8503 Hilltop Drive, Ooltewah, TN 37363
Telephone 423.238.4171

Date	Feb 2, 2023

SUBJECT: Whelen CORE-R™ System
PURPOSE: Integrated Wrecker – Final Installation & Dressout

Cab Installation:

A. Parts Required

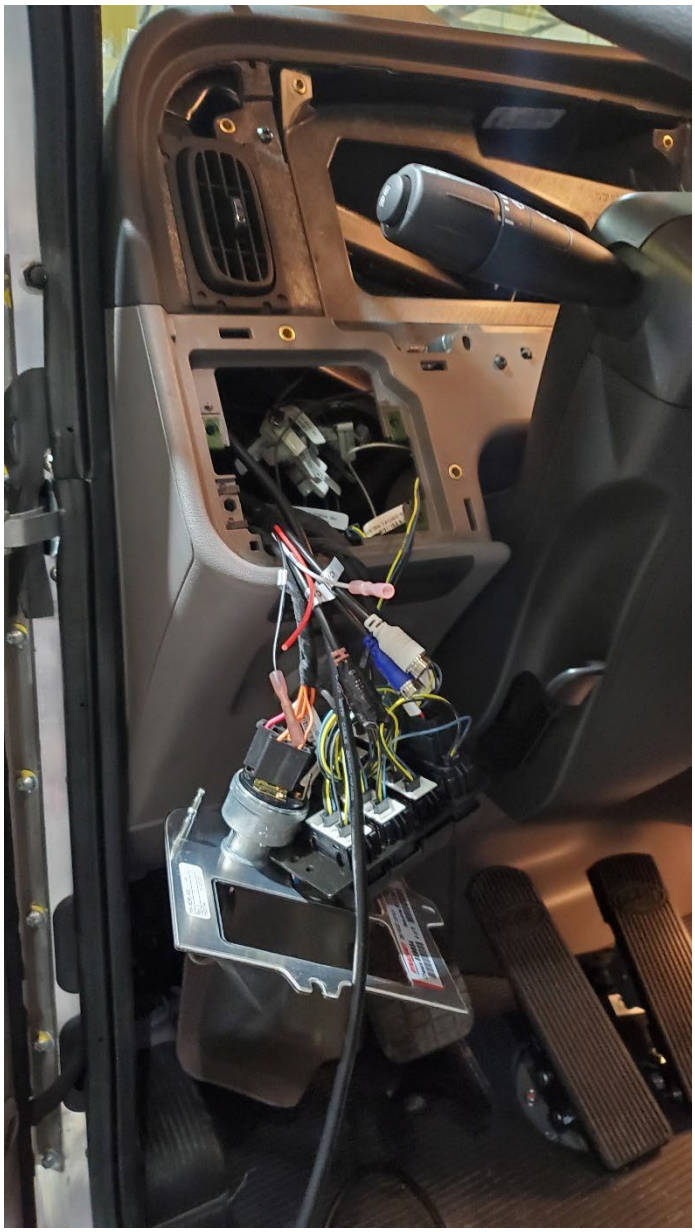
Miller P/N	Description
03028353	HARNESS,CCTL7 ETHERNET ADAPTOR
03028390	CABLE, ETHERNET EXTENSION, 50'
03028295	KEYPAD, WHELEN WECANX 21 SLIDE
03029449	CABLE, CORE-R J4 RJ12 TO RJ45

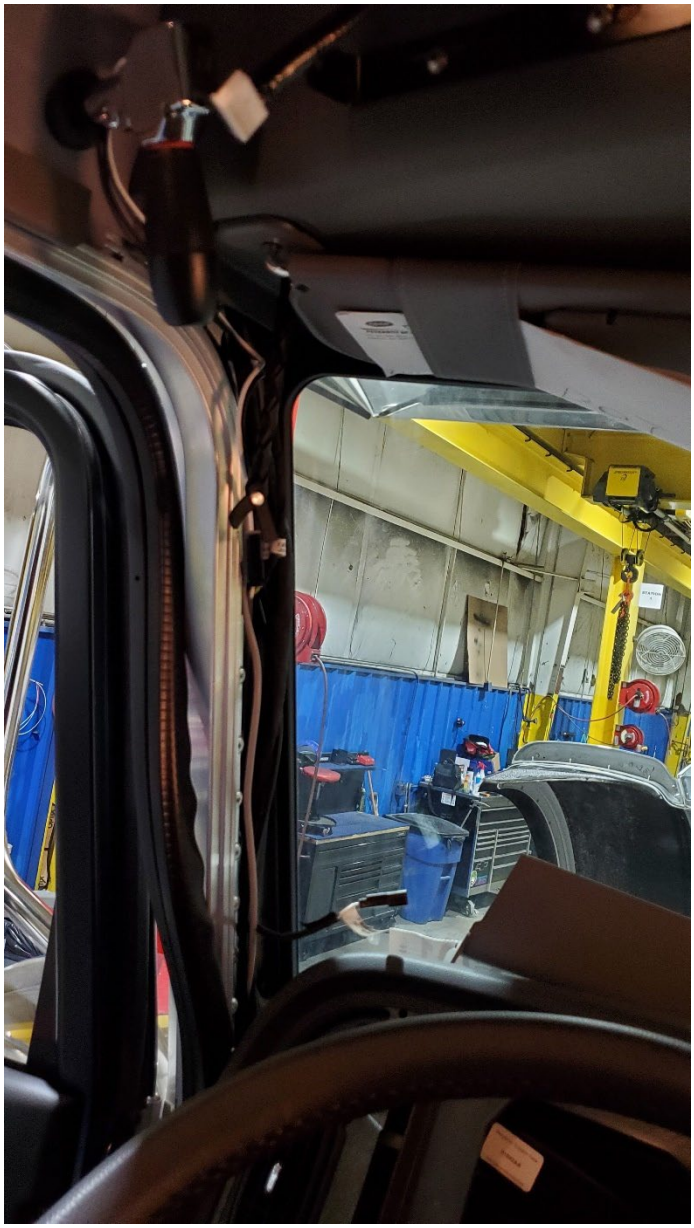
B. Install the Whelen Keypad inside the Cab

- Add a wire entry hole and grommets as necessary for the cables in the cab header.
- Install the mounting brackets to the header:

B. Install the Whelen Keypad inside the Cab (cont'd)

- Route the ethernet extension up the left side 'A' pillar and behind the header, over to the wire entry hole:





B. Install the Whelen Keypad inside the Cab (cont'd)

- Connect the ethernet adapter to the end of the ethernet extension and leave enough slack to plug in to the keypad.
- Connect the ethernet adapter to the back of the keypad.
- Attach the keypad to the bracket:

