

7.7 Data Maintenance of the CM-93/3Pro Chart

The CM-93/3Pro chart is exclusively published by the company C-MAP.

Chart maintenance for the CM-93/3Pro chart comprises the following operations:

Initial Installation of the CM-93/3Pro Chart

1. If there are no CM-93/3Pro licences, procure these for the desired zones or areas from SAM Electronics. Then install the licences you receive on the local database. See [Section 7.7.1](#).
2. Transfer all the CM-93/3Pro cell files for which the licences apply from the provider's CDs ¹⁾ to the local database, as per [Section 7.7.2](#).
3. Now transfer all CM-93/3Pro cell files from the local database to all other CM-93/3Pro databases of the system, as per [Section 7.7.3](#).

If large volumes of data are to be transferred, this process may take a very long time: The entire CM-93/3Pro chart consists of approx. 15,000 cells, and the transfer to several CHARTPILOTs and/or MULTIPLOTs can take many hours. If this period of time is not available, it is advisable to transfer only the cells of the region that is to be sailed first (for the procedure, see [page 277](#)).

By the first regular update, at the latest, all cells should have been transferred in this way. The reason: when the CM-93/3Pro CD is used, the Update function always transfers all those licensed cells that are not yet contained in the databases. If large numbers of cells are missing from the databases, the update will take correspondingly longer.

Updating the CM-93/3Pro Cells:

Regular update: As soon as a new CD has been received, perform an update on all CM-93/3Pro databases of the system in one working step, using the Update function as per [Section 7.7.5](#).

Online update: If an online update is possible (see [page 220](#)), perform it at least once a week, beginning no later than one week after last receiving a CM-93/3Pro CD.

To do this, an Online Update CD is produced at the PC, with which the update is performed on all CM-93/3Pro databases of the system in one working step, using the Update function as per [Section 7.7.5](#); see also [page 220](#). The online update of the CM-93/3Pro cells begins with the generation of the RTU request as per [Section 7.7.4](#).

Installing Subsequently Licensed Cells:

1. Using the Update function as per [Section 7.7.5](#), perform an update on all CM-93/3Pro databases of the system in one working step.
2. Install any CM-93/3Pro licences that were procured later to the local database; see [Section 7.7.1](#).
3. If only a few cells were licensed subsequently: Using the Update function as per [Section 7.7.5](#), transfer the cells to all CM-93/3Pro databases of the system in one working step.

If many cells were licensed subsequently: Use the Transfer function as per [Section 7.7.2](#) and [Section 7.7.3](#) as for the initial installation, step 2 and 3.

¹⁾ The data media to which the CM-93/3Pro cells are transferred are in fact DVDs. Because this distinction is irrelevant for the actual handling, the term "CD" is used both in the user interface of the CHARTPILOT (e.g. Source: CD-ROM) and in these Operating Instructions. Therefore, only CHARTPILOTs equipped with a DVD drive are able to handle CM-93/3Pro charts.

CM-93/3Pro DVDs that are suitable for use at the CHARTPILOT are marked as **Only readable in SAM Electronics systems**. There are older CHARTPILOT versions, where unpredictable errors may occur if other DVDs are used.

There are older CHARTPILOT versions with a CM-93/3Pro database, on which CM-93/3Pro charts can hence be displayed but which cannot access the CM-93/3Pro CD. Such a CHARTPILOT is therefore not suitable for this work; it must be supplied with these data by means of step 3.

7.7.1 Licences for CM-93/3Pro Cells

- ☞ For general information on this topic, see [page 219](#).
- ☞ All operating actions listed in this section should be performed at the CHARTPILOT that is intended for the chart maintenance work of the system. For the following operating steps, the **Type CM-93/3Pro** must be set in the Utilities > **Chart Maintenance** menu.

The CM-93/3Pro chart is divided into ten **zones**, and has divided up each zone into a different number of **areas**. Each cell of the CM-93/3Pro chart is assigned to an area.

For this chart type, two different licence types are available:

- **Subscription licences:** These utilization rights are limited in time, and also include the supply of updates during the period of use.
- **Purchase licences:** These are time-unlimited rights to use the cells of a certain edition.

Before deciding on a Purchase Licence, it is essential to consider the following:

- Within a particular system, only one of the licence types can be used for the CM-93/3Pro Chart.
- All purchase licences refer to the editions of the cells located on a certain CD. If a purchase licence is obtained subsequently for another region, this licence also refers to the editions of the cells located on the CD supplied for the first purchase licence. However, these cells may already be obsolete by this time.
- If a change is made later from purchase licences to subscription licences, none of the purchase licences procured previously can be used after that (not even on other systems).
- Cells used on the basis of a purchase licence can only be updated by using a new purchase licence.

Licences Provided with Hardware (Test Licence)

For some of the CHARTPILOTs installed after introduction of the chart type CM-93/3Pro, a subscription licence for all available cells (Zone 0) is included in the scope of supply. This test licence has a validity of 6 months, beginning at its activation.

For these systems, a CM-93/3Pro CD ¹⁾ is already provided and the corresponding licence is already installed. So it is possible to start the initial installation, see [page 265](#). If you intend to continue using the CM-93/3Pro chart after expiry of this licence, the desired licences can be procured as described in [Section 7.7.1.1](#).


7.7.1.1 First Procurement of Subscription Licences

Procurement of the licences is supported by the subroutine Chart Maintenance. If you do not wish to use the assistance of SAM Electronics, please proceed as follows:

Procurement of the CM-93/3Pro CD

1. In the menu Utilities > **Chart Maintenance**, press the button **CM-93/3Pro Licensing**.
2. Acknowledge the request to insert a CD with **OK**.
3. Answer the question posed in the subsequent dialog box (i.e. whether a CD is to be delivered) with **OK**.

¹⁾ If the CD provided is no longer up-to-date when the system is delivered, please contact SAM Electronics to request the current version of the CD.

4. Then a box appears with the request to insert a diskette. Now, at the latest, insert a DOS-formatted diskette into the diskette drive and press the **OK** button.
5. As a result, the file USER.USR is generated; this contains the system ID (this is the system identification code described in [Section 7.2.2](#)). A box appears to report this process. After the corresponding request, close it with **Cancel**.
6. Send the diskette or the file USER.USR to SAM Electronics ¹⁾. You will then receive the CM-93/3Pro CD.
 If you already know which zones and/or areas you need, you can order the licences at the same time, by specifying the desired zones and/or areas and the licence type when you send the USER.USR file. You will then receive the codes of the requested licences together with the CM-93/3Pro CD and can dispense with the steps described below.

