

MAGUIRE PRODUCTS INC.

FLEXBUS[®] / FLEXBUS Lite[®]

FLEXBUS[®]
FLEXBUS Lite[®]
RECEIVER CONTROL SYSTEM
INSTRUCTION MANUAL



Original Instructions Manual
Revision Date: January 31, 2025

Copyright © Maguire Products, Inc. 2025

Copyright

© 2025 Maguire Products Inc.

The information contained within this manual including any translations thereof, is the property of Maguire Products Inc. and may not be reproduced, or transmitted in any form or by any means without the express written consent of Maguire Products Inc.

To every person concerned with use and maintenance of the Maguire Flexbus system it is recommended to read thoroughly these operating instructions. Maguire Products Inc. accepts no responsibility or liability for damage or malfunction of the equipment arising from non-observance of these operating instructions.

To avoid errors and to ensure trouble-free operation, these operating instructions must be read and understood by all personnel who are to use the equipment.

Should you have problems or difficulties with the equipment, please contact Maguire Products Inc. or your local Maguire distributor.

These operating instructions only apply to the equipment described within this manual.

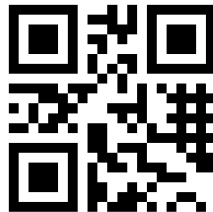
Manufacturer's Contact Information

Maguire Products Inc.
11 Crozerville Road
Aston, PA. 19014

Phone: 610.459.4300
Fax: 610.459.2700

Website: <http://www.maguire.com>

Email: info@maguire.com



Maguire Products Inc.

MAGUIRE Flexbus / Flexbus Lite

Table of Contents

Flexbus Overview	4
Flexbus Lite Overview	4
Flexbus Home Screen	5
Flexbus Setup and Configuration	5
Flexbus Pump Assignment	8
Receiver Assignment	10
Receiver Configuration	11
Pump Configuration	13
Removing Receivers or Pumps	15
Flexbus System Setup Options	16
Firmware Updates	17
Flexbus Main Screen Details	18
Event and Alarm Logging	20
Operator Access	21
Change Passwords	22
Backup and Restore Flexbus Component Map	22
Flexbus Wiring Diagrams	23
Flexbus Component Map	26
Flexbus Lite Component Map	28
Warranty	31
Technical Support and Contact Information	32

Flexbus / Flexbus Lite Overview

The Flexbus System allows you to avoid the guesswork associated with central system conveying. Using one single, central Flexbus controller you can scale control up to five pumps and 240 receivers (48 per pump).

Flexbus Lite - Flexbus is also integrated into the Maguire 4088 Weigh Scale Touchscreen Controller as Flexbus Lite for loading control of the individual blender.

This manual describes both the Flexbus Central Vacuum Loading System and the Flexbus Lite Loading System integrated into the Maguire 4088 Weigh Scale Touchscreen Controller. The Flexbus Central Loading System and the Flexbus Lite Loading System are very similar in setup and operation. Differences in the systems will be noted throughout this manual when applicable.

- **Central Vacuum System Efficiency**
Utilizing a 3-phase vacuum pump to supply multiple vacuum receivers is much more efficient than using separate vacuum loaders.
- **Easy Installation**
Install a single wire and conveniently located drops to connect the control to all receivers and pumps.
- **System Grows with Your Needs**
Each Flexbus central control allows the addition of up to 5 pumps and up to 48 receivers per pump for a total of 240 receivers.
- **Flexbus Lite**
Included within the Maguire Weigh Scale Blender Touchscreen, Flexbus Lite enables local control of a single pump and up to 9 receivers.
- **Local Receiver Control**
Provides ON/OFF and loading time convenience. No need to run back to the central control.
- **Full Featured Central Control**
Adjustable load, unload, priority, proportioning, purge, blowback, and alarm settings.
- **Control over Communications**
Flexbus provides communication support using Modbus TCP. See the Flexbus Modbus register mapping document for more details.

Flexbus Loading Controller Features

- 7" Color Touch Screen
- Control up to 5 pumps & 240 receivers (48 receivers per pump)
- Auto ID of receivers for easy system expansion
- Includes power supply and pump control board
- Audible and Visual Alarms
- Single wire CANbus connectivity
- Adjustable load, unload, priority, proportioning, purge, blowback, and alarm settings
- 24 VDC Control Voltage

Flexbus Home Screen Overview

Live View Panel (gray area) - Displays the live view of Receivers

Navigation Menu

Receiver View

Receivers
Navigation / Setup of all Receivers

Pumps
Navigation / Setup of all Pumps

Navigation Menu

- Returns to the Home screen
- Display Pumps
Changes the Live view panel to Pumps
- Event Log and Alarm History
- Flexbus Firmware Information
- Setup
Enters password-protected setup screens.

Flexbus Setup and Configuration

Flexbus uses a MAC address to individually identify each Flexbus pump and receiver. Identification and numeric assignment of each Flexbus pump and receiver is set up within the Flexbus controller through the order that the pump or receiver is turned on and discovered during the Pump Assignment routine and the Receiver Assignment routine setup processes.

Once the initial setup has been completed, the Flexbus system will retain the setup and identification of each pump (a single pump with Flexbus Lite) and each receiver indefinitely. After the initial identification order and numeric assignment have been saved, the operator can later make adjustments to the pump's numeric assignment order and the receiver's numeric assignment order and assign a 4-character alphanumeric identification name to each receiver.







Secondary Control Setup* - Flexbus has the option of installing a second controller to mirror the primary control at a second location on the communication line. To add a second controller, enter the password 12358 and select Secondary. All initialization of pumps and receives must be done on the Primary controller.

* excludes Flexbus Lite

Enabling Flexbus Lite in the Weigh Scale Blender Touchscreen Controller

Flexbus Lite is an option that can be enabled within the Weigh Scale 4088 Touchscreen controller allowing local control of a single pump and up to 9 receivers. Additional components are required for blender loading including receivers equipped with Flexbus, a T-drop, a position hub, pump module, and necessary cabling. Please see the Flexbus Lite component map on page 28 for setup details.



How to enabled Flexbus Lite in the Maguire Weigh Scale Blender

Press		Display will prompt for a password. (default: 22222)	Then press:	
Press		System Configuration	The display will show the System Configuration categories.	
Press		Preferences	The display will show preference categories.	
Press		Flexbus Lite	The display will show the Flexbus Lite Options screen.	
Press		Enabled	Flexbus will be enabled displaying the Flexbus menu button.	
Press		To save and exit or press the red X to cancel and exit.		
Press		To access Flexbus Lite.		
Press		To toggle the display back to the Weigh Scale Blender controller screen. When the Blender controller is displaying the Weigh Scale Blender, Flexbus continues to operate. Press the Flexbus button at any time to return to Flexbus.		

Flexbus System Setup Screen

Pump assignment is set through the SETUP screen. The setup screen is accessed by pressing the Setup button on the right side of the screen.



<p>On the HOME screen, PRESS:</p>		<p>Pressing the SETUP button prompts for a password.</p>
<p>PRESS:</p>	<p>22222</p>	<p>Enter the password (default password is 22222) Press  to confirm password.</p>
<p>This enters the Setup screen. This screen contains several setup specific options.</p>		

Pumps and Receivers Setup Buttons

Pressing PUMPS or RECEIVERS enters Setup for those devices

Navigation Menu

Flexbus Setup Options

Pumps: 1 **Receivers: 0**

Preferences **Communications**

Screen Options **Resets**

Navigation Menu

- Returns to Home screen
- Display Pumps
Changes the Live view panel to Pumps
- Event Log and Alarm History
- Flexbus Firmware Information
- Setup
Enters password protected setup screens.




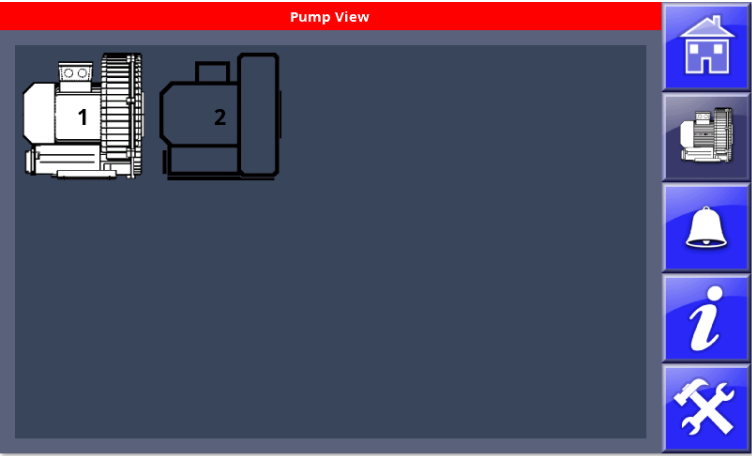




Flexbus System Setup Options

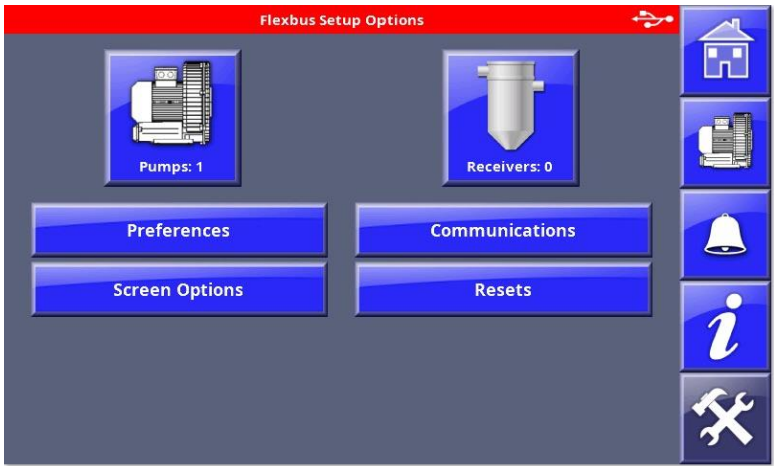


Note: Pumps must be assigned before Receivers.

