FURUNO

NavNet 3D Chart Installation Guide v2.0

MFD8/12/BB

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1. Data Catalog

Chart Data (Charts, Satellite Photos and 3D) must be installed on the NavNet 3D MFD's internal memory before it can be used by the Plotter. This chart installation is done from the Data Catalog menu page (as seen in *Figure 1.1*). To display the Data Catalog, press the [MENU] key. Turn the RotoKey to display the "Chart" page. Push the RotoKey and then turn the RotoKey clockwise to select the "Data Catalog" tab. Menus and tabs may also be selected using the cursor pad or a conventional mouse (if one is installed via the NavNet 3D USB connection).
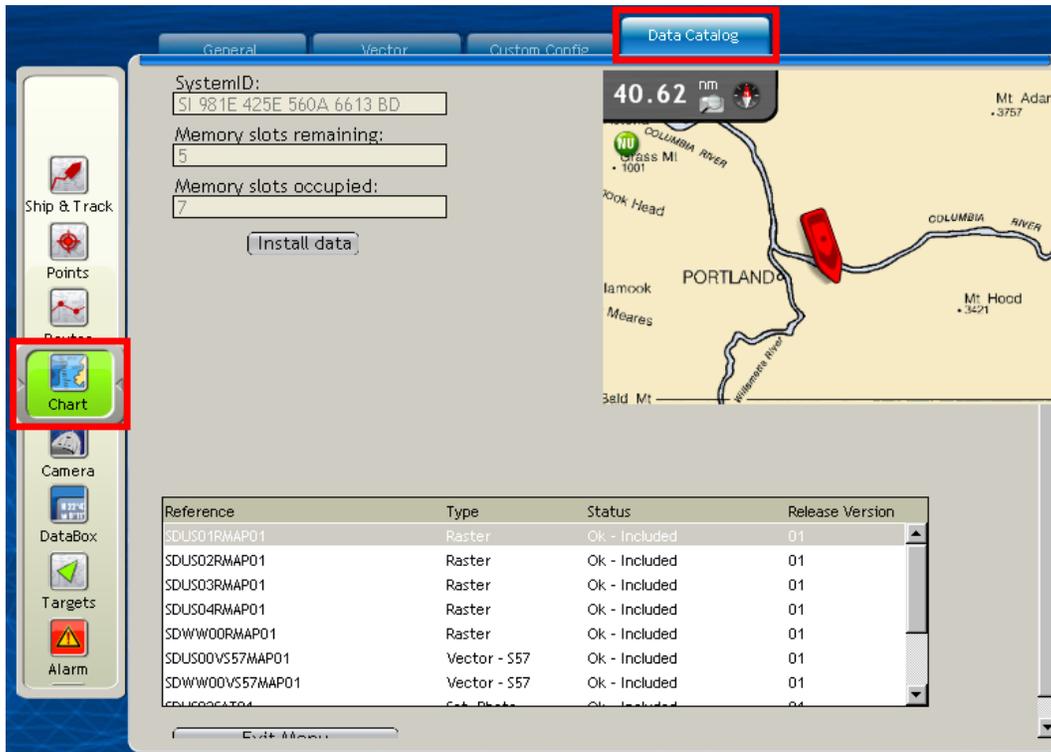
Figure 1.1

1.1. SystemID

The SystemID is a unique 20 digit number that identifies a NavNet 3D system. The SystemID is required to purchase charts, and must be provided when charts are ordered.

1.2. Memory Blocks

The MFD's internal memory is divided into "Memory Blocks," also referred to as "Memory Slots" in the system software. A memory block may contain a minimum of (1) area of data (Raster, Vector, Satellite Photo or 3D). NavNet 3D comes preloaded with chart data for the U.S. and has 3 memory blocks available to install additional data. NavNet 3D will show how many memory blocks are occupied and how many are remaining.

Note that if no memory blocks are available (Memory Slot remaining = 0), additional data may not be loaded until free space is created by deleting select data from the MFD. Please refer to section 5.2 for more information on how to free memory blocks.

1.3. Data List

The Data List shows all the Data Installed on the MFD's internal memory and gives basic information for each item installed. You can select the data by using the RotoKey or clicking on it with the cursor pad or a mouse (if installed). When Data is selected, the Preview screen automatically centers on it, giving basic information about the location of the Data. If you push on the RotoKey while the Data is selected (or right click on it) a menu will appear (Delete, Insert Unlock Code, Repair, etc.)

1.3.1. Reference

"Reference" is the name of the Data File
"Type" describes the type of data:
- Raster: Raster Charts
- Vector-S57: S57 Vector Charts
- Vector: Mapmedia Vector Charts
- Sat. Photo: Satellite Photo
- 3D: 3D (bathymetric/topographic) Information

1.3.2. Status

The following Status may appear:
- "OK – Included": For the Free Data
- "OK – Unlocked": For purchased data that was successfully unlocked (a correct Unlock Code was entered)
- "OK – Locked": The data was correctly copied onto the MFD, but no Unlock Code was entered. In this state, the Chart cannot be displayed until a valid Unlock Code is entered (select the Area and Push the RotoKey or Right Click on it to enter the Unlock Code; See section 4.3)
- "Corrupted": The Data cannot be read by the system. Select the Area and Push the RotoKey or Right Click on it to try to Repair It. If the area cannot be repaired, you will have to delete it from the Chart Catalog and re-install.

1.3.3. Release Version

All Data contains a release version (including the Free NOAA USA Data). When a customer purchases charts, he purchases an area with the current release version. The Unlock Code provided at this time will only work for this specific edition number (or earlier edition numbers). ROW (Rest of the World) charts will be updated approximately once per year and the edition number will be incremented.

