MarineNet Radio NetWorks

SATELLITE SERVICE Installation

This guide is for Globalstar/Iridium/Generic wireless service setup on MarineNet NetWoks.

Introduction of services

MarineNet has been continuously seeking out solid improvements in wireless communication technology then applying this to real world applications so customers benefit in reliable, less learning curve oriented services. This is the driving force behind the MarineNet Radio Wireless E-mail Client and Wireless Gateway package. Our combination of wireless Client/Server service, gives the satellite customer a consistent 70% to 120% improvement in E-Mail speed over other e-mail programs like Outlook Express and others...

Where do I get the license codes?

Codes and account names are acquired from service providers MarineNet Radio, Kiel Radio or one of our agents. Satellite only customers will need only our Calypso Wireless Client key. When you setup the software, you enter these codes to activate it to full version so get them before installation and have them in front of you read through this setup procedure.

What needs installing?

1. **Calypso Wireless E-mail program. Select the pre-configured mailbox for Globalstar, Iridium or HF E-Mail that already has important settings done for you that will appear on your Desktop. Have the following information with you during install:**

   o Calypso Key

   o User Name (Specified by Service Provider)

   o User Password (Specified by Service Provider)

2. **Calypso Wireless license key. To activate fast mail function and license this software.**

3. **If you are a Globalstar customer, and have not installed the Globalstar Packet Modem Driver, do so before proceeding. Handles computer dial-up modem connection and settings for your phone.**

4. **For Iridium Customers, install the Apollo software before proceeding and ''Test" the connection using that package first.. Then run Calypso..**

Satellite Modem Setup

You may already have the satellite phone setup for e-mail... If so skip this step. Consult the manufacture for specific details depending on which satellite system you have on how-to install the modem software. Your Satellite system may already have the modem built into the phone so it a matter of pointing Calypso E-mail to your computers "Dial-up Account". If you are a Globalstar customer and have not installed the modem driver program in your computer then read on! The "Packet Modem Driver" will assist you in adding the correct values to "dial" the satellite network. The modem is activated as soon as you plug in the data cable on the bottom of the phone or set the phone into the "Marine Kit" and start data. Once this is done, proceed with adding Calypso Wireless Client for fastest Internet wireless e-mail service!

Calypso Wireless E-Mail Client Program

"Wireless e-mail" no matter what the platform, **Satellite or Cellular/GSM**, suffers from one key problem.... very narrow radio channels with a result of slower than "wired" e-mail speeds. The narrower the channel, the slower the thru-put (Data). Over the years, many ways of dealing with this problem were developed...some good and some not so good. This e-mail program takes advantage of high level on-the-fly compression/de-compression that shrinks the amount of data passing across the wireless connection, thereby reducing the per minute time on the satellite.

The Calypso program is quite versatile and has the most desirable features of better known programs like Outlook Express and Eudora however, it is "Lean" in it's e-mail handling. Calypso is certainly worth sitting down with the "help" file and examining features that work for you after you get the basic program installed. Here are some items that you need to be very aware of when using *any type* of e-mail to the Internet:

1. **Do not send HTML e-mail** through wireless systems due to the enormous amount of time they take in sending and receiving. NOTE: MarineNet "Pre-configured" Mailboxes that are setup for Globalstar/Satellite and SSB E-Mail are set to not send HTML so messages move quickly.

2. **JPEG and GIFF (Pictures)** Due to file sizes around 60 to 100Kbd for a picture, expect much longer connect times due to these modes will not compress much. Items such as word documents, Zip files, Doc's notes and such do fine. If you need to send pictures back home...try to keep them small. Remember...you are trying to squeeze as much mileage out of very tight wireless bandwidth!

3. **Auto responders are a no-no,** as they tend to meet up and tangle with other auto responders that create a loop effect. You could have 200 e-mail responses to your single message saying they received your ONE message!

