

**DSCdecoder To Google Map**

**DSC2GM**

**Reference Manual**

DSC2GM - Version 4.1 – October 26, 2008  
By: W. Curt Deegan

## Table of Contents

---

PURPOSE.....	4
INTRODUCTION.....	4
USER INTERFACE OVERVIEW.....	6
Map Box:.....	6
Legend Box:.....	7
Functional Area:.....	7
Control Area:.....	8
Legend Area:.....	9
OPERATIONAL MODES.....	10
Check Mode Operation:.....	10
Tracking Mode Operation:.....	10
Map Display:.....	11
Check Mode Scenario:.....	12
Tracking Mode Scenario:.....	13
USAGE NOTES.....	14
Map Display:.....	14
Ship Received List:.....	15
Information Window Display:.....	15
Running:.....	16
Restarting:.....	16
Log Files:.....	17
DISPLAY MODES.....	19
Ship Information Display Mode:.....	19
Range & Bearing Display Mode:.....	20
Ship Track Display Mode:.....	21
Route Planning Display Mode:.....	21
Distance & Heading Display Mode:.....	22
Display Mode Controls:.....	23
Map Controls:.....	24
ADVANCED USAGE NOTES.....	25
Start-Up Commands:.....	25
DSC Status Utility Program:.....	26
Synchronizing Tracking Mode Web Map With Data Preparation:.....	26
Starting After An Abnormal Shut-Down:.....	27
INSTALLATION.....	28
Setting User Definitions:.....	30
DEBUG MODE FOR REGIONAL SETTINGS & TIME ZONES.....	33
Decimal Points:.....	33
Setting Debug Options:.....	34
Time Zones:.....	35
INSTALLING AND USING DSC2GM ON THE WEB.....	36
Installation:.....	36
Operation:.....	39
OVERLAYS AND ALTERNATE DATA SOURCES.....	40
Overlays:.....	40
Alternate Data Sources:.....	41

<a href="#">DISTRIBUTION PACKAGE CONTENTS &amp; UNPACKING.....</a>	<a href="#">43</a>
<a href="#">CHANGES, UPDATES AND FIXES.....</a>	<a href="#">44</a>
<a href="#">DISCLAIMERS.....</a>	<a href="#">46</a>

# DSCdecoder To Google Map

## PURPOSE

---

The purpose of **DSCdecoder To Google Map (DSC2GM)** is to display on a Google Map and provide interaction with the ship position reports received from Digital Selective Calling (**DSC**) using the COAA **DSCdecoder**© program and appropriate MF, HF, or VHF receiving equipment.

## INTRODUCTION

---

Some of the messages received from the DSC service contain position reports from ships. DSC2GM obtains the geographic coordinates contained in those messages from the DSCdecoder (**DSCd**) program and processes them for display on a Google Map based display.

DSCdecoder version 4.2 and later includes a program interface – called *OLE/COM* – which allows DSC2GM to retrieve information decoded by DSCd and use that to prepare the map display.

DSC2GM uses a standard web browser such as Mozilla Firefox, Opera, Microsoft Internet Explorer, or other browsers with similar capabilities. With the browser a graphic representation of ship positions is presented along with certain information about each ship. Such information as ship MMSI number, name, call sign, location coordinates, country of registry, and time of last report are shown when available for each ship position plotted.

The facilities of Google Maps allow moving the map area around to the positions of ships and zooming in to see the map annotations describing the location of each ship, or zooming out to see larger regions containing several ships.

In addition to plotting the current ship positions, which is an *operational mode* called **Check Mode**, DSC2GM can also operate in **Tracking Mode** and plot a sequence of position reports for each ship. Each plotted point for each ship can be clicked to view the details of that position.

A log file is created each time DSC2GM runs, containing all the unique position reports plotted during that session.

DSC2GM can be used locally or in a web based arrangement to display current ship positions. Off-line facilities are also provided for viewing past session logs.

In addition to displaying the DSC received ships positions and associated information in what is called **Ship Information** display mode, DSC2GM can also be used to produce information in four other *display modes*.

In **Range & Bearing** display mode, DSC2GM can compute R&B either to ships, to locations selected on the map with mouse clicks, from manually entered geographic coordinates, or any combination of these entry methods.

The **Ship Track** display mode produces a connected track-line showing all of the recorded positions collected for a selected ship when DSC2GM has been running in the operational Tracking Mode. Each ship position includes the details for that position. In this display mode, when a ship current or track position is clicked on, a table of positional data for each tracking point is created and displayed below the map. Entries in the table can be clicked to show that position on the map.

Useful for various purposes, the **Route Planning** display mode allows creating a sequence of connected route legs. The coordinates of each of the points along the route can be displayed by passing the mouse pointer over the markers. The length of each route leg and the forward and reverse directions from each, are presented in a table which is created in this display mode and appears below the map and user input area. Entries in the table can be clicked to show that position on the map.

Both a Ship Track table and a Route Planning table can be displayed at the same time.

An alternative to Route Planning is **Distance & Heading** display mode. Producing the same results, this mode allows entry of a distance and heading from which DSC2GM computes the coordinates of the next point along a route. This display mode is specifically included for producing rescue search patterns where given the current position of a search vessel and the distance and heading of the next search leg, the coordinates will be computed for the vessel to set in their navigational equipment.

Route Planning and Distance & Heading display modes can be used together to define a single route.

## USER INTERFACE OVERVIEW

---

As an introduction, the visual components of DSC2GM are briefly described as a way of establishing some of the terminology which will be used in the remainder of this document.

### Map Box:

---



The Map Box is a typical Google Map type display but with some changes and additions.

In the upper left corner are the standard GM pan controls. Directly below them is the zoom control. Against the far left edge of the map in this same area are two special buttons for zooming with a selection box. Click the white button and drag a selection box around the area into which you wish to zoom. The brown button undoes the previous such zoom operations.

In the upper right corner is a drop-down selection box from which the type of map can be selected. Hybrid is shown here but Map, Satellite, or Terrain can instead be chosen.

The lower left area of the map includes a status box which will show the current coordinates of the mouse pointer when it is positioned over the map. If operations have been performed that produce range & bearing data between two points, that information will also be displayed. The current units of measure are used for all these.

In the lower right corner is the standard GM pan/zoom control mini-map.

## Legend Box:

The screenshot shows a software interface for a navigation system. At the top, there are input fields for Latitude (8° 50' 29.944"), Longitude (-97° 38' 47.344"), Distance, and Heading, with a Submit button. Below this is a summary row showing coordinates and calculated values: From: 10° 8' 30.954" -105° 1' 45.469" To: 8° 50' 29.944" -97° 38' 47.344" RANGE: 443.80nm BEARING: 99° 30' 3.296". There are also input fields for Time, Speed/Drift, and Course/Set, with a Compute button. A row of radio buttons allows selecting between Ship information, Range&Bearing, Ship Track, Route Planning, and Distance&Heading. A status bar shows the last update time and the next map update interval. Below this are buttons for Help, Menu, Show List, Hide Legend, Show About, Hide, and Show. There are also dropdown menus for Select Data Source, a Reset Plot button, and Select Map Overlay. A unit selection row includes DMS, DM, D, and unit options (nm, m, km). The bottom section is a legend table with columns for Ship Group, Europe, North & Central America, Asia, Pacific, Africa, South America, and several Unused categories, plus DSC Receiving Station, History Tracking Marker, and Distress Message Received. Each column has a MID value and a corresponding plot symbol and color.

Legend:	Ship Group	Europe	North & Central America, Caribbean	Asia	Pacific	Africa	South America	Unused	Unused	Unused	DSC Receiving Station	History Tracking Marker	Distress Message Received
MID:	0xx	2xx	3xx	4xx	5xx	6xx	7xx	8xx	9xx	1xx	(132)	(any)	(any)
Plots:			■ Range & Bearing			■ Ship Track							■ Route Planning / Distance & Heading

In addition to the map, the user input and control area, referred to as the **Legend Box**, is where most interaction will take place. The following paragraphs provide a brief overview of the functions and uses of the buttons and input areas of this box. More detail on each function will be provided later in this document.

The top one-third of the Legend Box is the **Functional Area** where modes of operation are selected, data entered, and certain results displayed.

The middle one-third is the **Control Area** where the user selects what is shown by DSC2GM, both on the map and in optional display areas, and sets how data is interpreted when entered by the user.

The bottom one-third is the **Legend Area** and is the source of the name for this box as well as a display of symbols and colors used to mark items on the map. Since this section of the Legend Box has no interactive properties, it can optionally be displayed or not.

## Functional Area:

The first row, from left to right, has a **CLEAR** button which changes as different modes are selected. Next to it are the input boxes for **latitude** and **longitude** which are used to manually enter or display the clicked-on position on the map. Next are the **distance** and **heading** boxes used for manual entry or display of computed results for these two variables. On the far right is the **Submit** button used to enter data manually keyed into the input boxes. When the cursor is located in one of the input boxes, the **Enter** key can also be pressed to enter data.

The second row is a pop-up box which shows results from **Range & Bearing** operations.

The third row is another pop-up box which appears when the **New D&H** button is clicked to enter distance and heading data.

On the fourth row are a group of *radio buttons* which determine the **Display Mode** of operation for DSC2GM. When one of these five buttons – **Ship Information**, **Range&Bearing**, **Ship Track**, **Route Planning**, or **Distance&Heading** -- is clicked, DSC2GM switches to that mode for data input and display. Certain other buttons and input areas will be enabled or disabled depending on whether they are used in the selected mode. Disabled items will be grayed-out to indicate they are not active. On the far right is the **New D&H** button mentioned above which causes that input area to pop up for use.

The last row in the Functional Area displays the date and time of the last map update with plotted ship data and a count-down timer until the next update.