B. Install the Whelen Keypad inside the Cab (cont'd)

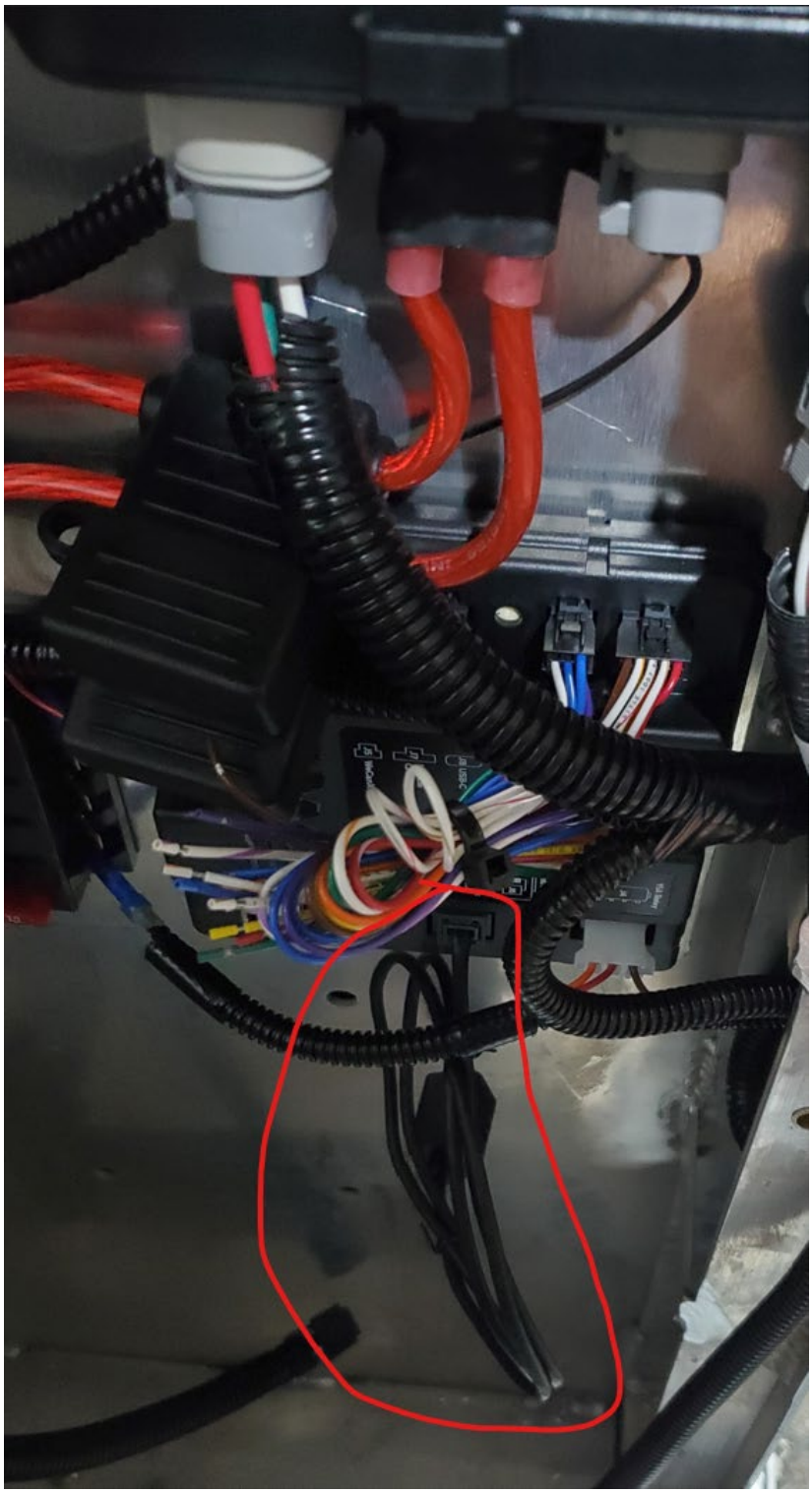
- The other end of the ethernet extension at the bottom of the 'A' Pillar will be fed through a hole in the engine bay firewall behind the dashboard:

B. Install the Whelen Keypad inside the Cab (cont'd)

- Secure the ethernet extension down through the engine bay and back along the frame to the forward toolbox compartment containing the Whelen CORE-R system:

B. Install the Whelen Keypad inside the Cab (cont'd)

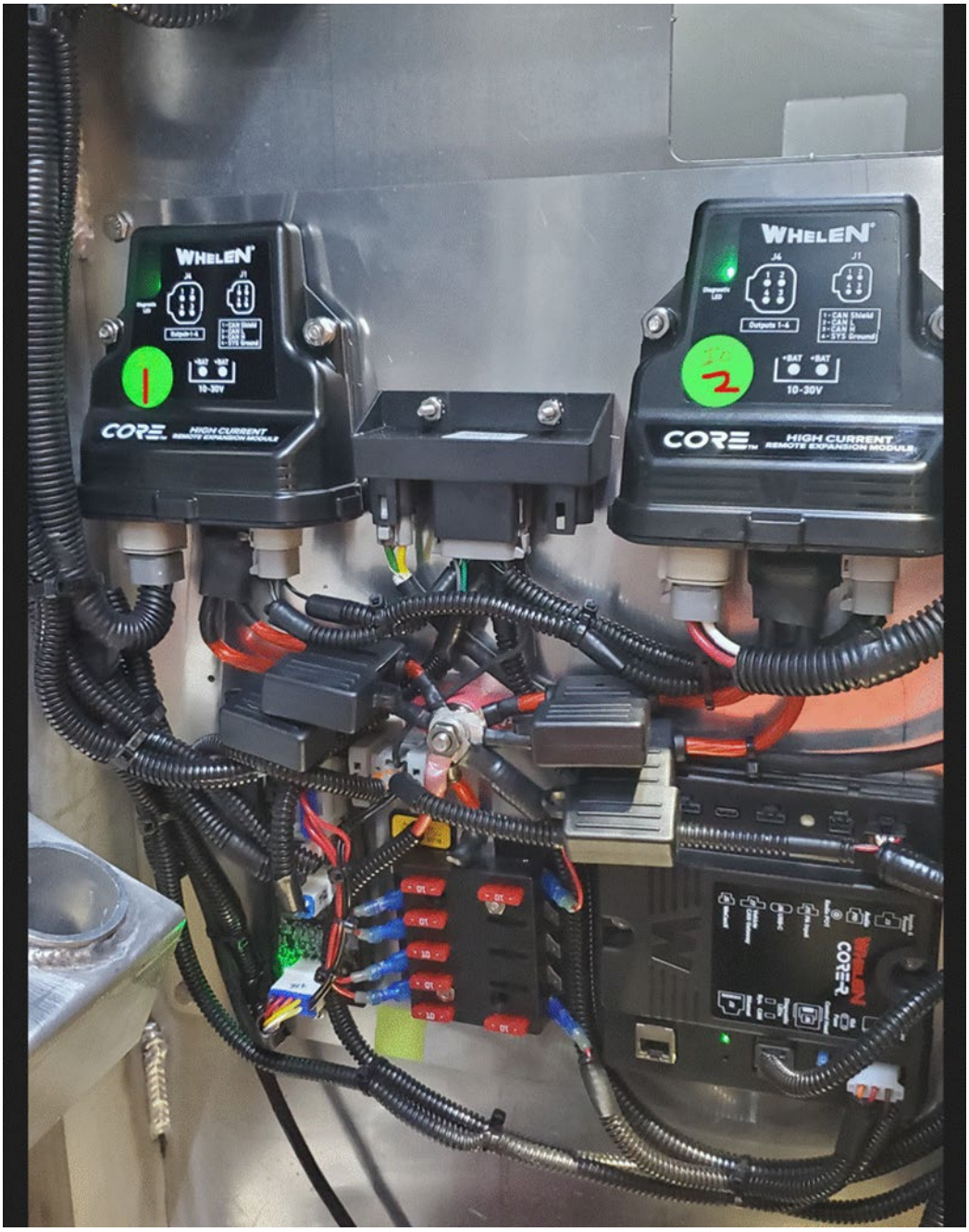
- Connect the ethernet extension to the Whelen CORE-R module at J6 using the RJ12 TO RJ45 cable:



Whelen Installation:

Whelen CORE-R Power Distribution Panel

The power distribution panel should come pre-installed in the toolbox and wired to the junction box. Refer to the Whelen System Outputs Table (CORE-R inputs) for details. It will be necessary to make additional connections to this panel:



Chassis Input

When the unit is shipped, the chassis brake, turns, marker, and reverse wires are temporarily wired to the appropriate stud in the junction box. These wires must be removed from the junction box and spliced to the appropriate input wires on J3 of the CORE-R module:

Battery +12V

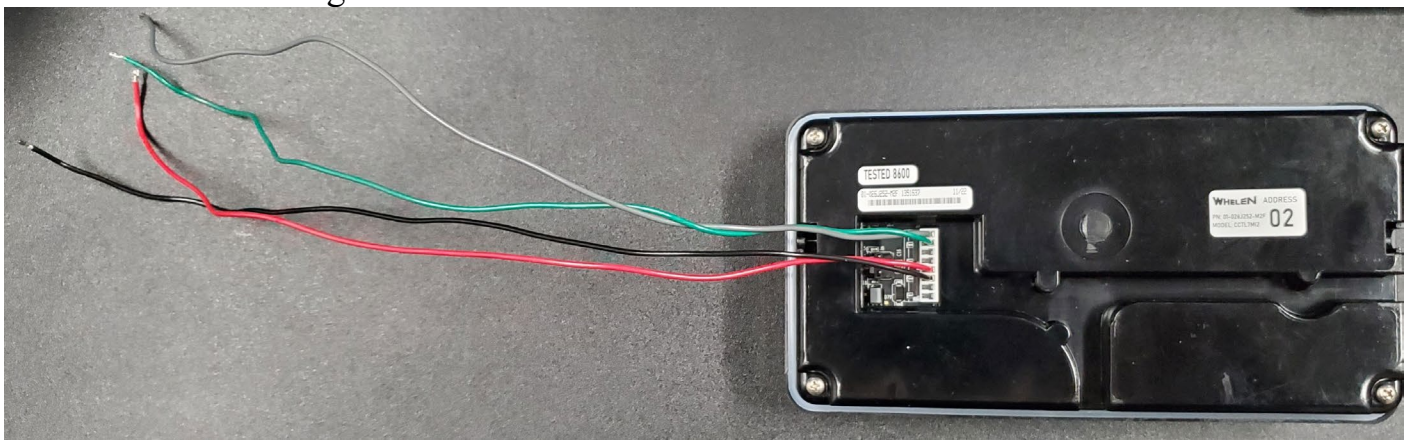
The +12V battery power from the 150A circuit breaker installed in the battery box should be wired to the +B stud on the center of the panel. Minimum battery cable size is 4ga. This system is not 24V compatible.

Rear Keypad WeCanX

The CAN bus connection from the rear keypad will plug into the left triangular connection on the CAN Splitter located between the two HC modules. This connection is part of harness 03028531 HARNESS,WHELEN OPTIONAL KEYPAD. Expected availability of this harness is March 2023. In the interim, it is necessary to use a 25' CAN cable to connect the Rear Keypad to the CAN Splitter on the panel.

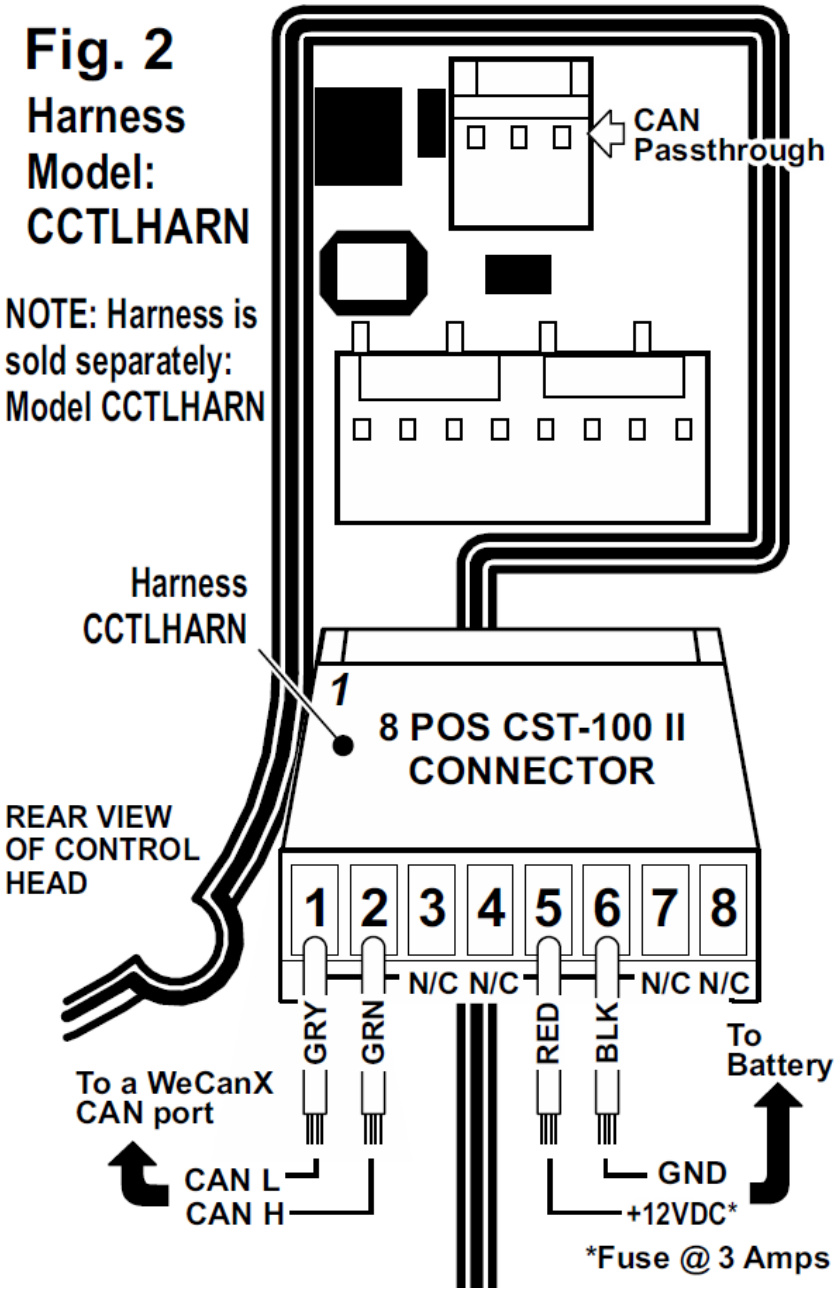
Note: the Whelen wire colors and Miller wire colors when making this harness.
Example: CAN-H would be Whelen green wire connected to a yellow CAN wire.

Wire the red wire to Ignition and black wire to Ground:



Plug Position	Label	Wire Color	Miller Wire Color
A	CAN-H	GREEN	YELLOW
B	CAN-L	GRAY	GREEN
C	SHIELD	BLK/WHITE	BARE

Rear keypad comes with the CCTLHARN harness that can be spliced to a CAN cable, ignition, and ground:



WeCanX Lightbar

Any Whelen WeCanX compatible lightbar will have a power and ground connection and a CAN bus cable, not individual control wires. The CAN bus cable plugs into the CAN Splitter triangular connection on the right.

Note: customer supplied WeCanX lightbars may not be setup to work with the CORE-R supplied programming from Miller.

Operation:

A. Whelen System Delayed Time Off

Whelen Systems updated with the latest program revision will now keep the system active for 1 hour after the key is turned off. When the key is turned off, all keypad functions and backlight will also turn off. Marker lights, hazard lights, or brake lights will function during this 1 hour if turned on. Also during this hour, it is possible to reactivate a cab keypad function, the button will illuminate red and the function will turn on; the blue or amber backlight, however, will remain off.

Reasoning: We do not want to add a relay to flash the hazard lights when the key is off. Also the marker lights can be on the key is off, just like the cab.

B. E-STOP – PTO Dropped

12V e-stop output from GS Underlift controller is used as an input to the Whelen CORE System, When triggered, the PTO will turn off and the PTO Button and Slide Switch indicators will flash to indicate the e-stop is active. Clear the e-stop by resetting the e-stop switch and power on the remote, and relink the remote to the receiver with the shift trigger switch. Cycling controls power will also reset the e-stop output.

C. Slide Switch Operation

Position 0 - All Lights Off

Position 1 - All flashing amber lights.

Position 2 - All upper work lights.

Position 3 - All lower work, toolbox, and ground illumination lights.

