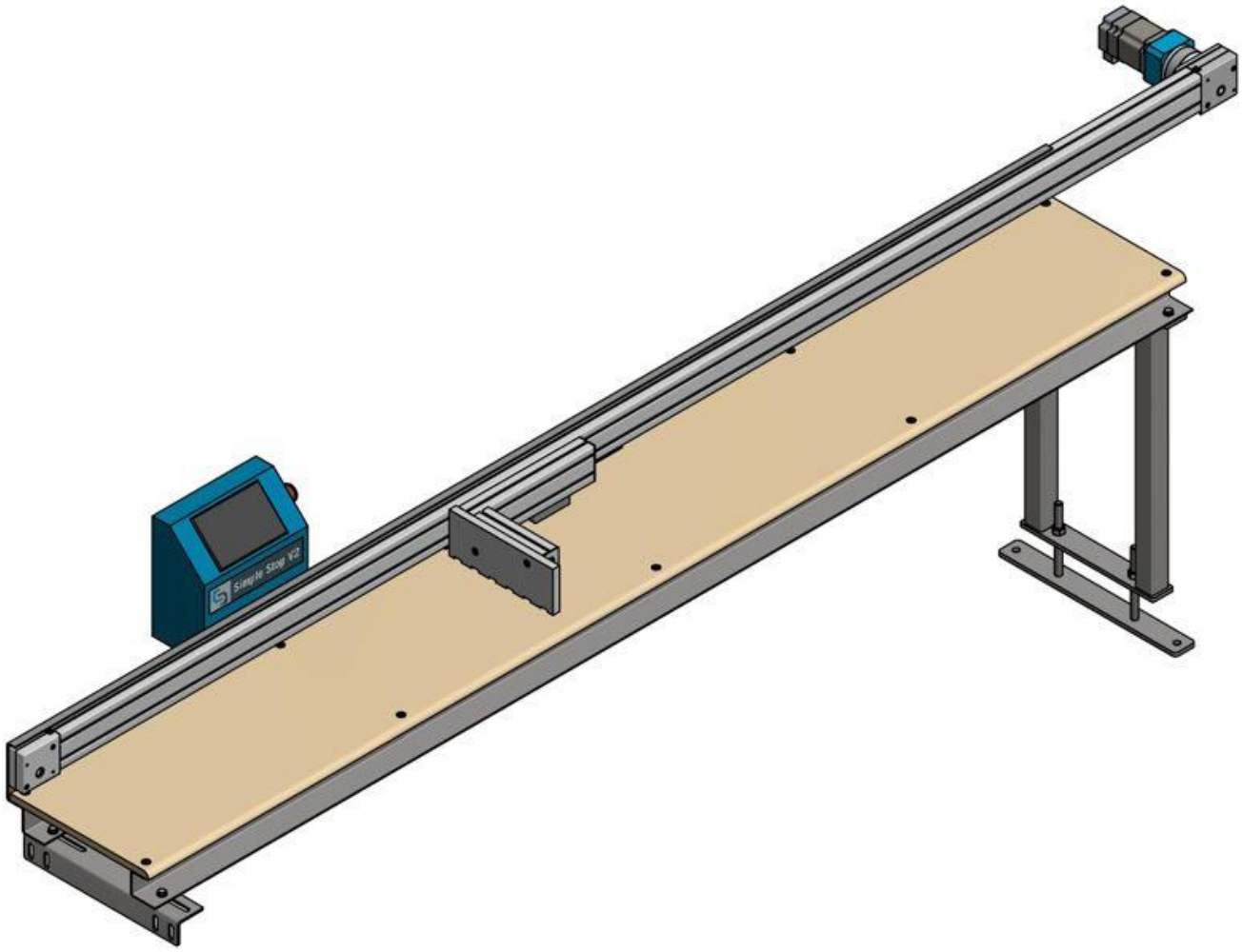
Simple Stop V2



OPERATION & MAINTENANCE MANUAL

WARNING

This machine ***must only*** be used by personnel who have been properly instructed in all aspects of the machine's safe operation.

Operators ***must*** also wear the recommended personal protective equipment and have thoroughly read and understood this manual.

Serial Plates

All enquiries should be directed to:

SM2012 Ltd – Known as Spida Machinery

Australia free phone 1800 146 110

America free phone 1888 262 9476

NZ free phone 0800 SPIDAS or +64 7 579 5010

Below is a copy of the serial plate displayed on the back of the machine

1 Contents

Tables

Figures

2 Overview

The Simple Stop is designed to provide an automated and accurate method of measuring material.

The Simple Stop must be used per the standard operating procedures set out in this manual. Any actions carried out which are not contained in this manual are not endorsed by Spida Machinery and cannot be warranted.

All operators should read and then sign the register of this manual before operating the Simple Stop to ensure they are thoroughly familiar with the machine capabilities, limitations and to ensure correct operating procedures are adhered too.

Only those operators that have received training on the correct operation of the Simple Stop are deemed competent and qualifies to operate the machine.

The Simple Stop test procedures must be performed at installation and after any maintenance, adjustment, repair or modification of the machine. The test procedure is available on request.

The competent operator must also regularly perform the recommended maintenance procedures and checks detailed in this manual.

All electrical wiring must be set as to not allow their movement through any areas of adjacent machinery that could cause them to be damaged or severed.

This manual offers many safety tips, but its purpose is not to provide instruction in all the skills and techniques required to manufacture timber frames safety and efficiently.

Due to improvements in design and performance during production, in some cases there may be minor discrepancies between the actual machine and the illustrations and text in this manual.

3 Specifications

Table 1, Simple Stop Specifications

Overall Width	760 mm
Overall Height	1220 mm
Overall Length (Approx. Min – Max)	0 - 12510mm
Working Width	360 mm
Working Height	910 mm
Working Length (Approx. Min – Max)	0 - 12000 mm
Fence Height	115 mm
Monitor Centre Height	1180 mm
Weight (For 3m table)	105 kg
Material Feed	Left or Right option
Servo Motor	180VDC, 10 Amp Continuous
Power Requirement	5 Amp, 240V, Single Phase

Specifications may change without notice

4 Installation

4.1 Handling & Transport

- Box all additional parts and secure with the machine
- Using a single fork truck, lift the machine package underneath using the forklift spaces provided
- Once on the truck, tightly strap the machine.
- Do **not** place any loads on top of the machine
- The machine should be kept free from road grime and rain, and should always be covered while being transported

The Simple Stop will be delivered in large component form and will require assembly on site by trained personnel. Due care and attention should be given whilst unpacking the components from their packaging materials. Any damage caused whilst in transit should be noted immediately and Spida Machinery informed. Refer to section 3 specifications for weights of individual components when selecting Manual Handling Equipment required, prior to positioning them on the selected site.

4.2 Installation

- It is advisable to forklift the machine package as close to the final assembly point as possible to reduce manual lifting
- The final operating position of the machine must be free from any rubbish or impediments
- There must be good lighting in the installation area to allow proper positioning of the machine
- The ground on which the machine rests must not vary by more than 30mm over a 13m x 2m area
- The Simple Stop should be leveled using adjustable feet. Once level, the machine should be bolted to the floor through holes provided.
- Electrical commissioning to be to local standards and be performed by a qualified electrician

The site selected for the Simple Stop will depend on the ground. The ground chosen should be clean and free of water or possible flooding. The area on which the framework sits must be as even and horizontal as possible. This can be achieved by adjusting the height of the feet. There should be no twist to the framework once the feet have been adjusted to take the ground into account.

The final operating position of the machine should be free of all rubbish or impediments, with general access to all areas of the Simple Stop for the ease of loading and unloading material of varying sizes.

Check that all safety equipment is functioning properly.

5 Safety

This section is provided as a guide only, it is the responsibility of the employer to ensure compliance with the relevant Health and Safety Regulations applicable to them at the time.

5.1 Young Persons

No person under the age of 15 should be allowed to operate or assist with the operation of machinery.

5.2 Long Hair and Loose clothing

Any long hair or loose clothing must be fully contained to eliminate the risk of entanglement with machinery.

PROTECTIVE SAFETY CLOTHING AND EQUIPMENT MUST BE WORN; INCLUDING:

Eyewear

Hearing protection

Respirator or Dust mask

Protective Clothing

Safety footwear

5.3 Cleaning and Maintenance of Machinery

For safe and reliable use, machinery should be regularly cleaned and maintained. During cleaning and maintenance, the Simple Stop must be isolated from all sources of energy and locked out to prevent unexpected operation.

5.4 Training and Supervision of Simple Stop Operators

No person should be expected or allowed to operate the Simple Stop until they have been fully trained and authorised to do so. They must be familiar with:

- Actual and potential hazards and appropriate controls.
- Correct use and adjustment of guards.
- Emergency procedures.
- How the Simple Stop works.
- Checks to perform prior to starting.
- How to recognise potential faults.
- Location of controls and how to Stop and Start the Simple Stop.

5.5 Responsibilities of Simple Stop Operators

Operators should:

- Check the Simple Stop prior to use and during operation to ensure it is in sound operating order.
- Report immediately any defects noted to their supervisor.
- Use any, and all safety equipment provided.
- Not operate any machinery if under the influence of drugs or alcohol, consult a physician or pharmacist if unsure of any medication.

5.6 Operating Speeds and Vibration

Machinery should be operated within its designed limitations and for its designed use only, any unfamiliar noise, vibration or failure should be investigated and remedied promptly.

5.7 Machinery Stability and Location

The Simple Stop should be securely fastened to the structure of the building to prevent movement or toppling over. Location should provide access all around for maintenance and cleaning. Lighting must be adequate to allow operator to clearly see controls and work pieces but not glaring or blinding.

Consideration should be given to the operators work area for product flow and to minimise repetitive actions and unnecessary movement.

An exclusion zone around the Simple Stop should be maintained to prevent persons not directly involved with the operation of the machine from reaching any part of the machine.

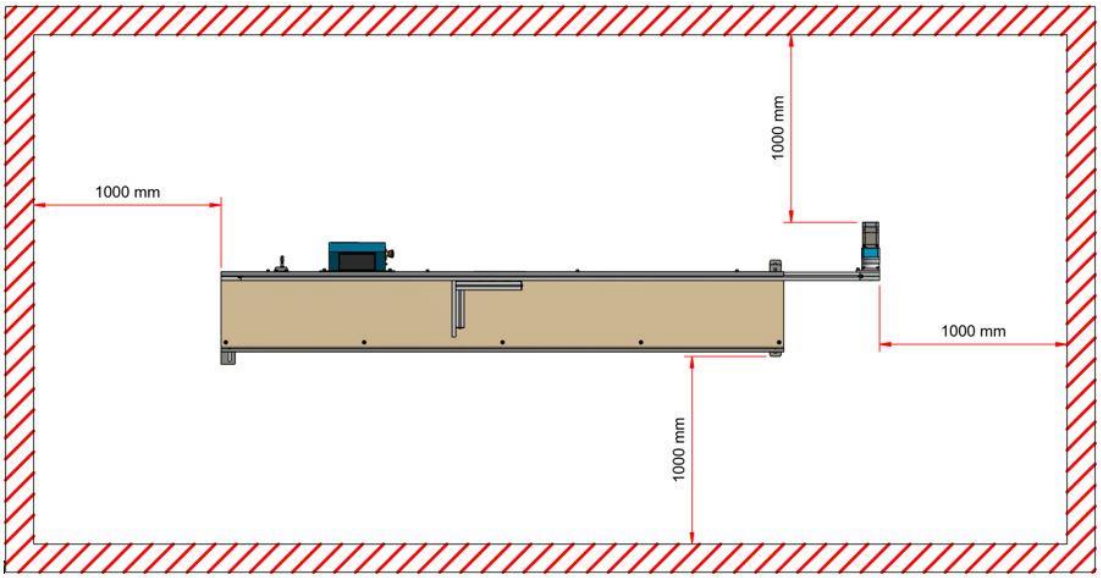


Figure 1, Recommended exclusion zone around the Simple Stop.

5.8 Electrical Safety

Electrical wiring must be installed and maintained by a suitably qualified person in accordance with relevant regulations.

5.9 Isolation, hold cards and lock out devices

There should be procedures for isolating and locking out the Simple Stop, for purposes of maintenance and to prevent unintended use should a fault have been identified.

5.10 Noise control

The normal operation noise of some machines will be more than permitted noise exposure levels. Employers must ensure adequate hearing protection is available and is used by all persons in the affected area.

5.11 Manual Handling

Manual handling should be avoided where possible, use of mechanical lifting and assisting equipment is recommended. Consider using forklifts, hoists, and trolleys to eliminate lifting and carrying components.

5.12 Recommended Service Interval

It is recommended that for optimal performance, the Simple Stop should be serviced every 6 months.

It is also recommended that a service log be kept, as a reminder of when the next service should be due. Spida Machinery performs service runs on a regular basis throughout NZ; however, should the need arise for an early service, or should a service need to be booked in advance, please advise Spida Machinery accordingly.

WARNING! Do not operate the Simple Stop without having received the proper instruction in operation and safety from this manual.

WARNING! It is recommended that the employers maintain training records demonstrating the competencies of each employee

6 Safe Operation

NOTE: The Simple Stop is to be operated in accordance with this manual. Deviation from this specified operation may result in defective products, incorrect measurements, or injury.

6.1 User Warnings

- All moveable parts of the machinery must be set so as not to allow their movement through the hazardous areas of adjacent machinery.
- All machine and components should be inspected upon delivery and at weekly intervals for looseness, fracture, bends, sharp edges or surfaces and any other condition that may contribute to a human mishap or further deterioration of the machine. We suggest a log be kept for this purpose.
- When broken, damaged, or loose parts (or any condition that may represent a hazard) are observed, corrective action should be taken immediately. Inadequate attention to maintain the machine can cause the premature failure of these parts. We suggest this information also be logged.
- The electrical boxes should always be locked to avoid casual entry by unauthorized persons, as touching live surfaces is hazardous.
- Split, broken, warped, twisted or material with excessive wane should be avoided or used with caution because of the greater possibility of the material not being held securely during manufacturing processes.
- The machine is not to be used for any other purpose than the measuring of material components.
- Keep hands out of moving parts on the machine. Operators should be instructed not to extend fingers or limbs into or beyond the vicinity of the warning labels. The danger here is obvious – fingers in these areas will risk mutilation.
- Be sure the machine is completely free of foreign objects, and that all guards are in place before connection to electrical supply.
- Any guards removed for maintenance or adjustments **must** be replaced before the machine is put back into service.
- Exceeding the capabilities of the machine will void the warranty and could lead to a serious injury.
- All Operators should read and then sign the register of this manual before operating the Simple Stop to ensure they are thoroughly familiar with the machine capabilities and limitations and to ensure correct operating procedures are adhered to.
- Failure to perform the daily and weekly service checks as per the schedule may result in serious machine damage or a severe accident.

WARNING! This machine must only be operated by personnel who have been properly instructed in all aspects of the machine's safe operation. They must also be wearing the recommended protective clothing and have thoroughly read and understood this operation and service manual.

6.2 Manual Handling

The following is not a comprehensive list. Manual lifting has the potential to be hazardous; so, for a full description of material handling please refer to lifting standards, techniques, and your own company policies.

- Ensure material supply is via forklift or other support mechanism
- Ensure correct lifting techniques are adopted to transfer material
- Suggest use of trolleys or bench at required height and location to minimize handling and twisting
- Ensure required PPE is worn
- Ensure correct and appropriate lifting techniques are used
- Suggest the setup of a material supply via gravity roller transfer system
- Avoid twisting torso when moving components from one area to another
- Only lift components of weight which you assess to be within your limit
- Use machinery (forklift) for material decreed to be too heavy or ask for assistance from another worker

WARNING! This machine must only be operated by personnel who have been properly instructed in all aspects of the machine's safe operation. They must also be wearing the recommended protective clothing and have thoroughly read and understood this operation and service manual.

6.3 General

Table 2, General Hazards

POTENTIAL HAZARDS	SAFE WORK PROCEDURE
Safety	Ask questions if you have any doubts about doing the work safely. Check and adjust all safety devices daily.
Poor Guarding	Ensure all guards are fitted correctly and are adequately guarding moving parts. Make sure guards are in position and in good working order. Do not operate machine without guards.
Poor Housekeeping	Inspect the Simple Stop and surrounding areas for obstructions, hazards, and defects. Remove built-up debris from around machine, electrical leads, and power points.
Electrical Faults	Inspect electrical leads for damage.
Inoperable Safety Switches	Check that start/stop and emergency stop buttons operate effectively.
Incorrect Accessories	Use only the accessories designed for each specific application
Foreign Objects	Check that foreign objects and maintenance tools etc. are removed from the machine before using the machine.
Defective/Damaged parts	Any identified defects must be reported and actioned prior to use of the Simple Stop.

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6.4 Operation

Table 3, Operational Hazards

POTENTIAL HAZARDS	SAFE WORK PROCEDURE
Slip, Trip & Falls	Avoid awkward operations and hand positions where a sudden slip could cause your hand or part of your body to move into the line of travel. Electric power cords should be above head level or in the floor in such a way that they are not trip hazards. Floor areas should be level and non-slip. Clean up any spills immediately
Workplace	Use good lighting so that the work piece and machine controls can be seen clearly. Position or shade light sources so they do not shine in the operators' eyes or cause glare and reflections. Ensure that the floor space around the equipment is sufficient to allow the operator to process their work without bumping into other staff or equipment. Keep the work area free of clutter, clean, well swept and well lit.
Housekeeping	Clean built up debris from around the machine, electrical leads, and power points
Defects	Report all defects to the supervisor
Personal Protection	Wear safety glasses or a face shield. Wear hearing protection that is suitable for the level and frequency of the noise you are exposed to in the work area. Wear dust masks when required. Do not wear gloves when operating this machine. Do not wear loose clothing, work gloves, neckties, rings, bracelets or other jewellery that can become entangled with moving parts
Machine Guarding	Make sure all guards are fastened in position. The machine MUST NOT be operated with any of the guards removed. The machine is fitted with steel guards.
Improper Use	Only use the machine for what it has been designed for.
Operator Technique	Do not impede the movement of the Simple Stop while in use. Ensure any body parts, clothing, or work tools do not get in the way of moving parts. Only place material once the Stop is in the home position and has come to a complete halt. Do not attempt to activate the Simple Stop before material is in place.
Hit by projectiles	The Simple Stop must be electrically isolated before attempting to clear blockages or material jams. Do not use fingers to remove items which have become entangled in movable parts.

WARNING! This machine must only be operated by personnel who have been properly instructed in all aspects of the machine's safe operation. They must also be wearing the recommended protective clothing and have thoroughly read and understood this operation and service manual.

6.5 Maintenance

Table 4, Maintenance Hazards

POTENTIAL HAZARDS	SAFE WORK PROCEDURE
Cleaning and maintenance preparation	Isolate power and air to the machine before inspecting, changing, cleaning, adjusting or repairing a machine. Do not use compressed air to remove sawdust etc. from machines or clothing.
Operational Buttons	Make sure that Operational buttons are in good working condition and within easy convenient reach of an operator. Buttons should be protected so that accidental contact will not upset the machine.
Emergency Stop Buttons	Make sure that Emergency Stop buttons are in good working condition and within easy convenient reach of an operator.
Incorrect electrical isolation of machine	Machine power must be switched off at the Main Power Switch, before maintenance or cleaning
Incorrect tools	Use Correct tools for the job to minimise personal injury and damage to the machine
Guarding	Ensure Guards are fitted correctly, adjusted and in good working order.