2.   MM3D Chart Data Available on the Internet

2.1. Download Charts from the Internet

Free charts and Satellite Photos for the USA can be downloaded from the Furuno USA website at http://tinyurl.com/3uyogg. Navigate to this website manually by going to http://www.furunousa.com/furuno and selecting "Products > NavNet 3D > MapMedia Charts & Satellite Photos for NavNet 3D". Once here, select the area(s) and style chart(s) required. A list of the U.S. Raster Charts is shown in *Figure 2.1*:

Figure 2.1

Once you have located the specific chart you are looking for, click on the Chart Part Number (MM3-XXX-XXX). A link to download the chart is located in the lower right corner of the screen. Right click on the link and "Save Target As…" as shown in *Figure 2.2*:
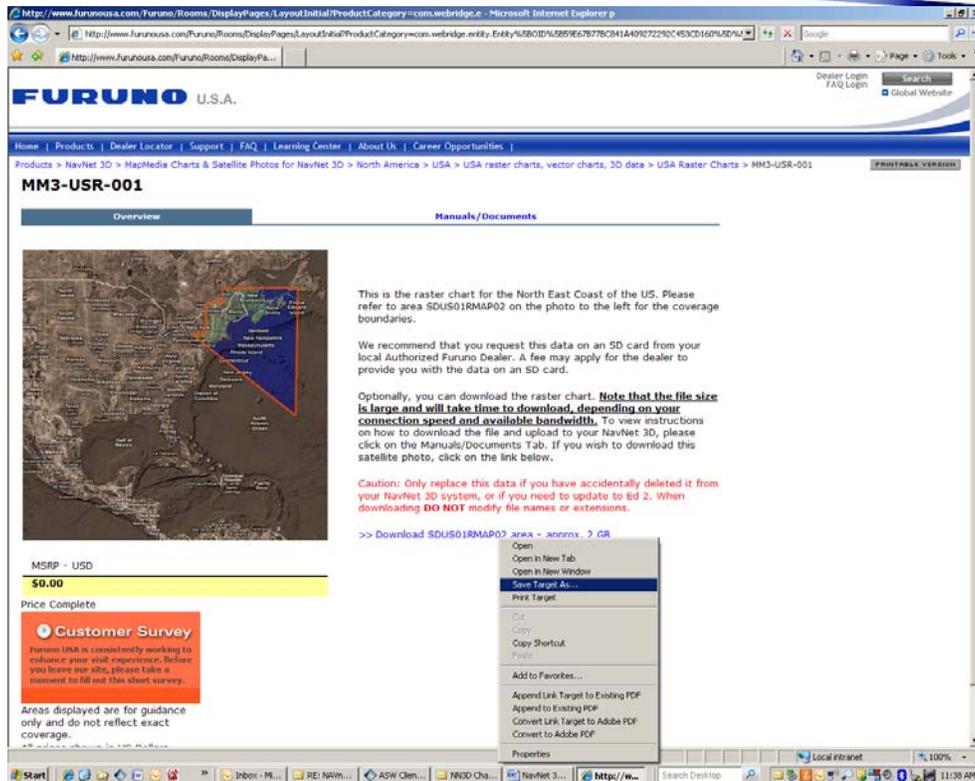
Figure 2.2

2.2. Unzip the Downloaded File

When the file download is complete, unzip and save the file in a folder designated by you.

2.3. Transfer Data to the SD-Card or USB Flash Drive

You can only use SD-Cards to transfer Chart Data to an MFD8/12. However, you can use a USB Flash drive (2,4,8 or 16GB) to transfer multiple charts to the MFDBB using the USB2.0 port on the processor (much faster than using an SD-Card).

2.3.1. Copy the Chart Data

Only one set of data, either high resolution Satellite Photo(s) or Chart Pack(s) can be copied to the Windows clipboard at a time.

Copy High Resolution Satellite Photo

To copy high resolution Satellite Photo(s), right click on the ".dba" file you unzipped and choose "Copy". (See *Figure 2.3*)

Warning: Do NOT rename the file or change its extension.

Figure 2.3

Copy Chart Pack(s)

To copy Chart Packs, select all of the files in the folder you unzipped (CTRL-A or "Edit" > "Select All"), then copy the files (CTRL-C or "Edit" > "Copy"). (See *Figure 2.4*)

<u>*Warning:*</u> *Do NOT rename the file or change its extension.*
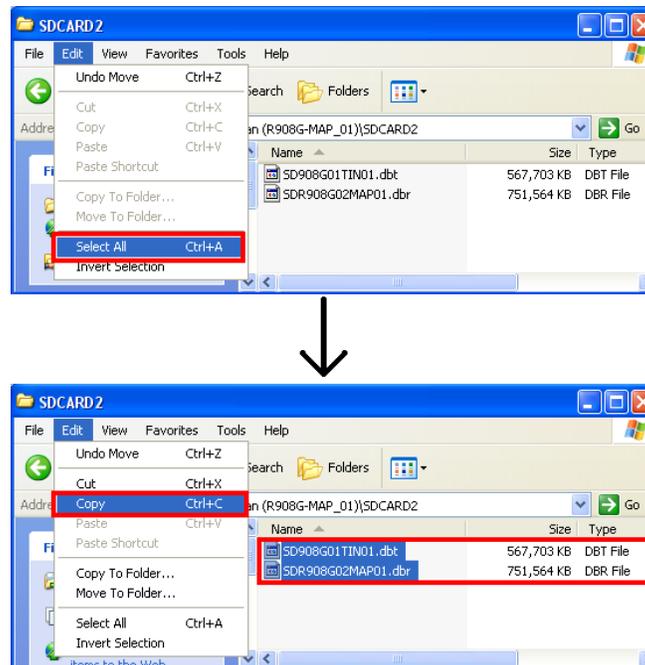
Figure 2.4

*Note: If the folder contains only one file, right click on the file and select "Copy" from the menu (*See *Figure 2.5)*
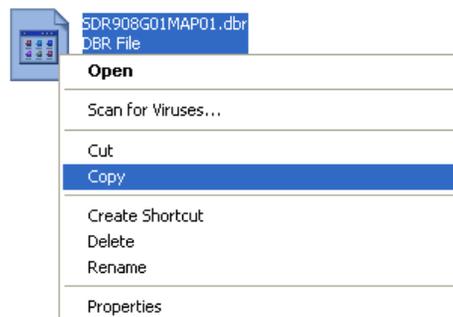
Figure 2.5

2.3.2.   Paste the Chart Data

Note: Please refer to the Appendix at the end of this document (Section 6.) to learn how to properly format the SD-Card or the USB flash drive prior to pasting the chart data.

