



AVCS

ADMIRALTY
Vector Chart Service

Using the ADMIRALTY Vector Chart Service with PC Maritime ECDIS

This guide is based on the PC Maritime NAVMASTER ECDIS Version 7.1.0.16



United Kingdom
Hydrographic Office

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1 Introduction

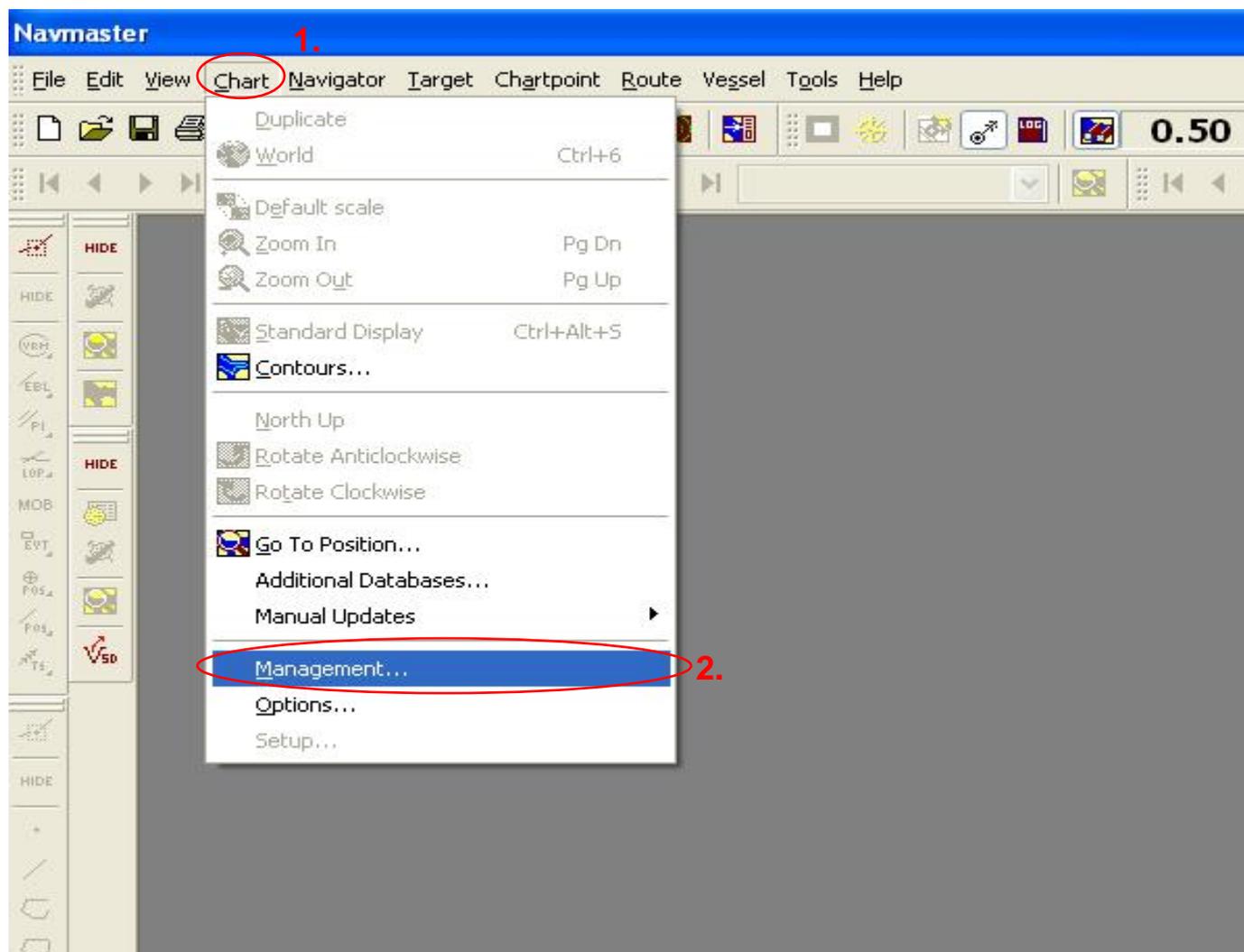
- > The purpose of this guide is to provide equipment-specific information to assist users in managing their AVCS ENC holdings.
- > This guide should be used in conjunction with the AVCS User Guide, as well as the ECDIS Operators Manual or other documentation as supplied by the equipment manufacturer.
- > The actual instructions and screenshots in this guide are based on the version of the PC Maritime 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

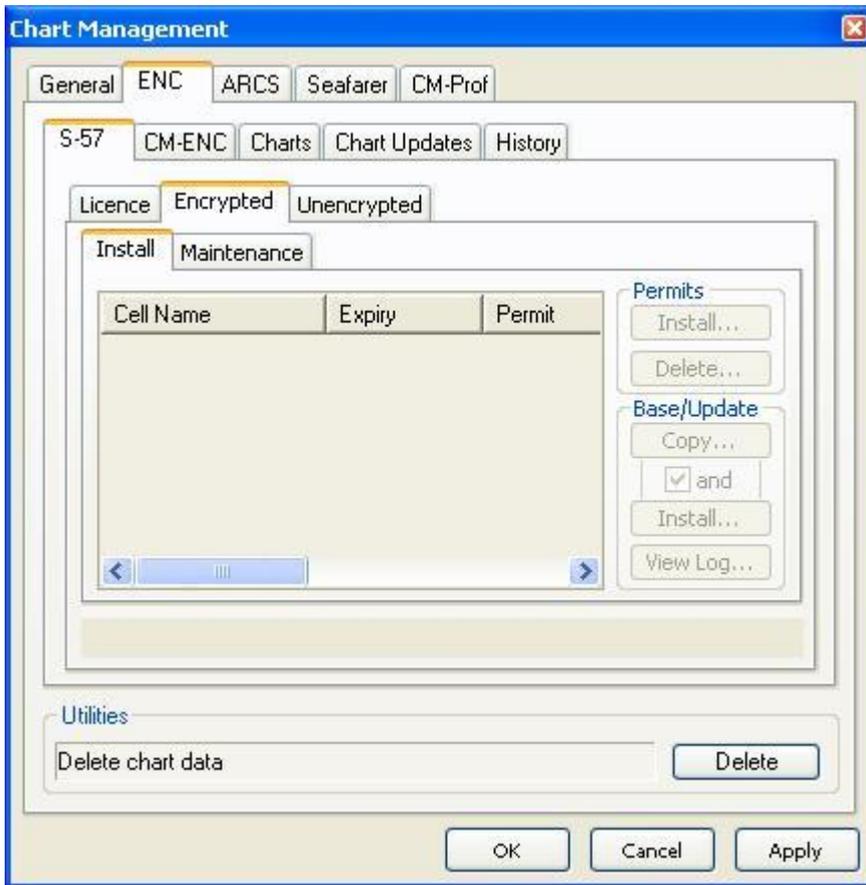
All Data Management within the PC Maritime ECDIS is undertaken within the 'Chart Management' window.

NavMaster: Chart → Management...

1. Select the 'Chart' option from the menu at the top of the screen.
2. From the dropdown select 'Management...'



This will open the 'Chart Management' window.



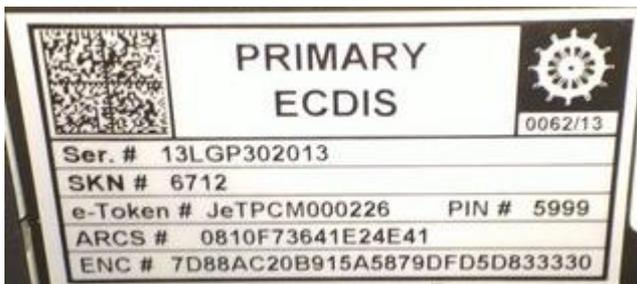
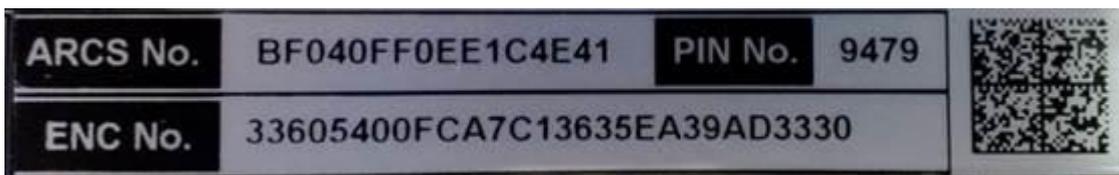
Note: All electronic chart licensing and data management operations are carried out through the "Chart Management" window.

3 The User Permit Number (UPN)

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 an AVCS licence.

It is not possible to view or retrieve the User Permit Number from the PC Maritime NavMaster. The User Permit Number will have been provided at the time of installation and should be noted within the ECDIS User Manual.

The User Permit Number can be found on the processor label on the ECDIS case as below:



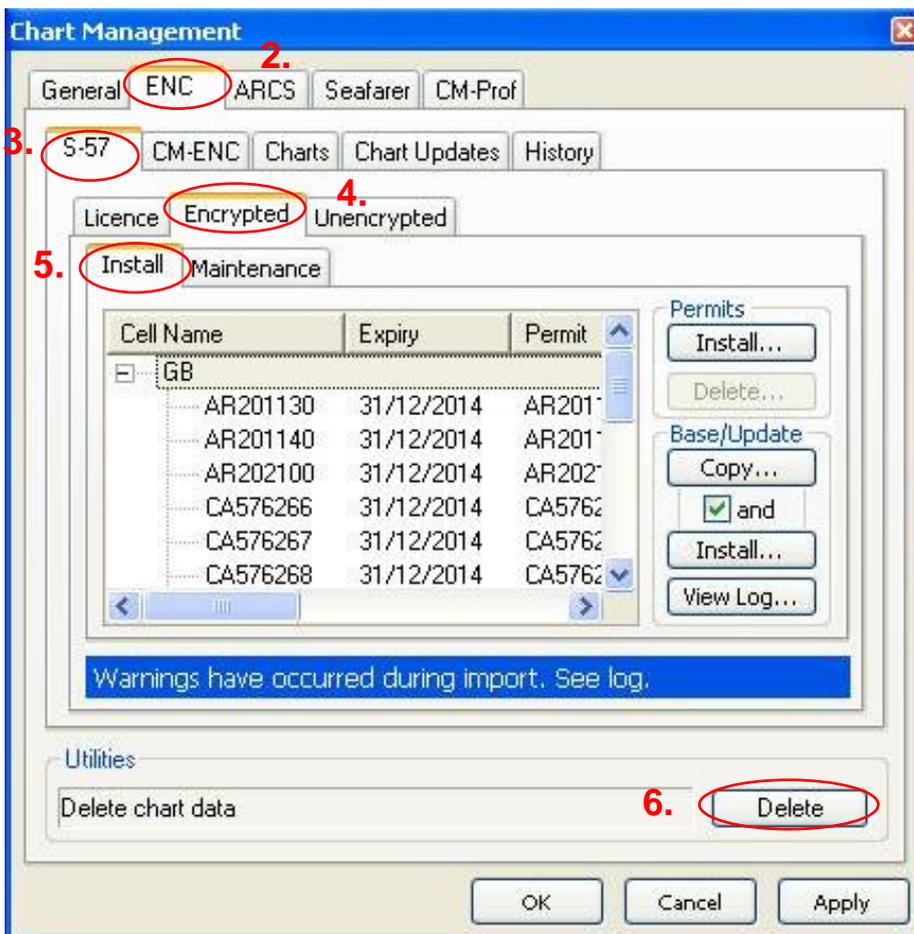
4 Deleting ENC Data

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.