Positions 1-3 of the Slide Switch will active a specific set of lights and turn off all others. If already active, Toolbox Lights will remain on when moving to position 1 or 2 if switched from the rear keypad on either side of the truck. The Traffic Advisor arrow functions are not affected by the slide switch. If active, DVI will remain on, except when the slide switch is returned to position 0 from a rear keypad.

D. DVI

The DVI button triggers low power modes of the lightbar and DVI capable M6 lights. The M6 purple wire wired to DVI output wire in the Junction Box.

E. Load Shedding

All lights, except brake, turns, marker and reverse, will turn off (or not turn on) when the battery voltage hits 11.8 at the CORE-R controller. The batter voltage measure at the battery or by the chassis may show closer to 12V, but the inherent voltage drop to the CORE-R could read 11.8, which would turn off the lights to preserve the battery. PTO and Controls Power are unaffected by this feature. For proper operation the truck should be running.

F. Marker Output

The Marker output has a 15A limit. If it exceeds that the output module will cut it off. If it does stop working, then the amp load might have been borderline close to the 15 Amps, or there might be a short.

HC Remote 2		15A each			
Plug Position	Label	CEM Wire Color	Miller Wire Color	Description	Control
J4-1	SIDE BEACN - AUX 1	RED	Brown/White	SIDE BEACON (AUX 1) [7]	SBCN / SW3
J4-2	DRVR DOCK	WHITE	Yellow/White	DRIVER DOCK [14]	LDCK / SW16
J4-3	PASS DOCK	BLUE	Yellow/Black	PASS DOCK [32]	RDCK / SW17
J4-4	MARKER	GREEN	Brown/Yellow	MARKER [29 or Direct to 30]	CORE J3-5

There is a separate non-flashing marker light output that could be used to control a relay for any non-flashing marker lights. This could be used to help alleviate the load.

CEM 1 16 Outputs		2.5 A each			
Plug Position	Label	CEM Wire Color	Miller Wire Color	Description[JUNCTION BOX STUD]	Control
J5-1	SOLID MARKER	Brn (+)	Orange/Black	NON-FLASHING MARKER [31]	CORE J3-5

Installation:

A. Work Lights Load Limit

The installation of high current work lights may require the addition of a relay. The Upper Work and Side Work outputs are fused at 15A each. If the installation of work lights will exceed the 15A limit, add a relay controlled by the Whelen output as follows.

Work light relay example

Relay terminals:

85	Ground
86	Whelen Output
87	To Work Light Stud in Junction Box
30	20A Fused Battery +

B. M6 Load Limits

More than (3) sets of M6 lights exceed the 15A rating of the High Current Output Module. M6 peak amp draw is 2.2A. So, 4 of more sets of M6 lights will require the addition of a fuse relay to power the M6's and use the Whelen Side Beacon output to control the relay.

