WOODTECH ELECTRONICS

PROMIX SD Mini Instruction Manual

for Keypad & Toggle Cabin Consoles

Rev: 240424-01

24/7 – Support Videos -

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Important! Please Read all Setup and Calibration Information before Installation

Your new *PROMIX SD Mini Advanced Control System* has some preset calibration and setup parameters.

Promix SD Mini System Intro Video - Click here

Please Note: The PROMIX SD Mini system is only a 12V system. if installing into a 24V system please use a 24v to 12v Reducer (min 7A). We suggest a using the Voltech VC7.

ALL parameters in “Adjust Settings” menus must be checked and adjusted by qualified and trained personnel. Failure to set parameters correctly may result in damage to the control system, vehicle or mixer components or injury to persons.

After making any changes, switch power off and wait 10 seconds before powering system on again

Please consult the relevant section of this manual for calibration and setup procedures.

All wiring must be properly installed and terminated to ensure long-term, trouble-free service. We strongly recommend installation is only carried out by persons with a trade qualification in Auto Electrics (Electrical Mechanics – Automotive) as a minimum.

The relay modules are not weatherproof and must be mounted in the cabin area.

When switching from Cabin to Remote ensure no buttons are pressed on the remote control otherwise a “Stuck Button” error will occur.

Revs lockout jumpers for Park Brake, Neutral & Service Brake have 3 states – POS, CAN, NEG (No jumper = NEG). See page 35.

Auxiliary switches for Beacon and Worklight inputs must be momentary types.

Displayed values may be within +/-3% accuracy. Check values with calibrated Fluke meter

When coding a remote handpiece – ignition on and engine not running to prevent unwanted machine movement.

WARNING! - Do not connect any other wiring or devices (eg. Two Way radios, CB radios, sound systems, entertainment systems, data collection or telemetry systems etc.) to the control system, control system wiring harness, control system voltage reducer or control system accessories. Unauthorised connections can interfere with correct functionality and compromise the safety of the system. WoodTech Electronics reserves the right to withdraw any warranty on the product or to consider it null and void in case of any such connections.

Australian Designed and Manufactured

The Promix SD Mini System is manufactured in Australia by engineers who have extensive experience in designing, manufacturing, and commissioning electronic control systems for the heavy equipment and transport industries. As a result, many unique features are included to enhance system operation, promote ease of use, reduce operator fatigue, and minimize downtime.

- Compatible with all types of hydraulic pumps and vehicles currently in use.

- Joystick integration for precise control in the palm of your hand. Deadman switch prevents unwanted machine movement

- Continuous monitoring for stuck switches (Cabin & Remote) to prevent unwanted machine movement

- Auto Travel – engages at set road speed – fully adjustable

- Maintain constant bowl speed during Travel Mode using engine RPM compensation – fully adjustable

- High Speed Travel mode – fully adjustable

- Built in Door Park Brake Alarm – configurable

- Bowl Counter – fully configurable

- Easy field upgrades via custom USB bootloader.

- “Easy Code” One button remote coding – no need to access inside enclosures

- Free firmware upgrades for life (generic firmware only)

- J1939 CAN vehicle connectivity

- OLED Display – excellent clarity, sunlight readable and fully dimmable

- Backlight Decal fully dimmable

- Buzzer volume level adjustable (keypad version)

- Display and Decal dimmed when Park Brake released – individually configurable

- Small control station with membrane keypad or large toggle switches for very positive feel

- Wash Out mode – fully programmable for Mix, Discharge, Neutral and number of Cycles

- Discharge lockout above set road speed - fully adjustable

- Plant Mix - run time fully adjustable

- Horn can be activated from remote control handpiece

- Work light can be activated from remote control handpiece

- Work light can be automatically switched on when in reverse gear

- Work light can be automatically switched off at set road speed - fully adjustable

- Beacons can be automatically switched off at set road speed - fully adjustable

- Hydraulic cooler fan on only when hydraulics active - configurable. (cont.:)

Australian Designed and Manufactured

- Rear Emergency Stop testing regime using Number of Days, Day of Week, Number of Ignition-On Events and Bowl hours – fully configurable

- Mixer Service Warning using Ignition-On Hours, Total Bowl Hours and Number Of Days – fully configurable

- Bowl Hours Display shows Mix Hours, Discharge Hours and Total Bowl Hours. Can be reset by mixer OEM.

- F1, F2 function buttons on remote handpiece can be set to Momentary or Push On / Push Off operation for use with auxiliary equipment (water pump etc.)

- Visual and audible warnings if remote control not stowed in charging cradle. Audible warning can be triggered from road speed or park brake. Adjustable timer sets duration of audible warning.

- Setup configurations can be customized and loaded via a simple menu selection

- B.I.T.E (Built In Test Equipment):

    - Measure system voltages, currents, resistances and PWM

    - View status of internal settings (pots, switches)

    - Set analog outputs using live values on the display

    - CAN tester for viewing live J1939 vehicle data

    - Remote control button testing

    - Determine system health or pending issues.

    - All this without using an external multimeter.

- WoodTech proprietary CAN network. Allows expansion for hardware. Additional features can be added in the future.

The Remote-Control System

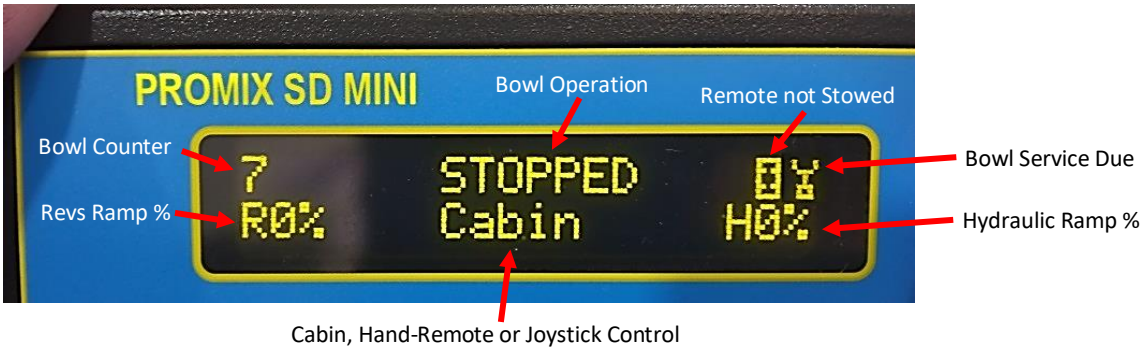
The advanced 915MHz remote control system utilizes the latest in Frequency Hopping Spread Spectrum technology (FHSS). Why is this important? Because it is the most immune to interference and therefore works more effectively on the job site than either 433MHz or 27MHz systems.

The IP65 rated remote control hand piece contains a rechargeable battery, which is recharged automatically when returned to the cradle. The multi-stage charger is computer controlled for fast charging and maximum battery life.

Also supplied is a translucent silicone rubber cover to further assist in protecting the remote from environmental and physical damage.

OLED Display

The super bright, sunlight readable OLED display with wide viewing angle shows operating mode and status at a glance. Display brightness can be automatically dimmed, and the dimming level can be easily set to suit operator comfort. (Standard Operations Screen)



System Real Time Clock (RTC)

The RTC is used to time stamp certain actions and also to provide accurate time keeping for features such as bowl hours, service intervals, emergency stop testing etc.

J1939 CAN Connectivity

J1939 CAN network is the connectivity backbone of modern heavy equipment vehicles. Many manufactures provide “bodybuilder” data for telematics via a dedicated Fleet Management Systems (FMS) connector.

Promix SD Mini can read all the required vehicle input signals via J1939. This significantly reduces installation time and is the preferred connection method of many vehicle manufacturers.

Promix SD Mini also generates all of the data required for TSC1 engine control via J1939 interface. Parameters provided by the vehicle manufacturer are easily adjusted via the OEM Tech Menu topics. No system reprogramming is necessary to change parameters for different vehicles.

Promix SD also has a built in J1939 reader to view live data from the vehicle.

Operation via the Cabin Console

Functions that are common to both the remote hand piece and the cabin console operate in the same manner regardless of the operating position.

Engine Up.
Increases engine revs when pressed.

Engine Down.
Decreases engine revs when pressed.

Discharge.
Increases the discharge bowl speed smoothly from zero to maximum rpm. Pressing the Mix switch whilst discharging will decrease the discharge bowl speed
The buzzer activates every few seconds whilst discharging as an audible alert for operator. The display shows mixer status DISCHARGING.

Mix.
Increases the mix bowl speed smoothly from zero to maximum rpm. Pressing the Discharge switch whilst mixing will decrease the mix bowl speed. The display shows mixer status as MIXING.

Pressing the Mix switch whilst in Travel mode will activate Hi Speed Travel mode. This mode is useful when traveling up a steep incline to reduce the risk of product spilling from the rear of the mixer. An audible alert is generated the display shows the mixer status as TRVL HI x (where x is the current Hi Speed Travel selection).

Chute Up.
Raises the chute while activated

Chute Down.
Lowers the chute while activated

Stop / Clear.
Stops the mixer and clears the resume status. The display shows mixer status STOPPED.

Halt / Resume.
Pressing Halt/Resume stores the current bowl speed and ramps the bowl speed down to zero. The display shows mixer status HALTING while ramping down and HALTED once mixer stops.

If Mix or Discharge is pressed while status is halted, the operator will be prompted of the current status by a visual and audible alert. Halted status can be cleared by pressing Stop / Clear.

Pressing Halt/Resume while the mixer is halted will resume the mixer to the status that was saved when Halt was pressed. The system recalls saved bowl direction and bowl speed.

Remote.
Selects operation from the remote hand piece. The display shows control status REMOTE.

Cabin.
Selects operation from the cabin console. The display shows control status CABIN.

By default, the control system will boot up with Cabin selected. This can be changed so the system will boot into the same mode it was in (Cabin or Remote) when powered down (see Adjust Settings Menu Item S12 – Cab/Rem Sticky).

Plant Mix.
Activates Plant Mix mode.

Plant Mix increases the bowl speed to maximum and increases engine RPM to the preset upper limit. The display shows mixer status as PLANT MIX.

Plant Mix can be stopped by activating the Stop switch on the cabin console or by activating the service brake.

If a Plant Mix run timer value has been set (see Adjust Settings Menu Item S9 – P/Mix Run Timer) the mixer will stay in this mode until the run timer has elapsed. The remaining run time (seconds) is displayed in the top, left hand side of the display. Once the timer has elapsed the mixer mode will change to TRAVEL.

If Plant Mix run timer is set to “Off”, the symbol “- -“ will be shown in the top, left hand side of the display. Plant Mix mode will run continuously until stopped by the operator

Travel.
Activates Travel mode.

Travel mode maintains a constant preset bowl speed (usually around 2RPM). This mode can be used whilst transporting the load from the batching plant to the job site.

Pressing the Travel button again while in Travel will return operation to Mix.

Travel mode can automatically engage if required and Hi Speed Travel parameters can be adjusted (see Adjust Settings Menu Item S5 – Travel Settings).

Bowl speed in Travel Mode will vary with engine speed if compensation is not used. The Travel Compensation parameter is used to counteract this effect. (see Adjust Settings Menu Item S14 – Trvl Comp).

Emergency Stop Switches.

Pressing any emergency stop switch (cabin or rear) will immediately remove all power to the mixer and therefore stop all functions. Mixer status is returned to STOPPED.

The cabin console buzzer will emit an alert tone, the decal around the cabin console emergency stop switch will flash and one of the following warnings will be displayed:

To reset the Emergency, stop switch, briefly turn it in the “clockwise direction” see arrow on top of the switch.

Auto Travel. -

Requirements:
- Electronic pump
- Road speed signal from vehicle CAN
- Auto Travel Speed km/h must be set (Settings Menu S5)
- Auto travel will not engage if park brake or neutral signals are active
- Auto travel will cancel if Stop pressed, however will reengage when road speed drops below, and then rises above, the preset road (km/h) speed.

