

# Radioddity GD-77

## FAQ Frequently Asked Questions

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New user to GD-77? Got a question you can't find the answer to? Have a look here!

### **My GD-77 won't hear anything (analogue FM channel) even though the green LED is lit up?**

The green LED doesn't necessarily mean sound should be coming out of the speaker, it merely indicates that some sort of RF signal is on the frequency. It may or may not have matching CTCSS / PL tones. This is probably the reason why your GD-77 has remained silent - you've set an incorrect CTCSS / PL tone. Perhaps you don't even need one at all?

### **My GD-77 won't hear anything (DMR digital channel) even though the green LED is lit up?**

The green LED doesn't necessarily mean sound should be coming out of the speaker, it merely indicates that some sort of RF signal is on the frequency. Check that you definitely have the correct DMR colour code, correct timeslot and correct talkgroup programmed in to the channel. Unlike other DMR radios you may have been used to, the GD-77 absolutely requires a RX group list to be attached to each and every DMR channel. If you leave it set to 'none' then nothing will be received.

### **The green LED is lighting up, shouldn't I be hearing something?**

The green LED doesn't necessarily mean sound should be coming out of the speaker, it merely indicates that some sort of RF signal is on the frequency. On an analogue channel, there could be a signal with a CTCSS / PL tone that doesn't match. On a DMR channel, it could mean another talkgroup or other timeslot is active, or even idle DMR data being transmitted will cause the green LED to light up.

### **OK, I've checked all that, and I'm still not hearing any DMR transmissions. What next?**

Some people have reported success with the 'monitor' function. You need to program one of the buttons for the monitor function, and then when on a DMR channel press that button. A solid black speaker symbol will appear to indicate that the monitor function is on. If this works however, it's a sure sign that, somewhere, you have your DMR configuration wrong.

### **Nope, still not hearing any DMR transmissions. Anything else to try?**

Yes, there's two things you can try at this stage. First, see if there's anyone else nearby who has a GD-77 working correctly and borrow their codeplug. Second, and as a last resort, perform a factory reset (below) and program a very simple codeplug to prove that it will receive a DMR channel. Then slowly build up your configuration from there.

### **My GD-77 is doing funny things eg: no transmit on any frequency / signal meter randomly goes full scale even though there is no signal genuinely present / other general strange issues. Help!**

Try a reset (below) and then try a very simple codeplug. Many strange issues seem to stem from having a large codeplug, created bit by bit, added to ad-hoc etc. While in theory it shouldn't be a problem, frequently it does lead to strange things happening. Often the solution is to start fresh and write a new codeplug from the ground up.

### **How do I do a reset on the GD-77?**

Page 67 of the user manual says to hold down side key 1 (the black button underneath the PTT) and keypad button 1 while turning on. You'll be greeted with 'Memory Reset?' and to complete the process you have to confirm by pressing the green button. Don't turn off the radio while it's resetting. In newer versions of firmware, 2.6.7 and later, there is a bug that the reset sometimes doesn't quite refresh the memory properly; indeed a reset on later versions of firmware may even induce new problems. To get around this problem, downgrade your firmware to V2.6.3 first, then do a memory reset. As part of the reset process you may see 'Factory init' depending on how corrupt the memory had become. After resetting under firmware version 2.6.3, you may like to load a simple codeplug to test that the problem you were experiencing has been cleared. After that, upgrade your firmware to your desired version, and finally re-send your codeplug back to the GD-77 using the correct version of CPS that matches the firmware version.

### **How do I do a reset on the GD-77S (no keypad version)?**

First turn the top selector to channel 16. Turn off the radio. Press and hold down the small black button below the PTT and the small top panel orange key, and turn on the radio. When the top panel LED turns to yellowish-green colour, you can let go of the buttons. Wait until LED stops flashing, then turn off radio, and turn back on again. Reset is now complete. No need to reprogram the radio.

### **How do I load new / upgrade / downgrade firmware versions?**

Assuming you've downloaded the firmware package which includes the PC executable loader software and the firmware .sgl image, you need to connect your programming cable and hold down the two side keys underneath the PTT while turning the radio on. The screen of the GD-77 will be all blank and the top panel LED will glow green, indicating it's ready to accept a new firmware image. It doesn't matter if the firmware image is older or newer, it'll accept it without problem so whether you are updating or downgrading, it doesn't matter, the process is the same. Note that you don't need to press & hold these two side buttons for normal CPS software programming, just plug in the programming cable, turn the radio on and program away.

### **What's the best firmware version to use?**

Generally, the later the firmware version, the more features you will have available. There are some bugs in the current V3.0.6, and if you find you can't live with those bugs, then version 2.6.6 is often preferred. I have no doubt that Radioddity will iron out all the bugs eventually, and for that reason you should keep an eye out for later versions as they are released.

### **Is there a list of bugs somewhere?**

Not that I know of. I keep my own list, which currently has one critical, four medium and four low priority bugs.

### **Where do I get newer (or older) versions of CPS software or firmware?**

You can go to the Radioddity web page, click on the Support tab and then look for GD-77 software in there. Or, you can also find these at the Radioddity Facebook support web pages.

