Operating Instructions

Oyster Vision II

Issue: May 2006
Software Version 1.05

Intended use

The intended use of this product is the fixed assembly on mobile homes or trailers (caravans) with a maximum speed of no more than 130 km/h. With parked carrier vehicle, the product is able to align the mounted parabolic antenna automatically to one of the geostationary, directly broadcasting television satellites operating for Europe. Voltage supply must take place via a standard motor vehicle on-board electrical system with a rated voltage of 12 V / 24 V.

Any other use than that described above is not permissible.

Please also observe the following instructions of the manufacturer:

- Any modification of the total system by removing individual components or by adding other components is not permissible.
- The use of other parabolic reflectors or LNBs than the originally installed parts is not permissible.
- Assembly has to be performed by sufficiently qualified personnel.
- Relevant, recognized guidelines of the automotive trade are to be observed and adhered to.
- The assembly is only permissible on hard vehicle roofs with sufficient firmness and internal stability.
- The product does not require any regular maintenance. The housings may not be opened. Always have examination work only be done by a qualified specialist.
- In case of uncertainty or problems please turn to the manufacturer or to a workshop recognized by the manufacturer.

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Introduction

These operating instructions describe the function and the operation of the automatic satellite system Oyster Vision II. Instructions regarding the assembly are to be found in the separately provided Assembly Instructions. Fault-free and functionally reliable operation can only be ensured if you adhere to these instructions both for the assembly and for the operation.

Your Oyster Vision II is an intelligent receiving system for satellite television which is able to automatically align itself to a preset satellite as long as the receiving system is within the cover area of this particular satellite.

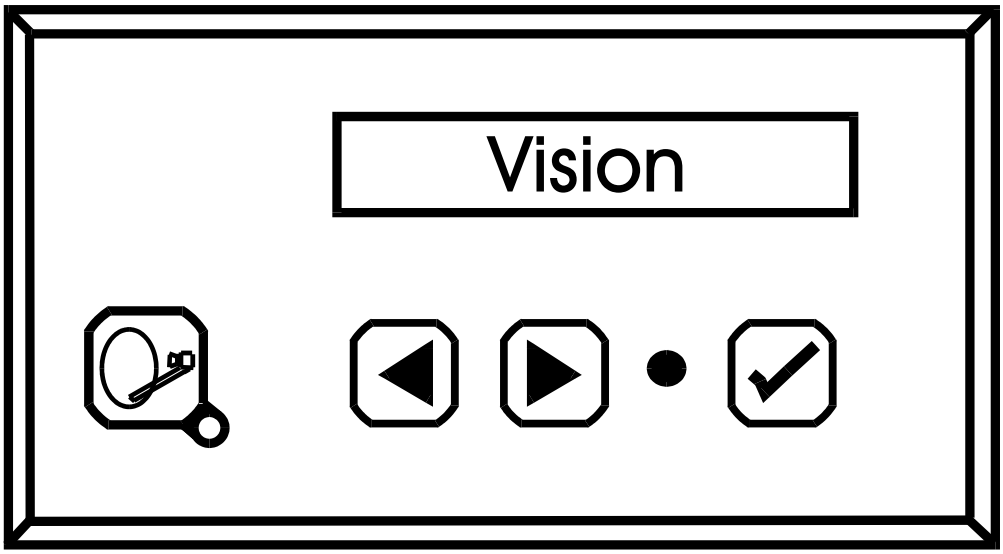
Always pay attention to a "free line of view toward the south". Seen from Europe, all satellites are located approximately in the south. If the direct line of view to the satellite is blocked by obstacles (buildings, mountains, trees etc.), neither an automatic adjustment can take place nor is television reception possible.

On the first pages of these instructions you will find guidance to the operation of the general functions of your Oyster Vision, and subsequently the adjustment possibilities are described. The last pages of these instructions contain various technical details concerning the Oyster Vision.

The first steps

We have included separate instructions for the assembly and first start-up as well as the necessary wiring work of your Oyster Vision in the Assembly Instructions. All steps from unpacking through the assembly and the connection up to the first switching-on together with various basic adjustments are described there. If you carefully proceeded with all steps described in the Assembly Instructions, now a fully functional Oyster Vision should be at your disposal.

