

Hardware Installation

Device Configuration

Operations of GRIT® Systems

Copyright GRIT Automation, Inc.
All Rights Reserved.

3rd Printing, March 2023

Updates of this documentation may be
available at www.gritautomation.com

Products displayed on the front cover represent a portion of the products
available from GRIT and are not necessarily indicative of the products you
received.

GRIT Automation, the GRIT Automation logos, and the configuration of these products
and system are registered trademarks of GRIT Automation, Inc. All rights reserved.
Protected by U.S. patents pending.

TO OUR CUSTOMERS

Thank you for purchasing your GRIT Automation® system. Please read this manual carefully to ensure that your new products are installed, configured, and maintained correctly.

We're a small company that loves the product we've created, and we're confident you will too! If you ever have any questions or feedback, feel free to contact us at the address below.

GRIT Automation, Inc.
2001 N. Mattis Ave. Suite 8402
Champaign, IL 61822 USA
www.gritautomation.com

Phone - (217) 840-5074
Email - info@gritautomation.com

TABLE OF CONTENTS

GETTING STARTED

Device Power	9
GRIT Lock®	12
6 Ways to Lock/Unlock Your Tools	14
Initial Setup	17
GRIT Hub® Connection Options	18
Access the GRIT App	19
Create GRIT Administrator Account	20
Switch from Hub WiFi to Personal Wifi	21

GRIT HUB® + APP

GRIT Hub®	23
Installation	24
Bind Devices	26
GRIT App	29
Save App to Home Screen	29
Common GRIT App Functionality	30
Dashboard	30
Navigation	31
Icons	32
Devices Page Overview	33
Replace / Delete Device	34
Administration	35
My Profile	36
Network	37
Remote Access	38
Settings	39

TABLE OF CONTENTS

TRIGGERS

Standard 120v and 220v (up to 20a) Triggers	41
Installation	41
E-Stop Trigger	42
Installation	42
Standard 220v Heavy Duty (up to 35a) Triggers	49
Installation	49
Industrial 220v Single Phase Trigger	50
Installation	52
Industrial 208v 3Phase Trigger	51
Installation	52
Industrial 480v 3 Phase Trigger	57
Installation	58
Trigger Device Configuration	62
Activation Level and Power Profiles	64
Normal	64
Delay	66
Spike	68
Advanced	71
Maintenance Schedule	73
GRIT Switch	74
Installation	74
Switch Device Configuration	75

COLLECTORS

120v and 220v Collectors	76
Installation	76
MagSwitch Collectors	77

TABLE OF CONTENTS

COLLECTORS

MagSwitch Installation	77
Collector Device Configuration	92
VFD Device Configuration	93

GATE CONTROL

Gate Control	94
Orientation	95
Installation	97
Finetune the Arm Position	99
Reattach the Arm	100
Slide Guide	102
Gate Control Device Configuration	103
Calibration	104

AIR QUALITY

Air Quality	105
Installation	106
Air Quality Device Configuration	107
Programming an iR or RF Remote	108

TABLE OF CONTENTS

MESH XTNDR

Mesh XTNDR	110
Installation	110
Mesh XTNDR Device Configuration	111

GRIT REPORTS

Activity Reports	112
Maintenance Reports	116
Tool Reports	117
Export Reports	121

GRIT LEGAL NOTES

Limited Warranty	122
-------------------------------	------------

GETTING STARTED



Device Power

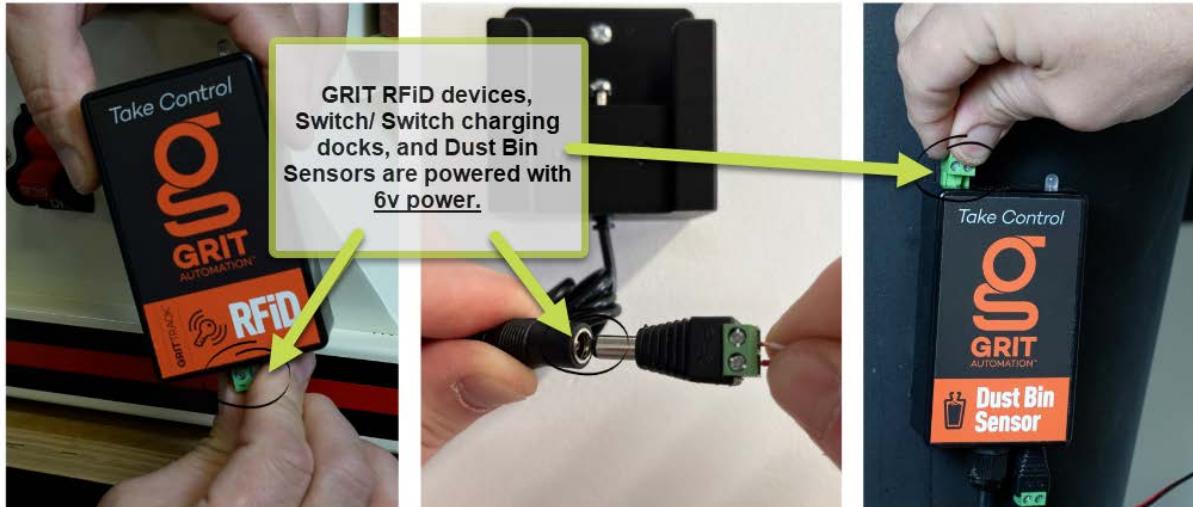
Attention: Supplying appropriate and sufficient power for your GRIT devices is crucial for optimal performance. Please, carefully read through all power information and recommendations.

Most importantly, remember to unplug or cut the power to any tool you are working on.

Power Requirements

RFID, Switch charging docks, Gate Control, and Dust Bin Sensor's Strobe Light are all powered with low-voltage power, BUT require different voltages to operate. All low-voltage devices are shipped with 18/2 solid copper thermostat wire.

6v power



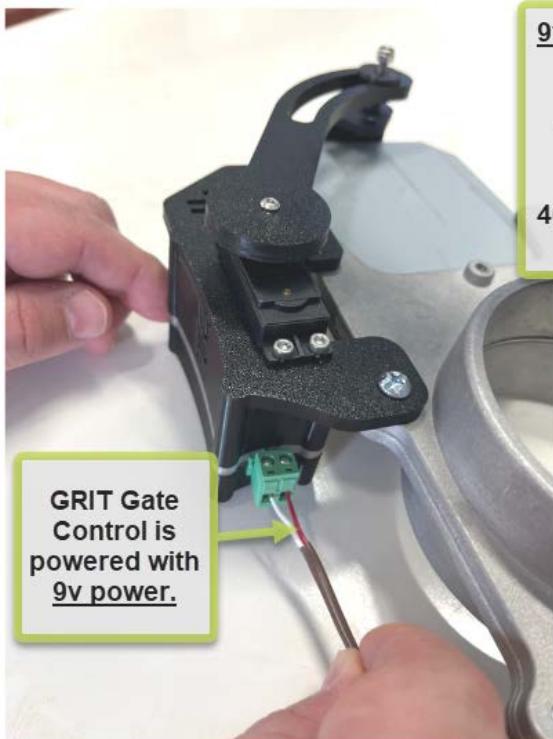
6v 1a Power Supply: GRIT Trigger/Collector

A Trigger (or Collector) outputs enough power to operate one RFID, Switch charging dock, and/or one Dust Bin Sensor.



GETTING STARTED

9v power



9v 20a/40a Power Supply: GRIT Power Banks

20a- operate up to six*
Gate Control devices.

40a- operate up to twelve*
Gate Control devices.



The low-voltage wire can be run from a device to the Power Bank in a "home run" fashion, or, hopped from one Gate Control device to the next on its way to the Power Bank in a "daisy chained" fashion. The Power Bank has two low-voltage jacks, but two sets of wires can be landed in each, if needed.

*Note: These recommendations could slightly increase or decrease based on the frequency with which multiple gates on the same Power Bank open in unison and/or how close to the dust collector the gate is located. Large Gate Control (5"+) devices do use more amperage than the Standard Gate Control (2.5"-4").

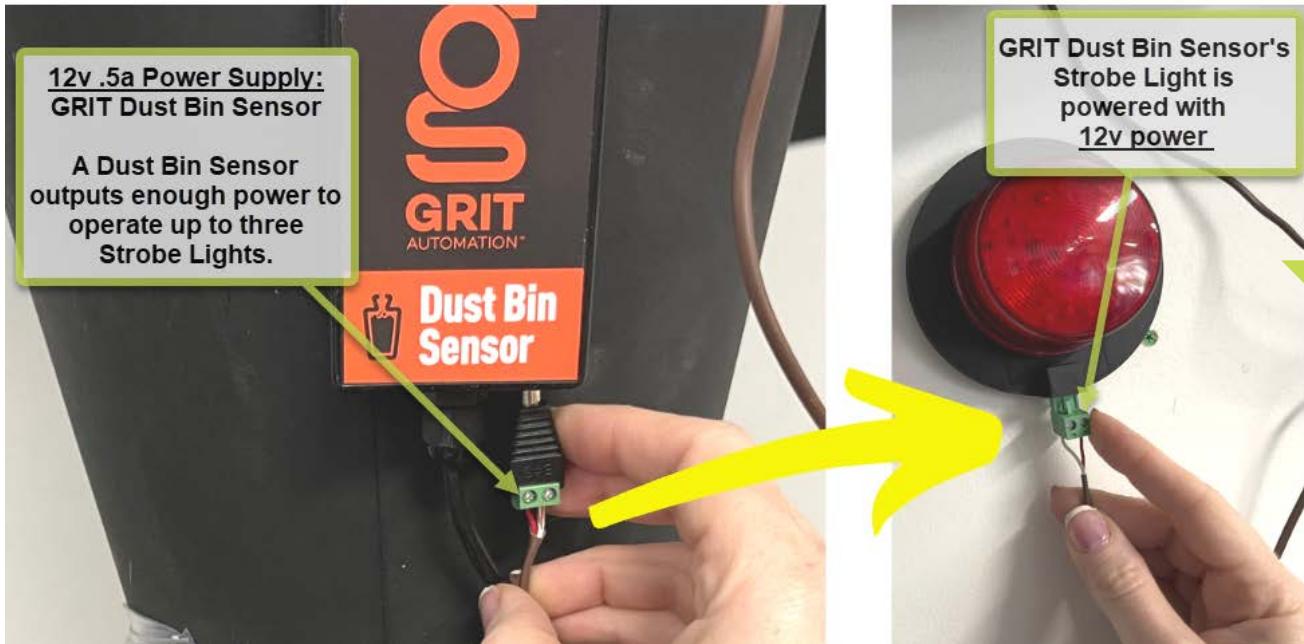
Troubleshooting:

- If gates seem "sluggish", decrease the number of gates that operate synchronously on a single Power Bank. If gates aren't receiving sufficient amps, they lose "throw" power.
- If gates keep "re-setting", you may need to ground your ductwork.

GETTING STARTED

Getting Started

12v power

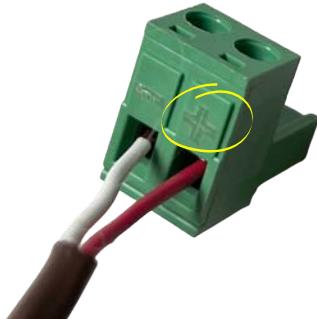


Pay Attention to Polarity

A brief note about the two types of low-voltage connectors used in the GRIT system: Terminals and Jacks. The positive and negative ports for these two connectors are located on opposite sides from each other. When running the low-voltage wire to devices, pay attention to polarity. A good rule of thumb is "Red on Right/Positive." This rule does not hold, however, for the low-voltage jacks found on Switch charging docks, Dust Bin Sensor Strobe Lights , or Power Banks. Refer to the image below.

Low-voltage terminal

- / +



Low-voltage jack

+ / -



GETTING STARTED

GRIT Lock®

The premise of GRIT Lock is simple: easily lock/unlock tools to increase shop safety. With the use of GRIT Triggers, we are able to not only control the power that reaches your tool, but also, measure the current draw of the machine. Beyond the lock/unlock capability, the system provides an additional safety feature: Emergency Lock. Understanding how GRIT Lock® works and how to fine tune the power profile configuration of each tool/Trigger will ensure the proper current measurement to detect when a tool is running, as well as, optimal response time in the event of an Emergency Lock situation.

Emergency Lock

One of our safety "policies" is that GRIT will NEVER turn off a tool that is running. In the event that the HUB goes offline, someone initiates a system update, or someone is running a tool after the HUB's scheduled lock time, GRIT NEVER CUTS POWER TO A RUNNING TOOL.

An Emergency Lock, or an instance when GRIT will cut power to a tool, is described in the following scenario:

GRIT quickly cuts power to tools left in the 'ON' position prior to that tool's Trigger being unlocked.

Example: The entire shop is locked. Person 'A' walks up to the bandsaw and flips the power switch 'ON'. Since the tool is locked, it will not power on. Mistakenly, person 'A' leaves the tool's power button in the 'ON' position and walks away.

Later, the shop owner enters the shop and unlocks all the tools. When the bandsaw gets the unlock command, the Trigger will switch on the power feeding the bandsaw. As soon as the Trigger unlocks, GRIT immediately checks whether power is flowing. If the Trigger reads power above the activation current level set for the bandsaw, it cuts the power again within 1/60th of a second (1 cycle of AC current). GRIT immediately re-locks the bandsaw and logs an event called 'Emergency Lock'. To allow usage of a tool that has been shut off due to Emergency Lock, simply turn off the tool, then press the unlock button again.

GRIT Lock® and the Importance of Trigger Configuration

The effectiveness of a majority of your GRIT system, including GRIT Lock, is dependent upon properly configuring each tool's Trigger. A Trigger's "job" within the system is, in essence, to measure and control current flow to its tool. All tools vary in the amount of current they pull, the amount they pull when 'on' versus 'running' (i.e., CNCs), the time it takes to reach their full draw (i.e., slow-start router tables), and the consistency with which they pull it while running (i.e., lasers). With your shop's complexity in mind, GRIT has a fully configurable application to completely capture each tool's power profile.

The details for properly configuring Triggers are covered under the Trigger Configuration section.

GETTING STARTED

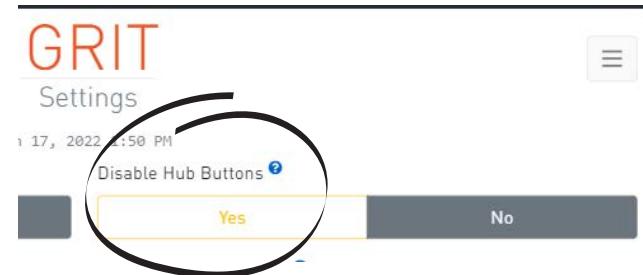
6 Ways to Lock/Unlock Your Tools

Lock/Unlock the entire shop with:

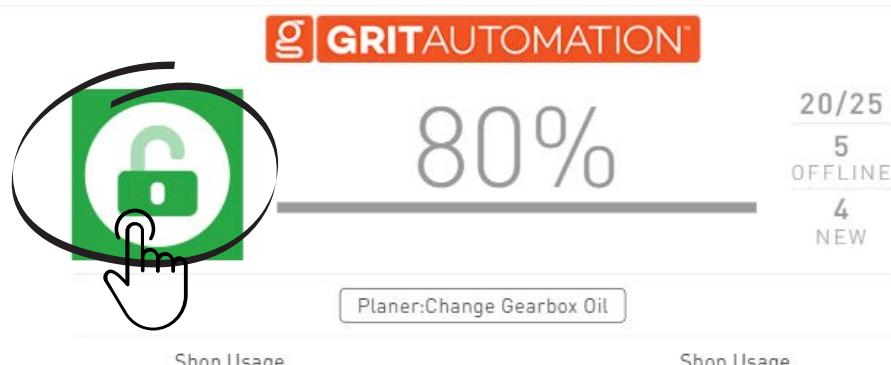
1. The Hub buttons.



*Note: the use of the Hub buttons can be disabled in the Admin section if the Hub is mounted in a location where using the buttons poses a safety concern.



2. The GRIT App Dashboard.

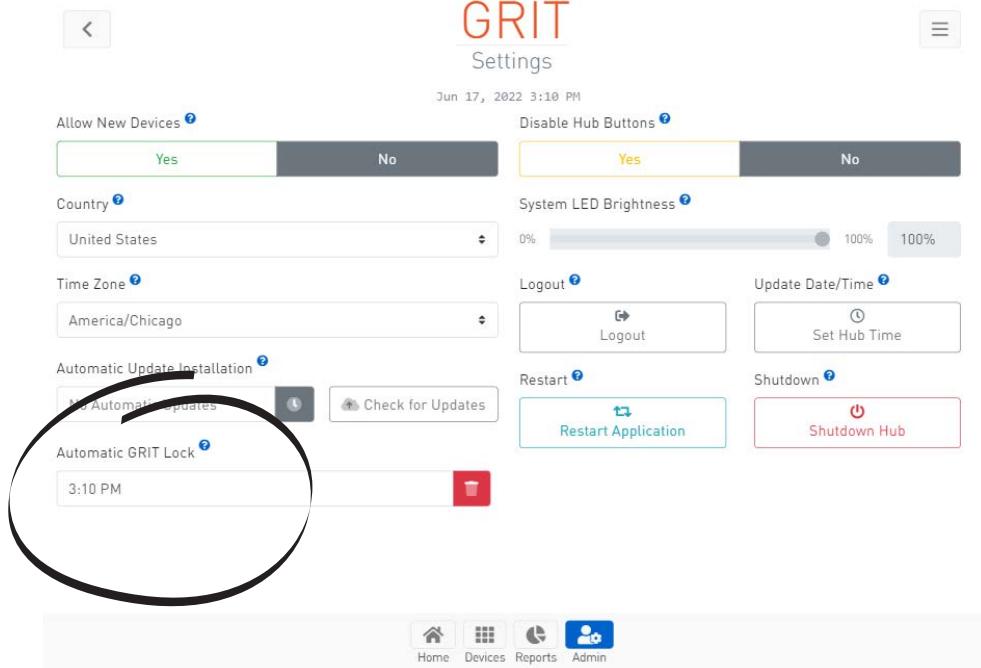


GETTING STARTED

Getting Started

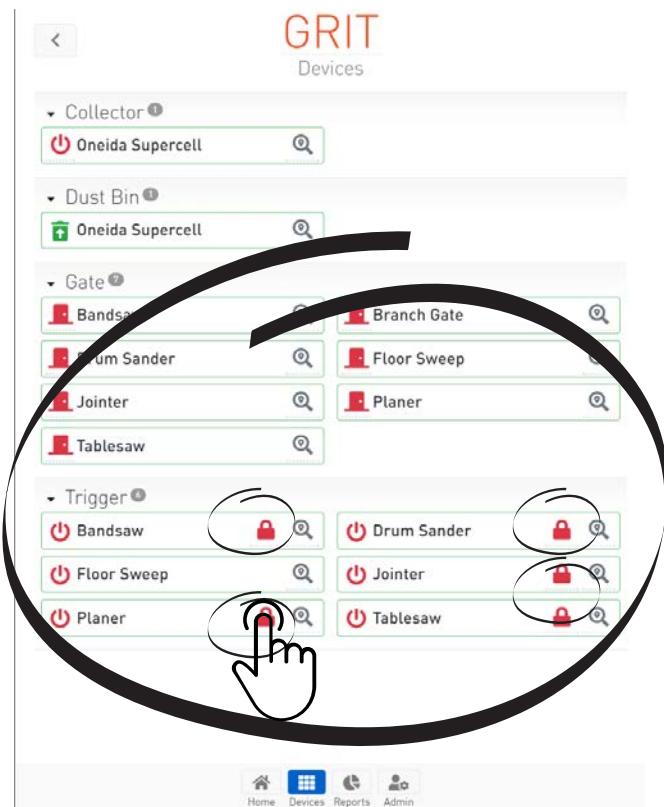
3. The Automatic GRIT Lock setting.

A scheduled system lock can be setup to automatically lock all triggers at the end of the day.



Lock/Unlock a single tool with:

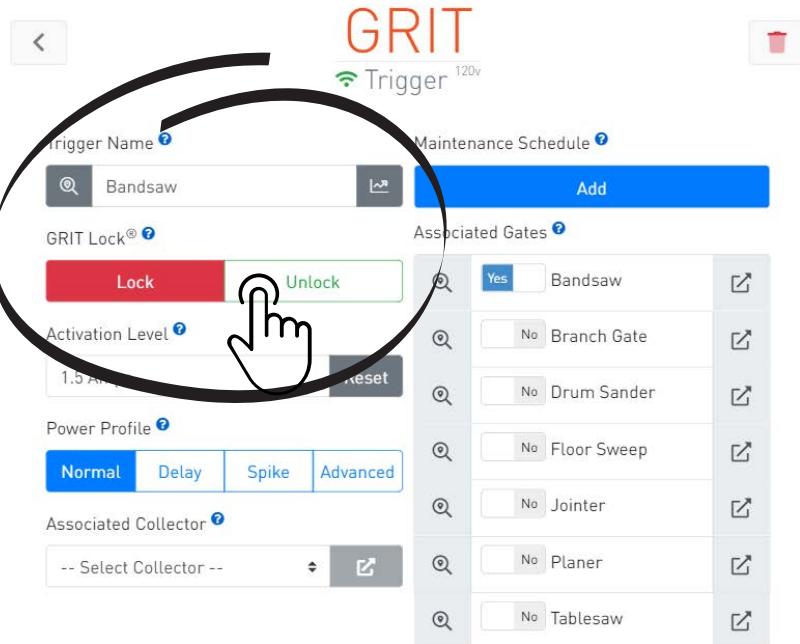
4. The GRIT App Devices screen.



GETTING STARTED

5. The GRIT App Trigger screen.

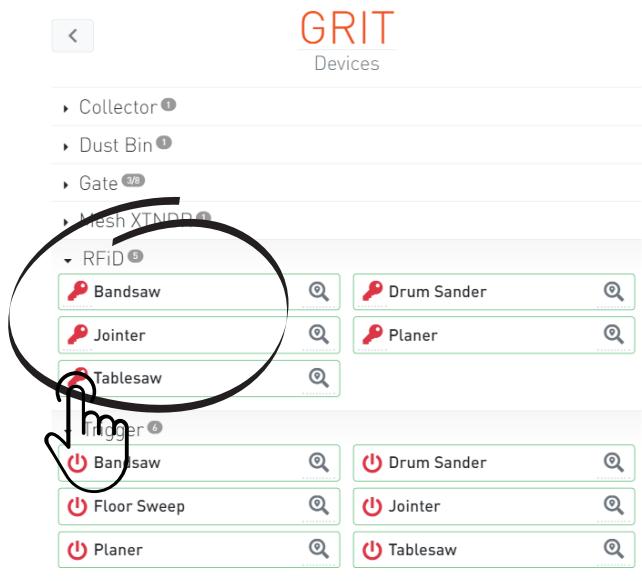
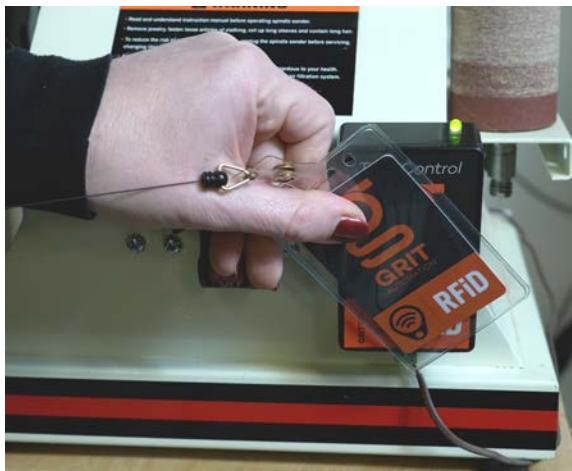
A tool's detailed configuration screen provides a button to toggle the state of that Trigger.



6. GRIT Track® RFiD devices.

If a tool is outfitted with Access Control, unlock:

- by swiping a RFiD card.
- by pressing the key icon in the GRIT App



GETTING STARTED

Initial Setup

The GRIT Hub® is the "brains" of the system and should be installed first.

- Select a location for your Hub that:
 - is centrally located in your shop to support good connectivity with other devices.
 - is located near an ethernet connection or close to your personal Wi-Fi port (if applicable).
 - is located near a 120v outlet.
- The GRIT system does not require internet access to operate, however, in order to access your system remotely and to perform updates, internet access is required and recommended. The two options of accessing the Hub are:
 - **Connect with the Hub via your own local network, or;**
 - **Connect with the Hub via its own projected Wi-Fi***

Plug in the Hub using the provided power supply. Allow the Hub to boot up (can take up to 2 minutes). A QR code is visible on the side display when the Hub is ready for connection.

Choose the connection method you'll be using: Ethernet or the Hub's own Wi-Fi*.

***Note: If planning to connect with your own private Wi-Fi, choose the initial setup option that first connects with the Hub's Wi-Fi. If you switch from the Hub's WiFi to your personal WiFi, wait until you have completed that proc to save the App shortcut to your device Homescreen.**

GETTING STARTED

GRIT Hub® Connection Options

Option 1: Connect to GRIT Hub with ethernet

Step 1:

Plug one end of an ethernet cable into the jack located on the bottom of the Hub, and the other end into your personal router or switch.



Option 2: Connect with GRIT Hub Wi-Fi (ensure ethernet is not plugged in.)

Step 1:

Press the button on the left side of the Hub until a QR code labeled 'CONNECT TO HUB WIFI' appears on the display screen.



Step 2:

Scan the QR code with your phone or tablet's camera to join.

(Note: If your phone/tablet has trouble scanning the QR code, you can manually connect):

-Go to the device's Wi-Fi settings.

-Select the Wi-Fi network that starts with 'grithub-'.

-The password is gritautomation (all one word, all lowercase).

GETTING STARTED

Access the GRIT App

After connecting with the Hub via ethernet or the Hub's own Wi-Fi, it is now time to install the GRIT App. (Remember, if you plan to switch from the Hub's own Wi-Fi to your own personal Wi-Fi connection, wait until that step is completed to save the shortcut to your device as the IP address will change in the process of the switch.)

Getting Started



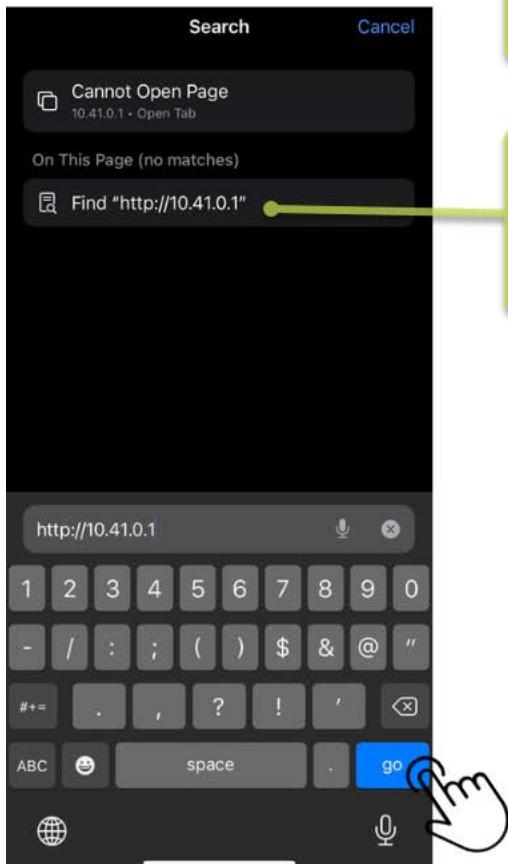
The GRIT App works on mobile phones, tablets, and PCs. Using the native browser for the mobile device allows for the application to be installed on the home screen.

Apple devices use Safari (not Chrome).

Android devices, use Chrome.

Press the button on the left side of the Hub to display the unique IP address QR code. You can either:

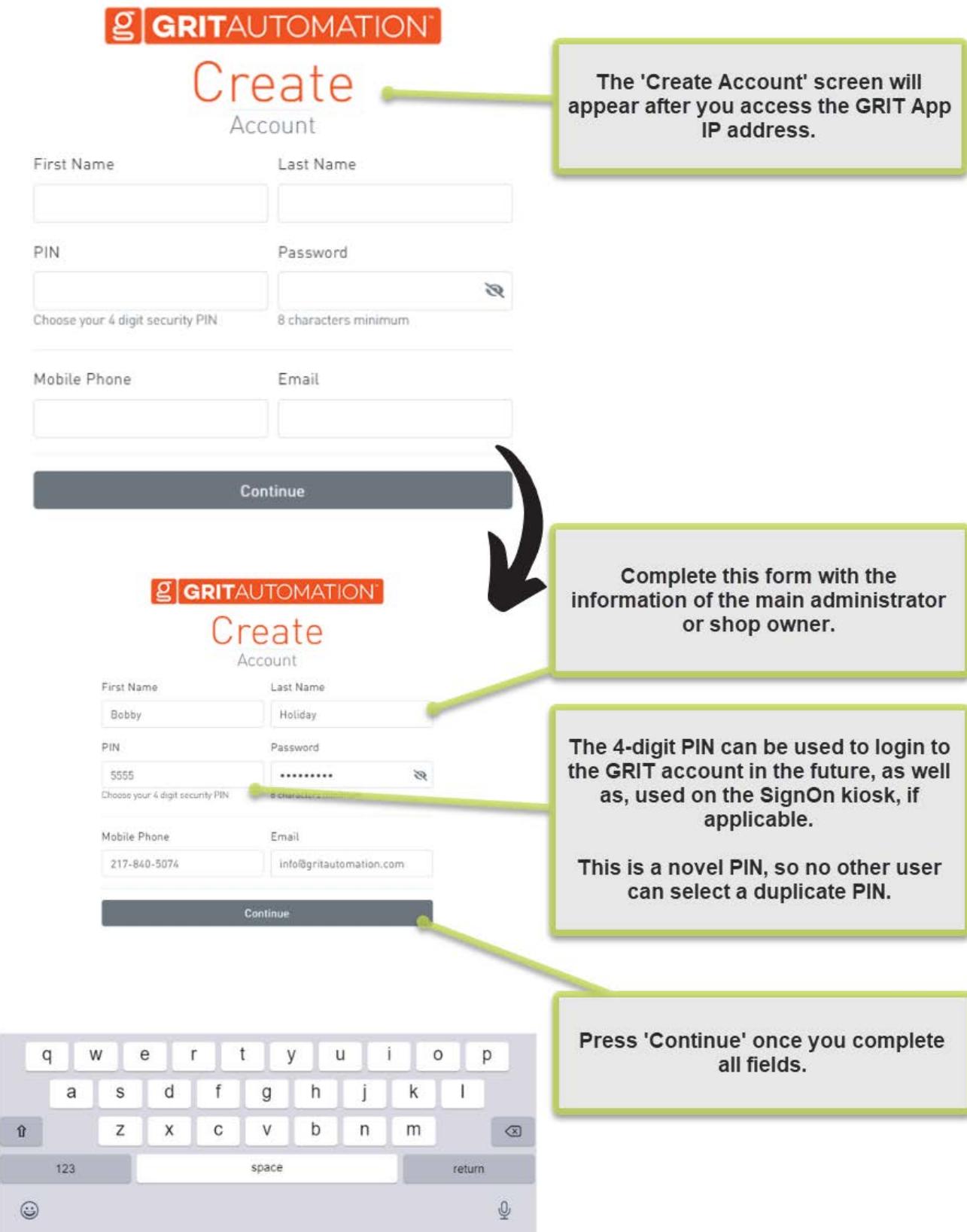
Scan the code with your phone/tablet's camera,
or;



Manually enter the IP address displayed into your device's native browser.

