

Firmware Update 2.001 – MSA G1 SCBA



The MSA G1 SCBA was developed with the promise to provide the latest technology. In fulfilling that promise, MSA is pleased to announce the release of **G1 SCBA firmware 2.001**. This release is an exciting new feature for a Bluetooth wireless connection to Motorola APX series radios, not to mention several product enhancements, including reduction in feedback to further elevate your overall experience.

To ensure that updates such as this one can be executed quickly and easily, MSA has incorporated Bluetooth technology into each and every G1 SCBA, an industry first for updating. This Bluetooth link allows you to update each of your G1 SCBA wirelessly. This document provides step-by-step instructions to perform this update, as well as detailed information concerning features and enhancements you should expect with 2.001.

As of November 23, 2015, all MSA G1 SCBA and replacement parts shipped from Murrysville, Pa. will be equipped with firmware version 2.001. Products shipped before that date will need to be updated using MSA A2 Software.

MSA will continuously research and develop ground breaking technology to provide you with the next level of performance and latest in product features and functions.

UPDATING TO G1 SCBA FIRMWARE 2.001

Required Components:

1. Personal computer (PC) with Bluetooth capability (or with use of P/N 10161282-SP)
2. Installation of MSA A2 Software. Before starting, verify the bootloader version that is installed in the G1 Power Module by entering *Service Mode* and selecting *System Info*. The power module bootloader version will be either B 1.006 or lower, OR B 1.008 or higher.

⚠ CAUTION:

Do **NOT** remove the G1 SCBA battery pack during the firmware update. If a failure occurs during the updating process, simply restart the update within the MSA A2 Software system. Removal of the battery during this update can cause permanent damage to the electronic module.

Step 1: Using your PC, connect to the internet and start MSA A2 Software.

Step 2: Place two SCBA into *Service Mode* by pressing and holding a green reset button on the control module until the service mode screen appears (~10 sec).

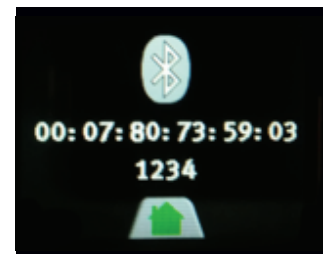
NOTE: Both G1 SCBAs must have the same bootloader version installed. If they do not, you can only update one SCBA at a time. Only perform updates on two SCBA at a time. Some PCs are not capable of working with more than one SCBA at a time. If you are not successful with two SCBA, then program only one SCBA at a time.

Step 3: Scroll down and choose *Data Link* with the red control module button. To scroll up and down, use the green reset buttons.

Step 4: The Bluetooth address of that SCBA will display on the screen, and may take up to 30 seconds for the address to appear. Wait until the address appears on both control module displays; for later reference, remember the last two digits.



Step 1



Step 4

WHEN YOU GO IN, WE GO IN WITH YOU.

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Step 5: Within MSA A2 Software, select *G1 Firmware* and press the *Check for Updated Firmware* button in the upper right corner of the window. This action searches for the latest firmware version.

Step 6: Select *Software Version 2.1.1749* and select *Yes* to download the image to your computer. *You will download this to your computer only once.*

Step 7: Select the correct bootloader version for the SCBA(s).
NOTE: *Both G1 SCBA must have the same boot loader version installed. If they do not, you can update only one SCBA at a time.*

Step 8: From the G1 SCBA firmware update screen, select the *Scan for G1 Devices* option.

Step 9: Select both devices that match the address of your G1 SCBA. If the name is cropped, use the address listed in a smaller font on the lower right corner of the icon.

NOTE: *Both G1 SCBA must have the same bootloader version installed. If they do not, you can only update one SCBA at a time. Only perform updates on two SCBA at a time. Some PCs are not capable of working with more than one SCBA at a time. If you are not successful with two SCBA, then program only one SCBA at a time.*

Step 10: Select the *Upload firmware to devices* option in the lower right corner of the A2 Software window. Choose *Yes* to proceed.

IMPORTANT: *At this point, both devices power off and MSA A2 Software attempts to latch onto the devices to start the reprogramming process. One of the following situations occurs:*

(1) *MSA A2 Software bootloads both SCBA; the reprogramming process completes on both SCBA.*

(2) *MSA A2 Software does not latch onto one of the SCBA and starts up normally. This SCBA is currently not being reprogrammed and can be powered off (quick double-press of reset button) for this series of reprogramming. This SCBA can be reprogrammed as part of the next set of reprogramming. DO NOT try to cancel the update process of the other SCBA.*

(3) *MSA A2 Software did not latch onto to both SCBA and they start up normally. Power off both SCBA and repeat steps 1–10 listed above.*

(4) *MSA A2 Software begins to program one or both SCBA and fails during programming (the power module blinks, but the control module will be off). DO NOT REMOVE G1 SCBA batteries or rescan MSA A2 Software for device. Leave the units in their current state and re-attempt programming by pressing **Upload firmware to devices**. Continue to attempt this process until the SCBA reprogram.*

WARNING: *DO NOT cancel MSA A2 Software reprogramming process or touch the SCBA that is currently reprogramming. The device that started normally can be powered off; wait until the programming process is completed on the other device. If you cancel the programming process or remove the battery from the G1 SCBA, this action can cause a programming error.*

NOTE: *Updating from version 2.000 to 2.001 requires approximately 10 minutes. If you update from version 1.3 or earlier, the process requires approximately 30 minutes to update firmware when all SCBA components are programmed.*

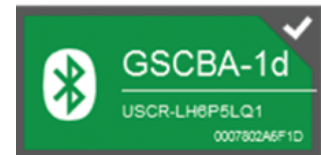
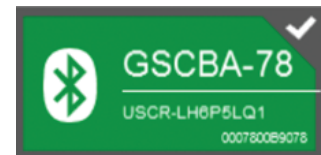
Step 11: When the update completes, the G1 SCBA will reboot and A2 Software will display an indication of success.



