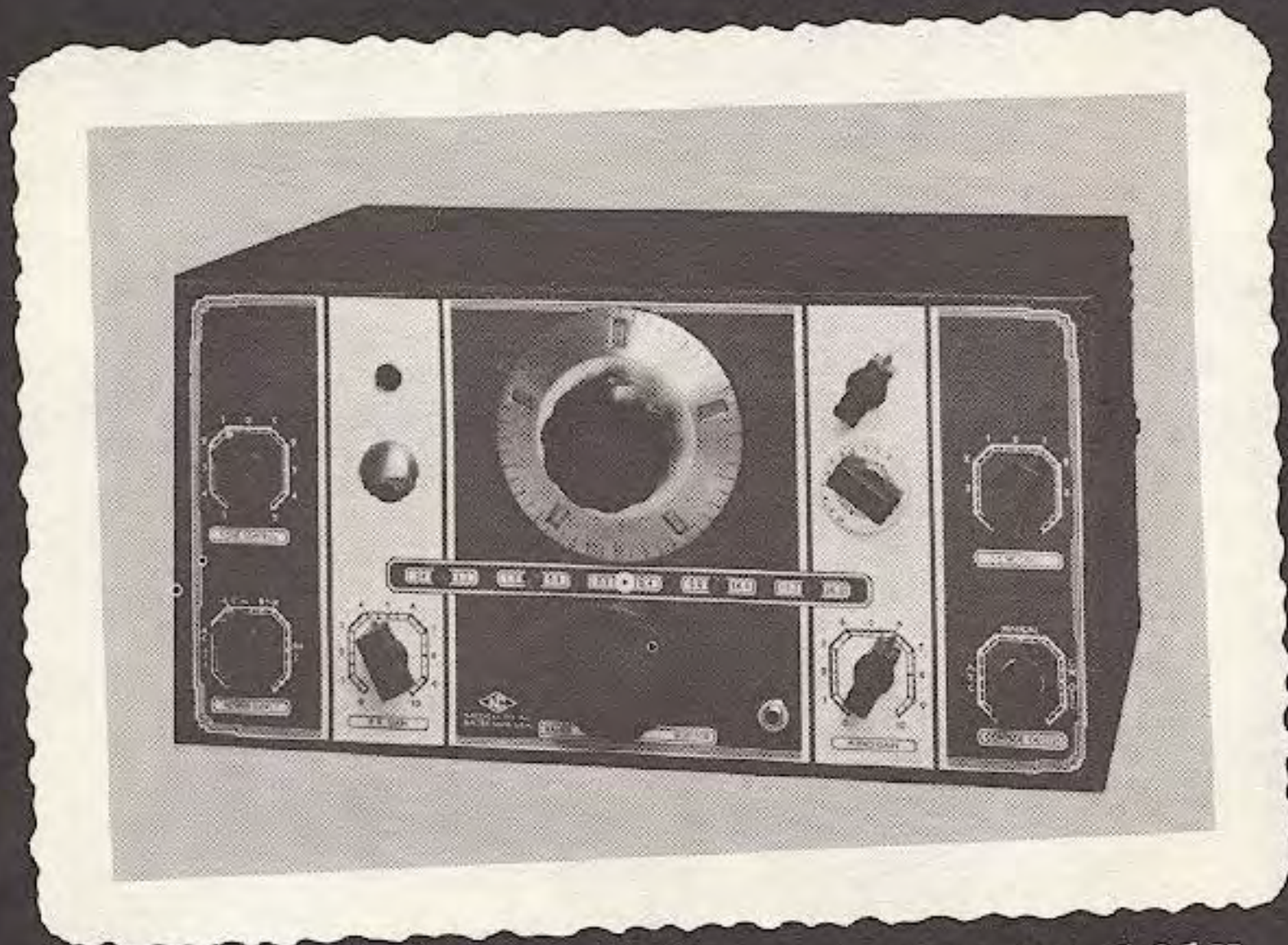
1933 -- The first amateur transceiver -- the 5 meter model TRW. Notice the light weight mobile antenna mounted on the bumper of the Buick.



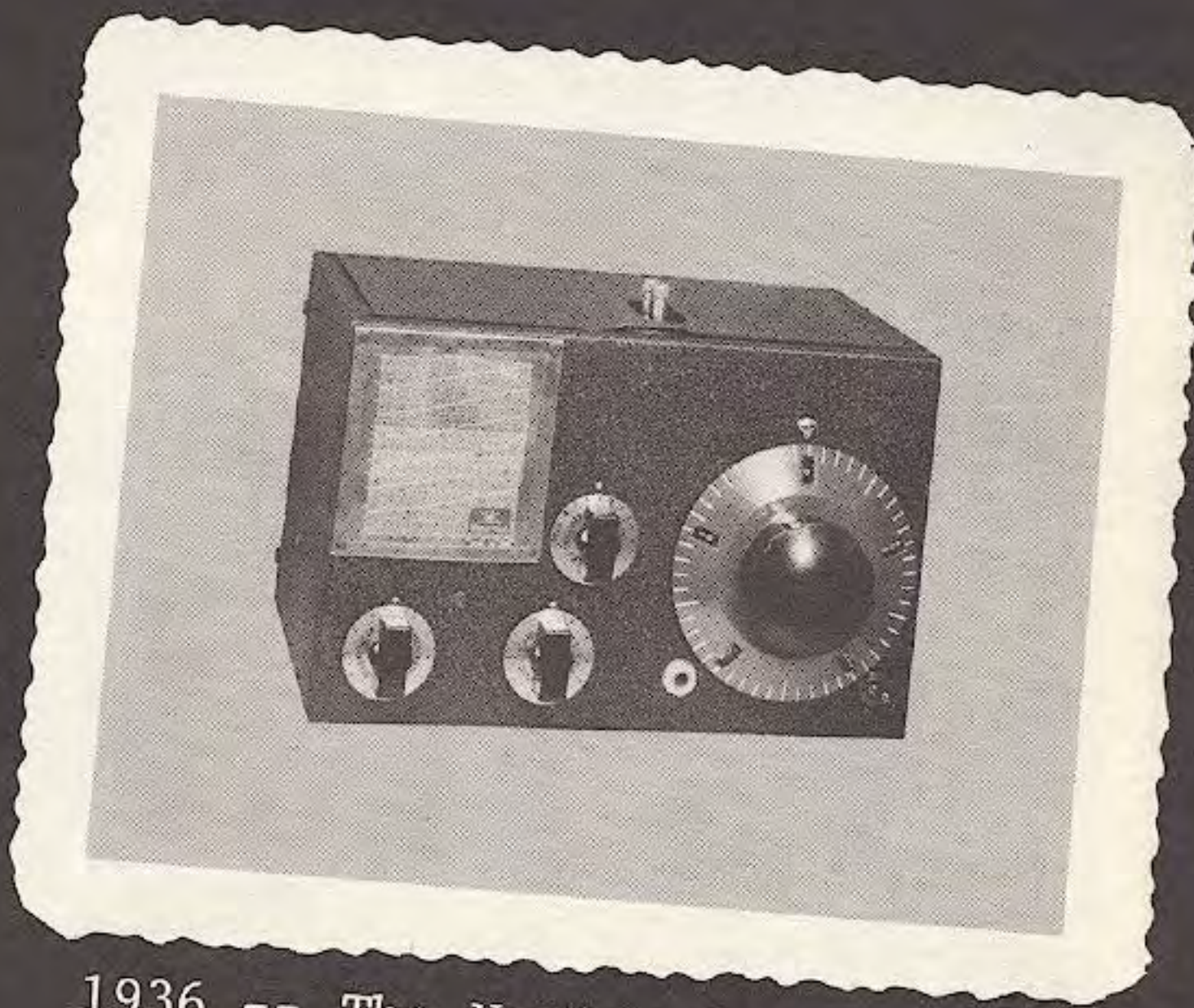
The cast aluminum "Honeycomb" coil turret developed by National to improve band-switching efficiency.



The NC-101X hamband receiver, circa 1937. Basically a bandswitched HRO with the "honeycomb" coil turret.



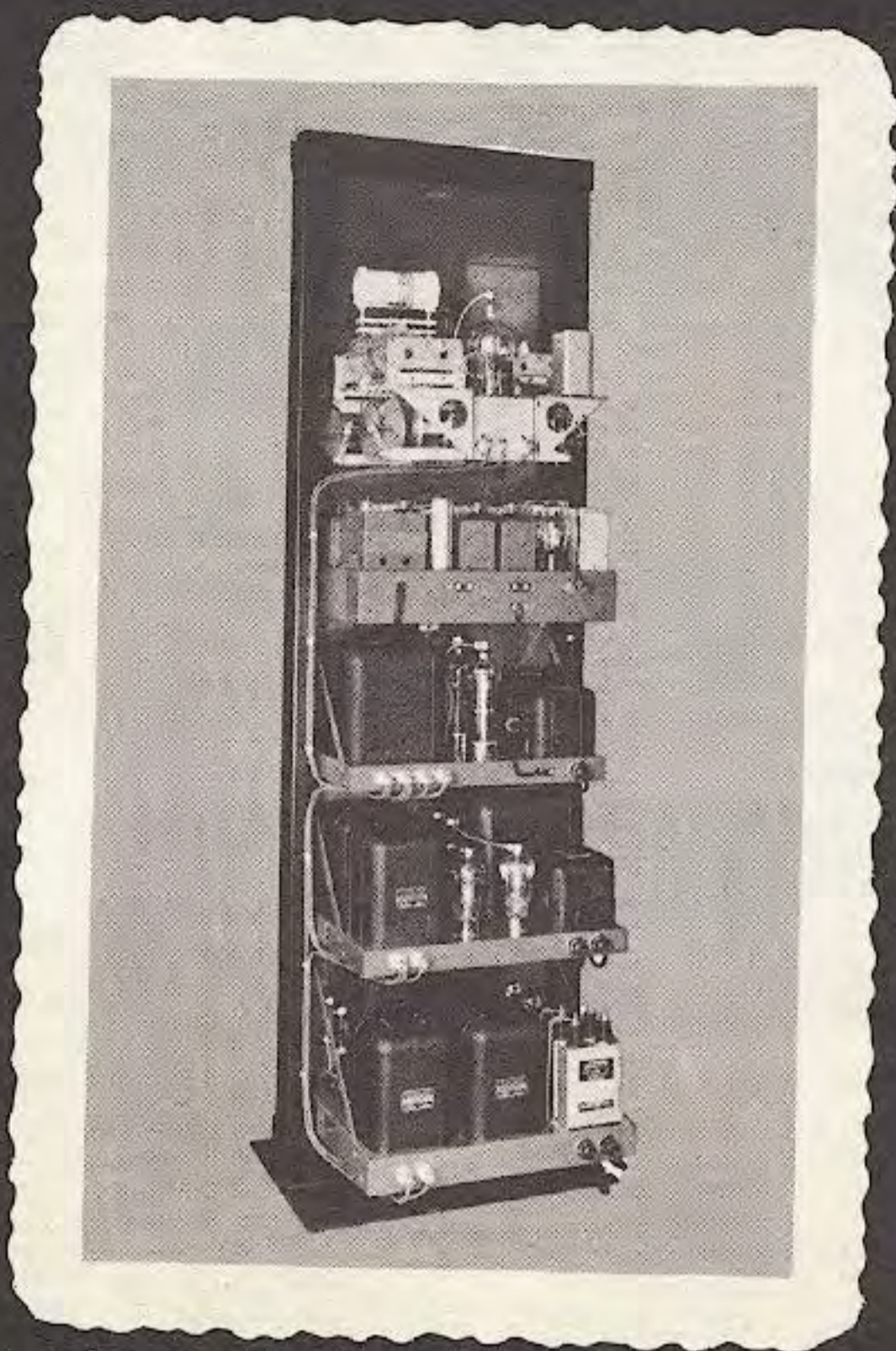
The NC-100 -- similar to the NC-101X but general coverage from 540 KC to 30 Mc.