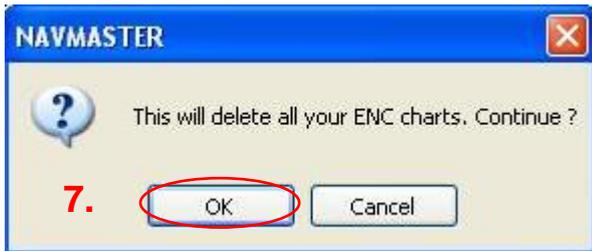
When there are installed charts in the ECDIS the user can remove (delete) all of the installed ENCs from the system database (SENC):

Chart Management: ENC tab → S-57 → Encrypted tab → Install → Delete → OK → No → No

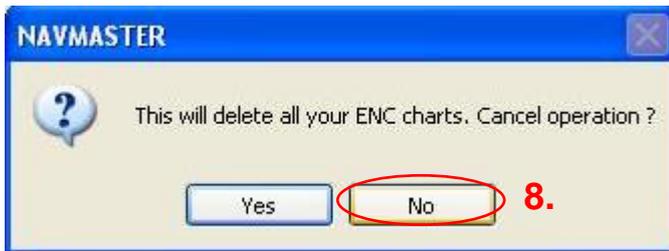
1. Select 'Management...' from the 'Chart' Menu
2. Select the 'ENC' tab
3. Select the 'S-57' tab
4. Select the 'Encrypted' tab
5. Select the 'Install' tab
6. Select 'Delete'



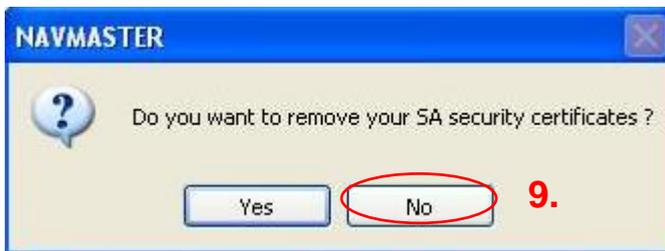
7. Select 'OK'



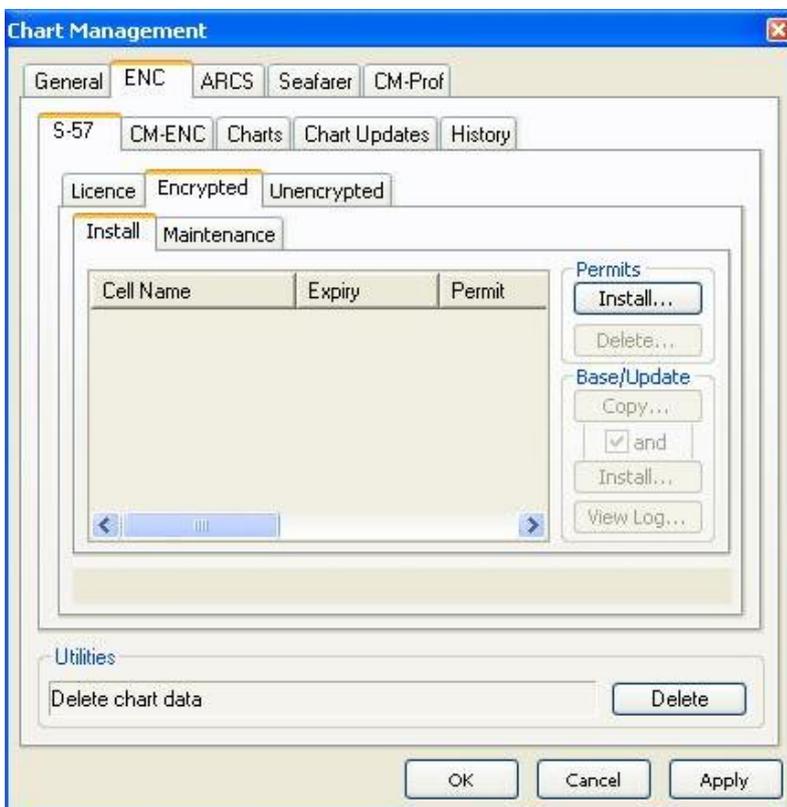
8. Select 'No'



9. Select 'No'



All ENC data will then be deleted from the system.

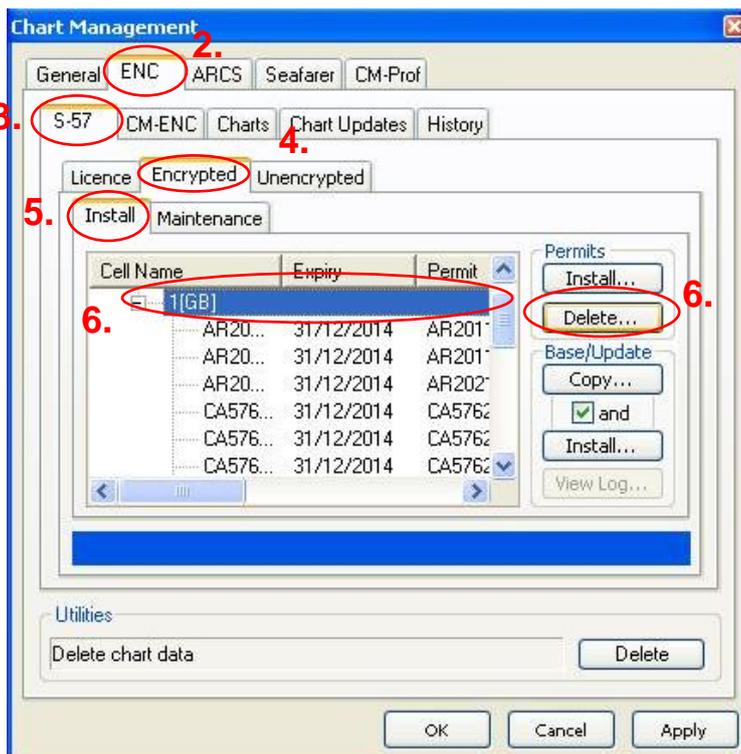


5 Deleting ENC Permits

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 for 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.

Chart Management: ENC tab → S-57 → Encrypted tab → Install → Delete → OK

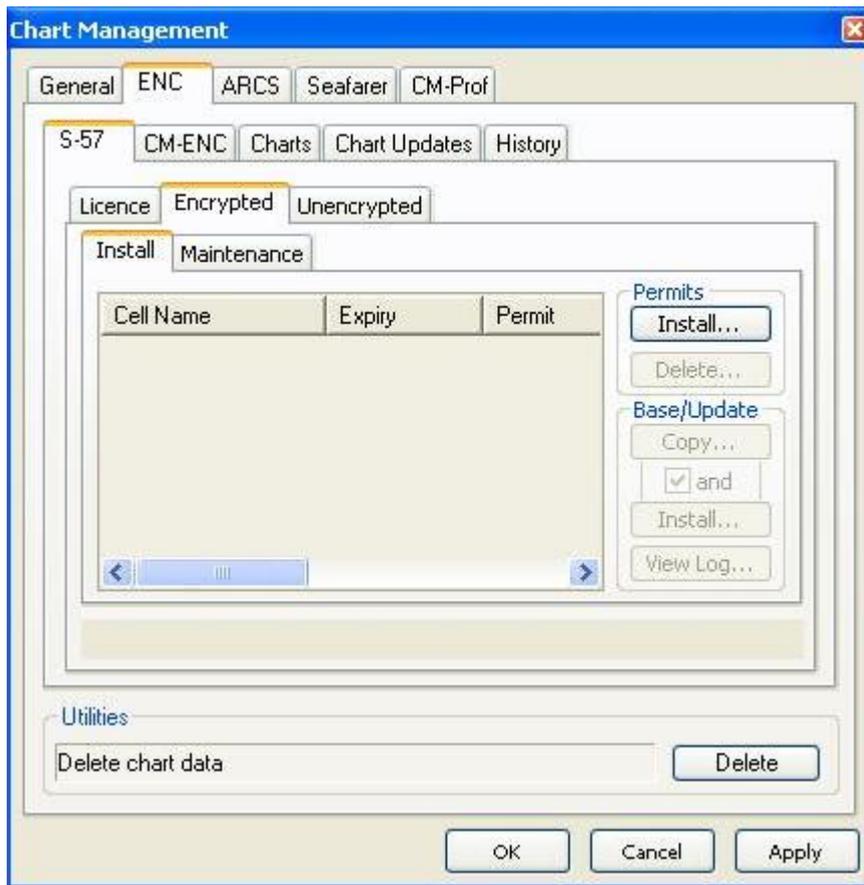
1. Select 'Management...' from the 'Chart' Menu
2. Select the 'ENC' tab
3. Select 'S-57' tab
4. Select the 'Encrypted' tab
5. Select the 'Install' tab
6. Highlight the permit folder required for deletion and select the 'Delete' option from the 'Permits' section



7. Select 'OK'



The selected permits will then be deleted.



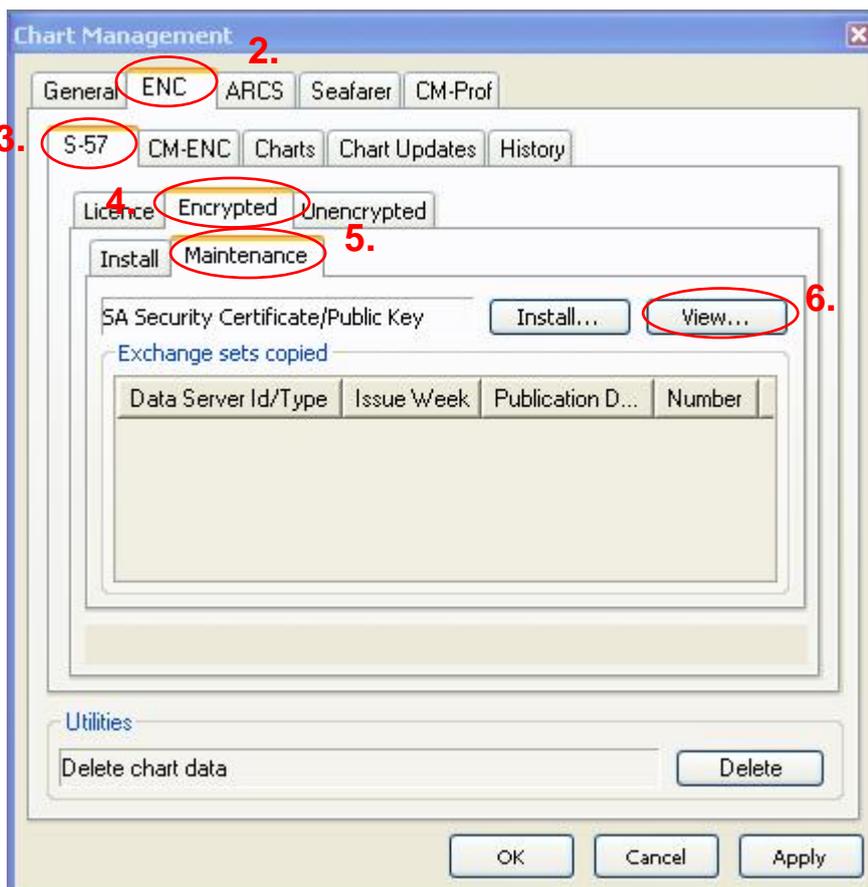
6 The Public Key

The Admiralty Vector Chart Service currently uses the IHO.CRT, issued by the International Hydrographic Organisation, to authenticate its AVCS ENC's. The IHO Public Key is included in all AVCS media