WARNING! This machine must only be operated by personnel who have been properly instructed in all aspects of the machine's safe operation. They must also be wearing the recommended protective clothing and have thoroughly read and understood this operation and service manual.

6.6 Recommendations

That the operator is trained, on induction, of the dangers of accessing the machine operating area.

The electrical system is to be serviced, by a qualified electrician only.

That all operators are walked through the operators' manual and all potential hazards are identified.

That good housekeeping is always maintained to avoid the risk of slips, trips or falls.

That approved eye and hearing protection is always used when operating the machine.

That approved dust masks and safety footwear are always worn when operating the machine.

That if the machine is not operating as efficiently as specified, the operator notify their supervisor who in turn takes appropriate action and eliminate the problem if possible.

All guards and safety devices are not to be removed.

It is recommended that a visual exclusion zone be marked on the floor on a one metre (1000mm) perimeter surrounding the working area of the machine. To identify the work space to pedestrians.

WARNING! This machine must only be operated by personnel who have been properly instructed in all aspects of the machine's safe operation. They must also be wearing the recommended protective clothing and have thoroughly read and understood this operation and service manual.

7 Operating Controls

Before attempting to operate the Simple Stop, familiarise yourself with the location and function of each control.

7.1 Simple Stop Controls

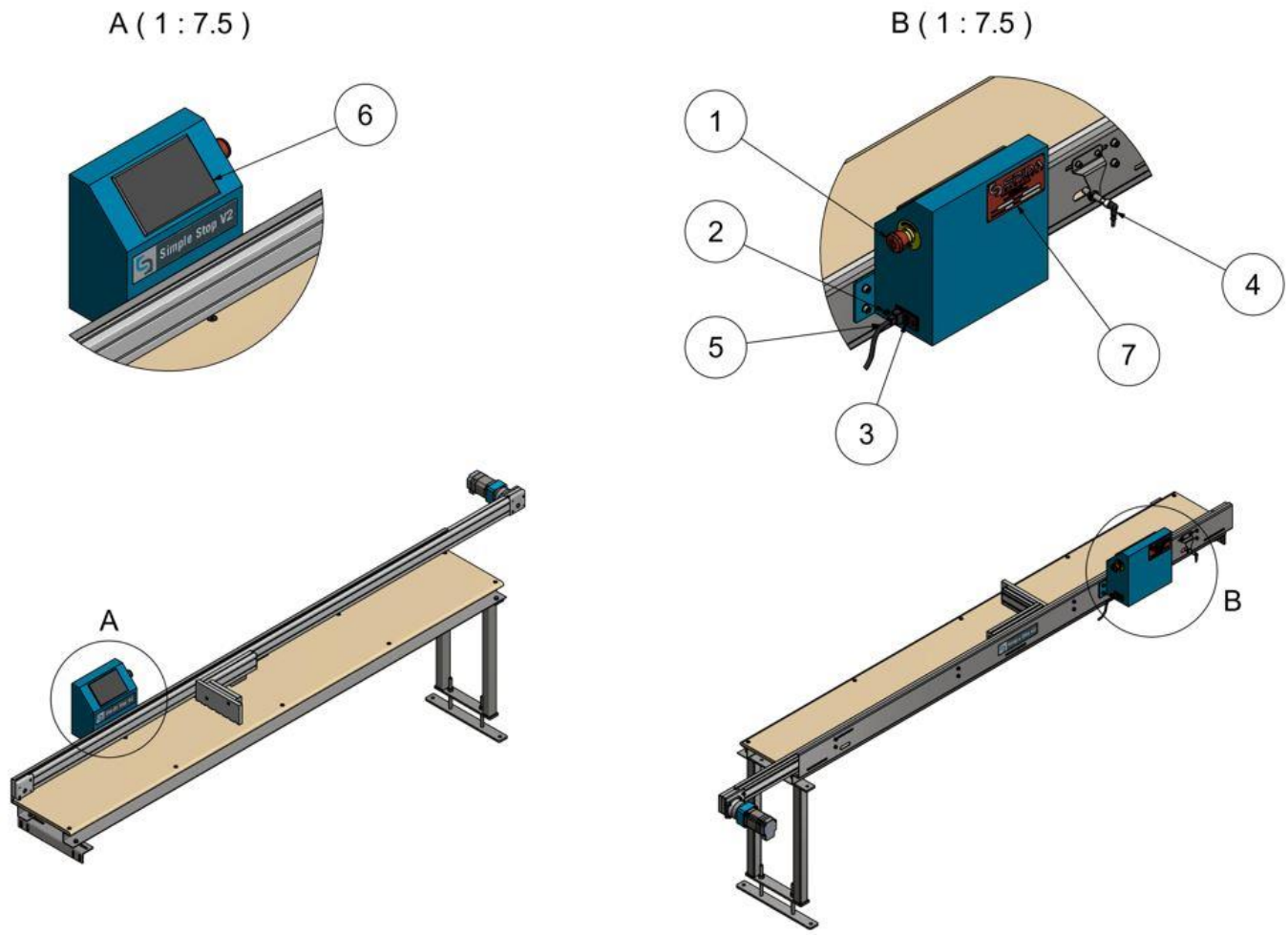


Figure 2, Simple Stop controls

Table 5, Control functions (see Figure 2)

Control	Function
1	Emergency Stop
2	Fuse
3	On/Off Switch
4	Proximity Sensor
5	Power Cord
6	Operating HMI (Human Machine Interface)
7	Nameplate

See Section 7.2 for HMI display details

7.2 HMI Displays and Controls

7.2.1 Main Display

The HMI's basic controls include: allowing the Simple Stop to be reset as required; calling the stop to home; and setting the required cutting distance. Please refer to Section 8, Software Operation, for further information.

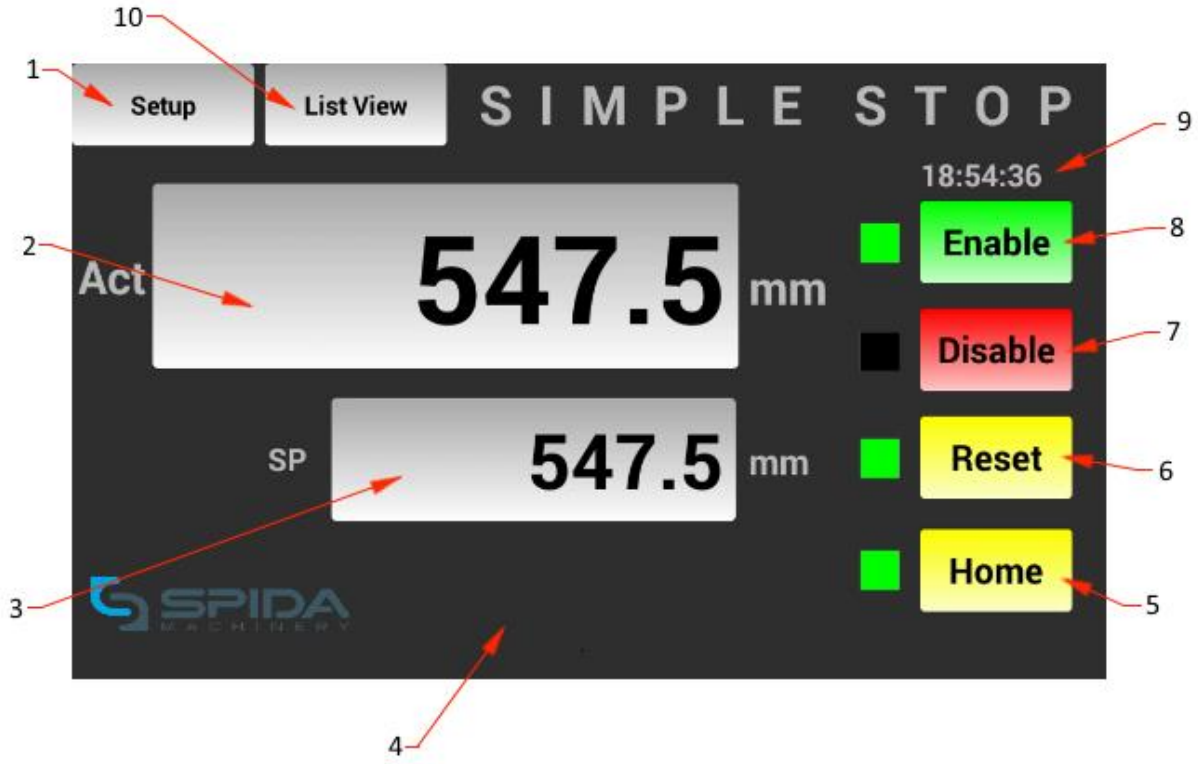


Figure 3, Simple Stop Main HMI Display – Metric version

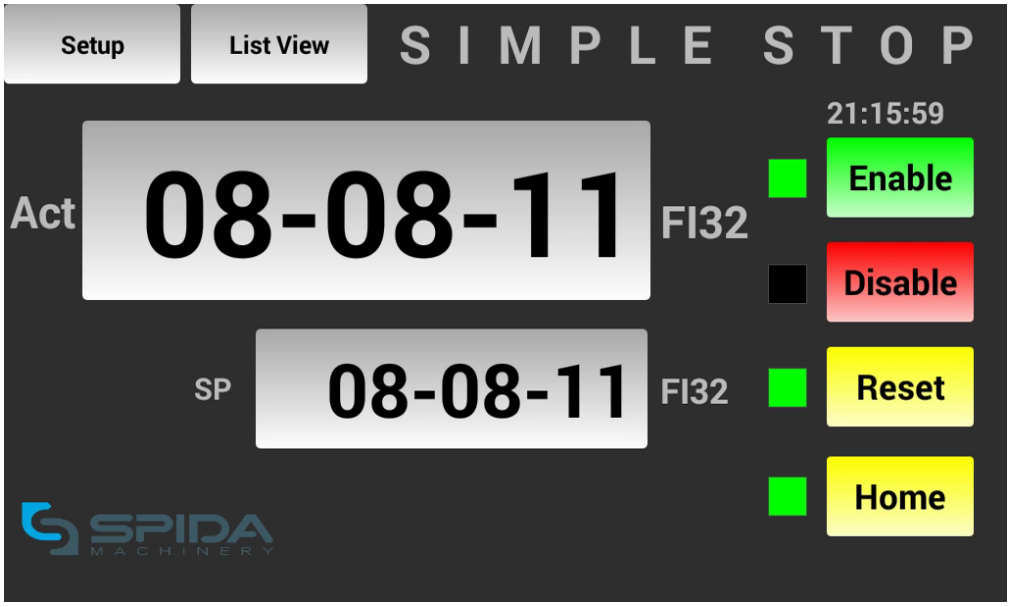


Figure 4, Simple Stop Main HMI Display – Imperial version

Table 6, Simple Stop Main HMI Display - Controls

The following table shows the controls as numbered on the Figure 3 display. Please note that the Figure 4 display and the Figure 3 display have the same controls, only the Figure 4 display is shown in imperial rather than metric.

Control	Function	Description
1	Setup Select	Press this option to go to the setup screen
2	Main measurement display	This is where the required material length (or the distance between the saw and the Stop) is displayed
3	Current measurement display	This is where the actual distance between the saw and the Stop is displayed
4	Error Display	Displays the error in Red, if an error has occurred (not shown in picture)
5	Home Select	Press this option to send the Trolley to the home position
6	Reset Select	Press this option to reset the Simple Stop and send any changed settings to the servo drive. Once the reset has been activated, the trolley will need to be enabled and homed. Reset is also used to clear any faults. If it does not clear the fault, then contact Spida Machinery.
7	Disable Select	Press this option to disable the trolley from the operating system
8	Enable Select	Press this option to enable the trolley to reconnect to the operating system
9	Time display	This tells you what the current time is, in 24hr time
10	List View	Press this option to change to List cut function

7.2.2 Main Display with Offset

The offset option allows otherwise difficult actions to be achieved. It is useful when using a block to cut short lengths, for when the trolley cannot get close enough to the saw, or to allow for 45° cuts.

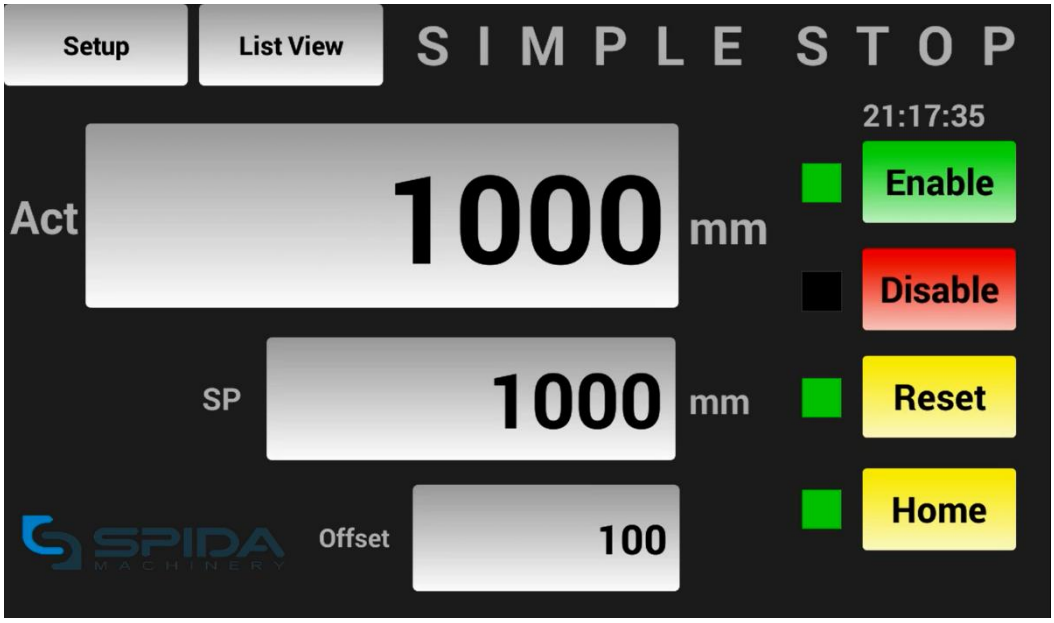


Figure 5, Simple Stop Main HMI Display – with Offset

7.2.3 General Setup

This setup screen allows the user to select various options so that the Simple Stop is setup to their specific requirements.

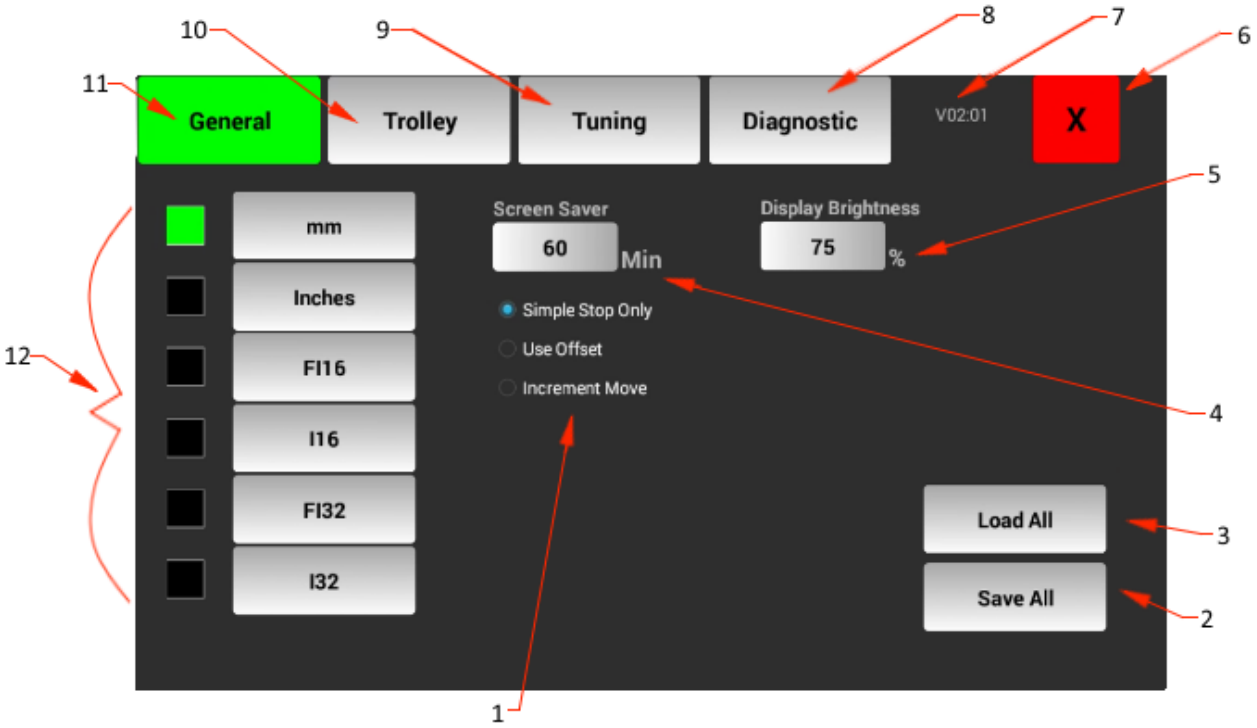


Figure 6, Simple Stop General Setup Screen

Table 7, Simple Stop General Setup Screen controls

Control	Function	Description
1	Operating Mode	Toggle radio button to select operating mode. Simple Stop Only/Use Offset/Increment Move.
2	"Save all" Select	Select this box to save all setup settings
3	"Load all" Select	Select this box to load a saved setup/Remove any unwanted changes before they are saved
4	Screen Save Select	Select this box to set the screen timeout
5	Display Brightness Select	Select this box to set the screen brightness
6	Exit Select	Press this button to exit the General setup and return to the main screen
7	Version Display	This displays the version of the software that the HMI is currently running
8	"Diagnostic" Select	Press this button to go to the Diagnostics screen
9	"Tuning" Select	Press this button to go to the Calibration screen
10	"Trolley" Select	Press this button to go to the Trolley setup screen
11	"General" Select	Press this button to go to the General setup screen – Already selected
12	Measurement Unit Select	Press one of these buttons to select which units to use for measurements

7.2.4 Trolley Setup

This setup screen allows the user to set the Trolley options, so that it moves and performs as required.

