



# User Manual

Firmware 1.1.7

Thank you for purchasing our Quartz V3, syncing your pedals is about to get a whole lot easier! The Quartz is an advanced controller that can sync both your Midi and Non-Midi pedals to a specific BPM. Not only that, but it allows you to control basically any other parameter, if the other device allows it! It is designed to fit in to you setup the way that you need it to. Whether you're the organised type and have each song planned out in advance with presets, or you like to wing it, tap in each tempo, and send custom Midi data when you tap your foot. Or a combination of the two.

The Quartz V3 allows you to control your pedalboard the way that YOU want

*Selah*

[www.selaheffects.com](http://www.selaheffects.com)

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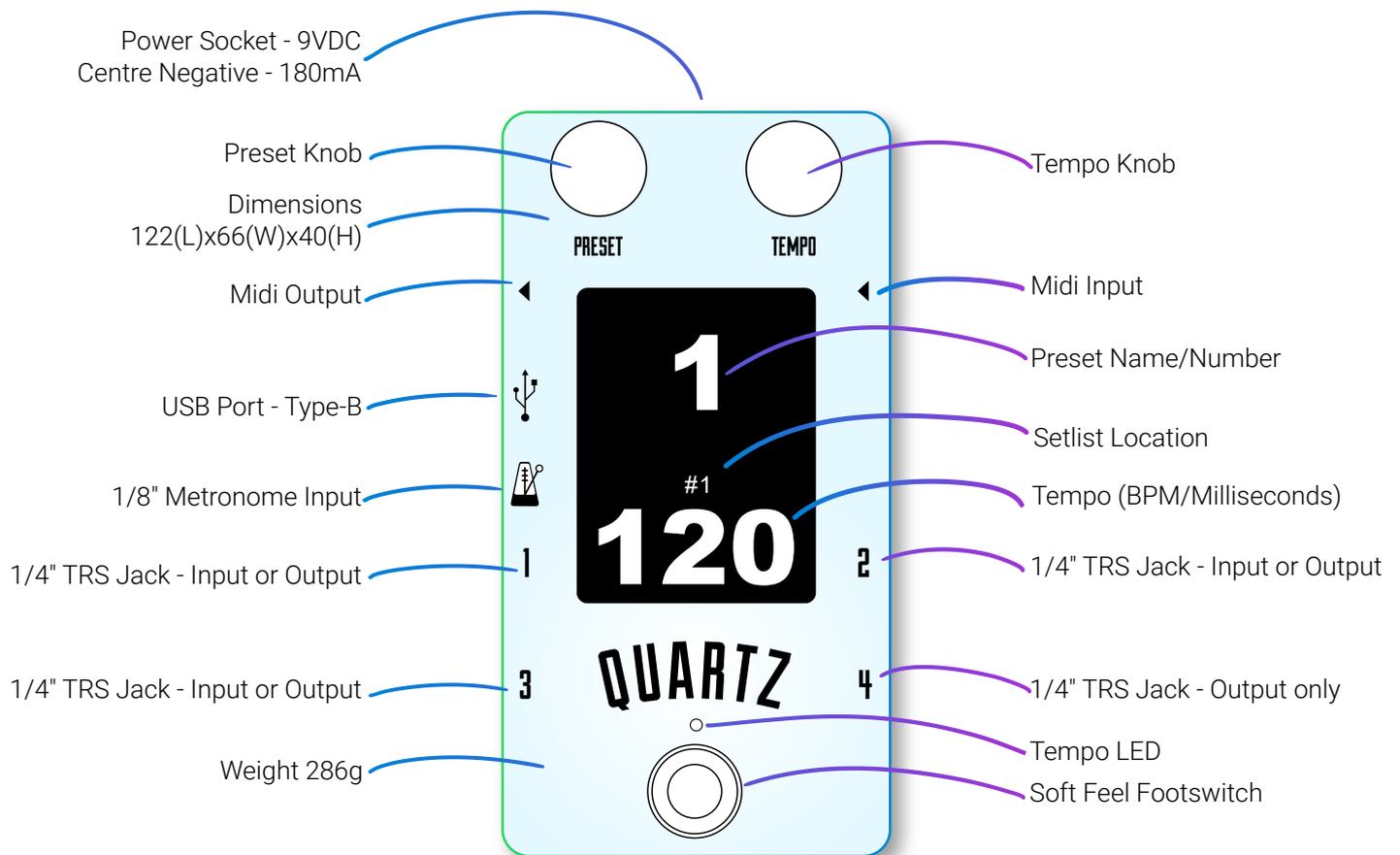
# OVERVIEW

Whether your pedal accepts a Normally Open tap signal, Normally Closed tap signal, TRS tap configuration, MIDI Clock, or needs a custom Midi Message, the Quartz Timer can sync them to a specified BPM.

The Quartz can act as a MIDI controller by sending Program Changes, Control Changes, or any other MIDI message you'd like. Not only can the Quartz generate these signals, but can receive MIDI Clock and MIDI Program Changes, filter certain messages out and at the same time passing any other Midi Messages through.

The Quartz is a powerful Midi Controller in its own right, allowing for Custom Messages to be sent at the precise moment you need. The Quartz has the ability to plug in up to 6 extra footswitches, each with assigned functions, along with 128 presets available directly on the pedal, as well as through use of a Midi Controller.

The Quartz computer application will make editing and organising your songs a breeze. All of this will enable it to fit right in with your favourite MIDI Controller or become your favourite MIDI Controller.



## GENERAL NAVIGATION

- Highlight an item by turning the Preset Knob
- Select an item by clicking the Preset Knob
- Change the value of an item by turning the Tempo Knob
- Hold the Tempo Knob to go back, or save your edited settings/preset
- Fast Scroll by turning the knob and holding it in at the same time

# CREATE/EDIT A PRESET

Click the Preset Knob to open the Preset Menu. Turn the Preset Knob to scroll between the menu options and turn the Tempo Knob to change the value. All options in this menu are for the selected preset only, they are not global parameters affecting multiple presets.



## NAME

Turn the Preset Knob to cycle through the available characters. Click the Preset Knob to add the character to the name. Click the Tempo Knob to backspace.

**Changing Font Size:** Turn the Tempo Knob.

**Insert New Line:** Press the Onboard Footswitch

Hold down the Tempo Knob to save and exit. When the name is empty, the preset will default to the preset number. Each name can be up to 30 characters long.

The pedal allows your names to extend off the screen, so make sure you put your line breaks in!

## COLOURS

Turn the Preset Knob to change the text colour. Turn the Tempo Knob to change the background colour. Hold down the Tempo Knob to save and exit.

## DIVISION (OUTPUTS 1, 2, 3 and 4)

Each number represents each Auxiliary Output on the side of the pedal. Turn the Preset Knob to select the output, then turn the Tempo Knob to change the division. Hold down the Tempo Knob to save and exit.

Each output can have a different Tap Division. This setting is only applicable if the Jack is set to be an output.

## MIDI DIVISION

Turn the Tempo Knob to change the division. Keep in mind that Midi Clock is always global and all devices will listen to it. So any division that you set here will be sent to all Midi Clock capable pedals.

## FOOT ONBOARD

Choose what the Onboard Footswitch does. The Footswitch Function can change per preset and there are a number of Functions available to choose from. See the *FOOTSWITCH FUNCTIONS* section for more information.

Turn the Preset Knob to select what to edit. Turn the Tempo Knob to edit the selection.

The Functions that are written on 2 lines (like RCL Preset) allow you to edit the function also.

