Release Notes for Radioddity GD-168 update 1.07

July 1st 2025

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About Radioddity

'You, our friend and customer, are our focus"

At Radioddity, our customers are important to us. As a customer, your time and money are important to you. When you buy radios online, you face a dilemma: buy from a reputable website at a high price, or try to save money by choosing a retailer that may not offer quality goods, service or advice. At Radioddity.com, you don't have to choose between low prices and a safe shopping experience. Whether you are a first-time shopper or an experienced radio amateur, we always do our utmost to ensure that you get the best possible value for money. Over the past few years, Radioddity has continuously strived to better meet the needs of wireless equipment buyers and has become a reliable partner. We do this by offering the highest quality products at an affordable price and by providing you with first-class support after purchase as well as out of warranty. Because as our customer, you deserve nothing less.

Our promise: To offer you the best shopping experience

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support@radioddity.com

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1 Firmware release notes

The following table lists the details that have been changed with new versions of the Radioddity GD-168 firmware and CPS. Generally previous updates are included in the latest version. Normally only the main firmware of the radio needs to be updated. Currently the icons and the base band 3288 firmware are still unchanged since its initial sales. However, we have included the corresponding files and utility program within the update archive as well.

Note: *Never update your radio if it is not really necessary, or in other words: **'Don't fix it if it's not broken'**! This cannot be emphasized often enough. To update the Radioddity GD-168, only use the firmware that you can find on our support pages. Using other firmware will void your warranty. Before carrying out an update, make sure that the firmware is still available for download on our support page. All firmware updates for the Radioddity GD-168 are supplied with 'Release Notes'.*

Please carefully read the 'Release Notes' and all documents contained in the firmware archives!

1.1 CPS: V1.07, Icon: V1.34, SCT 3288: V3_01_01A5

revision	Changes	released
V1.07	• Resolve the issue that Satellite TX frequency is incorrect. • Resolve the issue that Satellite passes are inaccurate.	2025-06-14

1.2 CPS: V1.06, Icon: V1.34, SCT 3288: V3_01_01A5

revision	Changes	released
V1.06	• Resolve the issue that APRS doesn't work. • Resolve the issue that GPS info menu was missing the Edit button. • Resolve the issue that Satellite AoS (Acquisition of Signal) limit doesn't work. • Resolve the issue that TOT Predict does not work. • Resolve the issue that when listen to a Satellite, the radio doesn't have a sound when SQ set 0. • Improve the scan speed. • Resolve the issue that other radios AES 256/ARC4 encrypted communication is not properly received • Resolve the issue that receiving a digital repeater signal in mixed-mode is not working as expected. • Resolve the issue that the radio doesn't display the satellite name after the satellite information has been loaded.	2025-04-29 Not officially released

1.3 CPS: V1.05, Icon: V1.34, SCT 3288: V3_01_01A5

revision	Changes	released
V1.05	• Improve the scan speed. • Allows APRS Transmit under Satellite menu, press PTT+PF2 button to transmit the APRS. The APRS shall be set up in CPS → Tool → GPS Satellite Data Update → AprsTxFreq(Hz). • Allows Arm CTCSS transmit under Satellite menu, press PTT+PF1 button to transmit the ArmCTC or DCS. The Arm CTC or Arm DCS shall be set up in CPS →Tool →GPS Satellite Data Update → Arm CTC or Arm DCS first. • Separate the color code for TX and RX in channel setting. When you load the old. rdt file to the CPS, the CPS will come up with a screen that asks whether you want to let the TX CC be the same as RX CC, click on Yes will make the TX CC= RX CC • Move CRC ignore into each channel setting instead of a global setting that would apply to all channels. • CPS → Optional Setting → Satellite → SAT Aos limit, allows to set up the Elevation/Degrees for the satellite. • CPS → Optional Setting → Satellite → SAT Fix PointName 1-8, allows to set the name for Fixed location 1-8. • CPS → Optional Setting → Display → Night Start hour, Night Start Min, Night end hour and Night end Min, it allows to set up the Night time, the radio will switch to night mode automatically in the night time period. • CPS → Tool → GPS Satellite Data Update, allows to import and export the satellite data in .CSV file format.	2025-01-23 Not officially released

1.4 CPS: V1.04, Icon: V1.34, SCT 3288: V3_01_01A5

revision	Changes	released
V1.04	• AES256 function – Improve the issue that the radio operates incorrectly if using AES256 encryption. • Mic function – Improve the issue that some radios have low transmit audio. • Ext speaker microphone – Improve the issue that using FW V1.03 with external mic speaker on a DMR repeater channel, if the repeater doesn't reply when PTT is pressed, no tone is played.	2024-12-3 Not officially released

1.5 CPS: V1.03, Icon: V1.34, SCT 3288: V3_01_01A5

revision	Changes	released
V1.03	• Satellite function (only available if a fixed GPS location has been defined with the CPS) - Allows set up power for Satellite separately from channel power. Press * key to switch the power level when the radio is in Satellite mode. - Improve the issue that radio stuck during predicting. - Allow the radio stay at the satellite menu, ignore the menu exit time setting. The radio will exit Satellite menu by pressing the return key only. - The CPS → tool → Satellite Data Updating, this page is updated to allow input different download link for satellite information update use. • In CPS → Digital → Master ID, allows set up a Master ID for the radio. In radio menu → Setting → Channel Set → Radio ID, if you select the master ID in a channel, all the channels will switch to use master ID, it is a public setting for all channels. It is helpful when you temporarily lending out radios. • CPS → Tool → Radio recording, update the recording page	2024-11-16 Not officially released

1.6 CPS: V1.02d, Icon: V1.34, SCT 3288: V3_01_01A5

revision	Changes	released
1.02d	• Initial firmware	2024-09-10

2 Updating the Radioddity GD-168

Updating the Radioddity GD-168 firmware may involve various steps. As for v1.03 it requires to update three parts within the Radioddity GD-168 itself (firmware, baseband firmware and icons) plus the update of the Radioddity CPS for the Radioddity GD-168. Before starting to update your Radioddity GD-168 or your Radioddity CPS, save a backup of your current codeplug to a file on your PC.

> ***Note**: Never install any firmware or CPS not originating from Radioddity. Always check the availability of the update archive on the Radioddity support page for the Radioddity GD-168 prior to performing any update.*

2.1 Backup of current codeplug

1. In order to avoid any damage of the Radioddity GD-168 CPU or memory, it is required to turn off APRS on the Radioddity GD-168 during a firmware update. That´s done at the Radioddity GD-168 as follows:

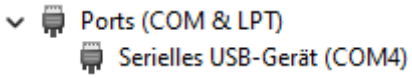
   MENU → APRS → Intervals →Off

2. Connect the Radioddity GD-168 to your PC using the supplied USB-C to USB-A cable.

3. Turn on the Radioddity GD-168.

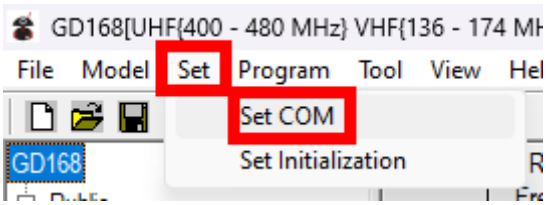
   > ***Note:** The supplied USB-C to USB-A (programming/charging) cable for the Radioddity GD-168 is a plain USB-C to USB-A data-cable and does not contain any electronics. In order for the Radioddity GD-168 virtual COM-port to be visible for the PC, the Radioddity GD-168 needs to be fully powered on.*

4. Check your device manager for the virtual COM-port that represents the Radioddity GD-168. As for the below example this would be COM4.

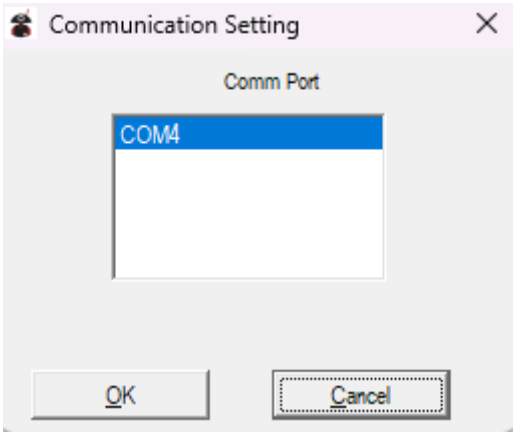
   

5. Start the Radioddity GD-168 CPS and within the menu select.

   Set → Set COM.

