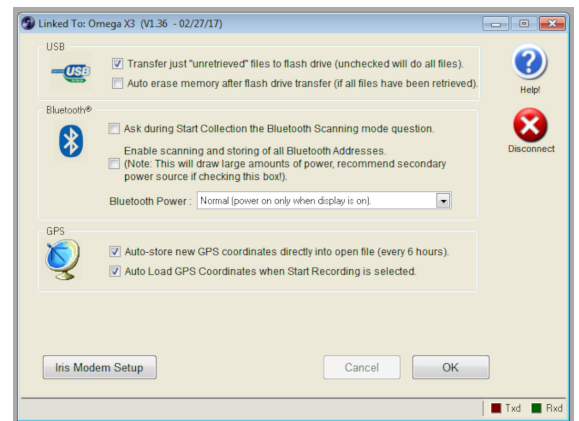


2.6 – Texting (SMS) with the Omega X3

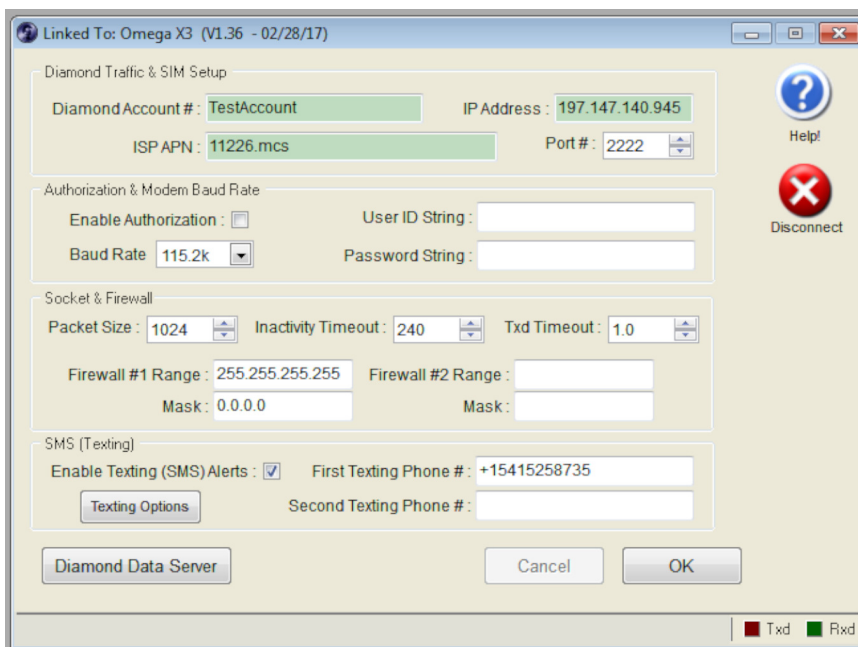
Starting with firmware V1.36, the Omega X3 now supports directly sending text messages (aka “SMS” for Short Message Service) from the counter to users in a variety of situations. This feature makes the detection of potential data collecting problems much faster because the counter can alert the field operator via text message if it stops getting inputs (as when a road tube comes up or loose from the case), the battery is low, or under other situations. Prior to this function, most users would only become aware of a problem after they returned to pick up the counter to find that they did not get their full data set because a tube came loose an hour after they left.

To be able to use texting (SMS), customers must (a) have firmware version 1.36 or later inside the Omega X3, (b) have an Omega X3 with an Iris Modem built in, (c) have an active SIM card installed in the Iris Modem, and (d) be using Centurion V1.43 Build #0006 or later to program the texting options. Once these conditions have been met, follow the instructions below to setup your counter for texting:

1. Connect an Omega X3 to your computer either by a USB cable or through Bluetooth.
2. Run Centurion V1.43 Build #0006 or later and link to the Omega X3.
3. If you have the Omega X3 “simple interface” enabled, click on the “Advanced Interface” option.
4. Once the main link screen appears, click **Settings** and then click **Advanced**. You will see a screen like the one shown here:



5. At the bottom left of the screen the button **Iris Modem Setup** appears (if your Omega X3 has an Iris Modem installed). Click it to display this screen:

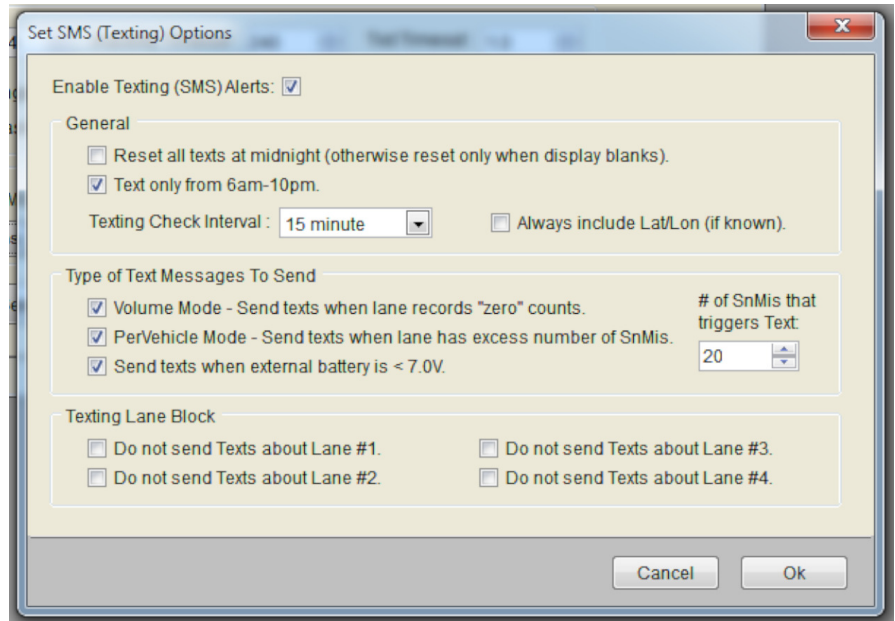


The bottom group box sets the general enable for Texting as well as the phone numbers you want to send alerts to when a problem is detected.

You can specify one number or two, and any message will be sent to both. NOTE: The phone number should always be in the international format which starts with a plus symbol followed by a “1” (for the U.S.) and then the area code and number.

Check the “Enable Texting” box, type in the phone number(s), and then click the **Texting Options** button.

6. The Texting Options for the Omega X3 will appear similar to this screen:



These options are defined as follows:

Option	Explanation
Enable Texting (SMS) Alerts	Exactly like the option on the previous screen - Check this box to enable the Texting function, uncheck it to disable all Texting.
Reset all texts at midnight	Normally, the counter will only send a text message about a particular problem once. For example, if it detects zero count in Lane #3 it will only send one text message about it and then will not report it again (even if the Lane keeps seeing zero counts) until the user physically wakes the counter up (by pressing the Enter key when the screen is blank) and then puts it back to sleep (by pressing the Clear key when screen is on). However, if this box is checked then all detected issues are reset at midnight. If the problem is seen again, the Omega X3 will resend a new Text about it. This repeats each day until the issue is resolved.
Text only from 6am-10pm	If checked, this forces the counter to only send Text messages during the hours of 6am to 10pm. It will still detect problems that occur at other times, but will hold the message and not send it until 6am the next morning.
Texting Check Interval	All problems are determined on an interval basis. For example, if you are collecting PerVehicle data, have set the interval to 15 minutes, and have checked "PerVehicle Mode – Send texts when lane has excess SnMis", then a problem will be detected when the number of SnMis for any lane is greater than or equal to the "# of SnMis that trigger Text" during the last 15 minutes. Texting Check Interval also determines how frequently the battery voltage is checked and how often zero counts check are done. See below for more details.
Always include Lat/Lon	Text messages use the following format: OX3 "<site>": <message> Where <site> is the current Site ID and <message> is a report of the exact problem found. It is expected users can identify the specific counter that sent the message by the Site ID. If this option is checked, then the counter will send instead: OX3 "<site>" (latitude, longitude): <message> The latitude and longitude will be added in to make it easier to find the counter that sent the message. Note that the latitude and longitude are only added in if they have been determined either during the initial Start Recording setup or at one of the periodic 6 hour GPS checks (if enabled). If the latitude and longitude have not been determined at the time of sending the text message, then they aren't included even if this option is checked.
Volume Mode – Send texts when lane records zero counts	If collecting Volume (Count) data, then checking this box enables the <i>Check for zero counts on a lane</i> . Zero counts usually indicates a road tube has come loose from the road or disconnected from the case. The rules for determining zero counts are as follows: <ol style="list-style-type: none"> 1. Total count for each lane is monitored for "Texting Check Interval" length of time. 2. If the total count exceeds 10, then the zero count monitor for the lane is armed. If a lane never gets to at least 10 counts, then it will won't be monitored (this is to make sure that the system doesn't report on lanes that are not really connected). 3. Once armed, if a lane goes through <u>two</u> Texting Check Interval periods in a row with zero count, then an alert message will be sent. For example, Lane #2 gets 100 counts in the first 15 minute period, then 0 counts for the next two 15 minute periods (30 minutes total). At that point, a text message will be sent.