Insert a properly formatted 2GB SD-card into the SD-Card reader of the computer or a USB flash drive. If a folder doesn't automatically open, follow the instructions below:

- Click Start and select "My Computer".
- Double-click on the Removable Disk. The name of your external drive may vary (see *Figure 2.6*).
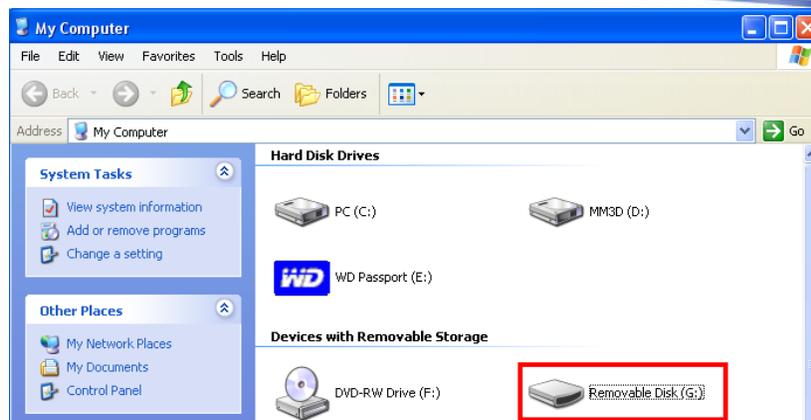
Figure 2.6

Paste the file(s) at the root directory of the SD-Card or Flash Drive (CTRL-V or "Edit" > "Paste"). (See *figure 2.7*)
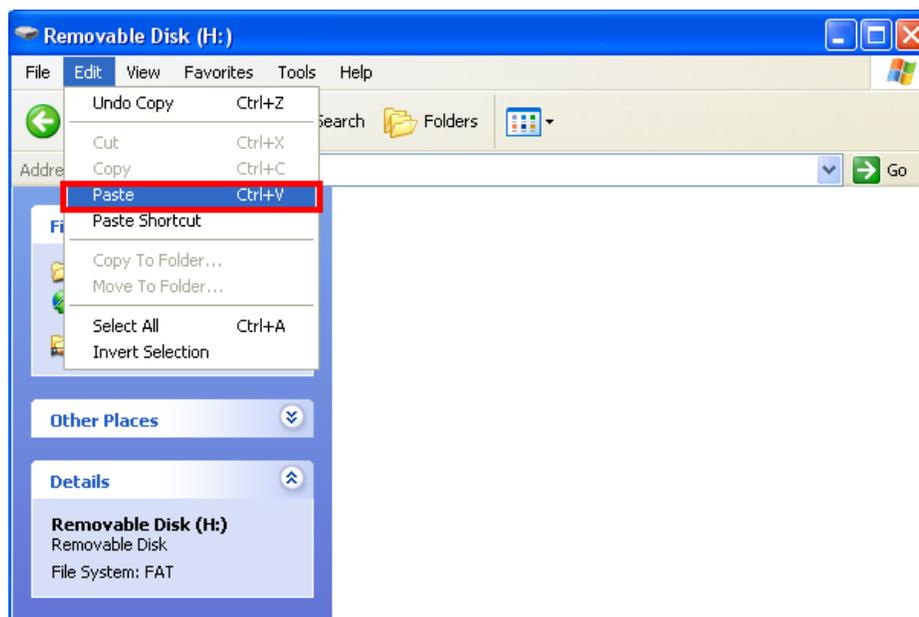
Figure 2.7

Note: If you are using a Flash Drive to load charts into a MFDBB, you can load multiple chart packs at the same time. Make sure however to not overload the MFDBB memory. You can simply look at the number of Memory Slots available (Menu -> Chart Catalog) and multiply this value by two. This will give the number of Gigabits that are available in the MFDBB to load charts (ex: if four memory slots are available, you can load up to 8GB of data onto the Flash Drive)

When the transfer is completed, remove the SD-Card or the Flash Drive

Note: To safely remove the SD-Card or Flash Drive, return to the My Computer window, right-click on the External Drive, then click Eject.

3. MM3D USB Hard-Drive Introduction

The MM3D external USB hard-drive contains chart data that can be used with NavNet 3D. The chart data can be copied onto SD-Cards (2GB SanDisk SD-Cards recommended) or USB Flash Drive (MFDBB only) then installed into the NavNet 3D MFD(s) using the integrated SD-Card reader of the display (MFD8/12) or USB2.0 port (for the MFDBB).

Furuno USA strongly recommends the use of the external USB hard-drive as the best method for loading chart data onto SD-Card(s)/Flash Drive.

All the Data contained in the "USA-MAPxx" folder can be installed into any NavNet 3D display (free data). The Data contained in the other folders can be copied and distributed but will require an Unlock Code when installed into any NavNet 3D MFD.

Warning: Do NOT rename or change the extension of any files contained on the external USB hard-drive.

The instructions below explain how to transfer the Data from the external USB hard-drive to the SD-Card(s) or Flash Drive. Please note that you can also transfer the entire contents of the external USB hard-drive to a computer that will become the "chart server" (this will improve the transfer speed to the SD-Card)

Note: PC Required. The external USB hard-drive cannot be connected directly to NavNet 3D: SD-Cards or Flash Drive are required to transfer the data.

