

**Electronic Precise Integrated Navigation System  
(ECPINS) DOWNLOAD/INSTALL/UPDATE  
CHARTS JOB AID**



**Version 1.0  
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**Training Branch,  
United States Coast Guard  
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## **PREFACE**

This document contains the Electronic Chart Precise Integrated Navigation System (ECPINS), Versions 5.0.4 and 5.1.0.6, Chart Download / Install/ Update Job Aid as designed, developed, and approved by the Systems Training Branch of the United States Coast Guard Command and Control Engineering Center, Portsmouth, VA.

# ECPINS DOWNLOAD / INSTALL / UPDATE CHARTS JOB AID

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## **INTRODUCTION**

This job aid provides detailed steps to download, install, and update Electronic Nautical Charts(ENCs), Raster Nautical Charts (RNCs), and Digital Nautical Chart s(DNCs) using the Electronic Chart Precise Integrated Navigation System (ECPINS). It is normally performed by the CO, OIC, Navigator, OOD, JOOD, or other qualified bridge watchstanders.

## DOWNLOAD CHARTS FROM THE INTERNET

### PROCEDURES TO DOWNLOAD ENC AND RNC CHARTS FROM NOAA WEBSITE

**NOTE:**

Updates to both ENC and RNC (BSB) charts are available at the following web addresses:

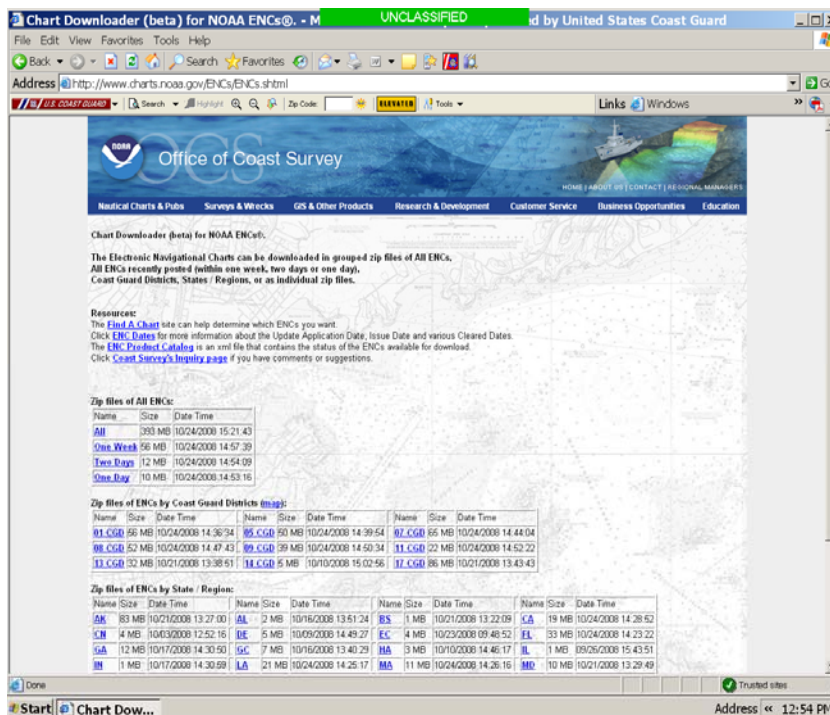
<http://www.charts.noaa.gov/ENCs/ENCs.shtml>

<http://www.charts.noaa.gov/RNCs/RNCs.shtml>

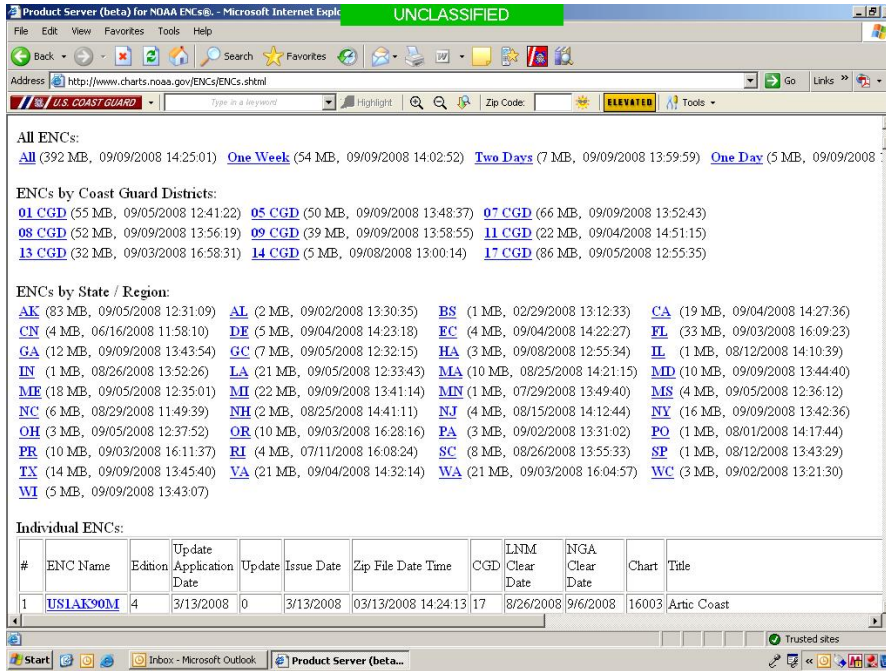
The procedures for downloading ENC and BSB charts are the same except where noted.

ENC procedures are shown.

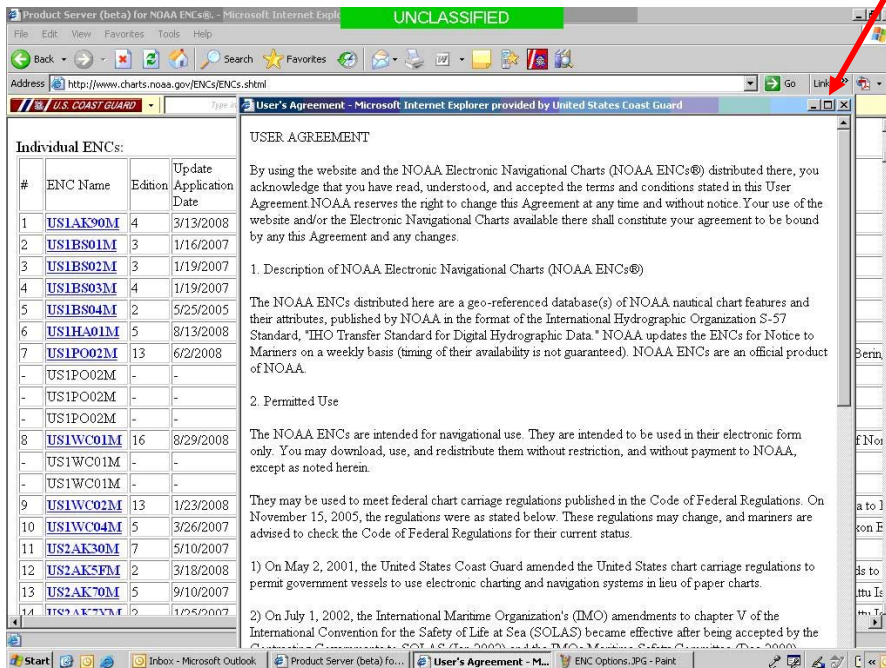
1. From a Standard Workstation III (SWIII), open Internet Explorer.
2. Go to: <http://www.charts.noaa.gov/ENCs/ENCs.shtml>.