Do this by holding down the Tempo Knob as you turn the Tempo Knob. As you do this, you'll notice that the number displayed below "RCL Preset" will change.

**Save the settings to just this preset:** Hold down the Tempo Knob to save and exit.

**Save the settings to ALL presets:** Scroll to "Save To All" and click the Tempo Knob

## MIDI STACK

A stack/list of 10 custom Midi messages. There are 128 Midi Stacks available and each preset/song has one Midi Stack assigned to it. The Preset's Midi Stack (10 Midi Messages) is sent out when a preset is recalled.

Change the assigned Midi Stack by turning the Tempo knob while holding the Tempo Knob down.

You can edit the selected Midi Stack's messages by first clicking the Preset Knob.

Turn the Preset Knob to select a message to edit. Click the Tempo Knob to select which section of the message to edit. Turn the Tempo Knob to change the value.

If the message is set to "None", "0", "0", "0", then no message will be sent.

## SET JACKS

Here you set what each TRS Jack (1, 2, 3, and 4) will do. Each number represents each Jack on the side of the pedal. Each Jack has unique abilities

Assign the Jack to a specific task:

- Select the Jack by turning the Preset Knob
- Hold the Preset Knob to cycle through the available assignments for that Jack

### OPTIONS FOR EACH JACK:

**Jack 1:** T Out, Foot, Exp, Static

**Jack 2:** T Out, Foot, Midi, Static

**Jack 3:** T Out, Foot, CV, Static

**Jack 4:** T Out, Midi, Static

**T Out:** Jack will be a Tap Output. When something changes will pulse the output the number of times that is set below. Turn the Rempo knob to choose the number of pulses.

**Foot:** Jack will be a Footswitch Input. Click the Preset Knob to enter a new mode to select what it will do. Jacks (1, 2, 3) can have 2 external footswitches plugged in to it. These have the same capabilities as the Onboard Footswitch. These are labelled as Left and Right in relation to the left and right footswitches on our Q:Expander pedal.

Please see our website to find out more about the Q:Expander. Each of these footswitches can have 2 functions assigned, one when tapping, and one when holding for 1 second.

Turn the Preset Knob to select what to edit.

Turn the Tempo Knob to edit the selection.

The Functions that are written on 2 lines (like RCL Preset) allow you to edit the function also. Do this by holding down the Tempo Knob as you turn the Tempo Knob.

As you do this, you'll notice that the number displayed below "RCL Preset" will change.

**Static:** Jack will sit there and do nothing. It will either be latched/closed, or un-latched/open while it does nothing. Turn the Tempo knob to choose. This option is useful for recalling presets on certain pedals

**Exp:** Jack will be an Expression Pedal input.

**CV:** Jack will be a Control Voltage Output

**Midi:** Jack will output Midi

*Note that for Exp, CV, and Midi, you also need to set DIP switches inside the pedal*

*See the "Internal DIP Switches" and "Jacks (TRS)" section for more information.*

**Save the settings to just this preset:** Hold down the Tempo Knob to save and exit.

**Save the settings to ALL presets:** Scroll to "Save To All" and click the Tempo Knob

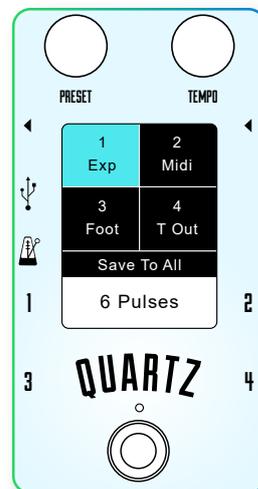
*See the JACKS (TRS) and FOOTSWITCH FUNCTIONS sections for more information.*

## MIDI PC

Turn the Tempo Knob to change the default Program Change. This PC message is sent out when the preset is recalled, and by default it is the same as the number of the preset.

You may change this to any number between 1 and 128.

**When you have finished editing your preset, press and hold the Tempo Knob for 1 second to save and return.**



# CREATE/EDIT THE SETLIST

The Quartz has 128 Songs, but it would be a pain to have to scroll through them all live. This is where a Setlist comes in handy. You can just select the songs that you are playing for the day, and only those songs will be accessible in Live Mode. The same song can be added more than once.

If the preset text is red, it means the preset has been added to the Setlist.

Presets are added to the Setlist in the order that they are selected. Removing a preset from the middle of the Setlist will mean the following preset will take its place. Removing the all presets from the setlist will result in the setlist being reset. Another way to reset the setlist, is to hold down the on-board footswitch for 1 second. This will reset the Setlist so that it contains all 128 presets.

Press and hold the Preset Knob for 1 second to open the Setlist Menu.

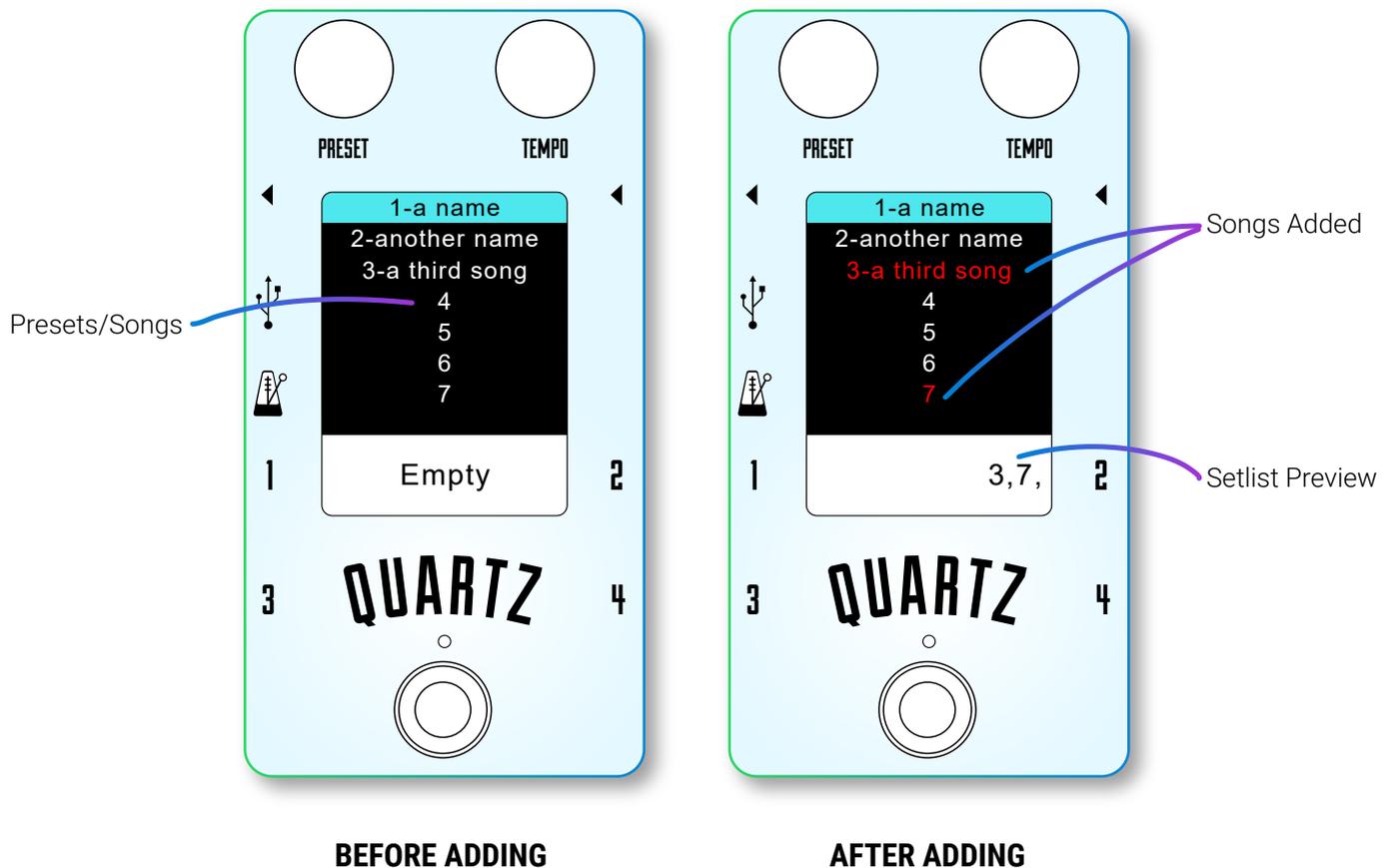
Turn the Preset Knob to scroll through your presets.