### Control Area:

---

On the first row of this area is a **Help** button which displays this document in a new browser window or tab. Next to that is a **Menu** button which is installation defined to open a browser window or tab with other web pages available for use. The three buttons in the center of this row toggle the display of three optional areas of information. **Show/Hide List** opens/closes an area beneath the Legend Box where a list of current plotted ships is displayed. **Show/Hide Legend** optionally displays the **Legend Area** of the Legend Box. The third button, **Show/Hide About** opens/closes another optional display below the Legend Box and Ship List. Information about the DSC2GM program is shown in this area. On the right side of this row are two buttons, **Hide** and **Show**, which work in conjunction with the **Select Map Overlay** drop down selection box which is on the next row and will be described along with it.

The second row of this area has a drop down selection box **Select Data Source** which is used to select from several possible **Alternate Data Sources** of ship data or other data which will be plotted on the map. This is an advanced function the nature of which will depend on installation defined choices. If a list of choices is available, clicking one will cause that data to be plotted on the map along with any other data already displayed there. In the middle of this row is the **Reset Plot** button which has two primary functions. When clicked, the map plot will be redrawn from the current selected Data Source, usually this will be the DSCdecoder data. Any other plotted data will be removed in the process. This button also resets and recreates all the ship information data in the pop-up boxes that are shown when a ship marker is clicked. If the **Units of Measure** has been changed – such as from nautical miles to kilometers – these new units will be used in the recreated ship info. The rightmost button on this row is the **Select Map Overlay** button mentioned above. This is an advanced function and depends on the installation choices that have been made. If a list of choices is available, selecting one and then clicking the **Show** button above this box will cause that overlay to be displayed on the map. Clicking the **Hide** button will remove the overlay from the map.

On the third row of this area is a group of *radio buttons* which allow the **Units of Measure** to be selected. These buttons will be disabled if the current DSC2GM mode does not allow changing them. Choices include whether coordinates are to be entered and displayed in degrees; degrees and minutes; or degrees, minutes and seconds; and whether to use +/- or NSEW. Also selectable are the distance measures of nautical miles, statute miles, or kilometers. These units can only be changed when DSC2GM is in **Ship Information Mode** and all entered and computed data and tables have been removed using the **CLEAR ALL** button. Otherwise these buttons will be disabled. In addition, as mentioned above, to change the units of measure of ship info displayed in the pop-up boxes next to ship makers, after selecting these units the **Reset Plot** button must be clicked. This allows the ship info to be recreated using the selected units.

Some of the above may mean nothing or seem complicated and confusing when first read. However, once the remainder of this manual as been reviewed, these descriptions should begin to make some sense.

### **Legend Area:**

---

The first row of this area shows the markers and the region in which the ship is registered.

The second row lists the country of registry **MID** codes which correspond to the ship marker.

The third row shows the markers used in the DSC2GM plotting operations for **Range&Bearing** measurements, **Ship Track** plotting, and **Route Planning** and **Distance&Heading** operations.

## OPERATIONAL MODES

---

**NOTE:** Before using DSC2GM the first time, you must properly install the program package. See the *INSTALLATION* section for instructions on how to do this.

There are two Operational Modes for DSC2GM. The more basic mode of operation is called the **Check Mode** and it is described next. Following that, a more advanced mode of operation called **Tracking Mode** is described.

When DSCdecoder is running and you want to see the current ships with position reports that have been received, simply double-click the *DSC2GM.vbs* name, icon, or a shortcut you have created. This will start DSC2GM in the Operational Mode called Check Mode. It will obtain the latest data from DSCdecoder and create plotting instructions. The ships will then be plotted on a Google Map presented by your browser. The browser and the *DSC2GM.html* file which displays the Google Map will be opened automatically by DSC2GM and do **not** need to be, nor should they be started by the user.

### Check Mode Operation:

---

If **Tracking Mode** has been disabled, when DSC2GM is started you need do nothing more. DSC2GM will extract the details of the DSCdecoder ships and create the necessary XML data file to use for the Google Map display. DSC2GM will then start the browser specified during installation and pass the location, map type, and zoom level info to it. When the browser opens, it will run the *DSC2GM.html* program which will in turn access the Internet to obtain the Google Map data needed to produce the desired display of the XML file data created by DSC2GM. The GM display will show the ships along with their details, and range and bearing to the central *Reference Point* marker. The data collected will also be saved to a log file for later inspection or use.

**Tracking Mode** is disabled during installation by setting the controls **trackflag** to *False* and **looptime** to *zero*. In this, what is called **Check Mode**, there is no prompting for any user input.

### Tracking Mode Operation:

---

DSC2GM use in Tracking Mode is similar to what was described above with the addition of some user prompts to specify operational choices. Tracking Mode also must be explicitly stopped, unlike Checking Mode which stops after one execution.

If during installation a *non-zero* **looptime** was set but **trackflag** is *False*, a prompt will be presented when DSC2GM is started, providing the choice of a single check or starting the Tracking Mode.

If **looptime** is *zero* and **trackflag** is *True*, a prompt will be presented to either run once in Check Mode or run continuously in Tracking Mode. If Tracking Mode is chosen there will be another prompt for the **looptime** to use.

If Tracking Mode is in operation and DSC2GM or a shortcut to it is clicked, a prompt will appear offering to **stop** Tracking Mode. If that choice is not selected another prompt will offer to **restart** the browser. This is useful if the browser or DSC2GM map window have been closed and needs to be re-opened without affecting the current Tracking Mode data collection operation.

If the choice to stop Tracking Mode is made, the current *XML* data file will be copied to the log file folder for historical purposes and possible future viewing.

At the end of a tracking session it is necessary to **shut down** DSC2GM, otherwise the VBS program will continue to perform updates even if the browser is not displaying them. (This may be desirable if DSC2GM is installed on the web as described later.) Shutting down DSCdecoder will lead to DSC2GM shutting itself down within **looptime** minutes. Alternatively, clicking on the VBS program will present the option to stop, as described above.

All of the choice prompts described above will **time-out** after ten seconds and processing will continue using the default action. The default action will be determined by the default settings of DSC2GM, set during installation. If **trackflag** is *True*, the default action will be to do tracking, if *False*, to do a single check. The default to the stop prompt is to **not stop** since doing so inadvertently could impact necessary data collection. The input prompt for a **looptime** will not time-out and must be responded to, however the default response to no input – that is, just hitting enter – or to a value of zero, is to do a single check.

## Map Display:

---

Regardless of whether the Google Map was created by DSC2GM in **Check Mode** or **Tracking Mode**, the Google Map display can always be manipulated to better show the ships of interest. The map can be panned and zoomed as desired, even while Tracking Mode data collection is in progress.

The several **Display Modes** of DSC2GM are all available for use regardless of the Operational Mode which produced the display – **Ship Information, Range & Bearing, Ship Track, Route Planning, and Distance & Heading**. These Display Modes are described in the section named that, below.

## Check Mode Scenario:

---

A typical Check Mode scenario with no tracking might be as follows:

- Have DSCdecoder running and collecting ship data.
- Double click on the *DSC2GM.vbs* program name or shortcut icon.
- After a moment to obtain ship data from DSCdecoder and search for matches in the specified ship information text file, *DSC2GM.vbs* then creates the *XML* file of ship data needed to plot the GM display. The browser will open, *DSC2GM.html* will be started, and a map will be presented showing the area around the designated reference point coordinates. This map display works like standard web site GM displays, showing ship locations with colored balloon markers and providing pan and zoom, and map-type controls.
- The color of each ship marker is determined by the first digit of the MMSI number, which if non-zero indicates the region of registry of the vessel. The **ship MMSI** and **name** will be displayed when the mouse pointer passes over a ship marker, and the ship details will be shown in a pop-up information window when the ship marker is clicked on.
- If a position report resulted from a **distress message** or a distress relay message, a special marker will be used to indicate this position. The ship information window resulting from such a message will reflect this.
- Located at the center of the display is a marker of the **Reference Point** which identifies from where range and bearing calculations have been made, the results of which appear for each ship in the pop-up information window. Also included is a date/time stamp indicating when the latest update of DSC messages was made.
- Below the map is a **Legend** of the meaning of the different colors of ship markers. When the map is clicked on in some display modes, coordinates and range & bearing information will appear here. Input boxes for manual entry of coordinates used by some display modes, are in the Legend area as well, as are some control functions described later.
- Below the legend is the **Ships Received List** of the current ship MMSI numbers, with names if available, which have sent position reports via DSC. These MMSI numbers are **links** which when clicked will position the map to show that specific ship. In this way far ranging ships can be quickly located. The **Information Window** will also have been opened on the map for that ship.
- Below the list of MMSI numbers is a **statistics line** that looks like this:  
*Ships underway reports: 8, Ships stationary reports: 0.*  
The first count will be the number of ships reporting, when in **Checking Mode**.  
The second count is only relevant for **Tracking Mode**.

That's all there is to the use of DSC2GM in its *Checking Mode*.

## Tracking Mode Scenario:

---

In Tracking Mode there are only a few differences with the above scenario, including the prompts which have been previously described. There is additional data that is plotted on the Google Map, and some added statistical information.

In addition to the current position of each ship, any historical data that has been collected on the **track** of the ships will also be displayed on the map as **small dots**. Each dot will carry with it similar location information as the latest position plot balloon marker. When any tracking dot is clicked on, a pop-up **information window** will open with the details of that position at the time it was received. It should be noted that for tracking plots the info window will use the term **Track Position**, while for the current location, the info window will use the term **Location**. This is to help avoid confusing historical positions with the latest one.

See the discussion of **Display Modes** below, for more on Tracking Mode track-lines.

The **statistical line** mentioned above has added meaning in Tracking Mode. As new position reports come in during tracking, the **Ships underway reports** count will increment for every report where a ship position changed from the previous report as well as for each MMSI that reports. The **Ships stationary reports** count will increment when a new report is received but the ship position has not changed.

## USAGE NOTES

---

### Map Display:

---

The **colored balloons** mark the last reported locations of ships and also indicate the region of registration of the ship. The color codes are:

*0-Blue 2-Orange 3-Green 4-Red 5-White 6-Yellow 7-Purple 9-Brown 8-Gray 1-Black*

*Regions are set by the first digit of MID (first three digits of MMSI):*

*0xx Group, 2xx-7xx countries, 1xx & 8xx-9xx none*

*0xx-Group 2xx-Europe 3xx-NA,CA,Caribbean 4xx-Asia 5xx-Pacific 6xx-Africa 7xx-SA*

Reports resulting from **distress messages** or distress relay messages are presented with a unique marker if they are new position reports. The marker is a **red balloon with a yellow dot** in the middle.

