



**AVCS**

**ADMIRALTY**  
Vector Chart Service

# Using the ADMIRALTY Vector Chart Service with SAM ECDIS

This guide is based on the SAM ChartPilot 1100 Version 6.14 Build 69



United Kingdom  
Hydrographic Office

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# 1 Introduction

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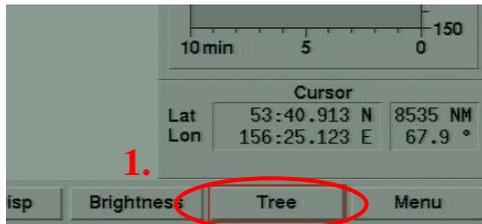
- > The purpose of this guide is to provide equipment-specific information to assist users in managing their AVCS ENC holdings.
- > This guide should be used in conjunction with the AVCS User Guide, as well as the ECDIS Operators Manual or other documentation as supplied by the equipment manufacturer.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

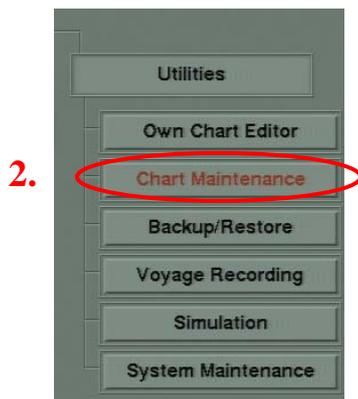
The “Chart Maintenance” utility is accessed by clicking on the “Tree” Menu within the SAM ChartPilot 1100 ECDIS.

**Note:** All chart licensing and data management operations are carried out from the “Chart Maintenance” tree.

1. Select “Tree”



2. From the “Utilities” menu select “Chart Maintenance”



3. Ensure any functions are carried out with the “ENC” Chart Type selected



### 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.

To check the User Permit Number:

*Chart Maintenance* → *ENC Licensing* → *View User Permit No*

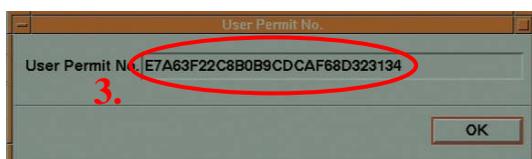
1. From the “Chart Maintenance” menu Select “ENC Licensing”



2. Select “View User Permit No”



3. The User Permit Number will be displayed as shown 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. For more information please refer to the 'Data Cleansing' section in the AVCS User Guide.

There are two ways of deleting data within the SAM ChartPilot 1100:

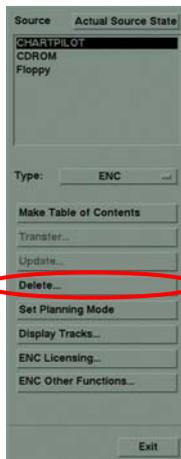
>Delete Charts (This option will delete ENC data)

>Remove Complete Database (This option will remove both ENC data and Permits)

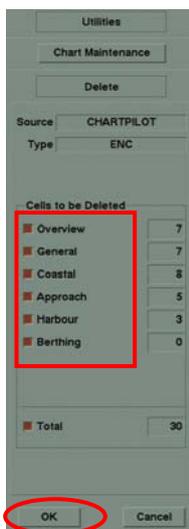
To delete ENC data from the system:

*Chart Maintenance* → *Delete* → *OK* → *Add All* → *OK*

1. From the "Chart Maintenance" menu select "Delete"



2. Select the usage bands from which you wish to delete data. In this instance all usage bands are selected.
3. Select "OK"



4. Add cells to the “ENC Cells Selected for Deletion” window using the “Add all” button

N.B. Cells can be added one at a time by selecting the “Add” button or in groups by holding the shift button to select multiple cells and then selecting the “Add” button.

5. Select “OK” to delete selected charts



4.

5.

Alternatively to remove the entire chart database:

**Note:** This option will remove the entire chart database and therefore should be used with care.

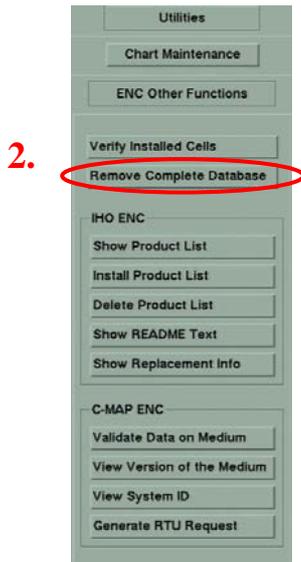
Chart Maintenance → ENC Other Functions → Remove Complete Database → Type “PRUNE” →