6. A popup-window will show the available COM-ports.

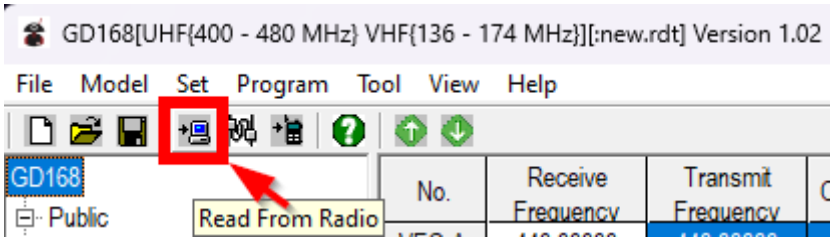


7. Select the virtual COM-port that corresponds to your Radioddity GD-168.

8. Before starting to update the firmware or the CPS, we advise to backup your current codeplug to a file on your PC. Do so by either clicking in the CPS menu on:

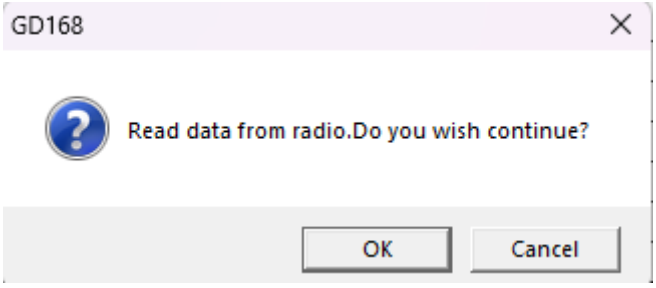
Program → Read From Radio

or by clicking on the appropriate icon to start copying the current codeplug from the Radioddity GD-168 to your PC.

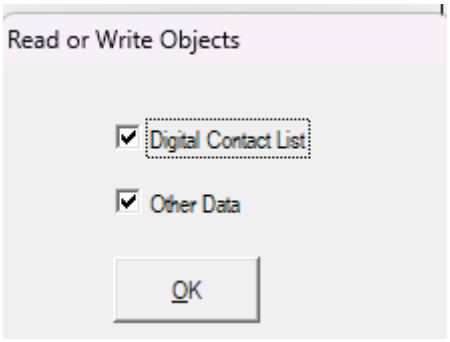


9. Please make sure the current codeplug has been saved to your PC before you start to update the Radioddity GD-168.

10. A confirmation dialog will be displayed.

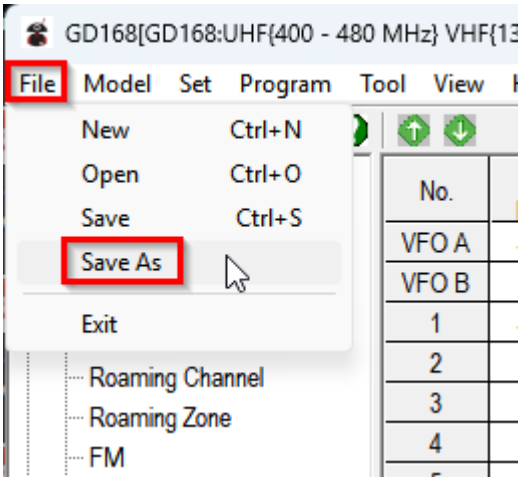


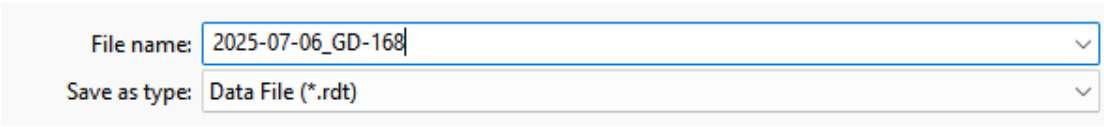
11. Transfer both, the “Digital Contact List” and the “Other Data” to the PC.



12. Next save the current codeplug to a file of your choice. We advise to use some naming scheme such as “YYYY-MM-DD_RADIODDITY GD-168”. To do so, select

File → Save as



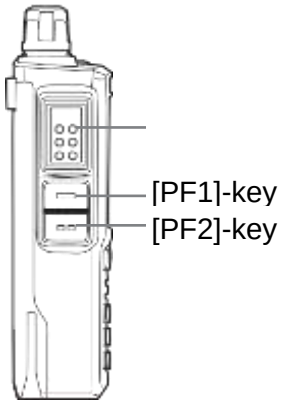


13. As soon as the codeplug has been saved to a file a confirmation popup will be displayed.

This completes the creation of a codeplug backup file and you are now ready to start the actual update process

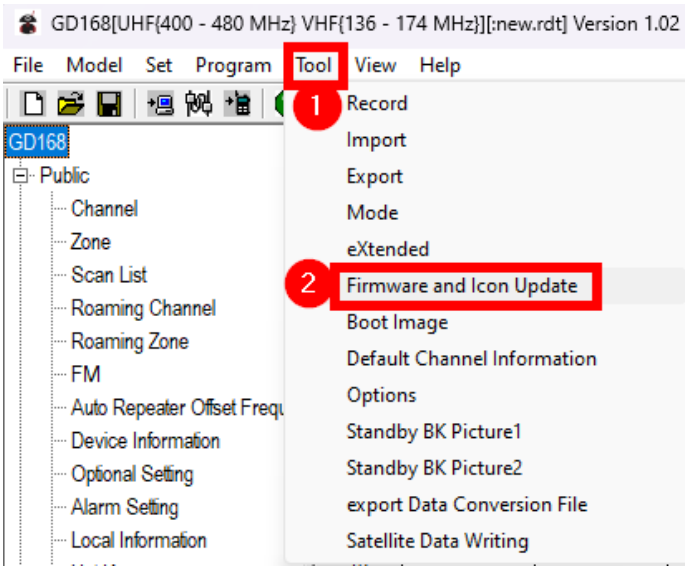
2.2 Updating the main firmware

1. Connect the Radioddity GD-168 to your PC using the supplied USB-C to USB-A cable.
2. Turn off the Radioddity GD-168.
3. At the Radioddity GD-168 hold both functions keys [PF1] and [PF2] on the left side of the radio depressed.



4. Keep the function keys of the Radioddity GD-168 depressed while turning on the radio.
5. The display of the Radioddity GD-168 will remain dark, but the status-LED on the top of the radio will start blinking. This indicates that the Radioddity GD-168 is now in firmware-update mode.
6. Release both function keys, [PF1] and [PF2]
7. Now start the current CPS and select the virtual COM-port that represents the Radioddity GD-168.
8. Now enter the submenu for updating the firmware of the Radioddity GD-168. Do so by clicking in the CPS menu on:

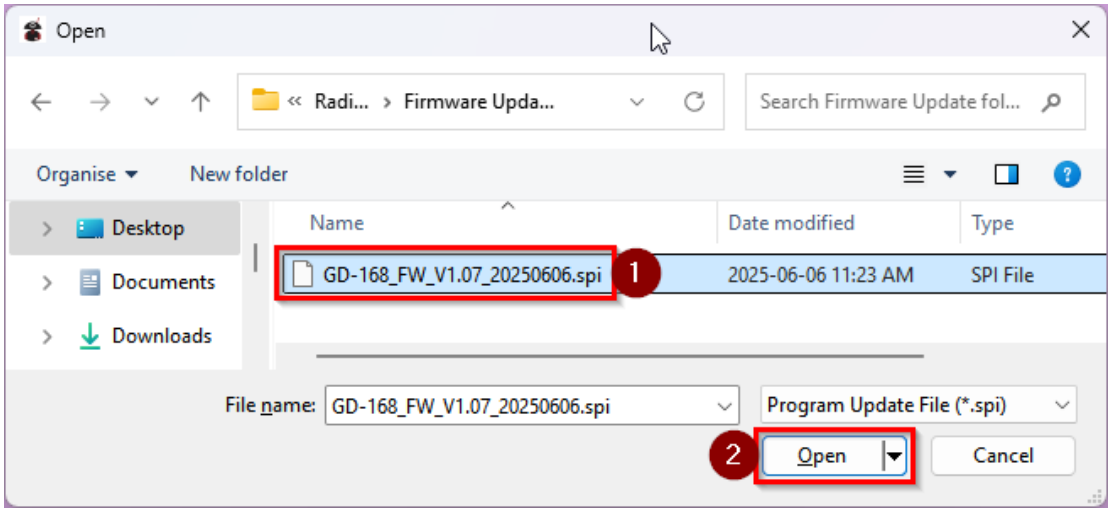
Tool → Firmware and Icon Update



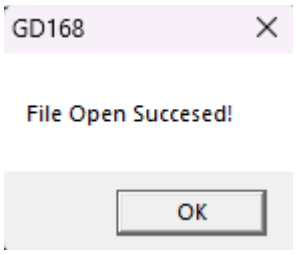
9. Now click on Open Update File and navigate to the "Firmware Update folder" of the extracted archive that contains the Radioddity firmware GD-168_FW_Vx.xx_YYYYMMDD.spi for updating the radio.

> ***Note:*** *Never use any firmware that has not been published by Radioddity. There may be radios on the market that look almost the same as the Radioddity GD-168 but aren´t the same. Using a firmware not provided for the Radioddity GD-168 may brick your radio.*

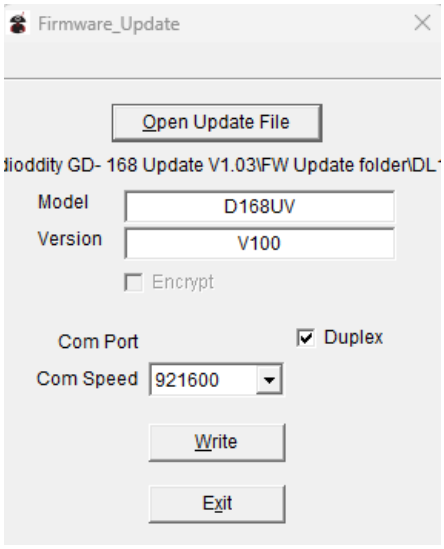
10. Select the firmware update file ending with ".spi" (1) and confirm your selection by clicking on Open (2).



