iCon Communication Fault Finding Manual

Title Page

Publication details:

Title: iCon Communication Fault Finding Manual
Revision : 14.0-B
Issue Date: 16-1-12
Part Number: CM-CFFM

Produced by:

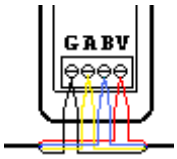
Product Support Department
Comeragh Controls Ltd
Irishtown Clonmel Co. Tipperary
Ireland

Comeragh Controls Limited,
Upper Irishtown, Clonmel, Co. Tipperary, Ireland. Tel +353-(0)52-72000
Website www.comeraghcontrols.com Email info@comeraghcontrols.com

1. Communication Fault Finding Test

1.1 Check for any shorts

Use a DVM (Digital Volt Meter) and check for any shorts between A,B,G,V,
typically if there are no shorts the reading will be approx 1kΩ or greater ,
if there is a short the reading will be approx 1-10Ω



Pass Approx. 1000Ω or greater
Fail Approx. 1-10Ω

1.2 Check for Incorrect Wiring (e.g. V into A or B)

Use a DVM (Digital Volt Meter)
(Note ensure Touch Screen USB-RS485 device is not attached during this test)
The resistance reading between G and A should be almost identical to G and A

Example: A
14 x sensors, 1 x I/O, 1 x Console

	G-A	G-B	
Good Wiring	1185Ω	1186Ω	(Under 10Ω difference is OK)
Bad Wiring (V into B slot)	1185Ω	1276Ω	(Above 10Ω difference is possible problem)

Example: B
12 x sensors, 2 x I/O, 2 x Console

	G-A	G-B	
Good Wiring	1765Ω	1761Ω	(Under 10Ω difference is OK)
Bad Wiring (V into B slot)	1765Ω	1790Ω	(Above 10Ω difference is possible problem)

Example: C
12 x sensors, 2 x I/O, 2 x Console

	G-A	G-B	
Good Wiring	1765Ω	1761Ω	(Under 10Ω difference is OK)
Bad Wiring **(G** into A slot)	1738Ω	1762Ω	(Above 10Ω difference is possible problem)

Example: D
If A & B are wired incorrect at a sensor, the system will work, but this sensor will simply not communicate.

Example: E
If G is wired into A or B, the system will work, but this sensor will simply not communicate.

Comeragh Controls Limited,
Upper Irishtown, Clonmel, Co. Tipperary, Ireland. Tel +353-(0)52-72000
Website www.comeraghcontrols.com Email info@comeraghcontrols.com

2. Quick System Check

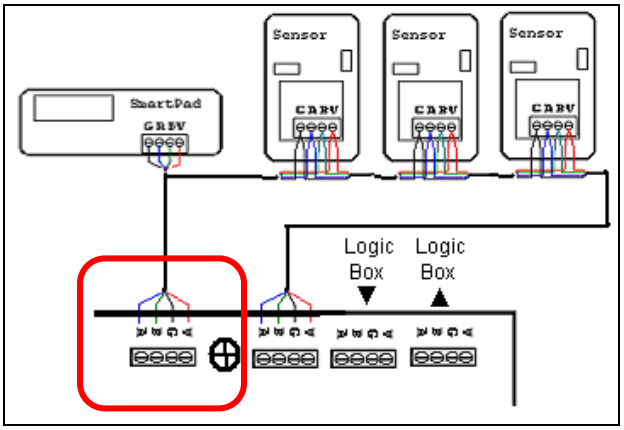
Ensure System is Power OFF	☐
Check Communication wiring (A,B,G,V) at Stat, Console, I/O Boxes	☐
Check I/O Boxes {220v Outputs, Switch Lives & Inputs} are wired correctly	☐
Set address on all I/O Modules	☐
Power ON system	☐
Set Zone address on all stats	☐
Calibrate all stats	☐
Set Time at the Console	☐
Set all Zone SP to a value above Zero	☐
Ensure each Zone Schedule is set up.	☐

Comeragh Controls Limited,
Upper Irishtown, Clonmel, Co. Tipperary, Ireland. Tel +353-(0)52-72000
Website www.comeraghcontrols.com Email info@comeraghcontrols.com

3. Check Comms on A& B

Use a DVM (Digital Volt Meter) and check for commutation on channel A,B,

DVM set to AC voltage
Open Logic Bock with the console attached
Check for communication at Sensor Out A B G V



Check Channel A
Ground Lead (Black Cable) Attached to G
Voltage Lead (Red Cable) Attached to A