4. **Don't be overwhelmed** by the versatility of this program... many functions that you don't need or use have been turned off to improve performance. One very important thing is not to _under any circumstances_ change the setting specifically detailed below as this would constitute a breach of service and may cripple your system performance requiring us to suspend your account until the problem is resolved! _If in doubt, ask us first_ before you change anything.

5. If you need **technical support or a question for Calypso Wireless** e-mail, contact MarineNet Radio e-mail at **calypso@marinenet.net** or call 561-747-5686 and ask for Calypso help.

Beginning Calypso Setup

After clicking the Calypso install shield button at the bottom of this section, you will be asked the following questions:

1. "Type your **Name** and **Company**" Put your name and vessel name here if you wish.

2. The "**Destination Folder**" Click next. Use the default.

3. With the installation just about completed, you can view the "readme" file or "**open**" Calypso. Select start Calypso...

4. As the program opens, locate "**Browse for a Mailbox**" button. Click on that and choose **Globalstar Or Iridium E-mailbox**. NOTE: Once you have setup one of the pre-configured mailboxes, you may go back at a later date and setup the other mailbox from the desktop icon if you are also a Marine SSB E-mail customer. Iridium Mailbox should ONLY be used for Iridium Satellite customers. All other wireless systems should use the versatile Globalstar Icon.

5. Close the "**Tip of the day**" and click on "**Mailbox**" in the top left toolbar menu and select "**Accounts**" from the dropdown menu then go over and down and click on "**Properties**" to either mailbox you had selected... **"GlobalStar Mail"** for all satellite accounts.

Account Settings

Here is where you enter in your MarineNet Radio account information. Goto "**Mailbox**" located in the toolbar (Top left screen). Down to "**Accounts**" and then over and down to "**Properties**" for the mailbox name "**Globalstar/Any satellite**" and click on it. Remember to have the account name and password information you requested from MarineNet Radio handy.

1. The first tab "**Account Status**" Enter the "**E-mail address**" to your address **using lower case letters and no spaces**. Remember, this address is assigned to you by the service provider such, as your "**accountname@mailmarinenet.net**" is the norm. Example is wxy1234@mailmarinenet.net or johndoe@mailmarinenet.net.

2. In "**Real Name"** which appears in the "From" field in all sent e-mail from you. Leave the "**Reply-to address**" blank.

3. Goto the **Mail Server** tab and information such as, mail servers names are pre-set except for "**User ID" using lower case letters and no spaces** for example, type in your user name. Example, **waxy1234 or johndoe without the @mailmarinenet.net**.

4. Now click on the **"Password**" button, located midway down on the right and enter the password assigned to you by your service provider. **NOTE:** For first time password entries, only fill out the two lower boxes... do not fill in the top box... just the two lower ones only.

5 The above items are the only items that should be changed or set in this section. **Click OK**. This completes changes under account "**Properties**" settings. Make no other changes at this time.

Properties Settings

These settings are changed by again going to "**Mailbox**" in the toolbar (Top left screen) and select "**Properties**" in the drop down menu. We will only address areas that require some changes.

1. The first tab, "**Mailbox Status**" has been set however; you should make sure that the proper mailbox is showing as your default mailbox. If not, select it from the dropdown box at "**Select your default mailbox**".

2. **(GLOBALSTAR AND ALL OTHERS)** "**Online/Offline**" tab is **VERY** important and most of it has been pre-set... and must **not** be changed: **"Online"**, "**Connect with a modem"** and **"Always disconnect after communication" must remain as they are.** Example, you should have already installed the "**Globalstar Packet Modem or other Sat service**" software so with "**Online/Offline**", you simply select to which dial-up account you wish to use by selecting it with the "**Default Dial-up**" dropdown menu. This acts like a switch between what Calypso will use to get an Internet e-mail connection. Example: "**Globalstar Packet Modem**" is a "**Dial-up Property**" want to use and should be shown in the window.

