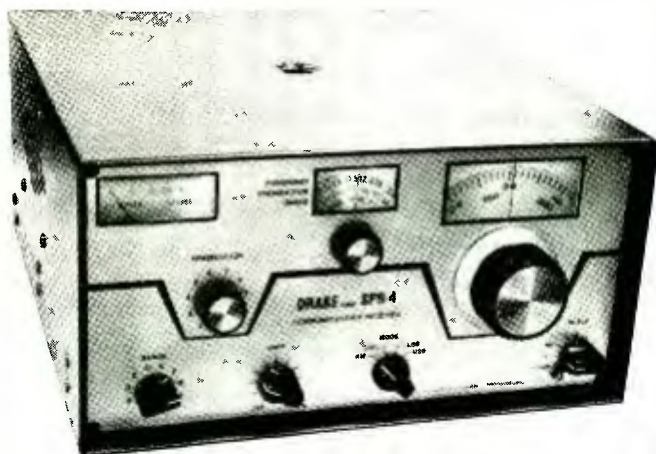


PROGRAMMABLE RECEIVER

(R. L. Drake Co. SPR-4)



IF, AS CERTAIN advertisements say, you have a friend at such-and-such a bank, the shortwave listener is equally fortunate since he has an enthusiastic friend at R.L. Drake Co. The SWL got an inkling of this in 1966 when Drake introduced the SW-4 (now SW-4A) receiver. This was a product that tuned only the long-wave, medium-wave and short-wave broadcasting bands. The crystal-controlled front end permitted excellent linear dial calibration and the SWL could read out a frequency to better than one kilohertz.

The next logical step after the success of the SW-4 series was to go from tubes to solid-state, add more tuning ranges, add an internal speaker and tape recorder output, improve the selectivity, add optional noise limiting and crystal calibration, etc. It sounds like a big order, but Drake has fulfilled it in the brand new SPR (Solid-state Programmable Receiver)-4.

POPULAR ELECTRONICS had the opportunity to field-test one of the half dozen prototypes of the SPR-4. Matched against the SW-4A, there were some pretty outstanding differences. First, the dial mechanism has been simplified and made a little smoother (SW-4A and R-4B users, please note) and second, the selectivity is really meaningful. In fact, the SPR-4 has 3 selectivity positions that are automatically switched into the circuit as you move from straight AM (4.8 kHz at 6 dB down), to SSB (2.4 kHz), to CW (0.4 kHz). The skirts are much steeper and signals are easier to separate. As opposed to the 16-kHz-wide selectivity of the SW-4A (at 60 dB down), the SPR-4 is rated at 10 kHz

(-60 dB) a really meaningful improvement.

Band selection and r.f. tracking on receivers similar to the SPR-4 have always constituted a problem. However, this has been solved by putting notations on the main Frequency Preselector Range dial using numerals and letters. The SPR-4 also has two thumb lever controls: one for an r.f. gain potentiometer, the other for selecting operation with a Noise Blanker or a Calibrator (both optional at extra cost) in the circuit. It is obvious that considerable thought has gone into making the SPR-4 more functionally useful for SWL's as well as laboratories, hams, etc.

In listening tests with the prototype, sensitivity and signal-to-noise ratio on all the short-wave bands were equal to a receiver costing 3 times as much. Selectivity was better. Medium-wave reception using the

CAPSULE CIRCUIT INFORMATION

R.L. Drake SPR-4: All solid-state (dual-gate FET's) dual-conversion 24-band superhet, tuning 150-500 kHz and any of 23 ranges 500 kHz wide between 0.5 and 30.0 MHz. May be supplied to tune 0.5-1.0, 1.0-1.5, 6.0-6.5, 7.0-7.5, 9.5-10.0, 11.5-12.0, 15.0-15.5, 17.5-18.0, and 21.5-22.0 MHz. Three band-widths determined automatically by reception mode (AM, SSB, or CW). R.f. gain control. Built-in speaker. Built-in provisions for Notch Filter. Noise Blanker, 25-kHz crystal calibrator. Loop antenna input. May be used on d.c. with optional power cord. Manual fine adjustment for dial calibration. \$375.00.

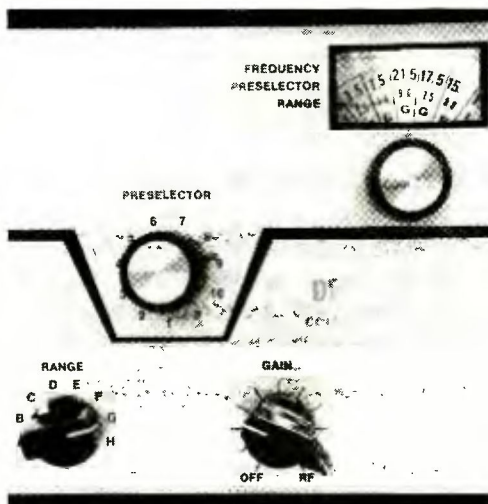
loop proved interesting and locals could be nulled out without difficulty. Reception of SSB and CW was at least comparable to the Model R4-B—clean and easy.

Our only arguments with the prototype (one of which was immediately corrected and won't be discussed here) concerned the S-meter sensitivity (200 microvolts for S9)

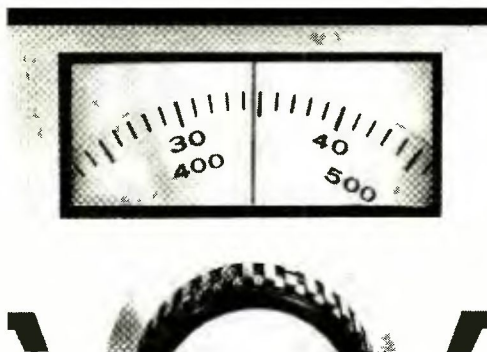
and the placement of the headphone jack on the rear skirt (inconvenient to reach). Both of these may be modified before production models are delivered to the public.

All in all, the SPR-4 is a fantastic value and we'd say snap one up before the price goes up.

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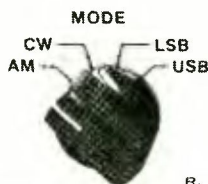


Don't get upset! We "phantomed out" the S-meter to emphasize the tie-in between the Range selector, Preselector and Range controls. Note the illuminated dial shows where each control is to be set.



INS RECEIVER

Two thumb lever controls under the Gain and Notch knobs are for r.f. gain and either noise blanker or 25-kHz crystal calibrator use respectively.



R. L. DRAKE COMPANY, MIAMISBURG, OHIO



Base of rotatable loop antenna plugs into top of the SPR-4. It is fed to an internal amplifier and is rotated to null out local medium-wave broadcasters. New dial design (left) has two rotating translucent discs—one calibrated in units and the other in hundreds. Add the figures shown to Range position and the frequency is 21.935 MHz.