1. From the “Chart Maintenance” menu select “ENC Other Functions”



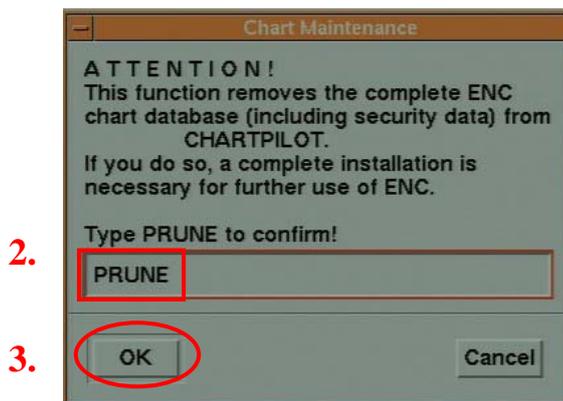
1.

2. Select "Remove Complete Database"



3. The system will require you to type "PRUNE" to confirm.

2. Select "OK"



## 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.

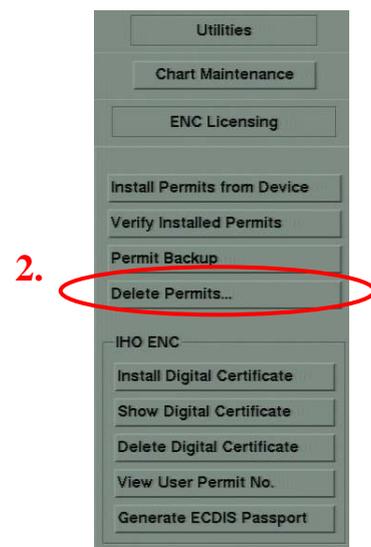
To delete ENC permits:

*Chart Maintenance* → *ENC Licensing* → *Delete Permits* → *Add* → *OK*

1. From the “Chart Maintenance” menu select “ENC Licensing”



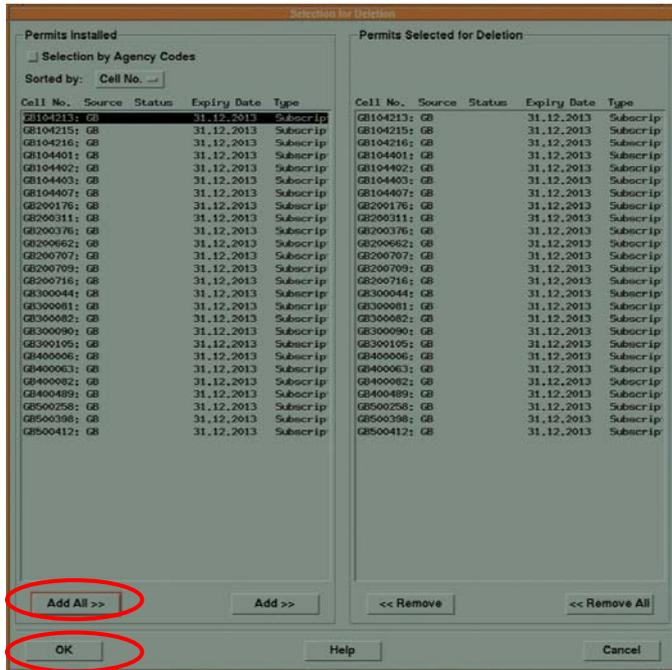
2. Select “Delete Permits”



3. Add cells to “Permits Selected for Deletion” window using the “Add all” button

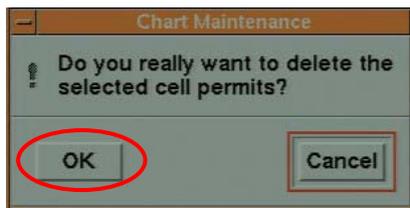
N.B. Permits can be added one at a time by selecting the “Add” button or In groups by holding the shift button to select multiple cell numbers and then selecting the “Add” button.

4. Select “OK” to delete selected permits



- 3.
- 4.

5. Select “OK”



- 5.