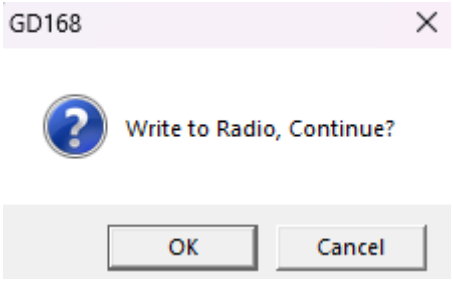
11. A confirmation popup will be displayed. Click on OK.



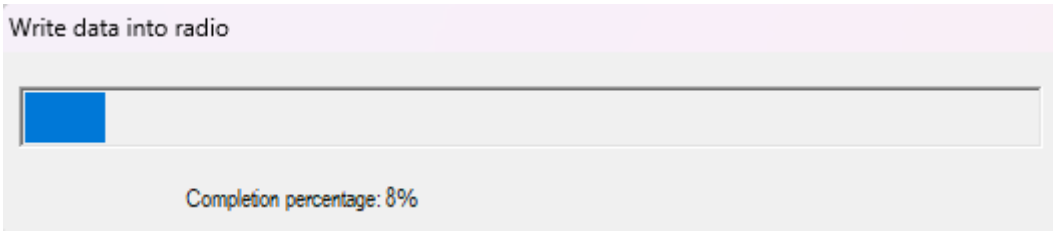
12. Now the other fields will automatically be filled as well.



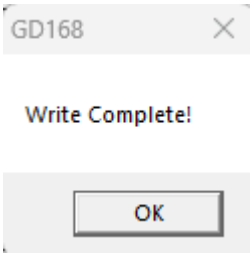
13. As soon as you now click on Write you will be asked one more time if you really want to update the radio.



14. As soon as you now confirm the question by clicking on OK the update process will be started.
15. A status bar visualizes the progress of the update process.



16. A popup will be shown as soon as the update has completed.



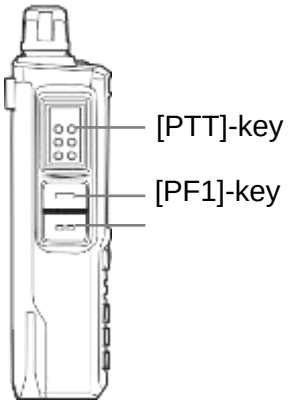
17. The Radioddity GD-168 will automatically reboot.

In order to complete the firmware update process of the Radioddity GD-168, it is required to reset the main control unit (MCU) of the radio.

2.2.1 Reset Main Control Unit (MCU)

Before you do anything else it is now required to reset the radio Main Control Unit (MCU) of the Radioddity GD-168 as follows.

1. Turn off the Radioddity GD-168.
2. Now press the [PTT] and [PF1] key and keep both keys depressed.



3. Keep the [PTT] and [PR1] key depressed until you see the following dialog on the display of the Radioddity GD-168.

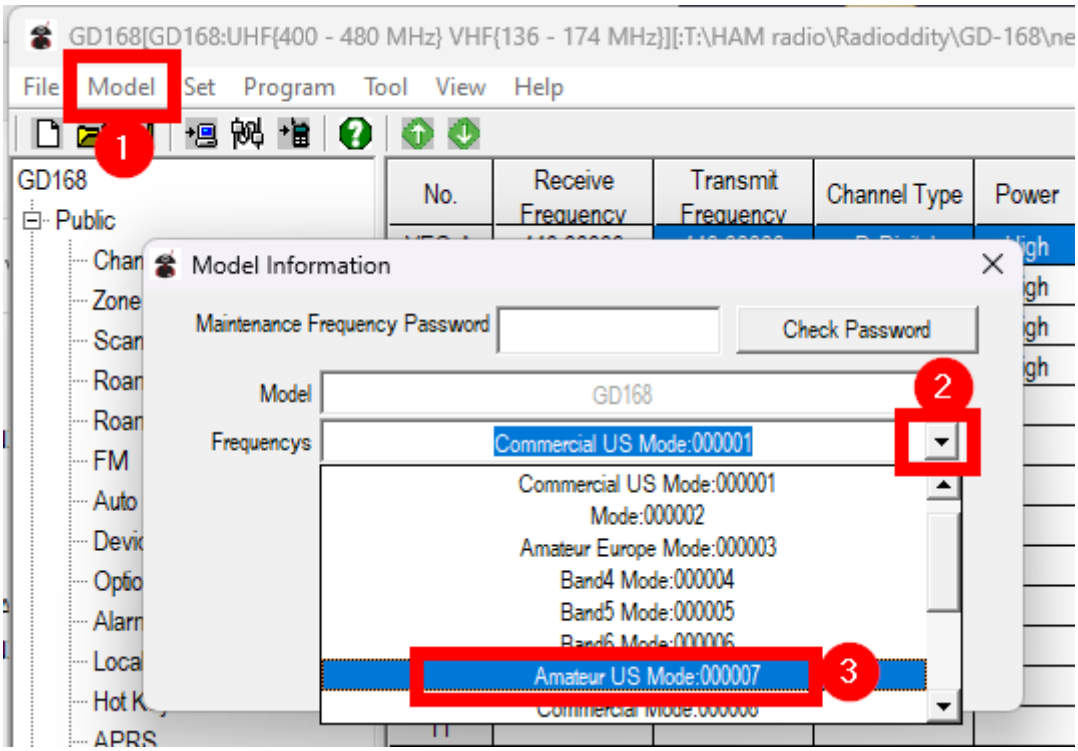
4. Now press the key at the Radioddity GD-168 to confirm the initialization of the radio.

5. The display of the Radioddity GD-168 will show.

6. After about a minute the Radioddity GD-168 will reboot and display its default time zone, time and date.

7. Using the [PF1] key you can now navigate between the various fields and update them using the ▲ and ▼ arrow keys of the Radioddity GD-168.
8. After you made your changes, confirm your changes by clicking on the ▬ key of your Radioddity GD-168.
9. The Radioddity GD-168 will reboot.
10. You will notice, that several submenu entries are missing (due to the radio not yet being programmed – we will get back to that later.

11. Do not forget to select the proper frequency MODE (region) using the CPS (Model → Frequencies). All frequency data will again be cleared.



2.2.2 Set frequency MODE (region)

Before you do anything else the very same frequency MODE (region) also needs to be selected on the radio itself. To do so:

1. Turn off the Radioddity GD-168.
2. Now press the [PTT] and the numerical [1] key and keep both keys depressed.
3. Keep the [PTT] and the numerical [1] key depressed until you see the following dialog on the display of the Radioddity GD-168.

4. Release the [PTT] and the numerical [1] key.

5. The bottom line of the display will now show the currently selected MODE (region). The line above shows the associated frequency range for that region.

Possible regions (MODES) are:

MODE	Region	UHF Frequency range	VHF Frequency range
00000	Commercial Europe	400-480 MHz	136-174 MHz
00001	Commercial US	400-480 MHz	136-174 MHz
00003	Amateur Europe	RX: 400-480 MHz TX: 430-440 MHz	RX: 136-174 MHz TX: 144-146 MHz
00006	Band 6	446-447 MHz	136 - 174 MHz
00007	Amateur US	RX: 400-480 MHz TX: 420-450 MHz	RX: 136-174 MHz TX: 144-148 MHz
00008	Commercial 8	400-470 MHz	136-174 MHz
00010	Amateur Australia/Canada	RX: 400-480 MHz TX: 430-450 MHz	RX: 136-174 MHz TX: 144-148 MHz
00013	Commercial 13	RX: 400-480 MHz TX: 403-470 MHz	136-174 MHz
00015	Band 15	RX: 400-480 MHz TX: 450-470 MHz	RX: 136-174 MHz TX: 138-174 MHz
00016	Amateur Thailand	430-440 MHz	144-147 MHz
00017	Commercial Thailand	RX: 430-440 MHz TX: -/-	136-174 MHz

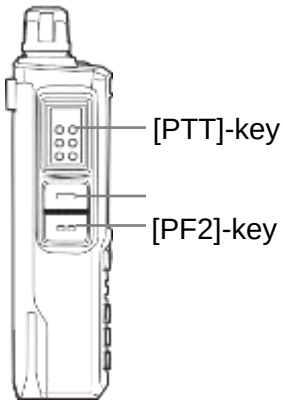
6. Using the channel selector knob you can change the region (MODE) of the Radioddity GD-168.
7. Finally, just turn off the Radioddity GD-168. This will safe the region (MODE) setting.

***Note**: The MODE (Region) set in the CPS has to be identical to those set on the Radioddity GD-168 in order to avoid later conflicts when reading/writing a codeplug.*

This completes the reset process.

