

wideyeTM

liberating communications

SAFARITM

SAFARITM 10

Installation
Guide of
Antenna Unit
& Transceiver
Unit

P/N 74G00127100

Installation Guide of Antenna Unit

Unpacking

- 3 sets of magnetic mounting base
- 1 pack of screws with an installation guide
- Antenna Unit
- 10 meters antenna cable (for SAFARI™ 10 only)

Radiation

The SAFARI™ antenna radiates 15.1 dBW EIRP and this translates to a minimum safety distance of 1m from the antenna while it is transmitting, based on a radiation level of 10 mW/cm². Note that the safety distance applies to a hemisphere above the antenna. The antenna does not radiate over directly below the antenna.

Interference

Do not place the Antenna Unit close to interfering signal sources or receivers. It is recommended that no other antennas are located within three meters of Antenna Unit. Operate and test the SAFARI™ system to ensure no interference to other equipment near to it.

Important note to be followed before installing Antenna Unit

The following note shall be observed:

- Install the Antenna Unit with free line of sight in all directions to ensure proper reception of the satellite signal. Do not place the Antenna Unit close to large objects that may block the signal.
- The Antenna Unit has to be mounted horizontally without any inclined roof surface.
- The roof of the vehicle has to be metallic to be able to use the magnet mounts.

Installation of Antenna Unit with Antenna Cable

The Antenna Unit is shipped with 3 high intensity magnets with rubber coating. The Antenna Unit can be directly attached on the roof of the vehicle using these magnets.

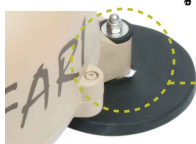
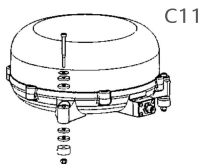
M5 Bolt stainless steel
(length must be selected
(3 pcs)

M5 Washer, fixed (3 pcs)

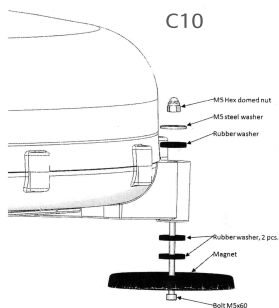
Rubber Washer, fixed
(3x4=12 pcs)

Spacer, must be
selected / adjusted
(3 pcs)

M5 lock nut (3 pcs)



Antenna Unit
Magnetic
Mounting Base



1. Place the Antenna Unit with magnets on the roof of the car. Remember that the magnets only work on a roof, which is made of metallic material.



WARNING: Do not place your fingers underneath the Antenna Unit when placing it on the vehicle. The magnetic force is very strong and your fingers may get hurt if they are caught between the Antenna Unit's base and mounting surface.

2. Connect the antenna cable between the Transceiver Unit and the Antenna Unit.

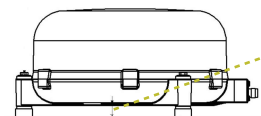
Recommended mounting position of Antenna Unit



It is recommended to locate the Antenna Unit on the flat portion of the roof of the vehicle so that the magnet mounts can be fixed securely to the vehicle.

The detailed information of installing the magnet mounts is available inside the packaging box of the antenna unit.

It is very important to have the clearance of at least 5mm to prevent rainwater from entering the base of the antenna unit.



Minimum
clearance of
5mm

Detaching the Antenna Unit

To remove the Antenna Unit, hold the Antenna Unit near one of the three magnets and lift it. When one magnet is loosened, the other two magnets are easier to “break off”.

Connecting Antenna Cable

At the side of the Antenna Unit, there is a coaxial connector which is a TNC (Female) receptacle.

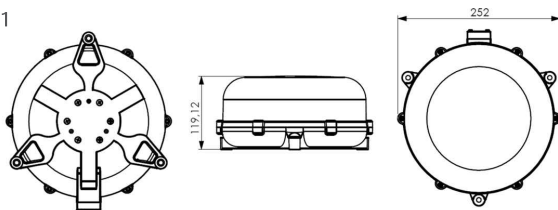
When installing the antenna cable, it is important to protect against moisture using self-amalgamating tape (or similar), which is wrapped around the coaxial connector.



