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# INSTALLATION AND USER MANUAL

# TRAVEL VISION Q6 S / DUO S

Version 1.1 October 2012 (from software 1.1.8)





#### **Foreword**

Congratulations on the purchase of your Travel Vision Q6 S / Duo S .

This manual will provide you with all the information you need about the installation, use and maintenance of the system.

The Travel Vision Q6 S / Duo S ® has been exclusively developed for use on inland waterways.

The system allows optimal enjoyment of the tremendous variety of radio and TV programmes currently on offer via geostationary satellites, under way as well as in port.

The use of high grade materials like stainless steel and durable plastics has been maximised to ensure a long service life. Maintenance is also minimal, thanks to the use of stepping motors and toothed belt transmissions.

#### WARNINGS AND REMARKS

All data is current at the time of going to press. Travelvision BV shall not be liable in any way for errors made during the drafting of this manual.

Travelvision BV retain the right to introduce any changes deemed necessary due to product development and to introduce any necessary amendments to the installation, to this user manual or to the products described in it, without prior notice.

Travel Vision Q6 S / Duo S ® is a registered trademark of Travelvision B.V. Read this installation and user manual before using your Travel Vision Q6 S / Duo S ® for the first time. Carefully follow the instructions and take note of all warnings appearing on the equipment and in this user manual.

Installation and must be carried out exclusively by qualified persons.

There are no components within the installation which require service by the user. Satisfy yourself that the wiring has been correctly connected before taking the equipment into use.

Switch off and disconnect the power supply before carrying out any maintenance on the system.

When opening the dome, bear in mind that that the dish antenna can move suddenly and without warning unless the power supply is disconnected.

The dome must not be cleaned using a high pressure water jet. A soft damp cloth with soap solution should be used instead.



In the event that the dome needs to be tilted due to the overall height of the vessel, consult your dealer for input on cabling, power supply and further measures which may be required.

For further information we would kindly request that you contact the specialist supplier where you purchased the system, or contact us directly at:

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#### 1.1 Travel Vision Q6 S / Duo S ® packaging

The Travel Vision Q6 S / Duo S B is packed in a strong plastic bag within a cardboard box measuring 70 x 70 x 90 cm. The equipment can easily be lifted from the cardboard box by two persons, using the strong plastic bag.

We request that you carry out the following checks before removing the packaging :

- The cardboard must not be deformed and must not display visible signs of obvious and serious damage, such as rips in the box or dents caused by impact.
- The Travelvision tape used to seal the packaging must remain intact.

# Note! The Travel Vision Q6 S / Duo S ® is equipped with a special DUO LNB which is very precisely adjusted. You must ensure that the LNB is not moved out of position during unpacking.

#### 1.2 Parts checklist

You should find the following components in the packaging:

- > Antenna dome (antenna unit in lower housing and dome)
- Control unit for internal installation (MCM unit)
- Manual.
- Bag of components:
- 2 no. 5 pole plugs - 1 no. 2 pole plug
- 3 no. M8 x 45 mm stainless steel bolts
- 3 no. M8 stainless steel lock washers
- 3 no. sealing cap for cable throughput

Note. The bag of components is packaged together with the MCM unit.



- 2. Installation instructions
- 2.1 Determining installation position

# Selection of location for installation of antenna dome

Various factors must be taken into account when selecting the correct installation location for the antenna dome, these are summarised below:

- The ideal location will have a free line of sight in all directions.
- The antenna dome must be installed at the point where the three axes intersect (roll, pitch and yaw motion).
- The external unit must be kept away from radar equipment as this can cause interference; where no other location is possible it is recommended that the antenna dome be installed a minimum of 1.5 metres below or above the radar antenna.
- The substrate on which the antenna dome will be installed must be adequately resilient and vibration free; in case of doubt we recommend that the substrate should be reinforced with additional constructions.

#### Rule of thumb for reception of Astra 1 and 3:

# An obstacle which is 3 metres away from the dome may be one metre higher than the dome.

The rule of thumb assumes a minimal elevation of 27 degrees.



# Selection of location for installation of control unit

The following instructions should be followed when selecting the location for the control unit:

- The control unit may be installed in either a visible or a concealed location.
- We would however advise that the control unit should be installed in an easily accessible location because of the potential need to install software updates.
- The control unit must not be installed in a damp or inadequately ventilated space.
- Adequate space must be available at the rear of the control unit to allow cables to be connected.