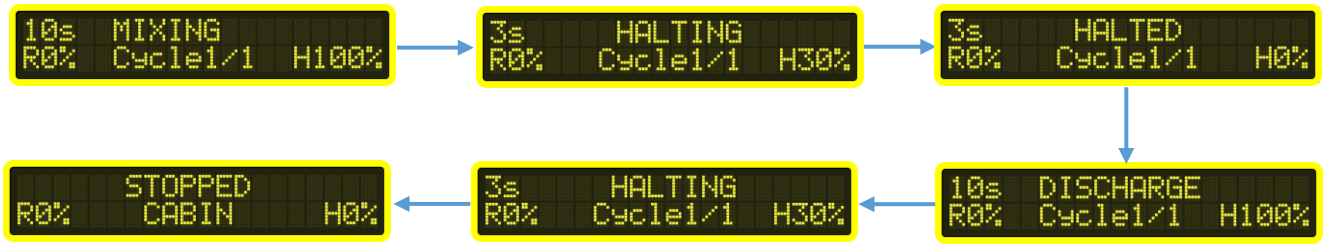
Washout Mode. -

Requirements:
- Electronic pump
- Park Brake must be on
- Cycles setting must be greater than zero (Settings Menu S6)

Entering Washout requires system to be in the main screen and status to be stopped. Press Halt & Mix together and follow the on-screen instructions.

One Washout Cycle consists of the following sequence (Total number Cycles can be set via Setting Menu 6)

- Ramp Mix up to maximum
- Stay at full mix for "Mix" time
- Ramp Mix down to Neutral
- Wait at Neutral for "Neu" Time
- Ramp Discharge up to maximum
- Stay at full discharge for "Dis" Time
- Ramp Discharge down to Neutral
- Wait at Neutral for "Neu" Time



Discharge Lockout. -

Requirements:
- Electronic pump
- Road speed signal from vehicle CAN
- Dis L/out km/h setting must be greater than zero (Settings Menu S10)

If road speed is greater than Dis L/out km/h setting, discharging is inhibited. If the mixer is already discharging it is ramped down to stop.

Operation via the Remote-Control Hand Piece. -

To operate the mixer from the remote-control hand piece simply press Remote on the Cabin console. Operational mode will display REMOTE.

Promix SD Mini has the option of an 8 or 12 button remote control. The top 8 buttons are the same on both and the functions work the same as the cabin console.

Please note – The Main Unit must be a 12 Channel version to use the extra features of the 12-button remote control. There is also extra hardware supplied with the 12-channel kit to support the extra four functions.

The four extra functions on the 12-button remote are:

- Horn — Activates the vehicle horn
- Work light — Activates the vehicle work light
- F1 — Function key 1 – can be set as Momentary or Push On / Push Off
- F2 — Function key 1 – can be set as Momentary or Push On / Push Off

To adjust Function Key options, see T2 Tech Menu - F1, F2 for setting setup.

1. Halt/Resume
2. Stop/Clear
3. Engine UP
4. Engine DOWN
5. MIX
6. Discharge
7. Chute Raise
8. Chute Lower

8 Button Remote

NEW 12 Button

1. Halt/Resume
2. Stop/Clear
3. Engine UP
4. Engine DOWN
5. MIX
6. Discharge
7. Chute Raise
8. Chute Lower
9. Work Light
10. Horn
11. F1
12. F2

VERY IMPORTANT NOTE:
The new 915 GEN3 Hand Remote has the new wireless charging and still works with existing PROMIX charge cradles as normal. The 915 GEN3 hand remote is the only hand remote that will charge in the new wireless PROMIX charge cradle. If you do place a 915 GEN2 or earlier hand remote in the wireless charge cradle the hand remote will not charge (No green charge led).

The OLD “Version 1 Main Controller” only uses the pogo pin charge cradle with GEN2 or 3 hand remotes. The NEW “Version 2 Main Controller” only uses the wireless charge cradle with the GEN3 hand remote only Always make sure the green charge led on the hand remote is up while in the cradle and the console display remote symbol is solid and no flashing this is means the hardware used is compatible and charging.

PROMIX SD Mini Antenna's.

An internal and external antenna are supplied as part of the kit. The external antenna is supplied with a universal 90deg mounting bracket and 5m cable with SMA (Male) connector.

The 11cm internal antenna screwed directly to the connector on the front of the main unit provides fast installation and satisfactory performance for most installations.

The external antenna, with universal mounting bracket, is used in configurations where the internal antenna performance is marginal.

NOTE: Do not mount the external antenna anywhere on the mixer frame or in the vicinity of the hydraulic cooler fan. For best performance the external antenna should be mounted on the vehicle cabin up high and in the clear.

Useful range of the remote control must be tested as part of the system commissioning process.

Operation via the optional Joystick. -

Must be in cabin mode.

When deadman switch activated control is from joystick.

When deadman deactivated control is cabin console.

U – Engine Up

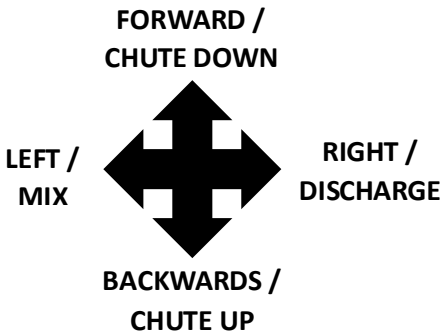
D – Engine Down

H – Halt / Resume

S – Stop

P – Plant Mix

T – Travel



The joystick is a Plug-and-Play option and is connected via WoodTech proprietary CAN network.

Menu Selections and Washout Mode via the Cabin Console.

(Please Note: The operation & setup functions work the same way on the keypad and toggle switch cabin control stations)

How to enter the Menu Selections -

- Mixer Mode = **"STOPPED"**

- Must be in **"Cabin"**

Press **"Halt/Resume"** and **"Cabin"** together, then release.
Menu Selections screen will appear with two options (Adjust Setting or View Diagnostics)

Use **"Chute Up"** & **"Chute Down"** to select menu item.

Use **"Cabin"** to enter menu item

Use **"Plant Mix"** & **"Travel Mode"** to change parameter value

Use **"Remote"** to save / exit menu item

Some menu items have multiple fields. Use **"Chute Up"** & **"Chute Down"** to change selected field.

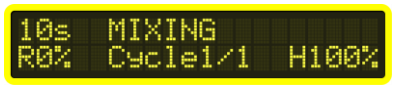
How to enter Washout Mode -

- Mixer Mode = **"STOPPED"**

- Must be in **"Cabin"**

Press **"Halt/Resume"** and **"Mix"** on the cabin console together, then release.
It will Prompted, are you sure warning so it can't accidently be used.

Press "Halt/Resume" to use the **"Washout Mode"** or **"Stop/Clear"** to return to operations screen.
If this screen does not appear, then the Washout feature is disabled or not been setup.



See: Adjust Setting - **S6 - Washout Setting** (To turn the feature ON and set your cycle settings etc).

Adjust Settings (via the Cabin Console)

S1 - Display Backlight -

(To enter the "Menus > Adjust Setting" via the cabin console see page 15 of this manual)

This feature allows you to set the brightness of the OLED display as well as dimming it when the park brake is released. This can be set for a comfortable brightness when travelling.

Display B/light
Adjusts the intensity of the display
Adjustment range: 0 – 100%

Dim with P/Brake
Adjusts the intensity of the display when Park Brake is released
Adjustment range: 0 – 100%

S2 - Decal Backlight -

(To enter the "Menus > Adjust Setting" via the cabin console see page 15 of this manual)

This feature allows you to set the brightness of the Decal illumination (all text area) as well as dimming it when the park brake is released. This can be set for a comfortable brightness when travelling.

Decal B/light
Adjusts the intensity of the decal backlighting
Adjustment range: 0 – 100%

Dim with P/Brake
Adjusts the intensity of the decal backlighting when Park Brake is released
Adjustment range: 0 – 100%

S3 - Remote Warn Km/h -

The Hand Remote Speed Alert may be set to automatically activate the audible warning at a preset road speed when the remote-control hand piece is not in the charging cradle. The Remote Warn Km/h parameter value sets the preset speed in Km/h. A value of zero turns this feature off.

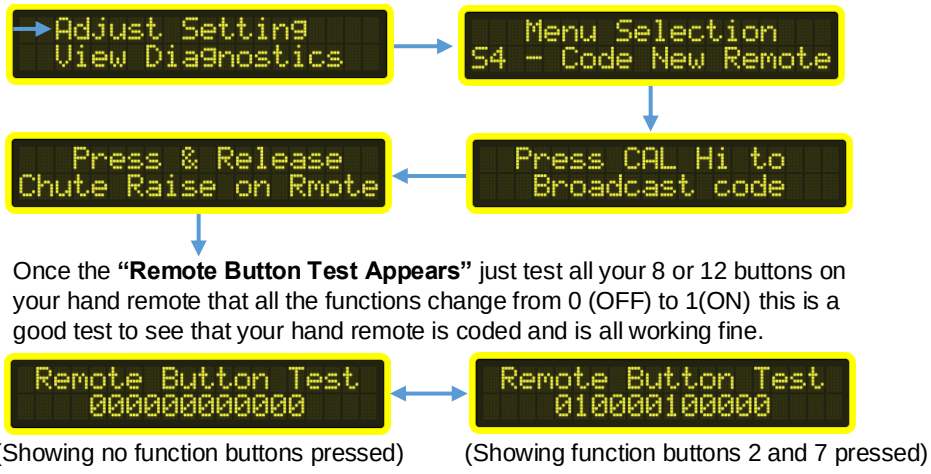
(To enter the "Menus > Adjust Setting" via the cabin console see page 15 of this manual)

Adjustment Range: Off – 99 km/h

The duration of the audible warning can be set via menu item S17 – Remote Alarm

S4 - Code New Hand Remote -

(To enter the “Menus > Adjust Setting” via the cabin console see page 15 of this manual)



Once the **“Remote Button Test Appears”** just test all your 8 or 12 buttons on your hand remote that all the functions change from 0 (OFF) to 1(ON) this is a good test to see that your hand remote is coded and is all working fine.

(Showing no function buttons pressed) (Showing function buttons 2 and 7 pressed)

The Promix SD Mini offers 2 versions of 915 GEN hand remotes -
The standard 8 Button and the optional 12 Button.

Both are coded the same way. The 12 & 4-way dipswitch banks inside the hand remote itself must all be set to the OFF position before coding the remote unit to the Promix SD Mini console.

When coding to a Promix SD Mini system this 4 Way Dipswitch bank must be set to all OFF.

When coding to a Promix SD Mini system this 12 Way Dipswitch bank must be set to all OFF.

Please Note: Always power down the system and wait 10 seconds before repowering.
Check that the new hand remote that is compatible with the existing remote cradle for charging.
it must at have charging pin at the bottoms or the wireless charging when available. Side charging pins only will not work.

S5 - Travel Settings -

The Auto Trvl km/h parameter value sets the road speed at which Auto Travel will engage. If Auto Trvl km/h parameter value is set to zero, Auto Travel feature is switched off.

(To enter the "Menus > Adjust Setting" via the cabin console see page 15 of this manual)

Auto Travel Adjustment Range: Off – 99 km/h

The Trvl Hi Speed parameter value sets the High-Speed Travel initial speed. It is calculated as a percentage from Travel base speed (e.g. If Trvl Hi Speed value = 2, calculated speed is base speed + 20%).

Travel Hi Speed Adjustment Range 1 – 10

S6 - Washout Settings -

Configure Washout settings.

(To enter the "Menus > Adjust Setting" via the cabin console see page 15 of this manual)

Mix: Number of seconds the mixer will stay at full mix each cycle during Washout.
Dis: Number of seconds the mixer will stay at full discharge each cycle during Washout.
Neu: Number of seconds the mixer will rest at neutral during Washout.
Cycles: Number of washout cycles to perform.

Mix Time: 2 – 999 Seconds
Discharge Time: 2 – 999 Seconds
Neutral Time: 1 – 30 Seconds
Number of Cycles: 0 – 99

S7 - Worklight & Beacon in Km/h -

Configure Work light and Beacon settings.