GETTING STARTED

Create GRIT Administrator Account



The 'Create Account' screen will appear after you access the GRIT App IP address.

Complete this form with the information of the main administrator or shop owner.

The 4-digit PIN can be used to login to the GRIT account in the future, as well as, used on the SignOn kiosk, if applicable.

This is a novel PIN, so no other user can select a duplicate PIN.

Press 'Continue' once you complete all fields.

g GRITAUTOMATION Create Account

First Name: Last Name:

PIN: Password: 

Choose your 4 digit security PIN 8 characters minimum

Mobile Phone: Email:

Continue

q w e r t y u i o p
a s d f g h j k l
z x c v b n m
123 space return
!

GETTING STARTED

Switch from Hub WiFi to Personal WiFi

Getting Started



Step 1:

If you would like to continue using the Hub's own WiFi, press 'No'.

If you would like to switch from the Hub's own WiFi to your own personal WiFi network, press 'Yes'.



Step 2:

Select your preferred WiFi network from the list of Available Networks. If you do not see yours in the list, press 'Refresh'.

Once selected, enter your WiFi password. Take care to enter the password correctly.

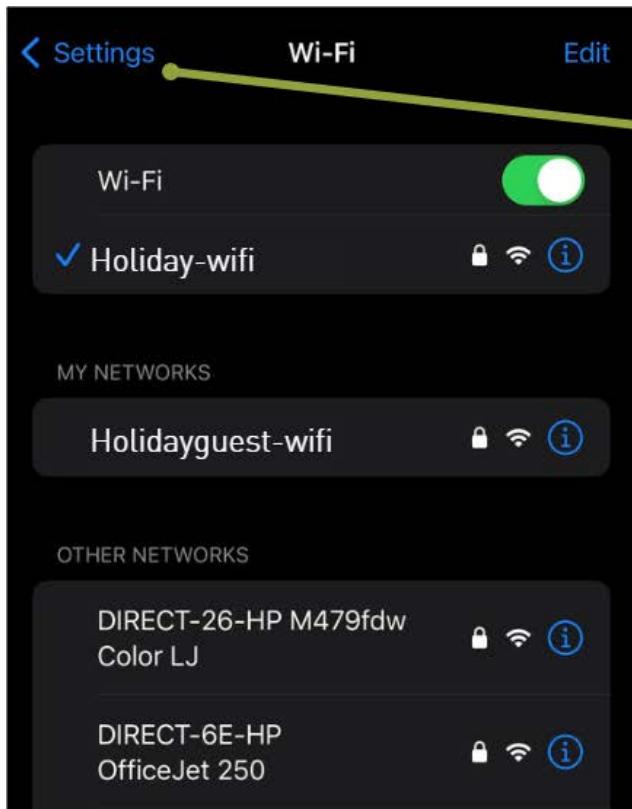
Press 'Next'.



Step 3:

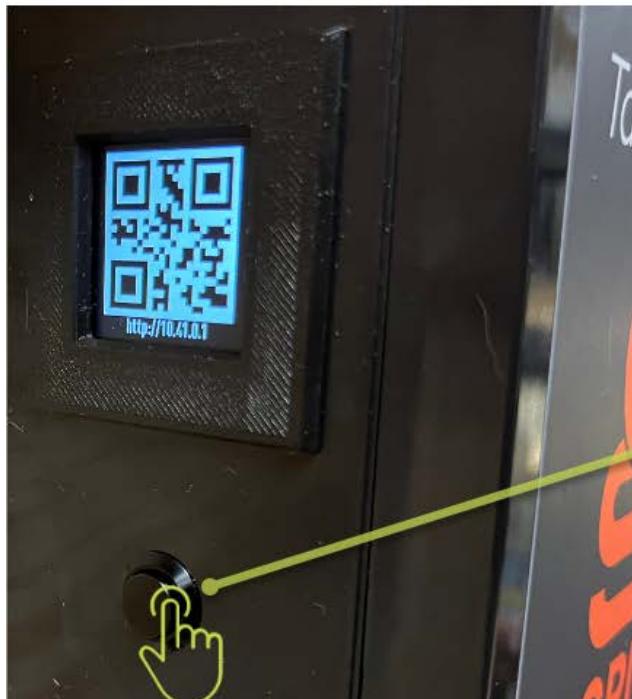
This screen will display when the connection has switched to your personal WiFi network.

GETTING STARTED



Step 4:

Go to your phone/tablet's Settings and make sure your device is on the same WiFi network you selected for your Hub.



Step 5:

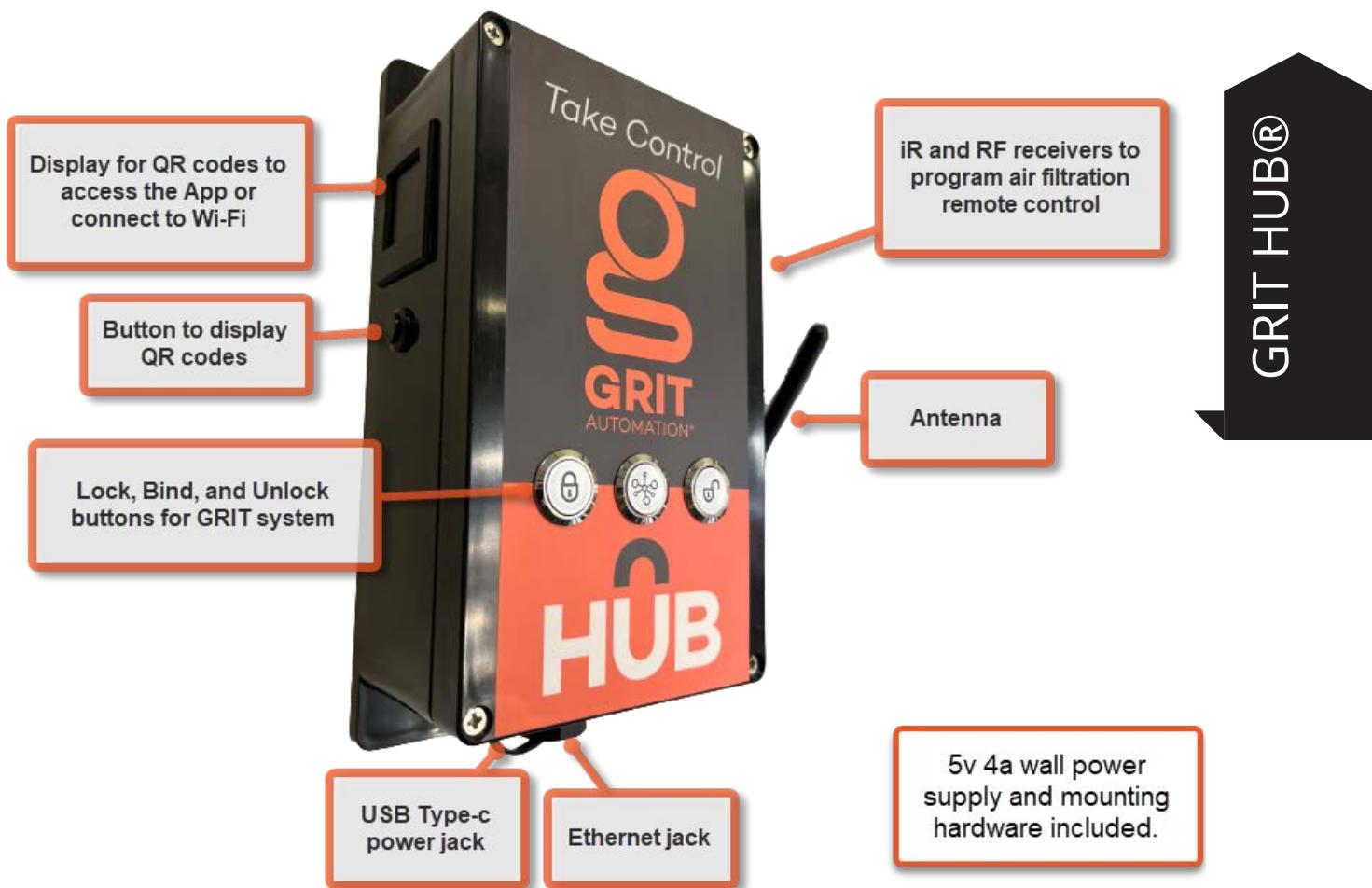
Press the button on the side of the Hub until you see the QR code for the new GRIT App IP address.

Scan with your phone/ tablet's camera or enter the IP address into your native browser's search window.

*Please note: If you enter the wrong password during the WiFi setup, press and hold the button on the side of the Hub for 10 seconds to delete the WiFi settings and start again.

GRIT Hub®

The Hub is the ‘brains’ of your system and all other GRIT devices communicate through its Mesh Network. All data collected from the system is stored locally.



GRIT HUB® + APP

Installation

The GRIT Hub® can be installed anywhere as long as it can connect to a single device to form the GRIT Mesh Network. However, the following should be considered to avoid having to move it later.

- The more centrally located the GRIT Hub®, the better.
- If your system will be connecting to your local network via ethernet cable, ensure that its placement makes this connection easy.
- If your system will be connecting to a local Wi-Fi network, make sure it is placed with good signal strength.
- If your shop has any thick concrete walls or thick metal walls that separate portions of the space, try to position the Hub central to this barrier. This will ensure the best communication between the areas. If your space has many rooms spread over large distances you may need to purchase the GRIT Mesh Xtndr device to bridge the long distances.
- If your system will not be using GRIT Track® (RFID), physical access to the hub should be considered to limit access by unauthorized persons (i.e., In a locked closet or office). If your system includes GRIT Track® (RFID), the GRIT Lock® buttons on the front of the device are not used.
- Access to 120v power is required to power the GRIT Hub®.

When mounting the Hub make sure it has no obstructions that might hinder the communication with the GRIT Mesh Network.



Step 1:

Attach the Hub to the wall.
If the Hub is not to be mounted on a wall, it can lay float on its back, on a high shelf.

GRIT HUB® + APP



Step 2:

Screw on the antenna and position it pointing up.



Step 3:

Plug the supplied 5v 4a power adapter into the jack on the bottom of the Hub, then into a 120v wall outlet.



Step 4:

If you are using an ethernet cable to connect to your local network, plug one end into a router or switch, and the other end into the jack on the bottom of the Hub.
(Cat5 cable not supplied.)

GRIT HUB® + APP

Bind Devices

After physically installing the other GRIT devices in the shop, you must Bind the devices to the Hub.

There are 2 Ways to Bind Devices*



1.

Press the center 'Bind' button on the front of the Hub. It will illuminate in solid blue when binding is activated.

Binding will stay 'on' for 5 minutes.

GRIT Settings
v1.1.309 | Jan 26, 2023 10:05 AM

Allow New Devices Yes No

Disable Hub Buttons Yes

Country

Email Settings

Time Zone

System LED Brightness

Automatic Update Installation

Automatic GRIT Lock

Logout

Update Date/Time

Home Devices GRIT Track Reports Admin SignOn Tracker

2.

Press 'Yes' for 'Allow New Devices' in the Admin Settings section of the App.

Binding will stay 'on' for 5 minutes.

*Bind Devices: Multi-Hub Environment

After physically installing the other GRIT devices in the shop, you must Bind the devices to the Hub. If there is another Hub that is close enough to yours to hear projected messages over the mesh network, your Hub will slightly alter its binding process to keep the systems separated.



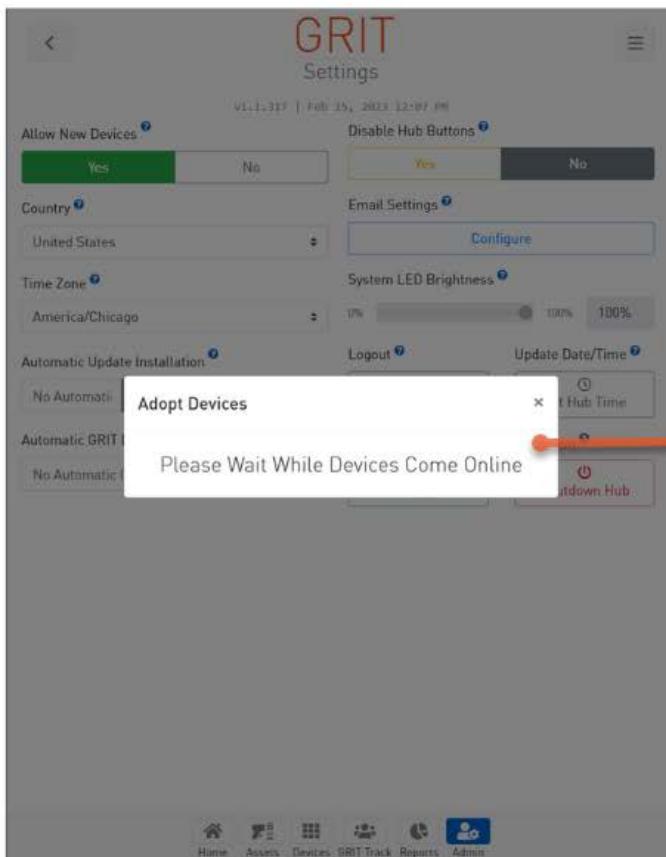
When you are in an environment where there are multiple HUBs present, the 'Bind' button on the front of the HUB will no longer enable new devices to bind.

When pushed, it will **FLASH** blue (rather than being solid) indicating that you must use the App to bind.

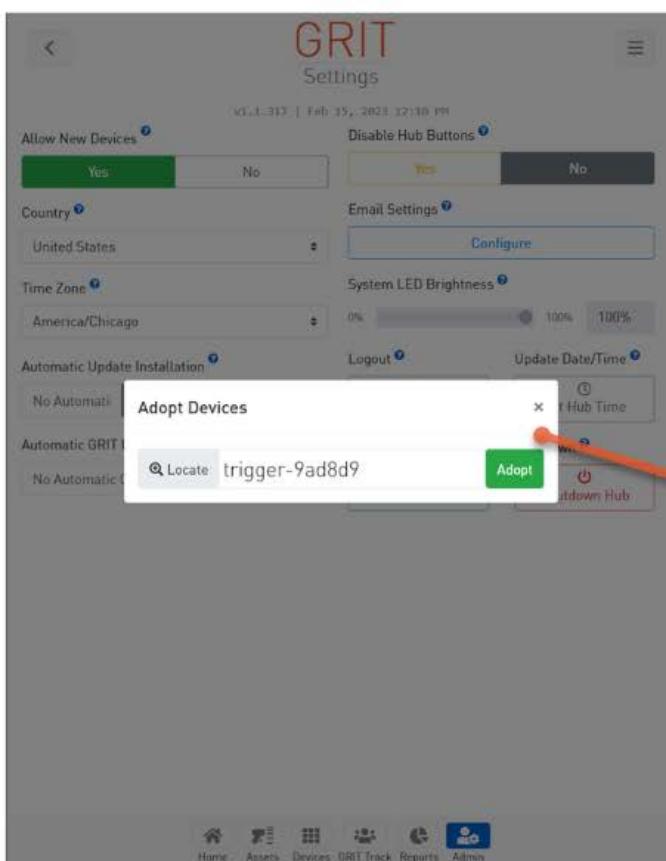
GRIT App
Bind Devices

To bind new devices in a Multi-Hub environment, press 'Yes' for 'Allow New Devices' in the Admin Settings section of the App.

GRIT HUB® + APP



After pressing 'Yes', a popup window will appear. If there are no devices waiting to bind, you will see this message.



After pressing 'Yes', a popup window will appear. If there are new devices waiting to bind, you will see this message.

Press 'Adopt' for each device you would like to bind to your HUB.

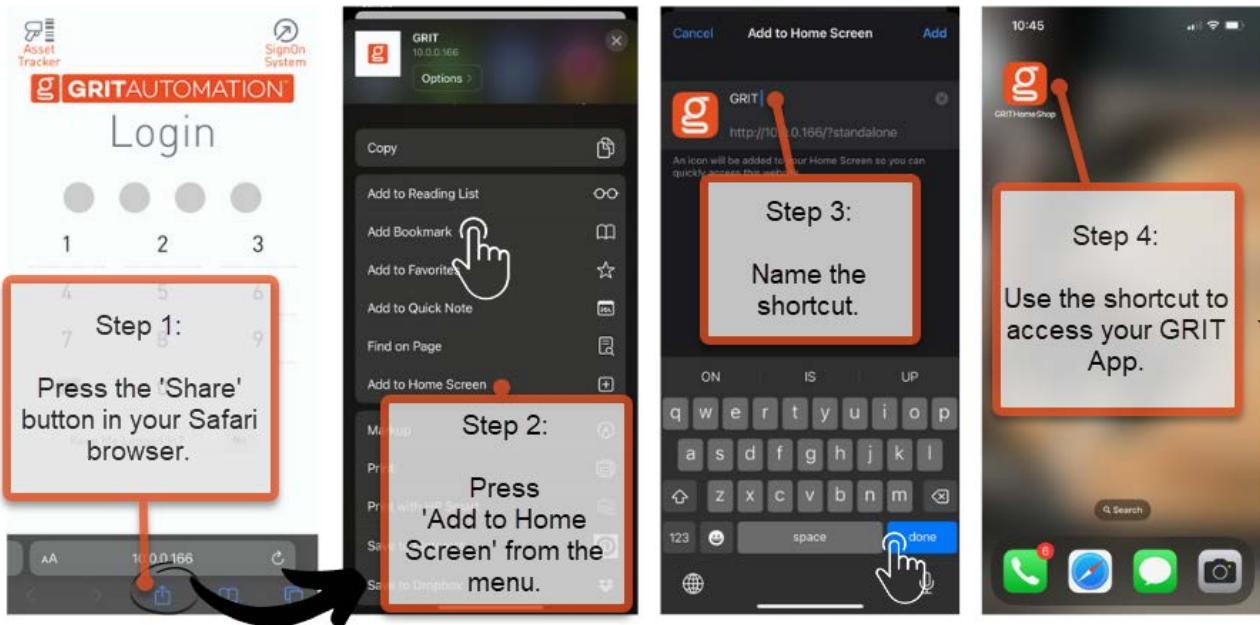
Be sure to only 'Adopt' devices that are present in your shop, to eliminate the chance that you bind a device from a nearby shop.

GRIT App

After connecting with your Hub and creating your GRIT administrator account, save the GRIT App shortcut to your Home Screen(s) for easy future access. Be aware that the network your phone/tablet/PC is on must be the same network used by your Hub. You will not be able to access the App from a different network.

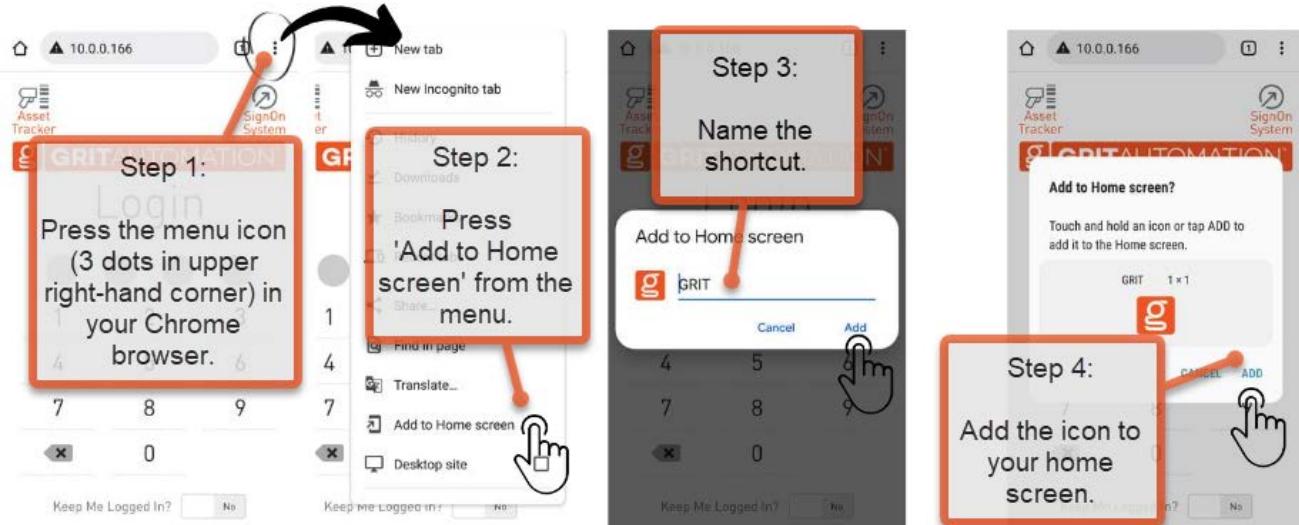
Save App to Home Screen

iOS (use Safari)



GRIT App

Android (use Chrome)



Common GRIT App Functionality

Dashboard

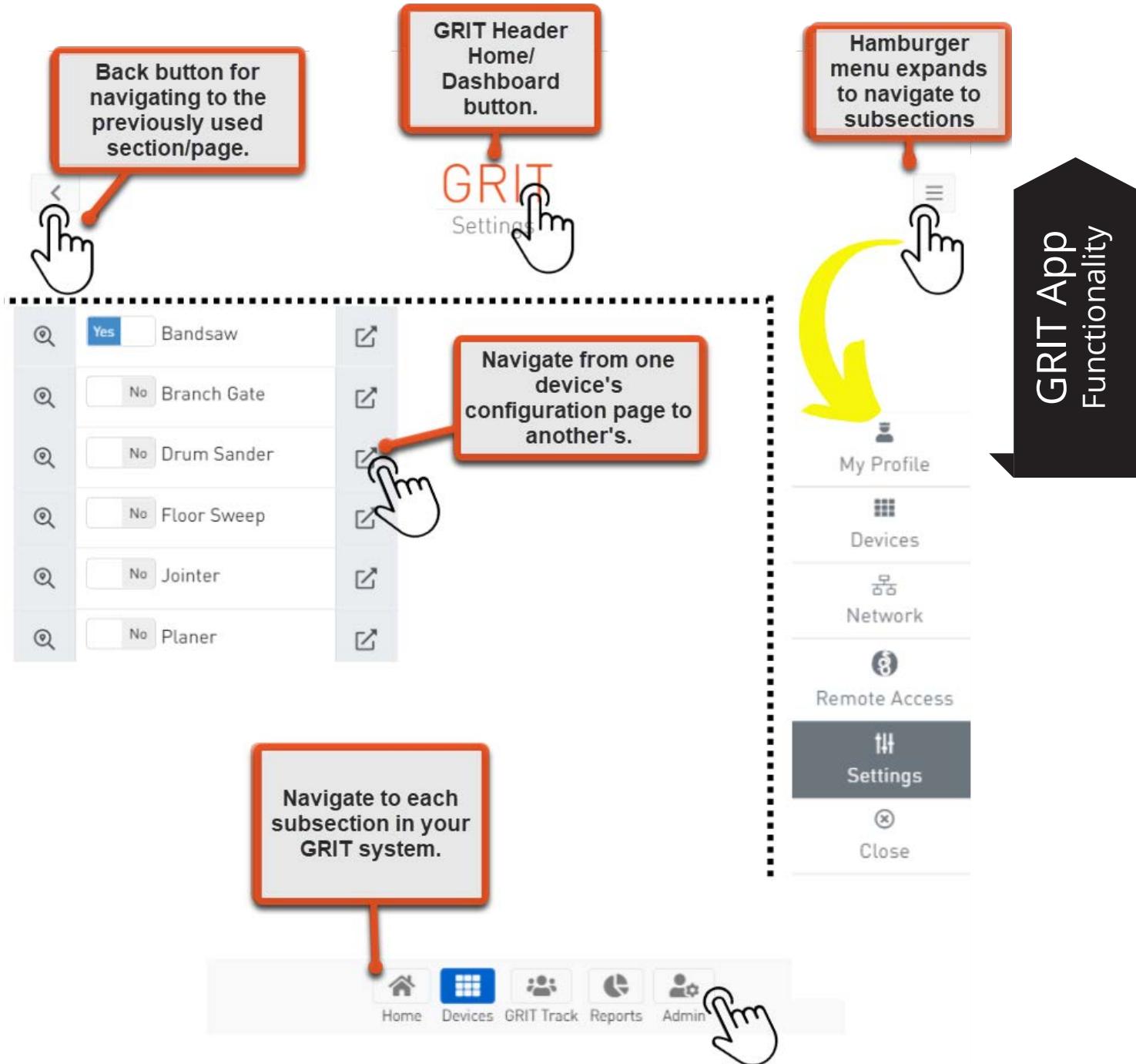
The dashboard features a central header with the GRIT AUTOMATION logo and a large 'ON' status indicator. To the left is a lock icon with a tooltip explaining it's for the entire shop (excluding RFiD tools). To the right is a system health bar showing 100% online, with 16/16 devices online, 0 offline, and 0 new issues. Below this is a message stating 'No Maintenance Required' with a tooltip for system maintenance alerts.

Two line graphs are displayed: 'Shop Usage By Hour : Today' and 'Shop Usage By Day : Today'. The hour graph shows runtime in minutes from 0s to 1s across the day, with a red dot at approximately 4 PM. The day graph shows runtime in minutes from 0s to 1s across the week, with a red dot at Monday. A tooltip for the hour graph points to the red dot at 4 PM.

At the bottom is a navigation bar with four icons: Home (selected), Devices, Reports, and Admin. A tooltip for the Home icon indicates it's a navigation button for each system section.

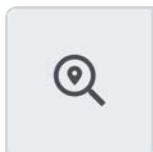
A separate callout box on the right side states: "Systems using Air Quality devices will also display a real-time Air Quality graph on the Dashboard."

Navigation



GRIT HUB® + APP

Icons



Locate button makes device LED lights flash



Displays Green/Red to indicate online/offline status



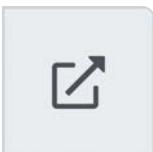
Display device graph



Hamburger menu to expand subsection options



Gives more in depth information about a field



Navigate to another device detail page



Indicates dropdown menu



Delete/Replace device



Displays Red/Locked or Green/Unlocked



Displays Red/Closed or Green/Open

Note: Any icon with these gray dots underneath is a clickable button

Devices Page Overview

The number displayed by each device category indicates the number of that device type bound with the system. A fraction 4/5, for example, would mean that one device is not online.

GRIT Devices

- Collector 1
 - collector-dc7451
- Dust Bin 1
 - dustbin-dc59f0
- Gate 6
 - gate-c00e94
 - gate-fd040
 - gate-c00e6c
 - gate-c00e80
 - gate-c1e31b
 - gate-70d20
 - gate-c00d90
- Trigger 6
 - trigger-107536
 - trigger-edb3e3
 - trigger-8099e
 - trigger-97b716
 - switch-c71e94
 - trigger-98acf5

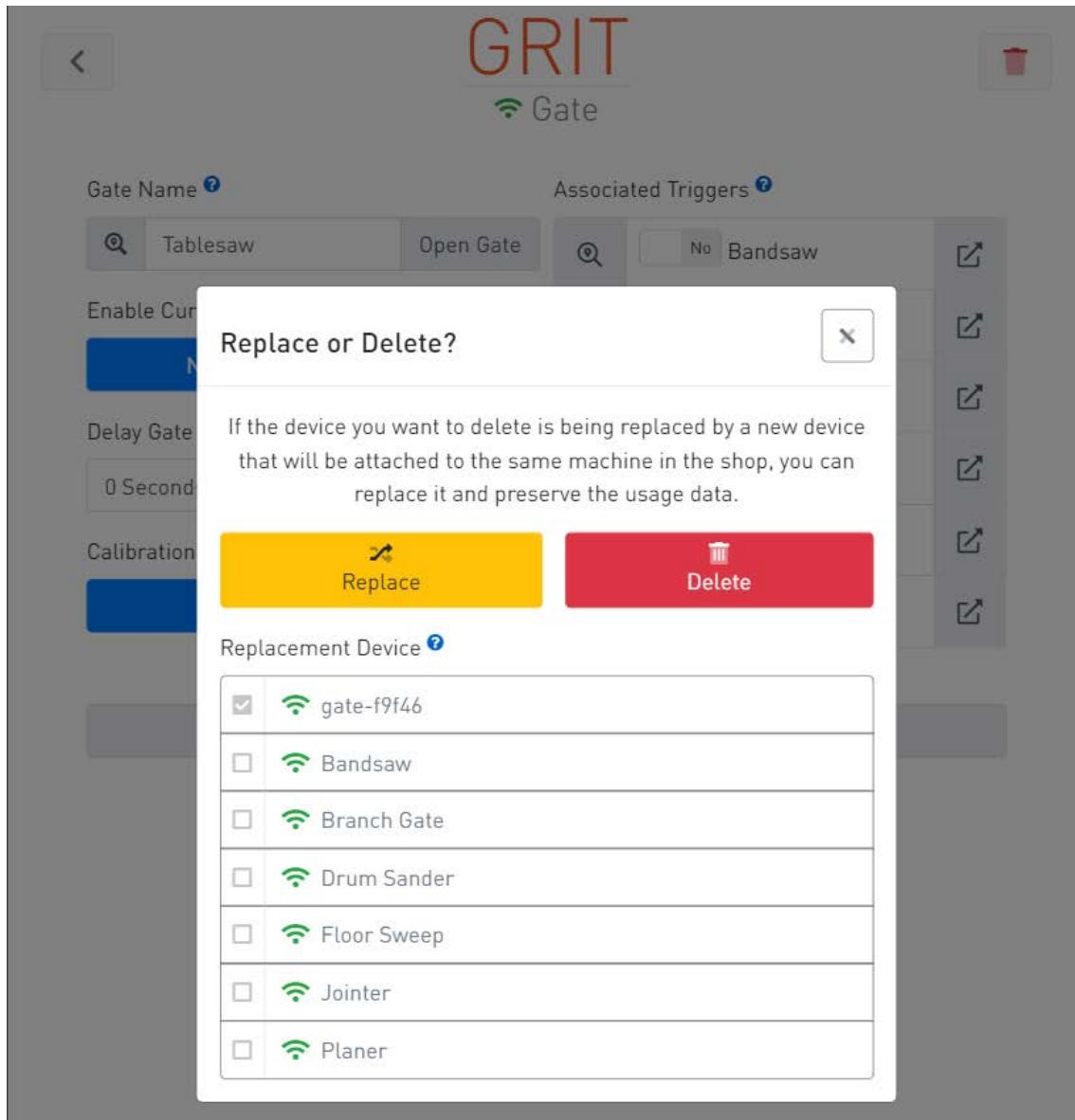
Generic names are assigned to each device until manually changed during configuration.