   (IRIDIUM AND "LAN" SERIVCE) You should have already installed the "**Apollo emulator**" software for Iridium. The "**Online/Offline**" tab is **VERY** important and most of it has been pre-set... and must **not** be changed: However, as the default when selecting Iridium, Calypso is set to run on the emulated "local Area Network" or **LAN** that allows you to connect to the gateway directly and **not** use a optional "Dial-up" connection. It is strongly recommended that customers use the Iridium Gateway, as this will provide the fastest connection possible. If you wish to connect to a "Dial-up" type connection then select "Connect using a modem" and proceed on... Selections like **"Online"**, "**Connect with a modem"** and **"Always disconnect after communication" must remain as they are.** Example, with "**Online/Offline**" tab, you simply select which dial-up account you wish to use. Click the button "**Settings**" and then "**Default Dial-up**" dropdown menu. This acts like a toggle switch between what Calypso will use to get an Internet e-mail connection. Example: "**Iridium Dial-up**" is a "**Dial-up Property**" you want to use and should be visible in the window.

3. The "**Account**" (**Button**) in "**Online/Offline**" tells the GateWay server who you are (example: **User Name: johndoe** and what you password is **Password: 1234**) so make sure your account information in here and correct! **Use lower case letters only with no spaces between letters and numbers!** Note: The password box appears to be "grayed out" click "**Save Password**" box first and then enter your password.

Click "**OK**" and at this point the program is now functional with the exception of the high-speed wireless key. Please remember that the pre-configured mailboxes have been designed for best functionality and service. These standard functions **must not be changed** as it would more than likely stop working or, cause trouble. If you have any question about possible changes that you would like to try, contact us at **service@marinenet.net** before attempting any changes!

Turn on Wireless Option

The best part of Calypso's ability to compress messages for fast sending and receiving through the MarineNet Radio Gateway Server! Here's how to turn on this function...

1. At this time you should have **Calypso's wireless license code** numbers with you and, the program currently running on the screen. Locate "**Help**" in the upper Toolbar section, click "**About Calypso**" and then "**Change Activation Code**" enter the two line "**Register Calypso**" code that was assigned to you. Click **OK** and Calypso is now registered for Wireless!

2. Once the code is entered... Click on "**Mailbox**" and then "**Properties**" in the dropdown menu, and locate the tab called "**Wireless**" and click on it. Here you should "**Enable Wireless Mode**" click on it.

3. "**Wireless Gateway:**" is **mailmarinenet.net** and the "**Port:**" is **23** should be showing.... click **OK**. This completes turning Calypso into a fast wireless enabled e-mail program that can be used for **satellite e-mail, Most land based POP-3 e-mail ISP's, SSB radio e-mail connections!**

Other Calypso Settings

This example will give you the look and feel of Outlook Express, as this is my personal preference. Start by selecting "Windows" down to "Toolbar" and over to and click on "Large with Text". This will increase the size of the buttons and add names to them. Next select "Windows" again and go down to "Window Layout" and select the second layout at the top and click OK. Click the button "Compose" (Far left) and again select "Windows" and again goto "Toolbar" and select "Large with text" then exit out of that window. Below are other items you should be aware of...

1. "**Signatures**" Should be used to create a small "Footnote" briefly explaining that you are on a Satellite service and to keep messages short! Here is an example... Please keep messages brief as we are billed by the minute! Don't send jokes, e-mails with 100 addresses on them, or large attachments unless you have cleared it with me. Use "Plain Text Mode" and not "HTML" e-mail messages. Ask your service provider how. Thank You! Something like this can be used but best to keep them as short as possible. Goto "**Mailbox** / "**Accounts**" / "**Properties**" / "**Globalstar**" and to the tab "**Signature**" / "**Compose**" / Give it a "**Name**" and write one... When finished, click "Save" and remember to check the "Attach signature to outgoing mail" box and your done! Look in help file for more information on this.