The entire operation is performed by using the operating control.



You can attach this operating control device at any place of your choice, but please consider, however, that it is not waterproof. Possibly you may yet have to pull off the protective plastic film from the display.

On the display area of the operating control you are also presented with various pieces of information about the current operating condition of your system. In order to be able to read this information it is advisable to place the operating control at an easily accessible place. Since the display is back lit, it can also be read without problems when it is installed at a very dark place.

For reasons of operating reliability, please unplug the operating control only while your Oyster Vision is in a standby mode. You recognize this by the fact that no text is shown on the display.

Switching on and off

The operation of your Oyster Vision is very simple. You only have to press the key  , and your Oyster Vision will immediately start up.
Please do not forget, however, to switch on your satellite receiver and your TV set or flat-panel display. The Oyster Vision works completely independent from TV set and receiver; however, if these devices are switched off naturally no TV or radio reception is possible.

After switching on, the antenna dish extends and first moves into the position of the last satellite identification. If since then the vehicle location has been changed, the system does not recognize any signals and it begins the fully automatic satellite search.

For the selection (the basic setting) of the desired satellite, please refer to the chapter Menu option "Settings" (see page 12).

If no picture appears after extending the antenna and the system does not change into the automatic search mode, then it had been operated in the manual mode before last switching it off. Please refer for this case to the chapters "Automatic search" and "Manual search".

In order to switch off the system, simply press the key  again so that the Oyster Vision immediately retracts and then changes into the standby mode.

If you want to stop the motion of the system during a search in progress, simply press the key  and the antenna will immediately remain stationary.

The Overview menu

Every time your Oyster Vision is activated and has currently no particular actions to perform, as for example extending or retracting, automatic search, or a satellite change, you have direct access to the Overview menu from which you can initiate all actions or also branch out to the Main menu.

With the keys ◂ and ▸ you can navigate in this Overview menu, with √ you activate the individual functions.

SAT operation	The system is in normal operation mode. Press ◂ or ▸ in order to scroll through the different menu options.
Automatic search	The automatic search (see page **Fehler! Textmarke nicht definiert.**).
Manual search	The manual search (see page **Fehler! Textmarke nicht definiert.**).
Sat change	The satellite change (see page **Fehler! Textmarke nicht definiert.**).
Settings	The key √ selects the menu option "Settings". (see page 12).

Automatic search

After switching on the system with the key  , the antenna extends and aligns itself first to the position on which a satellite had been received the last time. If no satellite can be received there, the system begins automatically with the fully automatic search for the preset satellite (factory pre-set to ASTRA 1). In the chapter Menu option "Settings" on page 12 you learn how to change this search satellite.

After the search satellite has been found the search stops and the TV picture is switched through. If after prolonged search (several minutes) still no TV picture appears, then you are probably in an area where the preset satellite cannot be received or there is an obstacle in the receiving direction of the system. In this case the message "not found?" appears on the display of the controller. In that case you should select another search satellite or make sure that no obstacle obstructs reception; or change the present location, if necessary.

The fully automatic search always assumes that your vehicle is standing perfectly horizontally. If this should not be the case then you will possibly experience prolonged search times.

When the system has already been extended, the fully automatic search can again be started as follows:

- Press the key ▸ repeatedly until the message "Automatic search" appears on the display.
- Press the key √ .

If at the end of the automatic search the receiver is not switched on, then a corresponding message is shown on the display.

Manual search

The manual search serves predominantly for fine-adjustment of a found satellite under unfavourable reception situations. If you want to receive a new satellite which has not yet been stored as a search satellite in the controller, this can be likewise set up with the manual search function.

First, switch your receiver to a pre-programmed programme place which is broadcast by the desired satellite.

Press the key ▸ at the controller repeatedly until the message "Manual search" appears on the display. After pressing the key √, you can gradually change the position of the antenna with the arrow keys. At first, setting of the angle of rotation is pre-selected. Switching between angle of rotation and angle of inclination and back is performed by pressing and holding the key √ and **simultaneously** pressing one of the arrow keys.

Adjust the system in both axes of movement with the arrow keys to the strongest possible signal.

After you have adjusted the antenna to optimal reception, you can store the position for the present location by pressing the key √ again.

