



ATGO TECHNOLOGIES

# RPM18000 TacTrack User Manual

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## Introduction

Thank you and congratulations on your purchase of the RPM8000 “TacTrack” model performance recorder. The “TacTrack” is an RPM recorder suited for snowmobile racing that plays back on your tachometer. It connects between the output of the snowmobiles Electronic Control Unit and the Tachometer. The “TacTrack” records the engine RPM and stores it for later playback on the Tachometer of the sled. This allows for immediate playback after a race to identify any modification needed to improve the sleds performance.

“TacTrack” has a list of features such as:

- Easy Installation Illustration will guide you through the connection process. Also the “TacTrack” is equipped with diagnostics to help you determine if your wiring is correct.
- Three modes of operation: The “TacTrack” will record your race, playback your race on your tachometer and help calibrate your tachometer. With the “TacTrack”, you can record multiple races and play them back in any order up to 256 races or 1 hour of data can be saved.
- Small size let’s you attach the device where it can be access easily.
- Large buttons with tactile-feel that will let you feel the button depress while wearing gloves.
- Durable case and internal hardware that will hold up to the bone jarring beatings that occur during racing.

## In the Box.

Each RPM8000 “TacTrack” is tested before being packaged to help us ensure that you get a product that is as ready to be used as you are to use it.

Your box should contain one RPM8000 “TacTrack” unit, mounting bracket, one cable harness, three female and three male snap receptacle/plug terminals, a battery pack with charger and this user manual.

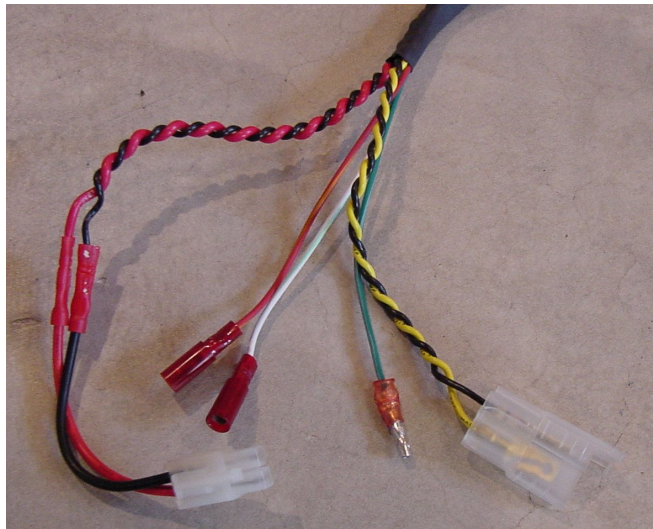


Replacement parts may be purchased at [www.atgotech.com](http://www.atgotech.com).

## Installing your RPM8000 TacTrack

**IMPORTANT!!!!!!!!!!!!!!** When connecting the wiring harness to your sled, make sure the following wires are connected to the correct signals.

Wire Use	Wire Color
+12V	Red
Ground	Black
Sled Power	Yellow
Sled Ground	Black
Tack Out	White w/ Green Trace
Tack In	Green w/ White Trace
Tachometer Power	Red w/ Yellow Trace



### Connecting Power Wires.

There are two connectors on the cable harness that can be used to power the TacTrack. Both sets of wires may supply power to the TacTrack at the same time. The connector on the Red and Black wires mates to the external battery that comes with the TacTrack. The connector on the Yellow and Black wires connects to the Skidoo snowmobile's +12 Volt power supply.

Once you have connected the power connectors connected to the harness, connect the RPM8000 TacTrack to the "TacTrack Cable Harness". If power is available (battery is charged or snowmobile is running) and connected correctly, the Record LED will begin blinking once the software version is displayed on the LEDs.

By pressing the mode button, you will see the mode change to Play, Calibrate, Erase and back to Record. Power has been successfully applied to your unit.

## Connecting the Tack in and Out wires.

Disconnect the cable assembly from the “TacTrack” before you continue.

Find the wire that provides the pulses to your tachometer (Skidoo snowmobile is white wire with a green trace). For the “TacTrack” to function properly, the “TacTrack” must be placed inline with the wire that provides the pulses. Cut the wire to the Tachometer so there is plenty of wire on both sides of the cut wire to work with.

Crimp a Female snap plug on the cut side of the wire that runs to the Electronic Control Module (ECM). Crimp a Male snap plug on the other end of this wire that runs to the tachometer.

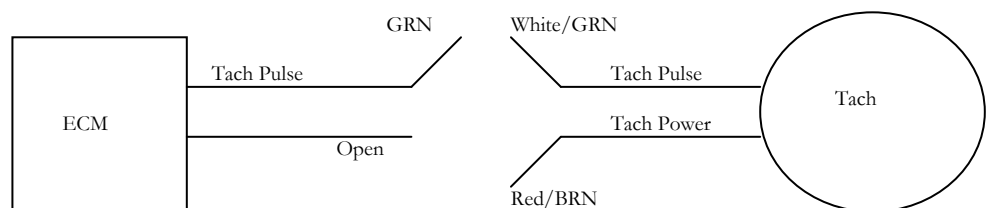
**For Skidoo Snowmobiles Only;** find the Tachometer power wire (typically red wire with a yellow trace). Crimp a Female snap plug on the side of this wire that runs to the ECM. Crimp a Male snap plug on the other end of this wire that runs to the tachometer.

With these plugs, the cable harness may be connected to the ECM and Tachometer (If you want to run without the “TacTrack”, the two wires can be plugged back together).