Selecting the Zones and Areas and Procuring the Subscription Licences

1. After receiving the CD, press the button **CM-93/3Pro Licensing** in the menu Utilities > **Chart Maintenance**.
2. Now, at the latest, insert the CM-93/3Pro CD into the drive and confirm the request to do so with **OK**. Acknowledge the message that the boundaries of the zones and areas have been read in.
3. In the **CM-93/3Pro Licensing** menu, press the **Subscription Licence** button.
4. In the **Subscription Licence** menu which then opens, select the regions by choosing the corresponding zone or area in the frames **Zone Selection** and **Area Selection** and entering it into the list **Selected Regions**, and then repeating the procedure for all desired regions.

Details:

- When opening the menu, **Zone 0** is selected. Zone 0 denotes the entire surface of the earth; it therefore contains the zones 1 to 9, with the boundaries indicated.
 - To be able to select an area within the frame **Area Selection**, the corresponding zone (1 to 9) must have been selected in the frame **Zone Selection**.
 - The zone or area selected last is displayed as a hatched region in the world chart.
 - The buttons **Next** and **Prev.** can be used to select each zone or area in sequence.
 - The **Add/Remove** button is then used to enter the selected zone or area into the list **Selected Regions**. Repeated pressing deletes the entry.
 - The entries in the list can also be deleted by marking them and then pressing the button **Remove from List**.
 - The boundaries of the zones and areas entered in the list are displayed in the world chart, with their water areas appearing dark-blue.
 - If licences are already installed on the CHARTPILOT, the corresponding zones and areas are also shown. In the list, the corresponding expiry date of the subscription licence (**yyyy-mm-dd**) is also displayed, whereas for purchase licences the indication (**purchased**) is shown.
5. In the **Subscription Licence** menu, press the **Write Licence Request** button.
 6. Now, at the latest, insert a DOS-formatted diskette ²⁾ into the diskette drive and confirm the request to do so with **OK**.

1) address see [page 2](#).

2) or the diskette used for requesting the CM-93/3Pro CD

7. As a result, the file USER.USR (containing the system ID) is generated, together with the file AREA.REQ, which contains the licence type and the data of the selected regions. These activities are indicated in a dialog box. Acknowledge the completion message with **OK**, and close the box with **Cancel**.
8. Send the diskette or the two files by e-mail to SAM Electronics ¹⁾, and apply for the licences.

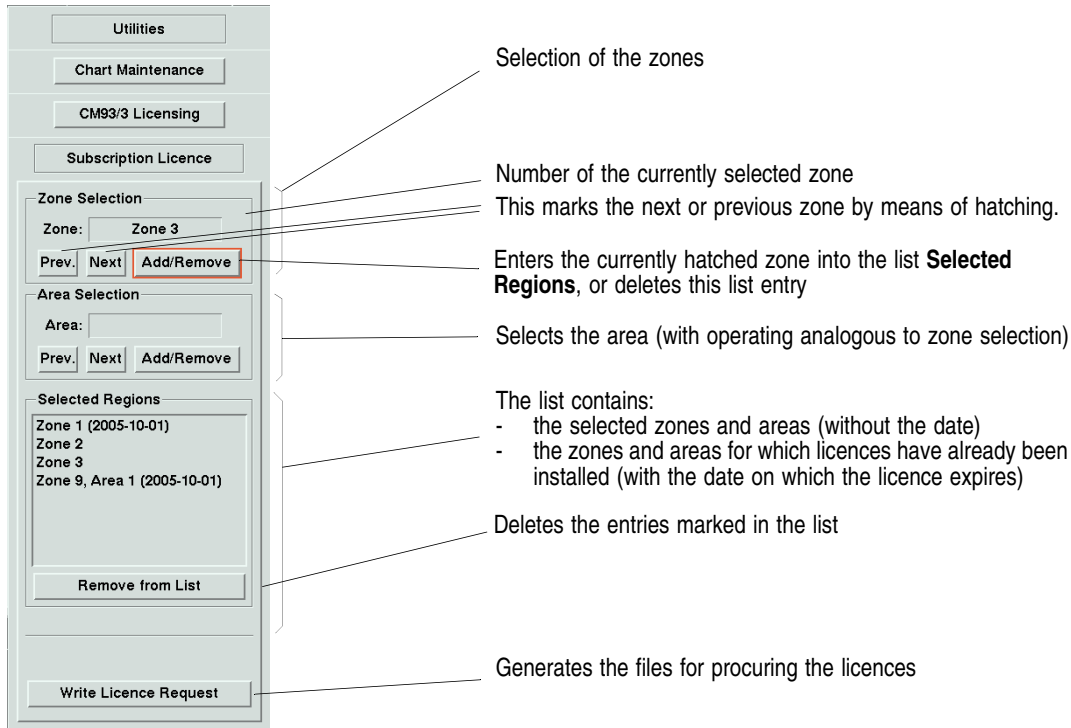


Fig. 7-15 The menu Utilities > Chart Maintenance > CM-93/3Pro Licensing > Subscription Licence

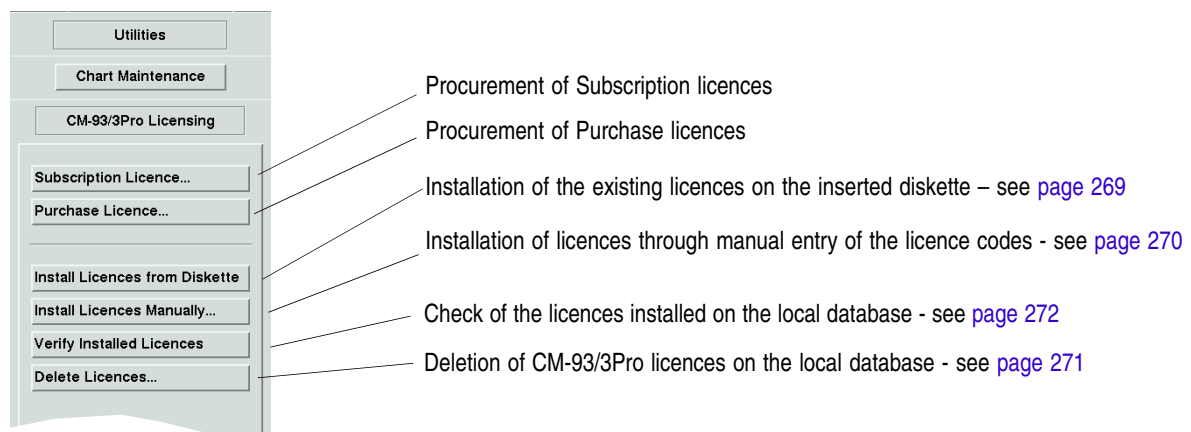


Fig. 7-16 The menu Utilities > Chart Maintenance > CM-93/3Pro Licensing

¹⁾ address see [page 2](#).

7.7.1.2 First Procurement of Purchase Licences

☞ Purchase licences cannot be installed if subscription licences are already installed; see [page 267](#).

Purchase licences are procured in the same way as **subscription licences**, with the sole distinction that the **Purchase Licence** menu is used instead of the Subscription Licence menu (press **Purchase Licence** in step 3).

