Aimtrak Lightgun Running Perfectly on ALU 1.1 CoinOpsX 5.5 Still Alive

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[Arcade](#)

Greetings:

This post has two parts: First a sort of bullet-points part to try and save you time when configuring the Aimtrak guns to work with the ALU running CoinOpsX 5.5 (And by extension, without CoinOpsX 5.5 also, though who would want to miss this glory, I do not know. All hail the Chefs!)

Second, a detailed guide with the same goal in mind. If the bullet points are not enough, the guide is there to peruse.

Things to know if you are in a hurry:

1-Aimtrak Lightguns (Two guns at once have been confirmed) work just fine with games on CoinOpsX v 5.5

2-The Aimtrak Lightgun has to be running FW 9.19 or 9.20. If it is running .21 it will not work. You can change the firmware using the Aimtrak Configuration Utility: https://www.ultimarc.com/aimtrak_setup.exe

Run the utility as Administrator.

3--There is also a specific button configuration that has to be set using the Aimtrak Configuration Utility. The image depicting it is below, in the Guide.

4-The Aimtrak Lightgun must be plugged into the leftmost USB port on the ALU 1.1. Use a powered USB hub.

5-The IR "sensor" that comes with the Aimtrak HAS to be mounted around one inch above the SCREEN, on the acrylic with the Tron designs, NOT on top of the cabinet nor anywhere else.

6-Calibrate the gun with the ALU LightGun calibration tool, not with the PC calibration tool.

7-In order to start as P1in most games, press the Menu button to add a single credit, then go back to the game and WHILE POINTING OFFSCREEN press each of the side buttons and/or the trigger. Keep track of which button you need to press for each game, or if it is the trigger. Some games (Like Alien 3: The Gun) require you to aim at the screen and press the trigger. That is up to each game and its idiosyncrasies.

Guide to using the Aimtrak Lightguns with the ALU 1.1 running CoinOpsX V5.5

With the help from Andy from Ultimarc, I devoted some time to getting the Aimtrak Lightgun to work on the AT Games Legends Ultimate 1.1. This is a guide on how to do it. Any errors are mine.

This is my setup:

-AT Games Legends Ultimate (ALU) 1.1 running firmware version 5.61.0

-Hogore powered USB 3.2/3.1 Gen 2 Hub (currently unavailable on Amazon. This other one also works and is available on Amazon: Anker 10 port 60W Data Hub with 7 USB 3.0 Ports and 3 PowerIQ Charging Ports)

-CoinOpsX V5.5 Still Alive running off a Samsung BAR Plus 256GB-400MB/s USB 3.1 Flash Drive

-Ultimarc Aimtrak LightGun with Recoil (Black) running firmware version 9.20

-Ultimarc IR Sensor (comes included with the Aimtrak)

The Aimtrak can be connected to the same powered USB hub as the IR sensor. The hub has to be plugged into the leftmost USB port on the ALU.

The CoinOpsX USB FlashDrive is plugged into the rightmost USB port on the ALU, all by itself.
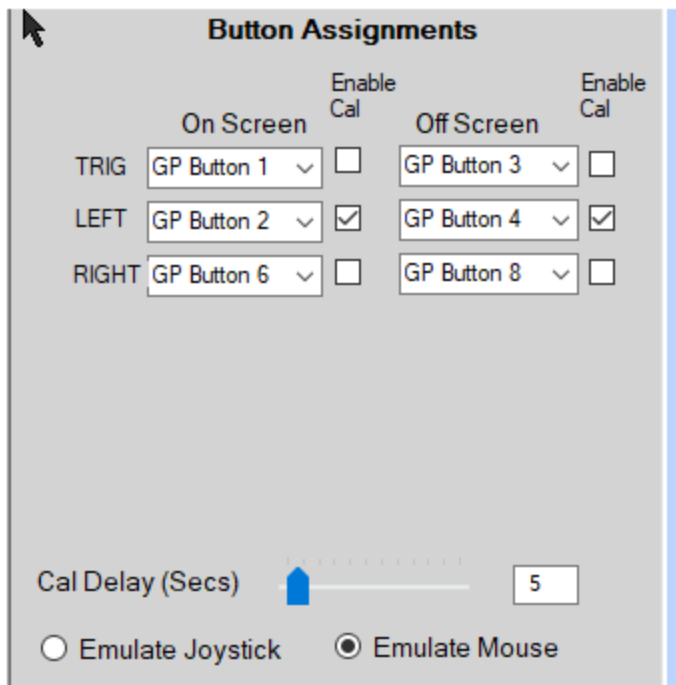
Start