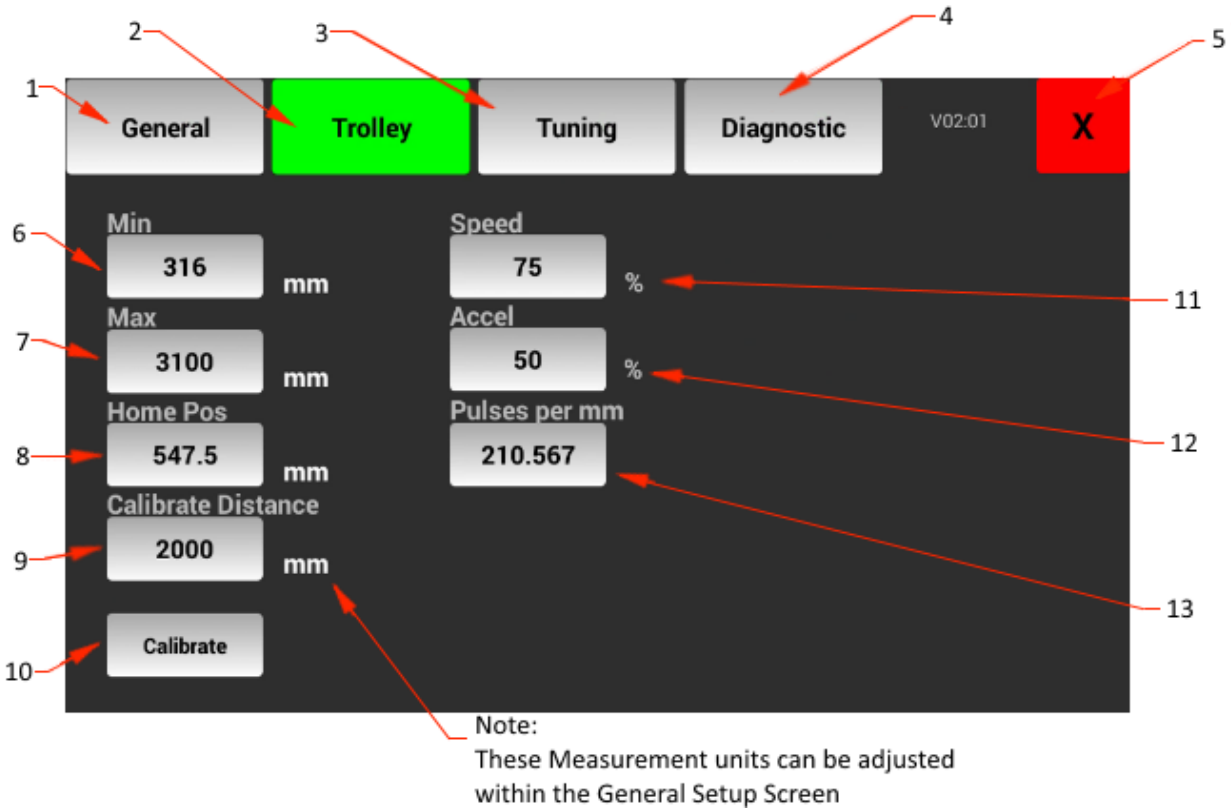


Figure 7, Simple Stop Trolley Setup Screen

Table 8, Simple Stop Trolley Setup Screen controls

Control	Function	Description
1	“General” Select	Press this button to go to the General setup screen
2	“Trolley” Select	Press this button to go to the Trolley setup screen - Already selected
3	“Tuning” Select	Press this button to go to the Calibration screen
4	“Diagnostic” Select	Press this button to go to the Diagnostics screen
5	Exit Select	Press this button to exit the General setup and return to the main screen
6	Minimum Position Select	Select this box to enter in the Minimum position of the Trolley. This sets the minimum cut length
7	Maximum Position Select	Select this box to enter in the Maximum position of the Trolley. This sets the maximum cut length
8	Home Position Select	Select this box to enter in the Home position of the Trolley - i.e. the position from the saw blade to the trolley when homed. It is best to cut some product and measure this to ensure accuracy.
9	Calibrate Distance	Select this box to enter in the distance at which to calibrate the Simple Stop. The calibration distance should be at least ¾ of the bench length for accuracy, longer is better. The calibration distance is set at the factory.
10	Calibration Select	Press this button to activate the machine calibration, based on the calibration settings. To calibrate, follow the step by step instructions on the screen. Calibration settings can be set in the Calibration Screen.
11	Speed Select	Select this box to set the speed of the Trolley. This is a percentage of the top speed available on the trolley. The speed is set at the factory.
12	Accel\Decel Select	Select this box to enter in the required percentage of acceleration of the Trolley. The maximum acceleration is set at the factory.
13	Pulses per mm Select	Select this box to enter in the required pulses per mm. The pulses are set automatically when the saw is calibrated; 210 is the start point for most machines.

7.2.5 Calibration

The calibration controls allow the user to set up the Simple Stop to make accurate measurements each time. The Simple Stop only requires calibration if the pulley belt is changed; the motor is replaced; or any other such big changes that cause measurement inaccuracies.

If calibration is needed, there is an available video on the Spida Machinery YouTube page, [**https://www.youtube.com/watch?v=HsoIABT8b9M**], that shows the user how to calibrate the system; or alternatively contact Spida Machinery.

7.2.6 Tuning

This screen is used to setup the servo drive. This is done at installation and should not be changed. If you have lost your settings or have a problem, contact Spida Machinery to assist with setting up the configuration of the servo drive.

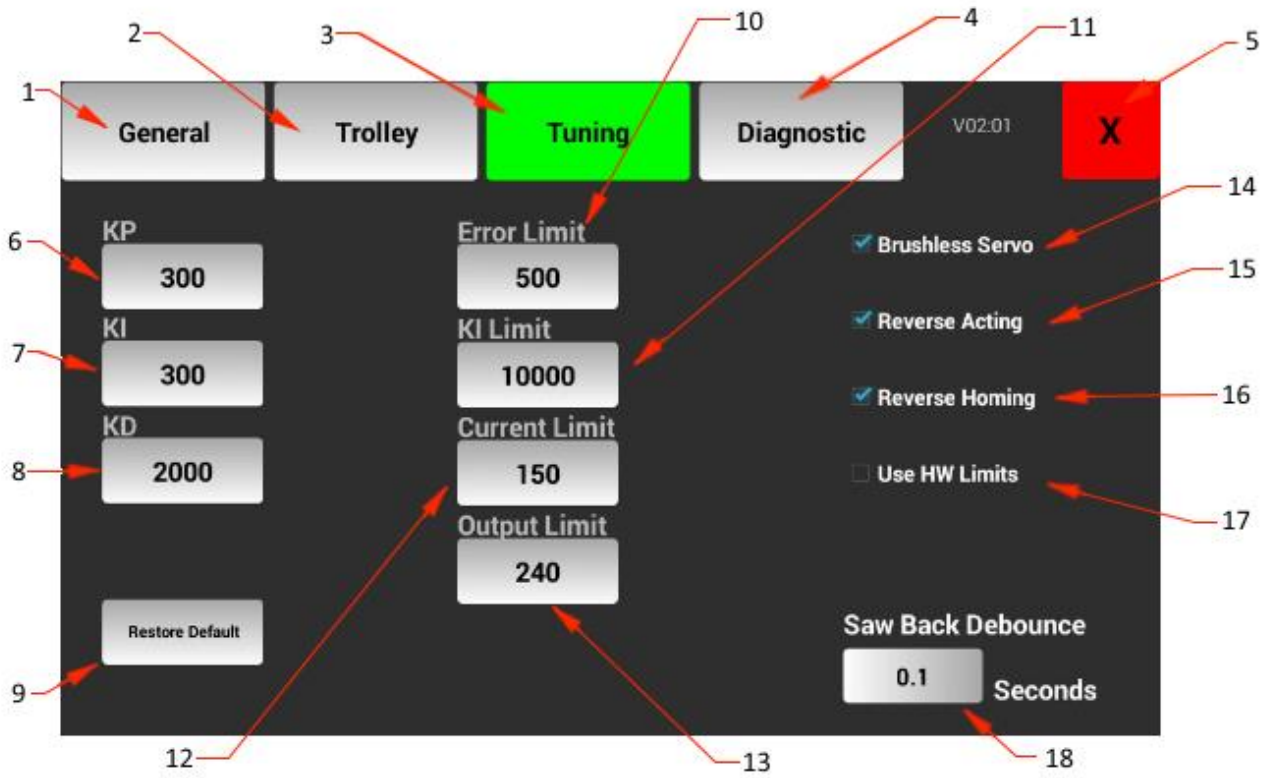


Figure 8, Simple Stop Calibration Screen

Table 9, Simple Stop Calibration controls

Control	Function	Description
1	“General” Select	Press this button to go to the General setup screen
2	“Trolley” Select	Press this button to go to the Trolley setup screen
3	“Tuning” Select	Press this button to go to the Calibration screen - Already selected
4	“Diagnostic” Select	Press this button to go to the Diagnostics screen
5	Exit Select	Press this button to exit the General setup and return to the main screen
6	“KP” Select	This is pre-set and MUST NOT be changed without consultation from SPIDA
7	“KI” Select	This is pre-set and MUST NOT be changed without consultation from SPIDA
8	“KD” Select	This is pre-set and MUST NOT be changed without consultation from SPIDA
9	“Default All” Select	Press this button to return all settings to their default
10	“Error Limit” Select	This is pre-set and MUST NOT be changed without consultation from SPIDA
11	“KI Limit” Select	This is pre-set and MUST NOT be changed without consultation from SPIDA
12	“Current Limit” Select	This is a factory setting. DO NOT change
13	“Output Limit” Select	This is a factory setting. DO NOT change
14	Servo Select	Check/Uncheck this box to activate/deactivate the Brushless Servo. This is set in the factory.
15	“Reverse Acting” Select	Check/Uncheck this box to activate/deactivate Reverse Acting. This will reverse the operation of the unit. This is set in the factory.
16	“Reverse Homing” Select	Check/Uncheck this box to activate/deactivate Reverse Homing. Reverse homing homes towards the saw (standard setup). This is set in the factory.
17	“HW Limits” Select	This should not be selected
18	“Saw Back Debounce”	This is the amount of time the saw must come off the Saw Back sensor before the Simple Stop will register another cut. This is used in “List View” only.

7.2.7 Diagnostics

The diagnostics screen allows the user to check the different parts of the machine and ensure everything is working as it should be.

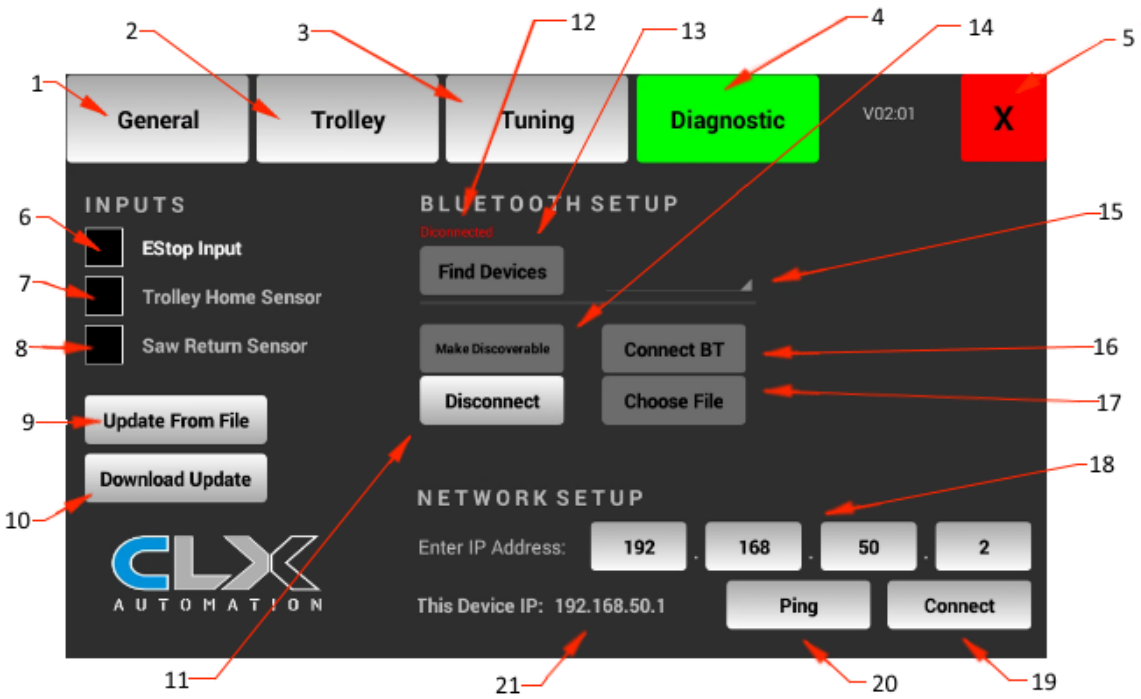


Figure 9, Simple Stop Diagnostics Screen

Table 10, Simple Stop Diagnostics controls

Control	Function	Description
1	“General” Select	Press this button to go to the General setup screen
2	“Trolley” Select	Press this button to go to the Trolley setup screen
3	“Tuning” Select	Press this button to go to the Calibration screen
4	“Diagnostic” Select	Press this button to go to the Diagnostics screen - Already selected
5	Exit Select	Press this button to exit the General setup and return to the main screen
6	Estop Input	This box lights up to show that the Estop input is on. This indicates that the E-stop is reset and ok to run.
7	Trolley Home Sensor	This box lights up to show that the sensor is on.
8	Saw Return Sensor	This box lights up to show that the sensor is on. **Note:** This sensor is not used on this model
9	“Update From File” Select	Press this button to find and install Update from the tablet
10	“Download Update” Select	Press this button to download any available update over the internet
11	“Disconnect” Select	Press this to disconnect Bluetooth
12	Bluetooth Status	This displays the current Bluetooth connection Status
13	“Find Devices” Select	Press this to Find available Bluetooth devices
14	“Make Discoverable” Select	Press this to let other devices find the Simple Stop over Bluetooth
15	Available Device List	Press this to see a list of possible Bluetooth connections
16	“Connect BT” Select	Press this to connect to the selected device
17	“Chose File” Select	Press this to send the selected file to the connected device
18	IP Address Fields	Press these to change the target static IP address
19	“Connect” Select	Press this to connect to the target IP address
20	“Ping” Select	Press this to Ping the target IP address (Test Connection)
21	This Device IP	This shows the devices current IP Address

7.2.8 Set Length (Home Screen)

This screen provides the means to input a measurement or length when required. Select the Set Point (SP) from the Home Screen and a Numpad will appear allowing input for a desired length. Once you have input the desired length, select Enter and the stop will move to the 'Set Point'

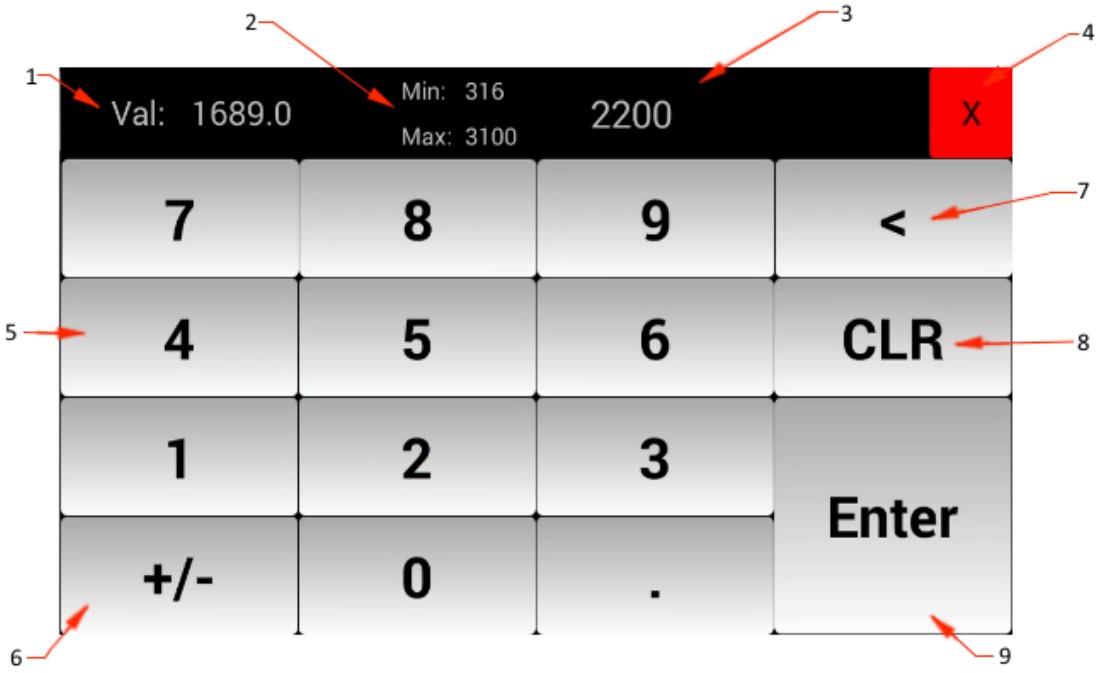


Figure 10, Simple Stop Set Length Screen – Metric version

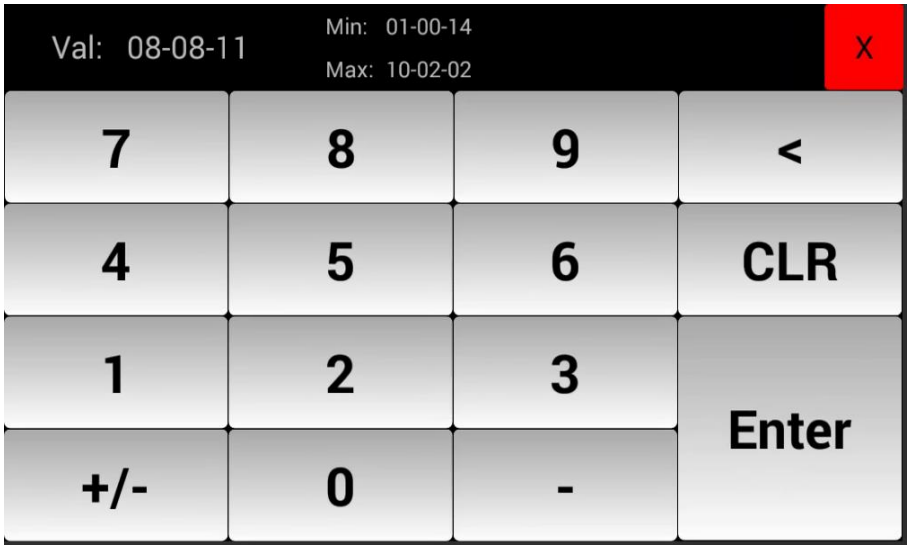


Figure 11, Simple Stop Set Length Screen – Imperial version

Table 11, Simple Stop Set length controls

In the same way as the main display, the Figure 10 display and the Figure 11 display have the same controls, except the Figure 11 display is shown in imperial rather than metric.

Control	Function	Description
1	Old Position	This displays the current position at which the trolley is sitting
2	Length Limits	This displays the limits on the measurements that can be entered
3	Position display	This displays the measurement as it is being entered
4	Exit Select	Press this button to exit the screen
5	Numbers select	Use these buttons to input the desired measurements
6	Plus/Minus select	Press this button to toggle between positive and negative numbers (- = movement past the saw when possible, depending on machine)
7	Backspace	Press this button to delete the last digit entered
8	Clear	Press this button to clear the entered amount
9	Enter	Press this button to confirm the entered amount; which moves the trolley to the selected position and exits the screen

WARNING! Do not operate the Simple Stop without the correct knowledge and function of each of the controls.

8 Software Operation

8.1 Simple Stop only

Simple Stop only is the core functionality of the Simple Stop. See 9.2 General Operation for standard operation, or 7.2 HMI Display and Controls for basic controls.

8.2 Offset Mode

The offset option allows otherwise difficult actions to be achieved. It is useful for when using a block to cut short lengths; for when the trolley cannot get close enough to the saw; or to allow for 45° cuts.

Figure 12 – Activating "Offset" - As seen during Step 1 of "Using Offset Mode" (8.2.1)

8.2.1 Using Offset Mode

1. Enable Increment move in the "general" setup page by selecting "Use Offset", then press the "Save all" button.
2. Exit the Setup screen by pressing the red "X" on the top left of the screen. A new Text field will have appeared on your home screen.
3. Press the new Text field, the Numpad will appear. Enter the distance you would like the trolley to be offset and press "Enter".
4. Make cuts as required, the offset will be accounted for.

Note: Always measure the first useful cut of the day to ensure the saw is accurate.

8.3 Increment Move

Increment Move is used to make a lot of small repetitive cuts from a large length of material.

Figure 13 – Activating "Increment Move" - As seen during Step 1 of "Using Increment Move" (8.3.2)

8.3.1 Increment Move Options

Press the "Setup" button from the home screen in the "General" setup page, then select the "Increment Move" option. More options will appear below.

