

# User manual Emit Timer ET6



- when time counts...





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# 1. General information

This manual explains the use of Emit Timer ET6; the latest split-timer from Emit. ET6 is best suited for coaches in sports with interval start, but can also be used in other sports. The start list for the event is entered into the ET6, either manually or by transferring it from a PC. ET6 shows the running (current) time for a participant and compares with other relevant participants. ET6 stores the result lists internally, and you can scroll between the different passes.

This manual explains how to use the keyboard and display of the ET6, and how the unit is charged. Furthermore, we look at the menu system of ET6 and how it can be used as simple as possible. Then we go through all the menu options and advanced use of the ET6. Finally, we look at the transfer of data from one PC to ET6.

### Bundled items

ET6 is delivered with the following items included:

- Leather case
- Mini-USB cable for charging and data transfer
- CD with drivers and software
- This manual

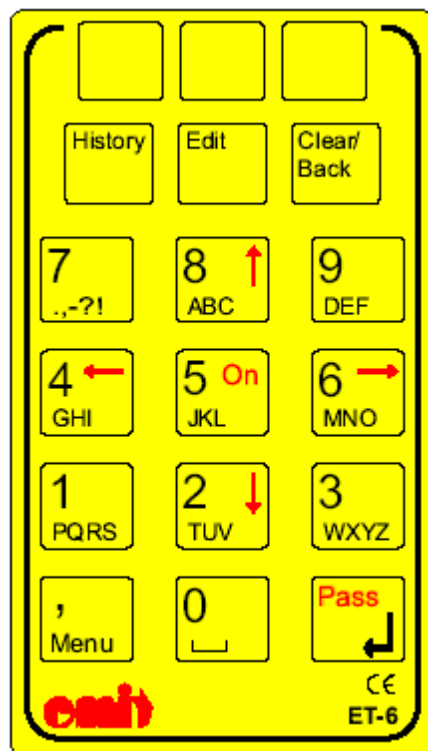


## Batteries and charging

ET6 has two rechargeable Ni-Mh AA "ready-to-use" batteries built-in. These batteries have low self-discharge. To ensure that the internal clock runs and the batteries are not drained completely, the ET6 should be recharged once a year, when not in use. "Ready-to-use" batteries have no special initial charge, like other rechargeable batteries are known to have.

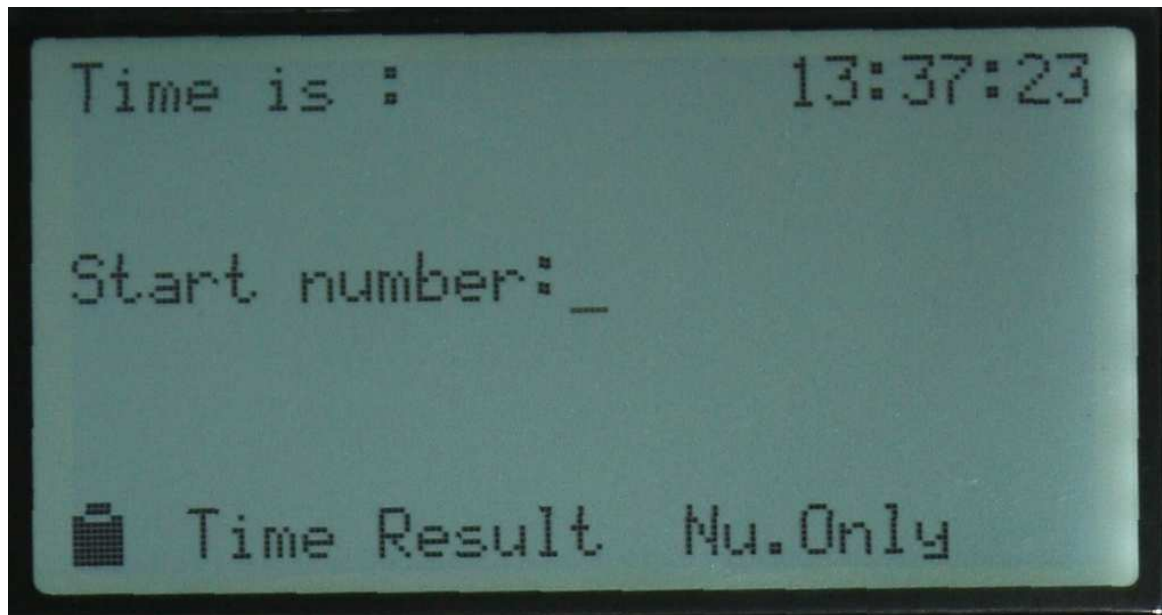
The ET6 is recharged using the included mini-USB cable from your PC or 220V-adaptor. The charging time from empty to full is approximately 5 hours.