Note: Flexbus Lite uses a single pump and up to 9 receivers.


Pump Assignment - Pumps must be assigned before Receivers.





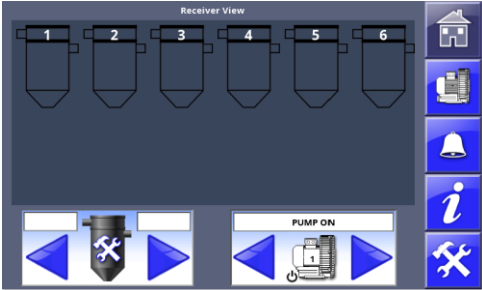
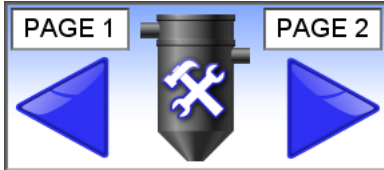

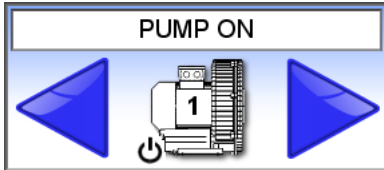




Flexbus Lite (part of the Maguire 4088 TS Weigh Scale Blender) controls a single pump. The Flexbus System can control of to 5 pumps. If you have two or more pumps (Flexbus only), turn OFF all pumps before running Setup in the Flexbus controller, otherwise: To assign Pumps, follow these instructions:

<p>On the HOME screen, PRESS:</p>		<p>Pressing the SETUP button prompts for a password.</p>
<p>PRESS:</p>	<p>22222</p>	<p>Enter the password (the default password is 22222) Press  to confirm the password.</p>
<p>This enters the Setup screen. This screen contains several setup-specific options.</p>		
<p>To set up Pumps: PRESS:</p>		<p>Press the large Pumps button on the far left of the screen.</p>
<p>This enters the PUMP assignment screen. This gray screen contains any previously assigned pumps. For first-time setup, this screen is probably blank and no pumps have been assigned. At this time, turn on your Flexbus Pumps in the order that you want them to be assigned.</p>		
<p>If you have a single pump, that pump will appear on the screen and be labeled with the number 1. If you have multiple pumps, they will appear on the screen and be numbered in the order that they were turned on. Pressing the pump icon will allow you to re-assign the ID number to a different unassigned number.</p>		
<p>PRESS:</p>		<p>To return to the Setup screen. When you return to the Setup screen, the Pumps button will show the Setup symbol  on the Pumps button indicating that you are still in the Pump Assignment mode.</p>
<p>PRESS:</p>		<p>To Exit the Pump Assignment Mode. Setup icon  overlaying the button will disappear indicating you are out of Pump assignment mode.</p>

<p>While in the Setup screen, you can go straight to setting up Receivers without re-entering the password.</p>		
<p>PRESS:</p>		<p>To enter the Receivers assignment screen.</p> <p>See the Next Page for Receivers Assignment instructions.</p> <p>If you are not configuring Receivers at this time continue below to exit the Setup screen.</p>
<p>PRESS:</p>		<p>To exit the Setup screen.</p>

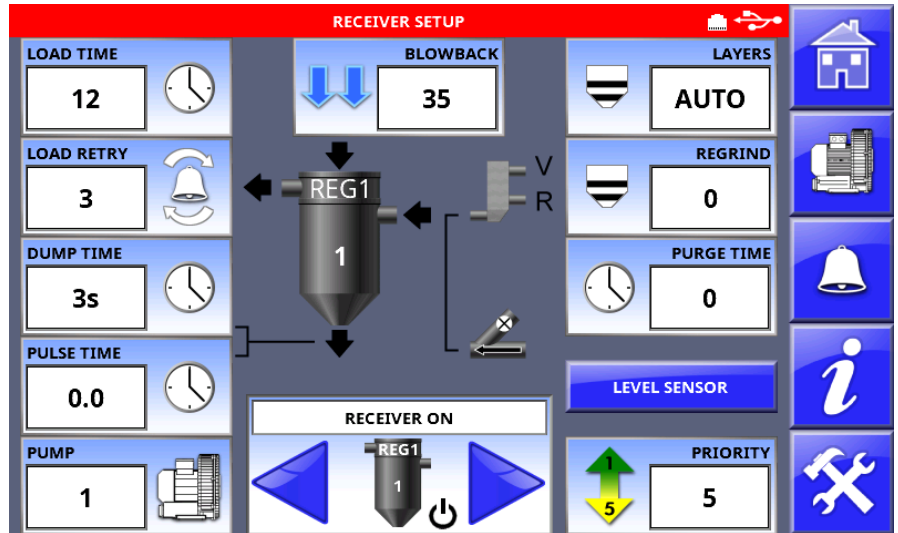
Receiver Assignment

NOTE: If you are already entered into SETUP, skip the password step and go to the  below.

<p>On the HOME screen PRESS:</p>		<p>Pressing the SETUP button prompts for a password.</p>
<p>PRESS:</p>	<p>22222</p>	<p>Enter the password (default password is 22222) Press  to confirm password.</p>
<p> This enters the Setup screen. This screen contains several setup-specific options.</p>		
<p>PRESS:</p>		<p>Press the large Receivers button to enter the Receiver assignment screen.</p>
<p>The gray screen contains any previously assigned Receivers. For first-time setup, this is blank and no Receivers have been assigned. Turn on your Flexbus Receivers in the order that you want them to be assigned.</p>		
<p>Your receivers will appear on the screen and be numbered in the order that they were turned on.</p> <p>First-time setup of Receivers will appear as an outline image indicating that the receiver is in Standby.</p> <p>If necessary, pressing each receiver icon will allow you to re-assign the ID number to a different unassigned number.</p>		
<p>If you have more than 12 Receivers, use the Receiver page navigation arrows to navigate to the next screen.</p>		
<p>The Pump navigation arrows allow control of the pumps assigned to the receivers to be taken offline / online. Press the Pump  symbol in this navigation panel to toggle the selected Pump online or offline.</p>		
<p>PRESS:</p>		<p>To return to the Setup screen. When you return to the Setup screen, the Receivers button will show the Setup symbol on the pumps button indicating that you are still in the Receiver Assignment mode.</p>
<p>PRESS:</p>	 <p>RECEIVERS: 3</p>	<p>To Exit the Receiver Assignment Mode. Setup icon  will disappear indicating you are out of Receiver assignment mode.</p>
<p>PRESS:</p>		<p>To exit the Setup screen.</p>

Receiver Configuration

The Receiver configuration screen is accessible from the Home screen. Pressing a receiver on the Home Screen, takes you to the Receiver's Configuration screen. The receiver that you are configuring is identified by the Receiver's ID number on the receiver images on this screen. You can select another Receiver by using the Receiver navigation arrows at the bottom center of this screen.



Receiver Navigation








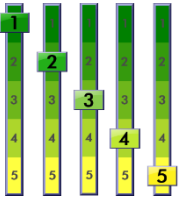
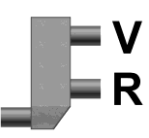
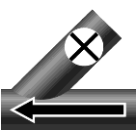



	<p>Receiver Navigation and Status Panel - This multi-function panel displays messages and receiver status, allows for navigation to each Receiver's configuration screen using the arrow buttons, and allows the receiver to be turned OFF or ON.</p>
--	--

The receiver symbol can display the following states:

	<p>Pressing the Receiver symbol toggles receiver OFF or ON. This symbol indicates that the receiver is turned off and will not run.</p>
	<p>This symbol indicates that the controller has lost communication with the receiver. The receiver will not run in this state.</p>

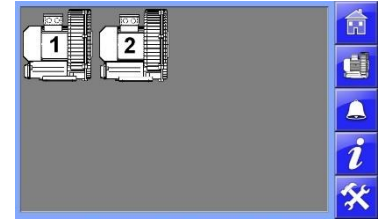
Receiver Configuration Fields

	<p>Blowback - Blowback is a pulse of air to clear the filter. Blowback has two configuration fields. Skip cycle defines the number of cycles the receiver will skip between blowback pulses. Default for Skip Cycle is 3. Setting Skip Cycle to 0 (zero) will pulse every time. Time Interval is a multiplication factor of 400ms to pressurize the charge canister. Default Time Interval is 1 (1=400ms).</p>
	<p>Load Time - The time in seconds that the receiver will load.</p>
	<p>Load Retry - The number of times the receiver will try to successfully load material and satisfy the sensor. Exceeding this retry count will cause the receiver to alarm.</p>