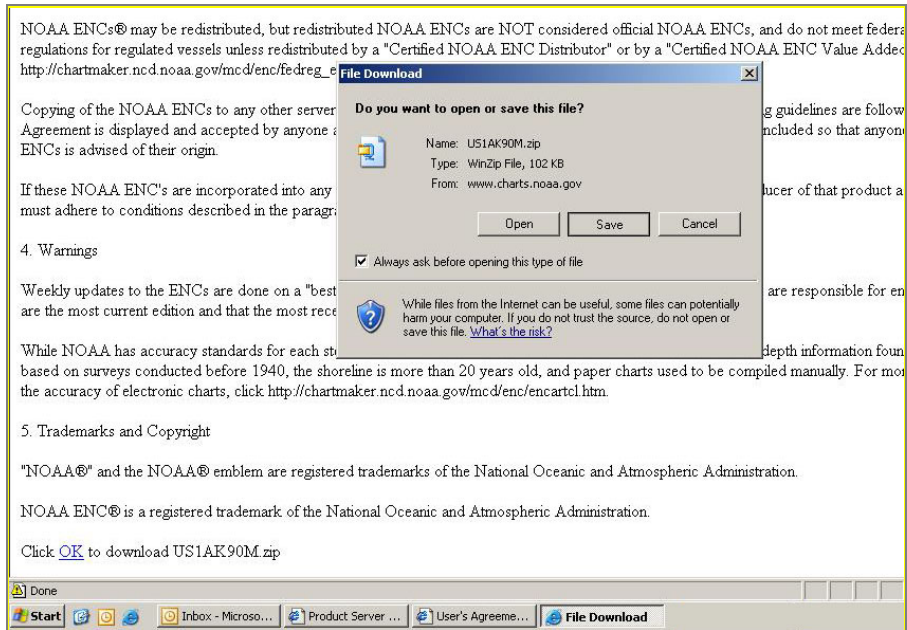
3. Click on a link from the following categories:
  - a. All ENC's
  - b. ENC's by Coast Guard Districts
  - c. ENC's by State/Region
  - d. Individual ENC's



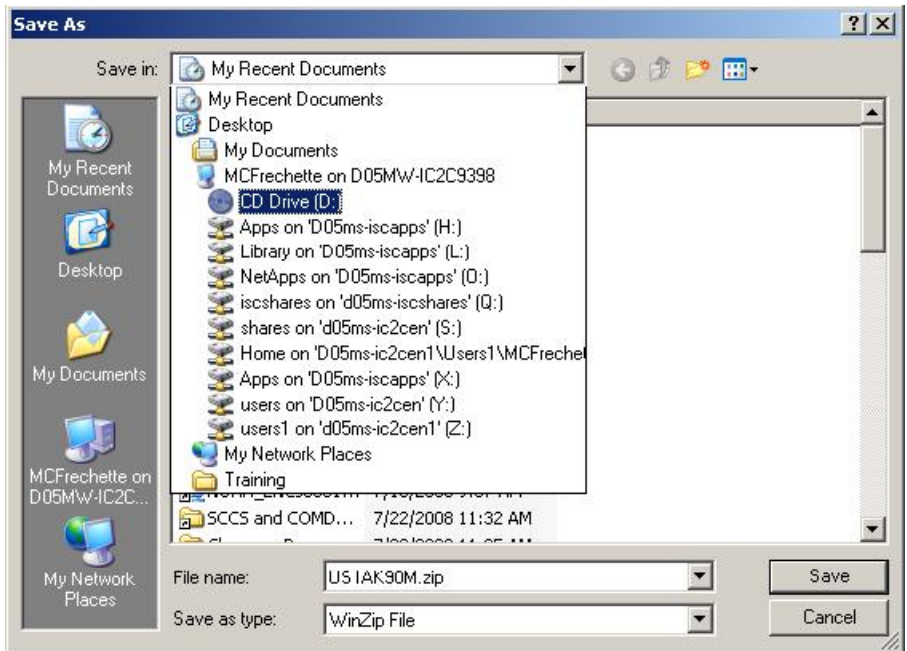
4. Maximize the USER AGREEMENT window.



5. Read the **USER AGREEMENT** and click **OK** at the bottom of the window.
6. Click the **Save** button.



7. From the *Save as* dropdown menu, select the desired location to save the file (i.e. My Documents).



8. Click **Save**.



**NOTE:**

*The Download **may** take several minutes if grouped charts were selected.*

9. Click **Close** when the download is complete (if necessary).



10. Close the USER AGREEMENT window.

11. Repeat steps 3 thru 10 as necessary.

**NOTE:**

*When downloading multiple chart types, it is recommended that you complete all downloads prior to burning to CD.*

12. Exit Internet Explorer.
13. Access the folder where you saved the downloaded chart(s) and unzip the files.
14. Ensure that a blank CD is in the CD drive.
15. Transfer the unzipped files to a CD. Insert this CD into the ECPINS station that you are applying the correction to.

**NOTE:**

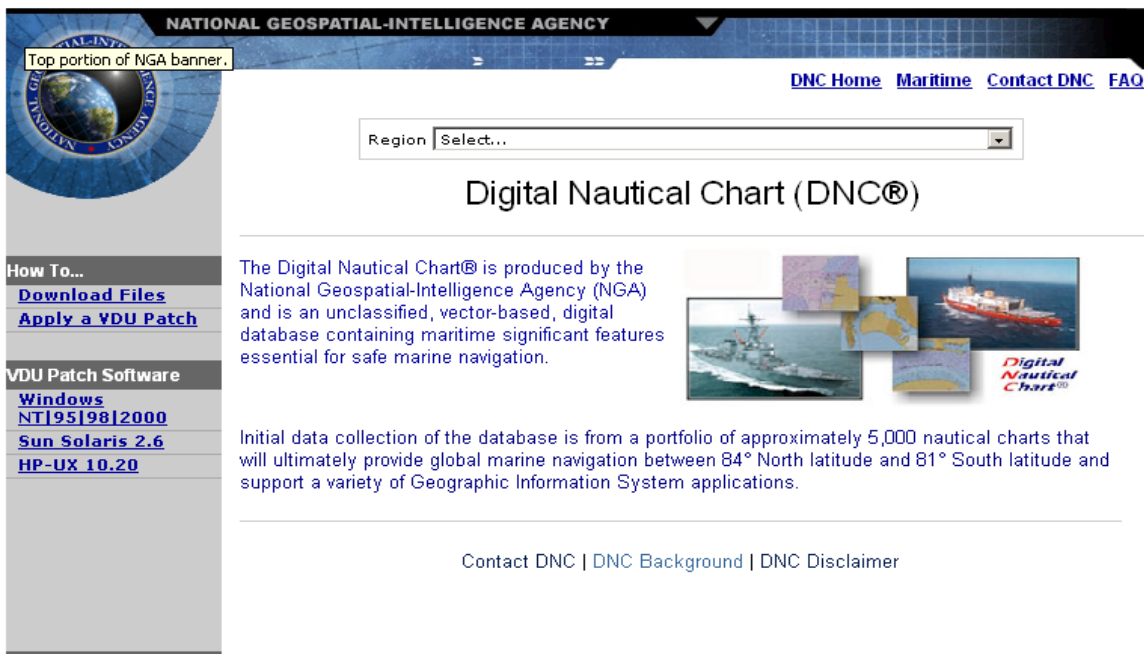
*Updates must be installed on the system where the chart folder resides (i.e. Route Monitoring, Route Planning, and Backup)*

**PROCEDURES TO DOWNLOAD DNC CHARTS FROM NGA WEBSITE**

DNC updates are available through the National Geospatial-Intelligence Agency (NGA) website as update files to the current edition of DNC CDs that have already been loaded onto your system.

