AVCS

ADMIRALTY
Vector Chart Service

Using the ADMIRALTY Vector Chart Service with Tokyo Keiki EC 8x00 ECDIS

This guide is based on the version 1.3.0 (Build 28)

United Kingdom
Hydrographic Office

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1 Introduction

The purpose of this guide is to provide equipment-specific information to assist users in managing their AVCS ENC holdings.

This guide should be used in conjunction with the AVCS User Guide, as well as the ECDIS Operators Manual or other documentation as supplied by the equipment manufacturer.

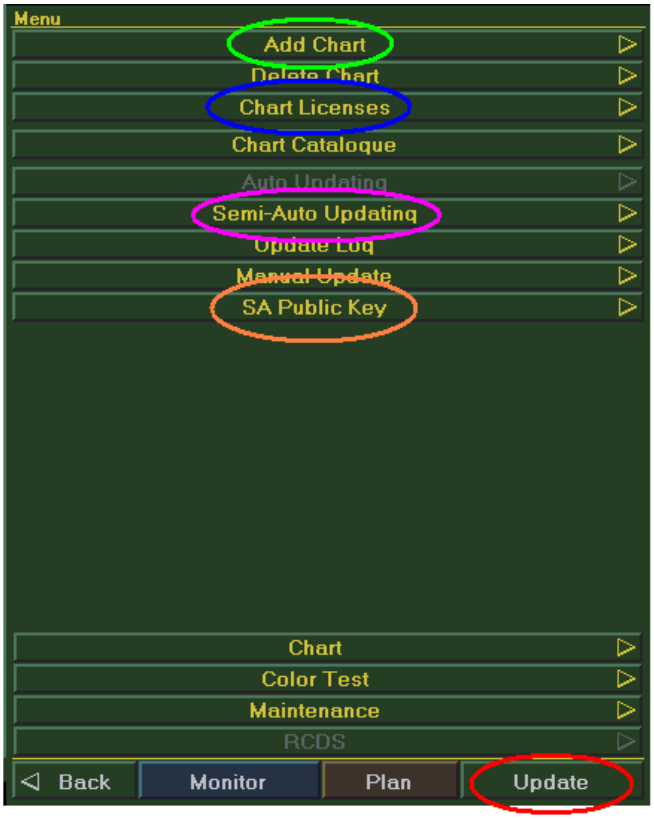
The actual instructions and screenshots in this guide are based on the version of the Tokyo Keiki EC 8x00 ECDIS installed in the UKHO as detailed on the front cover. There may be minor differences between certain models (i.e. screen layouts may vary).

2 Data Management

All data management operations are carried out through the *'Update'* function shown below.

AVCS Base Media is installed using the "Add Chart" option

AVCS Update Media is installed using the "Semi-Auto Updating" option



The AVCS ENC permits (PERMIT.TXT) are installed using the "Chart Licenses" option

The certificate file (Public Key) can be replaced or updated using the "SA Public Key" option

All ENC installation functionality is accessed through the "Update" tab.

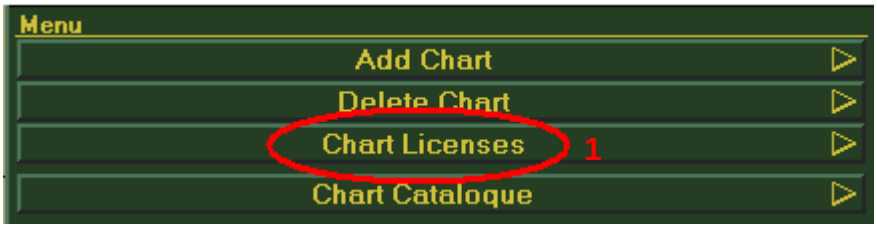
3 The User Permit Number

The User Permit Number is a 28 character alphanumeric string that is unique to each ECDIS installation or group of ECDIS, e.g. multiple bridge installations. The User Permit Number should have been supplied at the time of delivery and must be used when ordering ENC permits.

To check the User Permit Number, select the following:

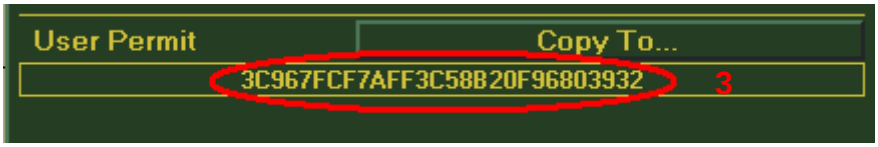
Update Menu → Chart Licenses → Copy To..

1. In the *'Update'* menu, select *'Chart Licenses'*.



2. Select 'ENC' in 'Chart Type' to view the ENC User Permit Number.

3. To export the User Permit Number, Insert the USB stick and Select 'Copy To..' to export out in text file.



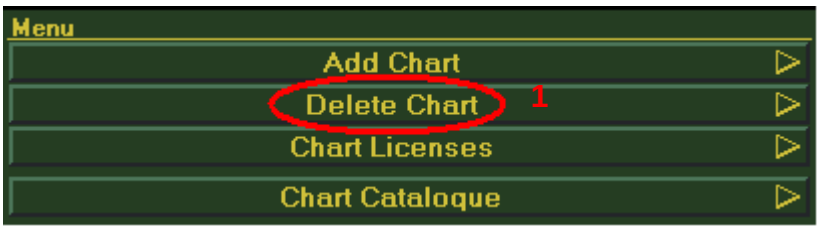
4 Deleting ENC Data

New AVCS customers who had previously subscribed to other ENC services are **strongly** recommended to remove (purge) all ENC Permits and ENCs from the system before installing AVCS. For more information please refer to the 'Data Cleansing' section in the AVCS User Guide.

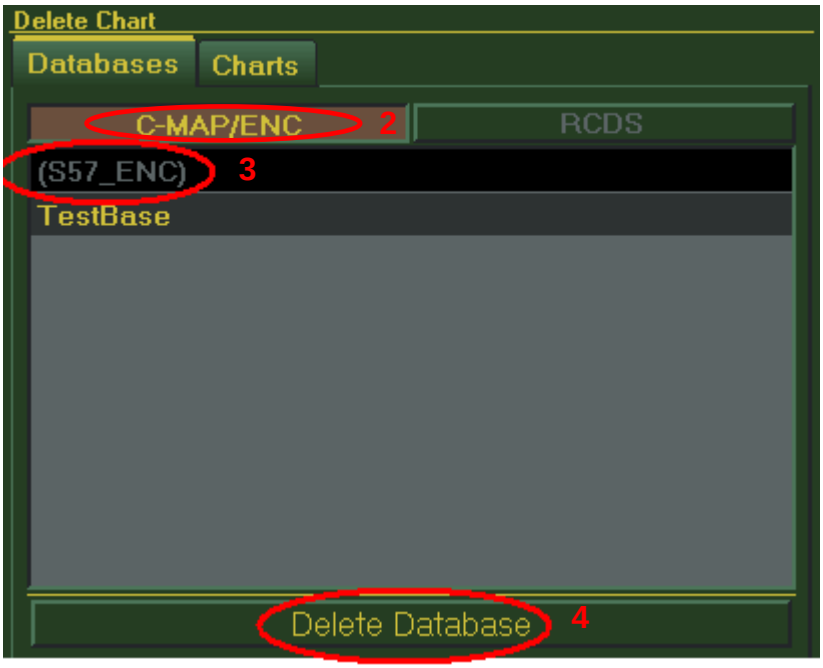
To delete the ENC database from the system, select the following:

Update Menu → Delete Charts → Databases tab → Select Database → Delete Database

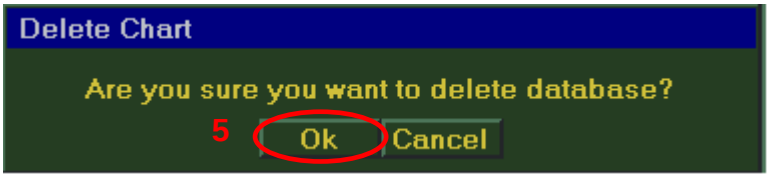
1. In the *'Update'* menu, select *'Delete Chart'*.



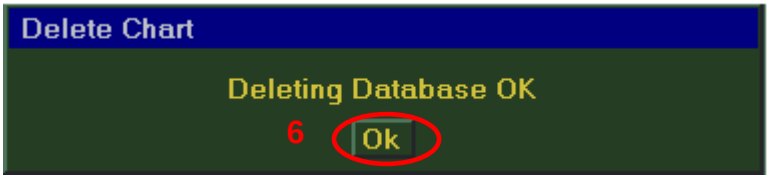
2. In the *'Databases'* tab, Select C-MAP/ENC.
3. Select the appropriate ENC Database to highlight the database.
4. Select *'Delete Database'*.