Clicking on a device listed will take you into that device's detail page for further configuration.

Home Devices Reports Admin

GRIT App
Functionality

Replace/ Delete Device



- To Delete a device, go to the device's detail page and press the trash icon. Then select 'Delete'.
- To Replace a device with a new one on the same machine, physically remove/ uninstall the old device then install and Bind the new device. Go to the old device's detail page and press the trash icon. Then select the newly installed device in the Replacement Device list and press 'Replace'.

Administration

The screenshot shows the GRIT App Administration interface. At the top, it displays "GRIT Settings" and the version "v1.1.309 | Jan 26, 2023 10:05 AM". Below this are various configuration options:

- Allow New Devices:** Yes (green bar)
- Disable Hub Buttons:** Yes (yellow bar)
- Country:** United States
- Email Settings:** Configure
- System LED Brightness:** 0% to 100%
- Automatic Update Installation:** No Automatic Updates (button), Check for Updates (button)
- Automatic GRIT Lock:** No Automatic GRIT Lock (button)
- Logout:** Logout
- Update Date/Time:** Set Hub Time
- Restart:** Restart Application
- Shutdown:** Shutdown Hub

At the bottom, there is a navigation bar with tabs: Home, Devices, GRIT Track, Reports, Admin (highlighted in blue), SignOn, and Tracker.

A red callout box with a hand icon points to the hamburger menu icon in the top right corner of the main content area. A yellow arrow points from this callout down to another red callout box at the bottom left of the screen. This second callout contains the text: "The Admin tab opens directly into the Settings section the first time it is opened. After that, it will return to the last section viewed in Admin."

On the right side of the screen, a vertical sidebar titled "GRIT App Functionality" is visible, listing various administrative functions with corresponding icons and descriptions.

My Profile

The 'My Profile' page in the Admin tab should be completed with the shop owner or main administrator's information. This page is only present for GRIT systems without **GRIT Track® RFID**. For systems utilizing RFID, all profile information is located under the **GRIT Track** tab.

The screenshot shows the 'My Profile' page from the GRIT HUB app. The page has a header 'GRIT My Profile' and a back arrow. It contains fields for First Name (Bobby), Last Name (Holiday), PIN (****), Password (*****), Mobile Phone (555) 555-5555, and Email (bobby@holiday.com). A red callout box points to the PIN field with the text: 'Set a unique, 4-digit PIN for logging in.' Another red callout box points to the Password field with the text: 'Choose a login with your email address and password, or, use this password in the event that you forget your PIN.' A third red callout box points to the Mobile Phone field with the text: 'Enter your mobile phone number for maintenance alerts and forgotten password/PIN.' At the bottom, there is a navigation bar with icons for Home, Devices, Reports, and Admin.

First Name ?
Last Name ?
PIN ?
Choose a unique, 4-digit PIN for logging in.
Bobby Holiday **** Choose your 4 digit security PIN
Password ?
Mobile Phone ?
Email ?
Choose a login with your email address and password, or, use this password in the event that you forget your PIN.
(555) 555-5555 Enter your mobile phone number for maintenance alerts and forgotten password/PIN.
bobby@holiday.com

Home Devices Reports Admin

Network

The Network page in the Admin tab is used to check internet connection status and connect the Hub with a local WiFi network.

Internet Connection Status

Network connection method (Ethernet vs. Wi-Fi) display, including the Hub IP address (same as displayed on the Hub display screen).

Internet Connected

Ethernet 10.0.0.88

GRIT Cloud® Not Available

WiFi Network Name ?

WiFi Password ?

Save Clear

If connecting through local Wi-Fi, select your Network Name from the list of Available Networks and enter your Network password. Then, press 'Save'. The option to 'Disconnect' is given if connected via Wi-Fi to a local network.

Holiday-net1 WPA2

Holiday-Guest WPA2

DIRECT-6E-HP OfficeJet 250 WPA2

Refresh

If your desired network is not displayed in the Available Networks list, press 'Refresh' to scan available networks again.

Home Devices Reports Admin

Remote Access

The screenshot shows the 'Remote Access' section of the GRIT Hub + APP. It includes fields for 'WireGuard VPN' (with an 'Install' button), 'VPN Subdomain' (set to 'subdomain.grithubapp.com'), 'Reporting Token' (with a key icon and 'Access Token' label), and 'Remote Assistance' (with an email address 'remote.help@gritautomation' and an 'Invite' button). A search bar and a menu icon are also present. Callouts provide detailed explanations for each feature.

WireGuard VPN opens the location where you can install WireGuard on a phone, tablet, or computer.

VPN Subdomain sets the custom subdomain that is used to access your GRIT Hub via the WireGuard VPN.
An example would be shopname.grithubapp.com or lastname.grithubapp.com

Search to filter who has been given Remote Access.

Reporting Token
Access Token

WireGuard VPN

VPN Subdomain

Remote Assistance

Install

Save

Invite

Reporting Token

Access Token

Search

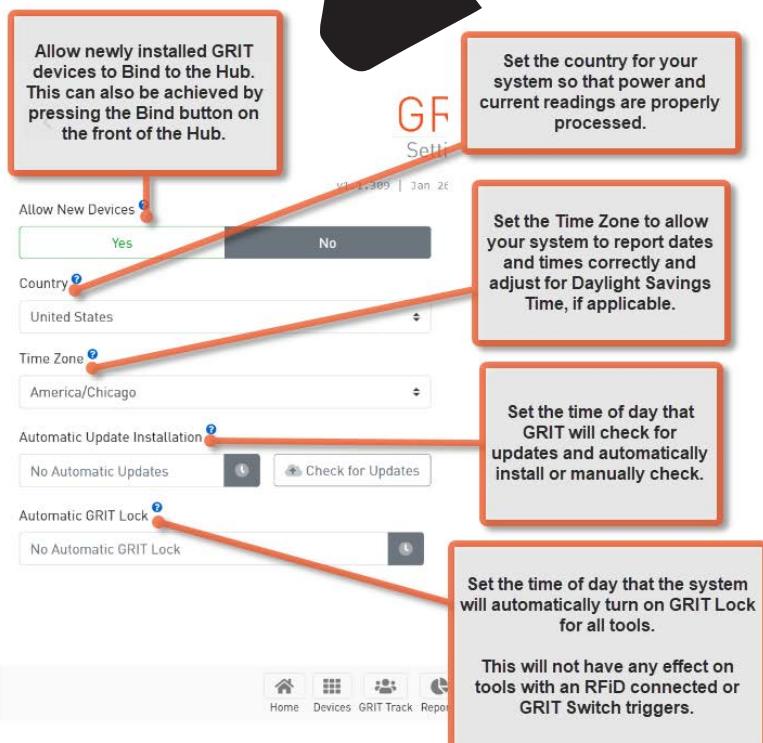
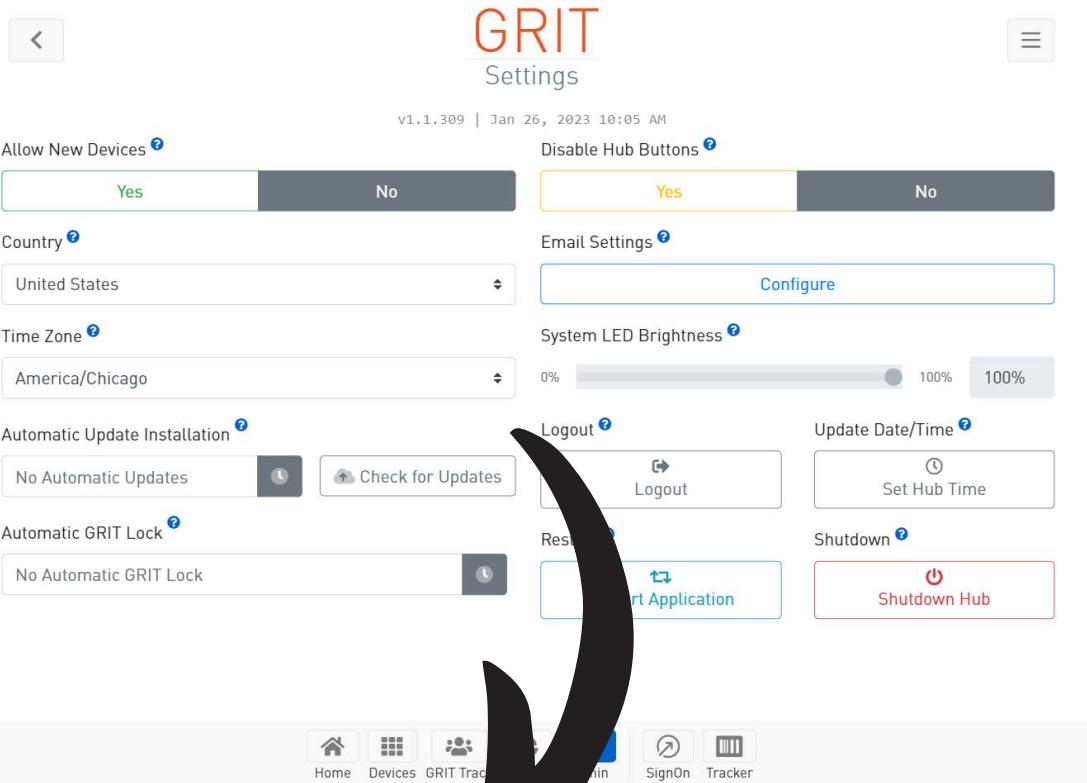
List of users and Access Tokens with Remote Access.

Home Devices GRIT Track Reports Admin SignOn Tracker

GRIT HUB® + APP

Settings

The Settings page in the Admin tab is used to manage key elements of your GRIT system.



GRIT App

GRIT HUB® + APP

GRIT Settings

v1.1.309 | Jan 26, 2023 10:05 AM

Allow New Devices [?](#)

Yes No

Disable Hub Buttons [?](#)

Yes No

Country [?](#)

United States

Email Settings [?](#)

Configure

Time Zone [?](#)

America/Chicago

System LED Brightness [?](#)

0% 100%

Automatic Update Installation [?](#)

No Automatic Updates [?](#) Check for Updates

Logout [?](#)

Logout

Update Date/Time [?](#)

Set Hub Time

Automatic GRIT Lock [?](#)

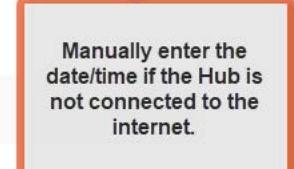
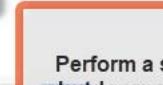
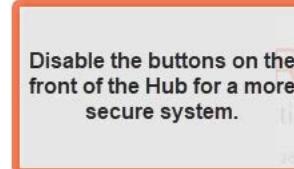
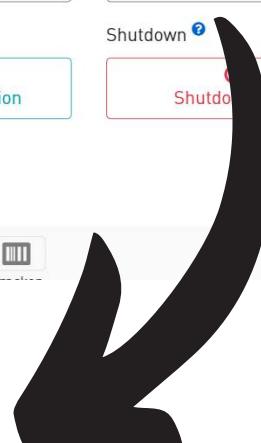
No Automatic GRIT Lock [?](#)

Restart [?](#)

Restart Application

Shutdown [?](#)

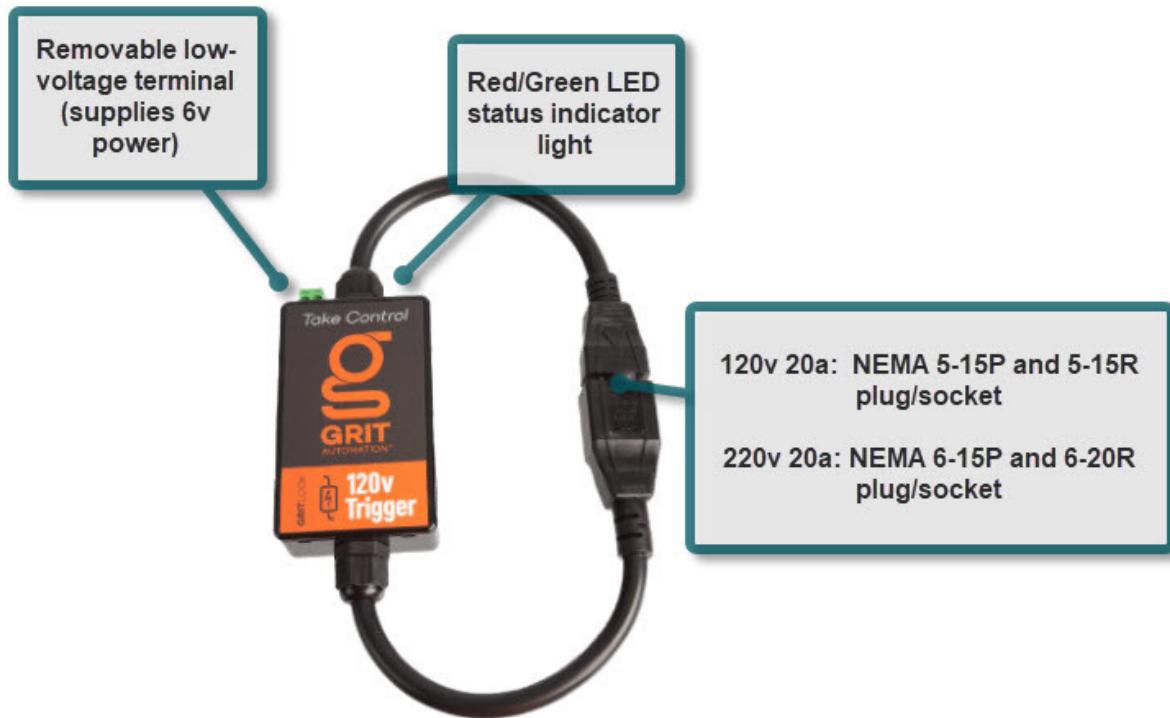
Shutdown Hub



TRIGGERS

Standard 120v and 220v (up to 20a) Triggers

The GRIT Trigger creates a virtual barrier between tools and unauthorized users. This hardware component of GRIT Lock® technology is able to monitor and control the power that reaches your tool.

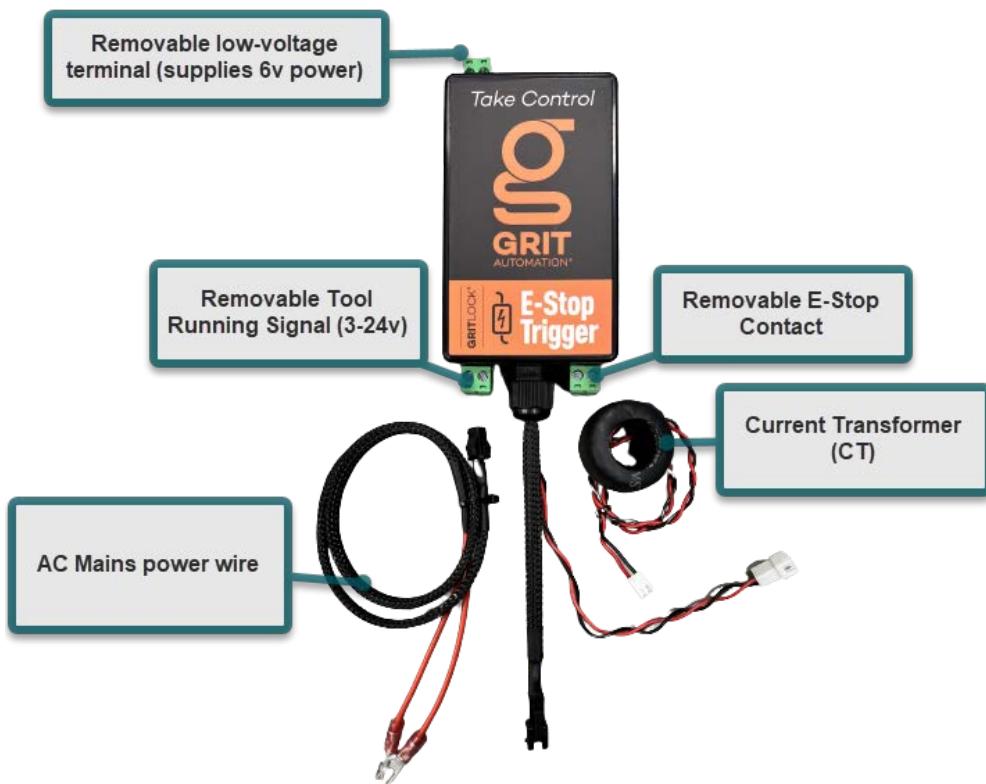


Triggers
Installation



TRIGGERS

E-STOP Trigger



Installation Overview

The E-Stop Trigger is a versatile device to measure whether your tool is running. It has various installation options based on your machine and which components are most accessible.

Installation consists of three primary steps:

Step 1: Power the GRIT E-Stop Trigger Device

- use the AC Mains power wires from the GRIT device.

Step 2: Measure Whether the Tool is Running

- Option 1: use the CT from the GRIT device to measure the tool's current, or;
- Option 2: wire the Removable Tool Running Signal from the GRIT device inline with the tool's running signal.

Step 3: Control the Tool's Power

- Option 1: wire the Removable E-Stop Contact from the GRIT device inline with the tool's emergency stop button, or;
- Option 2: wire the Removable E-Stop Contact from the GRIT device inline with the low-voltage wire that controls the tool's contactor coil.

TRIGGERS

This is an example of a completed E-Stop Trigger installation where the user installed the device into their CNC. If the E-Stop device doesn't fit inside your machine, you may need to drill a hole through the contactor box to pass the wires through. Then, mount the E-stop with provided VHB tape.

Step 1:

They've connected the two AC wires.

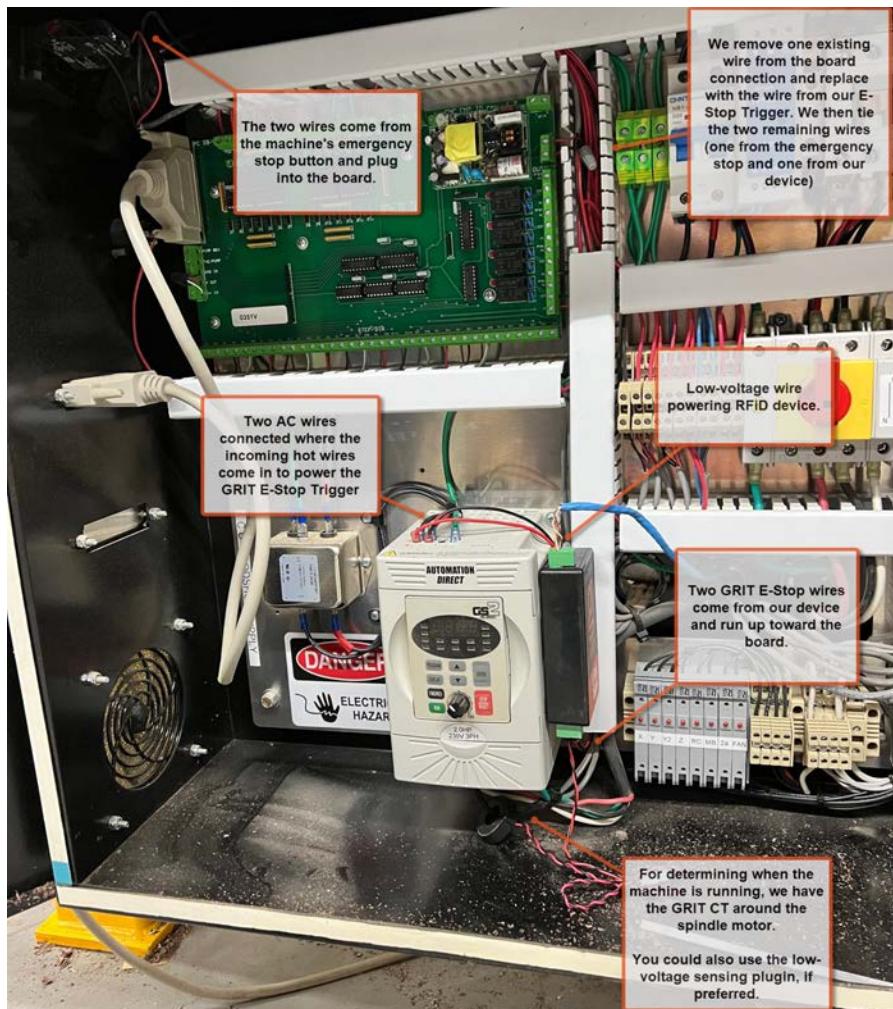
Step 2:

They've measured whether the tool is running with the CT around the spindle motor wire.

Step 3:

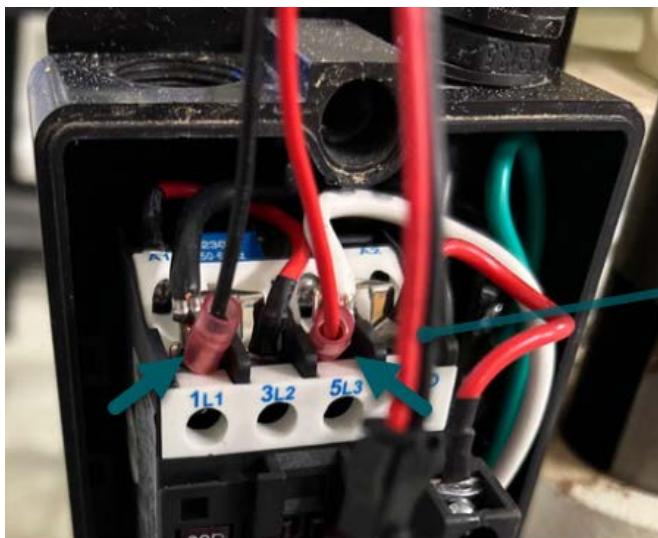
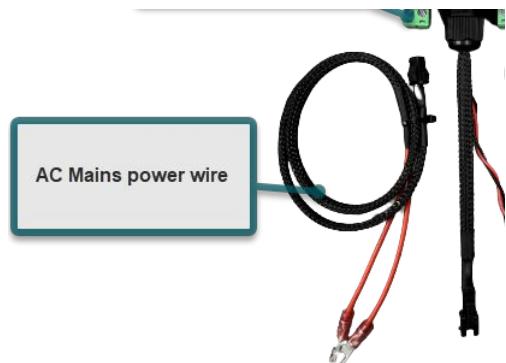
They've controlled the tool's power by wiring inline with the tool's emergency stop button.

Please note that it is possible to install this device without wiring inline with the emergency stop or the contactor coil, but none of the GRIT Lock safety features would be available if you skip the third step, so we do not recommend this.



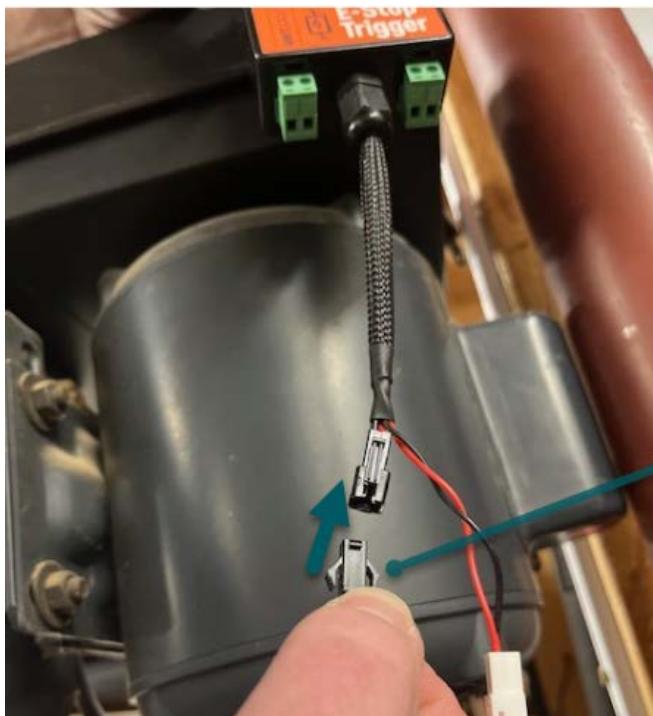
TRIGGERS

Step 1: Power the GRIT E-Stop Trigger Device



Step 1:

Connect the AC Mains power wires to 110v- 240v AC power by landing the fork connectors into the contactor's terminals with the first two incoming hot wires.

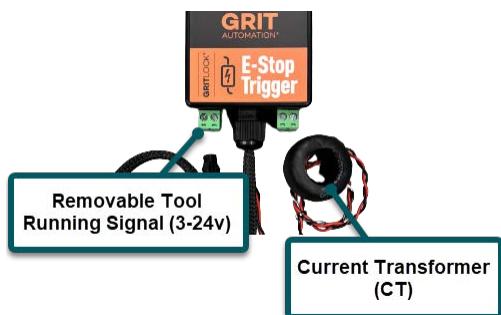


Step 2:

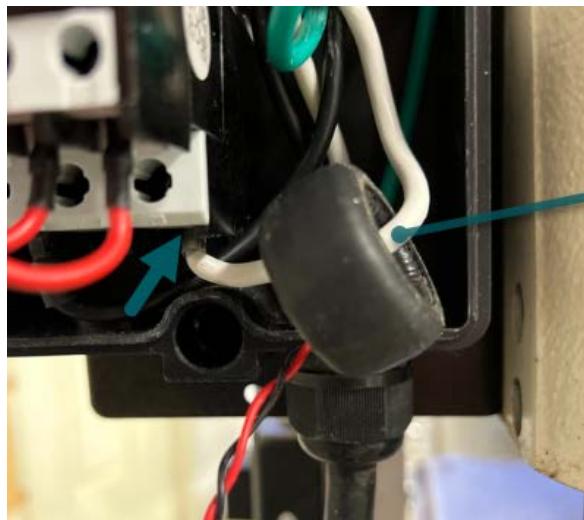
Connect the other end into the black terminal coming from the bottom of the E-Stop Trigger.

TRIGGERS

Step 2: Measure Whether the Tool is Running



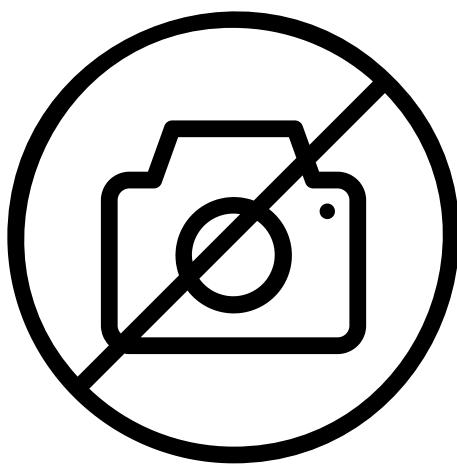
Option 1: Measure with the CT



Unscrew one of the power wires that goes to the tool from the contactor.

Insert it through the middle of the CT, then re-secure it in its contactor terminal.

Option 2: Measure with the Tool's Low-Voltage Running Signal



Not Yet Pictured

Using the Tool Running Signal (must be DV voltage 3v-24v), insert the positive signal wire into the right side of the green terminal (marked with a +).

Connect the negative ground from the tool to the left side of the same green terminal (marked with a -).

Plug the green terminal back into the E-Stop Trigger.

Triggers
Installation

TRIGGERS

Step 3: Control the Tool's Power



Option 1: Wire Inline with the Emergency Stop Button



If your machine has an Emergency Stop button, open up the machine and find the two wires leading from the back of the button.



Follow those wires to find their connection on the board.

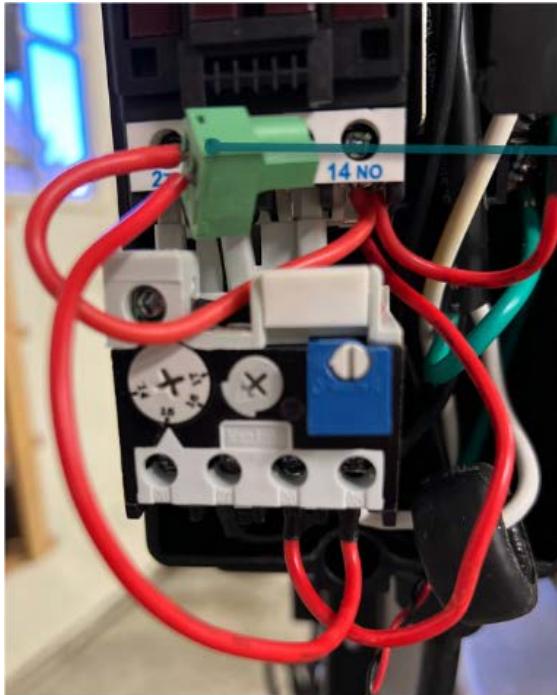
Remove one of the wires from the board, and land it in one side of the E-Stop Contact green terminal. If that wire is not long enough to reach the trigger, connect an extra length of wire with a wire nut.