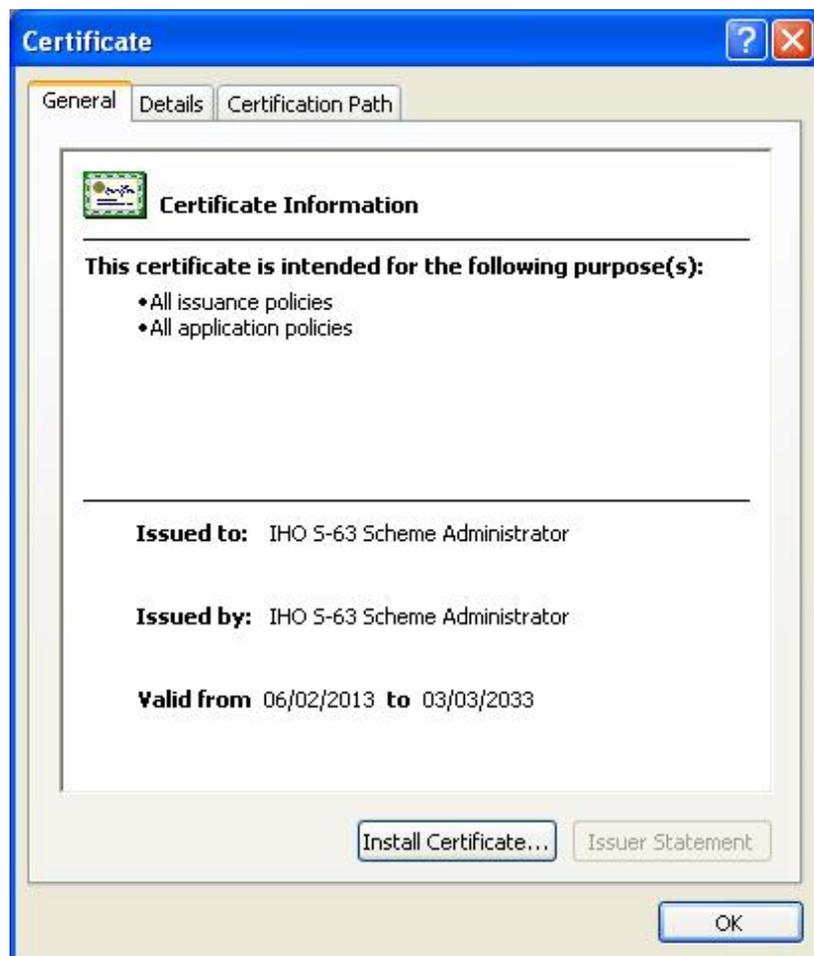
To view the installed Public Key follow the below steps:

Chart Management: ENC tab → S-57 → Encrypted tab → Maintenance → View

1. Select 'Management...' from the 'Chart' Menu
2. Select the 'ENC' tab
3. Select 'S-57' tab
4. Select the 'Encrypted' tab
5. Select the 'Maintenance' tab
6. Select 'View'

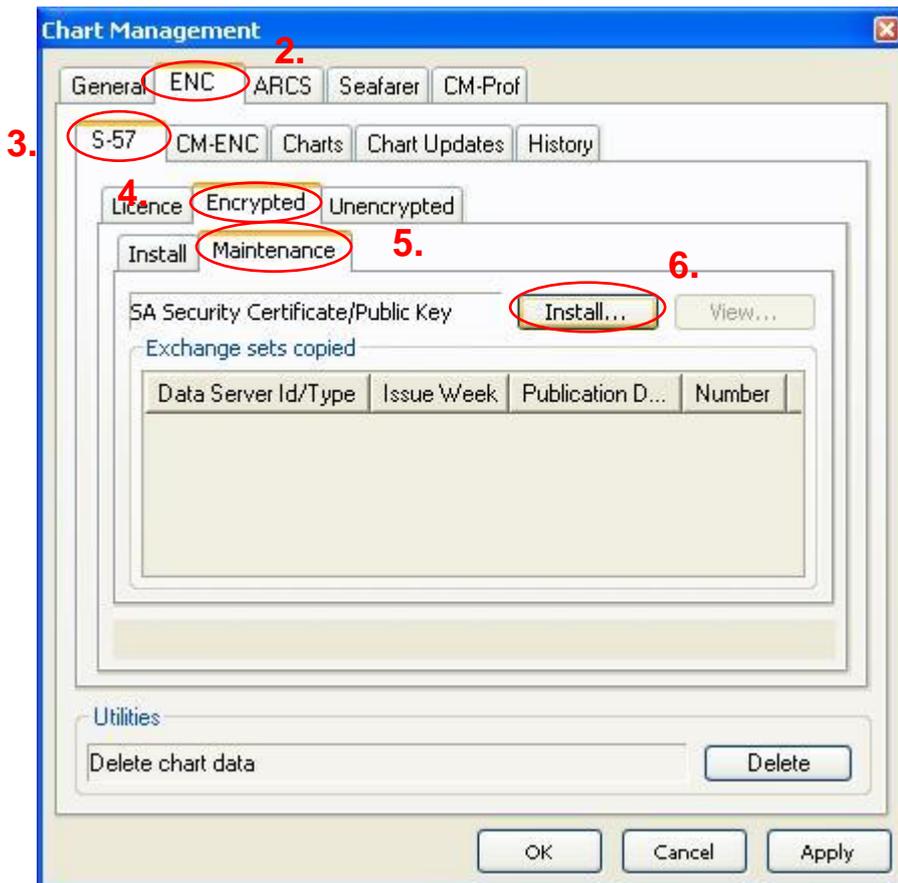


The installed Public Key will then be displayed.

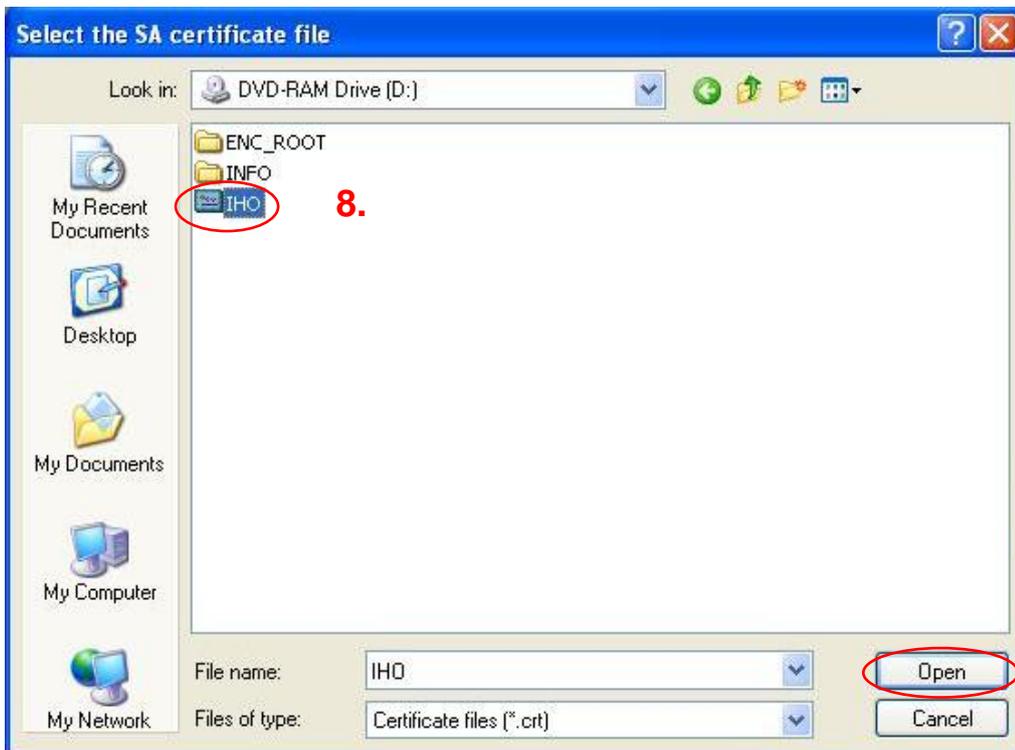


If the Public Key currently installed differs from the IHO.CRT the user will need to install the IHO.CRT. To do this insert any AVCS S63 1.1 Base or Update CD into your ECDIS and follow the steps below:

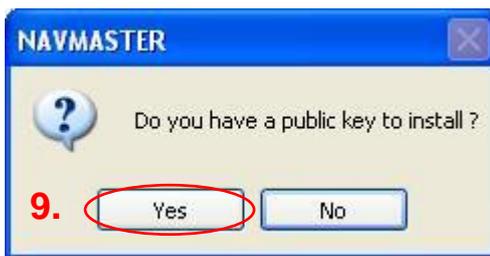
1. Select 'Management...' from the 'Chart' Menu
2. Select the 'ENC' tab
3. Select the 'S-57' tab
4. Select the 'Encrypted' tab
5. Select the 'Maintenance' tab
6. Select the 'Install' tab