Here is a link to download all of the necessary files. You will also find FW 5.61.0 for the ALU 1.1 (ha8800_update.img) in it.

https://www.dropbox.com/sh/puv647c5zqtf9xt/AAAgwYDCIeFm_dXMJntg9qfsa?dl=0

Create a new folder called "Aimtrak" or similar. Only download the ALU Firmware if you need it. Download the Aimtrak Setup Installer (aimtrak_setup.exe), the Aimtrak Firmware Downloader (fwdriver.zip) and Firmware version 9.20 (3 total file downloads). Copy/Paste all 3 into the folder. Right click on the Aimtrak Setup Installer .exe and select Run as Administrator.

When the installation has completed, plug your powered USB hub to the mains and then to your PC. Connect your Aimtrak to the hub, rIght click on the Aimtrak Setup program and run it as Administrator. On the opening screen (Configuration Tab), you will see the option to configure the buttons. Set up the buttons according to this illustration:

Button Assignments

	On Screen	Enable Cal	Off Screen	Enable Cal
TRIG	GP Button 1 ⌄	☐	GP Button 3 ⌄	☐
LEFT	GP Button 2 ⌄	☑	GP Button 4 ⌄	☑
RIGHT	GP Button 6 ⌄	☐	GP Button 8 ⌄	☐

Cal Delay (Secs) ▮━━━━━━━ 5

○ Emulate Joystick   ◉ Emulate Mouse

Note:
- GP Button 1 = P1 Button A (We do not recommend to use trigger button for enabling calibration mode. Because user will inevitably trigger this in-game)
- GP Button 2 = P1 Button B
- GP Button 6 = P1 Button C
- GP Button 3 = P1 Button X (We do not recommend to use trigger button for enabling calibration mode, Because user will inevitably trigger this in-game)
- GP Button 4 = P1 Button Y
- GP Button 8 = P1 START

Press Apply when done. Then look at the lower right corner. Verify which Firmware version is currently installed in the Aimtrak. If it is anything other than 9.20, close the Aimtrak Setup program and go to the Aimtrak Firmware Download section of this guide. If the firmware version installed in your Aimtrak is 9.20, close the Aimtrak Setup program and go to the ALU Aimtrak Calibration section of the guide

Aimtrak Firmware Download

Why 9.20?

The reason why Aimtrak Firmware version 9.21 does not work with the Arcade Legends is that the ID displayed by the device was changed on that version to make it uniform in both Linux and Windows. However, the Arcade Legends firmware is still looking for the old name, and so, it does not recognize the gun when it is plugged in, if it reports the new name.

	9.20	9.21
Device name for gun set to ID#1 (Linux)	Ultimarc	ATRAK Device #1
Device name for gun set to ID#2 (Linux)	Ultimarc	ATRAK Device #2
Device name for gun set to ID#1 (Windows)	ATRAK Device #1	ATRAK Device #1
Device name for gun set to ID#2 (Windows)	ATRAK Device #2	ATRAK Device #2

Firmware version 9.19 is recognized by the Arcade Legends firmware, but that version has the issue with sometimes not saving the configuration from the Aimtrak Configuration Utility.

Steps:

1-Locate your 9.20 firmware file and keep it in the Aimtrak folder.

2-Right click on the Aimtrak Setup Program and run it as Administrator. Click on the Setup tab.

3-Click on the Upgrade Firmware button and then on the OK button. You will get a message that states the device will reset in 20 seconds. After a bit you will hear the sound code for USB device disconnected and then connected.

4-A new window will open with a Select Firmware button. Press it and locate the 9.20 firmware file. Hit Select and the Firmware process will begin.