## 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.

Before installing AVCS ENC's, the user must check that the correct Public Key is installed on the system this can be viewed in the SAM ChartPilot 1100 by following these instructions:

*Chart Maintenance* → *ENC Licensing* → *Show Digital Certificate* → *Select Certificate* → *OK*

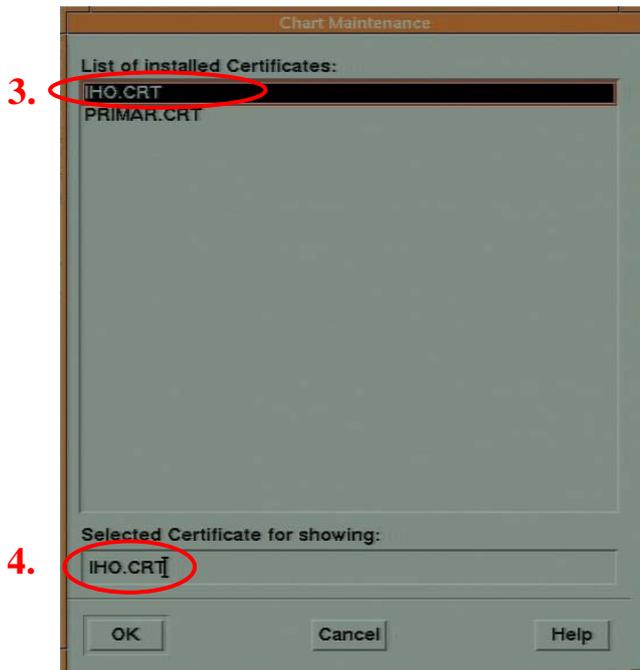
1. From the “Chart maintenance” menu select “ENC Licensing”



2. Select “Show Digital Certificate”



3. Select "IHO.CRT"
4. Select "OK" to view certificate details

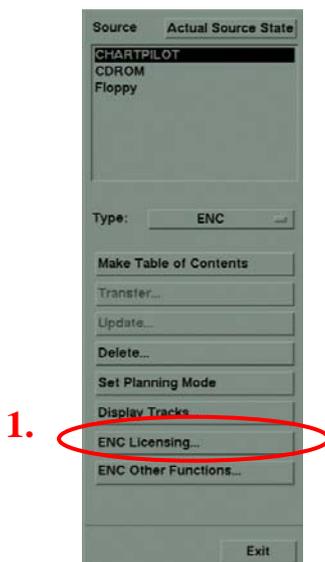


If the IHO Public Key is not present in the system then it will have to be installed before AVCS ENC's can be loaded.

### To install the IHO.CRT public key:

*Chart Maintenance* → *ENC Licensing* → *Install Digital Certificate* → *Select Certificate* → *OK*

1. From the "Chart maintenance" menu select "ENC Licensing"

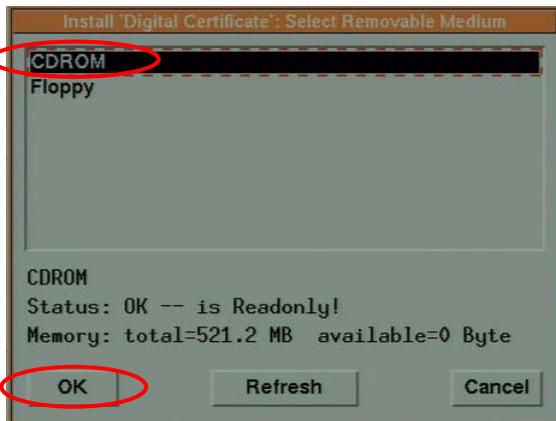


2. Select "Install Digital Certificate"



2.

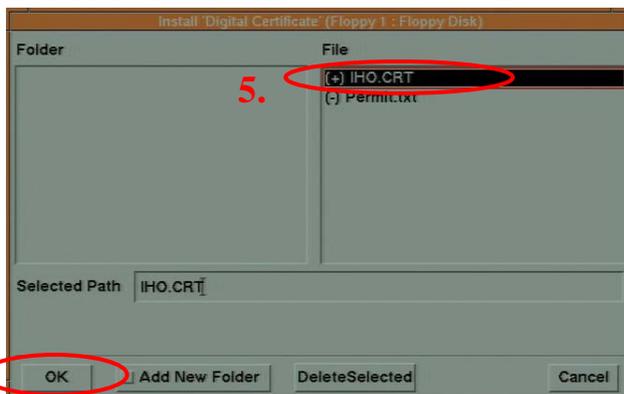
3. Insert any AVCS Base or Update CD / DVD and Select "CDROM"
4. Select "OK"



3.

4.

5. Select "IHO.CRT"
6. Select "OK"



6.

6. Select "Cancel" when asked to create a backup of the existing certificate (see Note below)



**Note:** If required a backup can be created by selecting "OK", however the IHO.CRT is available on all AVCS Base and Update CDs/ DVDs and so this is unlikely to be necessary.