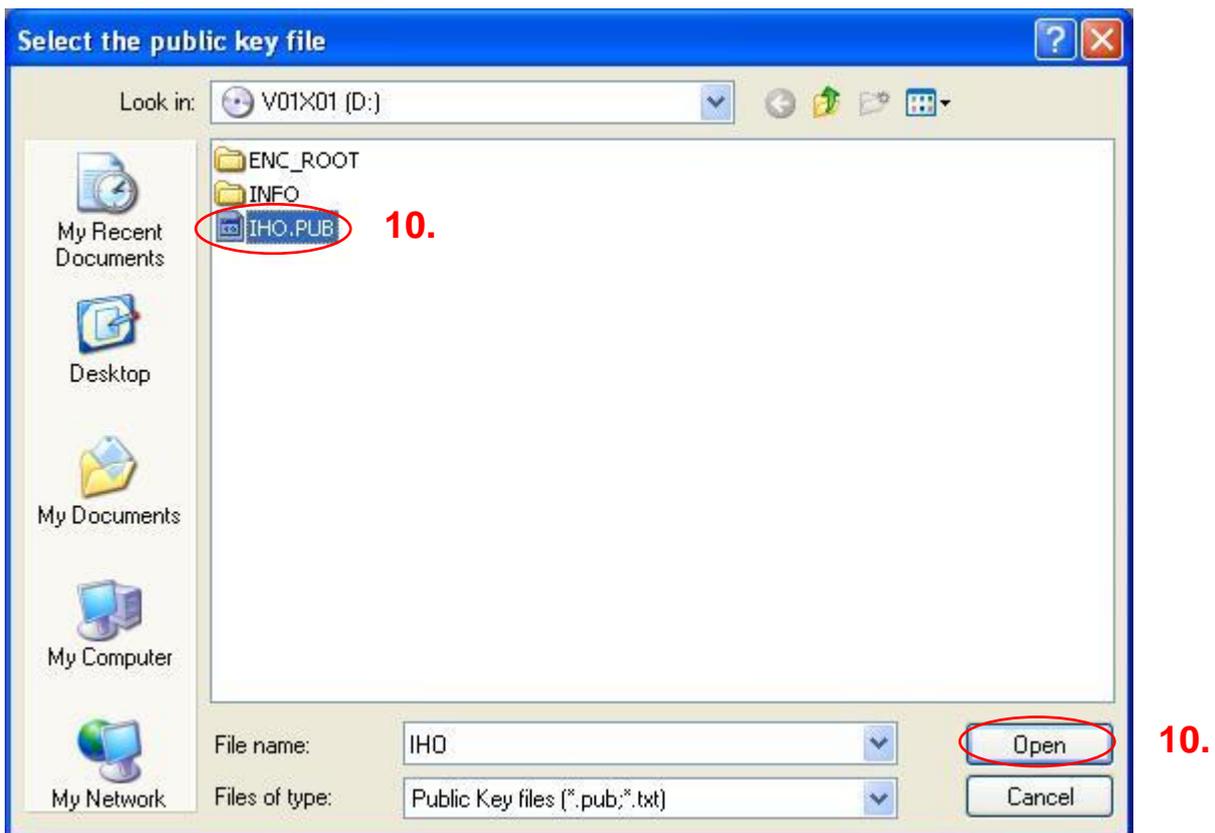
7. This will open a file selection dialog headed 'Select SA certificate file'
8. Locate and select the IHO.CRT and click 'Open'



9. You will then be asked 'Do you have a public key to install?'. Click 'Yes'.



10. Select the IHO.PUB file from the appropriate location and click 'Open'.



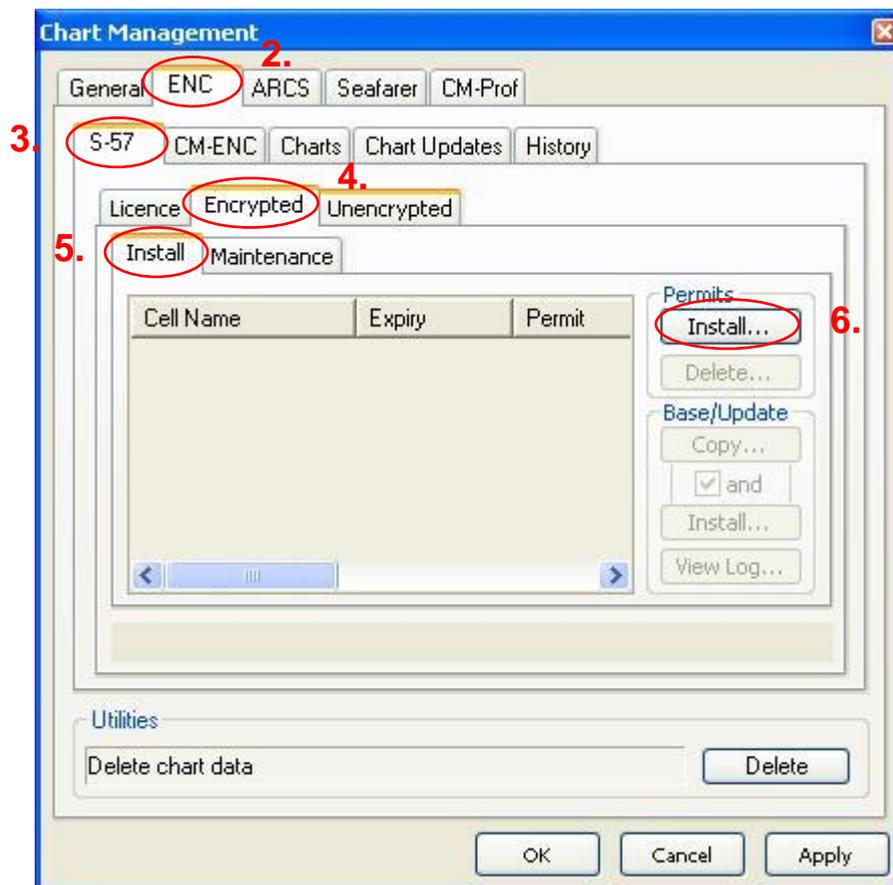
The IHO.CRT and the IHO.PUB files have now been installed and AVCS data can be loaded into the ECDIS.

7 Installing ENC Permits

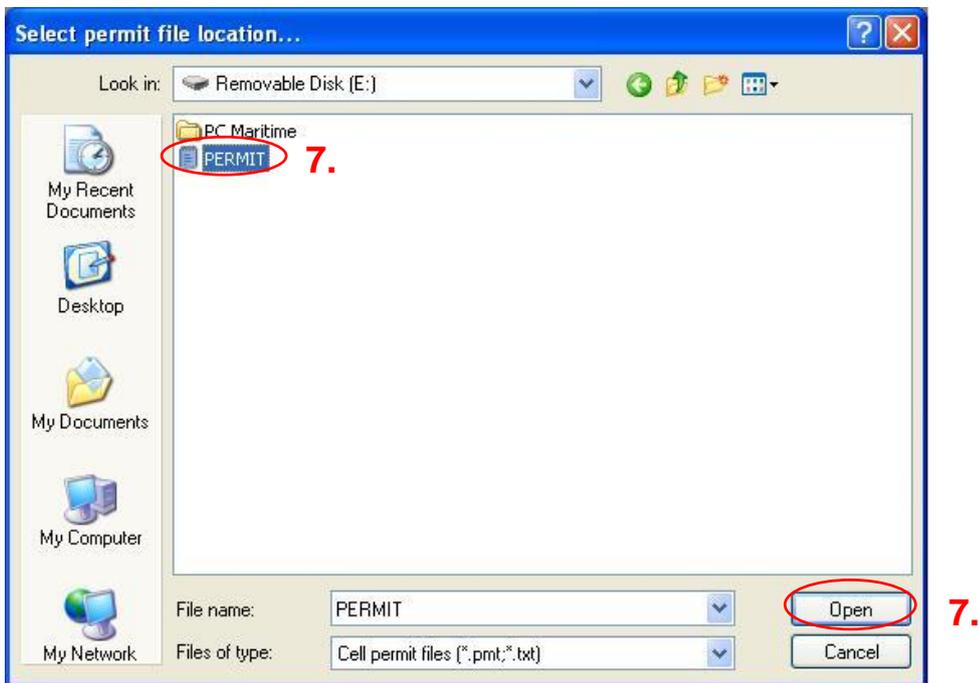
To install AVCS ENC Permits into the ECDIS use the 'Chart Management' window:

Chart Management: ENC → S-57 → Encrypted → Install → Install → Open

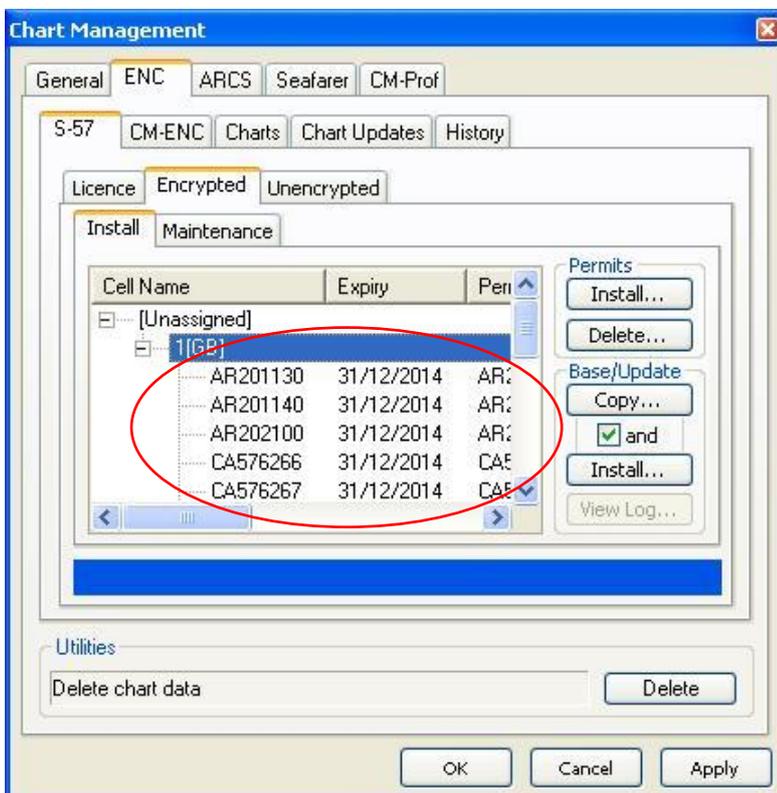
1. Select 'Management...' from the 'Chart' Menu.
2. Select the 'ENC' tab
3. Select the 'S-57' tab
4. Select the 'Encrypted' tab
5. Select the 'Install' tab
6. Select 'Install...'



7. Locate and select the 'PERMIT.TXT' file for installation and click 'Open'



8. The ECDIS will then install the PERMIT.TXT file. The cell permits will display under a '1[GB]' folder within 'Chart Management'.