2. **Turn off _ALL_ Antivirus Automatic update programs** while in the field. This option robs allot of satellite connect time!!! Update your Antivirus when you're at home and not during remote field operations.

<u>Other Calypso Settings</u> _(Cont.)

3. **Never open attachments unless you are VERY sure of its contents!!!** Even if you know the sender well!!! If there is the slightest bit of doubt, contact the sender before opening the attachment to verify they meant to send one. If a "Sender" has been infected by a virus, typically a virus will e-mail itself to all in the senders address book entries. Calypso's address book is encrypted so if you catch a virus it will not spread via your e-mail to others. Never open files with .exe or .scr at the end, as this is typical for virus type e-mail. Remember that you are not using a "wired" connection so repairing virus damage while out mobile is terribly difficult! When you get back home with a high-speed connection, update your Antivirus program then!

4. "**Auto-responders**" <u>Must not be used</u> as was touched on earlier due to the problems they can cause an automated e-mail system.

5. "**Filters**" Tab can be useful and customers should consult the help file before use. In future use of filters, MarineNet radio will send notifications of weather, service notes etc via e-mail with specific titles in the Subject line that can be used to play a sound denoting their arrival for example.

6. "**Windows**" selection located in the toolbar, allows you to customize the appearance of how mail is displayed. Example, Select "**Window**" and then "**Toolbar**" then select "**Large w/ Text**" and notice how the toolbar buttons get larger and now have text in them. You can do the same thing to the "**Compose Message**" window by clicking on "**Compose**" and then "**Windows**" and change it also to "**Large w/ Text**". For arranging how mail is displayed... Select "**Windows**" again and down to "**Window Layout**". Here you can select how the windowpanes layout on Calypso. I am comfortable with Outlook Express so I use the second window layout. Click OK and your done.

7. "**Customize Toolbar**" button, allows you to add or remove buttons that you don't plan to use on the toolbar. Refer to the **"Help"** file in Calypso for more information.

Locate and download Calypso program now.

Wrapping It Up!

This concludes the setup of your account information and at this point should be able to connect to your service providers by clicking the red **Check Mail** mark button. You will note at the bottom of the screen a window that will show the status of the connect. You will notice your system will begin respond as it tries to call the service provider. If after a number of attempts there is no connect, please refer to the troubleshooter's section and note the trouble in the "**Details"** box. Here is a brief description of the folders:

1. Address book: View entries

2. Auto-Responder: Not used

3. Filter: Refer to Calypso "Help" file.

4. Pending: Once messages are ready for sending, they are stored here.

5. Received: View incoming messages here.

6. Search results: Refer to Calypso "Help" file.

7. Sent Mail: Once a message is sent successfully, it is stored here.

8. Signature: Handy item for creating footnote message telling sender to keep messages short!

9. Wastebasket: Deleted messages are here. Clean out once a week!

To create a message, simply click on the yellow pencil button and the "Compose" window will appear. Create your message and hit "Send". If Calypso has not seen "To: address before, you will be prompted to save the address and then your message will be stored in the "Pending" folder.

If a connect problem occurs and no mail goes out, double check the "Pending" folder and make sure a red "X" is not at the head of the message line. This tells you Calypso will not send the message again until the connect trouble is fixed. To re-cue the message, double click the message and click "Send" again and the yellow Icon with show. Attempt the satellite connection again.

How can I switch from one wireless e-mail provider to another? Or, in the same mailbox?

   MarineNet Radio's Wireless Mail package gives you separate mailboxes for SSB E-Mail or Satellite e-mail... so by simply selecting the desktop Icon and filling out the account information and where to get a connection in each mailbox, allows independent e-mail services. By utilizing the different dial-up account settings, Calypso will allow you to use a single e-mailbox on not just one service but <u>anywhere</u> you require fast e-mail to be sent or received! Example: If switching from Globalstar e-mail to MarineNet WKS Radio or a telephone landline connection, just make sure the appropriate information is in **"dial-up box"** and select it by following these steps... Goto "**Mailbox**" located in the upper left hand part of the screen and select "**Properties**" then the tab "**Online/Offline**" and goto "**Settings**" and choose from the drop-down menu, any different dial-up connection. It is a matter of telling Calypso which dial-up connection you wish to use. Remember that each connection has it's own unique information and one will not work with the other so know where you are telling the program to get a connection!