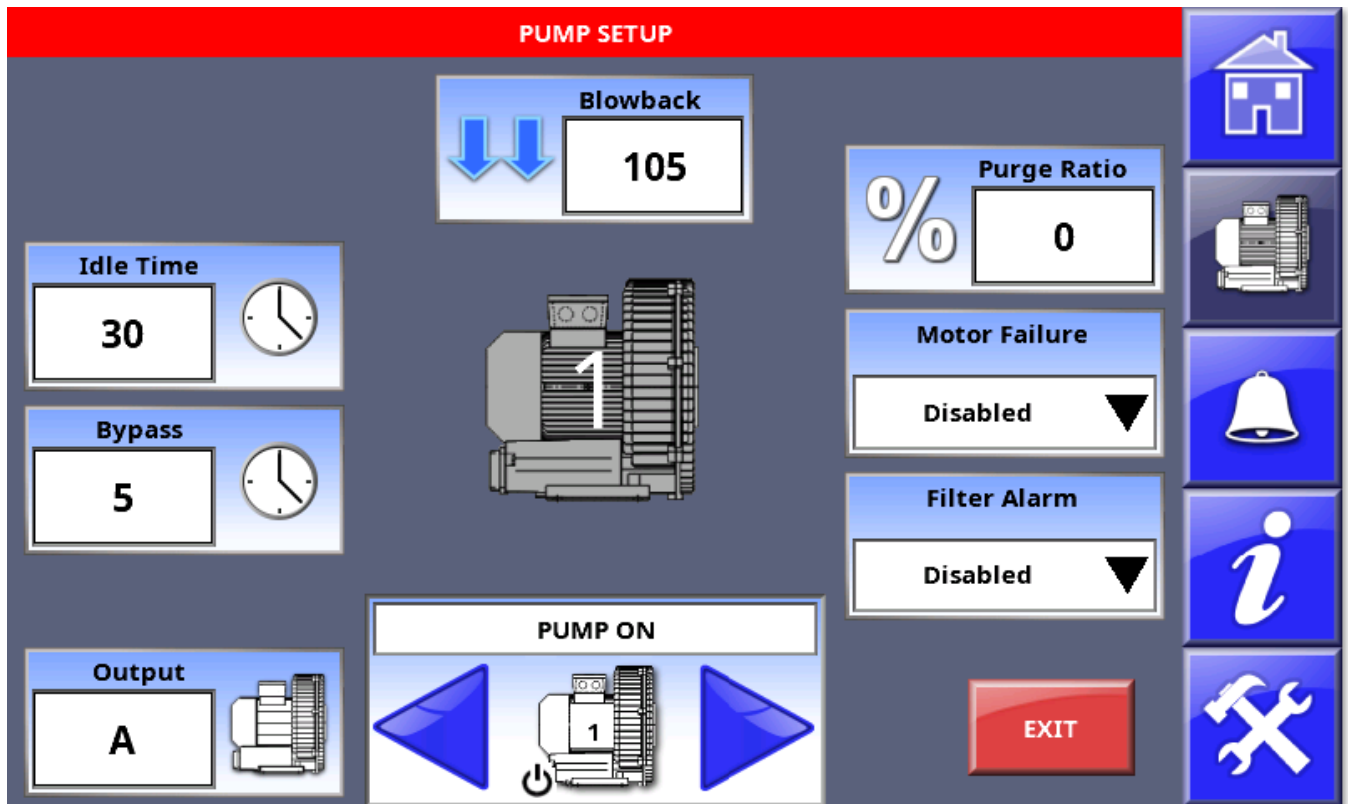
	<p><u>Dump Time</u> - The time in seconds that the receiver will remain open during the dump cycle.</p>	
	<p><u>Pulse Time</u> - Time output 6 on the receiver flexbus module will turn on and off during the dump time. Example 1.0 seconds on and off for 10 seconds of dump time. This equals 5 pulses. Used with receivers requiring pulse blowback or bridge breakers.</p>	
	<p><u>Pump Assignment</u> - The ID number of the pump that this receiver is assigned to.</p>	
	<p><u>Layers</u> - Number of layers Regrind will be dispensed in with natural. Zero turns on automatic layering. Maximum 4 layers.</p>	
	<p><u>Percent of Regrind</u> - When a non-zero % value is specified, this will dispense regrind as a % of load time. Proportioning valve is controlled by time.</p>	
	<p><u>Purge Time</u> - The time in seconds that the purge valve will open to purge the convey line. (Purge time follows Load time).</p>	
	<p><u>Priority</u> - Sets the order of importance of the receivers. Setting a receiver to level 1 sets to the highest priority, while setting to level 5 sets to the lowest priority. Higher priority receivers receive material first while lower priority receivers receive material later.</p>	
	<p><u>Layering Proportioning valve</u> - This symbol represents the Virgin (Natural) / Regrind % material layering on the input side of the receiver.</p>	
		<p><u>Purge</u> - This symbol represents the purge valve. When purging, the symbol will show a blue arrow.</p>
	<p>The Receiver's label and defaults can be reset by touching the large receiver image in the center of the screen.</p>	
	<p>Press the info button to display the ID Number, Serial Number, firmware and the label of the loader. From this screen the loaders label can be set or changed. If info button is not displayed, press the image of the pump.</p>	

Pump Configuration

Pressing the pump button in the right navigation takes you to the Pump overview screen and then pressing a pump in this overview screen will open the Pump's Configuration screen. The pump that you are configuring is identified by the pump's ID label on the pump's image on this screen. You can select another pump by using the pump navigation arrows at the bottom center of this screen.



Pump Overview Screen



Pump Configuration Screen






Pump Navigation

	<p>Pump Navigation and Status Panel - This multi-function panel displays messages and pump status, allows for navigation to each pump configuration screen using of the arrow buttons, and allows the pump to be turned OFF or ON.</p>
--	---

The pump symbol can display the following states:

	<p>Pressing the pump symbol toggles the pump OFF or ON. Message will display PUMP OFF.</p>
	<p>This symbol indicates that the pump has lost communication. The pump will not run in this state. Message will display PUMP LOST COM.</p>

Pump Configuration Fields



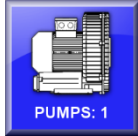

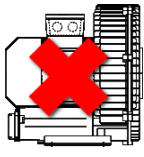





	<p><u>Blowback</u> - Blowback is a pulse of air to clear the filter. Blowback has two configuration fields. Skip cycle defines the number of Bypass cycles skipped between each blowback pulse. Default for Skip Cycle is 10. Setting Skip Cycle to 0 (zero) will pulse every time. Time Interval is a multiplication factor of 400ms to pressurize the charge canister. Default Time Interval is 5 (1=400ms).</p>
	<p><u>IDLE TIME</u> - The time in minutes that the pump runs after the last convey request before shutting off.</p>
	<p><u>BYPASS</u> - The time delay in 10ths of seconds (0-50, zero seconds to 5 seconds) before the Bypass valve opens after all receivers are satisfied.</p>
	<p><u>PURGE RATIO</u> - The % of time split between two purge valves. Used to clear material that overshoots the receiver.</p>
	<p><u>PUMP</u> - Selects between pump A or pump B outputs.</p>

Motor Failure Alarm - Optional motor failure detection. See wiring diagram on page 23.

Filter Alarm - On power up, system detects if filter is present. During pump operation system detects a clogged filter.

Removing Receivers or Pumps from the configuration












If a pump or receiver needs to be removed from the configuration, it can be removed using this procedure.

<p>On the HOME screen PRESS:</p>		<p>Pressing the SETUP button prompts for a password.</p>
<p>PRESS:</p>	<p>22222</p>	<p>Enter the password (default password is 22222) Press  to confirm password.</p>
<p>This enters the Setup screen. This screen contains several setup specific options.</p>		
<p>PRESS:</p>	 <p>or</p> 	<p>Press the large Receiver or Pump button depending on which device you want to remove.</p>
<p>The screen will contain any previously assigned devices (Pumps or Receivers).</p> <p>A device must be turned off or communication must be disconnected to remove the device. When a device is turned off or communication to the device is disconnected, the loader or pump icon will show a red X over it. The red X enables the option for the device to be removed by pressing the device.</p>		
<p>PRESS:</p>	 <p>or</p> 	<p>To remove the pump or loader that you want to remove.</p>
<p>For Receivers, a prompt to remove the receiver will be shown. If a pump is being removed, a prompt to remove all receivers from this pump will be shown.</p>		
<p>PRESS:</p>		<p>To return to the Setup screen. When you return to the Setup screen, the Receivers button will show the Setup symbol on the pumps button indicating that you are still in the Receiver Assignment mode.</p>
<p>PRESS:</p>	 <p>or</p> 	<p>To Exit the Assignment Mode. Setup icon will disappear indicating you are out of the assignment mode.</p>
<p>PRESS:</p>		<p>To exit the Setup screen.</p>

Flexbus System Setup Options



Press the Setup button to The Setup screen also allows for setting: Date and time, screensaver timeout, screen brightness, screen calibration, updating Flexbus controller and receiver/pump firmware, changing the password, language selection and date format. To enter Setup press the Setup button on the home screen. Default password is 22222.