A **tool tip** will pop up as the mouse pointer moves across either a location balloon marker or a tracking dot marker. The MMSI number with ITU Country Code appended and ship name are displayed. The color of the text indicates the kind of message received at that marker. **Text in red** indicates a **Distress** message. **White** is the latest ship location. Text in **green** indicates the marker is of a Tracking position, and finally, **yellow** is used for the *Reference Point* text.

When DSC2GM is running in Tracking Mode a **count-down timer** will be displayed in the **Legend** area beneath the map, showing how long until the next map update. It should be noted that this time may not coincide with the next update cycle of DSC2GM when it interrogates DSCdecoder for current ship report data. The retrieval of data and the plotting of the map run independently of each other. Normally, since the map display is started just after the first data retrieval, the timing of both events will be very close together; the map updating shortly after new data has been prepared by DSC2GM. However, if the browser is restarted using the command provided by DSC2GM for that purpose, then the timing between the two operations could be offset. Since both data retrieval and map updating take place at the same rate, new data will always be displayed, it may just be somewhat delayed from when it was originally retrieved from DSCdecoder.

When DSC2GM is used as a **web based application**, the timing between ship data updates and map updates are completely unrelated. See **Synchronizing Tracking Mode Web Map With Data Preparation** in the **ADVANCED USAGE NOTES** section below, for more on this topic.

When operating in **Check Mode**, there is **no** count-down timer display.

In a wide view while running DSC2GM in **Tracking Mode**, the tracking markers – small red squares – may disappear beneath the current ship position marker balloon. Zooming in will make these tracking markers visible.

If two ships report exactly the same coordinates, only one of them will be shown when the mouse pointer passes over the ship marker or when the marker is clicked on. See the next section for a way to see information on both ships.

## Ship Received List:

---

Below the map and **Legend** area is an optionally displayed list of **ship names** and **MMSI** numbers. Each of these entries is a link which when clicked will position the map so that ship can be seen and will open the ship **information window**. This is useful for finding a ship without needing to move the mouse pointer over the individual ship markers.

As mentioned previously, if two ships report exactly the same coordinates, only the last reported one of them will be shown when the mouse pointer passes over the ship marker or when the marker is clicked on. However, both ships will be in the Ships Received List, and when either ship name and MMSI number entry in that list is clicked, that ship information window is the one that will be opened. This usually only happens when bad coordinates were sent in the DSC message, such as all zeroes.

## Information Window Display:

---

When a marker, either a balloon or red dot, is clicked on, an information window opens displaying something similar to the following:

<i>MMSI:</i>	308232000-BAH
<i>Name:</i>	KOA SPIRIT
<i>Call Sign:</i>	C6QP4
<i>Region:</i>	N&C America/Caribbean
<i>Message:</i>	Standard
<i>Location:</i>	N23.8166667° / W66.35°
<i>Range/Bearing:</i>	762.7nm / 98°
<i>Received:</i>	07-11-30 06:37:21UTC

This example is for a normal position report. If any of the information was missing in the received position report, that item will not appear in the information window.

If no *mid\_ccc.txt* file is found in the DSCdecoder folder, or if the **MID** is invalid – the first three digits of the MMSI number – the **ITU Country Code** will not be appended to the MMSI number.

The **Range/Bearing:** values are as computed by DSC2GM from the coordinates given for the *Reference Point*.

For tracking reports the label **Location:** will instead be **Track Position:**. This is to help avoid confusing old tracking positions with the current location.

If the report was from a distress message or distress relay message, the **Message: Standard** label will instead be **Message: DISTRESS** and will appear in red text.

The pop-up **information window** for the *Reference Point* will not contain all these entries since they do not all apply. The **Received:** label will instead be **Updated:** and shows the **time** of the last update of messages performed by DSC2GM.vbs. This time is different from the time shown in the **Legend** below the map, which is the time DSC2GM.html updated the map display. These two times could differ by as much as the **looptime** minutes settings. See **Synchronizing Tracking Mode Web Map With Data Preparation** in the **ADVANCED USAGE NOTES** section below, for more on this topic.

## Running:

---

While it should go without saying, let me say anyway that **to run DSC2GM, normally you must first be running DSCdecoder**. Everything keys off the ship coordinates provided by DSCdecoder.

If DSCd is not found by DSC2GM, a message will be displayed to that effect and the option to display a Google Map of the last recorded data will be presented. If this is selected the browser will open and display the latest available XML file ship data. If the option is not chosen or once GM is displayed, DSC2GM will end.

With DSCdecoder running and DSC2GM in **Check Mode**, if there have been no ship position reports received, this will be briefly reported by DSC2GM and it will end. **With nothing to display, the browser will not be started**. Since DSC2GM deletes the old *dscdata.xml* file when it checks DSCd for new data, future efforts to use DSC2GM will not show any results until ship position reports are received by DSCd.

If DSCdecoder is stopped while DSC2GM is running in **Tracking Mode**, DSC2GM will shut down as well. There will be a time delay before DSC2GM stops based on the setting of **looptime**, which will be the maximum number of minutes for the delay.

When DSC2GM is stopped, the latest XML data file is copied to a **log file folder** and renamed with a current date/time stamp prefixing the original *dscdata.xml* file name.

## Restarting:

---

When DSC2GM is started the previous *dscdata.xml* file is **deleted** before new data is acquired from DSCdecoder. DSC2GM can be restarted using the last recorded data by starting with the **Resume Start-Up Command**. It will then continue on from where the previous session left off. This procedure might be needed if DSC2GM were accidentally stopped prematurely.

If it is desired to **use a previously saved log file** as the starting point for a new session, follow this procedure:

- Copy the historical log file from the log file folder to the DSC2GM folder.
- Remove the date/time info the prefixes the file name, renaming the log file to `dscdata.xml` so it will now be used as the current data file.
- Start DSC2GM using the Resume Start-Up Command so the existing data is not cleared.

On the next update the **historical data** will be incorporated in with the current data and plotting will proceed from there. The result will be a continuation of the historical session using that collected data and adding to it newly collected data.

It is also possible to **display and review previous DSC2GM log files** when DSCdecoder is not running. In this case the last recorded *XML* file can be viewed or an historical one can be chosen instead by copying the log file of interest from the log file folder into the DSC2GM folder and renaming it *dscdata.xml*.

When DSC2GM is started, the fact DSCdecoder is not running will be noted and instead of deleting the existing *XML* file in preparation for collecting new data, an option will be presented to display the *XML* file. In this case what will display on the Google Map will be based on the contents of the previous session or the historical log file which was chosen. It is not necessary to use the Resume command in this case.

## Log Files:

---

The log files will be saved in a folder named **DSC2GM Log Files**, which will have been created in the folder where DSC2GM was installed. For example, the log file might be here:

*C:\Program Files\SPTools\DSC2GM Log Files*

A log file name might be this:

*20071116221254dscdata.xml*

The log file name contains year: 2007, month:11, day:16, hour:22, minute:12, second:54, and `dscdata.xml` to complete the name.

In operation, DSC2GM keeps track of ships in three reporting categories:

- N** - New data updates with the latest ship position report.
- T** - Tracking data of previous positions of ships which are underway.
- S** - Stationary ship positions.

It also specially tracks reports from distress messages:

- D** - Any of the above categories resulting from a **distress message** or distress

relay message, are indicated uniquely by this second letter.

Also marked is the *Reference Point* update data entry:

**R** - The latest update date/time and *Reference Point* identification.

On the Google Map the category **N** positions are plotted with the **colored balloon** markers. The **T** positions are plotted with the **small red dots**. An orange balloon marker with a black dot in the middle is used to mark the **R Reference Point**.

The **S** positions are **not** plotted since they would lay one atop another, however they are recorded in the log file, identified by their differing report times. When a ship moves after having been **stationary**, the plotted tracking point will show the latest report from that position. There is a distinction made when a ship does not report at a given update cycle and when it reports but with the same position as it previously had. Missed report periods will simply not show in the log, while stationary reports will show just as other position reports but with the **S** category.

The log file contains position reports with these category indicators shown by a parameter called **hist**. Here is a sample log file entry:

```
<marker lat='20.5333' lon='115.9' mmsi='636011597-LBR' name='MSC GERMANY'  
call='A8AH4' datim='07-11-18 14:27:13UTC' type='6' hist='N'/>
```

The parts of this entry are obvious except for **type** and **hist**. **Type** is usually the same as the first digit of the MMSI and is used to control the marker color and some other internal processes. **Hist** is as described above, the category indicator for each log file entry. If scanning a log file visually, the records which indicate the last reported position of each ship will be **hist='N'**. The historical tracking positions of ships underway will be shown as **hist='T'**, and the reports when ships were stationary will be **hist='S'**. If a position report resulted from a **distress** message or distress relay message, the additional indicator **D** will be added to the other "hist" setting, such as **hist='ND'**. The reports on updates associated with the *Reference Point* will be reported as **hist='R'**.

## DISPLAY MODES

---

There are several Display Modes in which DSC2GM can operate. Which mode is active is selected by clicking on one of the *radio buttons* in the Legend box below the Map. These radio buttons – so called because they are like station selectors that were once common on auto radios – operate so that pushing one, will pop out any others, thereby allowing only one to be chosen at a time. The DSC2GM Display Mode selection is like that, clicking one will un-click any other.

There are five Display Modes: **Ship Information**, **Range & Bearing**, **Ship Track**, **Route Planning**, and **Distance & Heading**. All of these modes function with the Google Map display as described above and where appropriate, can interact with the ships that have been plotted there.

Any plots or other information created in one mode can be carried over to the other modes. The map display could be showing a Range & Bearing plot, a Ship Track, and a combination Route Planning and Distance & Heading plot, all at the same time.

There are some functions which are common to all the modes. These all appear in the Legend box below the map. They are described below in the **Display Mode Controls** section.