2.3 Updating the icons

1. Turn off the Radioddity GD-168.
2. Press the [PTT] and the [PF2] key on the left side of the Radioddity GD-168.

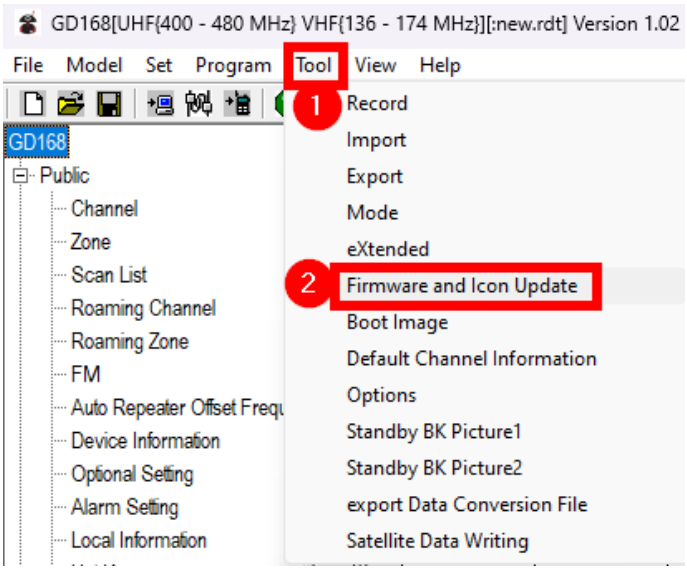


3. Keep both keys depressed while turning on the Radioddity GD-168.
4. As soon as the display of the Radioddity GD-168 will show “UPDATE MODE”, you may release both keys.

5. Now connect the Radioddity GD-168 to your PC using the supplied USB-C to USB-A cable.
6. Start the current CPS and select the virtual COM-port that represents the Radioddity GD-168.

7. Now enter the CPS submenu for updating the icons of the Radioddity GD-168. Do so by clicking in the CPS menu on:

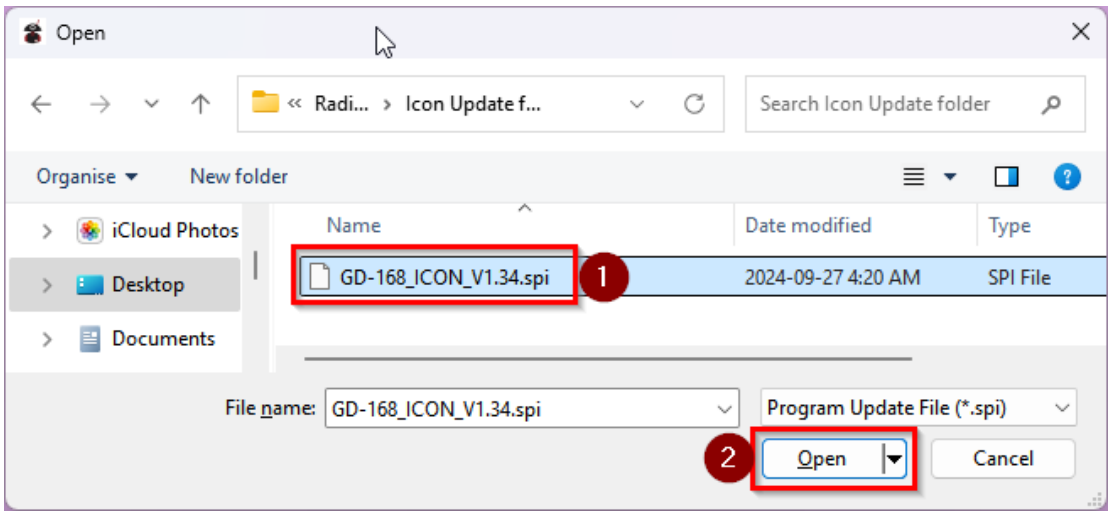
Tool → Firmware and Icon Update



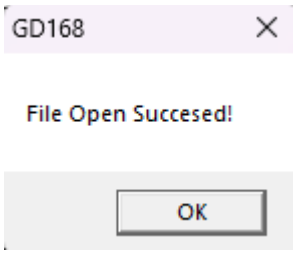
8. Now click on Open Update File and navigate to the "Icon Update folder" of the extracted archive that contains the Radioddity file GD-168_ICON_Vx.xx_YYYYMMDD.spi for updating the icons of the radio.

> ***Notes:*** *Never use any icon file that has not been published by Radioddity. There may be radios on the market that look almost the same as the Radioddity GD-168 but aren´t the same. Using a icon file not provided for the Radioddity GD-168 may brick your radio.*

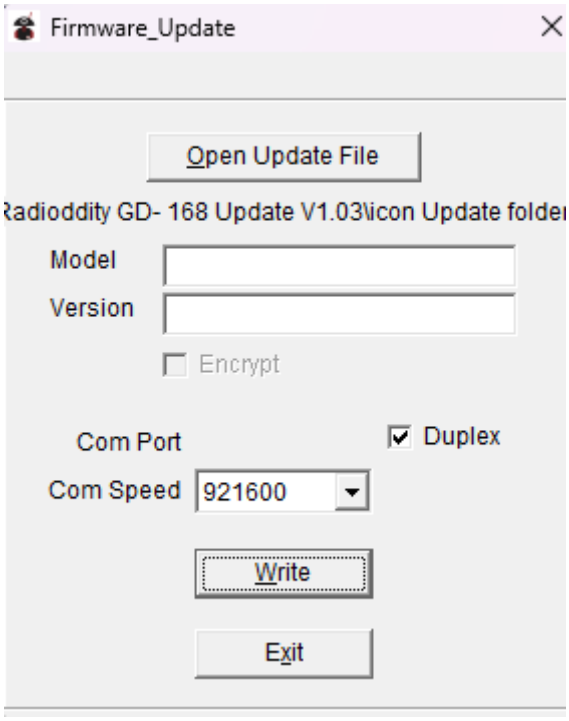
9. Select the Program Update File ending with ".spi" (1) and confirm your selection by clicking on Open (2).

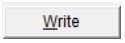


10. A confirmation popup will be displayed:

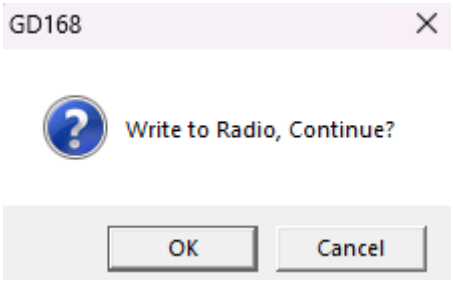


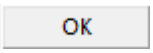
11. This time there will not be any details shown for “Model” or “Version”:



12. As soon as you now click on 

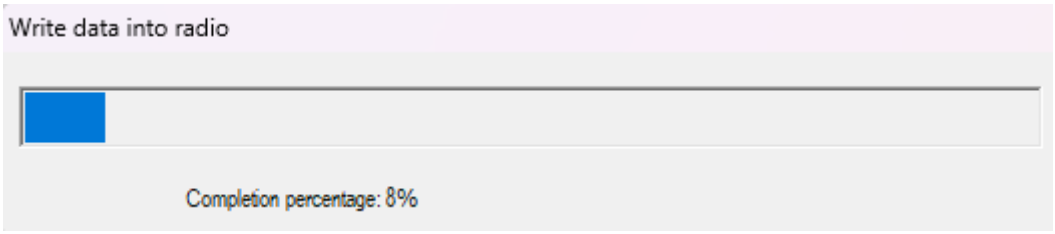
you will be asked one more time if you really want to update the radio.



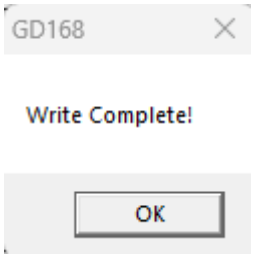
13. As soon as you now confirm the question by clicking on 

the update process will be started.