Click the Preset Knob to add it to the Setlist.

Click the Tempo Knob to remove it from the Setlist.

Hold down the Oboard Footswitch for 1 second to reset the Setlist

Hold the Preset Knob to save and return to Live Mode.



## FACTORY RESET

Go to the Global Settings by pressing and holding the Preset & Tempo Knobs simultaneously.

Now hold down the Preset Knob, Tempo Knob and Footswitch for 7 seconds until it reads "Factory Reset".

Release all 3 and wait until the screen switches back to Live Mode. This will take some time so please be patient while it reads "Factory Reset". All user data will be erased and restored to factory settings.

## SET TEMPO

There are multiple ways to set the tempo on the Quartz V3, you can do this by:

- a) Turning the Temp Knob.
- b) Tap one of footswitches\*.
- c) Receive MIDI Clock from external MIDI device.
- d) Receive Metronome Tempo via the 1/8" Metronome Input.

*\*You need to ensure that the footswitch that you are using has the function "Tap Tempo" assigned to it. Please refer to the FOOTSWITCH FUNCTIONS section.*

## CHANGE PRESETS

There are multiple ways to change preset on the Quartz V3, you can do this by:

- a) Turning the Preset Knob.
- b) Tap or Hold one of the footswitches\*
- c) Receive MIDI Program Change message from external MIDI device.
- d) Receive MIDI Control Chane message from external MIDI device.

*\*You need to ensure that the footswitch that you are using has the appropriate function assigned to it. Please refer to the FOOTSWITCH FUNCTIONS section.*

## JACKS (TRS)

### **IMPORTANT!**

Power down the pedal **BEFORE** connecting or disconnecting any leads to TRS Jacks 1, 2, 3 and 4.

The Aux Jacks on the Quartz V3 are multi-purpose. Jacks 1, 2, and 3 can be either inputs, or outputs. Jack 4 is always an output but it has the ability to be modified to support Diamond pedals. For every application in this section, you must use a stereo lead, not mono. A 1/4 inch Stereo TRS (Tip, Ring, Sleeve) lead, instead of a 1/4 inch Mono TS (Tip, Sleeve) lead.

### **TAP OUTPUTS (jack as OUTPUT) - Jacks 1, 2, 3, 4**

The four 1/4" jacks can be used as "Tap Outputs" to connect to the "Tap Inputs" of effects that may not have Midi. You can set each output to a different polarity to match the needs of the pedals you have.

"Normally Open", "Normally Closed", "TRS" configuration used by most Strymon pedals, and a "DIG" option for the Strymon DIG. The number of times the pedal pulses and its latch time (how long it stays engaged) can also be determined separately for each output.

#### **Polarity:**

- "Normally Open" disconnects the Tip and Sleeve by default and then momentarily connects them together.
- "Normally Closed" connects the Tip and Sleeve by default and then momentarily disconnects them.
- "TRS" connects the Tip and Sleeve by default and then momentarily disconnects the Tip and Sleeve while connecting the Tip and Ring.
- "DIG" connects the Tip and Ring by default and then momentarily connects all three Tip, Ring, and Sleeve together.

### **STATIC FAVOURITE SWITCHES (jack as OUTPUT) - Jacks 1, 2, 3, 4**

Some pedals and amps may allow you to switch to a favourite setting via a TRS Input. In this case, the Quartz may be able to switch them for you. Each output has the option of being "Latched" or set to "0 Pulses". Usually latching the output will activate the favourite on the other device, and "0 Pulses" will deactivate it. You can choose if each Jack is latched or not, per preset. So each Quartz preset can activate or deactivate the favourites on your other devices. This may not be compatible with all devices, please double check your device's requirements.

**Polarity** also applies here, as these determine how they are latched/un-latched.

## EXPRESSION INPUT (jack as INPUT) - Jack 1 only

Jack 1 can also function as an input for an Expression Pedal. It will calculate the position of the Expression pedal and convert that in to Midi.

The expression can be received on the Tip or the Ring, and a reference voltage needs to be applied to the jack for this to work. If you're receiving on the Tip, put the reference 3V on the Ring. If receiving on the Ring, reference goes to Tip. See the "Expression Pedal Input" section and the "Expression Pedal Setup" section for an example on how to set this up. Not all Expression pedals will work, so please check your Expression pedal's configuration first.

## CV OUTPUT (jack as OUTPUT) - Jack 3 only

Jack 3 can also output a Control Voltage (CV) from 0V to 3V on either it's Tip or Ring. This CV value is calculated by the current BPM and the range is set in the Global Settings. You can set the start (0V) and end (3V) points are equal to in BPM, and the values in between will be mapped accordingly. For example, setting 0V to 100 BPM, and 3V to 200 BPM: 100 BPM will output 0V, 150 BPM will output 1.5V, 200 BPM will output 3V

A reference voltage can also be assigned to the the Tip or Ring. Be sure not to assigned them both to the same thing.

## MIDI OUTPUT (jack as OUTPUT) - Jacks 2 and 4

Jacks 2 and 4 can output Midi on either the Tip or the Ring. You can hook up Empress, Chase Bliss Audio, and Meris pedals without any special cables.

## EXTERNAL FOOTSWITCH INPUTS (jack as INPUT) - Jacks 1, 2, 3

Aux Jacks 1, 2, and 3 double as external inputs.

There are **two inputs per Jack** (Left and Right). This is in reference to our Q:Expander pedal.

Each input has two ways of activating it (**Tapping** it, or **Holding** it).

Each activation method performs a **Function** of its own.

The Function can be as simple as a Tap Tempo, or you can send out a bunch of custom Midi Messages

This all goes for the onboard footswitch as well, and everything listed here can be changed **per preset**.

The list of Functions available are always growing, so keep checking the latest firmware notes.

But you can see a list of Functions in the FOOTSWITCH FUNCTIONS section in this manual too.

**TAPPING Function** **HOLDING Function**

### EXAMPLE

Everything you see here can change per preset!

**Q:EXPANDER**  
*Selah*

**Q:EXPANDER**  
*Selah*

**Q:EXPANDER**  
*Selah*

<b>Favourite Preset</b>	<b>Start/Stop Midi Clock</b>	<b>Previous Preset</b>	<b>Next Preset</b>	<b>Timeline Bank DOWN</b>	<b>Timeline Bank UP</b>
<b>Second Favourite Preset</b>	<b>Receive/Ignore Metronome Input</b>	<b>Engage Tonal Recall</b>	<b>Bypass Tonal Recall</b>	<b>BigSky Bank DOWN</b>	<b>BigSky Bank UP</b>

# FOOTSWITCH FUNCTIONS

When the footswitch is activated, a certain function will be performed. These are predefined Functions that others have found to be useful. If you have any suggestions for more, let us know.