8 Installing AVCS Base CDs

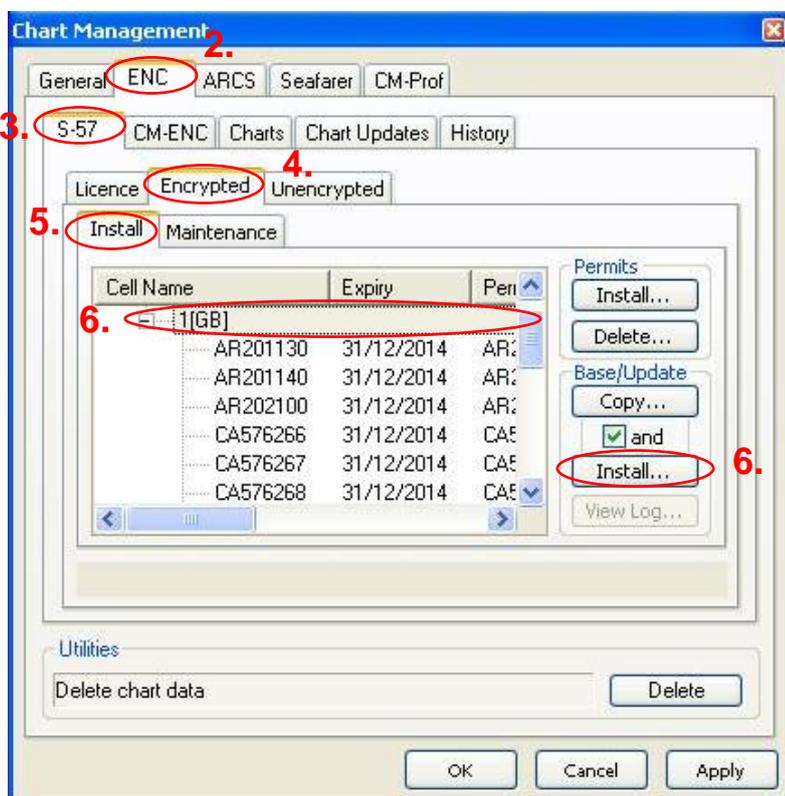
There are currently 9 AVCS Base CDs but this number will grow as more ENC's become available for distribution within AVCS. It is unlikely that users will need to install all of the CDs in order to load all licensed ENC's. Reference to the **Schedule A** can avoid the unnecessary loading of some CDs and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

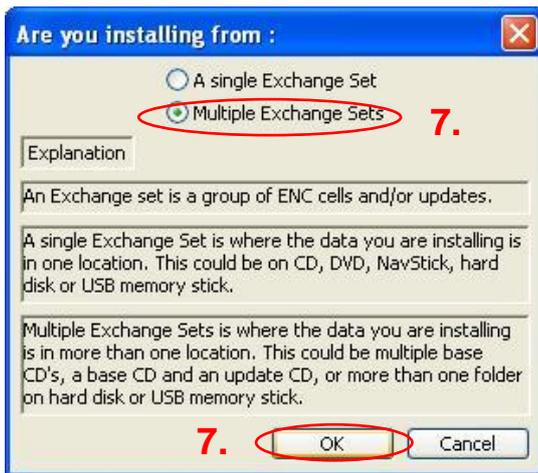
Chart Management: ENC → S-57 → Encrypted → Install → Install... → OK → Multiple Exchange Set → Drive → OK → OK → NO

1. Select 'Management...' from the 'Chart' Menu
2. Select the 'ENC' tab
3. Select the 'S-57' tab
4. Select the 'Encrypted' tab
5. Select the 'Install' tab. Insert the first AVCS Base CD into the drive.
6. Select the '1[GB]' folder and click 'Install...'.



Note: If the 'Copy...' and 'Install...' buttons are greyed out then AVCS permits have not been installed

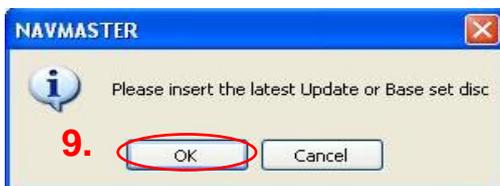
7. Select 'Multiple Exchange Sets' and click 'OK'



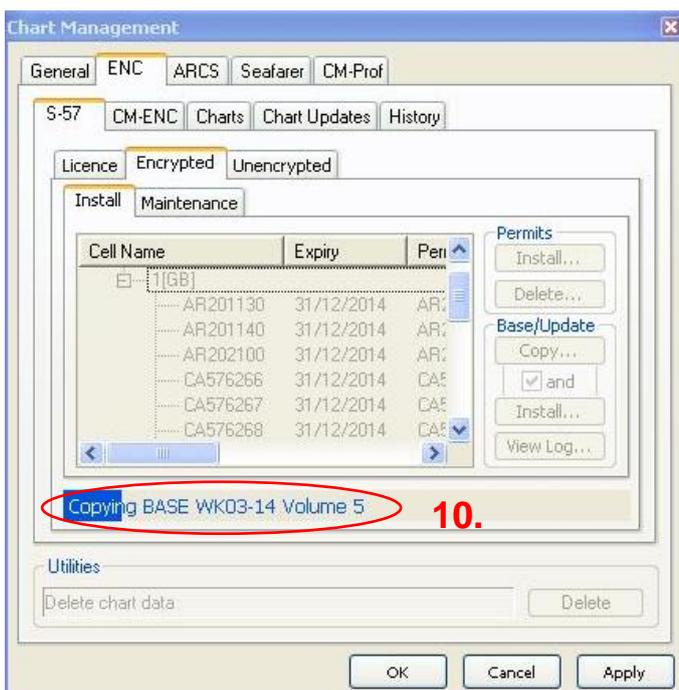
8. Select 'Drive' from the 'Chart Source Selection' window



9. Make sure that the latest AVCS Base media is in the CD Drive and click 'OK'



10. 'Chart Management' will then copy the required data from the AVCS Base media

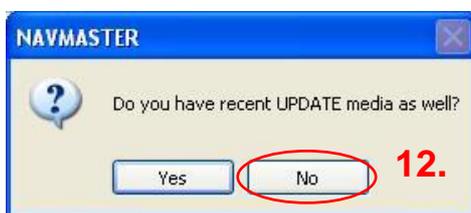


11. Once completed the ECDIS will ask for the next AVCS Base media. Insert the AVCS Base media relating to the message and click 'OK'



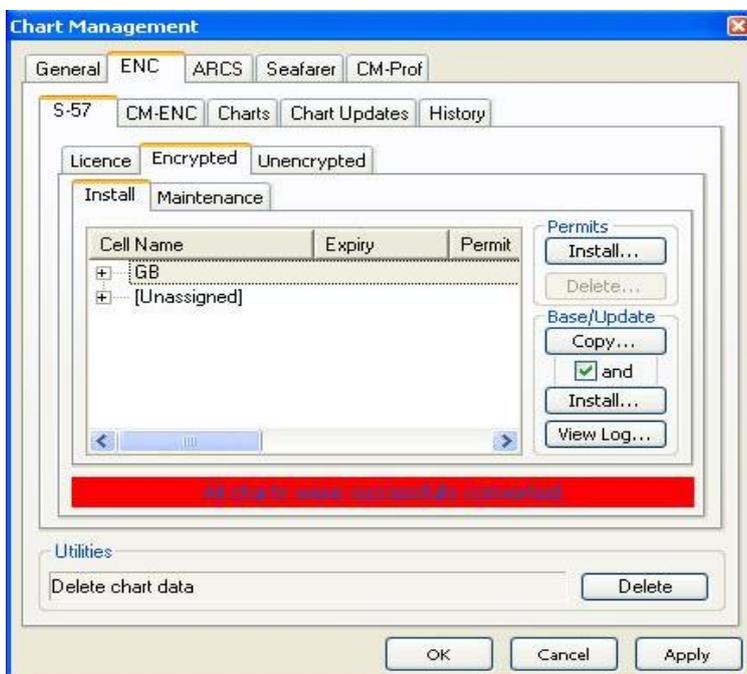
Note: Only install the AVCS Base Media required as per the **Schedule A**. If the AVCS Base Media mentioned in the 'Navmaster' message does not require installation click 'Cancel', this will then change to the next AVCS Base Media in numerical order. Repeat the process as required

12. The NavMaster will then ask whether you have recent update media. Select 'No'.



Note: It is possible to install AVCS Update Media at this point if required. Simply insert the AVCS Update Media as directed and select 'Yes' this will then copy the Update Media across and then install all copied data.

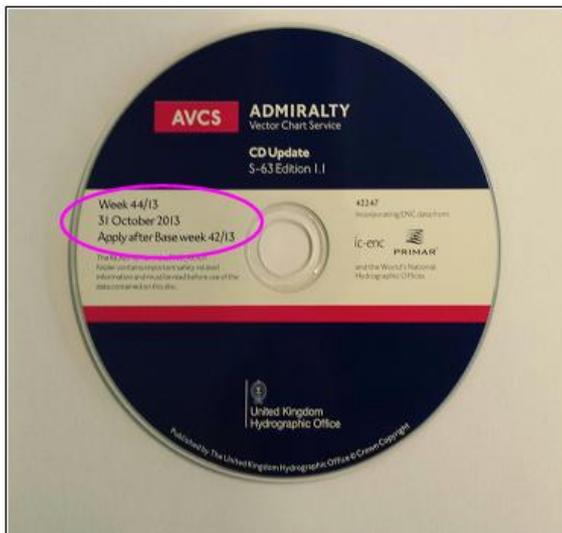
The NavMaster ECDIS then completes the installation.



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

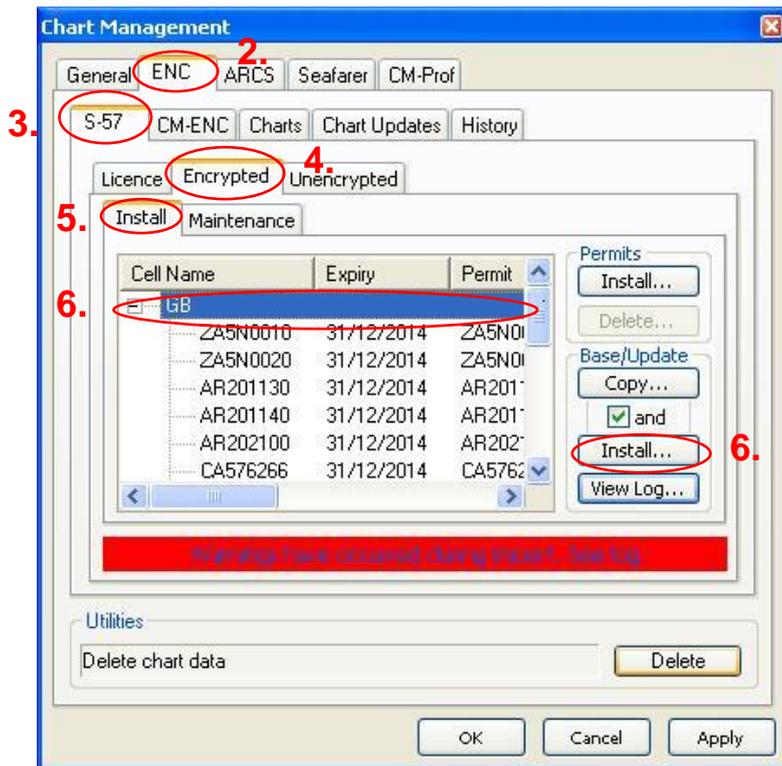
The Weekly AVCS Update CD must only be inserted into the CD Drive after having installed the latest required AVCS Base Media.



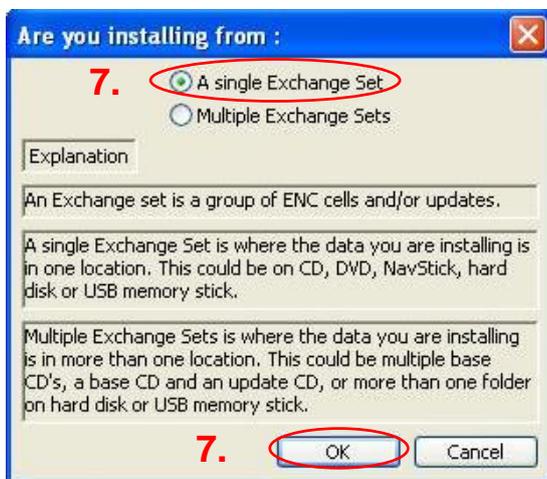
Note: AVCS Base CDs are re-issued about every 6 to 8 weeks. The AVCS update disc will indicate which Base disc week must have been installed. It is important that users do not attempt to load an Update CD that is not consistent with the Base CDs.