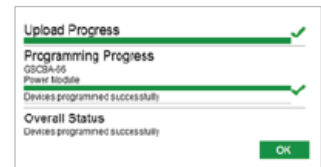
Step 5



Step 8



Step 9



Step 11

TO VERIFY THE NEW FIRMWARE VERSION

- Step 1:** Place the SCBA into *Service Mode* by pressing and holding a green reset button on the control module until the service mode screen appears (~10 sec).
- Step 2:** Scroll down and select *System Info* using the red alarm button. To scroll up and down, use the green reset buttons.
- Step 3:** All modules show hardware (H), software (S) and bootloader (B) revision. The new software version should read as **S 2.001** for the regulator module and power module. The control module will still read **S 2.000**.

COMPATIBILITY OF COMPONENT VERSIONS

Every time the G1 SCBA is powered on, the unit performs a check of hardware and firmware to verify compatibility across all electronic modules. With the introduction of new firmware versions, the system alerts users via the hardware alarm when all SCBA components are NOT using the same version. This scenario will occur when a G1 SCBA repair is needed and a new electronic module is used as a replacement. All MSA repair and replacement components have the latest firmware version installed prior to shipping.

To correct electronics compatibility:

- Step 1:** Remove batteries when the SCBA hardware alarm is active.

NOTE: Double-pressing green reset buttons on the control module will **not** power off the SCBA.

- Step 2:** Reinstall batteries into the SCBA. When the startup screen completes (after approximately five seconds), quickly power off the SCBA by double-pressing a green reset button on the control module.

NOTE: If you wait too long, the unit will go into hardware alarm. To correct, repeat the steps above.

- Step 3:** Place the SCBA into *Service Mode* by pressing and holding a green reset button on the control module until the service mode screen appears (~10 sec).

- Step 4:** Follow the steps for updating SCBA firmware. The system knows which components have previous firmware and updates those to the latest version. Once this process is complete, restart the system and the hardware alarm will clear.

NOTE: If the hardware alarm is not cleared after the update repeat the steps above. If the hardware alarm persists, contact MSA Customer Service at 1-800-MSA-FIRE.

G1 FIRMWARE 2.001 NOTES:

New Features:

- Added G1 SCBA compatibility with Motorola APX series radios. The G1 SCBA can be wirelessly paired via the Bluetooth module to a Motorola APX series radio. When the two devices are paired and the user breathes on the SCBA, all audio voice communication transmits from SCBA microphones to the APX radio and is sent across the network when the push-to-talk (PTT) button is pressed. All incoming transmission is output on the G1 SCBA speaker module. For full details concerning this feature and functionality, please read *G1 SCBA Accessories with Bluetooth Wireless Technology User Instructions* (P/N 10170289).
- Added lithium-ion rechargeable battery support. All G1 SCBA users who plan to add the lithium-ion battery must update their firmware to v2.001 version before using the lithium-ion battery on the SCBA.

Enhancements:

- Improved speaker module feedback performance.
- Fixed thermal alarm activation at startup.
- Improved battery status information.
- Fixed evacuation reset in the data logs.
- Added time out of service mode after three minutes of inactivity.

FREQUENTLY ASKED QUESTIONS:

1. Will my G1 SCBA continue to operate normally if I do not update my firmware?

MSA strongly recommends updating your SCBA firmware to the latest version to ensure optimal performance and new feature additions. However, your G1 SCBA will continue to operate as it does today, should you choose not to update your firmware.

2. Where can I obtain MSA A2 Software?

The following link provides access to MSA A2 Software, as well licensing information.

<http://us.msasafety.com/productSoftwareDownloads>

3. How can I find out if my SCBA has the latest firmware?

The best way to verify is to place the SCBA into **Service Mode** and look at **System Info**. **System Info** displays the unit's software version; the new software version should read **S 2.001** for the regulator and power module. The control module will still read version **S 2.000**.

4. How much time is needed to update the G1 SCBA?

The process requires approximately 10 minutes per SCBA to update if you already have v2.000 installed. If you update from v1.3 or older, the process requires approximately 30 minutes

5. How do I obtain the latest firmware version?

To obtain the latest firmware version, you must have MSA A2 Software installed and select **G1 Firmware**. The software reaches MSA servers and downloads the latest version.

6. Can we update more than one SCBA at a time?

Yes. You can update up to two SCBA at a time following the instructions above. Instructions must be followed carefully to ensure a successful program. Some personal computers are not capable of reprogramming more than one SCBA at a time. If the steps above do not work for two SCBA, program only one at a time thereafter.

7. Does MSA plan to release additional firmware updates?

MSA continues to investigate new technology and features that can be deployed into the G1 SCBA. Currently MSA does not have a set release date for a new version but will communicate that information when the next update is available.

8. We have heard whistling sounds from my speaker while using the SCBA. Is this sound a form of feedback and does this update prevent this whistling noise?

Yes, this software version improves the speaker module's feedback performance.

9. If I have a device with v2.0 firmware and replace a component with v2.001, should I update the entire SCBA?

Yes. Firmware 2.001 only updates the regulator and power module, and does not change the control module.

10. Will the hardware alarm occur if the product already has v2.000 but a replacement component is v2.001?

No. All versions v2 are compatible with each other but MSA does recommend updating all components to v2.001.

11. When I review the software versions in Service Mode, the regulator and power module display v2.001 but the control module shows only v2.000. Is this information correct?

Yes, it is correct. The update is for the regulator and power module only; the update does not affect the control module.

Note: This bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



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