Allocated via the computer app or the Preset Menu. See the "Create/Edit Preset" section.

Here is the current list of Functions:

**DISABLED** - No function will be performed

**TAP TEMPO** - Consecutive taps will set a new tempo.

**NEXT PRESET** - This will take you to the next preset in the setlist.

**PREV PRESET** - Will take you to the previous preset in the setlist.

**TGL REPEAT** - Starts or stops the custom repeating MIDI message. A message sent every quarter note.

**TGL ALL TIME** - Starts or stops the sending of tempo data from MIDI Clock, the 4 Aux outputs, and the repeating MIDI Stack, all at once.

**TGL AUX** - Starts or stops the sending of tap signals from the 4 Aux outputs.

**TGL CLK OUT** - Starts or stops the sending of MIDI Clock.

**TGL CLK IN** - Toggle whether the Quartz ignores or receives incoming MIDI Clock.

**TGL AUDIO IN** - Toggle whether the Quartz ignores or receives an incoming audio metronome.

**RCL Preset** - The Quartz will change to the preset/song that is assigned. It will change to it even if the song is not in the Setlist. Since this can change per preset as well, this can turn each preset into a bank with sub-presets. Great for having presets as a verse, chorus, etc, linked to one song/preset. This is also great for those of you who will use the Quartz presets as "Sounds" rather than "Songs". You could have 7 footswitches all up, each with 2 actions. That's 14 name-able sounds accessible straight away.

To edit which preset will be recalled, hold down the Tempo Knob while you turn the Tempo Knob.

**MIDI Stack** - The Quartz will send out the Midi Stack that is assigned. This allows you to set multiple parameters all at once with single tap, without having to change Quartz presets. Just like "RCL Preset" this can change per preset, and can turn each preset into a bank. The difference here is the Quartz preset will not change. Everything can be sent out while remaining on the same preset, then when you change presets, all of the custom messages can change too.

**TGL 1 Latch** - Jack 1 will toggle it's latched state (closed or open). This allows you to favourite switch or amp switch. Note for this to work, the Jack must be set to an Output AND either "Latched" or "Unlatched".

**TGL 2 Latch** - Jack 2 will toggle it's latched state (closed or open). This allows you to favourite switch or amp switch. Note for this to work, the Jack must be set to an Output AND either "Latched" or "Unlatched".

**TGL 3 Latch** - Jack 3 will toggle it's latched state (closed or open). This allows you to favourite switch or amp switch. Note for this to work, the Jack must be set to an Output AND either "Latched" or "Unlatched".

**TGL 4 Latch** - Jack 4 will toggle it's latched state (closed or open). This allows you to favourite switch or amp switch. Note for this to work, the Jack must be set to an Output AND either "Latched" or "Unlatched".

# EXPRESSION PEDAL INPUT

You can plug an Expression Pedal in to Jack 1 of the Quartz V3.

Please note that not all expression pedals will be compatible.

You do this by assigning a Midi Stack to Jack 1. Then the first message in the stack will be sent out when a change in expression is detected.

The way it works is, the message will stay the same except for the value, which will be mapped using expression.

This allows you to set a message that will target a particular parameter on your device, then move your foot on your Expression Pedal to change the value.

Each message can have a different range also. The range can be full 0 - 127, or limited.

You can even invert the range. Here are some examples:

**Midi Stack message with a VALUE of:**

**0:** Heel Down = 0, Toe Down = 0

**1:** Heel Down = 0, Toe Down = 1

**50:** Heel Down = 0, Toe Down = 50

**127:** Heel Down = 0, Toe Down = 127

**Midi Stack message with a VALUE of:**

**128:** Heel Down = 0, Toe Down = 0

**129:** Heel Down = 1, Toe Down = 0

**179:** Heel Down = 50, Toe Down = 0

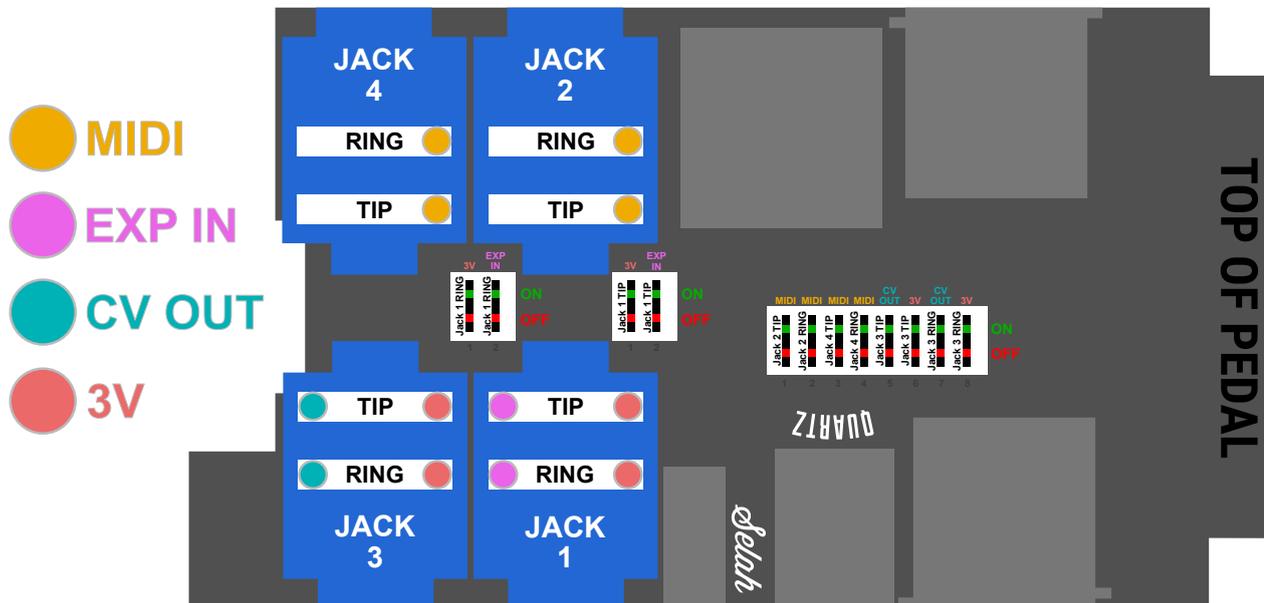
**255:** Heel Down = 127, Toe Down = 0

# INTERNAL DIP SWITCHES

## IMPORTANT!

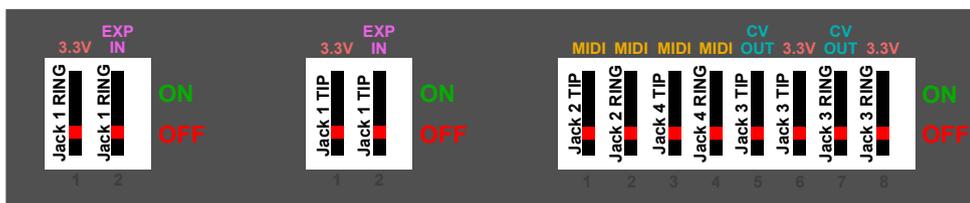
Power down the pedal BEFORE changing any of the DIP switches.

Each Jack can now perform a special function assignable via DIP switches inside the pedal. By switching them to the ON position either the Tip or the Ring of the specified Jack will be connected to the specified function. Midi over TRS, Expression Input, and CV Output are all assigned here. Make sure you set the jacks to the appropriate assignment before changing these switches (see the "Set Jacks" in the Preset Menu). Also see the "Jacks (TRS)" section for more information.