3.1. Connecting the Hard-Drive

Insert the USB cable of the external USB hard-drive directly into an available USB port on your PC. The USB connection will be used to transfer data and power to the external USB hard-drive (no extra power supply is required).

Note: In the lower right-hand corner of your screen, you may see a message indicating that a new device has been detected. It may take about 10 seconds until you see "Device is ready for use."

If the external drive folder doesn't automatically open, follow the instructions below:
- Click Start and select "My Computer".
- Double-click your external hard-drive icon. The name of your external drive may vary. For example: MM3D (D:) (see *Figure 3.1*):
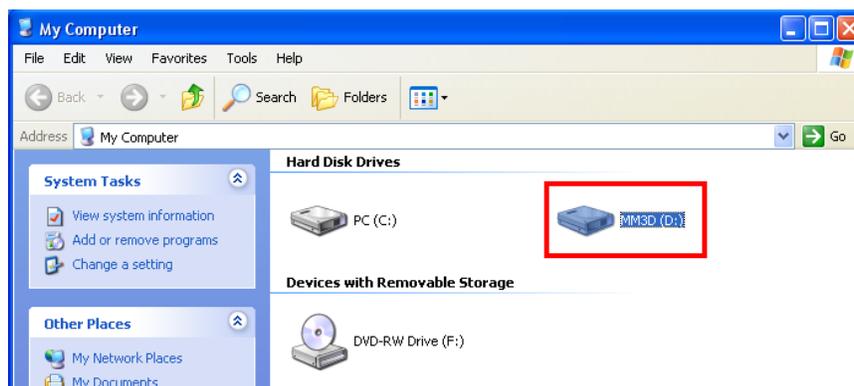
Figure 3.1

3.2.   Hard-Drive File Structures

The hard-drive contains multiple folders and subfolders. The first level allows you to choose your ChartPack (see *Figure 3.2*)

Note: You can refer to the "HDD Chart Pack References.pdf" document (included at the root of the Hard-Drive) to view a description of the ChartPack Reference
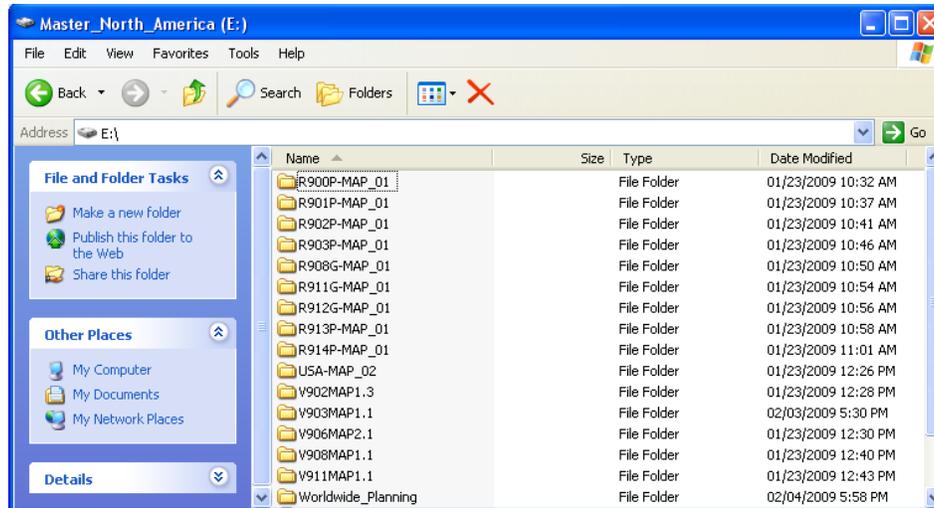
Figure 3.2

A Chart Pack consists of multiple data: Nautical Charts, Satellite Photos and 3D Data. In some cases, multiple SD-cards will be required for one Chart Pack. In this example (Chart Pack for the Caribbean), you will need (2) SD-Cards for the Chart and 3D data and (2) SD-Cards for the optional Satellite Picture (see *Figure 3.3*).

Note: If you are using a Flash Drive to load chart into a MFDBB, you can load multiple chart packs at the same time. Make sure however to not overload the MFDBB memory. You can simply look at the number of Memory Slots available (Menu -> Chart Catalog) and multiply this value by two. This will give the number of Gigabits that are available in the MFDBB to load charts (ex: if four memory slots are available, you can load up to 8GB of data onto the Flash Drive)
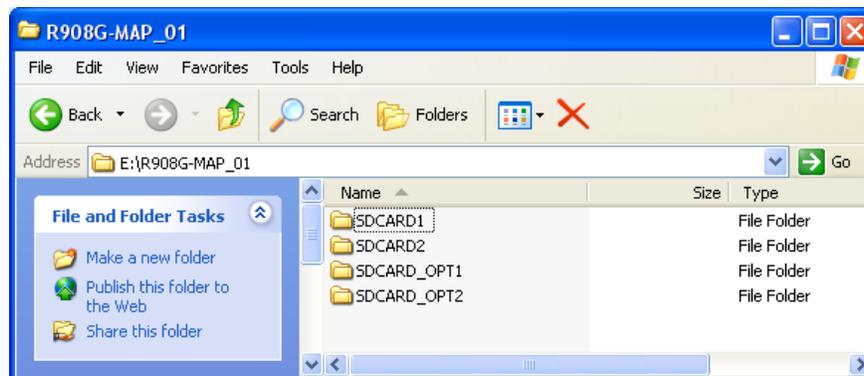
Figure 3.3