5. Select 'OK' to confirm removal of the selected ENC Database.



6. Select 'OK' to end.



Note:

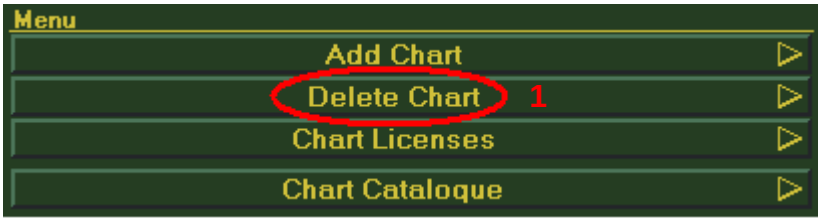
The Default Database Name is 'S-57_ENC'. If no ENC databases are available then no further action is necessary.

Do not delete the 'TestBase' database.

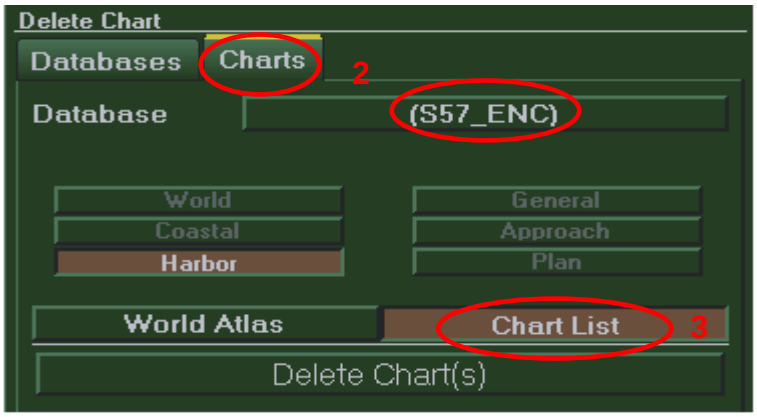
To delete an individual ENC, select the following:

Update Menu → Delete Chart → Charts tab → Select Chart List → Select Chart(s) → Delete Chart(s)

1. In the *'Update'* menu, select *'Delete Chart'*.



2. In the *'Charts'* tab, choose the Database (e.g: S57_ENC) which holds the installed chart(s).
3. Select *'Chart List'* to view the installed chart status.

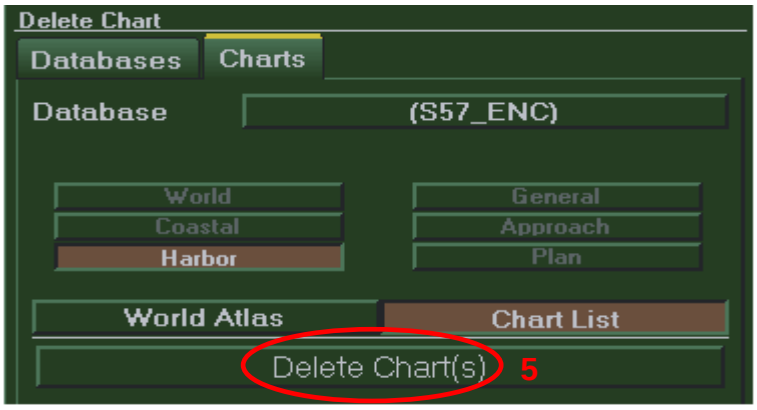


4. Select the *'Cell Name'* in the *'Chart No.'* Column to highlight the chart.

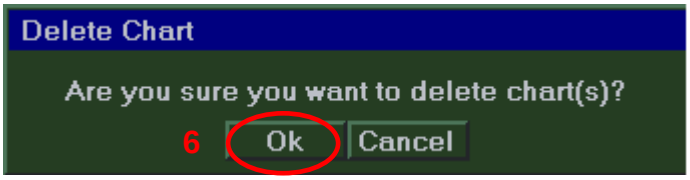
Chart No.	Chart Type	Authority	Scale	Date of Issue	Edition No.	Date of Update	Update No.
GB52721A	(AVCS)	GB	12000	10.03.2008	3	10.03.2008	5
GB52770A	(AVCS)	GB	12000	12.08.2013	3	12.08.2013	0
GB52896A	(AVCS)	GB	12000	28.05.2012	3	28.05.2012	0
GB52566Y	(AVCS)	GB	12000	09.11.2012	4	09.11.2012	1
GB52711A	(AVCS)	GB	12000	17.03.2008	3	17.03.2008	5

4

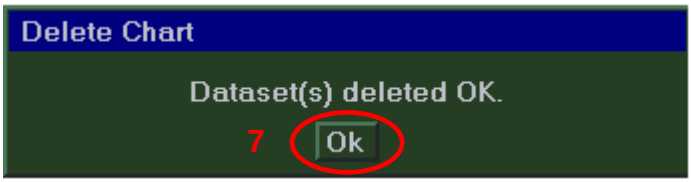
5. Select *'Delete Chart(s)'* to delete highlighted chart(s) from the database.



6. Select *'OK'* to confirm.



7. Select *'OK'* to complete the process.



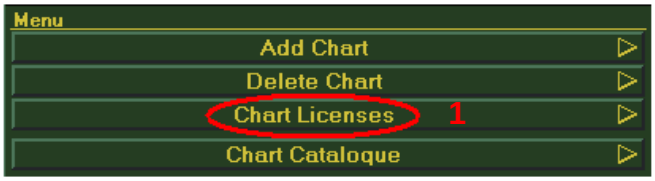
5 Deleting ENC Permits

If the user has previously subscribed to another ENC service it is advised to remove these ENC permits from the ECDIS system before use. The user must select the cells from which permits are to be deleted. In most instances this will simply involve selecting all cells. In certain circumstances it may be required to remove permits for individual cells, in this case simply select the cells for which permits need to be deleted.

To delete the ENC permits, select the following:

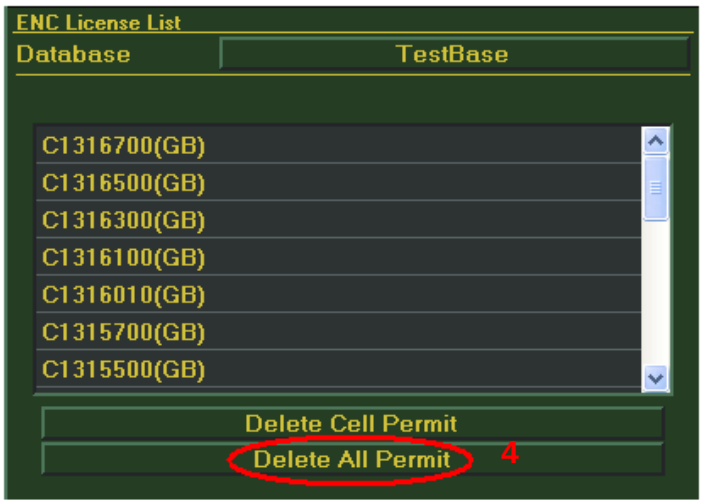
Update Menu → Chart Licenses → License List → Delete All Permit

1. In the *'Update'* menu, select *'Chart Licenses'*

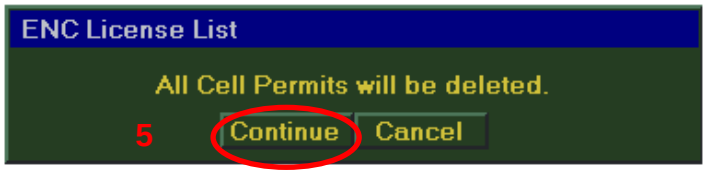


2. Select *'ENC'*.
3. Select *'Licence List'*.

4. Select *'Delete All Permit'*.



5. Select *'Continue'* to remove all ENC Permit.



Note: *To delete individual cell permit, Select the permit then Select 'Delete Cell Permit'.*

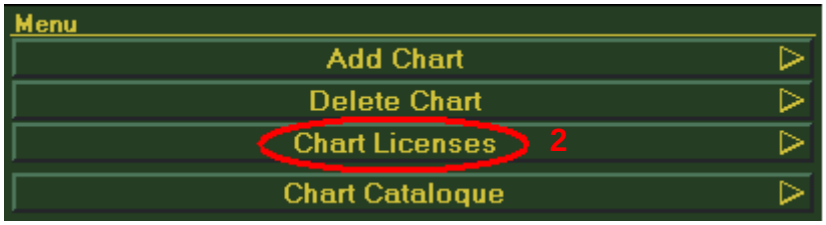
6 The Public Key

The Admiralty Vector Chart Service currently uses the IHO.CRT, issued by International Hydrographic Organisation, to authenticate its AVCS S-63 Edition 1.1 ENCs. The IHO Public Key is included on all AVCS Media.