## 2. The keyboard



- The top three keys on the keyboard are programmable, i.e. the use of these keys change depending on which mode you are in. The text on the bottom line of the screen shows their current use.
- The history key shows an updated result list for previous passings
- The edit key is used to correct passes.
- The clear/back key functions as backspace; i.e. deletes the last key pressed.
- The number keys 0 to 9 also functions as letters. These letters are used to register names.
- The menu key is used to enter the menu system.
- The keys with red letters have additional functionality;
  - On (5) turns on the ET6 (but NOT off; this is done from the main menu)
  - The arrow keys are used to scroll the screen in the direction indicated.
  - Pass registers a pass.

### 3. The display



-----						
						1
						2
						3
						4
						5
						6
						7
@	Prog1	Prog2	Prog3	#	&	N

The display has 7 lines for runner data, while the bottom line is reserved for the programmable keys and symbols. When it is referred to the bottom line in this manual, this is the last line with runner data; i.e. line 7

@ is used as a battery symbol and shows the remaining battery power.

Prog1 .. 3 is the current function of the three programmable keys. If there is no text above the three programmable keys; they have no function in the current screen.

# is used as the arrow symbol. If no symbol is shown, this means that the keys are not in use in the current screen. Left and right arrows means that the left (4) and right (6) arrow keys can be used. Up and down arrows means that the up (8) and down (2) arrow keys can be used.

& is the battery charging symbol. When ET6 is connected to a PC with a mini-USB cable, the charging symbol appears.

## 4. Using ET6

Press (and hold down) the *On* key to turn on the ET6. After some initial messages the main screen is displayed.

The first time you use the ET6 it is recommended to delete EVERYTHING.

Press the *Menu* key followed by the 'o' - Setup and '2' - Master clear

This operation takes up to 30 seconds. ET6 will restart when it's finished.

### Language:

If you have not used ET6 before, you might need to change the language.

Press the *Menu* key followed by 'o' - Setup and 'o' - Language

If one were to accidentally select Russian, and is not familiar with this language, remember that *Menu* key + 'o' + 'o' + 'o' will select English as default language.

### Changing the time :

Press the *Menu* key followed by 'o' - Setup and '1' - Change time

If the time is correct, just press the *Prog1* key to go 'Back'. To set the time, enter the correct time using the number keys and press 'Pass/Enter' to start the clock.

At least one class must be defined before ET6 can be used in coaching mode.

### Programming:

Press the *Menu* key followed by '1' - Programming and 'o' - New Class

Enter all information for a class; the first and last start number for the class, first start time, start interval (in seconds), number of runners starting at the same time ('o' is mass start) and finally how to check passes. It is recommended to use automatic check of passess.

If you want to add more classes; repeat the process above for each class.

When all classes are registered, we are ready to start ET6 in *coaching mode*.

## 5. Coaching mode

### 5.1 Register a pass

Enter the start number for the runner and press the 'Enter/pass' key exactly when the runner passes. The *coaching screen* appears on the display.

For those familiar with Emit's previous timers (ET4 & ET5), all coaching screens on ET6 are exactly the same.

The coaching screen shows:

Startno	Name	Rank	Time	
0005		90	2:02:03	Our runner
0047		1	- 50:35	Leading runner
0010		86	- 04:43	Runner 4 ranks ahead of us
0009		87	- 03:50	Runner 3 ranks ahead of us
0008		88	- 02:55	Runner 2 ranks ahead of us
0007		89	- 01:57	Runner 1 rank ahead of us
0004		91	+ 00:56	Runner 1 rank behind us
Tilbake Grupper			⊕	Symbol line

The arrow keys are used to scroll with. Up arrow ('8 ') and down arrow ('2 ') are used to scroll up or down the result list for a pass, while the left arrow ('4 ') and the right arrow ('6 ') is used to jump/switch between passes.