Recommended Fusing

4 sets 20A

5 sets 25A

6 sets half on Whelen 15A Side Beacon Output

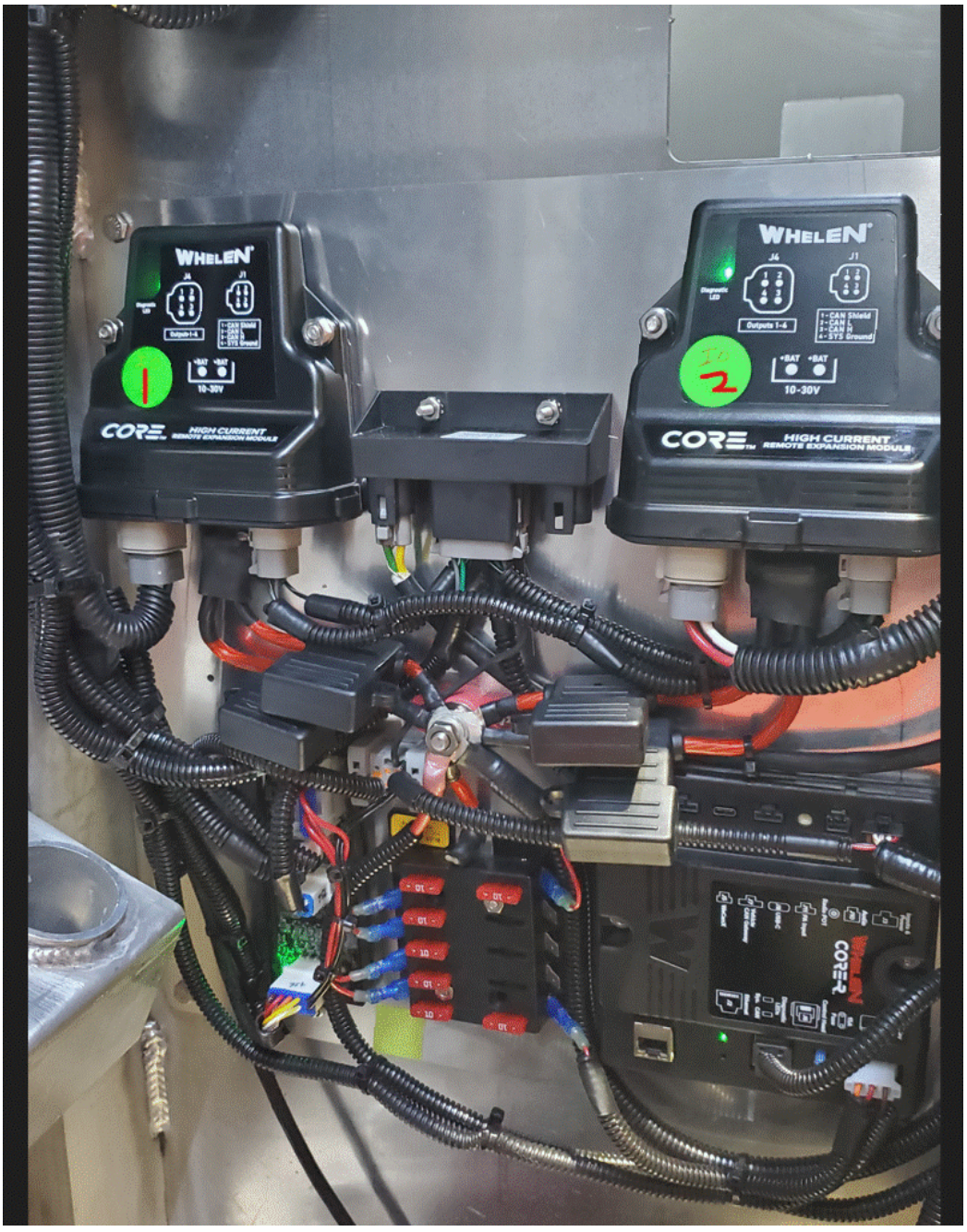
half on 15A fused relay

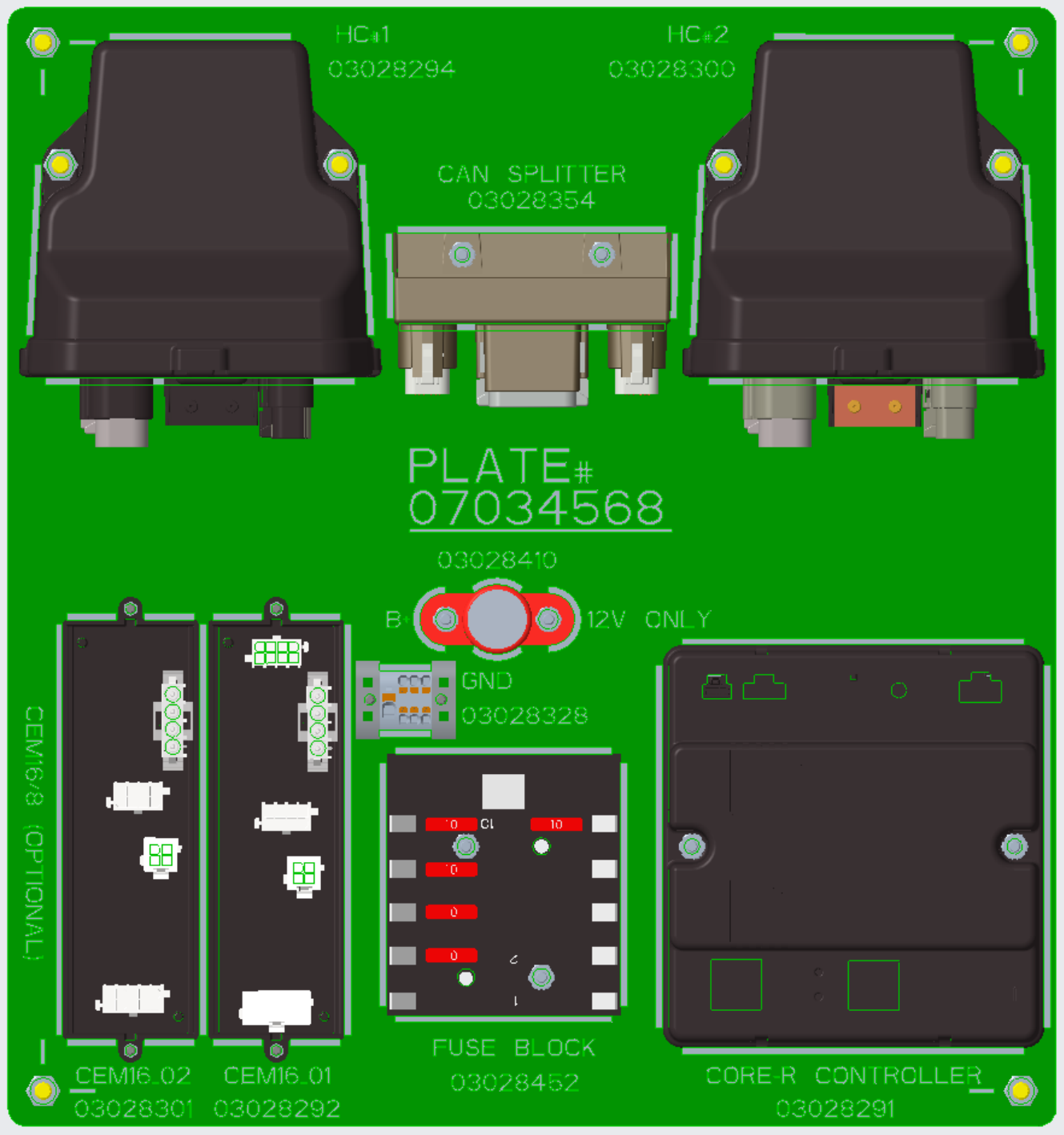
8 sets (3) sets on Whelen 15A Side Beacon Output

(4) sets on 20A fused relay

C. Optional M6 CEM16 Module Miller p/n 03028301

With a new set of harnesses, we could offer the optional CEM16 to individually power and control up to 8 sets of M6's. This harness design is in process. Miller will follow up with more details on this option to determine if we want to pursue/offer it.




HC#1
03028294
HC#2
03028300
CAN SPLITTER
03028354
PLATE#
07034568
03028410
B+
12V ONLY
GND
03028328
CEM16_02
03028301
CEM16_01
03028292
FUSE BLOCK
03028452
CORE-R CONTROLLER
03028291

D. Chassis Input

note: you will only use the CORE-R input wires

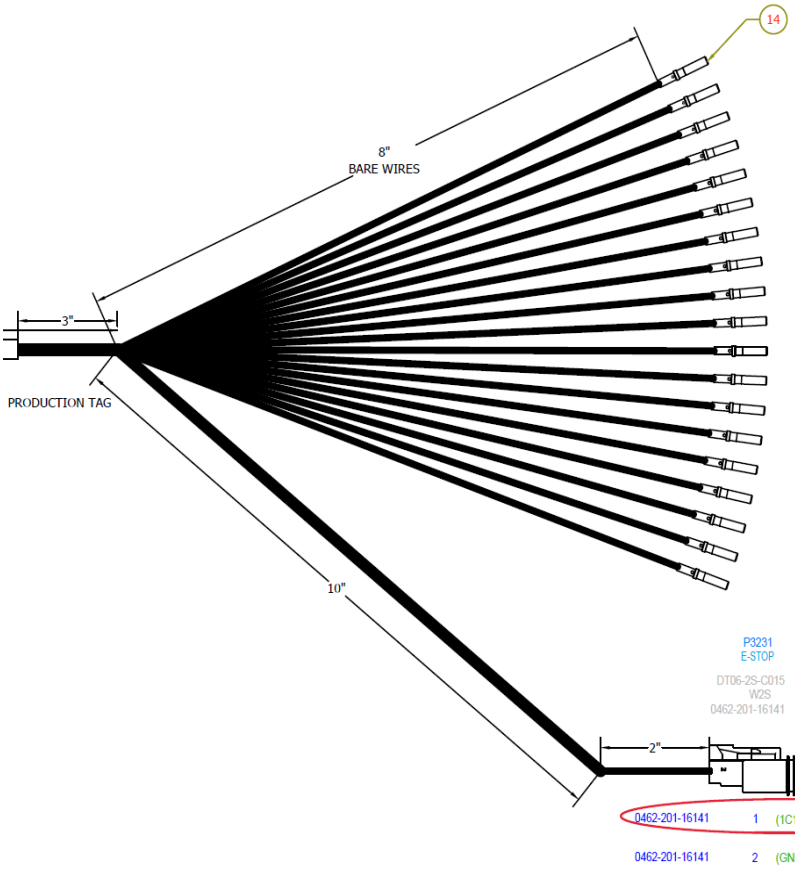
Core R Inputs				
Plug Position	**Label**	**Wire Color**	**Miller Wire Color**	**Description**
J3-1	**Battery**	**Red (+)**	**Red**	**12V-24V Battery +**
J3-2	Left Turn	Wht/Brn (+)	Yellow/Green	Chassis body builder
J3-3	Right Turn	Wht/Red (+)	Green/Yellow	Chassis body builder
J3-4	Brake	Wht/Org (+)	Red/Black	Chassis body builder
J3-5	Marker	Brn (+)	Brown	Chassis body builder
J3-6	**Ground**	**Blk**	**White**	**Battery Ground**
J3-7	**Ignition**	**Red/Wht (+)**	**Red/Yellow**	**Ignition Sense Input**
J3-8	Reverse	Org (+)	Blue	Chassis body builder
J3-9	Photo Cell	Yel (+)	Violet	Optional
J3-10	E-Stop	Grn (+)	GS Color is BLUE	GS remote E-stop Active High

E. E-STOP Circuit

The J3-10 E-stop should be wired to pin 1 of the E-STOP connector on the GS Flex* remote system harness:

Core R Inputs				
Plug Position	**Label**	**Wire Color**	**Miller Wire Color**	**Description**
J3-1	**Battery**	**Red (+)**	**Red**	**12V-24V Battery +**
J3-2	Left Turn	Wht/Brn (+)	Yellow/Green	Chassis body builder
J3-3	Right Turn	Wht/Red (+)	Green/Yellow	Chassis body builder
J3-4	Brake	Wht/Org (+)	Red/Black	Chassis body builder
J3-5	Marker	Brn (+)	Brown	Chassis body builder
J3-6	**Ground**	**Blk**	**White**	**Battery Ground**
J3-7	**Ignition**	**Red/Wht (+)**	**Red/Yellow**	**Ignition Sense Input**
J3-8	Reverse	Org (+)	Blue	Chassis body builder
J3-9	Photo Cell	Yel (+)	Violet	Optional
J3-10	E-Stop	Grn (+)	GS Color is BLUE	GS remote E-stop Active High