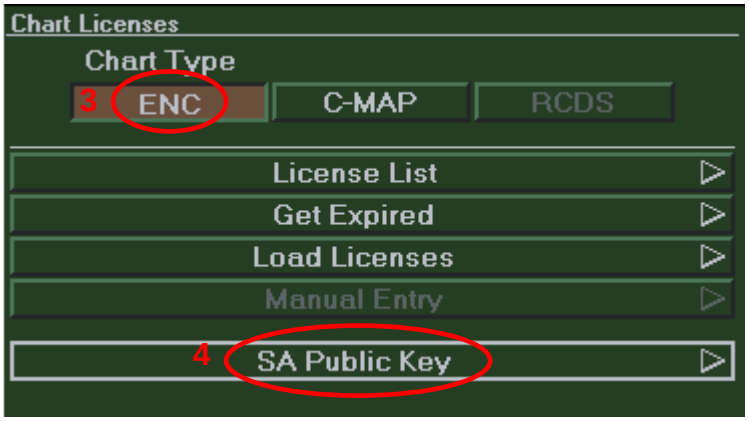
To install the IHO Public Key, select the following:

Update Menu → Chart Licenses → SA Public Key → Select IHO.CRT → Install SA Public Key file

1. Insert AVCS Media into the ECDIS.
2. In the *'Update'* menu, select the *'Chart Licences'*.

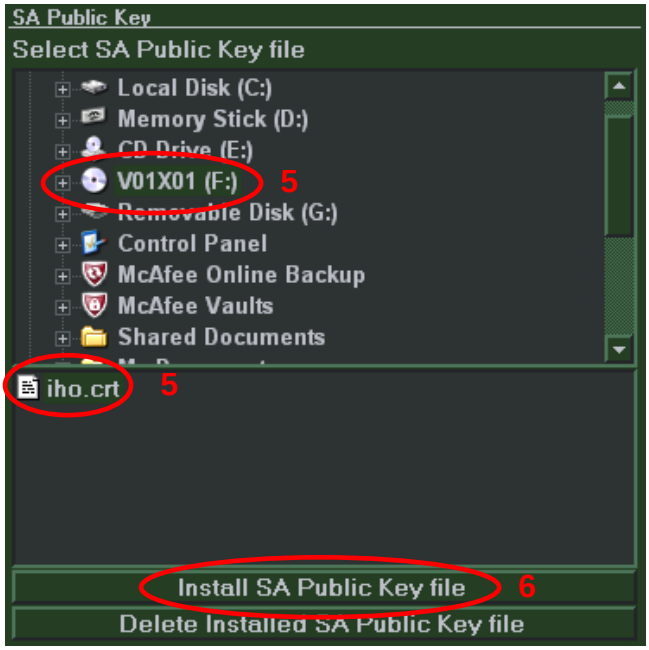


3. Select *'ENC'*.
4. Select *'SA Public Key'*.

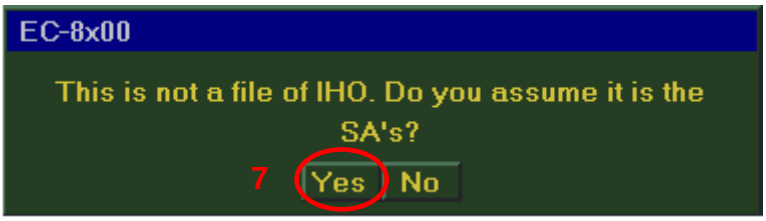


5. Browse to the Media Drive (e.g. V01X01) where the IHO.CRT file is stored and select it.

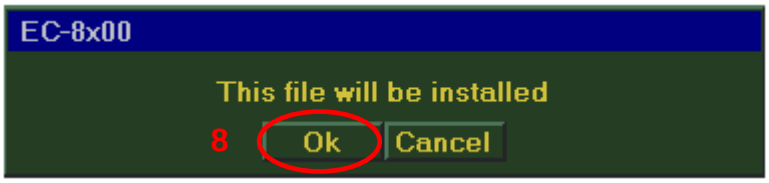
6. Select the *'Install SA Public Key file'* to install the certificate.



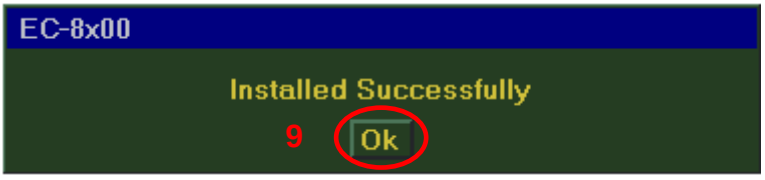
7. Select *'Yes'*.



8. Select *'OK'*.



9. Select *'OK'*.

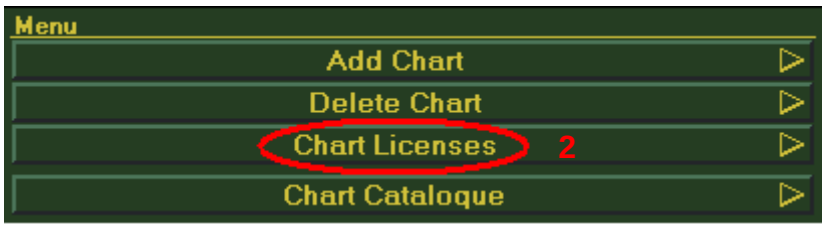


7 Installing ENC Permits

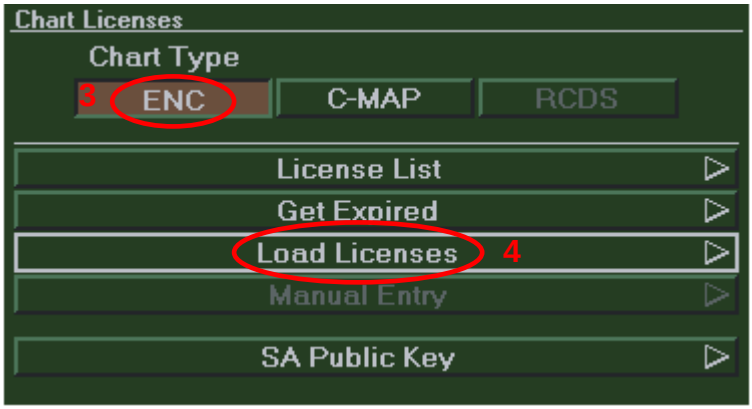
To install the ENC Permit, select the following:

Update Menu → Chart Licenses → Load Licenses → Read from Media → Select Drive → Install All

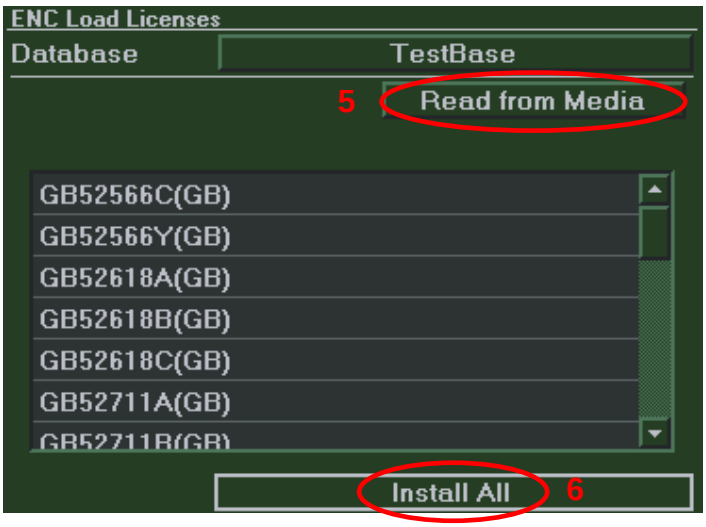
1. Insert the media (e.g. USB stick) where the ENC permit is stored.
2. In the *'Update'* menu, select *'Chart Licences'*.



