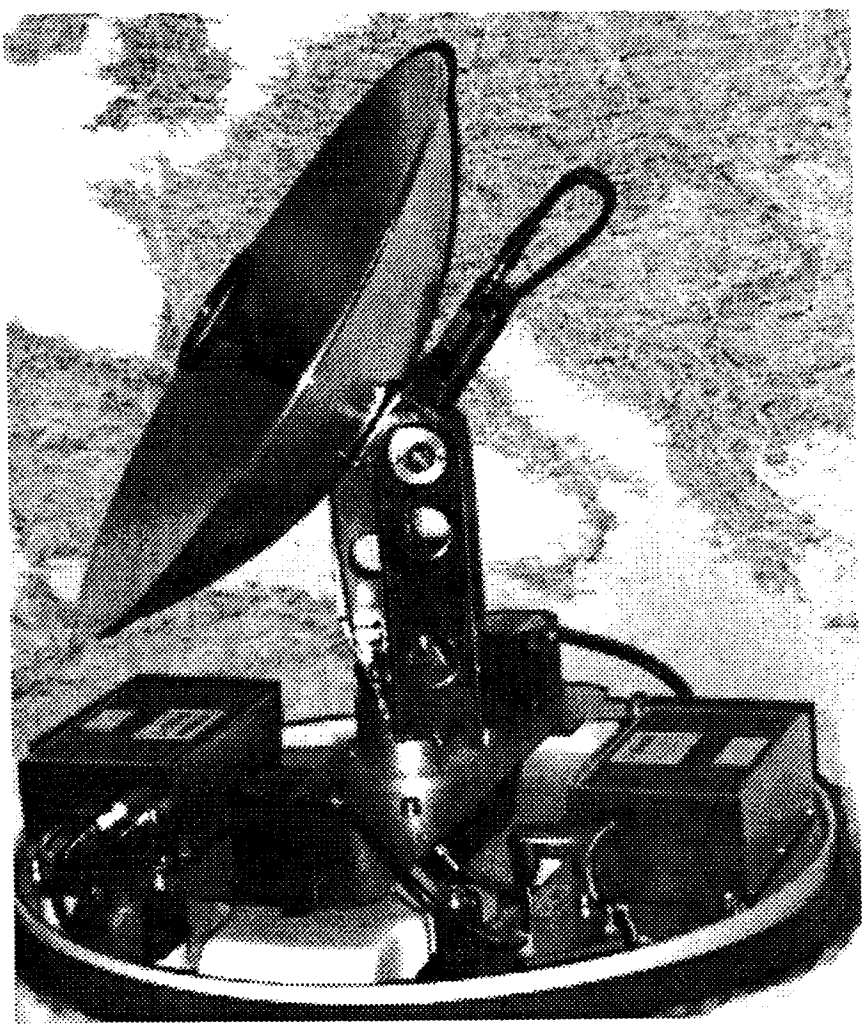
Operating Manual

ORBI*scan*® plus

Fully-Automatic Satellite Receiving System
Self-Adjusting To
ASTRA 1 A-G

further satellites on demand



1. INDEX

2. INTRODUCTION

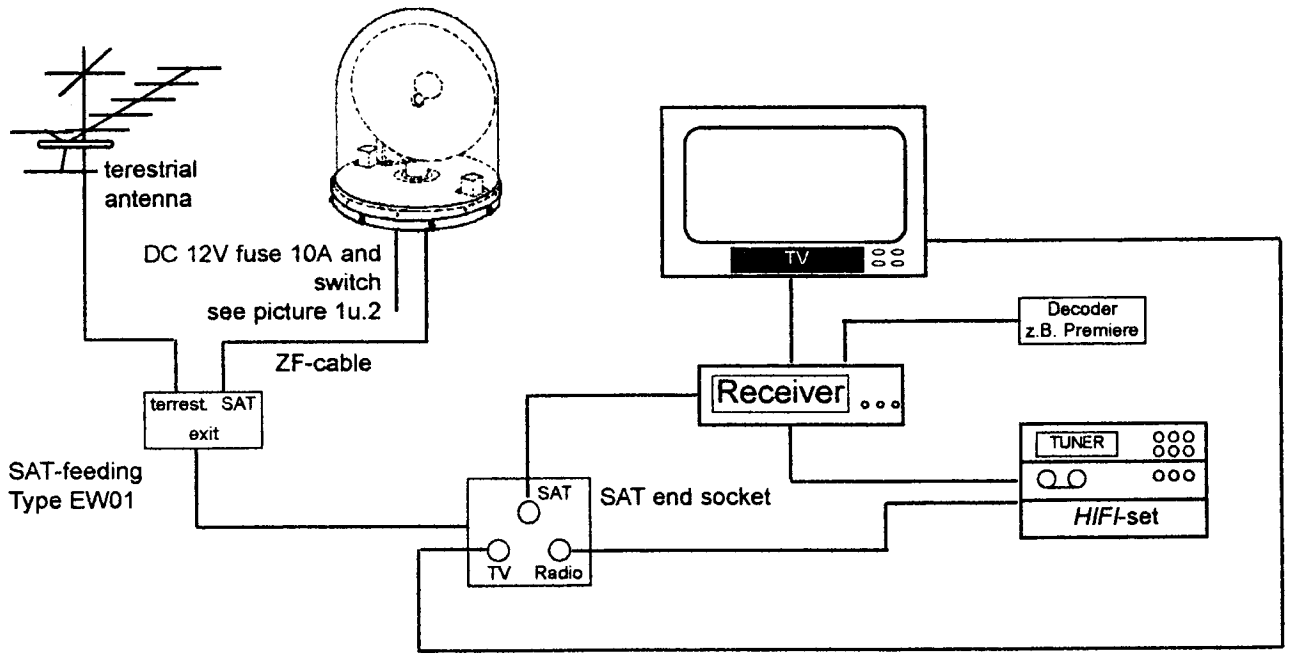
You have bought an ORBIscan® satellite receiving system. We thank you for your convidence.

With the purchase of this system you have definitely solved the problem of continuous and difficult realignment of your antenna after change of location. It offers you the whole variety of programs available from various satellite receiving systems while being on the road. Free sight to the satellites is essential.

This manual informs you about the operation and maintenance of your system as well as about satellite reception in general.