14. A status bar visualizes the progress of the update process.



15. A popup will be shown as soon as the update has completed.

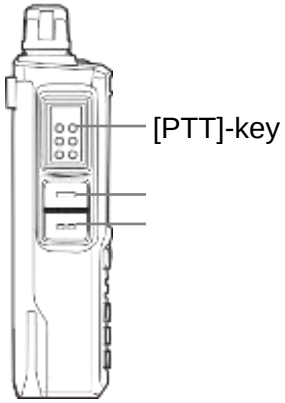


16. The Radioddity GD-168 will not automatically reboot.
17. Turn off the Radioddity GD-168.

The completes updating the icons of the Radioddity GD-168

2.4 Updating the 3288 base band firmware

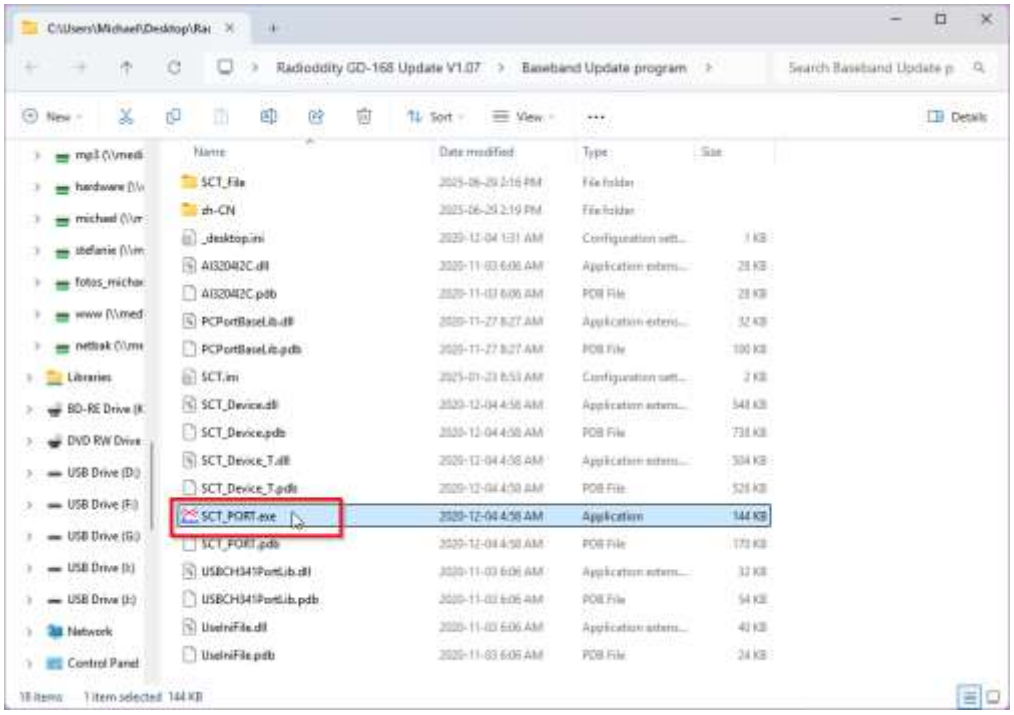
1. Turn off the Radioddity GD-168.
2. Close any running Radioddity GD-168 CPS. This will allow the virtual COM-port that represents the Radioddity GD-168 to be used at a later step for upgrading the 3288 base band firmware.
3. Press the [PTT] key on the left side of the Radioddity GD-168 and the [#] key at the lower right front side of the Radioddity GD-168.



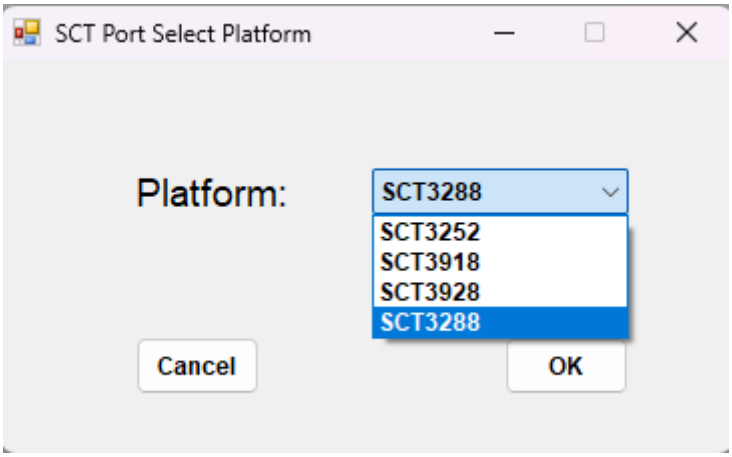
4. Keep both keys depressed while turning on the radio.
5. You may release both keys as soon as the display of the Radioddity GD-168 will show:

6. The displayed warning will not change
7. Now connect the Radioddity GD-168 to your PC using the supplied USB-C to USB-A cable.

8. Within the directory “Baseband Update program” start the program SCT_PORT.exe.

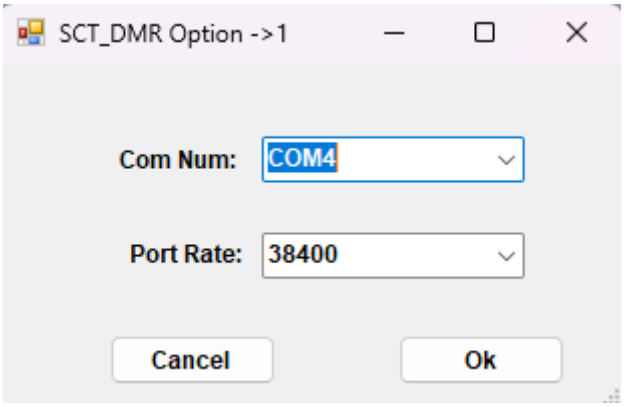


9. If not already selected, select “SCT3288” within the popup:



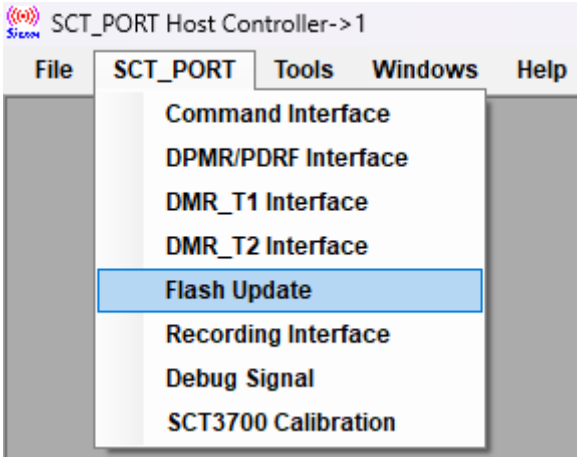
10. Confirm your selecting by clicking on OK.

11. Within the menu select **Tools → Config** and select the virtual COM-port that represents the Radioddity GD-168. The Speed (*Port Rate') should be kept at 38400 bps.

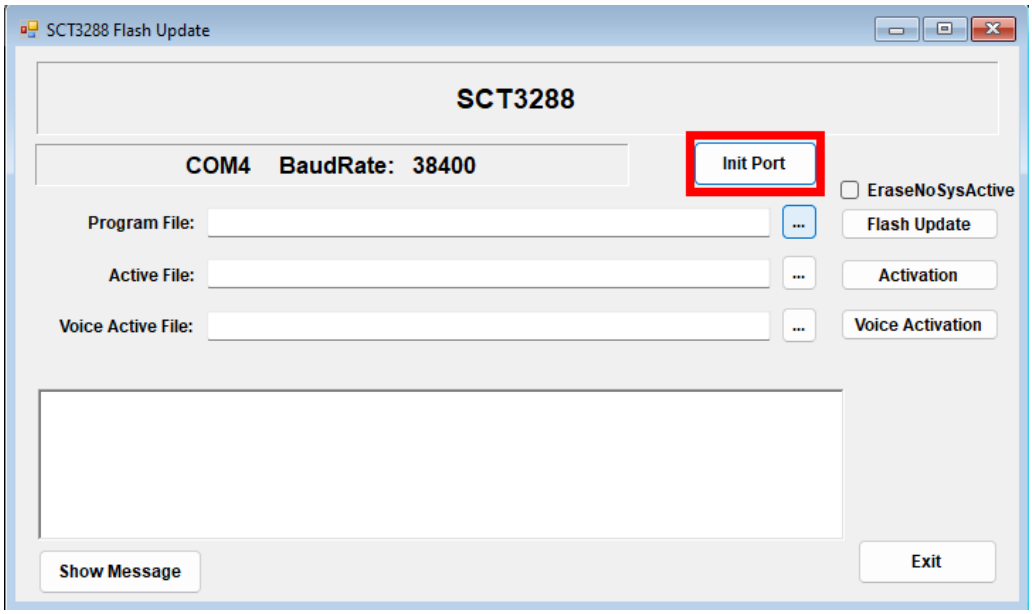


12. Confirm your selecting by clicking on Ok.

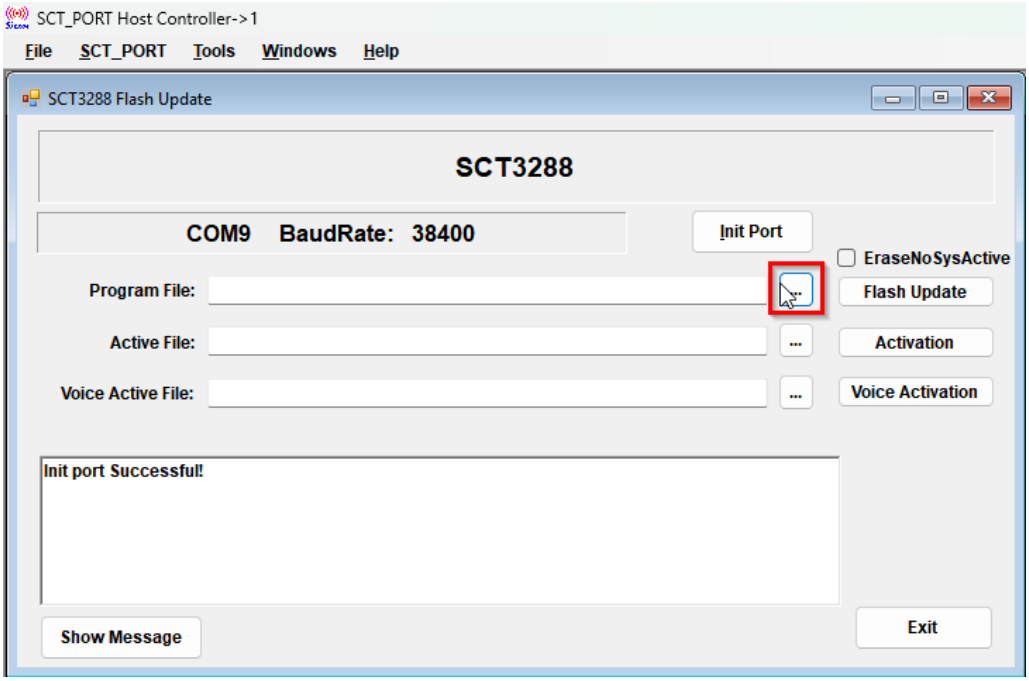
13. Within the menu select **SCT_PORT → Flash Update**:



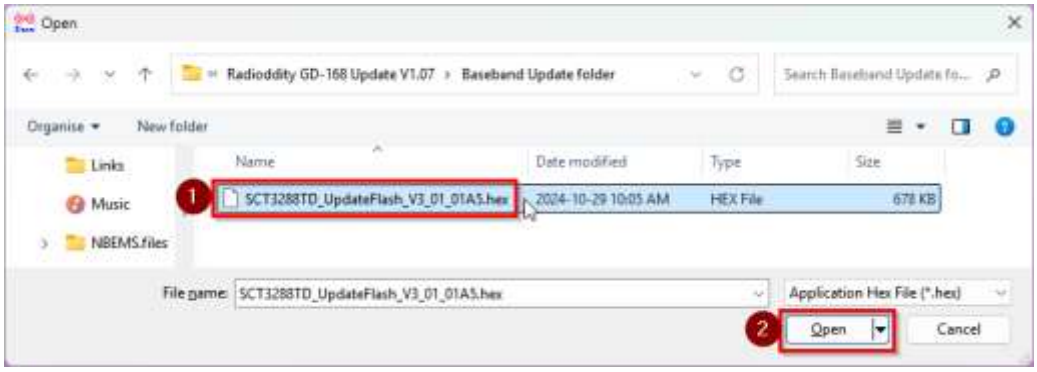
14. In order to initialize the virtual COM-port click on Init Port.



15. Next click on the three dots to navigate to the directory “Baseband Update folder” containing the base band update file.

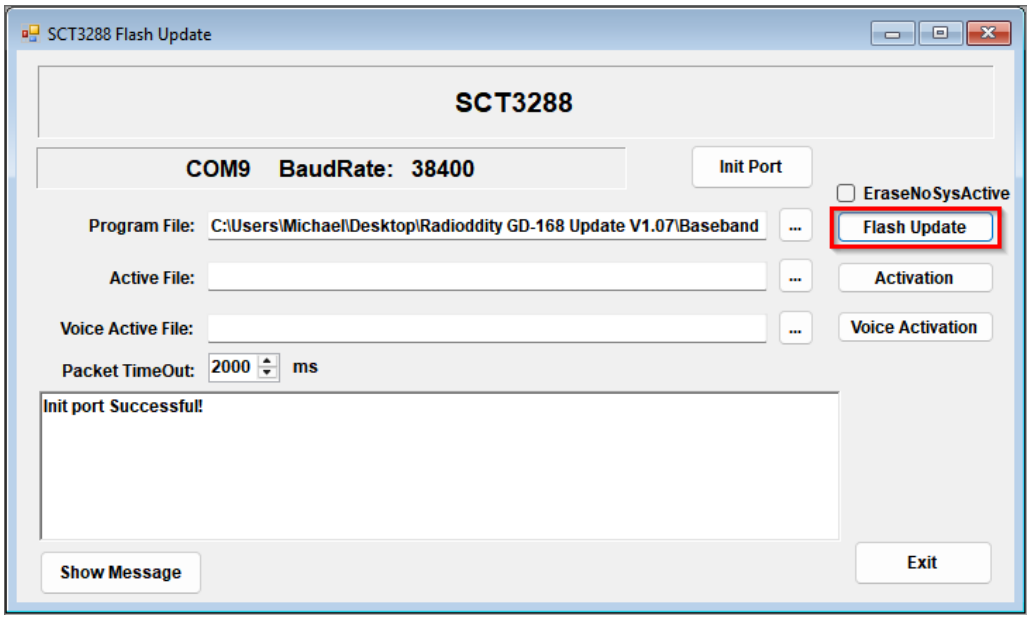


16. Navigate to the folder containing the hex file for the baseband update SCT3288TD_UpdateFlash_Vx_xx_xxxx.hex.

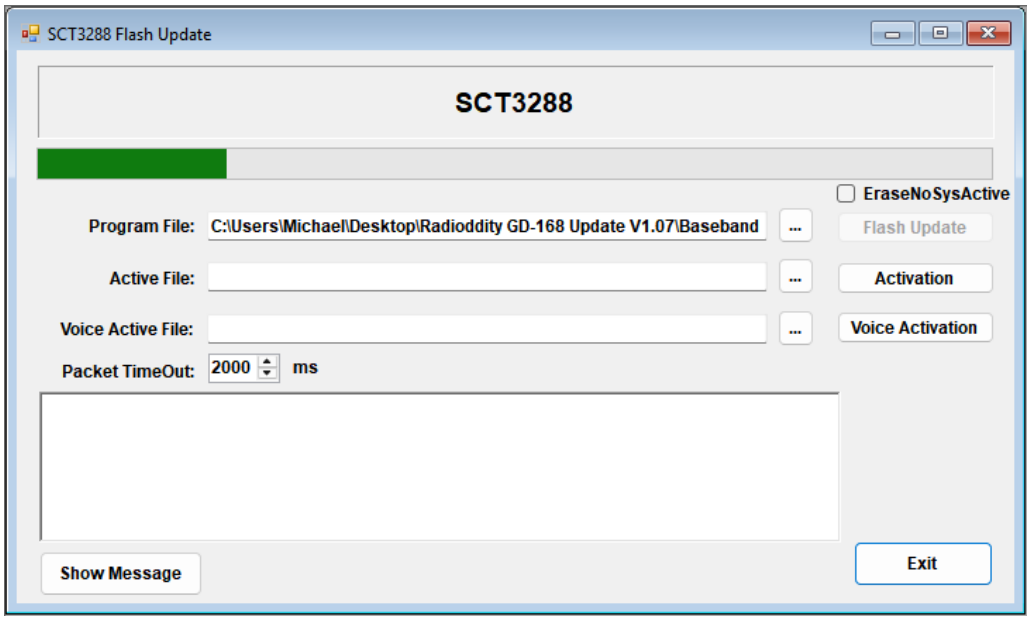


17. Select the file (1) and click on Open (2).

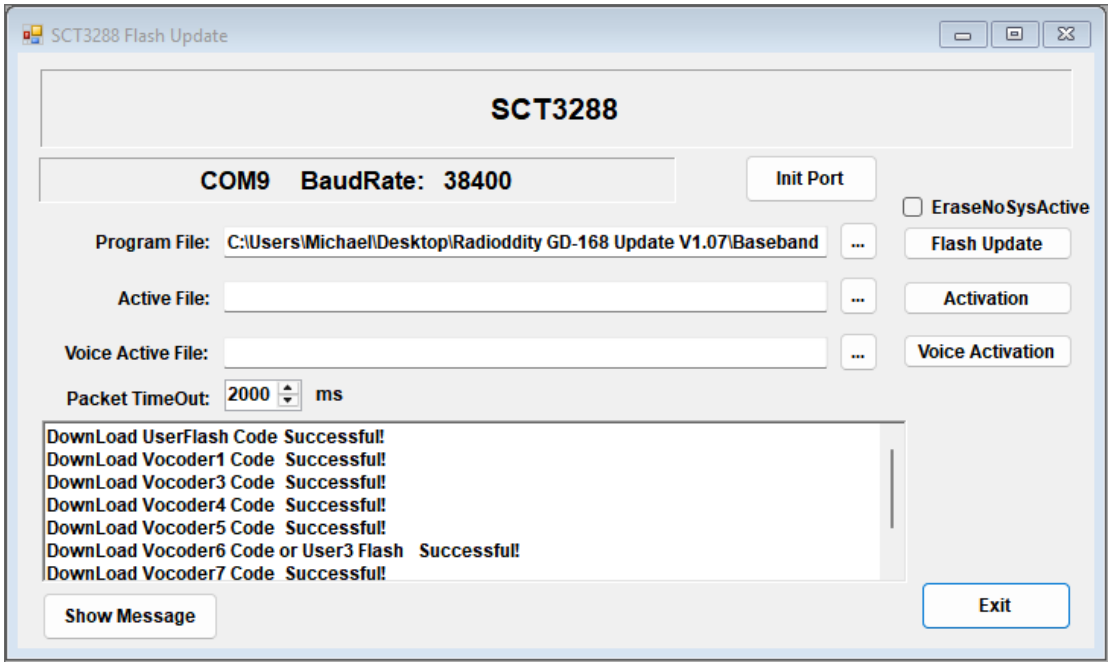
18. Now click on Flash Update to start the update process.