8.3.1.1 Auto Move When Saw Back (where fitted)

If your saw is fitted with a saw back sensor you can use this option to automatically progress the stop to the next cutting position.

8.3.1.2 Allow for Saw Blade Width

In most cases when making multiple cuts from a single large length you will want to account for the saw blade width for greater accuracy. Tick this Field and enter the saw blade width, and the Simple Stop will calculate the cutting position accordingly. **Note:** Most saw blade manufacturers state the saw blade width on their product.

8.3.2 Using Increment Move

WARNING! The Trolley may move without warning during this procedure. Please read instructions carefully.

1. Enable Increment move in the "general" setup page by selecting "Increment Move", then select the options you would like to use and press the "Save all" button.
2. Exit the Setup screen by pressing the red "X" on the top left of the screen. A new "MOVE" button and a Text field will have appeared on your home screen.
3. Press the new Text field and the Numpad will appear. Enter the distance you would like to the saw to increment and press "Enter".
4. Press the "SP" button and enter the Set Point to slightly smaller than the length of the piece of material you would like to cut OR press the "Disable" button and manually push the trolley to almost the length of the piece of material you would like to cut, then press the "Enable" button.
5. Make the first cut. If you have selected the "Auto Move When Saw Back" option, the trolley will automatically move to its next location. Otherwise press the "MOVE" button and the Trolley will move to its next location. Discard the first cut.
6. Continue to make cuts until the length of material is gone.

Note: Always measure the first useful cut of the day to ensure the saw is accurate.

8.3.3 Main Display with Increment Move

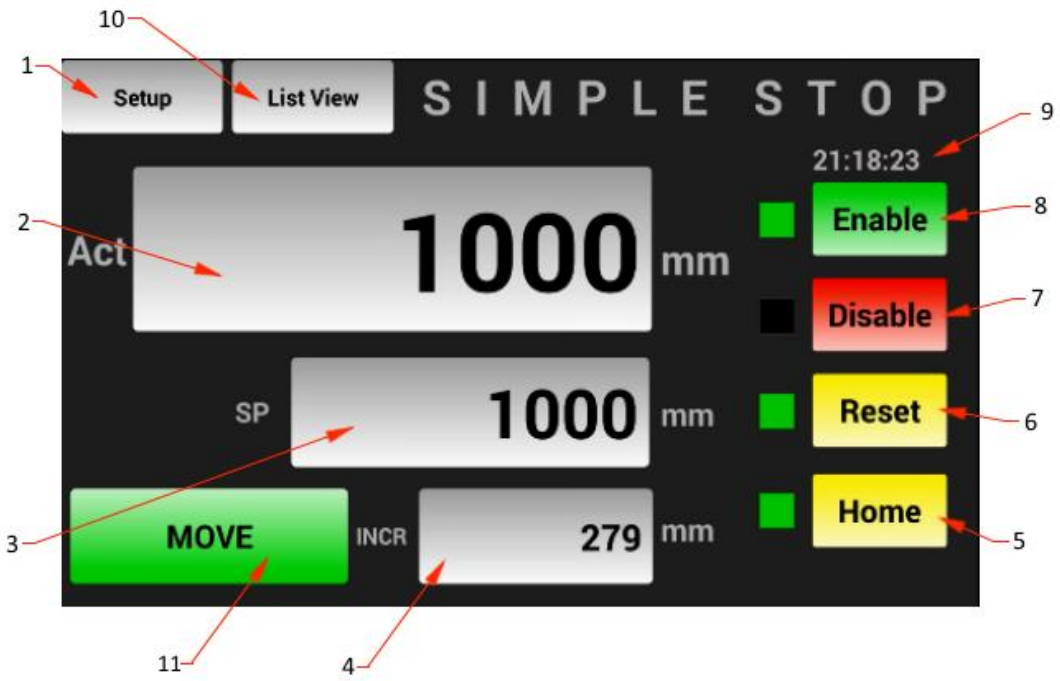


Figure 14 – Simple Stop Main HMI Display – with Increment Move

Table 12, Simple Stop Main HMI Display with Increment Move - Controls

Control	Function	Description
1	Setup Select	Press this option to go to the setup screen
2	Main measurement display	This is where the required material length (or the distance between the saw and the Stop) is displayed
3	Current measurement display	This is where the actual distance between the saw and the Stop is displayed
4	Current Increment Length	This is where the Increment length is shown. Press this to change the value
5	Home Select	Press this option to send the Trolley to the home position
6	Reset Select	Press this option to reset the Simple Stop and send any changed settings to the servo drive. Once the reset has been activated, the trolley will need to be enabled and homed. Reset is also used to clear any faults. If it does not clear the fault, then contact Spida Machinery.
7	Disable Select	Press this option to disable the trolley from the operating system
8	Enable Select	Press this option to enable the trolley to reconnect to the operating system
9	Time display	This tells you what the current time is, in 24hr time
10	List View	Press this option to change to List cut function
11	Move Select	This will move the stop to the next cut location. **Note:** If the "Auto Move When Saw Back" is enabled, and a saw back sensor is installed, the stop will automatically move to this position.

8.4 List View

List View is used to work through a list of simple cuts. The list can be loaded onto the Simple Stop via Bluetooth or USB, or you can even create your own list on the Simple Stop itself.

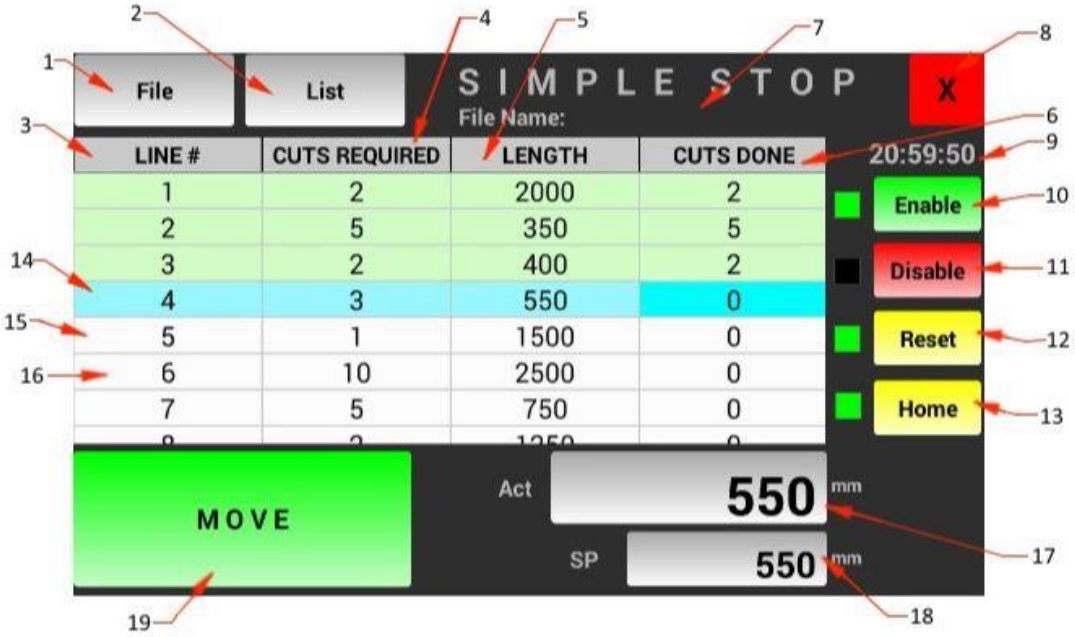


Figure 15 – Simple Stop List View Screen

Table 13, Simple Stop List View controls

Control	Function	Description
1	File Select	Opens the File Pop-up Menu
2	List Select	Opens the List Pop-up Menu
3	Line #	Line Number listed below
4	Cuts Required	Cuts required of each line listed below
5	Length	The length that needs to be cut listed below
6	Cuts Done	The number of cuts done on that line listed below
7	File Name	File Name displayed here (blank if un-saved).
8	Exit	Exit List View and return to simple stop home.
9	Time display	This tells you what the current time is, in 24hr time
10	Enable Select	Press this option to enable the trolley to reconnect to the operating system
11	Disable Select	Press this option to disable the trolley from the operating system
12	Reset Select	Press this option to reset the Simple Stop and send any changed settings to the servo drive. Once the reset has been activated, the trolley will need to be enabled and homed. Reset is also used to clear any faults. If it does not clear the fault, then contact Spida Machinery.
13	Home Select	Press this option to send the Trolley to the home position
14	Selected Line	Blue if cuts are still required, dark green if all cuts are done
15	White Row	Cuts are still required to be done on this line.
16	Green Row	All required cuts have been done on this line.
17	Current measurement display	This is where the actual distance between the saw and the Stop is displayed
18	Main measurement display	This is where the required material length (or the distance between the saw and the Stop) is displayed
19	Move Select	This will move the stop to the next cut location. **Note:** If the “Auto Move When Saw Back” is enabled, and a saw back sensor is installed, the stop will automatically move to this position.

8.4.1 Load File

To load a file, press the “file” button then press the “Load File” button on the pop-up menu at the bottom of the screen. Select the .LFF file you would like to open then press the “Load Job File” Button to open it.

8.4.2 Loading a File from USB

Insert the USB into the Simple Stop, press the “file” button at the top of the List View screen, then press the “Load File” button on the pop-up menu at the bottom of the screen. In the File explorer press the top Line “/ ..” to go back a directory, do this until you find a folder called “/ usbhost0” click on this directory to view the files on your USB drive. Select the file that you would like to open from this directory, then press the “Load Job File” Button to open it.

8.4.3 Save File

To save a file, press the “file” button then press the “Save File” button on the pop-up menu at the bottom of the screen. If the file was loaded it will save the changes to the file; otherwise a new file will be created and named as the time and date it was saved.

8.4.4 Export File to another device

This allows wireless sharing of Job Files (.LFF) between devices.

1. Connect a Bluetooth device that is either:
   - Running the Simple Stop Assistant app
   - Another Simple Stop

   See Connecting a Bluetooth device for more information.
2. Press the “file” button, then press the “Export File” button.
3. Select the Job File you would like to export, then press the “Send Job File” button.

The connected device will then receive the file.

8.4.5 List Manipulation

Press the “List” button at the top of the screen (see Figure 15, control 2), and a pop-up menu will appear. When starting a new list add as many lines as required, then enter the length of the cuts and the number of cuts required for each line.

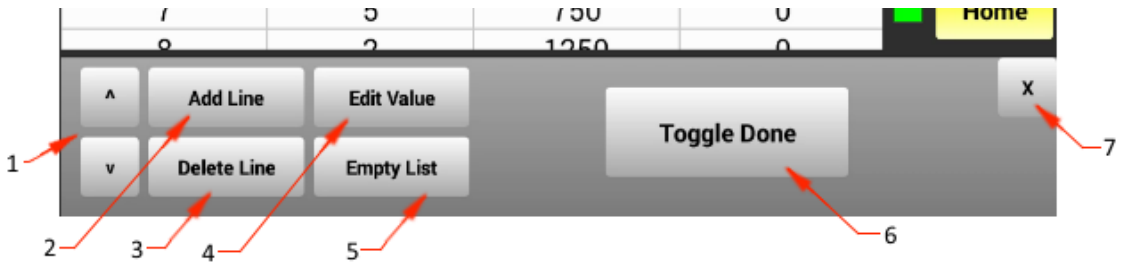


Figure 16 – List Pop-up menu

Table 14, List Pop-up menu controls

Control	Function	Description
1	Move Row (v/^) Select	Press the appropriate option to move the selected row up or down the list
2	Add Line Select	Press this option to add a blank line below the selected row
3	Delete Line Select	Press this option to delete the selected Row
4	Edit Value Select	Press this option to open the Numpad to edit the value in the selected cell. **Note:** this can also be done selecting and then holding your finger on the selected cell.
5	Empty List Select	Press this option to clear the entire list (deletes all rows).
6	Toggle Done Select	Pressing this option marks the line as done by changing the value in “Cuts Done” to that of “Cuts Required”. Press again to set the “Cuts Required” value to zero.
7	X (Exit) Select	Press this option to close the List pop-up menu

8.4.6 Using List View to Make Cuts

1. Load a File. Press the “file” button, then press the “Load File” button on the pop-up menu at the bottom of the screen. Select the .LFF file you would like to open and press the “Load Job File” Button.
2. Select the line you would like to cut, then press the “Move” button and the Trolley will move into position.
3. Place the material you would like to cut against the trolley-stop and make the cut. If the saw is fitted with a saw back sensor, the cuts done will increment up in value.

Note: if your saw is not fitted with a saw back sensor you can either change the value in “cuts done” or press the “Toggle Done” button in the List pop-up menu once all the cuts on the selected line are complete.

4. Repeat Steps 2 and 3 as required.

9 Operation

Note: The Simple Stop is to be operated in accordance with this manual. Deviation from this specified operation may result in defective products, incorrect measurements, or injury.

9.1 Machine Set-up

Before operations commence, the operator must ensure that the Simple Stop has been set-up correctly.

To set-up the machine:

- Ensure that the safety guards are secured and correctly positioned.
- Complete a visual inspection of potential hazards near the proximity of the machine.
- Check that there are no obstructions either to any moving parts; between the Simple Stop and any adjacent machining area; or further down the framing line.
- Complete all safety checks required

Once the Simple Stop and the surrounding area are satisfactorily clear, the Simple Stop can be switched on.

An initial calibration can then be performed, as per section 7. At this point it is necessary to mark the home position of the stop on the bench.

9.2 General Operation

The Simple Stop can adjust to the cut length required. It provides a stable guide for material to be pushed up against, so that the material can be cut accurately. The Simple Stop can be set up to cut material in either left or right configurations.

Before operations commence, first set the stop to “home” to ensure that it is working correctly. The trolley should be homed at the start of every shift.

- A small sensor block underneath the stop activates the proximity sensor when the stop has reached home. The stop is in the correct home position when the back edge of the sensor block lines up with the sensor.
- Generally, the machine will only be “homed” once per day; but it will need to be “re-homed” each time the machine is turned on.

Set up the length of cut required into the HMI as per section 7 and/or 8, and the stop will move accordingly.

Place material to be cut up against stop and cut material with saw.

- **Always measure the first cut of the day, to check for any inaccuracies.**

Continue cutting as necessary, changing the cutting length via the HMI as required.

Re-calibrate the machine when discrepancies in length occur, as per section 7.2.5, to ensure continually accurate material measurements.

Note: The HMI accounts for the distance from the home position to the saw blade, and for the distance from the front of the stop to the back edge of the sensor block. This is done so that the distance from the saw blade to the front of the stop is equal to the length of cut required.
The Simple Stop is accurate to within +/- 0.5mm (0.02 inch).

In all instances, the operators must:

- Stay aware of people/items moving around the Stop to avoid collisions.
- Ensure nothing gets in the way of moving parts/material.
- Switch off the Simple Stop when not in use, or when performing maintenance

9.3 End of Operations

Once operations are complete, ensure that the Simple Stop is switched off and any foreign tools/equipment are removed.

10 Parts Identification

Note: The Simple Stop computer is versatile and can be used on a number of different tables. In this manual the Simple Stop computer is shown being used on a 1213000 – 03 Roller table.

10.1 Top Level Assembly (1213RSSIMPLE)

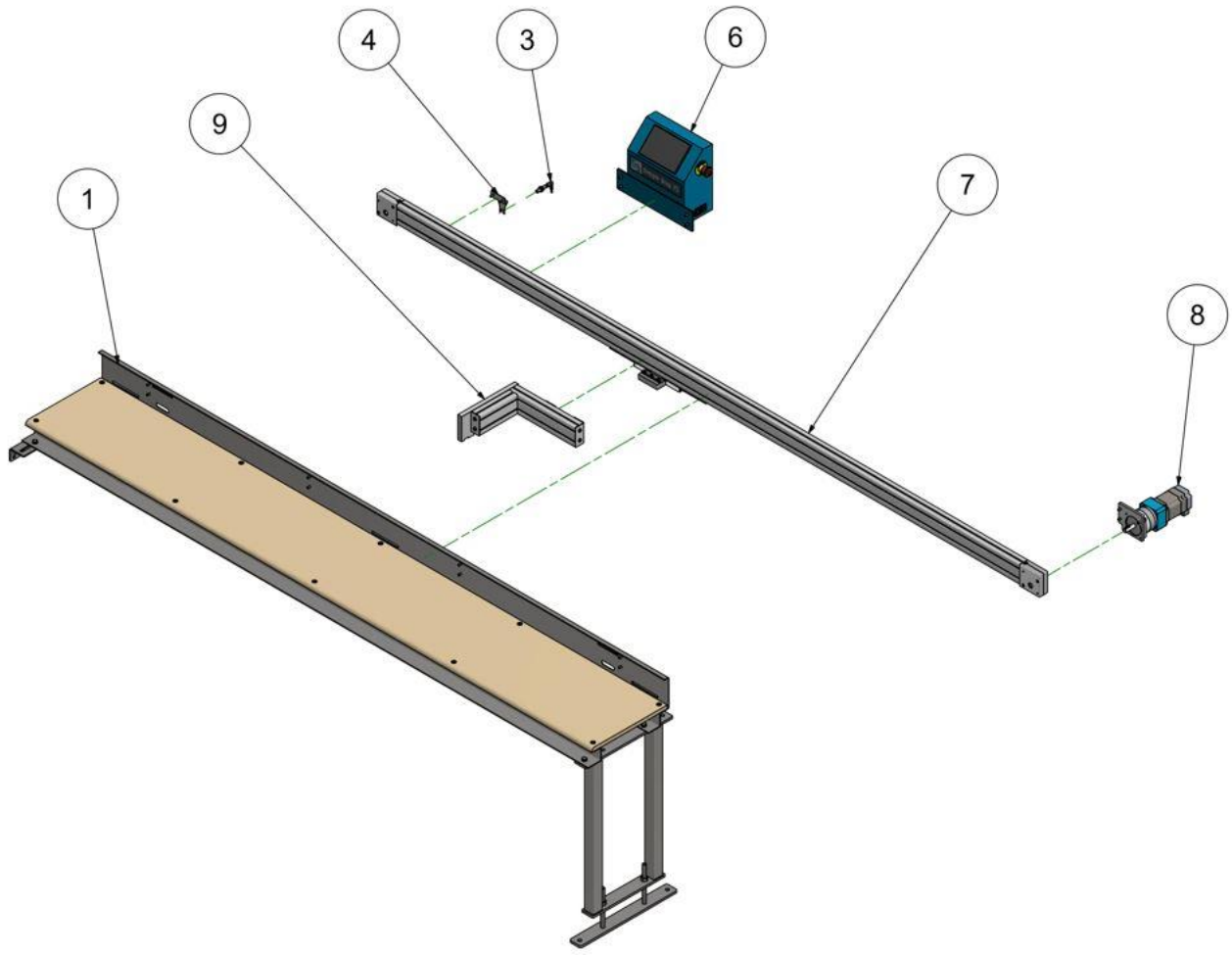


Figure 17, Simple Stop

Table 15, Parts List – Simple Stop

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1213000 - 03	Guide Profile Flat Table assembly 3m (10')
2	1	NAMEPLATE	SM2012 Ltd Name / Serial No. P
3	1	PSIME1204BPSZC0S	SICK - Proximity Sensor
4	1	SMPBKT01	Sensor Bracket
5	2	SMPDEC046	SimpleStopV2 270x65 SPIDA
6	1	SMPEKSS	Computer Control Panel
7	1	SMPGPFA3300	Fence assembly
8	1	SMPGPGK1	Motor/gearbox kit - Straight box
9	1	SMPGPTK3	Guide profile trolley kit