To download DNC corrections from the Internet, the following steps should be accomplished.

1. Log on to the Internet at a Standard Workstation that has CD burning capabilities.
2. Open web page [www.nga.mil/portal/site/dnc](http://www.nga.mil/portal/site/dnc).



(Example NGA web page)

3. Select the region that you wish to correct from the “region drop-down menu.” The web page will change and display the area chosen, along with the edition number, and the Notice to Mariners (NTM).

The screenshot shows the NGA website interface for the DNC page of DNCDX013 - North America West. The page title is "DNCDX013 - North America West" and it indicates it is the "Current on Edition 16". A red box highlights the "Region" dropdown menu, which is labeled "CD region edition number". Below the title, there is a "Chart to Library Reference" button and a "Disclaimers" section. The "Edition Patches" section is highlighted with a red box and labeled "If the CD edition installed on ECPINS is not current, use this to update". It lists two patches: "Windows (20.09 MB)" and "Unix/Solaris (18.98 MB)". The "Library Catalog" section is also highlighted with a red box and labeled "Coverage groups available for selection". It lists various coverage groups: "Browse", "General", "Harbor", "Approach", "Coastal", "All", and "Totals". The "Totals" section shows "Libraries:105" and "Charts:195".

Example NGA DNCDX013 – North America West web site

4. Compare the region edition number against the edition you have installed on ECPINS. If the edition number you currently have installed on ECPINS is older than the version listed on the web page, select the “WINDOWS” edition patch on the web page. This will update the chart installed on ECPINS to the current edition.

**WARNING:** If you use the edition patch, you will not be able to apply future corrections via the web to that CD region. When the new edition CD arrives, you will need to uninstall the DNC charts for that region and reinstall them from the CD, then complete the correction process using the library catalog.

5. From the Library catalog, select the appropriate coverage group. Usually, you will need to apply corrections for each coverage group, with each coverage group comprising a separate update process.

After you select the coverage group, the web page will look like this:

Region: DNCDX013 - North America West - to NtM 45/04

### General Libraries [return to region](#)

The VDU patches below will update certified libraries on **Edition 16** to **NtM 45/04**.

\*To download individual libraries or patches, right-click on the link and choose 'Save Target As' (for IE) or 'Save Link As' (for Netscape). To download multiple files at once, use the checkboxes to select the files, and click the 'Download' button at the bottom of the list.

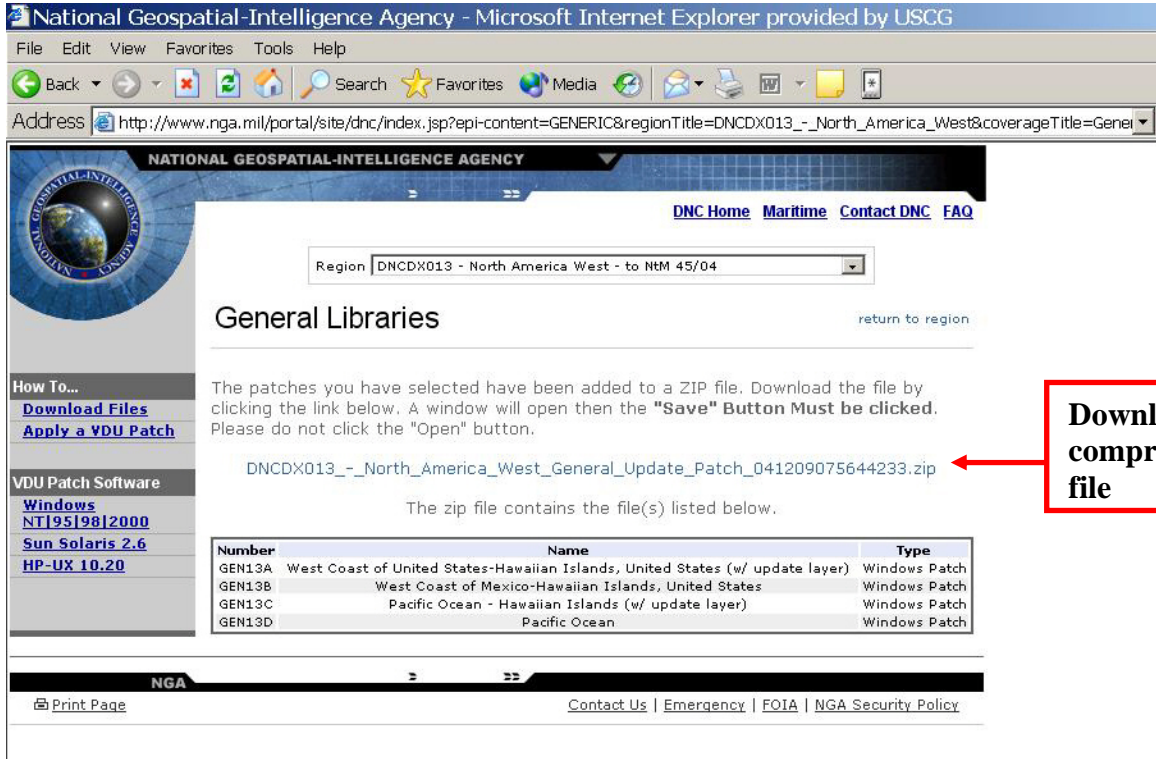
Images  
Generals

Number	Name	Download full library	Download VDU Patch (Windows)	Download VDU Patch (Unix)	Graphic
		<input type="checkbox"/> check all	<input checked="" type="checkbox"/> check all	<input type="checkbox"/> check all	
GEN13A	West Coast of United States-Hawaiian Islands, United States (w/ update layer)	<input type="checkbox"/> <a href="#">Edition 16</a> (4 MB)	<input checked="" type="checkbox"/> <a href="#">Windows</a> (663 KB)	<input type="checkbox"/> <a href="#">Unix</a> (600 KB)	n/a
GEN13B	West Coast of Mexico-Hawaiian Islands, United States	n/a	<input checked="" type="checkbox"/> <a href="#">Windows</a> (10 KB)	<input type="checkbox"/> <a href="#">Unix</a> (10 KB)	n/a
GEN13C	Pacific Ocean - Hawaiian Islands (w/ update layer)	<input type="checkbox"/> <a href="#">Edition 16</a> (4 MB)	<input checked="" type="checkbox"/> <a href="#">Windows</a> (615 KB)	<input type="checkbox"/> <a href="#">Unix</a> (589 KB)	n/a
GEN13D	Pacific Ocean	<input type="checkbox"/> <a href="#">Edition 16</a> (293 KB)	<input checked="" type="checkbox"/> <a href="#">Windows</a> (11 KB)	<input type="checkbox"/> <a href="#">Unix</a> (10 KB)	n/a

[Download](#)

Example NGA: General Libraries web page

6. Select the “Check All” box under the **DOWNLOAD VDU PATCH (WINDOWS)** category, then select the “Download” button at the bottom of the page. The web page will change to the example shown on the next page.