The Firmware Downloader program may give you a Program Not Responding error and the completion bar may not move at all, but that is all right. Give it time and the firmware download will eventually complete.
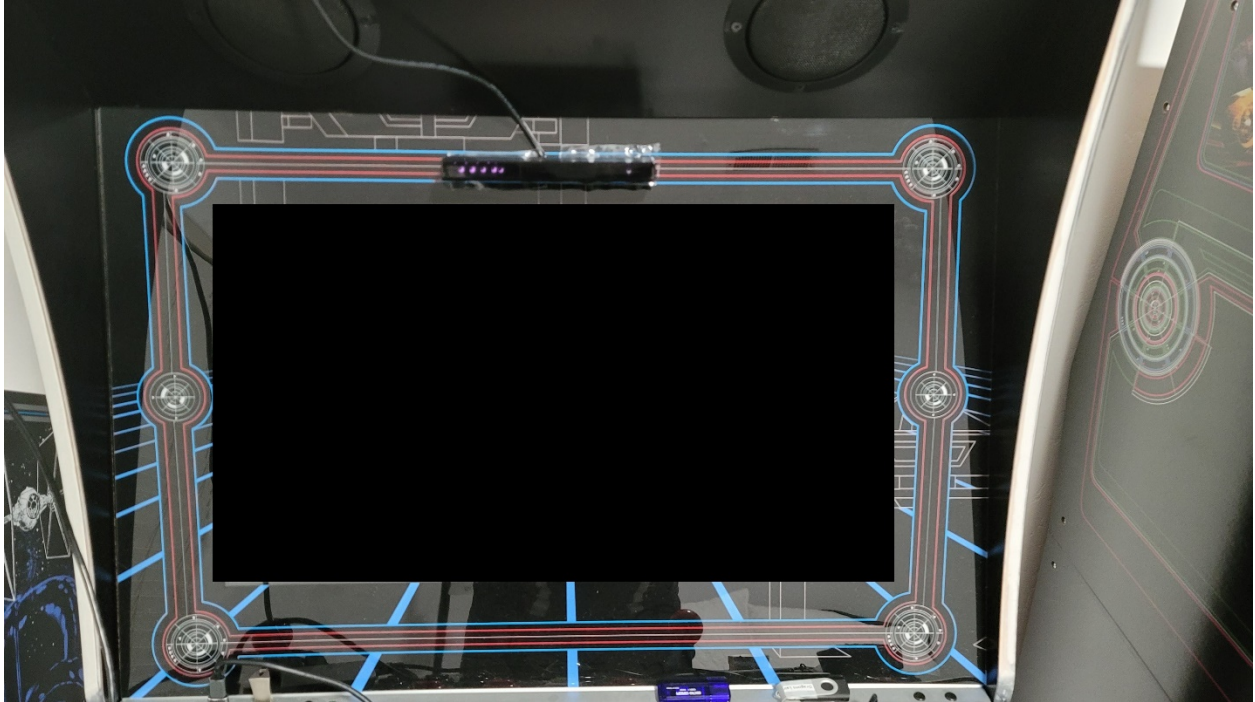
5-If the Aimtrak Setup program has closed, open it again and check to see that the Firmware installed is 9.20 If it is not, redo the Firmware installation process from Step 2.

If you have issues, like getting a No Device Connected error and no browse button when downloading the firmware to your Aimtrak, then Unzip the Firmware Downloader file (fwdriver.zip) into the Aimtrak folder. Right click on the install.exe and run it as Administrator. Then go into the fwdriver Setup folder and locate right-click on the U-HIDFirmwareUpgrade.exe file. Run it as Administrator. Then go back to Step 2 above.

When firmware version 9.20 is intalled in your Aimtrak, then go to the ALU Aimtrak Calibration section of this guide.

ALU Aimtrak Calibration

Attach the Aimtrak IR Sensor to your ALU within 1 inch if the top of the display itself. Do NOT mount it on top of the case.

It is best to mount it right over the bottom blue line that is part of the Tron artwork over the display, as the image shows. You can take the sensor out of the case to make life easier on you. This only takes undoing some Phillips screws. If you do that, make sure the LEDs are pointing at you, setting the circuit board perpendicular to the display, not flush. If you mount it with the LEDs pointing down, you will have calibration issues and general poor performance.