Now, let’s connect the TacTrack cable harness to the snowmobile. First, connect the Plug the snap plug on the wire that provides the pulses to your tachometer into the harness’ green with white stripe male plug. Then plug the harness’ white with green stripe wire into the Male wire going to the Tachometer

Now connect the Tachometer power. The “TacTrack” supplies the tachometer with power. Connect the remaining harness’ Female plug on the red with brown wire into the Male red with brown stripe wire going to the Tachometer. The other side of the power wire running to the ECM does not need to be connected.

Reconnect the cable harness to the “TacTrack”. The LEDs should light up (Skidoo Tachometer should buzz and reset).



The TacTrack supplies power to Skidoo Tachometers. This is so playback can be performed without the sled running.

## **Testing Your Installation.**

Once you have your TacTrack wire harness installed, connect the harness to your RPM8000 TacTrack. The TacTrack should power up ( Skidoo tachometer's should buzz while being reset) and some of the LED's on the TacTrack will light up for a few seconds showing the version number of the firmware. Then the Record and Race number LED's will blink.

Press the mode button twice until the Calibrate light is blinking. Your Tachometer should now be going up and down from around 1000 RPMs to 8000 RPMs or more. If your Tachometer is moving, then the wiring to the Tachometer is correct. If you press the "Enter" key you can change the output to your Tachometer. After the first press the TacTrack will output 8000 RPMs for a two stator motor. Pressing again will change to 8000 RPMs of a three stator motor then a four, six, eight then nine. The next press will go back to outputting from 1000 to 8000 or more RPMs.

To test the input, press the "Mode" button so the Mode is back to Record and start the snowmobile. Start you snowmobile. The tachometer should function normally. The TacTrack passes the pulses through the unit to the tachometer when the Record LED is blinking. If the tachometer is not functioning, check to see if the Record LED is blinking and that you have a good connection on your cable.

If this still does not work, remove the cable harness from the sleds ECM wiring (you may leave the power connections alone). By reconnecting the power (red with yellow stripe plugs) and Tachometer (white with green stripe plugs). This should reconnect the ECM back to the tachometer. If one of the functions does not work (power or tachometer movement), check if there is good continuity with the wire and plugs.

## Operating the RPM8000 TacTrack

The “TacTrack” is easy to operate and a very versatile tool. It can record a race, play it back, erase your races and calibrate your tachometer.

### Picking and Executing a Mode of Operation.

The “TacTrack” can be placed in one of 4 modes of operation. Record, Play, Calibrate and Erase. Each mode has a light by it on the label to signify what state the “TacTrack” is currently in. A blinking light next to one of the mode labels signifies a mode has been selected, but not being executed. If the light by a mode label is solid, that mode is being executed.

For example, when the “TacTrack” is powered up, the default mode is “Record”. The light next to the “Record” label is blinking. To select another mode, press the “Mode” button. This will move the blinking light to the other mode labels. Keep pressing the “Mode” button until you reach the operating mode you desire. To execute that mode, press the “Enter” key. The Mode light will stay on indicating the mode is being executed.



### Record Mode

The main function of the “TacTrack” is to record and play back races. The “TacTrack” contains enough memory to store 1 hour of record time over more than 256 races. The only limit on the length in time of a recording is the size of the unused memory. In other words one race can be 1 minute and another 59 minutes.

To record a race, Press the “Mode” key until the blinking mode light moves to the Record label. When you are ready to record, press the enter button. The record mode light will stay on while the device is recording.

Also blinking will be the Race # light. The number of blinks before the pause in blinks indicates the Race number that you are recording. The race numbers automatically increment with each new recording.

The recording will end once the “Enter” key has been pressed or the sled gets shut off or you fill up all the memory.

## **Play Mode**

To play back a particular race, select the Play mode using the “Mode” key. Then press enter. The Play mode light will stop blinking and stay on. The “Race #” light will blink with a pause. The number of blinks before the pause is the race that is being displayed.

To exit the play mode, press the “Enter” key.

To change to the previous race, while the Play led is blinking (not playing back) press and hold the “Mode” key until the play light starts blinking again. To change to the next race press and hold the “Enter” key until the Play led starts blinking again. When the race you want is selected press the “Enter” key to start playing the selected race.

## **Calibration Mode**

Set the mode to Calibration by pressing the “Mode” key until the blinking LED is the LED next to the Calibration label. If you press the “Enter” key you can change the “TacTrack” output to your Tachometer. After the first press the “TacTrack” will output 8000 RPMs for a two stator motor. Pressing again will change to 8000 RPMs of a three stator motor then a four, six, eight then nine. The next press will go back to outputting from 1000 to 8000.

Also, while in any of the calibration modes, the Race # will flash if the “TacTrack” detects pulsing on the input wire of the harness.

## **Erase Mode**

To erase the memory in the “TacTrack”, press the “Mode” button to select the erase mode. Press the “Enter” key and hold it down until you see all the mode lights start blinking. All mode lights will blink until the erasing is complete. This will erase all the recordings.

To erase the last recording press and hold the “Mode” button until all the lights start blinking.

During Recording and Playback, you may notice the Erase LED flashing. This flashing is normal and indicates memory is being accesses.

## **Product Registration.**

### **IMPORTANT!!!!!!!!!!!!!!!**

For your product warrantee to be granted, you must register your Performance Recorder! This can be done on the web at **[www.atgotech.com/register](http://www.atgotech.com/register)**.

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