Displayed in the Legend area, below the information on ship markers, are the markers used when plotting in these various Display Modes. These are to remind what the various plots represent. The color of these markers will also be the color of any connecting line segments used to display results.

What follows are brief descriptions of each of the DSC2GM Display Modes. It is quite likely that other uses will be found for some if not all of these modes. These are only suggested uses.

### Ship Information Display Mode:

---

This is the normal Display Mode for DSC2GM operation. The ship and tracking positions of ships are displayed. Clicking on either produces an information box for that ship at that position. Moving the mouse over a marker displays summary information on the ship at that position.

If the mouse is not positioned over a marker, left-clicking will close any open ship information box. Rapidly double-clicking on the map will cause it to zoom into the next level and position the area clicked on, near the center of the display. Rapidly right-clicking will zoom out while re-positioning the map. The map controls in the upper left-hand corner of the map can also be used to zoom and pan the displayed area.

In Ship Information Display Mode the **CLEAR ALL** button will be activated in the Legend box. Clicking this button, in this mode, will clear all the settings which may have been made in any of the other Display Modes. Care should be exercised when clicking this button to ensure that it is truly desired to CLEAR ALL. It should be noted that this same button will change to reflect the currently selected Display Mode. When DSC2GM is in one of the other Display Modes, this button will only clear entries made in that mode.

### **Range & Bearing Display Mode:**

---

Two special features are available in DSC2GM in this Display Mode. One is to display the geographic coordinates of any point on the Google Map. By positioning the mouse pointer anywhere on the map and clicking the mouse button, a **location marker** will appear. The coordinates of that marker will be displayed in a box in the **Legend** below the map, in a marker tag which appears when the mouse pointer is moved over the marker, and in a pop-up box when the marker is clicked on. As an alternative to clicking on the map, latitude and longitude can be entered directly in the appropriate input boxes to set a location marker.

The other feature is to compute **range & bearing** between two location markers. If a second location is clicked on, a second location marker will appear and in addition to the coordinates of both markers, the range & bearing between them are also displayed in the Legend box. A connecting line is drawn between the location markers. This line curves to follow the curvature of the earth. When computing range & bearing between widely separated points, this curvature will become noticeable.

Either of these two markers can be clicked on and a pop-up information window will appear with the details of that marker range & bearing to the other marker. Care must be exercised that the mouse is over the marker before clicking, otherwise the markers may be cleared and a new one set.

If another map location is clicked on, the first two markers will be replaced by a location marker at this new position, and as before, a second location can be clicked to again produce range & bearing information between these two new markers.

To **remove location markers**, click on the **Clear R&B** button in the Legend box. Switching to Ship Information Mode and clicking on the CLEAR ALL button will also clear any R&B plots, but will also clear any other display mode data.

When setting location markers, clicking on the exact position of an existing ship marker will open the information window for that ship instead of setting a location marker. However, this position does become a location for Range & Bearing use.

For reasons not worth going into here, it is **not** possible to click beneath the shadow of an existing marker or information window. In this case, zooming or clearing the existing information window producing the shadow will allow selecting such a position for a location marker.

The information windows that open when a ship marker is clicked on, can be cleared by clicking anywhere on the map, however, in all but Ship Information and Ship Track Display Modes, this will cause a location marker to be placed. To clear information windows without causing the creation of a location marker, click the information window **close** button – a box with an **X** in it, in the upper right hand corner of the window.

### **Ship Track Display Mode:**

---

When DSC2GM is in the Tracking Operational Mode, it will collect multiple reports from a ship and display them as red dots. The most recent location will be plotted with the usual colored balloon marker. The Ship Track Display Mode is used to highlight the entire track of a ship that has been collected during a Tracking Mode session.

When DSC2GM is in Ship Track Display Mode, clicking on any ship marker of a ship which has made more than one position report, will cause the points plotted for that ship to be connected by line segments. These lines indicate the ship track, connecting the plotted ship position markers in the order in which they were reported.

Beneath the Legend box, which is itself below the map, a **Ship Track Table** will be displayed listing each of the plotted positions for the selected ship, in the order they were reported. This table will show information on each position and will also include a link, which when clicked will pan the map to show that particular plotted point and will open the information box for the position.

Clicking on a new ship will clear any previously created track plot including the Track Table. A new table will be created and if that ship has more than one reported position, those positions will be connected by line segments. If any other part of the map is clicked, the existing track will be cleared but the Ship Track Table will not.

The **Clear Track** button can be used to clear an existing track and Ship Track Table. Switching to Ship Information Mode and clicking on the CLEAR ALL button will also clear any plotted tracks and the table.

### **Route Planning Display Mode:**

---

This mode is useful for creating a proposed route, computing distance and direction from each clicked map location to the next, or from coordinates entered manually. As each new location point is added, the forward and reverse direction information for the previous point is updated.

Route points added by mistake or not properly located can be removed, one at a time in reverse order by clicking on the **Clear Route** button, then route creation resumed from the last remaining location. The button can be repeatedly clicked to completely remove a plotted route and the Route Table.

The accumulated locations of the route are displayed in a Route Planning Table beneath the Legend. The location coordinates, distance and direction to the next and previous point, and the accumulated distance of the route to each point is displayed.

This mode can also be used to compute the details of a previously recorded Ship Track by clicking on each of the plotted position markers in the sequence they were reported.

Switching to Ship Information Mode and clicking on the CLEAR ALL button will also clear any plotted route and the table.

### **Distance & Heading Display Mode:**

---

This mode is much the same as Route Planning except with the added ability to enter distance and heading as well as position coordinates.

Two input boxes, appropriately labeled Distance and Heading, allow entering distance in nautical miles and heading in degrees. Decimal values can be used for both. Using the starting point produced by clicking on the map or manually entering coordinates in the Latitude and Longitude input boxes, the resulting position coordinates will be computed and used in the route that is being generated.

After the distance and heading have been entered, clicking the **Submit** button will start the computation. However, if no starting position has been previously designated, nothing will happen since there is no reference point from which to compute the new position. A position can be clicked on the map or coordinates entered manually and then clicking Submit will proceed to compute the next position coordinates and record the information in the Route Planning table which is produced.

When the cursor is on one of the four input boxes, the **[Enter]** key can be pressed instead of clicking on the Submit button. This is sometimes easier when repeatedly making manual entries. The **[Tab]** key and **[Shift-Tab]** key combination can be used to move forward and back through the input boxes.

After clicking the Submit button or pressing the [Enter] key, the newly computed coordinates will be displayed in the Latitude and Longitude boxes adjacent to the Distance and Heading input boxes. These coordinates will then be used for computing the next leg of the route with the existing distance and heading entries or with new values for either or both.

This display mode is provided specifically for creating **search patterns** for search and rescue operations. By clicking on the current position of a search vessel and entering the distance and heading for a search leg, the steer-to coordinates for the pattern can be computed. When the search vessel reaches that position, a new set of coordinates can be computed for the next search leg. Since each leg is computed using the current position of the search vessel, any slight variation of position from the intended starting coordinates are automatically accounted for.

## Display Mode Controls:

---

Located in the Legend box below the map are some buttons and input areas used for the Display Modes.

**Mode Select** – These are the radio buttons mentioned before. Clickable small round buttons which allow only one to be selected at a time. These allow choosing between the Display Modes. Each button is label accordingly.

**Clear** – This button changes its label depending on the current Display Mode. Just what will be cleared by clicking on this button is described in each of the mode descriptions above. In Ship Information Display Mode, this button will clear all plots and tables created by the other modes, as well as the latitude, longitude, distance, and heading input areas. **Clear does not affect the ship plots or position data.**

**Coordinate Input** - These two input areas allow entering **latitude** and **longitude** for use by all the Display Modes except Ship Information and Ship Track. The coordinates can be entered as degrees and decimal degrees; degrees, minutes and decimal minutes; or degrees, minutes, seconds and decimal seconds. They can be entered as positive and negative, or with a **NSEW** prefix or suffix as needed. When the coordinates have been entered, the Submit button must be pressed to use them. Alternatively, if the cursor is in one of these boxes the [Enter] key can also be used.

**Vector Input** - These two input areas allow entering **distance** and **heading** which are then used to compute the coordinates of the next position from the one shown in the Coordinate Input boxes. Distance is entered in nautical miles, heading in degrees, either can be a decimal value.

**Submit** – This button is used to enter the coordinates of a new marker for the different Display Modes that use coordinates. It also enters the distance and heading entries if appropriate for the current Display Mode. When clicked, the coordinates will be plotted with a marker appropriate for the current Display Mode. If also entered, the distance and heading will be used to compute a new position which will then be displayed in the Coordinate Input boxes in place of the original settings. Pressing the keyboard [Enter] key will also enter these values if the cursor is in one of the active input boxes.

**Menu** – Clicking this button will open a new **browser** tab or window and display the HTML file which was specified in the installation process. The contents of this new window are completely up to the user. Included in the DSC2GM distribution package is a *menu.html* file which is an example of how the Menu Link can be used to start another browser page from the Map Page. The contents of this Menu Link page could be additional resources to record, investigate, or compute information related to the ships received via DSC, or even links to even more pages. This link can be used in both the local and web installed implementation of DSC2GM.

**Help** – This button will open this document in an appropriate application such as Adobe Reader© or in a browser window if a built in reader is available. During installation this can be changed to open some other user document, web page, or application to provide user assistance.

**Show** – This button will produce an overlay on the existing map display. The content of this overlay is determined at installation time. It could be a weather radar display, for example.

**Hide** – The opposite of Show, clicking this button will remove the overlay from the map display.

## Map Controls:

---

Located on the Google Map display itself, are several items which allow controlling the display of the map and providing some additional information.

**Map Type Selector** – In the upper right-hand corner of the map is a drop-down selector box. Choices are offered for the type of GM display: Map, Satellite, Hybrid, or Terrain. Choosing one of these will switch the display to that type of map.

**Map Area Control** – In the lower right-hand corner of the large map, is a box containing a small map with the current GM area highlighted in a rectangle. Dragging this rectangle or double-clicking on the small map will reposition the large map. A small arrow in the lower right corner of this box when clicked will minimize the box or restore it.