(To enter the "Menus > Adjust Setting" via the cabin console see page 15 of this manual)

Wrklgt Off km/h — Road speed at which the rear work light will switch off. A value of zero sets the feature to Off.

Beacon Off km/h — Road speed at which the beacon lights will switch off. A value of zero sets the feature to Off.

Adjustment Range: 0 – 99 km/h
(Hardware required - Must use a momentary dash switch and the 4 Way External Relay Module - P/N: W019-030)

S8 - Worklight in Reverse -

Select rear work light to switch on when in reverse gear.

(To enter the “Menus > Adjust Setting” via the cabin console see page 15 of this manual

Options Yes / No (Hardware Required - 4 Way External Relay Module - P/N: W019-030)

S9 - Plant Mix Run Timer -

Configure Plant Mix Run Timer

(To enter the “Menus > Adjust Setting” via the cabin console see page 15 of this manual)

The P/Mix Run Timer parameter value sets Plant Mix run time. A value of zero sets the feature to Off (i.e. Once activated, Plant Mix will run continuously until stopped by operator).

Adjustment Range: Off – 999 Seconds

S10 - Discharge Lockout in Km/h -

Configure Discharge Lockout

(To enter the “Menus > Adjust Setting” via the cabin console see page 15 of this manual)

The Dis L/out Km/h parameter sets the road speed at which the discharge lockout is active. It is not possible for discharge to be activated above this speed. If mixer is already discharging, mixer will return to stopped status.

A value of zero turns the feature Off

Adjustment Range: Off – 99 km/h

S11 - Hyd Step through Neutral -

Configure Hydraulic Stop through Neutral

(To enter the “Menus > Adjust Setting” via the cabin console see page 15 of this manual)

Selects whether mixer mode must enter stopped status when transitioning through hydraulic neutral from Mix to Discharge or vice versa.

Options Yes / No

S12 - Cabin /Remote Sticky -

Default system operation is to boot up with control set to Cabin mode regardless of status when switched off. If Sticky is set to yes, the control system will remember status (Cabin or Remote) on next boot up.

(To enter the “Menus > Adjust Setting” via the cabin console see page 15 of this manual)

Options Yes / No

S13 - Discharge to Mix Delay -

Discharge to Mix Delay when using Plant Mix or Travel

(To enter the “Menus > Adjust Setting” via the cabin console see page 15 of this manual)

When Plant Mix or Travel are selected and mixer is discharging, the mixer is ramped down to a stop and then ramped up into mix. This transition between mix and discharge may be aggressive depending on the load in the mixer. The Dis to Mix Delay parameter allows the mixer to rest at neutral for the prescribed number of seconds before ramping up into mix.

Adjustment Range: 0 – 5 Seconds

S14 - Travel Compensation -

Travel Speed Compensation using Engine RPM

(To enter the “Menus > Adjust Setting” via the cabin console see page 15 of this manual)

Bowl speed in Travel Mode will vary with engine speed if compensation is not used. The Travel Compensation parameter is used to counteract this effect. A higher number means more compensation is applied. Suggested procedure to determine Travel Compensation value:

1. Engage Travel mode
2. Set desired travel bowl rpm at idle using TRVL SPD pot
3. Increase engine revs to max and note bowl rpm
4. If bowl rpm at high engine revs is too fast, increase travel compensation value

Adjustment Range: Off – 10

S15 - Load Config -

Stored configurations are selected and loaded via this menu. This can dramatically reduce system setup time. See *S15 - Load Config - Parameter Table* below

(To enter the "Menus > Adjust Setting" via the cabin console see page 15 of this manual)

Select Config 0 - 3
Load as Default? Yes/No

S16 - Joystick (Chute) -

The Joystick Y axis controls Chute operation. Pushing the Joystick forward (+Y direction) activates Chute Down. Pulling the Joystick back (-Y direction) activates Chute Up. The percentage of joystick travel required to active chute functions can be set in this menu.

(To enter the "Menus > Adjust Setting" via the cabin console see page 15 of this manual)

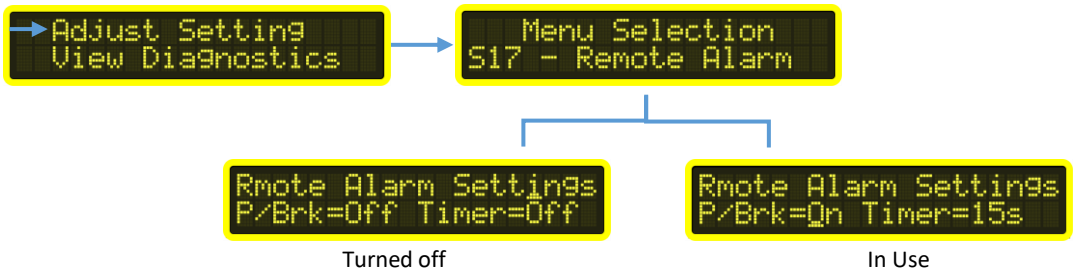
1% = minimum travel
100% = maximum travel

Adjustment Range: 1 – 100% (Hardware Required – Joystick - 2 Axis, 6 button w/Deadman P/N W019-019)

S17 - Remote Alarm -

Configure parameters for audible alarm when remote control handpiece is not stowed in charging cradle.

(To enter the "Menus > Adjust Setting" via the cabin console see page 15 of this manual)



P/Brk: On/Off

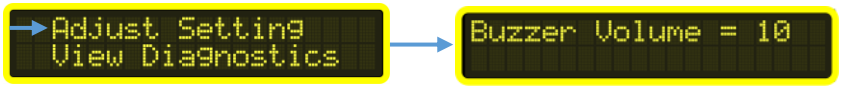
(Note: Setting Remote Warn Km/h (Menu S3) to a non-zero value overrides the park brake setting)

Timer Adjustment Range: Off – 255 seconds

S18 - Buzzer Volume -

This feature currently only available on keypad control station version.

(To enter the “Menus > Adjust Setting” via the cabin console see page 15 of this manual)



Adjust the volume of the buzzer.

Adjustment Range: 1 – 10
Note: The buzzer does a self-test at maximum volume during system boot up.

S19 - Exit Menu

Pressing Cabin switch exits the menu system.

View Diagnostics (via the Cabin Console)

D1 - Configuration Dipswitches -

Displays the status of the configuration switches in the Main Unit.

(To enter the “Menus > View Diagnostics” via the cabin console see page 15 of this manual)

D2 - Hyd Settings -

Displays the status of the following hydraulic settings pots:

(To enter the “Menu’s > View Diagnostics” via the cabin console see page 15 of this manual)

Hinc: Hydraulics Increase Ramp Rate Pot. Higher number = faster ramp time
Hdec: Hydraulics Decrease Ramp Rate Pot. Higher number = faster ramp time
Moffs: Mix Offset (Milliamps) “First Press” mix solenoid current
Doffs: Discharge Offset (Milliamps) “First Press” discharge solenoid current

Adjustments can be made in real time and viewed on the display.

D3 - Analog Revs -

Displays the status of the following analog revs settings pots:

(To enter the “Menu’s > View Diagnostics” via the cabin console see page 15 of this manual)

Lo: Analog Revs Lo pot
Hi: Analog Revs Hi pot
Rmp: Analog Revs Ramp pot
Out: Analog Revs output voltage

Adjustments can be made in real time and viewed on the display.

D4 - Hyd Diagnostics -

Displays the status of the following hydraulic settings pots:

(To enter the “Menu’s > View Diagnostics” via the cabin console see page 15 of this manual)

Rexroth Hydraulics:

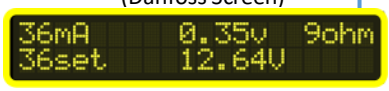
mA: Actual solenoid current
set: Commanded solenoid current
pwm: Duty cycle of PWM signal controlling solenoid coil
v: System supply voltage

(Rexroth Screen)

Danfoss EDC90 Hydraulics:

mA: Actual solenoid current
set: Commanded solenoid current
v: Solenoid voltage
V: Supply voltage
Ω: Solenoid coil circuit resistance

(Danfoss Screen)



D5 - Lockouts -

Displays the status of the following lockout signals from the vehicle:

(To enter the “Menu’s > View Diagnostics” via the cabin console see page 15 of this manual)

P/Brk: Park Brake
S/Brk: Service Brake
Neut: Transmission in Neutral
= 1 or 0: (1 is On) and (0 is Off)

D6 - Revs System Off -

Some vehicles require a specific voltage to be present on the remote accelerator signal wire when the control system is switched off. The Revs jumper must be ON and the REVS SYS OFF pot set to the required value.

(To enter the “Menu’s > View Diagnostics” via the cabin console see page 15 of this manual)

Adjustments can be made in real time and viewed on the display.
Always confirm the required voltage from the truck manufacture.

D7 - Remote Test -

Provides a handy way to test button functions of the remote handpiece. The numbers will change from “0” to “1” when the corresponding button on the handpiece is pressed.

(To enter the “Menu’s > View Diagnostics” via the cabin console see page 15 of this manual)

D8 - Time & Date -

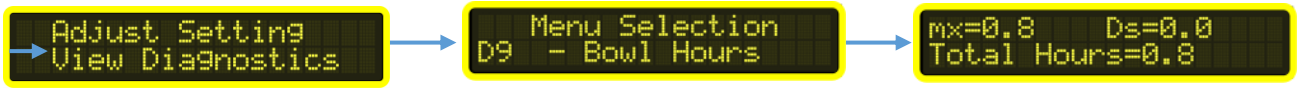
Displays current system time and date.

(To enter the “Menu’s > View Diagnostics” via the cabin console see page 15 of this manual)

D9 - Bowl Hours -

Displays bowl operational hours.

(To enter the “Menu’s > View Diagnostics” via the cabin console see page 15 of this manual)



Mx:	Mix hours
Ds:	Discharge hours
Total Hours:	Mix hours + Discharge Hours

Bowl hours resolution is 1/10th of an hour (6 minutes)

D10 - Vehicle CAN (J1939) Data -

Displays live CAN data from the vehicle.

(To enter the “Menu’s > View Diagnostics” via the cabin console see page 15 of this manual)

RPM: Engine RPM
Kmh: Road speed
PB: Park Brake status
SB: Service Brake status
NU: Neutral status
RV: Reverse status

D11 - Emergency Stop Last Press -

Displays the date and time the rear emergency stop was last activated.

(To enter the “Menu’s > View Diagnostics” via the cabin console see page 15 of this manual)

To ensure the rear emergency stop has been tested.

D12 - Reserved -

Reserved for future use

D13 - Reserved -

Reserved for future use

D14 - Reserved -

Reserved for future use

D15 - F/W Versions -

Displays firmware versions for Main and Dash units

(To enter the “Menu’s > View Diagnostics” via the cabin console see page 15 of this manual)

D16 - Exit Menu

Pressing Cabin switch exits the menu system

Tech Menu (via the Cabin Console)

(To enter the “Tech Menus” via the cabin console – Contact Woodtech Electronics)

T1 - New Remote Code

Generate new remote code for system. We strongly recommend to NOT perform this procedure unless instructed to by WoodTech.

(To enter the “Tech Menus” via the cabin console – Contact Woodtech Electronics)

T2 - F1, F2 Settings

Change the way the F1 and F2 buttons operate.

(To enter the “Tech Menus” via the cabin console – Contact Woodtech Electronics)

They can be individually set to one the following options:

- Momentary
- Push On / Push Off

T3 - Door / Remote Out

Pin 21 on the Main unit can be set to one of the following options:

(To enter the “Tech Menus” via the cabin console – Contact Woodtech Electronics)

- Positive output when in remote mode
- Door switch input

Door switch input is used for Park Brake Door Alarm feature and can be set to positive or negative input polarity via the Door Sw Pol parameter

(Park Brake Door Alarm requires 4 Way External Relay Module - P/N: W019-030)

T4 - Fan Control

The hydraulic cooler fan can be set to operate at all times or only when the bowl hydraulics are active.