The position stored in such a way is then first used when you switch on the system the next time. Even if no satellite signal is recognized in this position, the automatic search is **not** started if you had stored a manually located position before. If desired, start the automatic search through the menu (see also page **Fehler! Textmarke nicht definiert.**).

If the "manual search" is stopped with the key  , then no storage of the current position takes place. The system moves back into its initial position.

Satellite change

In principle, a satellite change can of course be performed when you enter another satellite in the menu option "Search satellite" and then select the fully automatic search function. For fast, comfortable turning to another satellite, however, the so-called "fast satellite change" was implemented in addition to the DiseqC system. Here, four preset satellites can be located very quickly. However, the satellite change functions satisfyingly only if the preset satellites can actually be received in the area you are currently residing in.

Pre-setting:
Select the menu option "SAT position" and assign the appropriate satellites to the respective positions (see page **Fehler! Textmarke nicht definiert.**). If you do not assign all 4 possible positions, then the factory-preset satellites remain in the remaining positions. The pre-setting is hereby already finished. You can now leave the Settings menu.

Changing to another satellite is quite simple: Scroll through the Overview menu by repeatedly pressing of the key ▸ until the option "SAT change" appears on the display.
Now press the key √ , and the currently received satellite is indicated on the display. By pressing the keys ▸ or ◂ , you can now switch between the 4 preset satellites.

Hint: If you do not assign all four possible positions and when switching through the positions you feel annoyed by the appearance of the factory-preset satellites, then you can also assign the positions several times to the same satellite. If you would like to change, e.g., only between Astra and Hotbird, then you set Astra on position 1, Hotbird on position 2, Astra on position on position 3 again and Hotbird on position 4 again. When switching through with ▸ or ◂ , *then the change takes always place only between Astra and Hotbird.*

After the desired satellite is shown on the display, it is directly selected by pressing the key √ .
Afterwards, the display changes back again into the mode "SAT operation".

This satellite change takes some seconds after a fully automatic search. If a satellite had already been selected before and no fully automatic search had been started since that time as well as the vehicle was not moved, then the adjustment happens substantially faster.
After renewed retracting and extending of the system, however, the preset “search satellite” (see page 14) will be located again.

Menu option “Settings”

With this menu option you can change the individual settings of the system or initiate various functions. In order to reach the different adjustment possibilities, you must therefore always first select the Main menu.

In the Overview menu, simply scroll to the entry Settings and press the key √ to activate the menu.

The menu is not accessible while then system is switched off. You must thus first switch on the Oyster Vision before you can use the menu.

