

PHANTOM TETH-AIRTM

2012-16 Arctic Cat M-8 Install, 2015 Phantom and 2016 Phantom

As Arctic Cat does not include a factory tether connector on most models, the Phantom universal install kit(standard kit) is recommended for this install.



1. Position the Upper Control Unit to the front of the throttle block as shown. Optionally foam tape can be used between the throttle block and Upper Control Unit.



2. Use the long plastic cable ties to secure through the end holes and around the handle bars. Avoid having any wires directly under the ties or they could break as the throttle block is rotated. MAKE SURE THAT THE WIRE TIES DO NOT INTERFERE WITH THE THROTTLE MOVEMENT.

3. Use the smaller wire ties to attach the Black control cable to the handle bar but leave some slack on the top end to allow for movement. (2015 Phantom shown with Grey cable unsecured)



4. Remove the hood to access the engine compartment.



5. The lower circuit is to be mounted under the hood and suspended from the over-structure with 2 cable ties. Make sure it will not interfere with the hood when re-installed. Feed the wires up to near the steering column. Keep all wires away from the hot exhaust, sharp components and moving parts. Addition of split loom is recommended to protect wiring.

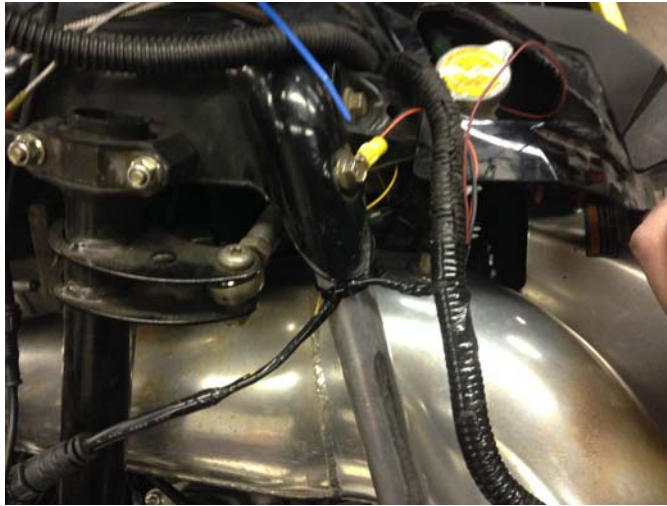
Plug the Lower Control Unit into the cable from the Upper Control Unit and gently tighten the locking ring to make a water-tight connection. Also similarly connect the Universal wiring harness.



6. The M/F bullet connector next to the chain case, if available, is a good location to connect for power/ground. If unavailable the back-up beeper has positive voltage present with the engine running and this power can be shared for the Phantom Teth-Air. Note, the ground is switched on the beeper and therefore is not usable. The Red Phantom (Brown for 2016) wire must be connected to a 12 volt DC supply and the Black (Orange for 2016) and Green Phantom (Black for 2016) wires will need to be connected to a reliable chassis ground. Refer to the wiring diagram. **Note: for 2016 the thick Red Phantom wire is not used for 2 strokes and should be taped over any bare conductors.** (2016 Phantom wiring shown)



7. For 2015 Phantom, Black and Green wires must be connected to chassis ground. For 2016 Phantom, Black and Orange wires must be connected to chassis ground. **For 2016 the thick Red Phantom wire is not used for 2 strokes.** We grounded using the bolt securing the top end of the over-structure tube near the steering post support. Use a fork style crimp on connector and there is then no need to remove the bolt completely when grounding.



8. The easiest connections for a tether to the existing wiring are as follows:
Violet/Red wire from engine bay cable that runs to the council. Grounding of this connection will kill the motor. (pin 17 on council plug)



Connect the Brown Phantom wire (Green for 2016 Phantom) to this Violet/Red wire with the Scotch-Lok connector provided. Refer to the wiring diagram. (2016 shown below)



9. Remove the expansion chamber to access one of the ignition coils to connect the Tach wire.



10. Carefully remove about 1 cm (7/16") of the outer White insulation from either ignition coil primary input wires. Crimp on the provided Scotch-Lok connector. (kit may contain another style) Connect the Blue Phantom (2015) or Yellow Phantom (2016) Tach wire. Avoid routing this wire too near hot or sharp components. The addition of split loom is recommended to protect this wire. Note: If the Phantom LED flashes Blue when setting the Tach, the Phantom has failed to read the engine RPM and this connection will need to be checked for integrity.