(To enter the “Tech Menus” via the cabin console – Contact Woodtech Electronics)

Available selections are: - Always or Hydraulics

T5 - Set Time & Date

Allows setting of the following parameters:

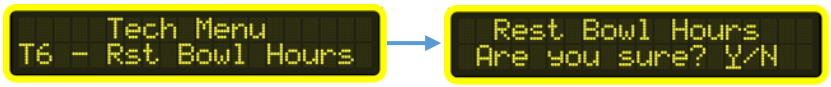
(To enter the “Tech Menus” via the cabin console – Contact Woodtech Electronics)

- Weekday
- Day of month
- Month
- Year
- Hours (24Hr format)
- Minutes

T6 - Rest Bowl Hours

Resets all bowl hours to zero. Follow on-screen prompts.

(To enter the “Tech Menus” via the cabin console – Contact Woodtech Electronics)

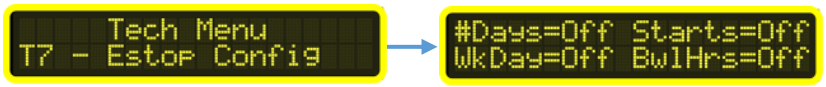


Options Yes / No

T7 - Emergency Stop Config

Configures rear Emergency Stop testing regime. Allows setting of any, or all, of the following parameter values since last rear Emergency Stop activation:

(To enter the “Tech Menus” via the cabin console – Contact Woodtech Electronics)



#Days	Number of Days
WkDay	Weekday
Starts	Number of Ignition On events
BwlHrs	Bowl hours

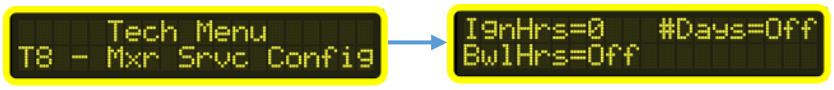
If any of the set parameter values have been exceeded the operator will be prompted to test the rear Emergency Stop switch at system start up. Pressing Stop/Clear will temporarily clear this warning. The warning will be present the next time the system starts if the rear Emergency Stop switch still hasn’t been tested.

If a parameter value is set to off, the parameter is not included in the test regime. If all parameters are set to Off no operator warning is generated.

T8 - Mixer Service Config

Configures Mixer Service warning. Allows setting of any, or all, of the following parameters since last Mixer Service reset:

(To enter the "Tech Menus" via the cabin console – Contact Woodtech Electronics)



IgnHrs	Ignition On hours	Resolution 1/10th of an hour (6 minutes)
BwlHrs	Total Bowl Hours	
#Days	Number of Days	

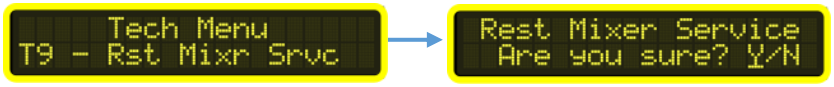
If any of the set parameter values have been exceeded a warning will displayed at start up. The Service Spanner symbol will also be displayed in the right-hand side of the top row of the main screen during operation.

After setting or changing any parameters you must Reset Mixer Service (Menu T9)

T9 – Reset Mixer Service

Resets Mixer Service warning. Follow on-screen prompts.

(To enter the "Tech Menus" via the cabin console – Contact Woodtech Electronics)

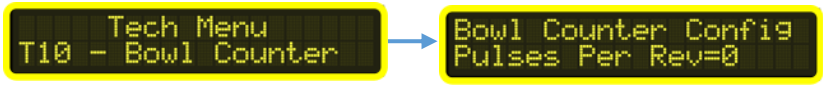


Options Yes / No

T10 - Bowl Counter

Configures the Bowl Counter.

(To enter the "Tech Menus" via the cabin console – Contact Woodtech Electronics)



The number of pulses the bowl count sensor generates each bowl rotation is entered into the Pulses Per Rev parameter field.

If the bowl counter is not required, set Pulses Per Rev to Off.

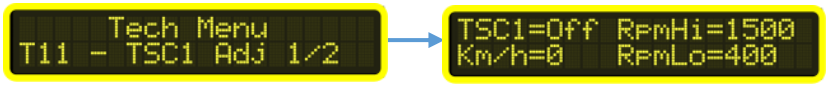
The accumulated bowl count is cleared by pressing and holding the Stop/Clear for at least 3 seconds. (Must be in the main operation screen).

(Please Note: the bowl counter signal must be positive and use a PNP proximity switch)

T11 - TSC1 Adj 1/2

Configures TSC1 parameters – page 1 of 2.

(To enter the “Tech Menus” via the cabin console – Contact Woodtech Electronics)

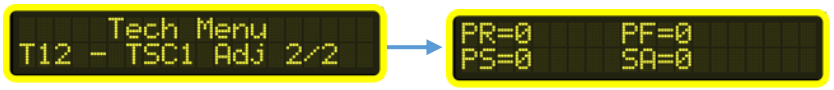


TSC1	Selects whether TSC1 control is On or Off
Km/h	Road speed at which TSC1 control will switch off
Rpm Hi	Maximum requested engine RPM
Rpm Lo	Minimum requested engine RPM

T12 - TSC1 Adj 2/2

Configures TSC1 parameters – page 2 of 2.

(To enter the “Tech Menus” via the cabin console – Contact Woodtech Electronics)



PR	Priority	Range 0 - 8
PF	PDU Format	Range 0 – 255
PS	PDU Specific	Range 0 – 255
SA	Source Address	Range 0 - 253

HARDWARE
ADJUSTMENTS, SETTING AND TESTING

PROMIX SD MINI - CAN 120-Ohm Board Termination Jumpers

TRUCK	MODEL	JP1A (J1939)	JP1B (J1939)	JP2 (AUX CAN)	ACK (Dip SW 7)
KENWORTH	T360	OFF	OFF	ON	OFF
UD - NISSAN	CG303060	ON	ON	ON	ON
MACK	METROLINER(<2022)	ON	ON	ON	OFF
MACK	METROLINER(2022>)	ON	ON	ON	ON
WESTERN STAR	(2020>)	ON	ON	ON	OFF
HINO	MINI & MAXI	ON	ON	ON	OFF
ISUZU	F-SERIES	ON	ON	ON	OFF
FREIGHTLINERS	ALL	ON	ON	ON	OFF
SINO-TRUK	T5G	ON	ON	ON	OFF
IVECO	EURO6	ON	ON	ON	OFF
DIAMOND REO	(2020>)	OFF	OFF	ON	OFF

Please Note: JP1A and JP1B must be both "**ON"** or both "**OFF"** for the J1939, Never one "**ON"** and on "**OFF"**.

Main Control Board Dipswitch Settings

The dipswitches on the main control board configure the various control system parameters to suit different vehicle / hydraulic combinations. Only trained and competent personnel should make adjustments.

After making changes we strongly recommend cycling system power (switch off, wait 10 seconds, switch back on) to ensure new settings are applied.

Dipswitch	Function	On	Off
1	Park Brake input required for Engine revs	Yes	No
2	A/T neutral input required for Engine revs	Yes	No
3	Engine revs control type	Cruise / Linear act.	Analogue
4	Proportional hydraulics type	Danfoss	Rexroth
5(Note1)	Hydraulic pump control	Manual / Linear act.	Electronic
6	Reserved	-	-
7	J1939 CAN Acknowledgements (ACK)	Yes	No
8	Plant Mix Exits to Travel with Service Brake	Yes	No
9	Danfoss coil current reversal	Normal	Reversed
10	Reserved	-	-

Note1: When using a manual pump – Pressing "Halt/Resume" applies power to rotate bowl (dump valve active). Pressing "Stop/Clear" removes power so bowl rotation stops (dump valve inactive). Display will show "RUNNING" when dump valve is active.

Main Control Board Adjustments

Engine Revs – Analogue

The following is only applicable when Revs control type is set to analogue (Dipswitch 3 Off)

The rate at which the engine revs ramp up and ramp down can be adjusted with the REVS RAMP adjustment pot. Turning this pot clockwise makes the ramp time faster. Even when set to the fastest setting (fully clockwise), the vehicle ECU ultimately determines how quickly it will allow the engine to change rpm.

Most remote accelerator applications require a voltage of approx. between 0.4 – 1.0v before the engine will increase above idle. Because of this, there can appear to be some "dead time" from idle as you hold the Increase Revs button. The REVS LO adjustment pot "tunes out" this dead time by setting a minimum voltage somewhere between 0 – 1.0 volts. Turning the REVS LO pot clockwise increases this initial voltage.

If the setting of the REVS LO pot is too low, there will be noticeable "dead time" when initially increasing the rpm above idle. If the setting of the REVS LO pot is too high, the engine will not return fully to idle RPM. A little time spent getting this adjustment "just right" will improve the overall smoothness and operation of the system.

The REVS HI pot sets the maximum voltage the system will ramp to.
See Diagnostic Menu item D3 – Analog Revs.

On how to test your Analog Engine Revs via the main controller – see page 36

Truck Engine Revs Voltages.
Record your voltage settings, please always consult with the truck manufacture specifications.

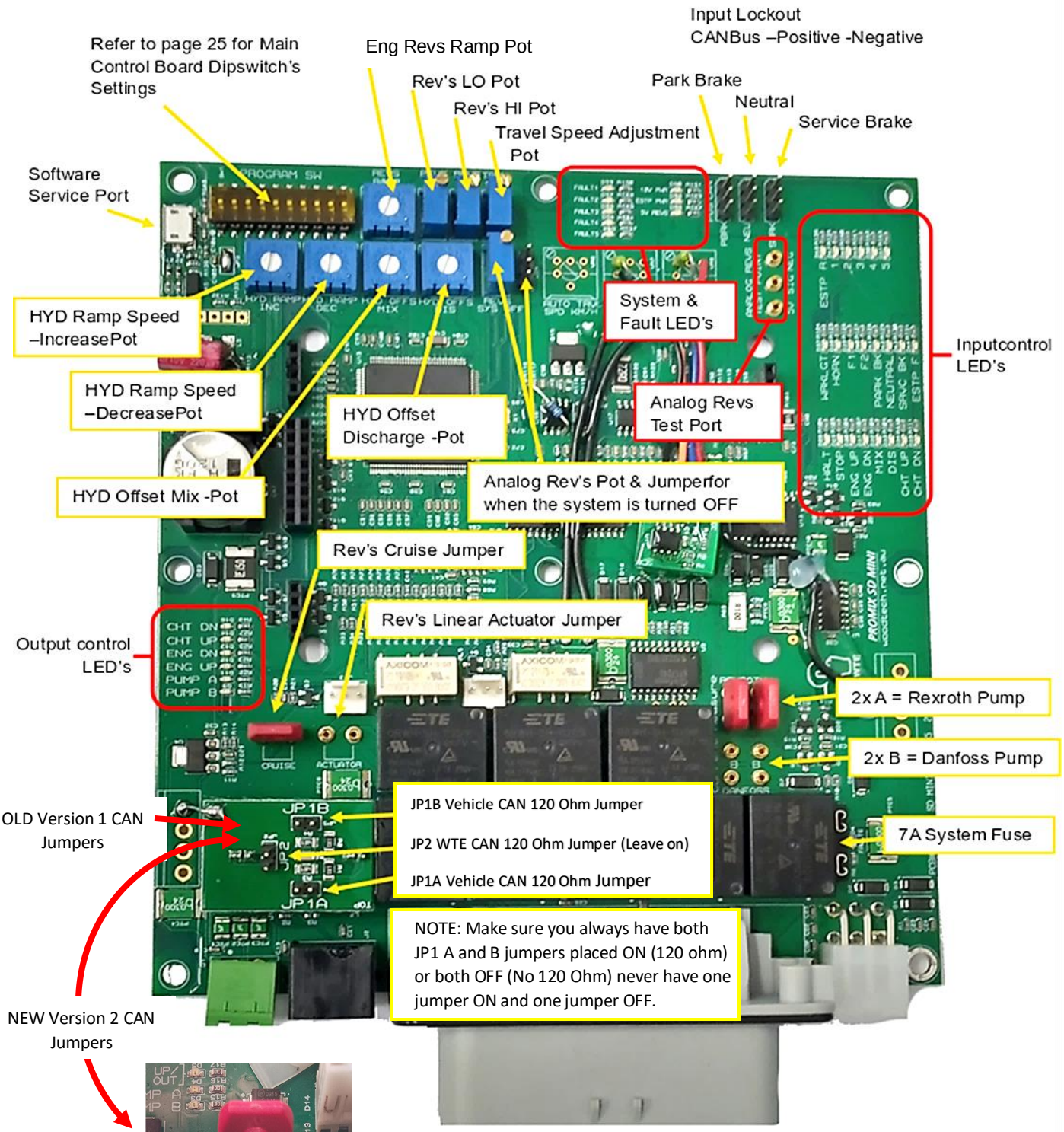
Truck	Lo Revs(V)	Hi Revs(V)	Sys Off(V)
Kenworth T360			
Isuzu F Sers			
Hino Maxi			
Hino Mini			
Sino			
UD-Nissan			
Diamond Reo			
Iveco			
Volvo			

