GRE PSR-120 Hand-held Scanner

By Bob Grove, W8JHD

The most recent release from GRE America is intended for regions where trunking communications are not a consideration. That would be in the myriad small towns across the American midway which haven't found the need for advanced digital communications.

The new, triple-conversion PSR-120 does not do trunking, nor does it have P25 decode capability. But the good news is what it *does* do!

Frequency range is in the following bands: 25-54, 88-174, 380-512, 806-960 (less cellular), and 1240-1300 MHz. This gives us total VHF/UHF land mobile allocations, ham radio bands, as well as civilian aeronautical (but no 225-380 MHz mil air), marine, business, CB band, and even FM broadcast coverage.

The inclusion of a dedicated button for FM broadcast is a cute idea. If you've been listening for scanner activity and it's really getting boring, just a press of this key and you connect to your favorite music station. Twenty separate memory channels are reserved for FM broadcasting. A toggling attenuator key can be invoked to reduce sensitivity by 20 dB in case nearby strong signals are overloading your scanner.

As the accompanying photo shows, the 2.3-inch, well-backlit LCD is bold – there's never any doubt as to what frequency you're listening to. The display also registers relative signal strength, memory channel number, activated memory banks, and other selective functions as shown in the LCD illustration.

Seasoned scanner users will be pleased to see that the PSR-120 has a traditional BNC antenna connector rather than the more recent SMA threaded connectors found on new, sub-compact scanners.

The 4-inch rubber ducky does a good job considering its short length. For those listeners requiring maximum reception distance, high-performance replacement whips are available from some *MT* advertisers, like the popular Condor (**www.grove-ent.com/ANT14.html**) and Diamond RH77CA (**www.grove-ent.com/rh77ca.html**).

Audio is loud and clear, and a 1/8-inch (3.5 mm) mini phone jack is accessed from the top panel for the use of earphones (not included) if desired.

The compact scanner is powered by three AA cells – alkaline or rechargeable. A mini-switch in the battery compartment allows selection of battery type. When batteries are low, a "B" warning appears on the LCD. A 6 VDC jack on one side of the scanner affords use of an external charger/adapter.

The PSR-120 weighs 9 ounces with batteries and antenna.

Finding Activity

For the frequency searcher, there are several options. Service Search automatically and selectively hunts for public safety, VHF maritime, VHF aircraft, and even amateur radio activity in the 10 meter, 6 meter, 2 meter, 70 cm, and 25 cm bands.

You can also set upper and lower band edge limits for a rapid sampling of all contiguous frequencies between, so as not to miss any active channels.

If you prefer the manual tuning procedure, use the arrow keys to step up or down from a central frequency in increments appropriate for the frequency range chosen. Frequency steps are automatically chosen to track the current bandplan intervals.

Sweeping the Spectrum

One recent addition to scanning is the automatic capture of nearby transmissions even if they aren't programmed into the scanner. On GRE products this useful function is called the Spectrum Sweeper.

The sweep is activated by pressing the sweep-symbol key (fourth key in the top row as shown in the illustration).

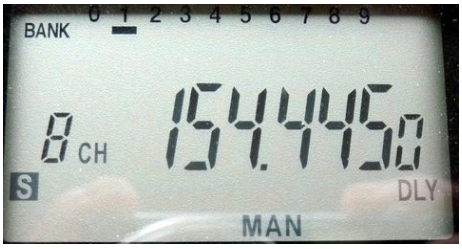
The user can select whichever bands he wants swept to capture unknown users. The PSR-120 will automatically display the discovered frequency and allow the user to monitor the signal.

A typical example of this useful feature is if you're on a trip and you pass a fire or accident. You simply press the key and local public safety activity can be monitored without preloading the frequencies. You can auto-store into memory these newly-discovered frequencies as well.

Since some bands contain irritating constant transmissions like paging tones, you can omit those from the search. In order to restrict the search to close by, you simply invoke the attenuator key to reduce scanner sensitivity.

Memory

Ten selectable banks, each holding up to 30 memorized frequencies, provide access to 300 memory channels. Any number of banks may be selected for scanning. You can also step up and down from those frequencies in appropriate increments for the particular band you are tuning.