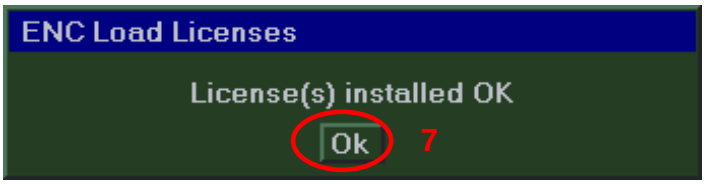
3. Select *'ENC'* at Chart Type.
4. Select *'Load Licences'*.



5. Select *'Read from Media'* and select the drive where the ENC permit is stored.
6. When the list of licensed ENCs is displayed, select *'Install All'* to install them.



7. Select *'OK'* to confirm the installation of ENC permit.



8 Installing AVCS Base CDs

There are currently 9 *AVCS Base CDs* but this number will grow as more ENCs become available for distribution within AVCS. It is unlikely that users will need to install all of the CDs in order to load all licensed ENCs. Reference to the **Schedule A** can avoid the unnecessary loading of some CDs and save the user time.

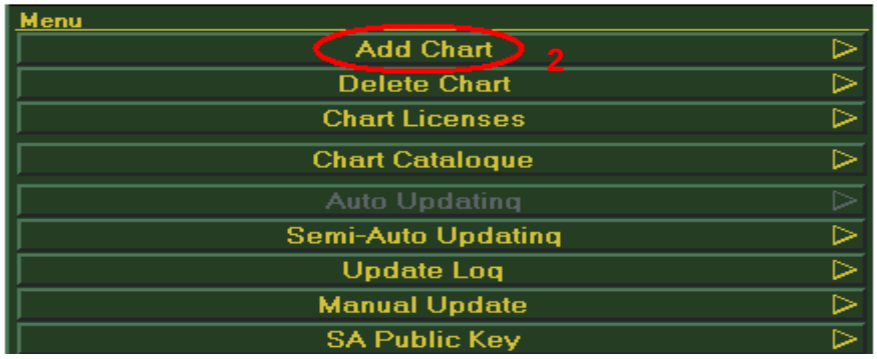
The process described here should be used in almost all circumstances as it will automatically select data to be loaded according to the permit file installed by the user.

Note: *Ensure the latest permits have been installed before attempting to install any data*

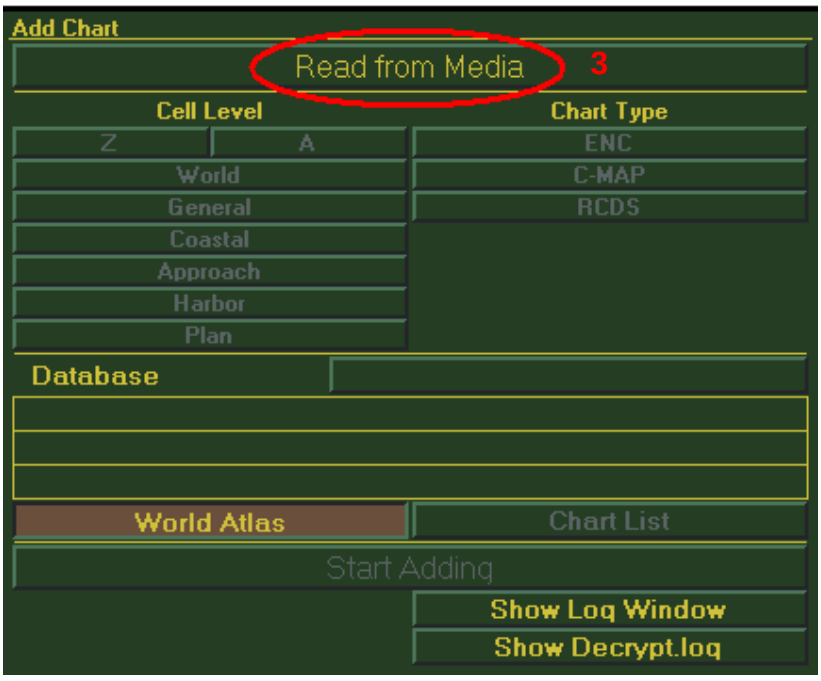
To install AVCS Base CD(s), please select the following:

Update Menu → Add Chart → Read from Media → Name the Database → Start Adding

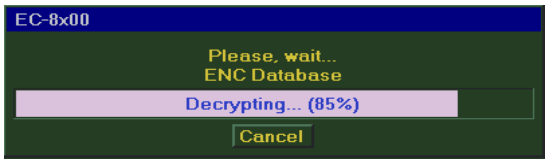
1. Insert the AVCS Base Media into the CD Drive.
2. In the *'Update'* menu, select *'Add Chart'*.



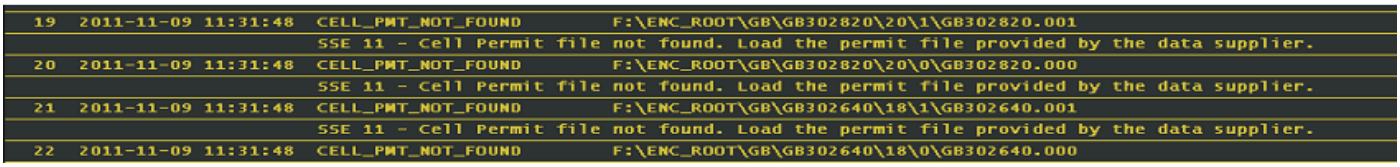
3. Select *'Read from Media'*.



Once the system has detected the AVCS media containing the ENCs a message box is displayed informing the user on the progress of the decryption process.



Once the decryption process has finished the user is presented with a *'DECRYPT LOG'* which lists the results. This log lists all the ENCs (Base and Update Files) on the AVCS media regardless of the licence status.

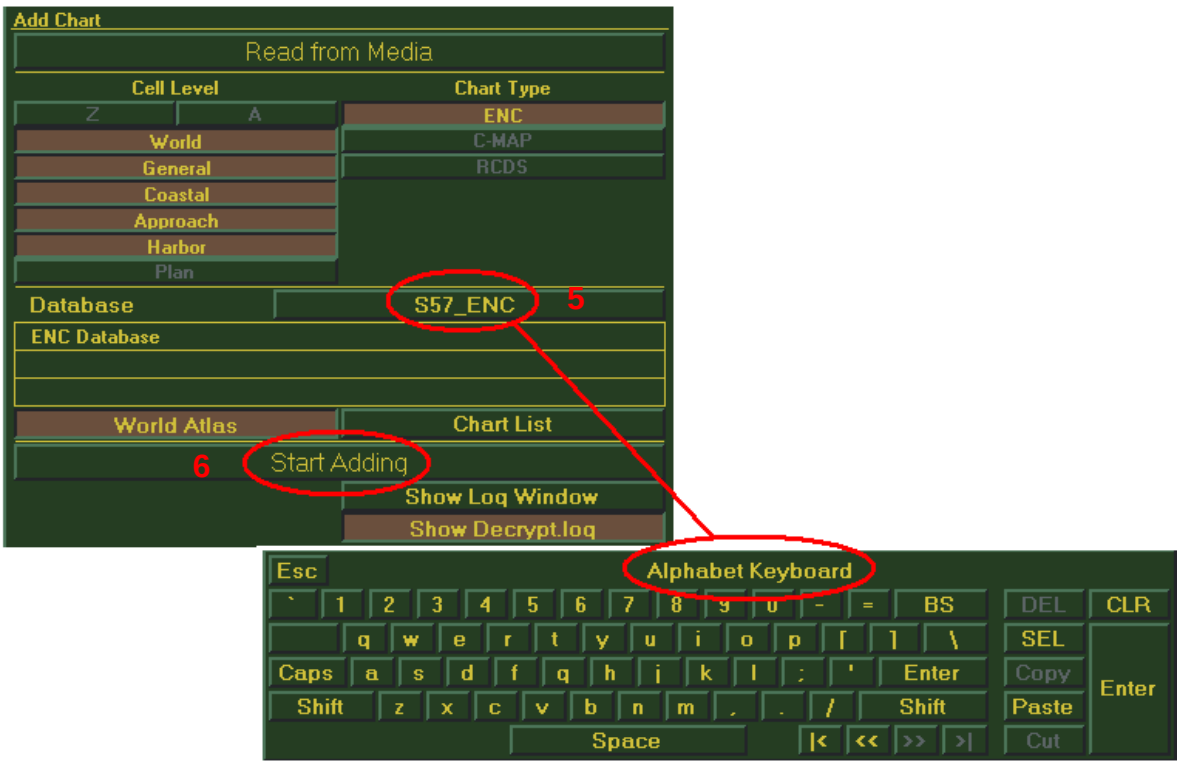


Note: *Users should not be alarmed if **SSE 11** Error Message is displayed. This means that these particular ENCs have not been purchased and as a result no permits are available.*

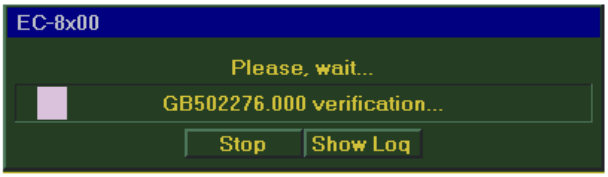
4. Select *'OK'* to ignore the Error Messages **SSE 11**.