S15 - Load Config- Parameter Table

Menu Item	Setting	Config 0	Config 1	Config 2	Config 3	Config 4 (Custom)
S1	Screen Brightness Dim with Park Brake	100% 50%	100% 50%	100% 50%	100% 50%	
S2	Decal Brightness Dim with Park Brake	100% 20%	100% 20%	100% 20%	100% 20%	
S3	Remote not in cradle warning km/h	0 (Off)	0 (Off)	0 (Off)	0 (Off)	
S5	Auto Travel Km/h Travel High Speed Value	0 (Off) 1	0 (Off) 1	0 (Off) 1	0 (Off) 1	
S6	Washout Mix Time Washout Dis Time Washout Neutral Time Washout Cycles	10s 10s 2s 0 (Off)	10s 10s 2s 0 (Off)	10s 10s 2s 0 (Off)	10s 10s 2s 0 (Off)	
S7	Work light Off Km/h	0 (Off)	0 (Off)	0 (Off)	0 (Off)	
S7	Beacon Off Km/h	0 (Off)	0 (Off)	0 (Off)	0 (Off)	
S8	Work light in Reverse	No (Off)	No (Off)	No (Off)	No (Off)	
S9	Plant Mix Run Timer	0 (Off)	0 (Off)	0 (Off)	0 (Off)	
S10	Discharge Lockout Km/h	0 (Off)	0 (Off)	0 (Off)	0 (Off)	
S11	Hydraulics Stop through neutral	Yes	Yes	Yes	Yes	
S12	Cab / Remote status sticky through power cycle	No	No	No	No	
S13	Plant & Travel Discharge to Mix Delay	2s	2s	2s	2s	
S14	Travel – Engine RPM compensation	0 (Off)	0 (Off)	0 (Off)	0 (Off)	
S16	Joystick Travel for Chute Operation	50%	50%	50%	50%	
S17	Park Brake for Remote Alarm Remote Alarm Timer	On 2s	On 2s	On 2s	On 2s	
S18	Buzzer Volume	10	10	10	10	

Main Controller –CPUV1

Pot Adjustments, Jumpers & Dipper Switches.Locations.

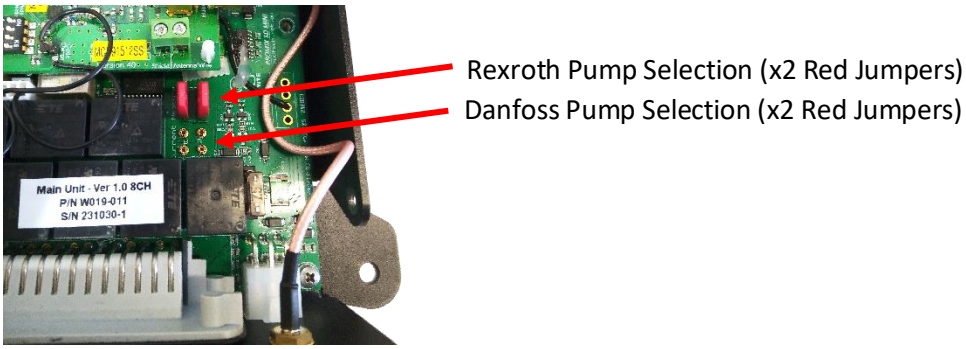


We find it is best to use the **"hardware version"** sticker located on the black relays inside the main controller. It should match the details also listed on the main controller cover.

Mix & Discharge Hydraulic Current Test (via the Main Controller)

1. The current test works the same for Mix and Discharge using a Rexroth or Danfoss Pump.
2. First you will need to setup your meter make sure it's a calibrated known meter(no blown fuse)
3. Set you meter to AMPS-DC as well as place the positive lead into Amps port.

4. Located on the main control board are two red board jumpers for the Hyd pump selection.



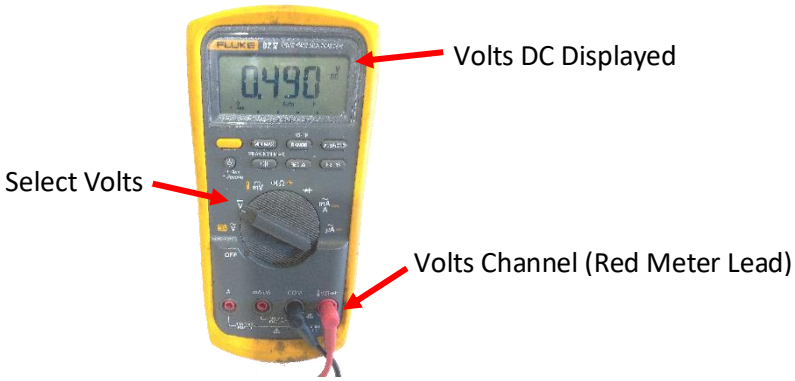
5. Both red jumpers will be placed either on the Rexroth or Danfoss never on each other always make sure the jumpers are set for the correct hydraulic pump used.
6. Now remove the inner jumper for this example we will be doing the Rexroth jumper same goes for when doing the Danfoss jumper.

7. Place your Meter leads as shown
8. Using the MIX or Discharge functions with your meter connected you can check your coils working current range with our current list below.

Analog Revs Voltage Test (via the Main Controller)

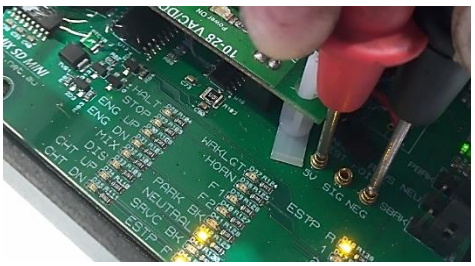
The Analog Revs test will allow you to test the Engine Revs Voltage via the main Controller.
To understand more on how to set the analog engine revs - see page 31
First you will need to setup your meter, make sure it's a good quality meter.

1. Set you meter to Volts-DC as well as place the positive lead into the volts port.

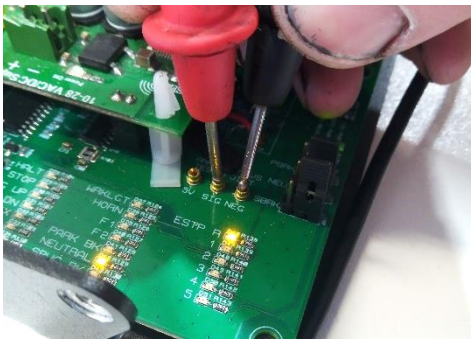


1. Located on the main controller is the analog test port.
The 5 volt supply is on the left, Signal output in the middle
and ground on the right.

2. To test the 5 volt supply,
place your red meter lead on the 5volt pin (left pin)
and the black lead onto the ground pin(right pin)
you should read around 4.9 to 5.0 volts.



3. To test the signal voltage output from the controller to the truck.
Place your red meter lead on the signal pin(middle pin)
and the black lead onto the ground pin(right pin)



It's a good idea to always check with the truck manufacture on
what the analog voltage setting should be for the truck you are doing before you start the install or repair.

PROMIX SD MINI DRAWINGS
(12V System Only)

Wiring Code - 35 Way Connector

Pin No.	Function	Colour
1	Cruise Rly - Normally Closed	Yellow/Purple
2	Cruise - Revs Up	Yellow
3	Cruise Rly – Normally Open	Yellow/Pink
4	Cruise – Revs Down	Yellow/White
5	Beacon Switch In	Yellow/Black
6	Chute Raise	Purple
7	Discharge	Green/White
8	Mix	Brown/White
9	Dump Valve	Pink
10	Not Used	-
11	Chute Lower	Purple/Orange
12	Rexroth Solenoid Common	Light Green
13	Pump Linear Actuator B	White/Orange
14	Pump Linear Actuator B	White
15	Aux Pos Out	Red
16	Aux CAN H Out	Yellow
17	Aux CAN L Out	Green
18	Aux Neg Out	Black
19	Rear Emergency Stop	Green/Brown
20	Fan Relay Terminal 86	Green/Red
21	Pos Out in Remote / Door Switch In	White/Purple (Adaptor Lead)
22	Work Light Switch In	Yellow/Blue
23	Rexroth Solenoid Common	Light Green
24	Vehicle CAN H	Yellow (twisted pair)
25	Vehicle VAN L	Green (twisted pair)
26	Remote Accelerator Neg	Brown
27	Remote Accelerator Signal	Grey
28	Remote Accelerator 5v	Orange
29	Park Brake Input	Dark Blue
30	Service Brake (stop light) Input	Yellow/Red
31	Transmission Neutral Input	Dark Green
32	Bowl Counter Sensor Input	Yellow/Green
33	Beacon Output	Yellow/Brown
34	Negative	Black
35	Ignition Input	Orange/Blue

PROMIX SD Mini
35 Pin Rectangular
Main Vehicle Harness Plug

Battery & Ign Input
Red (6mm) Battery Supply
Red (3mm) 12V IGN Supply Only

Vehicle CAN In(2 Way Deutsch Plug)
Twisted Yellow - Vehicle CAN Hi - Pin:24
Twisted Green - Vehicle CAN Lol - Pin:25
(CAN-120 Ohm options - See Manual Page 24)

Aux CAN Out(White 4 Way Plug)
Red - Positive - Pin:15
Yellow - CAN Hi - Pin:16
Green - CAN Lo - Pin:17
Black - Ground - Pin:18
(Optional Hand Joystick Controls See Manaul,Page 10)

Lockout Inputs (Hardwired Option)
Dark Blue - Park Brake Lockout Input - Pin:29
Yellow/Red - Service Brake Lockout Input - Pin:30
Dark Green - Transmission Neutral Input - Pin:31
(Lockout Inputs can be Postive,Negitive or CANbus if supported See Manual, Page 29)

Optional DIO Inputs
Yellow/Black - Beacon Switch Input - Pin:5 (OF)
Yellow/Blue - Worklight Switch Input - Pin:22 (OF)
Yellow/Green - Bowl Counter Sensor - Pin:32 (OF)

Optional DIO Outputs
White/Purple - Remote Mode On, Positive Output - Pin:21 (OF)
Yellow/Brown - Beacon Light Output - Pin:33 (OF)

Ground
x4 Black 3mm wires- 1x Yellow Eye Lug

Hyd Fan
Yellow(6mm) Hyd Fan Supply (Promix Relay Box)
Fan ground to the trucks chassis earth.