<p>PerVehicle Mode – Send texts when lane has excess SnMis</p>	<p>If collecting PerVehicle (Raw) data, then checking this box enables the <i>Check for high number of SnMis on a lane</i>. The number of SnMis to trigger an alert is specified in “# of SnMis that trigger Text”, and can be set from 10 to 265 which must occur in a single Texting Check Interval. For example, if Lane #1 had 42 SnMis #1’s in a 15 minute period (likely indicating the second tube has come loose from the road or disconnected from the input), and you had the “# of SnMis that trigger Text” set to 20, then the counter would send out an alert about this problem.</p>
<p>Send texts when external battery is < 7.0V</p>	<p>If checked, the Omega X3 will read the external battery voltage and will send out an alert if it ever drops below 7.0V. Included in the alert is the current battery voltage reading. Checking the external voltage also causes the internal voltage to be checked, and a text message will be sent if the internal voltage drops below 3.20V. NOTE: If the external battery drops below 7.0V, then the counter will be unlikely to be able to upload data to the Diamond Data Server or to send further texts for very much longer. It is strongly recommended that the batteries be replaced as soon as possible.</p>
<p># of SnMis that trigger Text</p>	<p>Used with the “PerVehicle Mode – Send texts when lane has excess SnMis”, this value defines the number of SnMis a lane has to have during a single Texting Check Interval to trigger sending a text message.</p>
<p>Don not Send Texts about Lane #1 - 4</p>	<p>Each of these boxes allows you to individually Texting about a particular lane. For example, checking the Lane #2 box would block sending any text messages that are detected for conditions applying to Lane #2. Most users will not need this feature, but it is included for those situations where you have very unusual traffic in one particular lane and don’t want to get unnecessary alerts for that lane while keeping alerts active for the other lanes.</p>

7. Click Ok when done, and keep clicking Ok until you return to the main link screen.
8. From this point on, the Texting function will be active when:
 - You are collecting/recording data.
 - You have 8 D-Cell batteries installed in battery pack.
 - One of the following conditions is true:
 - The screen is blank. Texting is normally disabled when the screen is on because the counter assumes you are physically present at the site. Press <Clear> until the screen blanks after you start recording to reset and enable the Texting system.
 - You are in “Listen” mode. Texting can still be sent if the counter is in the Iris Modem listen mode where the counter is actively connected to the internet and can be connected to via an IP address and port number.

NOTE: Cellular service plans available from Diamond have a daily limit of 5 text messages, and a monthly limit of 100. This is more than enough for most users. However, if you find you need more capability then please contact Diamond for an upgraded plan that allows a greater number of text messages for the counter.