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UNISAT-IPSNG VEHICULAR

User Manual

CE

INDEX

WARRANTY

UNIVIDEO S.R.L. ENSURES THE SATELLITE ANTENNA POINTING SYSTEM UNISAT-IPSNG, FROM NOW ON REFERRED TO ONLY AS UNISAT-IPSNG, FOR A PERIOD OF ONE YEAR FROM COMMISSIONING. THE WARRANTY EXCLUDES ALL PARTS RELATING TO COMMERCIAL COMPONENTS FOR WHICH IS VALID THE GUARANTEE OF THE ORIGINAL MANUFACTURER.
THE WARRANTY STARTS FROM THE DISPATCH OR TESTING DATE OF UNISAT-IPSNG.
THE GUARANTEE IS VALID ONLY IF UNISAT-IPSNG HAS BEEN CORRECTLY USED FOLLOWING THE INSTRUCTIONS WRITTEN IN THIS MANUAL INCLUDING THE PERIODIC MAINTENANCE.
DEFECTIVE PARTS, DURING THE WARRANTY PERIOD, WILL BE REPAIRED OR REPLACED FREE OF CHARGE BY UNIVIDEO SRL AT ITS HEADQUARTERS IN ALBIGNASEGO. IN CASE OF REPLACEMENT OF DEFECTIVE PARTS UNIVIDEO SRL MAY PICK THE SAME AFTER THEIR REPLACEMENT.
THE COST OF TRANSPORT AND DELIVERY OF SPARE PARTS WILL BE CHARGED TO THE BUYER.
IF THE INSTALLATION AND / OR REPLACEMENT OF DEFECTIVE PARTS REQUIRES WORKFORCE BY UNIVIDEO SRL AT THE PURCHASER COSTS OF TRAVEL AND SUBSISTENCE WILL BE CHARGED TO THE BUYER.
ANY SPECIAL OPERATIONS TECHNICIANS UNIVIDEO SRL WILL BE AGREED ON A CASE BY CASE BASIS.
ALL CONSUMABLES AND ROUTINE MAINTENANCE, THE PARTS DAMAGED DUE TO IMPROPER USE OF UNISAT-IPSNG ARE EXCLUDED.
REPAIRS AND / OR REPLACEMENTS DURING THE WARRANTY PERIOD WILL NOT EXTEND THE WARRANTY.
THE RECOGNITION OF THE WARRANTY EXCLUDES ANY CLAIM FOR DAMAGES FOR LOSS OF PRODUCTION.

- On delivery, you should verify that UNISAT-IPSNG has not been damaged during transport and that the range of accessories is intact and complete. Any complaints must be submitted within eight days of delivery. The buyer may enforce its rights in the collateral only if it has complied with the conditions concerning warranty services, listed in the supply contract.

- In addition to the cases provided in the contract, the warranty is void in the event of:
  - operator error due to inexperience, carelessness, willful default;
  - use other than that stated and provided by the manufacturer;
  - damage caused by insufficient or inadequate maintenance;
  - repairs performed by the user without the consent of the UNIVIDEO Srl;
  - installation of aftermarket parts and / or unauthorized use of lubricants from UNIVIDEO Ltd.

GENERAL INFORMATIONS

Manufacturer

UNIVIDEO S.r.l.
Via San Bellino, n°34
35020 Albignasego (PD) Italy
Tel./Fax: +39 049 8806052
e-mail : info@univideo.com
www.univideo.com

Authorized technical support

UNIVIDEO S.r.l.
Via San Bellino, n°34
35020 Albignasego (PD) Italy
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e-mail : info@univideo.com

Technical support is available for:
- clarification and information;
- technical assistance;
- spare parts supply.

Requests for extraordinary maintenance can be addressed directly to the manufacturer by fax.

UNIVIDEO S.r.l. directly manages the representation and technical support for its products. For any malfunction, failure or breakdown that may require the intervention of specialized staff or interest components not mentioned in this manual, please contact the manufacturer.

WARNING PLEASE NOTE THAT:
- *CUSTOMER HAVE TO USE ONLY ORIGINAL SPARE PART;*
- *DISASSEMBLY AND ASSEMBLY OF THE PARTS MUST BE ENTRUSTED TO QUALIFIED PERSONEL AND PERFORMED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS;*
- *THE USE OF NON-ORIGINAL PARTS AND / OR INCORRECT OR IMPROPER INSTALLATION, FREE MANUFACTURER FROM ALL LIABILITY.*

Normative references

In drafting of this manual has been used instructions included in the following normative:
UNI 10893 July 2000;
UNI 10653 November 1997;

Attachments

This manual is accompanied by the following documents:

- ☐ Compliance declaration of UNISAT-IPSNG satellite antenna pointing system
- ☐ Compliance declaration of connection box MG
- ☐ Electrical scheme control box MGMG
- ☐ Compliance declaration of remote control ELCA
- ☐ Electrical scheme remote control ELCA

INTRODUCTION TO USE

Preliminary information

Thank you for purchasing UNISAT-IPSNG, the pointing system in azimuth and elevation for satellite antennas of the ViaSat SurfBeam®2 Residential Satellite Terminal series. The system, built of anodized aluminum and stainless steel, is extremely compact and lightweight but at the same time very stable. Movements of the axes are controlled by simple and robust DC motors with variable speed which allow a fast and precise pointing.
The antenna tracking movements are controlled through a remote pointing control.

Check the applicable regulations in each country on installing equipment on the roof and its approval, if necessary apply to a new approval.
Univideo is not responsible for any changes in the approval of the vehicle.

General warnings

This manual and all accompanying documents are an integral part of UNISAT-IPSNG; so, for security purposes, they should be:

- kept intact in all their parts until the demolition (even if you move, sale, rental, lease, etc.).
- easily accessible for quick reference to all users (operators and maintenance personnel).

Before carrying out any operation on UNISAT-IPSNG, please read this manual to learn about the machine, its uses and possible contraindications.

Used symbols in safety instructions for easy reading and understanding of the text

To attract attention and to preserve safety, dangerous operations described in this manual, are preceded by symbols and notes that point out the danger and explain what to do to avoid the danger; never underestimate these calls.

CAUTION: INDICATES SITUATIONS OF RISK TO PEOPLE AND SAFETY REGULATIONS FOR OPERATORS.

WARNING: INDICATES RISK SITUATIONS FOR UNISAT-IPSNG AND / OR COMPONENTS AND / OR THE PRODUCT BEING PROCESSED.

PRECAUTION: MORE NEWS AND / OR REQUIREMENTS TO ENSURE SAFETY DURING OPERATION.

NOTE: PROVIDES USEFUL INFORMATION.
IMPORTANT NOTE: PROVIDES INFORMATION PARTICULARLY USEFUL OR IMPORTANT.

CAUTION: SOME ILLUSTRATIONS IN THIS MANUAL REPRESENT THE SATELLITE ANTENNA UNISAT-IPSNG, OR PARTS OF IT, WITH NO SHELTER OR PROTECTION COVERS REMOVED. THIS IS DONE ONLY FOR PURPOSES OF EXPLANATION.
DO NOT USE THE AIMING SYSTEM WITHOUT SHELTER OR PROTECTION COVERS REMOVED. IGNORE THIS OBLIGATION MAY RESULT IN SERIOUS INJURY.

General requirements for safety in most common operating situations

- comply with the instructions on safety attached labels;
- follow the instructions included in this manuals for any components of UNISAT-IPSNG;
- before starting work make sure that there are no people performing cleaning or maintenance on UNISAT-IPSNG and standing into dangerous areas;
- do not lubricate, repair, record moving parts;
- maintenance should be performed only by authorized personnel and only after putting the satellite antenna pointing system UNISAT-IPSNG in maintenance mode (see chap. "Maintenance");
- never open shelter or protection covers during operation

CAUTION: IT'S ABSOLUTELY FORBIDDEN FOR ANYONE TO USE UNISAT-IPSNG FOR A PURPOSE OTHER THAN THAT INTENDED.

Intended use

UNISAT-IPSNG, along with the kit ViaSat SurfBeam®2 Residential Satellite Terminal, was built for the installation and operation on vehicles fixed on the native roof rails fixed or on special roof rack bars.
UNISAT-IPSNG is designed exclusively for outdoor use, it is prohibited to use in any other ambient.

CAUTION: EXPLOSIVE ATMOSPHERE.
THIS MACHINE IS NOT MADE UNDER CONSTRUCTION AD (ANTI DEFLAGRATION), BUT IS MADE OF STANDARD EQUIPMENT.
THEREFORE IT IS FORBIDDEN TO USE IT IN LOCAL IN WHICH THE CONCENTRATION EXCEED THE EXTENT ALLOWED AND CREATING ATMOSPHERES WITH A RISK OF EXPLOSION.