Preferences	Before version V1028, press:
Date and Time - Press the field to edit and use the keypad to enter the month, day, year, hour or minute. Press  to save changed.	
Change Passwords Change Admin Password - Changes the Administrator password. Change Operator Password – Changes the Operator password. Enable Password Mask – When enabled, passwords will display as an asterisk symbols on-screen when entered. Enabled Operator Password - When enabled, all Pump and Receiver parameter fields are password protected.	  
Language - Select language preference. After a language change, the system will reboot.	
Screen Options	
Set Screensaver Timeout, Screen Saver Mode, Password Protection Screen Saver is the elapsed time in minutes until an inactive (untouched) display will blank the screen and show the screen saver. Setting the screen saver to 00 will disable the screen saver. Enabling Password Protection will prompt for a password when touched.	
Screen Brightness The Brightness slider allows the brightness of the screen to be adjusted.	
Screen Calibration Screen calibration adjusts the touch area of the touchscreen using touch prompts. Follow the on-screen instructions to complete the screen calibration. If the screen ever becomes unresponsive or the touch points are not responding in the correct spot on the screen, the screen calibration can be activated by powering off the controller, and then holding your finger on the screen while powering on the controller.	
On-Screen Options Enable to show on the home screen: Date and Time, USB connectivity, and Ethernet connectivity.	
Communications, TCP/IP Configuration Enter the IP address for the Flexbus controller for Modbus TCP communications. MAC address is provided on-screen for DHCP. See the Maguire Modbus Register Mapping document for more information. https://www.maguire.com/support/data-third-party	

Firmware Updates



To prevent corruption of the controllers firmware, do not turn off the controller or remove the flash drive while the firmware is updating.

Firmware updates for controllers using version V1028A or later (V=2022, 10=October, 28=day of month.)

Update Flexbus Touchscreen Firmware on controllers versions V1028A or later

1. Controller firmware updates are distributed by Maguire Products in a zip file. Extract the contents of the zip file and copy the files to a folder named maguire on a USB flash drive. Note: Flash Drive must be 64 GB or smaller with a FAT or FAT32 file system.
2. Press the Setup button on the Flexbus controller toolbar and enter the Setup password (default is 22222).
3. Press Resets then press Firmware Update.
4. Controller firmware files are named with with a prefix "FB". Select the firmware update to highlight the new firmware (FBxxxx.xuf) from the white panel on the screen.
5. Press Program then press the green check button to start the firmware update. The update will start and when completed, the controller will automatically reboot. The controller is ready for operation.

Update Receiver and Pump Firmware on controllers with firmware versions V1028A or later

1. Controller firmware updates are distributed by Maguire Products in a zip file. Extract to contents of the zip file and copy the files to a folder named maguire on a USB flash drive. Note: Flash Drive must be 64 GB or smaller with a FAT or FAT32 file system.
2. Press the Setup button on the Flexbus controller toolbar and enter the Setup password (default is 22222).
3. Press Resets then Update Device Firmware.
4. Receiver and Pump firmware files are named with with a prefix "FD". Select to highlight the new firmware (FDxxxx.xuf) from the white panel on the screen.
5. Press Program then press the green check button to start the firmware update. Update will start and when completed, the controller will display Update Complete. Pumps and Recievers are ready for operation.

Firmware updates for controllers prior to version V1028A

Controller firmware updates are distributed by Maguire Products in a zip file. Extract the contents of the zip file to the root directory of a micro SD card. The micro SD card must be 32 GB or smaller with a FAT or FAT32 file system. Controller firmware files are named with with a prefix "FB". Rename the file FBUPDATE.XUF and insert the micro SD card into the micro SD card slot. To access the micro SD card slot, remove the two screws on the right-side of the controller and open the front panel. Locate the micro SD card slot in the upper right of the circuit board and insert the card with the label facing out. Press down to click the card into the slot. Cycle the power on the controller (off/on). The firmware update automatically begins on power on and when completed, the controller will automatically prompts to remove the card and restart the controller.



Update Receiver and Pump Firmware on controllers with firmware prior to V1028A

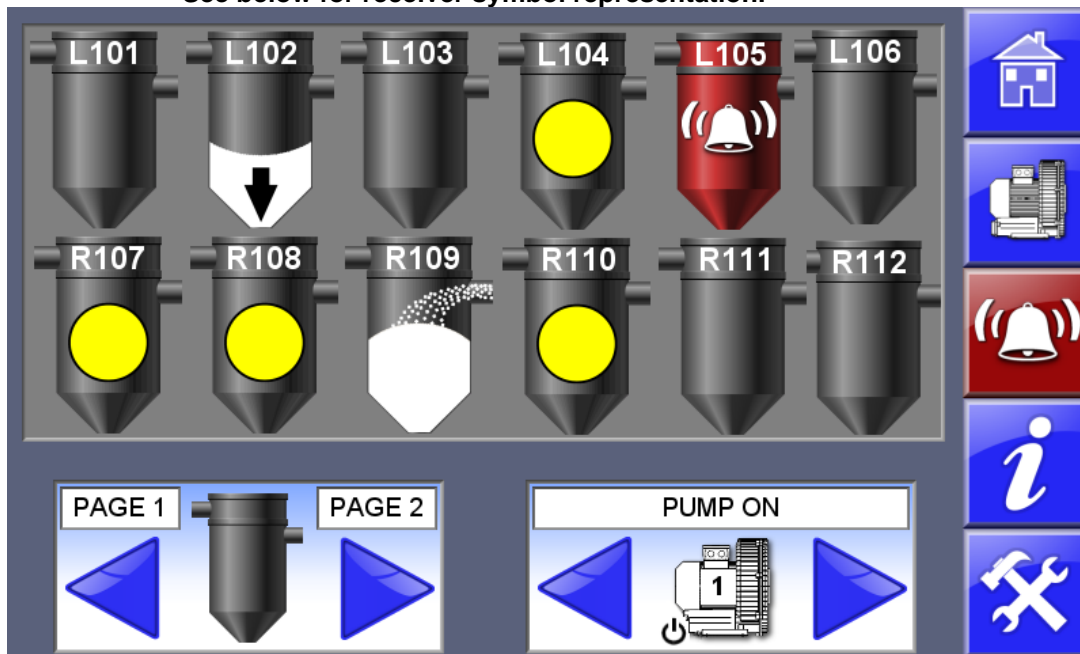
Receiver and Pump firmware files are named with with a prefix "FD". Rename the file FDUPDATE.XUF and insert the micro SD card the micro SD card slot. Cycle the power on the controller (off/on). The firmware update will be copied from the flash drive to the Pumps and Receivers that require the update. When the copy has been completed, you will be prompted to remove the SD card and toggle the power off then on. Updates to devices are logged in the Alarm/Event log. When complete, the controller is ready for operation.

Flexbus Controller Main Screen Details

Live Status Panel

Displays the live status of all receivers.
See below for receiver symbol representation.

Navigation Menu



Returns to Home screen from any screen.

Display Pumps
Changes the Live view panel to Pumps

Alarm History
Displays red when there is an alarm notification.

Flexbus Firmware Information

Setup
Enters password protected setup screens.

Receivers

Navigation / Setup of all Receivers

Pumps

Navigation / Setup of all Pumps


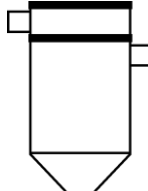
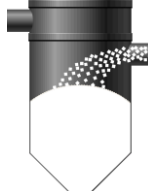

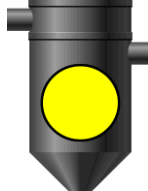
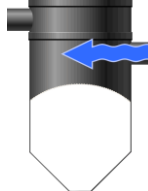

Live Status Panel





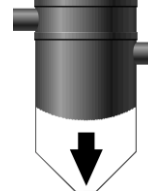


In the Live Status Panel, the receivers will display their current status. See the next page for a description of each live receiver status symbol.

If you have more than 12 receivers, use the receiver navigation arrows to view other pages of receivers.

Pressing any of the receiver symbols in the Live Status Panel will display the Receiver Configuration screen for that specific receiver. See Receiver Configuration for more information on configuring receivers.

What the Receiver Symbols Represent:

	<p>Receiver is online and ON but idle.</p>
	<p>Receiver is in Standby and is disabled until enabled in Receiver Setup.</p>
	<p>Virgin material filling receiver.</p>
	<p>Regrind Layering</p>
	<p>Demand for material.</p>
	<p>Virgin material only purging.</p>
	<p>Proportioned material purging.</p>

	<p>Lost communication with receiver. Cause may be receiver's power is off or a disconnected communication wire.</p>
	<p>Receiver is alarming.</p>
	<p>Regrind material filling receiver.</p>
	<p>Proportional Loading</p>
	<p>Material discharging</p>
	<p>Regrind material only purging.</p>
	<p>Blowback active. Cleaning receiver's air filter.</p>

Flexbus Alarm Log



Press to display the Alarm Log. Each event or alarm will have the date and time, the receiver or pump ID number involved in the alarm or log, and the reason for the alarm or log. Alarms and logs are listed with the most recent displayed at the top of the list.