10.2 Guide Profile Flat Table Assembly (1213000 – 03)

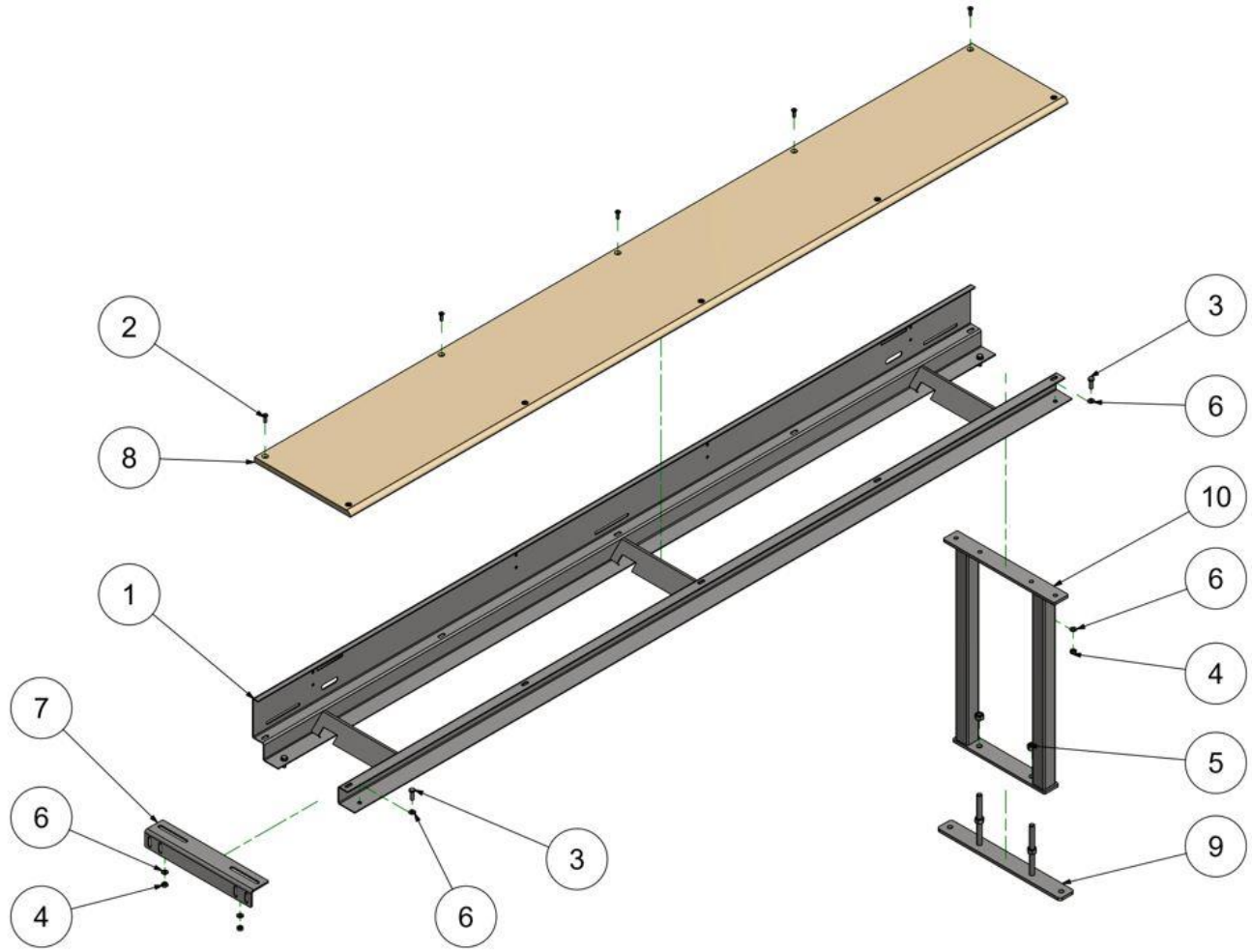


Figure 18, Guide Profile Flat Table Assembly

Table 16, Guide Profile Flat Table Assembly parts list

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1213001 - 3000	Rapid Stop Table 3000 - Folded
2	10	HWCSM825CS	Hex Socket CSK Cap Screw M8x25
3	4	HWHBM1030	Hex bolt M10x30
4	4	HWNHM10	Hex nut M10
5	4	HWNHM16	Hex nut M16
6	8	HWWFM10	Washer Flat M10
7	1	SMPBKT11	Saw Connector Brkt
8	1	SMPBT3000-400-18-P	Bench top 3000x400x18
9	1	SMPTBF01	SMP - Foot v.1
10	1	SMPTBL02	SMP - Leg v.2

10.3 Fence Assembly (SMPGPFA3300)

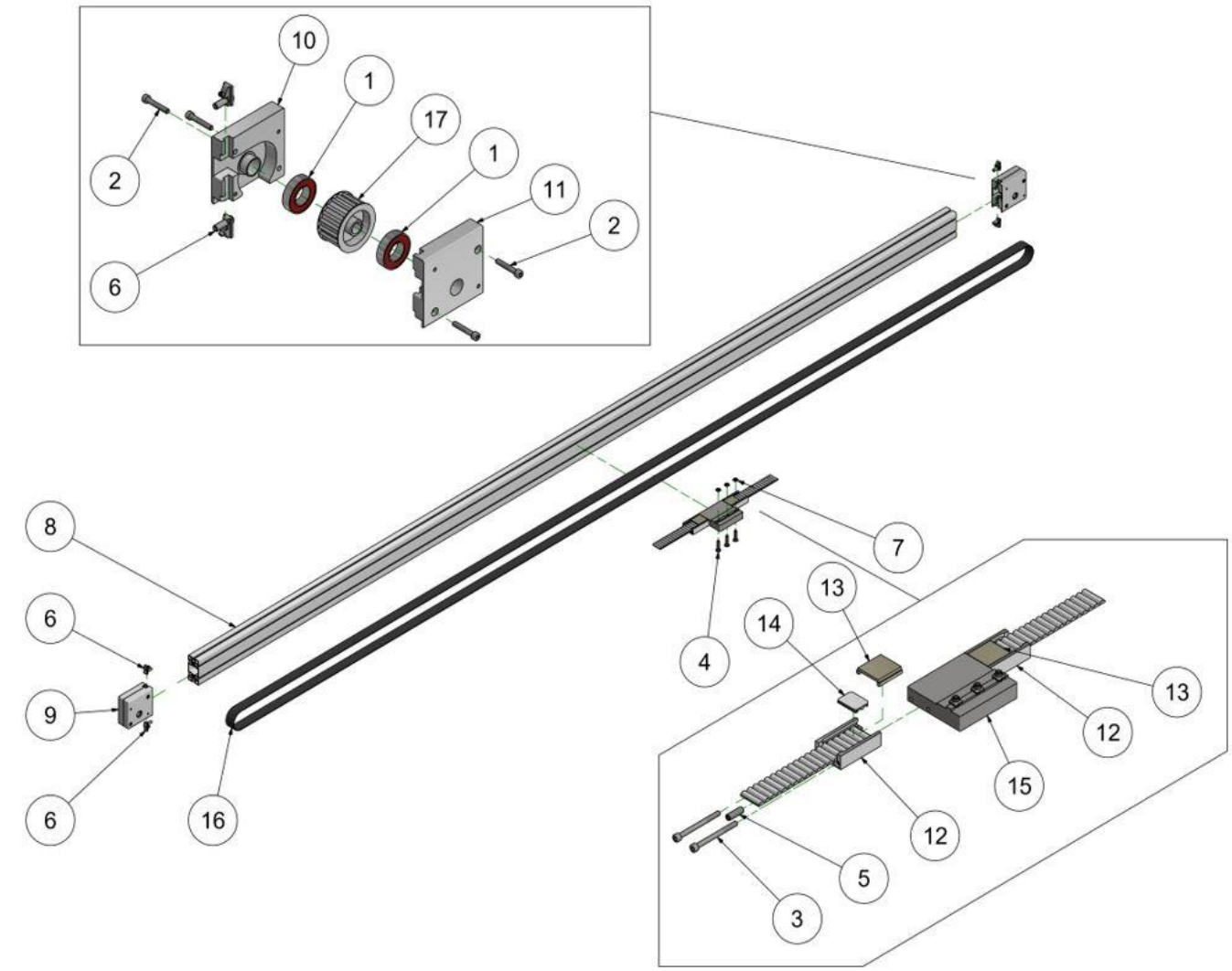


Figure 19, Fence Assembly

Table 17, Fence Assembly parts list

ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	BRG6005ZZ	Bearing 47x25x12
2	8	HWCSM635	Hex Socket Head Cap Screw M6x35
3	4	HWCSM670Z	Hex Socket Head Cap Screw M6x70
4	3	HWCSM835CS	Hex Socket CSK Cap Screw M8x35
5	2	HWGSM825	Hex socket grub screw M8x25
6	4	MT21.1018	Power lock fasteners
7	3	MT21.1351/2	M8 Sq Nut - Posn Fixing
8	3300.000 mm	SMPGP9045	Guide Profile
9	2	SMPGPPB45	Pulley Block 45mm
10	2	SMPGPPBA	Pulley Block part 1
11	2	SMPGPPBB	Pulley Block part 2
12	2	SMPGPTB - 01	Belt tensioner body
13	2	SMPGPTB - 03	Tension block slider
14	2	SMPGPTB-02	Tension block insert
15	1	SMPGPTC	Tensioner connector
16	1	TRTIB-AT10/32	Timing Belt AT10/32. Open 32mm. Code 872431
17	2	TRTIP19AT1032F-BF	Timing Pulley - 19T 10P 32W 16 Bore

10.4 Trolley/Stop Assembly (SMPGPTK3)

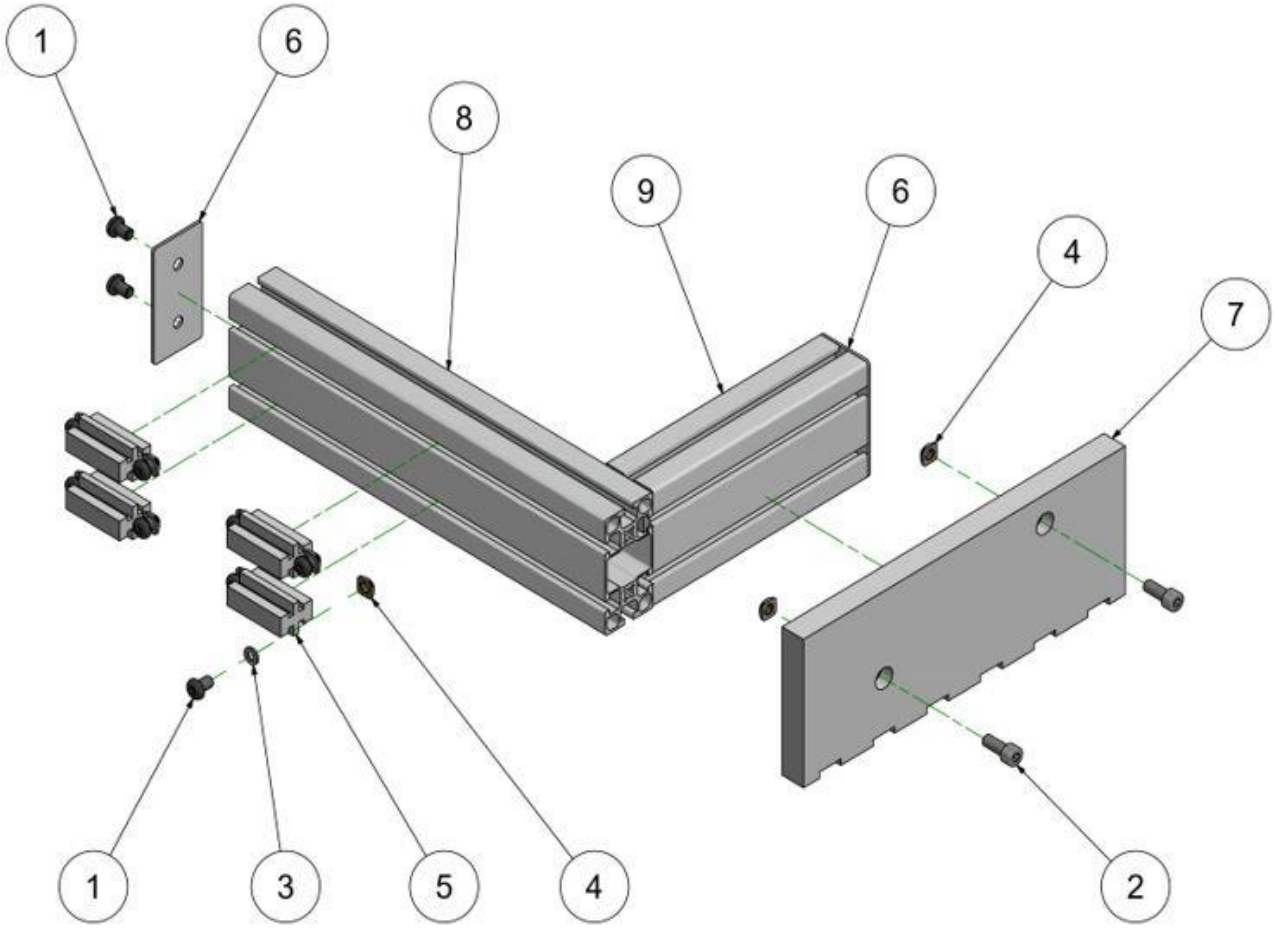


Figure 20, Trolley/Stop Assembly

Table 18, Trolley/Stop Assembly parts list

ITEM	QTY	PART NUMBER	DESCRIPTION
1	12	HWCSM812BH	Hex Socket BH cap Screw M8x12
2	2	HWCSM820	Hex Socket Head Cap Screw M8x20
3	8	HWWFM616	Washer - Flat - M6ZP
4	10	MT21.1351/2	M8 Sq Nut - Posn Fixing
5	200.000 mm	SMPGPDS	Slider for GP
6	2	SMPGPEP	Guide profile end cap
7	1	SMPGPPP1	Pusher Block
8	350.000 mm	SMPSP9045	Guide Profile
9	200.000 mm	SMPSP9045	Guide Profile

10.5 Gearbox Motor Assembly (SMPGPGK1)

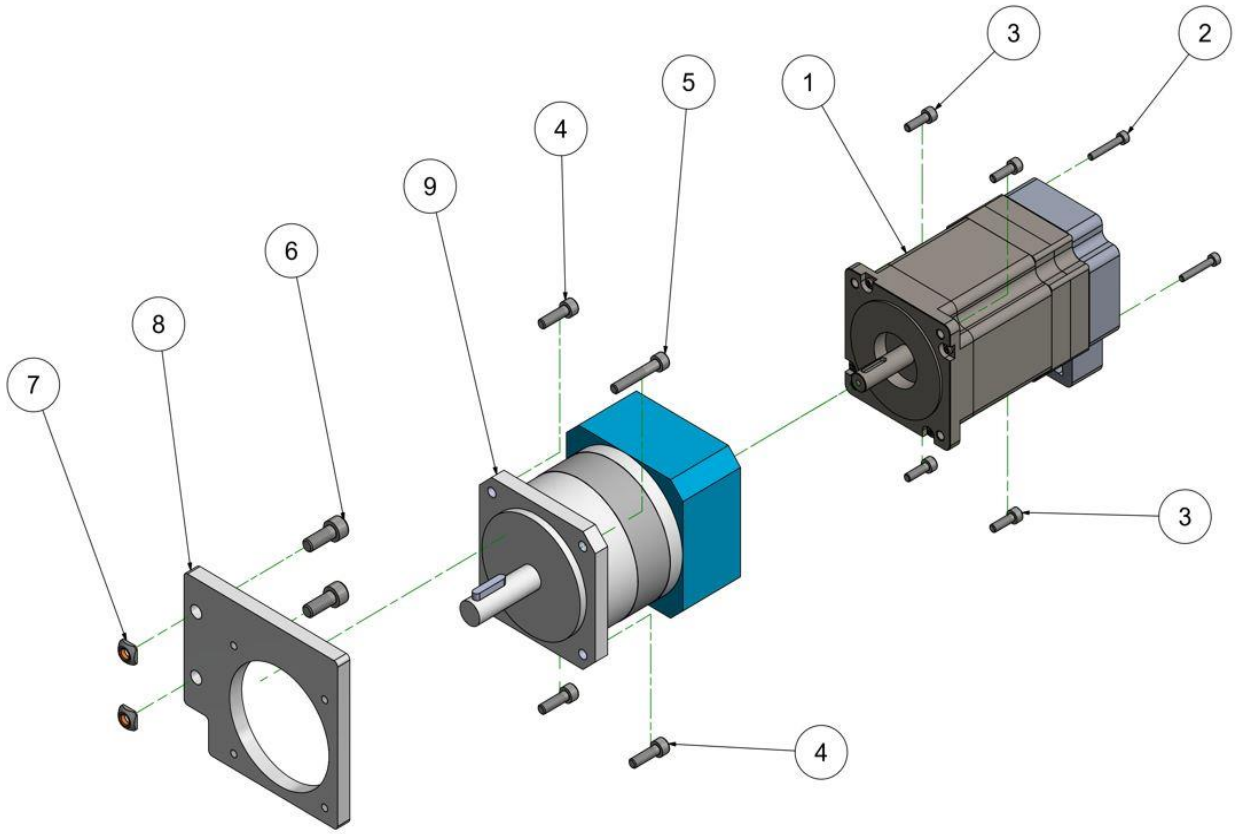


Figure 21, Gearbox Motor Assembly

Table 19, Gearbox Motor Assembly parts list

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	EMBLY343160V5K	BLY3473D Brushless 5000RPM 160VDC 440W Motor Complete
2	2	HWCSM425	Hex Socket Head Cap Screw M4x25
3	4	HWCSM516	Hex Socket Head Cap Screw M5x16
4	3	HWCSM620	Hex Socket Head Cap Screw M6x20
5	1	HWCSM635	Hex Socket Head Cap Screw M6x35
6	2	HWCSM820	Hex Socket Head Cap Screw M8x20
7	2	MT21-1351	M8 Sq Nut - Posn Fixing
8	1	SMPPLT20	Mount Plate GB to Guide Profile
9	1	TRGB0901-NS-010-12-16	Gearbox - 34 Motor - 12mm input 16mm output

