

**SUBJECT:** Troubleshooting Guide  
**PURPOSE:** Integrated Wrecker – Final Installation & Dressout

## Whelen CORE-R - Troubleshooting:

Symptom	Likely Cause	Recommendation
Light flashes when turned on, but immediately turns off.	The circuit likely exceeded the output rating of the CEM16 at 2.5A or the HC module at 15A.	If the load calculations are below the circuit protection rating, check for a short circuit. If the load calculation is above the circuit protection rating, use a relay to separate the load such that is no long exceeds the rating.
Keypad buttons turn on the wrong functions.	Whelen output were wired to the wrong post in the junction box. The CEM16 Output connectors are swapped. The HC modules are ID'd incorrectly, or installed in the wrong location.	Verify the wiring, connector and module location, and module IDs.
PTO button is flashing red	The CORE-R is seeing +12V on the E-Stop input wire. If the E-Stop is pressed on the Flex8 underlift remote, the MC43 controller will output +12V on the E-stop wire which should be connected to the Whelen E-Stop input.	This is normal behavior if the E-Stop is pressed. To clear the E-Stop, release the E-Stop button on the remote and relink the remote to the receiver. Turning controls power off and back on will also clear the E-Stop.
Only one keypad will operate at a time.	Keypads have the same ID. Only one keypad can operate if multiple Keypads share the same ID. It may vary with each power cycle which keypad is operational.	Each keypad has a separate ID: Cab ID #1, Rear Left ID #2, Rear Right ID #3. Use the Whelen COMMAND software, available from the Whelen website, and a USB-C data cable to check/modify the Keypad ID. Unplug keypads one at a time to determine which is which and set the proper ID number.

## FlexPro8 Transmitter – Troubleshooting Tips:

Problems	Possible Reasons	Suggestions
No Response when transmitter push button is pressed (improper startup & settings)	Transmitter low battery power	Check the transmitter battery level.
	Emergency stop button activated prior to startup	Prior to turning on the transmitter power switch make sure that the red emergency stop button is elevated.
	Improper startup procedure	Redo the startup procedure by holding the power key at “START” position for up to 2.0 seconds and then release.
	Incorrect system RF channel	Make sure that the transmitter handset and the receiver unit both have the same channel.
	Incorrect Receiver Access Code	Make sure that the transmitter handset and receiver unit both have the same Receiver Access Code.
	System out of range	Make sure that the startup procedure is initiated within 100 meters (300 feet) from the receiver location.

## FlexPro8 Transmitter – Status Lights & Warnings:

Status Display	Fault Indication
Slow green blink (Normal Operation)	Transmitter on and in standby.
Blinking orange	Button has been pressed and the unit is transmitting. The speed at which the orange LED blinks is directly related to how far down the button is pressed.
1 red blink followed by a 2-second pause	Voltage goes below 1.9V during operation - change batteries immediately.
2 red blinks followed by a 2-second pause	A push button is active while turning on the transmitter. The button that is active will be designated by the (25, 50, 75, 100) LEDs. See Push Button Fault Table.
3 red blinks followed by a 2-second pause	I-CHIP error. Consult Manufacturer.
4 red blinks followed by a 2-second pause	Transmitting error, system cannot lock on to the designated channel.
Constant green for up to 2 seconds	Transmitter power on with no faults detected (prior to initiating the START function). OK to use.
Solid Red	Stop command initiated with receiver ESTOP deactivated.
Solid Red	Voltage goes below 1.9V at initial power on - transmitter power shuts off.

## **CAN 2 Radio Receiver (part number 03025153):**

Top LED (RF) indicates receiving RF messages

- GREEN slow blinks = Transmitter is offline
- GREEN fast blinks = each blink is a valid RF message
- RED solid light = error occurred, refer to the Error Code LED blink code





























Center LED (STATUS) indicates the CAN 2 signal strength / error codes

- solid GREEN = good RF signal strength
- solid YELLOW = average RF signal strength
- solid RED = low RF signal strength
- RED (2) blinks = commanded power down
- RED (3) blinks = RF data timeout
- RED (4) blinks = CAN bus timeout
- RED (5) blinks = initialization / hardware error
- RED (6) blinks = machine stop power down
- RED (7) blinks = invalid RF firmware

Bottom LED (COM) indicates received CAN data

- During normal operation, if there is CAN data currently being received on the bus this LED will light SOLID BLUE as an indication that the CAN bus is connected properly.