If no more passes are registered, ET6 will go back to the *main screen*.

### 5.2 Result list

The main screen shows that the current function of the *Prog2* key is 'Results'. Thus pressing the *Prog2* key gives us a result list for the current pass.

If several classes have been defined, ET6 will not react when the *Prog2* key is pressed. This is because ET6 doesn't know which class you want results for. Enter a start number belonging to the class you want results for, then press the *Prog2* key.

Arrow symbols are also displayed in this screen. Use '8' - arrow up, and '2' - arrow down, to scroll up and down within the result list for a pass. If the left arrow - '4' and the right arrow - '6', are shown, this means more passes are available. Use the appropriate arrow key to jump/switch between passes.

### 5.3 Updated coaching screen (*History* key)

To view an updated coaching screen for a previous pass, use the *History* key. Enter the runner's start number followed by the *History* key, and ET6 displays the same coaching screen as described in section 5.1. Now the coaching screen is updated with runners that passed after our runner.

### 5.4 Running (current) time of a runner

To check the current time on a runner, enter the correct start number, and the upper line of the display shows the current time for this start number. To compare this time with the result list for this pass, press the *Prog1* key ('Time'). The display still shows the current time for our runner on line 1, while the rest of the screen shows the result list for this pass. Press the *Clear/Back* key to return to the main screen.

### 5.5 Pre-register a time

To register a group of runners passing almost at the same time, it is possible to register a number of times, and later match these times with the appropriate start numbers. To register times WITHOUT start numbers, press the *Enter/Pass* key. The display shows that we have registered extra times. When the correct order is settled, the start numbers are entered one-by-one, followed by the *Prog3* key ('Nu. only')

### 5.6 Pre-register a start number

It is also possible to pre-register start numbers and later register the times for these runners. To register start numbers WITHOUT times, enter the start number followed by the *Prog3* key. The display shows that we have registered extra start numbers. Press the *Enter/Pass* key when the runners passes, and the times are matched with the start numbers entered previously.

## 6. Programming ET6

### 6.0 New class

Press the *Menu* key followed by '1' - Programming and 'o' - New Class

Enter all information for a class; the first and last start number for the class, first start time, start interval (in seconds), number of runners starting at the same time ('o' is mass start) and finally how to check the passes. It is recommended to use automatic check of passess.

If you want to add more classes, repeat the process above for each class.



When all classes are defined, we are ready to start ET6 in *coaching mode*.

## **6.1 Edit class**

Press the *Menu* key followed by '1' - Programming and '1' - Edit class

There are several choices you might want to change in a class, so this option leads to a submenu;

### **6.1.0 Edit class data**

The basic data of a class (the first and last start number for the class, first start time, start interval, number of runners starting at the same time, and method of pass control) may be changed. The same questions as we answered during the creation of the class, must be answered again, but this time the class is corrected instead of being added as a new class.

### **6.1.1 Edit red group**

It is possible to add/correct a red group of runners. Answer all questions concerning the runners in the red group.

### **6.1.2 Edit groups**

It is possible to create separate *coaching groups* for runners you want to compare with each other, i.e. runners on the same team. Coaching groups are defined or edited, using this choice. Answer all questions concerning the runners in this group.

### **6.1.3 Edit names**

Enter, or edit, the names of the runners using this menu choice. Use the letter keys on the keyboard, the same way as used on mobile phones.

### **6.1.4 Edit pass windows**

This menu option opens up another menu.

#### **6.1.4.0 Auto close windows**

The pass windows defines the minimum and maximum times for a pass. ET6 can automatically “close” these pass windows. This means that the gaps between the

maximum time for the first pass and the minimum time for the second pass, will be adjusted by increasing the maximum time for the first pass and decreasing the minimum time for the second pass.

#### **6.1.4.1 Manual edit windows**

To manually edit the pass windows, enter the minimum and maximum times for each pass. Enter a start number belonging to the class, followed by the desired values.

