
WALCHEM

GPRS Modem Option



Instruction Manual

W A L C H E M

5 Boynton Road Hopping Brook Park Holliston, MA 01746
508-429-1110 508-429-7433 (fax) www.walchem.com

Notice

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(508) 429-1110
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1.0 Introduction

The GPRS modem option provides remote communications with any USB-style WebMaster or WebAlert controller, using the ShoulderTap method. This permits changing of set points, downloading of data files, emailing of reports, and alarm notification.

The user must obtain an **unlimited data usage** GPRS account from a local cell service provider, receive a SIM card, and install this in the modem. Once the controller is programmed correctly it will connect to our ShoulderTap server using a secure connection over the Internet. This connection will be dropped and restored on a regular basis throughout the day as a further security measure. It will not be connected to the Internet at the same IP address for very long.

When you want to ShoulderTap the controller, simply log onto our ShoulderTap server, identify the controller by its phone number, and you will be instantly connected to the controller. Its unique user name and password are required to enter the controller.

The GPRS cell service is a data only plan. The modem is not capable of answering a phone call, and therefore modem-to-modem communications is not possible as it is with the landline modem option.

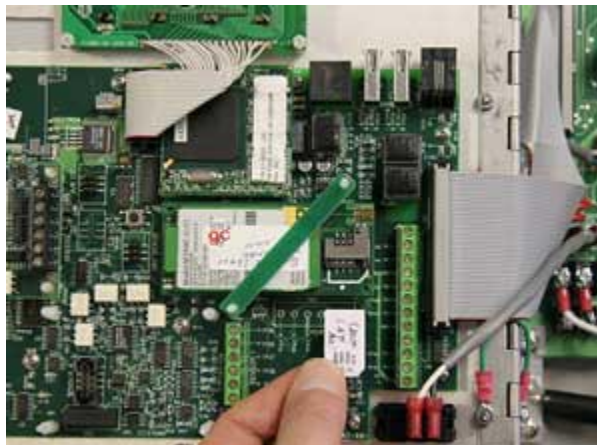
2.0 Installation



CAUTION! There are live circuits inside the controller even when the power switch on the front panel is in the OFF position! The front panel must never be opened before power to the controller is REMOVED!

If your controller is prewired, it is supplied with a 10 foot, 14 AWG power cord with USA style plug and 8 inch, 18 AWG USA style receptacle cords for the powered relay outputs. A tool (#1 Phillips screwdriver) is required to open the front panel.

1. Insert the SIM card into the slot as shown below. The notched corner must be oriented to match the outline silk-screened on the modem



SIM Card Installation

2. Run the coaxial antenna cable into the controller through a watertight strain relief.
3. Thread the antenna cable to the 103357 SMA to FME adapter.
4. Thread the 103356 SMA to MMCX cable to the adapter.
5. Cover all metal parts of these connections with shrink-wrap tubing or electrical tape.
6. Snap the small end of the cable into the connector on the upper right corner of the modem.



Cable Installation

3.0 Programming

This section describes how to set up the controller to communicate using the GPRS cell modem.

When purchasing the unlimited data usage GPRS account, ask for the following information. The chart below shows the required information for a few typical cell service providers:

Provider	User Name	Password	Access Number	Mobile Number	Access Point Name (APN)
T-Mobile	Not Required	Not Required	*99***1#	Ask for it	internet2.voicestream.com
Cingular	isp@cingulargps.com	cingular1	*99***1#	Ask for it	isp.cingular
Vodafone (UK)	web	web	*99***1#	Ask for it	internet
KPN (Netherlands)	Not Required	Not Required	*99#	Not Used	internet

Power up the unit, and connect to it using USB or Ethernet as described in the controller's instruction manual.

Communications Page

In order to ShoulderTap, the following fields need to be completed.

Controller ISP User name

Type the required user name into the text box. If the cell service provider does not require a user name, then type the word "test". The connection will fail if the text box is left blank.

Controller ISP Password

Type the required password into the text box. If the cell service provider does not require a password, then type the word "test". The connection will fail if the text box is left blank.

ISP Primary/Secondary Phone Number

Type the required access number into the text boxes.

Controller Phone Number

Type the mobile number into the text box. Use the pull-down to select the country code. If the cell service provider does not actually assign a mobile number, use the controller's serial number to serve as the unique identifier for the ShoulderTap process.

In order to send email reports and alarms, fill in email addresses to receive the emails and also complete the following fields. Whereas the cell service plan includes Internet access, it does *not* include an email account.