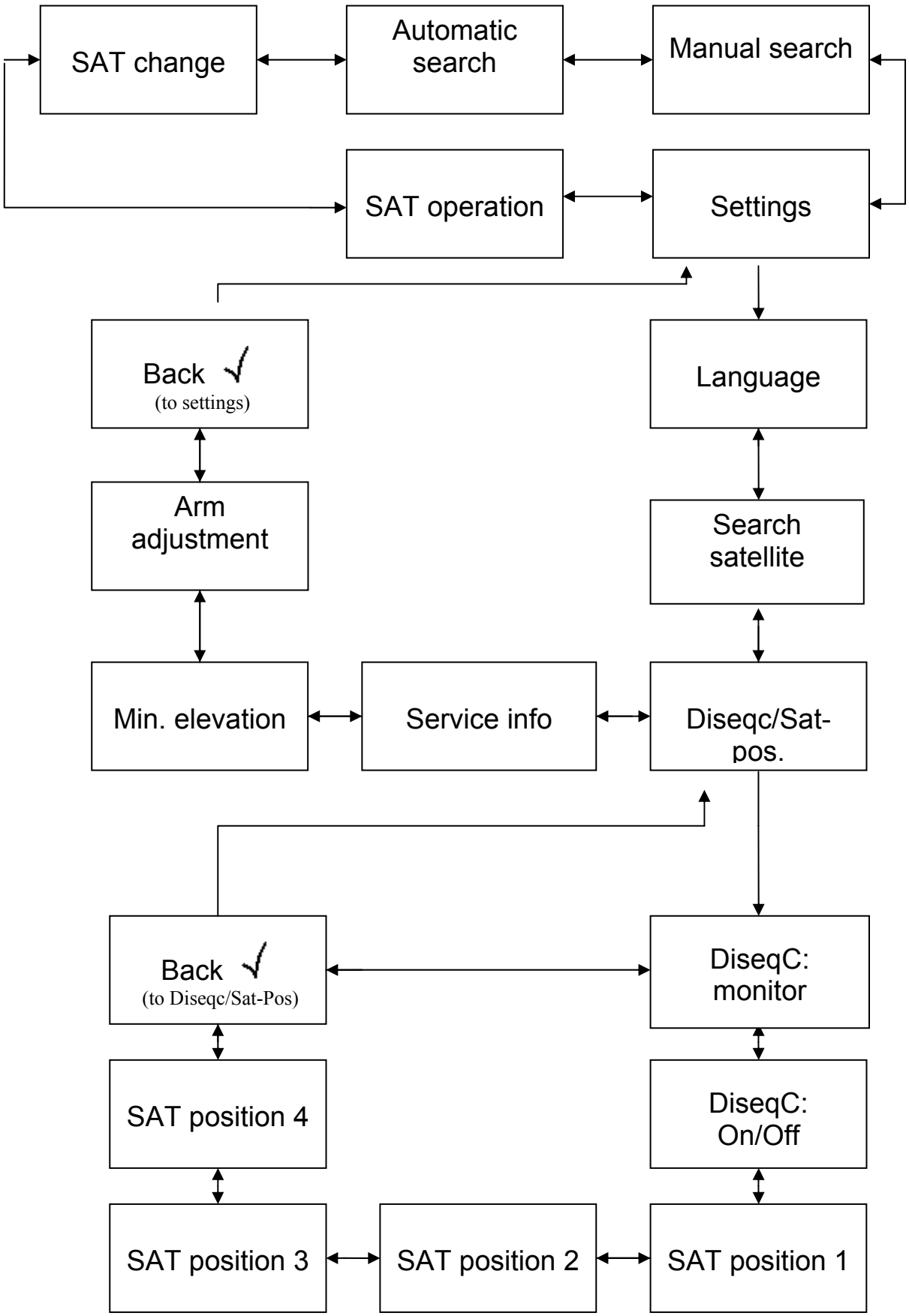
Using the menu

In all menu levels the operation takes place via the arrow keys ◄ and ►. With these keys you select the desired submenu or function or settings option. By pressing the key √, you activate the indicated menu option.

In the settings options you can also change the indicated values with the arrow keys ◄ and ► within certain given limits. With the key √ you accept the setting and return to the selection level.

By selecting the menu option Back √ and pressing the key √, you move up one level at a time in the menu tree.

The menu structure



Language

Selection of the language for the texts indicated on the operating control.

Search satellite

Selection "Astra 1", "HotBird" etc. (Appendix Search satellites, page **Fehler! Textmarke nicht definiert.**).

Select the satellite which on the one hand broadcasts your desired programme and on the other hand can also be received in the region where you are currently located.

For German-language programmes in Europe you will in most cases decide for "Astra 1".

DiseqC/Sat pos.

In this menu option, by pressing √ you get into the DiseqC submenu where the settings for the satellite change and the DiseqC system are made (details see pages 10 and 18).

Service info

Here various information relating to the service can be called up.

Min. elevation

Selection 8 – 30.

Here you enter the minimum elevation which your antenna may use during the satellite search. This serves to 'protect' attachments at the vehicle, such as the roof railing, a HEKI window, or an exhaust gas stack, from the moving antenna.

The lower the elevation of the satellite in the sky, the lower the reception head (LNB) will move over your roof during the satellite search. If there are any roof attachments within the range of rotation, this could lead to a collision and thus to the damage of your Oyster Vision or to the parts concerned. Often, however, the system must be installed with limited available space. The setting of Min. elevation prevents that the LNB lowers itself below a certain value. The larger the entered number, the higher is the lower limit for the LNB. If you change this value, the LNB immediately takes the appropriate position; thus you can recognize whether the input has been appropriate.

The satellite Astra 1 does not reach elevation values smaller than approx. 14° anywhere within the reception range of the Oyster Vision. For other satellites, however, this value may be still lower.

Caution: If you enter too large a value here, then your desired satellite, particularly in northern regions of Europe, can possibly not be received any more!