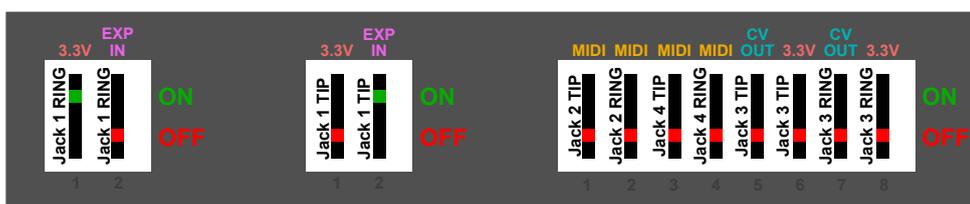
### EXAMPLE 1

- All Jacks as Tap Outputs, or Footswitch Inputs



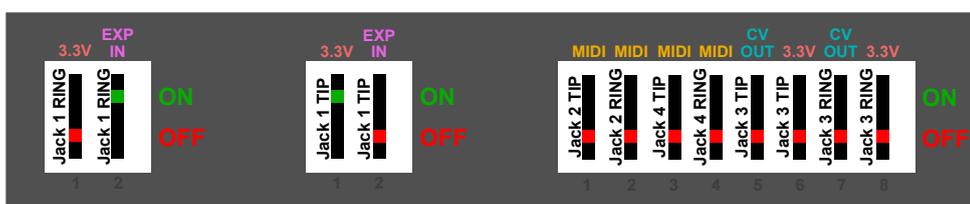
### EXAMPLE 2

- Jack 1 receive standard Expression Pedal. Receiving on the Tip and reference on the Ring  
 - All other Jacks as Tap Outputs, or Footswitch Inputs



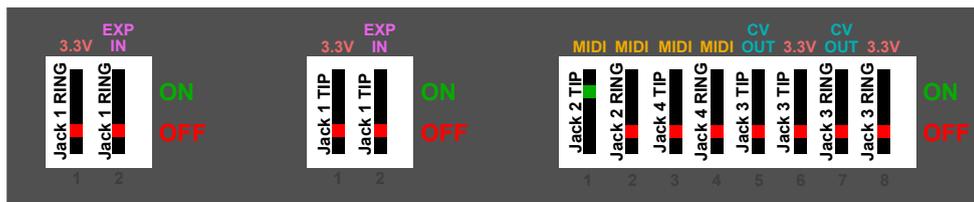
### EXAMPLE 3

- Jack 1 receive non-standard Expression Pedal. Receiving on the Ring and reference on the Tip  
 - All other Jacks as Tap Outputs, or Footswitch Inputs



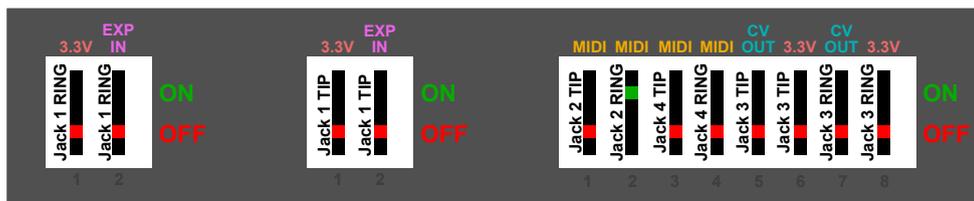
## EXAMPLE 4

- Jack 2 sending Midi on the Tip for Empress or Meris pedals
- All other Jacks as Tap Outputs, or Footswitch Inputs



## EXAMPLE 5

- Jack 2 sending Midi on the Ring for Chase Bliss pedals
- All other Jacks as Tap Outputs, or Footswitch Inputs



## EXAMPLE 6

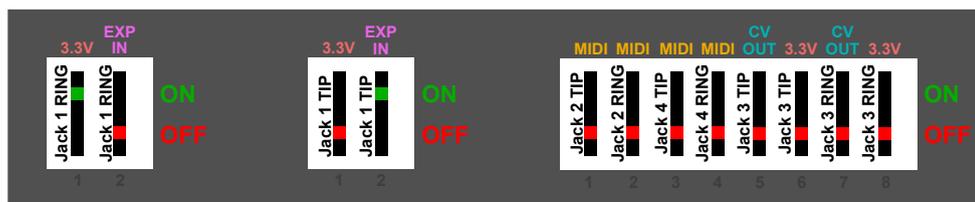
- Jack 1 receive standard Expression Pedal. Receiving on the Tip and reference on the Ring.
- Jack 2 sending Midi on the Tip, for Empress or Meris pedals
- Jack 3 sending CV on the Tip with a reference 3V on the Ring
- Jack 4 sending Midi on the Ring for Chase Bliss pedals



# EXPRESSION PEDAL SETUP

## FOR STANDARD EXPRESSION PEDAL, SENDING ON TIP

- Enter the Preset Menu by clicking the Preset Knob
- Scroll to and enter "Set Jacks"
- Scroll to Jack 1 with the Preset Knob
- Hold down the Preset Knob for 1 second to cycle through the assignments
- Change the assignment to "Exp"
- Scroll to and select the Midi Stack that you'd like to convert to
- Hold down the Tempo Knob to save and exit the Preset Menu
- Power down pedal by removing the power
- Open up the back with a screw driver and set DIP switches to the following:



- Close back of pedal
- Plug in all required leads into Jacks 1,2,3,4
- Power pedal on

# CONTROL VOLTAGE OUT SETUP

## FOR VARIABLE CV ON TIP, REFERENCE 3V ON RING

- Enter the Preset Menu by clicking the Preset Knob
- Scroll to and enter "Set Jacks"
- Scroll to Jack 3 with the Preset Knob
- Hold down the Preset Knob for 1 second to cycle through the assignments
- Change the assignment to "CV"
- Hold down the Tempo Knob to save and exit the Preset Menu
- Power down pedal by removing the power
- Open up the back with a screw driver and set DIP switches to the following:



- Close back of pedal
- Plug in all required leads into Jacks 1,2,3,4
- Power pedal on