Cruise Rev (White 8 Way Plug)
Yellow - Cruise Revs Up - Pin:2
Yellow/White - Cruise Revs Down - Pin:1
Yellow/Pink - Cruise Common - Pin:3

Analog Revs (White 8 Way Plug)
Orange - Remote Accelertor 5V - Pin:28
Grey - Remote Accelertor Signal - Pin:27
Brown - Remote Accelertor Neg - Pin:26

Linear Actuator Revs
Yellow - Motor Control A - Pin:2
Yellow/White - Motor Control B - Pi
Yellow/Pink - Supply - Pin:3
Yellow/Purple - Ground - Pin:1

Rexroth Hyd Pump
Brown/White - Mix Coil - Pin:8
Lt Green - Mix Coil - Pin:12
Green/White - Dischange Coil - Pin:7
Lt Green - Discharge Coil - Pin:23
(CPU HYD jumpers both in A & Dip Sw 4 - OFF See Manual,Page 29)

Danfoss Hyd Pump
Green/White - Pin A Cannon Plug - Pin:8
Lt Green - Pin B Cannon Plug - Pin:12
(CPU HYD jumpers both in B & Dip Sw 4 - ON See Manual,Page 29)

Linear Actuator Hyd Pump
White/Orange - Motor Control A- Pin:13
White - Motor Control B - Pin:14
Pink - Dump Valve - Pin:9(Power to run)

Rear Chute
Purple - Chute Raise Coil - Pin:6
Purple/Orange - Chute Lower Coil - Pin:11
Black x2 - Ground - Pin:34

Rear E/Stop (Rubber 2 Core)
Red - Signal Supply - Promix Relay Box
Blue - Signal Return - Promix Relay Box

Rear W/Light
Lt Blue - both ends are bare

(OF - Optional feature)
(EHR - Extra hardware is required)

DRAWING NO: DWG0001	- Project: **PROMIX SD MINI** MAIN HARNESS WIRING	Modifications		- Drawing Title: PROMIX SD MINI_MAIN VEHICLE HARNESS WIRING (covers hardwired and CANbus Lockouts)
		LS	24/10/23	
				WOODTECH ELECTRONICS - www.woodtech.net.au

PROMIX SD Mini
35 Pin Rectangular
Main Vehicle Harness Plug

Battery & Ign Input
Red (6mm) Battery Supply
Red (3mm) 12V IGN Supply Only

Vehicle CAN In(2 Way Deutsch Plug)
Twisted Yellow - Vehicle CAN Hi - Pin:24
Twisted Green - Vehicle CAN Lol - Pin:25
(CAN-120 Ohm options - See Manual Page 24)

Aux CAN Out(White 4 Way Plug)
Red - Positive - Pin:15
Yellow - CAN Hi - Pin:16
Green - CAN Lo - Pin:17
Black - Ground - Pin:18
(Optional Hand Joystick Controls
See Manaul,Page 10)

Lockout Inputs (Hardwired Option)
Dark Blue - Park Brake Lockout Input - Pin:29
Yellow/Red - Service Brake Lockout Input - Pin:30
Dark Green - Transmission Neutral Input - Pin:31
(Lockout Inputs can be Postive,Negitive or CANbus if supported
See Manual, Page 29)

Optional DIO Inputs
Yellow/Black - Beacon Switch Input - Pin:5 (OF)
Yellow/Blue - Worklight Switch Input - Pin:22 (OF)
Yellow/Green - Bowl Counter Sensor - Pin:32 (OF)

Optional DIO Outputs
White/Purple - Remote Mode On, Positive Output - Pin:21 (OF)
Yellow/Brown - Beacon Light Output - Pin:33 (OF)

Ground
x4 Black 3mm wires- 1x Yellow Eye Lug

Hyd Fan
Yellow(6mm) Hyd Fan Supply (Promix Relay Box)
Fan ground to the trucks chassis earth.

Rexroth Hyd Pump
Brown/White - Mix Coil - Pin:8
Lt Green - Mix Coil - Pin:12
Green/White - Dischange Coil - Pin:7
Lt Green - Discharge Coil - Pin:23
(CPU HYD jumpers both in A & Dip Sw 4 - OFF
See Manual,Page 29)

Analog Revs (White 8 Way Plug)
Orange - Remote Accelertor 5V - Pin:28
Grey - Remote Accelertor Signal - Pin:27
Brown - Remote Accelertor Neg - Pin:26

Rear Chute
Purple - Chute Raise Coil - Pin:6
Purple/Orange - Chute Lower Coil - Pin:11
Black x2 - Ground - Pin:34

Rear E/Stop (Rubber 2 Core)
Red - Signal Supply - Promix Relay Box
Blue - Signal Return - Promix Relay Box

Rear W/Light
Lt Blue - both ends are bare

(OF - Optional feature)
(EHR - Extra hardware is required)

DRAWING NO: DWG0002	- Project: **PROMIX SD MINI** MAIN HARNESS WIRING	Modifications: LS 24/10/23	- Drawing Title: PROMIX SD MINI_REXROTH PUMP_ANALOG REVS (This drawing covers hardwired and CANbus Interface)
			WOODTECH ELECTRONICS - www.woodtech.net.au

PROMIX SD Mini
35 Pin Rectangular
Main Vehicle Harness Plug

Battery & Ign Input
Red (6mm) Battery Supply
Red (3mm) 12V IGN Supply Only

Vehicle CAN In(2 Way Deutsch Plug)
Twisted Yellow - Vehicle CAN Hi - Pin:24
Twisted Green - Vehicle CAN Lol - Pin:25
(CAN-120 Ohm options - See Manual Page 24)

Aux CAN Out(White 4 Way Plug)
Red - Positive - Pin:15
Yellow - CAN Hi - Pin:16
Green - CAN Lo - Pin:17
Black - Ground - Pin:18
(Optional Hand Joystick Controls
See Manaul,Page 10)

Lockout Inputs (Hardwired Option)
Dark Blue - Park Brake Lockout Input - Pin:29
Yellow/Red - Service Brake Lockout Input - Pin:30
Dark Green - Transmission Neutral Input - Pin:31
(Lockout Inputs can be Postive,Negitive or CANbus if supported
See Manual, Page 29)

Optional DIO Inputs
Yellow/Black - Beacon Switch Input - Pin:5 (OF)
Yellow/Blue - Worklight Switch Input - Pin:22 (OF)
Yellow/Green - Bowl Counter Sensor - Pin:32 (OF)

Optional DIO Outputs
White/Purple - Remote Mode On, Positive Output - Pin:21 (OF)
Yellow/Brown - Beacon Light Output - Pin:33 (OF)

Ground
x4 Black 3mm wires- 1x Yellow Eye Lug

Hyd Fan
Yellow(6mm) Hyd Fan Supply (Promix Relay Box)
Fan ground to the trucks chassis earth.

Cruise Rev (White 8 Way Plug)
Yellow - Cruise Revs Up - Pin:2
Yellow/White - Cruise Revs Down - Pin:1
Yellow/Pink - Cruise Common - Pin:3

Rexroth Hyd Pump
Brown/White - Mix Coil - Pin:8
Lt Green - Mix Coil - Pin:12
Green/White - Dischange Coil - Pin:7
Lt Green - Discharge Coil - Pin:23
(CPU HYD jumpers both in A & Dip Sw 4 - OFF
See Manual,Page 29)

Rear Chute
Purple - Chute Raise Coil - Pin:6
Purple/Orange - Chute Lower Coil - Pin:11
Black x2 - Ground - Pin:34

Rear E/Stop (Rubber 2 Core)
Red - Signal Supply - Promix Relay Box
Blue - Signal Return - Promix Relay Box

Rear W/Light
Lt Blue - both ends are bare

(OF - Optional feature)
(EHR - Extra hardware is required)

DRAWING NO: DWG0003	- Project: **PROMIX SD MINI** MAIN HARNESS WIRING	Modifications: LS 24/10/23	- Drawing Title: PROMIX SD MINI_REXROTH PUMP_CRUISE REVS (covers hardwired and CANbus Lockouts)
			WOODTECH ELECTRONICS - www.woodtech.net.au

PROMIX SD Mini
35 Pin Rectangular
Main Vehicle Harness Plug

Battery & Ign Input
Red (6mm) Battery Supply
Red (3mm) 12V IGN Supply Only

Vehicle CAN In(2 Way Deutsch Plug)
Twisted Yellow - Vehicle CAN Hi - Pin:24
Twisted Green - Vehicle CAN Lol - Pin:25
(CAN-120 Ohm options - See Manual Page 24)

Aux CAN Out(White 4 Way Plug)
Red - Positive - Pin:15
Yellow - CAN Hi - Pin:16
Green - CAN Lo - Pin:17
Black - Ground - Pin:18
(Optional Hand Joystick Controls
See Manaul,Page 10)

Lockout Inputs (Hardwired Option)
Dark Blue - Park Brake Lockout Input - Pin:29
Yellow/Red - Service Brake Lockout Input - Pin:30
Dark Green - Transmission Neutral Input - Pin:31
(Lockout Inputs can be Postive,Negitive or CANbus if supported
See Manual, Page 29)

Optional DIO Inputs
Yellow/Black - Beacon Switch Input - Pin:5 (OF)
Yellow/Blue - Worklight Switch Input - Pin:22 (OF)
Yellow/Green - Bowl Counter Sensor - Pin:32 (OF)

Optional DIO Outputs
White/Purple - Remote Mode On, Positive Output - Pin:21 (OF)
Yellow/Brown - Beacon Light Output - Pin:33 (OF)

Ground
x4 Black 3mm wires- 1x Yellow Eye Lug

Hyd Fan
Yellow(6mm) Hyd Fan Supply (Promix Relay Box)
Fan ground to the trucks chassis earth.

Rexroth Hyd Pump
Brown/White - Mix Coil - Pin:8
Lt Green - Mix Coil - Pin:12
Green/White - Dischange Coil - Pin:7
Lt Green - Discharge Coil - Pin:23
(CPU HYD jumpers both in A & Dip Sw 4 - OFF
See Manual,Page 29)

Rear Chute
Purple - Chute Raise Coil - Pin:6
Purple/Orange - Chute Lower Coil - Pin:11
Black x2 - Ground - Pin:34

Rear E/Stop (Rubber 2 Core)
Red - Signal Supply - Promix Relay Box
Blue - Signal Return - Promix Relay Box

Rear W/Light
Lt Blue - both ends are bare

Linear Actuator Revs
Yellow - Motor Control A - Pin:2
Yellow/White - Motor Control B - Pi
Yellow/Pink - Supply - Pin:3
Yellow/Purple - Ground - Pin:1

(OF - Optional feature)
(EHR - Extra hardware is required)

DRAWING NO: DWG0004	- Project: **PROMIX SD MINI** MAIN HARNESS WIRING	Modifications: LS	24/10/23
		- Drawing Title: PROMIX SD MINI_REXROTH PUMP_ACTUATOR REVS (covers hardwired and CANbus Lockouts)	
		WOODTECH ELECTRONICS - www.woodtech.net.au	

PROMIX SD Mini
35 Pin Rectangular
Main Vehicle Harness Plug

Battery & Ign Input
Red (6mm) Battery Supply
Red (3mm) 12V IGN Supply Only

Vehicle CAN In (2 Way Deutsch Plug)
Twisted Yellow - Vehicle CAN Hi - Pin:24
Twisted Green - Vehicle CAN Lol - Pin:25
(CAN-120 Ohm options - See Manual Page 24)

Aux CAN Out (White 4 Way Plug)
Red - Positive - Pin:15
Yellow - CAN Hi - Pin:16
Green - CAN Lo - Pin:17
Black - Ground - Pin:18
(Optional Hand Joystick Controls
See Manaul,Page 10)

Lockout Inputs (Hardwired Option)
Dark Blue - Park Brake Lockout Input - Pin:29
Yellow/Red - Service Brake Lockout Input - Pin:30
Dark Green - Transmission Neutral Input - Pin:31
(Lockout Inputs can be Postive,Negitive or CANbus if supported
See Manual, Page 29)

Optional DIO Inputs
Yellow/Black - Beacon Switch Input - Pin:5 (OF)
Yellow/Blue - Worklight Switch Input - Pin:22 (OF)
Yellow/Green - Bowl Counter Sensor - Pin:32 (OF)

Optional DIO Outputs
White/Purple - Remote Mode On, Positive Output - Pin:21 (OF)
Yellow/Brown - Beacon Light Output - Pin:33 (OF)

Ground
x4 Black 3mm wires- 1x Yellow Eye Lug

Hyd Fan
Yellow(6mm) Hyd Fan Supply (Promix Relay Box)
Fan ground to the trucks chassis earth.