## 7 Installing ENC Permits

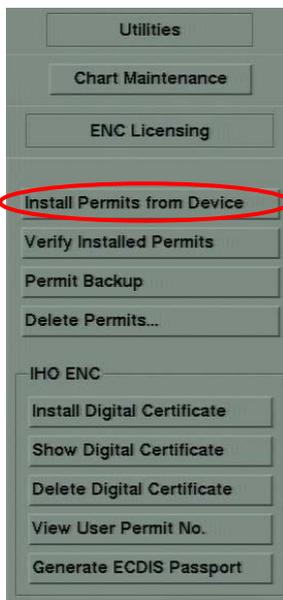
To install AVCS ENC Permits:

*Chart Maintenance* → *ENC Licensing* → *Install Permits from device* → *Browse to permit location* → *OK*

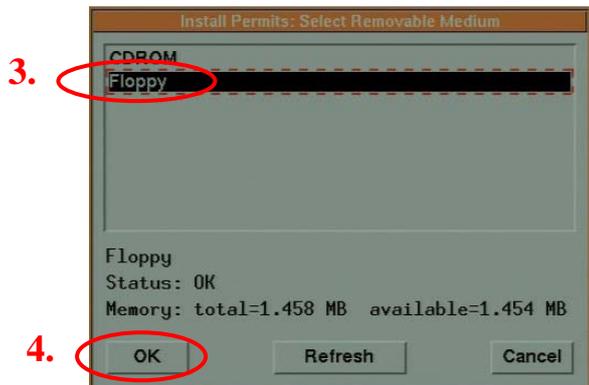
1. From the “Chart Maintenance” menu select “ENC Licensing



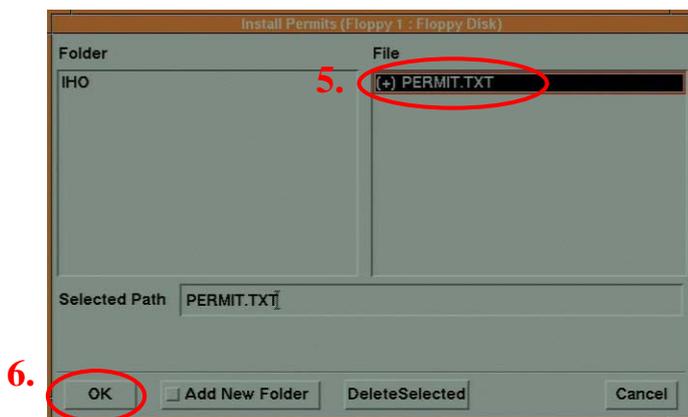
2. Select “Install permits from device”



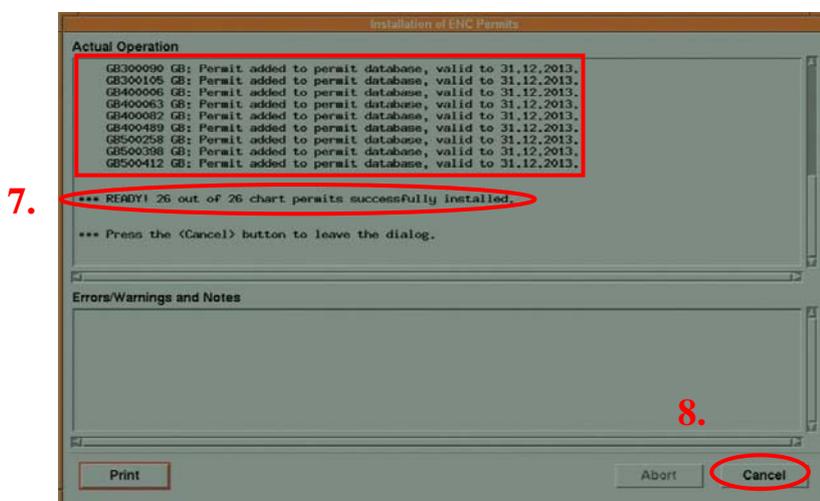
3. Select Removable Medium as appropriate, in this instance "Floppy" is being used (N.B. Newer SAM systems will have a USB option)
4. Select "OK"



5. Browse to permit location and select "PERMIT.TXT"
6. Select "OK"



7. A window will open confirming the Permits are successfully installed
8. Select "Cancel" to close the "Installation of ENC Permits" window



## 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:** It is acknowledged that SAM ECDIS are designed to operate in an integrated way whereby Chartpilots and Multipilots may be linked. For more detail regarding the chart installation process it is recommended that users refer to their Operators Manual.

When installing ENC's using the SAM ChartPilot 1100 there are two functions that can be used. For instructions relating to the **Update** function please see Section 9 Installing AVCS Update CD.

**The "Transfer" function** transfers data of all files, or of selected files, from the CD-ROM, USB-Disk(s) or Floppy to one, several or all databases of the system.