8503 Hilltop Drive, Ooltewah, TN 37363
Telephone 423.238.4171



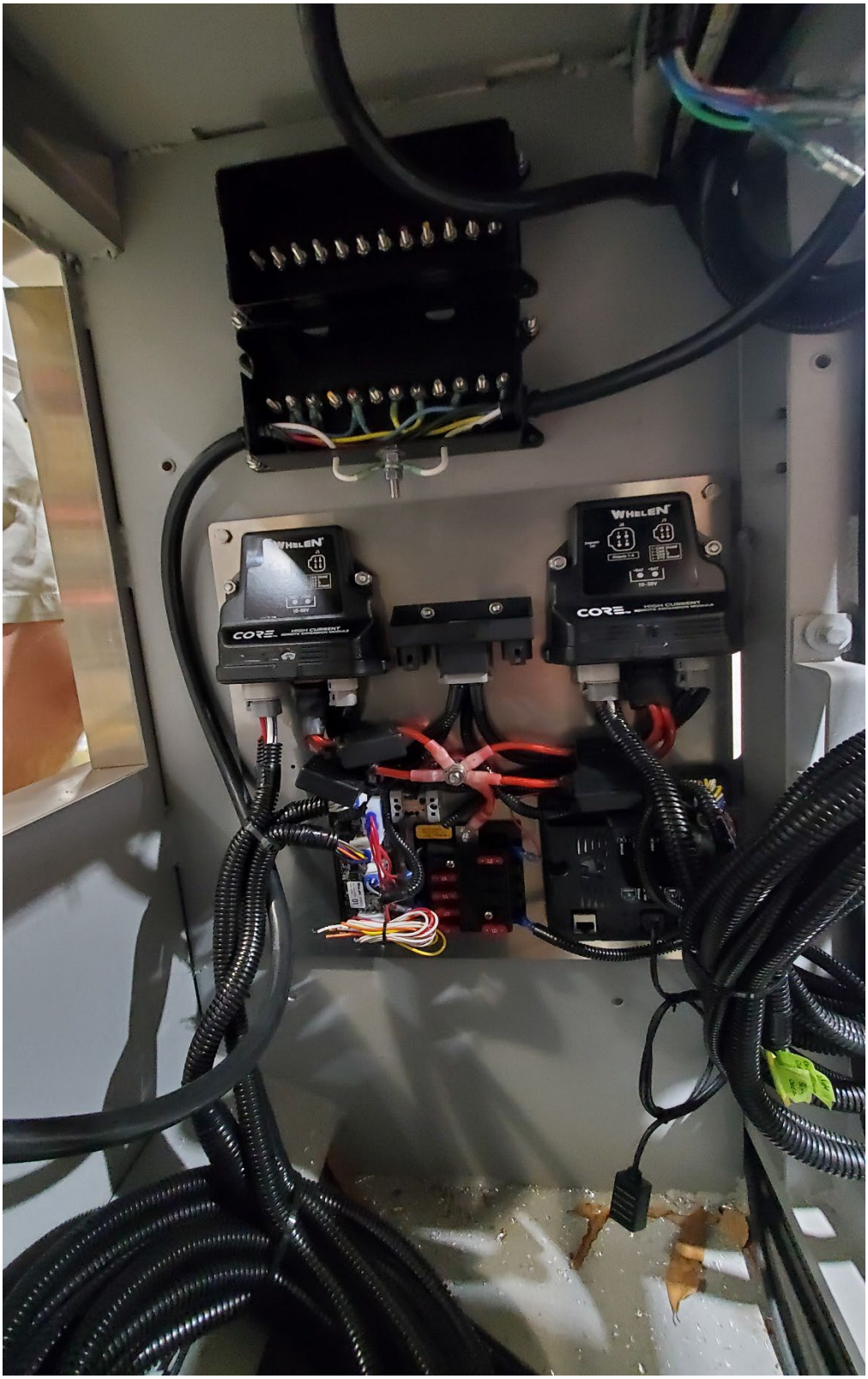
LABEL WIRES WITH CONNECTOR AND PIN NUMBER
(EXAMPLE - P3001-C)

P3001

0462-201-16141	C	(1C1-39) P2011:39 (VT_18_TXL)
0462-201-16141	D	(1C1-55) P2011:55 (VT-BK_18_TXL)
0462-201-16141	E	(1C1-40) P2011:40 (OG_18_TXL)
0462-201-16141	F	(1C1-56) P2011:56 (OG-BK_18-TXL)
0462-201-16141	G	(1C1-41) P2011:41 (YE_18_TXL)
0462-201-16141	H	(1C1-57) P2011:57 (YE-BK_18_TXL)
0462-201-16141	J	(1C1-42) P2011:42 (GN_18_TXL)
0462-201-16141	K	(1C1-58) P2011:58 (GN-BK_18_TXL)
0462-201-16141	L	(1C2-32) P4001:32 (RD_18_TXL)
0462-201-16141	M	(1C2-16) P4001:16 (RD-BK_18_TXL)
0462-201-16141	N	(1C2-31) P4001:31 (WH_18_TXL)
0462-201-16141	O	(1C2-15) P4001:15 (WH-BK_18_TXL)
0462-201-16141	P	(1C2-30) P4001:30 (BU_18_TXL)
0462-201-16141	Q	(1C2-14) P4001:14 (BU-BK_18_TXL)
0462-201-16141	R	(1C1-45) P2011:45 (OG-RD_18-TXL)
0462-201-16141	S	(1C1-46) P2011:46 (GN-RD_18_TXL)
0462-201-16141	T	(1C2-50) P4001:50 (WH-RD_18_TXL)
0462-201-16141	U	(1C2-49) P4001:49 (BU-RD_18_TXL)
0462-201-16141	V	(1C2-10) P4001:10 (OG_18_TXL)

To Whelen Core-R E-Stop Input J3-10 (Green wire)
Use harness 03028531 when available.

F. 3212 Junction Boxes



Whelen System Schematic			3212/V30 WHELEN SCHEMATIC
		Standard Junction Box	Upper and Lower
Whelen Schematic Colors	***Function***	***Post #***	**12 Post Junction Boxes (Left to Right)**
HC REMOTE 1			
Red	Aux Beacon	9	Upper Box #10
White	Toolbox Lights	26	Lower Box #2
Blue	Upper Work	33	
Green	Work Up	34	Upper Box #4
HC REMOTE 2			
Red	Aux 1	7	Upper Box #12
White	Driver Dock	14	Upper Box #6
Blue	Passenger Dock	32	Upper Box #7
Green	Marker	29 or 30	Lower Box #3
CEM 16			
Plug J5			
Brown	Marker Flasher	31	
Red	Brake	10	Lower Box #10
Orange	PTO	Empty/Spare Stud	Empty/Spare Stud
Yellow	Left Turn	21	Lower Box #8
Green	Right Turn	22	Lower Box #7
Blue	Reverse	23	Lower Box #12
Violet	TA Left	6	
Grey	TA Right	5	
Plug J6			

Whelen Schematic Colors	*Function*	*Post #*	12 Post Junction Boxes (Left to Right)
White/Brown	DVI Low Power Output	4	
White/Red	Controls Power	13	Upper Box #9
White/Orange	DO NOT EXTEND	X	
White/Yellow	Aux 2	8	Lower Box #5
White/Green	Main Beacon	35	Upper Box #11
White/Blue	Lower Work	25	
White/Violet	Under Lift	27	
White/Grey	DO NOT EXTEND	X	
Plug J9			
Brn, Red, Org, Yel			
Black			
Black			
Plug J4			
Red	Fuse Block		
Orange	*cut short dont extend		
Brown	Swivel	24	Upper Box #8
Plug J3			
Red	Fuse Block		
Black	Ground Block		
DO NOT EXTEND OTHER WIRES			

G. Diagnostics (excerpt from Whelen CORE-R documentation):

CORE SYSTEM DIAGNOSTIC INDICATORS

Status Indicator LEDs

All CoreOS devices have both a Status and Activity indicator. In some cases the indicators use a single RGB LED or a separate blue LED and an RGB LED. The indicators are used to communicate system status and error information:

- The **Activity Indicator** is a blue LED that flashes to indicate when the device is processing data and that system communications are active.
- **Status Indicator** is a multi-color RGB LED that indicates to the user system status and error conditions.