3. CONNECTION DIAGRAMS

1. Connecting of a receiver- ***analog*** - *or* - ***digital*** - to a **ORBISCAN-MAR**



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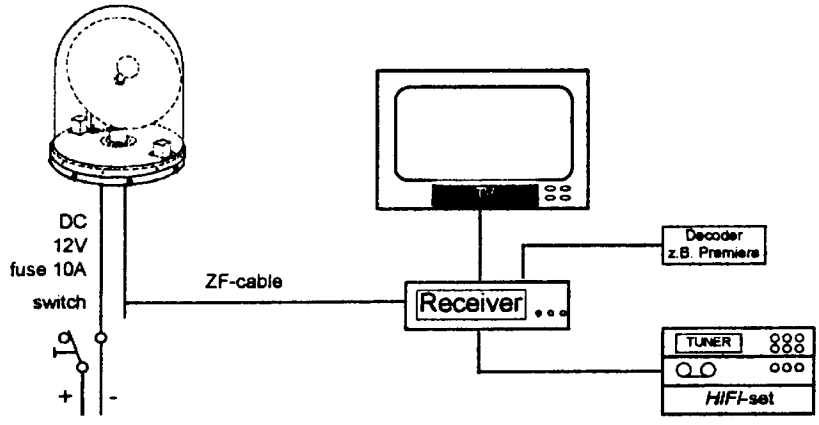
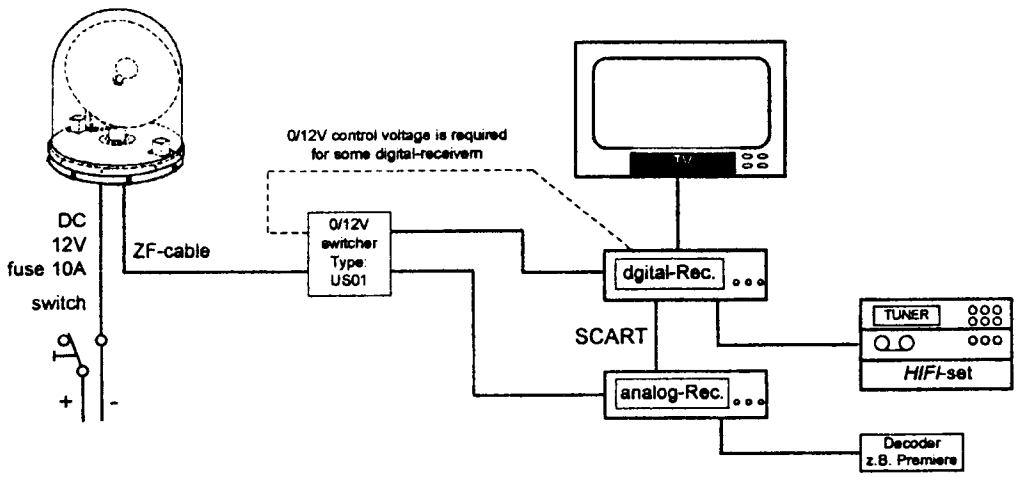
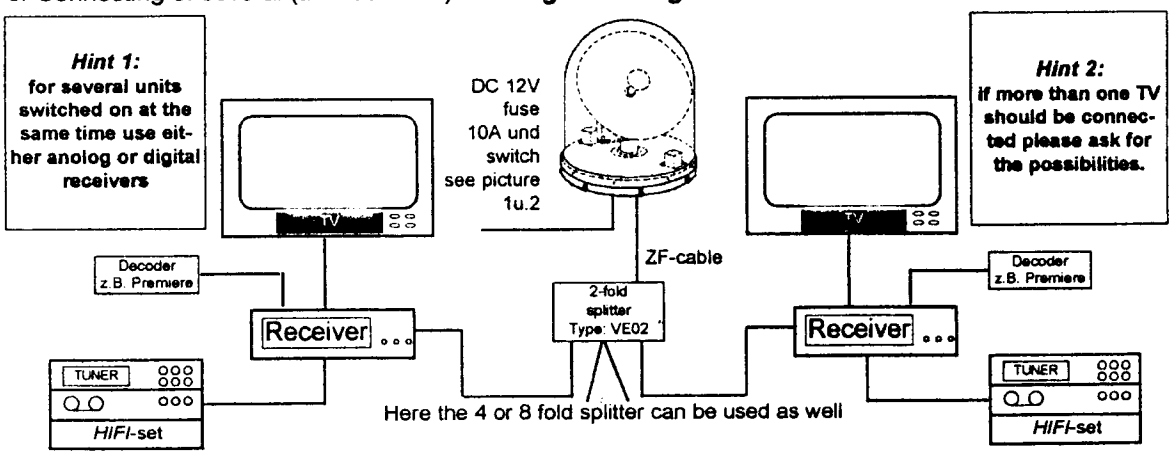


2. Connecting of a receiver - ***analog+digital*** - to a **ORBISCAN-MAR**



3. Connecting of several (2-8 receivers) - ***analog*** *and/or* ***digital*** - to a **ORBISCAN-MAR**



4. SAFETY PRECAUTIONS, INSTALLATIONS, MAINTENANCE

1. **Operating manual**
   Please study the safety precautions and operating manual carefully before you operate the system.

2. **Current supply**
   Connect the satellite system with the board installation of your vehicle. The voltage must be 12 V. The connection must be secured by a 10A fuse.

3. **Temperature**
   The temperature range of the satellite receiving system is from -15°C to +70°C. If the temperature is below -15°C the reception might be disturbed.

4. **Cleaning**
   Any impurity might diminuate the reception quality. In this case you can clean the plastic radome using a wet cloth.

5. **Reparation**
   Have your system repaired by well-trained service staff only. Any unauthorized opening of the antenna causes loss of warranty.

6. **Installation onto the vehicle**
   If you intend to install the satellite receiving system firmly onto your vehicle please consider the valid safety regulations.

   Please care for the system to be mounted exactly horizontal. It may only differ by a maximum of 1°. The TV set may not be installed at a place where it could distract the driver.

7. **Earthing**
   Please care for a optimal mass connection between antenna and mass, as otherwise there might be an error function.

8. **Cabling**
   When laying the cable please take care you will not step on it or stumble over. Avoid chafe marks on the cable when laying it firmly on board of your vehicle.

9. **Interferences**
   In the following cases you should disconnect the antenna from the mains supply and consult qualified technicians:

   1. Damaged power cable.
   2. The system shows severe changes in its function. It does not operate properly.
   3. The system shows visible damages.
   4. The main fuse on board switches off again and again.