# MIDI VIA TRS SETUP

## FOR EMPRESS ON JACK 2 AND CHASE BLISS ON JACK 4

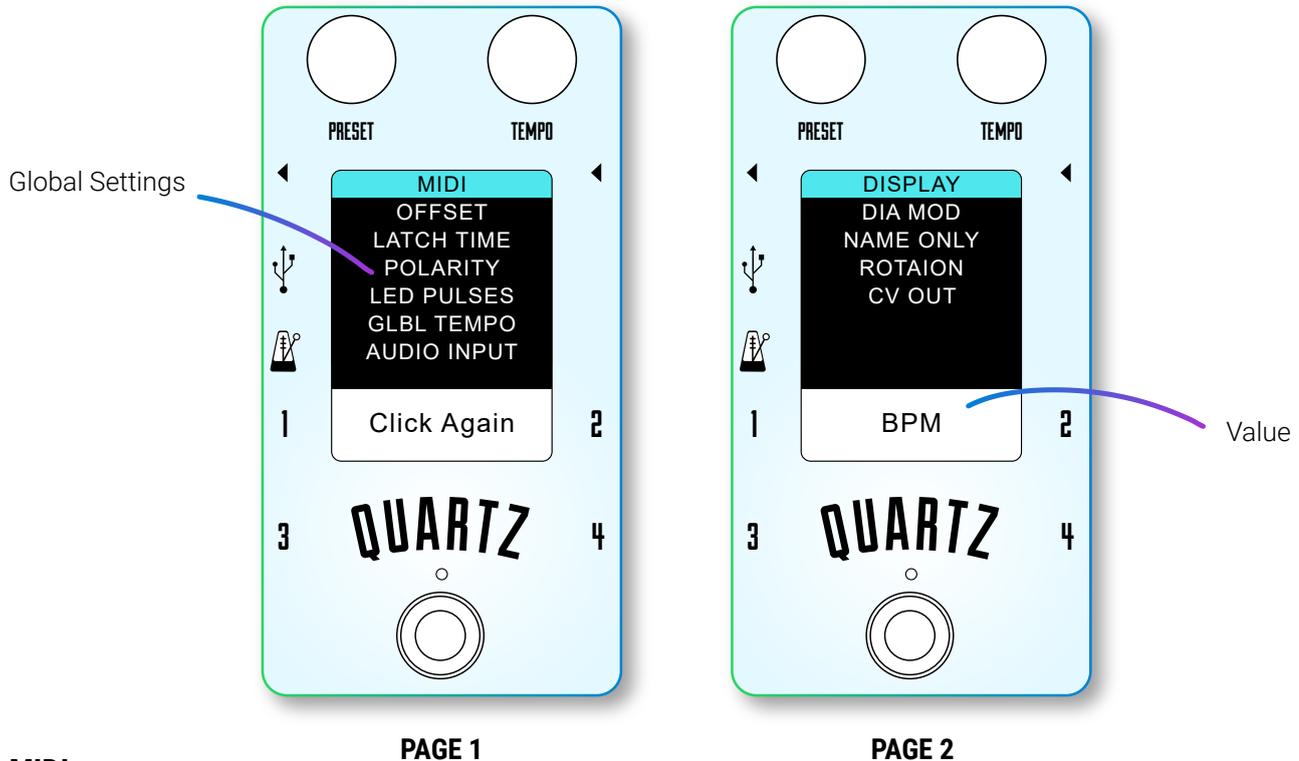
- Enter the Preset Menu by clicking the Preset Knob
- Scroll to and enter "Set Jacks"
- Scroll to Jack 2 with the Preset Knob
- Hold down the Preset Knob for 1 second to cycle through the assignments
- Change the assignment to "MIDI"
- Do all of the above for Jack 4 also
- Hold down the Tempo Knob to save and exit the Preset Menu
- Power down pedal by removing the power
- Open up the back with a screw driver and set DIP switches to the following:



- Close back of pedal
- Plug in all required leads into Jacks 1,2,3,4
- Power pedal on

# GLOBAL SETTINGS

To access the Global Settings on the Quartz, press and hold the Preset & Tempo Knobs simultaneously. Turn the Preset knob to scroll between the menu options and turn the Tempo Knob to choose the value. If the value states "Click again", click the Preset Knob. Press and hold the Tempo Knob to go back to a previous menu option and save. Press and hold the Preset & Tempo Knobs simultaneously to exit the Global Settings



## MIDI

SEND CLK - Choose whether to generate and send MIDI Clock or not.

SEND PR CH - Choose whether to generate and send MIDI Program Change Messages or not. This is the message that you edit in the Preset Menu.

THRU - Choose whether to pass through all MIDI messages including Clock that the Quartz receives. If you are sending Midi Clock to the Quartz from another device, be sure that you have the right combination of MIDI THRU, SEND CLK, and CLOCK THRU, so that you aren't duplicating the Midi Clock.

CHAN IN - Choose the MIDI channel to receive program changes.

CHAN OUT - Choose the MIDI channel to send program changes. This is the channel for the PC from "SEND PR CH".

THRESHOLD - Choose the threshold at which to listen to MIDI Clock. Some Clock sources are unstable and jump around quite badly, this option allows you to ignore small jumps in tempo if needed. If you have a good solid Clock source, keep the threshold set to 1. Example: If set to 3, the Quartz will only change if the BPM is at least 3 BPM different to the current BPM.

RECEIVE CLK - Choose whether to receive MIDI Clock or not.

CLOCK THRU - Choose if Midi Clock is blocked from passing through, or allowed to pass. MIDI THRU must be enabled if you want it to pass through. Be sure that you have the right combination of MIDI THRU, SEND CLK, and CLOCK THRU, so that you aren't duplicating the Midi Clock.

RECL ONCE - When enabled, when the Quartz receives a preset that it is already on, the Quartz will not resend the preset data.

RECL SET - When enabled, receiving Midi Program Change messages will recall the corresponding setlist preset, not actual preset.

INCOMING - Set what messages the Quartz will listen to. See "Incoming Midi" section.

CLK PULSES - Set how long the Midi Clock will be sent out for. Value is how many note lengths.

MONITOR PC - Set this to a Midi Channel that you'd like to monitor. Everytime a PC message is generate by the Quartz, that matches this channel, a quick message will be display on the screen.

STK DELAY - Some pedals struggle to receive Midi Messages quick enough. The Quartz is capable of slowing these messages down. Specifcally you can choose to add a delay between messages 2 adn 3 in the Midi Stack. If you use this feature, EVERYTIME the Quartz sends out a Midi Stack, there will be this delay.

REPEATING - Choose how many times the Repeating Midi Stack is sent out (Num Pulses). Also choose what Division it is sent out at.

## OFFSET

Each Aux Output can have an offset. If the BPM is 100 and you set this to "-5", that output will output 95 BPM. Good for syncing devices that calculate tap signals inaccurately.

## LATCH TIME

Choose how long (in milliseconds) each Auxiliary Tap Output stays engaged. Some pedals may require the signal to be engaged longer or shorter to be received accurately. Use the Preset Knob to select the output. Use the Tempo Knob to set the value

## POLARITY

Choose what polarity each output is. "Normally Open", "Normally Closed", or "TRS" (for most Strymon pedals), "DIG" (for the Strymon DIG) Use the Preset Knob to select the output. Use the Tempo Knob to set the value.

## LED PULSES

Choose how many times the LED will flash when something changes. This can be infinite

## GLBL TEMPO

When enabled, tempos will not be recalled when recalling a preset. Tempo is changed globally via tapping, Midi, or the metronome input. All other preset data will still be recalled.

## AUDIO INPUT

RECEIVE - Choose whether the Audio/Metronome input is enabled or not. Any audio signal will be ignored if this is disable.

THRESHOLD - Choose the threshold at which to listen to Audio/Metronome. Example: If set to 3, the Quartz will only change if the BPM is at least 3 BPM different to the current BPM. Use the Tempo Knob to set the value.

## DISPLAY

Choose whether the tempo is display in BPM or Milliseconds.

## DIA MOD

Enable/Disable the extra switching device on output 4, to be used with Diamond pedals. Keep this option disabled unless you have a modded Quartz to support Diamond pedals.

## NAME ONLY

When in Live Mode, only the name will be displayed. This allows for larger, easier to read names.

## ROTATION

Choose which way the screen is oriented. Allowing you to mount the pedal side-ways, and upside down.

## CV OUT

CONSTANT - Choose whether the CV is sent out constantly or only when the value has changed

0V EQUALS - Choose waht BPM is associated to 0 Volts

3V EQUALS - Choose waht BPM is associated to 3 Volts

# CONNECTING TO A COMPUTER

Plug your pedal in AFTER opening the app.

Make sure that the firmware on the pedal matches the version of the app. You can see the Quartz firmware when you first power it on under the word "QUARTZ". You can see the app version in the window title of the app. If it does not match, press the "Upload Firmware" button in the app.

