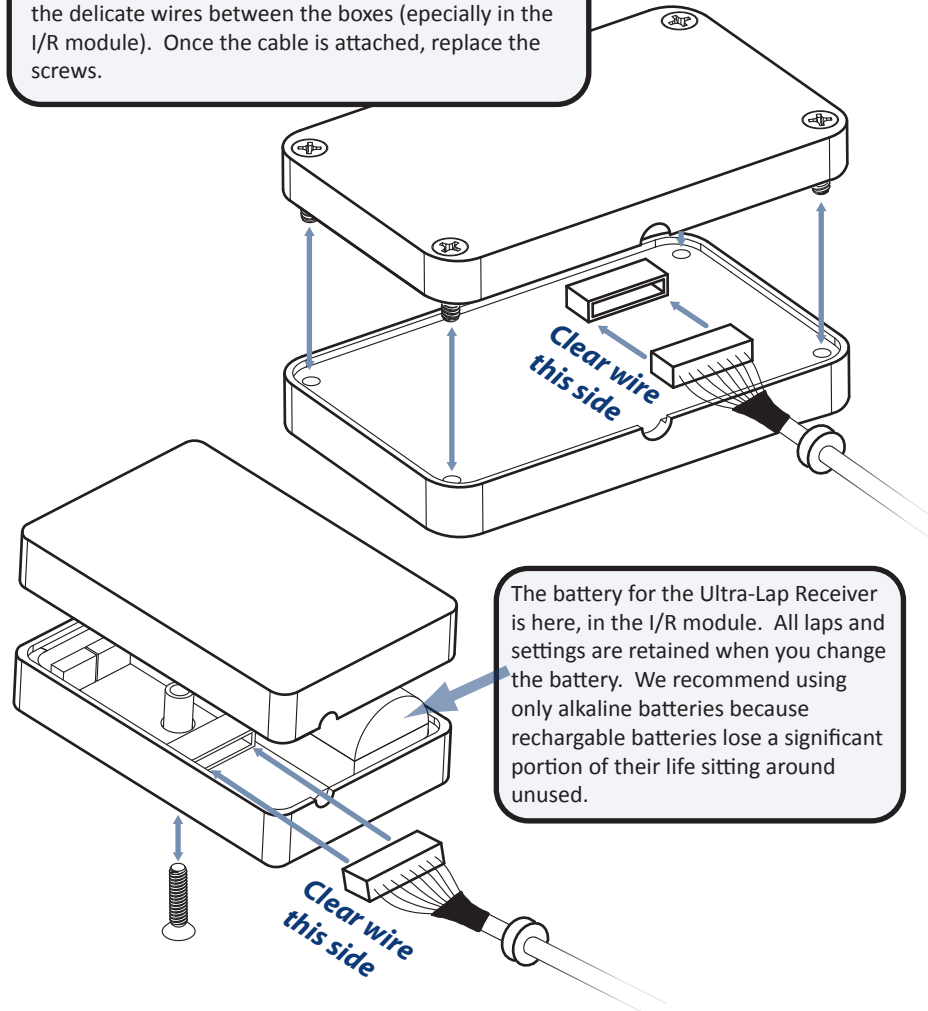


1 Attach the cable

Attach the cable by removing the 4 screws on the receiver and the 1 screw in the I/R module. The connector is keyed, so it can only be inserted one way (as indicated by the diagrams). Be careful not to pinch the delicate wires between the boxes (especially in the I/R module). Once the cable is attached, replace the screws.



2 Initial setup

The initial setup of the Ultra-Lap receiver involves setting the current date and time and entering your personalization information. The steps below will guide you through the completion of this process.

Enter the Ultra-Lap menu system by pressing the **Menu** button.

Count laps
Menu 1 of 26 →

Move to the **Set date and time** menu by pressing **Right** 8 times.

Set date and time
← Menu 9 of 26 →

Press **Select** to enter the **Set date and time** menu.

Set date and time
01/03/07 04:18:31 PM

The active field will blink. Use the **Left** and **Right** buttons to change the value of the field. Pressing **Select** will save your selection and move to the next field. When the active field wraps back to the beginning and the date/time is correct, press **Menu** to save and exit the menu.

The personalization information displays on the main screen of the Ultra-Lap. It identifies the owner of the Ultra-Lap receiver. The steps below will guide you through the completion of this process.

Move to the **Personalization line 1** menu by pressing **Right** to menu 18.

Personalization line 1
← Menu 18 of 26 →

Press **Select** to enter the **Personalization line 1** menu.

Personalization line 1

The active field will blink. Use the **Left** and **Right** buttons to change the value of the character. Pressing **Select** will enter the character and move to the next one.