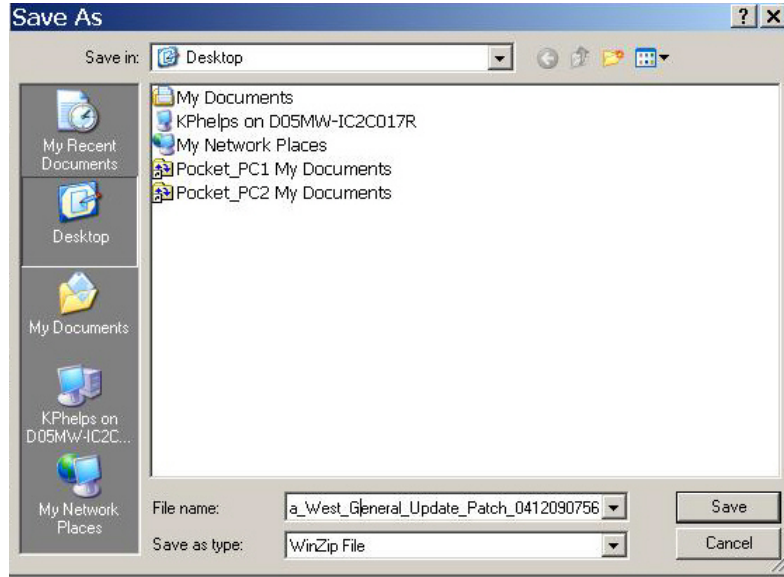
(Example NGA General Libraries web page)

7. Select the compressed file link to begin the download process.



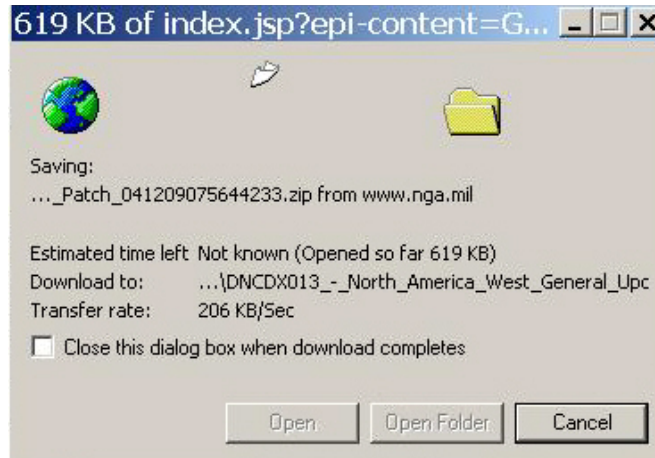
(Example File Download dialog box)

8. When the File Download dialog box appears, select the “Save” button.



(Example Save As dialog box)

9. From the *Save as* dropdown menu, select the desired location to save the file (i.e. My Documents). Then select the “Save” button.



(Example file downloading dialog box)

10. A message will be displayed indicating that the file is downloading.
11. Repeat this process for each coverage group for the chosen region.
12. After completing the download process for the coverage group(s), use the WINZIP feature to uncompress the downloaded files. After you uncompress the file a new folder is created.
13. Copy the uncompressed folder(s) to a CD.

## CHART INSTALL/UPDATE

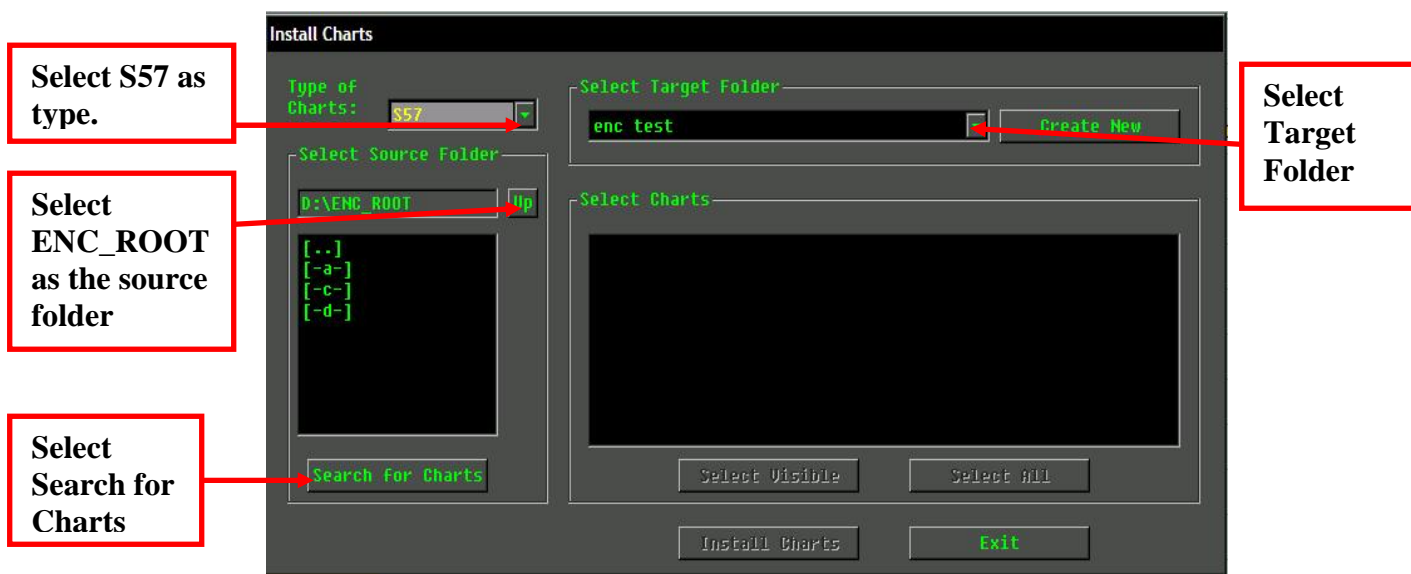
### PROCEDURES TO INSTALL/UPDATE ENC CHARTS FROM NOAA

**NOTE:**

*There are two options to install/update charts. The first option is to install Chart corrections which require a full file replacement. The procedures for the second option are similar to corrections from NOAA's website but use the update menu instead of the install menu.*

**To install corrections requiring a full file replacement:**

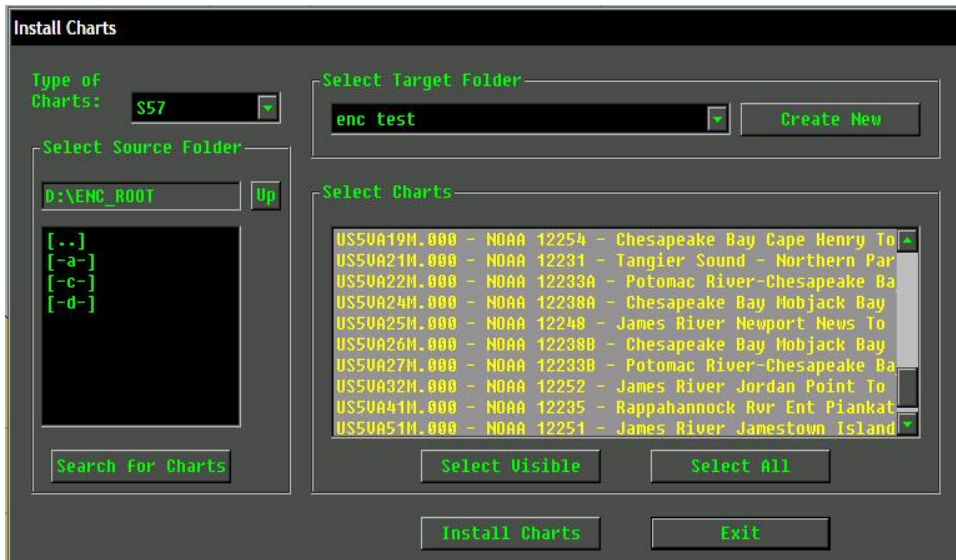
1. Start ECPINS at the station you wish to apply the corrections.
2. Insert CD into the CD Rom Drive of the ECPINS station that you are applying the update to.
3. Activate the Main Menu by pressing the center button. Select Chart Selection>Chart Install>Install Charts.



