

# Chatterbox GMRS-X1 Bluetooth Communicator

by Moshe K. Levy

**I**N PREPARATION FOR our month-long cross-country trip last year, Terri and I purchased a set of HJC-Chatterbox FRS-X2 Communicators. A year later, we can report that both of our FRS-X2s have performed flawlessly every time they were used. However, there was one issue we constantly had to contend with, and that was the unruly bundle of wires connecting our Communicators to various devices such as audio sources, GPS, and cell phones.

Figure 1 shows my former comm setup, with the FRS-X2 helmet-mounted communicator hooked to a Sirius Sportster satellite radio and an Apple iPod through a splitter to the audio port, a cell phone through the aux port and a third open port supplying the external push-to-talk switch. The mayhem of all these wires whipping around between my helmet and the devices at highway speed makes it easy to see why consolidated devices combined with emerging Bluetooth wireless technology hold so much promise.

When Chatterbox released its Bluetooth-enabled GMRS-X1 communicator, we decided to see if its wireless advantage was worth the extra cost over the conventional FRS-X2 model. For those unfamiliar with the term, Bluetooth is a

short-range wireless audio protocol for Personal Area Networks (PANs) that allows enabled devices including cell phones, laptops and GPSs to communicate with each other over a secure, globally unlicensed radio frequency. More and more, the wired connections shown in Figure 1 are going the way of the dodo bird, replaced with the infinitely more convenient integrated wireless device.

## Overview

Riders familiar with the FRS-X2 Communicator will be right at home with the GMRS-X1 Bluetooth. Like the older X2, this new model includes everything one needs to set up right out of the box. The transceiver comes complete with a helmet-mounted HiFi noise-reducing headset and microphone, rechargeable 4.8 VDC Ni-MH battery with AC charger, remote Push-To-Talk (PTT) switch, plastic clamshell helmet mounting bracket, and miscellaneous mounting hardware.

Both X1 Bluetooth and X2 models can operate as rider-to-passenger duplex intercoms in addition to their bike-to-bike communications capabilities. Likewise, they share many identical design attributes, as shown in Figure 2. Clearly, the major draw of the X1 is Bluetooth. This GMRS-X1 can accept up to two Bluetooth-enabled sources and

deliver full stereo sound through the included speakers.

In addition to Bluetooth, the GMRS-X1 improves on the conventional FRS-X2 design with an advertised range of up to five miles, as opposed to the FRS-X2's two-mile max. The X1 Bluetooth also boasts 22 primary channels. Both X1 Bluetooth and X2 have 38 subchannels per each primary channel.

The Chatterbox units can be mounted three different ways: to your helmet with the included brackets; on the motorcycle (most commonly with Velcro on aftermarket brackets or in tankbags); or stored on your person with optional belt clips. For the purposes of this test, we pitted the FRS-X2 against the GMRS-X1 Bluetooth in stock helmet-mounted form as shown in Figure 3, using no aftermarket mounting accessories.

As of press time, MSRP for the FRS-X2 is \$279.95, while the GMRS-X1 Bluetooth commands an MSRP of \$399.95. As usual, shopping around online can easily save you 15% off MSRP for either unit. (There is also a non-Bluetooth version of the GMRS-X1 that retails for \$329.95, but only the Bluetooth version is tested here.)

## The Wireless Future

Figure 4 illustrates my new budget-conscious integrated communications setup, consisting of a Chatterbox GMRS-X1 Communicator, Garmin Zumo 550 GPS, and an ordinary Verizon/LG VX8300 cell phone, all Bluetooth enabled. The Zumo GPS already contains an integrated XM satellite radio and mp3 player, rendering the former separate devices obsolete. It also pairs nicely with the LG phone, meaning that the Zumo essentially functions as a GPS, satellite radio, mp3 player, and cell phone while taking up only one of the two available Bluetooth inputs on the GMRS-X1 Communicator. For the second (unused) port on the GMRS-X1, I added my old Sirius Sportster satellite radio coupled with an ICombi AG-12 Bluetooth dongle as shown in Figure 5. With such a dongle, even non-Bluetooth 3.5mm jack devices such as this first generation Sportster radio can now interface wirelessly with the GMRS-X1. Dongles for the Chatterbox are available for a variety of applications (including Apple iPods) with MSRPs in the range of \$50-60.

## GMRS-X1 Bluetooth Communicator Performance

The biggest potential benefit of this upgrade is the elimination of wires between the communicator and other gear,

Figure 1

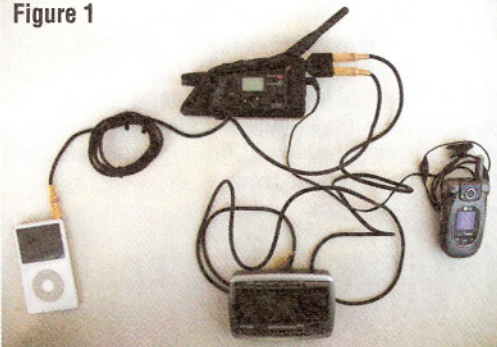


Figure 2



Figure 3



Figure 4



Figure 1: Conventional FRS-X2 Communicator with typical wired connections. Figure 2: Transceiver units are each approx. 2.5" x 5.2" x 1.5" and weighs 8 oz. FRS-X2 on top, GMRS-X1 on bottom. Figure 3: GMRS-X1 Bluetooth Communicator mounted on a full-face helmet. Figure 4: GMRS-X1 Bluetooth Communicator connected to devices wirelessly.

