

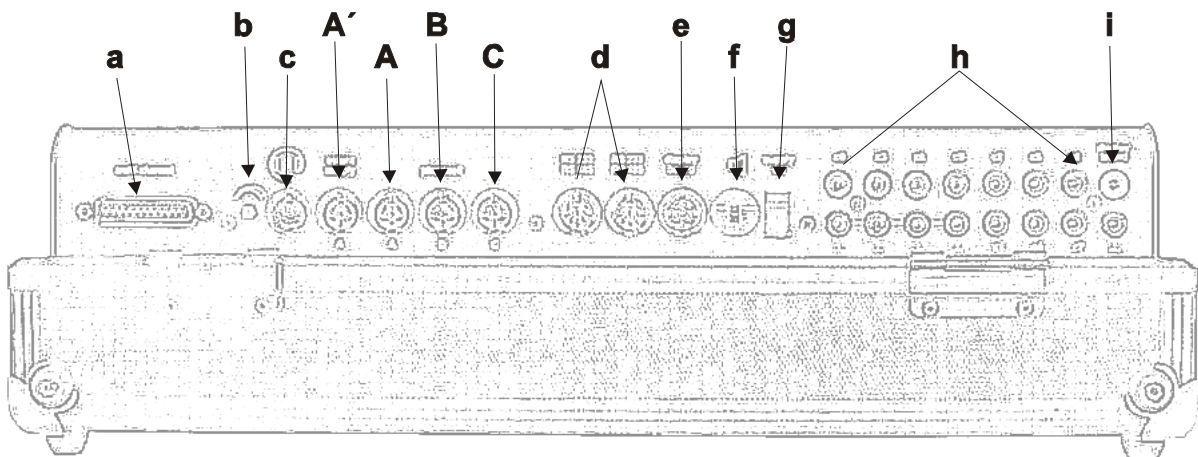
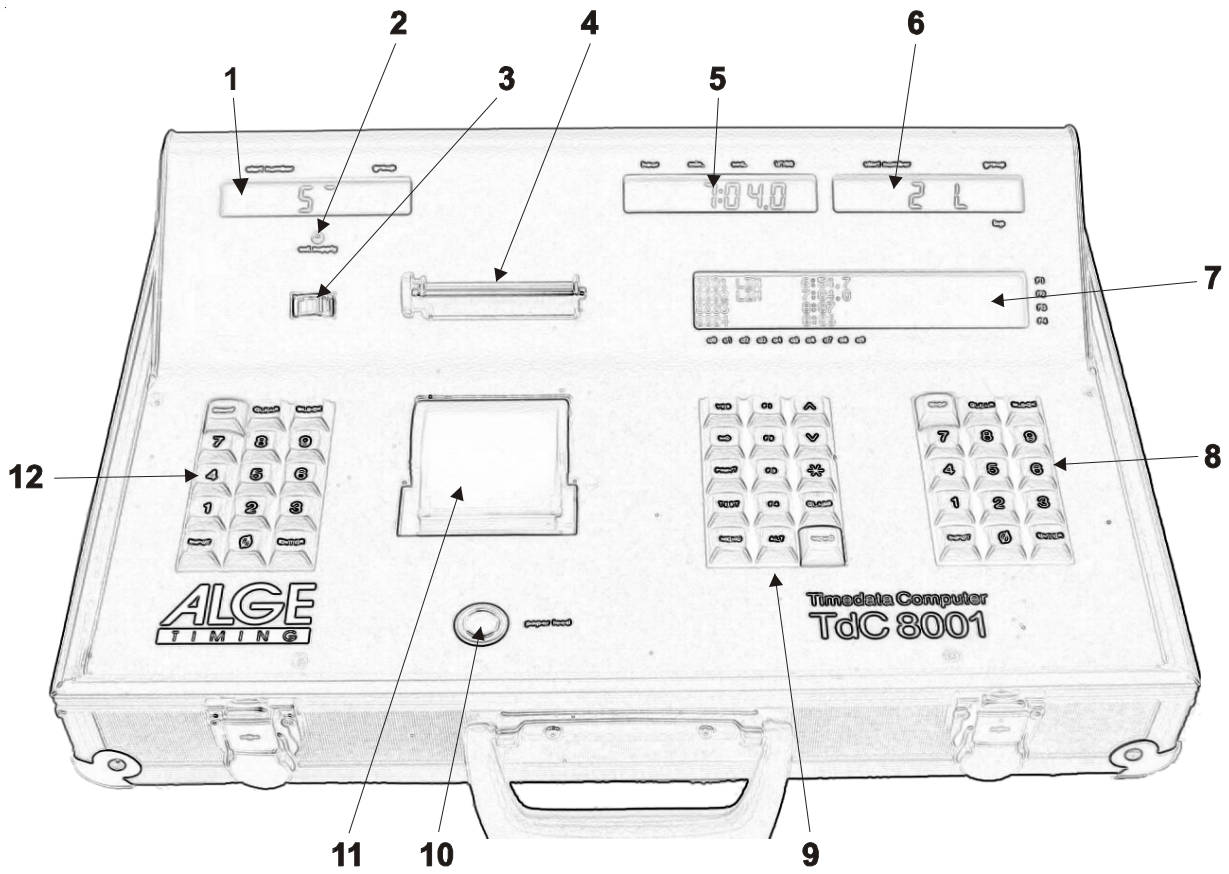