To erase the previous character, spin through the characters until a backwards arrow appears, pressing **Select** on this will move the cursor back one character. When you are finished with your personalization line, press **Menu** to exit the menu and save your information. You can continue to **Personalization line 2** and enter more information if you would like.

This package contains:

- Ultra-Lap Receiver
- Ultra-Lap I/R Module
- Cable
- Manual
- Warranty Card
- Velcro
- XT Racing Stickers
- Ultra-Lap Transmitter (optional)
- Battery Clips (optional)
- Ultra-Lap Download Module (optional)
- USB Cable (optional)
- Download CD (optional)

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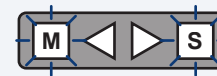
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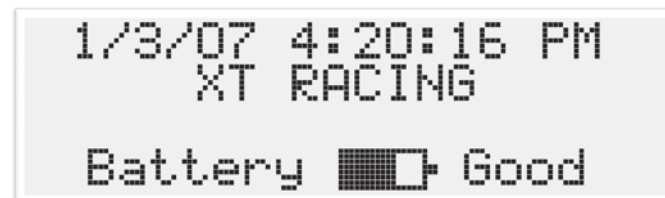
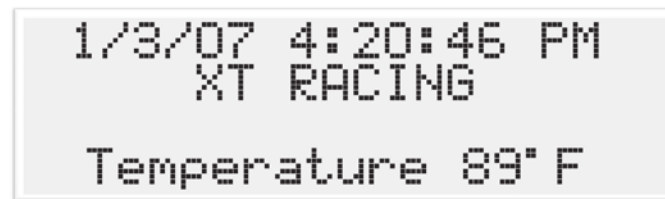
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Once the cable is connected, the Ultra-Lap should turn on by holding any button for about one second. If the unit does not turn on with this method, it may need to be reset. To reset the Ultra-Lap, press and hold **Menu** and **Select** at the same time.

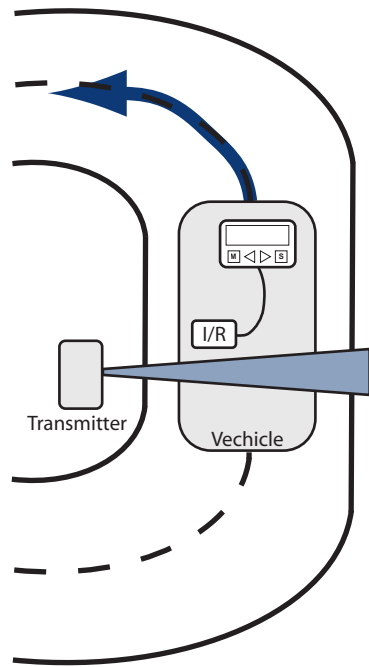


After the Ultra-Lap powers up, it will boot up, then proceed to the main screen. This is the home screen from where all of the Ultra-Lap actions are performed. The main screen displays the current information about the Ultra-Lap.



The current date and time is displayed at the top, followed by your two personalization lines. The final line rotates between the screens shown above. The first displays the current temperature. The seconds tells you the amount of lap memory that is currently used. And the final gives you a battery level indicator.

3 On the track

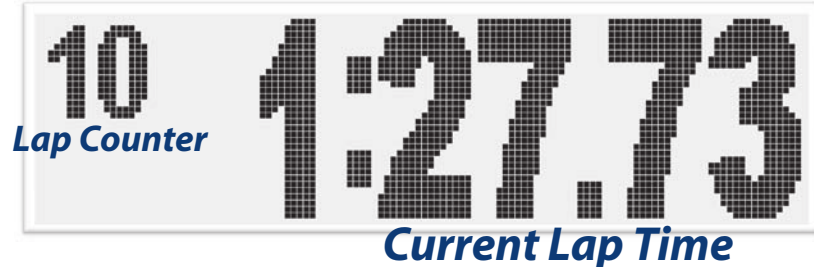


The transmitter (set to mode M1) should be placed about 15 feet from where the vehicles will pass at the same height as the I/R modules on the vehicles. This is usually about 3 feet off the ground.

The I/R module should have the plastic filter pointing towards the side of the track that the transmitter is on.

Motorcycles/dirtbikes:
The transmitter should be placed near the beginning of a straight section to ensure that the vehicle is vertical when it passes the signal.

The Ultra-Lap will automatically turn on and start timing a lap when it passes by the Start/Finish transmitter for the first time. Once the Ultra-Lap starts timing, it will enter the lap spinner screen. This is the screen that displays the time while you are on the track.



