USER & INSTALLATION MANUAL
TARGET BLU EYE

TARGET
BLU EYE

An eye for safety.

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USER AND INSTALLATION MANUAL TARGET BLU EYE

Congratulations! With the purchase of this Target Blu Eye system you have become the owner of a very sophisticated traffic safety system that is patented worldwide and manufactured in The Netherlands. To ensure maximum benefit from your new Target Blu Eye, please read all operating instructions completely. We believe our system will increase your comfort of driving and we wish you many safe years using your Target Blu Eye on the road.

Track Technologies B.V.

IN THE BOX
- Central unit
- Control display
- Standard antenna with 2.5m. antenna cable
- Cable between central unit and control display
- Power cable including fuse
- SD card
- Quick Start Manual

THE FUNCTIONS OF TARGET BLU EYE

The operation of the Target Blu Eye system is very user-friendly. If an emergency vehicle is nearby, Target Blu Eye is able to recognize such a vehicle in time, thanks to the very advanced electronics. You will be warned in advance with an acoustic and visual alert. The signal strength meter on the control display allows you to see at first glance whether an emergency vehicle is approaching you or moving away from you.
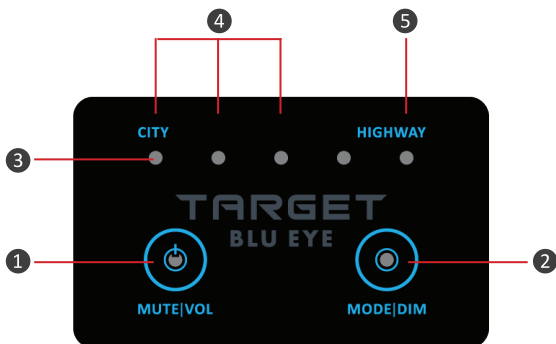
ON/OFF-MUTE-VOLUME-BUTTON ❶

- System on/off manually: press and hold the button for at least 2 seconds
- Mute on/off: press the button shortly
- Set volume: press buttons ❶ and ❷ simultaneously

ON/OFF

The system is powered from the ignition of the car. Press button ❶ for at least 2 seconds to switch the display on or off manually.

MUTE

Press button ❶ (a short press) to activate the Mute function: the first green led ❸ will start flashing. The system will be muted for 30 seconds after the last alert has been received. Mute can be manually deactivated with a short press on button ❶.

VOLUME

Press and hold the buttons ❶ and ❷ simultaneously for the desired volume level.

MODE-DIM BUTTON ❷
• Select sensitivity mode: short press
• Set display brightness: press and hold the button

CITY MODE
Press button ❷ (a short press) to select the sensitivity mode. City Mode has 3 user selectable levels varying from 1 to 3 leds. Press button ❷ (short press) to select the desired sensitivity – 1, 2 or 3 leds. After 5 seconds from the last button press, the system will set the sensitivity level selected. Your display will continuously show 1, 2 or 3 leds in City Mode depending on your sensitivity selection. Only signals stronger than the led that is continuously on, will lead to alerts from your Blu Eye. The use of City mode is recommended in urban areas. Adjust the sensitivity (1, 2 or 3 leds) to get the best results from your Blu-Eye.

You may need to experiment to see which setting works best for you. Factors such as antenna performance and the density of buidings near your vehicle will affect the Blu-Eye detection capabilities.

HIGHWAY MODE
Highway mode has a much greater range of detection but may cause unhelpful alerts in built up areas. To switch to Highway Mode press and hold button ❷ until the red led ❺ starts flashing. Blu Eye is now in Highway Mode. The red led will go out after 5 seconds.
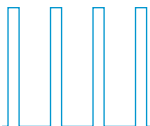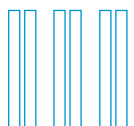
VISIBLE WARNINGS BY LEDS ❸
Besides an acoustic alert, Target Blu Eye also warns you by the leds on the signal strenght bar on the control display. If an emergency vehicle is approa-ching, the leds will run up from green to finally red. Green represents the longest distance to the emergency services vehicle and red the shortest distance.