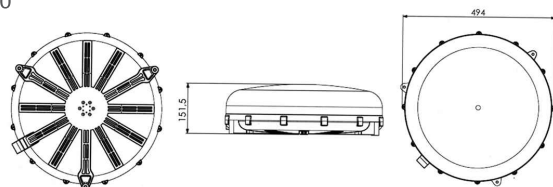
Additionally, the antenna cable running from the Antenna Unit has to be secured at short intervals. An unsupported length of cable will vibrate when driving or get entangled with overhead trees etc which can affect the antenna connection over time.

Dimension of the Antenna Unit (in millimeters)

C 11



C 10



Installation Guide of Transceiver Unit

The Transceiver Unit is designed for installation in a vehicle. It is not suited for outdoor installation.

Unpacking

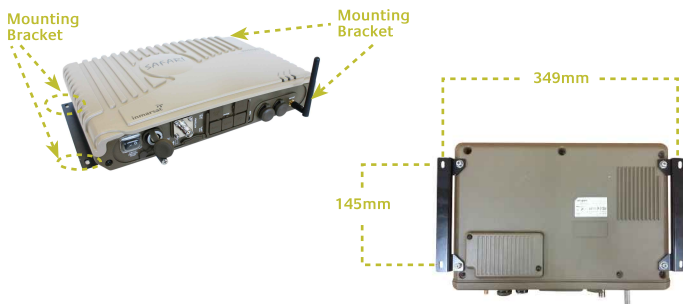
- Transceiver Unit (TU)
- Primary Handset with cradle
- 3 meters antenna cable
- 1.5 meters Ethernet cable
- 1.8 meters telephone cord
- Self-amalgamating Tape
- 3 meters DC power cable with cigarette lighter connector
- 1 meter GPIO cable (General Purpose Input / Output) cable
- 1.8 meters serial port cable with its connector for GPS output
- Wi-Fi Antenna
- CD format User manual

Optional accessories for Transceiver Unit

- AC/DC Power Supply 24VDC / 10A (without power cord)
- 10 meters antenna cable
- 20 meters antenna cable
- 30 meters antenna cable
- 1 meter pigtail antenna cable and TNC Adaptor

Mounting of Transceiver Unit

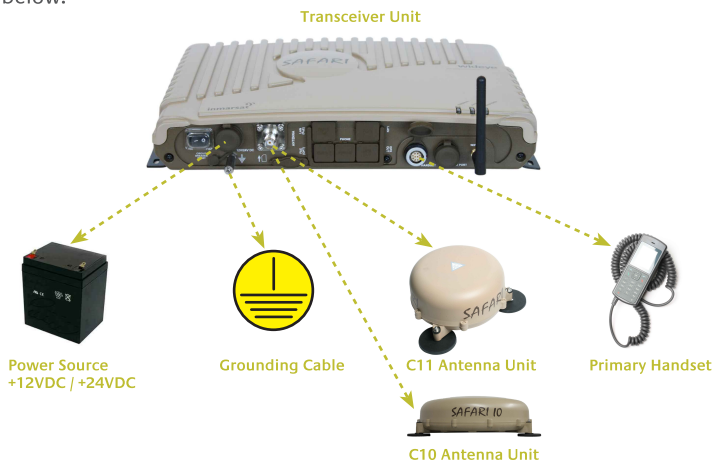
Mount on any solid surface in the vehicle preferably with the cable connections at the bottom.



Mounting brackets can be found on both sides of the Transceiver Unit and can be secured firmly by 4 pieces of M5 x 12mm self-tapping or machined screws.

Installation of Transceiver Unit

An overview of Transceiver Unit's basic connections with is illustrated as below.



Note: Grounding cable shall be connected to the body of the vehicle as the earth or grounding point. It is not included as a standard accessory.



Note: If the Transceiver Unit is installed in a location where the ambient temperature may exceed $+45^{\circ}\text{C}$, we recommend placing the terminal where unintentional contact with the unit is avoided. If the maximum ambient temperature does not exceed $+45^{\circ}\text{C}$, the terminal can be placed in an open area.

Installing the SIM Card

The Transceiver Unit requires a BGAN SIM card to access the Land Mobile network and configure the settings. Please refer to your Airtime Service Provider for more information.