The Alarm Log button will display in red when there is an active alarm. The strobe will flash and the alarm beeper will sound when an alarm is active.



Silence Alarm – Press this to stop the alarm from sounding. The alarm condition may still exist. Refer to the latest log record (top record) for the alarm condition.



Prints the Alarm log named FBEVENT.TXT onto a USB flash drive in a folder named “Maguire”.








Clear the alarm log and delete all records.



Toggle to show events and alarms or display alarms only.





Operator Access

When enabled, Operator Access will limit access to functions of Flexbus by prompting for the operator password. All other functions of Flexbus will be restricted. Default Operator Access password is: 11111. Also see Changing Passwords.

Press		Display will prompt for a password. (admin default: 22222)	Then press:	
Press	Preferences	Display will show System Preferences categories.		
Press	Operator Access	Display will show the Operator Access screen. Operator access options: Receiver Standby, Pump Standby, Receiver Parameters, Pump Parameters.		
Press		To enable Security Access.		
Press		To save the changes or press the red X to cancel and exit.		

Changing Passwords

Access to the controller is limited by one or two passwords. Access to Setup information is restricted by an Admin Password (default password is: 22222). If Operator Access is enabled (see above), access to commonly used functions are further restricted with the Operator Password. If security is important and restricted access is desired, it is important to change the passwords.

Press		Display will prompt for a password. (admin default: 22222)	Then press:	
Press	System Configuration	Display will show the System Configuration categories.		
Press	Preferences	Display will show System Preferences categories.		
Press	Change Passwords	Display will show three options, Change Admin Password, Change Operator Password and Enable Password Mask. Select the password you wish to change. Check Enable Password Mask to hide the password and show the asterisk instead of the password numbers when entering a password.		
Enter	the new password	then enter the password again to confirm.		
Press		To save the changes or press the	red X to cancel and exit.	

Backup and Restore of the Flexbus Device Map (Import / Export)

The Flexbus Device Map is the configuration of the receivers and pumps. The configuration can be backed up to a USB drive.

Backup of the Flexbus Device Map

1. To back up the configuration, insert a USB drive into the USB port on the controller.
2. Press Setup, Resets, Device Map, Export to USB. A file labeled FLEXBUS.CSV will be created on the USB drive.

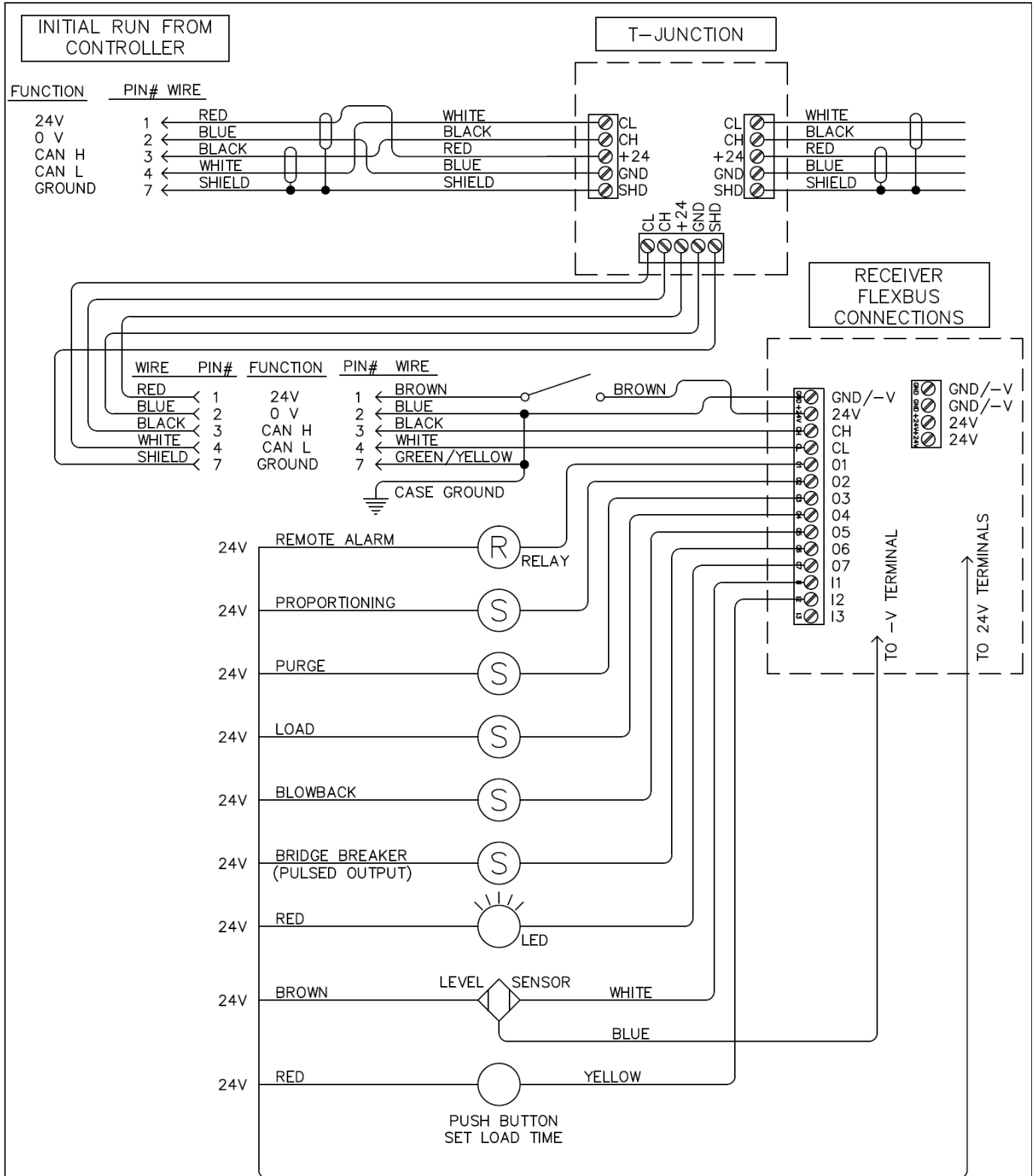
Restore the Flexbus Device Map

1. To restore a backup, insert a USB drive containing the file FLEXBUS.CSV into the controller's USB port.
2. Press Setup, Resets, Device Map, Import from USB.

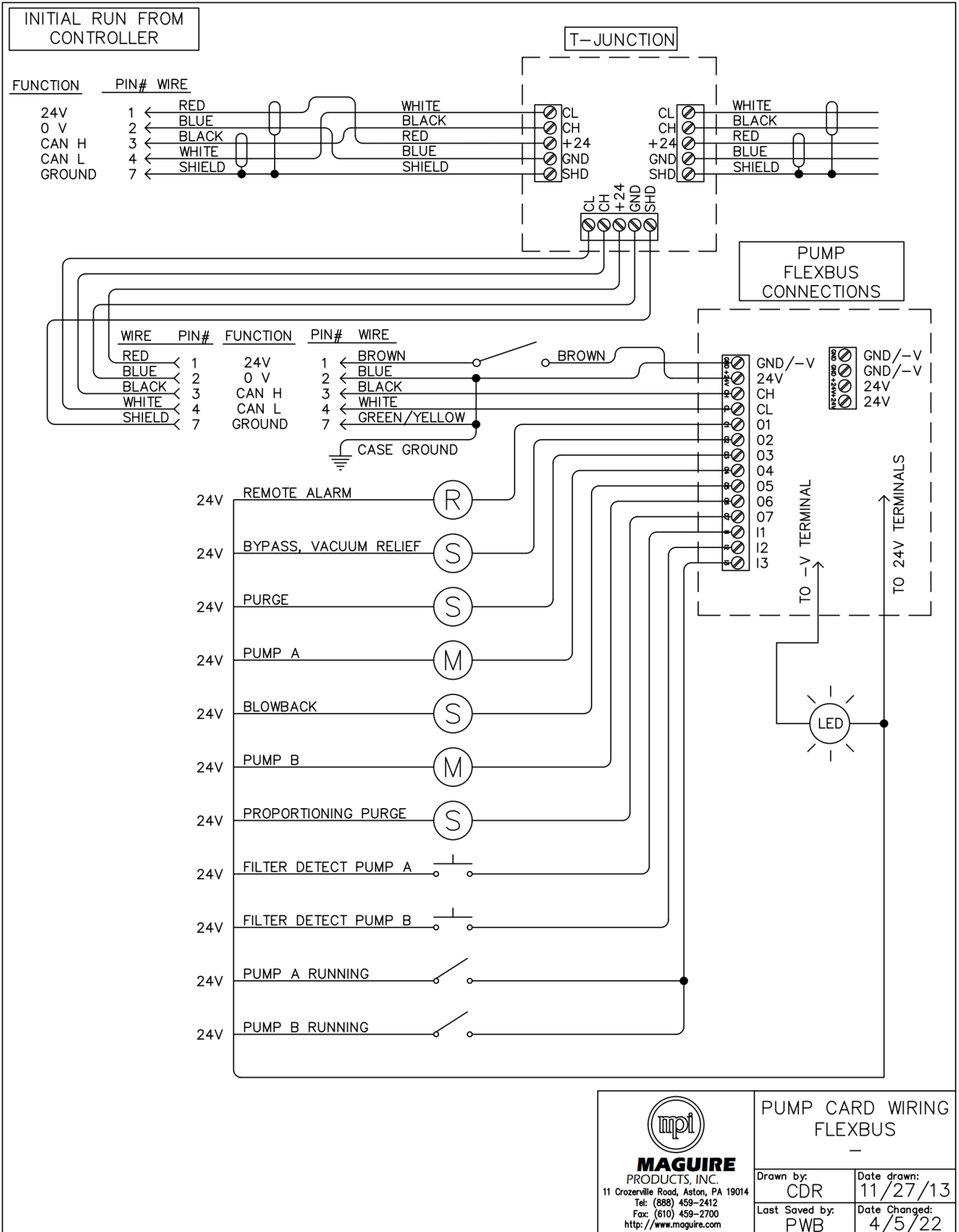
Pressing Clear All Devices will remove all receivers and pumps.


