



DESCRIPTION

The *Cordless Teth-Air* is a technologically advanced radio transmitting and receiving safety device. It is designed for snowmobiles and similar vehicles where the rider/driver may get separated from the controls. This system is designed to shut off the engine in a runaway condition, whether the throttle is stuck open or when the vehicle may be kept moving, aided by the engine running uncontrolled in gear.

The *Cordless Teth-Air* is comprised of two components:

1. Transmitter. (Worn on the wrist of the vehicle operator)
2. Receiver. (Mounted and wired permanently on the vehicle)



The primary mode/feature of operation is to shut off the vehicle engine when the driver is ejected from the drivers seat or falls off the vehicle. The receiver will shut the engine off when the radio signal strength is too weak. This condition occurs when the distance from the transmitter and receiver become too great. The ideal set-up condition allows uninterrupted operation of the vehicle as long as the transmitter on the operator is within 2-3 metres (6-9 feet) of the receiver.

The secondary mode/feature of operation is to provide limited theft control of your vehicle. When properly installed, the *Cordless Teth-Air* does not allow operation of the engine for more than 1 second without receiving the coded digital signal from the transmitter. This allows the engine to start but does not allow sufficient running time for a potential thief to ride away.



CERTIFICATION

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

PATENT PROTECTION

This device is protected under the following patent(s): **Patent License US 7,034,696 B2**



INSTALLATION

Receiver:

The receiver is housed in a water resistant ABS enclosure. However, is recommended to be installed in a dry location. Make sure that the chosen location is not too close to **HOT ENGINE OR EXHAUST SYSTEM** components. The internal relay will accommodate normally open or normally closed kill switch wiring schemes. The normally open configuration would be used when it is desired to “close” the “kill switch” to stall the engine (e.g. Ski-doo and Polaris snowmobiles). The normally closed configuration would be used “open” the “kill switch” to stall the engine (e.g. Arctic Cat snowmobiles and vehicles with a battery type electrical system).

The receiver requires a 6-18 volt supply from the vehicles power source. The power can be either AC or DC (therefore not polarity sensitive) and should not supply power when the engine is off (e.g. not across battery). If the vehicle is equipped with an ignition switch, you may connect the receiver unit at the switched side of the ignition switch. The **white** and **yellow** wires on the receiver unit are used for the power connection. Tie these wires in to the chosen power supply location with the supplied connectors. See wiring diagram for further details.

Install the antenna (stripped end of COAX) as close as possible to the throttle side handgrip with the supplied zip ties. For best reception it is recommended to not attach to metal surfaces or have metal components in the path between the transmitter and receiver. Do not install COAX antenna where it could impede throttle operation.

The receiver is shipped with the 6.5cm (2.5”) antenna for maximum operational area. The antenna length may be cut shorter to decrease the operating area. If this is done it is recommended to cut about 1cm (3/8”) at a time and not shorter than 2cm (3/4”). Test your operational area by starting engine and walking away and monitoring where the engine cuts out. Keep shortening the antenna until you are satisfied with the operation. If you overshoot and cut the antenna too short, re-strip the black COAX jacket and shield to the desired length. Remember to keep the white inner insulator on the antenna.

Transmitter:

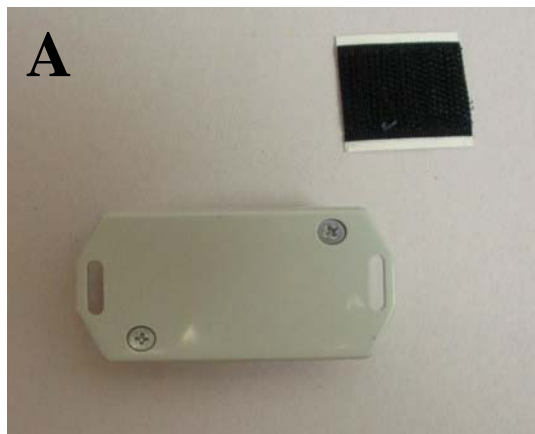
The transmitter PCB is coated with a water resistant epoxy that is housed in a water resistant ABS enclosure with no user interface buttons. The TAG must be worn on the outside of the clothing for best results. For abnormally wet riding conditions, it is still recommended to apply a thin bead of silicon sealant to the battery cover before installation. This will have to be checked or re-applied each time the battery cover is removed.

To install the battery, remove the two screws from the back of transmitter and install the supplied battery (CR2032). Replace the cover and screws.

Affix the wrist strap to the back of the transmitter as shown in figures A, B and C on the next page with the hook and latch material supplied.



TAG STRAP INSTALLATION



Remove the black “hook” material (illustration “A”) from the paper backing and adhere it to the back center of the TAG.



Feed the elastic “latch” material through one side of the flange opening of the TAG. Then attach the “latch” material to the “hook” material as shown in illustration “B”.



Feed the other side of the “latch” material through the other flange opening and attach it to the “hook” material. Same as illustration “B”.

The final result of the TAG should look like the illustration in “C”.