Memorization is done in the conventional manner: Choose a vacant channel, or an assigned channel that you want to overwrite, and press the program key (PRG) followed by the frequency; then press PRG again.

If you hear three beeps, you've already entered that frequency on another channel. You can enter it again by once again pressing the PGM key, or you may simply enter a different frequency for that channel.

Priority

Any one memory channel may be selected for priority, forcing the scanner to switch to that channel when it becomes active regardless of its current frequency. The frequency is briefly polled automatically every two seconds to find an activation.

Lockout

During scan, or especially during a search, it's likely to stop on one channel you'd rather not continue to hear locking up the sequence. It could be weather, pager tone, or even a public safety channel that you'd like to discontinue monitoring.

Simply pressing the lockout (L/O) key when the scanner has stopped on the unwanted frequency will automatically prevent that frequency from being received.

As many as 200 discrete frequencies may be locked out in this manner (50 in the FM broadcast band). Lockouts can be restored later if desired by selecting that channel manually and pressing the L/O key again.

A review feature permits the operator to see all of the locked out frequencies he has chosen

by pressing L/O RVW and stepping through the channels with the arrow keys.

Squelch

GRE has chosen to allow quick access by a side-panel slide switch; choose a "HI" or "LO" setting depending on the severity of environmental electrical noise interference. An adjacent pushbutton allows a squelch defeat to listen for activity that might not have been strong enough to trigger the squelch.

If desired, the user can enter the proper CTCSS or DCS squelch code to prevent reception of co-channel interference. Don't know the code? The PSR-120 will decode it for you.

Weather Alert

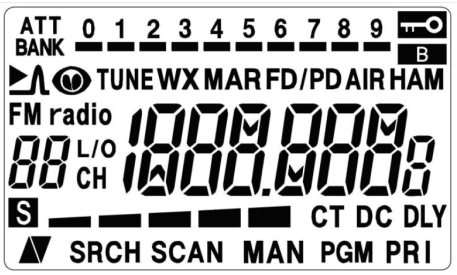
SAME/FIPS encoding for specific cities or counties can be custom selected, providing an alert tone during storm threats. A pushbutton press starts the automatic search for active NOAA weather channels in your area.

Key Tone

Some people like to hear a "beep" when they press a function key, some don't. The feature can be quickly turned on or off by simply pressing either the 1 or 2 key while the welcome message is showing at power turn-on.

Key Lock

To prevent accidental bumping a key and changing the function, simply press the FUNC



(function) and key symbol. This doesn't change any function currently engaging the scanner, but merely deactivates the other keys. Repeat the two-key sequence to restore normal key operation.

Backlight Control

The backlight comes on when the power is switched on and it remains lit for five seconds. It can be turned on again at any time by pressing the LIT key, and may be switched on indefinitely by holding down the LIT key for at least one second. Another press shuts it off. Turning the power off will also deactivate the extended light time when the power is switched back on.

Data Cloning

A PC/IF connection permits the transfer of programmed data to another PRS-120. The two scanners may be interconnected by a cable (not supplied) which is terminated with 3.5 mm (1/8-inch) phone plugs.

The clone command is prompted by pressing the FUNC and CLONE keys, then initiated by pressing an arrow key.

Reinitializing your Scanner

As all of us have learned in the computer age, sometimes things just don't go right. If the scanner misbehaves or locks up, a key sequence allows the scanner to be reinitialized. This does, however, clear all stored memory information, so the procedure should be done only as a last resort.

The Bottom Line

The only criticism I can offer on this new product is the small key size. Users with jumbo fingers may find them hard to press. I often used just a fingernail tip to avoid pressing two keys at once.

I found the GRE PSR-120 to be intuitive to use once I understood the flow of the operation. Sensitivity is what I would expect on any hand-held radio with a short antenna.

Audio was excellent and, as pointed out earlier, there was never any doubt about what frequency I was listening to because of the large size of the numerals on the display. I also liked the Spectrum Sweeper, a handy function for unknown territory.

I have no reservations about giving this nice unit a high grade. The GRE PSR-120 will be available in the second quarter. Pricing has not yet been announced, but we are anticipating it will be a pleasant surprise.

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