5. At *'Database'*, name the database (e.g. S57_ENC) for first time installation then use the same database for subsequence chart installation.

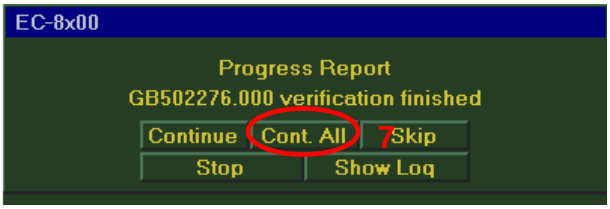
6. Select the *'Start Adding'* to begin chart installation.



The system will start by verifying the first ENC.



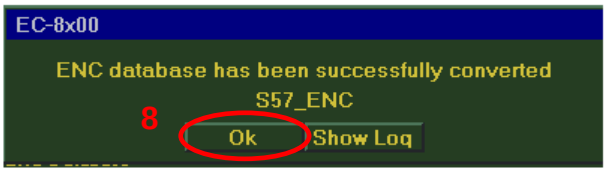
7. Once verification of the first cell is complete select *'Cont. All'*.



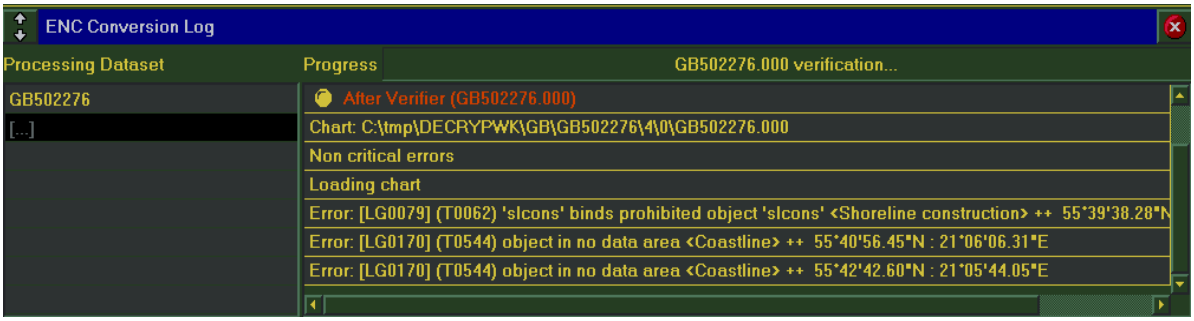
The system now verifies and imports the remaining ENC data files into the System Database (SENC).

On completion the following message box is displayed informing the user that the *'ENC database has been successfully converted'*.

8. Select *'OK'* to complete the installation process.



During the verification and conversion process the system displays an *'ENC Conversion Log'* with the results of the verifications and conversion status. Users can **ignore** any ***'Non critical errors'*** as these do not affect the safe display of the ENC in the ECDIS.

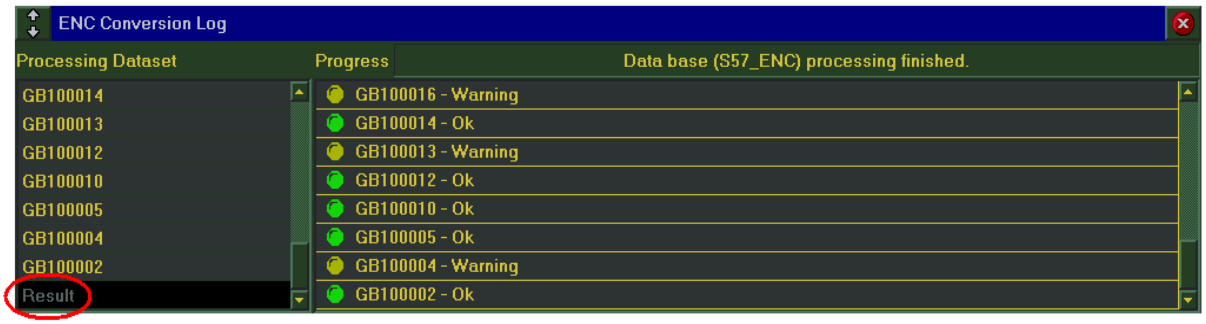


On completion the *'ENC Conversion Log'* provides a summary status of the installed ENCs.

Green: *ENC verification and installation is OK.*

Yellow: *ENC verification returned some minor warnings. ENC installation has been successful.*

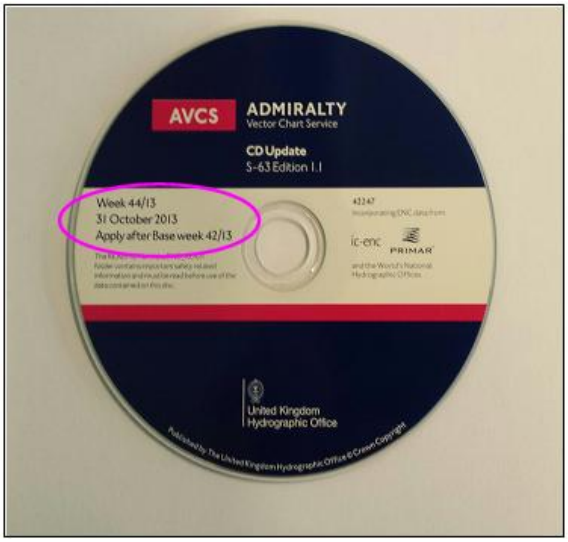
Red: *ENC verification returned some critical errors and ENC installation has failed.*



Note: *Make sure that all the required AVCS Base CDs have been inserted and the import operations completed before installing the latest Update CD. Updates cannot be applied unless the ENC base file is present in the system database*.

9 Installing AVCS Update CD

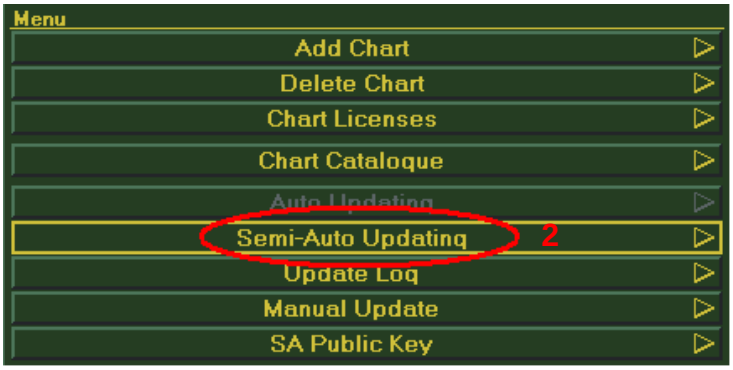
The Weekly AVCS Update CD must only be inserted into the CD Drive after having installed the latest required AVCS Base Media:



Note: AVCS Base CDs are re-issued about every 6 to 8 weeks. The AVCS update disc will indicate which Base disc week must have been installed. It is important that users do not attempt to load an Update CD that is not consistent with the Base CDs.

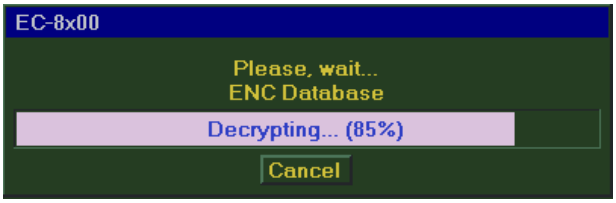
Update Menu → Semi-Auto Updating → Read from Media → Select Database → Apply Updates

1. Insert the AVCS Update Media.
2. In the *'Update'* menu, select *'Semi-Auto Updating'*.

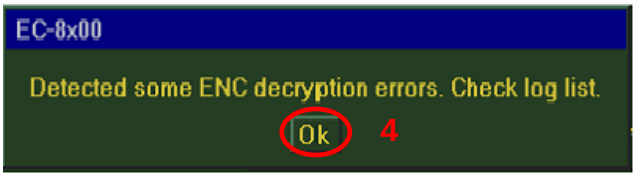


3. Select *'Read from Media'*.

Once the system has detected the AVCS media containing the ENCs a message box is displayed informing the user on the progress of the decryption process.