Some Chart Packs have additional high resolution Satellite photos (ex: Bahamas, France, USA…). These Chart Packs have a "Sat_Photo_HR" folder (see *Figure 3.5*)
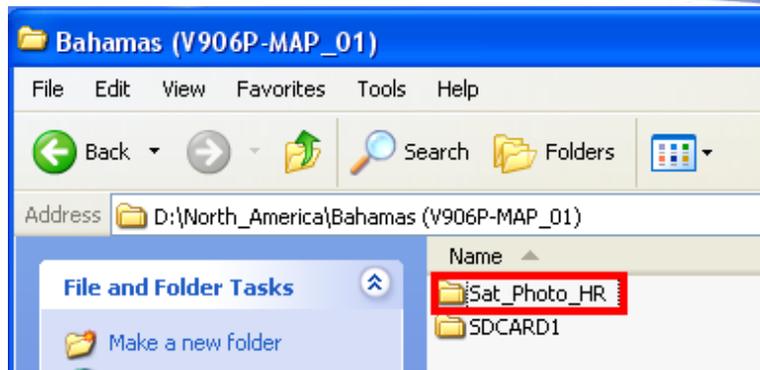
Figure 3.5

Due to very high resolution and full coastline coverage, the Satellite Photos are divided into smaller sub-areas. A document describing the Satellite Photo boundaries is included inside each "Sat_Photo_HR". This will allow you to pick only the areas you are interested in.

3.3. Transfer Data to the SD-Card or Flash Drive
Note: Please refer to the Appendix at the end of this document (Section 6.) to learn how to properly format the SD-Card or Flash drive prior to pasting the chart data.

Open the first folder "SDCARD1". Select all the files inside the folder (CTRL-A or "Edit" > "Select All"). Copy all of the files (CTRL-C or "Edit" > "Copy"). (See *Figure 3.6*)
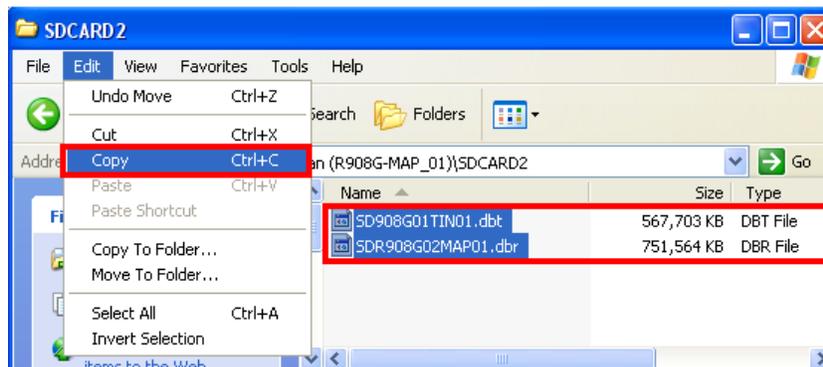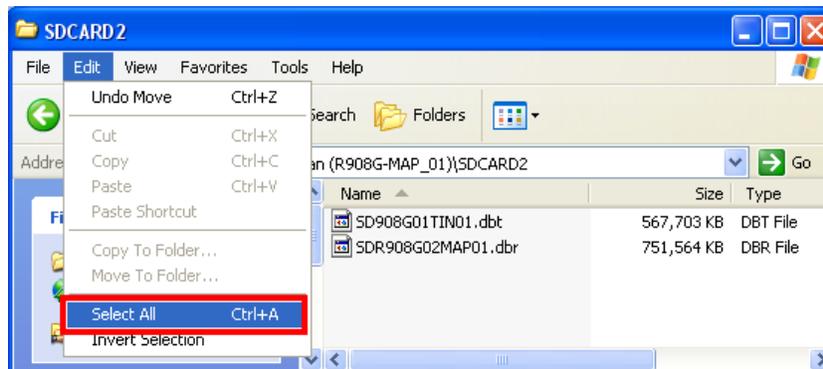
Figure 3.6

Note: If the folder contains only one file, right click on it and select "Copy" from the menu (See Figure 3.7)
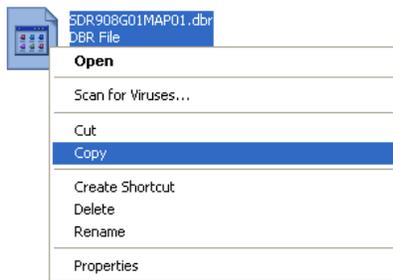
Figure 3.7

Insert a properly formatted SD-card into the SD-Card reader of the computer. If the SD-Card folder doesn't automatically open, follow the instructions below:

- Click Start and select "My Computer".
- Double-click on the Removable Disk. The name of your external drive may vary. (See *Figure 3.8*)
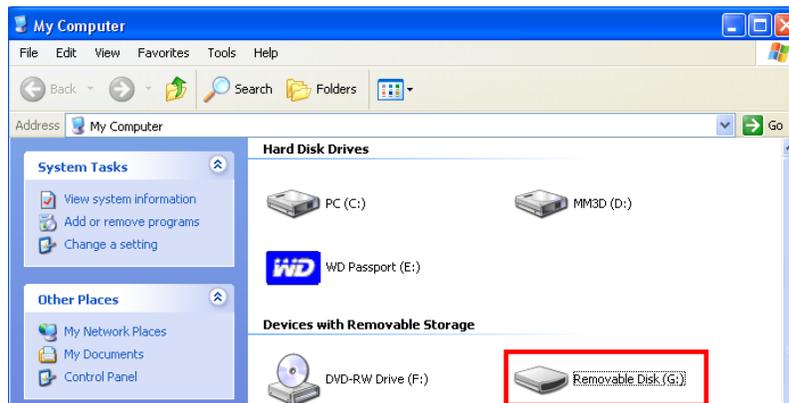
Figure 3.8

Paste the file(s) at the root of the SD-Card/Flash drive folder (CTRL-V or "Edit" > "Paste"). (See *Figure 3.9*)

