EMIZON TCD

STEP 7 - DIAGNOSTICS & FAULTS

Emizon TCD

Step 7 - Diagnostics & Faults

To take a signal strength tap the Mode button once (SW402). The display will show a code for the parameter on the display for example **GS** is for signal strength together with the associated value. The display will remain in a diagnostic mode for 1 minute.

GPRS SIGNAL STRENGTH (GS)

Signal strength value ranges from 0 (zero strength) to 31 (maximum strength). A value of 12 or more is normally acceptable. **GS99** indicates that the GPRS modem cannot properly detect the signal strength. Please be patient, the GPRS path (LED 202) can take a few minutes to find a good signal strength.

GPRS REGISTRATION STATUS (GA & GR)

The display will then show the GPRS registration status.
G A   0 5 indicates successful GPRS Registration.
G r   0 5 indicates successful GSM Registration.
G A and **G r** readings must display **0 5**

Any other value will not allow a GPRS connection.

SIGNALS TO THE ARC & CSL

Press SW401 for 5 seconds. A test signal will be sent over any paths that are available

EMIZON ONLINE MAINTENANCE

Site Diagnostics - Allows you to communicate securely with TCD's across all your installations. Use OLM to check the alarm status, change the pin configuration, check the signal strength, enter static IP addresses, apply F/W updates, set the panel type or set and unset relays connected to CCTV systems

Upload Download (UDL) For panel maintenance - a secure connection from the TCD to the panel, using RS232, RS485 or dial capture.

> **BEFORE YOU CAN ADD A SITE TO OLM, THE TCD MUST BE ASSOCIATED FIRSTLY BY YOUR ALARM RECEIVING CENTRE (ARC).**

ADDING A SITE TO (OLM)

To add a site to OLM you will require the EM number and the Serial number of the

TCD. Register for Emizon Online Maintenance. Available of the Emzion section of the Installer Zone

FAULT CODES & GPRS DIAGNOSTIC

Error and fault conditions are shown on the display. The display may show a number code to indicate the nature of the problem. The most common codes together with the potential reasons and solutions are shown on the table

CODE	POSSIBLE REASON AND SOLUTION
E 0	Error Code 0: IP Path not connected. Check Ethernet cable from TCD to Router/ Network connection electrically OK
E 1	Error Code 1: TCD has No IP address
E 2	GPRS Registration State not 1 or 5. If this persists, it indicates poor GPRS coverage or an antenna location problem
E 3	GPRS Connection not available. If this persists it indicates the TCD is unable to connect to the GPRS IP Network.
E 6	No ARP Response. Cannot detect local gateway/router. Indicates no response from router. Most likely causes; TCD plugged into wrong network, router not online or has different IP address
E 7	Cannot detect Emizon Service Platform. Most likely causes; customers internet connection is down or firewall is blocking internet access on the desired port range Outbound Ports TCP 18000 – 18049 Inclusive)
FIRMWARE UPDATE CODE	
U R	**U A** Firmware Update Available. Apply a Firmware update by pressing both buttons for 10 Seconds or until **U F** is displayed
U E	Update Error
U F	**U F** Followed by a value of between **0 0** and **9 9** or displays hexadecimal characters indicates that the firmware update is in progress
F E	FE followed by a value indicates an error in firmware update process. Repeat process, if the result is the same check network connection
r r	**r r** TCD is rebooting followed by **B U**, **B C**, **t 1**, **O 1**
U c	Firmware Update Complete. followed by **t 1**, **0 1** indicates the firmware update is complete and awaiting signalling both paths
FOR GPRS SIGNAL STRENGTH TAP THE LEFT HAND BUTTON ONCE (SW402)	

G S	Signal strength. 12 is the minimum, 31 is the Maximum. Recommended minimum usable signal is 12. 99 indicates no signal.
G A	GPRS Registration state which must read 0 5
G R	GSM Registration state must read **0 5**
G d	Grade type **L 3**, **L 4**
A G	Age of GPRS reading (values in shown in seconds
O P	Operating mode **I G**, **G P**, I **P**, **G -**, **I -**,

Troubleshoong Guide for IP/GPRS, GPRS/PSTN & Bi-Path IP/PST

FOR IP FAILURE	FOR GPRS FAILURE	FOR PSTN FAILURE
IP LED 201 indicates the IP path is up	GPRS LED 202 indicates the path is up if IP/GPRS. If GPRS/PSTN the GPRS is LED 201	PSTN LED 202 indicates the PSTN path is up
Has the Quick Start Guide been followed? Has the TCD been Associated and Activated by the ARC?	Has the Quick Start Guide been followed? Has the TCD been Associated and Activated by the ARC?	Has the quick Start Guide been followed? Has the TCD been Associated and Activated by the ARC?
Is the RJ45 physically connected to the TCD and the Router/Switch?	Is the Emizon antenna physically connected to the TCD and positioned correctly?	Is the PSTN wired to T1 and R1 terminals? Unscrew White SLIC cover to check the wiring
Is LED 301 next to the RJ45 Cable flashing? LED 301 only indicates data is passing. LED 201 indicates the IP path is signalling.	Take a signal strength on the TCD by pressing SW402 once, then Observe the GS reading, Minimum is 12, maximum is 31. The GA and GR reading must read 05. E.g. GS 27, GA 05, GR 05	With a Multi-meter check if there is approximately 50V present on PSTN connections between T1 and R1
Has the RJ45 cable been tested for data? e.g. Can you connect to the Internet? Try rebooting the router for two minutes. Try a speed test on a laptop	If a standard Antenna (matchbox sized white) is currently fitted and the signal is below 12, try installing an Emizon High Gain Antenna Internally or externally to improve the signal strength. A 5M Extension is also available from CSL	Press SW401 for 5 seconds to force a poll and wait 5 minutes, observe LED 202. LED 202 should flash then go solid on to indicate the PSTN path is up
Does the TCD require a Static IP Address? The TCD is DHCP enabled by default. To apply a Static IP Address, Subnet mask and Gateway, use Emizon Online Maintenance / Phone app or call CSL	If the GPRS signal is still low, relocate the High Gain Antenna externally to improve signal strength to 12 or above. The minimum recommended signal is 12 and the maximum is 31. The higher the GS reading the better the signal. GS 99 indicates no signal	Can an outside call be made with a Butt phone tester?

Have ports 18000 – 18049 inclusive TCP outbound been opened on the Firewall by the person who is responsible for the network?	LED 101 located on the GPRS Daughter board should indicate a double flash once every 3 seconds	Does an external call require a Dial Prefix e.g. 9 or 0? If so, use Emizon Online Maintenance / Phone app or call CSL to apply a Dial prefix
The IT department may require our Destination IP addressees? If so, ask the IT department to request the Destination IP Addresses via email to: support-emizon@csl-group.com referencing the Serial number of the TCD or the EM number. We will send the Destination IP Addresses via email on request	To identify if both paths are signalling **For IP/GPRS:** LED 201 is IP & LED 202 is GPRS **For GPRS/PSTN:** LED 201 is GPRS & LED 202 is PSTN **For IP/PSTN:** LED 201 is IP & LED 202 is PSTN	Does the Phone line require a PSTN filter? Investigate the line further or get the phone line checked by the phone provider