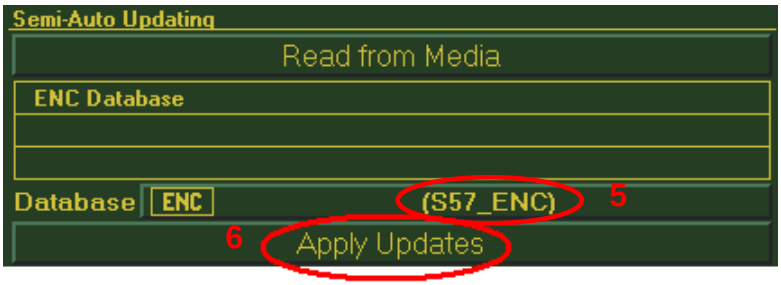


4. Select *'OK'* to ignore the Error Messages **SSE 11**.

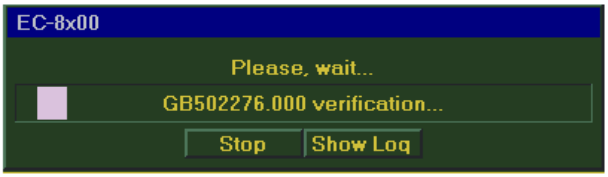


Note: *Users should not be alarmed if **SSE 11** Error Message is displayed. This means that these particular ENCs have not been purchased and as a result no permits are available.*

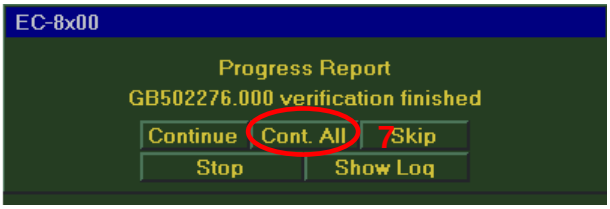
5. Select the same database (e.g. S57_ENC) which was created to install AVCS Base CD(s).
6. Select *'Apply Updates'*.



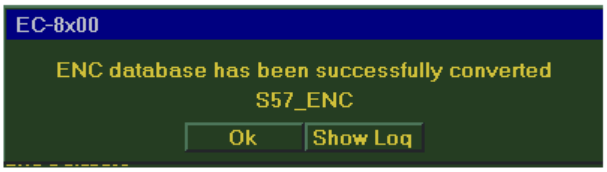
The system will start by verifying the first ENC.



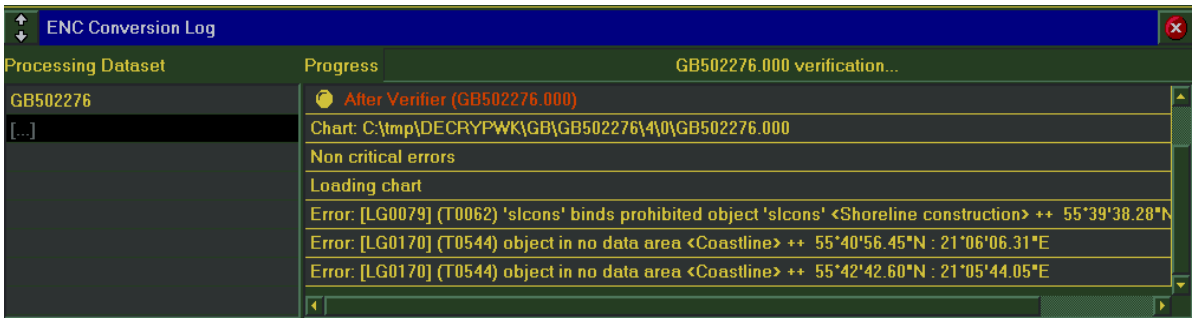
7. Once verification of the first cell is complete select *'Cont. All'*.



8. Select *'OK'* to complete the installation process.



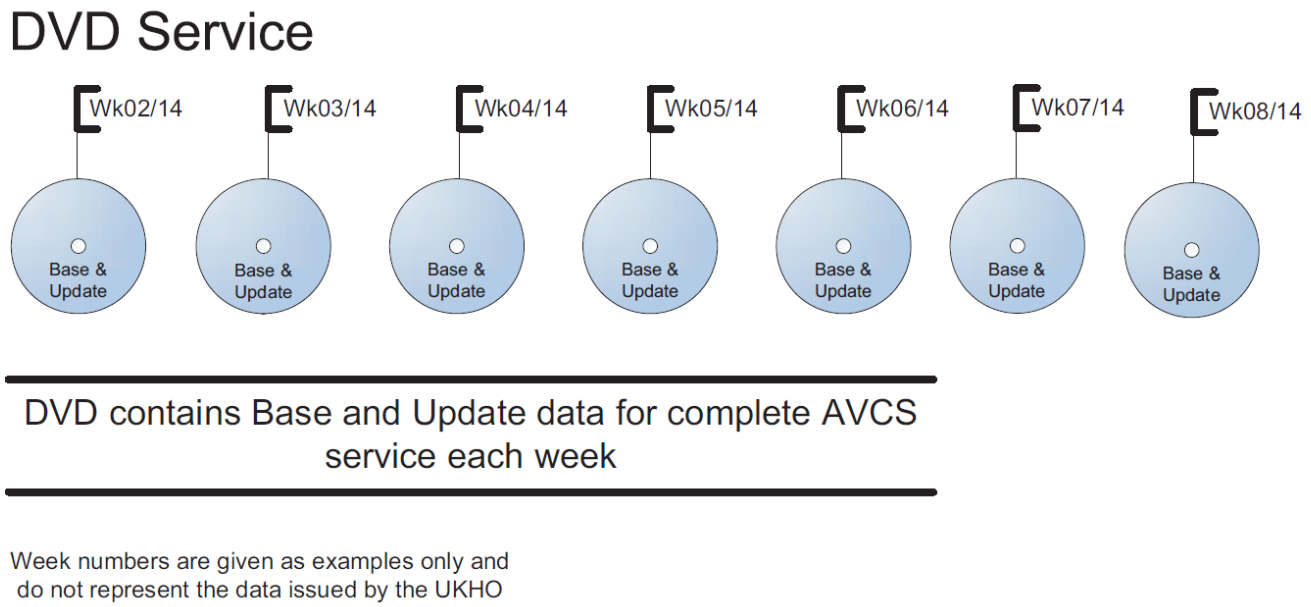
During the verification and conversion process the system displays an *'ENC Conversion Log'* with the results of the verifications and conversion status. Users can ***ignore any 'Non critical errors'*** as these do not affect the safe display of the ENC in the ECDIS.



Note: *Base CDs are re-issued about every 6 to 8 weeks. The AVCS update disc will indicate which Base disc week must have been installed. It is important that users do not attempt to load an Update CD that is not consistent with the Base CDs.*

10 Installing AVCS DVD

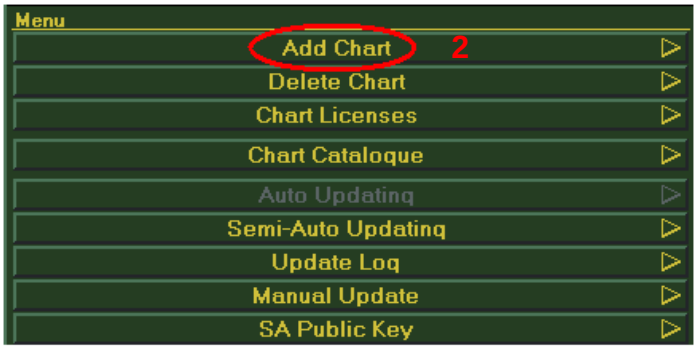
When using the AVCS DVD Service only one disc needs to be installed because it contains all the base ENCs and updates up to the date of its issue.