AUDIBLE WARNINGS 4

Target Blu Eye will generate two different audible warnings depending of the type communication that is used at a specific moment:

Type of communication	Acoustic alert Target Blu Eye	Explanation
Periodic log-on	Periodic log-on	Emergency services vehicles log-on periodically to the nearest TETRA base station. Even if the TETRA equipment is not used for communication. Target Blu Eye recognizes such log-ons, you will be warned by a short, repeating beep (mostly 4 seconds).
Communication (speech) and data transfers	Repeating double tone within one second.	If emergency vehicles communicate with each other or with the emergency room you will be warned by a repeating double tone within' one second. You will also be warned in case of data transfers betweeen emergency vehicles or between an emergency vehicle and the emergency room.

IMPORTANT INFORMATION

Target Blu Eye detects all radio signals transmitted by emergency services. However, the emergency services do not always transmit (periodical) radio signals. Sometimes intervals can be longer (in case of handheld radio's) or the radio's can be switched in DMO (Direct Mode Operation). In DMO, there is a direct connection between 2 or more vehicles and their respective radio's are not connected to the Tetra network.

Target Blu Eye always detects the presence of an emergency vehicle if there is communication between the vehicles or communication between the vehicle and the emergency room. Even when DMO is used.

The detection range of Target Blu Eye varies from hundreds of meters 'till approximately one kilometer. The range depends on the selected sensitivity mode, environmental conditions (open field or city area) and the antenna used.

INSTALLER MODE: YOUR GUARANTEE FOR THE MAXIMUM PERFORMANCE OF BLU EYE

Blu Eye is equiped with a high sensitivity receiver of more than -115dBm. Due to this, several design steps have been taken to shield Blu Eye to external interference from sources such as GPS devices (present in some dash cams and speed cam databases etc) and electronic circuits of the vehicle. Under some conditions the receiver of Blu Eye may be affected by one or more of these external sources. This may lead to a random alert pattern when no visible emergency service vehicles are around and/or late detections. Our new Installer Mode has been developed to easily detect and locate possible interference from external sources during the installation of Blu Eye.

HOW DOES INSTALLER MODE WORK?

Installer Mode displays the sum of any interfering pulses plus the noise level caused by any of the devices mentioned in the foregoing paragraph. This level will be indicated by the signal strength bar of Blu Eye. The lower the value, the better Blu Eye will perform. Installer Mode can be used to check both, existing installs and new installs.

TIP: Before you even take off the trim in the vehicle, lay out the Blu Eye system with all the cables and display in the locations that you plan to fit the Blu Eye and then run the installer mode, you will get a quick idea if there are any issues before you spend time removing trim. Make sure you also establish what electronic devices your customer may use in their vehicle so you can make sure they are present during installer mode testing. There is no point in positioning the antenna or receiver in the vehicle and then finding out the customer places his latest electronics gadget right next to one of them when he is driving.

If Installer Mode is pre-installed on your Blu Eye system, you should follow this manual. In case you have an older system without Installer Mode, or if you want to check a system already installed, then please use the special Installer Mode manual which you can find in the Download Center.

HOW TO OPERATE INSTALLER MODE

In Installer Mode, one of the led's of the display's signal strength indicator will continuously blink . The blinking led corresponds with the level of interference received by the antenna and/or the receiver on the chosen location. If the first green led is blinking only, there is no known interference which means the location is excellent. In case the 4th led (yellow) or 5th led (red) is blinking, the level of interference is above the acceptable level and it will be necessary to chose another location for the receiver and/or the antenna. See 'How to locate the source of distortion'.

Indication	Result
🟢 ⚪ ⚪ ⚪ ⚪	Excellent
⚪ 🟢 ⚪ ⚪ ⚪	Good
⚪ ⚪ 🟠 ⚪ ⚪	Doubtful
⚪ ⚪ ⚪ 🟠 ⚪	Poor
⚪ ⚪ ⚪ ⚪ 🔴	Very poor

IMPORTANT NOTICE!