All operations are controlled, manually, by a remote control, by a single operator.

Work zones, control zones, dangerous areas

The areas around UNISAT-IPSNG are divided and identified as:

Work zones

These are the areas in which the conductor and the other operators have free access to and where they can stop during normal operation. From these areas, they may:

- check the normal operation of UNISAT-IPSNG;
- intervene quickly on the control panel, in case of need or emergencies.

Control zones

These are the areas in which the conductor and the other workers can perform the command and control of the cyclical functions of t UNISAT-IPSNG by acting on the control panels.

Danger areas

These are any areas inside tUNISAT-IPSNG.
In these areas none can access during the operation of UNISAT-IPSNG.

CAUTION: THE DANGERS AND RISKS THAT EXIST IN THESE AREAS ARE AS FAR AS POSSIBLE, PROTECTED BY FIXED GUARDS AND SAFETY DEVICES. HOWEVER, WHEN UNISAT-IPSNG IS IN OPERATION, IT IS ABSOLUTELY FORBIDDEN TO OPERATE IN DESIGNATED AREAS, ALTHOUGH THE RISKS ARE ELIMINATED OR REDUCED BY THE PROTECTIONS TAKEN.

CAUTION:IT IS FORBIDDEN TO EVERYONE TO STAY IN DANGEROUS AREAS DURING OPERATION OF ANTENNA SATELLITE UNISAT-IPSNG.

The manufacturer has equipped the satellite antenna UNISAT-IPSNG of active and passive safety devices to ensure safe operations. The commissioning state of maintenance of the satellite antenna UNISAT-IPSNG is obtained by following the instructions detailed in the chapter "Maintenance".

Responsibilities of operators

Operators are users trained and authorized to run UNISAT-IPSNG performing the following tasks.

- positioning of the antenna;
- deploy the antenna
- run the antenna;
- closure of the antenna.

UNISAT-IPSNG and accessories are designed and built to work safely, if:

- are used within limits described in user manual
- operators follow the procedures in the instruction manual
- operators comply with the conditions laid down in particular with regard to:
  - overall limits of use;
  - coefficient in service (hours of work per shift);
  - environmental conditions (rain, snow, hail, dust, temperature)
- operators wear personal protective equipment required by the regulations in force and appropriate clothing for the type of operations to be performed:

Clothing requirements

WARNING: THE OPERATORS IN CHARGE OF OPERATING AND MAINTENANCE MUST WEAR WORK CLOTHES AND ANY PERSONAL PROTECTIVE EQUIPMENT (GLOVES, SAFETY SHOES, ETC..) IN ACCORDANCE WITH LOCAL REGULATIONS.

CAUTION: OBSERVE THE FOLLOWING GUIDELINES IN THE CHOICE OF CLOTHING TO WEAR DURING THE INSTALLATION:
THE CLOTHING SHOULD BE TIGHT TO THE BODY
AVOID LONG HAIR, TIES, NECKLACES OR BELTS THAT CAN GET CAUGHT OR SLIP BETWEEN THE MOVING PARTS OF THE SYSTEM

Personal responsibilities

WARNING: EACH OPERATOR MUST TAKE CARE OF THEIR OWN SECURITY, THEIR OWN HEALTH AND THAT OF OTHER PEOPLE IN THE WORKPLACE, WHICH MAY BE AFFECTED BY THEIR ACTS OR OMISSIONS IN ACCORDANCE WITH HIS TRAINING AND THE INSTRUCTIONS AND EQUIPMENT PROVIDED BY EMPLOYER.

IN PARTICULAR, WORKERS MUST:

- *PROPERLY USE THE EQUIPMENT, TOOLS, TRANSPORTATION AND OTHER WORK EQUIPMENT AND SAFETY DEVICES;*
- *DO NOT REMOVE OR MODIFY, WITHOUT AUTHORIZATION, SAFETY DEVICES, WARNING OR CONTROL;*
- *DO NOT TO PERFORM OPERATIONS ON ITS OWN INITIATIVE OR MANEUVERS THAT ARE NOT WITHIN THEIR COMPETENCE OR WHICH MAY JEOPARDIZE THE SAFETY OF THEMSELVES OR OTHER PEOPLE;*
- *ABSOLUTELY AVOID THE USE OF THE EQUIPMENT IN POOR OR ALTERED PHYSICAL CONDITIONS.*

WARNING: IT'S ABSOLUTELY FORBIDDEN TO TAMPER WITH AND / OR UNAUTHORIZED SUBSTITUTION OF ONE OR MORE PARTS OF THE SATELLITE ANTENNA POINTING SYSTEM UNISAT-IPSNG, THE USE OF ACCESSORIES, TOOLS, SUPPLIES OTHER THAN THOSE PRESCRIBED BY THE MANUFACTURER.

FAILURE TO OBSERVE THIS PROHIBITION RAISES THE MANUFACTURER FROM CIVIL AND CRIMINAL LIABILITY.

Prohibitions and requirements

CAUTION:

- *DO NOT USE UNISAT-IPSNG FOR JOBS WHERE THE USE IS NOT EXPECTED.*
- *DO NOT TAMPER WITH THE TARGETING SYSTEM UNISAT-IPSNG AND SAFETY CIRCUITS.*
- *IT IS FORBIDDEN TO RISE ABOVE THE AIMING SYSTEM.*
- *DO NOT USE UNISAT-IPSNG AND ITS PROTECTIONS AS WORK PLANS.*

- *IT IS FORBIDDEN TO KEEP THE REFLECTOR OF UNISAT-IPSNG IN THE OPEN POSITION DURING TRANSFERS BY CAR;*
- *IT IS FORBIDDEN THE USE TO PEOPLE UNDER THE AGE OF 18 YEARS;*
- *IT IS COMPULSORY TO USE PERSONAL PROTECTIVE EQUIPMENT DURING WORK, MAINTENANCE, ADJUSTMENT;*
- *YOU MUST FOLLOW THE SIGNS AFFIXED ONTO UNISAT-IPSNG AND INSTRUCTION MANUAL.*

Safety during the cleaning

It is mandatory to adopt the same procedures described in the preceding paragraph.
Cleaning maintainers must use a dry cloth and wear personal protective equipment (masks, goggles, gloves).

Improper use

It is forbidden to use UNISAT-IPSNG for operations other than what is set out in the intended use.

CAUTION: THE USE OF UNISAT-IPSNG FOR THE PROCESSING OF OTHER MATERIALS, OR TO OBTAIN PRODUCTION VALUES EXCEEDING THE PRESCRIBED LIMITS, IT IS CONSIDERED "IMPROPER USE".

Any other use of UNISAT-IPSNG must be authorized in writing by the manufacturer. In the absence of such written consent, the use is to be considered "improper use", so the Manufacturer disclaims any liability with regard to any damage caused to property and persons, considering decayed any kind of warranty on the system UNISAT-IPSNG and accessorizes.

Environmental operating conditions

The smooth operation, reliability and durability of UNISAT-IPSNG and its components are guaranteed if the useed under limits described in this manual.

Vibrations

UNISAT-IPSNG is constituted by a supporting structure on which are installed the components of the system, the rotating base and other installed mechanical parts. The supporting structure serve for the damping of vibrations. Any abnormal vibration reveals mechanical problems (such as loose parts, etc..).
Intervene according to maintenance instructions (see "Maintenance"). If the phenomena persist, contact the maintainer or service center of your local dealer.

Noise

UNISAT-IPSNG is designed and constructed to reduced source sound power level, the values of sound, are emission levels and do not necessarily represent safe operating levels. Although there is a relationship between emission levels and exposure levels, this cannot be used reliably to determine whether or not additional precautions. The factors that determine the level of exposure to which is subject the work force, include the duration of exposure, the characteristics of the processed product and other sources of noise (number of machines, adjacent processes etc..). In addition, the allowed exposure levels may vary from country to country. In any case, the information provided, will allow the user of the pointing system for Satellite Antenna UNISAT-IPSNG to make a better assessment of the hazard and the risk to which it is subjected.

Any unusual noises reveal mechanical problems (such as loose parts, etc..).

Intervene according to maintenance instructions (see "Maintenance"). If the phenomena persist, contact the manufacturer or the service center of your local dealer.

Generic residual risks

Safety, as far as possible has been integrated in the design and construction of UNISAT-IPSNG.
However, residual risks remain and people need to be protected.