**Map Scale** – Just above the Pan Control box is a map scale showing a reference for miles and kilometers for the current zoom level.

**Mouse Pointer Info** – In the lower left-hand corner of the Google Map, is a box which constantly displays the coordinates of the current position of the mouse pointer. In some Display Modes, also shown is the range and bearing from the last placed marker to the current position of the mouse pointer.

**Zoom & Pan Controls** – In the upper left-hand corner of the map are the standard Google Map controls for panning and zooming the map display. There are up, down, left, and right buttons for panning the display. There is also a center button which returns the map to its original settings. Below these controls are plus and minus buttons for zooming in closer or out farther. Between them is a clickable slider which allows zooming more quickly.

**Drag & Zoom** – Next to the GM slider zoom control are two small magnifying glass buttons displayed when DSC2GM is started. Initially, clicking the lower button does nothing. Clicking the top one activates the ability to drag the mouse pointer over the map to create a new map coverage area. Clicking and holding the left mouse button and moving the mouse pointer will cause a box to be drawn around an area to which the map will be zoomed when the mouse button is released. This procedure can be repeated to zoom in multiple times to precisely the desired area. The lower magnifying glass button – a reflected image of the upper button – is the D&Z Undo button. Each time this button is clicked the previous D&Z zoom is undone until the original zoom level is again restored. When this original state is reached, the Undo button will disappear, only to reappear the next time a D&Z Activate button is clicked.

## ADVANCED USAGE NOTES

---

### Start-Up Commands:

---

Under special circumstances it may be necessary to use DSC2GM somewhat differently than the normal approach as was defined when setting **USER DEFINITIONS** during DSC2GM installation. Rather than having to edit the *DSC2GM.vbs* file to change option settings, Start-Up Commands are provided which allow one-time alteration of some option settings.

The **Start-Up Commands** are:

<b>RESUME</b>	Retains existing dscdata.xml data on restart.
<b>TRACK</b>	Sets Tracking Mode.
<b>CHECK</b>	Sets Check Mode.
<b>DOFTP</b>	Enable FTP data to web server.
<b>NOFTP</b>	Disable FTP data to web server.
<b>DOMAP</b>	Enable starting browser with GM display.
<b>NOMAP</b>	Disable starting browser with GM display.
<b>nn</b>	If nn is numeric sets looptime to nn minutes.

One or more of these commands can be used as parameters in the **Windows Run Command dialog box** or in a **short-cut** defined to start DSC2GM execution. The usual Run Command or short-cut **target** specification would look something like this:

*"C:\Program Files\SPTools\DSC2GM.vbs"*

To use Start-Up Commands they should simply be added to the end of this target, each separated from any others by **spaces**, such as this:

*"C:\Program Files\SPTools\DSC2GM.vbs" resume*

**Note** that the Start-Up Command(s) should follow any closing parenthesis that may surround the program path.

If more than one command is specified and they **conflict** in purpose, the last one will determine what is actually done. For example:

*"C:\Program Files\SPTools\DSC2GM.vbs" domap nomap*

would produce **no** map.

**NOTE: The Resume command should be used with care because it could result in old ship data being commingled with current data.**

---

## **DSC Status Utility Program:**

---

Included in the DSC2GM distribution package is a small utility program which reports the current status of DSCdecoder and DSC2GM. Run *DSCstatus.vbs* by clicking on it or its shortcut, and a pop-up window will display the status.

DSCdecoder will be reported as *STOPPED* or *RUNNING* and if running, the current number of position reports it has received since it was last started will be shown.

DSC2GM can be operating in one of four modes: *CHECK*, *TRACKING*, *STOPPING*, and *STOPPED*. *DSCstatus* will report the DSC2GM mode and if tracking, the count of current ships and of histories currently being maintained by DSC2GM.

## **Synchronizing Tracking Mode Web Map With Data Preparation:**

---

DSC2GM has **two primary components**. One is the *VBS* program that acquires ship position reports from DSCdecoder and creates the data used to produce Google Maps. The other component is the *HTML* program which uses the data to generate the actual map.

These two components operate independently of each other. When running locally in **Tracking Mode** they repeat at the same rate which was set by the **looptime** parameter in the *VBS* component. In a web based installation the setting of **looptime** and the **refint** setting in the *HTML* component determine the rates of each. Generally, these two values should be set to produce the same **repetition rate**.

When operating locally, the *HTML* program is started directly by the *VBS* program so that map creation is automatically synchronized with data preparation. Within seconds of preparing the latest data obtained from DSCdecoder, that data is displayed on the map.

In the web based configuration this is not true. Whenever a user accesses the host server with their browser they start their copy of the *HTML* program. This could be just before or just after the latest data was uploaded by the *VBS* program to the server, or it could be at any point in between. Since the repetition rate for new data preparation is several minutes, it might be desirable to better synchronize the *HTML* display and the *VBS* creation operations.

This could also be true in a local configuration if the *HTML* program was stopped or the browser closed and later restarted using the facility in DSC2GM which does this. The restarted *HTML* program could be out of synch by as much as **looptime** minutes.

The **time the current data was prepared** can be seen by clicking on the *Reference Point* marker. The **time the map was generated** is shown in the **Legend** beneath the map. If there are several minutes difference in these two times it might be worthwhile synchronizing the *HTML* and *VBS* programs.

Using the time shown in the *Reference Point* information window, add the **looptime** minutes rate to determine the next time a data update will be made. When that time comes, refreshing the browser display will reset the time the *HTML* program updates itself, which will more closely match the time data preparation is performed by the *VBS* program.

### Starting After An Abnormal Shut-Down:

---

If for some reason DSC2GM is **not** shut down from **Tracking Mode** in an orderly fashion – such as a power failure or the computer being shut down while the *VBS* program was still running – its operational status may become indeterminate. In this case trying to start DSC2GM may result in a message that it is already running. If this happens and it is known for a fact the *VBS* program is not running, follow this procedure to re-establish the correct status:

- Click on the *VBS* program and when the message reporting the program is **TRACKING** appears, choose the option to shut it down.
- Following the confirmation message that DSC2GM is shutting down, again click on the *VBS* program. This time you will be told DSC2GM is **STOPPING** and you will be asked if you want to **WAIT** or **FORCE** DSC2GM to stop. Select the **FORCE** option.
- When the messages confirming your request complete, the status of DSC2GM will be **STOPPED** as it should be.
- Now when you click on DSC2GM it will start in the normal way.

This procedure should only be used if it is certain that *DSC2GM.vbs* is not running but is reported to be. This could be the case after a system restart or if DSCdecoder has been previously shut down and at least **looptime** minutes have passed since then. An abnormal termination of *DSC2GM.vbs* itself could also result in the status being incorrect.

The reason this procedure may be necessary is because when DSC2GM is running in **Tracking Mode**, it runs continuously in the background. When you click on the program name or icon to give new instructions – such as to shut down – a second copy of DSC2GM is actually run. It sets indicators which the first instance checks regularly. When all is working properly, the first instance of DSC2GM sees the indicators set by the second instance and takes the appropriate action. If things go wrong and these indicators become miss-set, the above procedure provides for getting everything back in sync.

## INSTALLATION

---

**NOTE: DSC2GM requires DSCDECODER version 4.2b or later.**

The *OLE/COM* interface implemented in version 4.2 is used by DSC2GM to obtain ship identification and position data. Without this, DSC2GM cannot function. Further enhancements in v4.2b are needed to take full advantage of all features.

DSC2GM is delivered as a *ZIP* file and should be unzipped into a folder for execution. The folder might be named *SPTools*, for example, and located on your disk drive wherever is convenient – or as may be required in a Windows Vista environment.

During the remaining set-up procedure only the disk drive onto which the DSC2GM files were placed will need to be known. The program has been most thoroughly exercised when installed in the following folder:

*C:\Program Files\SPTools*

It is the intention that over time additional utility routines will be made available and each will have been prepared for installation in the *SPTools* folder. However, this is only a suggestion and not a requirement.

After DSC2GM has been unzipped and before running it the first time, the file ***DSC2GM.vbs*** should be opened with a text editor to customize certain settings. The Windows *NotePad* editor will work fine for this.

The **drive letter** where DSC2GM was installed may need to be changed from the default **C:** if some other drive was used.

The home coordinates of the receiving location must be entered for positioning the map, to allow placing a *Reference Point* marker, and for computing range and bearing information to each ship.

If a **browser** other than MSIE is to be use, the path to the preferred browser will need to be entered.

If ship position tracking is desired, that must be set along with the time between updates.

There are some other options which you may want or need to modify as well, described below along with more detail on what has been mentioned.

The portion of the *DSC2GM.vbs* file of concern is shown below.

```

    '-- USER DEFINITIONS --'
'--
'-- SET the drive where DSC2GM was installed, C: is the default --'
my_drive = "C:"

'-- SET home location latitude --'
my_lat = "26.3438722"
'-- SET home location longitude --'
my_lon = "-80.1132583"

'-- SET the path and file name of your preferred browser --'
'--     For MSIE, browser = "" should be set.
'--     To use one of these examples,
'--         remove the apostrophe from: 'browser = ...
'--         and place an apostrophe before all other browser entries
'browser = ""           '-- MS IE - leave path and file name blank --'
'browser = "C:\Program Files\Netscape\Navigator 9\navigator.exe"
'browser = "C:\Program Files\Mozilla Firefox\firefox.exe"
'browser = "C:\Program Files\Opera\Opera.exe"
'browser = "C:\Program Files\K-Meleon\k-meleon.exe"

'-- SET the full path to the DSCd shipid.txt file --'
'--     Alternatively, the ShipPlotter shipinfo.txt file can be used.
shipFile = "C:\Program Files\COAA\DSCdecoder\log files\shipid.txt"
'shipFile = "C:\Program Files\COAA\ShipPlotter\log files\shipinfo.txt"

'-- SET the full path to the DSCd mid_ccc.txt file --'
midFile = "C:\Program Files\COAA\DSCdecoder\mid_ccc.txt"

'-- The following items must be set to display a local Google Map --'
'-- SET True to display GM.
start = True
'-- SET the default type of Google Map --'
'--     Choices are: map sat hyb ter
maptyp = "hyb"
'-- SET the default zoom of Google Map --'
'--     Choices are: 1 to 20
mapsiz = "5"
'-- SET the label to be used on the center-of-map marker --'
mapnam = "DSC Receiving Station"

'-- SET trackflag True to make continuous updates the default --'
'--     If trackflag is False and looptime is 0 tracking won't be done
'--     and no prompt will be given.
trackflag = True
'-- If tracking check for updates every looptime minutes --'
looptime = 5

'-- SET True to sound alert on new MMSI and distress messages --'
alertflag = True
'-- SET True to launch browser on new MMSI --'
autolaunch = True

```

**(The remainder of the **USER DEFINITIONS** is described in the **INSTALLING AND USING DSC2GM ON THE WEB** section below.)**

---

## Setting User Definitions:

---

The drive letter of the disk onto which you unzipped the DSC2GM package should be entered where designated in the **my\_drive** item. If you place DSC2GM on your **C:** drive, that is the default and will not need to be changed. The full location path of the programs of DSC2GM will be determined automatically using this drive letter.