#### **6.1.4.2 Show pass windows**

This menu choice displays the current pass windows for all passes.

### **6.2 Erasing a class**

Press the *Menu* key followed by '1' - Programming and '2' - Erase class

This menu item removes the class entirely, including all the times registered on the start numbers belonging to this class.

### **6.3 View class**

Press the *Menu* key followed by '1' - Programming and '3' - View class

When there are more things in a class you could want to study, this leads to the selection a new menu.

#### **6.3.0 Show class data**

There are several settings you might want to view in a class, so this option leads to another submenu;

The basic data of a class (the first and last start number for the class, first start time, start interval, number of runners starting at the same time, and method of pass control) is displayed.

If more classes are defined the *Prog2* key functions as 'Next'; press this key to scroll to the next class.

#### **6.3.1 Show start list**

If several classes are defined, ET6 will ask for a start number in the class you want

displayed. A start list for the class is shown on the display. You can scroll in the start list using the arrow keys. Any group affiliation will also appear on the start list. Red group likewise. If more classes are defined the *Prog2* key is used to view 'Next' class.

### **6.3.2 Show pass windows**

This option displays the current pass windows, for all passes.

### **6.3.3 Show special results**

This option leads to another sub-menu;

#### **6.3.3.0 Show speed**

This option is used to calculate the speed (i.e. time) between the two passes.

#### **6.3.3.1 Show correct pass**

Not implemented in this version

## **6.4 Remove times in class**

Press the *Menu* key followed by '1' - Programming and '4' - Remove times in class

This choice deletes all passes/times for a class, but retains the basic data of the class. If several classes are defined ET6 asks for a start number in the class to be deleted.

## **7. Events**

ET6 has two storages; a RAM storage of about 250 Kbytes and a flash memory of 2 Mbyte. When ET6 is used for coaching, the RAM is used for storage. When ET6 is turned off – either automatically or manually - it copies all data from RAM to the flash memory. This data is called an event. All transfers of data between RAM and flash, is in the form of an event. Events can be exported, imported, deleted, named and created.

### **7.0 Continue event**

Return to the menu system.

### **7.1 New event**

*This option will delete ALL classes and ALL passes/times!*

### **7.2 Name event**

All events are assigned a name automatically, based on date. It is possible to rename the event, using this menu option.

### **7.3 Import event**

Retrieve a stored event; to study the data or transferring it to a PC.

### **7.4 Export events**

Make a copy of the event in the flash memory. (This is done automatically when ET6 turns off)

### **7.5 Delete event**

Deletes a single event from flash memory.

## **8. Special use of the *Menu* key**

So far the *Menu* key has been used without entering a start number. If the *Menu* key is pressed after a start number has been entered (in coaching mode), a *personal* menu appears. This menu is personal in the sense that every menu choice relates to the start number entered.

### **8.0 Edit passes**

All passes registered for this start number are listed, and may be edited by pressing the corresponding number key.

### **8.1 Edit start time**

Used to correct the start time for the runner. Enter the new start time using the number keys.

### **8.2 Edit name**

This menu option is used to enter, or edit, the runner's name.



### 8.3 Edit group

Use this option to edit which group (if any), the runner belongs to.

### 8.4 Edit penalty

If, for some reason, a penalty has been given to the runner; this may be entered here (in seconds).

## 9. Result list

When the result list for a class is displayed, ET6 checks for more passes. If there are there any additional passes, the text for the *Prog3* key changes to 'Speed'. Press the *Prog3* key to show the rank for the time *between* the last two passes. The *Prog2* key will show the text 'Group' if any groups has been defined. The arrow symbols appears if there are any additional passes. Use the arrow keys to jump/switch between passes.

## 10. Pass windows

Automatic pass control means that the ET6 tries to sort all times registered, to the correct pass. This is done using the first participant's pass times as a guideline for what the minimum and maximum time for this pass should be. Therefore it is important that this participant is neither too good, nor too bad. A later pass, that does not fit in between the minimum/maximum time for this pass, will make ET6 ask if the pass is to be accepted.

If manual pass control is used, the first time registered for a participant will always be pass one. The second time is pass two, the third pass three, etc.