7.7.1.3 Subsequent Procurement of Further Licences

The subsequent procurement of licenses is carried out in the same way as the first procurement described above.

Here the following must be observed: If you intend to continue using the licences applied thus far, the licences to be procured subsequently must be of the same type. If purchase licences are procured subsequently, these must refer to the same CD to which the existing licences already refer. To exclude misunderstandings, it is advisable to mention in your request for subsequent Purchase Licences that purchase licences are already in use, with indication of the issue date of the CD to which they refer.

7.7.1.4 Installing the Licences

This section applies independently of the licence type and irrespective of whether the licences were procured for the first time, whether subscription licences were extended, and whether the licences were provided or procured additionally.

Depending on what was agreed, you will receive the licences

- as the file PASSWORD.USR on diskette or by e-mail, or
- in the form of the licence code by e-mail or by telephone.

The entry procedures to be applied are therefore different. Refer to A) how to read in the licences by diskette. Refer to B) for manual entry of the 16 character licence code.

A) Installing the Licences Contained on the Diskette

With this procedure, all existing licences are always installed.

This procedure must also be applied if the file PASSWORD.USR was received by e-mail. In this case, you must create the CM-93/3Pro licence diskette yourself beforehand, by transferring the received file to a DOS-formatted diskette.

☞ If the above-mentioned file was transferred as an archive file (e.g. the .ZIP format), it must first be decompressed. Installation as described is only possible if the file with the a.m. name is located on the licence diskette (if necessary, check this with a PC).

1. In the menu Utilities > **Chart Maintenance**, press the button **CM-93/3Pro Licensing**.
2. Now, at the latest, insert the CM-93/3Pro CD you received last into the drive and confirm the request to do so with **OK**. Acknowledge the message that the boundaries of the zones and areas have been read in.

☞ If a subsequently procured purchase licence is to be installed, the CD to which the earlier purchase licences refer must be inserted.

3. In the menu Utilities > Chart Maintenance > **CM-93/3Pro Licensing**, press the button **Install Licences from Diskette**.

4. Now, at the latest, insert the CM-93/3Pro licence diskette into the drive and confirm the corresponding request with **OK**.
5. The activities are shown in the dialog box which then opens. Successful installation of the licences is reported in another box. Confirm this. Acknowledge the box with the completion message, and use **Cancel** to close the dialog box that opened first.

B) Installing the Licences through Manual Entry of the Licence Codes

1. In the menu Utilities > **Chart Maintenance**, press the button **CM-93/3Pro Licensing**.
2. Now, at the latest, insert the CM-93/3Pro CD you received last into the drive and confirm the request to do so with **OK**. Acknowledge the message that the boundaries of the zones and areas have been read in.
 - ☞ If a subsequently procured purchase licence is to be installed, the CD to which the earlier purchase licences refer must be inserted.
3. In the menu Utilities > Chart Maintenance > **CM-93/3Pro Licensing**, press the button **Install Licences Manually**.
4. In the menu **Install Licences Manually** which then opens, select the zone or area for which a licence code is available and insert it under **Licence Code for:**. This is done the aid of the button provided in the frames **Zone Selection** and **Area Selection**; see [page 267](#).
5. Under **Enter Licence Code**, type in the 16-digit licence code and press the **Apply** button. A dialog box will then report that the licence has been installed. Acknowledge the completion message with **OK**, and close the box with **Cancel**.
6. If more licences are to be installed, repeat step 4 and 5.

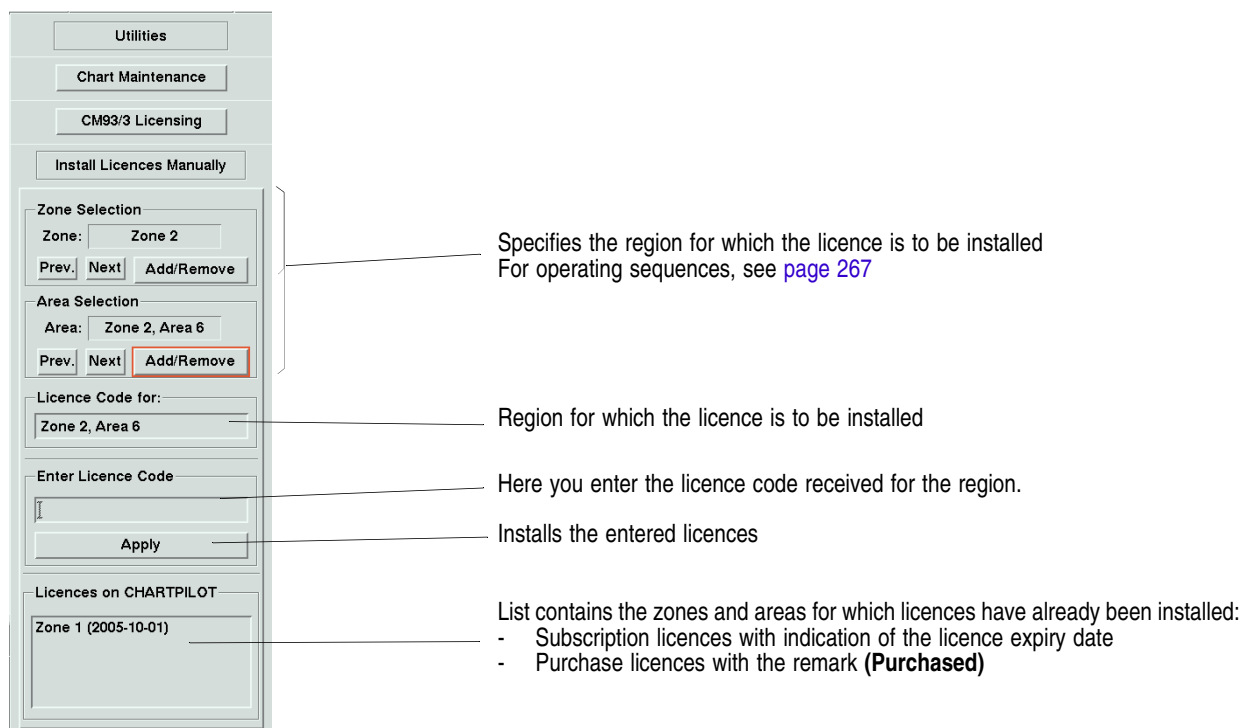


Fig. 7-17 The menu ... > Chart Maintenance > CM-93/3Pro Licensing > Install Licences Manually

7.7.1.5 Useful Information about Licensing

Deleting of Licences

1. In the menu Utilities > **Chart Maintenance**, press the button **CM-93/3Pro Licensing**.
2. Now, at the latest, insert the CM-93/3Pro CD you received last into the drive and confirm the request to do so with **OK**. Acknowledge the message that the boundaries of the zones and areas have been read in.
3. In the menu Utilities > Chart Maintenance > **CM-93/3Pro Licensing**, press the button **Delete Licences**.
4. In the **Delete Licences** menu, mark the licences to be deleted and then press the button **Delete Licence(s)**.
5. Confirm the safeguard question. A dialog box will then show that the marked licences have been deleted on all CM-93/3Pro databases. Acknowledge the completion message with **OK**, and close the box with **Cancel**.

