

OpenMD9600 is based on OpenGD77 and so this is not a complete User Guide it just covers the User interface so that you know which buttons on the MD9600/RT90 have the same function as which buttons on the GD77. I have included some Useful Key strokes for some of the more complicated functions but for all of the functions of OpenMD9600 you need to read the OpenGD77 User guide. If you don't have it, then you can find it by going to my OpenGD77 Updates page and using the link you will find there :-

[www.spencerweb.net/Downloads/OpenGD77/GD\\_Updates/gd\\_updates.html](http://www.spencerweb.net/Downloads/OpenGD77/GD_Updates/gd_updates.html)

Currently the User Interface controls are not ideal

The underlying GD77 user interface, expects the hardware to have more buttons than the MD-9600 / RT-90 has.

Specifically these radios do not have the Left or Right keypad keys, or the SK1 or SK2 buttons.

The radio also has a rotary control, but this is not the same as the rotary control on the GD77S. The rotary control only senses whether its being rotated clockwise or anti-clockwise, and can be rotated around and around.

For the VFO and the Channel screen, the firmware uses the Rotary control in place of the Up and Down buttons, because this is the most logical thing to do on these screens, especially the VFO screen and so rotating the control changes the channel or the VFO frequency.

The front panel of the radio has Up and Down buttons, but as the rotary control is used like the up and down buttons on the GD77. The Up and Down buttons are mapped to the Right and Left buttons in the user interface, so they change the Talk Group on DMR and the Squelch on FM.

However in the menu's there is not an obvious choice use for the Rotary Control, or the Up / Down buttons.

So the current mapping uses the Up and down buttons to move between items and the Rotary control to change items in the selected menu.

On the front panel, the Enter button is mapped to Green and the Esc/Band button is mapped to Red.

Currently the button P1 is mapped to button SK2 (Blue) and P2 is mapped to SK1, because the GD77 user interface makes most use of SK2, so it seemed more logical to use P1 for the most used button, so for the blind user P2 will voice Talk-Group, Channel etc.

Button P1 is mapped to the SK2 function so a short press while receiving a transmission will change the TX TG to the RX TG in DMR mode as will a short press of D on the microphone.

Button P2 is mapped to the SK1 function and so a short press will voice the last change and a long press will voice all the current parameters.

Button P3 Holding P3 while turning on the radio with the power button causes a Setting Update.

Button P4 is currently mapped to the \* STAR key to allow the Time Slot or FM bandwidth to be changed from the front panel in the same way as the star key on the GD77.

The mic keypad is also not ideal for the UI of the firmware, because it does not have Left/Right keys and also no SK2 or SK1 button.

Unfortunately the electronics in the mic keypad is just a resistor network, so it is not possible to accurately sense when more than one key is pressed at the same time.

But the mic does have keys A,B,C and D which are not on the GD77

So the current mapping is

"A/B" = Green

"A" = Red

"B" = Right

"C" = Left

"D" = like SK2 set TX TG to RX TG in DMR mode

Long press of "D" currently toggles latching of SK2, but this is functionality has problems because its easy to forget that SK2 has been latched, and this results in the UI not behaving as expected. SK2 latch automatically releases after 3 seconds with a high low tone from the radio. The latch is set after a 0.5 second press (low then high tone from the radio), this is a long press. If 0.5 seconds is too short for you then go to general options and change the key long to a value longer than half a second. Many of the latched functions will also work by holding the P1 button rather than latching the D button.

Currently we do not have any indication on the display that SK2 is latched, and potentially even if we keep "D" as some sort of SK2 functionality we should perhaps not latch it.

Although most of the menu's are the same as OpenGD77 there are one or two special functions available in OpenMD9600 which are not in OpenGD77 such as in Sound Options there is a Click Suppress which you can turn on as the MD9600/RT90 can make an annoying loud click when a station you are listening too ends it's transmission. This option will turn the loud click(caused by a hardware bug) into a soft plop which most people find more acceptable.

Also many people find the audio volume of a DMR signal is quieter than an FM station so there is a DMR RX AGC in the Sound options where you can increase or decrease the volume of the DMR audio. If you increase it too much then louder stations may become distorted.

## Useful key strokes

**Level 1 Voicing** Short press of P2 to voice last change. Long press of P2 to voice all information Zone,Mode,Channel,Timeslot,Colour code,talk group and Power. After long press of P2, a short press will repeat all the information until a change is made for example to the Talk Group or Channel.

**Level 3 Voicing** Turning on the radio with the power button while holding the # key will cause the radio to power up with voicing level 3 enabled.

**Change time slot** Hit the star/Asterisk button or P4(Press and hold the star button for 2 seconds to remove the override.)

**Change power** press and hold D for around a second actually anything longer than half a second is long enough to set the latch you will hear a low then high tone telling you the latch is set then use the up and down arrow keys on the front panel to change the power. The latch will reset 3 seconds after you stop using the up and down arrow keys. Or Hold P1 depressed and use the up and down arrow keys on the front panel.

**DMR/NBFM Switch** Press and hold D until you hear the low then high tone (normally 0.5 seconds) then hit the star/asterisk button or hold P1 and press P4.

**Change zones** press and hold D to latch it (low then high tone normally half a second) then use the up and down arrow keys on the microphone to move between zones. Or hold the P1 button and use the up and down key on the microphone to change zones.

**GPS Screen** there is a GPS screen in the menu's where you can see the GPS position information and you can transfer your position to the satellite position by holding the D button until you hear the low then high tone to activate the latch and then hit B.

**Clear Last Heard** Long hold on the # key will clear the last heard list.

**Reset to initial settings** Hold P3 while turning on the Radio.

**Lock PTT** Ent then # **Unlock** Ent then #

**Lock Keypad** Ent then \* **Unlock** Hold P1 and hit \*

**Scan** Press and hold the up button on the microphone to start a scan. To omit a channel while scanning hit the B button on the microphone. For VFO scanning hit the ESC/Band button on the front panel or A on the microphone and the VFO will be selected. Now hold the up arrow key on the microphone and the scan limits will be displayed. Enter a new start frequency followed by a new end frequency if you want to change the scan limits. Hold the up arrow on the microphone to begin the scan and exit in the same way as for channel scanning.

**Location** Select Radio info in the menu's and cursor up or down to location and enter first Latitude and then Longitude and you can change North/south and East/West by holding the D key until you hear the low then high tone to latch it or holding P1 depressed and using the up and down buttons. Confirm the location with the ENT button.

**Quick Keys** Just as with the GD77 you can put menu information on a quick key when you want to access it quickly, for example Last Heard or in channel details things like Receive Frequency etc. Just go to menu's and select the menu item you want on a quick key and then hold the D key on the microphone until it latches (low followed by the high tone) and then hit the number key 0 to 9 you want to assign. Or hold P1 depressed and hit the number key you want to assign. To recall the quick key information just hold the D key on the microphone until

it latches and then hit the number key to voice the information or hold P1 and hit the number key).

If there are a number of entries in the menu then when you power the radio on it will voice the first entry to cursor down to another entry you need to hit ESC on the front panel or the A on the microphone keyboard and then cursor to the entry you want to hear then you can exit with ENT or ESC. This will be remembered until you power off but at the moment when you power on the quick key will return to voicing the first entry in the list.

You can clear a quick key by holding the D key on the microphone until it latches or hold P1 and then holding down the number key until you get the confirm tones which means key cleared.