# TdC 8001 for Equestrian











**ALGE**  
**TIMING**

ENGLISH



**Operation elements and connectors**

- |   |   |        |  |
|---|---|--------|--|
| 1   | Start-Display   | 11     | printer cover and paper-tray   |
| 2   | External supply LED status light  | 12     | Start keyboard:  |
| 3   | Meter for monitoring power supply, alignment of the photocell (c1 to c9)  | START  | manual start impulse   |
| 4   | Paper-Roller  | CLEAR  | clear false start  |
| 5   | Display showing the running and net time that correspond with the start number input on the finish keyboard (8)                     | BLOCK  | blocks start impulses for as long as you press it  |
| 6   | Display showing the start number input for finish   | INPUT  | edit start times   |
| 7   | Info-display 4 x 40 alphanumeric characters   | ENTER  | confirm input  |
| 8   | Finish keyboard:  | 0 to 9 | numeric keys to input start numbers for the start or editing start times   |
| STOP  | manual stop impulse   | a      | Connection for Extender and Multi Channel (channel 0 to 9)   |
| CLEAR   | clear false finish  | b      | Volume for headset   |
| BLOCK   | blocks finish impulses for as long as you press it  | c      | Jack for the headset   |
| INPUT   | edit of finish times  | A`     | DIN-jack mainly used to connect the finish photocell (inputs c0, c1, c2). Connection of power supply is possible. Identical with DIN-jack (A)    |
| ENTER   | confirm input   | A      | DIN-jack mainly used to connect the finish photocell (inputs c0, c1, c2). Connection of power supply is possible. Identically with DIN-jack (A`) |
| 0 to 9  | numeric keys to input start numbers for the finish or editing finish times  | B      | DIN-jack mainly used to connect the a intermediate photocell (inputs c3, c4, c5). Connection of power supply is possible.                        |
| 9   | Function keyboard:  | C      | DIN-jack mainly used to connect the a intermediate photocell (inputs c6, c7, c8). Connection of power supply is possible.                        |
| YES   | key to confirm YES/NO questions   | d      | Two identical DIN-jacks with RS-232 and RS-485 interface.  |
| NO  | key to deny YES/NO questions  | e      | DIN-jack to connect a ALGE display board.  |
| PRINT   | to switch the printer on and off  | f      | DIN-jack to connect a speaker (e.g. show jumping)  |
|   | PRINT: Buffer mode on or off  | g      | On / Off - switch  |
|   | + PRINT: Printer on or off  | h      | banana socket for all 10 timing channels. The four black jacks are common grounds for all channels.  |
| TEST  | info-display (7) shows the device test  | c0     | Start channel  |
|  | key to go up  | c1     | finish channel   |
|  | key to go down  | c2     | intermediate time 1  |
|  | key for special functions   | c3     | intermediate time 2  |
| CLASS   | key to make a classement  | c4     | intermediate time 3  |
| MEMO  | to activate the memo function if several competitors reach the finish at the same time  | c5     | intermediate time 4  |
| MENU  | press this key first, followed by another to activate a special function: With <ALT> and <MENU> you get into the main menu          | c6     | intermediate time 5  |
|  | press this key first, followed by another to activate a special function: With <ALT> and <PRINT> you toggle the printer on and off. | c7     | intermediate time 6  |
|  | function key 1 on info-display  | c8     | intermediate time 7  |
|  | function key 2 on info-display  | c9     | intermediate time 8  |
|  | function key 3 on info-display  | i      | Banana socket for RS-485   |
|  | function key 4 on info-display  |        |  |
| 10  | paperfeed button  |        |  |