Residual risks arising from the material

The materials used to build UNISAT-IPSNG do not generate hazards or risks for operators.
Instead, the following materials can pose a hazard to the environment if not properly treated:

- wear parts replaced;
- lubricants in general.

These materials must be collected and disposed of in compliance with applicable laws in the country of installation.

Equipment supplied in standard configuration

- Pre-assembled pointing system for satellite antennas of series ViaSat SurfBeam®2 Residential Satellite Terminal, complete with 2 support cross bars for mounting on the roof rails of the vehicle (length 130 cm) (*), wind shield protection (**).
- 4 stainless steel sliding hooks for attaching the bars to the roof rails.
- 4 plastic closing side caps
- 8 m seal bars (*)
- 10 cm gasket connector RF-TRIA
- Power supply box
- Remote control with cable (length 4m)
- User Manual
- Quick user guide

(*) it is possible, during order, to define the required length, this implies a variation of the total weight of the outdoor unit.
(**) system is sold and shipped without TRIA SurfBeam ViaSat®2, reflector and modem.

INSTALLATION

Warnings

CAUTION: LIFTING, HANDLING, TRANSPORT OF UNISAT-IPSNG AND ITS COMPONENTS MUST BE CARRIED OUT UNDER THE FOLLOWING CONDITIONS:

- *SHOULD BE ENTRUSTED ONLY TO SKILLED OPERATORS.*
- *OPERATORS MUST ALSO BE:*
    - *EDUCATED ON THE NATURE OF THE LOADS TO BE LIFTED, THE STEPS TO BE TAKEN AND PROCEDURES DESCRIBED IN THE MANUAL;*
    - *AUTHORIZED;*
    - *ACT IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE MANUAL.*

CAUTION: OPERATORS MUST WEAR PERSONAL PROTECTIVE EQUIPMENT, HELMETS, GLOVES, SAFETY SHOES, WORK CLOTHING OR OTHER MEANS THAT MAY BE REQUIRED BY LAW, ACCORDING TO THE NATURE OF THE OPERATIONS TO BE PERFORMED.

CAUTION: OPERATORS MUST COMPLY WITH THE REQUIREMENTS AND PROHIBITIONS ESTABLISHED BY LAW FOR LIFTING AND TRANSPORT; THE FOLLOWING GENERAL RULES OF CONDUCT HAS TO BE FOLLOWED:

- *PROHIBIT THE ACCESS OF UNAUTHORIZED PERSONS TO THE WORK;*
- *MAINTAIN, DURING THE OPERATIONS, THE SAFETY DISTANCES FROM THE ANTENNA*

CAUTION: NEGLECTING PRECAUTIONS INDICATED ABOVE, CAN CAUSE SERIOUS INJURY AND / OR ACCIDENTS RESULTING IN DAMAGE MACHINERY AND OPERATOR INJURY.
IN SEVERE CASES, ACCIDENTS CAN CAUSE DEATH OF OPERATORS.

CAUTION: DURING INSTALLATION OF UNISAT-IPSNG, YOU MUST TAKE INTO ACCOUNT OF:

- *SHAPES AND SIZES;*
- *THE MASS (WEIGHT) AND ITS DISTRIBUTION (CENTER OF GRAVITY).*

Preliminary operation

Before going on with the installation, please verify the supplied parts and be sure to have:

- Tooway Connection kit (ViaSat SurfBeam®2 Residential Satellite Terminal)
- Vehicle capable of withstanding the static and dynamic load of the antenna system
- Installation Tools

Lifting and transport

UNISAT-IPSNG must be raised by at least two operators, using the support cross bars **A** (Pict.3-1).

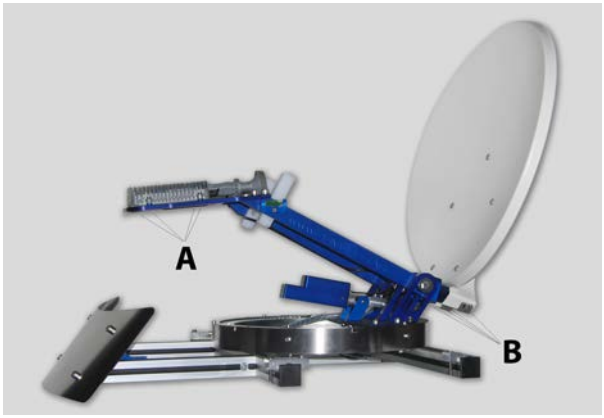
Pict.3-1 - Lifting points

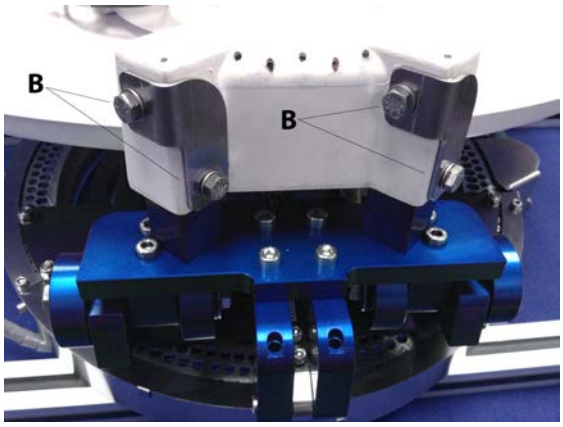
The weight of the outdoor unit is about 31,6 kg.
During lifting and transport you must be careful not to damage the cables connecting the outdoor unit and the power supply box.

Vehicle installation

UNISAT IPSNG comes pre-assembled and ready for installation on the vehicle's roof rails.
The antenna system must be installed only by qualified personnel for both mechanical and electrical part..
Before roof installation:

- Mount the TRIA SurfBeam ViaSat® 2 on the front panel and secure with the 4 screws and 4 washers supplied **A** (Pict.3-2).
- Place the ViaSat® reflector on the rear
- Place the additional mounting bracket for the reflector **B** (Pict.3-2)
- Secure with the 4 screws and 4 washers supplied **B** (Pict.3-2)

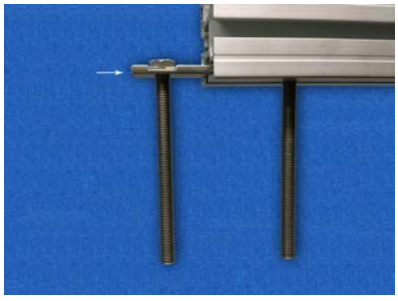




Pict.3-2 - Fixing SurfBeam ViaSat®2 TRIA (**A**) and reflector (**B**)

- Insert, in the lower guides of the support bars, the 4 the sliding hooks (2 for each bar) following next instructions:
  - Place the head of the 2 screws in the slots of the bracket insertion (Pict.3-3)
  - Fully insert the hooks inside of the sliding guide (Pict.3-4)
- Place the antenna system onto the roof rails and fix it with the sub-sealing and self-locking nuts (Pict.3-5).

Pict.3-3 - Screw head placement



Pict.3-4 - Hook insertion

Pict.3-5 - Correct installation

☞ *WARNING: THE ANTENNA SYSTEM MUST BE INSTALLED WITH THE PROTECTIVE WINDSHIELD FACING THE DIRECTION OF THE VEHICLE TRAVEL; AFTER THE INSTALLATION MEASURE THE OVERALL HEIGHT OF THE VEHICLE WITH THE ANTENNA SYSTEM MOUNTED, IN CLOSED POSITION AND INDICATE IT IN THE COMPARTMENT GUIDE IN A CLEAR AND VISIBLE WAY. EACH USER OF THE VEHICLE WITH THE ANTENNA SYSTEM INSTALLED MUST BE INFORMED ABOUT THE CHANGE IN DIMENSIONS.*

WARNING: THE PRE-ASSEMBLED, WINDSHIELD SHOULD NOT BE REMOVED FOR ANY REASON, BECAUSE IT PROTECTS THE ANTENNA DURING TRAVEL FROM IMPACTING OBJECTS AND INSECTS AND REDUCES AIR FRICTION.

WARNING: IT'S NECESSARY TO PERIODICALLY CHECK THE TIGHTNESS OF ALL THE SCREWS OF THE ANTENNA SYSTEM.

For fixing, align the 4 stainless steel sliding hooks to the roof rails (Pict.3-6/3-7) nd check the centering of the antenna system by measuring the distance between the outer edge of the crossbar and the roof rails: the value must be equal on both sides of the vehicle. Proceed with the definitive fixing of the antenna system by tightening the nuts car blockers.