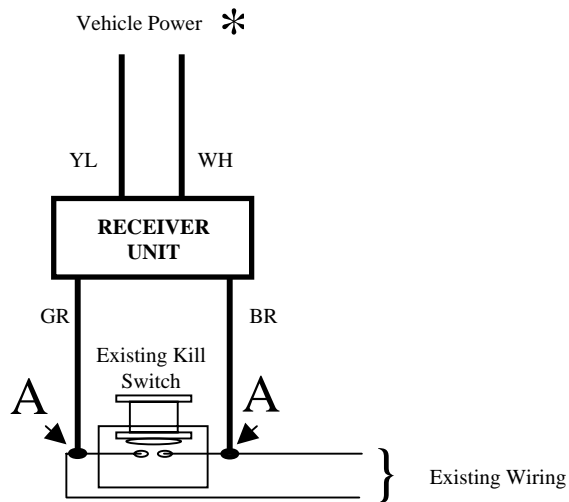
The length of the “latch” material may be shortened to suite you individual needs by pulling the “latch” material through one side of the flange further, and re-attaching it to the “hook” material. Cutting the “latch” material is not recommended incase you will need it to be longer in the future. Remember, the TAG has to be worn outside the clothing for best results.

For further information please see our web site @ :
www.sourceinnovations.ca

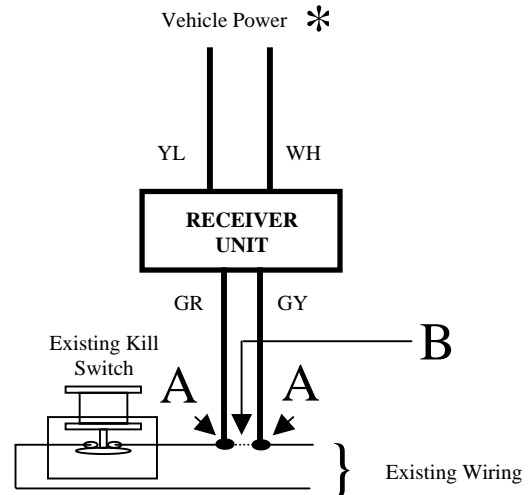


WIRING DIAGRAM

Normally Open Configuration
e.g. Ski-doo, Polaris, new Arctic Cat



Normally Closed Configuration
e.g. old Arctic Cat & Battery Ignition



<p><u>POWER (6V to 18V AC/DC)</u></p> <p>YL = YELLOW WH = WHITE</p> <p><u>RELAY</u></p> <p>GY = GREY (normally closed) GR = GREEN (common) BR = BROWN (normally open)</p>	<p>NOTE</p> <p>A: INSTALLER CONNECTIONS</p> <p>B: CUT EXISTING WIRE</p> <p>*: THE POWER SUPPLY LOCATION MUST NOT SUPPLY POWER WHEN THE ENGINE IS OFF FOR VEHICLES WITHOUT IGNITION SWITCHES (SEE INSTALLATION).</p>
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OPERATION / SETUP

Transmitter

The transmitter unit is to be worn on outer most layer of clothing around the wrist of rider/driver. Use the right wrist, as this one is closest to the throttle where the COAX antenna is mounted. Obstructions of clothing may affect the range of the transmitter. There are no user buttons on the transmitter for set up. When the battery is installed, this unit runs until battery is removed or exhausted. A fresh battery will last up to 6 months with continuous use depending on ambient temperature. To extend battery life, it is a good idea to remove the battery from transmitter during extended periods of non-use.

Receiver

The receiver has a three status LED indicator and a push button on the enclosure. The LED will blink green during normal operation, blink orange when the battery becomes low during normal operation and solid red during TAG signal loss. The battery should be replaced soon after when the LED blinks orange for continued operation.

The push button is used for transmitter TAG setup and bypass mode. The first time that the *Cordless Teth-Air* is used, the supplied TAG must be “learned” by the receiver unit. To do this, make sure that the battery is installed in the TAG and the tag is close to the COAX antenna. Within 30cm or 1 foot. Start the engine and depress the push button on the receiver unit within 1 second or hold it down while starting. The LED indicator will now be solid green indicating “learn / bypass” mode. Wait a few seconds and press the push button again to register the TAG. The LED will back to blinking green and you will be ready to go. After this initial set up, the *Cordless Teth-Air* will always be ready during every engine start up. More TAG’s may be registered as needed at any time engine is running (max. 6 TAG’s). Just place all TAG’s to be registered within 30cm (1 foot) and depress the push button. After indicator LED shows solid green, wait a few seconds press the button again. Now all TAG’s in range may operate the vehicle. This may be done multiple times to go back and forth between TAG’s. Pushing the “set up / bypass” mode button after 1 second during engine start up also sets the Receiver unit in bypass mode if the push button is not depressed. This disables the system and the engine is operated as if there was no *Cordless Teth-Air* installed. This bypass mode is mainly used if TAG becomes lost or has a dead battery. To keep engine in bypass mode, this procedure has to be performed every time engine is started up. With no TAG present or registered, the engine will approximately run for 1 second and shut down.

When power to the receiver unit is taken from the ignition switch, (vehicles with electric start) the ignition must be toggled off in order to reset the receiver unit. The engine will not start when the status LED is red. Turn key off and wait for approximately 3 seconds until LED goes out and then you can re-start engine.

The *Cordless Teth-Air* is a tool to make your vehicle safer and more enjoyable to use. Source Innovations Ltd. makes no claims or guarantees regarding results as radio interference is possible and cannot be controlled. See disclaimer for further details

ALWAYS TEST OPERATION PRIOR TO USE by starting engine and walking away from vehicle with TAG.