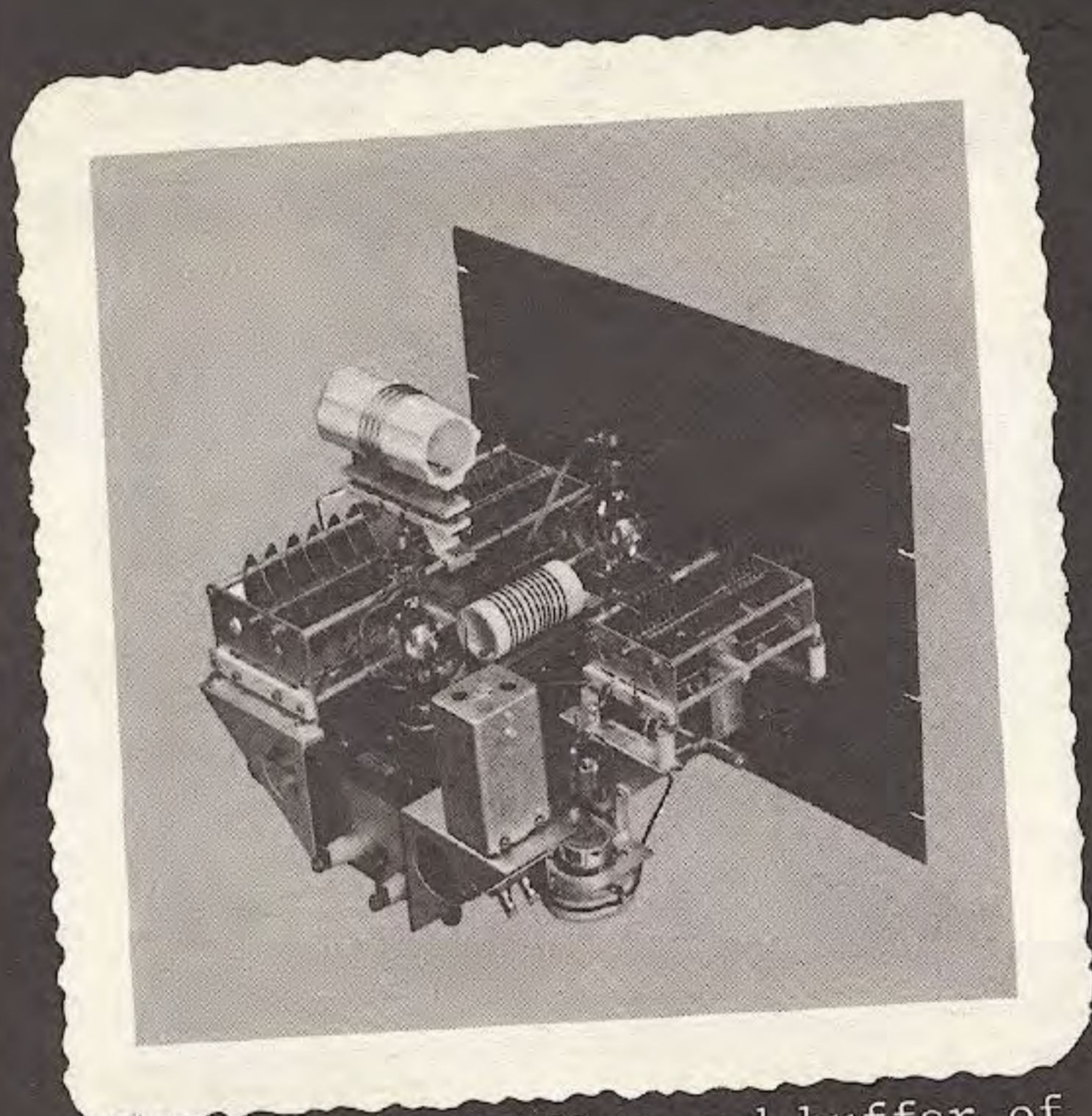
1936 -- The National one-ten. Plug-in coils and acorn tubes to cover one through ten meters.



1939 -- The 60 watt National NTX-30 transmitter for the 80-10 meter amateur bands. All circuits but the final plate were bandswitched by means of the row of push buttons.



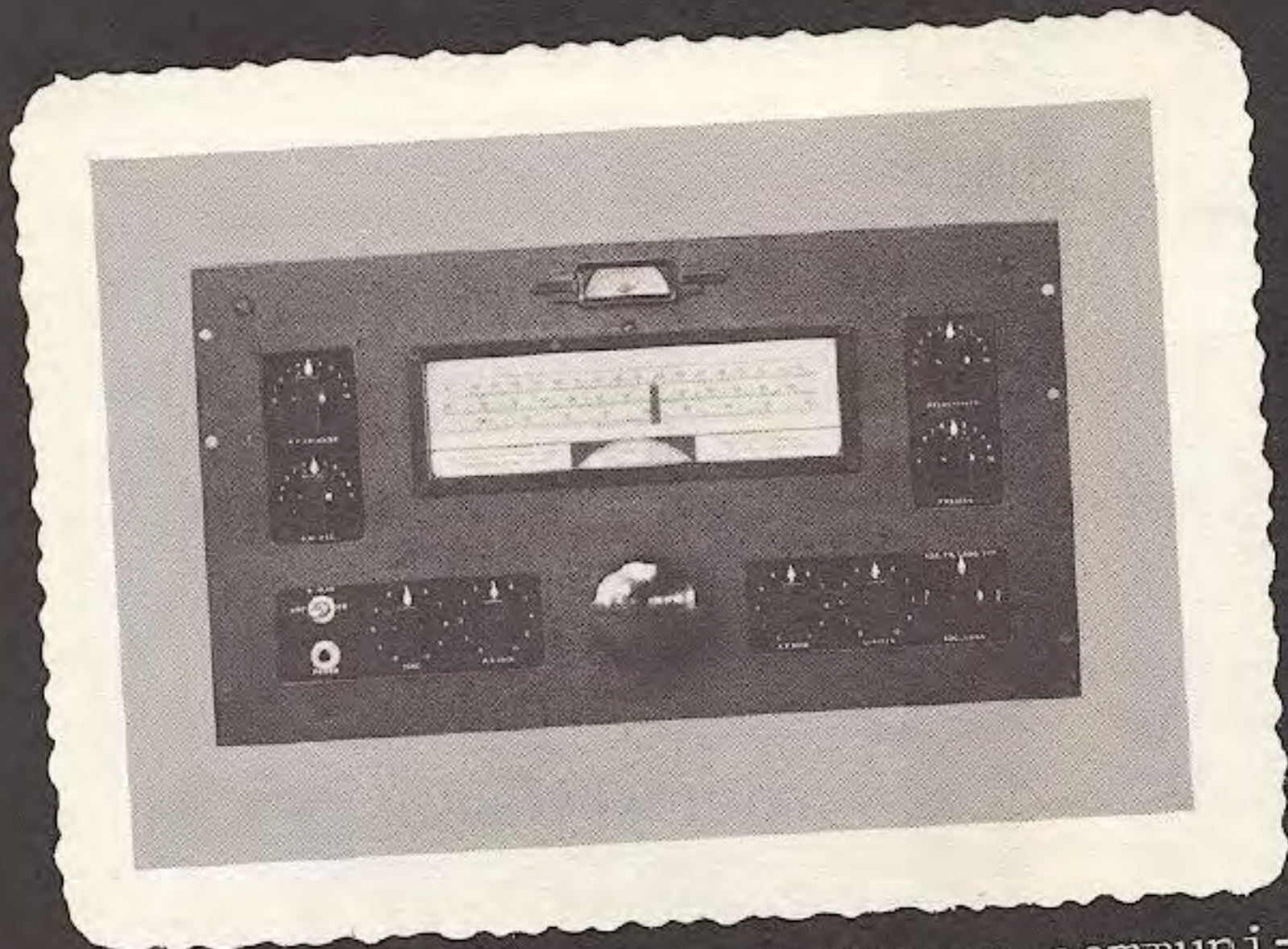
A rear view of the 80-10 meter National 600 transmitter. 100TH's in the final and although a far cry from today's table-top rigs, the ultimate in the late 30's.



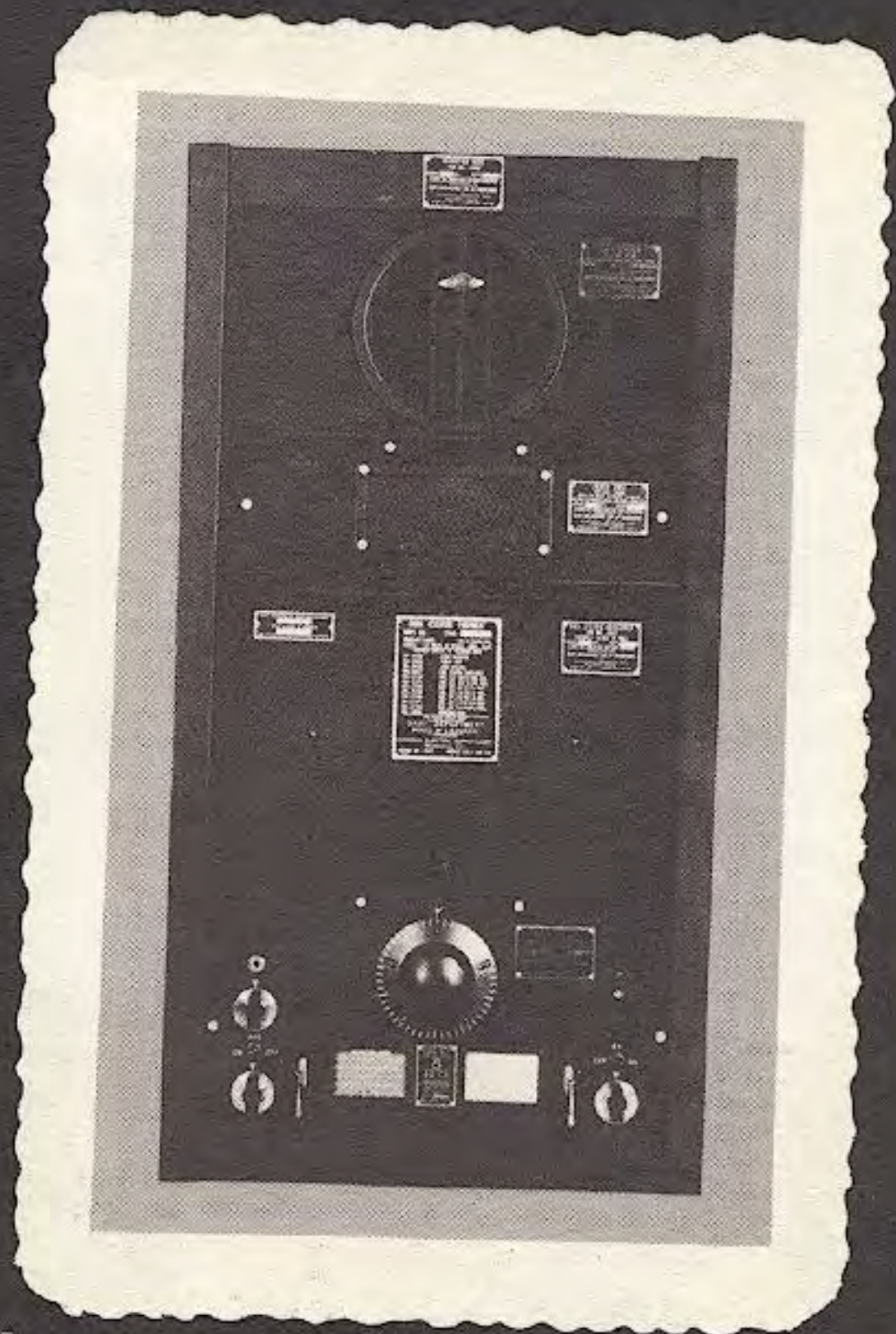
The final amplifier and buffer of the '600 -- every component except the tubes manufactured by National.