19. You will see a progress bar representing the current status of the baseband update:



20. As soon as the update has finished the screen will look similar to:

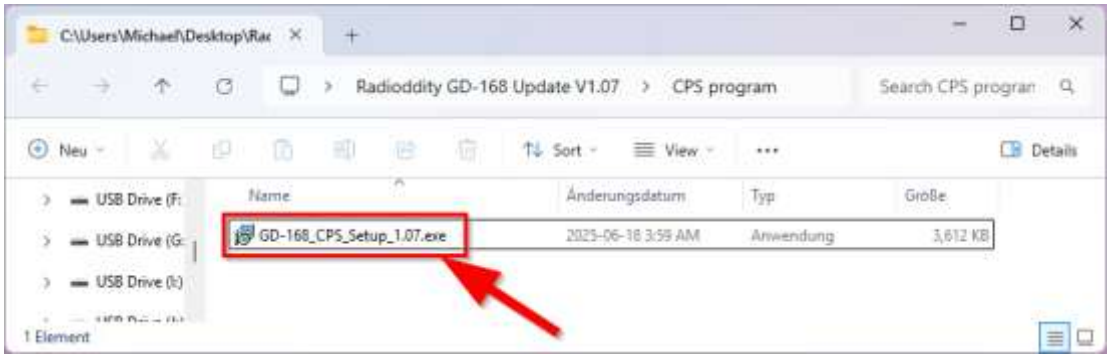


21. Finally click on to exit from this submenu.
22. The exit the program, click on **File → Exit**.
23. Turn off the Radioddity GD-168.

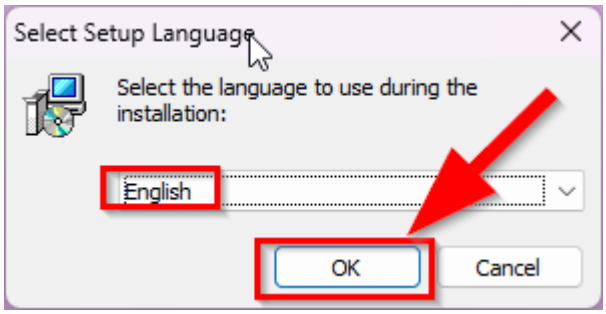
This completes the baseband update of the Radioddity GD-168.

2.5 Updating the CPS

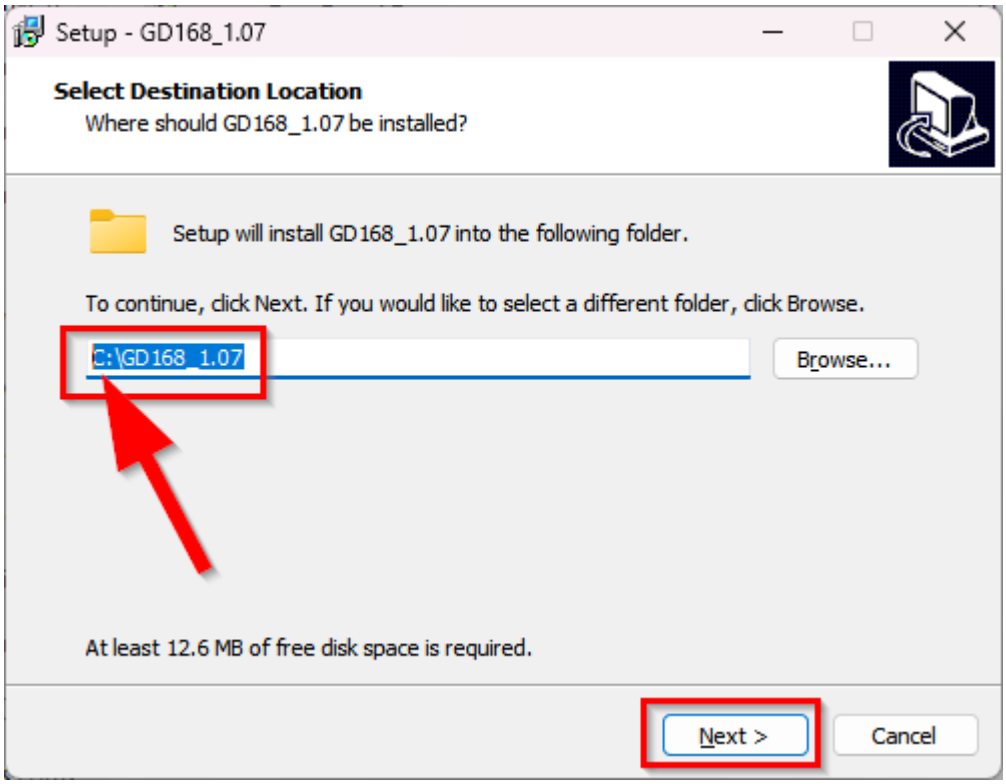
As each firmware version resides in a different directory (according to the version number). So, is safe to just install the new CPS by navigating to the CPS folder and starting the installation program.



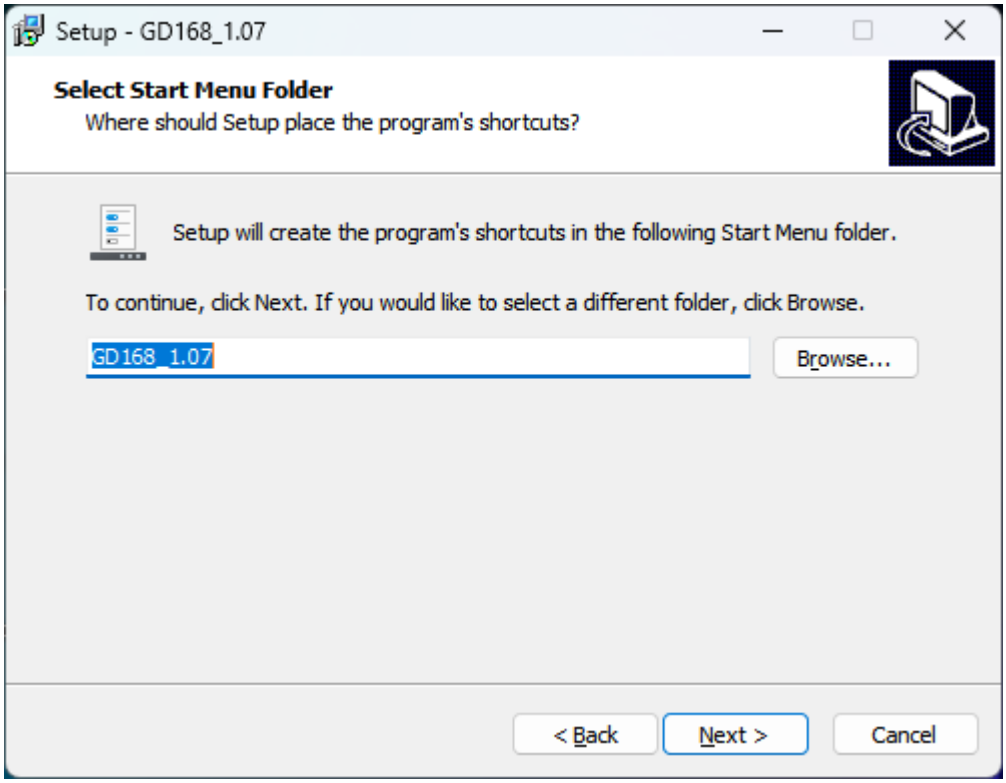
Choose 'English' language and hit 'OK'.



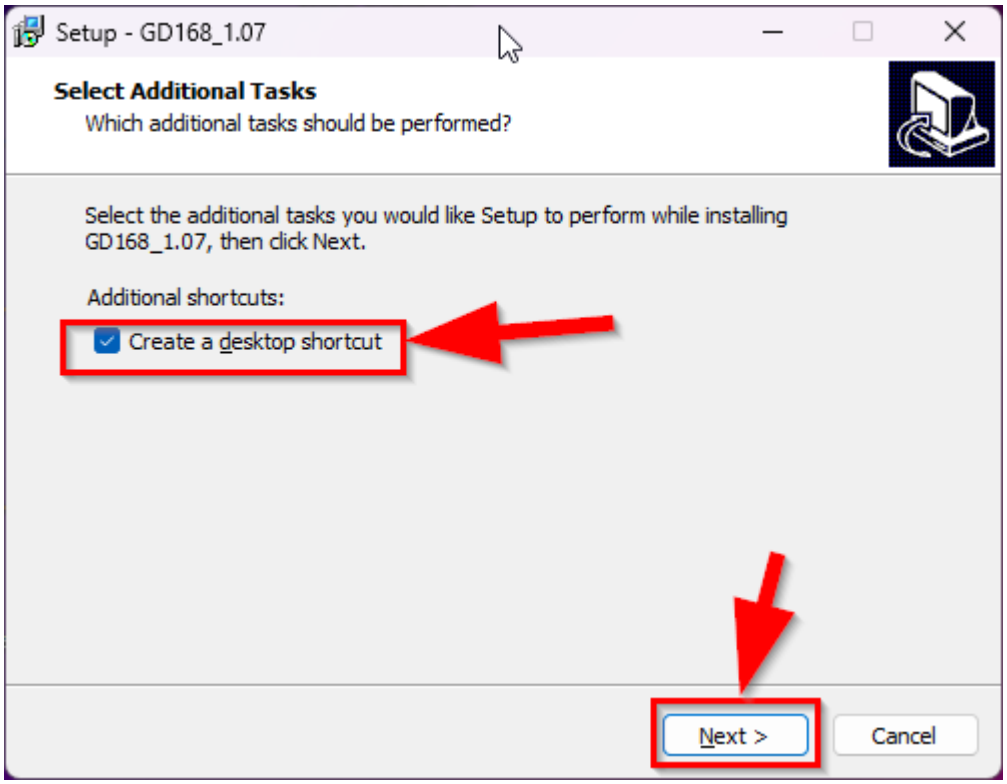
Next you will be asked for the installation directory. Be aware that by default drive “D:” will be used for the install. If you do not have a drive D:, change that to your normal boot drive (C:).