Chart Management: ENC → S-57 → Encrypted → Install → Install... → A Single Exchange Set → OK → Drive → OK → OK

1. Select 'Management...' from the 'Chart' Menu.
2. Select the 'ENC' tab
3. Select the 'S-57' tab
4. Select the 'Encrypted' tab
5. Select the 'Install' tab. Insert the AVCS Update CD into the Drive
6. Select the '1[GB]' folder that click 'Install..'



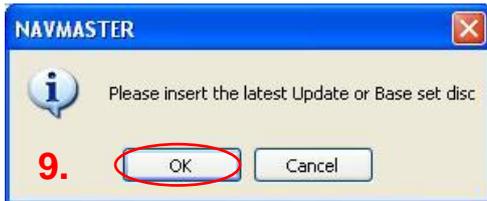
7. Select 'A single Exchange Set' and click 'OK'



8. Select 'Drive'



9. Insert the latest AVCS Update CD and click 'OK'

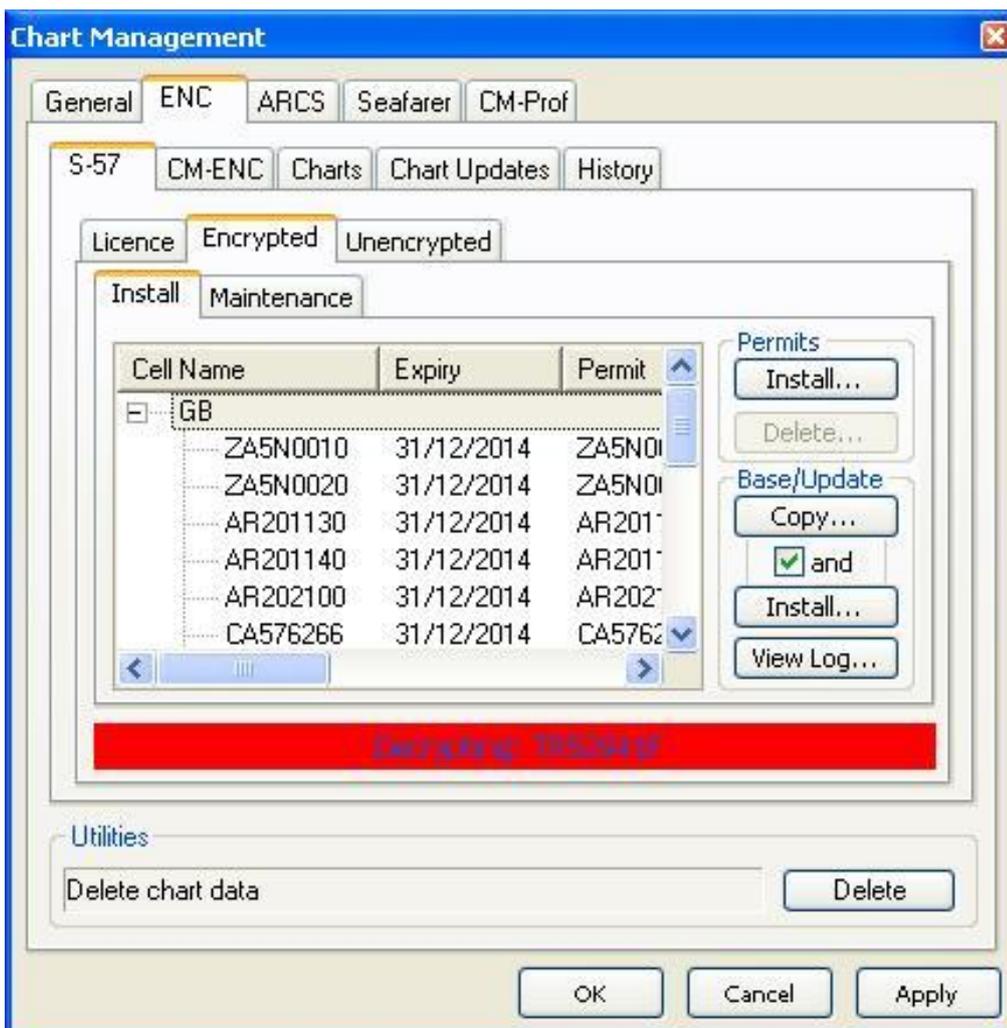


10. Insert the Base CD requested and click 'OK'



Note: Repeat this step if directed to do so by the ECDIS.

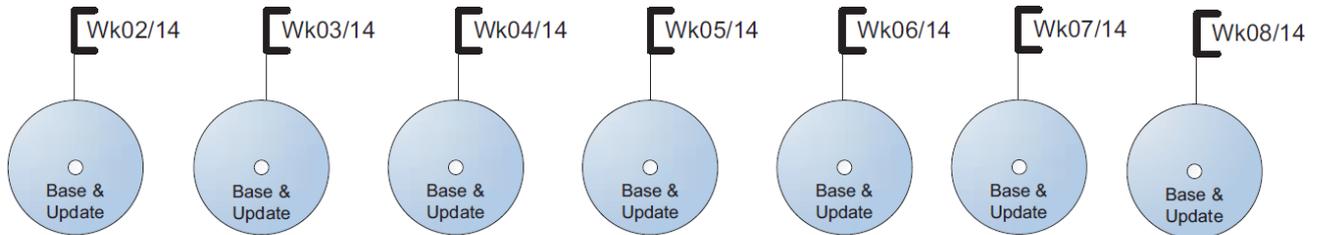
11. The update will then complete and any updates will be applied.



10 Installing AVCS DVD

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

DVD Service



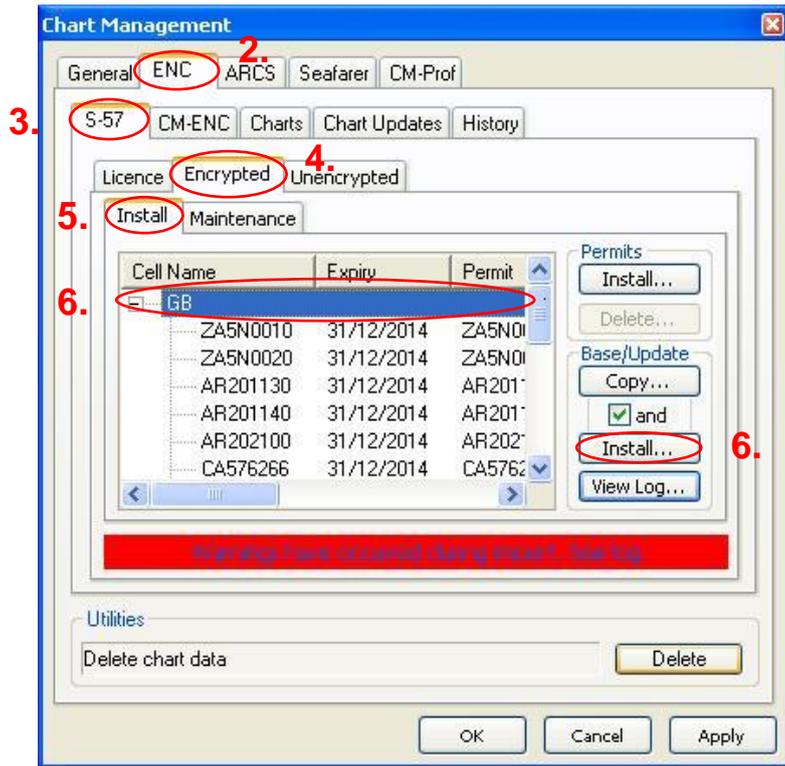
DVD contains Base and Update data for complete AVCS service each week

Week numbers are given as examples only and do not represent the data issued by the UKHO

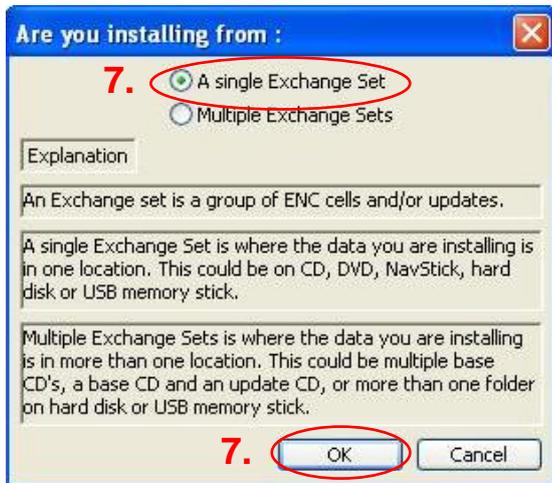
Note: *The loading process within the ECDIS will be very similar to that required for the AVCS CD Service however there are some minor differences which are detailed below.*

Chart Management: ENC → S-57 → Encrypted → Install → Install... → A Single Exchange Set → OK → Drive → OK

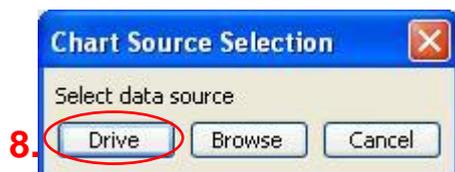
1. Select 'Management...' from the 'Chart' Menu.
2. Select the 'ENC' tab
3. Select the 'S-57' tab
4. Select the 'Encrypted' tab
5. Select the 'Install' tab. Insert the AVCS DVD into the Drive
6. Select the 'GB' folder that click 'Install..'



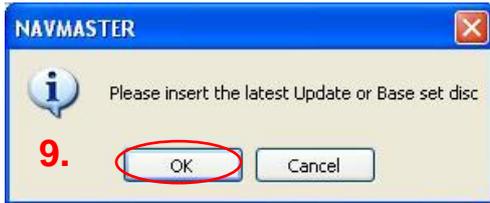
7. Select 'A single Exchange Set' and 'OK'



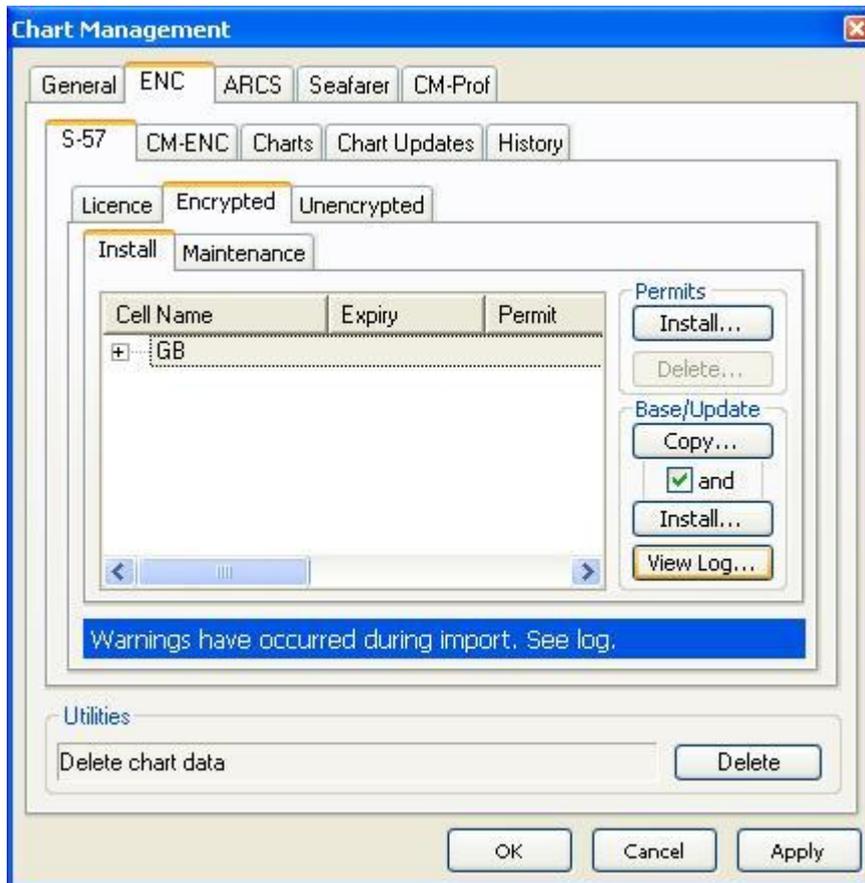
8. Select 'Drive'



9. Insert the latest AVCS DVD into the drive and select 'OK'



The ECDIS will then install all of the licenced AVCS cells from the AVCS DVD.