Result
Pass Approx every 6 sec you should see the voltage jump to above 1v then back to 0v
Fail Stays at 0v

Check Channel B
Ground Lead (Black Cable) Attached to G
Voltage Lead (Red Cable) Attached to B

Result
Pass Approx every 6 sec you should see the voltage jump to above 1v then back to 0v
Fail Stays at 0v

Comeragh Controls Limited,
Upper Irishtown, Clonmel, Co. Tipperary, Ireland. Tel +353-(0)52-72000
Website www.comeraghcontrols.com Email info@comeraghcontrols.com

4. Comms Failure – Step to Check

a) Isolate 1st logic box / Console / Stats on this logic box
   1. Power off system.
   2. Disconnect Logic box out cable (Now only 1 logic box in the system)
   3. Power on system,
   4. Repeat tested on Comms channel A&B

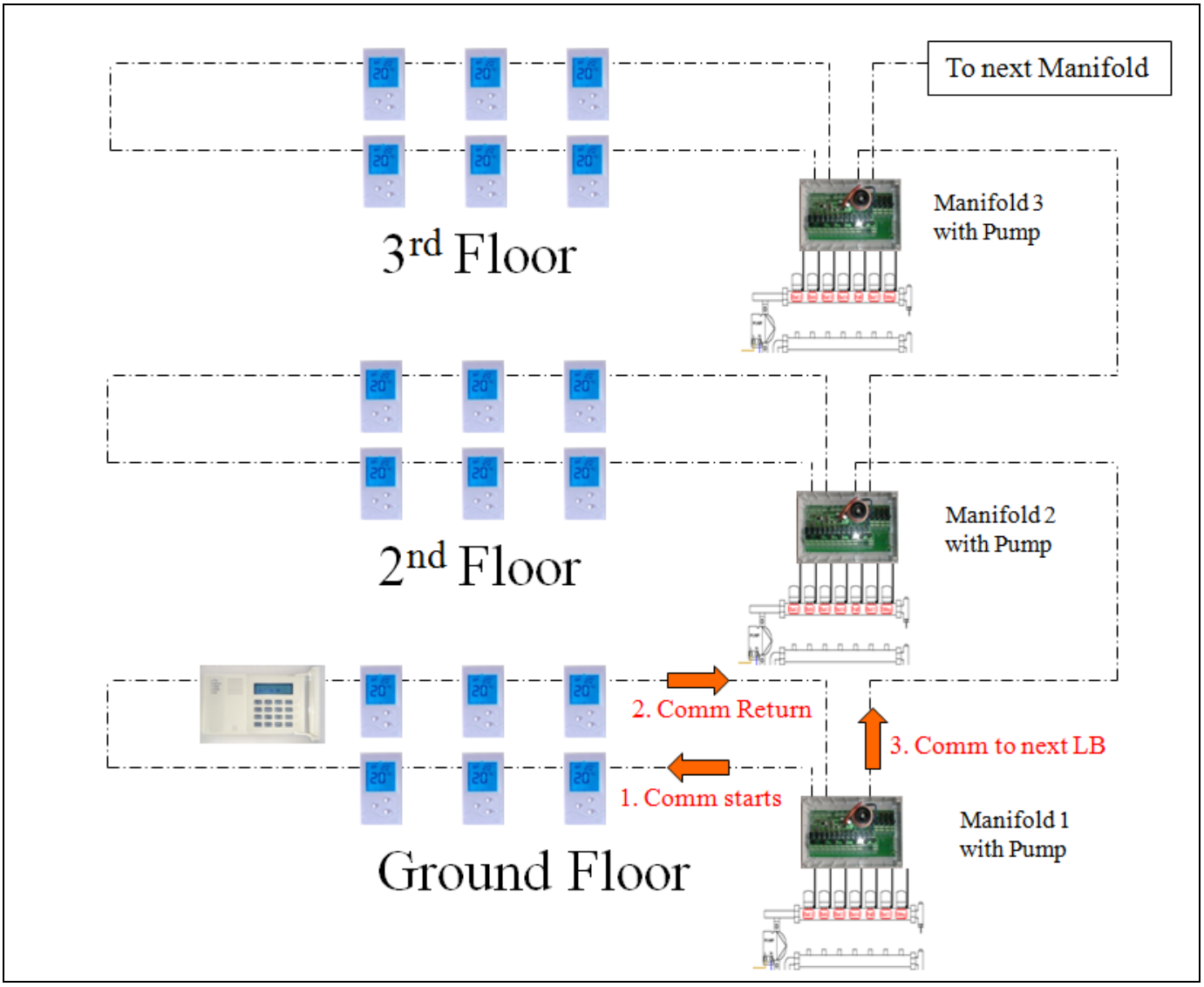
b) Isolate 1st logic box / Console / Reduce qty of stats
   1. Power off system.
   2. Disconnect Logic box out cable (Now only 1 logic box in the system)
   3. Power on system,
   4. Repeat tested on Comms channel A&B

c) Isolate 1st logic box / Console
   1. Power off system.
   2. Disconnect Logic box out cable (Now only 1 logic box in the system)
   3. Power on system,
   4. Repeat tested on Comms channel A&B