If there are valid Tetra signals present in your area (ambulance- fire truck garage or a police office etc.) these signals will influence your test results. This may lead to a higher interference indication and does not reflect the real interference in your vehicle.

HOW TO LOCATE THE SOURCE OF DISTORTION

TESTING THE BLU EYE RECEIVER LOCATION:

Disconnect the antenna from the Blu Eye receiver.
Start the engine and let it run idle for approximately 60 – 120 seconds.
If no yellow or red leds come on during this test, the chosen location for the receiver is good. Continue with 'Testing the Blu Eye antenna location'

If there are yellow or red led indications during this test, another location for the receiver is required. Sometimes moving the receiver 10 cm's to another location could make all the difference.

TESTING THE BLU EYE ANTENNA LOCATION:
Connect the antenna to the Blu Eye receiver.
Start the engine and let it run idle for approximately 60 – 120 seconds.
If no yellow or red leds come on during this test and the antenna and cable are in their final position*, the chosen location for the antenna is good. Continue with: **'Registration of your Target Blu Eye'**

If there are yellow or red led indications during this test, another location for the antenna is required. Sometimes moving the antenna a few centimeters could make all the difference.
 Interference may be caused when the antenna cable is routed against or very close to the vehicle's wiring looms. In some cases the interference can be eliminated by moving the antenna cable a short distance away from the vehicle's loom.

If the above was successfully solved, continue with: **'Registration of your Target Blu Eye'**

INSTALLATION INSTRUCTIONS
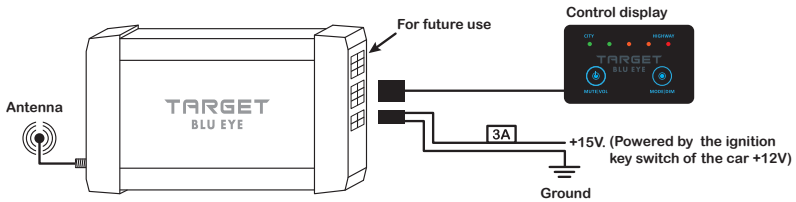
ANTENNA

The standard antenna is suitable for most situations and provides an average detection range.
It is preferred to install this antenna as high as possible on the inside of the rear- or front windshield with the top down. In case of the front windshield, mount the antenna at the location of the rear view mirror out of sight for the driver. The antenna cable can be routed behind the roof panel and the panel of the A pillar towards the central unit. In suitable cases, the standard antenna may also be installed on the vehicles roof.

The standard antenna may not be installed on one of the following locations:
1.   Under or behind the dashboard.
2.   Behind the panels of the A, B and C pillars.
3.   In the engine compartment.
4.   Behind a bumper.

The standard antenna can not be used in vehicles with a too high level of electrical noise. The noise level can be easily determined by using Installer Mode.

The standard antenna may be used in vehicles with heated windshields or heat insulting glass however this may affect detection ranges.

In case the standard antenna can not be used, you may select one of the following options:

1. Dipole antenna for installation in the front- or rear bumper. Installation in the front bumper, provides the best reception in the driving direction of the vehicle. Installation in the rear bumper gives the best results towards the rear side of the vehicle.
    Performance: better than the standard antenna.

2. Panel mount base antenna (18 cm long whip). Suitable for installation on the tailgate or rear spoiler. This antenna provides the best reception towards the rear side of the vehicle.
    Performance: substantially better than the standard antenna.

3. Combi Tetra/FM Radio/GPS antenna. This antenna replaces the existing antenna of the vehicle.This antenna provides the best reception towards the rear side of the vehicle.
    Performance: substantially better than the standard antenna.

4. Sharkfin modification for Audi/BMW/Mercedes Benz/Volvo. Caution! Not suitable for some of the latest models where the GSM antenna is in use. This antenna provides the best reception towards the rear side of the vehicle.
    Performance: better than the standard antenna.