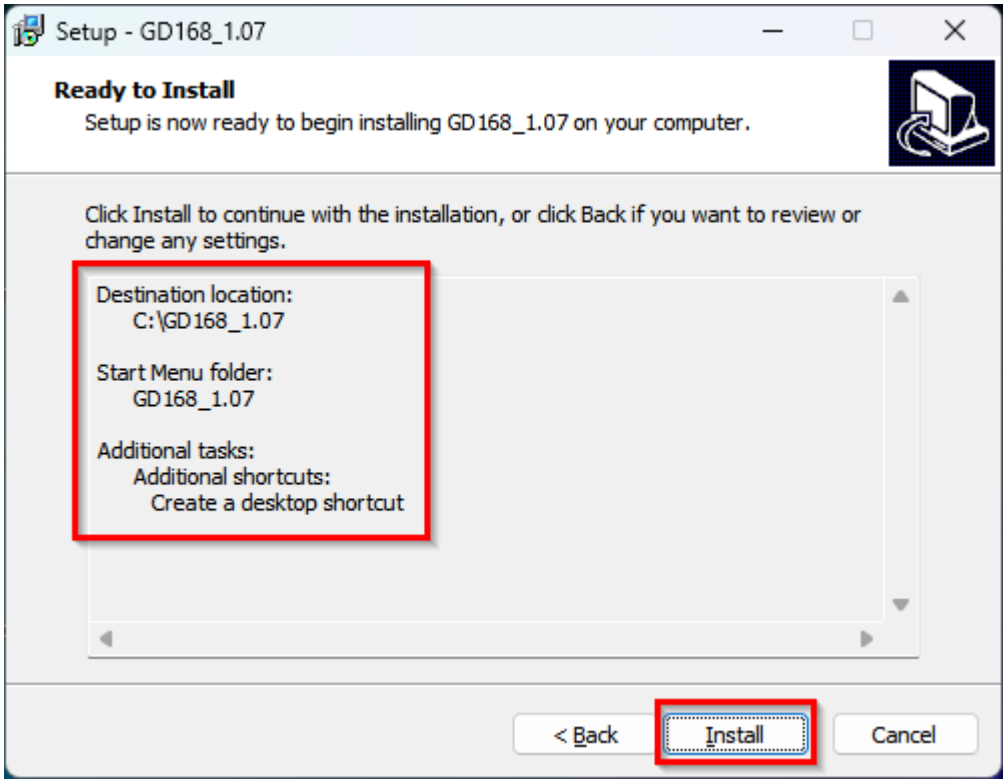
Next you will be asked for the name of the program´s shortcut within the Start Menu folder.



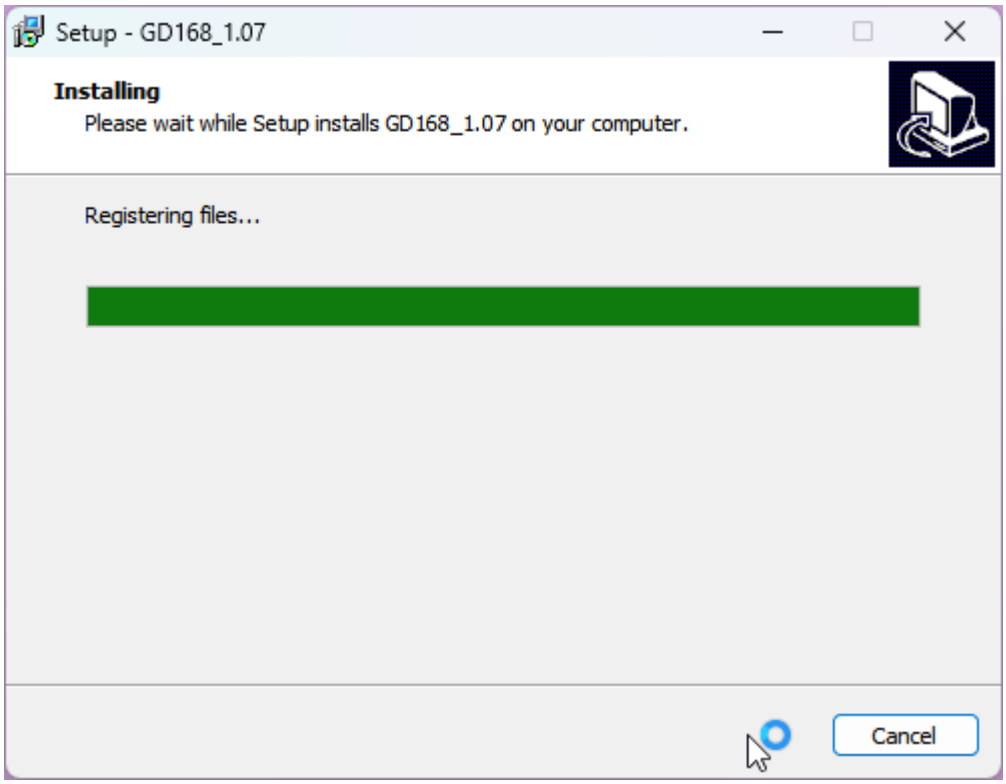
Creating a shortcut on your desktop often is a good idea. So, make sure the checkbox has been ticked before you click on 'Next' if you want a shortcut to become available on your desktop.



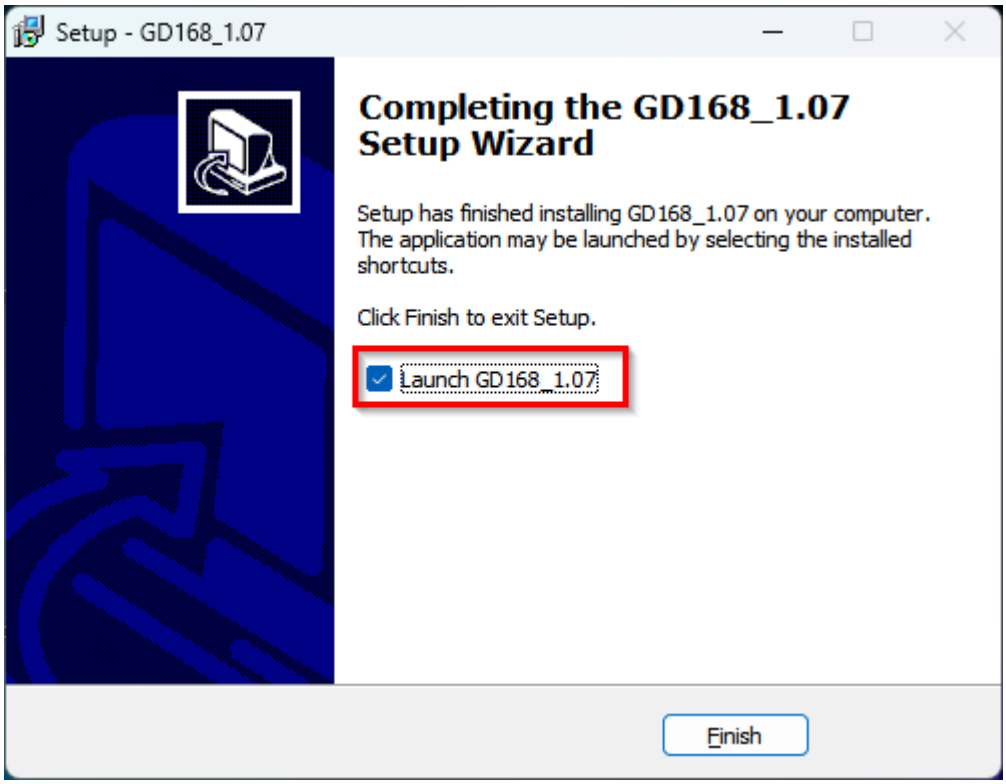
You will then get a summary of your selections. Hit 'Install' to start the actual installation process.



For just a few seconds you will see the installation progress bar.



As soon as the installation has been completed, you may directly start the CPS.



This completes the CPS installation.

3 Where to find further information?

On the Internet you will find a variety of sources with information about the Radioddity GD-168. When watching videos make sure that the Radioddity GD-168 in the video is at the same firmware level as yours (features can change and bugs may be fixed between firmware versions).

3.1 Radioddity support area

Please note that you can find all firmware, software and user manuals in the support section of our official Radioddity website by following these steps:

https://www.radioddity.com/ → Support → Radioddity → GD-168

For the Radioddity GD-168, the resulting support page looks something like this:

As soon as a new file is available (e.g., firmware updates, updated manuals or others), these files will be published in our Radioddity GD-168 support area.

We would like to thank all Radioddity customers for their constructive feedback.

If you find an error in the firmware of the Radioddity GD-168, its CPS or in this documentation, or if you miss a function that you would have expected, or even if a detail has not been described to the expected extent, please feel free to write a message to support@radioddity.com. In general, firmware updates for your Radioddity GD-168 are free of charge. The use of Radioddity firmware for this radio may invalidate the warranty or even brick your radio. Such will not be covered by our warranty.

Thank You for Shopping at Radioddity!

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https://www.facebook.com/radioddity

https://www.youtube.com/c/Radioddityradio