A deluxe amateur station of the late '30's -- NC-101X receiver, CRM 'scope, NTE exciter and the '600 transmitter.



1939 -- The high performance communications receiver for the VHF enthusiast and experimenter -- the 27-62 Mc. National NHU.



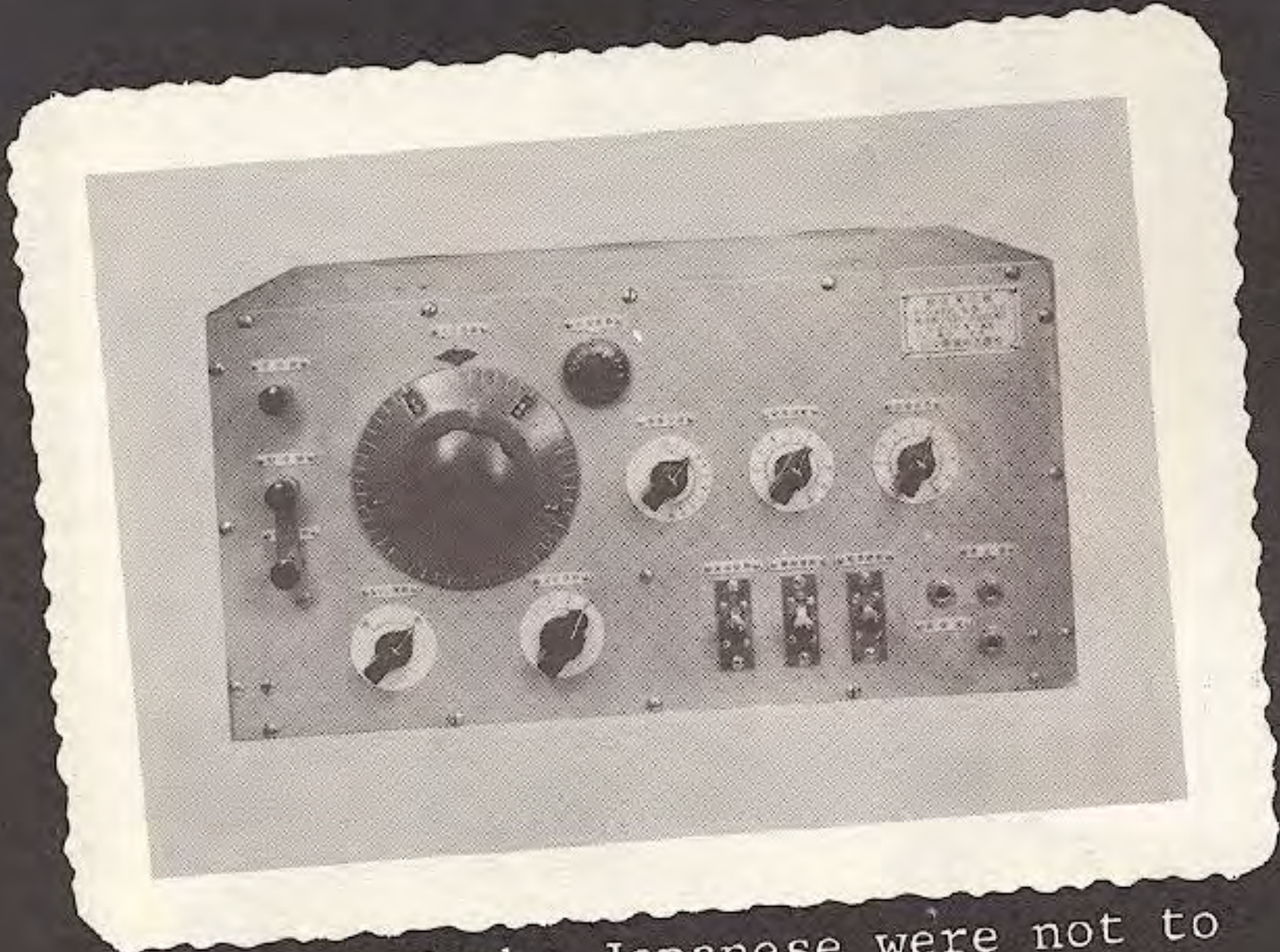
World War II -- Thousands of National receivers were manufactured for the war effort in dozens of configurations. In fact, National manufactured more than 70 different receivers for the government during World War II -- one of the best known was the 190 Kc-30 Mc. RAS.



Row upon row of National receivers were used in military installations -- nine out of ten Navy ships relied upon National receivers for communications.



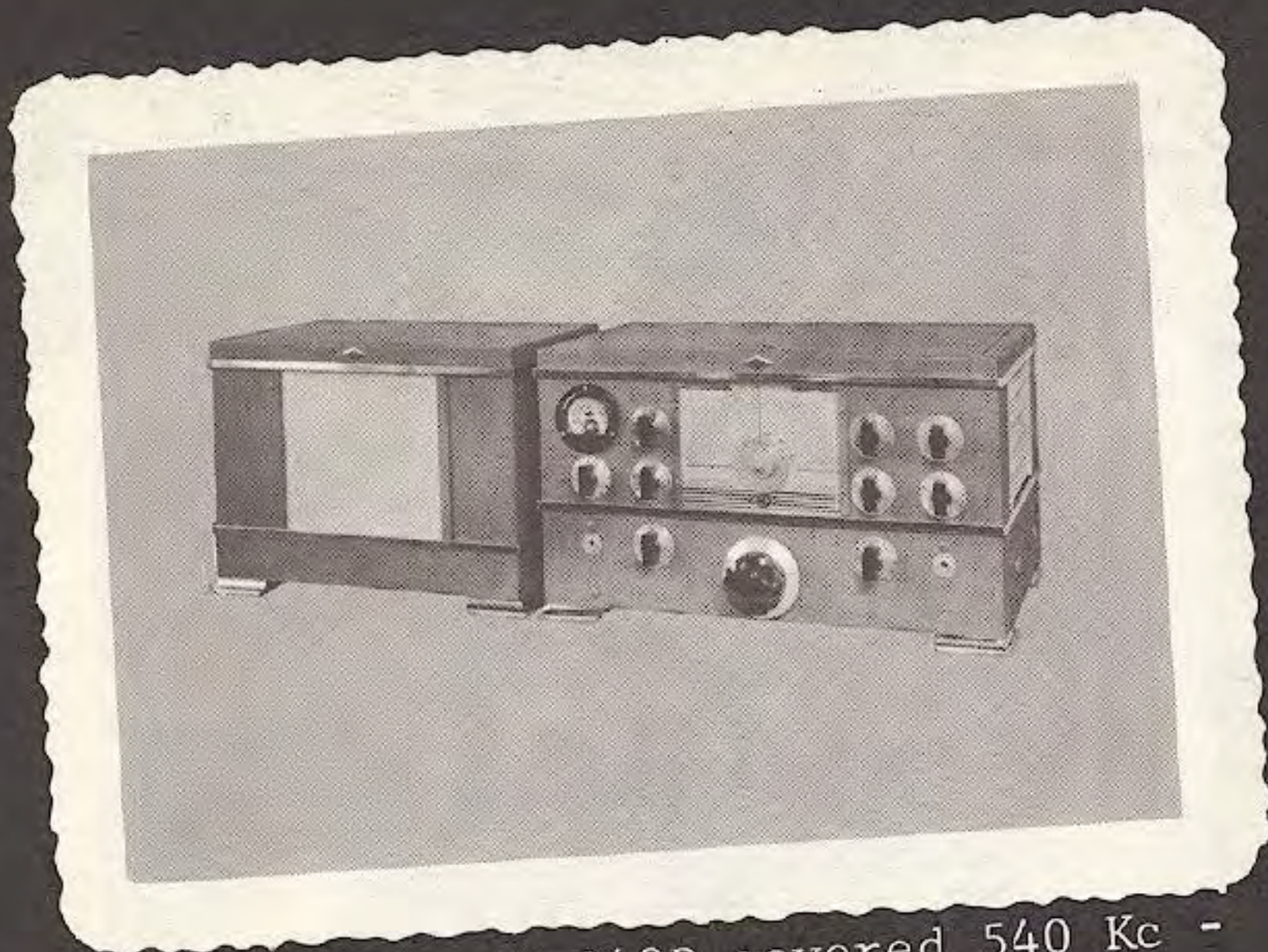
A famous war-time compliment to National -- the receiver on the right is an identical copy of the HRO manufactured by the Germans for their military communications.



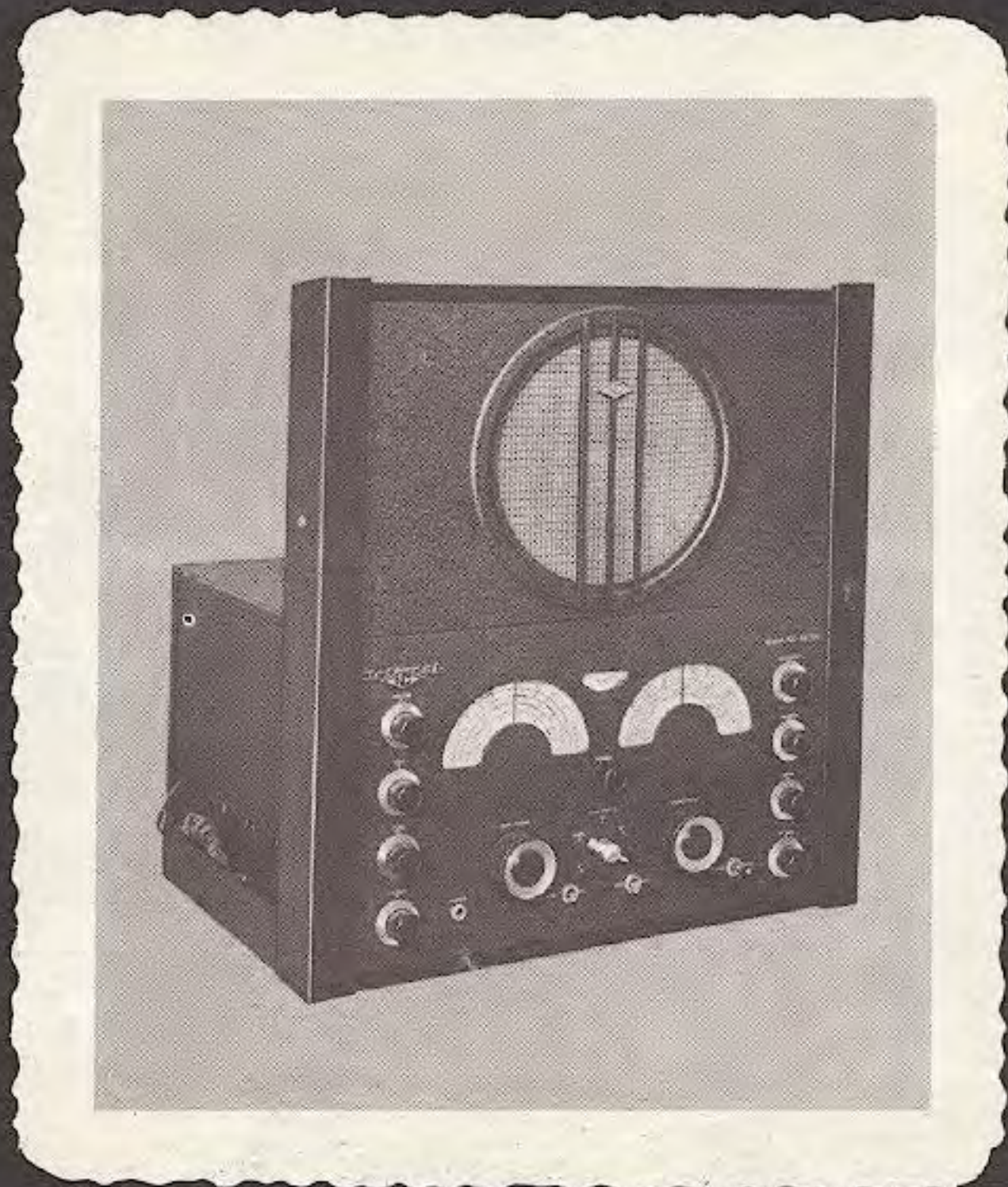
And the Japanese were not to be out-done.