> Also to copy all, or selected, files from the local database to one, several or all other databases of the system. If there are files, that will be overwritten on the CHARTPILOT, a safeguard question appears.

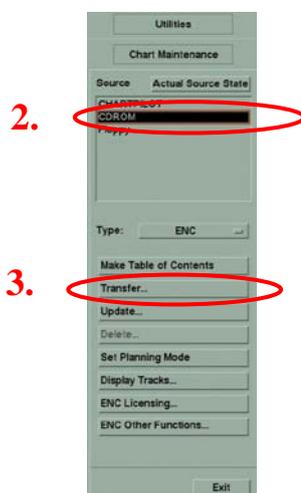
**The "Update" function** is used for licensed ENC cells. In one working step, this function is used for the following purposes with the CD-ROM/USB-Disk(s) on one, several or all databases of the system:

- > New additional files are transferred.
- > Where necessary, files are updated.
- > Outdated files that are no longer supported are deleted (after a safeguard question)

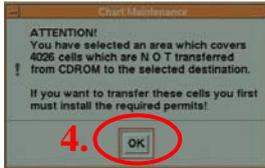
**Note:** Ensure the latest permits have been installed before attempting to install any data

Chart Maintenance → Transfer → OK → Add All → OK → OK

1. Insert latest AVCS Base CD
2. From the "Chart Maintenance" Menu select "CD-ROM" in the Source box and select "OK" when prompted to create a table of contents
3. Select "Transfer"

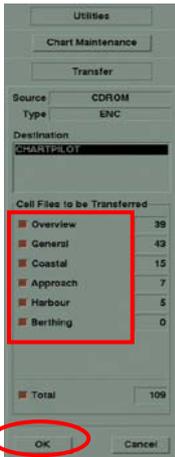


4. Select 'OK'



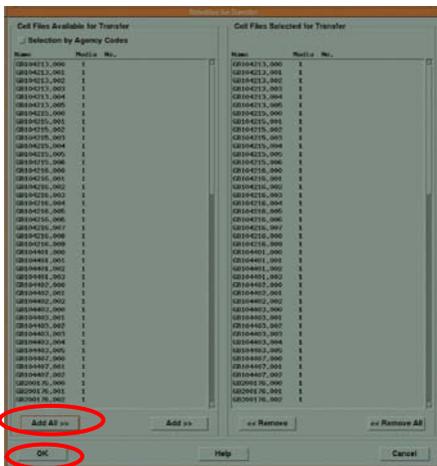
5. Select the usage bands from which you wish to transfer data. N.B. This will almost always be all usage bands and therefore no action is required.

6. Select 'OK'



7. Select "Add All"

8. Select 'OK'

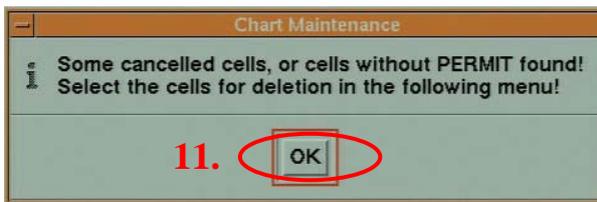


9. Select "Halt on Error"

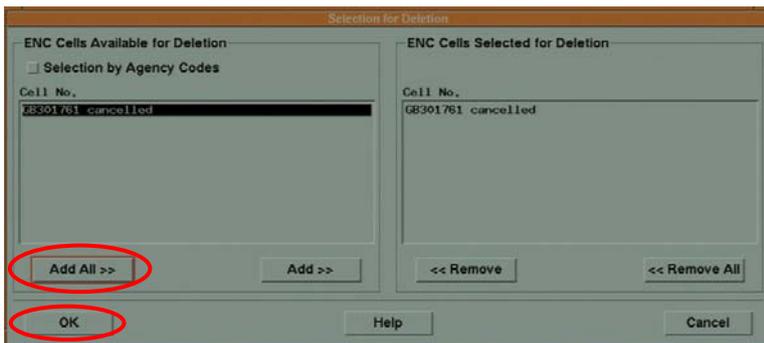
10. Select "OK" to begin the Transfer process



11. If any charts are cancelled (or no longer appear on your permit) the below message will appear. Select "OK"

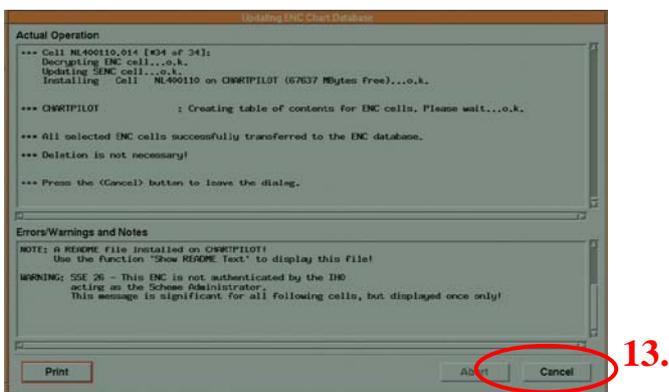


12. You are then prompted to delete the cancelled cells. Select "Add All" and then "OK"



**Note:** Failure to remove cancelled ENC's from the system may result in the ECDIS displaying out of date data in preference to more up to date data.