Some features and options can only be accessed and changed from a computer (Windows 8/10, MAC OS X). The software allows you to save your session for backing up or sharing. The session holds all the information that is stored on your pedal. To transfer information to a new Quartz you will have to save the session to your computer from the old one, and upload that session to the new one.

The session also holds some information that is NOT stored on the pedal. So we suggest that you try to use the same session all the time, and let the session be the master. This information is just the named Midi sections. So your pedal will still function without them.

If you decide that you don't want to keep loading a session, there are options within the app to load and save just that missing information, or you can just not use that naming functionality.

# MIDI STACKS

A Midi Stack is a collection of 10 Midi messages. These messages can be of any type and they are sent out in order. There are a number of ways that you can send out a Midi Stack:

## ASSIGNED TO PRESETS

Each preset is assigned a Midi Stack, and this stack is sent out every time a preset is recalled.

## ASSIGNED TO FOOTSWITCHES

Each footswitch is also assigned a Midi Stack, and this stack is sent out when the footswitch is activated.

## ASSIGNED TO REPEAT

You can also select one Midi Stack to be sent out continuously, it will be pulsed at the rate of the current tempo set. You can set how many times it is pulsed, and also at what division it is pulsed at.

The above 3 assignments can happen all at the same time.

There is some sharing going on because there are 128 Midi Stacks available but there are more than 128 ways to send out a stack. So preset 7 might be sending "Midi Stack 32", and you may also have the Repeating Midi Stack set to "Midi Stack 32", and you may also have it assigned to your second Footswitch. On top of that, you set up every preset to send out "Midi Stack 32" if you like.

All Midi Stacks and messages within the stacks can be named through the computer app. This makes it very easy to know what your Midi Stack is doing. You can also preview a Midi Stack before you've saved it so you can see and hear the results of the stack.

You can also introduce a "Stack Delay" that adds a delay between messages 2 and 3 of every Midi Stack. This is useful for pedals that cannot receive Midi messages at a fast pace. Some pedals get confused if there is a bombardment of messages coming at it. This allows you to combat that.

# FILTER INCOMING MIDI MESSAGES

You can assign 2 separate MIDI conversion rules to change the channels of incoming messages. The Quartz will receive the message, change the channel to what is specified, and send out the converted message. If you assign the new channel to something that none of your devices are listening to, this will essentially stop the incoming message. You can also filter out MIDI Clock only. When enabled in the Global Settings, MIDI Clock will not pass through but will still be received. Even if MIDI THRU is enabled, the clock will not be sent on. All other messages will still be passed through. These features are only active when MIDI THRU is enabled, otherwise, all messages are not sent through. Note that this is only editable through the computer app at this stage.

# INCOMING MIDI

The Quartz can receive Midi messages from another Midi Controller, and do something with it. What it can do is defined below. The messages that it listens to can all be changed. Normally pedal makers set this in stone, but there are some Midi Controllers that only send certain messages, so now you can make the Quartz to suit them. You can also change these messages to "Note On" messages for example. So that you can set a key on your keyboard to be "next preset" for example. Or you could tell the Quartz to listen to PC messages, so that whenever you change presets on another pedal, the Quartz will tap in a tempo. Just in case you ever want to see how fast you change presets...

Since the messages can be changed, we won't list the value. Any Midi message will work to activate the following:

## SET TEMPO

Set the tempo directly with a value. This requires 2 messages to be sent together. The 1st message's value is the 100's, the 2nd message's value is the 10's and 1's or the BPM. If you send these messages for example:

Send...

**Type = Control, Channel = 3, Message = 94, Value = 001**

Then straight after send...

**Type = Control, Channel = 3, Message = 94, Value = 059**

Tempo will be set to 159 BPM (assuming that the Channel and Message value match).

# INCOMING MIDI (cont)

## **NEXT PRESET**

Whenever this message is received, the Quartz will change to the next preset in the Setlist.

## **PREV PRESET**

Whenever this message is received, the Quartz will change to the previous preset in the Setlist.

## **SET PRESET**

Set the Preset directly with the **Value** of the message.

## **GLBL TEMPO**

If the **Value** of the message is 0, Global Tempo will be disabled.

If the **Value** of the message is 127, Global Tempo will be enabled.

## **SET DIV 1**

The division for Output 1 will be set.

If the **Value** of the message = 0, Division = Quarter

If the **Value** of the message = 1, Division = 1/4 Triplets

If the **Value** of the message = 2, Division = Dotted 1/4

...and so on...

## **SET DIV 3**

The division for Output 3 will be set.

If the **Value** of the message = 0, Division = Quarter

If the **Value** of the message = 1, Division = 1/4 Triplets

If the **Value** of the message = 2, Division = Dotted 1/4

...and so on...

## **SET DIV MD**

The division for the Midi Clock will be set.

If the **Value** of the message = 0, Division = Quarter

If the **Value** of the message = 1, Division = 1/4 Triplets

If the **Value** of the message = 2, Division = Dotted 1/4

...and so on...

## **SEND STACK**

Send out a Midi Stack directly with the **Value** of the message.

## **REPEAT MIDI**

If the **Value** of the message is 0, the Repeating Midi Stack will stop sending

If the **Value** of the message is 127, the Repeating Midi Stack will start sending

## **MIDI CLK OUT**

If the **Value** of the message is 0, Midi Clock will stop sending

If the **Value** of the message is 127, Midi Clock will start sending

## **RESET TIMERS**

Whenever this message is received, the Quartz will reset its timers so that the "1" beat begins when the message is received. It allows you to set the 1 so that the Quartz pulses are better synced to each beat. Useful for when receiving Midi Clock from another device.

## **SET DIV 2**

The division for Output 2 will be set.

If the **Value** of the message = 0, Division = Quarter

If the **Value** of the message = 1, Division = 1/4 Triplets

If the **Value** of the message = 2, Division = Dotted 1/4

...and so on...

## **SET DIV 4**

The division for Output 3 will be set.

If the **Value** of the message = 0, Division = Quarter

If the **Value** of the message = 1, Division = 1/4 Triplets

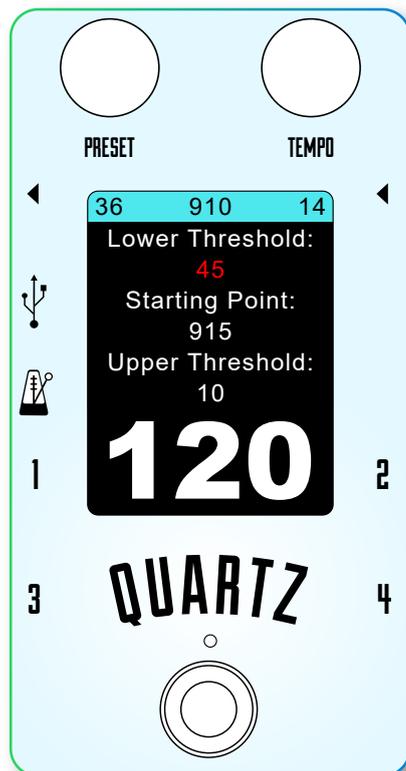
If the **Value** of the message = 2, Division = Dotted 1/4

...and so on...