Arm adjustment

This option is intended for the service in order to make basic mechanical adjustments at the system.

Submenu DiseqC:

DiseqC: monitor

You can use this function in order to find out which DiseqC commands your receiver sends with a programme change and whether it produces standard commands at all. It thus offers you assistance in order to correctly program both your receiver and your Oyster Vision.

A line with numbers and letters is displayed. At the beginning only the first, leftmost number is important. All information further to the right represents the transferred data bytes and can be of assistance to a qualified technician in the case of settings problems. However, you need not consider these data any further.

The leftmost number represents the position number (satellite number) that your receiver had requested last. This position number will be used by your Oyster Vision with a fully automatic satellite change.

DiseqC: On/Off

Default: Off

DiseqC enables a fully automatic satellite change if you select another satellite at your DiseqC enabled receiver by a programme switch. Consider also in this context the chapter about satellite change on page **Fehler! Textmarke nicht definiert.**.

Activate the DiseqC function only if you want to make frequent changes between the individual satellites and if your receiver is DiseqC enabled.

Even if the DiseqC function is activated (DiseqC: On), it is nevertheless active only if your Oyster Vision is in the "waiting state". You recognize this by the display of either Main menu √ or SAT operation at the operating control. As long as you are in the menu or have activated a special function, DiseqC commands will be ignored.

Keep in mind: You must program both your Oyster Vision and your receiver correctly and in the same way in order to be able to use the DiseqC functions successfully.
Please absolutely consult the operating instructions of your receiver for the programming of the receiver.

SAT position

Assignment of satellites to "position 1" through "position 4".
You have the possibility to select altogether up to 4 positions (satellites) for the normal satellite change or the DiseqC satellite change.
Each of the 4 positions can be assigned a satellite from the list of the search satellites.
Select first "position 1" and press the key √. With the arrow keys you can now select the satellite desired for this position. With √ you confirm your selection.
Proceed for "position 2" through "position 4" in exactly the same way as described for "position 1".

For the German-speaking countries it is advisable to assign Astra 1 to "position 1" and Hotbird to "position 2". This also corresponds to the factory-installed default.

Please read the explanations in the separate chapter "The DiseqC system" on page 18.

The DiseqC system[1]

What is DiseqC?

With the increasing variety of television satellites, the desire arose to receive programmes from different satellites. For the selection of the desired satellite, among other things the DISEqC system was developed which uses a switching signal that allows the user to receive several satellites with only one receiver by simple selection of the appropriate TV programme. Originally, the system was intended for fixedly installed home systems. The individual reception systems (satellite dishes) are connected to a so-called DISEqC enabled multi-switch (appropriately installed under the roof of the building) to which the Satellite receiver is also connected. By sending an appropriate DISEqC signal from the receiver to the multi-switch, this multi-switch makes the programmes of the selected satellite available to the receiver. The DISEqC signal is a standardized signal which is available with almost any modern digital satellite receiver (DVB-S receiver).
The Oyster Vision uses this DISEqC signal for fully automatic adjusting its receiving direction to up to four preset satellites. The initial configuration of a DISEqC system is relatively complex and represents partially a challenge also for the technically experienced. In a case of doubt the system should be configured by an experienced specialist. In addition, the system can be used satisfyingly only if the adjusted satellites are actually receivable in your current location. If this is not the case, locate the satellite through the settings option "Search satellite" (cf. page 14) and the automatic search function (cf. page 8).

[1] DISEqC (**Di**gital **S**atellite **Eq**uipment **C**ontrol) is a registered trade mark of the satellite operator **EUTELSAT**.

Programming:

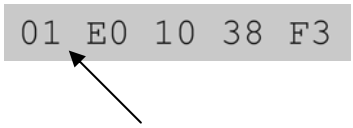
Precondition for a successful configuration is that programmes of the desired, receivable satellites are already stored in your receiver. Should this not be the case then you must store the broadcast transmitters first. To do this, look up the appropriate satellite with your Oyster Vision by selection of the appropriate search satellite (cf. page **14**) and use of the fully automatic search.
After successful satellite identification, start the programme search function of your satellite receiver. For details please consult the operating instructions of the satellite receiver. Next you must assign a so-called DISEqC position to the appropriate satellite in your receiver. For this procedure please also consult the operating instructions of your satellite receiver.