5. PUTTING INTO SERVICE

5.1 Cabling

Join all connections of your satellite receiving system as shown in the connection diagram on page 4 in the following order:

- Screw the F-plug of the satellite cable onto the F-socket of your receiver.
- Now connect the ORBIscan plus with the main power supply.

NOTE: Consider poles red and black! Secure with a 10A fuse.

Also the receiver and TV set have to be power supplied.

The antenna is waterproof, however prevent receiver and TV set from direct sun, rain, oil or water vapour to avoid error functions or unrepairable damage.

Without amplifier the cable can be prolongued to a maximum of 30 m. Use an inline amplifier (type LV01) if cable length exceeds 30 m. For prolongation of DC-cables only use cables of ∅ 2,5mm^2.

5.2 Selection of receiver

All common receivers can be connected analogous or digitally.

5.3 Right location for best reception

Free sight to the satellite (south) is essential.
Every obstacle between antenna and satellite diminuates the reception quality.

6. OPERATION

We take it that all cable joints are connected correctly and the antenna is installed properly.

6.1 General

The satellite receiving system ORBIscan plus is working fully-automatically, consequently it is not necessary to occupy yourself in detail with the operation of the antenna. However, you can have the ORBIscan to do certain actions.

The complete operation of the system is done via the standby function of your satellite receiver. When the antenna is adjusted to a satellite, you have access to all programs offered by this satellite.

6.2 Starting the search

In order to start the ORBIscan plus system you just have to switch on your receiver. The system starts with scanning (approximately 10 seconds for finding the satellite). The pre-programming of the system for the new search was programmed on the 1st position on ASTRA by factory .

6.3 Searching other satellites

Analog receiver: With all common receivers the next satellite (position 2 - HOT BIRD) is searched by switching the receiver off and back on.

Procedures:

⇒ Switch off your receiver and switch it back on immediately (1 - 3 seconds)
⇒ The antenna is now on position 2 - HOT Bird
⇒ Adjust channel on your receiver.

Digital receiver: Searching the next satellite by switching either

- menu LNB-supply on/off or
- the switch of power supply cable on/off.

Please see the instruction manual of your receiver.

⇒ The antenna is now at position 2 - HOT Bird
⇒ Adjust channel on your receiver

6.4 Time window for changing the satellite positions

The time window offers the possibility to place your favourite satellite onto the 1st position. Your system will then first search your favourite satellite, the other positions will be deferred backwards by one position.

Procedures:

⇒ Let your antenna find your favourite satellite.
⇒ Switch off your receiver.
⇒ Switch it back on after 2 - 3 minutes. Now your favourite satellite is at position 1. When starting a new search the antenna will first go for this satellite.

7. OPERATION WHILE DRIVING YOUR VEHICLE

7.1 Function of the system while driving

Your satellite receiving system ORBIscan-MAR is a self-adjusting antenna on one axis. It balances out all horizontal movements. Whenever the reception is interrupted by an obstacle getting between the antenna and the satellite the antenna will automatically find back to the satellite after the obstacle has been passed.

7.2 Diminuation of the reception quality while driving

Many influences have to be taken into consideration dealing with mobile satellite receiving systems and for this reason reception will be disturbed again and again. This is usually caused by:

- an obstacle getting between antenna and satellite
- vehicle suddenly steeply going up or down
- change of direction more than 10° per second
- impurification of the radome

As soon as the outside influences cease disturbing the reception, the antenna immediately adjusts back to the satellite.

8. TECHNISCHE DATEN

Range of reception:	**10,7 - 12,75 GHz**
System quality:	**>12 Db**
LNC noise figure:	**0,8 dB**
Elevation setting:	**0 - 90°**
Azimuth setting:	**0 - 360°**
Access time:	**nominally 10 seconds**
Tracking speed:	**10°/second**
Tracking:	**for ASTRA 1A-G, further on demand**
Operation units:	**none, fully-automatic**
Power supply:	**12 V DC and 230 V AC (accessories)**
Power consumption:	**max. 3 A during the search**
Weight:	**12 kg**
Measurements:	**∅ 52 cm, height: 54 cm (radome)**

9. FLOW DIAGRAM / SHORT INSTRUCTION

Power supply **ORBIscan** on

⇓

New search: switch on receiver from standby

⇓

Start search at position 1 (ASTRA by factory) approximately 6 - 15 sec

⇓

Receiver has to be programmed for ASTRA
(see receiver manual pre-programming)