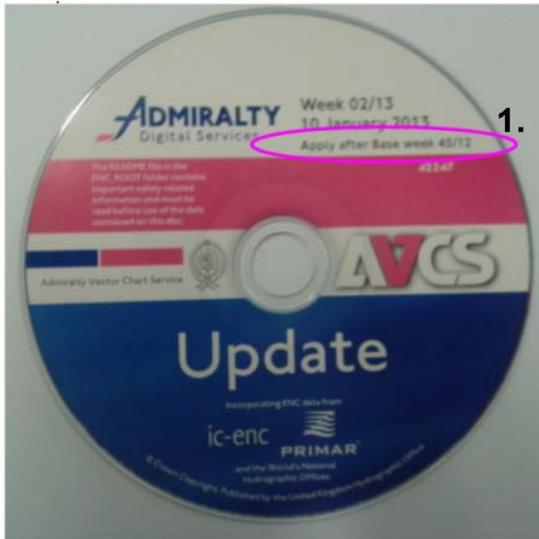
13. Close the Updating Chart Database window by selecting "Cancel"



**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 Base CD(s).



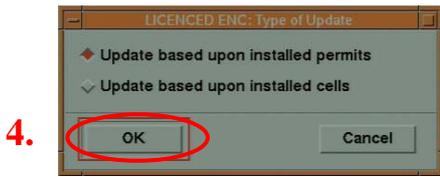
**Note:** Base CDs are re-issued about every 6 to 8 weeks. The AVCS update disc will indicate which Base disc week must have been installed. It is important that users do not attempt to load an Update CD that is not consistent with the Base CDs.

Chart Maintenance → CD-ROM → Update → OK → OK

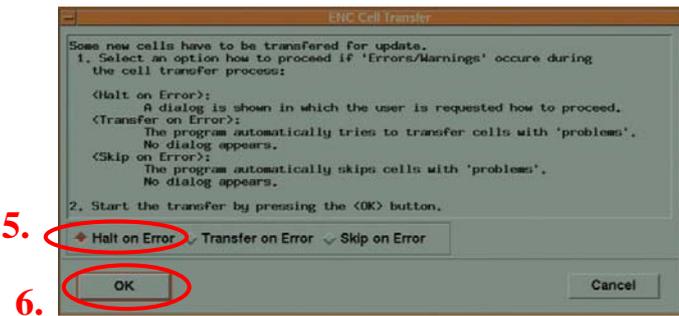
1. Insert the AVCS Update disc identified in the *Schedule A* into the CD drive'
2. From the "Chart Maintenance" Menu select "CD-ROM" in the Source box and select "OK" when prompted to create a table of contents
3. Select "Update" from the right hand menu then Click "OK" to confirm latest Update media is inserted



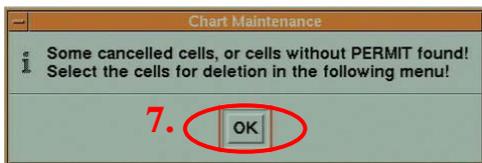
4. Ensure update based on installed permits is selected then click "OK"



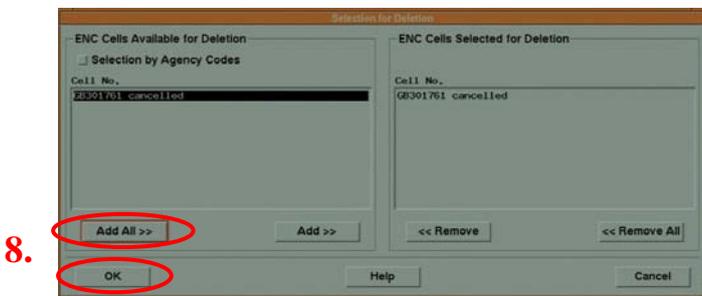
5. Select "Halt on Error"
6. Select "OK" to begin the update process