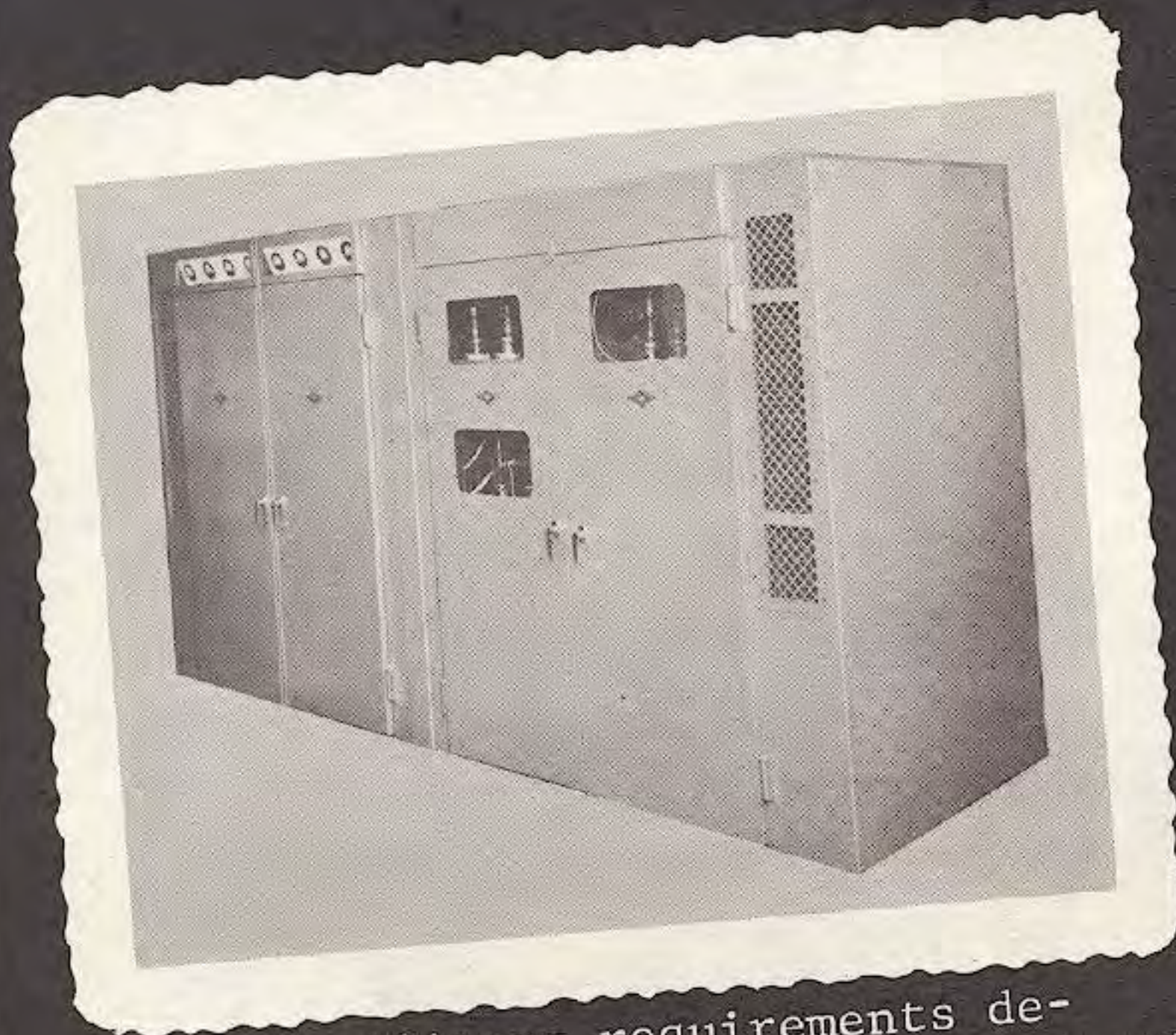
The first post-war HRO -- the HRO "5".



1946 -- The NC-240D covered 540 Kc - 30 Mc. with an unusual bandswitching arrangement -- the single main tuning knob switched the rack and pinion driven coil turret to amateur band-spread when pulled out a notch.



The NC-183D was (and still is) an extremely popular double conversion receiver, covering 540 Kc to 31 Mc. and 48 to 56 Mc. Shown here in the rack-mounted version.



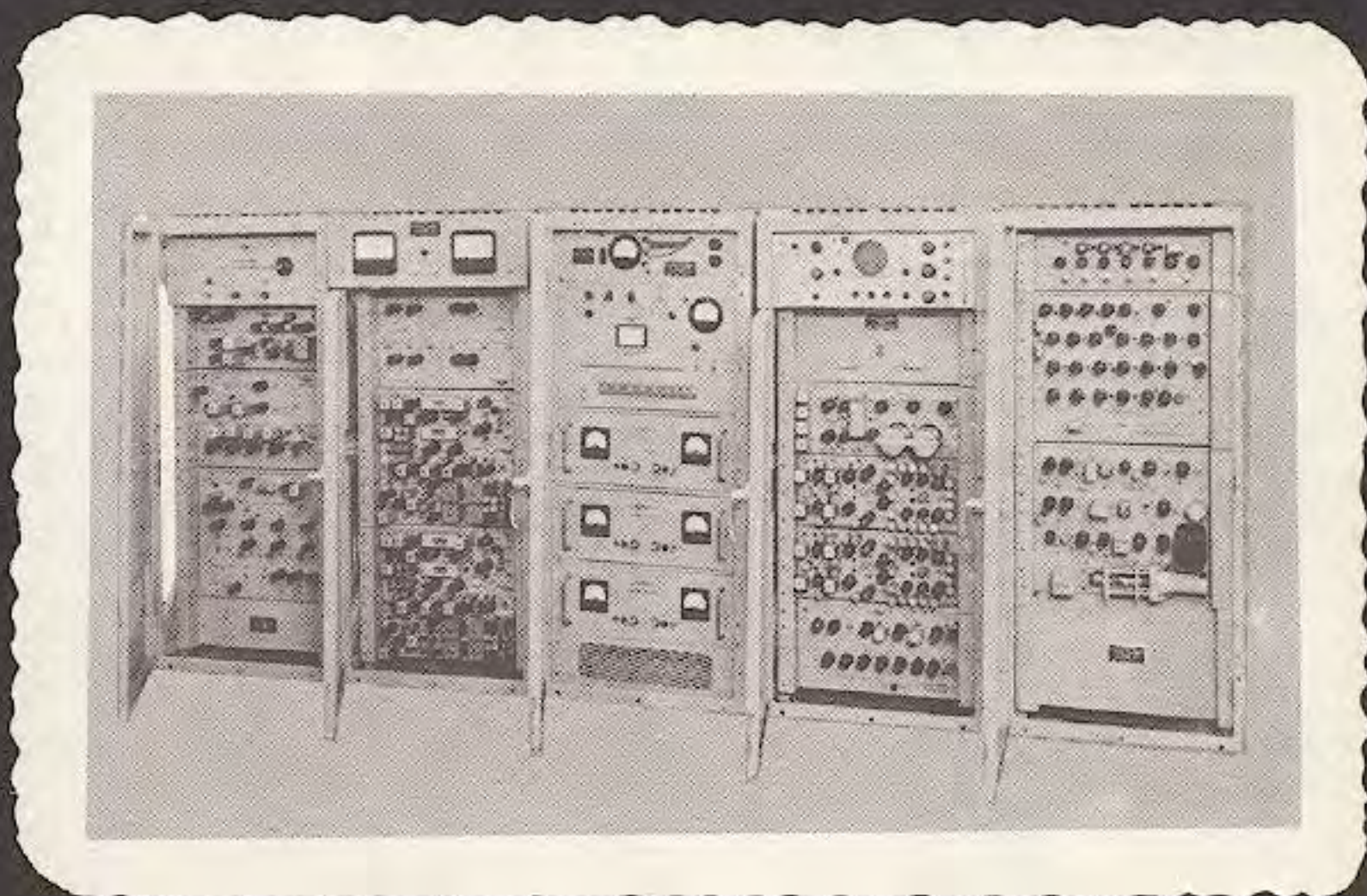
Post-war military requirements demanded R & D leadership -- and National pioneered tropospheric scatter techniques for ultra-reliable military communications. Shown is the 10 KW final amplifier of National's Trans-horizon[®] system.



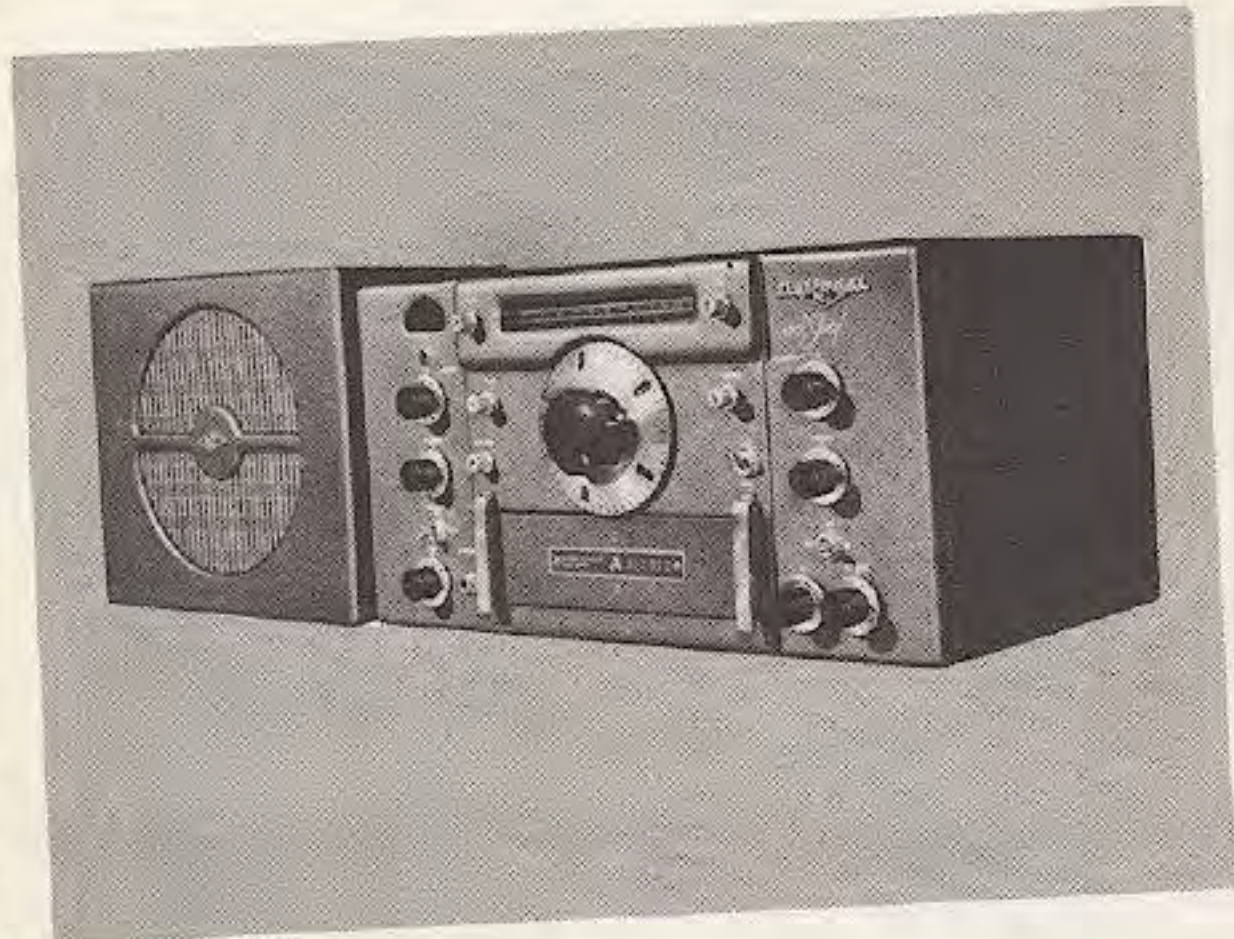
This 50 KW transmitter is part of NATO's main communications trunk -- the "Ace High" tropo system.