With the IR Sensor attached in place, plug it into a suitable USB power source. It can be the powered USB Hub you are using for the Aimtrak gun, but really, it can be any powered USB A port. The IR Sensor uses 0.4 AMP.

Next, plug in the Aimtrak gun running 9.20 Firmware into one of the ports of your powered USB hub, which should be connected to the mains and to the leftmost USB port of your ALU.

Power on your ALU. If you have CoinOpsX autorunning on start, wait until the CoinOpsX splash page comes up (Where you hear the "I feel alive!" bit) press A to get to the games library and as soon as that loads up, press the Rewind button on your ALU. That will switch you to the regular ALU setup menu.

Go to the Settings tab and then to Advanced Settings, page 3 and you will find the Lightgun Calibration function. Select it and hit A. You will see a large QR code. Do not bother with it: It takes you to the Aimtrak webpage.

Longpress the right side button on the Aimtrak and give it a couple of seconds. The crosshairs on the ALU screen should move by themselves to the upper left corner. Aim your Aimtrak carefully at the crosshairs. Wait for the crosshairs to be directly at the corner and then aim and shoot at it. When you "hit" the crosshairs, they will teleport to the opposite corner. You will repeat the shooting process twice, once for the opposite corner and once for the bottom center. When you are done, the crosshairs will stop moving by themselves. Aim around the screen to make sure the calibration went well, and if it did not, redo it as much as you need to. At that point, exit the calibration screen go to the BYOG tab and select AddonX. From the games list on the left, select Lightgun and then, I would suggest, Crossbow.

In order to start as P1in most games, press the Menu button to add a single credit, then go back to the game and WHILE POINTING OFFSCREEN press each of the side buttons and/or the trigger. Keep track of which button you need to press for each game, or if it is the trigger. Some games (Like Alien 3: The Gun) require you to aim at the screen and press the trigger. That is up to each game and its idiosyncrasies.

When the game starts, use your Aimtrak to shoot at the enemies.
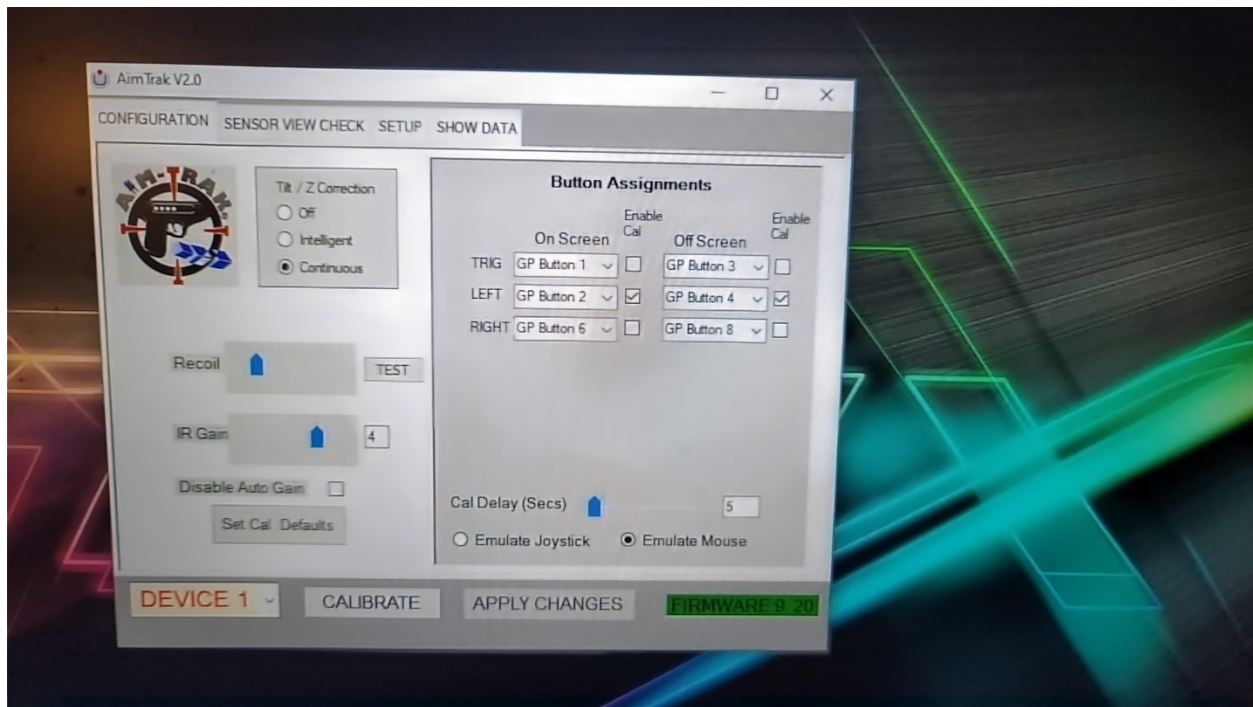
Additional Resources

