

73 Review

by Marc Stern WA1R

Uniden HR-2600

A beauty of a mobile rig!

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We have an amazing hobby. Every new contact is as exciting as the first, no matter how long ago that was. Take 10 meters, for instance. Just the other day 10 was open as I cruised along a road near my house. As I tuned around on my 10-meter rig I heard Cyprus, Malta, and Ireland. Not being one to let an opportunity go, I called each station, and what do you know! They came back to me: Cyprus on the first call, Ireland on the first call, and Malta on the third. The amazing thing is that it was all done with 25 watts from Uniden's modest power level transceiver, the HR-2600, into a base-loaded, mag-mounted mobile antenna (Wilson's 1000).

The HR-2600 looks the same as its predecessor, the HR-2510. About the only way you can tell them apart is the HR-2510 label on the older model and the RPT setting on the front panel of the HR-2600. That's it.

What are the improvements on the 2510? Read on to find out!

Major Changes

Table 1 shows what has been added to or eliminated from the HR-2510 to make the HR-2600. Let's look at each change briefly.

- **Transmit beep:** When the HR-2510 was first introduced it initiated a telltale annoying transmit beep whenever the beep button was pushed. I guess it was Uniden's way of trying to indicate an "over" signal for phone ops. This feature has been replaced on the 2600 by the repeater offset function.

- **Public address:** When the HR-2510 debuted, it had a public address capability. I guess you can tell its heritage, as most 11-meter rigs have that function, too (why, I can only guess). On the HR-2600, the PA function has been eliminated in favor of a real RIT switch.

- **RIT control switch:** When the HR-2510 debuted it was equipped with a continuously-tuned Receiver Incremental Tuning (RIT) circuit. The only problem was that unless you left it centered all the time, you couldn't really tell what the receive frequency was. There was also no indication of just how far away from your operating frequency the RIT had



The Uniden HR-2600.

Table 1. Uniden's Changes

HR-2510	HR-2600	Change
1. Transmit beep	No transmit beep	Beep gone
2. Public address (PA) function	No PA function	PA eliminated
3. Constant RIT	RIT control/switch	RIT can be disabled
4. Channelized operation; 10 kHz channels	No channelized operation	10 kHz channels gone; continuous tune
5. No repeater splits	Repeater splits	RPT button added
6. No CTCSS tones	CTCSS tones	CTCSS tones added

placed the 2510, and again, unless you left the RIT centered, you never really knew where you were. There was also no indication that the RIT was engaged at all times.

Several modifications were published to get around this problem, and Uniden responded. The addition of the RIT ON/OFF switch, in place of the PA switch, is an excellent change. The frequency display remains the same when the RIT is engaged, but you must physically engage the RIT control before it is activated.

Think about what this seemingly small change means. How many times do you think the owner of an older HR-2510 went to answer a CQ, only to find that the RIT had left the receive 2 kHz off the transmit frequency? Situations like this can be frustrating, especially if you're not "quick on the tune," so to speak. And, with 3 kHz bandwidth, it could become more than a little annoying on CW where most rigs use an 800 Hz or so offset. You could easily tune right through a CW signal and you never really could zero beat it easily.

Now, however, the RIT is defeat-able—you can use the VFO to tune critically, and then use the RIT to fine-tune after you've homed in. You can really zero beat signals now. However, the display still remains the same; there's no indication of received frequency change.

- **Channelized operation:** When the HR-2510 debuted, it was immediately apparent that it came from a world of channelized operation. Frankly, it was little more than an 11 meter rig with a few changes. Granted, they were necessary changes—RIT, FM, CW and the like—but basically, the HR-2510 was still a converted CB rig.

Because the heart of the circuitry was originally a CB radio, it is easy to see why the orientation of the HR-2510 is toward 10 kHz channel spacing. CB is limited to 40 channels on 11 meters with an arbitrary 10 kHz spacing. Thus, when you tune the HR-2510 with either the buttons of the up/down, standard mike or with the up/down keys on the front of the rig, you find it tunes through 50 channels that are evenly spaced every 10 kHz. The VFO dial is the only control that will tune in any way other than 10 kHz steps.