(Example ECPINS Install Charts dialog box)

4. Select "S57" as type of charts.
5. Use the drop-down menu to select the Target Folder where the ENCs are located.
6. Under Select Source Folder, click on CD Rom Drive Letter.

7. Under Select Source Folder, select “[ENC\_ROOT].”
8. Select “Search for Charts.”



(Example ECPINS Install Charts dialog box)

Once the search is complete, a list of available charts will appear on the right side of the dialog box.

9. Click the “Select All” button then select “Install Charts.”



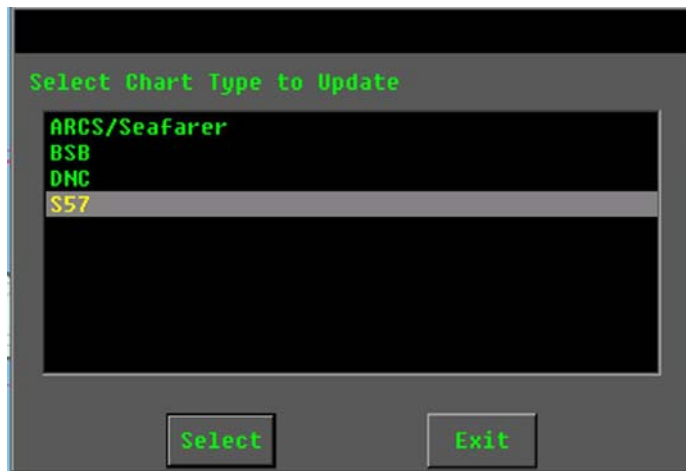
(Example ECPINS Installing Charts dialog box appears)

10. When the charts are installed and the “Chart Installation Completed” dialog box appears, select the “OK” button.
11. Remove the CD from the CD drive.
12. Select the “Exit” button.
13. Complete the process for each ECPINS station that needs the corrections.



**To install ENC corrections using the update menu:**

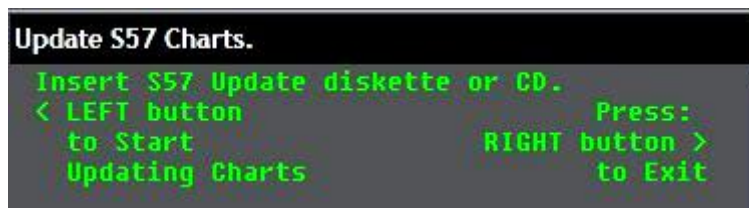
1. Start ECPINS at the station you wish to apply the corrections.
2. Insert this CD into the ECPINS station that you are applying the correction to.
3. Activate the Main Menu by pressing the center button. Select Chart Corrections>Update Charts.



(Example Select Chart Type to Update dialog box)

4. When the Select Chart Type to Update dialog box appears, highlight one of the following from below and click the “Select” button.

IF OPERTING SYSTEM IS:	SELECT THE FOLLOWING:
ECPINS 5.0.4	S57
ECPINS 5.1.0.6	S57/AML



(Example Update S57 Charts dialog box)

5. When the Update S57 Charts dialog box appears select the “Left button” to begin updating the charts.



(Example Searching CD-ROM drive for S57 Updates dialog box)

ECPINS will begin searching the CD for S57 updates.



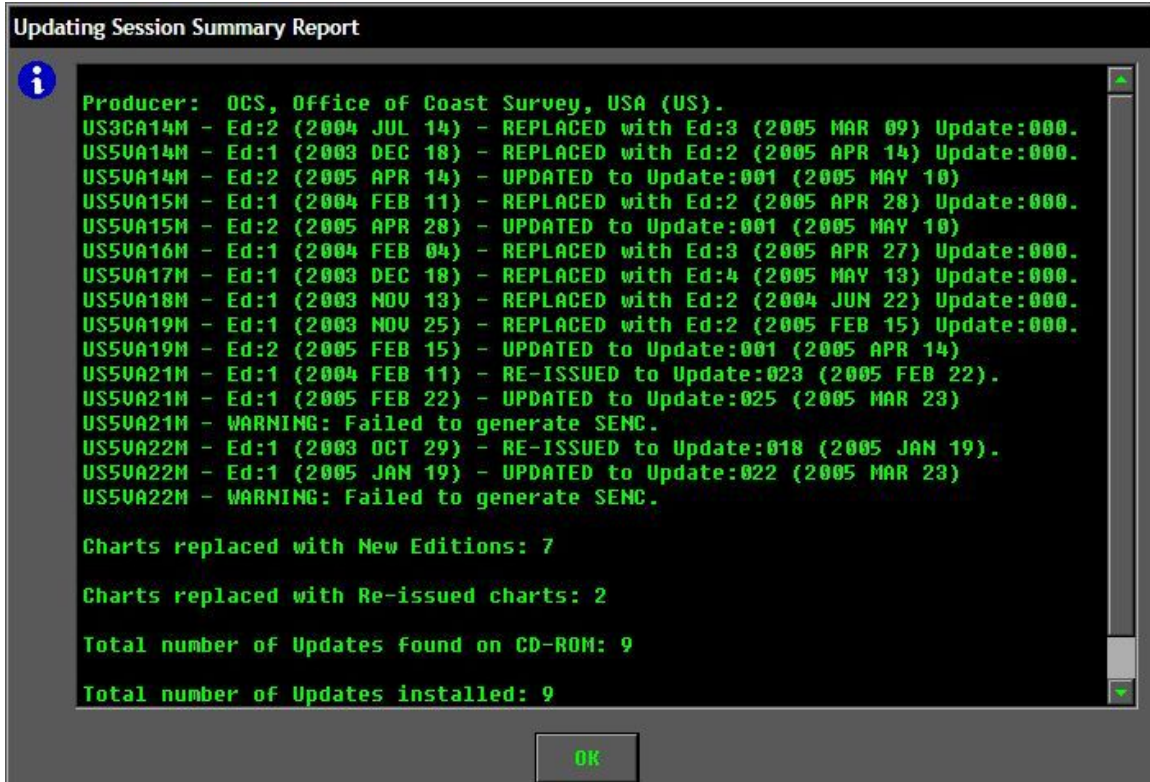
(Example Searching ECPINS hard drive for S57 Charts dialog box)

Once ECPINS has located the charts on the CD, it will begin searching for charts on the hard drive to update.



(Example Generating new SENC for updated Chart dialog box)

Once the charts requiring updates are located, ECPINS will begin to update the charts on the hard drive.



(Example Updating Session Summary Report dialog box)

After all of the charts have been updated, ECPINS will display a report of the action taken for each chart.

6. Review the summary report to ensure that all corrections have been completed.
7. Select “OK.”

An “Updating Chart Index / Please Wait” dialog box will appear. Once this dialog box disappears, the chart update is complete.

8. Repeat this process for each region that needs to be updated.
9. Select the “Exit” button.
10. Remove the CD from the CD drive.

**PROCEDURES TO INSTALL RNC CHARTS FROM NOAA**

1. Start ECPINS at the station you wish to apply corrections.
2. Insert CD into the CD Rom Drive of the ECPINS station that you are applying the update to.
3. Activate the Main Menu by pressing the center button. Select Chart Selection>Chart Install>Install Charts.



