WALCHEM
An Iwaki America Company

Troubleshooting Guide – VCell/GPRS

1) Connect to the controller via USB or direct Ethernet.

2) Check the software version of the controller at the top of the System Summary page. The software must be v017 or higher for WebMaster products, and v009 or higher for WebAlert products. If not, perform a software upgrade via USB stick.

3) Go to the Communications page.
   - ➢ Scroll to the bottom of the page and verify that the VCell NA1 or VCell W2 activation key is installed and Enabled. If not, import the key file, click Enable, and cycle power.

Activations

Enter Activation Key (Modbus or Subnet Keys only):		Enter 17 digit key			
Upload Key File:		Browse... Import			
Activations Status:	Normal				
Activations Log:	Activations Log				
Type of Key Installed	**Key Number**	**Status**	**Enable/Disable Feature**	**Delete**	
1) Modbus TCP/IP	3305-0668-6047-73941	Enabled	Disable	Delete	
2) VT-VCell	2603-0076-1337-83379	Enabled	Disable	Delete	

   - ➢ If the Activation Status is *SIM number mismatch*, then the SIM number read is not the same as the SIM number contained in the VCell activation key, or the key was manually entered by the user (note that VCell activation key files must be imported into the WebMaster). Go to Advanced Comms page and note SIM number. If you have received multiple SIM cards, find the one labeled with the serial number of this controller and use it. If it says Error instead of a SIM number, see below.

4) Look at the Communication Status section near the bottom of the page.

   - ➢ Make sure that the Last Known Signal Strength RSSI is at 12 or above. If not, relocate the antenna until you have adequate signal strength.

   - ➢ Make sure that the SIM status is either "Registered, Home Network" or "Registered, Roaming". If not, then the controller has not yet registered with a cell tower. A good cell signal strength reading does not necessarily mean that it has a good signal from a tower that used by the cell service provider of your SIM card.

     a) Try cycling power to the controller
     b) Try moving the antenna to allow it to connect to a different cell tower
     c) If you bought the cell service on your own, make sure the ISP user name, ISP password, ISP phone number, and APN are correct
     d) Make sure that the Extra Modem Init String, on the Advanced Communication page, is blank.

5) Look at the Connection Status. If it is connected, you will see "Connection Timeout xxxxx sec". If it is trying to connect, you will see this sequence in the Connection Status field, with a Live-Connect Status of "Pending", until it is connected, when it will show "Available":

   a) Re-Initializing Modem
   b) Off-Line
   c) Connecting to ISP
   d) ICOD Handshake
   e) Checking for Upgrade (not valid for VCell)
   f) Connection Timeout xxxxx sec

   Possible messages include:

Message	Cause	Corrective Action
Setting up Antenna	Signal Strength Test was started and has not ended	Wait for 10 minutes, or click End Test button
SIM Registration Problem	The controller is not able to register with the ISP	See above
Modem Response Timeout	The modem is not responding to commands	Replace modem
Authentication Failure	The controller connects to the cell service provider but can't authenticate	Check user name and password settings (if not VCell)

➢ Click on the link at the bottom of the page to go to the Advanced Communications page.

➢ The GPRS modem band should be North America if the cellular system for your country uses 850/1900 MHz bands, or for Outside North America if your country uses 900/1800 MHz. The controller negotiates this on power-up, so if it's incorrect, cycle power.

➢ Also verify that the GPRS SIM number is displayed. If it says ERROR then the SIM card is not installed or not installed correctly, or has been damaged. Remove power to the controller, check the SIM, and restore power. REMOVING THE SIM WITH POWER TO IT WILL DAMAGE IT!

➢ Go back to the Communications page.

➢ Scroll to the top the page and verify that the Internet Dial-up Connections Details section is present. If not, the modem is not installed properly. Remove power, open the controller, ensure that the modem is seated properly and restore power.

➢ If all else fails, go the Advanced Communications page and click the Download link to obtain the dbglogs file. This is an encrypted file which includes all the details necessary to determine why the connection is failing. You will not be able to open and read this file. Save the file without

opening, renaming, or changing the file type. Email this file to Walchem technical service for them to decrypt and interpret.

Communication Status message sequences for Manual Disconnection and Signal Strength Test

➢ If you have clicked the Manual Internet Connection "Disconnect" button, you will see this sequence, and then the controller will try to connect again within a few minutes:

   a) Manual Logoff
   b) Re-Initializing Modem
   c) Off-Line
   d) Connecting to ISP
   e) ICOD Handshake
   f) Checking for Upgrade (not valid for VCell)
   g) Connection Timeout xxxxx sec

➢ If you click on the Signal Strength Test "Start Test" button, you will see this sequence, and then the controller will try to connect again within 10 minutes:

   a) Manual Logoff
   b) Re-Initializing Modem
   c) Off-Line
   d) Setting Up Antenna (for 10 minutes or until "End Test" button is clicked)
      Test Suggestions:
      • Good Signal
      • Moderate Signal
      • Low Signal – Relocate Antenna
      • Modem or SIM Problem (no signal)
   e) Re-Initializing Modem
   f) Off-Line
   g) Connecting to ISP
   h) ICOD Handshake
   i) Checking for Upgrade (not valid for VCell)
   j) Connection Timeout xxxxx sec