10.6 Simple Automation Kit (SMPEKSS)

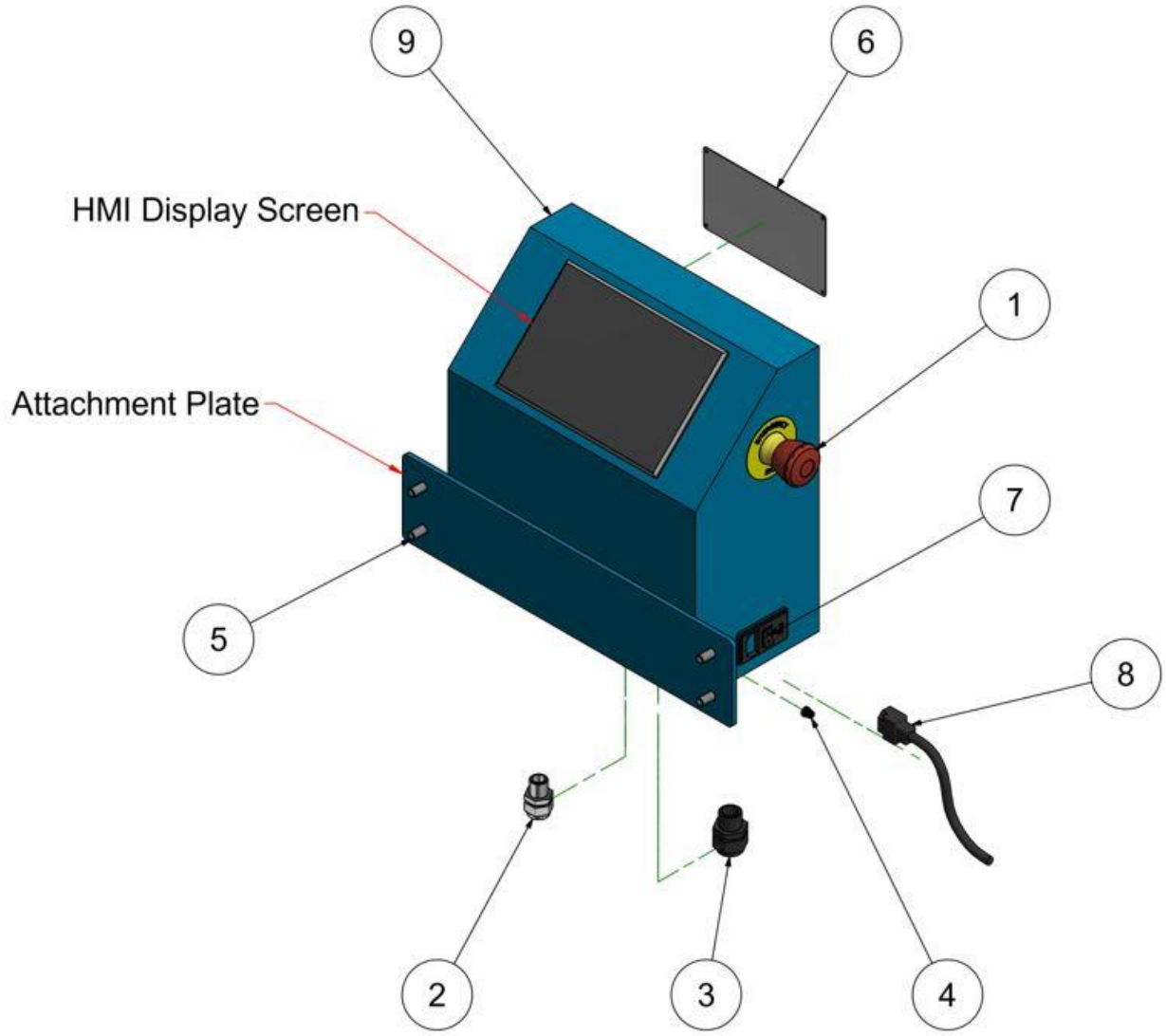


Figure 22, Simple Automation Kit

Table 20, Simple Automation Kit parts list

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	800f-1ym3_EStop	Emergency Stop
2	1	ELECGM16	Electronic port - M16
3	1	ELECGM20	Electronic port - M20
4	1	Fuse	Fuse
5	4	HWCSM820	Hex Socket Head Cap Screw M8x20
6	1	NAMEPLATE	SM2012 Ltd Name / Serial No. P
7	1	On/Off switch	On/Off Switch
8	1	Power Plug asymmetrical	Power Plug asymmetrical
9	1	SMPEKSS	Computer Control Panel

11 Maintenance

If a part is damaged substantially, or if anything covered in this maintenance section cannot be fixed by general maintenance; then do not use the Simple Stop, and contact a supervisor, maintenance engineer, or Spida Machinery.

Table 21, Maintenance intervals

Check	Day	Week	Month	½ Year
Guards in place	x			
Work area is clear	x			
Sensors	x			
Clean the Simple Stop of any build up	x			
Noises or Vibrations	x			
Clean aluminium extrusion slots	x			
Emergency stop working	x			
Inspect Timing belt			x	
Pulley block assemblies in good condition			x	
Motors running smoothly			x	
For loose or damaged bolts			x	
Floor bolts for tightness				x
Inspect stop for excessive play				x
Trolley Slides				x
Bench Top				x
Belt tensioned				x
Maintain Simple Stop				x

Failure to perform these checks as per schedule indicated in Table 21 may result in serious damage or a severe accident.

WARNING! Electrical power supply must be isolated from machinery and appropriate danger tagging in place whenever any maintenance is being performed on machinery. Any defects, which are found on inspection should be rectified immediately and reported to the supervisor for appropriate action.

11.1 Maintenance items

11.1.1 Guards

Check Guards are in place, and they are tight, with no loose bolts. Guards should always be operational.

11.1.2 Keep work area clear

Ensure that the area surrounding the Simple Stop is free of trip hazards, unnecessary tools, or other debris. There should be no reason for passers-by to approach or pass near the Simple Stop while it is in use.

11.1.3 Sensors

Check the home sensor is free and clear of any build-up of dust and securely fastened; sensor malfunctions will prevent the stop from homing correctly and/or will cause calibration error.

If the sensor is loose, check the positioning of the sensor is still correct and that there is a 1.5 – 2.5mm gap between the sensor and timing belt sensor block; then tighten any screws/parts as required. If the position is incorrect, then set proximity position as per Section 11.2 as required.

Sensor positions will need to be reset whenever a sensor, lead or bracket is replaced.

11.1.4 Clean the Simple Stop of any build up

Keep the Simple Stop free of any build-up of debris. Moving parts should not be obstructed, and the Simple Stop should be usable without any hindrance. Remove and replace components as required to clean out any built-up debris or dust. This may involve the removal of the pulley block assemblies to clean around the ends of the belt. Ensure that any components removed are then replaced correctly.

Remain aware of the condition of the timing belt while in use, to ensure that no large pieces of debris become ensnared. Ensure that this is done with utmost care, and that body parts and clothing are well away from moving parts while motors are on. If there are any obstructions that prevent any parts from moving freely, then only attempt to clear obstructions once the Simple Stop has been electrically isolated, and the belt has stopped moving.

11.1.5 Noises or vibrations

Take note of any unusual noises or vibrations. Do not operate the Simple Stop if the cause of any vibrations or unusual noises cannot be found.

10.1.7 Clean aluminium extrusion slots

Keep aluminium slots in fence clean and free of any dust or obstructions.

11.1.6 Emergency Stop Button

Check emergency stops are working and that they stop the machine when activated. This test should be performed before using the machine, at least once a day.

Whenever the Emergency Stops are used, ensure that the Trolley is reset and homed. This will ensure that the Simple Stop will continue working as required, and that accurate measurements are retained.

11.1.7 Inspect Timing Belt

The timing belt should move around the guide profile smoothly and easily, and there should be no visible wear on either the timing belt or the guide profile. Check for damage on the timing belt, and repair or replace as required. Do not use the Simple Stop if the timing belt is unable to be repaired or is damaged significantly.

11.1.8 Inspect Pulley Block Assemblies

The timing belt should move easily around the pulleys within the pulley block assemblies while the motor is running. The pulley block assemblies should be maintained regularly to check on the condition of the pulley and bearings. However, if the timing belt is catching or not moving smoothly; or there are unusual vibrations or noises within the assemblies; then it may be necessary to remove the outer covers of the assemblies to check on the condition of the pulley, bearings, and timing belt.

If any teeth of the pulley are chipped or broken, then replace the pulley as required. Do not use the Simple Stop if the pulley itself is not turning, and cannot be fixed, or if any of the above is unfixable.

Ensure there are no loose, damaged, or missing bolts, and replace or tighten as necessary.

11.1.9 Motor

The motor should stop and start with no issues and should easily move the timing belt around the guide profile. Clean the motor regularly by blowing out dust and other debris with dry compressed air.

- Check the point where the motor joins the gearbox (Screws, mount connection, etc)
- Check the shaft locks (this shaft should not be loose)
- Check condition of the motor

Do not use the Simple Stop if there are any substantial or unfixable issues with the motor.

11.1.10 Loose Fasteners and Fixings

Check for loose, missing, or damaged bolts especially on guards, pulley block assemblies, stop assembly and floor fixing. Tighten or replace where necessary.

11.1.11 Inspect stop

The stop should slide freely when changing position and should stop completely when holding position. The stop should be maintained every month to:

- Check that it is still moving/stopping correctly
- Ensure that it is still aligned correctly, and that the pusher pad is square to the extrusion
- Check that there is no excessive play
- Make sure that all moving parts can move freely.

All assembly components should also be checked to ensure there is no damage or wear that will affect the performance of the assembly. Ensure that there are no loose, damaged, or missing bolts, and replace or tighten as necessary.

Do not use the Simple Stop if the stop is staggering, not moving, and/or is stopping in the wrong position; if the stop is not correctly aligned with the guide profile or the pusher block is misaligned or bent in some way; if the stop moves for any reason when it is not supposed to; or if any of the movable parts are not moving correctly; and if any of the above cannot be fixed by general maintenance.

11.1.12 Trolley Slides

The sliders on the Simple Stop Trolley should allow the trolley to move up and down the Fence smoothly and easily. Check the slides for excessive play and/or wear and tighten/replace if necessary. Use the guide in section 11.3 to replace the sliders, or alternatively contact Spida Machinery.

11.1.13 Bench Top

Check the bench top for excessive wear or damage and replace if necessary. If the stop is interfering with the bench top, check that the trolley and slides are positioned correctly and that the support screws are tight. This should be checked every six months, or when the belt or trolley slides are replaced.

11.1.14 Belt Tensioned

The timing belt needs to be correctly tensioned. The belt can be tensioned using the rear tensioning block located underneath the Simple Stop fence. Training for this will be given when the Simple Stop is installed.

11.1.15 Maintain Simple Stop

Check all major operating components for wear, fatigue, and alignment. Adjust, tighten, or replace components as required.

Do not use the Simple Stop if it is damaged significantly or if it is not working correctly, and all other mentioned maintenance is not applicable.

11.2 Set Proximity position

The Proximity Sensor position will need to be reset whenever a sensor, lead or bracket is replaced.

Tools Required: 2x 17mm Spanners (to tighten sensors)

Homing Proximity Sensor Configuration

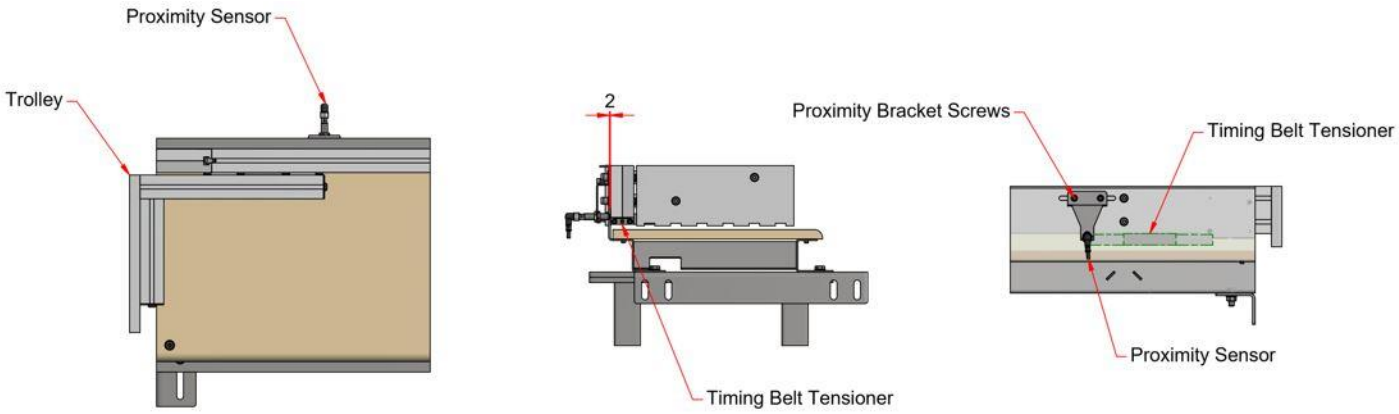


Figure 23, Simple Stop Homing Proximity sensor configuration

- Power off saw and Simple Stop.
- Push the stop to the minimum position (closest to saw).
- Loosen proximity bracket screws.
- Position the proximity sensor to the rear of the timing belt tensioner as shown in Figure 23.
- Tighten proximity bracket screws.
- Ensure there is a 1.5 – 2.5mm gap between face of sensor and timing belt tensioner.
- Check home position is correct, if not alter in set up screen.
- Reset, enable, home, trolley.
- Send out to the max table length, and check.
- If incorrect recalibrate trolley as normal.

11.3 Replacing Trolley Slides

When replacing the Trolley Slides, follow these steps as described. Alternatively, contact Spida Machinery.

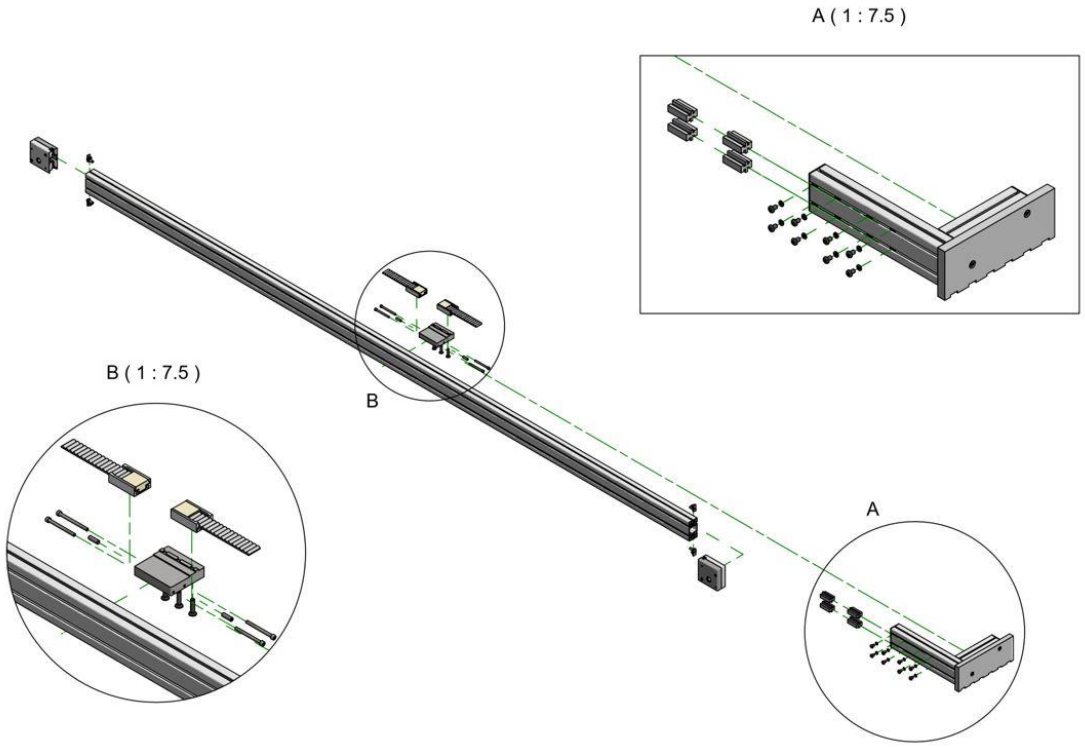


Figure 24, Trolley slide replacement

Tools required: Set of Allan keys

- Disconnect power.
- Disconnect lead and remove home sensor.
- Disconnect leads from and remove motor.
- Undo 16 cap screws holding fence assy.
- Turn upside down, and release belt tension. (Grub screw in centre of tensioner)
- Remove tensioners, (outside screws.)
- Undo pulley blocks from each end, grub screw top and bottom.
- Slide trolley out at one end.
- Undo grub screws either side of slides, remove, replace.
- Blow out the aluminium extrusion, and pulley blocks.
- Reassemble, tension belt (put most tension at the front, leaving adjustment at rear if more tension is needed later).
- Bolt fence back up.
- Fit motor and leads.
- Fit home sensor and lead.
- Start up, enable home trolley.
- Check home position is correct, if not alter in set up screen.
- Reset, enable, home, trolley.
- Send out to the max table length, and check.
- If incorrect recalibrate trolley as normal.

11.3.1 Reference Distances for Trolley sliders (on SMPGPTK3)

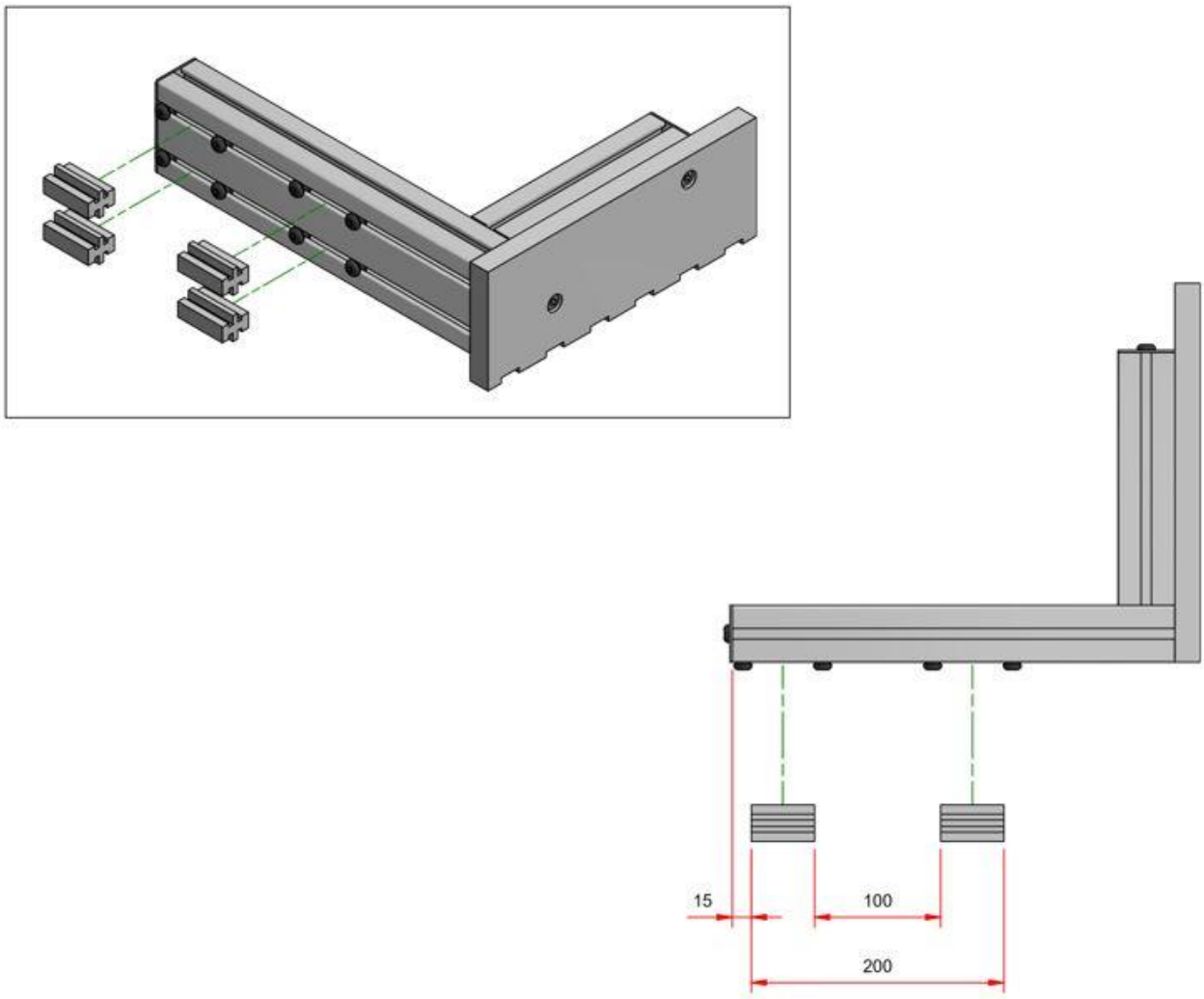


Figure 25, Stop Slider distances

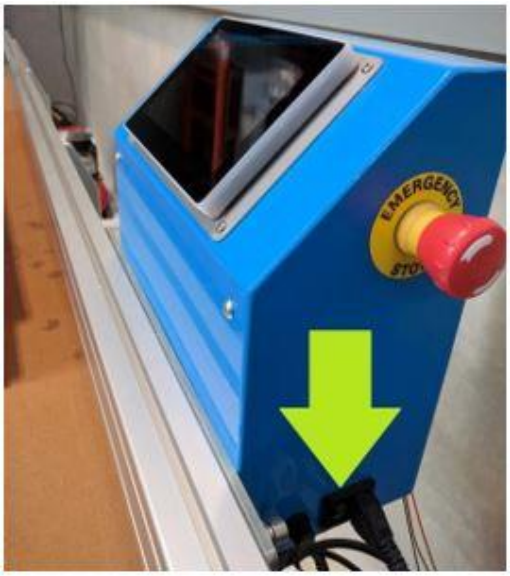
The above figure shows the required distances in mm between the sliders, and between the slider and the end of the Stop. Use these distances when the sliders need to be replaced during maintenance.