SMTP IP Address

Type the email server's IP address into the text box. Because the controller is not connected to the Internet using the email provider as the ISP, this email server must be an Authenticated server.

Controller Email Address

Type the email address for the controller's email account into the text box.

Send Email Via:

Click the radio button for via Modem.

Click Submit to accept the changes.

Advanced Comms Page**Extra Modem Init String**

The extra modem initialization string is required to prepare the GPRS modem to communicate properly. The commands must be typed exactly as shown without any extra spaces or punctuation! The APN is the last piece of data in quotation marks in the string. Contact your cell service provider for the correct APN

The string must be:

AT+CGDCONT=1,"IP","APN" where "APN" = whatever the cell service provider gives you.

For example, for T-Mobile the string is:

AT+CGDCONT=1,"IP","internet2.voicestream.com"

Secure Tunnel

Pull down arrow to select Tunnel Via Modem.

Gateway Server

Type the server address 146.115.4.198 into the text box.

Gateway Port

Set to 1194

eTap ID#

Leave blank.

ASMTTP User Name

Type the email account user name into the text box.

ASMTTP Password

Type the email account user name into the text box.

Use ASMTTP for Email

Click on the check box to select use of ASMTTP.

Click the Submit button to accept the changes.

NOTE:

Once all changes are made the controller power must be cycled off and back on for the changes to all take place.

4.0 Connecting via ShoulderTap®

After programming, before leaving the site, it is important to verify that the modem is connected to our server and available over the Internet.

Testing the Connection

Connect to the controller via Ethernet or USB, go to the Advanced Comms Page, and look at the ShoulderTap® Internet Connection section, Dial up Connection Status. If it never gets to Connection Timeout in xxxx Sec, but keeps repeatedly trying to connect, then change Secure Tunnel from Tunnel Via Modem to Don't Use Tunnel and click Submit button.

Then check the antenna location by using the Wireless Modem Antenna Setup. Click Start Setup and move the antenna until Suggestion says Good Signal Strength.

Change back to Always Online, click Submit, and cycle power again. Once it reboots, check the Dialup Connection Status again.

Connecting

Once the controller is on line, it can be accessed via ShoulderTap®.

1. From any computer with Internet access, surf to the ShoulderTap® web site:

<http://146.115.4.198/walchem/frontdoor.asp>

2. Enter user name and password: webmaster/2001.

3. At the next screen, enter the mobile number of the controller. If the cell service provider does not use mobile numbers, substitute the serial number. Regardless, the number you enter here must match the number entered into the Controller Phone Number field, including the country code pull-down.

4. Once connected to your controller, enter its unique user name and password as usual at the Authentication Page.

5.0 Troubleshooting

If you are unable to connect to the controller via ShoulderTap® the only recourse is for a person on-site to connect to the controller via Ethernet or USB and look at the diagnostic status messages on the Communications Page.

Can't ShoulderTap® and No Connection in Dialup Status

Possible Causes	Corrective Actions
No connection to cell tower	Check signal strength as described above and move antenna
ISP user name or password empty	Enter a valid user name and password, and if none is required, enter the word TEST
Wrong APN in the Extra Modem Init String	Enter the correct APN for your cell service provider
Wrong ISP phone number	Enter the correct Access Number for your cell service provider
Secure Tunnel not set to Via Modem	Set to Tunnel Via Modem
Controller not restarted after making programming changes	Cycle power to the controller
SIM card is not activated	Activate SIM card through the cell service provider
Cell account is not a GPRS data-only plan	Obtain a SIM card with the correct type of account

Can't ShoulderTap® but Connection in Dialup Status to 10.series IP Address

Possible Causes	Corrective Actions
Wrong Gateway Server	Set to 146.115.4.198
Wrong Gateway Port	Set to 1194
ShoulderTap® server problem	Contact the factory

Can't ShoulderTap® but Connection in Dialup Status to 169.series IP Address

Possible Causes	Corrective Actions
Entering wrong controller phone number	Check accuracy of phone number
ShoulderTap® server problem	Contact the factory

Not Sending Email (but ShoulderTap® is OK)

Possible Causes	Corrective Actions
Wrong SMTP IP address	Check with your email service provider
SMTP IP address is not for an ASMTTP server	Check with your email service provider
Use ASMTTP is not checked	Check the box.
ASMTTP user name or password is incorrect	Enter a valid user name and password
No email account	Set up an email account
Controller email address is empty or incorrect	Enter a valid email address
Send Email Via is set to Ethernet	Set to Modem
Email address to send to is empty or incorrect	Enter a valid email address
Email server problem	Check with your email service provider