FLEXBUS.CSV format: Column 1: P=Pump, R=Receiver followed by auto-assigned ID. Column 2: Serial number. Column 3: Label. [END] = end of file.

Flexbus Wiring Diagrams

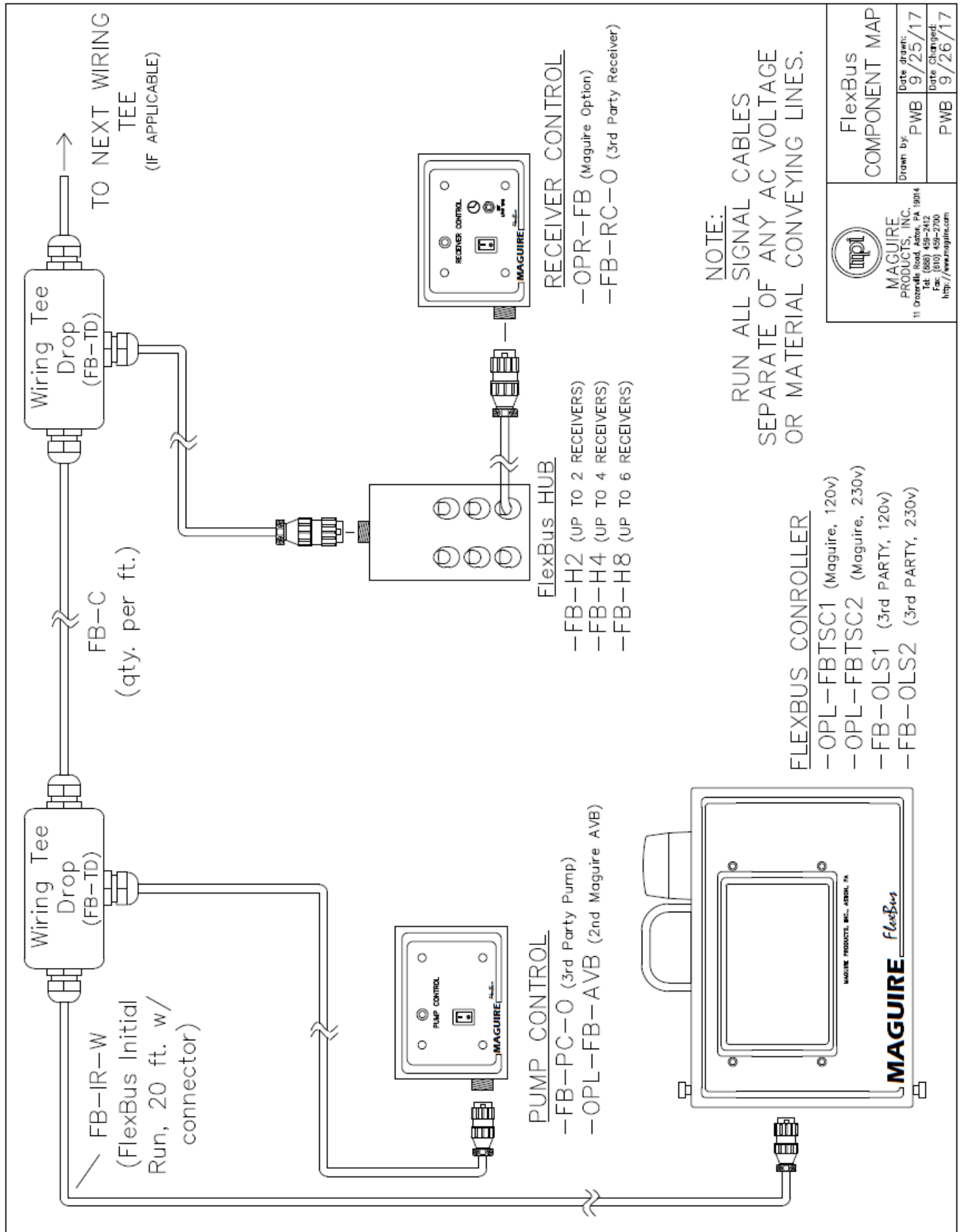



<p>MAGUIRE PRODUCTS, INC. 11 Crozerville Road, Aston, PA 19014 Tel: (800) 458-2412 Fax: (610) 458-2700 http://www.maguire.com</p>	RECEIVER CARD WIRING, FLEXBUS	
	Drawn by: CDR	Date drawn: 4/22/13
	Last Saved by: PWB	Date Changed: 12/19/19
	-	

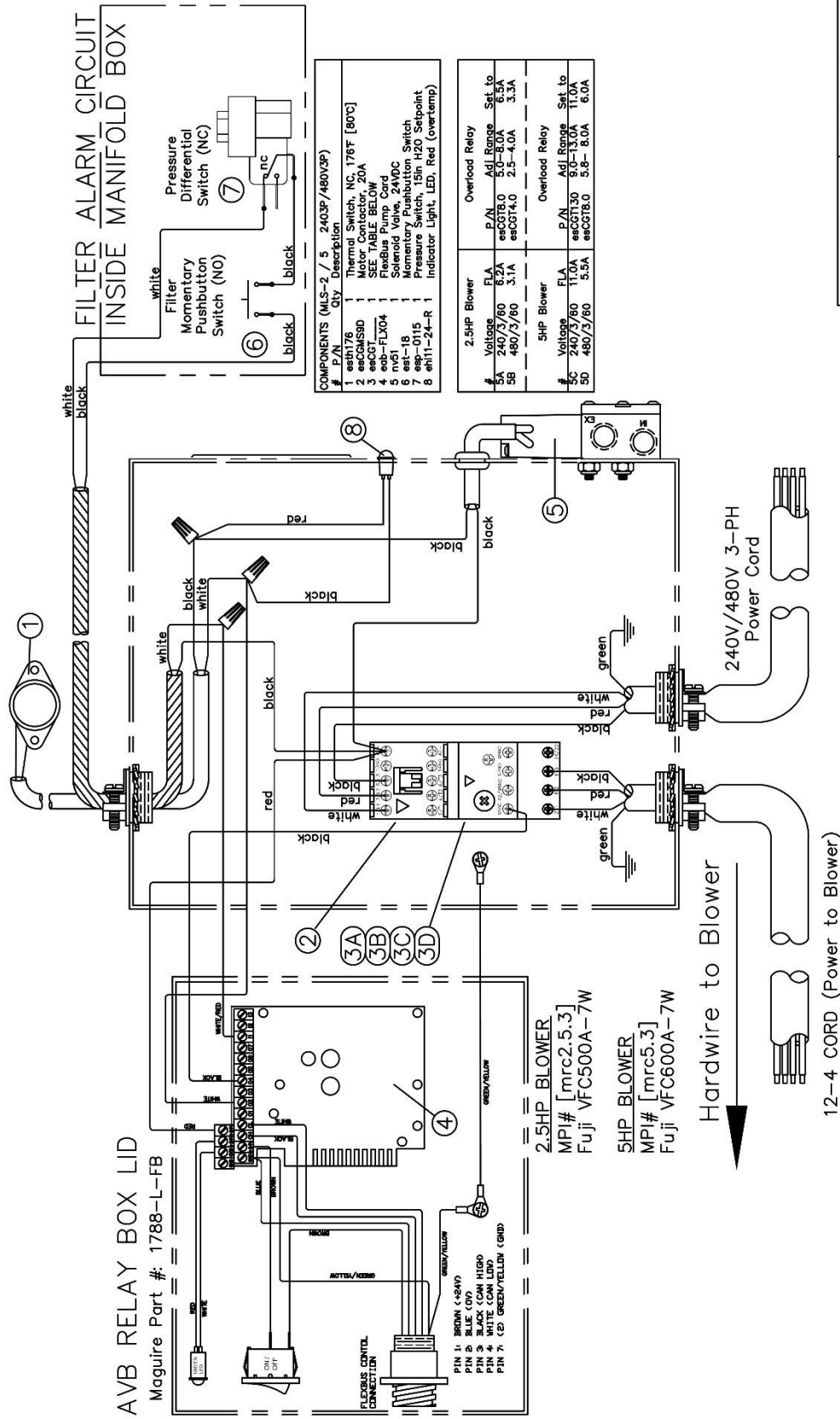


 MAGUIRE PRODUCTS, INC. 11 Crozerville Road, Aston, PA 19014 Tel: (888) 459-2412 Fax: (610) 459-2700 http://www.maguire.com	PUMP CARD WIRING FLEXBUS	
	Drawn by: CDR	Date drawn: 11/27/13
	Last Saved by: PWB	Date Changed: 4/5/22
	-	