## 11. Pursuit start

To use ET6 in a pursuit start event, the start list should be downloaded from a PC running *eTiming*. See Chapter 16, "Export of classes and names from eTiming "

Ensure that ET6 is synchronized with the official time, when the first participant starts.

## 12. Technical specifications

Weight: 378 grams

Size: 210 mm x 100 mm x 32 mm

Display: 8 lines of 26 characters. Graphic 160 x 80 pixels with LED backlight

RAM: 256 kbytes

Data flash: 2 Mbytes

CPU: TI 256 k 16MHz

Battery: 2 x Ni-MH "ready to use" 2000 mAh.

Power consumption / usage of light on the display: 80mA/25 hours

Power / life without lights on display: 25mA/80 hours

Power consumption / usage time off: 20 uA / 1 year

## 13. USB driver for ET6

When ET6 is to be connected to a PC (using the included mini-USB cable), an USB driver for ET6 must be installed. This is done automatically with the latest operating systems, while in older versions of Windows, this is done manually. The driver files are located on the included CD, and may also be download from

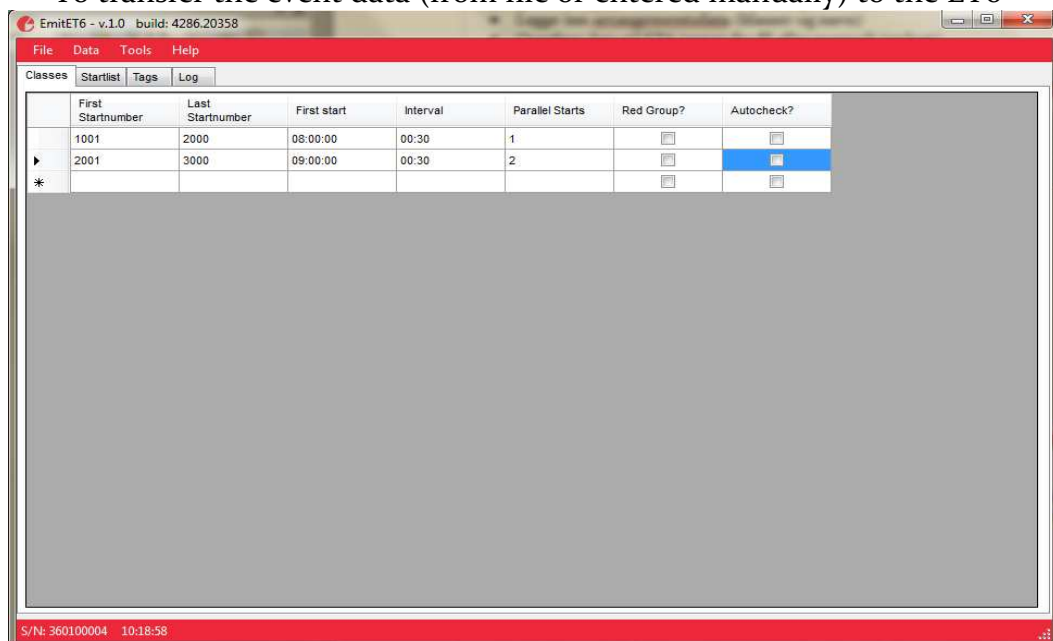
[www.emit.no](http://www.emit.no)

Make sure that the USB driver is properly installed by going to Control Panel -> Device Manager -> Ports. A new USB serial port should appear. If this port is not installed, the ET6 cannot communicate with the PC.

## 14. Transferring data from a PC to ET6

The PC-program *Emit ET6* is mainly used for two purposes;

- To enter the event data (class definitions and names)
- To transfer the event data (from file or entered manually) to the ET6



### Entering the event data (start list) manually

Click on the tab named 'Classes' and enter the desired values for all fields; first and last start number, time of first start, the start interval, the number of participants that starts at the same time, and how to check the passes. If you want to add the names of the participants, this is done by clicking on the tab labeled 'Names'. Enter the participant's start number and name.