11.4 Replace HMI Display

11.4.1 Remove Display

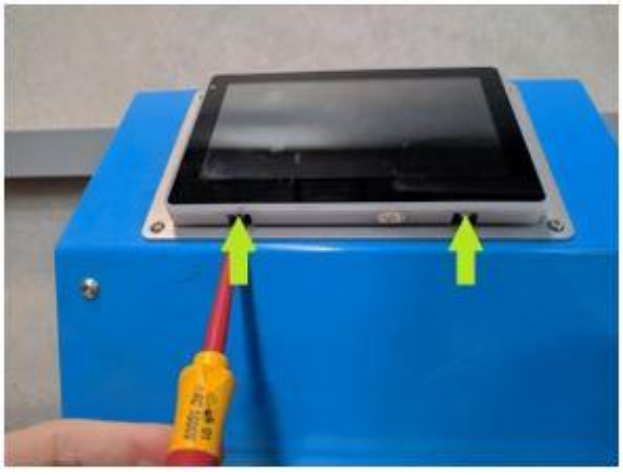
11.4.1.1 Power Down

Power down the Simple Stop using the power switch located on the lower right-hand side of the blue panel.



11.4.1.2 Remove screws

There are two screws located at the bottom of the Simple Stop display. Remove these and place them somewhere safe for later.

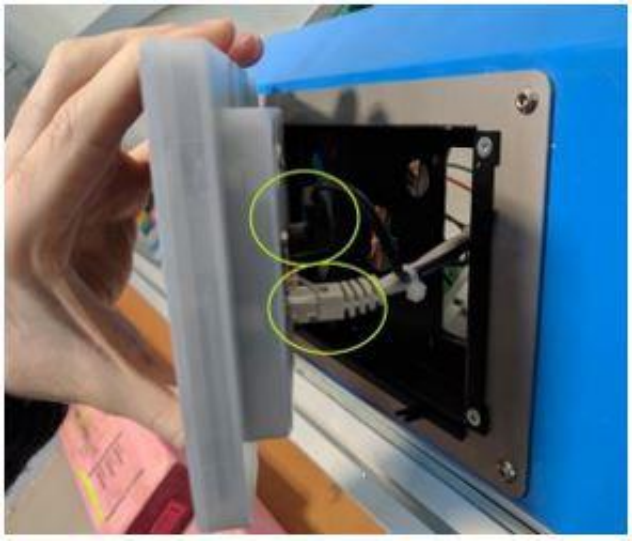


11.4.1.3 Remove screen

Now that the screws are removed, gently push the display upwards until it comes free, then carefully pull away from the blue panel.

11.4.1.4 Remove cables

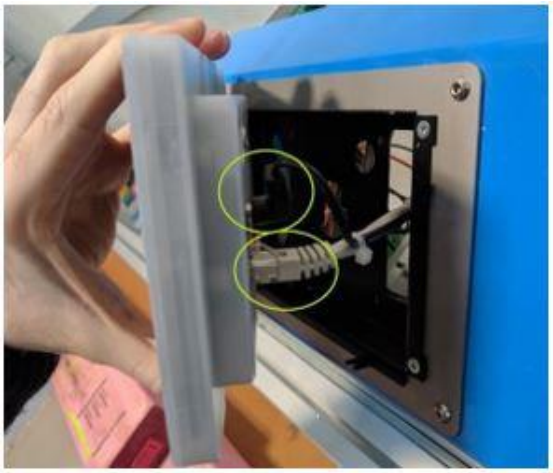
There are two cables connecting the display to the rest of the Simple Stop (Power and Communications). Gently disconnect the cables.

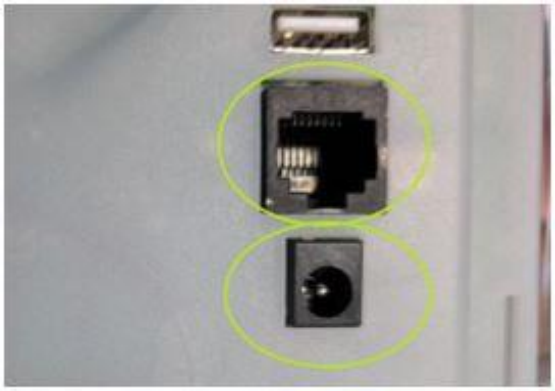


11.4.2 Replace Display

11.4.2.1 Attach cables

There are two cables needed to connect the display to the rest of the Simple Stop (Power and Communications). Gently plug these in.



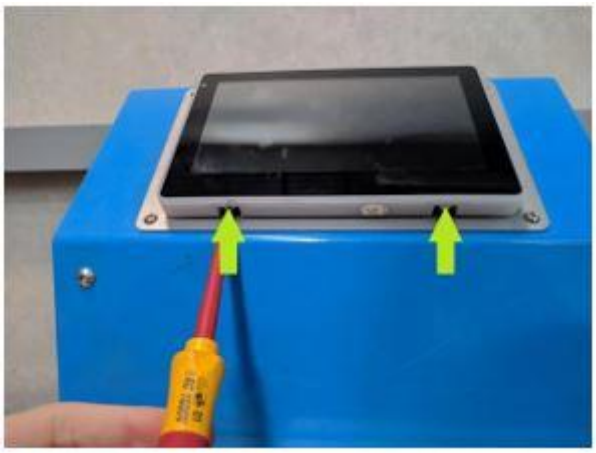


11.4.2.2 Slide Display into place

Gently slide Display down into place; ensuring all cables are clear.

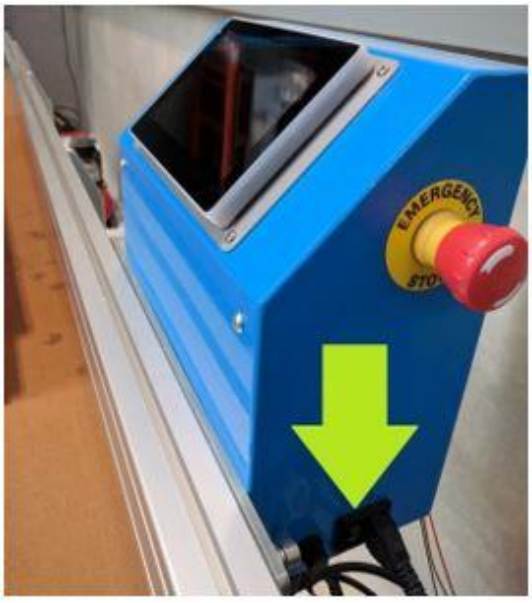
11.4.2.3 Attach Display

Fasten the display using two screws at the bottom of the display.



11.4.2.4 Power Up

Power up the Simple Stop using the power switch located on the lower right-hand side of the blue panel.



12 Foreseeable Misuse

Through experience, SPIDA's technical staff have listed (in order of occurrence) the most common misuses of the machinery by operators, the symptoms that result and the rectification required to address the misuse and return the machine to optimal working order.

Table 22, Common misuse issues

MISUSE	SYMPTOM	RECTIFICATION REQUIRED
Lack of cleaning	Stop not moving	- Clean the Simple Stop, especially table surfaces, sliding surfaces, pulleys, timing belt, and motor. - Remove any large pieces of debris and clean out any dirt. - Clean and check motor
	Machine overheating	
	Motor tripping out or overloaded	
Lack of care	Stop not moving correctly	- Repair or replace any damaged, loose, or missing parts. - Remove any loose or unnecessary objects. - Re-calibrate parts as required - Note, if possible, how each part was mistreated, and train operators to prevent additional misuse of these and other parts. - Contact Spida Machinery in the event of a major crash
	Excessive wear of moving parts	
	Misaligned Stop, fences, and plates	
	Bent fences or Stopper plates	
	Parts not working as designed	
	Unusual amount of noise while parts are moving	
	No operation or loss of control data	
Lack of Regular Calibration	Creeping measurements	- Re-home the Stop once per day, at the start of the day; or if the machine is restarted. - Re-calibrate the machine only when discrepancies in length occur.
Stop face damaged by material	Sagging Stop face may contact table or roller bed	- Tightening of support screws, retraining of operator

Any other misuse and resultant damage of the machine is deemed non-foreseeable as its occurrence is not consistent.

13 Trouble Shooting

Table 23, Trouble shooting

Trouble	Probable Causes	Correction
Motor not running smoothly	Excessive noise or vibration	Tighten any loose bolts. Make sure motor is tightly secured.
	Motor not switching on	Check electrical leads for faults. Turn machine off and on again.
	Drive shaft not turning	Remove any debris that may be blocking movement. Tighten the coupling if necessary. Ensure keyway is correctly located.
	Drive shaft not turning uniformly	Tighten any loose bolts, ensure shaft is located correctly, check condition of internal motor bearings.
	Overheating	Blow out any debris with dry compressed air, ensure motor ventilation passages are unclogged, make sure there is nothing to obstruct the free circulation of air or dissipation of heat around the motor.
	Motor is damaged	Repair/replace motor
	Motor is tripping	Turn machine off and on again.
Motor does not run at full speed	Power voltage too low	Test voltage
Motors tripping out	Moving parts obstructed	Clear obstruction
	Motor vents blocked	Clean motor
	Motor is damaged	Repair/replace motor
Timing Belt not moving	Motor not working	Check electrical leads. Ensure motor is clean, dry, and free of debris. Turn the machine off and on again.
	Misalignment	Ensure belt is aligned correctly on fence and around rollers/pulley block, and replace if damaged or excessively worn
	Obstruction	Clear obstructions around timing belt, pulleys, and drive shaft.
Stop not moving	Motor not working	Check electrical leads. Ensure motor is clean, dry, and free of debris. Turn the machine off and on again.
	Obstruction	Clear any obstructions around the pusher, sliders, or belt tensioners.
	Misalignment	Ensure that all parts of the Stop are aligned correctly with the fence and table.

Inaccurate Measurements/ Calibrations	Sensor Malfunction	If the sensor is not activating correctly, is damaged, or has some other issue, replace the sensor and re-set proximity position as per section 11.2. Re-calibrate the stop.
	Stop pushed out of place	Re-calibrate the stop.
	Bent or misaligned Stop	Repair or replace parts as required, re-calibrate the stop and re-set proximity position.
	Missing or damaged parts/parts moving incorrectly	Repair or replace parts as required. Re-calibrate and re-set proximity sensor position as required.
	HMI malfunction	Turn machine off and on again, otherwise contact supplier for further information. HMI malfunction could be for several reasons.
Screen not working	Screen malfunction	Turn machine off and on again
	Screen not turning on	Check input cables. Turn machine off and on again.
	Touch capability not working – Unable to utilise screen	Clear screen of any dust or debris. Check input cables. Turn machine off and on again.

If any of the above corrections do not solve the issue, then do not use the Simple Stop and contact a supervisor, maintenance engineer, or Spida Machinery.

14 Distributor & Repairer Contacts

14.1 Agent/Distributor

Company Name: _____

Address: _____

Contact Person: _____

Ph.: _____ Fax: _____

Mobile: _____ Email: _____

14.2 Automation Repairs

Company Name: _____

Address: _____

Contact Person: _____

Ph.: _____ Fax: _____

Mobile: _____ Email: _____

14.3 Mechanical Repairs

Company Name: _____

Address: _____

Contact Person: _____

Ph.: _____ Fax: _____

Mobile: _____ Email: _____

15 Warranty

SM2012 Ltd, SPIDA Machinery, Tauranga, New Zealand, warrants the equipment listed below to the initial purchaser of the equipment only against defective workmanship and materials only, for a period of twelve (12) months from the date of shipment from SPIDA's factory, subject to the following conditions:

1. SPIDA extends the original manufacturer's warranty to SPIDA on buy-in items such as motors, saw blades and air cylinders or other such buy-in items but does not add its warranty herein described to such items.
2. This warranty only applies if:
   a. The attached copy of this warranty is signed by the initial purchaser and returned to SPIDA's address shown above within 14 days of shipment of the goods from SPIDA's factory.
   b. The equipment is installed by SPIDA or its licensed installer.
   c. Regular routine maintenance has been carried out on equipment in accordance with instructions in manual provided by SPIDA and proper housing and shelter provided for the equipment.
   d. The equipment is operated by competent personnel in accordance with the operating instructions set out in the manual provided by SPIDA and not otherwise.
   e. The equipment has not been subjected to alterations or repairs or dismantling without prior written approval of SPIDA. Any parts returned to SPIDA either for repair or consideration of a warranty claim consequent to an authorisation to dismantle must be shipped prepaid.
   f. SPIDA may, at its option, either repair or replace the defective part upon inspection at the site of the equipment where originally installed. The warranty does not cover the cost of freight, Labour or traveling for the removal or replacement of the defective parts.
   g. This warranty does not apply to any deterioration due to average wear and tear or normal use or exposure.
   h. In all warranty matters, including any question of whether this warranty applies to any claim, the decision of SPIDA is final.

This warranty is the only warranty made by SPIDA as the manufacturer and is expressly in lieu of and excludes all other warranties, conditions, representations and terms expressed or implied, statutory or otherwise, except any implied by law and which by law cannot be excluded. Neither SPIDA or its agents or servants will be liable in any way for any consequential loss, damage or injury including any loss of use, profits or contracts.

The law applicable to this warranty shall be the law of New Zealand and the parties hereto submit to the exclusive jurisdiction of the Courts of New Zealand.

Machinery/Equipment

The item bearing the following serial plate:

_____

Date of Shipment: _____

Signed by: _____

Name: _____

Position: _____

Acceptance of Warranty

I acknowledge and accept the contents of this warranty.