The following page has more information on firmware and recovery issues:

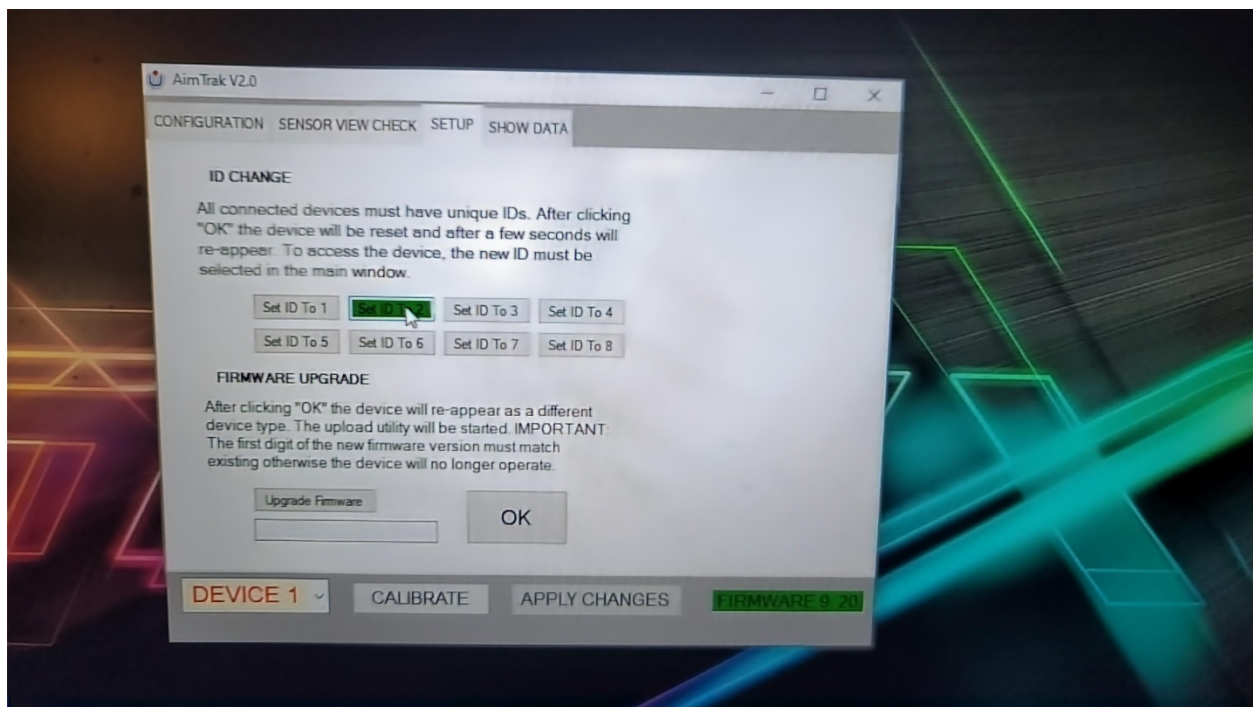https://www.ultimarc.com/programmers-page/

Adding a second Aimtrak gun:

In order to add a second gun to your ALU for two player Lightgun games (I have not tested past two guns), you need to follow these steps:

1-Install firmware 9.20 on the second Aimtrak gun as described above.