(Example ECPINS Install Charts dialog box)

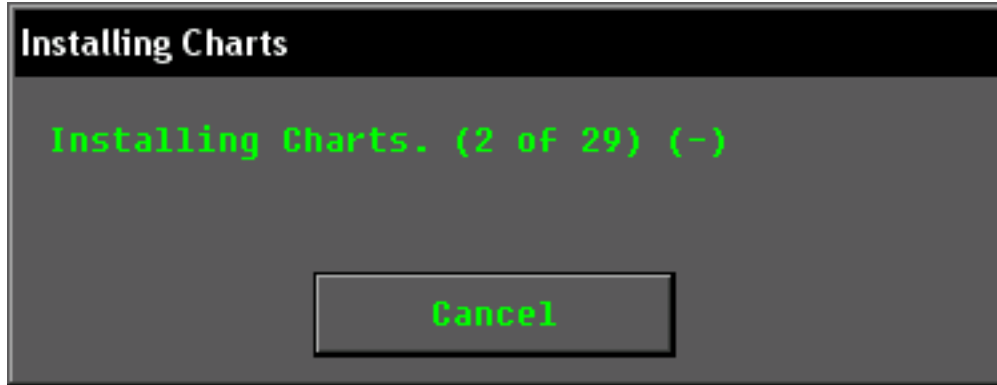
4. Select "BSB" as type of chart.
5. Use the drop-down menu to select the Target Folder where the RNCs are located.
6. Under Select Source Folder, click on CD Rom Drive Letter.
7. Under Select Source Folder, select "[BSB\_ROOT]."
8. Select "Search for Charts."

Once the search is complete, a list of available charts will appear on the right side of the dialog box.

9. Click the "Select All" button.

All of the charts in the "Select Charts" box will be highlighted.

10. Select "Install Charts."



(Example ECPINS Installing Charts dialog box)

The dialog box will change, displaying in the title bar “Installing Charts.”



(Example ECPINS Chart Installation Complete dialog box)

11. When the charts are installed and the “Chart Installation Completed” dialog box appears, select the “OK” button.



(Example ECPINS Updating Chart Index dialog box)

An “Updating Chart Index / Please Wait” dialog box will appear. Once this dialog box disappears, the chart update is complete.

12. Repeat this process for each region that needs to be updated.
13. Remove the CD from the CD drive.
14. Select the “Exit” button.
15. Complete steps 1-14 for each ECPINS station that need these corrections.

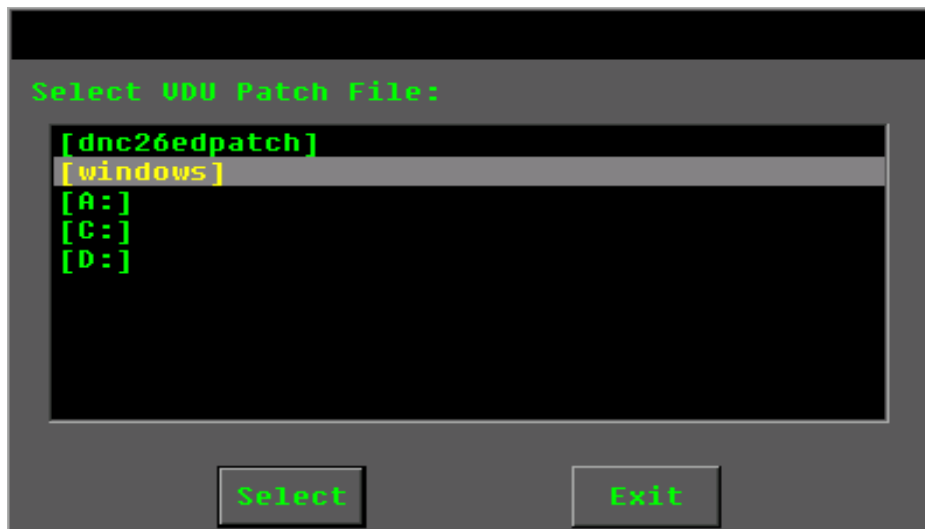
**PROCEDURES TO INSTALL/UPDATE DNC CHARTS FROM NGA WEBSITE**

1. Start ECPINS at the selected station where you are installing the updates.
2. Insert CD into the CD Rom Drive of the ECPINS station that you are applying the update to.
3. Activate the Main Menu by pressing the center button. Select Chart Corrections>Update Charts. A chart update dialog box will appear.



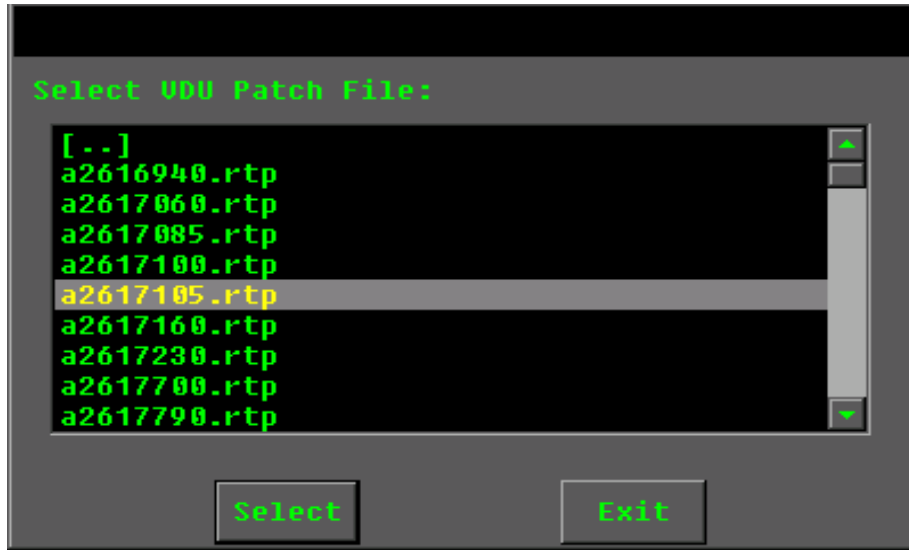
(Example ECPINS Chart Types dialog box)

4. When the Chart Updates dialog box appears, select “DNC” and then the “Select” button.



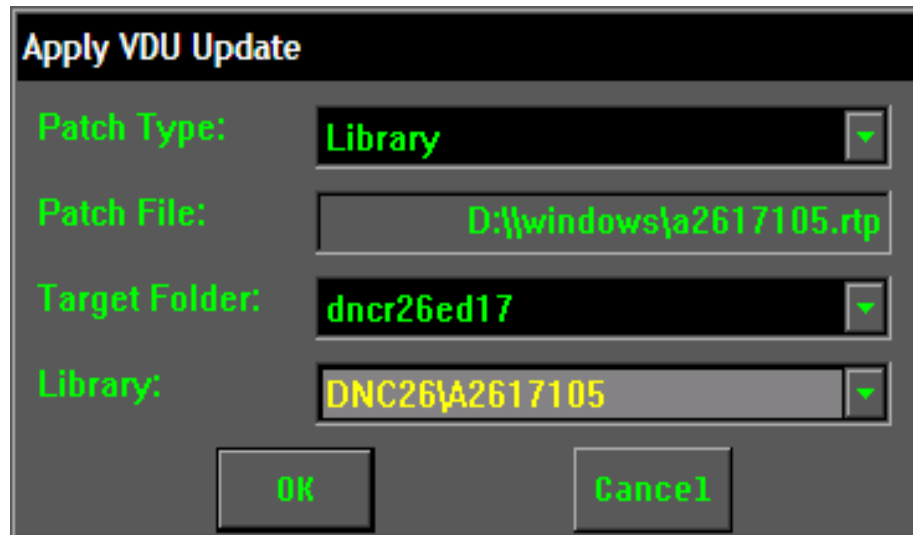
(Example ECPINS Select VDU Patch File dialog box)

5. When the Select VDU Patch File dialog box appears, select “[windows]” and then click the “Select” button.



(Example ECPINS Select VDU Patch File dialog box)