The state tables below are used to decode the system status and activity. The first table is for the Bootloader followed by the Application state table.

State Table - Bootloader

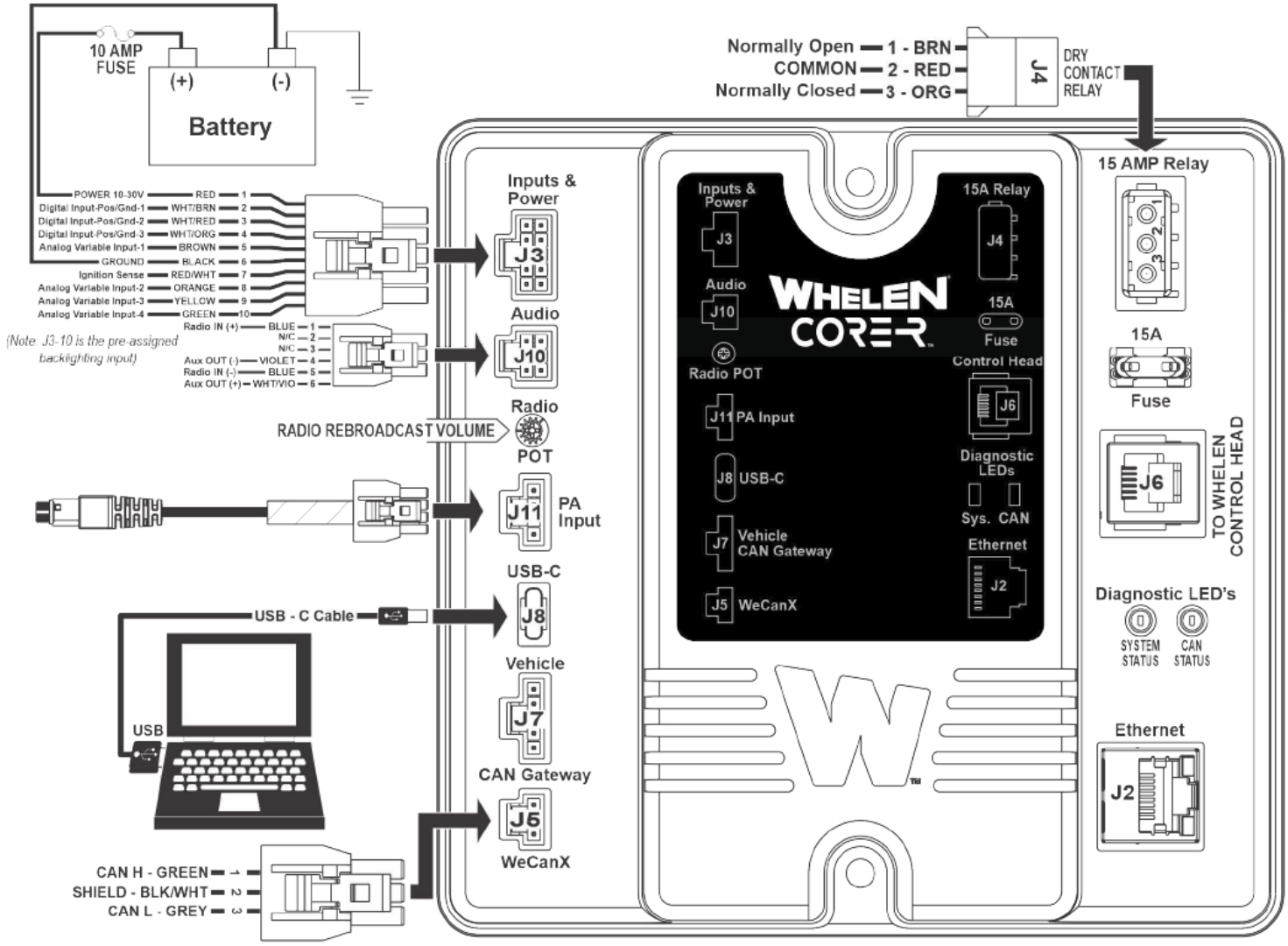
System Status	Status Indicator Colors	Details
Booting	**Magenta**	The system is booting up. When a CoreOS device firmware update is being installed, this process could take up to 30 seconds.
No Memory Detected (1)	**Magenta**	The system was unable to mount a micro-SD card. Ensure the micro-SD card is properly seated in its tray.
System Failed to Boot	**Red**	A fatal error occurred and the system was unable to boot. Contact customer support.

State Table - Application

System Status	Status Indicator Colors	Details
SD Card Error (1)	**Red**	The application was unable to mount the micro-SD card.
File Error	**Orange**	A configuration is missing.
Working	**White**	A new configuration file has been transferred to the CoreOS device and is actively transferring it to other WeCanX devices. Some functionality may be unavailable during this time.
Unconfigured Node	**Cyan**	The system has a valid configuration file installed, but a device is present on the bus that is not in the configuration.
Active	**Green**	The system is actively communicating with attached devices and processing events.
Communication (2)	**Blue Flash**	System communications are active.

1. **Some CoreOS devices use a non-removable flash memory device instead of a micro-SD card.**
2. **For a single shared RGB LED a blue flash will override the current color.**

8503 Hilltop Drive, Ooltewah, TN 37363
Telephone 423.238.4171



H. Whelen Parts Lists

Whelen Supplied Harnesses

Miller P/N	Description	Module	Vendor	Vendor P/N	Secondary Description
03029446	HARNESS, CORE-R J4 RELAY	C399RMI1	WHELEN	46-0748119-010	WHELEN ASSY, HARNESS CORE-R J4 DRY CONTACT RELAY. P/N 46-0748119-010
03029447	HARNESS, CORE-R J5 WECANX	C399RMI1	WHELEN	46-0748309-00A	WHELEN ASSY, HARNESS CORE-R J5 WECANX INPUT. P/N 46-0748309-00A
03029449	CABLE, CORE-R J4 RJ12 TO RJ45	C399RMI1	WHELEN	46-0748321-010	WHELEN CABLE, CORE-R RJ12 TO RJ45 ADAPTER 2'. P/N 46-0748321-010
03029450	HARNESS, CORE-R J3 POWER/INPUTS	C399RMI1	WHELEN	46-076K092-000	WHELEN ASSY, HARNESS CORE-R J3 POWER/INPUTS. P/N 46-076K092-000
03029451	HARNESS, CEM16 J10 POWER IN	CEM16MI1	WHELEN	46-0748118-00A	WHELEN ASSY, HARNESS CEM16 J10 POWER INPUT. P/N 46-0748118-00A
03029452	HARNESS, CEM16 J7 WECANX	CEM16MI1	WHELEN	46-0748168-00A	WHELEN ASSY, HARNESS CEM16 J7 WECANX INPUT SEALED. P/N 46-0748168-00A
03029453	HARNESS, CEM16 J5 OUTPUT 1 6'	CEM16MI1	WHELEN	46-076D814-020	WHELEN ASSY, HARNESS CEM16 J5 OUTPUT 1 6'. P/N 46-076D814-020
03029454	HARNESS, CEM16 J6 OUTPUT 2 6'	CEM16MI1	WHELEN	46-076D814-030	WHELEN ASSY, HARNESS CEM16 J6 OUTPUT 2 6'. P/N 46-076D814-030
03029455	HARNESS, CEM16 J9 INPUTS 12"	CEM16MI1	WHELEN	46-076J227-00A	WHELEN ASSY, HARNESS CEM16 J9 INPUTS 12". P/N 46-076J227-00A
03029451	HARNESS, CEM16 J10 POWER IN	CEM1602	WHELEN	46-0748118-00A	WHELEN ASSY, HARNESS CEM16 J10 POWER INPUT. P/N 46-0748118-00A
03029452	HARNESS, CEM16 J7 WECANX	CEM1602	WHELEN	46-0748168-00A	WHELEN ASSY, HARNESS CEM16 J7 WECANX INPUT SEALED. P/N 46-0748168-00A
03029456	HARNESS, CEM16 J5 OUTPUT 1 12"	CEM1602	WHELEN	46-076D814-000	WHELEN ASSY, HARNESS CEM16 J5 OUTPUT 1 12". P/N 46-076D814-000
03029457	HARNESS, CEM16 J6 OUTPUT 2 12"	CEM1602	WHELEN	46-076D814-010	WHELEN ASSY, HARNESS CEM16 J6 OUTPUT 2 12".P/N 46-076D814-010
03029455	HARNESS, CEM16 J9 INPUTS 12"	CEM1602	WHELEN	46-076J227-00A	WHELEN ASSY, HARNESS CEM16 J9 INPUTS. P/N 46-076J227-00A
03029458	HARNESS, CEM4H OUTPUTS 4X	CEM4HMI1 / CEM4HMI2	WHELEN	46-0748289-010	WHELEN ASSY, HARNESS CEM4H OUTPUTS 4X. P/N 46-0748289-010
03029459	HARNESS, CEM4H WECANX/GROUND	CEM4HMI1 / CEM4HMI2	WHELEN	46-0748290-00A	WHELEN ASSY, HARNESS CEM4H WECANX/GROUND. P/N 46-0748290-00A
03028353	HARNESS,CCTL7 ETHERNET ADAPTOR	CCTL7Mi1 (CAB KEYPAD)	WHELEN	46-0744020802	WHELEN ASSY, HARNESS CTTL7 ETHERNET ADAPTOR, PLUG, P/N 46-0744020802