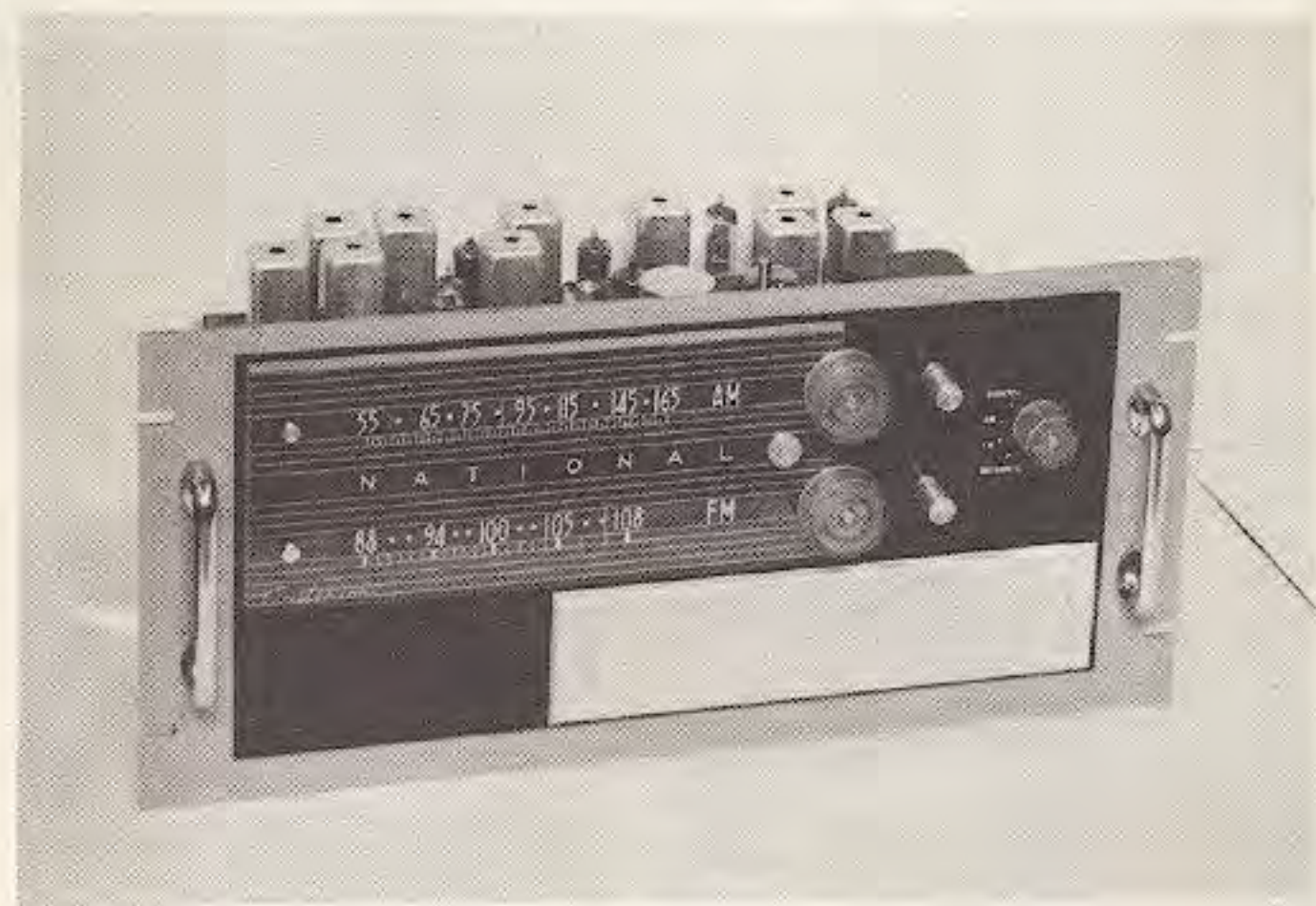
The popular NC-125 incorporated the famous "Selectoject" variable audio filter -- a boon to the CW man!



National's FSK-4 is a 30-65 Mc. tropospheric scatter RTTY system. The FSK-4 and similar earlier National tropo systems are in active use in U.S. Army world-wide communications.



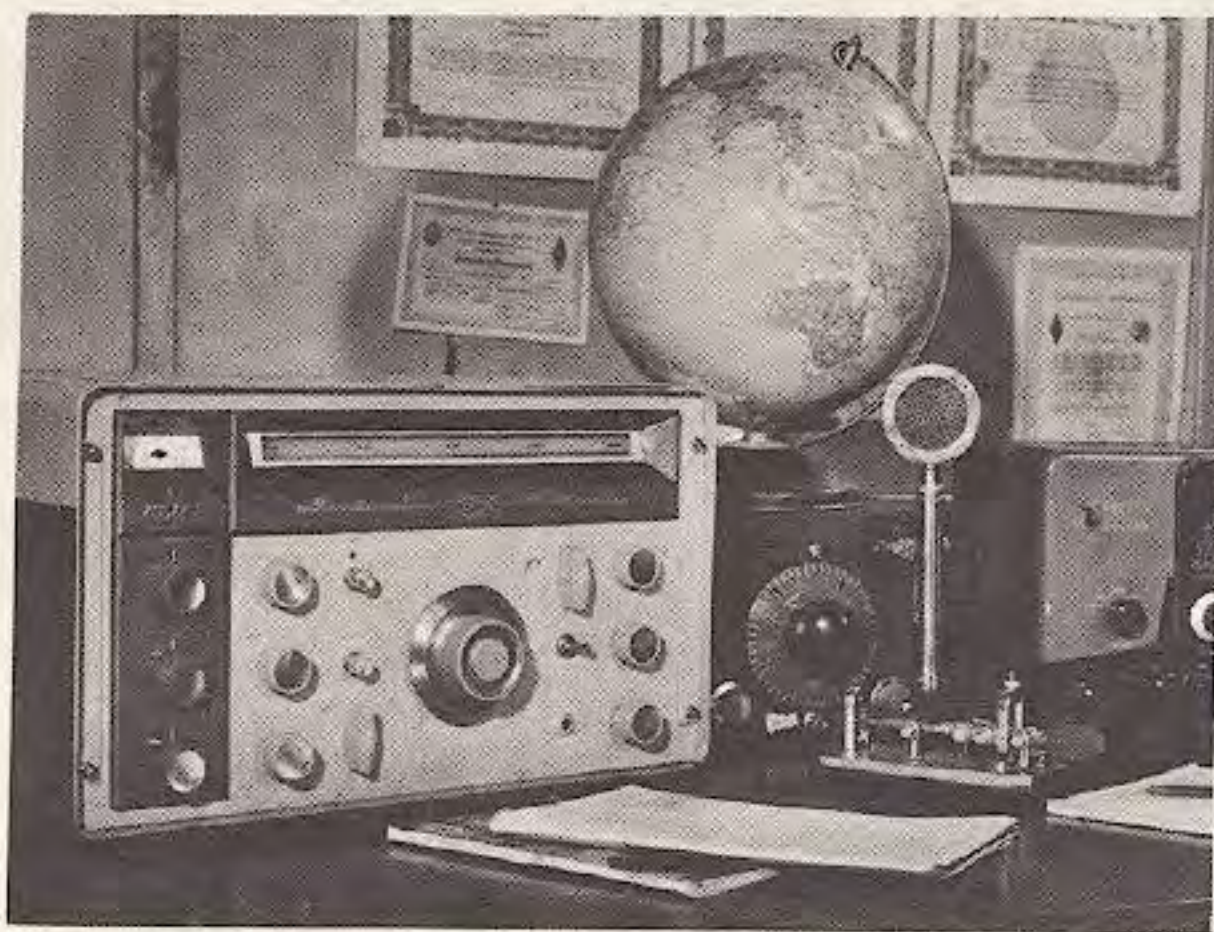
The current version of the long line of HRO receivers -- the 50 Kc - 54 Mc. double conversion HRO-60. Standard equipment in every electronics laboratory in the country because of its enormous frequency range, low noise, and absence of spurious signals or images. Take another look at the 1934 HRO "Senior" -- there aren't many such designs with a 30 year life!



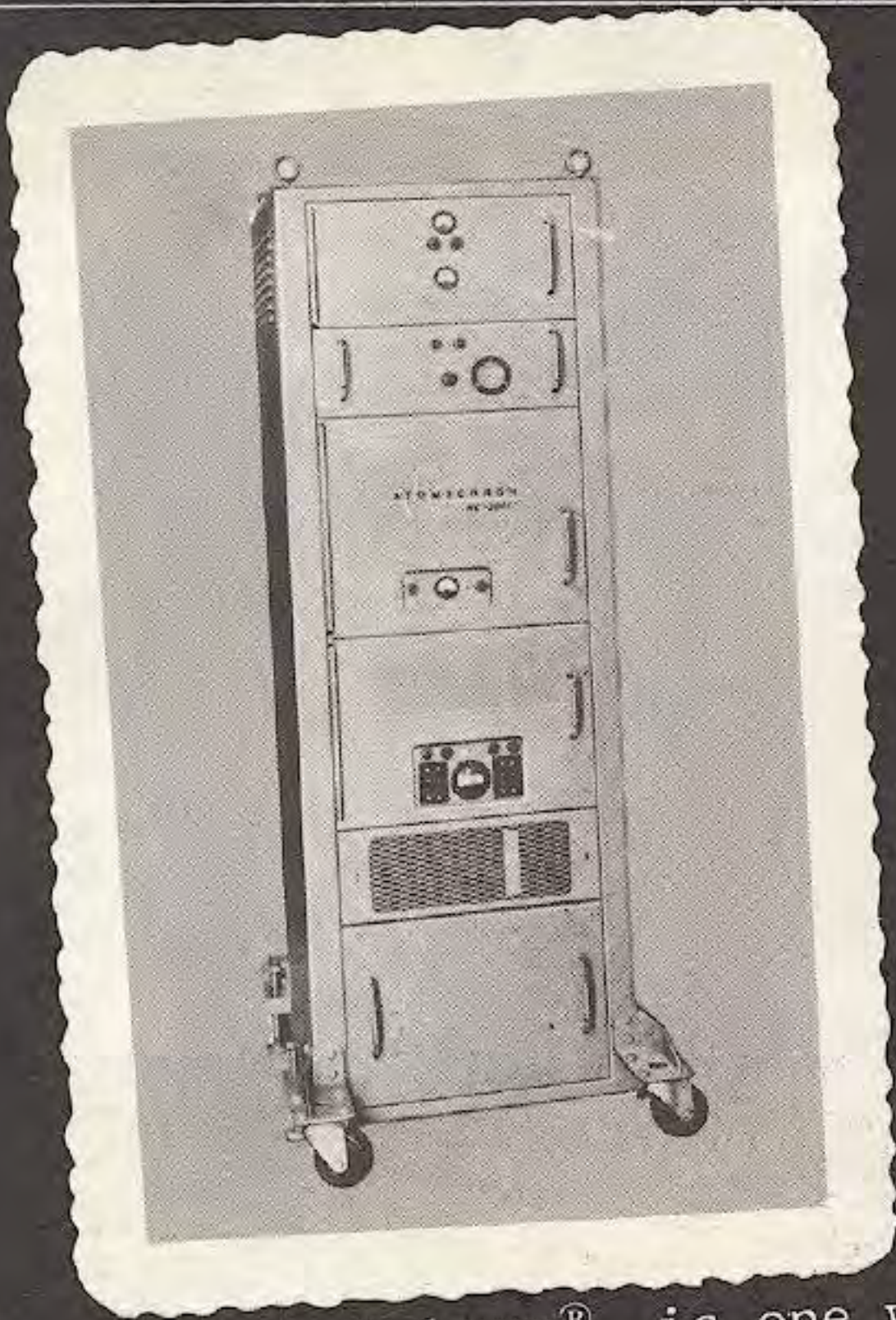
Over ten years ago, National's AM-FM Criterion tuner (shown in rack model monitoring version) incorporated a number of firsts -- a drift-free oscillator that eliminated need for AFC . . . F.M. squelch . . . The first binaural tuning . . . The first wide-band detector.