#### 2.2 Installation of antenna dome and control unit

Once the location for the antenna dome has been decided the antenna can be installed.

For a problem-free installation we recommend that you follow the procedure below:

- Check that the base plate where the antenna dome is to be mounted is level and vibration free and can support a load of at least 22 kg.
- Before drilling fixing holes, check that there is sufficient room, taking account of the dimensions of the antenna dome.
- When the ship is in a stable condition the surface should be parallel to the water surface.
- The following drilling plan must be followed when securing the substructure of the external unit, with account taken of the point where the cables emerge from the antenna dome, and the maximal space occupied by the dome:







Where the Travel Vision Q6 S / Duo S ® cannot be mounted from below using the M8 bolts and lock washers supplied, it is possible to mount the drive from the inside.

# NOTE! Remove the stainless steel screw thread holders from the drive feet with an M8 bolt and nut before drilling out the holes.

The system can be secured from the inside if sufficiently long M8 stainless steel bolts are used. With this installation method you will need to ensure that the galvanic separation, provided by the plastic feet, remains intact.



# Installation of control unit (MCM unit)

Once the location for the installation has been chosen the control unit can be mounted. The MCM unit may be built in or attached to the mounting clamp provided. If it is built in the MCM unit can be installed so that it is clamped in place. If the unit is not appropriately sized for this, the 4 securing holes at the corners of the front panel can be used for screw attachment.



Dimensions of control unit (MCM unit)



#### Electrical connection to antenna dome

The Travel Vision Q6 S / Duo S  $\ \$ must be connected to a 24 volt DC power supply. The current drawn when connected to a 24 Volt supply is around 3 amps.

The (brief) switch-on current is appreciably higher and is dependent among other factors on the supply cable installed.

It is advisable to use a galvanically separated supply.

The supply terminal "+" should be connected to the plug clamp marked "24VDC" and the "-" terminal to the 0V plug clamp.

The 5-pole plug is to be connected to the MCM unit.

#### Note:

The system can be switched on and off using a switch which makes and breaks the supply circuit. This method of switching off will ensure that the system is <u>not</u> permanently connected to the satellite.

#### Recommendation:

It is recommended that the system's power supply should be left switched on at all times. With the system switched on the temperature of the electronics and the internal climate in the dome is less subject to fluctuation, extending service life. If necessary the Stand-by button can be used to switch the system off.

- Remove the clamping rings from the cable fairleads and insert the cables through these.
- The cable fairleads which are not used must be sealed off using the sealing caps provided. If the unused fairleads are not sealed off water may penetrate the antenna dome, seriously damaging the mechanical structure and the electronic circuits.
- Connect the electrical cables to the appropriate 2 pole and 5 pole plugs and connect the coax F-connectors. No chemical anti-oxidisation products or silicone paste must be used with the coax F-connectors, as this can negatively affect the quality of the radio frequency signal.
- Check that the antenna unit can move freely and that there are no points of friction.
- Having completed the installation, cover the antenna lower housing with the dome.



The **Travel Vision Duo S** (a) is equipped as standard for the connection of **3 tuners** with unlimited channel reception on Astra 1 (19.2) and simultaneously Astra 3 (23.5). A fourth tuner can be connected, but with some limitations on reception of Astra 1 (19.2).



Electronics unit circuit diagram with 3 tuners connected, option switchbox.

The **Travel Vision Q6 S** <sup>®</sup> is equipped as standard for the connection of **4 tuners** with unlimited channel reception. It is possible to connect more tuners with the use of a switchbox. More information can be provided by your supplier.





#### 2.4 Electrical connection control panel (MCM unit)

The MCM unit must be connected in the following way:





Photo of rear of MCM unit.

Circuit diagram, antenna to MCM

- 1. 5 pole connector
- 2. The 2 pole connector is not used
- 3. RS 232 NMEA in and output
- Connect the 5 pole connector in accordance with the diagram
- The NMEA input and output are provided for service purposes and for future developments



#### 2.5 Assembly and dismantling of dome

The illustrations below show the assembly and dismantling of the dome. NOTE! Extreme care must be taken to carry this out in dry weather conditions.