2-Configure the second Aimtrak gun as described above, using the same button bindings as with the first gun.

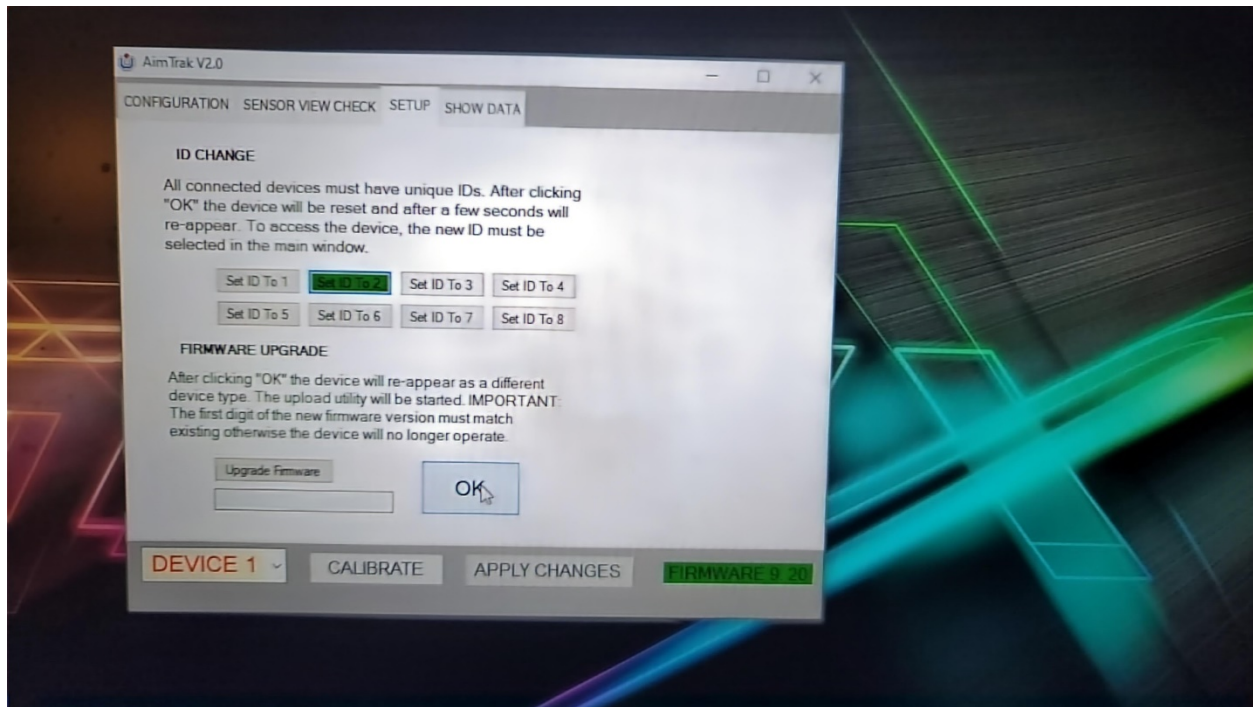3-If the Aimtrak Configuration Utility closed, then open it again.

4-Go to the Setup tab.