If a transfer or update of CM-93/3Pro cells takes place subsequently, these actions need only be performed on the local CM-93/3Pro database.

☞ If CM-93/3Pro cells are transferred (using the Transfer function or the Update function, independently of the source), all CM-93/3Pro licences on the local database are automatically copied to the CM-93/3Pro databases to which the transfer of the charts is taking place. Here licences that are not located on the local database are deleted on the other CM-93/3Pro databases.

End of the Subscription Licence

C-MAP has defined two expiry dates for the end of a subscription licence:

- **Subscription expiry date:** After this date, **no more updates** are performed, and two month later
- **Licence expiry date:** After this date, the cells are **no longer displayed**.

One month before the subscription expiry date, a message about the subscription expiry date is shown as soon as a CM-93/3Pro cell affected by this date is displayed.

From the subscription expiry date until the licence expiry date, a message about the licence expiry date is shown as soon as a CM-93/3Pro cell affected by this date is displayed. In addition, the Chart Status field of the navigation data line becomes yellow, and the display **Licence** appears there.

☞ This behaviour also applies for any 6-month test licence which may have been supplied with the hardware, see [page 266](#). With this licence, the first message about the subscription expiry date already appears 3 months after the start of the licence period, but the CM-93/3Pro chart can be used for a total duration of 6 months.

From the licence expiry date, there is a corresponding message as soon as a region affected by this date is shown in the chart display with the CM-93/3Pro chart selected. In addition, the Chart Status field of the navigation data line becomes red, and the display **Licence** appears there.

Checking the CD

If problems occur when accessing the CM-93/3Pro CD, it is possible to check the consistency of the data contained there. This is done by means of the function **Validate Data on CD-ROM** provided in the menu Utilities > Chart Maintenance > **CM-93/3Pro Other Functions**.

☞ **This check can take 30 minutes. During this time, the CHARTPILOT cannot be used for other purposes.**

Showing Information about the CD

The properties of the CD can be displayed by means of the function **View CD-ROM Version** provided in the menu Utilities > Chart Maintenance > **CM-93/3Pro Other Functions**.

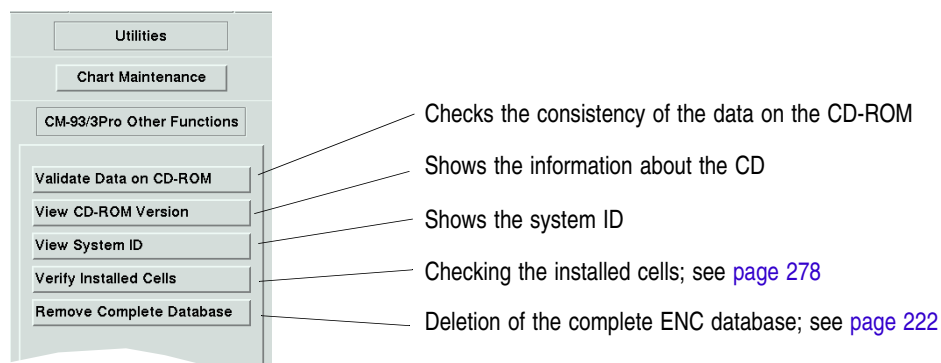


Fig. 7-18 The menu Utilities > Chart Maintenance > CM-93/3Pro Other Functions

Checking the Installed Licences

If difficulties occur in the display of cells for which a licence exists, the licences installed in the local CM-93/3Pro database can be checked: the check is initiated in the menu Utilities > Chart Maintenance > **CM-93/3Pro Licensing** by pressing the button **Verify Installed Licences**. In the dialog box which then opens up, information about the check performed is given.

☞ On the individual equipment items, you can perform in the same way a check of the licences existing in the other CM-93/3Pro databases of the system.

Showing the System ID

The system ID can be displayed by means of the function **View System ID** provided on the menu Utilities > Chart Maintenance > **CM-93/3Pro Other Functions**. It uniquely identifies the system installed on board your ship with regard to the installation of the CM-93/3Pro chart, and may be needed for servicing purposes.

7.7.2 Transfer Function: Transferring All CM-93/3Pro Cells from CD to Local Database

- ☞ For general information on this topic and further necessary steps, see [page 219](#) and [229](#).
- ☞ It is not permissible to have cells from different versions of the CM-93/3Pro CD installed on the same system. For this reason, the following important condition applies for the transfer function: If the database into which new cells are to be transferred already contains cells, both these and the new cells must originate from the same CD.

Application:

- Initial installation of CM-93/3Pro cells

With the procedure described:

- All CM-93/3Pro cells existing on the CD being used are transferred to the local database and updated there.

Preparations:

- Install all CM-93/3Pro licences to the local database, as per [Section 7.7.1](#).
1. In the menu Utilities > **Chart Maintenance**, set **CM-93/3Pro** as the **Type**.
 2. Put the CM-93/3Pro CD into the CD drive, and in the menu Utilities > **Chart Maintenance** set **CD-ROM** as the **Source**. If messages relating to the table of contents appear, answer with **OK**.
 - ☞ **Do not make** a selection by regions before performing the next step (e.g. there must be no frame shown in the world chart).
 3. Press the **Transfer** button. If messages relating to the table of contents appear, answer with **OK** and press the **Transfer** button again.
 4. Under **Destination**, mark only **CHARTPILOT (this one)**.
 - ☞ Under **Cell Files to be Transferred**, leave all navigational purposes switched on.
 5. In the **Transfer** menu, click the **OK** button and, in the selection menu which then opens, enter all the files into the right-hand column by clicking **Add All >>**.
 6. After pressing of the **OK** button of the selection menu, transfer and data conversion begin. The dialog box **Transferring CM-93/3Pro Cells** appears. In its upper part, the process currently taking place is listed, and in the lower part all errors and warnings occurring in the transfer and conversion process are listed.
 7. When the transfer process has finished (you are informed of this in the dialog box **Transferring CM-93/3Pro Cells**), close the dialog box by means of the **Cancel** button.

It is recommended that a check of the installed cells be performed afterwards as per [Section 7.7.8](#).

7.7.3 Transfer Function: Transferring All CM-93/3Pro Cells from Local to Other Databases

- ☞ For general information on this topic and further necessary steps, see [page 219](#) and [229](#).
- ☞ It is not permissible to have cells from different versions of the CM-93/3Pro CD installed on the same system. For this reason, the following important condition applies for the transfer function: If the database into which new cells are to be transferred already contains cells, both these and the new cells must originate from the same CD.