#### Dome assembly:



- 1 Place the 6 fixing clips in the recesses. Insert bolts in fixing clips by two turns. The locking mechanism on the bolt allows the fixing clip to rotate at the same time.
- 2 Check that all 6 fixing clips are able to move upwards after the dome has been placed over the rubber seal. Check that the rubber is not doubled over.
- 3 Push the bolt and fixing clip upwards. When in upper position, rotate to the right.
- 4 When the fixing clip clicks against the lower housing, tighten and maintain rightward pressure on the allen key so that the clip does not come free from the lower housing.

#### **Dismantling dome:**









- 1 Installed
- 2 Rotate to loosen until the fixing clip clicks against the other side of the lower housing.
- 3 Rotate clip +/- 90° until it is above opening. (Visible from outside from the position of the allen key).



- 4 Allow the bolt and clip to drop. The fixing is now loosened. It is also possible to completely loosen the bolt until the clip falls into the lower housing. (6 no.)
- 3.1 Functions of MCM unit control panel

The MCM unit has 3 functions:

- 1 Monitoring; The status of the dish antenna can be seen from the display. Various error codes can also be displayed. (see Display of Error Codes and Status)
- 2 **C**ontrol: Remote transmission of commands to the dish antenna e.g. selection of satellite, stand-by function.
- 3 Maintenance: The replacement or updating of software.



- 1. Stand-by function (places the system in idle mode)
- 2. Down (move down through functions menu)
- 3. Up (move up through functions menu)
- 4. Enter (select in functions menu)
- 5. Escape (move back through functions menu)
- 6. USB port (for software updates)



#### 3.2 Operation of MCM unit

#### Switching on

The Travel Vision Q6 S / Duo S ® is designed so that putting it into operation is very straightforward, assuming that the system has been correctly installed.

Switch on your satellite receiver and TV set.

A 24 volt supply will be required when switching on the Travelvision system, and it must be switched out of stand-by mode if necessary.

**N.B.** The antenna will start up automatically when the 24V supply is switched on.

The following will then appear on the MCM screen:

System type: (Travelvision Q6 S or Duo S)

This message will disappear after a few seconds, and the system will then begin to report its status.

Status: satellite (e.g., Astra 1) Searching for Limit

This message indicates that the antenna system is in its start-up phase (the system is searching for its reference points), a process that will take around 1 minute. On completion of the start-up phase the system will begin its search for the specified satellite.

After some time the Travel Vision Q6 S / Duo S ® will lock onto the satellite and your TV set will display the image received.

Status: satellite (e.g. Astra 1) Tracking



#### 3.3 Display of status of MCM unit

The display indicates the status of the satellite to be tracked. All status reports displayed are reports from the dome to the MCM unit.

Status :Searching Limit: The system searches for its reference points<br/>Search/scan for Sat: The system searches for the satellite<br/>Tracking<br/>Peaking<br/>Performing track<br/>Stand-by: The system searches for the satellite<br/>: The system tracks the satellite<br/>Optimising signal strength<br/>: The system positions itself<br/>: The system enters stand-by mode

#### 3.4 Display of MCM unit error codes

Various texts will appear on the display to report errors

#### **Error Codes:**

- E : Limits not found.
- E : No signal from LNB.
- E : Communication error.
- E : Firmware not found.
- E : Error during .. upgrade
- E : Usb disk not found
- E : No Tuner.
- E : No Tuner set.
- E : Not possible DiSEqC active
- E : Satellite not found
- E : LNB Low Voltage
- E : 22 Khz missing

#### 3.5 Explanation of Error Codes

- E : Limits not found.
  The system can not find its reference positions. Reset the system.
  If "No Limit" appears again on the display, contact your dealer.
- E : No signal from LNB.

The system is not detecting any signal from the LNB. In this case the LNB may be defective, or there is a poor connection with one or more of the coax cables in the system.

E : Communication error. There is no communication between the MCM unit and the dome. Check the wiring between the MCM unit and the dome.