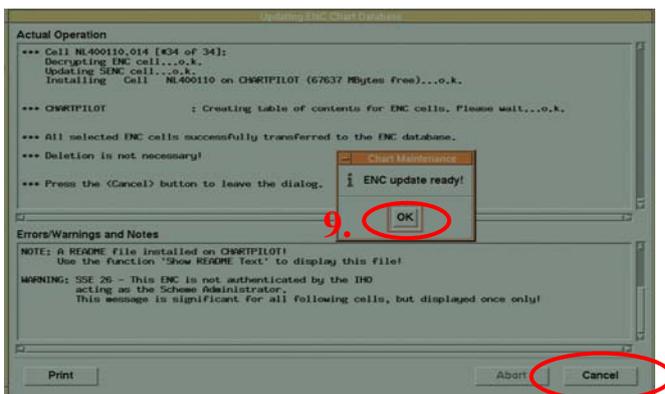
7. If any charts are cancelled, the below message will appear. Select "OK"



8. You are then prompted to delete the cancelled cells. Select "Add All" and then "OK"



9. Select "OK" in the "ENC Update Ready" Window
10. Select "Cancel" to close the dialog box

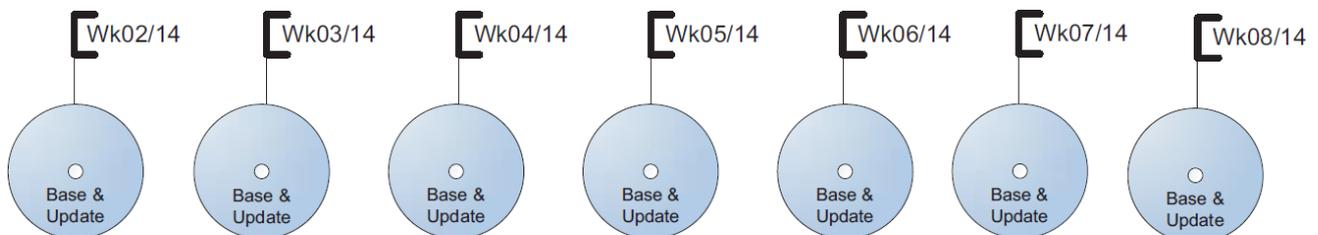


10.

## 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



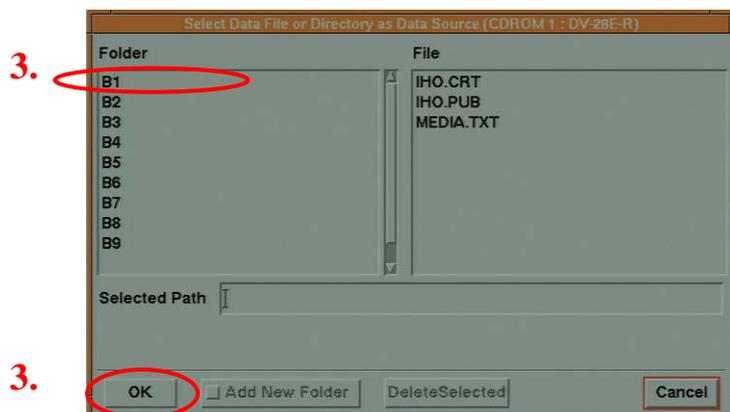
DVD contains Base and Update data for complete AVCS  
service each week

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 Update Procedure however there are some minor differences which are detailed below. Screenshots are included where the process differs to that of the Updating Procedure (Section 9)

Chart Maintenance → CD-ROM → Select Folder (e.g. B1) → OK → Update → Select Folder (e.g. B1) → OK → OK → OK

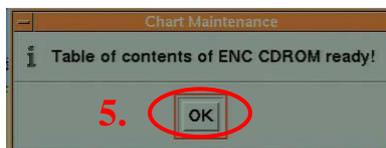
1. Insert the AVCS DVD into the CD / DVD drive'
2. From the "Chart Maintenance" menu select "CD-ROM" in the Source box and select "OK" when prompted to create a table of contents
3. Select any of the available folders (e.g. B1) from the list and click "OK". N.B. It does not matter which folder you choose.



