

CloseUp® System Gain Control Addendum

CloseUp® System Software 2.0 and Firmware Revision 16

[Your Heaven® Audio](#) — November 2019

Thank you for using the CloseUp® System! In order to provide you with the best possible experience amplifying and recording your instrument, we've made some changes to the CloseUp® System's gain control in Firmware Revision 16. To take advantage of these new firmware features, you will need to update the CloseUp® System Software to Version 2.0 first. These updates are both free and easy, and the Version 2.0 software does everything our earlier software did (with some added features!). **The updated firmware and software are mutually dependent: earlier versions of the firmware are not compatible with the Version 2.0 software, and earlier versions of the software are not compatible with the Revision 16 firmware.** But fear not, this version of the software does everything version 1.x did (and a little more), and the update is free and easy.

Some quick terminology

Firmware: The low-level software that runs on the chips inside the CloseUp® System whenever you use it.

CloseUp® System Software: The application you use on your computer to create a custom profile for your instrument that is then transferred to your CloseUp® System and run on the firmware. Firmware can be updated using the CloseUp® System Software.

Upgrading your CloseUp® System

All you need for both updates is your CloseUp®, a computer, a USB cable, and an internet connection.

1. Download the latest version of the CloseUp® System Software from <https://www.yourheaven.net/closeup-downloads>
2. Install it:
 - **Mac:** unzip [your browser might already have done this] and move it to wherever you like - probably the Applications folder, replacing any older version you might already have.
 - **Windows:** open the zip file, double click the installer inside, and follow the directions.
3. Connect you CloseUp® System with the USB cable and turn it on.
4. Launch the CloseUp® System Software (you'll still need to be connected to the internet).
5. Start the profiling process, even if you already have profiled your instrument. Once your CloseUp® System is connected and communicating with the software, you will be notified that it requires a firmware update.
6. Follow the instructions that describe how to put the CloseUp® System in firmware update mode.
7. The software will download and automatically program the firmware update onto your CloseUp® System.
8. The CloseUp® System will reboot and automatically reconnect to the software. If it does not reconnect immediately, don't worry — that doesn't mean the firmware update failed. Simply power it down and try again.

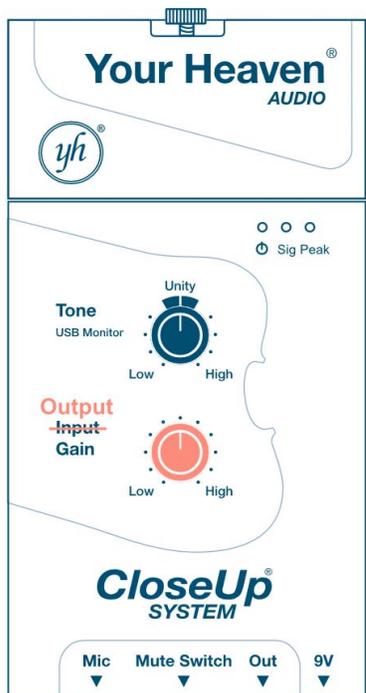
Awesome! Now you have a fully up-to-date CloseUp® System.

Note: if for any reason the firmware update goes awry (e.g. if the USB cable were to disconnect in the middle of the update) and you end up with a non-functional CloseUp® System, contact Your Heaven® Audio customer support at closeup@yourheaven.net and we'll be happy to provide you with easy instructions to restore your firmware.

Gain Control Improvements

A Better Gain Control

This version of the CloseUp® firmware introduces a new and improved method of gain control. **The knob labeled *Input Gain* will now function as the *Output Level*.** It will no longer change the mic input gain, and instead will change the level of the analog output. For most users, this change won't make a big difference, but it creates a more flexible and more predictable gain structure.



Input gain is now set automatically each time you create a custom profile. There are several ways to adjust the input gain later on:

- A. in Device Settings in the software
- B. when transferring a saved profile from your computer
- C. on the CloseUp® System itself, without a computer

The main thing to be aware of with this change is that **since old profiles did not have an input gain setting, the input gain of your old profiles will be set to default.** The default is Your Heaven® Audio's best guess at the correct value for each instrument type. It should be fine for most instruments, but if it's not right for yours, you can change it using one of the methods described here.

The CloseUp® System Software will notify you if any of your profiles are using the default input gain whenever you connect it for profiling or management.

Adjusting the Input Gain

(A) In Device Settings

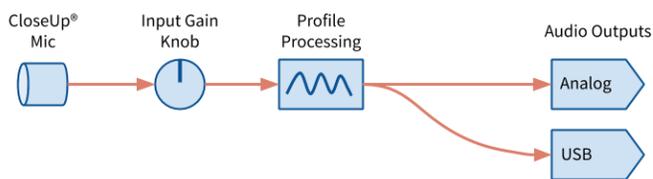
Connect your CloseUp® System to your computer, launch the software, and proceed as if you are going to make a profile. When you have a choice of whether to create a new profile or load an existing one, instead click **Device Settings**.

Input gains, along with other information, are displayed for each profile.

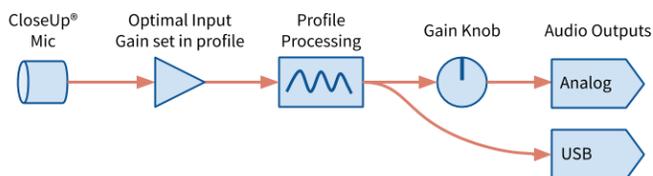
You can manually adjust the input gains of each profile in increments of 0.5 dB by dragging, or clicking and typing into, the blue sliders. *If you make a change this way, we suggest making a small change of not more than 1 or 2 dB until you have a chance to test with your instrument.*

If you have your instrument handy, you can click **Set Using Instrument** to automatically set your input gain. The software will instruct you to connect your mic to your instrument. You will then be asked to play

Original Gain Structure



New Gain Structure



loudly. Play as loud as you can imagine ever wanting to play, then click Next to set the input gain.