Example: Two satellites should be selectable through DISEqC. The first satellite should be Astra 1, the second satellite Eutelsat Hotbird. If the programmes of these two satellites are not yet stored in your receiver, then a transmitter browsing must be performed after fully automatic location of the respective satellite.
After the transmitters of the satellites are stored in the receiver, assign an appropriate position to the satellites.
In the Settings menu of most conventional receivers, this could, e.g., look as follows:

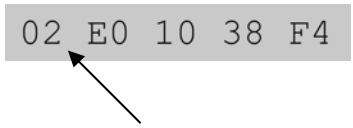
Satellite 1	***ASTRA1***	***DISEqC: A***
Satellite 2	***HOTBIRD***	***DISEqC: B***

After storing the positions you can now leave the Settings menu of the receiver and select a stored programme.
Next you should check whether your system works correctly. For this you select the menu option "DISEqC monitor" in your Oyster Vision (see "The menu structure" on page ***Fehler! Textmarke nicht definiert.***)
On the display you now see a succession of different numbers and letters, whereby momentarily only the satellite position (that is the leftmost number) is of any interest.

Readout on the display of the Oyster Vision operating control:



Satellite position "1"



Satellite position "2"

After you have now selected a programme in the receiver, the position number assigned to the satellite for this programme in the receiver must appear here. **This is one the most important preconditions for a perfect functioning of the system!** Should this not be the case, you cannot continue with the further configuration steps since in this case DISEqC will definitely not work. You can find possible troubleshooting help for erroneous display readouts in the troubleshooting table on page 24.

In our example, the number 01 should appear after selection of an Astra programme because we have assigned Astra to the position A (1). After switching to a Hotbird programme, 02 should appear because the position B (2) was assigned to this satellite.

After having verified that the position display functions reliably, the satellite position is assigned to the appropriate satellite in the operating control of the Oyster Vision. To do this, select the menu option "SAT position" (see page ***Fehler! Textmarke nicht definiert.***).

In our example, we now assign the satellite Astra1 to position 1, position 2 should be Eutelsat Hotbird.

After this setting was made, select the option "DiseqC On/Off" in the Oyster Vision operating control (cf. page *16*) and confirm with the key √ DISEqC: On .

Programming is hereby finished. Leave the Settings menu now.

Next, one of the pre-programmed satellites must be searched with the automatic search function (cf. page **Fehler! Textmarke nicht definiert.**). After the satellite has been found, after selection of a programme of another satellite at the receiver the system must align itself to this satellite. This takes some seconds after a fully automatic search. If a satellite was selected before and no fully automatic search was started as well as the vehicle was not moved in between, the adjustment happens substantially faster.

Please note that the DISEqC commands are only evaluated if the Oyster Vision is in the "waiting state". You recognize this by the display of either Main menu √ **or** SAT operation **on the display. If any other menu option has been selected on the display of the operating control, then all DISEqC commands will be ignored!**

Restarting the system

As is the case for any computer-controlled equipment, also with your Oyster Vision a "crash" of the software could occur. Causes for this might be external influences, e.g. strong electromagnetic disturbances, or also software bugs that had not yet been discovered so far.

If you are of the opinion that your Oyster Vision reacts incorrectly or does not react at all to your control inputs any more, then you should restart the microprocessor. You can do this in different ways.

- If the fuse in the set of cables is easily accessible for you, pull this fuse and then insert it again into the holder after a few seconds.
- If the fuse is inaccessible, plug off the Western plug on the right side of the operating control. To do this, you must from the rear press the plastic clips against the body of the plug and then pull the plug from the device. Now simultaneously press the two keys ◀ and ▶ at the operating control; keep them firmly pressed and insert the Western plug again. Now you can release the two keys.

With both described cases, your Oyster Vision will internally perform a reset. If the system had been extended, then it will first retract. After the reset, the system will be in standby mode and can again be switched on as usual with the key  .

Troubleshooting table

During the operation of the automatic antenna system there might occur malfunctions, e.g. if the unobstructed movement of the antenna is not ensured (branches, snow etc.).

In part, such malfunctions are automatically identified and represented on the display of the control device.