Pict.3-6 -Standard fixing system

Pict.3-7 -Standard fixing system

In case there are no the roof rails it is necessary to provide an adequate fixing system to the bodywork of the vehicle to guarantee safeness and to be able to sustain the static and dynamic load of the antenna system (Pict. 3-8/3-9).

Pict.3-8 -Customized fixing system

Pict.3-9 -Customized fixing system

Cabling

- Set up access for 2 cables feeding the motors (AZIMUTH and ELEVATION) and the coaxial cable connecting TRIA-Modem, so as to prevent the entrance of water inside the vehicle, this operation can be made through existing openings or preparing holes in the body that must be protected with a special waterproof cover as picture sample (Pict. 6-1)

Fig.6-1 - Waterproof cable entrance protection - examples

- Fix the connection box must inside the vehicle in a stable manner.
- Make sure the Azimuth and Elevation connectors (Pict.6-2), the power switch and the connector of the Remote Control are easily accessible (Pict.6-3); connect the relative cables.

Pict.6-2 - Azimuth - Elevation plugs

Pict.6-3 - Remote control plug - On/Off Switch

- Connect the coaxial cable, labeled RF, to the SurfBeam ViaSat®2 TRIA and the modem according to the instructions provided by the manufacture.
- Connect the power cable to electrical network, providing a correct grounding according to local regulations.

Nominal input tension (AC)	115/230 V
Nominal input frequency (AC)	50/60 Hz
Fuses	2/1 A
Nominal output tension (DC)	24 V
Programmed absorption max	2,5 A
Power max	60 W

USE

Introduction

WARNING: PLEASE NOTE THAT ALL OPERATORS MUST:
- *COMPLY WITH THE INTENDED USE OF UNISAT-IPSNG;*
- *RESPECT THE WORK ZONES, CONTROL ZONES, DANGEROUS AREAS;*
- *RESPECT THE LIMITS OF THE DUTIES AND RESPONSIBILITIES PROVIDED FOR CONDUCTORS, MAINTENANCE, QUALIFIED TECHNICIANS.*

THE CONDUCTORS MUST NOT PERFORM TASKS RESERVED FOR MAINTENANCE PERSONNEL OR QUALIFIED TECHNICIANS; THE MANUFACTURER IS NOT LIABLE FOR DAMAGES RESULTING FROM NOT OBSERVING THIS PROHIBITION.

STAFF TO WORK ON UNISAT-IPSNG MUST HAVE THE REQUIREMENTS STATED IN THE INTRODUCTION AND ALSO SHOULD BE FAMILIAR WITH THIS MANUAL AND ALL SAFETY-RELATED INFORMATION.

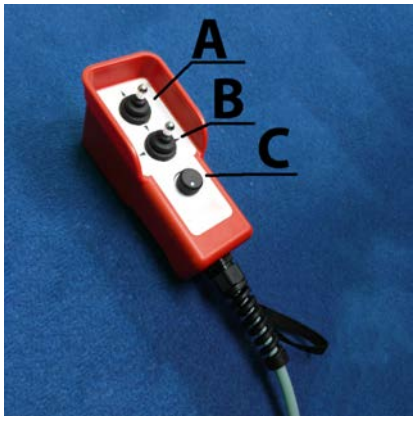
"IMPROPER USE" OF UNISAT-IPSNG RESULTS IN THE FORFEITURE OF THE GUARANTEE AND THE FULL ASSUMPTION OF RESPONSIBILITY BY THE USER.

THE CONDUCTOR, BEFORE USING UNISAT IPSNG, MUST:
- *CHECK OPERATIVE LOCATION MUST IS SUITABLE FOR USE OF UNISAT-IPSNG: FREE FROM ANY OBSTACLES THAT MAY INTERFERE WITH THE USE OF THE SATELLITE ANTENNA;*
- *CHECK THE INTEGRITY OF ELECTRIC CABLES;*
- *CHECK THAT UNISAT-IPSNG ELECTRICAL POWER CORRESPONDS TO THE AVAILABLE ELECTRICAL NETWORK;*
- *VERIFY CABLE GROUNDING;*
- *MAKE SURE THAT UNISAT-IPSNG IS NEVER LEFT UNATTENDED DURING OPERATION;*
- *CHECK, BEFORE EACH START-UP, THAT NO PEOPLE CAN BE HIT BY UNISAT-IPSNG MOVEMENTS;*
- *OBSERVE THE CORRECT STARTING PROCEDURE OF UNISAT-IPSNG.*

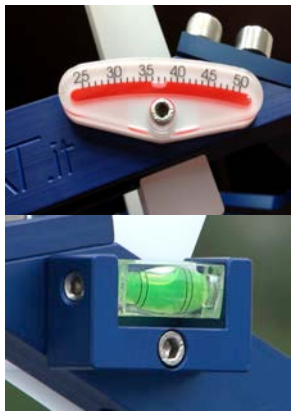
Control console

Control console consists of:
- **Connection box** equipped with luminous switch 0/I (OFF/ON), electrical power plug, DB9 connector for remote control (Pict.6-6);
- **Remote control** (Pict.6-7) :
  - **A** elevation switch;
  - **B** rotation switch;
  - **C** fine tuning potentiometer;
- **Graduated/Single elevation bubbles** (Pict.6-8); placed on supporting TRIA arms to fast elevation check

Pict.6-6 Connection box



Pict.6-7 Remote Control



Pict.6-8 Elevation bubbles

Preliminary operation

- Place the vehicle on a flat and stable ground.
- Place the vehicle on a south oriented position.
- Ensure the stability of the vehicle through support legs

PRECAUTION: IF THE VEHICLE IS NOT EQUIPPED WITH SUPPORT LEGS, AVOID BOARDING THE VEHICLE DURING USE

- Verify that there are no obstacles in front of it to prevent the transmission and reception of satellite signals (trees, buildings, etc.).
- Make sure the antenna, in the opening phase, will not hit power lines.
- Connect the remote control to connection box using DB9 port
- Connect the connection box and your Tooway modem to a power source at 220/230 V; if you are using a 220V inverter, connected to the vehicle battery, to power the antenna system ensure that is of high quality and can generate a sine wave; low-quality inverter generates non-sine wave that can cause damage to the electronic circuits of the power control.

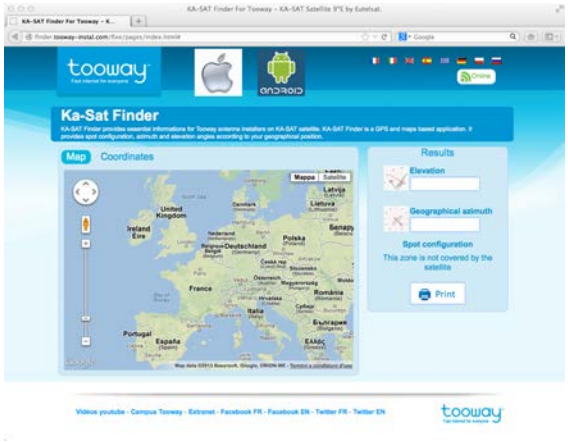
NOTE: GRADUATED BUBBLE IS CALIBRATED BY MANUFACTURER; SINGLE BUBBLE SHOULD BE FIXED ON PREFERRED ELEVATION BY USER, AFTER FIRST POINTING.

Pointing (as per manual Tooway optimized for UNISAT-IPSNG)

- Connect your computer used in pointing directly to the network port of your Tooway modem via ethernet cable
- Turn on the connection box: switch in position I; light on indicates presence of voltage (Pict. 6-6)
- Turn on both computer and Tooway modem that will start to boot.
- Detect the connection values (Elevation, Azimuth, N ° Spot) relating to the place where you will connect to satellite using the Tooway Ka-Sat Finder utility (Pict. 6-9) - http://finder.tooway-instal.com; select "Coordinates", insert requested data and press "calculate"; keep results (Pict. 6-10).

NOTE: IT IS POSSIBLE TO SAVE ALL THE TRACKING DATA ON YOUR COMPUTER FOR OFF-LINE VIEWING; UNTIL THE CONNECTION IS ESTABLISHED IT IS NOT POSSIBLE TO NAVIGATE ON THE INTERNET USING UNISAT-IPSNG.

CAUTION: DO NOT REMAIN WITHIN RANGE OF THE ANTENNA DURING DEPLOY TO AVOID BEING HIT BY THE ANTENNA.