Application:

- Initial installation of CM-93/3Pro cells

With the procedure described:

- All CM-93/3Pro cells located in the local database are copied to all other CM-93/3Pro databases of the system.
- All CM-93/3Pro licences located on the local database are copied to all other CM-93/3Pro databases, whereas licences that are not on the local database are deleted from the other CM-93/3Pro databases.

Preparations:

- The transfer as per [Section 7.7.2](#) must have been carried out.
 - All CHARTPILOTs and MULTIPILOTs must be switched on.
1. In the menu Utilities > **Chart Maintenance**, set **CM-93/3Pro** as the **Type**.
 2. In the menu Utilities > **Chart Maintenance**, as the **Source** select the equipment item that is currently being operated (**this one**).
 3. Press the **Transfer** button. Under **Destination**, mark all CHARTPILOTs and MULTIPILOTs.
 - ☞ Under **Cell Files to be Transferred**, leave all navigational purposes switched on.
 4. In the **Transfer** menu, press the **OK** button. The transfer begins. The dialog box **Remote Transfer of CM-93/3Pro Cells** appears. In its upper part, the process currently taking place is listed, and in the lower part all errors and warnings occurring in the transfer process are listed.
 5. When the transfer process has finished (you are informed of this in the dialog box **Remote Transfer of CM-93/3Pro Cells**), close the dialog box by means of the **Cancel** button.

It is recommended that a check of the installed cells be performed afterwards as per [Section 7.7.8](#).

7.7.4 Real Time Update (RTU) for C-MAP ENC

- ☞ For general information on this topic and further necessary steps, see [page 219](#) and [229](#).
- ☞ The procedure can be performed by any owner of a subscription licence. A special registration is not required.

IMPORTANT:

This online update does not replace the regular updates. Even if online updates are performed at regular intervals, an update must still be carried out with every new CD received from C-MAP.

The Real Time Update is performed in three steps:

1. Generating the RTU request; see below.
2. Producing the Online Update CD ¹⁾; see below.
3. Performing the update as per [Section 7.7.5](#).

A **prerequisite** for successful updating by RTU is that an update according to [Section 7.7.5](#) must have been performed completely and successfully with the last CD received from C-MAP.

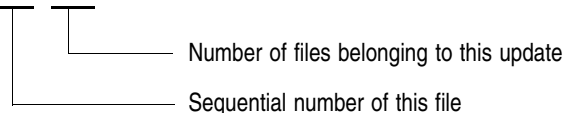
Generating the RTU Request and Producing the Online Update CD

1. Put a DOS-formatted diskette into the diskette drive, and in the menu Utilities > Chart Maintenance > **CM-93/3Pro Other Functions** press the button **Generate RTU Request**. After the request to insert the diskette has been answered with **OK**, an RTU request is generated and written to the diskette as a file with the name **CM93-3_[date]_[UTC].org**. This process can be observed in a dialog box.
2. When this file is sent as the attachment of an e-mail to the C-MAP RTU server, the server then returns one or more e-mails after a short while, each with one or more files attached.

☞ The e-mail address must be requested from C-MAP or, alternatively, it may be obtained from the C-MAP homepage on the Internet.

☞ The entire process is automatic. Any message in the body of the own e-mail is ignored. The file name is used to indicate how many files belong in total to this update:

u001x002.ans



3. **Producing the Online Update CD:** Label a CD (best done by including the chart type and date) and burn all the files received to this CD.

Use this Online Update CD to perform an update as per [Section 7.7.5](#).

7.7.5 Update Function: Update of the CM-93/3Pro Cells on All Databases

☞ For general information on this topic, see [page 219](#) and [229](#).

Application:

- Update of all CM-93/3Pro databases of the system after receiving a new CM-93/3Pro CD or for a Real Time Update (after generating the Online Update CD).
- Installation of CM-93/3Pro cells for post-procured licences in all CM-93/3Pro databases of the system.
- After an initial installation has been performed step by step (see [page 277](#)), check to ensure that all licensed cells have been transferred.

With the procedure described:

- Expired licences are deleted in the local database.
- All CM-93/3Pro licences located then on the local database are copied to all other CM-93/3Pro databases, whereas licences that are not located on the local database are deleted from the other CM-93/3Pro databases.
- On all CM-93/3Pro database, all cells are updated for which licences are available there.
- Outdated cells that are no longer supported are deleted on all CM-93/3Pro databases.

¹⁾ If the data volume is low, the data can also be transferred to a diskette. The term "Online Update CD" is then understood to mean this diskette in the following.

Preparations:

- All CHARTPILOTs and MULTIPLOTs must be switched on.
- Licences that were procured after the last update must have been installed in the local database as per [Section 7.7.1](#).
- For a Real Time Update: The Online Update CD was produced in accordance with [Section 7.7.4](#).

1. In the menu Utilities > **Chart Maintenance**, set **CM-93/3Pro** as the **Type**.

2. Put the most recent CM-93/3Pro CD or the Online Update CD into the CD drive.

If a new CM-93/3Pro CD has been received with which no update has been performed yet, this CD must always be used.

This also applies when its issue date lies before the date of the last online update that was performed. In this case, perform an online update again (with a renewed update request) after carrying out the update with the CM-93/3Pro CD.

3. In the menu Utilities > **Chart Maintenance**, set **CD-ROM** as the **Source**. If a message about the table of contents appears, answer it with **OK**.

4. Press the button Utilities > Chart Maintenance > **Update**. The menu Utilities > Chart Maintenance > **Update** opens ¹⁾. Under **Destination** there, mark all CHARTPILOTs and MULTIPLOTs.

5. In the menu Utilities > Chart Maintenance > **Update**, press the **OK** button. By means of the dialog box which then opens up, you are (again) requested to insert the latest CD. If you have not done this in step 2, do it now and press the **OK** button of the dialog box. As a result, the update process is started and the dialog box **Updating CM-93/3Pro Chart Database** opens up.

6. When a message stating completion of the update appears, you can close the dialog box **Updating CM-93/3Pro Chart Database** by means of the **Cancel** button.

It is recommended that a check of the installed cells be performed afterwards as per [Section 7.7.8](#).

If the update was aborted for some reason, then the databases will contain cells from different CD versions. Therefore the update must be initiated again as soon as possible and brought to completion.

¹⁾ Is not shown when only this CHARTPILOT is installed.

7.7.6 Divergent Procedures for Transfer and Update

In some cases, it is useful to deviate from the procedures described in [Section 7.7.2](#) to [7.7.5](#) for the transfer and update:

The required time is not available for the initial installation

If, before the first use of the CM-93/3Pro chart, there is not enough time for a complete initial installation, it is possible to use the Transfer function to transfer only the cells of the region which will be sailed next.