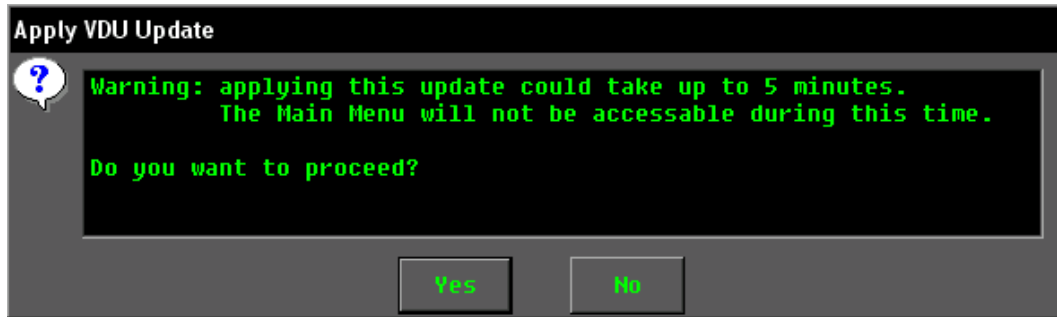
6. When the Select VDU Patch File dialog box reappears, select the “.rtp” patch file that you wish to update and then click the “Select” button.



(Example ECPINS Apply VDU Update dialog box)

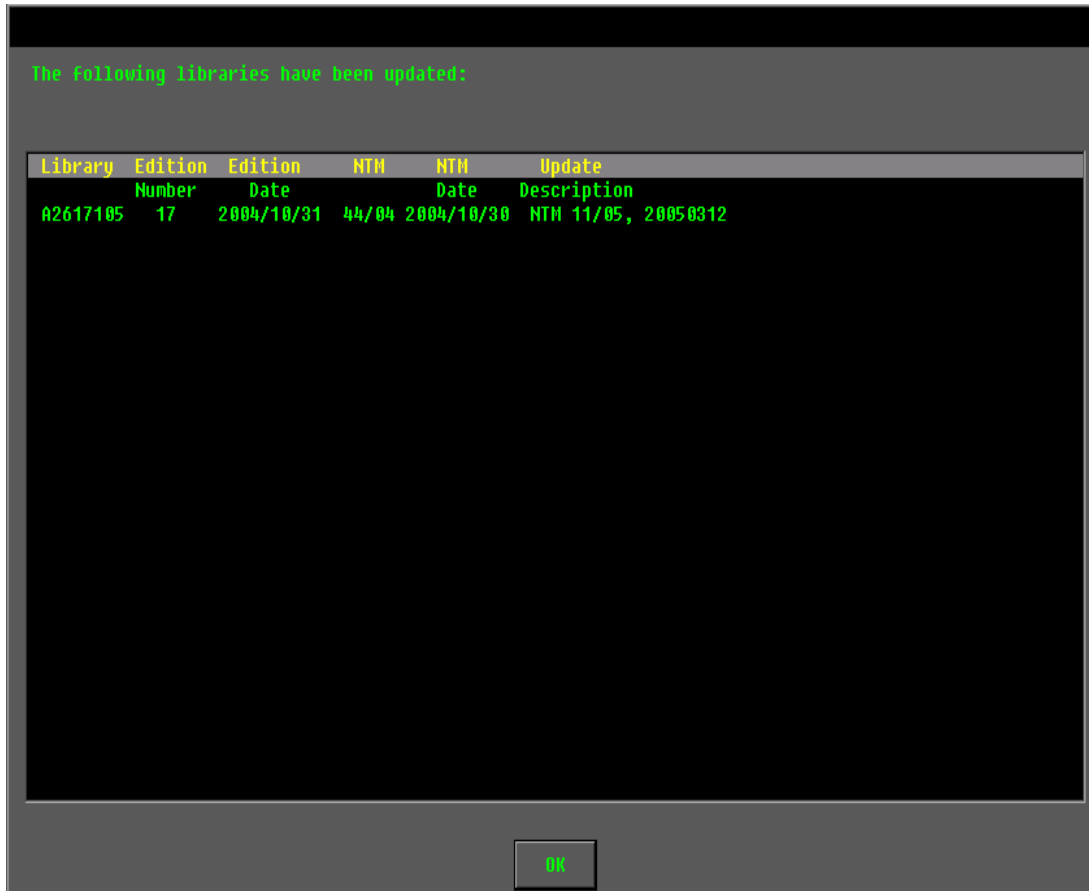


7. When the “Apply VDU Update” dialog box appears:
  - a. From the “Patch Type” drop down menu, Select “Library.” The Patch file will default to the ECPINS CD drive letter and path (In this example, D = CD Drive).
  - b. Select the DNC edition that is being updated from the “Target Folder” drop-down menu.
  - c. Using the Library drop-down menu, match the library to the patch file on the CD.
  - d. Select “OK.”



(Example ECPINS Apply VDU Update dialog box)

8. When the “Apply VDU Update” dialog box appears, select the “yes” button. This will cause another dialog box to appear stating “Please Wait.”



(Example ECPINS Updated libraries dialog box)

9. When the update is completed, a dialog box will appear stating: “The following libraries have been updated.”
10. Select “OK.”
11. Complete this process for each of the RTP patch files on your CD.
12. Remove CD after all files have been downloaded.
13. Complete steps 3-9 at each ECPINS station.

## **PROCEDURES FOR DNC MONTHLY CORRECTIONS FROM CD**

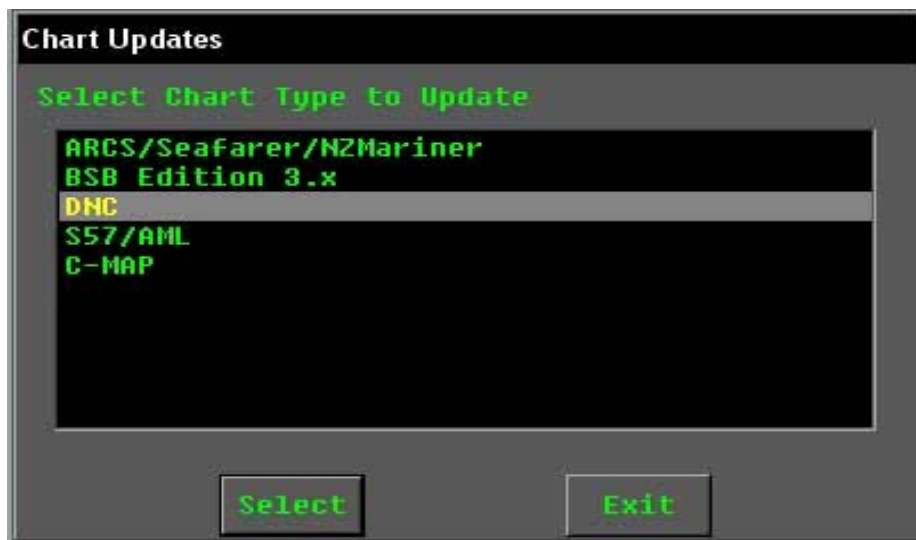
Approximately every 28 days, NGA issues a VPF Database Update (VDU) via CD that has chart corrections for every region. Inside the CD case will be two CD's, one is for a Windows based system and the other is for a Unix based system. Use the **Windows** CD.