Follow these steps to install the SIM card:

1. Tilt up the SIM card slot rubber cover as shown below.



SIM Card
Rubber Cover

2. Position the SIM card with its gold-contacts facing down as shown below.



SIM Card

3. Use your finger to push the SIM card gently until it is being clicked and locked in place. A screwdriver can be helped to push the SIM card if the SIM card cannot be inserted properly.
4. Tilt down the SIM card cover to its original position.

Connecting Antenna (Coaxial) Cable

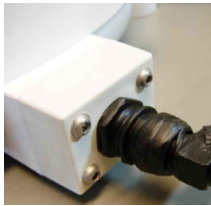
Connect the antenna cable between the Antenna Unit and Transceiver Unit. Follow these steps to connect the antenna cable to the Transceiver Unit:

1. Plug in the antenna cable to the Transceiver Unit.



Antenna Cable (Coaxial) Connector

2. Tighten the connector till it is being secured.
3. Plug the other end of the antenna cable into the antenna connector.



Note: It's important to use the given self-amalgamating tape to wrap around the coaxial connector (at the Antenna Unit end) to protect against moisture.

Antenna Cable

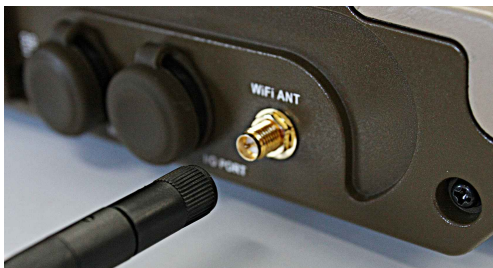
If there is a need to have a different cable other than 3-meter antenna cable, it is important that an antenna cable shall meet the requirement especially in the RF attenuation. The maximum attenuation in the antenna cable must be less than 12 dB at the frequency of 1600 MHz to ensure the performance of the system.

Note: It's important that the antenna cable is connected properly to the SAFARI Antenna Unit and Transceiver Unit. Check to ensure that the antenna cable connectors on both sides are securely and properly connected.

Connecting the Wi-Fi Antenna

Follow the steps to connect the Wi-Fi antenna:

1. Connect the Wi-Fi antenna to the Wi-Fi antenna port. Turn clockwise direction until it is secured.



Connecting to DC Power Source

Follow these steps to connect the Transceiver Unit to the DC power source.

1. Flip open the DC power port rubber cover on the front panel.



DC Power Connector
Rubber Cover

2. Connect the DC power cable on the front panel through the alignment of the red dot.

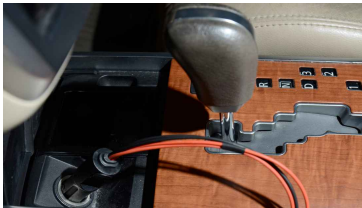


DC Power Cable
Connector

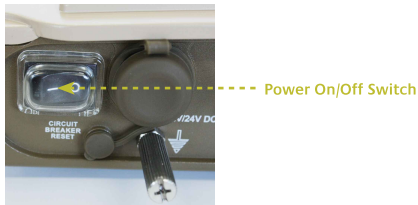
3. Connect the DC power cable to the DC Power Source of the vehicle via a 15 amperes fuse in the vehicle's fuse box.



4. Alternatively, the Transceiver Unit can be connected to the cigarette lighter connection of the vehicle. Check the fuse of the cigarette lighter in your vehicle to ensure that it is 15 amperes or above.



5. A Power On/Off switch is located next to the DC power connector on the front panel for the turning “On” and “Off” of the Transceiver Unit. Press the Power On/Off switch to turn on the Transceiver Unit.



It is recommended to operate the Transceiver Unit when the car engine is running to prevent the current being drained off from the battery directly.

Note: The power switch combines its internal 10A circuit breaker and ON/OFF switch with rocker actuation. Thus, the power switch protects the Transceiver Unit against any over current or short-circuits.

Connecting Primary Handset

Follow these steps to connect the Primary Handset:

1. Flip open up the rubber cover on the front panel.



Primary Handset Cable
Connector Rubber Cover

2. Plug in the Primary Handset cable connector into the Primary Handset port on the front panel through the alignment of the red dot.



Primary Handset
Cable Connector

Note: The Primary Handset is powered from the Transceiver Unit.