Next, run an extra segment of wire from the other side of the green terminal and land it where the other wire had been on the board.

TRIGGERS

Option 2: Wire Inline with the Contactor Coil Power Wire

The purpose of this installation choice is to break the connection powering the contactor's magnetic coil.



Find a wire that is going to the contactor's coil. The Removable E-Stop Contact green terminal should then be wired in series with that existing wire (-/+ side does not matter).



Plug the E-Stop Contact green terminal back into the bottom right-hand side of the E-Stop Trigger.

Triggers
Installation

TRIGGERS



Complete the installation by attaching the E-Stop Trigger with provided VHB tape.



TRIGGERS

Standard 220v Heavy Duty (up to 35a) Trigger



*Note: The 220v Heavy Duty Trigger does not come with a plug or socket end attached to the wire whip since tools with this power profile vary widely. The supplied wire whip is rated up to 35a. Customer is responsible for purchasing and wiring appropriate plug/socket or larger gauge wire for their purposes.

Installation

Follow the instructions provided with your chosen plug/socket. Once wiring is complete:

1. Plug your tool into the GRIT Trigger device.
2. Plug GRIT Trigger device into the wall.

TRIGGERS

Industrial 220v Single Phase Trigger



Installation

*Note: We recommend all electrical installation be performed by a licensed electrician. Wire whip, mounting hardware, chase nipple, and FMC connector are not included.

See page 52 for installation instructions for the Industrial 220v 1PH and Industrial 208v 3PH Triggers.

TRIGGERS

Industrial 208v 3 Phase Trigger



Triggers
Installation

Installation

*Note: We recommend all electrical installation be performed by a licensed electrician. Wire whip, mounting hardware, chase nipple, and FMC connector are not included.

TRIGGERS

Industrial 220v 1PH + 208v 3PH Trigger Installation



Step 1:

Turn off the breaker leading to the tool.
Disconnect the power wires feeding the tool.



Step 2:

Mount the trigger near the incoming power drop. That may mean attaching the trigger to the wall or the tool itself.



Step 3:

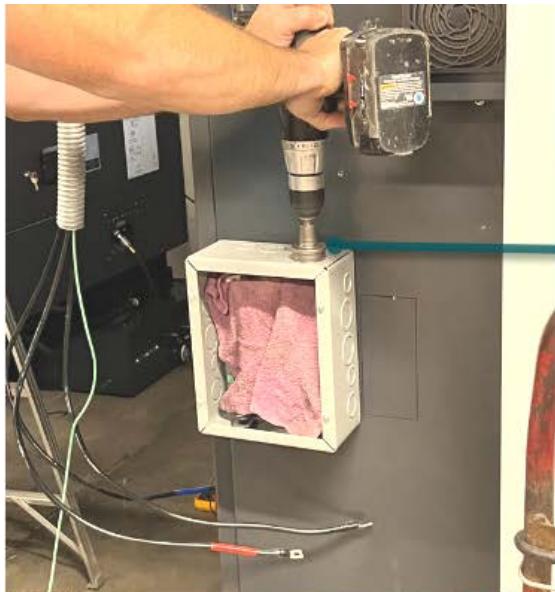
Use one of the existing knockouts, or drill a hole in the back of the enclosure to align with the existing hole where power is already being run to the tool.

Insert and tighten a chase nipple.

Step 4:

Measure and cut the conduit, if needed.

TRIGGERS



Step 5:

Cut a hole for the incoming power or use one of the existing knockouts.



Step 6:

Insert an FMC Connector and feed the incoming wires through the opening.

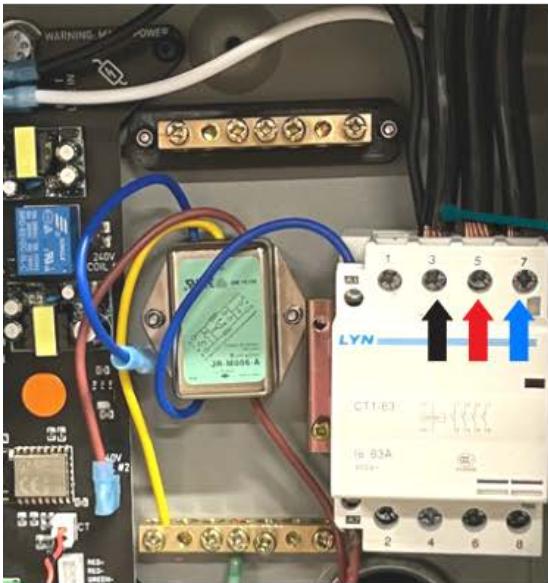


Step 7:

Secure the incoming conduit.

Triggers
Installation

TRIGGERS



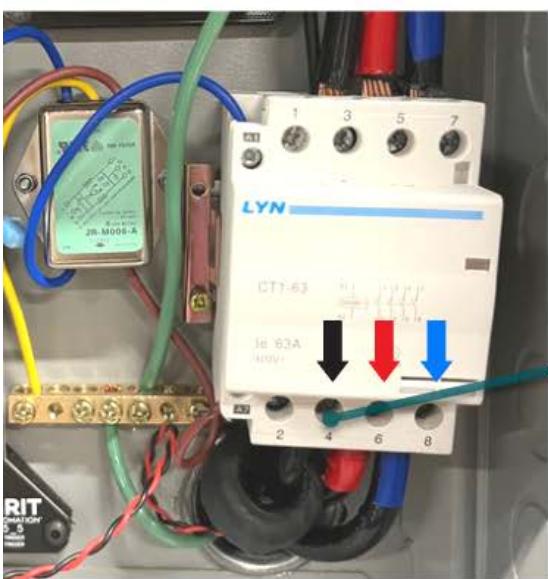
Step 8:

Cut the incoming wires to length, mark with colored electrical tape.

Strip and land the first incoming hot wire in terminal 3 with the Black wire connected to the PCB.

Strip and land the second incoming hot wire in terminal 5 with the White wire connected to the PCB.

If there are three hots coming in, land the third wire in terminal 7.



Step 9:

When landing the outgoing power in the contactor, be sure to keep the wires in line with the incoming wires.

Put the first outgoing hot wire through the CT. Strip and land in terminal 4.

Strip and land the second outgoing hot wire in terminal 6.

If there are three hots, land the third wire in terminal 8.



Step 10:

Cut the incoming ground wire to length and land in the ground terminal (see green arrow). Repeat with the ground wire leading into the tool.

If there is a neutral wire, land in one of the black/gold terminals (see orange arrow).

TRIGGERS



Step 11:

Plug the LED indicator light harness (attached to the lid) into the PCB.



Step 12:

To power an RFiD device from an Industrial Trigger, insert the black push-in connector into a small knockout.



Step 13:

Cut, strip, and land low-voltage wire(s) into the low-voltage terminal located on the PCB.

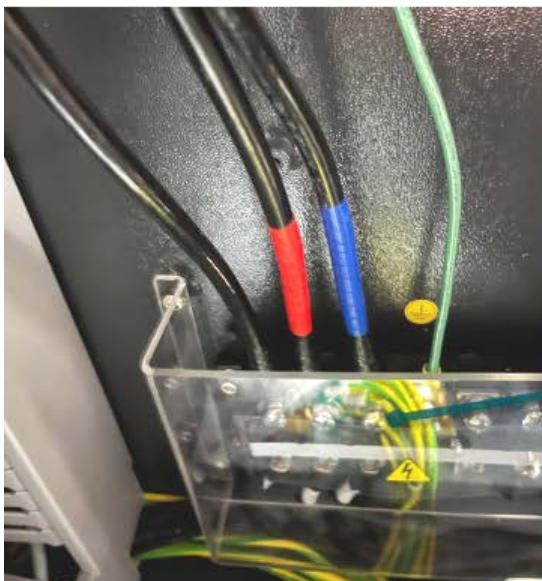
Triggers
Installation

TRIGGERS



Step 14:

Replace and secure the lid.



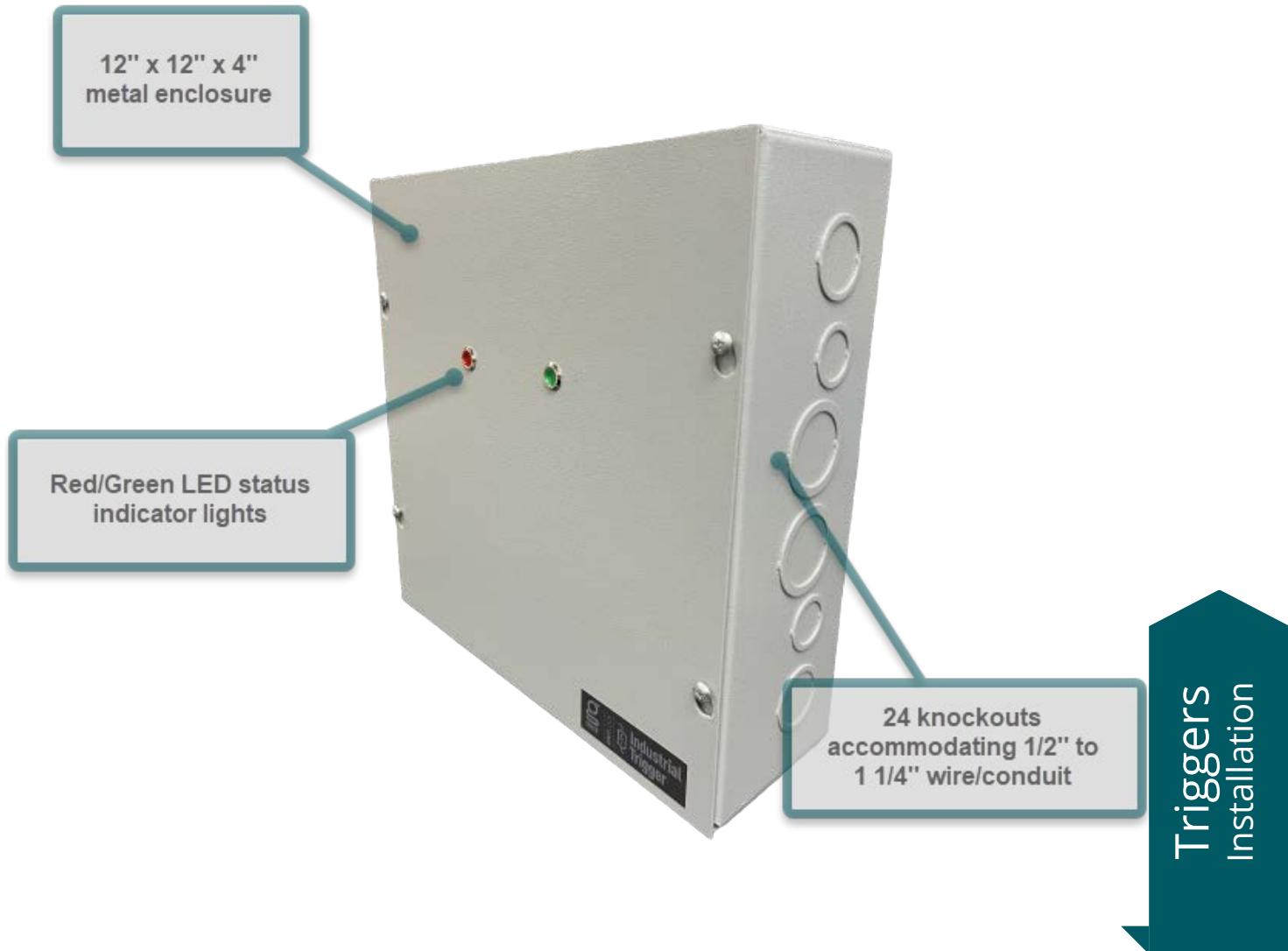
Step 15:

Re-land the wires leading into the tool.

Turn on the breaker leading to the tool.

TRIGGERS

Industrial 480v 3 Phase Trigger

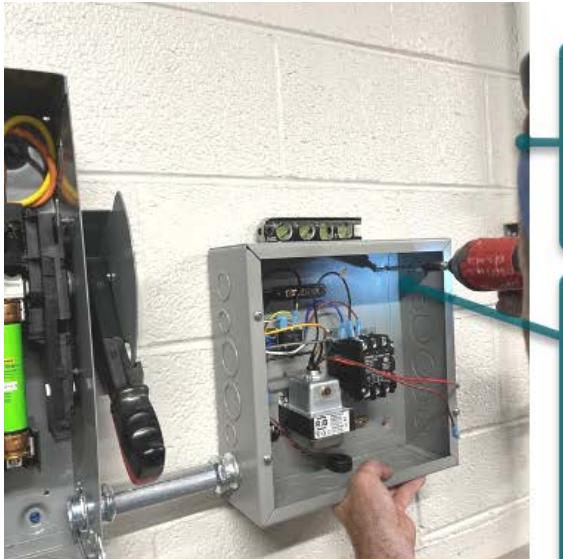


Installation

*Note: We recommend all electrical installation be performed by a licensed electrician. Wire whip, mounting hardware, chase nipple, and FMC connector are not included.

TRIGGERS

Industrial 480v 3PH Trigger Installation



Step 1:

Turn off the breaker leading to the tool.
Disconnect the power wires feeding the tool.



Step 2:

Mount the trigger near the incoming power drop or breaker.

Use one of the existing knockouts, or drill a hole in the enclosure to align with the hole where power is already being run to the tool and the incoming power.



Step 3:

The Industrial 480v 3PH Triggers contain a transformer used to power the GRIT PCB. For 480v power, use the Black wire and the light Grey wire.

Step 4:

Land the Black wire on a prong of L1 and the light Grey wire on a prong of L2.

TRIGGERS



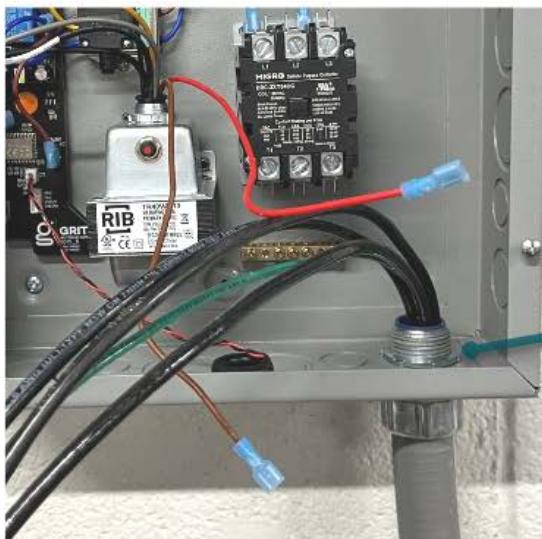
Step 5:

Cut the incoming wires to length, mark with colored electrical tape.

Strip and land the first incoming hot wire in the screw terminal L1 (in front of the Black wire landed from the transformer).

Strip and land the second incoming hot wire in the screw terminal L2 (in front of the light Grey wire landed from the transformer).

Strip and land the third incoming hot wire in the screw terminal L3.



Step 6:

Insert and tighten a chase nipple through a knockout.

Insert the outgoing wires leading to/from the tool.



Step 7:

Put the first outgoing hot wire through the CT. Strip and land in terminal T1.

Strip and land the second outgoing hot wire in terminal T2.

Strip and land the third outgoing hot wire in terminal T3.

TRIGGERS



Step 8:

When landing the outgoing power leading to the tool in the contactor, be sure to keep the wires in line with the incoming wires.



Step 9:

Plug the LED indicator light harness (attached to the lid) into the PCB.



Step 10:

To power an RFiD device from an Industrial Trigger, insert the black push-in cable connector into a small knockout.

TRIGGERS



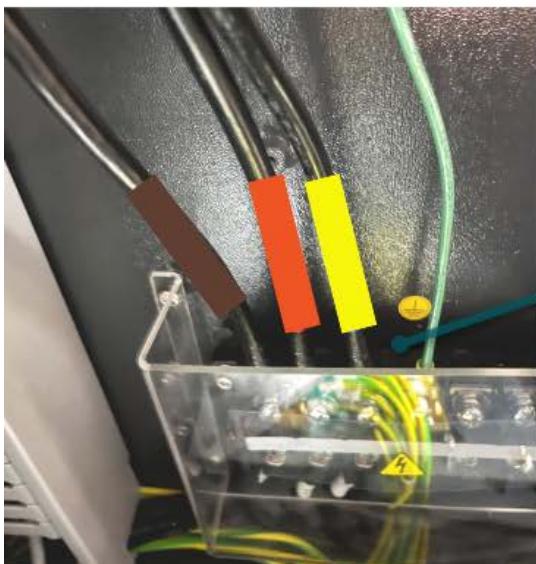
Step 11:

Cut, strip, and land low-voltage wire(s) into the low-voltage terminal located on the PCB.



Step 12:

Replace and secure the cover.



Step 13:

Re-land the wires leading into the tool.

Turn on the breaker leading to the tool.

Triggers
Installation

TRIGGERS

Trigger Device Configuration with Associated Collector Device

Each installed Trigger has its own detail configuration page in the GRIT App. As mentioned in the GRIT Lock® section of the manual, it is essential that each Trigger be carefully configured for its specified tool.

The screenshot shows the GRIT Trigger configuration screen. At the top right is the GRIT logo with '220v' and a Wi-Fi icon. Below the logo are three callout boxes:

- Trigger Name:** Rename the device, usually with the name of the tool it is associated with. Set to "Tablesaw".
- GRIT Lock®:** Lock and Unlock this tool. Set to "Lock".
- Maintenance Schedule:** Manage maintenance schedule reminders for this tool.

Below these are several configuration sections:

- Activation Level:** 1.50 Amps.
- Power Profile:** Normal (selected), Delay, Spike, Advanced.
- Associated Collector:** V3000.
- Associated Gates:** A list of tools and their status (No, Yes) relative to the trigger's running state. The list includes:
 - Belt/Disc Sander (No)
 - Drum Sander (No)
 - Edge Sander (No)
 - Floor Sweep (No)
 - Jointer (No)
 - Left Branch (No)
 - Planer (No)
 - Right Branch (Yes)
 - Spindle Sander (No)
 - Tablesaw (Yes)
 - gate-2c18a2 (No)
 - gate-8330a7 (No)
 - gate-3d7f8b (No)

A red exclamation mark icon is located near the "Associated Collector" section, with a callout box explaining: "Specify how the tool acts when it gets turned on to ensure GRIT Lock functions properly. See Power Profile section for more detail."

A central callout box for the "Unlock" button states: "Set the power required for this tool to be considered 'ON' by the GRIT".

At the bottom are navigation icons: Home, Devices, Reports, Admin (underlined), SignOn, and Tracker.

TRIGGERS

Trigger Device Configuration with Associated VFD Device

Each installed Trigger has its own detail configuration page in the GRIT App. As mentioned in the GRIT Lock® section of the manual, it is essential that each Trigger be carefully configured for its specified tool.

The trigger configuration page has the following differences when associated with a VFD device rather than a Collector device.

The screenshot shows the GRIT Trigger configuration interface. At the top, there's a back arrow, the GRIT logo with 'Trigger 220v' below it, and a trash can icon. The main area has sections for 'Trigger Name' (Tablesaw), 'Maintenance Schedule' (Add button), 'GRIT Lock®' (Lock button is red, Unlock is green), 'Activation Level' (1.50 Amps, Reset button), 'Power Profile' (Normal tab selected), 'Associated Collector' (VFD selected), and 'Minimum VFD Speed' (Collector Default (50%), Set To Default button). A callout box points to the 'Associated Collector' field with the text: "When the Associated Collector is a VFD, an additional setting appears on the configuration page." Another callout box points to the 'Minimum VFD Speed' field with the text: "This setting controls the speed the collector must be running at for this tool. If this value is blank, the speed will be set to the current minimum defined on the actual collector configuration." To the right is a list of 'Associated Gates' with checkboxes and icons.

Associated Gate	Status
Belt/Disc Sander	No
Drum Sander	No
Edge Sander	No
Floor Sweep	No
Jointer	No
Left Branch	No
Planer	No
Right Branch	Yes
Spindle Sander	No
Tablesaw	Yes
gate-2c18a2	No
gate-8330a7	No

Triggers
Configuration

TRIGGERS



Activation Level and Power Profiles

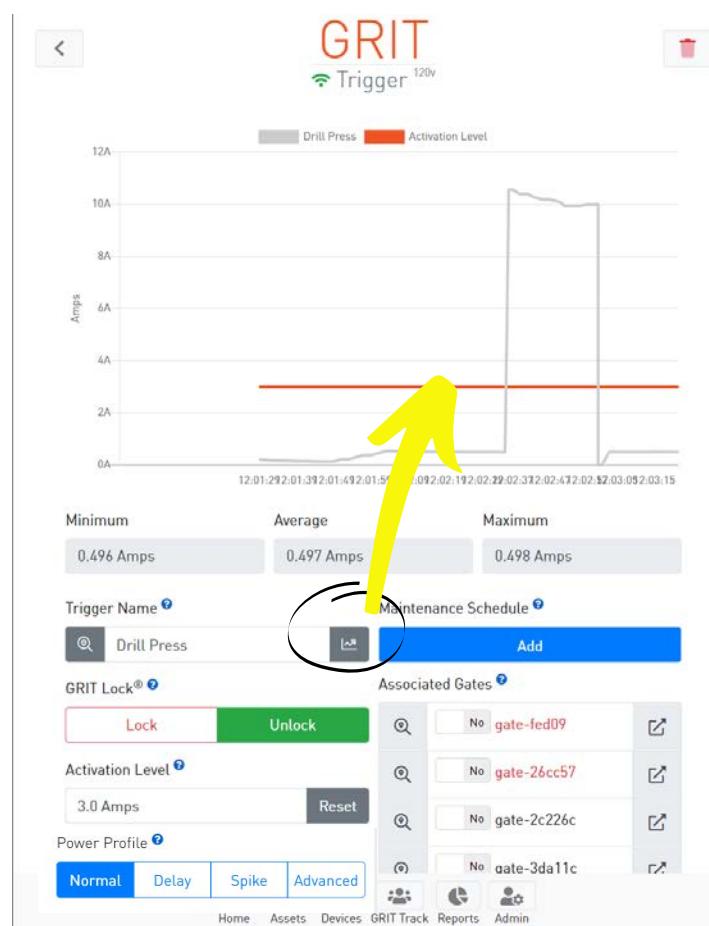
Correctly setting each tool's Activation Level and Power Profile in the trigger's detail configuration screen is essential to the overall functioning of the GRIT system. When GRIT Lock® can accurately assess whether a tool is running, the system can turn on an associated dust collector, open associated blast gates, and quickly initiate an Emergency Lock, but only if the tool's power is accurately captured in its configuration settings.

To further clarify, if the Activation Level is telling GRIT what level to check for, the Power Profile setting tells GRIT when and how to check.

Normal



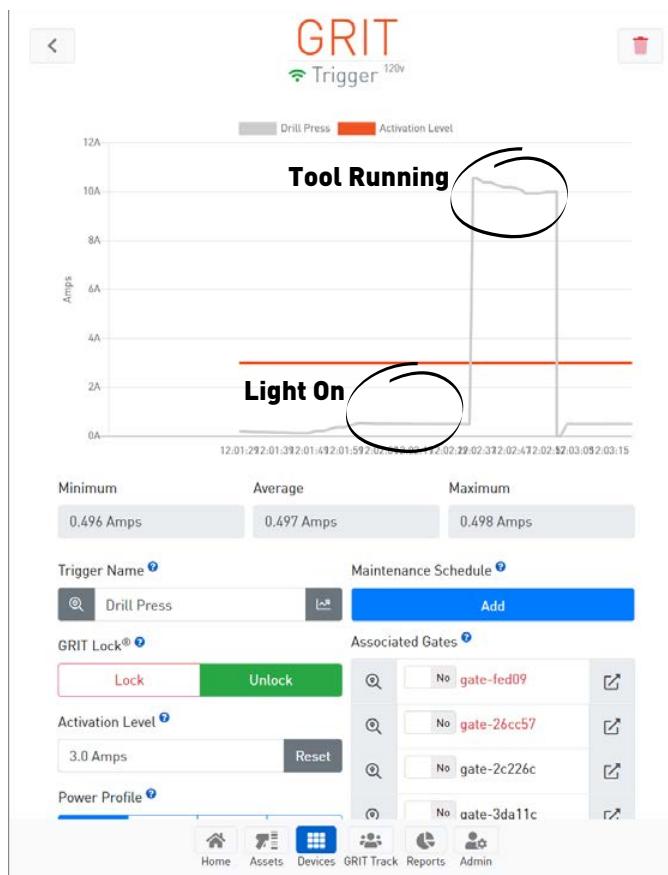
Tools that roar to life as soon as they are powered on have a "Normal" power profile. To properly configure this type of tool, look at its power graph.



For a tool to be considered running in the GRIT system, the current draw has to exceed the value set for the Activation Level.

In this example the Activation Level is set to 3.0 Amps with the drill press pulling ~10 Amps consistently when running. Setting the Activation Level anywhere between 1.0 Amp and 9.0 Amps would allow GRIT to accurately determine when this tool is running.

TRIGGERS



This particular drill press has a light that draws about .5 Amp when the trigger is unlocked but the tool is not yet running.

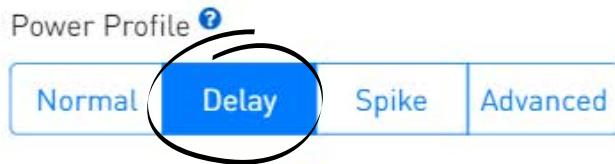
If there is an aspect of the tool that draws power even when it is not running, be sure to set the Activation Level above that amp level. This is to avoid the system thinking the tool is running when it is merely operating other components (i.e., a light, a computer, etc.).

Note: Some incandescent lights actually pull a great amount of power when they are turned on from a cold state. Keep this in mind when setting your Activation Level.

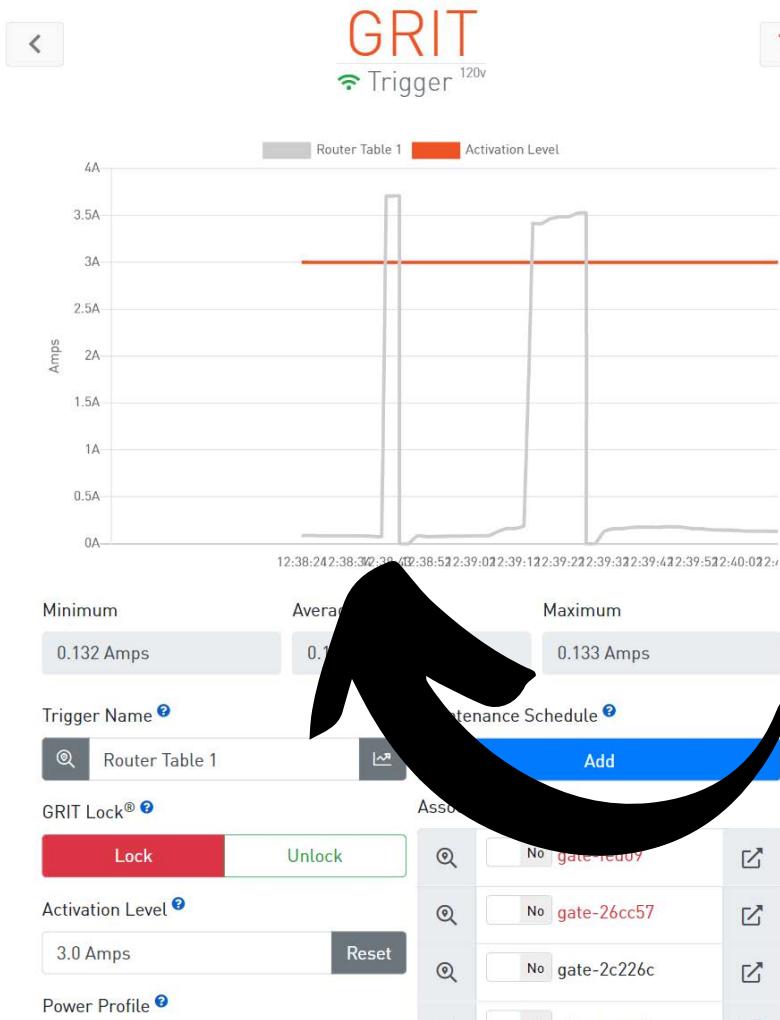
Triggers
Configuration

TRIGGERS

Delay



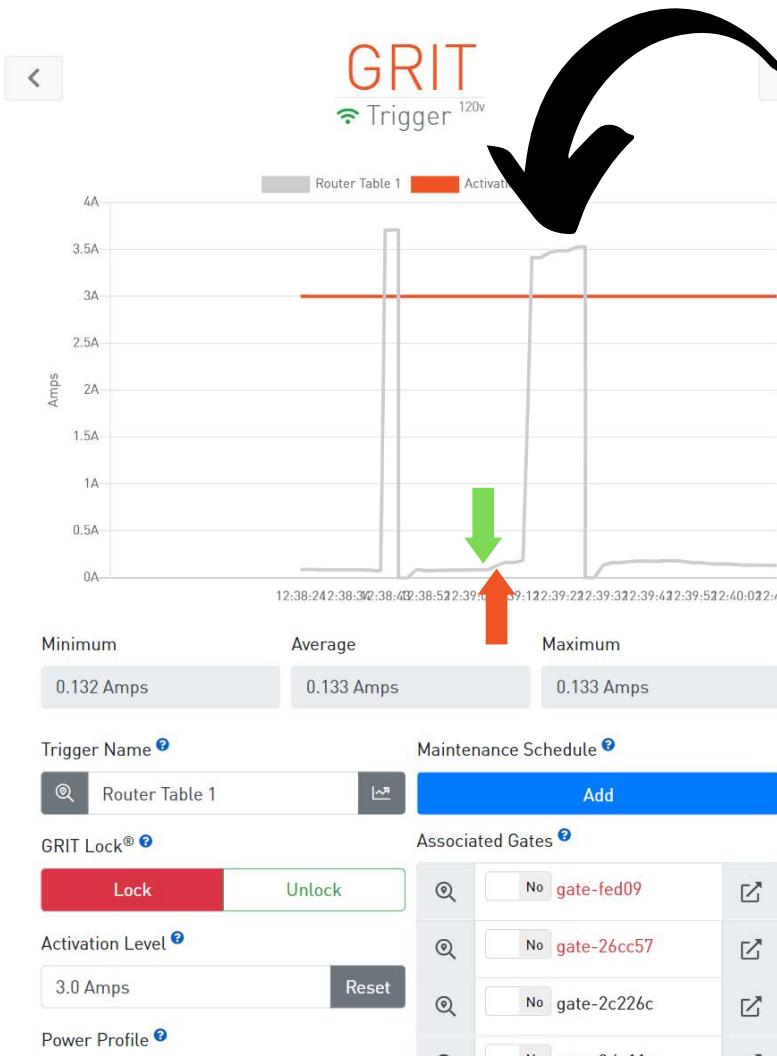
If the tool in question is a router table with a soft start motor, there is a chance that the "Normal" Power Profile might miss the current draw being above the Activation Level immediately after the tool is unlocked. For tools that have a slow or soft start, the trigger should be set to "Delay" for the Power Profile. This setting adds a sub-second pause before measuring the current, allowing the motor to begin pulling power.