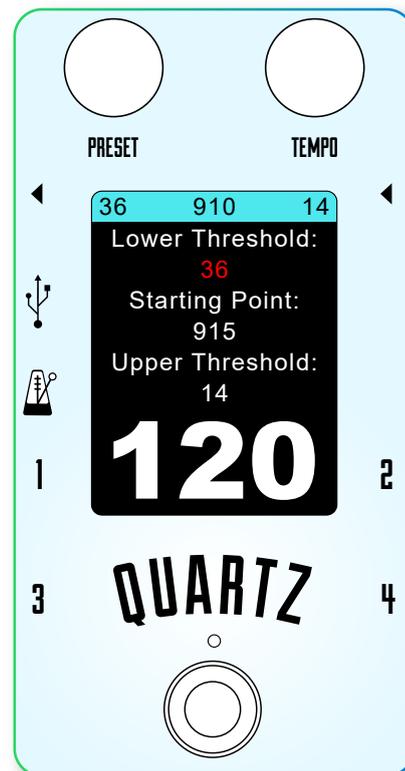
# METRONOME INPUT

The Quartz accepts an external click track via the 1/8" (standard headphone size) metronome input. If you find the Quartz isn't receiving the click, accurately you may need to configure it. To configure:

- 1) Switch off your Quartz V3.
- 2) Plug in your metronome but don't start it.
- 3) Hold down the Preset Knob and power up the Quartz. Release when you see "Lower Threshold", "Starting Point" and "Upper Threshold".
- 4) The values in the white bar represent the audio signal from your metronome. The large number represents the tempo calculated from the metronome. At the moment the white bar will just be displaying the noise level of your signal because you haven't started the metronome yet.



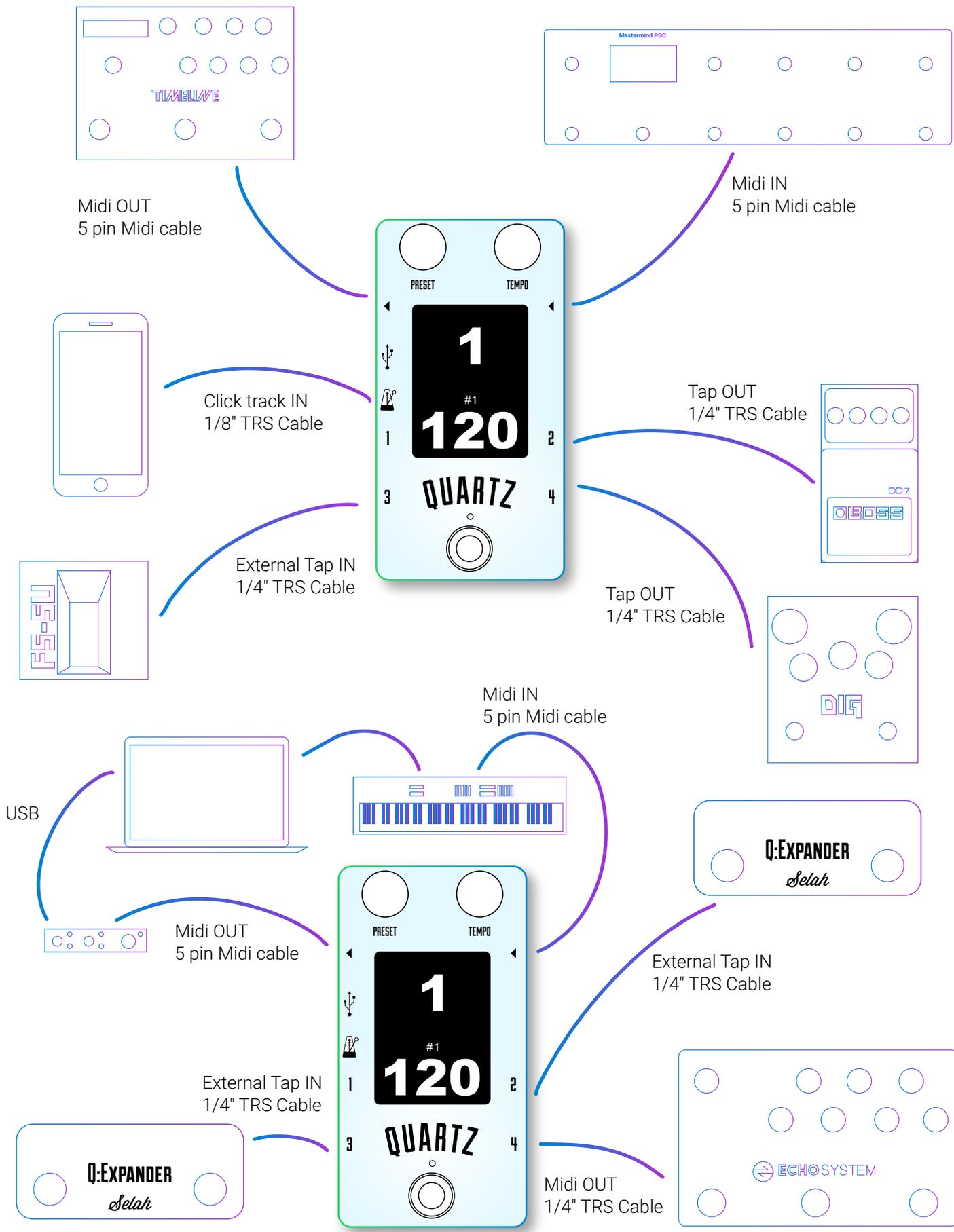
**UNMATCHED VALUES**



**MATCHED VALUES**

- 5) Turn the Preset Knob to select a value, and Tempo Knob to change the value. A good starting point is to match the 3 values in the white bar to the Lower Threshold, Starting Point & Upper Threshold values as shown on the images above.
  - 6) Now start your metronome and you will see the left and right values in the white bar get larger. You should see a tempo displayed below also. If this tempo is incorrect, play with the values until it is accurate.
  - 7) Once your tempo is correct you can restart your pedal normally and your settings will be saved.
- Experiment with different click sounds and volumes to find what works the best for your situation. We cannot test all metronomes, but we have done our best to accommodate as many different sounds and signal strengths as possible. The pedal will not be considered faulty if your metronome isn't compatible

# EXAMPLES OF CAPABILITIES



# SELAH EFFECTS NON-TRANSFERRABLE LIMITED WARRANTY

## **WARRANTY**

Selah Effects warrants the product to be free from defects in material and workmanship for a period of one (1) year from the original date of purchase. If the product fails within the warranty period, Selah Effects can repair or, at our discretion, replace the product. In this case there would be no repair costs, however the purchaser must cover the return postage costs. If the one year warranty has expired, Selah Effects can repair units for a reasonable cost, depending on the damage. If the product is purchased through a dealer or store other than Selah Effects, Selah Effects will not be liable to refund any amount of the product or postage costs to the purchaser.

## **EXCLUSIONS**

This warranty covers defects in manufacturing discovered while using this product as recommended by Selah Effects. This warranty does not cover loss or theft, nor does the coverage extend to damage caused by misuse, abuse, unauthorized modification, improper storage, lightning, or natural disasters. Damage caused by any of the above circumstances may result in a non-warranty repair fee.

## **LIMITS OF LIABILITY**

In the case of malfunction, the purchaser's sole recourse shall be repair or replacement, as described in the preceding paragraphs. Selah Effects will not be held liable to any party for damages that result from the failure of this product. Damages excluded include, but are not limited to, the following: lost profits, lost savings, damage to other equipment, and incidental or consequential damages arising from the use, or inability to use this product. In no event will Selah Effects be liable for more than the amount of the purchase price, not to exceed the current retail price of the product. Selah Effects disclaims any other warranties, express or implied. By using the product, the user accepts all terms herein.

## **HOW TO OBTAIN SERVICE UNDER THIS WARRANTY**

Please contact us through our website [www.selaheffects.com](http://www.selaheffects.com), and be ready to provide your original purchase receipt upon request.