The lack of continuous tuning with either the push-buttons on the front of the rig, or on the mike, made using the HR-2510 less than easy, especially for mobile operation. The HR-2600 fixes this problem by allowing continuous tuning with either the mike push-buttons or the up/down buttons on the front of the rig. Again, this feature was sought after by HR-2510 users, as fixes for it were published soon after the older rig was introduced.

Note, by the way, that Uniden still slices the 10 meter band into four band segments: 28.000–28.499, 28.500–28.999, 29.000–29.499, and 29.500–29.699. I can't fathom the reasoning behind this breakdown, except that the band segments do coincide with the Novice-Tech segment (28.000–28.499), international SSB window (28.500–28.999), satellite links and AM (29.000–29.499), and the FM/repeater window (29.500–29.699).

- **Repeater splits:** When the HR-2510 was introduced, it was loudly applauded for its standard FM, but more than one writer/observer

Table 2. HR-2600 Specifications

General	
Frequency Range	Band A 28.0000–28.4999 MHz Band B 28.5000–28.9999 MHz Band C 29.0000–29.4999 MHz Band D 29.5000–29.6999 MHz
Frequency Stability	±300 Hz Nominal (@25°C, 5 minutes after power on)
Microphone	500Ω Dynamic, PTT, UP/DOWN buttons
Speaker	8Ω, 5 Watts max.
Operating Modes	CW, USB, LSB, AM, FM
Display	Backlit LCD
Display Items	Freq., Band, Repeater Mode, Meter, Meter Mode, TX, VFO Span
Size	7.32"W x 10.35"D x 2.44"H
Weight	4 pounds, 3 ounces
Transmitter	
Output Power	CW, 25 watts USB/LSB 25 watts PEP AM/FM 10 watts nominal
Spurious Harmonic Emissions	–50 dB nominal, all modes
Carrier Suppression	–55 dB nominal, USB/LSB
Unwanted Sideband Suppression	–45 dB nominal, USB/LSB
Power Consumption	AM/FM 3 amps nominal USB/LSB 0.8 amps (no modulation) CW 5 amps (key down)
Power Consumption (maximum modulation)	AM/FM 3 amps nominal, USB/LSB 5 amps nominal
Microphone Input	1 mV nominal for 50% AM modulation
CW Key Voltage/Current	8 VDC, 10 mA
Receiver	
Sensitivity for 10 dB	AM 0.5 uV nominal
S/N	CW/USB/LSB 0.25 uV nominal
RF	Image Rejection Ratio 65 dB nominal
Power Consumption	500 mA nominal
Squelched Power Consumption, Maximum Audio	1000 mA nominal

also noted the lack of repeater offsets. To operate on repeaters, if they weren't tone accessed to begin with, meant that you had to transmit on the input frequency, then turn the VFO dial until you were on the repeater's receive frequency. Or you could set the SPAN control—the control which tells the HR-2510/2600 series the tuning rate (100 Hz, 1 kHz or 10 kHz)—and then hit the "up" button on the mike or front panel 10 times. Either way, it was awkward. The HR-2600 fixes that with built-in repeater splits. Using the former beep button location, Uniden has implemented standard 100 kHz splits for repeater work, making the HR-2600 a pleasure to use on repeaters.

•CTCSS Tones: When the HR-2510 was introduced it lacked CTCSS tones, a feature many repeater operators have implemented. Given the crowded state of 10 meter repeater pairs and the fact that at this stage of the sunspot cycle communications is worldwide, repeater operators have opted to use CTCSS tones to help keep their repeaters quiet.

A 10 meter repeater near my home uses CTCSS, and implementing this option opened up a new world of operating for me. And it was

world. Still, we're talking about orders of magnitude in price and selectivity.