## MC43 IQAN Controller / Output Module (part number 03028298):

Status		Flash (yellow)	
Normal operation			
Application not loaded			
No application available			
Waiting for restart			
Error code	Error	Primary Flash (red) Error category	Secondary Flash (yellow) Error description
1:1	Output		
1:2	Input		
1:3	VREF		
2:1	Power supply		
2:2	Temperature		
3:1	CAN, no contact		
3:2	IDtag error		
3:3	System mismatch		
3:4	CAN error (bus off)		
4:1 <sup>a</sup>	Stopped, critical		
4:2 <sup>b</sup>	Stopped, critical		
4:3 <sup>c</sup>	Stopped, critical		

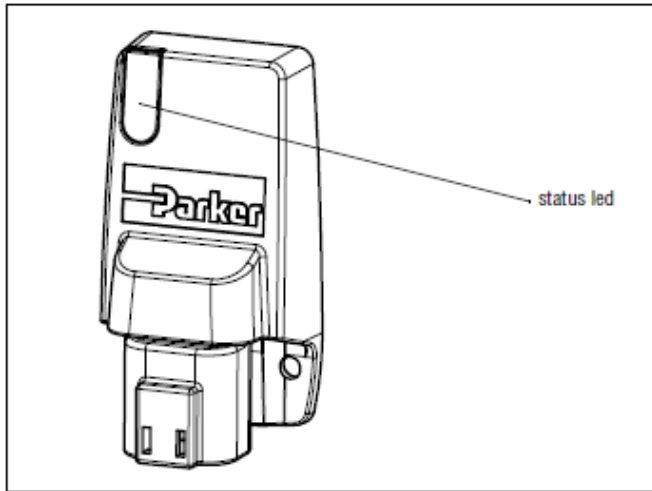
- a. Followed by a longer sequence of flashes, contact Parker.  
b. Followed by a longer sequence of flashes. Possible causes include reverse feed on startup, critical under-voltage and critical temperature.  
c. Followed by a longer sequence of flashes, contact Parker.






## IQAN G12 Diagnostics for GS Flex8 Underlift Remote System

Using a IQAN-G12 Bluetooth device and the IQANgo app, you can connect to the GS Flex8 Underlift Remote system for programming updates and diagnostic purposes.





- Connect the G12 modem to the 4 position programming plug located near the MC43 controller. The IQAN-G12 has 1 bi-color LED light on front surface indicating system status and dongle status:



LED indicators showing different IQAN-G12 modes

Status		Flash (yellow)	
Init	100 ms on 100 ms off		
Waiting	100 ms on 2000 ms off		
Connected	900 ms on 100 ms off		