Pict.6-9 - Home page

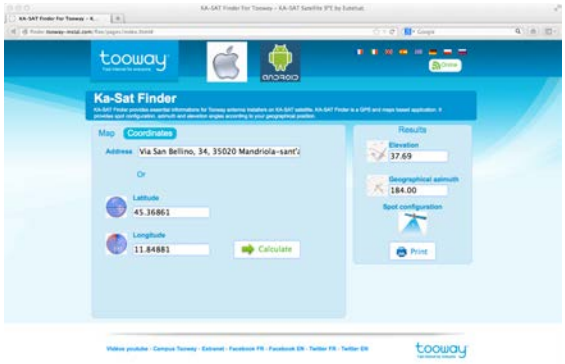


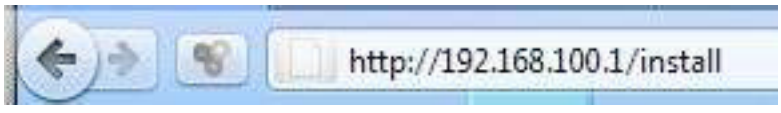
Fig.6-10 - Results

- Adjust the potentiometer **C** (Pict.6-7) on the remote control to maximum (turn fully clockwise).
- Open the reflector using the elevation control switch **A** (Pict.6-7) to a value close to that detected by the Ka-Sat Finder utility, you can read the value of the elevation on the graduated bubble (Pict.6-8);

NOTE: A BREAKER, PLACED NEAR THE INSERT POINT OF ONE TRIA SUPPORTING ARM, PREVENTS ACCIDENTAL ROTATION BEFORE REACHING SAFE ELEVATION TO AVOID DAMAGE TO THE ANTENNA SYSTEM AND THE VEHICLE

CAUTION: DURING THE OPENING MOVEMENTS TAKE CARE NOT TO REACH THE LIMIT OF MAXIMUM ELEVATION.

- Open the pre-installed pointing software on your Tooway modem by the browser on your computer: http://192.168.100.1/install (Pict.6-9)



Pict.6-11 - Access to modem internal configuration software

- In PAGE 1 (Pict.6-11) select the correct spot as indicated by Ka-Sat Finder (Pict.6-5)

Pict. 6-11 - Spot selection

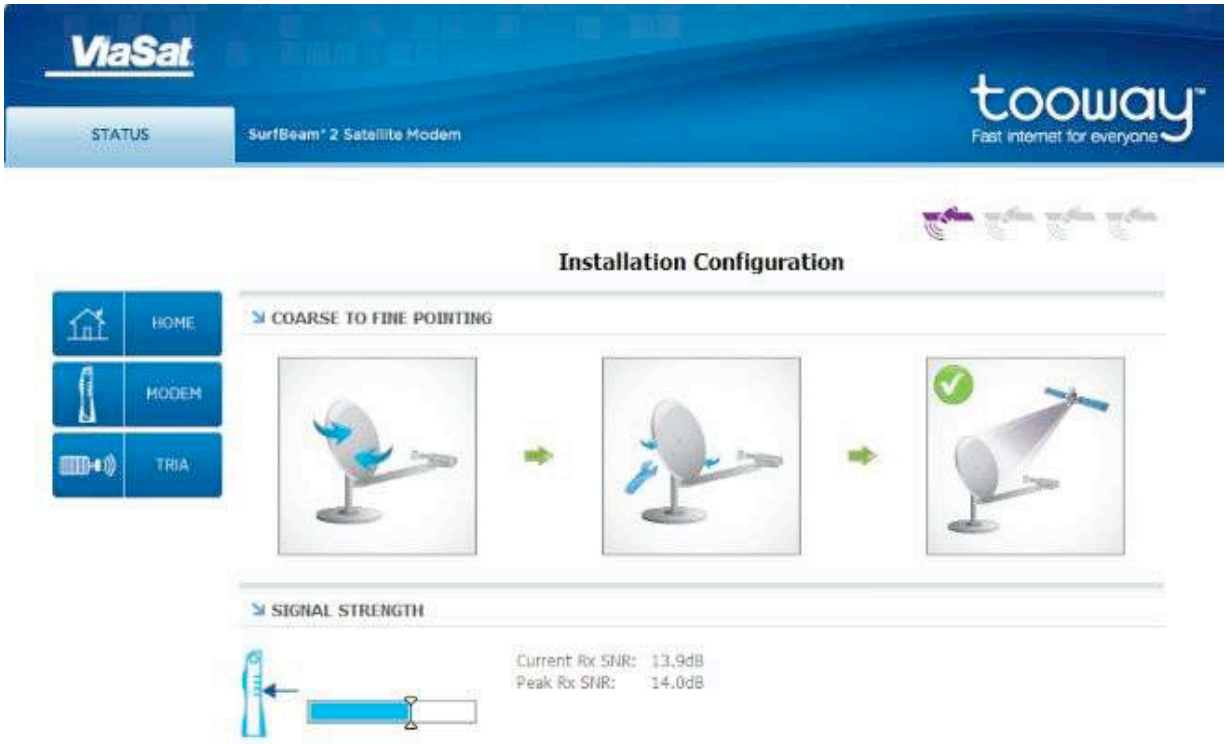
- Push next
- The TRIA will play a double beep sound to indicate lack of signal
- Start the satellite search using the azimuth control switch **B** (Pict.6-7) rotate the antenna in the direction of the satellite until it is heard the distinctive ring that indicates the identification of the satellite (for faster pointing use a compass to identify rotating direction).

NOTA: IF YOU DO NOT HEAR THE DISTINCTIVE RING THAT IDENTIFIES THE SATELLITE VERIFY AND CORRECT ELEVATION

WARNING: DURING THE MOVEMENTS OF AZIMUTH CORRECTION TAKE CARE TO CONTROL UNROLLING OF THE SPIRAL CABLE PLACED INSIDE THE CIRCULAR MECHANISM OF AZIMUTHAL MOTION, IT IS ADVISABLE NOT TO EXCEED THE 180 ° ROTATION LEFT OR RIGHT.

CAUTION: IT IS ABSOLUTELY FORBIDDEN TO MOVE THE VEHICLE WITH THE ANTENNA IN OPENED POSITION.

- Identified the satellite, on page 2 screen, check the level of the received signal (Pict. 6-12) to proceed with fine tuning.



Pict. 6-12 -Fine tuning

- Adjust the potentiometer on the pointing remote control remote **C** (Pict.6-7) to the minimum (turn fully counterclockwise) and proceed with the fine tuning (Pict.6-13).

Pict.6-13 - Fine Tuning - Scale zoom

- Act on the remote control by making small corrections, spaced from each other by 2/3 sec, so as to give time to the signal to be measured properly: you will have the correct pointing when the parameter "Current Rx SNR "will mark the maximum.
- After the fine tuning process push next to go to page 3; the TRIA automatically searches for the correct polarization; this stage does not require any operator intervention and some "click" coming from TRIA can be heard. At the end of the configuration the net icon on your PC will be active.
- Log off your Tooway modem
- Verify your internet connection using the standard speed test server.
- Disconnect the ethernet network cable from the configuration PC and connect it to your router, if necessary.
- Turn off connection box: switch in position 0, light goes off

NOTE: TURNING OFF THE CONNECTION BOX PERMITS TO SAVE ELECTRICITY AND AVOIDS ACCIDENTAL MODIFICATIONS IN POINTING DUE TO SHOCK ON SWITCHES OF THE REMOTE CONTROL; THE CONNECTION BOX MUST BE TURNED TO CLOSE THE ANTENNA

CAUTION: COMPLY WITH THE SAFETY STANDARDS OF EUTELSAT - VIASAT ® EMISSION OF ELECTROMAGNETIC FIELDS DURING OPERATION TO PREVENT DAMAGE.

End of transmission and antenna closure

- Turn off your Tooway modem;
- Turn on the connection box: switch in position I, light on indicates presence of voltage (Pict. 6-6)
- Adjust the potentiometer **C** (Pict.6-7) on the remote control to maximum (turn fully clockwise)
- By the rotation switch **B** (Pict.6-7) return the TRIA centrally located, pointing towards the direction of travel in the reverse order than the opening to prevent entanglement and breakage of control cables;
- close the antenna with the elevation control switch **A** (Pict.6-7);

CAUTION: VERIFY VISUALLY AND MANUALLY THE PERFECT CLOSURE OF THE REFLECTOR

- Turn off connection box: switch in position 0, light goes off.

Manual antenna closure

A manual procedure for the release of the elevation and rotation motors is provided to allow stowing of the antenna in case of failure; remember to mechanically secure the antenna with retaining straps before resuming the trip with the vehicle.

CAUTION: BEFORE GOING ON WITH MANUAL STOWING UNPLUG ELECTRICAL POWER.

If you can rotate the antenna on the azimuth axe, verify the cable connections of the azimuth control switch, located on the antenna, in the insertion point of the TRIA supporting arms.