The geographic coordinates of the DSC receiving location should be entered. This is used to position the Google Map in the area to be plotted, to place a *Reference Point* marker at the center point of the map, and also in calculations of range and bearing to ships whose position reports are received via DSC. The latitude in degrees and decimal degrees should be entered in the **my\_lat** item. Similarly the longitude should be entered in **my\_lon**.

Also required is the full path and file name of your preferred **web browser**. *Microsoft Internet Explorer* is the default and no change will be needed if that is the browser you use. Examples of other browsers are included as comments. To use one of these, remove the comment apostrophe, making any changes that are needed, or enter the path to another browser. You should comment out the entry for the IE browser and other unused browsers by adding a leading apostrophe.

**NOTE: Not surprisingly, MicroSoft Internet Explorer doesn't work like other browsers. As a result, the browser path and file name should be simply "" (a pair of quote marks) rather than the actual path as used for other browsers. The DSC2GM software will recognize this null entry as meaning MSIE should be used and will access it directly.**

The path to the file containing ship names and call signs should be entered in the **shipFile** item. This allows including that additional detail in the information provided for each ship on the Google Map (**GM**). There are two example paths shown, one for the DSCdecoder *shipid.txt* file and one for the ShipPlotter *shipinfo.txt* file, both of which contain the necessary information in a common format. Normally the path to the DSCdecoder *shipid.txt* file should be the one included. Since this folder is set by the user when DSCdecoder is installed, be sure to use the path as you have defined it.

If ShipPlotter (**SP**) is installed on the same system with DSCdecoder, the SP *shipinfo.txt* file can be used as the name and call sign reference instead of the DSCdecoder *shipid.txt* file. **Note** that the two file names are **not** identical. Also be aware that the SP file is often very large and may considerably slow the processing by DSC2GM. It may take several minutes to scan the SP *shipinfo.txt* file for matches for every ship reported by DSCdecoder.

If the path to *shipid.txt* or *shipinfo.txt* is incorrect, or no path is entered, DSC2GM will function normally but no ship names or call signs will be included in the displayed information.

DSCdecoder also includes a file called *mid\_ccc.txt* which contains ITU MID country numbers and alphabetic **Country Codes**. DSC2GM obtains the MID number from the received messages as a part of the ship MMSI number. If this file path is specified in the **midFile** item, the country code will be appended to MMSI numbers displayed in the ship information window, mouse-over tool-tip, and in the **Ships Received List** beneath the map.

The **start** item should not be changed from True except possibly in web based installations. If it is False the browser will **not** be started and the Google Map will **not** be displayed.

Google Map web pages can display *Map*, *Satellite*, *Hybrid*, or *Terrain* views. The default to use when DSC2GM starts the browser can be set with **maptyp**, hyb is the default. The map type can be changed at any time by clicking on the appropriate button of the GM displayed map.

The zoom level to use when plotting a Google Map can be changed to best fit each situation. This is done by changing **mapsiz**, which can range from 1 to 20 – 1 being the world and 20 someone's back yard. As with the map type, the zoom can also be adjusted after the map has been plotted. Once a map is displayed it can be panned and zoomed to best display any or all of the received ships. It should be noted that not all map types allow the same range of zooming. *Satellite* and *Hybrid* maps will zoom to the greatest degree while *Terrain* mode has the least amount of zoom.

You may or may not choose to alter the **mapnam** setting, which is the name of the *Reference Point* marker at the center of the map display area. This name will appear when the mouse pointer moves over the marker at the center of the map and in the information which is displayed when that marker is clicked on.

To run DSC2GM in the operational **Tracking Mode** and have it check and plot updates on a regular schedule, set **trackflag** True and enter the number of minutes between DSCdecoder update checks in **looptime**. To have DSC2GM run in operational **Check Mode** where it will execute once and stop, set **trackflag** False and **looptime** to zero.

A short alert tone can be sounded whenever a position report message with a new MMSI number is received. With the **alertflag** set True the tone will sound, and when False will not. This flag will also determine if a different alert tone is sounded when a **distress message** is received.

**NOTE:** *If different sounds are preferred, the WAV files can be changed in the Program Set-Up section of DSC2GM.vbs, which follows the User Definitions section. The new WAV files should either be copied to the folder where DSC2GM was installed or the full path to where they are located should be entered. Care should be exercised to assure nothing else is altered.*

Some installations may receive only occasional DSC position messages. In that situation it might be desirable to have DSCdecoder and DSC2GM running to **monitor** for new receptions but not have the browser set to continuously display the DSC2GM map. DSC2GM can be set to automatically open the browser display of the Google Map upon receipt of a DSC message with positional data for a ship with a new MMSI number. To do this set the **autolaunch** item True or leave the default of False if this is not desired. Messages received with positional data from ships which have already been plotted will not cause the browser to be opened.

There is no need to edit anything in the *DSC2GM.html* file for normal **local** use.

When setting options in the **USER DEFINITIONS** section, only make changes to the right of the equal sign. Also be sure to follow the example of the default entries as to the use or non-use of quotation marks. Note that all lines beginning with an apostrophe are comments for informational purposes.

DSC2GM can be installed for use on the **Internet**. For *DSC2GM.vbs* to send updated data to the web based *DSC2GM.html* file for display on user browsers, it is necessary to set the information contained in the **FTP TRANSFERS** portion of the **USER DEFINITIONS** in the *DSC2GM.vbs* file.

If DSC2GM is installed for Internet access there will also be changes necessary in the *DSC2GM.html* file.

**See the section below – INSTALLING AND USING DSC2GM ON THE WEB – for details on web installation.**

---

## DEBUG MODE FOR REGIONAL SETTINGS & TIME ZONES

### **Decimal Points:**

Those who run Windows using **Regional Settings** other than English may encounter problems with the conversion of the decimal point from **commas** to and from **periods**. The passing of command lines and data between the *DSC2GM.vbs* program and the Internet browser both through URLs with arguments and the *dscdata.xml* file, seem to contribute to this problem more than if everything were done inside one program.

Efforts to fashion an all encompassing solution for every different situation has proved difficult if not impossible. Adding to the problem is what has been reported to be differences in the way versions of Windows – Win2000 versus WinXP – handle the situation.

As a form of solution, DSC2GM has a Debug Mode specifically to allow users to select the conversions that work for their Regional Settings. If you are having problems, follow the procedure outlined below, otherwise this section can be ignored.

First, let us recount what have been found to be the modes of failure:

1. ***Browser command line (URL) with wrong decimal mark in coordinates:***

Will cause gray map with one ship balloon in upper left corner, ship names will appear below map area. Moving mouse pointer over names will cause them to display next to the single marker.

2. ***Correct URL but wrong decimal marks in dscdata.xml file:***

Produces correct map but only shows one or possibly two balloon markers (if degrees of ship positions are two values, i.e. -79 and -80, and map spans both). Moving the mouse pointer over ship names will cause them to display next to one or the other (if two) ship markers.

3. ***Bad URL and dscdata.xml:***

Produces gray map and one marker.

To correct for one or more of the above problems the Debug Mode is provided for the user to make local adjustments.

In *DSC2GM.vbs* you will find the **Debug Controls**, just below the **USER DEFINITIONS** section.

The Debug Controls section looks like this:

```
'-- PROGRAM SET-UP --'  
'-----'  
'   Debug Controls: Replaces nowXis character with toXbe in:  
'     C - Command line sent by DSC2GM to browser.  
'     D - Data file dscdata.xml contents.  
'     E - Entries from start-up input box and shortcuts.  
'   If athere = "" then no changes will be made.  
'   If athere = "C" or "D" or "E" then one data source will be converted.  
'   If athere = two characters, they will be converted and the third will  
not.  
'   If athere = "CDE" it will change all three data sources.  
athere = ""  
nowCis = "," : toCbe = "."  
nowDis = "," : toDbe = "."  
nowEis = "," : toEbe = "."  
'-----'  
'   Time Zone Controls: If there are problems with time zone processing:  
'     Set your local offset in the line: timzon = ""  
'     (for example: timzon = "-1")  
timzon = ""  
'-----'
```

### Setting Debug Options:

---

Debug Mode provides three uniquely handled areas where commas and periods can be converted. The default shown above will do nothing. Adding one or more of the **CDE control characters** will cause conversion in those areas. The **nowXis** character will be converted to the **toXbe** character for each of the selected areas.

**C** will convert commas and periods in the command line (URL) sent to the browser. By looking at the problem list above, the symptom this would address can be determined.

Likewise, **D** will convert the contents of the *dscdata.xml* file.

Including the **E** control character will make no difference with DSC2GM, it is used for other programs that share this same debug routine.

All of these conversions are run-time changes, the source information is not changed. Since *dscdata.xml* is created by DSC2GM, this is less a conversion than just how the output data is presented.