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We reserve the right of technical changes in order to meet the technological progress.  
You can download the actual manual from our webpage: [www.alge-timing.com](http://www.alge-timing.com)

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## 1. DEVICE DESCRIPTION

The TdC 8001 is the descendent of the popular TdC 4000 used for over 14 years worldwide. Compared to the TdC 4000 it has a bigger memory and the software is much more flexible. An additional alphanumeric display shows whatever is important for the operator.

It has a memory capacity of about 18.000 times for a maximum of four races. The most modern processor 80C167 guarantees to work effectively and fast. The new RS 485 interface holds many features, usable for the TdC8001.



The separated keyboard makes it possible to work on the TdC 8001 with two persons at the same time (e.g. one for start, one for finish)

### 1.1. Standard Software

#### SPLIT:

- Program to measure intermediate and run times
- Start channel, 8 intermediate channels, finish channel
- Selectable calculated precision from 1/1000 up to 1 sec.
- Up to 256 heats (runs)
- Individual, group or mass start
- Time of day or absolute timing
- Up to 9999 competitors on course at the same time
- Multiple result possibilities including; 1<sup>st</sup>, 2<sup>nd</sup> run, total time, with or without FIS race points, team results, top 10, DNFs, etc.

*Recommended for:* Alpine skiing, Snowboard, Cross Country skiing, Road and Mt. Bike Cycling, Biathlon, etc.

#### SPLIT SEQUENTIAL:

- Program to measure intermediate and run times with lap splits
- Start channel, 8 intermediate channels, finish channel
- Selectable calculated precision from 1/1000 up to 1 sec.
- Up to 256 heats (runs)
- Individual, group or mass start
- Time of day or absolute timing
- Up to 9999 competitors on course at the same time
- Multiple result possibilities including; 1<sup>st</sup>, 2<sup>nd</sup> run, total time, with or without FIS race points, team results, top 10, DNFs, etc

*Recommended for:* Cross Country ski relay, Biathlon relay, Motorsports, etc.

| Program                 | Prog. Number | Page |
|-------------------------|--------------|------|
| <b>Split</b>            | Program 1    | --   |
| <b>Split Sequential</b> | Program 3    | --   |
| <b>Parallel Diff.</b>   | Program 4    | --   |
| <b>Parallel Netto</b>   | Program 5    | --   |
| <b>Dual Timer</b>       | Program 6    | --   |
| <b>Speed</b>            | Program 7    | --   |
| <b>Speed Skiing</b>     | Program 8    | --   |
| <b>Carving</b>          | Program 9    | --   |
| <b>10-Kanal-Timer</b>   | Program 10   | --   |
| 10-Channel Timer 1      | Program 101  | --   |
| 10 Channel Timer 2      | Program 102  | --   |
| <b>Show Jumping</b>     | Program 11   | 44   |
| Standard Jumping A1     | Program 111  | 47   |
| Standard Jumping A2     | Program 112  | 55   |
| Standard Jumping AM3    | Program 113  | 55   |
| Standard Jumping AM4    | Program 114  | 56   |
| Standard Jumping AM5    | Program 115  | 57   |
| Standard Jumping AM6    | Program 116  | 57   |
| Standard Jumping AM7    | Program 117  | 58   |
| Standard Jumping AM8    | Program 118  | 58   |
| Standard Jumping AM9    | Program 119  | 59   |
| Points Jumping 1        | Program 120  | 59   |
| Points Jumping 2        | Program 121  | 59   |
| Points Jumping 3        | Program 122  | 59   |
| Time Jumping C          | Program 123  | 60   |
| Two-Phases-Jumping      | Program 124  | 69   |
| Amerik. Stage F         | Program 125  | 79   |
| Amerik. Stage / Time    | Program 126  | 90   |
| Standard/Time 1         | Program 127  | 101  |
| Standard/Time 2         | Program 128  | 102  |
| Team Jumping 1          | Program 129  | 103  |
| Team Jumping 2          | Program 130  | 104  |
| Team Jumping 3          | Program 131  | 104  |
| Team Jumping 4          | Program 132  | 104  |
| <b>Speed Skating</b>    | Program 12   | 104  |
| <b>Cycling</b>          | Program 14   | --   |
| Street Cycling          | Program 141  | --   |
| <b>Agility</b>          | Program 15   | --   |
| Competition             | Program 151  | --   |
| Games                   | Program 152  | --   |
| <b>TdC Test</b>         | Program 16   | --   |