**I heard it was best to use certain CPS versions with certain firmware versions. What are those versions?**

It's not only good, in some cases it is absolutely vital to use matching versions. Here's a list of matching firmware to CPS software versions:

Firmware earlier than 2.5.6 = CPS software 1.1.2

Firmware 2.5.6 = CPS software 1.1.4

Firmware 2.6.1 = CPS software 1.1.5

Firmware 2.6.3 = CPS software 1.1.6 and 1.1.7

Firmware 2.6.6 = CPS software 1.1.8 and 1.1.10

Firmware 2.6.7 = CPS software 1.1.12

Firmware 2.6.8 = CPS software 1.1.13

Firmware 2.6.9 = CPS software 1.1.13

Firmware 3.0.6 = CPS software 2.0.5

**Where can I get a codeplug for [insert your city / region here] ?**

You can try your local radio club, or try the Radioddity Facebook support page, check the files area. You might get lucky. Otherwise, you'll have to do the hard yards yourself by making your own codeplug.

**I have a Baofeng programming cable. Is it compatible with the GD-77?**

No, it's not.

**My computer won't connect to the GD-77. Any hints?**

The programming cable can be a tight fit into the speaker microphone sockets. Make sure the cable is firmly seated in the socket. You can also try a different USB port on your computer. I have one USB port that refuses to work for any USB radio programming no matter what brand of radio is being used, but that same port works fine for a USB memory stick. On some computers you'll need to use the same USB port that you used the very first time you successfully communicated with your GD-77. You should also connect to the USB first with the radio turned off, then turn on the radio.

**Is the CPS software compatible with Apple Mac or Linux?**

No, though it reportedly works under PC emulation for those platforms.

**Some menus and other items are greyed out in the CPS, and I can't change them. What gives?**

Early versions of software had a basic and advanced user mode, the default was basic. To switch to advanced, you hit Ctrl-Shift-Alt-F11 or Ctrl-Shift-Alt-5 and enter the password DMR961510

**The software won't install, my computer's antivirus says it's infected. What now?**

That is a so-called false-positive. The software is fine, it has been proven harmless by thousands of users worldwide. You can safely instruct your antivirus software to make an exception for it, or disable the antivirus software if an exception can't be made.

**The software won't install, I get a 'side by side' error. How do I fix it?**

You need to find and run vcredist\_x86\_208.exe which will fix that up.

**Is the GD-77 waterproof / water resistant / shower proof?**

No.

**Why can't I scan? It says 'Scan fail'**

If you have 'double wait' set to 'double' then you can't scan. Another possibility is that scan hasn't been set up properly. You need to nominate each channel to scan in a scan list, and also nominate which scan list a channel should belong to in the channel settings itself. This sounds like it's a bit of doubling up, but is necessary to ensure scan works correctly. Finally, the last thing to confirm is that you have selected a channel that is a member of the scan group to commence your scan on.

**My GD-77 is displaying strange characters on the display, it looks like Chinese. How can I switch it back to English?**

There's three ways you can do this:

- 1) First try resending a saved codeplug to the GD-77
- 2) If that doesn't work, then using CPS software version 1.1.2 (the only version that enabled selection of language) enter advanced mode by the Shift-Ctrl-Alt-F11 or Shift-Ctrl-Alt-5 keyboard combination and enter password DMR961510. Then go to the Menu selection in the CPS and on the right will be a language selection, select

English. Then write this to the GD-77 (no need to downgrade firmware version). After this, confirm your GD-77 is back to normal and reload your usual codeplug. 3) And if those don't work, try loading firmware version 2.6.3, reset the GD-77 and write a simple codeplug with CPS version 1.1.6 or 1.1.7 to the GD-77.

### **Why can't the GD-77 receive two frequencies at once? It shows two frequencies in double wait mode so it should, right?**

Sorry, wrong. Just because two frequencies are displayed doesn't automatically mean the GD-77 has the ability to receive two frequencies at once. It can strictly only receive one at a time. In double wait mode, it quickly toggles receive between the two displayed frequencies or channels, just as if it were scanning them. But the GD-77 definitely is not able to receive two frequencies at once.

### **Is the GD-77 compatible with APCO P-25, NXDN, D-Star, Fusion, TETRA, etc?**

No, it'll only do plain analogue FM, narrow and wideband, and DMR Tier 1 and Tier 2.

### **Is the GD-77 compatible with DMR Tier 3 or Capacity Plus systems?**

No. However, since the air interface for digital voice is common between Tier 2 and Tier 3, you can at least listen in on a Tier 3 or Capacity Plus system. You'll have to find the frequencies used by that system manually, and scan them as if they were individual DMR channels. It's messy, but it sort of works.

### **When using a speaker microphone, my transmitted audio in FM is good, but sounds horrible in DMR mode. What's going on?**

DMR transmissions are pulsed RF, which are very prone to causing interference to other devices. In this case, the pulsed RF is getting in to your speaker microphone audio. A good quality speaker microphone, designed for DMR radios, is the solution. Alternatively, you can modify your existing speaker microphone with a RF decoupling capacitor directly across the microphone insert and adding an inductor in line with the microphone insert to keep the pulsed RF interference in check.