Figure 5



First gen Sirius Sportster with 3.5mm jack ICombi AG-12 Bluetooth dongle.

and here the Chatterbox GMRS-X1 delivers on its promise. To test ease of Bluetooth compatibility, we paired the X1 with each of the other devices listed here (Garmin Zumo, LG cell phone, and ICombi AG-12 dongle on various audio sources) both individually and in pairs. Following the clear directions in the Chatterbox's user manual, pairing was easy and there was no problem going wireless. My formerly time-consuming ritual of carefully running and tucking wires to prevent them from blowing around in the wind is now just an unpleasant memory!

Testing was conducted in the densely packed suburbs of central New Jersey, where the abundant power lines, plentiful foliage, and crammed buildings severely limited range. In this difficult environment, the advertised "up to 5-mile range" of the X1 only managed 2.1 miles, as compared to the 1.3 miles of the X2 in identical conditions. In exchange for the additional range, the X1 drained its battery after only six hours of continuous use. By contrast, the X2 was able to last about eight hours on an equivalent full charge. Both range and battery life are highly dependent on external conditions and an individual's usage habits, so some users may experience considerably different figures than those posted here. Testing was performed with constant audio playing in the background and sporadic communication between riders. Those riding in wide open spaces will likely experience substantially better range, while those who love to gab will likely experience decreased battery runtime, and vice versa.

Many users have complained about the ineffective VOX (voice activated) function, and the GMRS-X1 follows in that tradition. The system is either too sensitive (wind noise can trigger the microphone) or not sensitive enough (requiring shouting to activate). No amount of fiddling with the adjustment knob resulted in a happy medium, and because only one broadcast is possible at a time, frequent false alarms and garbled transmissions resulted.

Figure 6



Remote PTT Switch mounted on BMW R1150R with included Velcro band.

It was easier to use either of the two PTT switches available to the rider—one on the far left of the transceiver itself as shown in Figure 2, or one remote switch. Locating the remote PTT switch near the handlebar controls with the included Velcro mounting band (as shown in Figure 6) was the most obvious location, and safely allowed for convenient thumb access.

Although the Chatterbox units are advertised as only "water resistant," we never had any issues even while riding through torrential rain for hours. The helmet bracket itself is lightweight, but relatively flimsy and can easily break if the helmet is dropped on the mount, or if the user applies too much force in either installing or operating the communicator. For \$5, a spare bracket is a must if one is planning a long trip away from home.

### Sound Quality

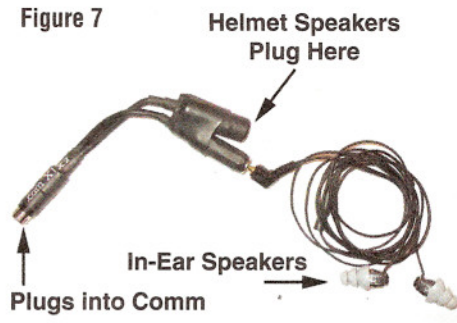
The Chatterbox's helmet-mounted speakers offer mediocre sound quality. The rider is forced to endure background road and wind noise in order to hear the speakers clearly, or if wearing earplugs, to suffer the resulting drop in sound quality.

Although tested here in stock form, anyone purchasing a Chatterbox X1/X2 Communicator is strongly advised to consider an adapter wire that allows for a set of in-ear speakers. For example, Figure 7 shows Cyclegadgets.com's NHT-YCX adapter made by Now Hear This (\$37) which allows the use of in-ear speakers (such as my Etymotic Research ER6i, shown connected to the NHT-YCX adapter in Figure 7) in lieu of the stock helmet speakers. Compared to helmet speakers, premium in-ear speakers like these offer huge improvements in sonic clarity, while doubling as earplugs to protect the user from dangerous prolonged exposure to background riding noise.

### Overall Impression & Conclusions

Overall value content, performance, and construction of the GMRS-X1 Bluetooth

Figure 7



NHT-YCX Adapter Cable with Etymotic in-ear speakers.

is what one can expect from a conventional Chatterbox like the FRS-X2, namely reasonable quality at an affordable price. But the convenience of a wireless configuration is well worth the additional \$120 or so, and will certainly be appreciated by anyone who regularly uses a conventional communicator.

Of course, the usual warnings apply about the personal risks motorcyclists face when using devices such as audio sources, GPS, and cell phones while riding. The seamless integration of Bluetooth devices ostensibly results in less operator distraction compared to separate devices for each function, but we all can guess what happens when we have an even wider variety of new gadgets to play with while in motion. Please remember, safety first!

It should also be noted that in practice, not all Bluetooth-enabled devices pair well together. Always verify the compatibility of the devices you are considering using in your setup by consulting the manufacturers or dealers familiar with the products.

Finally, the combination of paired devices shown in Figure 4 is my personal setup, and is definitely on the more basic end of what's available right now. No matter how you construct your personal comm system, an integrated device like the Garmin Zumo goes a long way towards consolidating various functions into a central point. In this case, four separate functions were crammed into only one port on the GMRS-X1 communicator!

At this rate, one can easily envision a small, ruggedized tablet type computer consolidating all of the aforementioned functions into an affordable, user friendly, motorcycle-specific package in the not too distant future.

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