This power graph shows a tool with a slow start motor which requires the Delay Power Profile setting.

The first spike was captured with the Power Profile set to Delay. The system waited 100ms before checking if the tool's power draw was above 3.0 Amps, which was enough time for the motor to reach its full current draw.

TRIGGERS



The second spike on the graph was captured with a Normal power profile setting. The green arrow shows when the tool was turned on, the orange arrow indicates when GRIT checks whether the tool is pulling power above the set Activation Level.

Triggers Configuration

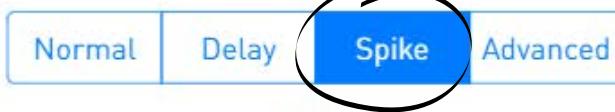
When a slow start motor is not configured with a Delay Power Profile, the system immediately measures the current after the trigger is unlocked. Because of the time it takes a slow start motor to ramp up to full speed, the system misses the accurate information that the tool is running.

This would impact not only the system turning on an associated collector or opening associated blast gates, but would impact the system's ability to initiate an Emergency Lock, if needed.

TRIGGERS

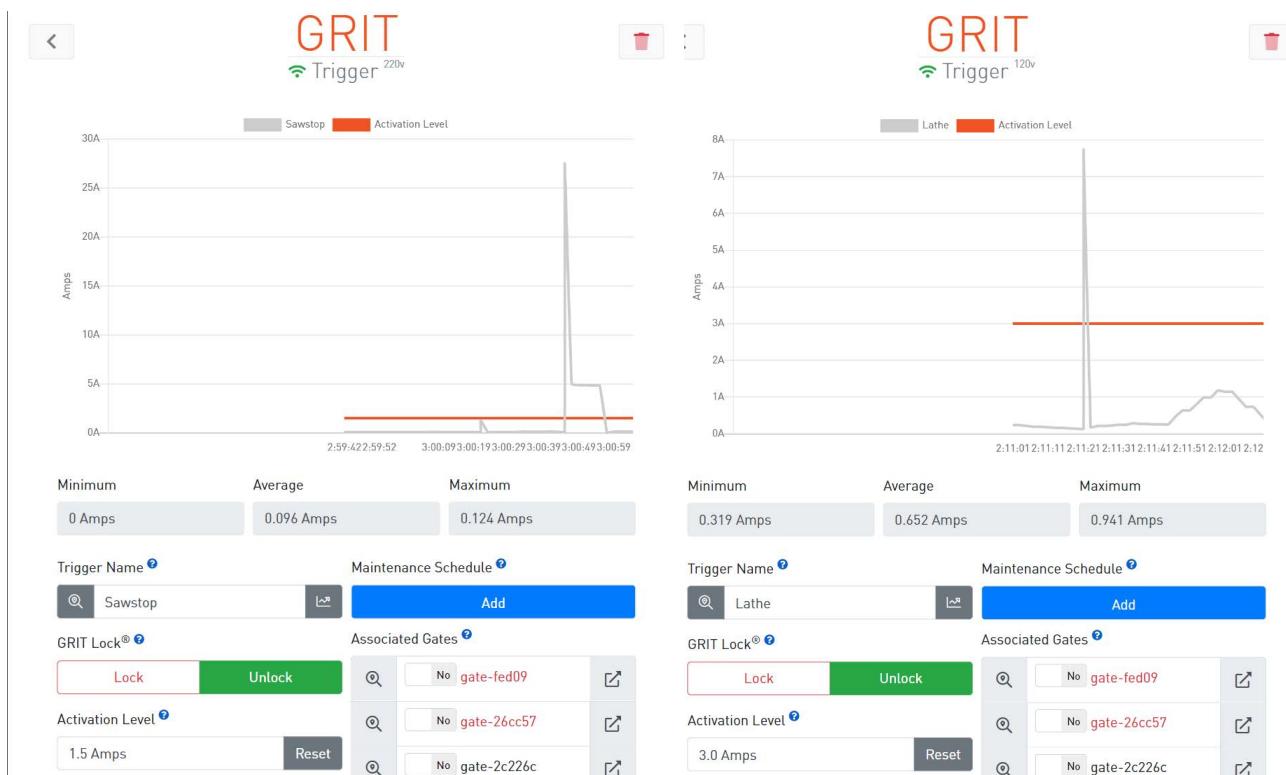
Spike

Power Profile [?](#)



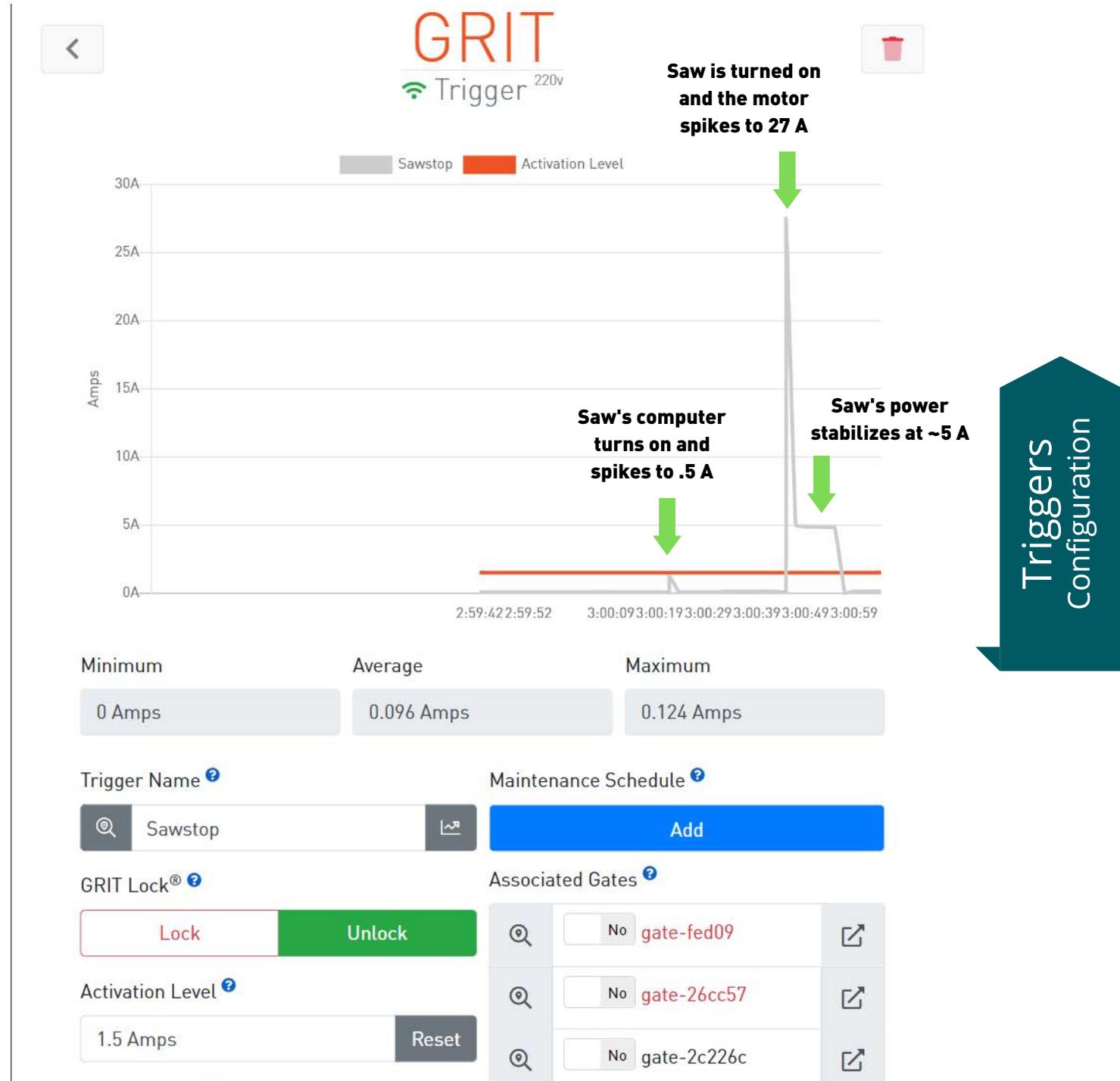
A "Spike" power profile is used for tools that have a huge inrush of current when they are unlocked. An example of this would be a wood lathe with a single phase to 3 phase converter. These will have a huge inrush as capacitors are charged. During this initial inrush, we don't want to measure until the spike has settled down or the system will incorrectly think the tool is on and re-lock it and log an Emergency Lock.

Here are two examples with spikes in the power graph: A Tablesaw and a Lathe. The SawStop can be configured with a Normal power profile and a higher Activation Level. The Lathe, however, requires a Spike Power Profile and a lower Activation Level.



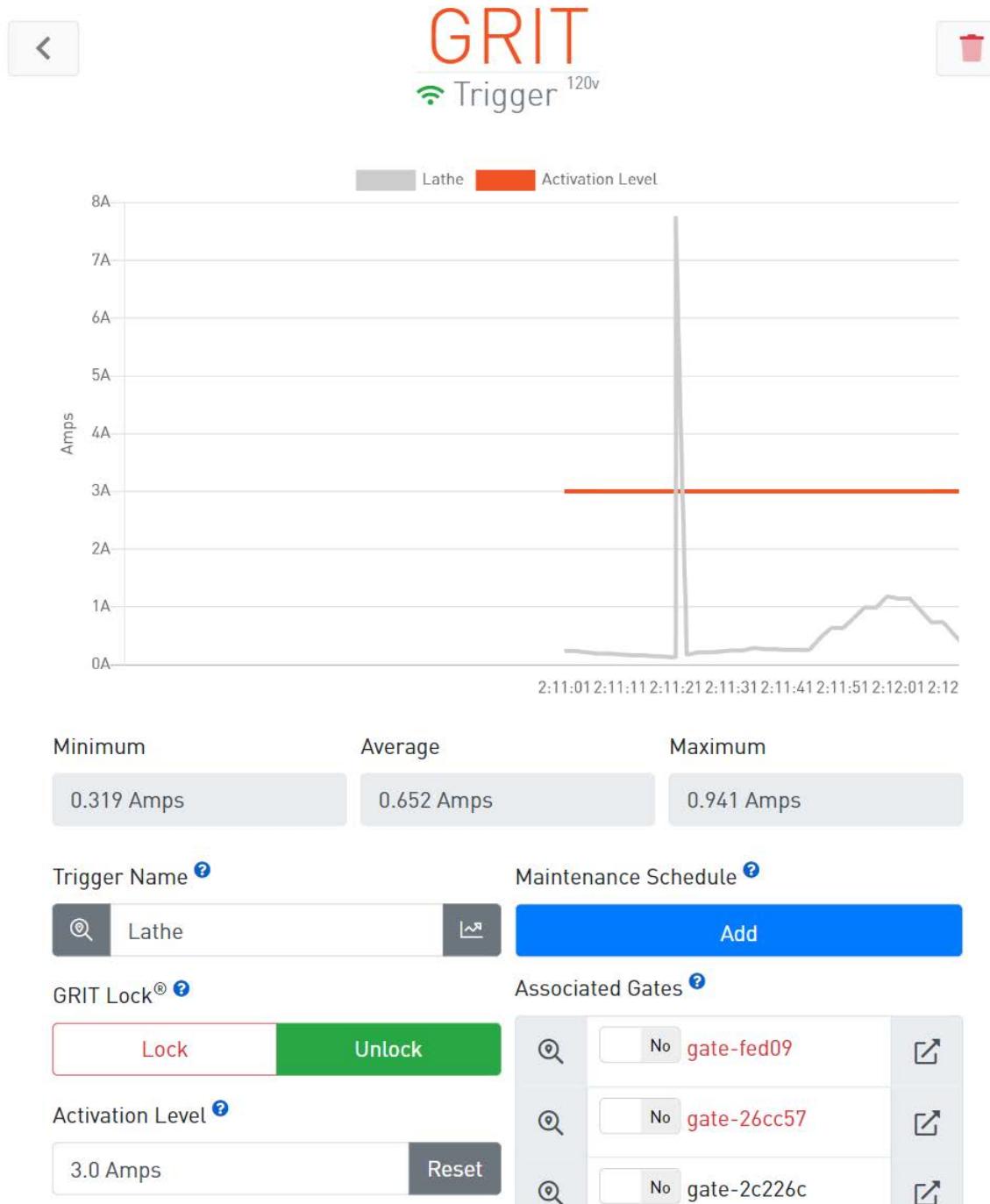
TRIGGERS

Although the Tablesaw has a power spike when the trigger is unlocked, it does not need to be configured with a Spike power profile because the inrush spike level is still less than when the saw is actually running. Configure this trigger with a Normal power profile and increase the Activation Level to 1.5 Amps (higher than the computer spike but lower than the consistent current draw when the saw is running).



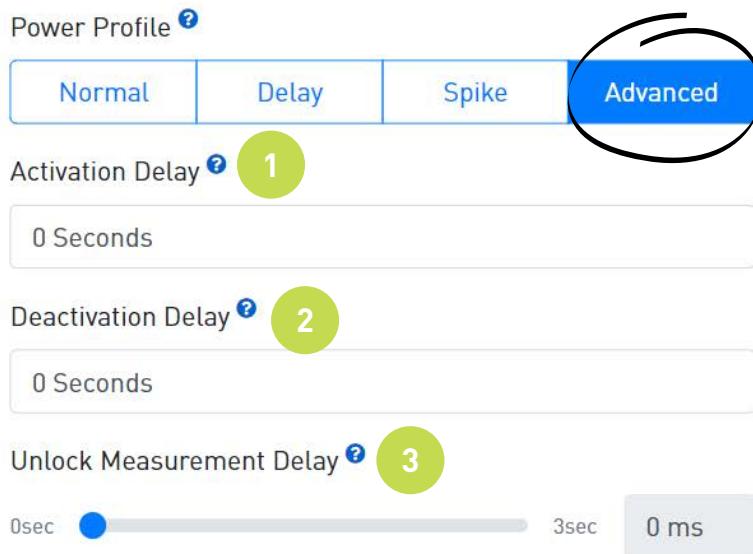
TRIGGERS

The lathe, however, requires a Spike power profile because the spike level is higher than the level of current when the lathe is running. The system must then wait until after the initial spike to determine if the tool is running. Configure this trigger with a Spike power profile and lower the Activation Level to .3 Amps.



TRIGGERS

Advanced



The Advanced power profile setting is for finetuning how the trigger operates. If none of the other preset settings accurately capture the tool's specific power startup timing/levels, you can set all of them manually in Advanced. This will show three new settings: Activation Delay, Deactivation Delay and Unlock Measurement Delay.

Two machines that frequently require "Advanced" power profiles are CNC machines and Lasers.

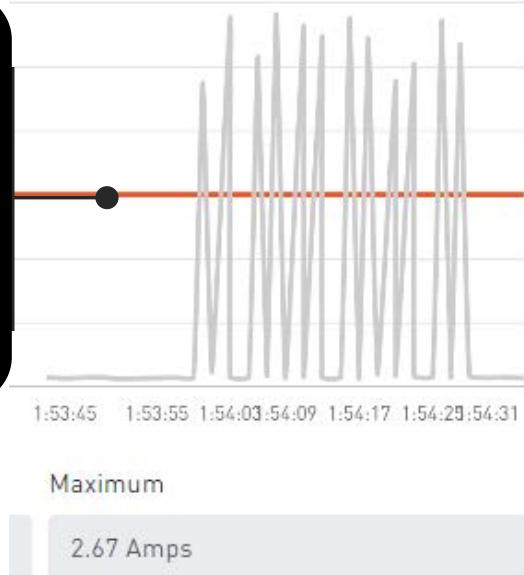
Triggers
Configuration

1. The Activation Delay setting controls how long the trigger needs to sense the current flowing before the attached device/tool is considered running. This setting is used when a tool such as a CNC machine might cause a current spike when the gantry moves, but this should not send out the messages to open gates and turn on the collector. Only when the current level sensed is above the Activation Level setting and for the amount of time specified here, should the tool be considered running. The same applies for how long the tool needs to be without current to be considered off. The system uses this to understand when to turn on an associated collector, air quality device, and move associated gates.

TRIGGERS

2. The Deactivation Delay setting controls how long the trigger needs to not sense the current flowing before the attached tool is considered off. This setting is used when a tool might cause repeated on/off current spikes (e.g., CNC or laser). The desired functionality is that these quick power spikes should not be viewed as lots of on/off commands, but instead wait for the current to stop flowing for the length of time specified in this setting before considering the tool to be off.

Example: A power graph of a laser would show the need for a Deactivation Delay setting set above 0 sec. so that the system does not think the machine is no longer running each time the laser stops firing.

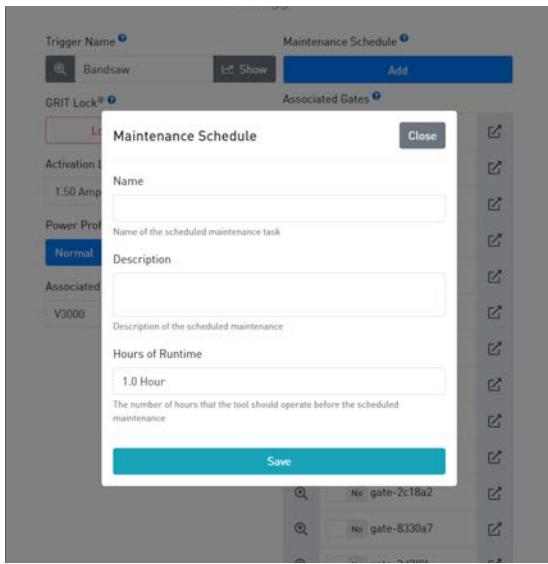


3. The Unlock Measurement Delay* setting controls how long the trigger will wait between unlocking and measuring the current from the attached tool. For instance, some tools have a soft start that require this value be set above zero. If you find that GRIT is not correctly sensing a tool that was left in the ON position when the trigger is unlocked, this value needs to be adjusted higher. The higher the value, the longer GRIT will wait before checking for current flow.

*Be aware, the downside of this setting is that if it is set too high, it will allow a tool to unintentionally run longer than it would need to during an Emergency Lock situation.

TRIGGERS

Maintenance Schedule

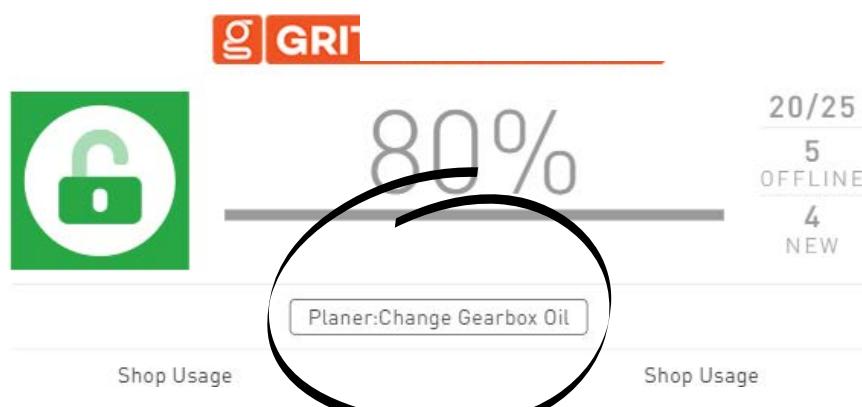


Set tool-specific maintenance tasks. Alerts for maintenance are displayed on the GRIT Dashboard after the configured number of hours has been reached. Optionally, email/SMS can be sent and can be specified in the Admin Settings.

Trigger Name: Planer
Maintenance Schedule: Change Gearbox Oil, 20h
Associated Gates: No gate-f9f46, No Bandsaw, No Branch Gate, No Drum Sander, No Floor Sweep, No Jointer, Yes Planer, No Tablesaw

Triggers Configuration

Example: A Maintenance Schedule has been set for this Planer to Change the Gearbox Oil after 20 hours of runtime. The time remaining will update after each use of the planer. Once the 20 hours has passed it's red and negative.

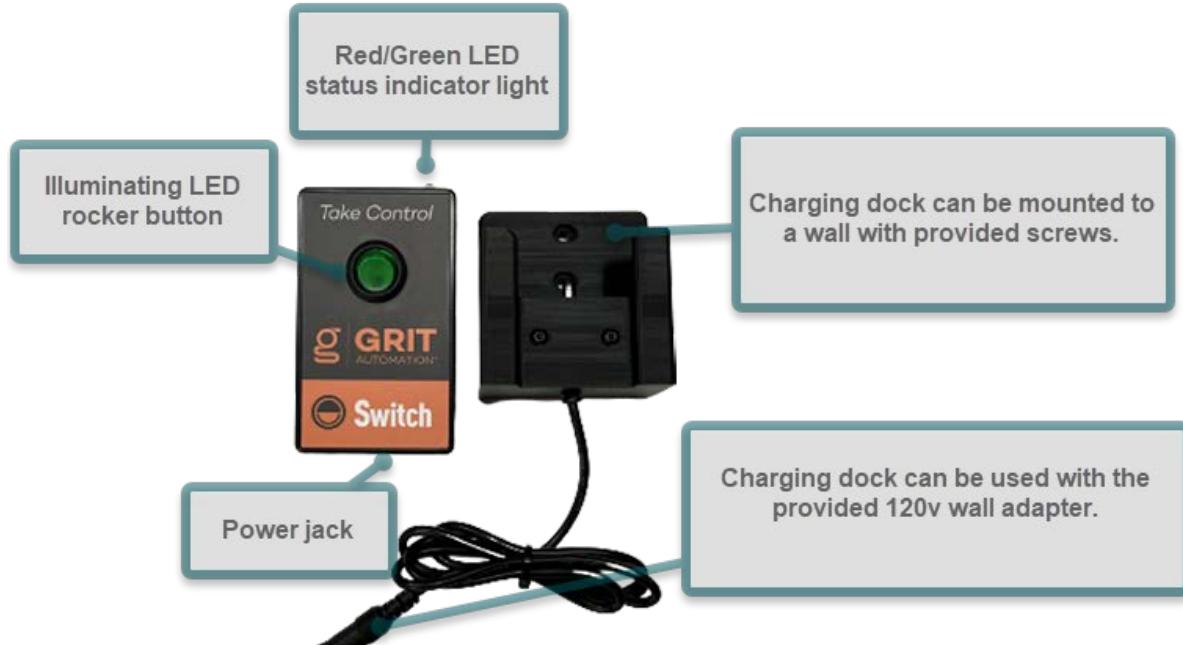


Example: Maintenance alert on Dashboard.

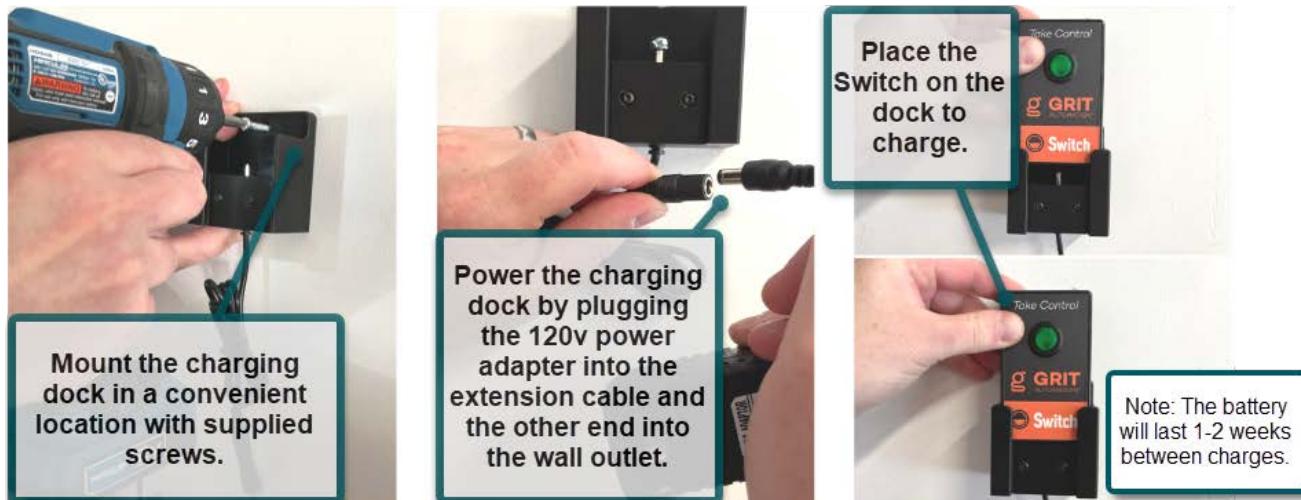
TRIGGERS

GRIT Switch

The GRIT Switch is a wireless trigger that can be configured exactly the same as other triggers, except instead of having the tool activate the collector, the toggle switch does. These are often used for a shop's floor sweep or for a work station that has rotating tools or wood lathes.



Installation



TRIGGERS

Switch Device Configuration

If you press Locate, the Switch will beep and flash when on the charging dock, but will take up to 30 seconds for the device to wake up and beep if it is operating on battery only.

Trigger Name: switch-8c9575

Battery Level: Plugged-In/Charged

Associated Collector: collector-9ace5b

Associated Gates:

No	Belt/Disc Sander	
No	Drum Sander	
No	Edge Sander	
No	Floor Sweep	
No	Jointer	
No	Left Branch	
No	Planer	
No	Right Branch	
No	Spindle Sander	
No	Tablesaw	
No	gate-2c18a2	
No	gate-8330a7	
No	gate-3d7f8b	

Configure the gate or gates that will be opened when this Switch is on.

Rename the device with the name of the tool it is associated with.

Configure the collector that will turn on when this Switch is on.

Battery Level is displayed or the charging status, if on its dock.

Triggers
Switch

COLLECTORS

120v and 220v Collectors

The GRIT Collector device controls dust collectors. It can be linked to triggers and will turn on/off automatically.



Installation



Step 3: Turn on your collector's manual switch (not pictured).

COLLECTORS

MagSwitch Collectors



Installation

The installation options for your MagSwitch Collector are listed below. You will need the following tools to complete:

- Power drill with step bit
- Flathead screwdriver (provided)
- Phillips screwdriver

Option 1: Onedia Collector with Oneida remote module

Option 2: Contactor with motor starter*

Option 3: Laguna Collector

*If the contactor enclosure is large enough, the MagSwitch Collector device can be put inside. If it cannot fit in the enclosure, the knockout must be at least 5/8".

COLLECTORS

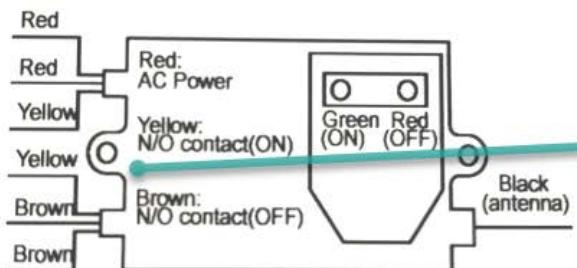
Option 1: Onedia Collector with Oneida remote module



Step 1: Remove the Cover.

If you have a Gorilla Pro, only remove the top cover to the VFD.

RG7 Remote Control
Voltage:AC 220-240V



Step 2: Connect the Control Wires

Replace the yellow wires from the existing remote module with the **BLACK** and **GREEN** control wires from the MagSwitch device (side does not matter).

Then, replace the brown wires from the existing remote module with the **RED** and **BLUE** control wires from the MagSwitch device (side does not matter).

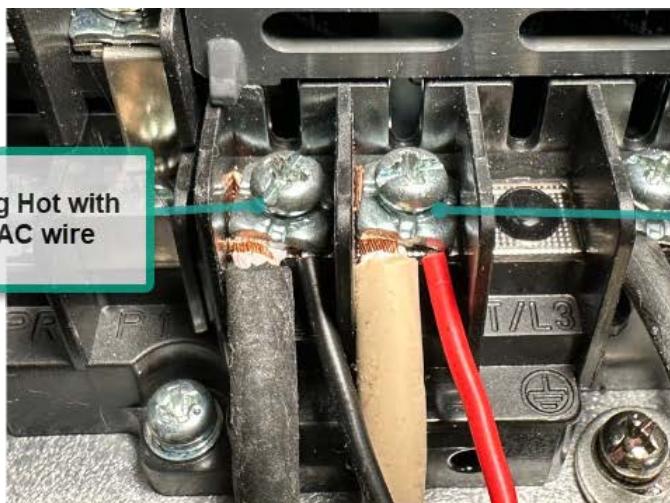


COLLECTORS



Step 3: Connect the AC Wires

To power the MagSwitch device, install the **BLACK** and **RED** AC wires with the incoming hot wires in the contactor (side does not matter).