With the initial installation as per [Section 7.7.2](#), an appropriate selection can be performed; for the selection procedure, see [Section 7.2.5](#). Then perform the transfer as per [Section 7.7.3](#) to all other databases.

As soon as there is sufficient time, the other licensed regions should be installed in the same manner, but at the latest when the first regular update is due; see the note on [page 265](#).

The cells that were not included by the consecutive selections are installed during the next update as per [Section 7.7.5](#). If you do not wish to wait for the next scheduled update, the CD received most recently can be used for this purpose.

7.7.7 Deleting CM-93/3Pro Cells

Application:


By means of the following procedures, it is possible to delete any desired selection of CM-93/3Pro cells on each CM-93/3Pro database that exists in the system.

Deleting Selected Cells

The listed selection procedures are described in [Section 7.2.5](#).

1. In the menu Utilities > **Chart Maintenance**, set **CM-93/3Pro** as the **Type**.
2. In the menu Utilities > **Chart Maintenance**, specify under **Source** the equipment item on which the cells are to be deleted. This unit must be switched on.
3. If the selection is to be made by regions or according to navigational purposes, open the corresponding frame in the world chart and press the **Delete** button. The **Delete** menu then opens.
4. It is possible to select according to navigational purpose in the **Delete** menu. With the aid of the button **Include Touched Cells**, it can be specified there whether only those cells are to be deleted that are situated completely within the frame, or also those cells that are only touched by the frame.
5. In the **Delete** menu, press the **OK** button and then, in the selection menu which opens, perform the selection according to cell names or select all files by clicking on **Add All >>**.
6. When the **OK** button is pressed in the selection menu, the cells listed in the right-hand list are deleted in the database specified by step 2. Alternatively, deletion can be prevented by pressing the **Cancel** button.

Deleting All CM-93/3Pro Cells of a Database

1. In the menu Utilities > **Chart Maintenance**, set **CM-93/3Pro** as the **Type**.
2. In the menu Utilities > **Chart Maintenance**, specify under **Source** the equipment item on which the cells are to be deleted. This unit must be switched on.
 **Do not make** a selection by regions before performing the next step (there must be no frame shown in the world chart).
3. Press the **Delete** button and press the **OK** button in the **Delete** menu.

4. In the selection menu which then opens, click on **Add All >>**. After the **OK** button is pressed, all CM-93/3Pro cells are deleted in the database specified by step 2. Alternatively, deletion can be prevented by pressing the **Cancel** button.

7.7.8 Check of the CM-93/3Pro Cells Installed

After an update and whenever there are doubts about the consistency or up-to-dateness of the database, the databases should be checked by means of the following function.

1. In the menu Utilities > Chart Maintenance > **CM-93/3Pro Other Functions**, press the button **Verify Installed Cells**.
2. Apart from the local database, other databases can also be checked in one working step: Under **Destination**, mark the relevant databases and click the **OK** button.
3. At the latest, insert the CD-ROM and click the **OK** button in the box with the corresponding request.
4. As a result, the check is started and the corresponding dialog box opens up. If no errors are found, the message **No errors found** is shown in the box. Otherwise, a reports on the errors is provided in the **Errors/Warnings** part of the dialog box.

☞ Because only cell files, but no external reference files are transferred during a Real Time Update, the message **WARNING: (cell name): External reference file (file name) is missing!** is shown for all cells updated by RTU for which additional files are intended. At the next regular update, the external reference files are transferred and so these messages are no longer shown. If this message still appears after a regular update, it is advisable to ask the provider about the possible cause.

7.7.9 Other Useful Information about the Data Maintenance of C-MAP ENC Cells

CM-93/3Pro CD

The ship receives the CM-93/3Pro CD at intervals governed by the individual contract with C-MAP. For it to be permissible to sail without paper charts, the corresponding regulations must be observed with regard to the frequency of these updates.

This CM-93/3Pro CD contains all CM-93/3Pro cells that are available at the time of publishing. It contains new editions or re-issues of CM-93/3Pro cells, but no update cells.

RTU Service

In the periods between publishing of the CM-93/3Pro CDs, C-MAP provides the RTU service as a way of keeping the data as current as possible.

To keep the data quantities to be transferred as low as possible, only updates are provided by the RTU service. New editions, or additional new cells, are not made available. In the same way, the updates do not include the external reference files needed in some cases. These are separate files containing additional textual or graphic information.

For the reasons mentioned above, it is absolutely necessary to update the database immediately when a new CM-93/3Pro CD is received, because only this source contains all the necessary data!

The RTU service therefore represents a useful supplement, but is no substitute for the update with the CM-93/3Pro CD!

In order to obtain a correct set of update cells for the data installed on the units, it is necessary to generate a new request directly before each planned online update and to send this to the RTU server of C-MAP.

The updates then received always refer to the CM-93/3Pro CD installed last. For this reason, all cells updated by RTU are replaced by the version of the cell located on the CD whenever a new CM-93/3Pro CD is installed, even if their date indicates that they are more up-to-date than the new CM-93/3Pro CD.

For this reason, it is urgently recommended that an online update be performed immediately after the latest CM-93/3Pro CD is installed.

7.8 Data Maintenance of the CM-93/2 Chart

The CM-93/2 chart is exclusively published by the company C-MAP.

Chart maintenance for the CM-93/2 chart comprises the following operations:

Initial Installation of the CM-93/2 Chart

1. Take out a subscription for the desired zones or areas from SAM Electronics and then install the CM-93/2 Authorization Code you receive on the local database; see [Section 7.8.1](#).
2. Transfer all the CM-93/2 cell files for which the Authorization Code applies from the provider's CDs to the local database, as per [Section 7.8.2](#).
3. Now transfer all CM-93/2 cell files from the local database to all other CM-93/2 databases of the system, as per [Section 7.8.3](#).

Updating of the CM-93/2 Chart

1. On the local database, delete all CM-93/2 cell files as per [Section 7.8.5](#) ¹⁾.
2. Transfer all the CM-93/2 cell files for which the Authorization Code applies from the newest CDs to the local database, as per [Section 7.8.2](#).
3. On all other databases, delete all CM-93/2 cell files as per [Section 7.8.5](#) ¹⁾.
4. Now transfer all CM-93/2 cell files from the local database to all other CM-93/2 databases of the system, as per [Section 7.8.3](#).

Purchasing and Installing Subsequently Licensed Cells: As for [Initial Installation of the CM-93/2 Chart](#)

7.8.1 Taking Out a Subscription for CM-93/2 Cells

☞ For general information on this topic, see [page 219](#).

☞ All operating actions listed in this section should be performed at the CHARTPILOT that is intended for the chart maintenance work of the system. For the following operating steps, the **Type CM-93/2** must be set in the Utilities > **Chart Maintenance** menu.