**PARALLEL SLALOM:****Parallel Slalom with finish differential only:**

- Red and Blue course identification
- Differential time between both courses

*Recommended for:* Alpine Skiing and Snowboard

**Parallel Slalom with net- and differential time:**

- Common start for both courses
- Run time for both courses
- Differential time between both courses
- Red and blue course identification
- Total time after switching course
- Total differential time after switching course

*Recommended for:* Alpine Skiing, Snowboard, Dual Mountainbike Slalom, etc.

**DUAL TIMER:**

- Timing of two courses simultaneously
- Measuring of intermediate and run times
- Calculation of total time after reversal of courses
- Separate or combined start
- Only one racer on each course
- Selectable calculated precision from 1/1000 up to 1 sec.
- Results for each course individual or comb.

*Recommended for:* Alpine Skiing, Snowboard, Dual Mountainbike Slalom, Pursuit Cycling, Kilometer Time Trial, Olympic Sprint, etc.

**SPEED:**

- Adjustable measuring distance between 1 and 9999 Meter
- Display and printout in km/h, m/s and mph
- Bi-directional trap

*Recommended for:* speed measuring

**SPEED SKIING:**

- Fixed 100 m trap length
- Display and printout in km/h only
- Display and printout of start, finish and run time
- Multiple result possibilities

*Recommended for:* Speed Skiing, Speed Mountainbike, Street Luge

**CARVING:**

- Countdown from the selected maximum course time
- Horn at zero
- Count up after zero
- Selectable calculated precision from 1/1000 up to 1 sec.
- Individual, group or mass start
- Time of day or absolute timing

*Recommended for:* Carving

**10-CHANNEL-TIMER:****10-Channel-Timer 1:**

- Program to measure intermediate and run times
- Start channel, 8 intermediate channels, finish channel
- Selectable calculated precision from 1/1000 up to 1 sec
- Up to 256 heats (runs)
- Individual, group or mass start
- Time of day or absolute timing
- Up to 9999 competitors on course at the same time
- Up to 9 lanes of finish input with memory for each lane and easy to input order of finish
- Multiple results possibilities

*Recommended for:* Marathon, Triathlon, Duathlon, 10k Run, Athletic, Training

**10-Channel-Timer 2:**

- Like 10 Channel-Timer 1 but it shows times of each channel on separate display boards

**Show Jumping:**

- Show Jumping software for international and national competitions.
- Details see Point 6.1

**Speed Skating:**

- Timing program for Speed Skating programs (with two tracks and a racer that changes the track every lap).

**CYCLING:****Cycle-Road:**

- For road cycling competitions to control the display board (run time, delay time, average speed)

**AGILITY:****Trial:**

- Program for Dog-Agility
- Please order your separat manual for Agility

**TDC TEST:**

Test program to check all of the components of the TdC including printer, LCD displays, inputs

## **2. OPERATING**

### **2.1. Power Supply**

The TdC 8001 has a built-in rechargeable-NiCad-battery-pack (4.5 Ah).

Charge the NiCad-battery-pack with the NG13 or a 12 Volt car-battery. The charging voltage must be between 11 and 16 Volts. To load the TdC 8001 you need to turn it on.