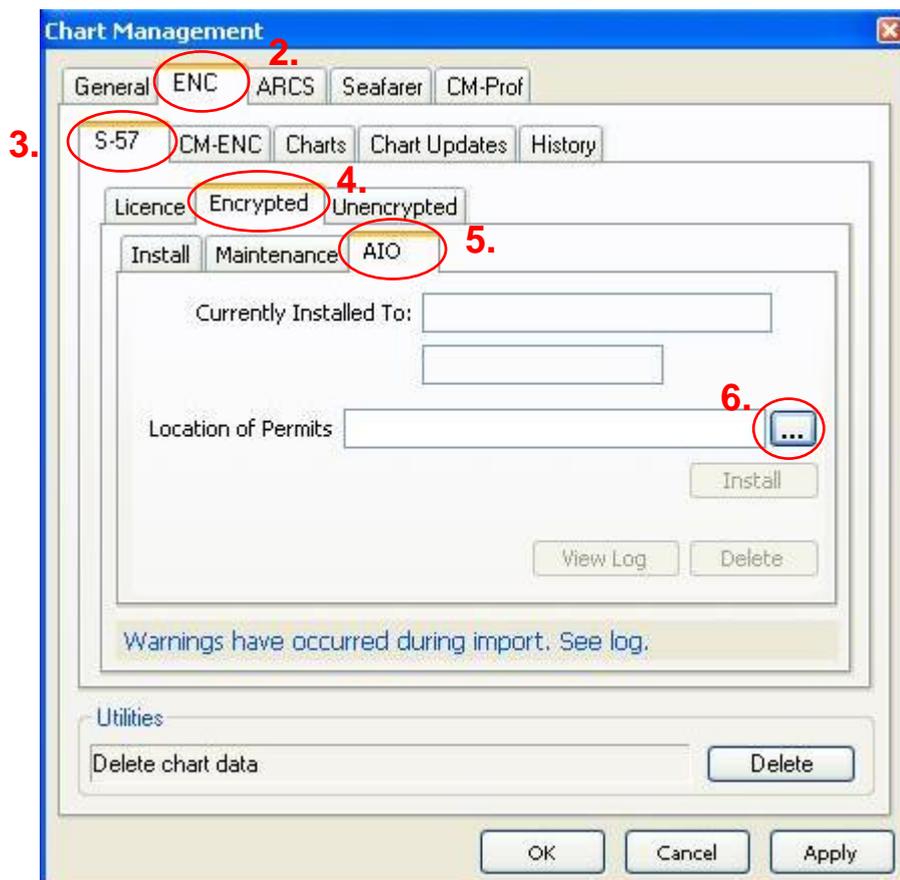


12 Installing AIO

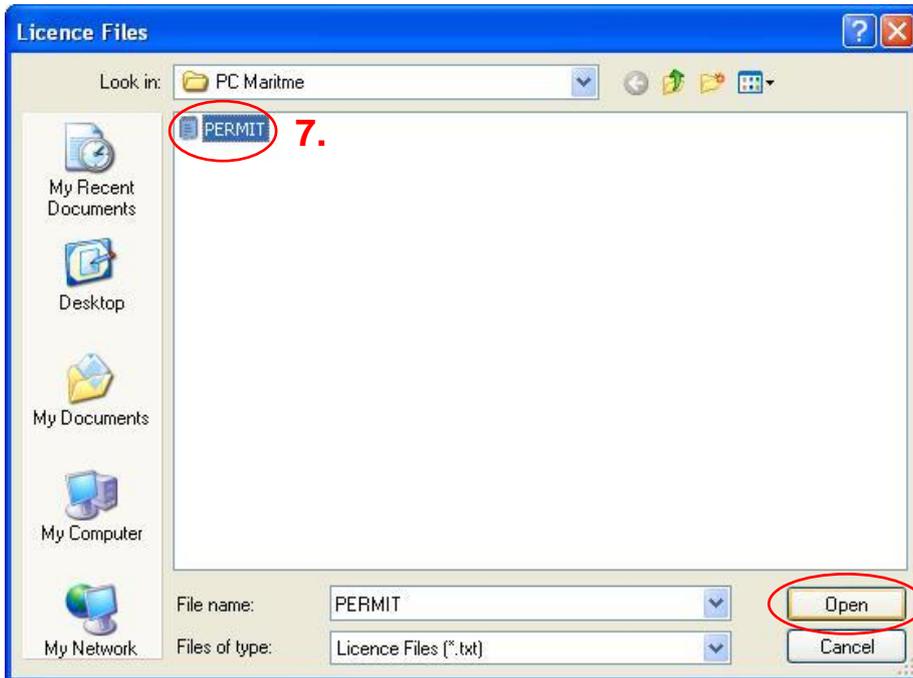
The Admiralty Information Overlay (AIO) should only be installed when the relevant AVCS S-63 1.1 Data has been installed. The PC Maritime ECDIS links the AVCS and AIO data and therefore both sets of data should be of the same week.

Chart Management: ENC → S-57 → Encrypted → AIO → ... → Install → Drive → OK

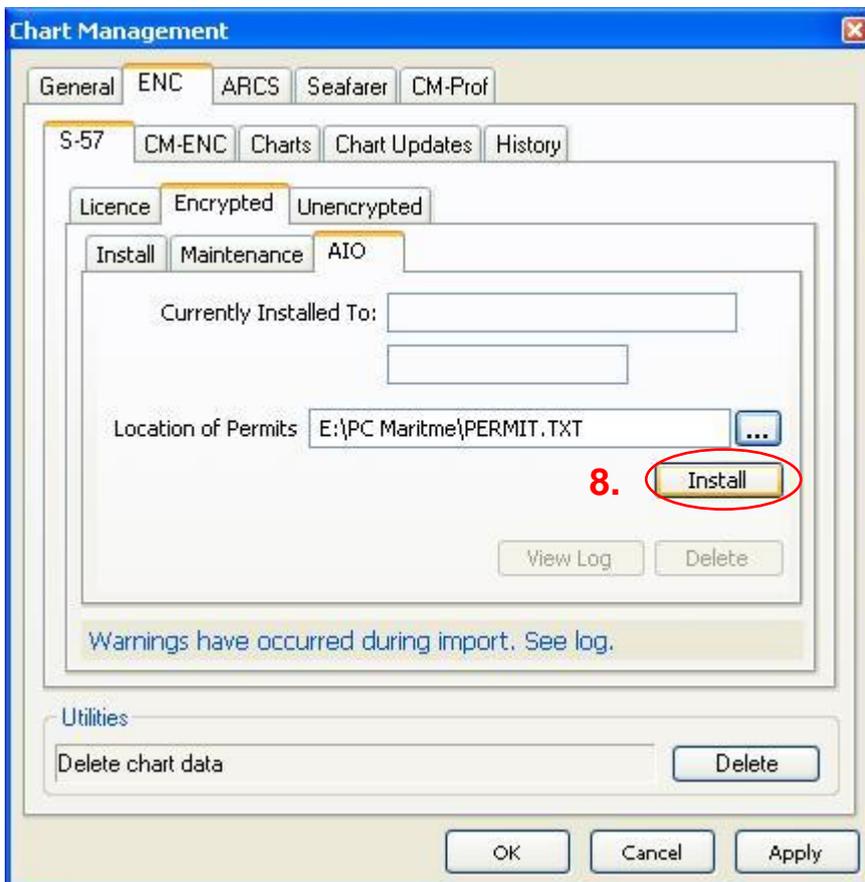
1. Select 'Management...' from the 'Chart' Menu.
2. Select the 'ENC' tab
3. Select the 'S-57' tab
4. Select the 'Encrypted' tab
5. Select the 'AIO' tab
6. Select the '...'



7. Locate and select the 'PERMIT.TXT' file for installation and click 'Open'



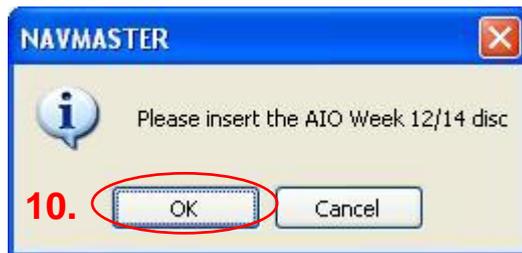
8. Select 'Install'