Before initial installation can take place, a subscription must be arranged with SAM Electronics to cover one or more particular geographical areas. With this chart type, the system identification code (see [Section 7.2.2](#)) and geographical areas are combined to form the **CM-93/2 User Code**. This code must be generated at one of the CHARTPILOTS of the system on which the CM-93/2 chart is to be used; see below. You will be sent the CM-93/2 CDs when the subscription has been taken out.

When you send the CM-93/2 User Code to your contractual partner, you will be given the **CM-93/2 Authorization Code**, with which you can then activate the subscription in the system; see below.

The CM-93/2 chart is divided into nine **zones**, and has divided up each zone into a different number of **areas**. Each cell of the CM-93/2 chart is assigned to an area. If you wish to obtain cells of the CM-93/2 chart, you can take out a subscription for all zones, for one or more zones, **or** for one or more areas.

Generating CM-93/2 User Code

1. Put one of the CM-93/2 CDs into the CD drive.
2. Call up the menu Utilities > Chart Maintenance > **CM-93/2 Subscription**. In the world chart which then appears, Zone 1 is displayed as a hatched region. If an existing subscription has already been activated, the corresponding regions are **marked dark blue**.

¹⁾ See [page 284: Saving Time with the Update](#)

- In the menu Utilities > Chart Maintenance > **CM-93/2 Subscription**, indicate under **Selection by** whether you have taken out a subscription for zones **or** for areas.

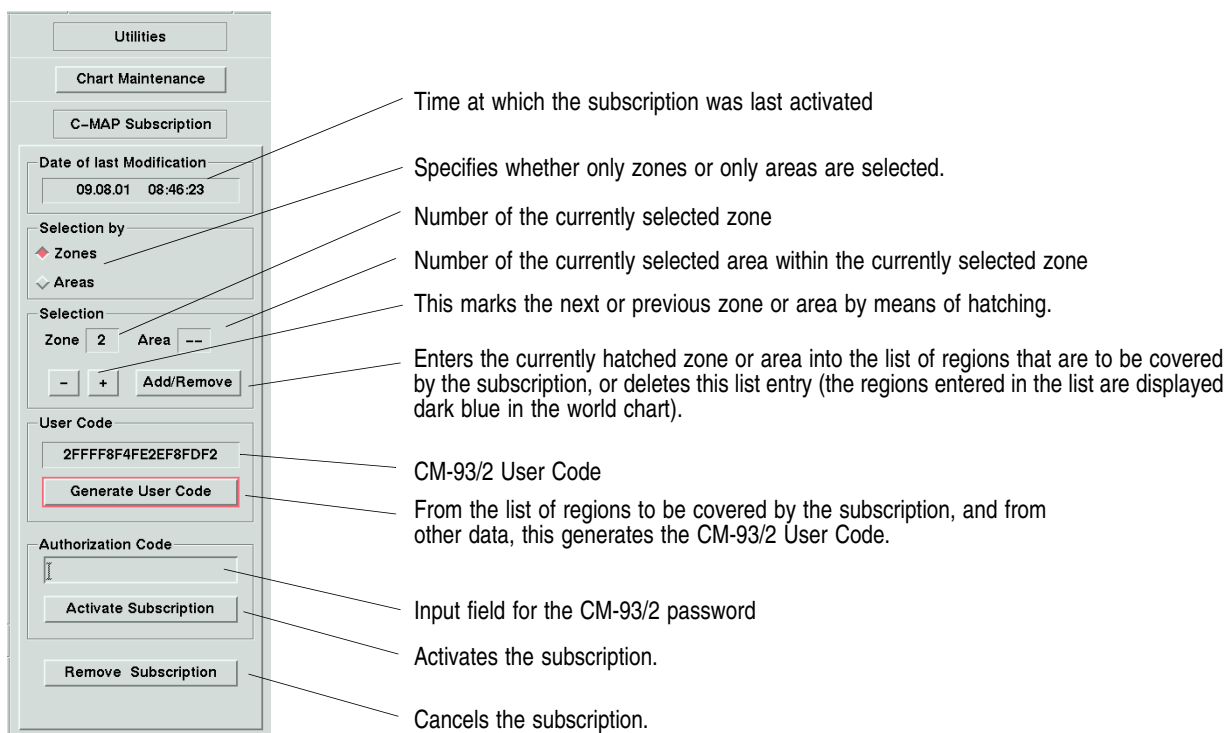


Fig. 7-19 The menu Utilities > Chart Maintenance > CM-93/2 Subscription

- With the buttons + and –, mark under **Selection** all subscribed zones or areas by means of hatching, and in each case press **Add/Remove** until all subscribed-for zones or areas are marked dark blue on the world chart. When doing this, note the numbers of the marked zones or areas.

By pressing **Add/Remove** again, marking can be cancelled.

- Press the **Generate User Code** button. The 18-place CM-93/2 User Code is then displayed to you above this button.

☞ The menu can be exited by clicking on the **Chart Maintenance** button, which is situated above the menu.

- To obtain the CM-93/2 Authorization Code, send this CM-93/2 User Code to the department from which the subscription was obtained,

IMPORTANT:

Note not only the User Code but also - and without fail - all numbers of the zones or areas covered by your subscription. You will need these numbers so that you can activate the subscription.

Entering the Authorization Code; Activating the Subscription

After the 16-place CM-93/2 Authorization Code has been received, the subscription can be activated:

- Generate the User Code again by marking all zones or areas covered by the subscription - see above. If, in this process, the same zones/areas are marked as in the first-time generation of the User Code, the same User Code must also be displayed. Compare the User Codes!

2. Under **Authorization Code**, input the Authorization Code received, and press **Activate Subscription**. The transfer of the files of the zones or areas covered by the subscription is then enabled in the CHARTPILOT. If, previously, the subscription had covered different zones or areas, these can no longer be transferred from the CD.

☞ Zero or capital O? The User Code and Authorization Code are hexadecimal numbers, and so they do not contain a capital O.

☞ The menu can be exited by clicking on the **Chart Maintenance** button situated above the menu.

You can now transfer the subscribed-for data from the CD to the hard disk drive (see [Section 7.8.2](#)).

Deleting the Subscription Data

If work with the CM-93/2 chart is no longer to be performed with the system, or if an error in licence management occurs and cannot be corrected by means of the operating procedure described, the subscription can be cancelled.

NOTICE:

After the following procedure has been performed, cells of the CM-93/2 chart cannot be transferred from the CD into the CM-93/2 databases of the system. Only if it is known which zones or areas were covered by the subscription, and only if the Authorization Code is available, will it be possible to bring the subscription back into existence so that cells of the CM-93/2 chart can again be transferred from the CD.

In the menu Utilities > Chart Maintenance > **CM-93/2 Subscription**, press the **Remove Subscription** button. A safeguard question then appears. If you then enter the word **PRUNE** in the input field of that safeguard question and press the **OK** button, the subscription data will be deleted on the hard disk drive of the CHARTPILOT that is being operated.