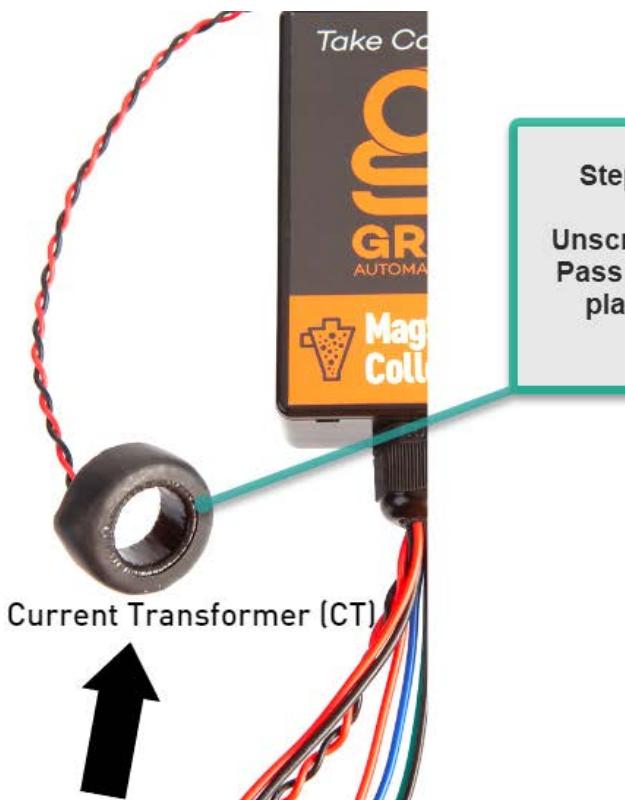


Pictured: Oneida Gorilla Pro



Pictured: Oneida Supercell

COLLECTORS



Step 4: Install the Current Transformer (CT)

Unscrew ANY ONE OF THE outgoing load wires.
Pass the wire through the middle of the CT and
place back into its same terminal. Screw to
secure.

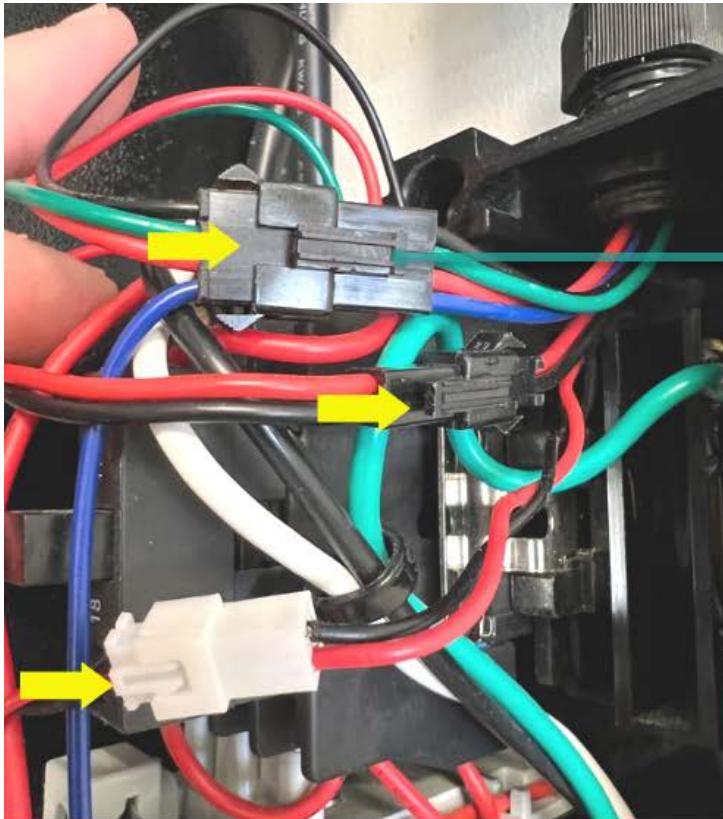


Pictured: Oneida Gorilla Pro



Pictured: Oneida Supercell

COLLECTORS



Step 5: Connect the Installed Wires to the MagSwitch Device.

Connect the AC wires, Control wires, and CT.

Step 6: Replace the Cover.

Replace the contactor cover and mount the MagSwitch device with provided VHB tape, if desired.



Pictured: Oneida Gorilla Pro



Pictured: Oneida Supercell

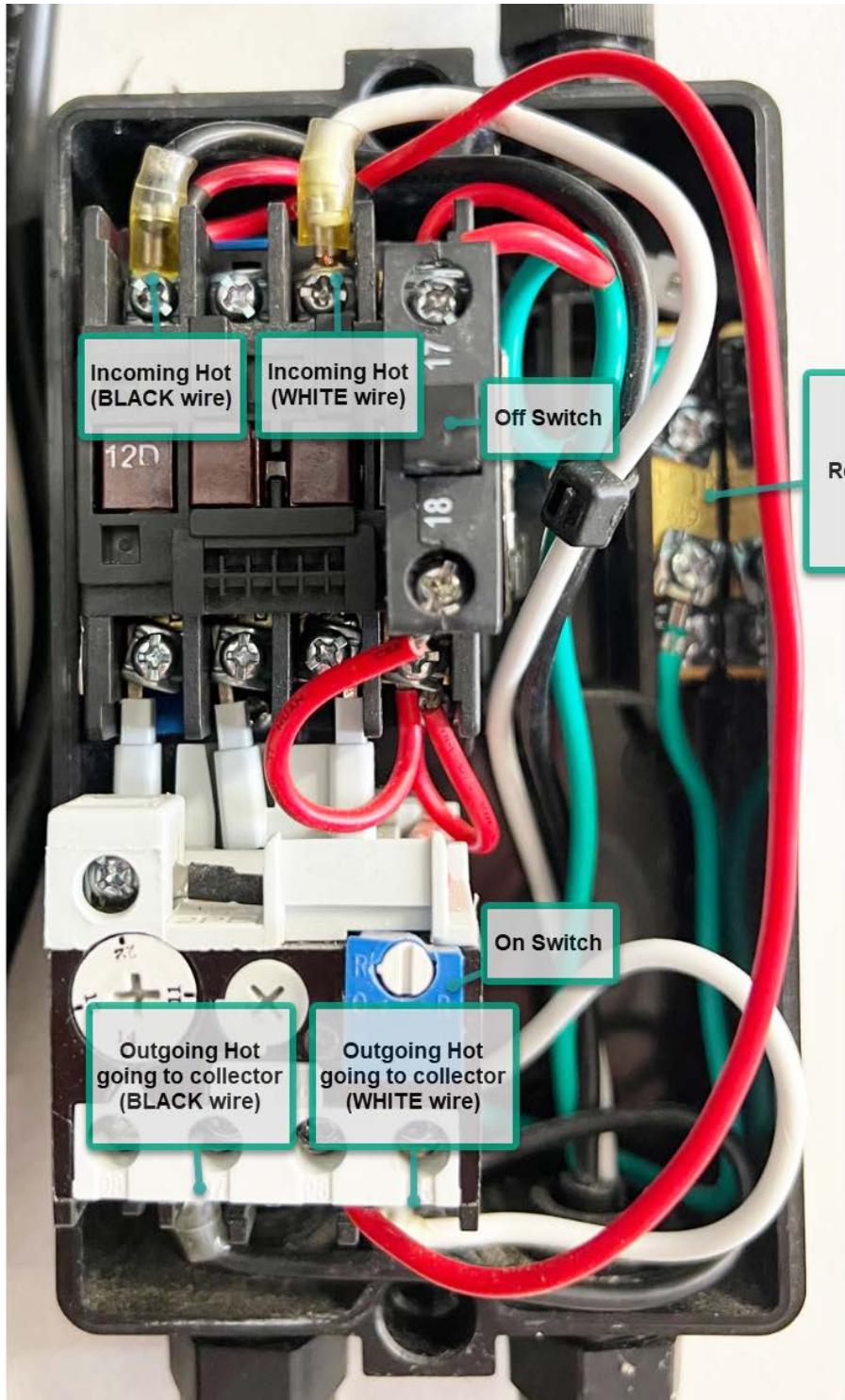
COLLECTORS

Option 2: Contactor with Motor Starter

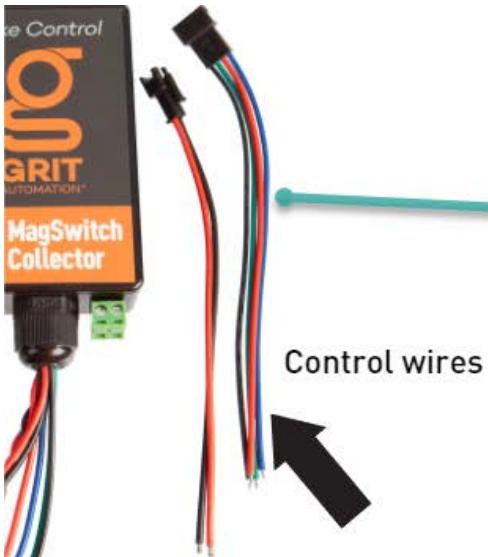
Installation Video



SCAN ME

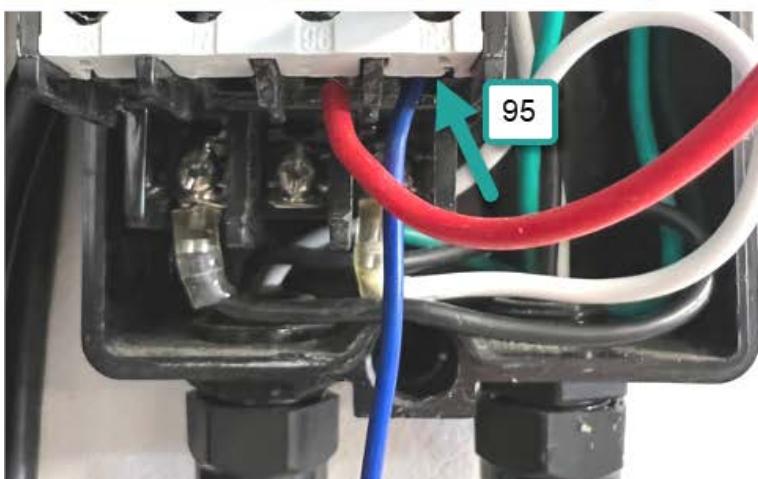
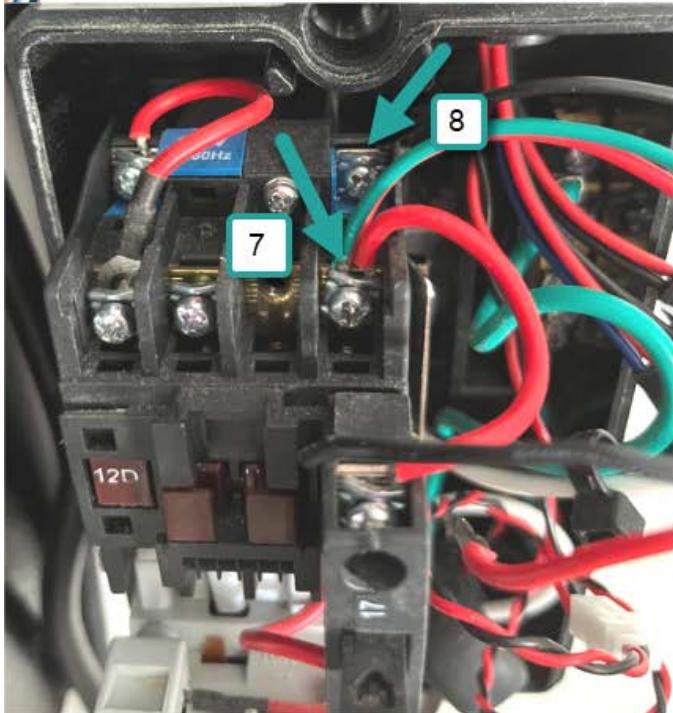


COLLECTORS

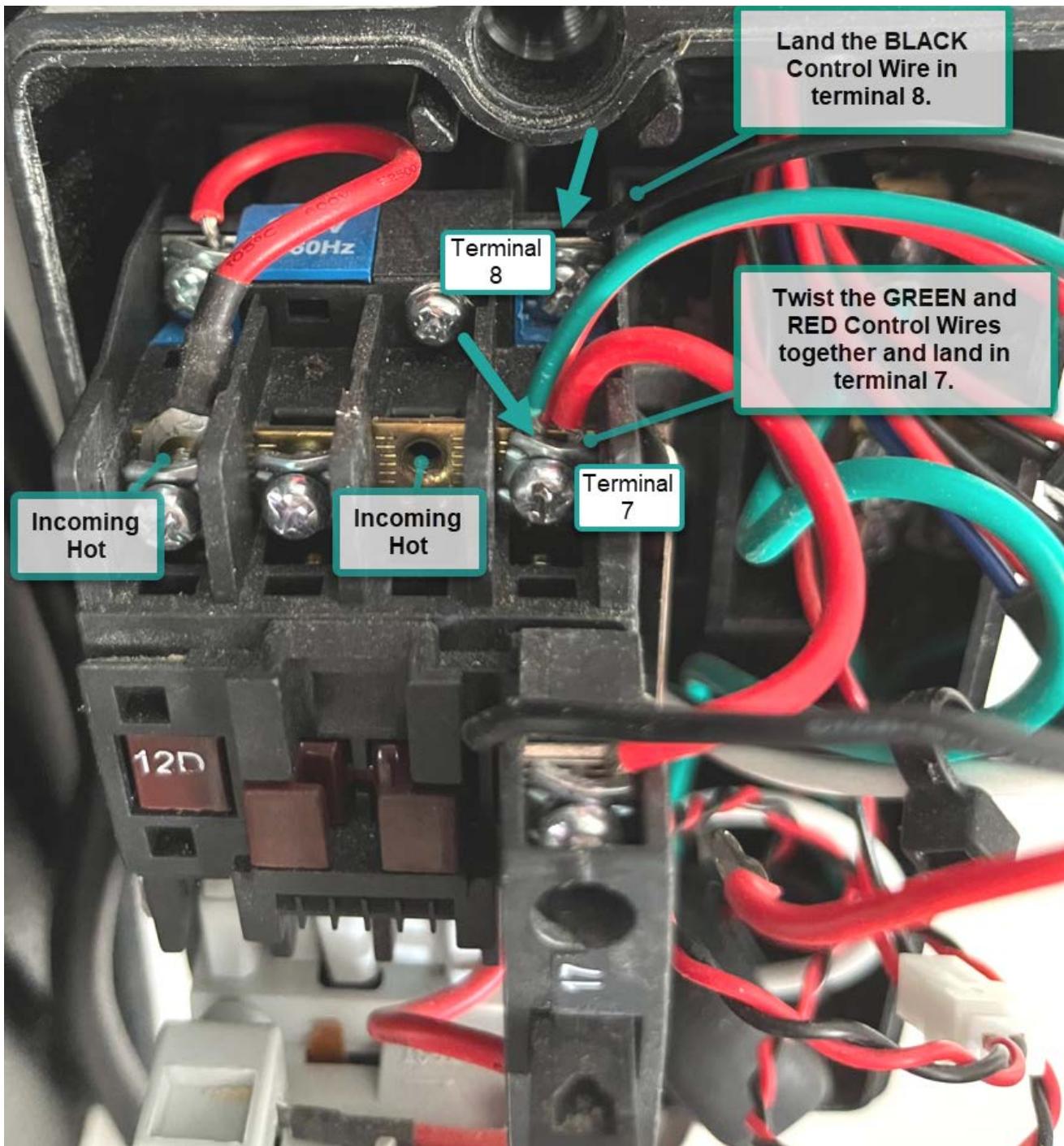


Step 2: Connect the Control Wires

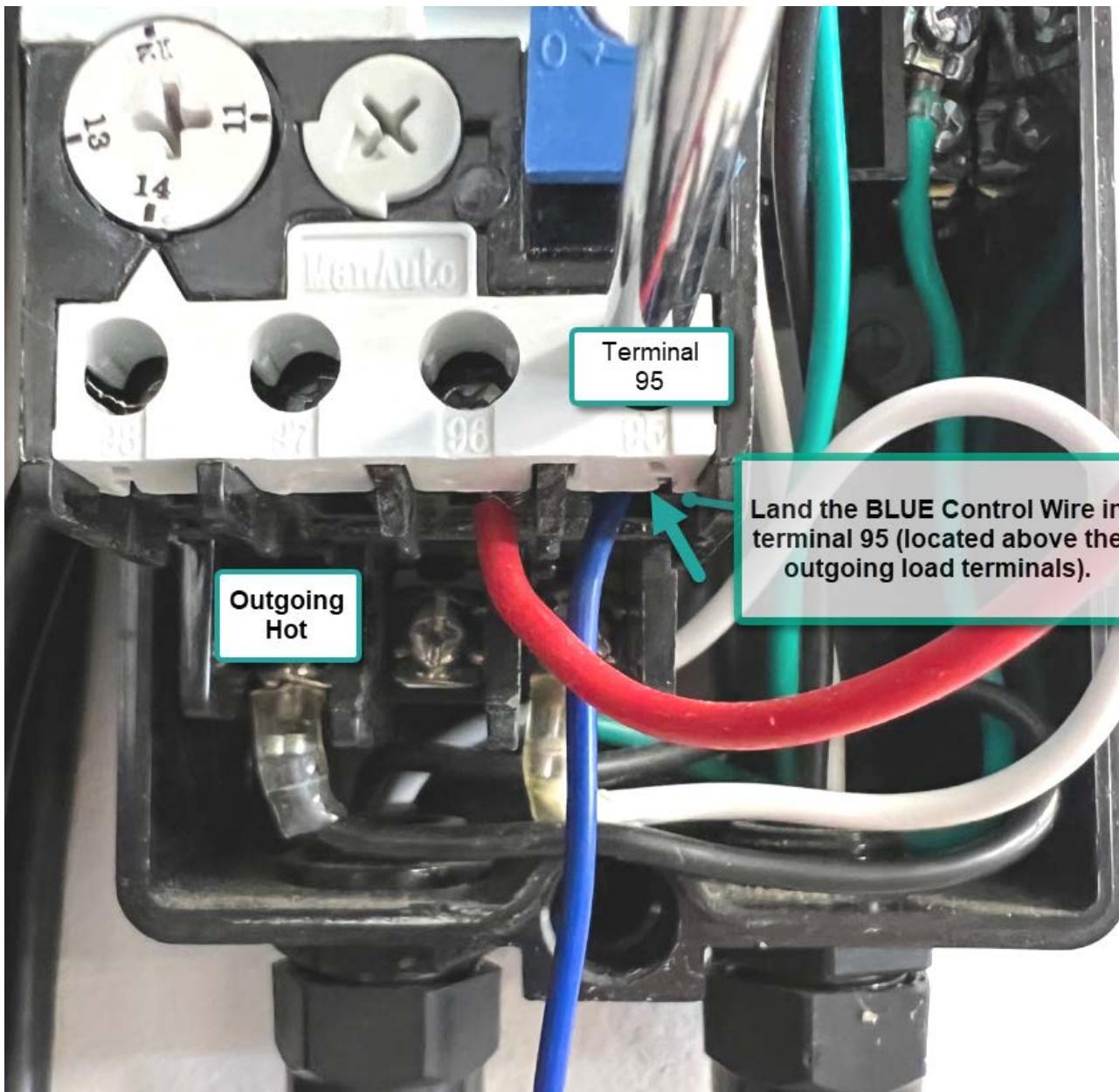
The control wires for this installation option will be landed in terminals 7 and 8 at the top of the contactor and in terminal 95 at the bottom of the contactor.



COLLECTORS

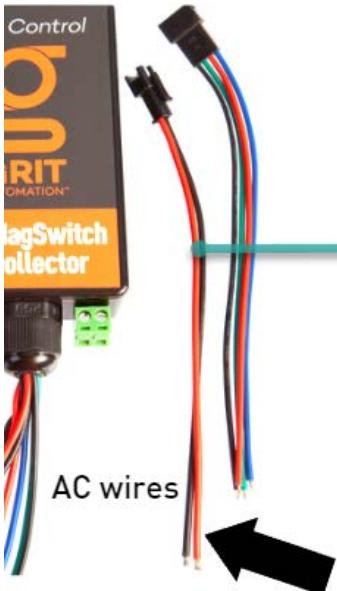


COLLECTORS



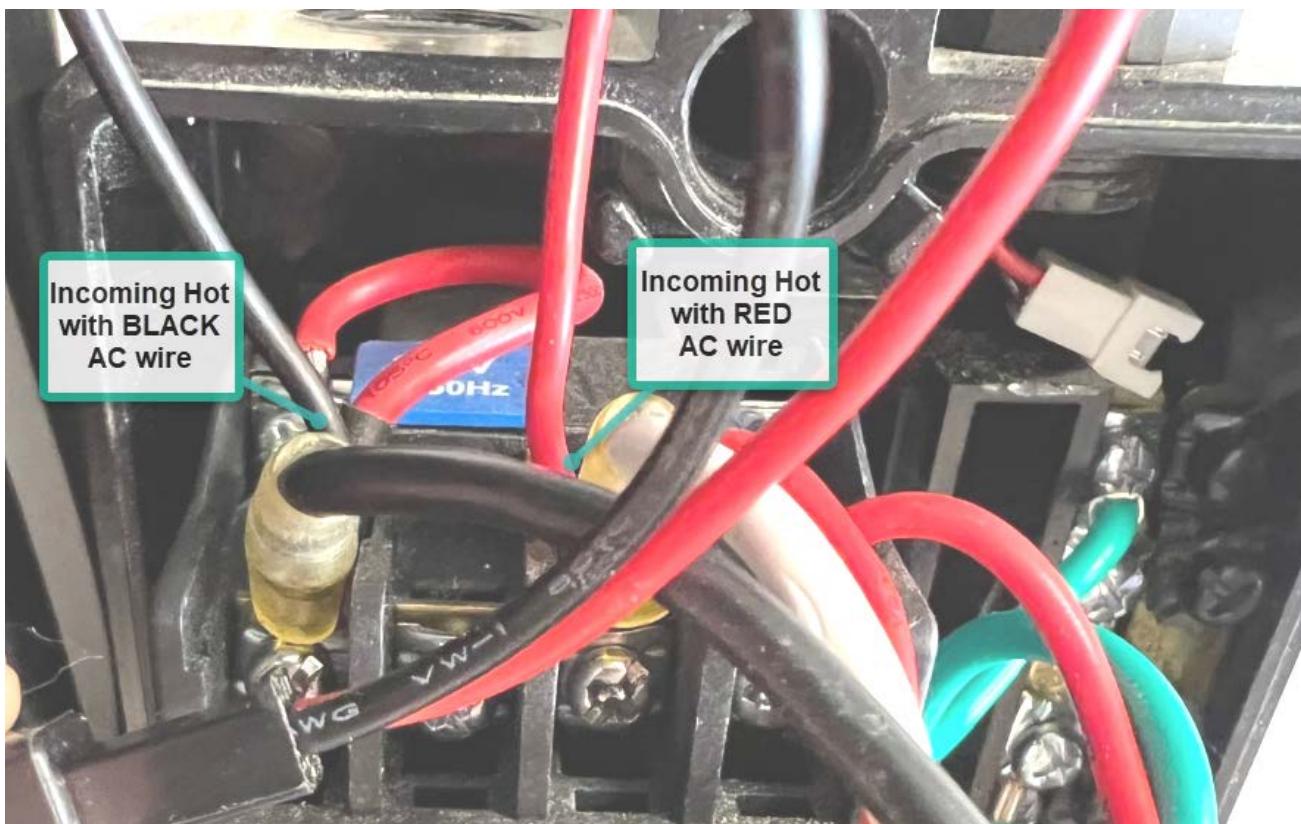
Collectors
Installation

COLLECTORS



Step 3: Connect the AC Wires

To power the MagSwitch device, install the **BLACK** and **RED** AC wires with the incoming hot wires in the contactor (side does not matter).

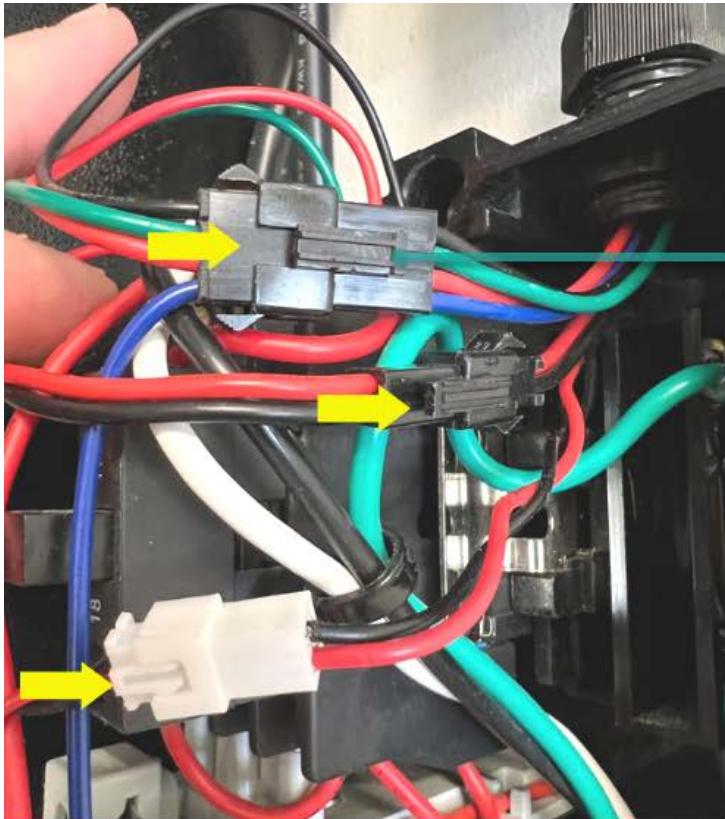


COLLECTORS



Collectors
Installation

COLLECTORS



Step 5: Connect the Installed Wires to the MagSwitch Device.

Connect the AC wires, Control wires, and CT.

Step 6: Replace the Cover.

Replace the contactor cover and mount the MagSwitch device with provided VHB tape, if desired.



Pictured: Oneida Gorilla Pro



Pictured: Oneida Supercell

COLLECTORS

Option 3: Laguna Collector

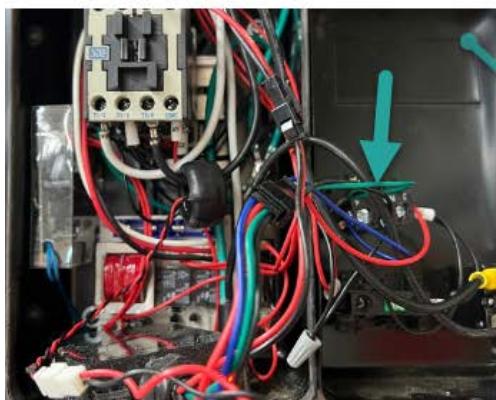
Installation Video



SCAN ME



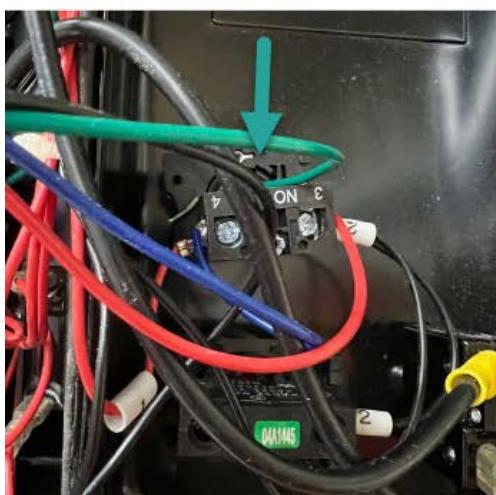
Step 1: Open the Cover.



Step 2: Connect the Control Wires.

Replace the yellow wires from the existing remote module with the **BLACK** and **GREEN** control wires from the MagSwitch device (side does not matter).

Replace the brown wires from the existing remote module with the **RED** and **BLUE** control wires from the MagSwitch device (side does not matter).



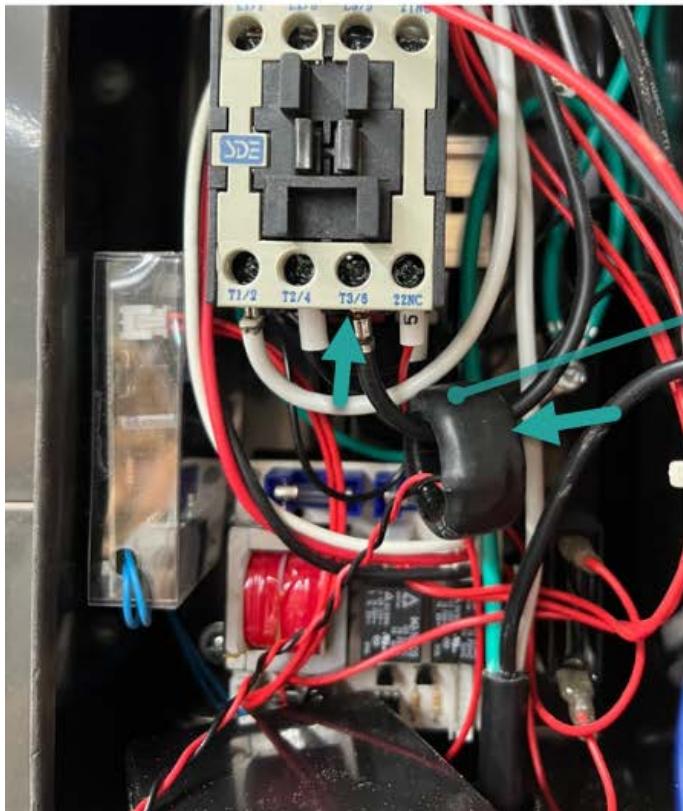
Collectors
Installation

COLLECTORS



Step 3: Connect the AC Wires

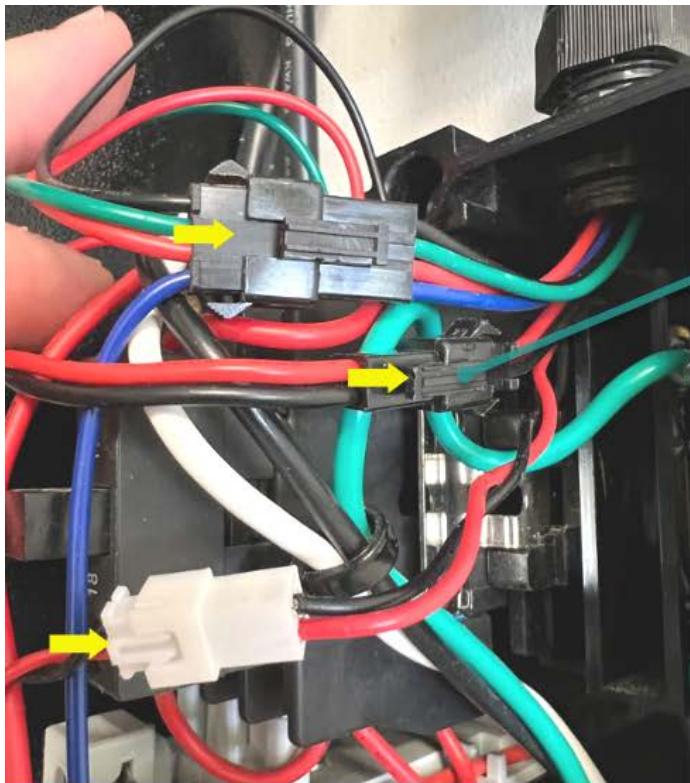
To power the MagSwitch device, install the **BLACK** and **RED** AC wires with the incoming hot wires in the contactor (side does not matter).