⇓

Now all ASTRA programmes can be watched

⇓

Searching another satellite at position 2 (HOT Bird by factory)
Switch off receiver and back on within 1 - 3 seconds

⇓

Search starts at position 2 (HOT Bird by factory) approximately 6 - 15 sec

⇓

Receiver has to be programmed on HOT Bird now
(see receiver manual pre-programming)

⇓

Now all HOT Bird programs can be watched

⇓

Time window for changing the positions

⇓

Choose your favourite satellite via the function „searching another satellite"

⇓

Switch off receiver and switch back on after 2 - 3 minutes

⇓

Your favourite satellite is now at position 1, all other positions move backwards by one position

10. GENERAL INFORMATION

- Function check start signal 14/18V voltage (measurable at IF socket on receiver with multimeter)
- DC-supply cable 12 V must be secured with a10A fuse (red +, black -).
- Do not use other than 75 ohm coaxial cables double screened with low loss. Treat cable carefully, do not bend, do not lay round sharp corners, consider minimum bending radius of 10 cm.
- Use an inline amplifier (type LV01) for the 75 ohm ZF-cable if cable length exceeds 30 m. For prolongation of DC-cables only use cables of ∅ 2,5 mm^2.
- For the connection from the receiver to the TV there are two possibilities:
  1. Via SCART cable (type SK15), AV on TV
  2. Via DIN-cable (type DK20), modulator
- Connection from receiver to hifi-set via cinch cable (type CK15), audio
- Use a proper distributor according to the number of TV sets (This guarantees a minimum reduction of the picture quality):
  2 x TV sets = 2-fold distributor (type VE02)
  3-4 x TV sets = 4-fold distributor (type VE04)
  5-8 x TV sets = 8-fold distributor (type VE08)
  Outputs which are not used have to be foreseen with a F-terminal resistance (type FW01).
- For the connection to other units (for example decoders for TV, videocrypt) please see the respective operation manuals.
- We advise to build in a manual on/off switch in the DC-cable in order to be able to separate the system completely from the net. Except of reducing the current consumption this switch offers other advantages:

  1. When you are 100% firmly lying in the harbour you can switch off the system
  2. With digital receivers switch off during an update
  3. Switch off during maintenance work on the system

NOTE: When using the system in marginal areas of the satellite receiving area (for example Baleares, Italy, France, etc) we recommend to use our Threshold receiver.

11. GUARANTEE REGULATIONS

K&W ORBIscan guarantees for material and processing of ORBIscan-MAR during a period of 6 months beginnig with the date of purchase to the final consumer. In case product faults occur during the period of guarantee, the antenna will be put back into function without cost for working time, materials and supplies, subject to the following conditions:

Conditions:

- The customer must be in the position to prove that malfunctions are due to defective material or fabrication faults.
- The guarantee is only valid if the guarantee certificate is filled in correctly. The model type, addresses of the dealer and the customer as well as the purchase date must be stated. The purchase date has to be proved by a sales slip, invoice, receipt or other valid purchase confirmation.
- K&W **ORBIscan** reserves the right to replace or retouch faulty parts according to own option.
- For all warranty payments please contact the specialized dealer from whom the antenna system was purchased.

This guarantee does not apply for defects not due to material or processing faults. The following is excluded from guarantee:

- Operating error
- Damage resulting from an accident
- Negligent treatment
- Modifications
- Use of false spare parts
- Unsuitable installation or packing
- Antennas with unreadable serial numbers
- Antennas with defective guarantee seal
- Damages due to lightning, fire
- False operation voltage
- Material wear
- Other causes which are beyond control of K&W **ORBIscan**

For any work done by non-authorized workshops or dealers K&W **ORBIscan** will not bear any costs, or assume the risk for possibly occurred damages.

Regular examinations, adjustments and modifications are not included in the guarantee.

K&W **ORBIscan** reserves the right to modify the design as well as to make improvements without the obligation to modify antenna systems already manufactured.

12. GUARANTEE CERTIFICATE

Guarantee Certificate (Please fill in completely)

In case of guarantee claims present together with the unit to your dealer.

Specialized dealer:

_____
company name

_____
address

Buyer:

_____
company name

_____
address

Date of purchase: _____ **Serialnumber:** _____

Place: _____ **Date:** _____

Spezialized dealer: _____ **Buyer:** _____

Fault description:

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