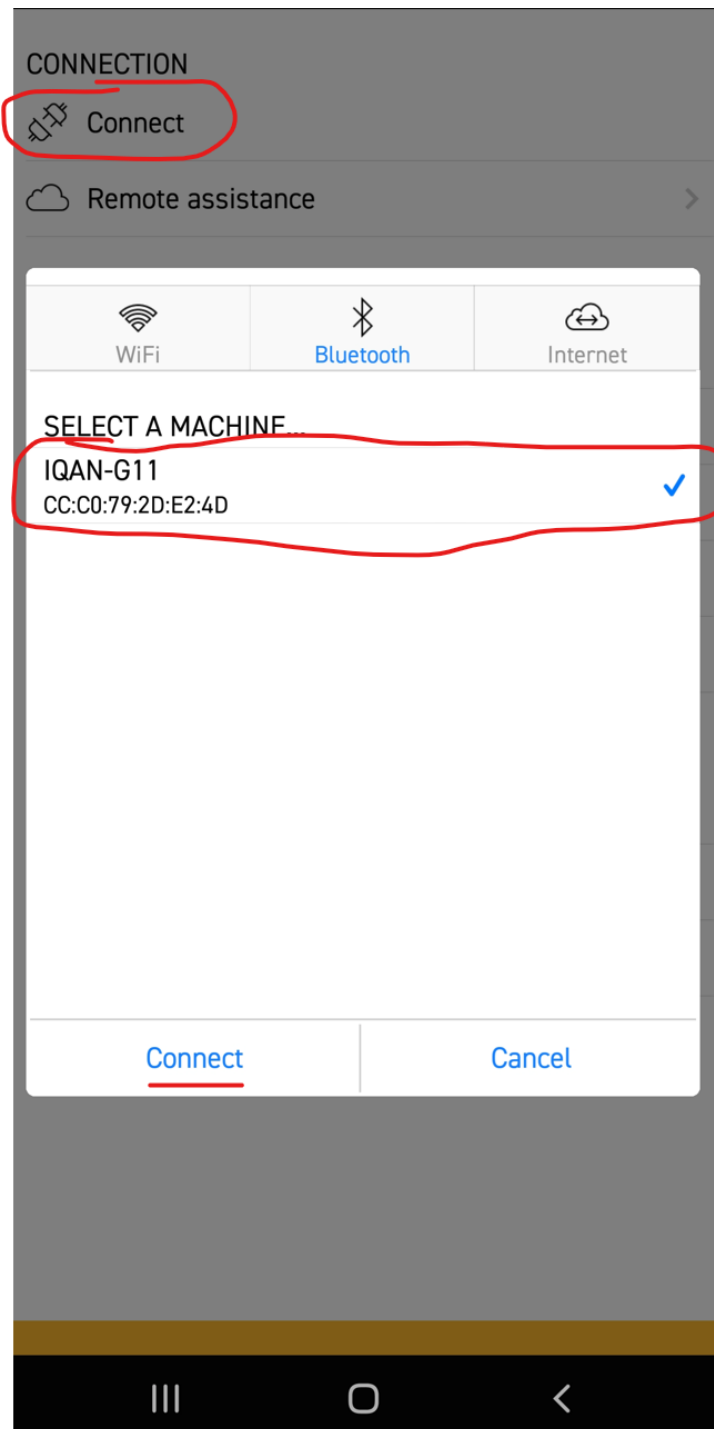
Error code	Error	Primary Flash (red) Error category	Secondary Flash (yellow) Error description
3:4 <sup>a</sup>	CAN error (bus off)		
4:1 <sup>b</sup>	Internal error		

a. IQAN-G12 will attempt to recover automatically.

b. Followed by a longer sequence of flashes, contact Parker.