Error description	**Fault correction**
During the search for a satellite, no signal could be received.	Do you have free line of view towards the south? Are you within the reception range of the selected search satellite? Should the skew angle of the LNB be modified with reference to your location (page 11)?
"Y motor error" or "X motor error" appears in the display.	Are any objects interfering with the movement of the antenna? Is the supply voltage too low (weak battery)?
Antenna does not react after switching on, or does not react to commands.	Is the fuse OK? Are all cables correctly plugged in?

Troubleshooting table DiseqC

Possible error	**Cause and remedy**
In menu option "DiseqC monitor", **the display does not change with programme change** or the readout displays `00 00 00 00 00`.	The DISEqC function has not been activated at the receiver. Switch on the DISEqC function at the receiver. (See operating instructions of your receiver.)
In the menu option "DiseqC monitor", the display indicates wrong position numbers (satellite numbers) when changing the programme at the receiver.	There are receivers that do not only support standard DISEqC but also extended special functions. These must not be activated! In such a case it must be checked, e.g., whether your receiver is set to DISEqC 1.0 or 1.1 or 1.2. There are also DISEqC 2.xx signals which can be wrongly interpreted by the Oyster Vision. Check the settings at the satellite receiver. Activate the **simplest** DISEqC function. (See the operating instructions of your satellite receiver.)
In the menu option "DiseqC monitor", the values are indicated correctly but the system does not react to a change of the programmes at the satellite receiver.	Is the DISEqC function of the Oyster Vision activated at all? (DISEqC: On) Does the display of the operating control show "Main menu" or "SAT operation"? DISEqC commands are ignored if another menu option is active!

In the menu option “DiseqC monitor”, the values are indicated correctly, the system moves during programme change, but the TV screen remains black.	The system aligns itself to the wrong satellite: 1) After the DISEqC configuration, a fully automatic search must be performed once. 2) Are the positions in the menu option “SAT position” correctly assigned? The assignment in the Oyster Vision must be the same as in the receiver. 3) Are you perhaps currently located in an area in which the satellite selected through DISEqC cannot be received at all?

Safety precautions

For correct operation of your Oyster Vision it is in principle necessary that the system is correctly connected to the ignition of your vehicle (see Assembly Instructions).

If correctly assembled, when switching on the ignition the antenna automatically retracts into the resting position within short time and locks itself there. If the system cannot or not completely retract due to a malfunction, then it is your responsibility as the driver of the motor vehicle to ensure the normal retraction and locking of the antenna.

Before beginning each journey, as the driver of the motor vehicle please personally make sure by a look at the external unit that the antenna is completely retracted.

Please further note that in the different countries different legal regulations apply to the operation of electrical as well as electronic devices. As user of such a system, you are responsible for the compliance with the respective regulations.

Your Oyster Vision is certified by the manufacturer exclusively for the connection to customary lead accumulators with a rated voltage of 12/24 Volt with a nominal capacity of at least 50 Ah. The manufacturer does not take any responsibility for direct or indirect damage or consequential damage to the system itself, to battery systems, motor vehicles, or other goods that might be damaged due to the connection of unsuitable battery systems or to assembly errors or wiring errors.

Appendix — Search satellites

These satellites are pre-programmed in your Oyster Vision for the direct search. The selection takes place in the Main menu under **Main menu → Settings SAT → Search satellite** (see page 14).

ASTRA 1
The satellite of choice for the German-speaking countries. All German-language television programmes, private and public as well as all third programmes together with their radio programmes.

Unfortunately, cannot or only in a very reduced manner be received in Turkey, at the eastern Mediterranean, and in the east of Europe. Under normal conditions, however, reception is possible even on the Canary Islands, in Morocco, and also in Greece with an 85 cm dish antenna. Compared to the old analogue programmes, the digital coverage area is considerably wider.

ASTRA 2
Covers primarily the English-speaking area of Europe. The well-known English-language news stations are to be found here. The coverage area is still larger than the coverage area of Astra 1. However, the reception area is subdivided into a northern and a southern zone. Only in Central Europe all programmes are available. The unencrypted broadcast transmitters of the BBC, however, are only reliably to be received in Great Britain & Ireland, France, Benelux, and in the west of Germany.