Flexbus Component Map



 MAGUIRE PRODUCTS, INC. 11 Overlook Rd., York, PA 19074 Tel: (800) 459-2412 Fax: (810) 459-2700 http://www.maguire.com		FlexBus COMPONENT MAP	
		Drawn by: PWB	Date drawn: 9/25/17
		PWB	Date changed: 9/26/17



COMPONENTS (MLS-2 / 5 2403P/480V3P)

#	P/N	Qty	Description
1	esth176	1	Thermal Switch, NC, 176°F [80°C]
2	esc04MSBD	1	Motor Contactor, 20A
3	esc04MSBD	1	Size 1/2" Bore, 20A
4	esp-FLX04	1	Flexbus Control Cord
5	ncv51	1	Solenoid Valve, 24VDC
6	est-18	1	Momentary Pushbutton Switch
7	esp-0115	1	Pressure Switch, 15in. H2O Setpoint
8	sh11-24-R	1	Indicator Light, LED, Red (overtemp)

2.5HP Blower				
#	Voltage	FLA	Adj Range	Set to
3A	240/3/60	6.2A	escGT8.0	5.0-8.0A
3B	480/3/60	3.1A	escGT4.0	2.5-4.0A
3C	240/3/60	11.0A	escGT13.0	9.0-13.0A
3D	480/3/60	5.5A	escGT8.0	5.8-8.0A

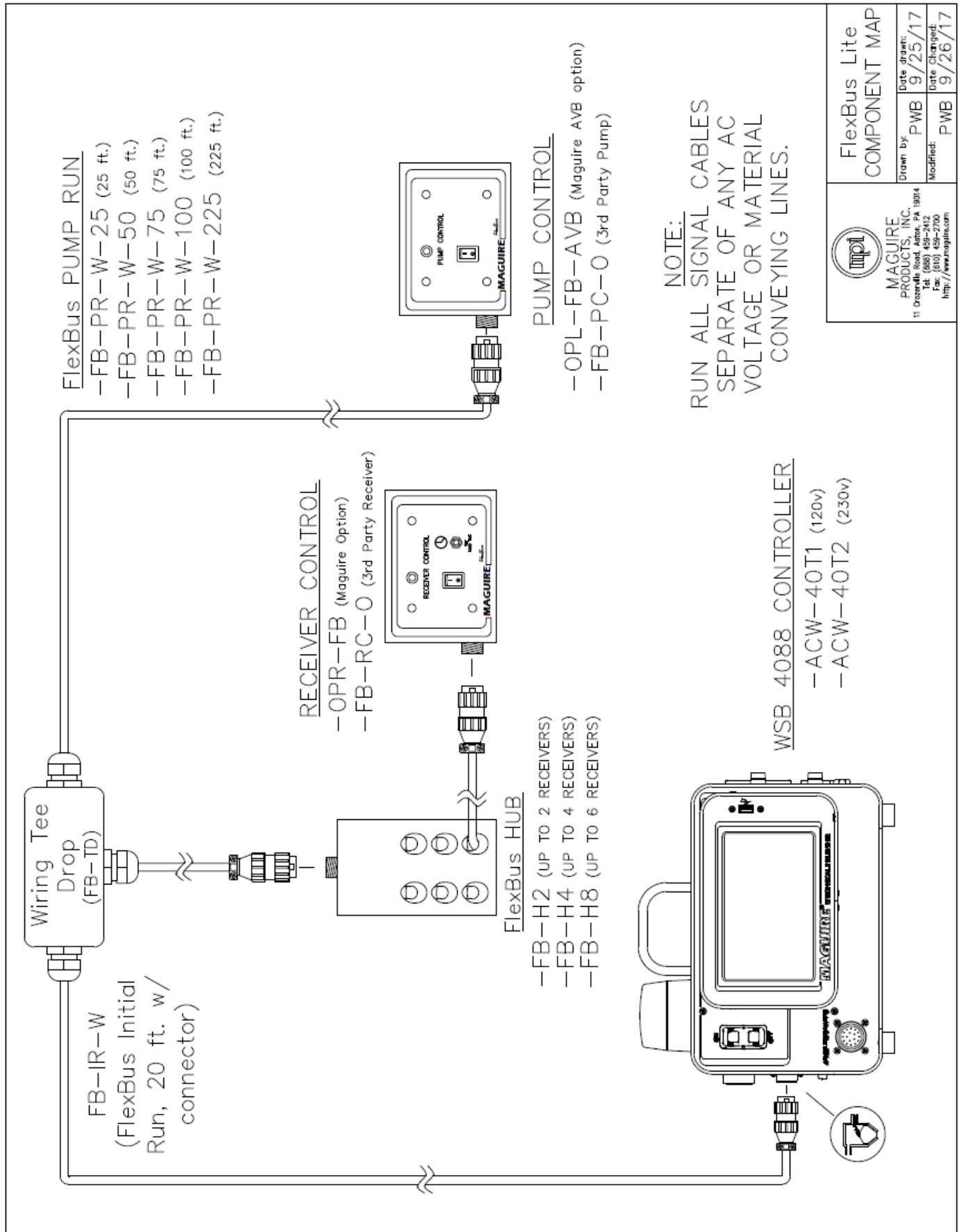
5HP Blower				
#	Voltage	FLA	Adj Range	Set to
5A	240/3/60	6.2A	escGT8.0	5.0-8.0A
5B	480/3/60	3.1A	escGT4.0	2.5-4.0A
5C	240/3/60	11.0A	escGT13.0	9.0-13.0A
5D	480/3/60	5.5A	escGT8.0	5.8-8.0A

FlexBus Controlled
AVB-2/5
Component Map

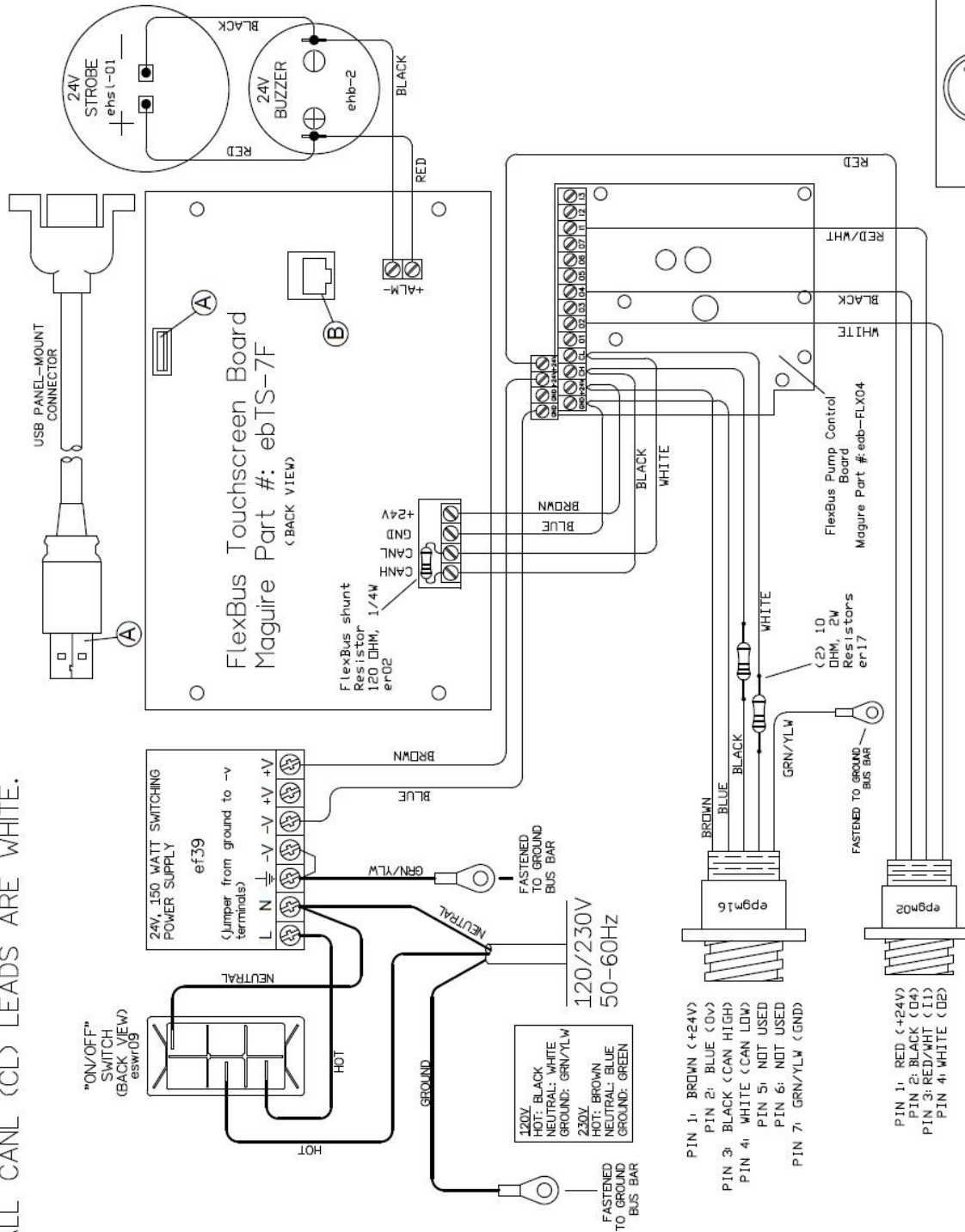
MAGUIRE PRODUCTS, INC.
 11 Overlook Ave., Westfield, MA 01094
 Tel: (413) 866-2424
 Fax: (413) 469-2700
 http://www.maguire.com