How do I get weather info?

   There are a number of other possibilities that are being explored and developed relating to fast accurate weather information via e-mail or web to you in the form of text and weather maps. More information will be available on our web site www.marinenet.net as it develops. Currently we are developing a web site, www.mailmarinenet.net that attempts to bring together many NWS text and maps available in one location that is specifically developed for wireless web users. For professional weather services via Satellite, Contact "Ocens" Ocean and Coastal Environmental Sensing, Inc. http://www.ocens.com or call

Phone (toll-free US) 800.746.1462
Phone (toll) 206.878.8270
Fax 206.878.8314

Can I surf the net with this system?

   Well Yes and No. Understand that MarineNet primarily deals in High-speed **e-mail** and web services providing the fastest way to move it around the world. This information will help you understand options available to you... What you can do "wireless" depends on the service... As was stated earlier, Due to the <u>VERY</u> narrow bandwidths of some systems, it would take many hours to download any useful information to your location... It is simply not practical. For **Satellite** services such as our GlobalStar SatPhone offering, it becomes more practical as this system is designed for higher speed access. MarineNet Radio NetWorks is developing "Low bandwidth" web sites for weather and other information that will load **much** faster than for example, web sites that have many graphic applications running in it that require _**TIME**_ to download. MarineNet Radio NetWorks also has developed Web Compression for Wireless that speed up web access up to 70% depending on content.

<u>Troubleshooting Guide</u>
SATELLITE SERVICE

<u>The system can be broken down into the following parts</u>

1. **Satellite System**

2. **Calypso E-mail Client Program**

<u>Satellite System</u>

One of the largest sources of headaches for a service provider is a new Satellite system aboard a vessel that has not positioned the satellite antenna properly in hand-held mode. This one item will make the difference whether you will have a pleasant experience or curse the day you bought it! With customers that have installed the "Marine Kit" this is not an issue most of the time however, it is still important to understand that with **any** satellite service, a clear unobstructed view of the heavens is critical to performance! If you have not attempted to install one, you may be better off having it done professionally by a marine electronics shop that specializes in Satellite or installations or, goto our web site for solid reliable information about this topic. We have a consultation service for you by phone or Email if an installation shop is not available or, direct you to one.

Problem	Indications	Things to check
The hand held phone act's like it's working but no connection to the provider	Battery shows good and that it's trying to connect but the signal level bargraph bounces up and down.	1. Make sure you have a clear view of the sky. Satellites may be low on the horizon at that time. 2. If phone has been in standby for a long time, battery maybe iffy and need charging. 3. Check if water is in the data connector. If yes, remove the battery and flush connectors with alcohol!
I have the Marine Kit for my phone... My GPS goes nuts when I make a call or send an e-mail!!!	When the satellite phone is in use "Connected" as a phone or e-mail, autopilot or Nav. computer says no GPS.	Experience has shown with the "Marine Kit" that mounting one marine satellite device next to another is not a good idea. A GPS signal are very weak and doesn't take much to mess with them however, mounting the GPS and SatPhone antennas more than 4 feet apart should clear up any interaction between them. VHF and SSB antennas are not a factor due to frequencies so far apart and small physical cross section. If possible, Ground the antenna cables to the SatPhone in near a SSB antenna to reduce large antenna currents on satellite coax.

Calypso Client Wireless E-Mail program

The MarineNet Calypso E-Mail program is quite versatile and has a number of ways to check for correct information of: user name, user password, SMTP and POP server names, Wireless Mode, Gateway Domain Name, Port Assignment. There is an extensive "Help" menu built in this program. It is strongly recommended that the "Pre-configured" mailboxes be used as the versatility of this client program is great however has functions that need to be turned off due to use as a SSB E-Mail client program.