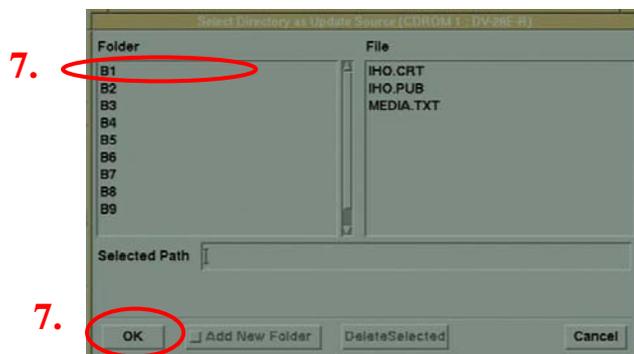
4. Select "OK"



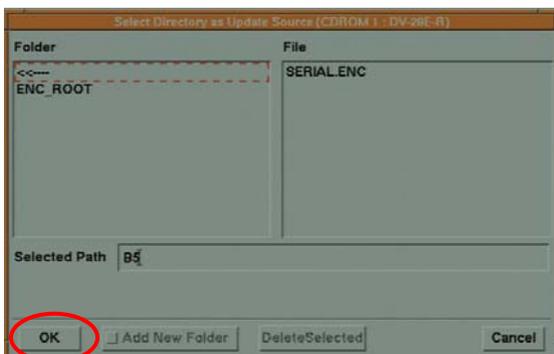
5. Select "OK" again to confirm the table of contents is ready



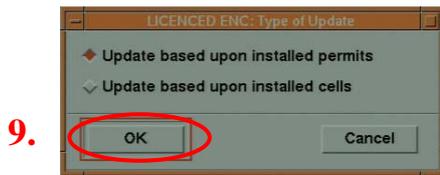
6. Select "Update" from the right hand menu then Click "OK" to confirm latest Update media is inserted
7. Select any of the available folders (e.g. B1) from the list and click "OK". N.B. It does not matter which folder you choose.



8. Select "OK"



9. Ensure *"Update based on installed permits"* is selected then click *"OK"*



10. Select *"Halt on Error"*
11. Select *"OK"* to begin the update process
12. If any charts are cancelled, the below message will appear. Select *"OK"*
13. You are then prompted to delete the cancelled cells. Select *"Add All"* and then *"OK"*
14. Select *"OK"* in the *"ENC Update Ready"* Window
15. Select *"Cancel"* to close the dialog box

## 11 Systems Checks

The system provides the user with the capability to view the status of the system database against any outstanding ENC new editions and/or updates available in AVCS.

ChartPortfolio: *S-57 Systems Chart* → *Highlight ENC* → *Information*

1. From the “Chart Maintenance” menu select “ENC Other Functions



1.

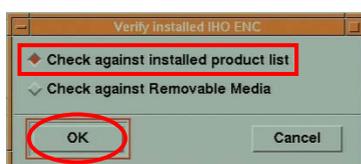
2. Select “Verify Installed Cells”



2.

3. Select “Check against installed product list”

4. Select “OK”

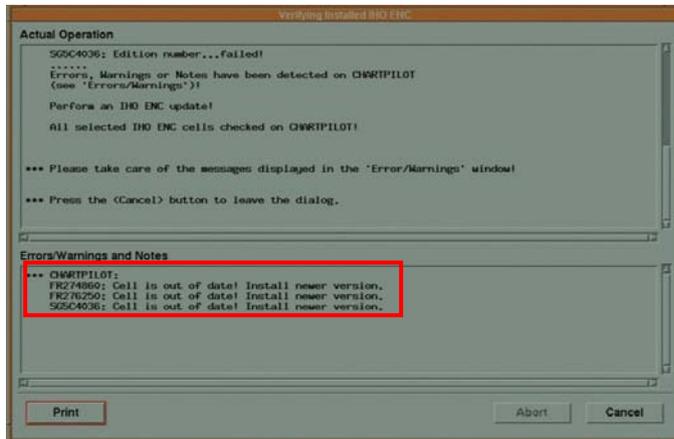


3.

4.

4. Review the Errors / Warnings and Notes window. The SAM ChartPilot 1100 ECDIS will generally advise the user what to do.

N.B. The example below shows three cells that are out of date when compared against the latest product list and would therefore require the latest version to be installed from the latest AVCS media held on board.



## 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
<b>Hardware problems:</b> difficulties with the keyboard, mouse, display or main system console, failure of a floppy disk or CD drive or USB port.	ECDIS Manufacturer
<b>Software problems:</b> difficulties with configuring or using the ECDIS system software, interfacing problems.	
<b>Chart installation problems:</b> problems with installing certificates, permits and AVCS ENC's, standard error codes displayed (see AVCS User Guide).	Admiralty Chart Agent
<b>Chart content problems:</b> 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:	<a href="http://www.ukho.gov.uk/Support">http://www.ukho.gov.uk/Support</a>

## 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.



**United Kingdom  
Hydrographic Office**

The United Kingdom Hydrographic Office,  
Admiralty Way, Taunton, Somerset,  
TA1 2DN, United Kingdom  
Telephone +44 (0)1823 723366  
Fax +44 (0)1823 330561

customerservices@ukho.gov.uk

[www.admiralty.co.uk](http://www.admiralty.co.uk)