Note: All the chart files must be at the root directory of the SD-Card or Flash Drive
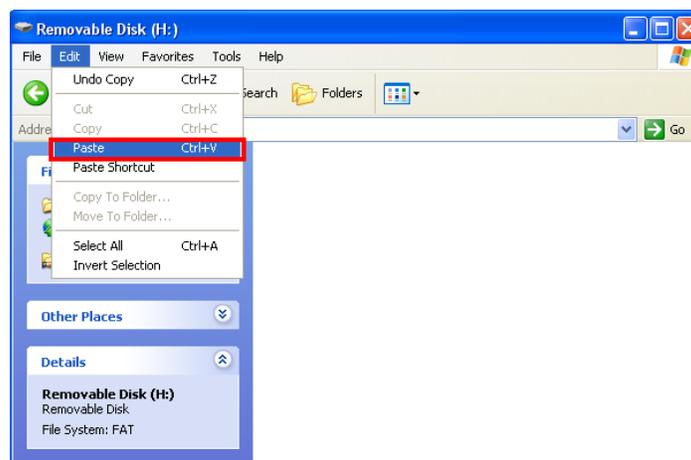
Figure 3.9

When the transfer is completed, remove the SD-Card or Flash Drive and repeat this process to copy the contents of the other folders (SDCARD2, SDCARD3…) onto other SD-Cards if needed.

Note: To safely remove the external USB hard-drive or the SD-Card, return to the My Computer window, right-click on the SD-Card or external USB hard-drive, then click Eject.

4. How to Install New Data onto the MFD
4.1. Introduction
When you purchase a Chart Pack, the data (charts, 3D, Sat. Photo) may be split into multiple files that must be loaded onto multiple SD-Cards. Satellite Photos for the U.S. are divided into specific areas, with each area fitting on one SD-Card. On the MFDBB a USB Flash Drive can be used to load multiple areas at the same time. Make sure however to not overload the MFDBB memory. You can simply look at the number of Memory Slots available (Menu -> Chart Catalog) and multiply this value by two. This will give the number of Gigabits that are available in the MFDBB to load charts (ex: if four memory slots are available, you can load up to 8GB of data onto the Flash Drive)

When a Chart Pack is purchased, an Unlock Code will need to be entered after the chart is copied onto the Internal Memory of the MFD.

4.2. Transfer Data to the NavNet 3D MFD
Chart Data (Charts, Satellite Photos and 3D) must be installed on the NavNet 3D MFD's internal memory before it can be used by the Plotter. This process must be repeated on every MFD in the network.

Insert the SD-Card into the upper slot of the MFD on which data is to be loaded. On the MFDBB, you can also connect a USB Flash Drive containing the data you want to load to a USB2.0 port (this will make the transfer much faster). Press the [MENU] key, select the "Chart" page and then select "Data Catalog". Press the "Install Data" button (as seen in *Figure 4.1*).

Figure 4.1

Select "Yes" when the following prompt appears (as seen in *Figure 4.2*):
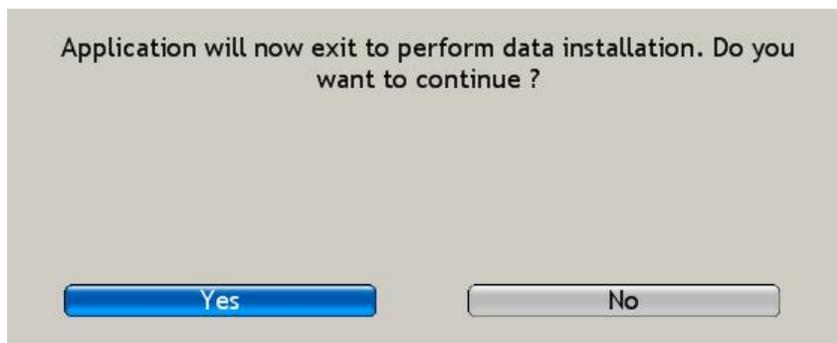
Figure 4.2

The transfer will begin and a window displaying a progress bar will appear (as seen in *Figure 4.5*).

Figure 4.5

4.3. Unlock Chart Data

Note: Unlock Codes are not necessary for U.S. Satellite Photos, Vector Charts or Raster Charts. This section applies only to Chart Packages that have been purchased.

Charts not included as standard on the NavNet 3D MFD are encrypted because of royalty payments due to each Hydrographic Office. Unless an Unlock Code issued by Furuno is entered, the charts copied into the NavNet 3D MFD cannot be viewed. The chart ordering process is based on SystemID (to identify the customer) and Unlock Codes (provided after purchase to unlock the chart).

The SystemID is required to purchase charts and must be provided when the chart is ordered. In order to access the SystemID, the NavNet 3D network must be set-up and configured properly. Press [MENU] on any NavNet 3D display and turn the RotoKey (clockwise) to select the "My NavNet" menu page. (See *Figure 4.6):*

Figure 4.6

Simply order the Chart(s) using the Chart Part Number and the SystemID.

Note: The Chart Part Number(s) can be found online at http://tinyurl.com/3uyogq

An Unlock Code can only authorize one specific area (one Unlock Code per area per type of chart - Raster or Vector). An Unlock Code is linked to a specific SystemID (the same Unlock Code cannot be used to unlock the same area on different systems).

The Unlock Code may be entered at any time from the Chart Catalog. Right Click on the area whose status is "Locked" and choose "Insert Unlock Code" (as seen in *Figure 4.8*)

Figure 4.8

Use the RotoKey to enter the Unlock Code:
- Rotate the RotoKey to select your character
- Push the RotoKey to validate the current character and move to the next one
- Press the [CANCEL] key to move back and correct a previous character.

Note: This operation may also be performed via a mouse and keyboard, if installed

Note: If multiple data areas have been purchased, you must enter the Unlock Code for each corresponding area.