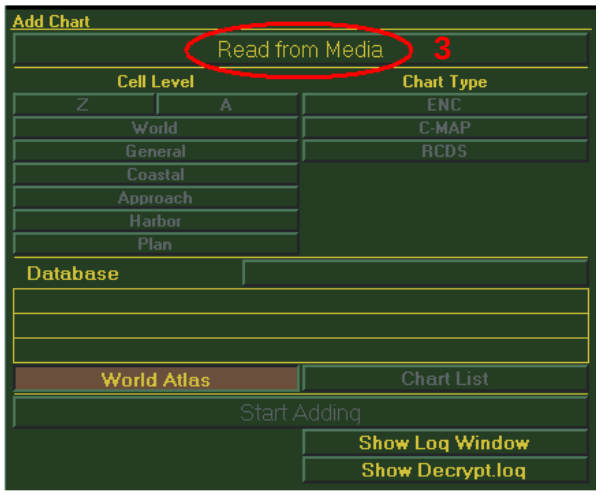
Note: *The loading process within the ECDIS will be very similar to that required for the AVCS CD Service however there are some minor differences which are detailed below.*

Update Menu → Add Chart → Read from Media → Select Required Volume → Name the Database → Start Adding

1. Insert the AVCS DVD Media into the ECDIS.
2. In the *'Update'* menu, select *'Add Chart'*.

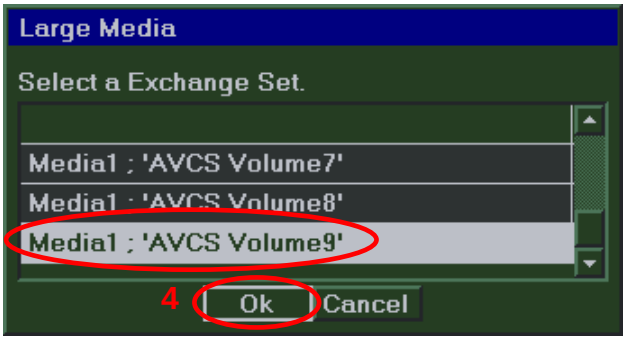


3. Select *'Read from Media'*.

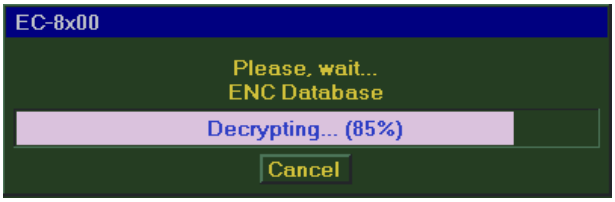


Once the system has detected the AVCS DVD media, it displays 9 volumes of exchange set for the user to install. (e.g. Volume 9 is Base 9 CD)

4. Select the required *'Exchange Set'* (e.g Volume 1 is Base 1 CD) and select *'OK'*.



Once the user selects the required exchange set, a message box is displayed informing the user on the progress of the decryption process.



After the decryption process is finished the user is presented with a *'DECRYPT LOG'* which lists the results. This log lists all the ENCs (Base and Update Files) on the media, e.g. CD/DVD regardless of the licence status. An example is provided below:

```
19  2011-11-09 11:31:48  CELL_PMT_NOT_FOUND        F:\ENC_ROOT\GB\GB302820\20\1\GB302820.001
                         SSE 11 - Cell Permit file not found. Load the permit file provided by the data supplier.
20  2011-11-09 11:31:48  CELL_PMT_NOT_FOUND        F:\ENC_ROOT\GB\GB302820\20\0\GB302820.000
                         SSE 11 - Cell Permit file not found. Load the permit file provided by the data supplier.
21  2011-11-09 11:31:48  CELL_PMT_NOT_FOUND        F:\ENC_ROOT\GB\GB302640\18\1\GB302640.001
                         SSE 11 - Cell Permit file not found. Load the permit file provided by the data supplier.
22  2011-11-09 11:31:48  CELL_PMT_NOT_FOUND        F:\ENC_ROOT\GB\GB302640\18\0\GB302640.000
```

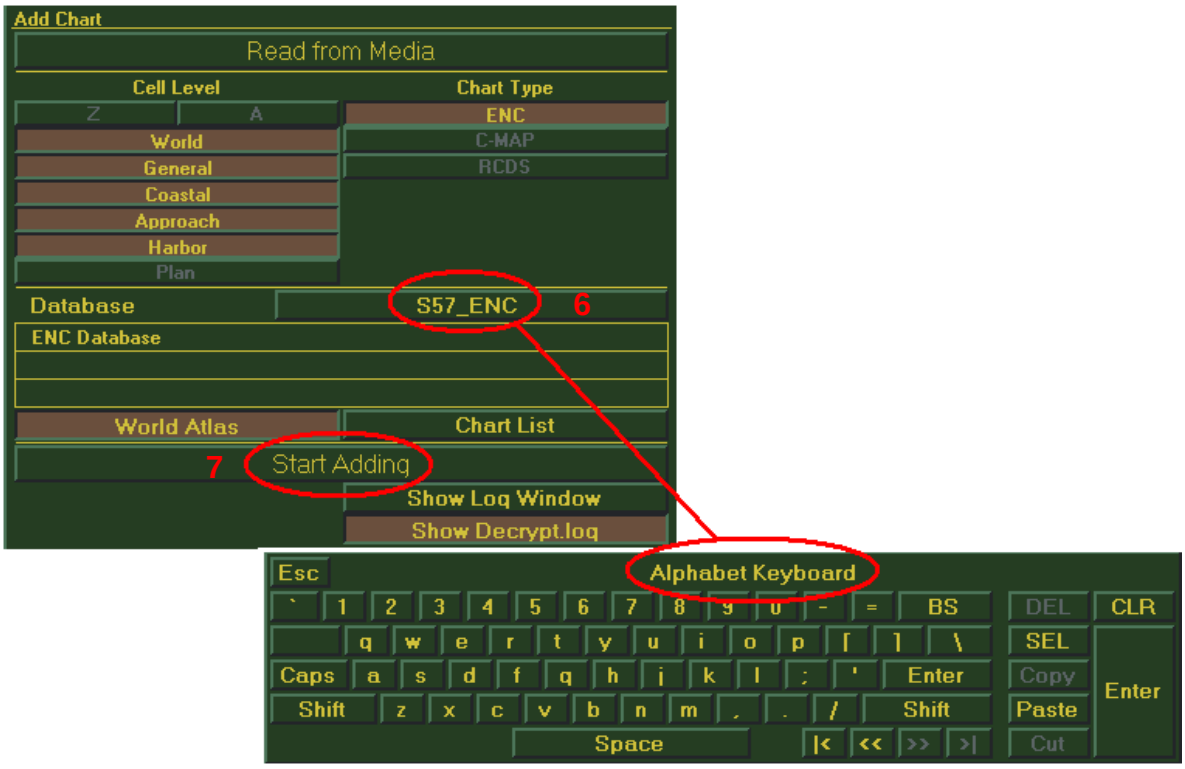
The warning message below displays *'Detected some ENC decryption errors. Check log list.'* is a result of the **SSE 11** warning message.

5. Select *'OK'* to ignore the Error Message **SSE 11**.

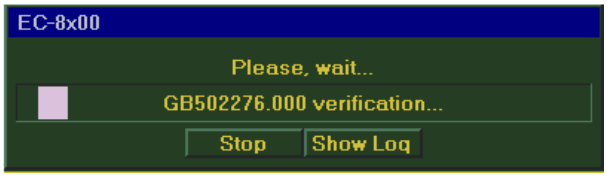
Note: *Users should not be alarmed if **SSE 11** Error Message appeared. This message means that these particular ENCs have not been purchased and as a result no permits are available.*

6. Select *'Database'*, for first time installation name the database (e.g. S57_ENC) then use the same database for subsequence chart installation.

7. Select *'Start Adding'* to begin chart installation.

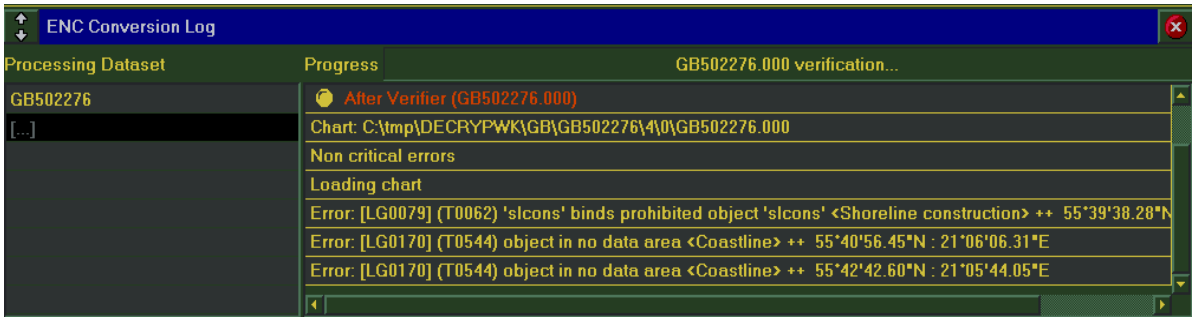


The system will start by verifying the first ENC.