☞ In this process, the cells of the CM-93/2 chart remain preserved. If the entire local CM-93/2 database is to be deleted, then in addition the cells of the CM-93/2 chart will have to be deleted in accordance with [Section 7.8.5](#).

7.8.2 Transferring Cells of the CM-93/2 Chart from CD to Local Database

☞ For general information on this topic, see [page 219](#) and [280](#).

Application:

- Initial installation of CM-93/2 cells
- Update after receiving the latest CM-93/2 CDs
- Installation of subsequently licensed CM-93/2 cells

With the procedure described:



- All CM-93/2 cells for which there is a subscription are transferred to the local database.

☞ From the program point of view, no distinction is made between first-time transfer and an update: both on receiving the CM-93/2 CDs for the first time and on receiving the more up-to-date CDs, all desired data must be transferred into the CM-93/2 databases of the system by means of the procedure described here.


Preparations:

- For the initial installation and for the installation of subsequently licensed cells: Install the Authorization Code on the local database as per [Section 7.8.1](#).
- For an update: On the local database, delete all CM-93/2 cell files as per [Section 7.8.5](#) ¹⁾.

¹⁾ See [page 284: Saving Time with the Update](#)

1. In the menu Utilities > **Chart Maintenance**, set **CM-93/2** as the **Type**.
2. Put the CD of the desired zone into the CD drive, and in the menu Utilities > **Chart Maintenance**, set **CD-ROM** as the **Source**. If a message appears concerning the table of contents, answer it with **OK**.
 **Do not make** a selection by regions before performing the next step (e.g. there must be no frame shown in the world chart).
3. Press the **Transfer** button. If messages relating to the table of contents appear, answer with **OK** and press the **Transfer** button again.
4. Under **Destination**, mark only **CHARTPILOT (this one)**.
 Under **Cell Files to be Transferred**, leave all navigational purposes switched on.
5. After pressing of the **OK** button of the **Transfer** menu, transfer and conversion begin. The only cells that are transferred are the selected cells not yet present in the CM-93/2 database selected under **Destination**, and the selected cells that are present with a different status. During this process, the progress of the transfer (and of the simultaneous decoding and conversion to the internal format) is displayed. Transfer is finished when the display **Percentage copied 100%** appears, together with a corresponding message.

7.8.3 Transferring All CM-93/2 Cells from Local to Other Databases

 For general information on this topic, see [page 219](#) and [280](#).

Application:


- Initial installation of CM-93/2 cells
- Update after receiving the latest CM-93/2 CDs
- Installation of subsequently licensed CM-93/2 cells

With the procedure described:

- All CM-93/2 cells located on the local database are copied to all other CM-93/2 databases of the system.

Preparations:

- The transfer as per [Section 7.8.2](#) must have been carried out.
- All CHARTPILOTs and MULTIPLOTs must be switched on.
- Only for an update: On all other databases, delete all CM-93/2 cell files as per [Section 7.8.5](#) ¹⁾.

1. In the menu Utilities > **Chart Maintenance**, set **CM-93/2** as the **Type**.
2. In the menu Utilities > **Chart Maintenance**, as the **Source** select the CHARTPILOT that is currently being operated (**this one**).
3. In the world chart, pull open the largest possible frame (up to the margin) and press the **Transfer** button.
4. Under **Destination**, mark all CHARTPILOTs and MULTIPLOTs.
 Under **Cell Files to be Transferred**, leave all navigational purposes switched on.
5. After pressing of the **OK** button of the **Transfer** menu, the transfer begins. The dialog box **Remote Transfer of CM-93/2 Cells** appears. In its upper part, the process currently taking place is listed, and in the lower part all errors and warnings occurring in the transfer process are listed.
6. When the transfer process has finished, press the **Cancel** button after the corresponding request.

¹⁾ See [page 284: Saving Time with the Update](#)

7.8.4 Divergent Procedures for Transfer and Update

In some cases, it is useful to deviate from the procedures described in [Section 7.8.2](#) to [7.8.5](#) for the transfer and update:

Saving Time with the Update

If, during an update, the existing cells on the databases are not deleted before the transfer is performed, the transfer process is much faster, because only the changed (and, if any, the new) cells are transferred.

Deleting the cells before the update is only necessary to ensure that no cells remain on the databases that were replaced by one or more other cells and are therefore no longer supported. Because this replacement of existing cells occurs very rarely, it is justifiable not to perform the deletion with every single update.

No MULTIPLOT is Installed in the System

The initial installation can be performed with the procedure as per [Section 7.8.2](#) directly on all databases of the system. The transfer as per [Section 7.8.3](#) is then no longer necessary.


With transfer as per [Section 7.8.2](#), mark all CHARTPILOTS under Destination in step 4.

Not All of the Cells of the Subscription are to be Installed

With the initial installation as per [Section 7.8.2](#), an appropriate selection must be performed; for the selection procedure, see [Section 7.2.5](#). Then perform the transfer as per [Section 7.8.3](#) to all other databases. Such an initial installation with subsequent transfer must also be carried out for new cells for which subscriptions were taken out later.

7.8.5 Deleting Cells of the CM-93/2 Chart

Deleting All CM-93/2 Cells of a Database

1. In the menu Utilities > **Chart Maintenance**, set **CM-93/2** as the **Type**.
2. In the menu Utilities > **Chart Maintenance**, specify under **Source** the equipment item on which the cells are to be deleted. This unit must be switched on.
 **Do not make** a selection by regions before performing the next step (there must be no frame shown in the world chart).
3. Press the **Delete** button and press the **OK** button in the Delete menu. An input field appears. If the word **PRUNE** is entered there and the **OK** button is pressed, all cells of the CM-93/2 chart on the CM-93/2 database defined by step 2 are deleted.

Deleting Selected Cells

The listed selection procedures are described in [Section 7.2.5](#).

1. In the menu Utilities > **Chart Maintenance**, set **CM-93/2** as the **Type**.
2. In the menu Utilities > **Chart Maintenance**, specify under **Source** the equipment item on which the cells are to be deleted. This unit must be switched on.
3. If the selection is to be made by regions or according to navigational purposes, open the corresponding frame in the world chart and press the **Delete** button. The **Delete** menu then opens.

4. If no frame was drawn in step 3, the number of cells in the database are shown in the **Delete** menu, grouped according to navigational purpose. If a frame was drawn, it is possible to select according to navigational purpose in the **Delete** menu. With the aid of the button **Include Touched Cells**, it can be specified there whether only those cells are to be deleted that are situated completely within the frame, or also those cells that are only touched by the frame.
5. In the Delete menu, press the **OK** button. When the safeguard question which then appears is answered by pressing of the associated **OK** button, all cells that are contained in the CM-93/2 database defined by step 2 and have been selected for deletion are deleted. Alternatively, deletion can be prevented by pressing the **Cancel** button.