That's right, selectivity. The more sensitive a rig gets, the more selective it has to become, and the HR-2600 can't seem to cope with several signals in the tuning passband. It tries to hear all of them at once and it begins to ring a little. However, when I put my Autek audio filter in front of the speaker, the problem cleared up and I was easily able to pick out signals.

Overall, I was quite pleased with the HR-2600. I received audio reports that were uniformly good, and signal reports that positively astounded me (worst case 5 and 4, which isn't bad for a 25 watt rig and a wildly swaying 60-inch whip). As I noted, the addition of the repeater splits, CTCSS, and a switch to disable the RIT, were also godsend. They added greatly to my enjoyment of the HR-2600.

I still haven't figured out the exact function of the MIKE GAIN control because it narrows the audio bandpass and attenuates outgoing audio. Instead of MIKE GAIN, I think it should read "MIKE ATTEN." Uniden would be well-advised to think about adding a high/low power switch, or a speech processor switch, in its place.

easy to do! I just followed the clearly written instructions in the manual and flipped a couple of DIP switches. Suddenly, where I used to be limited to listening passively to the repeater, I could access it and use it. The CTCSS tones made a BIG improvement.

Essentially, the rest of the 25 watt rig has remained unchanged. It is still a multimode rig that puts out 25 watts on CW and 25 watts PEP on SSB. When you run AM or FM, the output is 10 watts nominal.

The Good, the Bad, and the Ugly

If you look closely at the specs (Table 2), you'll see that the HR-2600 is a very capable rig. The worst case of sensitivity is 0.5 μV, which is within the realm of other rigs of this type and, in fact, within the realm of just about every rig on the market. With 0.25 μV sensitivity on CW and SSB, the HR-2600 is just about as sensitive as any rig I own, although figures in the 0.15 range are also common in the HF

One feature I like is the SPAN control. With a flick of the push-button, you can change the tuning rate from 10 kHz to 1 kHz–100 Hz. This rate takes effect on the VFO. You can easily QSY up 5 by pushing the SPAN button so that the small line that appears is under the 100 kHz place on the frequency readout. After that it just takes five clicks of the "up" button.

Documentation

The documentation has drastically improved. The manufacturer is actually beginning to understand that our market is different from the general consumer market, and they have included schematics. True, they are small, and in some cases you need a magnifier to trace a line or signal, but it's a start.

Another feature has remained the same but is still welcome: the large, finned heat sink. It looks like it could handle more than 25 watts, but I'm happy with the output. When 10's open, that's all you need.

I'm also pleased with Uniden's realization that the "President" series (the other name for the 2510/2600) was too easily modified by the "freebanders" that operate on 10.5 meters, and by other operators who wanted to operate on 11.5 meters, where the series could also tune. To cope with the problem, Uniden has potted up the areas you need to adjust, and has put warning signs all over the interior. There's also a warning in the manual that makes it clear that Uniden will turn over the name of any person modifying the "President" to operate outside its authorized band. The warning, a large insert in the documentation, easily falls out on the table as you unpack, and it's a color you can't miss.

Two features that have remained the same, which I really don't care for, are the accessory plug and the power jack. Uniden uses a 9-pin Molex™-style connector for such functions as CW, external speaker, and internal speaker.

The method of hookup is about as kludgy as anything I've ever experienced. For example, imagine hooking up your CW key with a Molex-style connector with two wires just sort of drooping into the connector. Aesthetics aside (it looks tacky), it doesn't make sense. Why the manufacturer didn't include miniature jacks for the CW key and external speaker (or phones; it really doesn't matter) is beyond me. There are just too many little pieces of wire hanging off a single, plastic connector. It really isn't convenient to use, especially when you consider that it locks into place and you have to literally pry it apart to change back to the "standard" configuration which features the internal speaker jumpered to work. The power connector seems like a least-cost option, and would be improved by a better, more secure connector.

Still, the last two points are minor, especially if you intend to use the HR-2600 mainly for mobile phone use. In this role it shines brightly. I like it and it has joined my stable of mobile rigs. **73**

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