NOTE: THIS SWITCH PREVENTS THE ROTATION OF THE PARABOLA BEFORE IT REACHES THE ELEVATION OF SECURITY PROTECTION TO THE ANTENNA ITSELF.

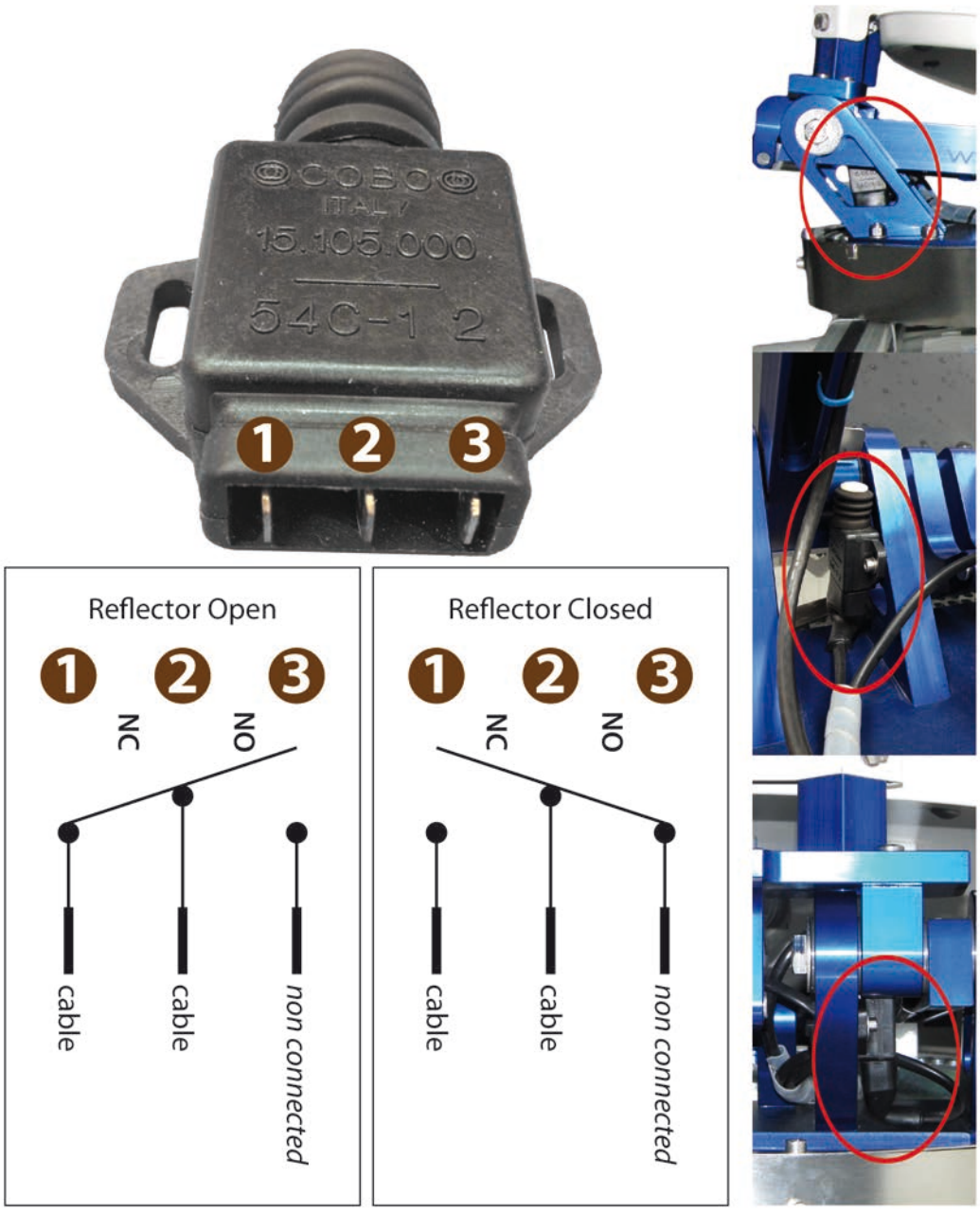
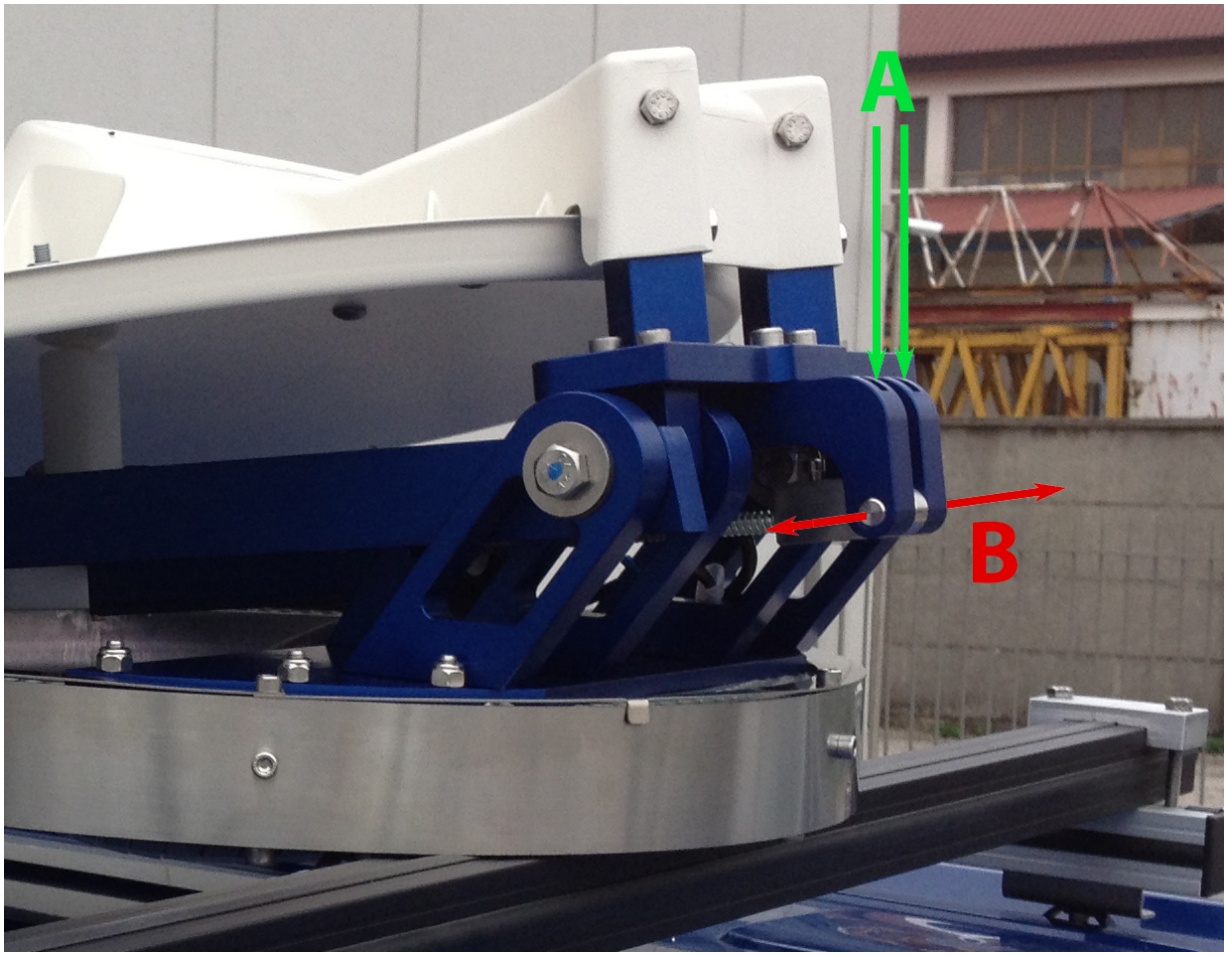