11. Your wiring will be complete at this point. Re-install the expansion chamber, re-check your connections and then start the motor and test and set up your Phantom prior to re-installing all panels and hood.

The factory setting should allow for starting of the motor. See the "Quick Programming Guide" for "High Value Escape Mode" if the motor fails to start.



Remote Control.

Keep the Remote Control in a warm dry place. The shipping bag can be left in place to help protect it from moisture. The Remote Control will work through this protective bag.

See the Phantom Teth-Air Owners Manual for additional installation, safety, and operation information.

Basic Settings:

With the motor running and the plastic tab pulled out of the remote control (to connect the battery) aim the remote toward the top of the Upper Control Unit.....

For **Proximity time delay**, Press “PROX” and then enter a number.

For **Roll-Over delay**, Press “R/O” and then enter a number.

Recommended initial number for both is **3** this will delay 2 seconds.

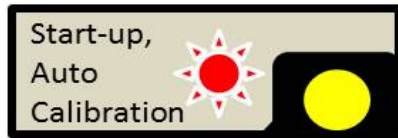
0=0.5, 1=1, 2=1.5 3=2, 4=2.5 5=3 seconds delay.

Lower delays should be considered for faster response once the rider is used to the system.

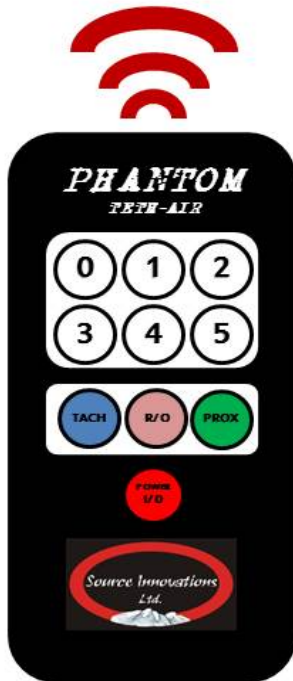
With No hand Present (LED RED) and engine idling, press the “TACH” button to Auto-Set the Tachometer Arming RPM. This value should be set below the clutch engagement RPM. If **Hand is Present** during this procedure (LED GREEN OR BLUE) the TACH point will be set to exactly current engine RPM.



Phantom Teth-Air



Quick Programming Guide



User Options:

Press TACH with LED red (hand not present) to set current RPM x 1.8.
Press TACH with LED green (hand present) to set current RPM.
Press TACH with no tachometer input and LED will flash blue.

Press R/O to flash out current Roll-Over delay setting (0.5-3 seconds).
Each violet flash = button pressed (0-5). Wait for solid violet LED for next entry. Press 0-5 to enter desired R/O delay or press R/O to exit saving last setting or press POWER I/O to disable this sensor. (see manual)
Unit returns to Run Mode.

0 to 5 or R/O or POWER I/O

Press PROX to flash out current PROX delay setting (0.5-3 seconds).
Each yellow flash = button pressed (0-5). Wait for solid yellow LED for next entry. Press 0-5 to enter desired proximity delay or press PROX to exit and save last Setting or press POWER I/O to disable this sensor. (see manual)
Unit returns to Run Mode.

0 to 5 or PROX or POWER I/O

Press POWER I/O to put Phantom into Sleep Mode. Red LED will flash periodically and unit will not function.
This button can be held during engine start to adjust incorrect settings that can cause immediate engine shut down. (see manual)

In Sleep Mode: The following sub-menu settings/options are available.

TACH Power Up Delay - Press TACH, LED glows solid blue. Enter number 0-5 to select (100 - 500 ms). Factory setting is 0. This mode is only used to prevent shutdowns during engine starting. (unstable / noisy power at startup)
Unit returns to Run Mode.

PROX Relay Active Option - Press PROX, LED glows White (may appear Pink). Press 0 or 1. 0 = Demo Mode. (Engine kill relay deactivated). 1 = Normal Run Mode. (With engine kill relay active).
Unit returns to Run Mode.

POWER I/O Exit - Press POWER I/O. Unit returns to Run Mode, and returns the unit to the last saved user settings.