9. Select 'Drive'

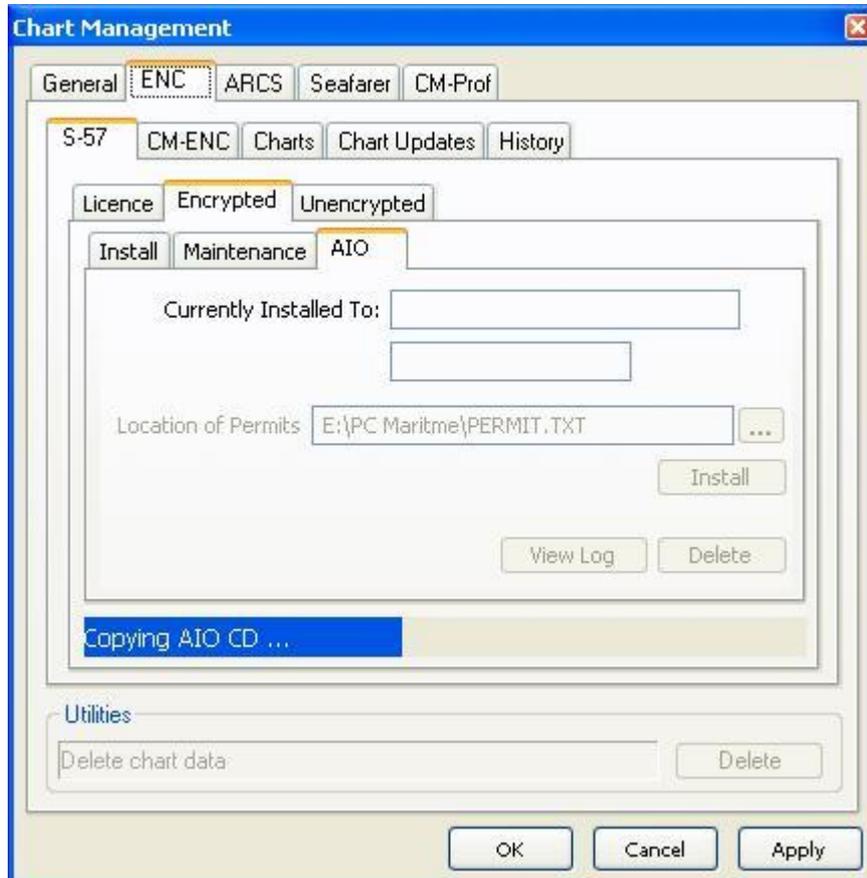


10. Insert the AIO Media as requested and select 'OK'

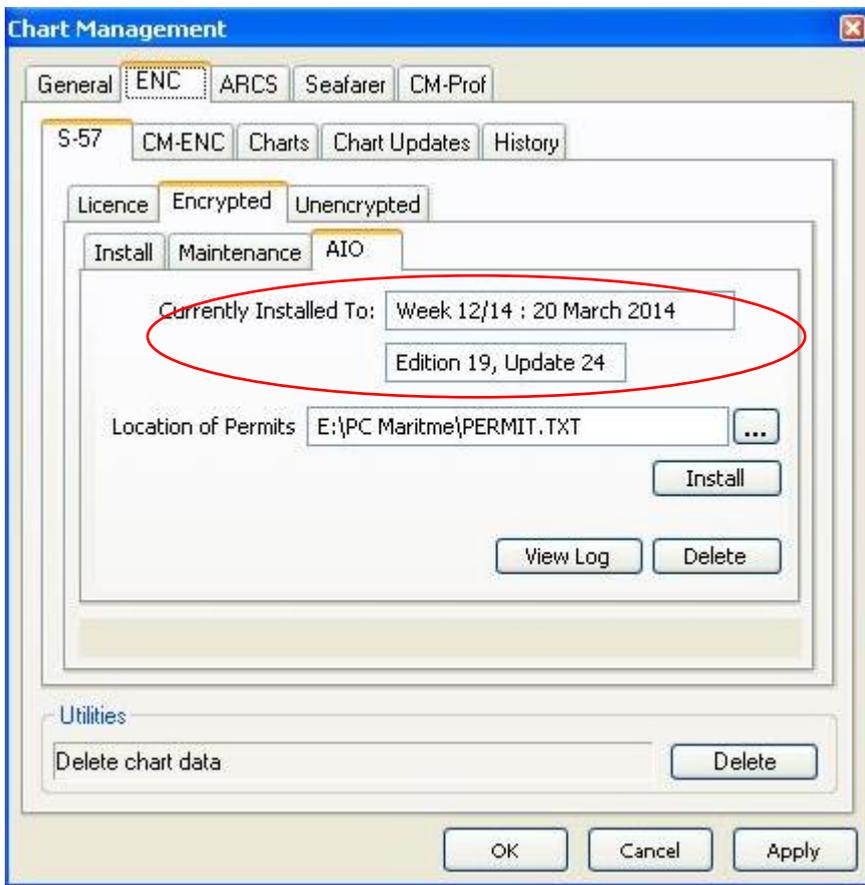


Note: To successfully install the AIO the data must be of the same week as the AVCS data that has been installed.

The AIO data will then start to install.



Once completed the PC Maritime ECDIS will display the week number of the data that is currently installed as well as the Edition and Update number of the installed data.

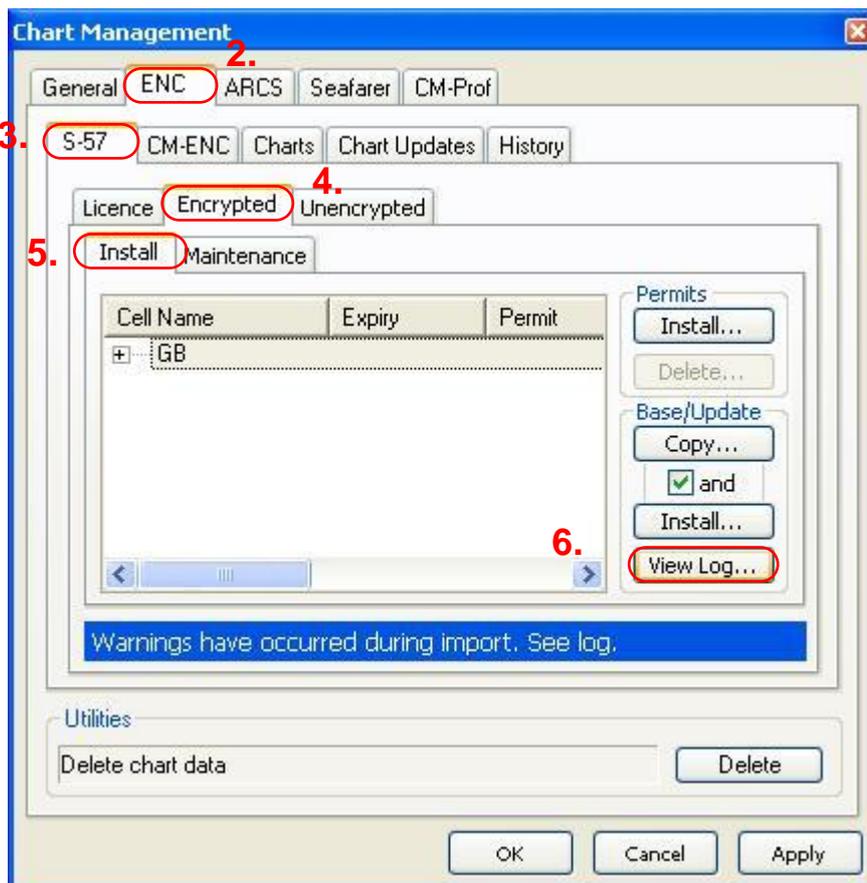


13 Systems Checks

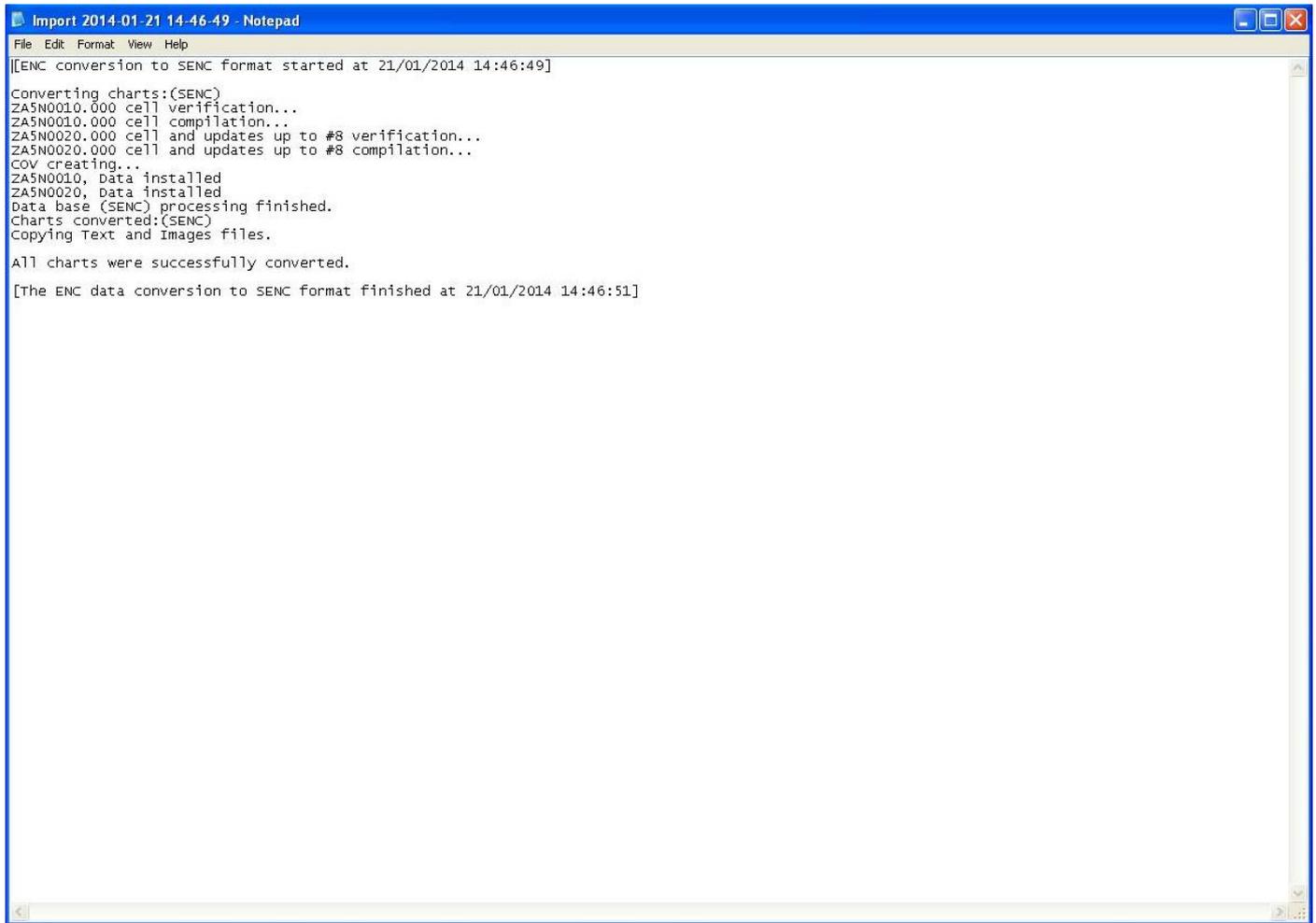
The PC Maritime NavMaster will produce a log at the end of every install action whilst in 'Chart Management'. This report log provides the User with information about the process that has just completed, within this report details can be obtained relating to any issues encountered during the install or update of ENC's. This can be extremely useful to identify why cells have failed to install. To view the log file follow the below instructions.

Chart Management: ENC → S-57 → Encrypted → Install → View Log

1. Select 'Management...' from the 'Chart' Menu.
2. Select the 'ENC' tab
3. Select the 'S-57' tab
4. Select the 'Encrypted' tab
5. Select the 'Install' tab.
6. Select 'View Log'



The ECDIS will then display the most recent log for review.



```
Import 2014-01-21 14-46-49 - Notepad
File Edit Format View Help
[[ENC conversion to SENC format started at 21/01/2014 14:46:49]
Converting charts:(SENC)
ZA5N0010.000 cell verification...
ZA5N0010.000 cell compilation...
ZA5N0020.000 cell and updates up to #8 verification...
ZA5N0020.000 cell and updates up to #8 compilation...
COV creating...
ZA5N0010, data installed
ZA5N0020, data installed
Data base (SENC) processing finished.
Charts converted:(SENC)
Copying Text and Images files.

All charts were successfully converted.
[The ENC data conversion to SENC format finished at 21/01/2014 14:46:51]
```

14 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 ENC's, 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 330561
	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 Customer Services.



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Hydrographic Office**

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