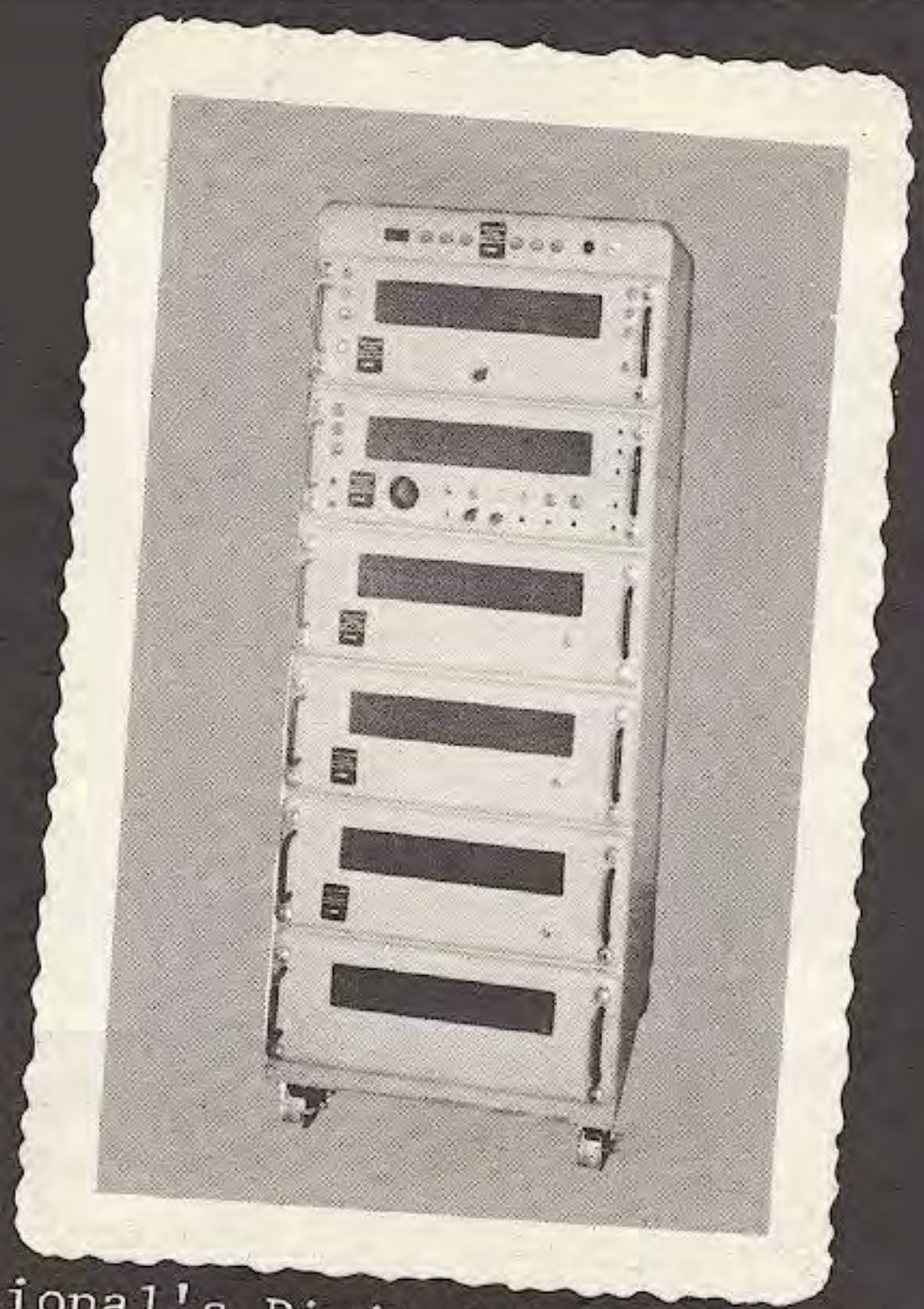
National's famous AN/MRC-80 is a tactical, transportable, self-contained two-way tropospheric scatter facility for radio-telephone, CW, or teletype. The MRC-80 is used by the U.S. Army for reliable field communications when terrain or military considerations do not permit telephone links.



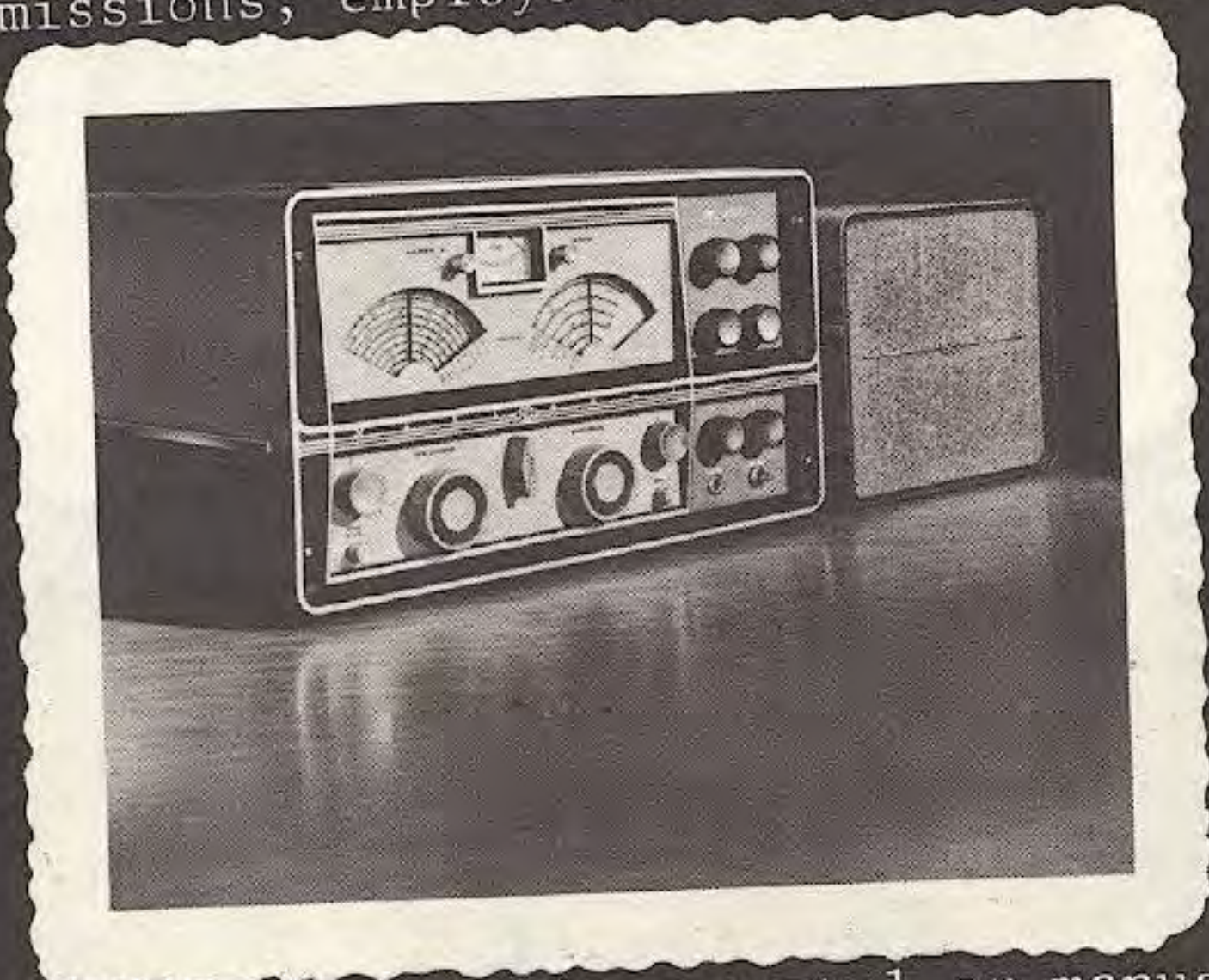
National's "Dream Receiver", the NC-300, was probably the fastest-selling deluxe amateur receiver ever manufactured. Double-conversion, the NC-300 covered all ham bands from 160 through 10 meters, with separate slide rule dial scales and converters for the 6, 2, and 1½ meter bands.