## IQAN G12 Diagnostics for GS Flex8 Underlift Remote System (cont'd)

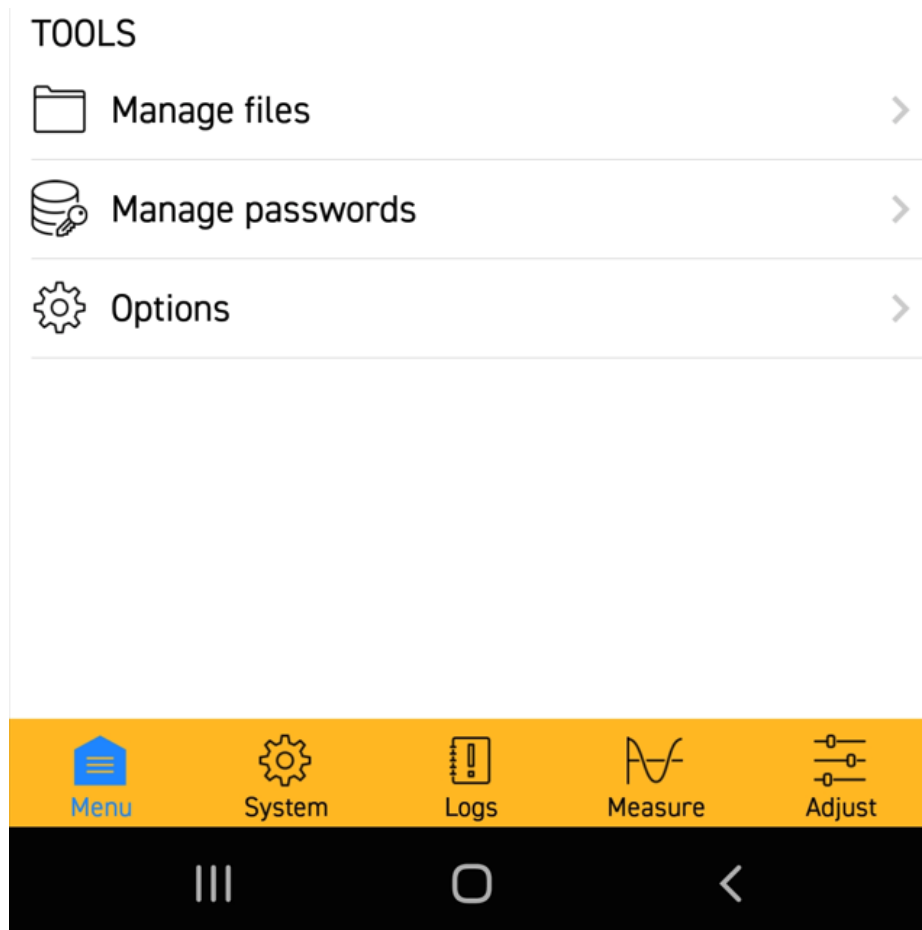
- Turn on the Bluetooth Radio on your phone or tablet.
- Open the IQANgo app.
- Tap **Connect**. Select your IQAN-G12 connected to the system. Tap **Connect**.



## IQAN G12 Diagnostics for GS Flex8 Underlift Remote System (cont'd)

Once connected, the buttons along the bottom list your main diagnostic tools:

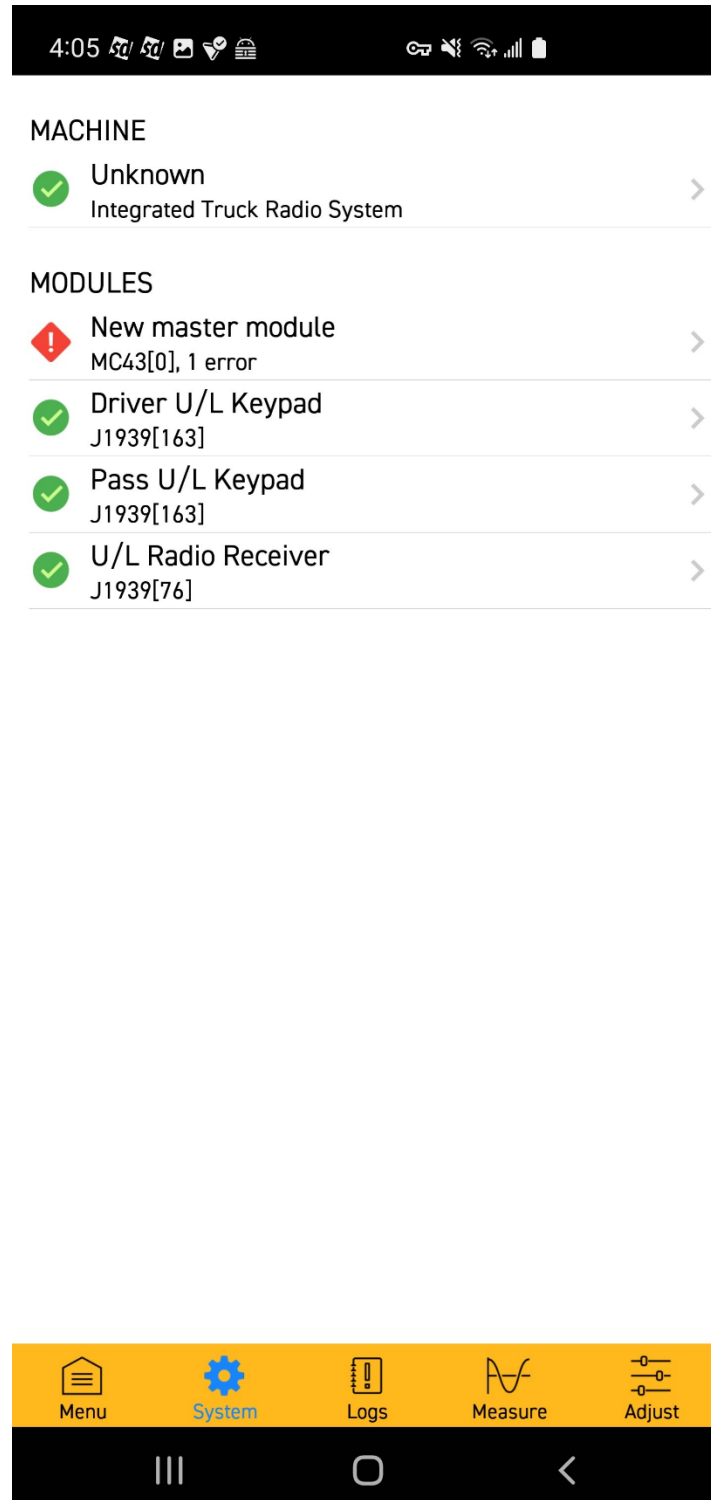
- System
- Logs
- Measure
- Adjust



Using these tabs to view the system information, faults, download logs, and to measure the system I/O states.

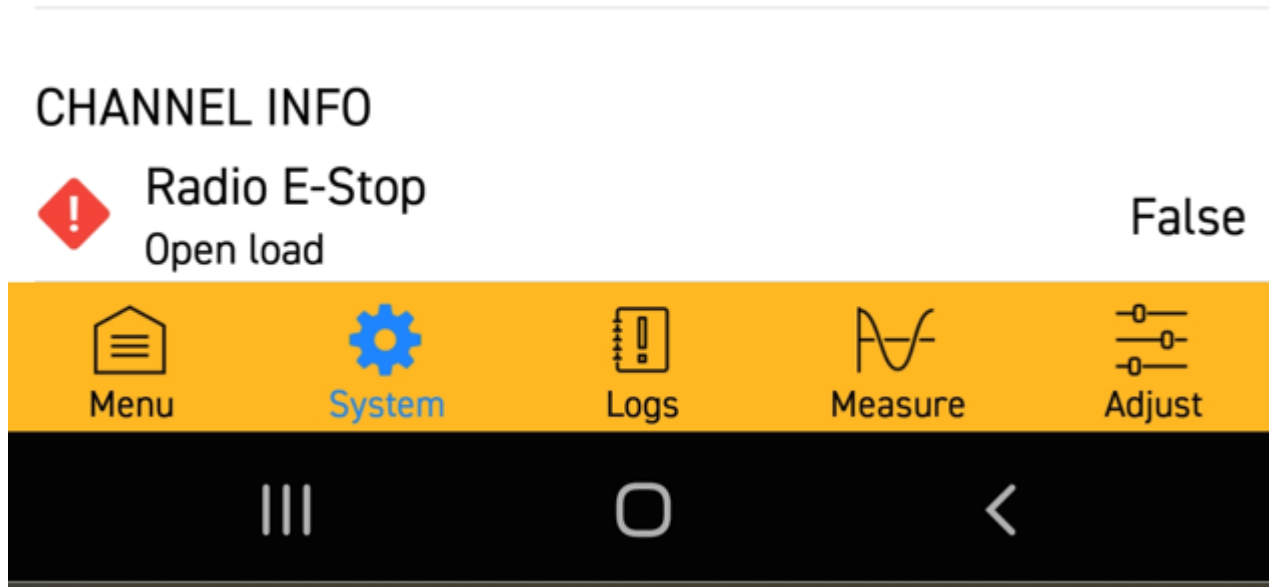
## IQAN G12 Diagnostics for GS Flex8 Underlift Remote System (cont'd)

System modules:

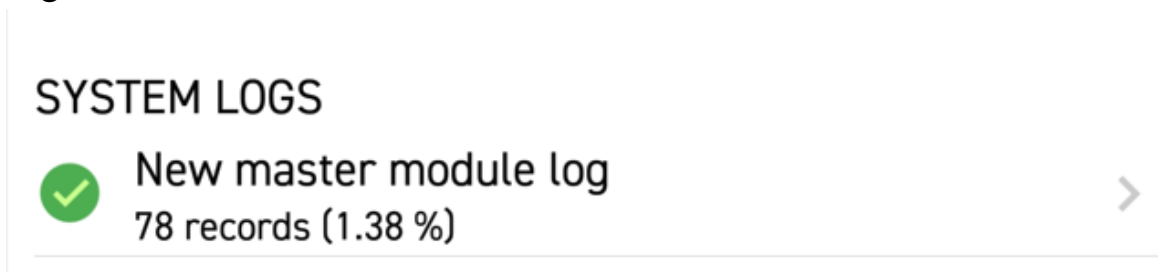


## IQAN G12 Diagnostics for GS Flex8 Underlift Remote System (cont'd)

**Ignore the Radio E-stop error.** This is normal operation due to the way the e-stop output is wired to the Whelen CORE-R module input. It does not detect a load like a relay which is not used in the system currently.



System logs can be downloaded and emailed.



## **IQAN G12 Diagnostics for GS Flex8 Underlift Remote System (cont'd)**

Measure Groups provide specific detail on the state of the I/O and the radio/remote. This includes button presses, remote battery level, and signal strength (RSSI).

### **MEASURE GROUPS**

Radio >

Driver Keypad >

Passenger Keypad >

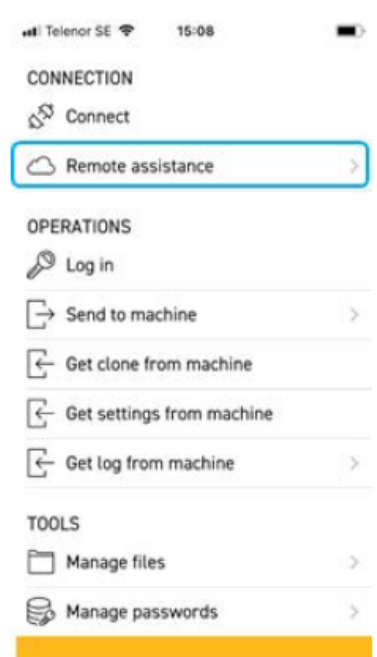
Outputs >

## IQAN G12 Diagnostics for GS Flex8 Underlift Remote System (cont'd)

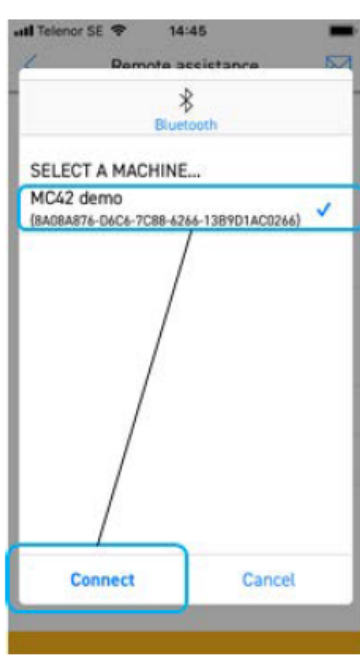
### Remote diagnostic assistance

- The IQANgo app, together with the IQAN-G11, can connect the machine to internet. This makes the IQAN system available for remote support via the IQANconnect service.
- IQANgo user at the machine
- Make sure Bluetooth is On.
- Start IQANgo, follow the steps below:

**Select Remote assistance**




**When the correct machine ID shows up, select it and tap Connect**



**The IQANconnect key is shown**

**The IQANconnect key can be sent to the person who will connect.**



The IQANconnect key that is shown in the IQANgo Remote assistance menu is unique to your phone. If you connect a different machine to Internet using IQANgo using the same phone, the same IQANconnect key will be used.

Send the IQANCONNECT KEY to the technician.

## **IQAN G12 Diagnostics for GS Flex8 Underlift Remote System (cont'd)**

For additional details regarding the G12 and IQANgo app, see the document

- **IQAN-G12-instruction-book-MSG33-8418-IB\_UK.pdf**
- This can be found in the GS zip file on the Miller distributor website.