Drawn by: PWB
 Date drawn: 1/18/18
 Last Update: PWB 5/14/19

Flexbus Lite Component Map



NOTE:
 -ALL CANH (CH) ARE BLACK
 -ALL CANL (CL) LEADS ARE WHITE.



CABLE CONNECTIONS

ID	CONNECTION DESCRIPTION / CABLE TYPE
A	USB HEADER
B	ETHERNET CONNECTOR TO MAIN BOARD ETHERNET PATCH CABLE



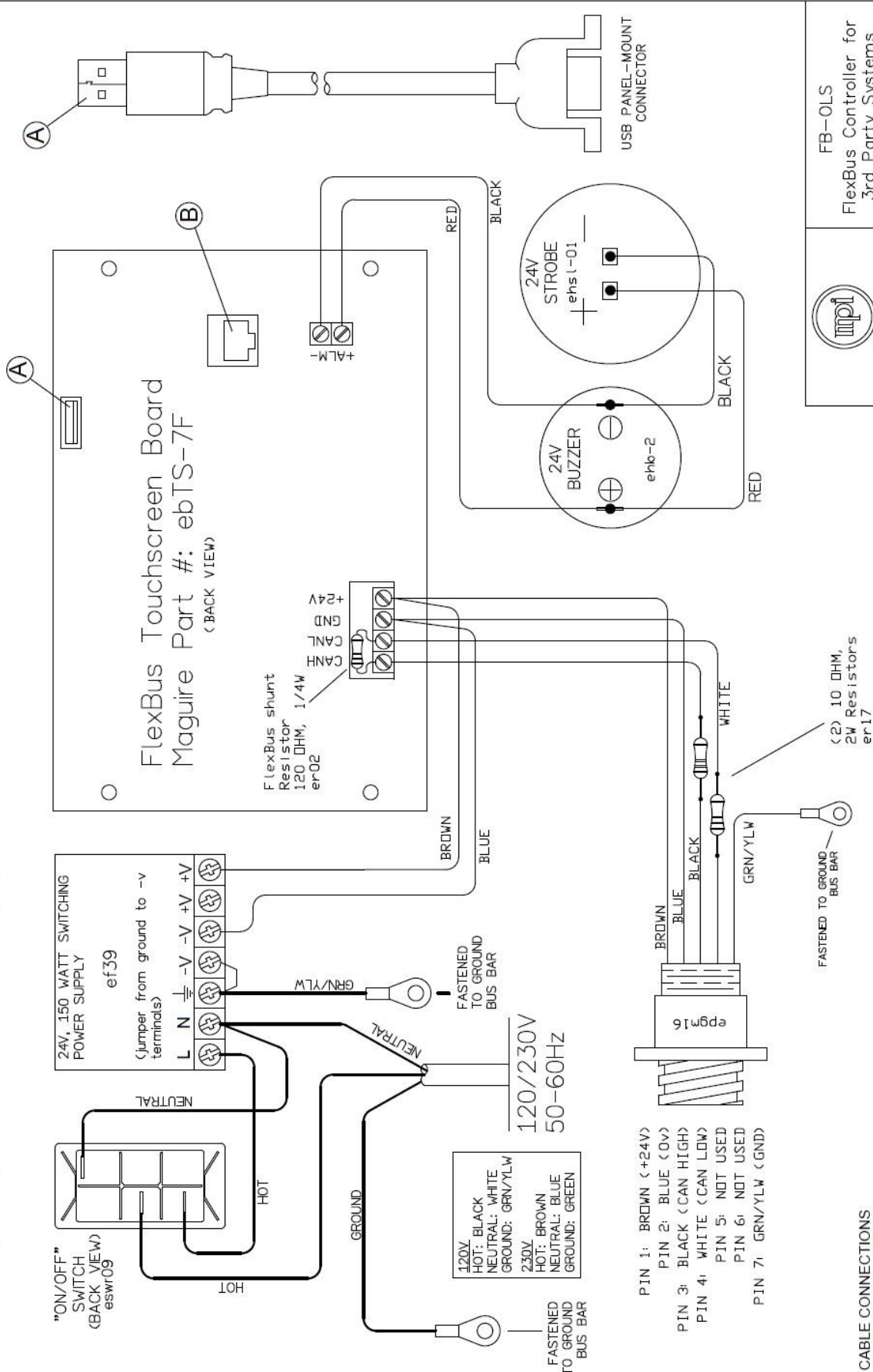
MAGUIRE PRODUCTS, INC.
 11 Crozerville Road, Aston, PA 19014
 Tel: (888) 459-2412
 Fax: (610) 459-2700
 http://www.maguire.com

OPL-FBTSC
 FlexBus Controller

Drawn by:	PWB	Date drawn:	1/22/20
Last Updated:		Last Updated:	

— INDICATES 16 AWG WIRE
 — INDICATES 20 AWG WIRE

NOTE:
 -ALL CANH (CH) ARE BLACK
 -ALL CANL (CL) LEADS ARE WHITE.



MAGUIRE PRODUCTS, INC. 11 Crozerville Road, Aston, PA 19014 Tel: (888) 459-2412 Fax: (610) 459-2700 http://www.maguire.com		Drawn by: PWB Date drawn: 8/3/17
		Last Updated: PWB Last Updated: 1/22/20

— INDICATES .16 AWG WIRE — INDICATES 20 AWG WIRE

CABLE CONNECTIONS

ID	CONNECTION DESCRIPTION / CABLE TYPE
A	USB HEADER
B	ETHERNET CONNECTOR TO MAIN BOARD ETHERNET PATCH CABLE

- PIN 1: BROWN (+24V)
- PIN 2: BLUE (OV)
- PIN 3: BLACK (CAN HIGH)
- PIN 4: WHITE (CAN LOW)
- PIN 5: NOT USED
- PIN 6: NOT USED
- PIN 7: GRN/YLW (GND)

WARRANTY - Exclusive 5-Year

MAGUIRE PRODUCTS offers one of the MOST COMPREHENSIVE WARRANTIES in the plastics equipment industry. We warrant each Flexbus System manufactured by us to be free from defects in material and workmanship under normal use and service; our obligation under this warranty being limited to making good at our factory any Flexbus System which shall within FIVE (5) YEARS after delivery to the original purchaser be returned intact to us, transportation charges PREPAID, and which our examination shall disclose to our satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties expressed or implied and of all other obligations or liabilities on our part, and MAGUIRE PRODUCTS neither assumes nor authorizes any other persons to assume for it any other liability in connection with the sale of its products.



This warranty shall not apply to any Flexbus System which has been repaired or altered outside MAGUIRE PRODUCTS factory, unless such repair or alteration was, in our judgment, not responsible for the failure; nor which has been subject to misuse, negligence or accident, incorrect wiring by others, or installation or use not in accord with instructions furnished by Maguire Products.

Our liability under this warranty will extend only to the Flexbus System components that are returned to our factory in Aston, Pennsylvania PREPAID.

It should be noted, however, that we strive to satisfy our customers in whatever manner is deemed most expedient to overcome any problems they may have in connection with our equipment.

Technical Support and Contact Information

Maguire Products Inc.

11 Crozerville Road

Aston, PA 19014

Tel: 610.459.4300

Fax: 610.459.2700

Email: info@maguire.com

Web: www.maguire.com

Maguire Europe

Tame Park

Tamworth

Staffordshire

B775DY

UK

Tel: + 44 1827 265 850

Fax: + 44 1827 265 855

Email: info@maguire-europe.com

Maguire Products Asia PTE LTD

Main Office

15 Changi North Street 1

#01-15, I-Lofts

Singapore 498765

Tel: 65 6848-7117

Fax: 65 6542-8577

E-mail: magasia@maguire-products.com.sg