- E : Firmware not found No software is installed on the system. Reset the system. Install software using USB stick.
- E : Error during .. upgrade The software has not transferred correctly from the USB stick to the antenna system. Reset the system and repeat the software procedure
- E : USB disk not found The USB stick has not been found or recognised.
- E : No Tuner. The tuner circuit is not detected by the motor circuit: contact your dealer.
- E : No Tuner set. No tuner settings available, repeat software update, check cable and connections control unit.
- E : Not possible DiSEqC active. (not possible with Travelvision Duo S) Not possible to select manual other satellite. auto DiSEqC is active. Turn DiSEqC off in menu Travelvision.(the system those not support auto diseqc anymore)
- E : Satellite not found
  - 1) Check whether there are any obstructions.
  - 2) Check if the latest Travelvision software has been installed for any possibly changed satellite frequencies. Consult your dealer
  - 3) You are possibly outside the broadcast area of the desired satellite
- E : LNB low voltage The LNB into the system has to low voltage, contact your dealer
- E : 22 Khz missing There is no 22 Khz received at LNB, contact your dealer.



#### 4.1 Menu structure

#### Illustration of Menu structure



The Travel Vision Q6 S / DUO S  $\ensuremath{\mathbb{B}}$  menu allows a range of settings to be made.



#### 4.2 Menu settings

Press the enter key for 2 seconds

Language	Choice of English, Dutch or German (Press the up and down keys to navigate within the list. Press the enter key to select).
Info	Information on software version etc.
LCD Illumination	Switch the background lighting on and off Adjust light intensity (Press the up and down keys to navigate within the list. Press the enter key to select)
Restart antenna	The antenna will restart (Press enter key to restart antenna).

#### 4.3.1 Satellite Selection Travel Vision Duo S®

Press the up and down keys to navigate within the satellite favourites list. Press the enter key to select satellite.

**N.B!** Satellites can be selected for the favourites list via the installer's menu.

Standard settings:

Satellite	Position	DiSEqC (not supported by the Travel Vision Duo)
Astra 1&3	19.2/23,5 E	
Astra 2	28.2 E	
Hotbird	13 E	

Satellites available for inclusion on the favourites list via the favourites list in the installer's menu:

The Duo Lnb is optimal adjusted for reception Astra 1 & 3, the reception of the other satellites are possible lower because of these adjustments.

Satellite	Position	Satellite	Position
Astra 1	19,2 E	Sirius	5 E
Astra 3	23,5 E	Thor	1 W
Astra 2	28,2 E		
Hotbird	13 E		
Eurobird 9a	9 E		
Eutelsat W3A	7 E		



#### 4.3.2 Satellite Selection Travel Vision Q6 S ®

Press the up and down keys to navigate within the satellite favourites list. Press the enter key to select satellite.

**N.B!** Satellites can be selected for the favourites list via the installer's menu.

Standard settings:

Satellite	Position	DiSEqC (not supported with switchbox connected)
Astra 1	19.2 E	A
Astra 3	23.5 E	В
Astra 2	28.2 E	С
Hotbird	13 E	D

Satellites available for inclusion on the favourites list via the favourites list in the installer's menu:

Satellite	Position		Satellite	Position	
Astra 1	19,2	E	Sirius	5	Е
Astra 3	23,5	E	Thor	1	W
Astra 2	28,2	E	Atlanticbird 3	5	W
Hotbird	13	E	Atlanticbird 2	8	W
Hellasat 2	39	Е	Atlanticbird 1	12,5	5 W
Eurobird 9a	9	Е	Telstar 12	15	W
Eutelsat W3A	7	E	Hispasat	30	W

**Note !** The LNB skew is optimized for reception of the red marked satellites. For reception of the other satellites the LNB skew needs to be changed, this can only be done by a certified Travel Vision dealer. Please inform your dealer for further information.

#### 4.4 Stand-by

Press the on/off key for 2 seconds to place the system in stand-by mode.



#### 4.5 Installation Menu

Press the enter and escape keys for 5 seconds to select menu

Firmware update	This position is used to update your Travel Vision antenna with new software (press the enter key to select) Insert the USB stick with the latest version of the software Press enter: the system will read in the software. <u>Wait</u> until the antenna is fully re-started before removing the USB stick! (If this is done prematurely the antenna will give the error message: "USB disk not found", and the software must be reinstalled!)
Installer mode	Note! this is provided for installers only, and is protected with a pin code. Modifications may have major effects on the operation of the system. Tracking settings (correct by default) System type (input type of Travelvision system)