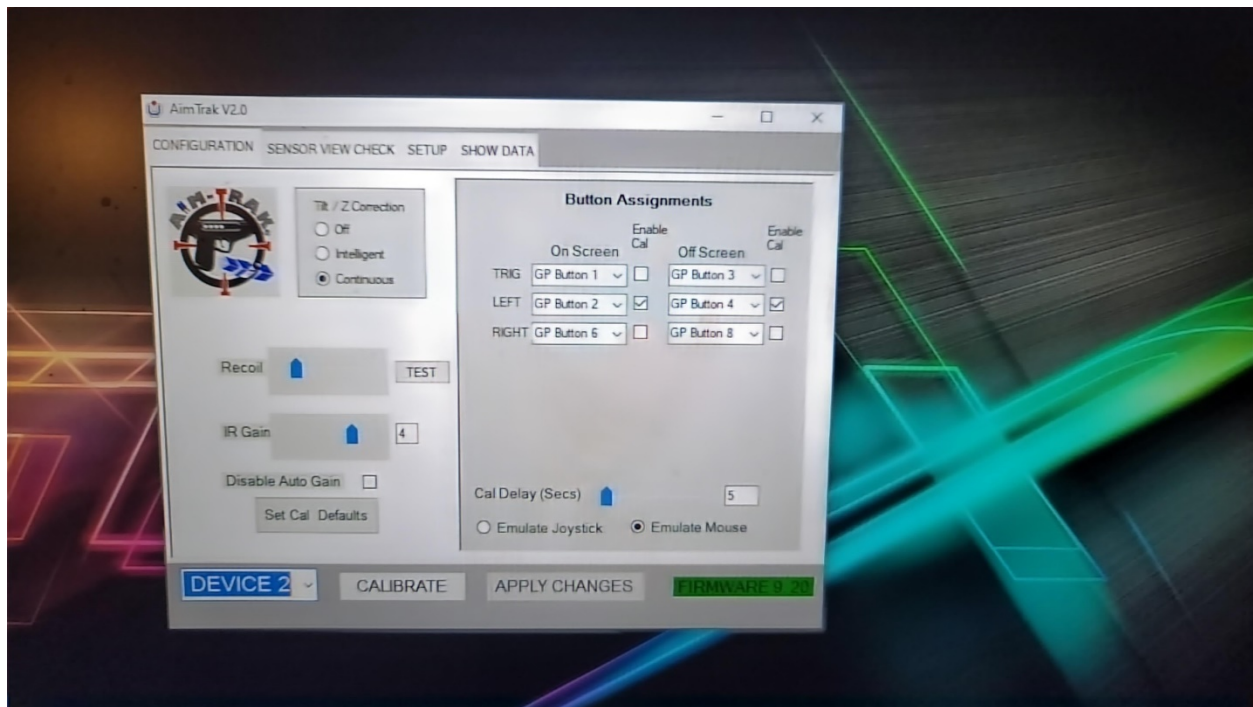5-Click the button that says "Set ID to 2" under the ID Change option.

6-Click the button that says "OK".

Give is some moments. You will hear the "USB Device disconnected" tone from Windows. After a while, the software will either hang or show you the Aimtrak pistol with a new ID. If it hangs, close it after a minute or so.

7-Run the Aimtrak Configuration Utility again. The far right label should be red and say "No Device". The far left button should read "Device1"

8-Click on the far left button and select "Device 2" from the dropdown menu. The label on the far right should now read "Firmware 9.20".

9-Disconnect your first Aimtrak from the ALU.

10-Connect the second Aimtrak to the same powered hub you are using for your first Aimtrak.

11-Run the Lightgun Calibration tool on the ALU with the second Aimtrak.

12-Turn off the ALU.

13-Connect the first Aimtrak back in its port.

14-Turn on the ALU. Select whichever Lightgun game you wish to play (My wife and I finished Space Gun together prior to my writing this).

15-Add Credits using the function under the Menu button.

16-Start the game according to what needs to be done to start that particular game (for Space Gun, you press the right button while aiming offscreen)

17-Shoot at the enemies. Double your fun.

IMPORTANT NOTE:

When you are not playing Lightgun games, you should unplug your Aimtraks(s) so the controller scheme is returned to normal (the IR Sensor can stay plugged in). Otherwise, you will have issues where the Aimtraks are being used as controllers on non-Lightgun games (looking at you, Kung-Fu Master!). It might seem like those games have stopped working (No P1 start) They are working. Just unplug the Aimtrak(s).

Aimtrak Lightguns on Core and Gamer Pro

On the Core and Gamer Pro every item on the guide applies equally EXCEPT:

1-Make sure you pair your game controllers via Bluetooth BEFORE you plug in the Aimtrak pistol(s).

2-If you are using the Gamer Pro, remember to pair both controller sides to the Core and then plug in the powered USB Hub that will have the Aimtrak gun(s), IR sensor and CoinOpsX V5.5 (if you are using it) to the Core single USB port. Do not use the one on the Legends Pro large controller tabletop component.