Whelen CORE Kits and Parts

Miller P/N	Description	Secondary Description
03028329	**KIT, WHELEN CORE-R BASE INTGRD**	**WHELEN CORE-R BASE SYSTEM FOR LIGHTING CONTROL ON INTEGRATED UNITS, 12V ONLY. INCLUDES: 1 KEYPAD, 1 CORE-R CONTROLLER, 1 CEM1601 LOW CURRENT OUTPUT MODULE, 2 HIGH CURRENT CEM4HC MODULES, ID 01 & 02. P/N TBD**
03028291	CONTROLLER, WHELEN CORE-R	WHELEN WeCanX CORE-R CONTROLLER, 10-30VDC, 2A INPUT, 3 DIGITAL INPUTS / 4 ANALOG / 1 IGNITION SENSE, TEMP -40C TO +65C. MODEL P/N C399RMi1
03028292	CONTROLLER,WHELEN CEM16 OUTPUT	WHELEN WeCanX REMOTE 16 OUTPUT MODULE ID 01, 12V, 4 DIGITAL INPUTS ACTIVE HI OR LOW, 16 2.5A POSITIVE SWITCHED OUTPUTS. P/N CEM1601
03028294	CONTROLLER, WHELEN HC 4 OUTPUT	WHELEN WeCanX 4 HIGH CURRENT OUTPUT EXPANSION MODULE ID 01, 10-30VDC, 60A MAX, 4X 15A OUTPUTS, DVI, TEMP -40C TO +65C, IP67. P/N CEM4HC01
03028300	CONTROLLER, WHELEN HC CEM4HC02	WHELEN WeCanX 4 HIGH CURRENT OUTPUT EXPANSION MODULE ID2, 10-30VDC, 60A MAX, 4X 15A OUTPUTS, DVI, TEMP -40C TO +65C, IP67. P/N CEM4HC02
03028295	KEYPAD, WHELEN WECANX 21 SLIDE	WHELEN WeCanX 21 BUTTON/SLIDE CONTROL HEAD, ID 01, CAB, 12V, FUSE AT 3A. P/N CCTL7Mi1
03028330	KEYPAD, WHELEN 21SLIDE DRVR 2	WHELEN WeCanX 21 BUTTON/SLIDE CONTROL HEAD, ID 02, REAR DRIVER, 12V, FUSE AT 3A. P/N CCTL7Mi2
03028352	KIT, BRACKET, CCTL7 W/ INSTALL	WHELEN CCTL7 MOUNTING BRACKET KIT. TRIM BRACKET FOR A MORE FLUSH MOUNT PROFILE. P/N 01-0442860-01
03030086	FXN LABEL SHEET 9X CORE KYPDS	WHELEN KEYPAD BUTTON LABEL FUNCTION CORE CONTROL HD, FULL SHEET FOR 9 KEYPADS. P/N 10-036K985-00

Whelen Parts Lists (cont'd)

Miller Supplied Parts

Miller P/N	Description	Secondary Description
03028354	SPLITTER,CAN,6X, TROMB 99-0770	TROMBETTA CAN SPLITTER, 2X CAN DT04-3P BLUE, AND 4X CAN IN ONE DT04-12P, GOLD TERMINALS, PINOUT: B/1/12/6/7(L), A/2/11/5/8(H), C/3/10/4/9 (SHIELD), 90 DEGREE MOUNT, IP67, TEMP -40C TO 125C. MATING CONNECTORS: DT03-3S, DT06-12SA. P/N 99-0770
03028328	DIST BLOCK, PTFIX 6+1	PHOENIX CONTACT DISTRIBUTION BLOCK, PTFIX 4/6X1,5-G RED, PUSH-IN CONNECTION, CROSS SECTION: 0.14 mm² - 2.5 mm², AWG: 26 - 14, WIDTH: 19 mm, HEIGHT: 18.7 mm. P/N MAY VARY WITH COLOR AND MOUNTING TYPE. EQUIVALENT TO 1047472 (BLACK) OR (1047466 GRAY).
03028410	STUD, JNCTN, RED, 5/16-18 250A	JUNCTION BLOCK STUD, RED, 1 STUD THREAD, 5/16-18, 250A. WAYTEK P/N 47202 OR EQUIVALENT.
03028451	FUSE, MAXI 40A 32VDC ORANGE	Eaton's Bussmann Series BK/MAX-40 Automotive MAX Fuse, 40A, 32VDC, Orange. P/N BK/MAX-40 OR EQUIVALENT
03028452	FUSE BLOCK, ATC X 10, 30A/100A	Eaton's Bussmann Series 15600-1020 Lightweight Fuse Panel, 10-Gang, w/o Ground Terminals. P/N 15600-10-20 or equivalent.
07034568	PLATE, CONTROL PANEL - WHELEN	ALUMINUM MOUNTING PLATE FOR WHELEN POWER DISTRIBUTION ASSEMBLY (
03028390	CABLE, ETHERNET EXTENSION, 50'	ETHERNET STRAIGHT-THRU PATCH CABLE. CAT5 OR CAT6, FEMALE END / MALE END.

Optional Parts

Miller P/N	Description	Secondary Description
03029846	PHOTOCELL, WHELEN LCPHOTO	WHELEN PHOTOCELL SWITCH, 12V WHEN DARK. P/N LCPHOTO.
03028301	CONTROLLER,WHELEN CEM1602 DVI	WHELEN WeCanX REMOTE 16 OUTPUT MODULE ID 02, OPTIONAL, FOR M6 AND MCFLED DVI, 12V, 4 DIGITAL INPUTS ACTIVE HI OR LOW, 16 2.5A POSITIVE SWITCHED OUTPUTS. P/N CEM160102
03028296	GPS, WHELEN VEHICLE2VEHCL SYNC	WHELEN WeCanX VEHICLE-TO-VEHICLE SYNC GPS MODULE, 12V 30mA, FUSE AT 1A. P/N CV2V
03028331	KEYPAD, WHELEN 21SLIDE PASS 3	WHELEN WeCanX 21 BUTTON/SLIDE CONTROL HEAD, 12V, ID 03, REAR PASSENGER, FUSE AT 3A. P/N CCTL7Mi3