5. Memory Availability

5.1. Introduction

Every NavNet 3D MFD comes preloaded with the following data for the U.S (NOAA Ed.2):

- USA Raster Charts
  - SDUS01RMAP02.dbr (US North East)
  - SDUS02RMAP02.dbr (US South East)
  - SDUS03RMAP02.dbr (US Gulf Coast)
  - SDUS04RMAP02.dbr (US Great Lakes)
  - SDUS05RMAP02.dbr (US West Coast)
  - SDUS06RMAP02.dbr (US Hawaii)
  - SDUS07RMAP02.dbr (US South Alaska)
  - SDUS08RMAP02.dbr (US Aleutian Islands)
  - SDUS09RMAP02.dbr (US North Alaska)

- USA Vector Charts
  - SDUS00VS57MAP01.dbv (Entire USA)

- USA 3D Bathymetric
  - SDUS00MAP3D02.dbt (West Coast USA)
  - SDUS01MAP3D02.dbt (East Coast USA)

- 1 Satellite Photo Areas
  - SDUS22SAT01.dba (Miami and the Keys)

You can remove some of the preloaded data to free up memory slots.
For example, if you are boating on the East Coast only, you can remove:

  - SDUS04RMAP02.dbr (US Great Lakes)
  - SDUS05RMAP02.dbr (US West Coast)
  - SDUS06RMAP02.dbr (US Hawaii)
  - SDUS07RMAP02.dbr (US South Alaska)
  - SDUS08RMAP02.dbr (US Aleutian Islands)

This will free 4 memory slots that will become available for additional data.

5.2. Deleting Data

Press the [MENU] key, select the "Chart" page and select the "Data Catalog". Right click on the Data you want to remove, or select the data and push the RotoKey (as seen in *Figure 5.1*).
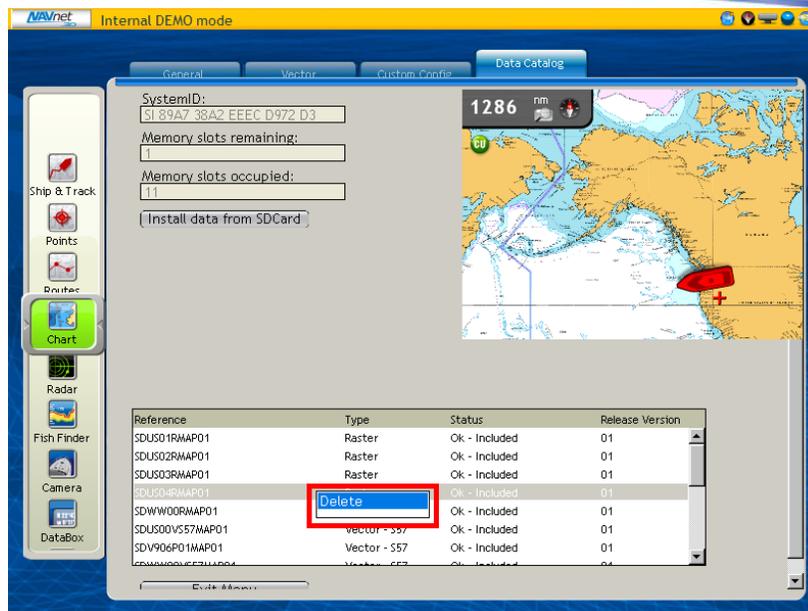
Figure 5.1

A confirmation window will appear (as seen in *Figure 5.2*).

Warning: This operation cannot be cancelled. Make sure you are removing the correct files before confirming. If purchased chart data is deleted by mistake, you can re-load the charts using an SD-Card and the original Unlock Code(s).
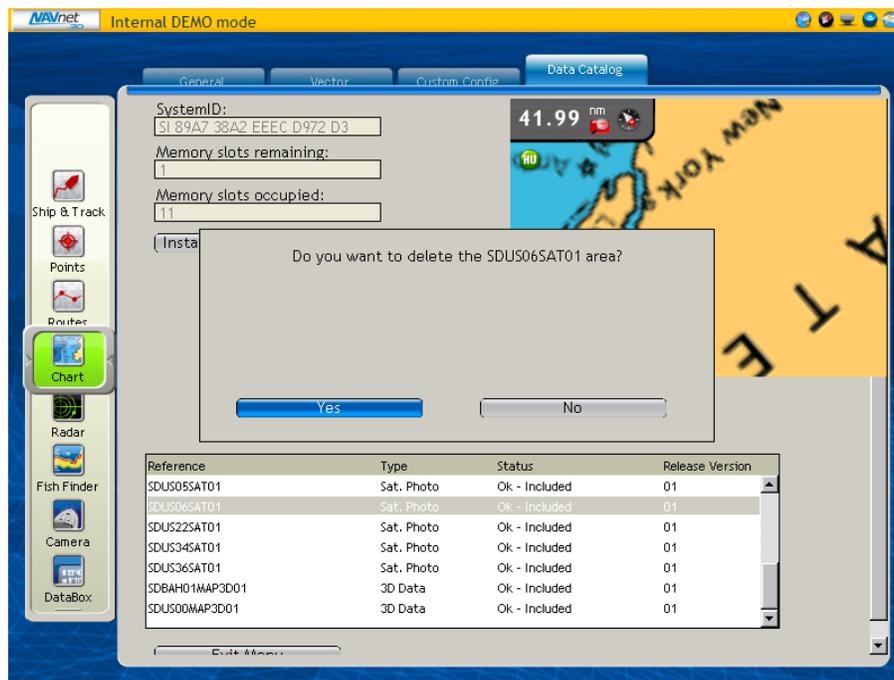
Figure 5.2

Note: If you deleted the wrong area by mistake, you can download this data from the Furuno USA website (http://tinyurl.com/3uyogq) or contact your authorized Furuno dealer.

6. Appendix
6.1. How to Format an SD-Card

6.1.1. Introduction

SD-Cards must be formatted properly before transferring files to them for use with NavNet 3D.