Ultra-Lap Transmitter

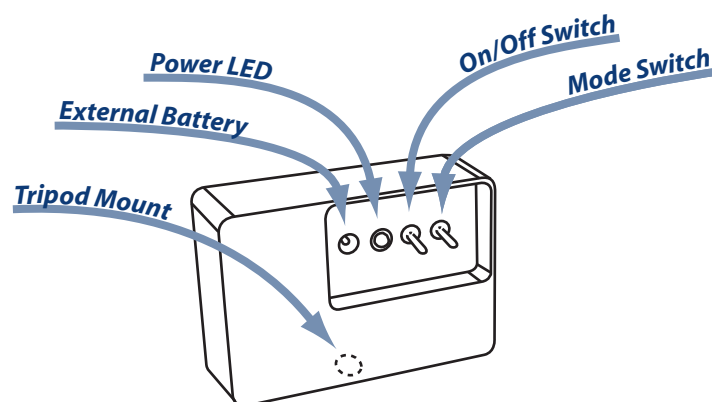
The Ultra-Lap transmitter is an optional part of the Ultra-Lap system. The transmitter is the source of the infrared signal that the Ultra-Lap receiver senses. If you have the transmitter then it will be able to act as the start/finish line or add split times to the track.

The Ultra-Lap transmitter has three modes of operation, M1 is used at the start/finish line, M2 is reserved for future use, and Split provides the split-time feature present in Ultra-Lap receivers.

The Ultra-Lap transmitter can use an external 12V lead-acid battery (preferred) or 4 internal AA alkaline batteries. The 12V battery provides extended running time and a more powerful signal. The On/Off switch is only used to switch the internal batteries, the 12V battery provides always-on operation. As with the receiver, we do not recommend using rechargeable batteries.

When the transmitter is on the Power LED will blink either green or red, and it will blink either slow (M1 mode), medium (M2 mode) or fast (Split mode). It blinks green when the battery level is good; red when the batteries are running low.

If you want to use your transmitter to record split times, set the mode to Split and place it at a location around the track (using the same procedure as the start/finish transmitter). The only restriction is that there must be at least two seconds between adjacent transmitters in order to record times.



4 Lap review

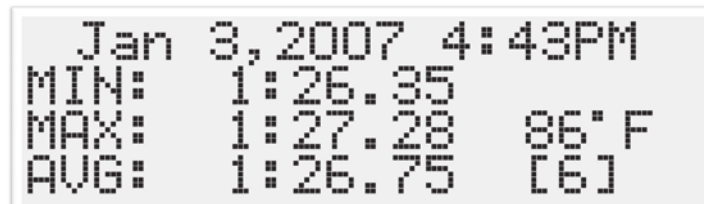
From the main screen, pressing **Left** will take you to the first lap stored in the Ultra-Lap.



From the main screen, pressing **Right** will take you to the summary of the last session stored in memory.



The lap review screen displays the lap information stored in the Ultra-Lap. The review of a session (which is indicated by a unique session ID, the SID), shows all of the lap information for that session. This includes the track, the date and time of the lap, the lap number, and the lap time. A star by the lap time indicates that this is the best time for this session. An "s" by the lap time indicates that this is a split time.

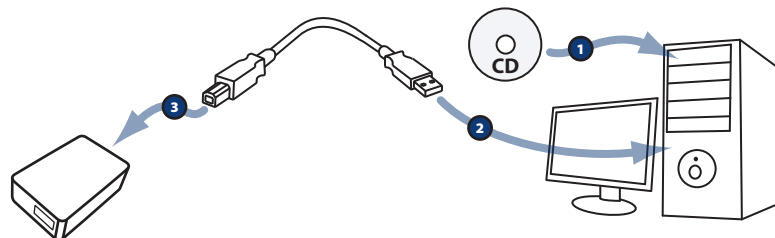


When you have scrolled through all of the laps for the session, there will be a session summary screen. This shows the minimum lap-time, the maximum lap-time and the average lap-time for the session. It also shows the average temperature for that session and the number of laps in the session.

Ultra-Lap Download Module

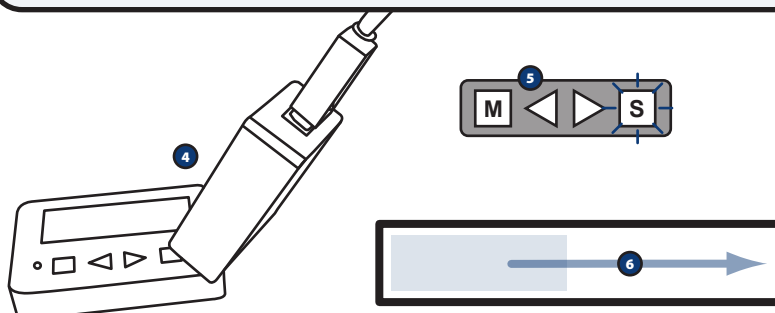
The Ultra-Lap download module is an optional part of the Ultra-Lap system. If you have the download module then you can copy your laps to your PC for archival or analysis purposes.