Problem	Indications	Things to check
All correct info seems to be there but connect error keeps happening	In the bottom of Calypso window, look for the button **Details** in the bottom of your screen just to the left of the small screen: Click on it and see what kind of error it shows. "Error 650 no connection" "Error 629" Disconnect From Remote Server	Note error in "Details:" and refer to the "Help" section. Typical problem is wrong "**Dial-up**" connection used. Goto: "**Mailbox**" then "Properties" then "**Online/Offline** and click "**Settings**" button and check which **"Default dial-up"** you are trying to use. Is the correct "Account" information in there?
I get connected but suddenly disconnect	Looks like it connected and the program worked but not sure!	1. Check the "**Details**" box in Calypso and see if it failed or was successful. Trouble is with this program is it so fast that it can sometimes leave you wondering if it really worked. 2. Check "Pending" folder to see if the message landed in there. If yes, check the addressing and click send. If no, check the "Sent" folder and verify it went out.
Took a very long/short time to connect and disconnect and did not get mail. Says "Error See previous details" in the "Details" box.	Look in the "Details" box and get more details. What kind of error?	1. Wireless .dll caused by not having to "Wireless function turned on. (See Below) Authentication Error caused by a missing password entry. (See Below) 2. Syntax error caused by bad or missing "Account Name" (Go over Calypso installation info again) 3. WINSOCK Error: Connection to socket failed. Make sure mailmarinenet.net is the server names for in and outbound mail. (See below) 4. Mail server responded: ' invalid usercode or password, please try again' caused by a bad or missing password. (See below)

| Still not connecting How do I check the locations of the possible problem? | Still getting errors showing in the details box. | 1. Spaces between letters and numbers in the call letters are a no no. (All lower case and no spaces)

2. Upper case info. (Must be all lower case except for the above license codes)

3. In Calypso, miss checking the "Account" info found in the "Mailbox" then "Properties" and check the tab "Online/Offline" to the button "Accounts" and make sure that the "User Name" and "Password" is right and in lower case. There is a trick to have it "Save the Password"... Click "Save Password" box first and then type in the password itself.

4. Make sure the "Wireless Enabled" is turned on as you must click the check box under the tab "Wireless" that is also found in "Properties" when done, click OK.

5. Go back up to "Mailbox" and this time goto "Accounts" and down and over to "Properties" and over again to GlobalStar/Iridium Mail and click on that. Double check the following:

   o The e-mail address is your call in lower case@mailmarinenet.net

   o Goto the "Mail Server" tab and make sure the "User Name" is in there and the "Server Name" for both the "Incoming" and "Outgoing" are the same mailmarinenet.net

   o In the "Mail Server" tab, click the "Password" button halfway down on the right and type in your password in the two lower boxes. If it throws a fit then try putting the password in all three boxes. It should tell you to check the account information and that is OK.

Click the red check mail icon and see what happens. Also note that down in the "Details" window all information will be noted so you can click the box "Details" and it will give you the good or bad news. |

Disclaimer

MarineNet Data Systems, Inc. has provided this CD for the specific use of our customers in order to setup service with MarineNet Radio and affiliate network stations. Some programs contained on this CD are simply for the convenience of our customers and any issues of installation, performance or use, is between the manufacturer or creator of that program and the customer. Questions related to software other than the: MarineNet Installer, MarineNet launcher, MarineNet Calypso, must be directed to the software company who created the program.

In Closing

It is my hope that you have found the information necessary to get up and running on this new and exciting service, that is just the beginning of possibilities for the marine wireless public. If you have questions or comments, please send them to: **service@marinenet.net** or call 561-747-5686. Please have license and equipment information available when you contact us. All the best and enjoy! John Heron, President MarineNet Radio. www.marinenet.net