Step 4: Install the Current Transformer (CT)

Unscrew ANY ONE OF THE outgoing load wires. Pass the wire through the middle of the CT and place back into its same terminal. Screw to secure.

COLLECTORS



Step 5: Connect the Installed Wires to the MagSwitch Device.

Connect the AC wires, Control wires, and CT.



Step 6: Close the Cover.

Mount the MagSwitch device with provided VHB tape and close the cover.

COLLECTORS

Collector Device Configuration

The screenshot shows the 'Collector Device Configuration' page for a 'GRIT Collector'. The top right features the 'GRIT Collector' logo with '120v' and a small trash can icon. The main area contains several configuration fields:

- Associated Dust Bin Sensor:** Set to 'V3000'.
- Delay On Timer:** Set to '0.0 Seconds'.
- Delay Off Timer:** Set to '4.0 Seconds'.
- Minimum Run Timer:** Set to '0.0 Minutes'.
- Minimum Open Gates:** Set to '1 Gate'.
- Collector Name:** Set to 'V3000'.
- Associated Triggers:** A list of triggers with edit icons:
 - Yes Belt/Disc Sander
 - No switch-8ca200
 - No switch-8c9575
 - Yes Drum Sander
 - Yes Edge Sander
 - Yes Jointer
 - No Left (60%)
 - Yes Spindle Sander
 - Yes Tablesaw

Callouts provide detailed explanations for several settings:

- Associated Dust Bin Sensor:** Select the associated GRIT Dust Bin Sensor, if applicable.
- Collector Name:** Rename the device with the name of the collector it is associated with.
- Associated Triggers:** Configure the trigger or triggers that will cause the collector to be turned on.
- Delay On Timer:** Set the number of seconds that the collector should wait to turn on after a trigger has been activated. If no gates need to be changed, the collector will immediately turn on. This setting gives the system a chance to move the gates first when a collector is too powerful. The LED on the Collector will flash green to indicate that it has received the message to turn on.
- Minimum Open Gates:** Set the minimum number of gates for this collector. The system finds all gates connected to this collector through the associated triggers and ensures that the number of gates that are open is at least this number.
- Delay Off Timer:** Set the number of minutes that the collector must run after it has been turned on. The timer for this feature starts when the collector first turns on. If all triggers have been deactivated and this minimum time has not elapsed, the collector will remain on until this minimum time has passed. If the value is set to 0, the feature is disabled.
- Minimum Run Timer:** Set the number of seconds that the collector should wait to turn OFF after all associated triggers have been deactivated. The LED will flash red to indicate that it has received the message to turn off.

COLLECTORS

VFD Device Configuration

Collector Name: VFD Collector

VFD Configuration: AutomationDirect :: GS1

Associated Dust Bin Sensor: -- Select Dust Bin Sensor --

Associated Triggers:

- No Belt/Disc Sander
- Yes switch-8c97de
- No switch-8392eb
- No Drum Sander
- No Edge Sander
- No Floor Sweep
- No Jointer
- Yes L
- No Planer

Delay On Timer: 0.0 Seconds

Delay Off Timer: 4.0 Seconds

Minimum Run Timer: 0.0 Minutes

Minimum Open Gates: 1 Gate

Turn On: Turn On

Number Of Tools For Max Speed: 3 Tools

Minimum VFD Speed: 0%

Maximum VFD Speed: 100%

Collector Name: Rename the device with the name of the collector it is associated with.

Minimum VFD Speed: Set the minimum speed for this VFD.

Maximum VFD Speed: Set the maximum speed for this VFD.

Associated Dust Bin Sensor: Configure how your device communicates. Select your VFD model or select 'Custom' if your model is not listed.

Associated Triggers: Set the number of tools that must be running for the VFD to operate at specified maximum speed.

Delay On Timer: Set the number of seconds the collector should wait before turning on after an associated trigger is activated.

Delay Off Timer: Set the number of seconds the collector should wait before turning off after all associated triggers have been deactivated.

Minimum Run Timer: Set the number of minutes the collector must run after it has been turned on.

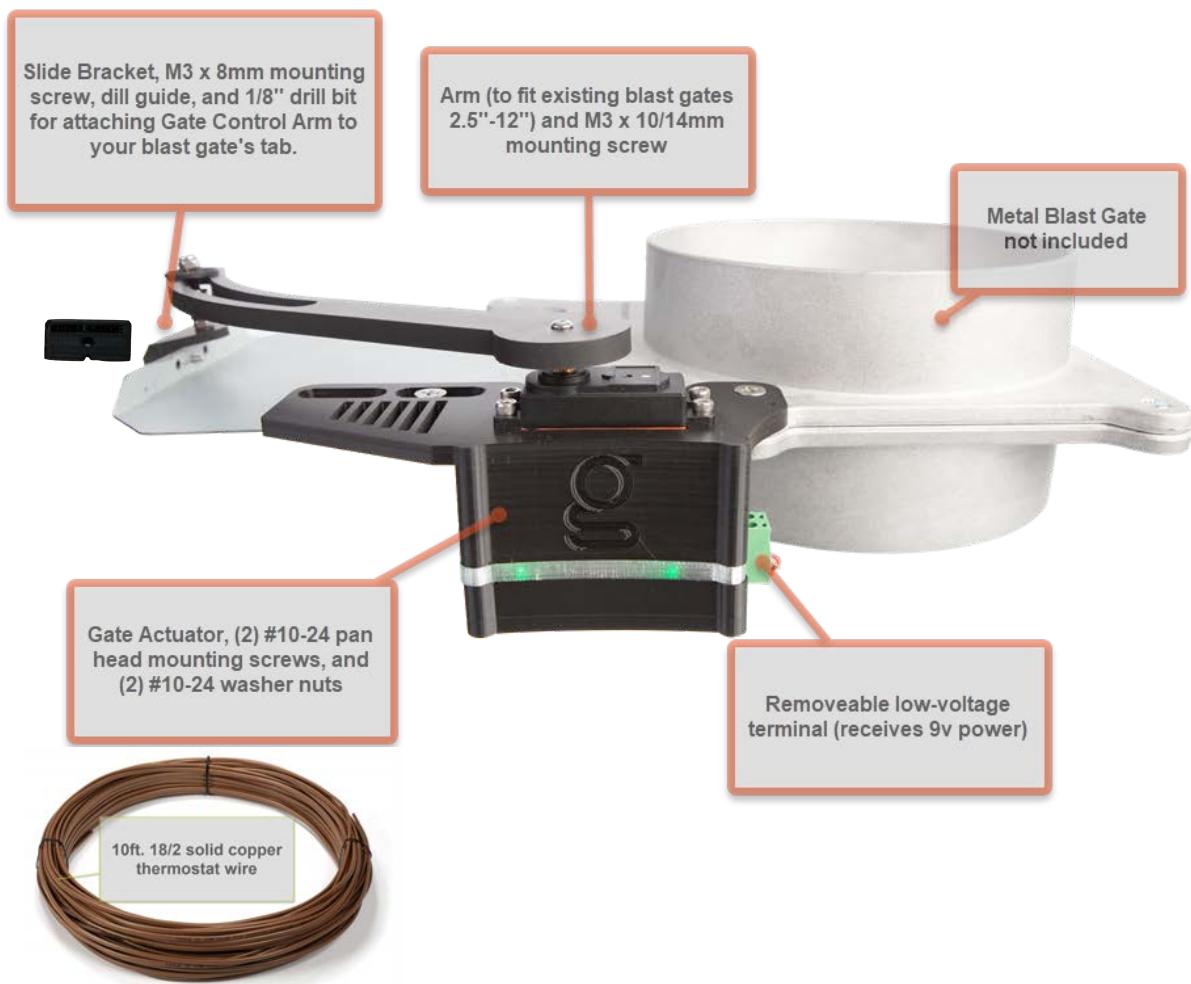
Minimum Open Gates: Set the minimum number of open gates for this collector.

Collectors
Configuration

GATE CONTROL

Gate Control

The GRIT Gate Control device attaches to an existing metal blast gate to automatically open and close the gate when an associated tool is turned on/off.



Installation Tool Requirements

The instructions to install your Gate Control are listed below.

You will need the following tools to complete installation:

- Power drill with 1/8" drill bit (provided)
- Drill Guide (provided)
- Flathead screwdriver (provided)
- T8 Torque screwdriver (provided)
- 7mm Socket driver (provided)
- Phillips screwdriver
- Wire stripper

Installation Video



GATE CONTROL

Orientation

GRIT Gate Control devices, when powered properly, operate in any orientation. Some placement considerations can be made, however, to assist in their best performance.

- If you notice strain when opening/closing, consider mounting the actuator so that:
 - the arm operates parallel to the floor, or;
 - the arm opens up toward the ceiling.



Gate Control
Installation

If the location of the existing blast gate does not allow for mounting the gate actuator as shown above, you can move the actuator to the other side of the blast gate by changing the direction of the Slide Bracket post.



The Slide Bracket arrives assembled with:

M4 x 30mm post
M4 lock washer
M4 nut
Assorted hat and flat washers
M4 lock nut
and
M3 x 8mm screw to secure the bracket to the gate's tab



To change the orientation of the Slide Bracket:

Step 1: Remove all components from the post.

GATE CONTROL



Step 2: Insert the post on the other side of the bracket.

Secure with the M4 lock washer and M4 nut.



Step 3: Attach the newly oriented Slide Bracket onto the tab per Gate Control installation instructions.

Secure with the M3 x 8mm screw.



The newly installed Slide Bracket, Actuator, and Arm will look like this when installed with the flipped bracket.

GATE CONTROL

Installation

Gate Control Installation



Step 1:

To mount the Slide Bracket to the gate's tab, place the Drill Guide over the middle of the tab. Drill through the tab with the supplied 1/8" drill bit. Remove the Drill Guide.

Note: Use a new Drill Guide for each gate.



Step 2:

Place the Slide Bracket over the tab, align the holes, and screw in the M3 x 8mm screw to secure the Slide Bracket to the tab.



Step 3:

Remove the lock nut, top flat washers, and hat washer from the Slide Bracket post.

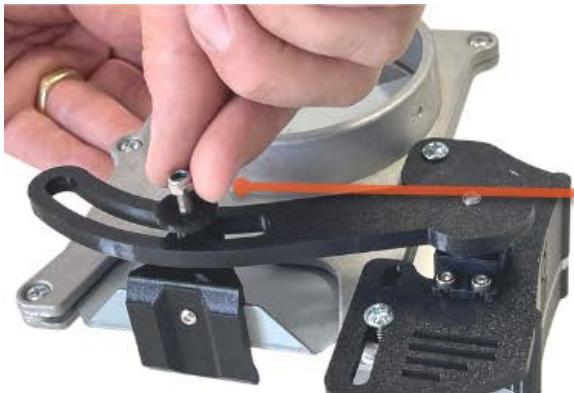
Remove the two screws from the blast gate (as shown).



Step 4:

Place the Arm over the Slide Bracket post and attach the Gate Actuator to the blast gate with the provided #10-24 mounting screws.

GATE CONTROL



Step 5:

Replace the hat washer, flat washers, and M4 lock nut on the Slide Bracket post.

Make sure the bottom of the hat washer touches the flat washers placed under the Arm.



Step 6:

Tighten the lock nut with the provided socket driver. The Arm and hat washer should be secure but still able to move freely.



Step 7:

The Gate Control device is now fully installed onto the existing metal blast gate.



Step 8:

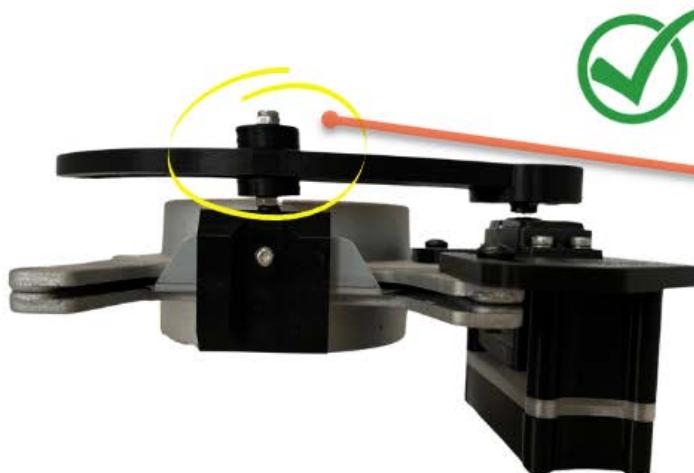
Run the low-voltage wire from the green terminal of the Gate Control device to a GRIT Power Bank.

Note: You can land two sets of wires in each terminal if wiring from one gate to another in a 'daisy chain'.

GATE CONTROL

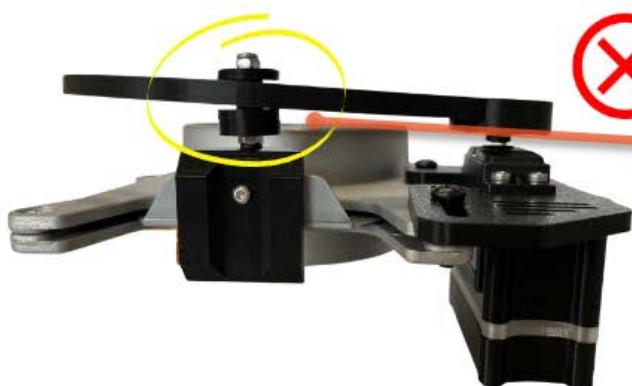
Finetune the Arm Position

To make sure your Gate Control Arm slides smoothly, take care in placing the correct configuration of Hat and Flat washers on the Slide Bracket post so that the Arm is level and secure. The best configuration will vary from gate-to-gate, so use these images as a guide.

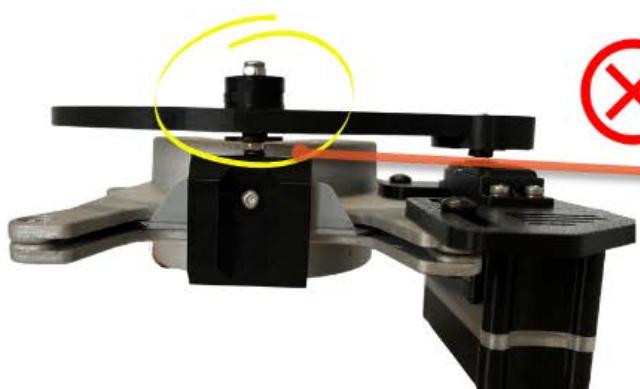


This Arm is fairly level and supported with no additional tension being placed at its connection point with the servo.

For reference, this configuration has a 3mm and 1mm washer placed below the Arm with a hat washer, 3mm, and 1mm washer placed above.



This Arm is pitched up at an angle due to too many flat washers being placed below the Arm.

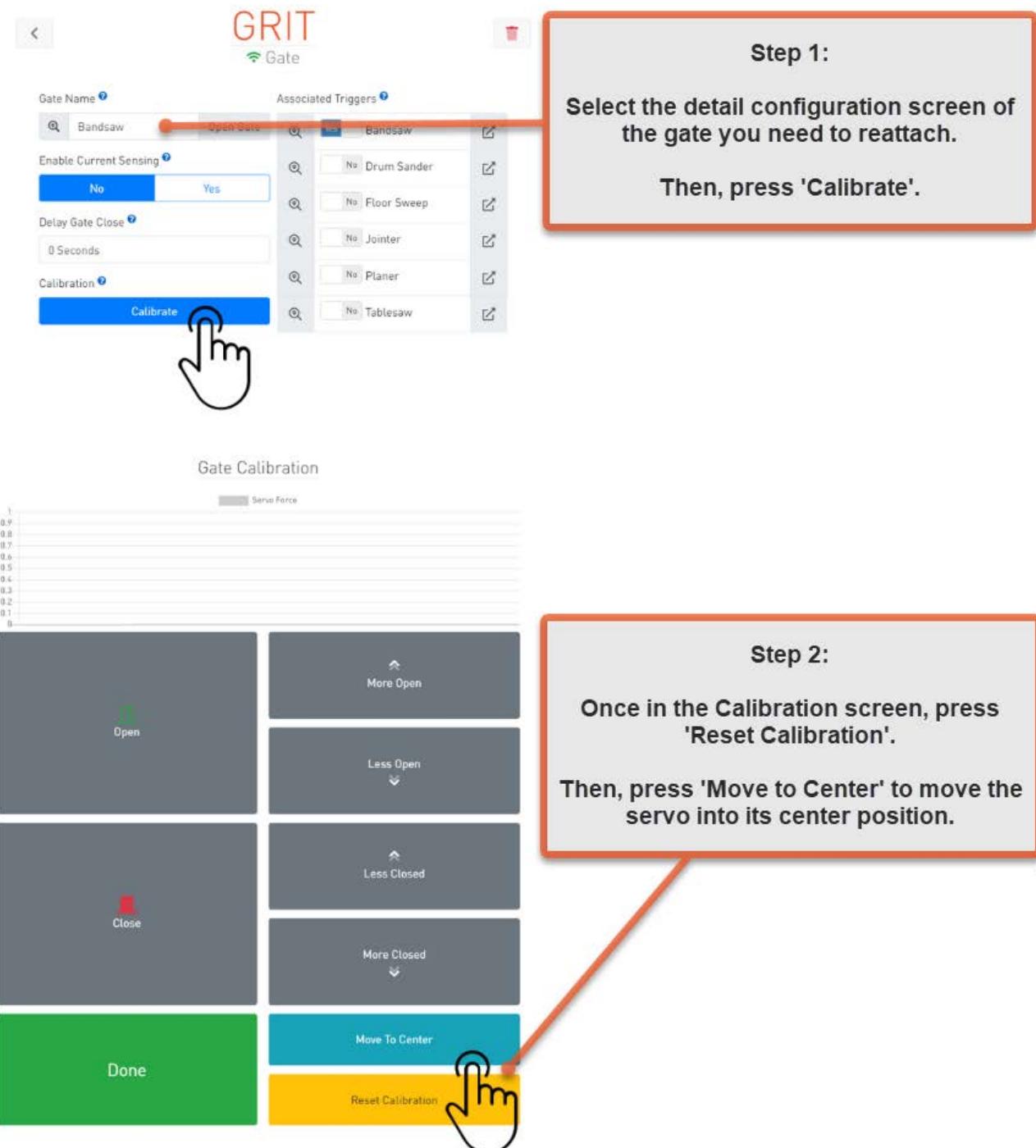


While this Arm is fairly level, it is not adequately supported with flat washers underneath the Arm.

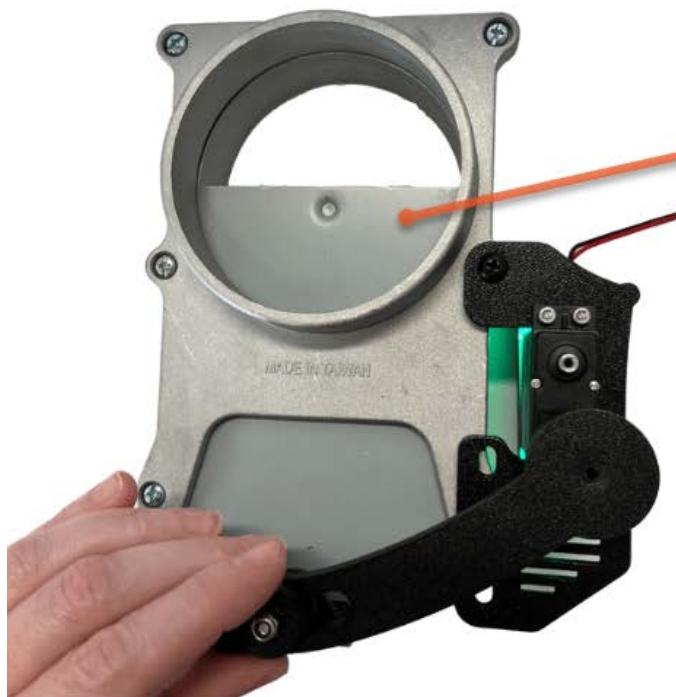
GATE CONTROL

Reattach the Arm

The Arm of the Gate Control device arrives attached in the proper placement for calibration and does not need to be removed during the installation process. If for any reason you need to remove the Arm, please follow these steps to reattach it properly.



GATE CONTROL



Gate Control
Installation

GATE CONTROL

Slide Guide

A Slide Guide is an additional component that can be added to your blast gate to assist in smooth operation for gates 6" and larger.



Install the Slide Guide on the side opposite the Gate Control Actuator.

Remove the two screws from the blast gate.

Place the Slide Guide over the holes, and attach with the provided #10-24 mounting screws.



The slide of the metal blast gate will glide along the metal bearings of the Slide Guide to keep it on track.

GATE CONTROL

Gate Control Device Configuration

The image shows the GRIT Gate Control configuration interface. On the left, a sidebar lists tools: Bandsaw, Drum Sander, Floor Sweep, Jointer, Planer, and Tablesaw. The main area shows a 'Gate Name' field set to 'Bandsaw', a 'Delay Gate Close' field set to '0 Seconds', and a 'Calibration' section with a 'Calibrate' button. A large orange callout box points to the 'Associated Triggers' table, which lists triggers for opening the gate. A red arrow points from the 'Calibration' section to the 'Calibrate' button. Another red arrow points from the 'Delay Gate Close' field to its value. A third red arrow points from the 'Associated Triggers' table to the 'Associated Triggers' header.

Rename the device, generally, with the name of the tool it is associated with.

Gate Name

Bandsaw

Open Gate

Delay Gate Close

0 Seconds

Calibration

Calibrate

Set the Open and Closed positioning for the gate.

Associated Triggers

Configure the trigger or triggers that will cause the gate to open.

Associated Triggers
Yes Bandsaw
No Drum Sander
No Floor Sweep
No Jointer
No Planer
No Tablesaw

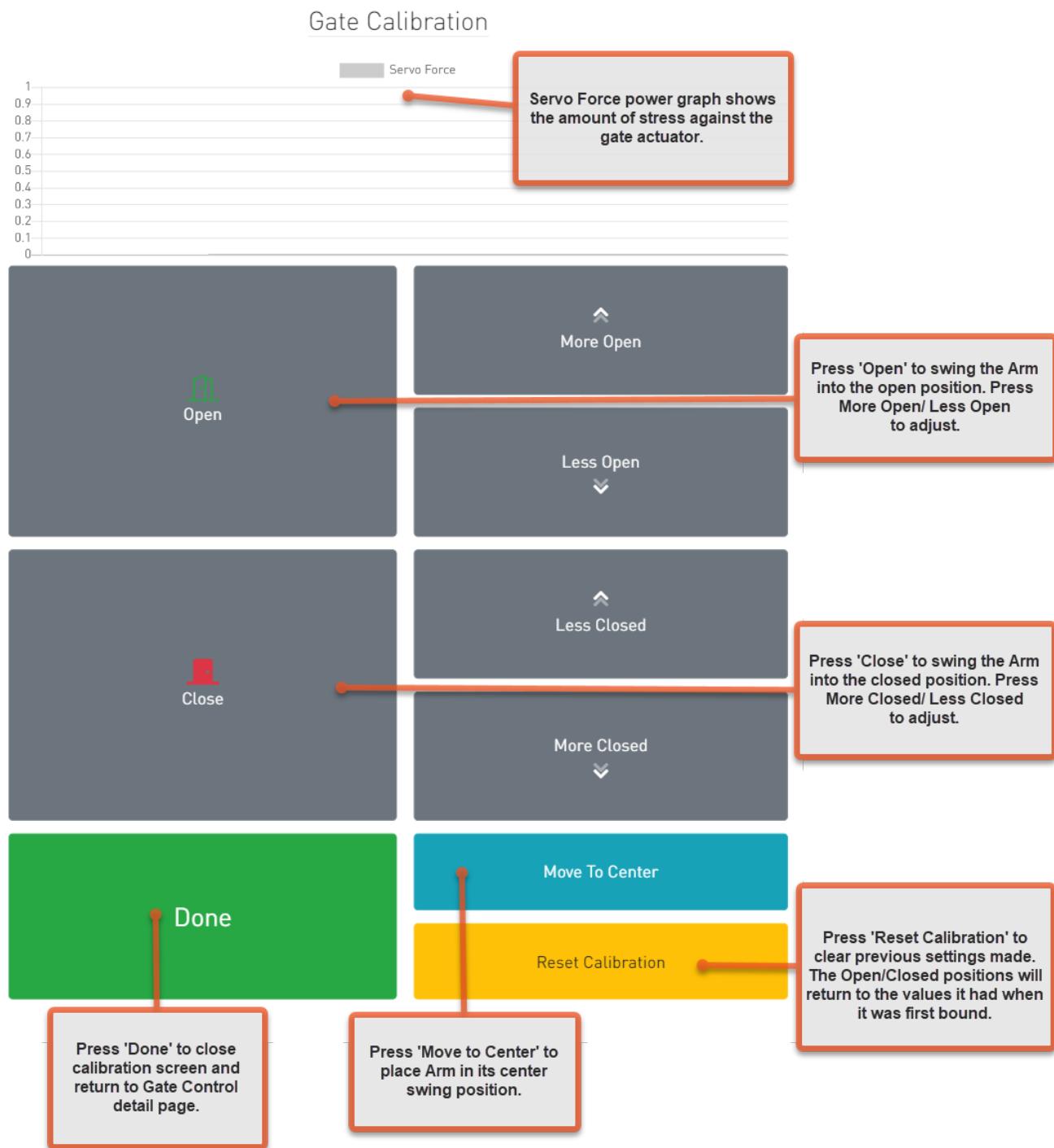
Open Gate

Home Assets Devices Reports Admin

Gate Control Configuration

GATE CONTROL

Calibration

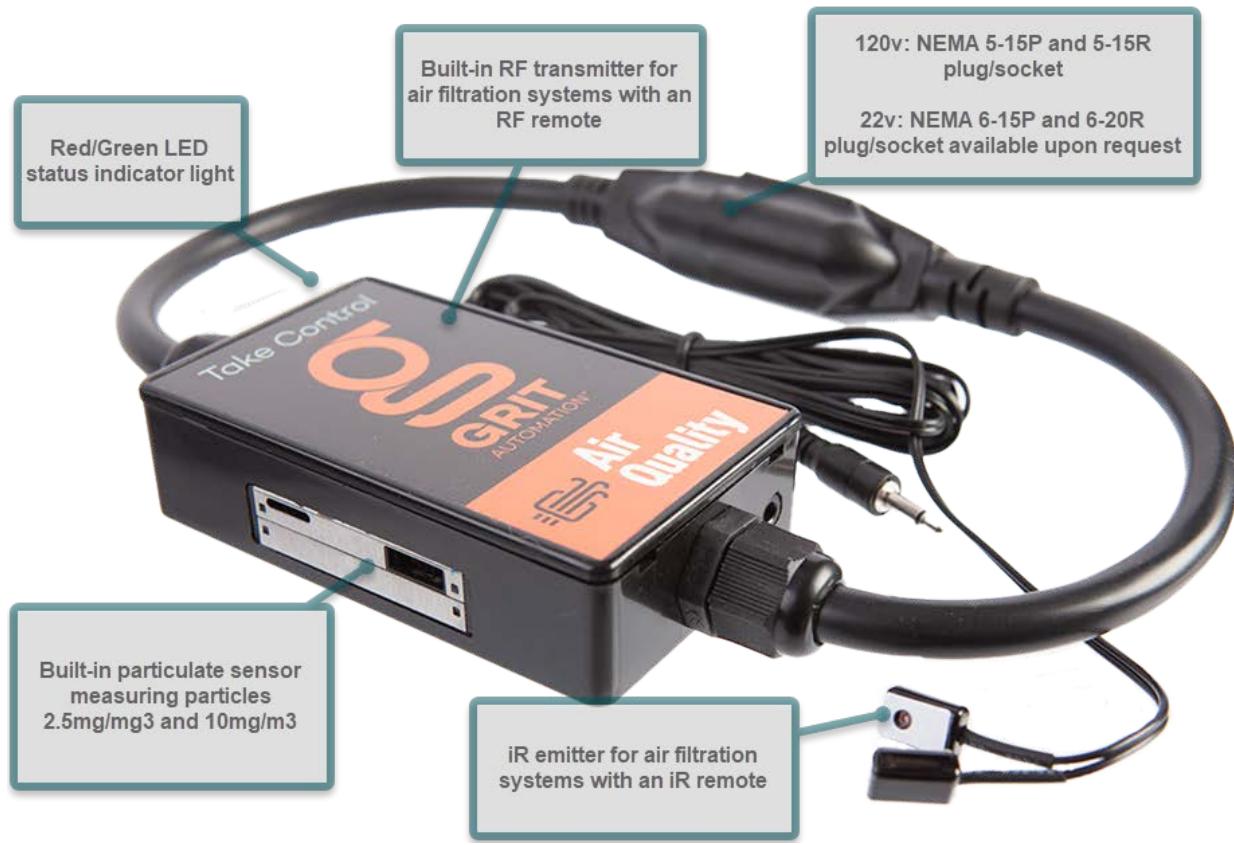


*Tips/Tricks: The LEDs on the Gate will flash each time you adjust its Open/Close position. Decrease the amount of the Open/Close if the stress on the servo becomes high. Indications that the position is too far in one direction is servo shuttering, the gate opening/closing spontaneously, or the LEDs turning off and the gate resetting.

AIR QUALITY

Air Quality

The GRIT Air Quality device automatically controls air filtration units. It continuously monitors air quality levels and activates the air filter system based on the configured settings.



Air Quality

AIR QUALITY

Installation



Step 1:

Plug your air filter into the GRIT Air Quality device.



Step 2:

Plug the GRIT Air Quality device into the outlet.

Steps 3 and 4 are only used for air filtration systems with an iR remote. Basic on/off systems or systems with an RF remote will not use the included iR emitter.