Satellite in Fav List Satellite settings for favourites list with choice of DiSEqC settings. (Press the up and down keys to navigate within the list. Press the enter key to select). Having selected "yes" there is the option to modify the DiSEqC settings (not supported by the Travel Vision Duo)



#### 5. Technical data

Dish diameter Dome diameter Dome height Weight Packaged volume and weight	:	55 cm. 65 cm. 81 cm. 22.5 kg Ixwxb=69x69x82 cm. Gross weight 30 kg.
approx.		
Power supply	:	2436 V DC
Current drawn	:	3 Amp. Max.
Cabling		
MCM cable	:	4x0.32 mm2 screened
Power cable	:	2x1mm2 (minimum)
Coax cable	:	75 Ohm (H125)
Monitor Output Protocol	:	RS422 115200 Bd, N,8,1
Maintenance (Up Load)	:	RS422 115200 Bd, N,8,1
MCM panel built in dimensions	:	136 x 85 mm (l x w)
MCM panel built-in depth	:	approx. 40 mm for cabling
Dimensions of MCM front panel	:	150 x 105 mm (I x w)



6. Certificate of IP 55 protection

### Travelvision BV,

#### hereby declare that the product Travel Vision Q6 S / Duo S

complies with the Machinery Directive IEC 60529 and is thereby classified as having a degree of protection to IP55.

Werkendam, Netherlands 9 July 2010

C.I. Visser Product Manager



#### 7. Guarantee conditions

- 1. The guarantee is valid only where the Travel Vision system has been installed by a person appropriately authorised/certified installation company (hereinafter referred to as a "dealer").
- 2. Our stringent quality control and the demanding requirements imposed on dealers allow Travelvision b.v. to guarantee the supply of a properly functioning Travel Vision system.
- 3. In the event that, despite all these measures, a defect occurs in the Travel Vision system in normal use within <u>24 months</u> of installation as a result of faults in manufacture and/or materials, then this defect will be rectified under the guarantee provisions.
- 4. The guarantee should be registered immediately, but must in all cases be submitted to Travelvision b.v. within 1 month of the installation of the Travel Vision system by the dealer. In order to provide proof of the registration both for Travelvision b.v. and the owner of the Travel Vision system the dealer must complete, sign and return the enclosed guarantee certificate.
- 5. The guarantee is not transferable.
- 6. Travelvision b.v have a help desk which the <u>dealer</u> may contact for free advice relating to the installation, dismantling and repair of Travel Vision systems.
- 7. On first detecting a defect the owner of the Travel Vision system must inform the dealer immediately and put him in a position where he is able to identify the defect.
- 8. Where in the judgement of the dealer a defect can be rectified on site, then the dealer is authorised to carry out the rectification on site. In the event that this is impossible the dealer will, without creating any obligation to temporarily install a replacement system, dismantle the Travel Vision system and take it to his premises for repair, or following consultation with the help desk, send the system to Travelvision b.v. so that they can carry out the repair.
- 9. Travelvision b.v. reserve the right to refer to third parties or to make use of their services in dealing with the guarantee or offering advice.
- 10. The guarantee may only be called upon where all the guarantee conditions have been met. Liability on the part of Travelvision b.v. is therefore limited to the reimbursement of the costs of repair or the bearing of such costs by Travelvision b.v., or replacement of the Travel Vision in whole or in part, or of the component in which the defect has occurred, all entirely according to the opinion and judgement of Travelvision b.v..
- 11. Travelvision b.v. reserve the right to judge, entirely in accordance with their own opinion, that a defect is attributable to improper use and/or improper installation of the Travel Vision system, in which event all claims against the guarantee shall lapse and will therefore be rejected.
- 12. Travelvision b.v. shall not be responsible for the suitability of the Travel Vision system for any purpose other than that for which Travelvision b.v. have given undertakings in the Installation and User Manual. Travelvision b.v. will therefore accept no liability whatsoever for any damage resulting from such use.
- 13. Travelvision b.v. shall not be liable for any defect in the Travel Vision system and/or its functionality where this is the consequence of damaging external factors, or of the improper or incomplete functioning of third party products and/or services, or the unavailability thereof. Travelvision b.v. will therefore accept no liability whatsoever for any damage resulting from such use.