Rear Chute
Purple - Chute Raise Coil - Pin:6
Purple/Orange - Chute Lower Coil - Pin:11
Black x2 - Ground - Pin:34

Rear E/Stop (Rubber 2 Core)
Red - Signal Supply - Promix Relay Box
Blue - Signal Return - Promix Relay Box

Rear W/Light
Lt Blue - both ends are bare

Analog Revs (White 8 Way Plug)
Orange - Remote Accelertor 5V - Pin:28
Grey - Remote Accelertor Signal - Pin:27
Brown - Remote Accelertor Neg - Pin:26

Danfoss Hyd Pump
Green/White - Pin A Cannon Plug - Pin:8
Lt Green - Pin B Cannon Plug - Pin:12
(CPU HYD jumpers both in B & Dip Sw 4 - ON
See Manual,Page 29)

(OF - Optional feature)
(EHR - Extra hardware is required)

DRAWING NO: DWG0005	- Project: **PROMIX SD MINI** MAIN HARNESS WIRING	Modifications		- Drawing Title: PROMIX SD MINI_DANFOSS PUMP_ANALOG REVS (covers hardwired and CANbus Lockouts)
		LS	24/10/23	
				WOODTECH ELECTRONICS - www.woodtech.net.au

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PROMIX SD Mini
35 Pin Rectangular
Main Vehicle Harness Plug

Battery & Ign Input
Red (6mm) Battery Supply
Red (3mm) 12V IGN Supply Only

Vehicle CAN In(2 Way Deutsch Plug)
Twisted Yellow - Vehicle CAN Hi - Pin:24
Twisted Green - Vehicle CAN Lol - Pin:25
(CAN-120 Ohm options - See Manual Page 24)

Aux CAN Out(White 4 Way Plug)
Red - Positive - Pin:15
Yellow - CAN Hi - Pin:16
Green - CAN Lo - Pin:17
Black - Ground - Pin:18
(Optional Hand Joystick Controls
See Manaul,Page 10)

Lockout Inputs (Hardwired Option)
Dark Blue - Park Brake Lockout Input - Pin:29
Yellow/Red - Service Brake Lockout Input - Pin:30
Dark Green - Transmission Neutral Input - Pin:31
(Lockout Inputs can be Postive,Negitive or CANbus if supported
See Manual, Page 29)

Optional DIO Inputs
Yellow/Black - Beacon Switch Input - Pin:5 (OF)
Yellow/Blue - Worklight Switch Input - Pin:22 (OF)
Yellow/Green - Bowl Counter Sensor - Pin:32 (OF)

Optional DIO Outputs
White/Purple - Remote Mode On, Positive Output - Pin:21 (OF)
Yellow/Brown - Beacon Light Output - Pin:33 (OF)

Ground
x4 Black 3mm wires- 1x Yellow Eye Lug

Hyd Fan
Yellow(6mm) Hyd Fan Supply (Promix Relay Box)
Fan ground to the trucks chassis earth.

Cruise Rev (White 8 Way Plug)
Yellow - Cruise Revs Up - Pin:2
Yellow/White - Cruise Revs Down - Pin:1
Yellow/Pink - Cruise Common - Pin:3

Rear Chute
Purple - Chute Raise Coil - Pin:6
Purple/Orange - Chute Lower Coil - Pin:11
Black x2 - Ground - Pin:34

Rear E/Stop (Rubber 2 Core)
Red - Signal Supply - Promix Relay Box
Blue - Signal Return - Promix Relay Box

Rear W/Light
Lt Blue - both ends are bare

Danfoss Hyd Pump
Green/White - Pin A Cannon Plug - Pin:8
Lt Green - Pin B Cannon Plug - Pin:12
(CPU HYD jumpers both in B & Dip Sw 4 - ON
See Manual,Page 29)

(OF - Optional feature)
(EHR - Extra hardware is required)

DRAWING NO: DWG0006	- Project: **PROMIX SD MINI** MAIN HARNESS WIRING	Modifications LS 24/10/23	- Drawing Title: PROMIX SD MINI_DANFOSS PUMP_CRUISE REVS (covers hardwired and CANbus Lockouts)
			WOODTECH ELECTRONICS - www.woodtech.net.au

PROMIX SD Mini
35 Pin Rectangular
Main Vehicle Harness Plug

Battery & Ign Input
Red (6mm) Battery Supply
Red (3mm) 12V IGN Supply Only

Vehicle CAN In(2 Way Deutsch Plug)
Twisted Yellow - Vehicle CAN Hi - Pin:24
Twisted Green - Vehicle CAN Lol - Pin:25
(CAN-120 Ohm options - See Manual Page 24)

Aux CAN Out(White 4 Way Plug)
Red - Positive - Pin:15
Yellow - CAN Hi - Pin:16
Green - CAN Lo - Pin:17
Black - Ground - Pin:18
(Optional Hand Joystick Controls
See Manaul,Page 10)

Lockout Inputs (Hardwired Option)
Dark Blue - Park Brake Lockout Input - Pin:29
Yellow/Red - Service Brake Lockout Input - Pin:30
Dark Green - Transmission Neutral Input - Pin:31
(Lockout Inputs can be Postive,Negitive or CANbus if supported
See Manual, Page 29)

Optional DIO Inputs
Yellow/Black - Beacon Switch Input - Pin:5 (OF)
Yellow/Blue - Worklight Switch Input - Pin:22 (OF)
Yellow/Green - Bowl Counter Sensor - Pin:32 (OF)

Optional DIO Outputs
White/Purple - Remote Mode On, Positive Output - Pin:21 (OF)
Yellow/Brown - Beacon Light Output - Pin:33 (OF)

Ground
x4 Black 3mm wires- 1x Yellow Eye Lug

Hyd Fan
Yellow(6mm) Hyd Fan Supply (Promix Relay Box)
Fan ground to the trucks chassis earth.

Rear Chute
Purple - Chute Raise Coil - Pin:6
Purple/Orange - Chute Lower Coil - Pin:11
Black x2 - Ground - Pin:34

Rear E/Stop (Rubber 2 Core)
Red - Signal Supply - Promix Relay Box
Blue - Signal Return - Promix Relay Box

Rear W/Light
Lt Blue - both ends are bare

Danfoss Hyd Pump
Green/White - Pin A Cannon Plug - Pin:8
Lt Green - Pin B Cannon Plug - Pin:12
(CPU HYD jumpers both in B & Dip Sw 4 - ON
See Manual,Page 29)

Linear Actuator Revs
Yellow - Motor Control A - Pin:2
Yellow/White - Motor Control B - Pi
Yellow/Pink - Supply - Pin:3
Yellow/Purple - Ground - Pin:1

(OF - Optional feature)
(EHR - Extra hardware is required)

DRAWING NO: DWG0007	- Project: **PROMIX SD MINI** MAIN HARNESS WIRING	Modifications		- Drawing Title: PROMIX SD MINI_DANFOSS PUMP_ACTUATOR REVS (covers hardwired and CANbus Lockouts)
		LS	24/10/23	
				WOODTECH ELECTRONICS - www.woodtech.net.au

PROMIX SD Mini
35 Pin Rectangular
Main Vehicle Harness Plug

Vehicle CAN In(2 Way Deutsch Plug)
Twisted Yellow - Vehicle CAN Hi - Pin:24
Twisted Green - Vehicle CAN Lol - Pin:25
(CAN-120 Ohm options - See Manual Page 24)

Lockout Inputs (Hardwired Option)
Dark Blue - Park Brake Lockout Input - Pin:29
Yellow/Red - Service Brake Lockout Input - Pin:30
Dark Green - Transmission Neutral Input - Pin:31
(Lockout Inputs can be Postive,Negitive or CANbus if supported See Manual, Page 29)

Optional DIO Inputs
Yellow/Black - Beacon Switch Input - Pin:5 (OF)
Yellow/Blue - Worklight Switch Input - Pin:22 (OF)
Yellow/Green - Bowl Counter Sensor - Pin:32 (OF)

Aux CAN Out(White 4 Way Plug)
Red - Positive - Pin:15
Yellow - CAN Hi - Pin:16
Green - CAN Lo - Pin:17
Black - Ground - Pin:18
(Optional Hand Joystick Controls See Manaul,Page 10)

Optional DIO Outputs
White/Purple - Remote Mode On, Positive Output - Pin:21 (OF)
Yellow/Brown - Beacon Light Output - Pin:33 (OF)

Battery & Ign Input
Red (6mm) Battery Supply
Red (3mm) 12V IGN Supply Only

Ground
x4 Black 3mm wires- 1x Yellow Eye Lug

Hyd Fan
Yellow(6mm) Hyd Fan Supply (Promix Relay Box)
Fan ground to the trucks chassis earth.

Rear Chute
Purple - Chute Raise Coil - Pin:6
Purple/Orange - Chute Lower Coil - Pin:11
Black x2 - Ground - Pin:34

Rear E/Stop (Rubber 2 Core)
Red - Signal Supply - Promix Relay Box
Blue - Signal Return - Promix Relay Box

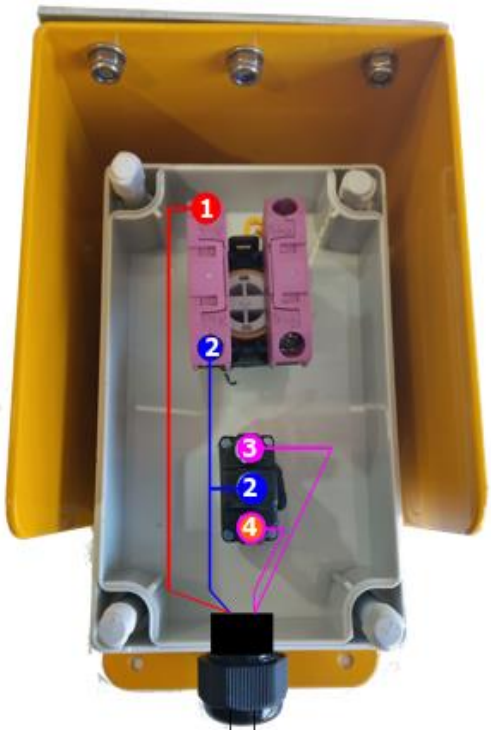
Rear W/Light
Lt Blue - both ends are bare

Linear Actuator Revs
Yellow - Motor Control A - Pin:2
Yellow/White - Motor Control B - Pin:4
Yellow/Pink - Supply - Pin:3
Yellow/Purple - Ground - Pin:1

Linear Actuator Hyd Pump
White/Orange - Motor Control A- Pin:13
White - Motor Control B - Pin:14
Pink - Dump Valve - Pin:9(Power to run)

(OF - Optional feature)
(EHR - Extra hardware is required)

DRAWING NO: DWG0008	- Project: **PROMIX SD MINI** MAIN HARNESS WIRING	Modifications		- Drawing Title: PROMIX SD MINI_ACTUATOR PUMP_ACTUATOR REVS (covers hardwired and CANbus Lockouts)
		LS	24/10/23	
				WOODTECH ELECTRONICS - www.woodtech.net.au