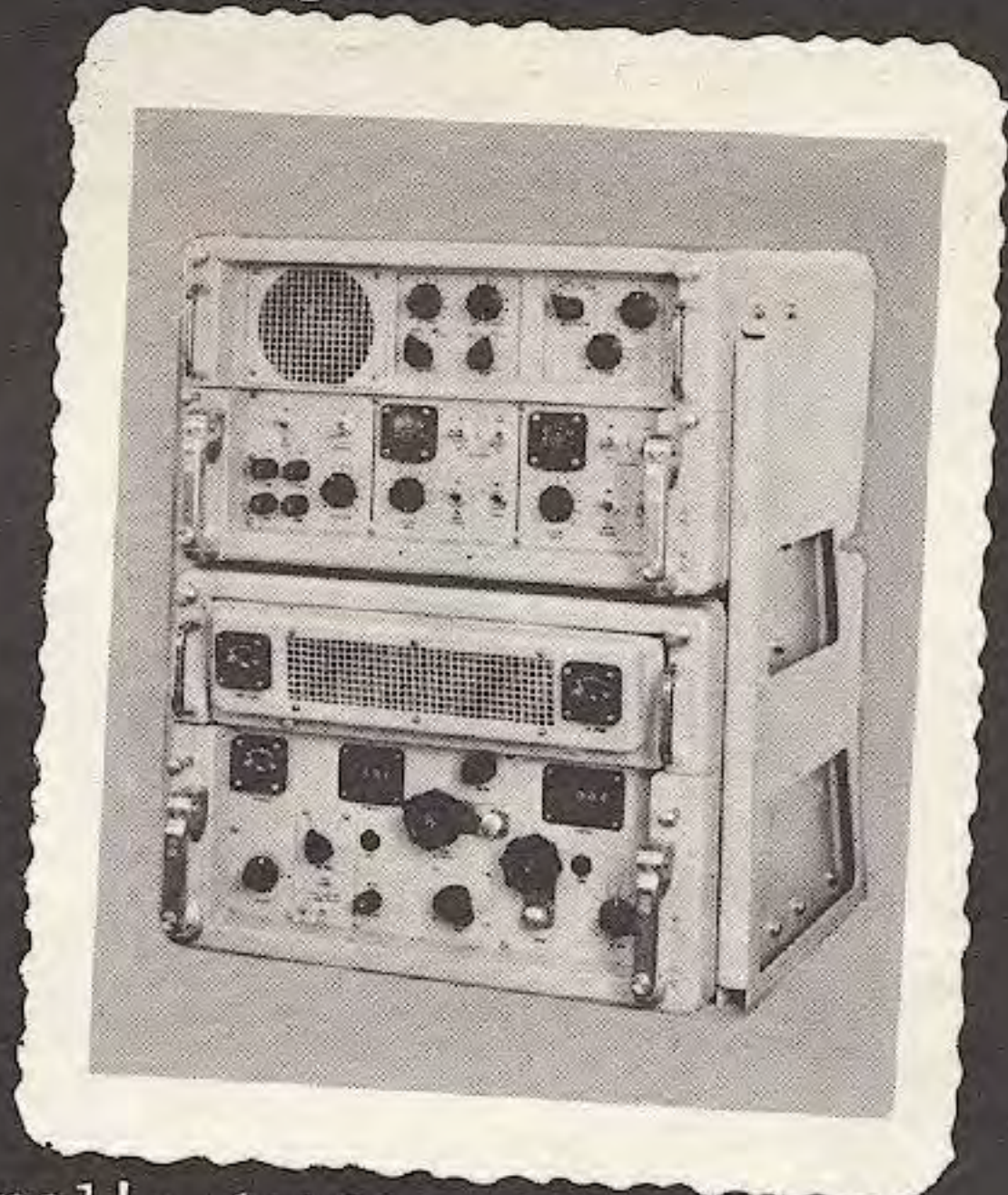
The NC-2001 Atomichron® is one well-known outgrowth of National's pioneering work in quantum mechanics and nuclear phenomena. The world's most accurate commercial primary frequency standard, the Atomichron utilizes the unvarying resonance of the cesium atom to achieve stability for the life of the equipment of five ten-thousandths of one cycle at 10 MC. The Bureau of Standards, which broadcasts WWV standard frequency transmissions, employs National's Atomichrons.



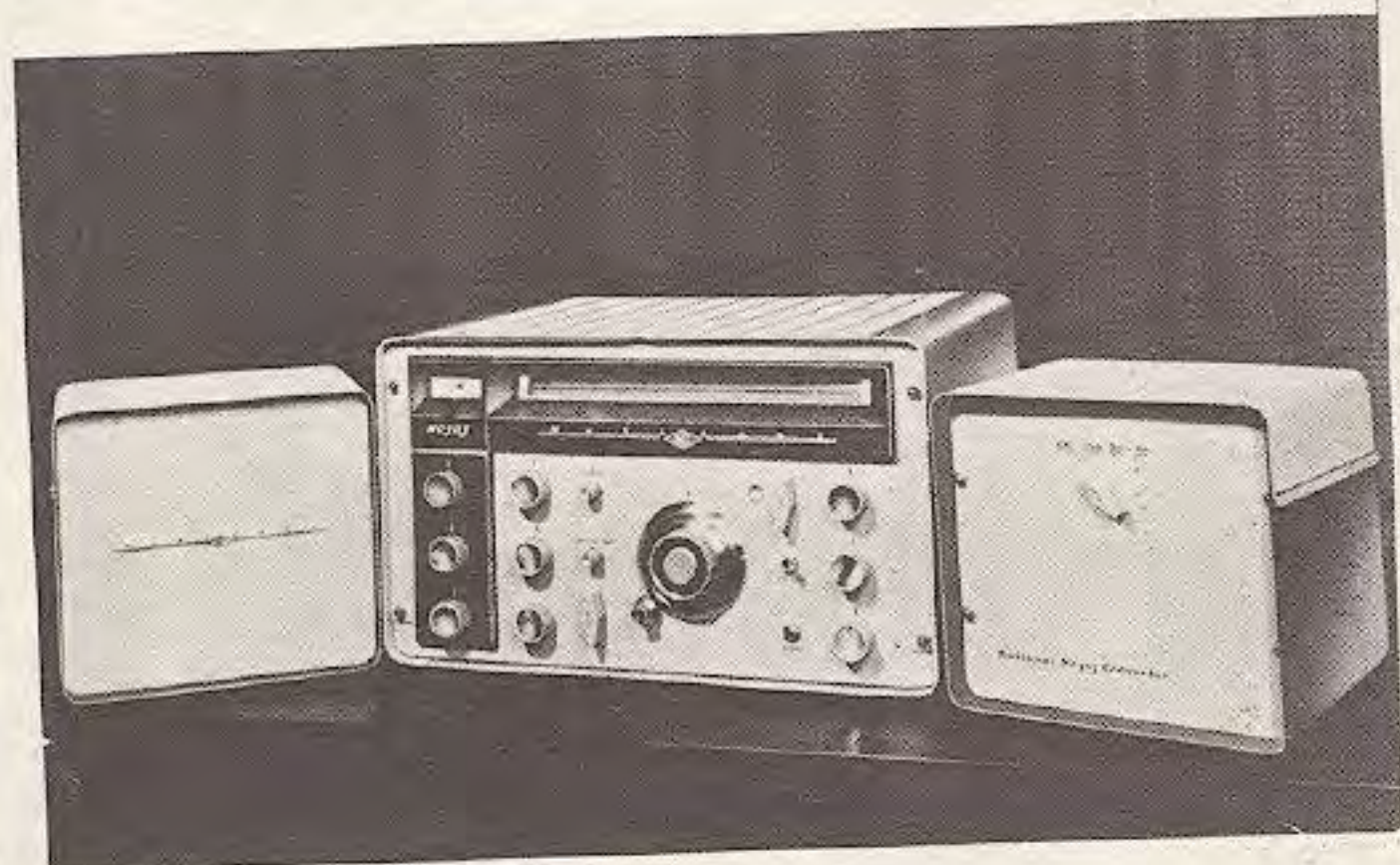
National's Digital Data Interpreter, developed for the National Security Agency. Used to convert radio signals to digital form for encoding and decoding.



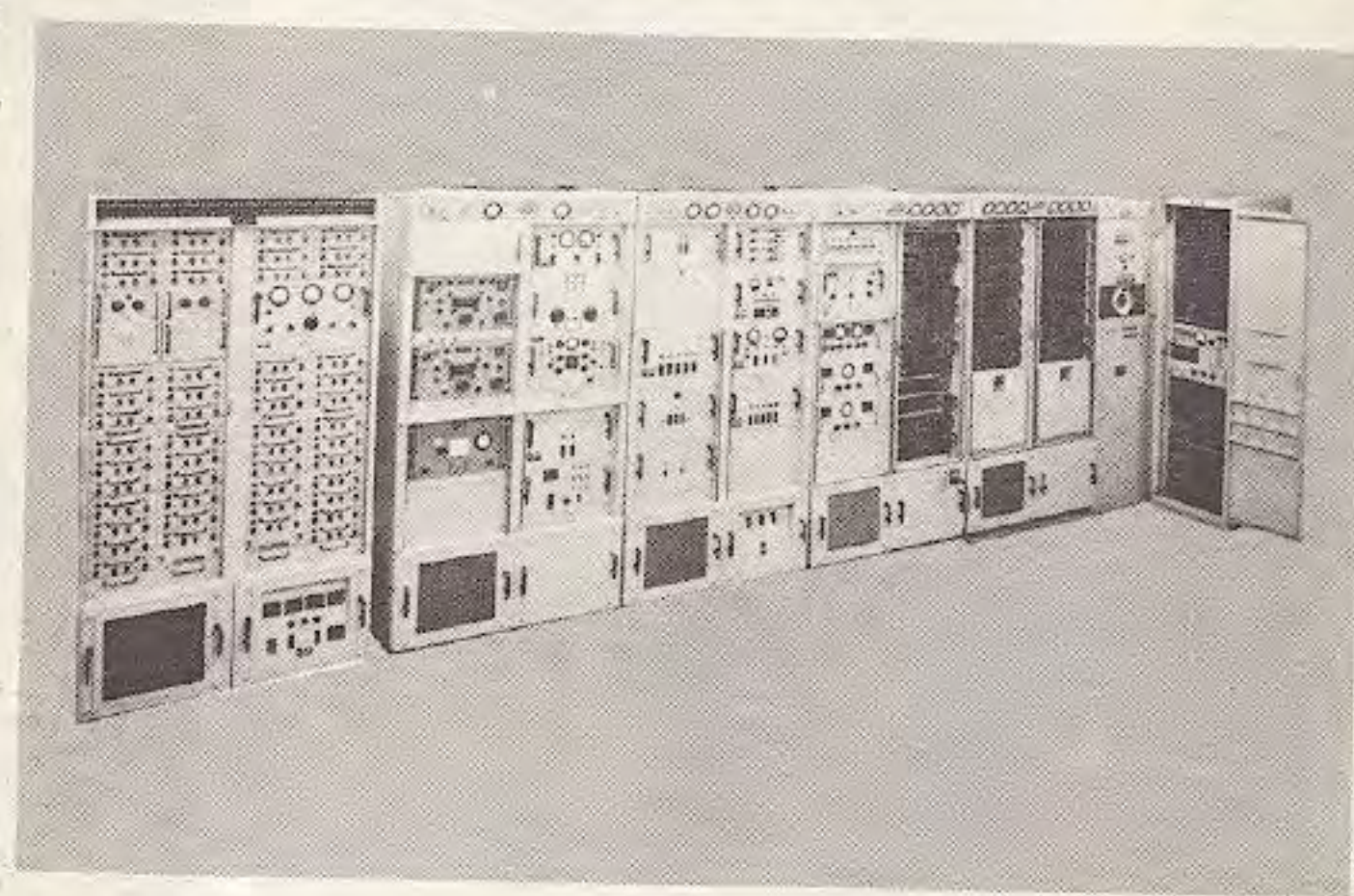
The NC-400 provides crystal or manual control of all oscillators, external synthesizer inputs, diversity provisions, and bandwidths up to 16 Kc! A typical application of the NC-400 is its use in the nationwide F.B.I. radioteletype network.



National's drift-cancelled AN/WRR-2 is the U.S. Navy standard shipboard SSB receiver. The most stable military communications receiver in use, WRR-2 stability is equal to one-tenth of one cycle at 10 Mc! Designed primarily for SSB use, the WRR-2 can simultaneously receive two different types of intelligence on independent upper and lower sideband channels.