Step 3:

Plug the jack of the iR emitter into the port on the bottom of the GRIT Air Quality device.



Step 4:

Remove the white sticker from the back of the iR emitter and place on top of the eye on the air filtration system.

Dusty environments might need more tape.

Note: If your shop has multiple Air Quality devices, you may need to cut off the second emitter to avoid sending signals to other devices.

AIR QUALITY

Air Quality Device Configuration

The screenshot shows the 'Air Quality Device Configuration' page for a device named 'GRIT Shop'. The configuration includes:

- Air Quality Device Name:** GRIT Shop
- Air Quality Levels:** PM2.5: 1.0 µg/m³, PM10.0: 1.0 µg/m³, Dylos: 85/15 #/.01ft³
- Activation Level:** 15 PM2.5 OR PM10.0 Dylos #/.01ft³
- Override On Timer:** 30 Minutes, Turn On button
- Automatic Mode:** On (selected)
- Minimum Run Timer:** 10.0 Minutes
- Control Type:** iR Remote (selected)
- Activation Speed:** High
- IR Command Setup:** -- Select Command Setup --
- Air Quality Indicator:** AQI 4 (Green)
- Associated Triggers:**
 - No switch-8392
 - No Belt/Disc Sander
 - No Drill Press
 - No Drum Sander
 - No Edge Sander
 - No Floor Sweep
 - No Jointer
 - No Spindle Sander
 - No Tablesaw

A vertical teal sidebar on the right is labeled 'Air Quality Configuration'.

AIR QUALITY

Air Quality Device Configuration with an iR or RF Remote

To program the GRIT Air Quality device to your air filtration system, first determine if the remote is iR or RF. If you are unsure, you can determine this by looking for a clear LED bulb on the remote or a tinted plastic window on the top of your remote. If none is present, it is RF.



Control Type ? Inline iR Remote RF Remote

Activation Speed ? Low Medium High

IR Command Setup ? Custom

IR Remote: On Command ? Clear Test

IR Remote: Off Command ? Clear Test

IR Remote: Speed Command ? Clear Test

Home Devices Reports

Step 1:
Select the Control Type for your air filtration system.

Step 2:
Select the Activation Speed.

Step 3:
Select 'Custom' if your air filtration system is not listed. If it is listed, select it, then no further programming is required.

Step 4:
If you select 'Custom', you will need to program your remote for the On, Off, and Speed Commands.

AIR QUALITY



Step 5:

Point the remote (iR or RF) at transmitter located inside the vent on the side of the Hub.

RF Command Setup [?](#)

Custom [?](#)

RF Remote: On Command [?](#)

Clear [Test](#)

RF Remote: Off Command [?](#)

Learn [Learn](#)

RF Remote: Speed Command [?](#)

Learn [Learn](#)

Home Devices GRIT Track Reports Admin

Step 6:

Select 'Learn' for each command you need to program.

Learning The 'ON' Command

Time Remaining 17 [Stop](#)

On Command [?](#)

Off Command [?](#)

Speed Command [?](#)

Learn [Learn](#)

Home Devices GRIT Track Reports Admin

Step 7:

A timeout popup will display on the screen. Follow the prompts to finish programming that command. The popup will disappear once the command has been learned.

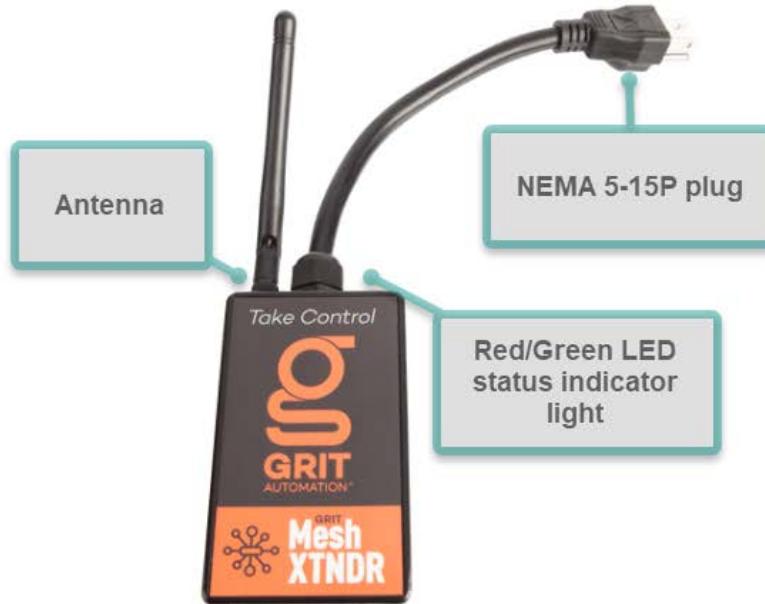
Repeat the 'Learn' sequence for each command.

Air Quality Configuration

MESH XTNDR

Mesh XTNDR

The Mesh Xtndr device extends the range of the GRIT mesh network in situations where devices are having trouble communicating.

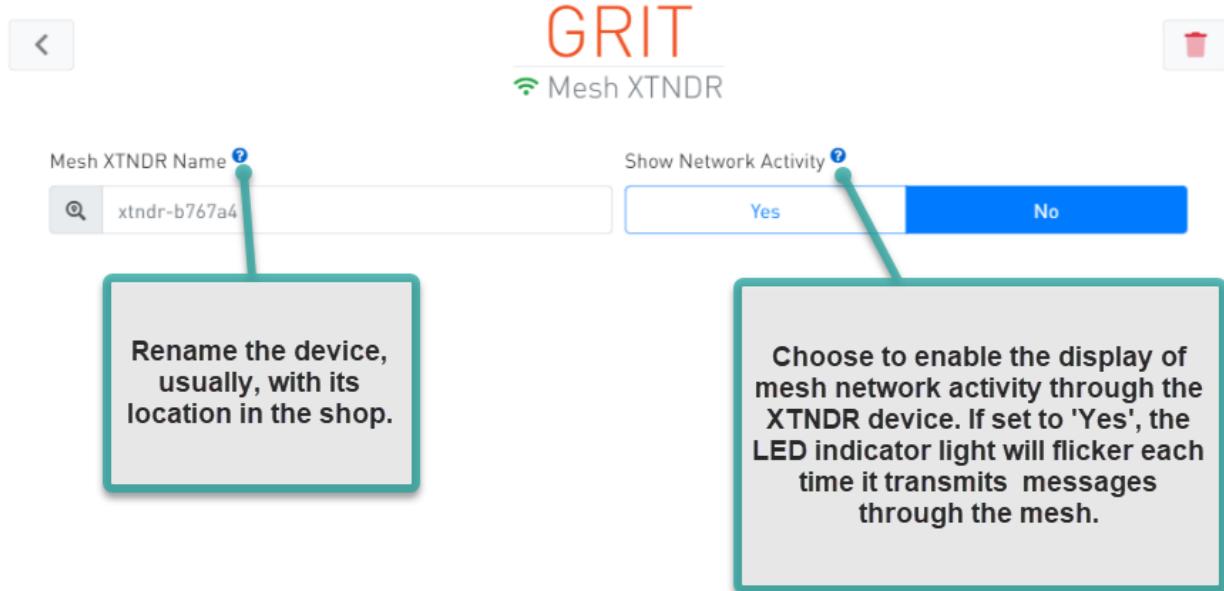


Installation



MESH XTNDR

Mesh XTNDR Device Configuration



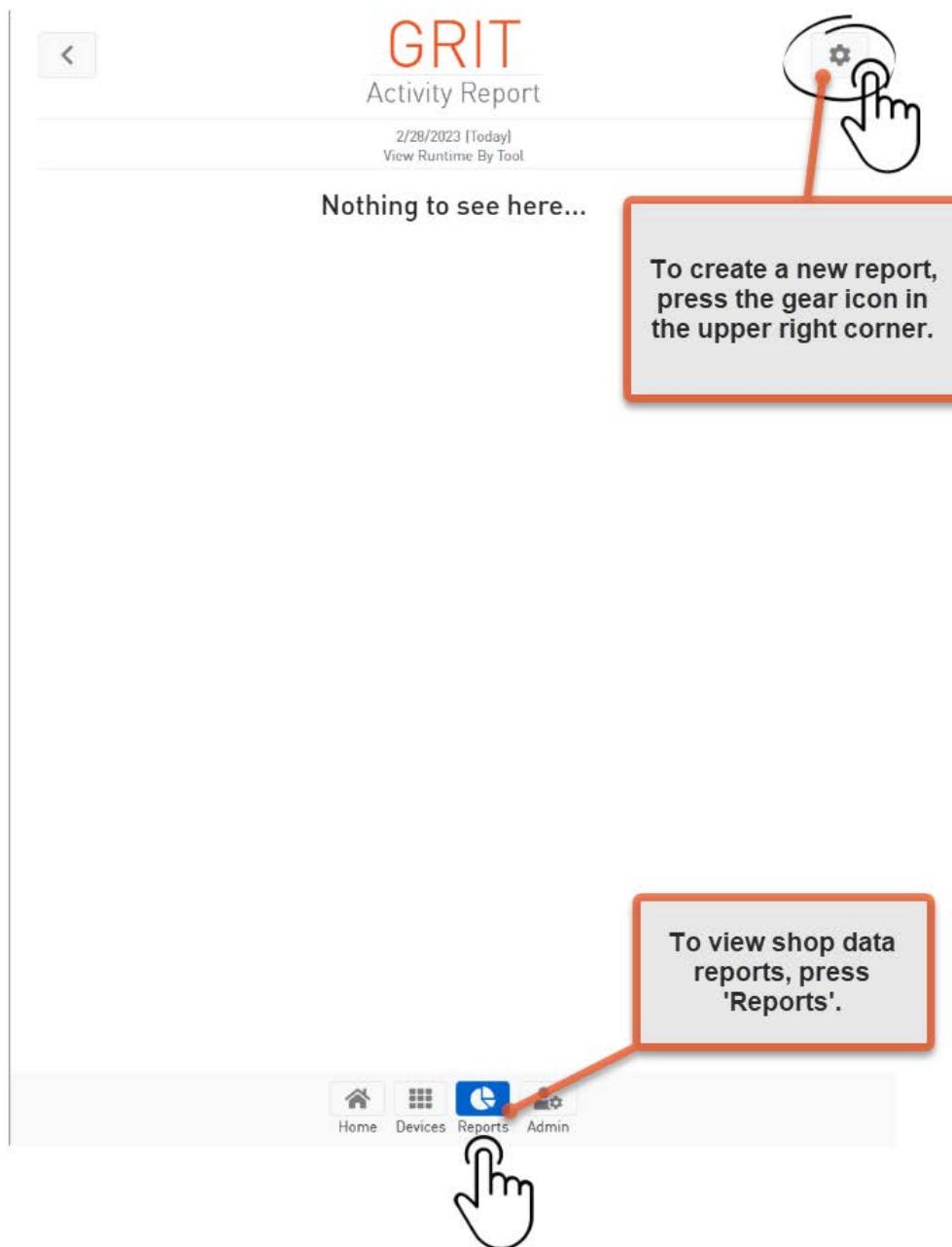
Mesh XTNDR
Configuration

GRIT REPORTS

Three types of reports available:

1. Activity Reports: view a log of GRIT device activity for the specified time range.
2. Maintenance Reports: view of tool maintenance for the specified time range.
3. Tool Reports: view tool activity for the specified time range.

Activity Reports



GRIT REPORTS

Reports
Activity Reports

The screenshot shows the 'Activity' section of the GRIT Reports interface. A hand icon points to the 'Maintenance' button under the 'Activity' dropdown menu. The 'Refresh Report' button is visible at the top right.

Step 1:
Select the type of report

Step 2:
Select the Date Range for the report.

The screenshot shows the 'Activity' section with the 'Maintenance' button selected. A hand icon points to the 'Display Seconds' checkbox, which is currently set to 'No'. Below it, the 'Display Device Online Logs' checkbox is also set to 'No'. The 'Select Activity View' dropdown menu is open, showing options like 'All', 'Runtime', and 'Device Status', with 'Device Status' highlighted.

Step 3:
Select whether you would like seconds data displayed in the timestamps.

Step 4:
Select whether you would like online/offline data about the system (used mainly for troubleshooting).

Step 5:
Select the type of activity for the report.

The screenshot shows the 'Activity' section with the 'Maintenance' button selected. A hand icon points to the 'Refresh Report' button at the top right of the screen.

Step 6:
Press 'Refresh Report'

GRIT REPORTS

GRIT
Activity Report
2/20/2023 - 2/26/2023 [Last Week]
View Runtime By Tool

View 1 View 2

Feb 23, 2023

- Table Saw 16 3m 16s
- Router Table 11 7m 49s
- Shop Sweep 3 1m 21s
- Bandsaw - Small 2 2m 03s
- Sanders - Flat 2 1m 29s
- Remote Switch 2 11m 05s

Feb 22, 2023

Feb 21, 2023

Feb 20, 2023

Home Devices Reports Admin

View 1: Tools

A list of activity for each date in the selected date range.

Press the dropdown menu for a detailed view of activity for each tool on a given date.

GRIT
Activity Report
2/1/2023 - 2/28/2023 [This Month]
View Runtime By Tool

View 1 View 2

Feb 23, 2023

Table Saw 16 3m 16s

Time	User	Duration
1:29 PM	Gifford, Ryan	>> 3s
1:17 PM	Gifford, Ryan	>> 12s
1:16 PM	Gifford, Ryan	>> 10s
1:15 PM	Gifford, Ryan	>> 11s
1:14 PM	Gifford, Ryan	>> 10s
12:42 PM	Gifford, Ryan	>> 11s
11:09 AM	Gifford, Ryan	>> 8s
11:07 AM	Gifford, Ryan	>> 8s
11:03 AM	Gifford, Ryan	>> 8s
10:59 AM	Gifford, Ryan	>> 7s
10:58 AM	Gifford, Ryan	>> 10s
10:57 AM	Gifford, Ryan	>> 21s
10:22 AM	Gifford, Ryan	>> 14s
10:21 AM	Gifford, Ryan	>> 19s

Home Devices Reports Admin

GRIT REPORTS

The screenshot shows the GRIT Activity Report interface. At the top, it says "GRIT Activity Report" and "2/20/2023 - 2/26/2023 [Last Week]". Below this are two tabs: "View 1" and "View 2". A hand cursor is pointing at the "View 2" tab. To the right of the tabs is a callout box with the title "View 2: Collectors" and the text "A list of activity for each date in the selected range.".

View 1

View 2

GRIT Activity Report
2/20/2023 - 2/26/2023 [Last Week]
View Runtime By Tool

View 2: Collectors
A list of activity for each date in the selected range.

Reports
Activity Reports

The screenshot shows the GRIT Activity Report interface with "View 2" selected. It displays activity for "Feb 23, 2023" under "Oneida SuperCell". A hand cursor is pointing at the dropdown menu next to the date. To the left, a callout box says "Press the dropdown menu for a detailed view of activity for each collector on a given date.". Below the date, there is a table of activity entries:

Time	Activity	Duration
2:56 PM	green icon	>> 4s
2:50 PM	green icon	>> 45s
1:50 PM	green icon	>> 11m 01s
1:32 PM	green icon	>> 12s
1:31 PM	green icon	>> 34s
1:29 PM	green icon	>> 3s
1:17 PM	green icon	>> 12s
1:16 PM	green icon	>> 18s
1:15 PM	green icon	>> 11s
1:14 PM	green icon	>> 12s
12:49 PM	green icon	>> 40s
12:49 PM	green icon	>> 55s
12:46 PM	green icon	>> 1m 53s
12:42 PM	green icon	>> 11s
11:09 AM	green icon	>> 7s
11:07 AM	green icon	>> 8s
11:03 AM	green icon	>> 5s
11:00 AM	green icon	>> 2s

Feb 23, 2023

Oneida SuperCell 37 27m 03s

View 1

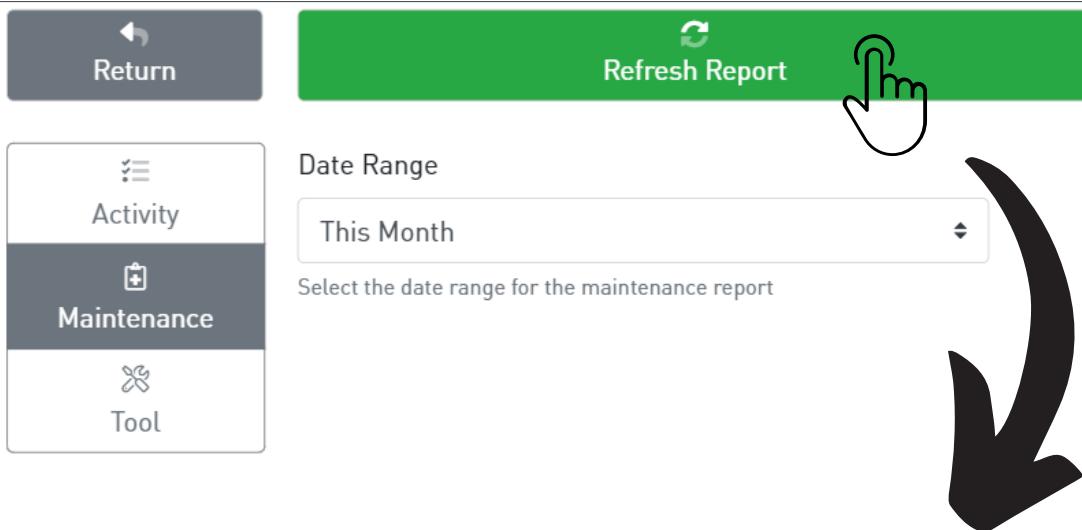
View 2

GRIT Activity Report
2/1/2023 - 2/28/2023 [This Month]
View Runtime By Tool

Press the dropdown menu for a detailed view of activity for each collector on a given date.

GRIT REPORTS

Maintenance Reports



The screenshot shows the GRIT Maintenance Report results page. At the top, there's a back arrow, the 'GRIT' logo, and a gear icon. The main title is 'Maintenance Report' with a subtitle '6/1/2022 - 6/17/2022 [This Month]'. Below this is a table with columns: 'Tool', 'Task', and 'Time Remaining'. One row is visible for a 'Planer' tool with the task 'Change Gearbox Oil' and 36s remaining. At the bottom, there are two sections: 'Details' (Frequency: 36s, Description: Change the gearbox oil with the correct fluid) and 'Activities' (a table with columns: 'Completed On', 'Performed By', and 'Notes'). The 'Completed On' column shows 'Jun 16, 2022 5:44 PM', 'Performed By' shows 'Danowitz, Joel', and 'Notes' shows 'I completed this task.'

Tool	Task	Time Remaining
▼ Planer	Change Gearbox Oil	36s

Completed On	Performed By	Notes
Jun 16, 2022 5:44 PM	Danowitz, Joel	I completed this task.

GRIT REPORTS

Tool Reports

Reports
Tool Reports

The screenshot shows the GRIT Tool Reports interface. On the left, there's a sidebar with 'Activity', 'Maintenance', and 'Tool' options. The 'Tool' option is selected and highlighted in dark grey. At the top right is a green 'Refresh Report' button with a circular arrow icon, which has a hand cursor pointing at it. Below the sidebar is a 'Date Range' dropdown set to 'This Month'. A placeholder text 'Select the date range for the tool report.' is visible below the dropdown. Under 'Tool Selection', there are two buttons: 'All Tools' (which is blue and highlighted with a hand cursor) and 'Single Tool'. A large orange callout box labeled 'View 1: All Tools Report' points to the table below. The table has two columns: 'Tool' and 'Duration'. The data is as follows:

Tool	Duration
Sanders - Hand	2h 03m
Remote Switch	1h 38m
Sanders - Flat	1h 02m
Table Saw	36m 25s
Router Table	16m 31s
Shop Sweep	16m 12s
Bandsaw - Small	12m 51s
Drill Press	4m 26s
Bandsaw - Large	1m 16s

To the right of the table is a chart titled 'Most Used Tools' showing total runtime for each tool. The Y-axis is 'Time' from 0s to 2h 13m. The X-axis lists the tools. The bars are colored: Sanders - Hand (blue), Remote Switch (grey), Sanders - Flat (red), Table Saw (teal), Router Table (orange), Shop Sweep (dark blue), Bandsaw - Small (black), Drill Press (purple), and Bandsaw - Large (green).

GRIT REPORTS



GRIT Tool Report

2/1/2023 - 2/28/2023 (This Month)

Tools: 9 | Total Runtime: 6h 12m

View 1 View 2

Tool	User	Duration
Feb 23, 2023		
Bandsaw - Small	Gifford, Ryan	2m 02s
Remote Switch	Gifford, Ryan	11m 05s
Router Table	Gifford, Ryan	7m 49s
Sanders - Flat	Gifford, Ryan	1m 39s
Shop Sweep	Gifford, Ryan	1m 29s
Table Saw	Gifford, Ryan	3m 18s
Feb 22, 2023		
Feb 21, 2023		
Feb 20, 2023		
Feb 17, 2023		
Feb 16, 2023		
Feb 15, 2023		
Feb 14, 2023		
Feb 11, 2023		
Feb 9, 2023		
Feb 8, 2023		
Feb 5, 2023		

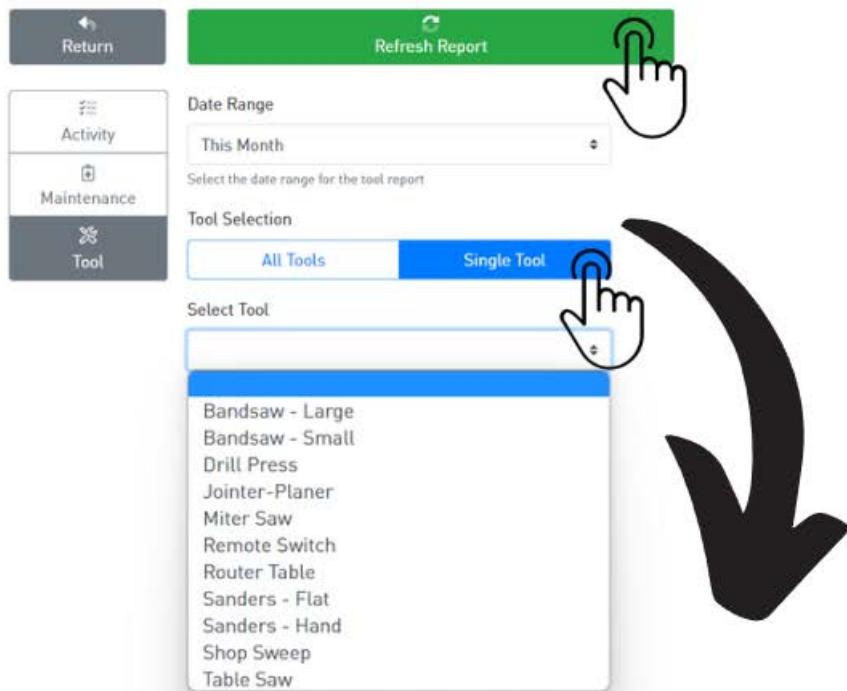
View 2: All Tools Report

A list of all tool runtime for each date in the selected range.



Home Devices Reports Admin

GRIT REPORTS



Reports
Tool Reports

View 1: Single Tool Report

Total tool runtime for the specified tool for the selected date range.

GRIT

Tool Report



2/1/2023 - 2/28/2023 [This Month]

Tool: Table Saw | Total Runtime: 36m 25s

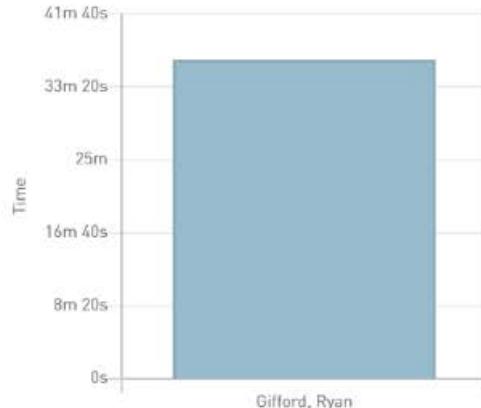
View 1

View 2

View 3

User	Duration
Gifford, Ryan	36m 25s

Most Active Users Table Saw



GRIT REPORTS

GRIT Tool Report

2/1/2023 - 2/28/2023 [This Month]
Tool: Table Saw | Total Runtime: 36m 25s

View 1 User View 2 Duration View 3

User

- Feb 23, 2023 Gifford, Ryan 3m 18s
- Feb 20, 2023 Gifford, Ryan 17m 16s
- Feb 11, 2023 Gifford, Ryan 10s
- Feb 9, 2023 Gifford, Ryan 22s
- Feb 8, 2023 Gifford, Ryan 13m 48s
- Feb 4, 2023 Gifford, Ryan 1m 31s

View 2: Single Tool Report
Tool runtime for each date in the selected range.

View 3: Single Tool Report
Each individual instance of tool use in the selected range.

2/1/2023 - 2/28/2023 [This Month]
Tool: Table Saw | Total Runtime: 36m 25s

Time User Duration

Time	User	Duration
Feb 23, 2023	Gifford, Ryan	12s
	Gifford, Ryan	34s
	Gifford, Ryan	19s
	Gifford, Ryan	14s
	Gifford, Ryan	21s
	Gifford, Ryan	10s
	Gifford, Ryan	7s
	Gifford, Ryan	8s
	Gifford, Ryan	8s
	Gifford, Ryan	8s
	Gifford, Ryan	11s
	Gifford, Ryan	10s
	Gifford, Ryan	11s
	Gifford, Ryan	10s
	Gifford, Ryan	12s
	Gifford, Ryan	3s
Feb 20, 2023	Gifford, Ryan	1m 26s

120

GRIT REPORTS

Export Reports

Reports
Export

The screenshot shows the GRIT Activity Report interface on a MacBook Air. The report lists various events from June 17, 2022, such as device status changes and sensor triggers. At the top right of the report area, there is a gear icon (settings) and a red download icon. A yellow arrow points to the gear icon, and a red arrow points to the download icon.

Date	Event Type	Device	Status
3:25:42 PM	Gate	Branch Gate	ONLINE
3:24:57 PM	Collector	Oneida Supercell	ONLINE
3:24:53 PM	Trigger	Tablesaw	GRIT_LOCK_STATE >> Unlocked
3:24:53 PM	Trigger	Tablesaw	ONLINE
3:24:18 PM	Trigger	Bandsaw	GRIT_LOCK_STATE >> Unlocked
3:24:18 PM	Trigger	Bandsaw	ONLINE
3:24:18 PM	Gate	Drum Sander	ONLINE
3:24:16 PM	Mesh Extender	b767a4	ONLINE
3:24:15 PM	Collector	fceeb	ONLINE
3:24:15 PM	Air Quality Sensor	c1789c	ONLINE
3:24:08 PM	Trigger	Planer	GRIT_LOCK_STATE >> Unlocked
3:24:08 PM	Trigger	Planer	ONLINE
3:24:08 PM	Dust Bin Sensor	Oneida Supercell	ONLINE
3:24:07 PM	Transistor	Drum Sander	GRIT_LOCK_STATE >> Unlocked

When running reports on a Desktop, reports can be exported as an Excel file by pressing the red download icon.

GRIT LEGAL NOTES



GRIT AUTOMATION, INC. 12-MONTH LIMITED WARRANTY

1. GRIT Automation, Inc. ("GRIT", "us", "we", "our") warrants all products sold directly from us to be free from defects in workmanship and materials for a period of twelve (12) months from the original shipment date when installed and used in accordance with the GRIT Automation Owner's Manual. Warranty repairs may require you to install a replacement part provided by GRIT, or require you to return the product to us for warranty service or replacement.

2. Such repair or replacement is subject to verification of the defect or malfunction. If we conclude shipping is necessary we will provide you with a shipping label. You are solely responsible for any damage to the returning product, so please ensure packaging is sufficient to protect all components therein.

3. This warranty does not cover repairs or replacements for:

GRIT products used for a purpose or used in any manner for which the product was not intended.

GRIT products damaged as a result of incorrect or inadequate maintenance or care.

Damages resulting from misuse, abuse, negligence, accidents, or shipping damage.

Damages that are a result of normal wear and tear.

Damages incurred during assembly or maintenance.

Damages that are determined to be from repairs made by third parties.

Without limiting the generality of the foregoing, this warranty will be void for products if you do any of the following:

Install any firmware not specifically issued by GRIT.

Make any change or modification to the electronics or computer components of GRIT.

Use or attempt to use GRIT components to control or move any device or object not specifically issued or authorized by GRIT.

General Disclaimer:

While GRIT Automation, Inc. has made every effort at the time of publication to ensure the accuracy of the information provided herein, product specifications, configurations, system/component/options availability are all subject to change without notice. Product design specifications and colors are subject to change without notice and may vary from those shown. Errors and omissions excepted. Images displayed are for illustration purposes only. The images are intended to help illustrate the product and its functions and are not indicative of actual relative differences.

GRIT LEGAL NOTES



4. Technical support is done through email only at info@gritautomation.com. To obtain warranty service, first email and include your order number, order date, and contact information along with a brief explanation of the issue you are having. Support will work with you via email to diagnose the issue. This may require you to send pictures and/or videos to help with the diagnostics. Do NOT send any products or components back to GRIT without prior approval from Tech Support.
5. Acceptance of the exclusive repair and replacement remedies described herein is a condition of the contract for the purchase of every GRIT product. In no event shall GRIT be liable for any incidental, special, consequential or punitive damages, or for any costs, attorney fees, expenses, losses or delays alleged to be as a consequence of any damage to, failure of, or defect in any product including, but not limited to, any claims for loss of profits. This warranty is exclusive and in lieu of all other express warranties, written or oral. To the extent permitted by law, GRIT disclaims any implied warranties, including without limitation any implied warranty of merchantability or fitness for a particular use or purpose; to the extent such disclaimer not permitted by law, such implied warranties are limited to the duration of the applicable express warranty as described above.

General Disclaimer:

While GRIT Automation, Inc. has made every effort at the time of publication to ensure the accuracy of the information provided herein, product specifications, configurations, system/component/options availability are all subject to change without notice. Product design specifications and colors are subject to change without notice and may vary from those shown. Errors and omissions excepted. Images displayed are for illustration purposes only. The images are intended to help illustrate the product and its functions and are not indicative of actual relative differences.