0 High Value Escape Mode - TACH and PROX will temporarily be set to high factory values to overcome stalling on start, due to accidental low TACH set-point. Unit returns to Run Mode. Followed by: PROX, R/O or TACH allows new setting to be entered. (see manual)

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CAUTION

The Phantom Teth-Air is a safety tool to make your power sport more enjoyable and safer. Source Innovations Ltd. strongly recommends that you take ample time to familiarize yourself with the functions and features so that you can set up the product to best suite your riding style. Failure to do so may cause engine shut downs and Source



Innovations Ltd. is not responsible for any damages caused by loss of control that could result. In addition improper setting could also cause the unit not to shut down the engine when it should.

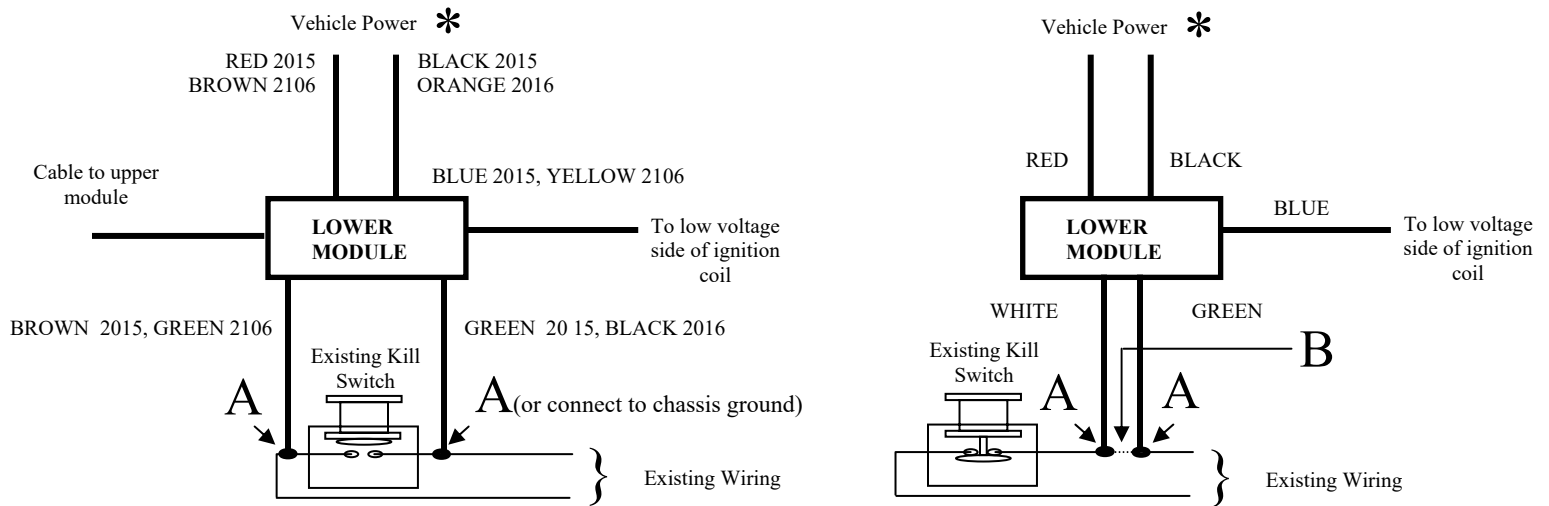
PATENT PROTECTION

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

WIRING DIAGRAM (note: 2015 and 2016 Phantom wire colours are different)

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

Normally Closed Configuration
e.g. old Arctic Cat & Battery Ignition Systems
2015 Phantom wire colours shown.



POWER (12V to 18V /DC)

RED 2105, BROWN 2016
BLACK 2105, ORANGE 2016

RELAY

WHITE 2105, RED 2016 (normally closed)
GREEN (common) 2105 AND 2016
BROWN 2105, GREEN 2106 (normally open)

TACHOMETER INPUT

BLUE 2105, YELLOW 2016

NOTES

A: INSTALLER CONNECTIONS

B: CUT EXISTING WIRE

***:** THE POWER SUPPLY LOCATION MUST NOT SUPPLY POWER WHEN THE ENGINE IS OFF FOR VEHICLES WITHOUT IGNITION SWITCHES (**SEE INSTALLATION**). CONNECT **RED (BROWN 2106)** TO POSITIVE AND **BLACK (ORANGE 2106)** TO NEGATIVE OF VEHICLES POWER. (CHASSIS GROUND)

