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Radio Shack PRO-94 Portable Dual Trunking Scanner

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adio Shack offers two new trunking portables of note for year 2000. The \$350 PRO-92 is manufactured by GRE and is able to track several types of trunked and conventional systems in sequence (see Jan. 2000 *MT*). The \$300 price tier is occupied by the new PRO-94, manufactured by Uniden in the Philippines for Radio Shack.

There are more differences between the PRO-92 and PRO-94 than similarities. The PRO-92 can scan a mixture of conventional and trunked systems at the same time, including LTR systems, has PL and DPL decoding squelch and readout, a computer port, and alphanumeric text labels. The PRO-94 lacks these features.

The PRO-94 tunes the upper portion of the 10 meter ham band and the standard "scanner bands," as well as 806 - 956 MHz, and a sliver in the 216 - 225 MHz range. The 1240 - 1300 MHz range is included, but at reduced sensitivity. Trunking coverage includes Motorola type I (800 MHz), type II (VHF, 400, 800, 900 MHz), and Ericsson EDACS systems.

The Pro-94 also functions as a "weather alert radio," displaying SAME messages. You cannot program FIPS codes for your location as you can in the more weather-savvy Uniden BC278CLT base scanner (see Nov. 1999 *MT*).

Powering the PRO-94 is simple – insert four AA batteries: two in the body of the radio and two into the battery cover. There's no "speed loader" battery tray as found the PRO-92 or PRO-43. Batteries and AC power supply/charger are not included.

A keystroke sequence can disable the confirmation beep as well as the battery saver circuitry.

♦ Memory

The PRO-94's 1000 channel memory is divided into A and B partitions, a design we haven't seen since the old Electra Bearcat BC 20/20. Each partition provides 500 memory channels in 10 banks, numbered 1 - 10. Banks can be designated as either conventional or trunking, but not both simultaneously.

The large number of memory channels is attractive, but you must program them by hand because the PRO-94 provides no computer port. It lacks a query facility, as found in the Uniden BC245XLT, so you won't be alerted if you program the same frequency in multiple channels. There are 10 monitor memories you can use for temporary frequency storage and they are common to both the A and B partitions.

With the exception of selecting the A or B partition, programming the PRO-94 is reminiscent of earlier models. You first choose trunking or conventional, then press the Program button. Each conventional memory channel is programmed with a frequency and an optional delay flag, then pressing Enter.

Programming a trunked frequency

requires you to choose the trunking technology, a bank, the frequency, then press Enter. Programming a Type 1 or hybrid Motorola trunk system is more complicated and requires entry of a fleet map. In addition, you must program a frequency offset for VHF and UHF Motorola trunked systems.

Scanning

For trunking, one can program five talk group lists of 10 IDs in each of the banks. Talk group lists can be enabled or disabled for scanning purposes. This is more flexible than the PRO-92 talk group scheme, which supports only one list per bank. You can lock out talk groups from these lists and conversations in these groups won't be scanned.

A defeatable rescan delay causes the PRO-94 to hold the current talk group for 5 seconds after the end of transmission before resuming the scan. The delay is global to all talk groups. A 2-second rescan delay can be assigned to each memory channel for conventional scanning.

Within the A or B partition, memory banks can be sequentially scanned in combination. You cannot scan banks from both partitions at the same time, nor can you can conventional and trunked banks at the same time. Like the BC-245XLT, there's a 5-second latency when scanning talk groups in two or more trunked systems. That is, our PRO-94 will not scan the next trunked bank until there has been no activity in the current trunked bank for approximately 5 seconds.

While scanning trunked systems, you can instruct the PRO-94 to "camp out" or hold on a particular talk group. A keypress sequence causes the display to alternate between talk group ID and frequency while trunking.

One ID in each talk group list may be marked as a priority ID and the PRO-94 will check those talk groups more frequently for activity when trunking. You can designate one channel per bank as a priority channel for conventional scanning and the PRO-94 will check the priority channels every 2 seconds.

Searching

The PRO-94 supports direct search, a limit search with one pair of frequency limits, and a service search. The direct search is handy – type in a frequency, press the up or down arrow key and the PRO-94 takes off. Service search categories include weather, ham, aircraft, marine, and police (fire and emergency). Sorry, railfans, there's no railroad category.

Up to 20 frequencies may be locked during a search. There is no auto store feature.

Performance

Our PRO-94 (s/n 96001982) is a fairly sensitive radio, except in the 1240 - 1300 MHz range (see graphs). It has only eight birdies strong enough to open the squelch: 407.7625, 407.8125, 413.175, 413.225, 899.2375, 906.4125, 906.5875, and 1290.7 MHz.

Our PRO-94's audio becomes distorted starting at lower volume levels. There's a bit too much treble, which accentuates the hissing noise on weak signals.

We purposely tortured the PRO-94 by driving through a problem area filled with cell phone and PCS base transmitters. We had problems with images and desensitization.

While our PRO-94 has excellent image rejection on most bands, cellular phone images batter the AM aircraft band when we are 1/4 mile from the cell phone towers. We hear no cellular





Radio Shack PRO-94 Scanner S/N 96001982

List price \$299.99 Tandy Corporation Fort Worth, TX 76102

Frequency coverage (MHz):

29 - 54 (5 kHz steps) 108 - 137 (AM, 12.5 kHz steps) 137 - 174 (5 kHz steps) 406 - 512 (12.5 kHz steps) 806 - 823.9875, 851 - 868.9875 896.1125 - 956 (12.5 kHz steps) 1240 - 1300 (12.5 kHz steps) Sensitivity: see graphs **RF** attenuator: none FM modulation acceptance: 13 kHz Intermediate Frequencies: 380.7, 10.85, 0.45 MHz **Image rejection:** 41 dB at 50 MHz 60 dB at 155 MHz 78 dB at 860 MHz Audio output power at earphone jack: 175 mW @ 10% distortion into 8 ohms Practical memory scan speed: 63 ch/ sec Search speed, Turbo: 182 steps/sec. Search speed, regular: 65 steps/sec. **Current consumption at 6.0 VDC:** off - 0 mA manual - 76 mA scan - 78 mA full volume - 153 mA Battery saver: after 5 sec. in Manual. Low battery warning at 4.54 VDC or less. Shutdown at 4.27 VDC or less.

images while using a rooftop antenna at home.

Cell base station transmitters desense our PRO-94, sometimes causing it to "lose" the data channel of a nearby trunked system. The PRO-94 locks solidly onto talk groups when used in other areas.

Paging intermod is a problem in the 160 - 165 MHz range and TV audio breaks through in the 418 - 430 MHz range when connected to our outdoor antenna.

The top mounted squelch and volume knobs are easy to grasp and the backlight illuminates the PRO-94's display better than in the PRO-92.

Overall

The PRO-94 is a solid scanner, but not competitive at \$299.99. The 300 channel Uniden BC- 245XLT has an attenuator and computer port, can scan conventional and trunked systems sequentially, includes a proprietary NiCd pack, and may be found discounted near \$220. If you elect to buy a PRO-94, shop around or wait for a sale.







Note: One sample of each model tested.

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