## Time Zones:

---

There is a Windows service (WMI) used by DSC2GM to automatically set the **local time zone offset**. Some installations of Windows may not have this service available. The result will be a run-time error message which will likely point at a line number in the range of 255-265.

If this happens, the first thing to try is to edit the *DSC2GM.vbs* file, going to the **Time Zone Controls** section under **PROGRAM SET-UP**. By entering your local time zone offset from UTC, the routine causing the problem will be bypassed. The problem with doing this is changes for daylight savings time, or summer/winter time, will have to be handled manually. The offset to enter is a plus or minus value that when added to your local 24 hour time yields UTC.

## INSTALLING AND USING DSC2GM ON THE WEB

---

DSC2GM can be installed for use on the **Internet**. To send updated data to the web based *DSC2GM.html* file for display on user browsers, it is necessary to set the information contained in the **FTP TRANSFERS** portion of the **USER DEFINITIONS** as described below.

DSC2GM is composed of **two primary components**, *DSC2GM.vbs* and *DSC2GM.html*. When installed locally there is certain information such as local coordinates, which are transferred from the *VBS* component to the *HTML* one. When installed for **Internet** access the *HTML* component is hosted by a web server while the *VBS* component is local to the DSCdecoder PC and DSC radio receiver. Since information can no longer be passed directly in this environment, it is necessary to make additional installation settings in both the *VBS* and *HTML* components.

### Installation:

---

After the distribution *ZIP* file has been unzipped into a local folder, the *DSC2GM.vbs* file should be opened with a simple text editor to make the necessary settings. Most of these are described above in the section **DSC2GM SET-UP**. There are the settings for the **FTP TRANSFERS** portion of the **USER DEFINITIONS** that also need to be made.

That section of the *DSC2GM.vbs* file looks like this:

```
'-- FTP TRANSFERS --'  
'-- The following items must be set if DSC2GM is to be web based.  
'-- SET doFTP True to send ship position data to the web site server.  
'-- To allow access to the server for FTP Transfers the other  
'-- items must be set.  
'-- The necessary information can be obtained from your ISP.  
doFTP = True           '-- SET True to do FTP Transfers.  
FTPAddr  = "ftp.host.url" '-- The server Internet address for FTP access.  
UserName = "user_name"   '-- Your user name on that server.  
Password = "password"    '-- Your password on that server.  
RelPath  = "/path/folder" '-- The path to the folder you have set for  
DSC2GM.  
Ftpextra = ""           '-- Any additional commands needing to be sent.  
'--  
'-- END OF USER DEFINITIONS --'
```

If **doFTP** is *True*, the latest ship tracking information will be automatically uploaded to the host server on the defined schedule as set by **looptime**. The information for the other settings in this section should be obtained from the provider of the host server such as your ISP.

The information for these settings should be obtained from the provider of the host server, such as your ISP.

Once the VBS file has been set up, the editor should be used to customize the DSC2GM.html file. The section of the HTML file of concern looks like this:

```
// BEGIN USER DEFINITIONS
// ***SET the files to open when the [Menu] and [Help] buttons are
clicked.
// ***SET the full path with file name, where the KML overlay file can
be accessed.
var menuFile = "menu.html";
var helpFile = "d2gaux/DSC2GM-Ref.pdf";

// ***SET default variables to use if no passed parameters.
var my_lat = 26.3438722; // Home coordinates for computing range &
bearing.
var my_lon = -80.1132583;

var maplat = 26.2; // Location of map center point.
var maplon = -79.8;

var mapsiz = 6; // Zoom level from 1=World to 20=Backyard.
var maptyp = 'hyb'; // Type of Google Map: "map", "hyb", "ter", or
"sat".
var refint = 300; // Seconds between MAP refreshes, should be
// 60 * looptime as set in VBS script.

. . .
```

**NOTE: DSC2GM can be set-up to run with both a local display and a web based Internet accessible display. The settings which were made when installing DSC2GM determine how the local display will appear. The following settings only affect how the Internet accessed web based display will look and perform.**

The entries **my\_lat** and **my\_lon** should be set to the location from where range and bearing are to be computed. These should be the same as were set in DSC2GM.

The **maplat** and **maplon** settings determine the center of the Google Map display. Normally these would be the same as the *Reference Point* home location but do not need to be. If, for example, it were desirable to have the map center offset one way or another to better display an area of interest.

As in the **VBS USER DEFINITIONS**, the **mapsiz** entry determines the default zoom level of the map display. This value will be used for the web accessed version of DSC2GM.

Similarly, **maptyp** is set as the default for the web display.

The **refint** value is the number of seconds between refreshes of the web browser display. This value would normally be set to match the **looptime** setting in **USER DEFINITIONS** of the VBS file. Be aware that **refint** is seconds and **looptime** is minutes. To set them both the same, multiply **looptime** by 60 and use that as the **refint** setting.

**Note** the use of apostrophes in **maptyp** and be careful to retain the closing semicolon on each line. Everything following the // on a line is a comment for informational purposes.

In addition to these settings, to make a Google Map accessible on the web it is required what is called an **API Key** be obtained from the Google web site here:

<http://www.google.com/apis/maps/signup.html>

What this is and how to obtain it are described at this site. Without an API Key for your specific server and directory where DSC2GM is installed, **DSC2GM will not work on the Internet**. An API Key is not required if DSC2GM is only used locally.

Once an API Key has been obtained for the server directory you will use, it must be copied into *DSC2GM.html* at the place just before the **USER DEFINITIONS** as shown here:

```
<script
src="http://maps.google.com/maps?file=api&v=2&key=ABQIAAAAioBykw08BI
U_D3HjggPk3BR_FHXrw_H6_PL_LktyKoLKu5SWYhRcMNz9FmLA6xqBakWpYTThGlh
2iA" type="text/javascript"></script>
```

Your Key should be inserted following **key=** and before the **quote**, don't forget the " at the end of your key. This should be one continuous line beginning with *<script src=*" with no carriage returns, and ending with *</script>* as shown above. The line as it is shown appears to have line breaks but that is just the way it displays in this document. When you edit the *HTML* file to add your API Key **no line breaks should be entered**.

Once the changes to the *HTML* file are made and saved, the following should be uploaded to the location on the web server specified in the **FTP TRANSFER** settings:

<b>DSC2GM.html</b>	The file accessed for web use.
<b>cursorcoord.js</b>	JavaScript files used by DSC2GM.html
<b>maptyp.js</b>	
<b>dragzoom.js</b>	
<b>menu.html</b>	Created from menusample.html file.
<b>d2gaux</b>	A folder containing image, sound and Help files.

Once these files are in place on the server, DSC2GM is ready for web access.

## Operation:

---

To provide updated data for the **Internet** user, DSCdecoder should be started, followed by *DSC2GM.vbs*, which should be started in **Tracking Mode**. Every **looptime minutes** the latest position reports are acquired from DSCdecoder and an XML file prepared by *DSC2GM.vbs*. It then sends the data to the web server where it will be used by *DSC2GM.html* the next time the user browser refreshes after **refint seconds**.

For a user to access the web display of DSC position reports, the browser should be directed to the **URL** which matches the server address and folder into which the DSC2GM server components were installed. For example, if the **FTP** address were:

*ftp.myserver.com*

and the relative path were:

*/user\_name/ships*

the URL to use from a browser might be:

*http://www.myserver.com/user\_name/ships/DSC2GM.html*

If the local DSCdecoder or DSC2GM are shut down for some reason but later it is desirable to provide data for Internet use, the procedures described above for retrieving a log file for re-display can be followed. The **Resume Start-Up Command** can be used to start DSC2GM while retaining the previously saved ship position reports.

**DSC2GM can be used both locally and on the web at the same time** just by starting it as described above. Not only will the ship position reports be available for plotting through the web on browsers, they will be plotted on your local browser just as they would in local only mode. If it is preferred the local browser not be opened to display the plotted map, the user option **start** can be set to *False* and the browser will not be opened when DSC2GM starts. There are also a pair of **Start-Up Commands** which can be used to control this. See the **ADVANCED USAGE NOTES** section for more details.

## OVERLAYS AND ALTERNATE DATA SOURCES

---

Two advanced features of DSC2GM are available for use but require a greater degree of effort to install and maintain. The first time user or anyone not fully aware of the installation and operation of DSC2GM should not undertake to install or use these features.

### Overlays:

---

The ability to display overlays on the Google Map, is accomplished using KML file support. To have an overlay shown by DSC2GM it is necessary to place an appropriate KML file on the server along with the other web based files of DSC2GM. Alternatively, existing KML files such as weather radar overlays on public servers, can be linked to. The full path and file name of the KML file must be entered in the *DSC2GM.html* file.

**Note:** This is the *HTML* file **not** the *VBS* file which was edited for the local installation.

At the beginning of this file, following the USER DEFINITIONS described above, you will find the following:

```
// KML Map Overlays
  overlay[1] = "Continental 48";
  kmlLnks[1] =
"http://wdssii.nssl.noaa.gov/geotiff/CONUS/MergedReflectivityQCComposit
e.kml";
  overlay[2] = "Atlantic SouthEast";
  kmlLnks[2] =
"http://www.srh.noaa.gov/ridge/kml/animation/sectors/southeast_NOR_loop
.kml";
  . . .
  overlay[8] = "Pacific SouthWest";
  kmlLnks[8] =
"http://www.srh.noaa.gov/ridge/kml/animation/sectors/pacsouthwest_NOR_l
oop.kml";
  overlay[9] = "[Reserved]";
  kmlLnks[9] = "";
  overlay[10] = "[Reserved]";
  kmlLnks[10] = "";
```

Each overlay is defined by two entries. One, **overlay[]**, names the overlay and is what will display when the mouse pointer hovers over that selection in the overlay drop-down menu. The second, **kmlLnks[]**, is a fully specified link to the web server where the KML file exists.

For an overlay to work, the KML files must exist on a web accessible server. It cannot be on your PC hard drive. Only KML format files are supported. Compressed KMZ formatted files may work but must first be uncompressed into KML format.

## Alternate Data Sources:

---

The usual source of data to plot is the *dscdata.xml* file created by *DSC2GM.vbs* either locally or uploaded to a web server for use by a web accessible installation of DSC2GM.