Signed by: _____

Name: _____

Company: _____

Position: _____

Date: _____

16 Electrical Drawings – NZ/AU

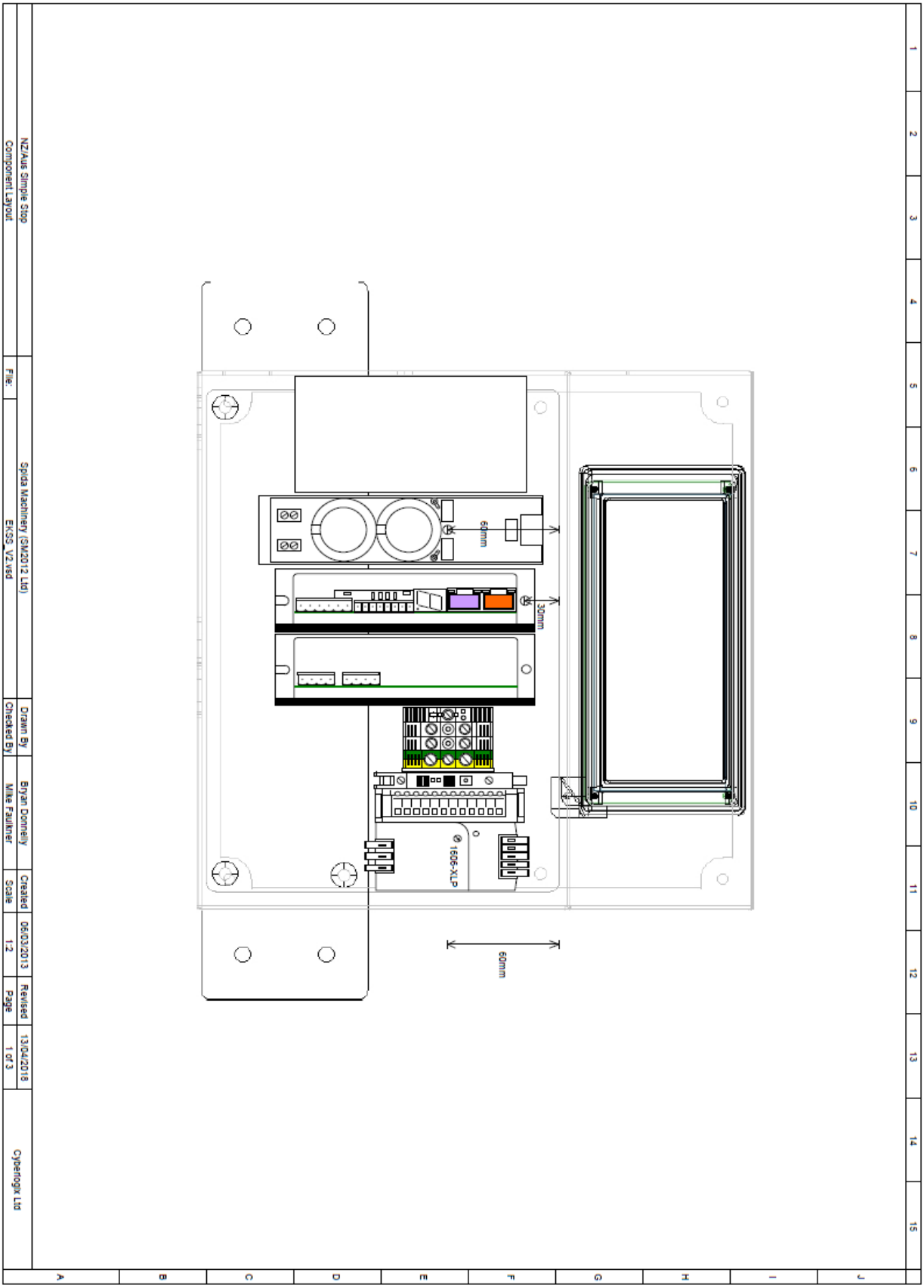


Figure 26, Gen 1 Simple Stop Electrical drawings – NZ/AU Version, pg 1

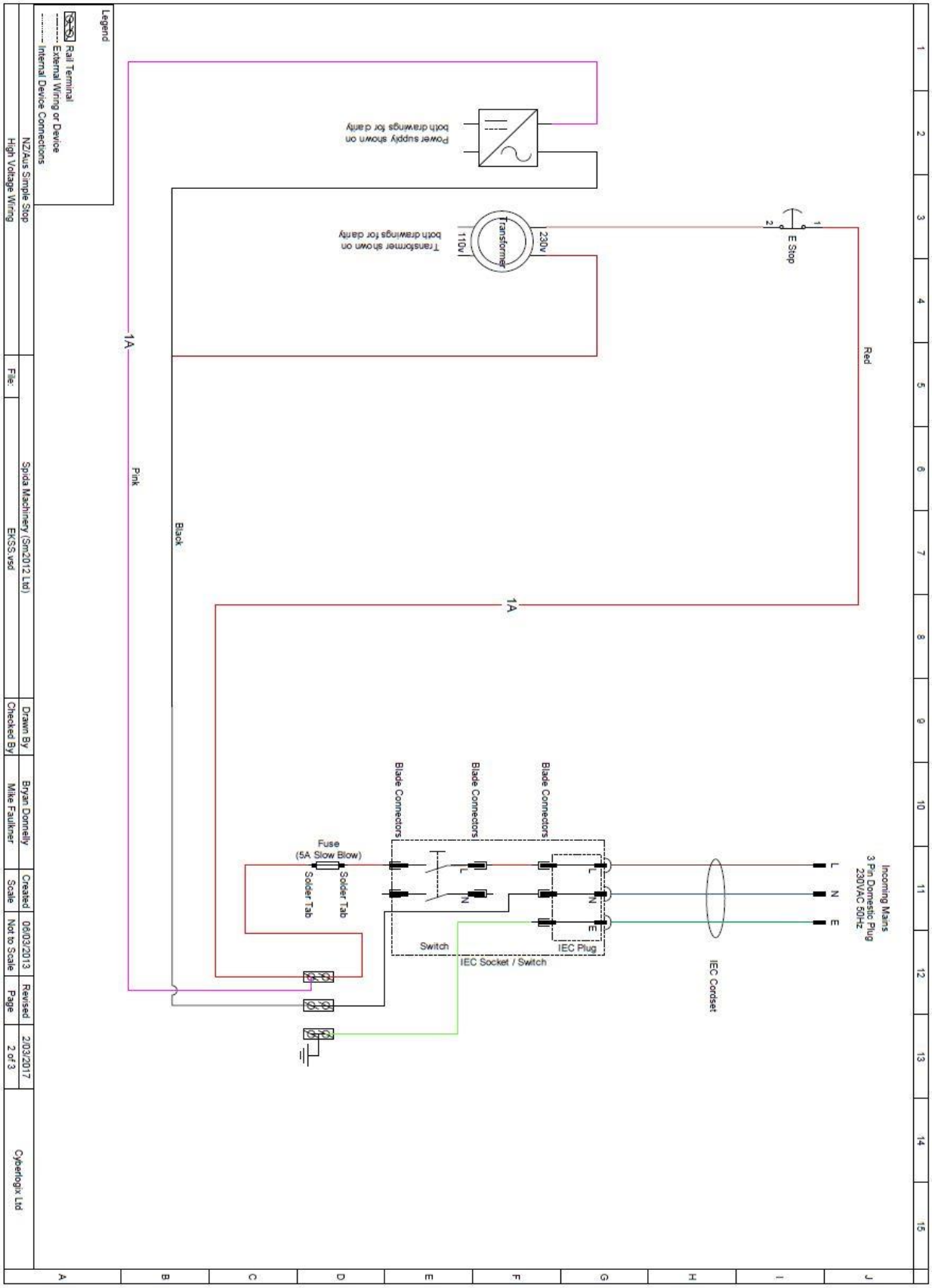


Figure 27, Gen 1 Simple Stop Electrical drawings – NZ/AU Version, pg 2

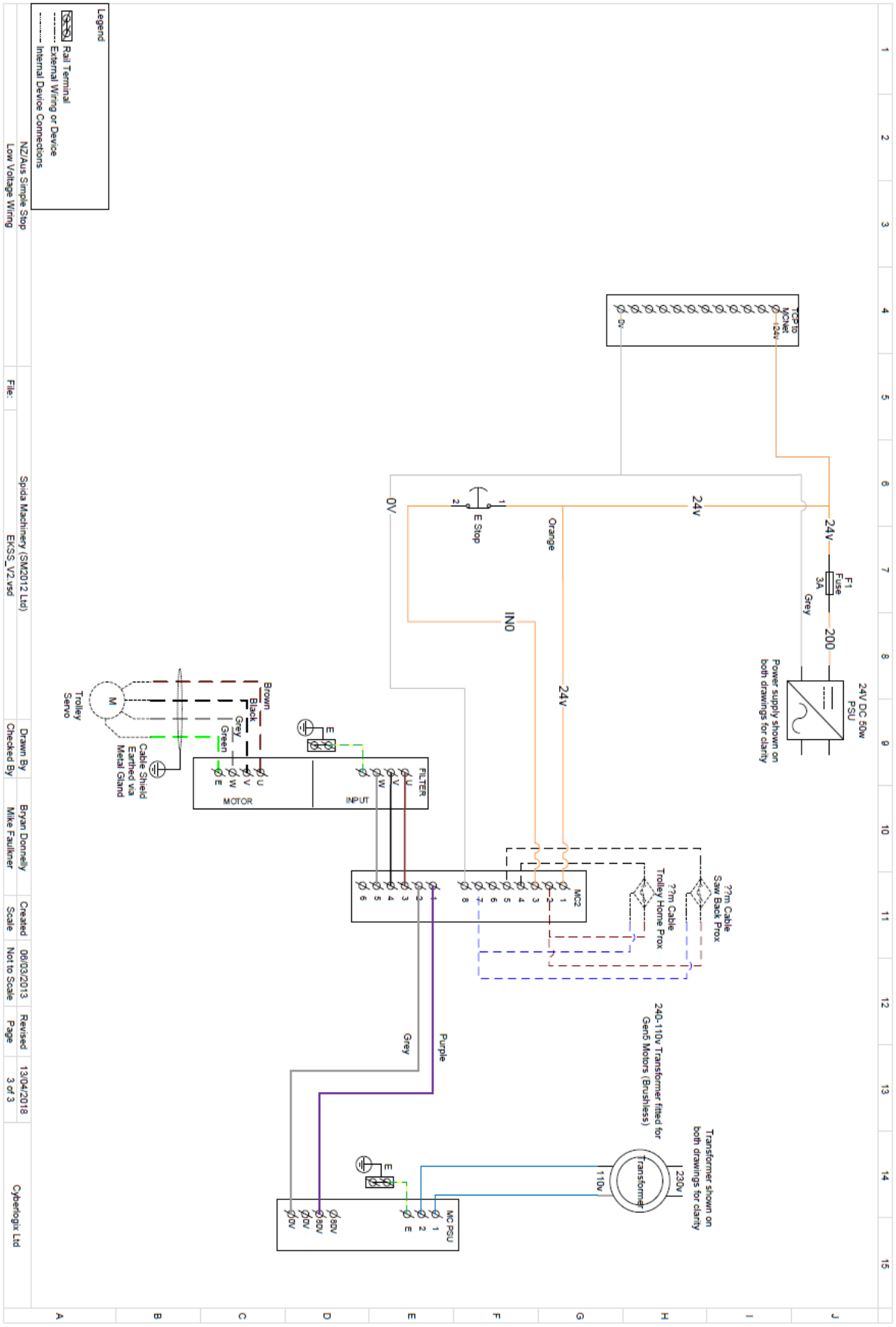


Figure 28, Gen 1 Simple Stop Electrical drawings – NZ/AU Version, pg 3

17 Electrical Drawings – US

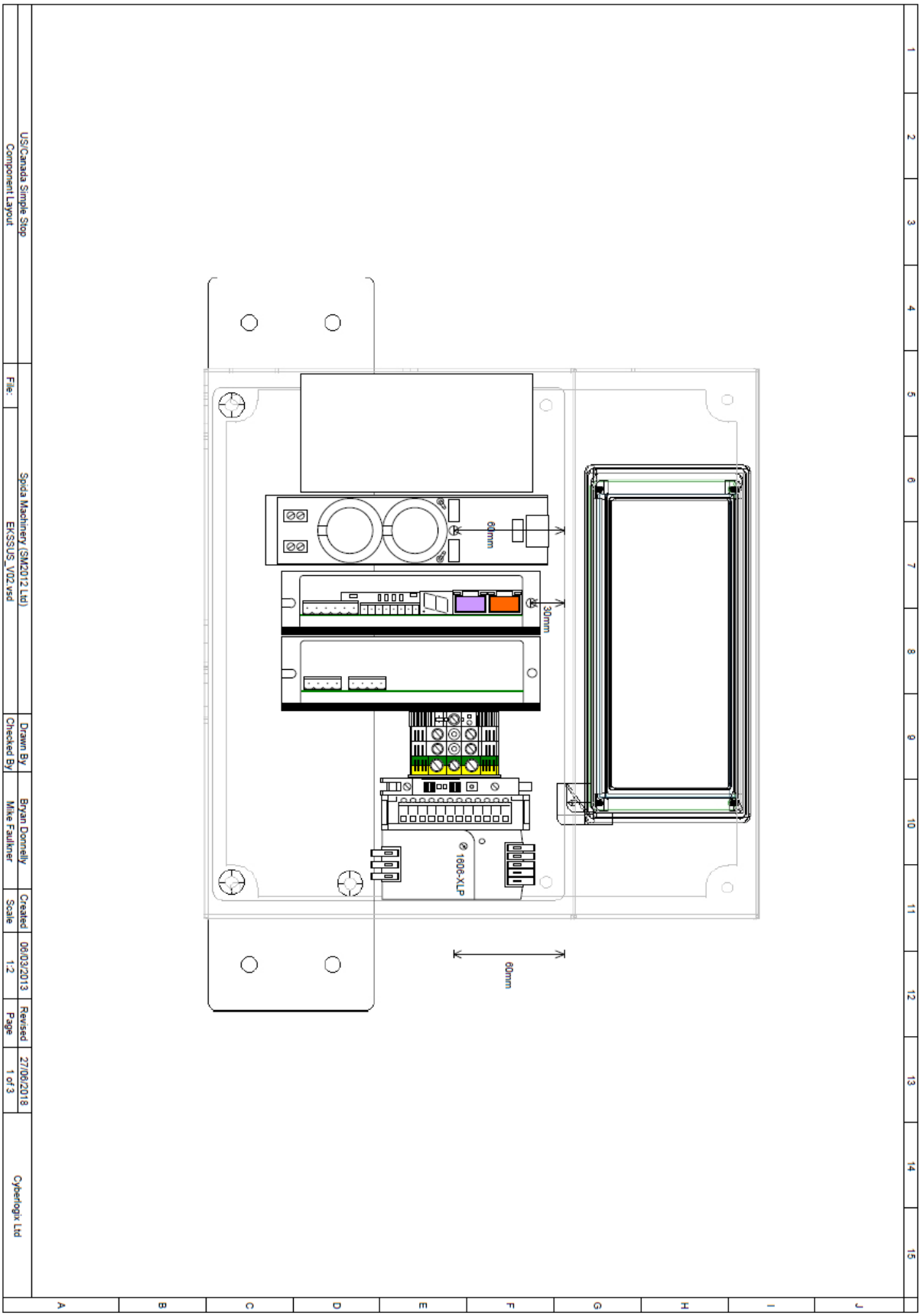


Figure 29, Gen 1 Simple Stop Electrical drawings – US Version, pg 1

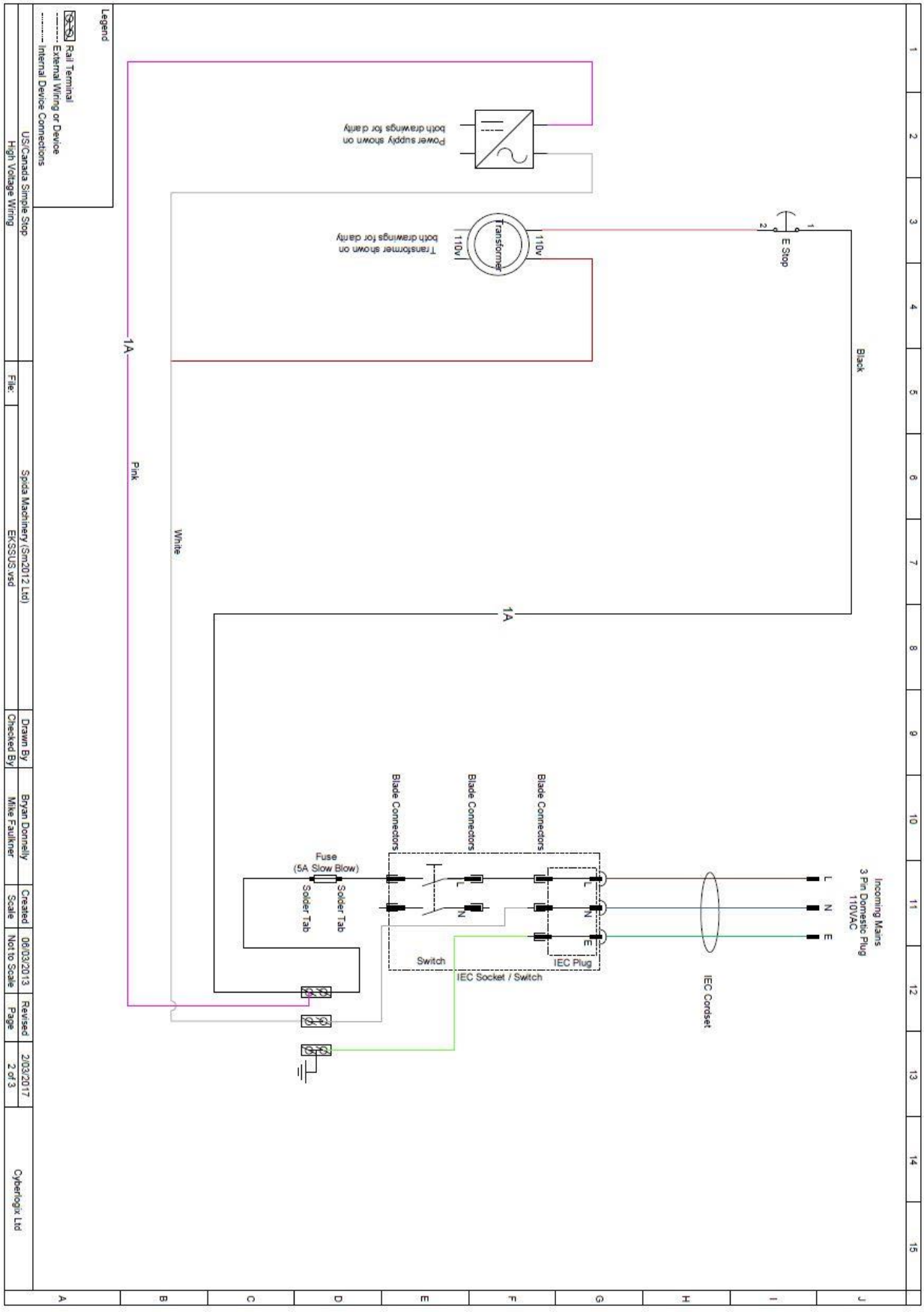


Figure 30, Gen 1 Simple Stop Electrical drawings – US Version, pg 2

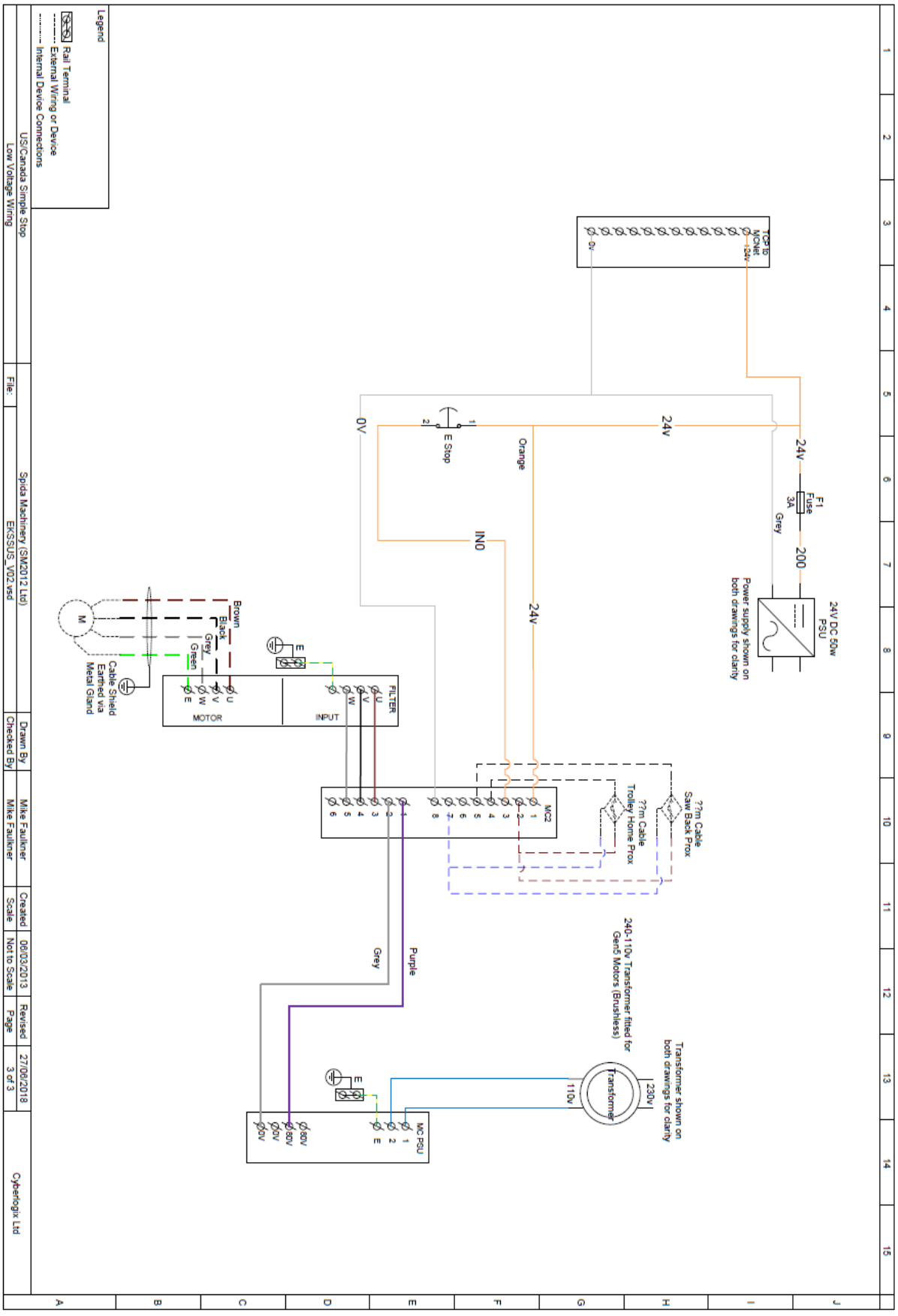


Figure 31, Gen 1 Simple Stop Electrical drawings – US Version, pg 3

18 Training Certificate – Simple Stop

Instructor: _____

Company: _____

I declare that:

- I have trained the person names below (“the trainee”) in the safe operation of the machinery/equipment detailed in the training manual.
- The trainee has demonstrated an understanding of the safe operation of the machinery/equipment.
- The trainee has indicated the he/she has read and understood this training manual.

Signed: _____

Date: _____

Trainee: _____

Company: _____

Position: _____

I declare that:

- I have received instruction from the person named above (“the instructor”) for the safe operation of the machinery/equipment detailed in this training manual.
- All information in this training manual was demonstrated and explained by the instructor.
- I have thoroughly read and understood this training manual.

Signed: _____

Date: _____

Witnessed by:

Name: _____

Company: _____

Signed: _____

Date: _____