Fig.6-14 - Interruttore controllo rotazione azimutale

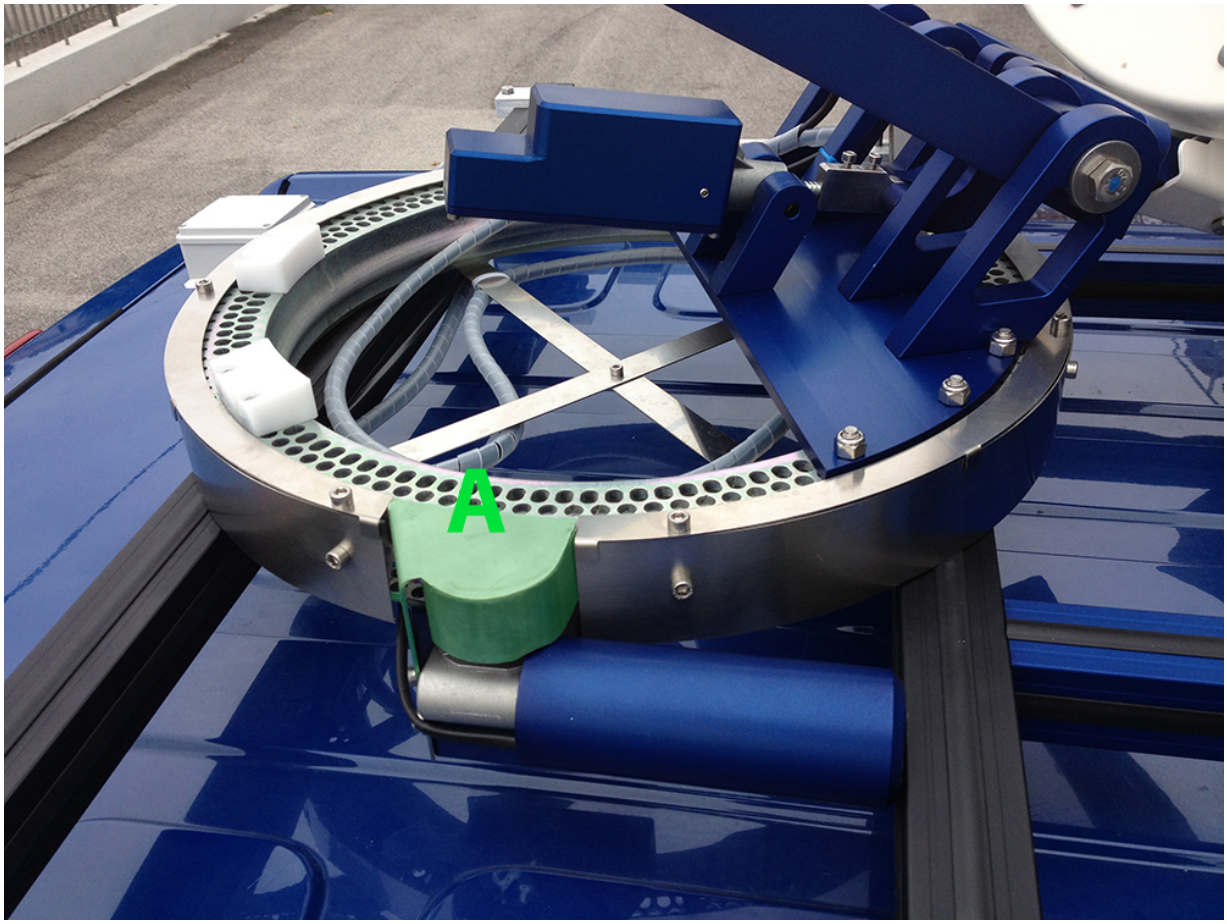
Elevation motor uncouple



Pict.6-14 -Elevation motor uncouple

- Secure the antenna with retaining straps in the open position to avoid accidental closure and damages to the operator.
- Loosen the 2 worm screw (**A**) and pull out the holding pin (**B**) (Pict-6-14).
- Remove the retaining straps and close the antenna carefully.
- If possible, turn manually the motor so you can replace and fix into place the holding (**B**) pin the 2 worm screw (**A**); secure the antenna with retaining strap;
- If not possible secure the antenna with retaining straps.

Azimuth motor uncouple



Pict.6-15 - Azimuth motor uncouple

- Remove the protective cover (**A**) (Pict-6-15).
- Loosen the screw that holds the ring gear.
- Remove the ring gear and rotate the dish to bring it back to center.
- Replace the ring gear into place and lock it with the retaining screw.
- Replace and secure the protective cover (**A**) (Pict-6-14)

MAINTENANCE

Introduction

The safety of UNISAT-IPSNG and operators also depends on the maintenance performed regularly according to the manufacturer's instructions.
The maintainers must:

- respect the limits of their expertise (mechanical or electrical);
- comply with the procedures in this manual and the warnings associated with them;
- wear personal protective equipment as per regulations
- put the car in “maintenance mode” before performing any work
- use only original spare parts
- reassemble each disassembled protective mechanical guards after maintenance.

Maintenance mode

The condition of safety is achieved through the procedure “maintenance mode."
The procedure involves the electrical isolation UNISAT-IPSNG (Fig. 7-1) and is required before making any intervention custody, maintenance, lubrication, repair to avoid the risk of electric shock

- The main power switch on the electrical box must be put in position "0";
- The power supply cable must be disconnected

Fig.7-1 - Attenzione - presenza tensione elettrica

CAUTION:

• IT IS ABSOLUTELY FORBIDDEN TO DO ANY MAINTENANCE, LUBRICATION AND REPAIR WHEN UNISAT-IPSNG IS IN MOTION OR STILL CONNECTED TO ELECTRICAL POWER NETWORK;
• NEGLECTING THESE INSTRUCTIONS CAN RESULT IN SERIOUS PERSONAL INJURY, OR CAN DAMAGE UNISAT-IPSNG, GOODS AND PROPERTY;
• THE MANUFACTURER DECLINES ALL RESPONSIBILITY IN THE EVENT OF NON-COMPLIANCE OF THE ABOVE INSTRUCTIONS.

- Warning panel "Maintenance in progress" must be displayed on the system.

Scheduled periodic maintenance

The scheduled maintenance (periodic or preventive) includes inspections, controls and interventions to prevent stops and faults;systematic control involve:

- the mechanical conditions
- the state of lubrication.

In relation to the frequency of use is necessary to perform periodic maintenance.
The maintenance must be carried out, in each case, at least once every 12 months.

Failure to comply with the above exempt the manufacturer from any liability to the effects of the guarantee.

NOTE: THE FREQUENCY QUOTED ARE BASED ON NORMAL OPERATING CONDITIONS, SATISFYING THE CONDITIONS OF USE ENVISAGED AND ESTABLISHED CONTRACTUALLY.

- Inspect and check the tightness of all nuts and bolts of the antenna system
- Inspect and check the tightness of the nuts holding the coupling systems in the stainless steel hooking mechanisms for fixing of the bars on the roof rails or structures prepared for mounting on the vehicle body.
- Check the center of the antenna system relative to the vehicle
- Check all electrical connections of the junction box and the status of the engine control cables with connectors.
- Grease the ball bearings of the azimuth wheel with grease type nautical navy anti rain. To proceed with the grease: off the power, remove the mechanical protection of the fifth wheel (both top and the side band), inject the grease through the grease special place on the fifth wheel, replace the mechanical guards checking the tightness of the screws.

CAUTION: CAREFULLY INSPECT THE ANTENNA SYSTEM BEFORE RETURNING IT TO SERVICES AND MAKE SURE ALL PROTECTIVE GUARDS ARE PUT BACK AND FIXED IN THEIR PLACE.

Extraordinary maintenance

Unscheduled maintenance must be performed by authorized service personnel. Any tampering by persons who are not qualified or authorized may impair the functionality of UNISAT-IPSNG and relieves the manufacturer from any liability

Permission to perform extraordinary maintenance

Notwithstanding the general rule, the ordinary maintainer can ask the Manufacturer permission to perform extraordinary maintenance, following this procedure:

- the ordinary maintainer shall write to the manufacturer the nature of the defect or problem by giving technical details and references to specific schemes, parameters, software program, etc..;
- The Manufacturer reserves the right to assess the situation and proposed to adopt one of the following solutions:
  - sends its trained, educated and authorized technicians ;
  - authorizes in writing to carry out ordinary maintenance intervention (within the limitations of itself).

CAUTION: CAREFULLY INSPECT THE ANTENNA SYSTEM BEFORE RETURNING IT TO SERVICES AND MAKE SURE ALL PROTECTIVE GUARDS ARE PUT BACK AND FIXED IN THEIR PLACE.

Electrical components maintenance

CAUTION: ALL MAINTENANCE ON THE ELECTRICAL COMPONENTS SHOULD ALWAYS BE ENTRUSTED TO QUALIFIED PERSONNEL IN COMPLIANCE SAFETY AND THE INFORMATION CONTAINED IN THIS MANUAL.
THE MANUFACTURER DISCLAIMS ANY LIABILITY IF THESE INSTRUCTIONS ARE DISREGARDED.