You can click **Reset** at any time to set the input gain back to the original value determined when profiling. If the profile was made using a software version before 2.0, it will instead set the input gain to the default for that instrument type, which is our best guess at the correct value.

(B) When transferring a saved profile from your computer

When you load a saved .ezq profile that does not have an input gain set, you will be asked if you want to set it using your instrument (automatically) or use the default gain setting. If you choose **Set Using Instrument**, you will be asked you to play loudly. Play as loud as you can imagine ever wanting to play, then click Next to set the input gain. You will be prompted to re-save your profile after transferring. This allows you to save the input gain changes you've made to a new .ezq file.

Before transferring *any* profile to your CloseUp® System, there will be multiple options for adjusting input gain, similar to the ones described above in **Device Settings**. If you make adjustments, you will be prompted to re-save your profile after transferring. This allows you to save the input gain changes you've made to a new .ezq file.

(C) Without a computer

To adjust the input gain of the active profile without a computer, follow these steps:

Note: these instructions apply to the SEQ006 and SEQ007 hardware versions of the CloseUp® System, the versions on the market up to the time of this writing (late 2019). This procedure may change for future CloseUp® System hardware revisions.

1. Make sure the profile you want to adjust is selected on the **profile selector switch**.
2. Center the **Tone** knob (*approximately - exact setting does not matter*).
3. Slide the **Dual Gain** switch to the ON position (left).
4. The **Tone** knob is now a *relative* control for input gain: no matter where the knob starts

out, turning it up (*clockwise*) will incrementally increase the input gain, and turning it down (*counter-clockwise*) will decrease it.

5. Play your instrument loudly and watch the meter LEDs.
 - If the yellow LED lights consistently but the red LED never lights, you have found a good setting.
 - If the red LED lights at all, reduce the input gain until it never does.
 - Additionally, you can listen to the output through speakers, an amp, or headphones to make sure your signal is strong, but free of distortion.
6. When you are satisfied, slide the **Dual Gain** switch back to the OFF (*right*) position to restore the **Tone** knob's normal function. This new input gain setting will be stored in the profile on the CloseUp® System and recalled whenever it is chosen with the **profile selector switch**.

If you were not able to change the input gain as much as you wanted (*i.e. if you were making a drastic change, or the **Tone** knob was not centered when you started*), simply center the **Tone** knob and start the process again. The rest of the input gain range will now be available to you.

Please Note: this change will **not** be reflected in the copy of this profile saved on your computer — so if you need to transfer it again, you'll have to make the gain change again before the transfer (using the software) or after, using the method just described.

You can see what your new gain setting is by connecting your CloseUp® System to your computer, launching the software, and navigating to **Device Settings**.

Additional Notes

Your profiles are safe

At Your Heaven® Audio, we hate it when a manufacturer's firmware update wipes out our custom settings on a piece of gear without warning, so we'll never do that to you!

The profiles on your CloseUp® System hardware and on your computer will be preserved and remain usable after this update, the one exception being that their input gain will initially be set to the default for that instrument type.

Advantages of this change

As discussed above, the knob marked **Input Gain** now controls the Output Level, which will allow you to connect to a wider variety of audio equipment, while keeping gain settings related to your instrument at their optimum. This is because you can now set the analog output to the best level for the gear you are connecting to (*e.g. amp, mixer, PA, recorder, headphones*), without changing the optimal gain setting of the CloseUp® Mic.

Additionally, the input gain will now always be correct for your instrument, no matter what the knob is set to, avoiding accidental overloads and distortion.

Labels on the CloseUp® System

We are aware that the label text next to the **Input Gain** knob is no longer an accurate description of its function on units sold before this change. Unfortunately, we can't change the text on the outside of the unit with a firmware update :). That said, a well placed sticker or piece of tape should minimize confusion. Most of our well-used gear has sticker labels all over it!

Gain Knob no longer affects USB recording volume

Due to these changes in the gain control structure, the **[Input] Gain** knob will no longer affect the volume of audio sent to a computer or mobile device when using

the USB audio interface feature of the CloseUp® System.

While this may seem like a reduction in functionality, it's actually pretty cool: now your recordings of your instrument will always be of a consistent volume, even if you change the volume of the CloseUp® System (which you might want to do if, for example, you are monitoring via headphones using its analog output).

If you want to change the volume of the audio that is recorded, the software you are using to record will certainly have that capability. Additionally, since the audio is already digitized at this point, you would not get any improvement in signal-to-noise ratio by having the gain change happen on the CloseUp® System vs. in your computer.

In short: you always get a consistent, predictable volume that never overloads. Set and forget, so you can concentrate on the music, not the audio engineering.

Dual Gain Mode feature removed

Note that the original *Dual Gain Mode* feature has been removed — you won't need it anymore! Dual Gain Mode allowed you to balance the input gains of two profiles for two different instruments that you were planning to switch back and forth between during a performance. Now that individual input gains are stored in each profile and take effect as soon as a profile is selected, a second gain knob is no longer needed to balance the volume of two different instruments. If you were using *Dual Gain Mode* before, congratulations – your life is now simpler!

The **Dual Gain** switch is now repurposed to allow you to set the input gain of the active profile without a computer (*see above*).