CENTRAL UNIT
Mount the central unit in the boot if the antenna is mounted on the back of the car. The unit can be mounted behind the boot's cladding. Be aware that the SD car slot must be accessible in order to run possible firmware updates.
If the antenna unit is mounted at the front of the car, please make sure that the central unit must be mounted nearby,i.e. underneath the dashboard.

IMPORTANT
If you mount the central unit in the boot of the car or behind the dashboard, please keep a certain distance between the antenna cable and wiring looms of the vehicle.

DISPLAY

The display must be mounted so that it is visible and easily accesible for the driver. There are three cable slots allowing you to route the cable from the left, right or bottom of the display (depending on the mounting position). If you bring the cable in from the bottom, slide the loose sleeve over the wires to protect and hide them. Slide the loose shrink sleeve out of the way if you are using the left or right cable routes. When you have decided your cable route you can use the double sided sticky tape to mount the display in the best position for the driver. The shielded 5m. cable between the central unit and the display MUST NOT be cut, shortened or extended! The display can also be installed in the rearview mirror. The leds will be visible through the glass and the buttons will be replaced with micro switches in the bottom of the mirror housing. Installation of the display in the rearview mirror will be arranged by Track Technologies.

Thanks to it's slim design the display can be mounted horizontally on the dashboard so the leds reflect on to your windscreen and are visible to the driver.

REGISTRATION OF YOUR TARGET BLU EYE

After the installation of the Target Blu Eye has been completed and the system is connected, you must register your Target Blu Eye on our website www.blu-eye.eu. After finishing the registration process and downloading and installing the software your Target Blu Eye is ready for use. For registration please follow the next steps:

1. Switch off the ignition of your car and your Target Blu Eye switch off automatically.
2. Insert the SD card into the SD card slot of your Target Blu Eye.
3. Switch on the ignition of your car.
4. The ID of your Target Blu Eye will be copied to the SD card. All leds will light up for five seconds. This step is completed if the leds on the signal strength meter go out and only the two blue leds are lit.
5. Switch off the ignition of your car.
6. Remove the SD card from you Target Blu Eye.
7. Insert the SD card into the SD card slot of your PC or Mac.
8. Go to www.blu-eye.eu and click on "Register" and follow the intructions in order to register your Blu Eye and to download the files to your SD card.
9. After finishing the registration process you remove the SD card from your PC.
10. Switch off the ignition of your car and your Target Blu Eye switch off automatically.
11. Insert the SD card again into the SD card slot of your Target Blu Eye.
12. Switch on the ignition of your car. IMPORTANT: Never disrupt the voltage to your Target Blu Eye during the update process!
13. All leds will light up for five seconds. After five seconds the leds on the signal strenght meter go out. In this first update process it takes about 30 seconds until the data files have been copied. During this process the leds will light up from left to right and right to left. At the end of this process the three leds on the right will light up, followed by the two leds on the left. When all leds go out, the process is finished. Please wait at least 15 seconds before switching off the system and removing the SD card.

TECHNICAL SPECIFICATIONS

- Power supply: 10 – 30V.
- Power consumption while display is switched on: 300mA (350mA max.)
- Power consumption while display is switched off: 275mA
- Fuse: 3A
- Frequency range: 380-400 Mhz
- TETRA detection by Waveform recognition, no decoding
- Temperature range: -20°C - +70°C
- Dimensions central unit: 160 x 82 x 27mm. (lxwxh)
- Dimensions display: 64 x 40 x 7,5mm. (lxwxh)
- Dimensions antenna: 72 mm. (H); diameter base: 35 mm.;
- diameter antenna: 15 mm.

TRACK
TECHNOLOGIES

Know what's out there...

Röderweg 32 | 35418 Buseck| Germany
Phone +49 6419728645 | info@radarwarner.de

www.radarwarner.de