You can use the default function of Windows (Vista/XP or 2000) however we highly recommend you use a formatting program that complies with the SD Memory Card specification.

6.1.2. Format an SD-Card Using Software (recommended)

Download and Install the formatting software available at:
http://panasonic.jp/support/global/cs/sd/download/sd_formatter.html

Once the software is installed, insert the 2GB SD-Card you want to format and launch "SDFormatter" (Start > All Programs > Panasonic > SDFormatter V2.0). The Drive Letter of the SD-Card should automatically be selected (click "Refresh if not"). (See *Figure 6.1*)

Figure 6.1

Leave all of the options on the default settings and click on "Format". A confirmation message will appear upon completion (see *Figure 6.2*)
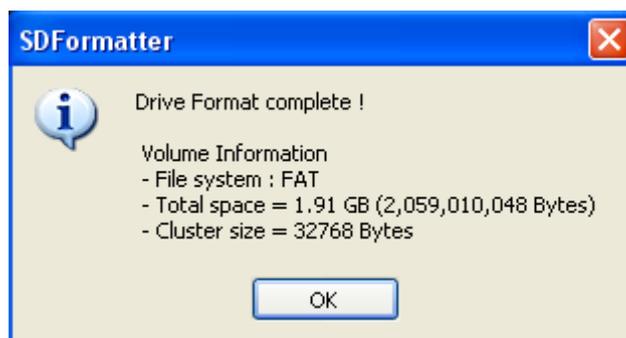
Figure 6.2

6.1.3. Format an SD-Card Using Windows

Insert the SD-Card into the SD-Card reader of the computer. If the SD-Card folder automatically opens, close it. Click Start and select "My Computer". Right-click on the Removable Disk and choose "Format…" (See *Figure 6.3*). The name of your removable drive may vary.
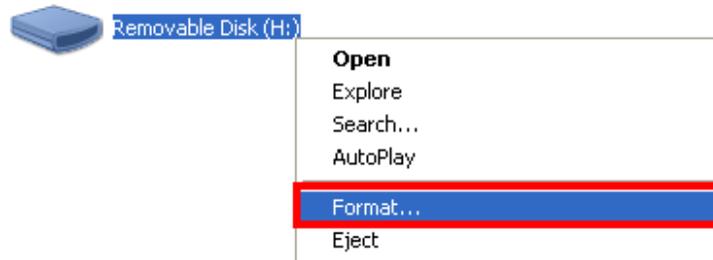
Figure 6.3

Select **"FAT"** and "Quick Format" then click on "Start" (see *Figure 6.4*)
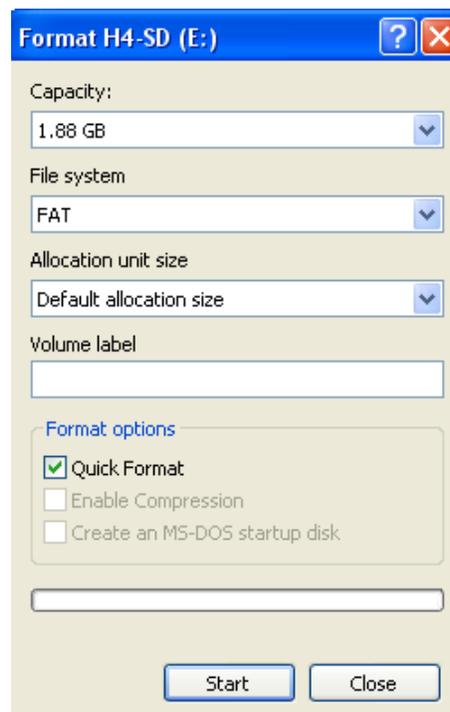
Figure 6.4

6.2.   How to format a USB Jump Drive

Insert the USB Flash Drive into the USB2.0 port of the computer. If the Flash Drive folder automatically opens, close it. Click Start and select "My Computer". Right-click on the Removable Disk and choose "Format…" (See *Figure 6.5*). The name of your removable drive may vary.
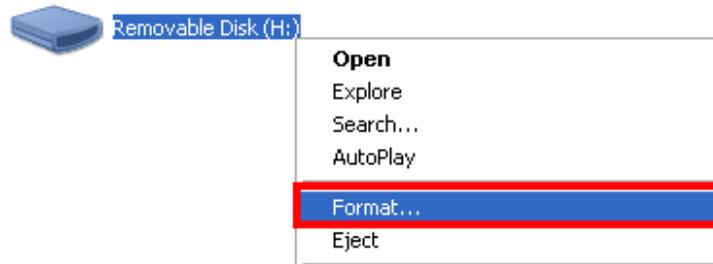
Figure 6.5

Select **"FAT32"** and "Quick Format" then click on "Start" (see *Figure 6.6*)
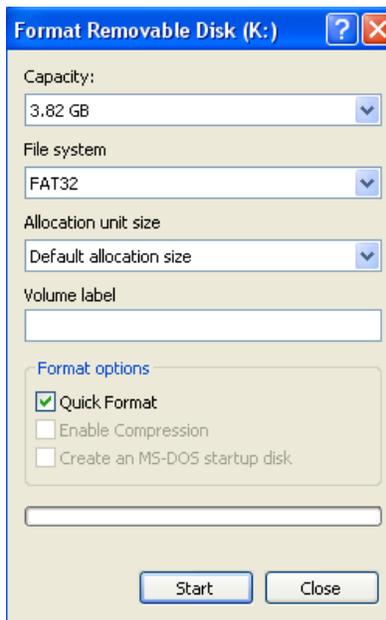
Figure 6.6

6.3.   Recommended SD-Card

Furuno USA offers compatible 2GB SD cards (part number SD1-BNK-003). If you are purchasing blank SD cards from an alternate source, we strongly recommend you use only 2GB SanDisk SD-Cards, as they have been tested by Furuno USA for transferring data to NavNet 3D.