### Open a xml-file with event data (start list)

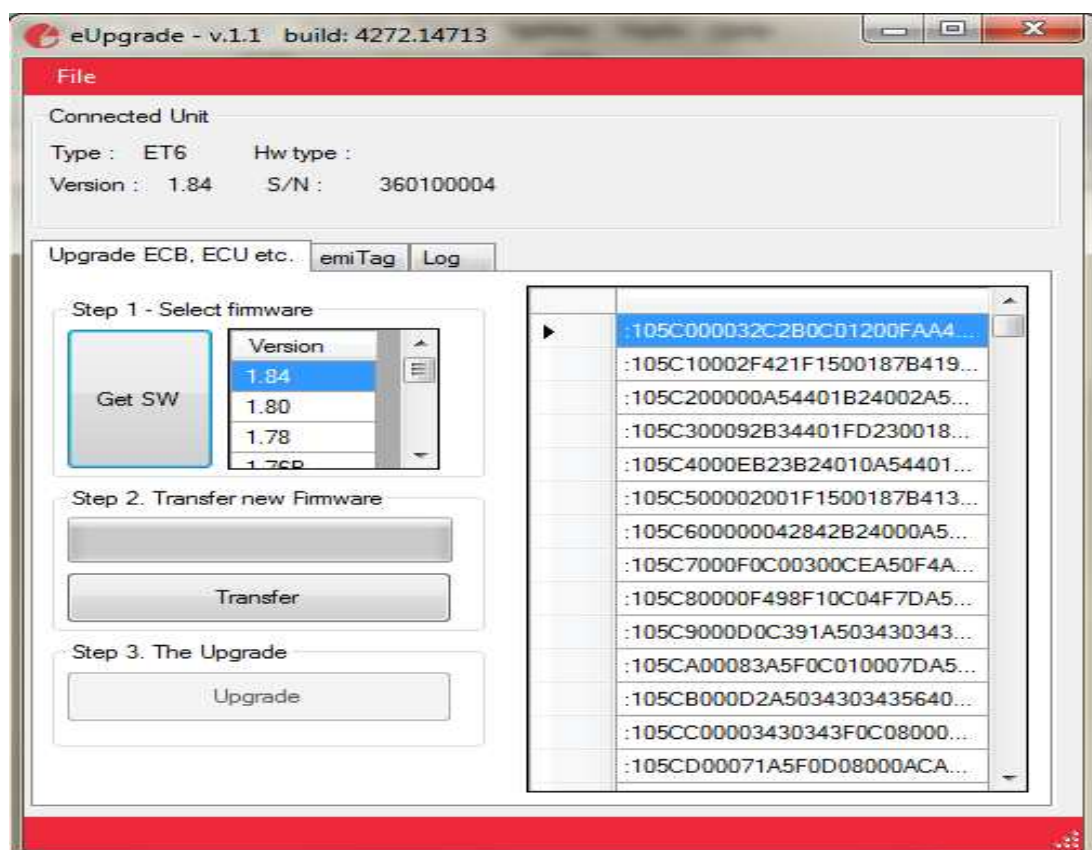
Open the 'File'-menu and choose to 'Open XML...' Browse to the correct xml-file and doubleclick to open it.

### Transfer data to ET6

To transfer all classes to ET6, open the 'Data'-menu and choose to 'Transfer - Classes'.

If you also want to transfer the participant's names, this is done by choosing 'Transfer - Athletes'.

## 15. *Upgrading ET6's firmware*



Connect ET6 to an available USB port on your PC. Verify that the serial number and firmware version of the ET6 is displayed at the top of the window. Then click the 'Get SW' (Get software) and select the latest (highest number) firmware. Click on the 'Transfer' button to start transferring the new firmware from your PC to ET6. This may take a long time, up to 30 minutes. When the transfer is finished, click the button labeled 'Upgrade'. ET6 restarts with the new firmware version after 10-15 seconds, and is ready for use.

## **16. *Export of classes and names from eTiming***

*eTiming is Emit's main software for timing, results service and race management. The program used by a number of organizers in several countries, and at all events that uses emiTags for timekeeping.*

*It is possible to export the event data (classes and participant's names) to a xml file. This file can be imported by the program Emit ET6, and then again, transferred to ET6.*

*Many organizers that use eTiming for result service, publish an updated start list (in the xml-format) on their website.*

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