There is also a provision for DSC2GM to use other XML data source files to plot Google Map data. These files must match the format supported by DSC2GM as represented by the *dscdata.xml* file. An alternate data source could be a second instance of DSC2GM running at a different location and uploading its XML data with a different name, to a web based DSC2GM installation. In that way two geographically separated DSC installations could be monitored on a single DSC2GM web site.

Another use for the Alternate Data Source feature is to create XML files of where you wish to display markers to identify specific positions. The most obvious use from the perspective of one who lives in a hurricane region is to plot the storm tracks of tropical storms. The coordinates and other pertinent data of an active storm can be captured from weather web sites and used to produce the necessary XML file which DSC2GM can then plot on the Google Map along with the usual ship positions from DSCdecoder.

To use these alternate data sources it is necessary to define them, much as was done for Overlays. In the same section of the *DSC2GM.html* file as the Overlays were defined, you will find the following:

```
// Input Data Sources
source[1] = "DSC Tracking";
srcFile[1] = "dscdata.xml";
source[2] = "Hurricane Hanna";
srcFile[2] = "1stdata.xml";
source[3] = "Hurricane Ike";
srcFile[3] = "2stdata.xml";
. . .
source[9] = "Reserved 2";
srcFile[9] = "8stdata.xml";
source[10] = "Reserved 3";
srcFile[10] = "9stdata.xml";

// END USER DEFINITIONS
//-----
```

Again as with Overlays, there are two entries for each data source to be defined. The **source[]** defines the name which will be used to identify the source and **srcFile[]** is the file name of the alternate data source. The file names can be whatever is desired with an *XML* extension. For normal operation of DSC2GM the first file name entry should be *dscdata.xml* to allow plotting of the usual DSC2GM data. The name of this entry can be whatever is preferred.

There are two formats of *XML* files supported. They are similar but differ somewhat in content and in the way they are presented when plotted.

The basic *dscdata.xml* file format was described previously in the section discussing **Log Files**. Any file from any source that matches that format and with appropriate data content, can be used as a data source to DSC2GM. Normally this would be multiple instances of DSC2GM with DSCdecoder running at different locations. Each instance of DSC2GM could upload the XML update files, with unique names, to a common server where they could all be accessed.

The other data source format is slightly different and was specifically designed to allow plotting severe weather such as hurricanes on the DSC2GM map along with the usual DSC data. The data fields are named the same as the standard file but some have somewhat different content.

```
<marker lat='23.50' lon='-68.30' mmsi='4' name='KYLE' call='45 1001' datim='09/25 21 GMT' type='201' hist='N'/>
```

The fields “lat” and “lon” are coordinates. The “mmsi” field is used to provide a storm number to distinguish between multiple storm tracks and must be unique for DSC2GM to properly display storm info. The “name” field is also for identifying the storm. In this format “call” is used for the maximum wind speed and minimum barometric pressure reported for the specific tracking position. The “datim” field is the date and time the storm was measured at that position. The “type” field is a coded indication of the storm category. The “hist” field is always ‘N’ for storm tracking entries.

The storm categories and codes are:

Description	Symbol	Color	Code
Tropical Depression	TD	White	200
Tropical Storm	TS	Grey	201
Hurricane Category 1	1	Yellow	202
Hurricane Category 2	2	Orange	203
Hurricane Category 3	3	Red	204
Hurricane Category 4	4	Purple	205
Hurricane Category 5	5	Black	206

In addition to creating and defining to DSC2GM the Alternate Data Source XML files, they need to be placed in the folder where DSC2GM was installed, either locally or on your web server.

A sample VB Script is included in the DSC2GM distribution package called **StormTracker.vbs** which will create the XML Alternate Data Source files and upload them to a web server. This script is designed to work with a specific data format from the storm weather web site:

<http://www.wunderground.com/tropical/>

The data comes from the selected storm historical tabular listing. This is explained in comments contained in the VBS file itself.

To use it for other purposes or web data sites will require user modification.

## DISTRIBUTION PACKAGE CONTENTS & UNPACKING

The DSC2GM distribution ZIP file includes the following files and folders:

<b>DSC2GMnn.zip</b>	The following files zipped together, <b>nn</b> is the version number.
<b>ReadMe.txt</b>	A very brief description to help with getting started.
<b>DSC2GM-Ref.pdf</b>	This considerably more detailed documentation.
<b>DSC2GM.vbs</b>	The executable <i>VB</i> script program.
<b>DSC2GM.html</b>	The <i>HTML</i> script that automatically runs using your browser.
<b>DSCstatus.vbs</b>	Utility to report running status of DSCdecoder and DSC2GM.
<b>cursorcoord.js</b>	These .js files are Javascript code used by DSC2GM.html.
<b>maptype.js</b>	
<b>dragzoom.js</b>	
<b>menusample.html</b>	A sample menu file to use with the DSC2GM.html Menu Link.
<b>StormTracker.vbs</b>	A sample VB Script to create Alternate Data Source XML files.
<b>nstdata.xml</b>	Several sample Alternate Data Source files of storm track data.
<b>d2gaux</b>	A folder containing images, sounds, and this PDF document.

The *ZIP* file should be unpacked into a folder of your choosing, anywhere on your system. The disk drive letter where the files are placed is needed to allow DSC2GM to function. This letter is entered during the **SET-UP** procedure described elsewhere in this document.

For web based use some of the above files must be uploaded to your web server as described above in the **INSTALLING AND USING DSC2GM ON THE WEB** section.

**To remove DSC2GM from your system**, simply delete the folder into which the *ZIP* file was unpacked, along with its contents and sub-folder.

## CHANGES, UPDATES AND FIXES

---

### **v4.1** Changes – 10/26/2008

- Added user selectable units of measure for distances and bearings.
- Added user selectable data source to allow multiple XML input files.
- Made Ship List, Legend and About Info displays clickable options.
- Changed User Input Area arrangement to better match typical use.
- Further expanded and improved tooltips for all user functions.
- Documentation improvements.

### **v3.1** Changes – 8/25/2008

- Added Drag & Zoom.
- Added Map Type selector.
- Added mouse pointer coordinates display.
- Added automatic range & bearing display from last placed marker.
- Added KML overlay support for weather radar display.
- Added tooltip help info to all buttons, controls and input boxes.
- Standardized font sizes in pop-up info boxes.
- Cosmetic changes to improve overall appearance.

### **v3.0** Changes – 8/7/2008

- Added Distance & Heading function with Route Plotting features.
- Disabled unused input fields for each Display Mode.
- Added ability to use [Enter] to input keyed-in entries.
- Changed so DSC2GM functions can work w/o DSCdecoder active.
- User interaction area format standardization for various browsers.
- Display font changed for better readability, other cosmetic changes.

### **v2.4** Changes – 1/28/2008

- Corrected display marker for stationary ships.

### **v2.3** Changes – 1/22/2008

- Added multiple Display Mode controls.
- Added Ship Track Mode.
- Added Route Planning Mode.
- Enhanced R&B Mode.
- Added coordinate input format conversion.
- Added new markers for Display Modes.
- Added Track and Route Tables.
- Added Help and Menu button functions.
- Added Display Mode sensitive Clear button.
- Removed reset of R&B on ship data update.
- Removed R&B info display above the map.

**v2.2** Changes – 12/30/2007

- Added VBS and HTML option for Coord, Range & Bearing window placement.
- Added range and bearing computation between positions clicked on the map.
- Added ITU country code translation and display using DSCdecoder mid\_ccc.txt file.
- Added menu page link and sample menu HTML file.
- Added ship name to MMSI in ship list beneath map.
- Added mouse pointer coordinates display to Legend.
- Illustrated version of PDF documentation available on-line.

**v2.1** Changes - 12/07/2007

- Added ship names to MMSI in "Ships Received" list.
- Added description of tool tip colors.
- Added terrain map type option.
- Added tracking marker to Legend.
- Added distress marker to Legend.
- Added distress message processing to VBS.
- Added distress message display to HTML.
- Improved shut-down options when DSCdecoder is not running.
- Included new marker in upload-files for web installation.

**v2.0** Changes - 11/29/2007

- Added web based hosting capabilities.
- Added Start-Up Commands.
- Added alert tone for new MMSI.
- Added DSCdecoder/DSC2GM status reporting utility.
- New feature and web installation documentation.

**v1.1a** Changes - 11/18/2007

- The logic for recording ship reports was changed to include stationary ships.
- Added statistics on ships underway and stationary.
- Updates and additions to the user documentation.

**v1.1** Changes - 11/16/2007

- Tracking Mode added.

**v1.0a** Changes - 11/12/2007

- Fixed MMSI numbers with leading zeros.
- Fixed display of 12PM.

**v1.0** Initial release - 11/06/2007

## DISCLAIMERS

---

I have no way other than with Windows XP - Home Edition Version 2002 - Service Pack 3, to test DSC2GM. It may work in other environments but that must be left to the user to determine. DSC2GM has been reported to work under the MS Vista operating system.

I have used the following browsers in testing DSC2GM:

- *Mozilla Firefox 3.0.3*
- *Opera 9.61*
- *K-Meleon 1.5.1 (Some rendering problems.)*
- *MicroSoft Internet Explorer 7.0.5730.11 (Security settings can prevent operation, some minor rendering problems.)*
- *Apple Safari 3.1.2 (There is a problem using the [Enter] key and with rendering.)*
- *Netscape 9.0.0.5 (and Netscape 7.2 & 8.1.3)*

*(Rendering problems tend to be spacing of web page elements that affects appearance but that does not affect accuracy or usability.)*

It is likely any browser that works with Google Map will work with DSC2GM. There is only one point of contact between the script and the browser when passing parameters and this seems to be consistent for all browsers except MSIE, which is handled uniquely by DSC2GM.

If I can possibly help with any questions or problems I will gladly do so.

Enjoy,

*W. Curt Deegan*

---

*This document last updated: October 26, 2008  
Concept, documentation and program Copyright 2007-2008 © W. Curt Deegan*