Objective of the above is to reducing the system until system comms are working,
Either the last device or cable disconnected from the system is the problem.

Comeragh Controls Limited,
Upper Irishtown, Clonmel, Co. Tipperary, Ireland. Tel +353-(0)52-72000
Website www.comeraghcontrols.com Email info@comeraghcontrols.com

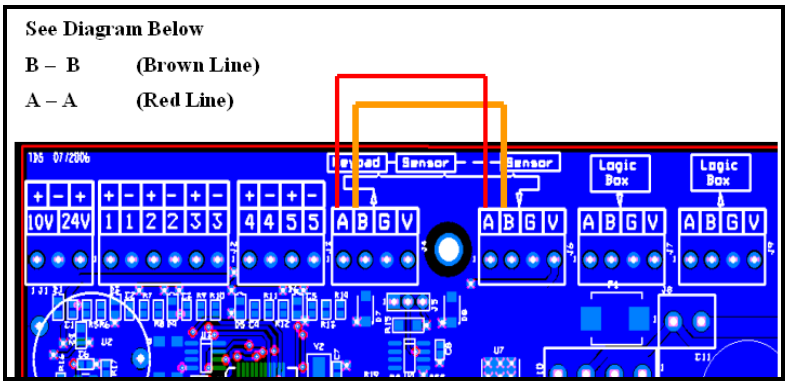
5. iCon RS485 - (Comms Direction)



Comeragh Controls Limited,
Upper Irishtown, Clonmel, Co. Tipperary, Ireland. Tel +353-(0)52-72000
Website www.comeraghcontrols.com Email info@comeraghcontrols.com

6. Wiring a Logic Box with no Sensors or console

If no console or sensor connected to a logic box the RS485 network connection must be jumper

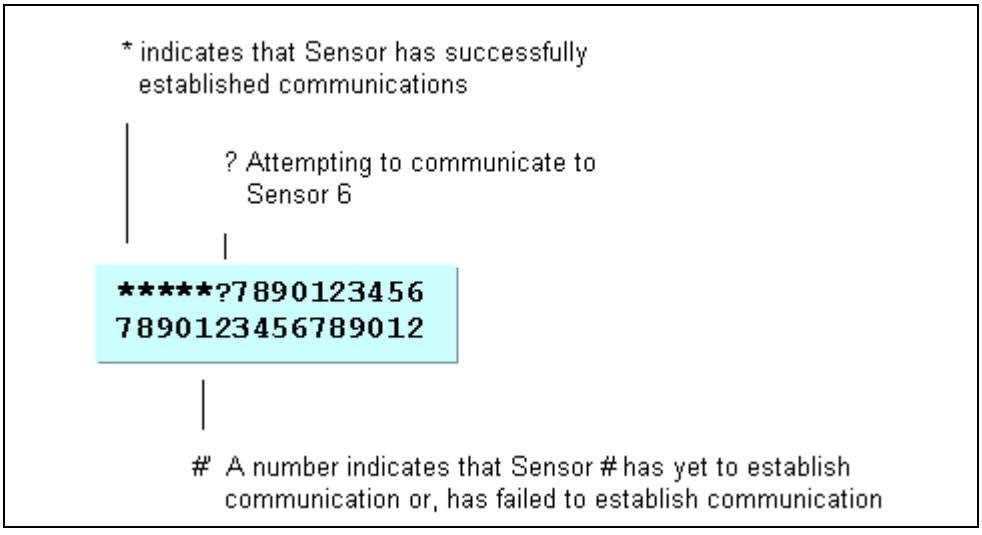


7. Sensor Comm Status

Accessing Sensor Comms Diagnostic

Simultaneously pressing	HOME and MODE keys
Password	3105
Press	Enter Key

1st screen displays Sensor Communication States



Comeragh Controls Limited,
Upper Irishtown, Clonmel, Co. Tipperary, Ireland. Tel +353-(0)52-72000
Website www.comeraghcontrols.com Email info@comeraghcontrols.com