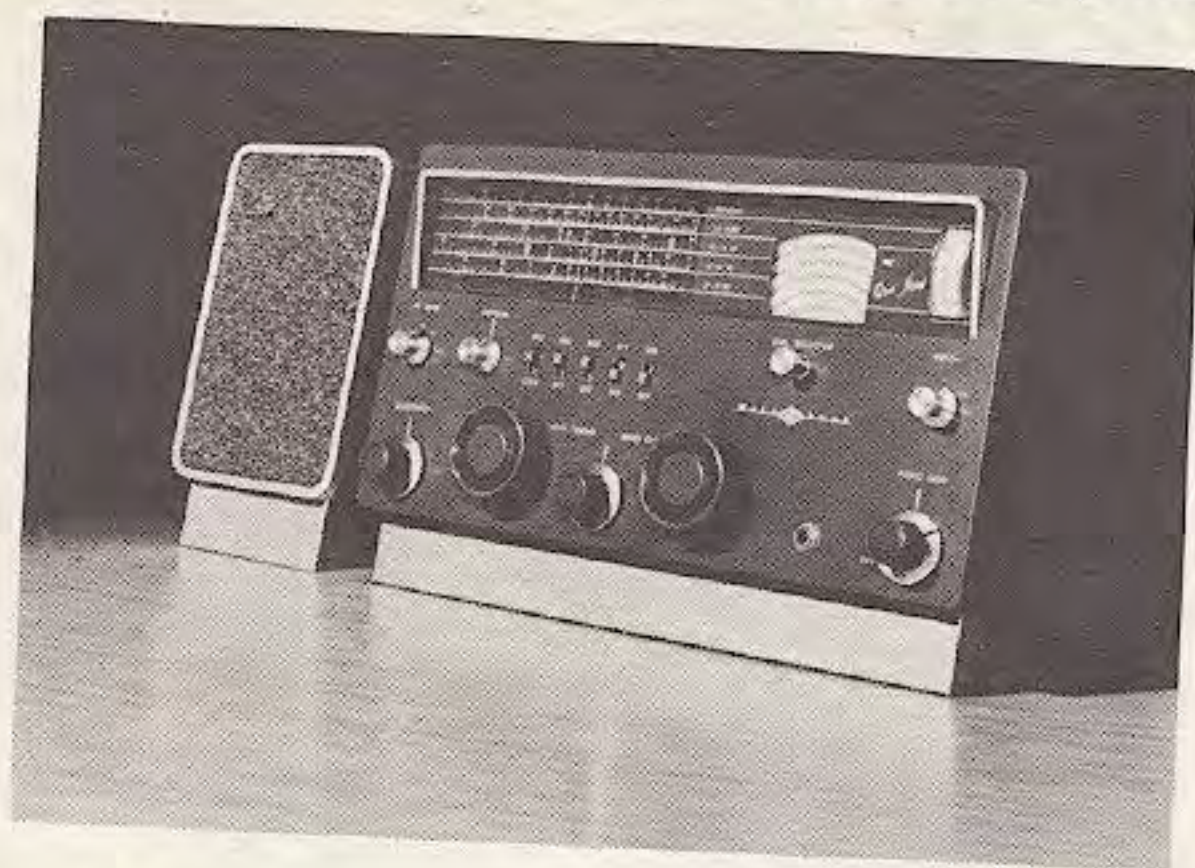
The NC-303 is a high quality ham-band receiver similar in many respects to the NC-300, but with selectable side-band, T-notch filter, improved product detector and SSB/CW AGC. The NC-303 is best known for its stability, remarkable sensitivity, and smooth AGC.



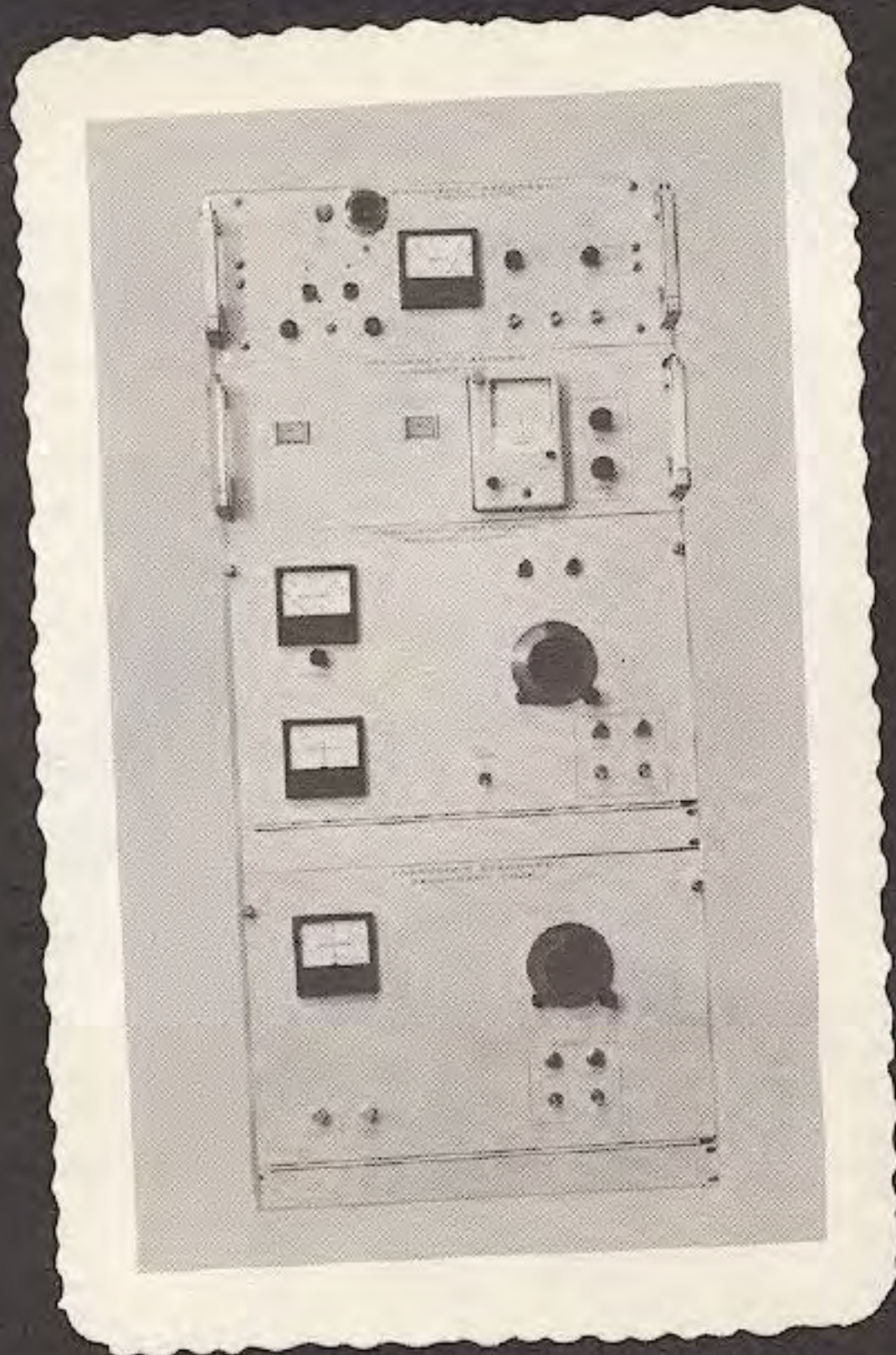
Above is National's "RAKE" modification of a U.S. Army RTTY receiving terminal. The "RAKE" system allows the reception of up to 50 possible multipath signals, thereby greatly increasing communications link reliability.



This is a corner of National's standards laboratory, where all test equipment used in the development, manufacture, and testing of National gear is regularly inspected and aligned.



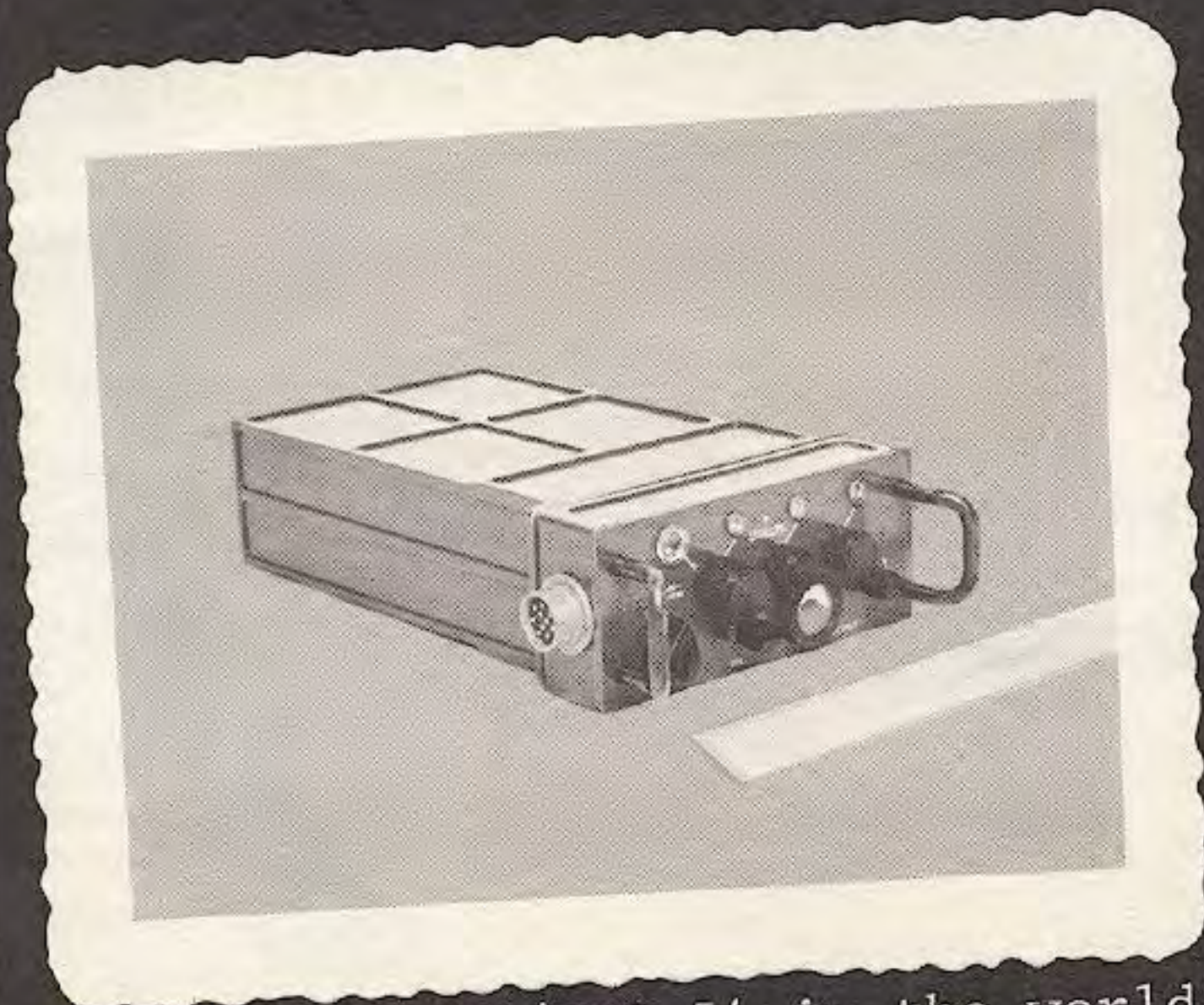
National's NC-190 is an economically priced, double-conversion general coverage unit designed for SSB, CW, and AM reception. It incorporates National's patented Dial Selector, which for the first time allows band-spread calibration of the foreign broadcast bands equal to amateur band calibration. A particularly popular SWL receiver because of this feature.



This attractive equipment, an important modification of the NC-1501 Atomichron, is the primary frequency calibration source for the Air Force Global Tracking System "GLOTRAC".



National's NC-121 is a surprisingly inexpensive general coverage receiver designed specifically for the novice amateur and the SWL. Incorporating a number of design innovations in its price class, the '121 (shown here in its optional oiled walnut enclosure) makes a handsome receiver for den or living room.



The National AN/PRC-54 is the world's smallest tactical SSB transceiver. Completely solid state, the PRC-54 was developed for the U.S.M.C. and provides 4000 synthesized channels between 28-68 Mc. Power is 5 watts PEP with advanced speech processing for extended range.



The NCX-3 SSB/AM/CW transceiver is a familiar sight in ham shacks and automobiles all over the world. The NCX-3 with its accessory AC or DC power supplies is a complete 200 watt 80, 40, or 20 meter amateur station.



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