***NOTE:***

*You must uninstall / reinstall the DNC charts before applying the monthly VDU corrections.*

To install DNC corrections from the CD, complete the following steps:

1. Insert the Windows CD into the ECPINS CD ROM drive.
2. Select Main Menu>Chart Corrections> Update Charts.



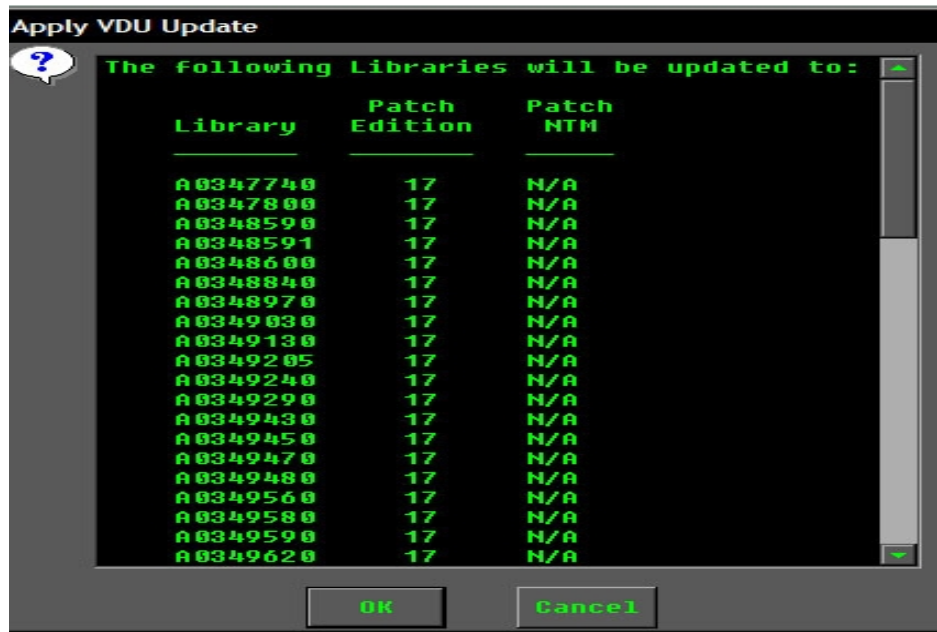
(Example ECPINS Select Chart Updates dialog box)

3. Select "DNC" as chart type and click the "Select" Button.



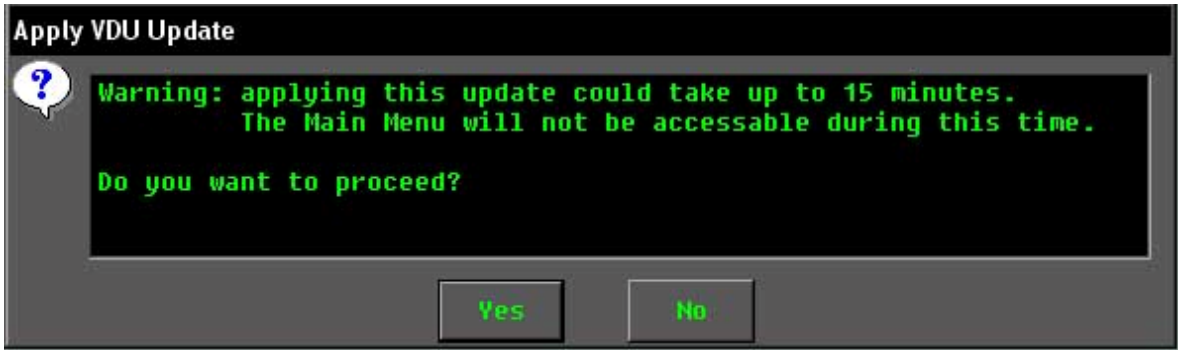
(Example ECPINS Select VDU Patch File dialog box)

4. When the Select VDU Patch File dialog box appears, select “yes.”



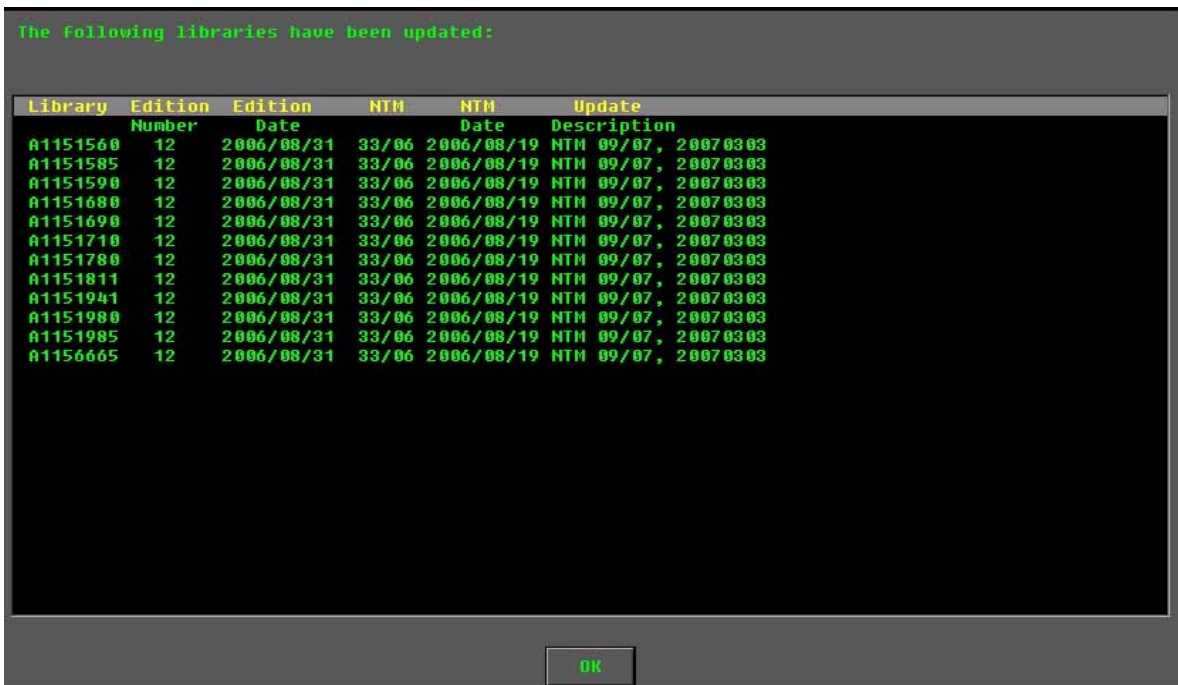
(Example ECPINS Apply VDU Update dialog box)

5. When the “Apply VDU Update” Dialog box appears, Select “OK.”
6. When the VDU Update dialog box appears, select the “yes” button. This will cause a dialog box to appear stating “Please Wait (1).”



(Example ECPINS Apply VDU Update dialog box)

7. When the “Apply VDU Update” dialog box appears, select the “yes” button.



(Example ECPINS Updated libraries dialog box)

When the update is completed, a dialog box will appear stating: “The following libraries have been updated.”

8. Select “OK.”
9. Complete steps 1-8 for all regions on the CD.
10. Remove the CD from the CD drive.
11. Complete this process for all ECPINS stations.

**TERMS / ABBREVIATIONS / ACRONYMS**

BSB: A proprietary format created in the late 1990's by BSB Electronic Charts, LLP. BSB was later purchased by MAPTECH, Inc.

CD: Compact Disc

DNC: Digital Nautical Chart

ECDIS: Electronic Chart Display and Information System

ECPINS: Electronic Precise Integrated Navigation System

ENC: Electronic Nautical Chart

ISCS: Integrated Ship Control System

Menu: Hierarchical list of software commands and/or options. The operator uses the trackball to highlight the desired command for selection.

NGA: National Geospatial-Intelligence Agency

NOAA: National Oceanographic and Atmospheric Administration

NTM: Notice to Mariners

RNC: Raster Nautical Chart

VDU: Vector Database Update

VPF: Vector Product Format