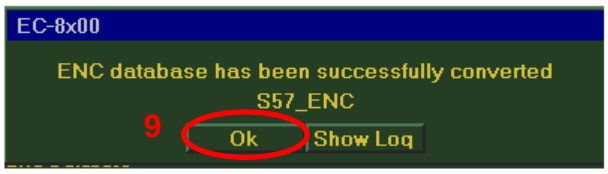


8. Once the first cell has been verified select *'Cont All'* after the ECDIS verifies the first ENC.

During the verification and conversion process the system displays an *'ENC Conversion Log'* with the results of the verifications and conversion status. Users can *ignore any* ***'Non critical errors'*** as these do not affect the safe display of the ENC in the ECDIS.



9. On completion the following message box is displayed informing the user that the *'ENC database has been successfully converted'*. Select *'OK'* to complete the installation process.

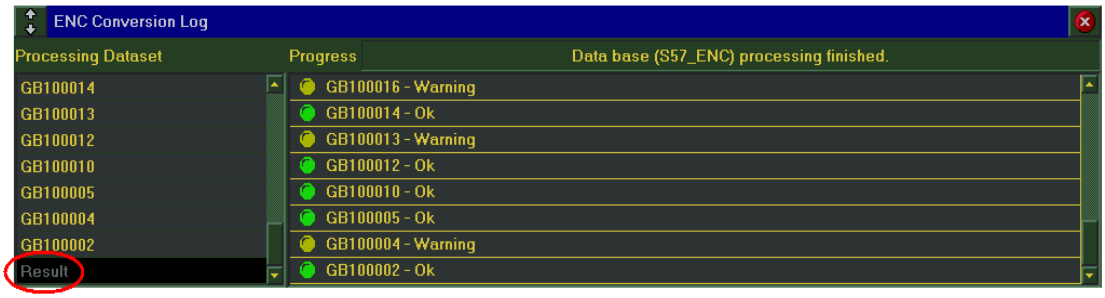


On completion the 'ENC Conversion Log' provides a summary status of the installed ENCs.

Green: *ENC verification and installation is OK.*

Yellow: *ENC verification returned some minor warnings and ENC installation is successful.*

Red: *ENC verification returned some critical errors and the ENC installation failed.*



Note: This process should be repeated until all required exchange set(s) have been installed.

11 Systems Checks

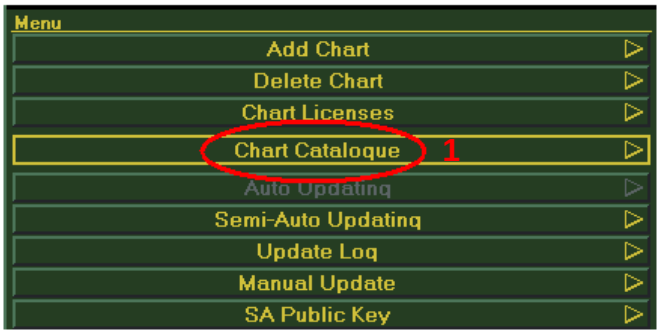
In Chart Catalogue, user must load the created databases installed on the system for viewing on display. User can also check the installed ENCs status in chart catalogue.

To check and view the installed ENCs edition and update status, select the following:

Update Menu → Chart Catalogue → Databases tab → Load the Database → Charts tab →

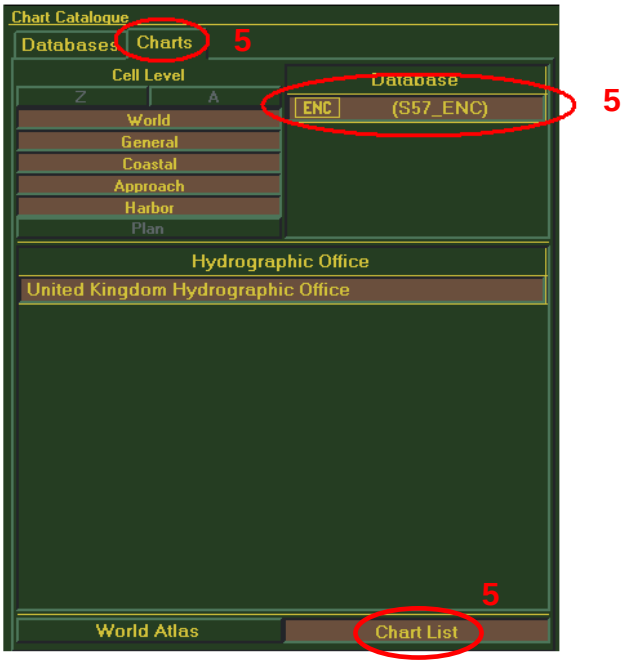
Select Chart List → Select Cell → Show

1. In the *'Update'* menu, select *'Chart Catalogue'*.



2. In *'Databases'* tab, Select *'C-MAP/ENC'*.
3. Highlight the appropriate database by selecting it (e.g. S57_ENC).
4. Select *'Load Database'*.

5. In the *'Charts'* tab, select *'Database'* and *'Chart List'* to view installed charts status.



In the *'Chart List'*, the user can check the **Edition and Update** status of all installed ENCs.

6. Select the *'Cell Name'* to highlight.

7. Select *'Show'* to display the chart on screen.

Note: *Check the Scale column to view the ENC at the appropriate scale.*

12 Troubleshooting

Many of the difficulties that could be experienced when using the Admiralty Vector Chart Service with this system can be avoided by carefully following the instructions in this guide. However, issues that are known to have caused confusion in the past are detailed in the Frequently Asked Questions (FAQ) section which can be found at:

http://www.ukho.gov.uk/Support

If you encounter problems that are not solved by referring to the FAQs, you may wish to seek Technical Support. Please see the section below for contact details.

Who should you contact?

You will receive the most effective support if you address your initial query to either your ECDIS Manufacturer or ADMIRALTY Chart Agent, but in certain circumstances you may need to contact the UKHO Customer Services.

Problem	Contact
Hardware problems: difficulties with the keyboard, mouse, display or main system console, failure of a floppy disk or CD drive or USB port.	ECDIS Manufacturer
Software problems: difficulties with configuring or using the ECDIS system software, interfacing problems.	
Chart installation problems: problems with installing certificates, permits and AVCS ENCs, standard error codes displayed (see AVCS User Guide).	Admiralty Chart Agent
Chart content problems: display anomalies or mismatched data displays.	
Problems that have not been resolved by your Admiralty Chart Agent.	UKHO Customer Services

When reporting a chart related problem it is useful if you can provide the following details:

> Licence number
> Vessel name
> ECDIS/Software Manufacturer
> Details of error message – Including ‘SSE’ error code
> Screen shot(s) of error
> Details of Base Discs used (date)
> Details of Update CD used (date)
> Details of Permits used (date)
> Details of Cell number(s) errors apply to
> Have there been any configuration changes to system(s)
> Details of User Permit(s) and PIN Number(s)

Emergency Chart Permit Generation

In certain circumstances it may be necessary for a vessel to get access to an AVCS chart at very short notice, for instance if a route needs to be **diverted due to a medical or safety emergency**.

In these emergency circumstances only, individual AVCS ENC Permits can be obtained from the UKHO **24 hours a day, 365 days a year.**

To obtain the AVCS emergency permit, please quote:

> Vessel Name

> ECDIS User Permit Number

> Required ENCs

The permits can be sent directly to the vessel by email wherever possible, by fax, or simply by reading the characters out over the telephone or radio.

Please contact UKHO Customer Services using the contact details below:

Support Hours: 24/7	Telephone:	+44 (0)1823 723366
	Facsimile:	+44 (0)1823 251816
	Email:	customerservices@ukho.gov.uk
	Contact:	UKHO Customer Services
	Web:	http://www.ukho.gov.uk/Support

Feedback

We hope this User Guide assists you in using the Admiralty Vector Chart Service with this system. If you have any feedback on the content of this particular guide, or the online FAQs, please forward your comments to your Admiralty Chart Agent or directly to UKHO

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