### **What's this 'promiscuous mode' and how do I use it?**

Promiscuous mode, or 'monitor' mode is a feature on DMR where the radio will hear all talkgroups on the current timeslot / colour code DMR transmission, whether you have those talkgroups programmed in your GD-77 or not. You MUST have the

timeslot and colour code correctly programmed in for this to work, though. To activate monitor mode, you have to program one of your buttons for the monitor function. Then, select a DMR channel and press the monitor button, a solid black speaker will appear in the display to confirm monitor mode is active. At this point, any talkgroup on that channel will be heard. You can commence a scan of memories and the monitor mode will stay active, even though the speaker symbol will disappear at times while scanning across analogue channels.

### **Can I re-program the top orange button for something else other than an 'emergency' feature?**

You sure can. There's no restriction at all with reprogramming that button.

### **Can the GD-77 be programmed with out of band frequencies?**

Yes it can, but that will obviously negate it's FCC Part 90 approval. It shouldn't be used for out of band transmissions. The process to get the software to accept out of band frequency entry will require a little bit of technical know-how with a process called hex-editing.

### **How far out of band can the GD-77 go?**

Not too far. Generally you should expect 130-180 MHz, 195-285 MHz and 390-520 MHz.

### **Does that mean the GD-77 can work on 220 MHz / 1.25 meters?**

For receive only, yes, with reduced sensitivity, around 5uV for 12dB SINAD. Do not try to transmit here, the GD-77 will not put out much power in that band, and will be very rich in unfiltered harmonics. You may even damage the electronics in the GD-77.

### **Can I use another power supply, like my shack 13.8 volt supply, to power the GD-77 charging base?**

Yes, you can, but check the voltage the charger base is going to deliver to an inserted battery first. The charging base should regulate the voltage to a steady 8.4 volts, and I found that an input voltage anywhere between 10 and 16 volts was acceptable on the many chargers I've seen, but some others report the voltage didn't remain perfectly constant on their charger base.

### **I have a Baofeng / Kenwood / other speaker microphone, will it work with the GD-77?**

If it fits in the speaker microphone socket of the GD-77, then it most likely will work. Just bear in mind the issues with DMR transmissions and pulsed RF getting back into the microphone; some microphones are better than others for this.

### **I connected my GD-77 to an external base station antenna. All the received signals disappeared! Why?**

The GD-77 uses a SDR based receiver, and it's a bit sensitive to overloading with too much RF. With traditional superheterodyne receivers, overload is observed with all sorts of interference being audible. On the other hand, SDR receivers simply shut down until the overload condition is removed.

### **Another receiver here picks up all transmissions, but the GD-77 is 'slow' to hear them, is there a problem?**

This is likely due to the battery save features of the GD-77. When the battery saver is working, the receiver goes to sleep, periodically waking up to check for any activity and then going back to sleep. That can delay the detection of a wanted transmission. Turn off battery saving options if this bothers you.

### **Where can I get a soft protective carry case for the GD-77?**

No case has yet been made specifically for the GD-77, but the Retevis RT-8 and TYT MD2017 cases are supposed to fit very well.

### **Can I get spare batteries?**

Depending on where you are, maybe. Sometimes you can get spare batteries on their own, other times you have to purchase them with your GD-77. It seems to depend on where you live, probably due to postal restrictions for sending just a lithium-ion battery on its own.

### **What's normal behavior for the battery charger base?**

With nothing in the charger base, there is a green LED lit, you can ignore that. When you put your radio, or just a battery, in the charger base, the LED turns red to indicate charging. Once the battery is charged, the LED will turn green. If your



charger base doesn't turn red when you drop in a battery, it means that either the charger base or the battery is faulty.

**When I turn on the radio, it beeps and makes all the right sounds, but there's no display. It worked fine yesterday. What can I do?**

There's two things that people have done to help fix this problem. First is to do a factory reset and reprogram the GD-77 to clear the problem. The second is to open up the radio and clean and reseat the ribbon connector that connects the main radio to the front display. That requires a very gentle touch to do, but no other specialist electronic knowledge is needed. All you have to know is that there is a little 'collar' that holds in the ribbon cable to its connector, and that you use a fine jeweler's flat blade screw driver to flip up the retaining collar by its side 'ears' to release the ribbon cable. Clean the ribbon cable by gently wiping it, and then firmly reinsert it to the connector and flip down the collar to retain it again. Repeat for the other end of the ribbon cable. If those two solutions don't work, then it's a return to supplier, unfortunately.

**There's a soft audio whine coming through the speaker with any received transmissions, most noticeable with the volume turned all the way down. As the volume is increased, the whine fades into the background. It also isn't heard when using a speaker microphone. Is that normal?**

No, that's not normal. I think that's a hardware fault with the audio amplifier, but no-one seems to have gotten to the core of that particular problem yet. Might be best to return the radio to the supplier in this instance.

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