The ordinary maintainer is allowed to:

- restore the operating conditions prevented by the intervention of electrical protective devices (for example circuit breakers tripped);
- provide assistance to UNISAT-IPSNG within the limits and in the manner prescribed in the manual;
- replace signaling devices in failure;
- replace defective components.

CAUTION: DEFECTIVE PARTS MUST BE REPLACED WITH ORIGINAL PARTS (OR WITH EQUIVALENT PARTS WITH WRITTEN PERMISSION OF THE MANUFACTURER OF UNISAT-IPSNG). THE CHANGE MUST STILL BE IN COMPLIANCE WITH THE CONNECTIONS AND FUNCTIONALITY OF THE ORIGINAL.
THE COMPONENTS THAT REQUIRE CALIBRATION MUST BE CALIBRATED WITH THE SAME VALUES AS THE ORIGINAL COMPONENT BEING REPLACED.

CAUTION: THE ORDINARY MAINTAINER CANNOT:

- *MODIFY THE ELECTRICAL CONNECTIONS;*
- *CHANGE THE WIRING IN THE VARIOUS POINTS OF UNISAT-IPSNG.*

CAUTION WITHOUT WRITTEN PERMISSION OF THE MANUFACTURER EVERY INTERVENTION ON UNISAT-IPSNG IS FORBIDDEN; THE MANUFACTURER DECLINES ALL RESPONSIBILITY.

All components must be monitored and replaced when the wear makes them unsuitable for use.

DISPOSAL OF WASTE

CAUTION WASTE MATERIALS MUST BE COLLECTED, RECYCLED OR DISPOSED ACCORDING TO THE LAWS OF THE COUNTRY IN WHICH UNISAT-IPSNG IS INSTALLED

Demolition

WARNING: DISMANTLING AND DEMOLITION MUST BE CARRIED OUT BY QUALIFIED PERSONNEL.

On demolition is necessary to separate the plastic parts and electrical components, which should be sent to waste collection in compliance with the current building code.
As for the metal mass of UNISAT-IPSNG, simply the division between the stainless steel parts and those of other metals or alloys, for a proper recycling for fusion.

WARNING: DURING ALL PHASES OF DEMOLITION RESPECT SAFETY RULES GIVEN IN THIS MANUAL.

Warning: the fluids discharged should not be mixed together and should be stored in closed containers to avoid contamination with foreign substances. Their disposal must always be assigned to the appropriate consortia disposal.

TECHNICAL CHARACTERISTICS

Indoor unit

Nominal input power	115 - 230VAC
Weigh	2,250 kg (ViaSat SurfBeam®2 Residential Satellite Terminal excluded)
Operative	0° - 40° C
temperature Storage	- 35° + 65° C
temperature Humidity	0 - 95% (non condensing)
Operative altitude	<3000 m

Outdoor unit

Nominal input power	12 VDC
Weight	31,6 kg (dish and tria included)
Dimension (lxwxh)	77 x 93 x 37 cm (not considering supporting cross bars)
Operative	- 40° + 55° C (+80° C max)
temperature Humidity	0 - 100% (condensing)
Rain	< 100 mm/h
Max vehicle speed (closed antenna)	≤ 130 km/h
Max wind speed (operative mode)	≤ 70 km/h

COMPLIANCE DECLARATION
2006/42/CE attachment II part A

The undersigned, representing the company :
UNIVIDEO S.r.l.
VIA SAN BELLINO, 34
35020 Albignasego (PD) - ITALY
instructed the authorized person to create the technical file

Mr. _____
Via San Bellino, 34
35020 Albignasego (PD) - ITALY

DECLARES UNDER PERSONAL RESPONSABILITY
THAT UNISAT-IPSNG SATELLITE ANTENNA POINTING SYSTEM

has been designed and manufactured in compliance
with the rules contents in the Directives:
EC/2006/42
EC/2004/108
EC/2006/95

Univideo Srl
The President
Silvio Finesso

Albignasego (PD), 31/05/2013 _____

M.G. s.n.c. di Munari Galdino & C.

DICHIARAZIONE DI CONFORMITÀ CE

La ditta: M.G. Snc di Munari Galdino & C.
via Casa Celeste 14
36014 Santorso (VI)

DICHIARA sotto la propria responsabilità che il prodotto:
Controllo per movimentazione di antenna satellitare.

è conforme alle seguenti norme:
EN 60950-1:2006+A11:2009
EN 55022:2001+A11:2009
EN 55024:1999+A2:2003+IS1:2008

e quindi risponde ai requisiti essenziali richieste dalle direttive:
2006/95/CE e 2004/108/CE

Santorso 22/04/2013

Il Legale Rappresentante
Munari Riccardo

36014 SANTORSO (VI) Italy - Via Casa Celeste N°14 - cod. fiscale e part. IVA 02247830249
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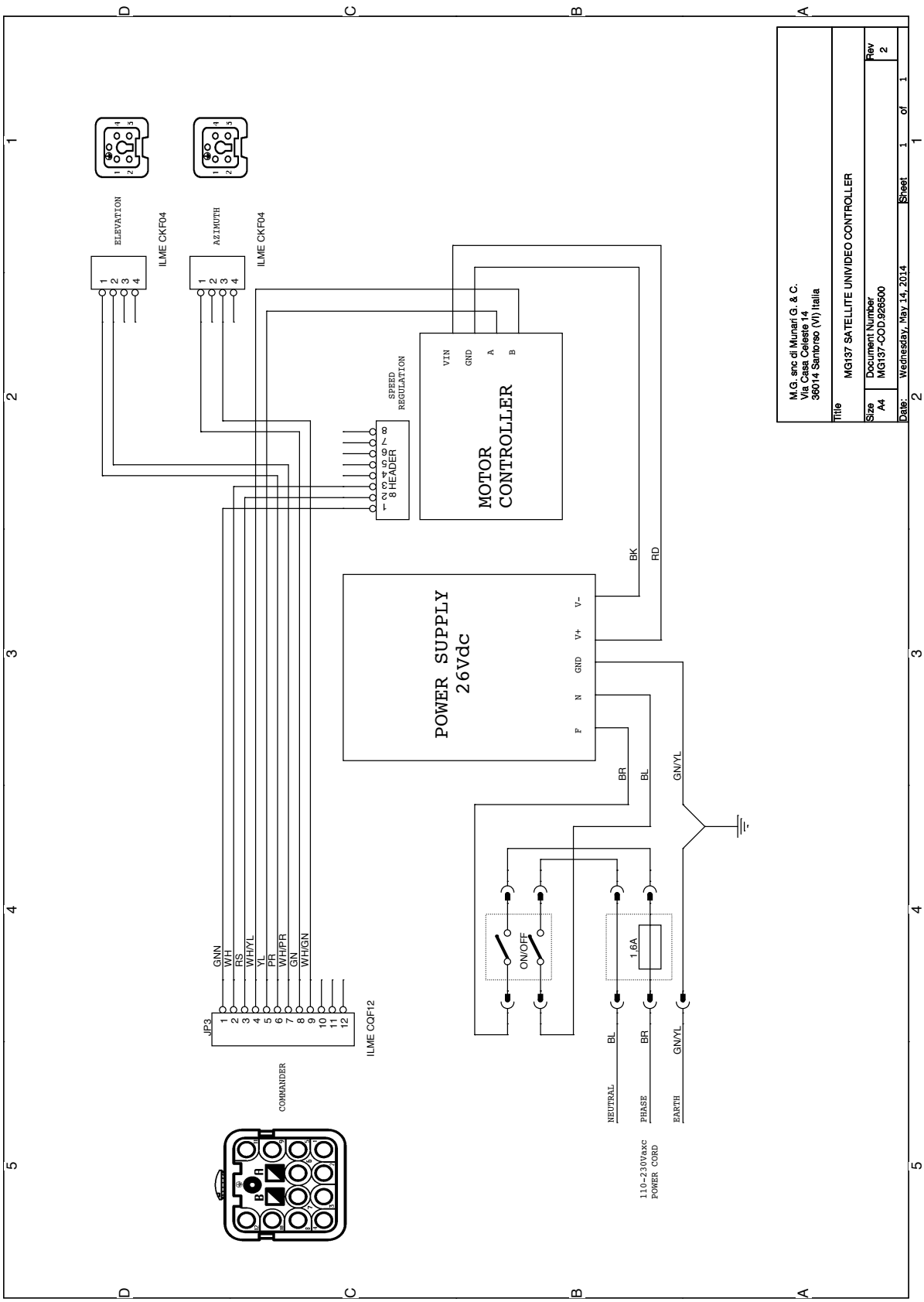
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