HOTBIRD (also called "Eutelsat Hotbird")
Like Astra, Hotbird also is a whole satellite system and not only an individual satellite. Hotbird truly covers the whole of Europe – although with weaker signals than Astra. In Turkey and in the eastern Mediterranean area as well as in North Africa, Hotbird is the easiest possibility to receive German programming.

THOR
Covers the northern European region, both with regard to its programme offering and the coverage area. Almost all programmes on Thor, however, are encrypted.

SIRIUS
Like Thor, primarily services the Scandinavian area. A small part of its programmes, however, can be received in nearly all of Europe.

ATLANTIC BIRD 3
Primarily services France and Benelux; however, depending upon transponder it can be received all over Europe without problems. Broadcasts some French programmes digitally and unencrypted.

ATLANTIC BIRD 2
Is primarily used for Internet services; in addition also broadcasts some normal TV programmes.

ATLANTIC BIRD 1
Broadcasts various specialized channels and digital services.

HISPASAT
Covers in particular the Iberian Peninsula and the Canary Islands. The programme offering is tailored to the Spanish-speaking region.

EUTELSAT W3A
The satellite with the all-in-all largest coverage area. Apart from all of Europe, it also covers the Middle East. However, the signals are altogether considerably weaker than those of the other satellites so that in principle the use of an 85 cm dish antenna is recommended.

HELLAS SAT 2
Covers all of Europe and the eastern Mediterranean. The programme offering is to a large extent Greek, but some English-language programming can also be found.

ASTRA 3
In former times also known as DFS-Kopernikus. Mostly used for downlinks for German cable television, but also a Czech and a Slovak programme can be found here.

Reception in distant countries

Thanks to the use of modern digital technology, the area in which a certain satellite can be received becomes substantially larger.

However, all satellites that broadcast a programme that is interesting for Central Europeans naturally also "aim" at Central Europe. If therefore the receiving system is located outside of this area, then the antenna looks "sideways" at the satellite. This effect is called "skew angle" or also "polarisation angle" and is particularly strong in areas such as Portugal, southern Spain, Morocco, Greece, Turkey, and very extreme on the Canary Islands.

The reception electronics compensates this effect without any intervention by the user, but in some cases it becomes necessary to help a little bit "by hand". This "helping" consists of turning the LNB (reception head of the antenna) some degrees.

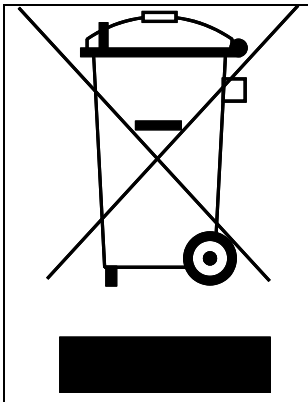
Setting of the antenna in different regions
(Skew angle correction, approx. values)

	Astra I	**Hotbird**
Southern Spain	+15°	**+10°**
Portugal	+25°	**+15°**
Morocco, Gibraltar	+20°	**+10°**
Canary Islands	+35°	**+25°**
Greece	-12°	**- 20°**
Turkey, western Russia	-15°	**- 17°**
Other regions	**0°**	**0°**

Viewing from the LNB into the mirror, positive degree numbers are turned IN CLOCKWISE DIRECTION, negative degree numbers IN COUNTER CLOCKWISE DIRECTION.

Corrections of less than 15° do not necessarily need to be implemented as long as good reception is ensured.

Notes regarding environmental protection



At the end of its service life, this product may not be disposed of through the normal household waste but must be brought to a collection point for recycling of electrical and electronic devices. The symbol on the product, in the instructions, or at the packaging refers to this.

The materials are reusable in accordance with their identification. With recycling, material reutilization, or other forms of reutilization of old devices, you make an important contribution to the protection of our environment.

Please inquire the respective disposal locations at your local administration.

Contact & Service

If you have any questions regarding the operation of the Oyster Vision, you can call us under:

Telephone: +49 7237 48 55-0

We are at your service:

Monday – Thursday		9:00 a.m. – 12:00 a.m.
	and	1:00 p.m. – 4:00 p.m.
as well as Friday		9:00 a.m. – 2:00 p.m.

We hope you will enjoy your Oyster Vision.

ten Haaft GmbH

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