Purple/Orange - From(Pin5)E-Stop Chute DOWN Switch

Purple - From(Pin:3)E-Stop Chute UP Switch

12V Rear Chute Coils

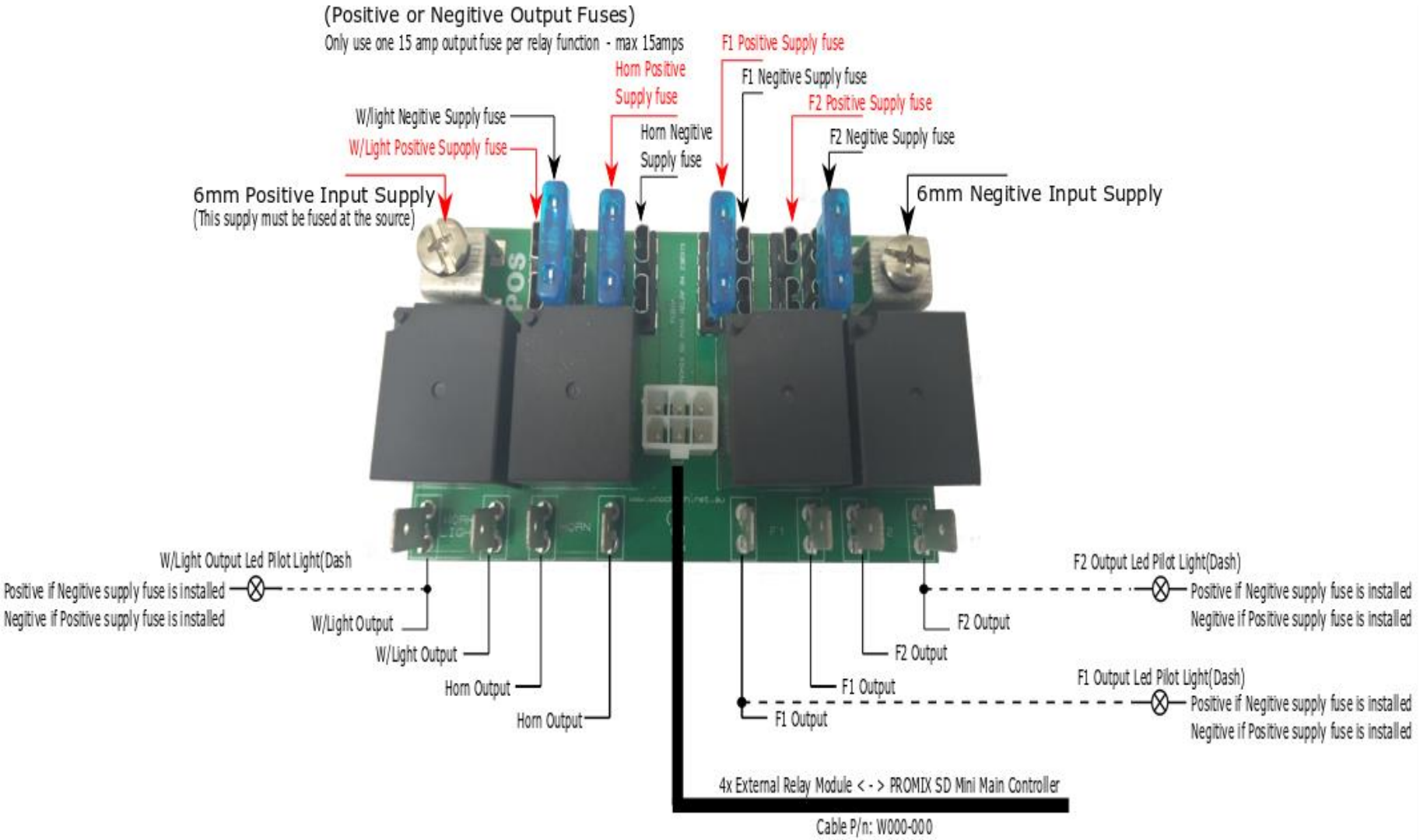
Purple - Chute Raise Coil - Pin:6
Black - Ground

Purple/Orange - Chute Lower Coil - Pin:11
Black - Ground

Rear E/Stop (Rubber 2 Core)
Red - Signal Supply (+) From Promix Relay Box
Blue - Signal Return (+) To Promix Relay Box

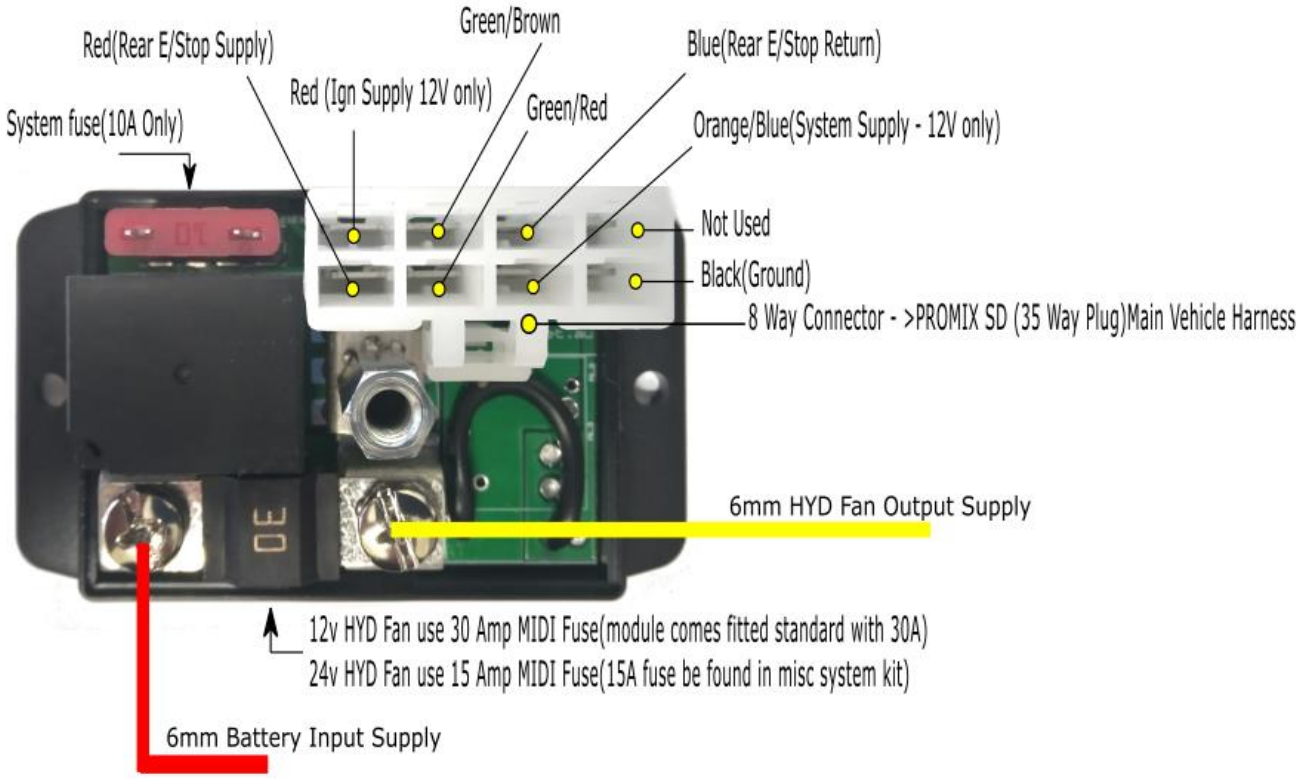
From Promix SD Mini Main Vehicle Harness

DRAWING NO: DWG0009	- Project: **PROMIX SD MINI** MAIN HARNESS WIRING	Modifications		- Drawing Title: PROMIX SD MINI_REAR E/STOP WITH CHUTE SWITCH
		LS	24/10/23	
				WOODTECH ELECTRONICS - www.woodtech.net.au



Very Important Note: The Beacon and Worklight dash switches used must be a momentary switch only.

DRAWING NO: DWG00010	- Project: **PROMIX SD MINI** HARDWARE WIRING	Modifications LS 06/11/23	- Drawing Title: PROMIX SD MINI_4X EXTERNAL RELAY MODULE (Used with the 12 Button Hand Remote)
			WOODTECH ELECTRONICS - www.woodtech.net.au



Please Note: This relay module is to be mounted inside the cab only

DRAWING NO: DWG00011	- Project: **PROMIX SD MINI** HARDWARE WIRING	Modifications		- Drawing Title: PROMIX SD MINI_FUSE & RELAY MODULE Location: Main Vehicle Harness P/n:W000-000
		LS	06/11/23	
				WOODTECH ELECTRONICS - www.woodtech.net.au

This show how easy it is to upgrade from an existing PROMIX Oiginal,LCD or SD Controller by using the existing 37 pin round vehicle harness already installed by adding a change-over harness and the plug in fuse and relay module .

NEW PROMIX SD MINI CONTROLLER

EXISTING PROMIX SD MINI CONTROLLER

From here

PROMIX SD 37 Male Pin Round Plug
(Using the existing PROMIX SD Vehicle Harness)

PROMIX SD MINI 35 Rectangular Plug

PROMIX SD MINI TO PROMIX SD CHANGE-OVER HARNESS
(Part No: W000-000)

To here

Must replace Fuse & Relay Harness Module on the existing 37 pin round plug harness with Part No: W000-000

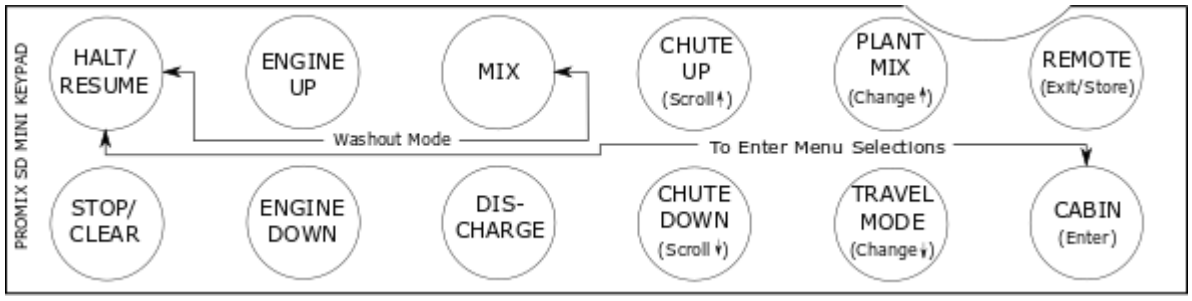
Aux CANbus Outlet Plug

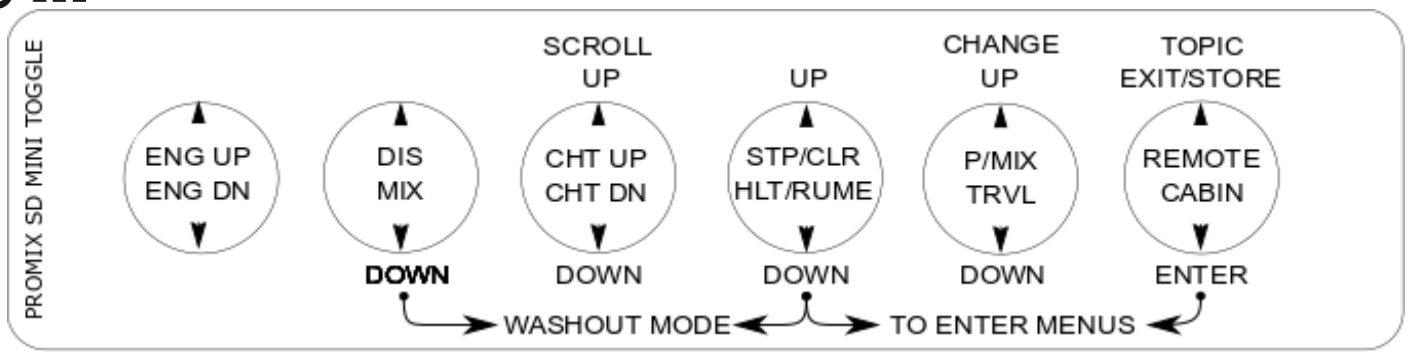
PROMIX SD 37 Pin Female Plug
(Change-Over Harness side)

DRAWING NO: DWG00012 Rev: A	- Project: **PROMIX SD MINI** HARDWARE WIRING	Modifications LS 07/11/23	- Drawing Title: PROMIX SD MINI_PROMIX/LCD/SD TO PROMIX SD MINI HARDWARE UPGRADE KIT
			WOODTECH ELECTRONICS - www.woodtech.net.au

PROMIX SD MINI CABIN CONSOLE - OVERLAYS

(Print and cut out overlays for the Keypad and Toggle Switch Cabin Consoles)





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