To install the Ultra-Lap download software, first insert the Ultra-Lap Downloader CD-ROM into your computer. After you have installed the software, attach the USB cable to your computer and to the Ultra-Lap download module. When you attach the download module to the computer you should hear an audible ding sound verifying that the module was correctly recognized.



To download your laps, start the Ultra-Lap Downloader program. Under the **Download** tab, make sure that **Version 2.xx** is selected. Click the Start Download button and a horizontal bar will appear at the bottom. The program is now ready to receive lap data.

Now, go to your Ultra-Lap receiver and press the **Menu** Button. Scroll to Menu #20 **Transfer Laps to PC**. On the lower right corner of the face of the lap timer there is a small hole with a picture of a computer next to it. Hold the filter of the download module near this hole. Next, press **Select** on the Ultra-Lap receiver and the transfer will begin. The download progress begins to count up. When the Ultra-Lap receiver reaches 100% the transfer is complete.



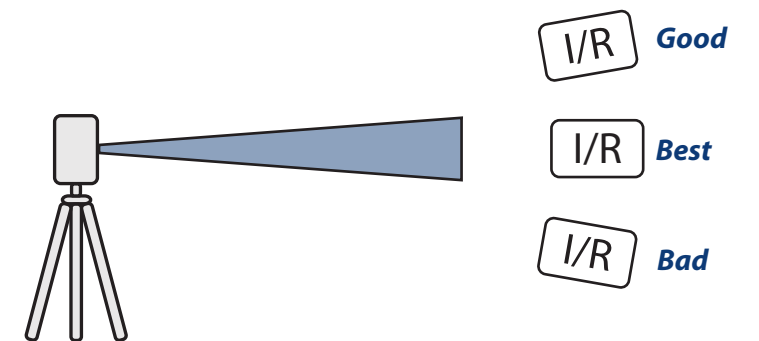
Ultra-Lap Menu System

	Menu Item	Description
1	Count laps	Enables or disables lap counter and counts up or down.
2	Set number of laps per session	Displays optional up or down count of laps during a race.
3	Minimum lap time	Sets minimum lap time, this will turn off the I/R receiver for this amount of time which virtually eliminates false triggers. It should be set a little lower than your fastest lap time.
4	Maximum lap time	Sets the maximum lap time.
5	Hold time at end of each lap	Set how long the completed lap time is displayed at the end of each lap.
6	Select track names	Select a pre-existing track name from the stored list to store with your session.
7	Enter track or ID	Sets the track name stored with each lap in the session and adds it to the list of track names in memory.
8	Go to a race or session	Jumps to the first stored lap on a given day.
9	Set date and time	Sets the current date/time.
10	Adjust contrast	Adjusts the contrast of the LCD display.
11	Split timing	Sets whether or not split-times should be collected, and sets the hold time of the lap spinner after each split capture.
12	Enable or disable automatic turn on	Enables or disables the auto-turn-on feature.
13	Number of minutes until auto power off	How long the Ultra-Lap LCD stays powered on after activity. Note that this does not affect the auto-turn-on feature. The Ultra-Lap will still automatically turn on when it passes a transmitter.
14	Which lap to display after race	Selects first, best, or last lap to display at end of race.
15	Temperature units	Select Fahrenheit or Celsius for the temperature display.
16	Ignore first lap in averages	Tells if the session summary lap average include the first lap.
17	Lap flash	Controls the LED blink feature at completion of each lap.
18	Personalization line 1	Adjusts line 1 of your personalization information.
19	Personalization line 2	Adjusts line 2 of your personalization information.
20	Transfer all laps to PC	Sends all data to PC (via optional download module).
21	Backlight	Changes the setting of the backlight.
22	Delete last viewed race or session	Deletes one session from memory.
23	Delete all laps from memory	Deletes all laps from memory.
24	Clear list of track names	Clears the stored list of track names.
25	Factory reset	Resets the Ultra-Lap to the settings it had when manufactured. CAUTION: ALL STORED LAPS AND TRACK NAMES WILL BE DELETED
26	Select Language	Change the language of the Ultra-Lap.

Troubleshooting

Triggering problems:

The alignment of the of the transmitter and I/R module is probably the most important key to success. The transmitter and I/R modules need to be at approximately the same height. The angle of the I/R module should be level with the transmitter, or pointed slightly down.



Also, check the following items:

- Make sure the receiver and transmitter batteries are in good condition.
- Make sure the transmitter is at least 15 feet away and no more than 75 feet from the area where the vehicle crosses the infrared beam.
- Make sure that the transmitter is pointing horizontally across the track, not up or down.
- Make sure the I/R module is mounted on the correct side of the vehicle so that when it passes the transmitter it is pointing directly at it.
- For motorcycles/dirtbikes, make sure that the transmitter is placed in a section of the track where the bike will be upright when it passes.