# INSTALLATION MANUAL

# TRAVEL VISION Q6 S & Duo S

Version 1.1 October 2012 since software version 1.1.8



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#### 1. Installation menu MCM unit

Press enter and escape key for 5 seconds

#### Firmware update:

This position is used to update the Travel Vision antenna with new software (press the enter key to select)

Insert the USB stick with the latest version of the software

Press enter: the system will read in the software.

<u>Wait</u> until the antenna is fully re-started before removing the USB stick! (If this is done prematurely the antenna will give the error message: "USB disk not found", and the software must be reinstalled!)

#### Install. Mode (installateurs mode)

Note! this is provided for installers only, and is protected with pin code **22**. (Press up and down and enter for selection)

#### Changes have great influence on operation !

#### Tracking settings:

Standard settings to be used , changes only in consultation with Travelvision BV.

#### System type:

Select type Travelvision for right operation software electronics:

- 1. Travelvision Modi S
- 2. Travelvision S
- 3. Travelvision Q6 S
- 4. Travelvision Duo S
- 5. Unknown (with startup, electronics keeps asking what type of antenna)

(Press up and down and enter for selection)



#### 4.3.1 Satellite Selection Travel Vision Duo S ®

Select satellites to be displayed in favourites list, also DiSEqC changes.

Press the up and down keys to navigate within the satellite favourites list. Press the enter key to select satellite.

Standard settings:

Satellite	Position	DiSEqC (not supported by the Travel Vision Duo S)
Astra 1&3	19.2/23,5 E	
Astra 2	28.2 E	
Hotbird	13 E	

Favourites list:

Satellites available for inclusion on the favourites list via the favourites list in the installer's menu:

The Duo Lnb is optimal adjusted for reception Astra 1 & 3, the reception of the other satellites are possible lower because of these adjustments.

We strongly recommend not to turn or adjust the Duo LNB!

Satellite	Position		Satellite	Position	
Astra 1	19,2	2 E	Sirius	5	E
Astra 3	23,5	5 E	Thor	1	W
Astra 2	28,2	2 E			
Hotbird	13	Е			
Eurobird 9a	9	Е			
Eutelsat W3A	7	E			



Select satellites to be displayed in favourites list, also DiSEqC changes.

Press the up and down keys to navigate within the satellite favourites list. Press the enter key to select satellite.

Standard settings:

Satellite	Position	DiSEqC (not supported with switchbox)
Astra 1	19.2 E	A
Astra 3	23.5 E	В
Astra 2	28.2 E	С
Hotbird	13 E	D

Satellites available for inclusion on the favourites list Note ! For reception of some satellites the LNB skew needs to be changed, this can only be done with use from a spectrum analyzer!

Satellite list

Satelliet	Positie	Satelliet	Positie
Astra 1	19,2 E	Sirius	5 E
Astra 3	23,5 E	Thor	1 W
Astra 2	28,2 E	Atlanticbird 3	5 W
Hotbird	13 E	Atlanticbird 2	8 W
Hellasat 2	39 E	Atlanticbird 1	12,5 W
Eurobird 9a	9 E	Telstar 12	15 W
Eutelsat W3A	7 E	Hispasat	30 W

The LNB is standard adjusted with a average cross polarization to receive the red marked satellites for common traveling area.

With all other satellites, probably the LNB skew needs to be adjust.

Adjustments should be made for satellite wish and traveling area of costumer.

The rule of thumb assumes the crosspol may deviate max.10 degrees. It could also be the LNB is adjusted to 1 and only 1 working satellite. When traveling area is different as standard adjust area (Rotterdam-Basel), we recommend to adjust the lnb skew to costumers travelling area. Useful Tool: www.dishpointer.com

#### Note:

Please consult the opportunities with advantages and disadvantages with costumer.



#### 4. DiSEqC automatic switching between satellites. Only with Q6 S!

Standard option within software Q6S:

The Q6 S electronics uses DiSEqC controle to auto switch between satellites. Connect the costumers receiver directly to the electronics of the Q6 S. Be sure to set the DiSEqC settings from connected receiver the same as DiSEqC settings in Travelvision Q6 S.

DiSEqC choices in Travelvision Q6 S:

DiSEqC: Yes

LNB A LNB B LNB C LNB D No

Note ! Diseqc is not supported when using a switchbox You can select it, but the antenna does not response