#### **2.1.1. Net-Charging-Set PS12:**



With the net-charging-device PS12 you can load the TdC 8001 directly form the mains:

- ☞ Plug PS12 at the mains.
- ☞ Plug PS12 at the socket „extern. supply“ (A´) or „photocell (20, 21 or 22).
- ☞ Turn TdC 8001 on (switch 26).
- ☞ The red LED (2) must burn.
- ☞ The TdC 8001 must be switched on during the charging process (internal charging electronic)
- ☞ You can load the TdC 8001 also during the normal timing operation.
- ☞ The charging process with the PS12 needs about 12 hours.
- ☞ The charging voltage of the PS12 is about 12 VDC.
- ☞ For the PS12 you need mains between 100 and 240 VAC.

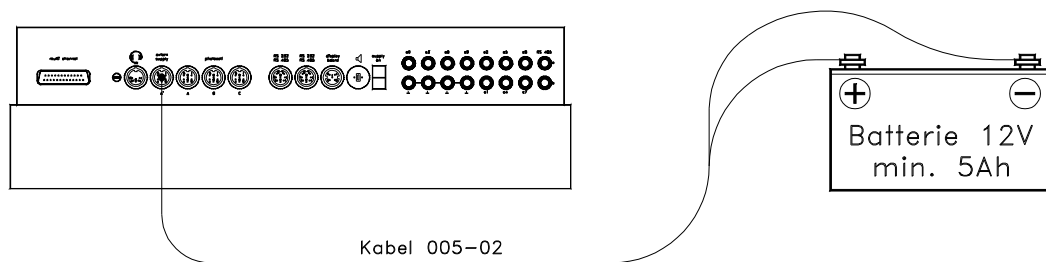
**Attention: You cannot load the TdC 8001 when it is switched off!**



### **2.1.2. External Battery (12 V car battery)**

You can use any 12 Volt battery with a capacity of 5 Ah to charge or supply the TdC 8001.

- ☞ Connect cable 005-02 at socket "extern supply" (A') of the TdC 8001.
- ☞ Connect clips that say (+) at the plus pole of the battery.
- ☞ Connect clips that say (-) at the minus pole of the battery.
- ☞ Red LED (2) of the TdC 8001 must illuminate.



### **2.1.3. Working Time**

The voltage is shown on the info-display (7) if you press <TEST>. Further, the battery condition is always displayed on the meter (3). As long as the needle of the meter is in the green section, you can operate the TdC 8001.

### **2.1.4. Condition of the Rechargeable-Battery**

The TdC 8001 has six NiCad rechargeable batteries, each with 1.2 V and 4.5 Ah. You can check the voltage by pressing <TEST>. The voltage is shown in the info-display. The TdC 8001 always measures the voltage of the batteries and shows a message as soon as they are getting discharged.

**Early warning:** The info-display (7) shows: "Almost empty battery!"  
The voltage is 6.2 Volt

You can continue to work until the voltage is 5.8 Volt. If possible plug a NLG8 or 12 Volt battery to charge (supply) the TdC 8001.

**Turn off:** The info-display (7) shows: "Empty battery!"  
The voltage is 5.8 Volt.

If the voltage is 5.8 Volt, the TdC 8001 is switched into a power down mode. This is necessary to save the memory. As soon as you supply the TdC 8001 with the NLG8 or a 12 Volt Battery, you can continue to work. The TdC8001 is still synchronized.

## **2.2. Printer**

The Timy printer is a thermo printer, this means that you need special thermo paper. You will reach the best printing quality with the original ALGE-paper. You can recognize this paper by the ALGE-Logo on the backside.

The printer is very user-friendly. The printing head does not move and the printer roll is attached to the printer hood. This means that you only have to open the printer hood, insert the new paper, feed the paper in the paper opening and close the paper hood for the change of paper.

The printer works fast and silently. With external power supply it prints up to 6 lines per second, when using the internal battery it will still make 4 lines per second.

When you switch on the TdC 8001, it activates the printer automatically. After you have selected the program you can make the following adjustments for the printer:

**Print-Mode:** The printer prints all data. The printer is automatically in this mode, when you switch the TdC 8001 on.

**Buffer-Mode:** All data for the printer is stored in the buffer. This mode you use e.g. to change the paper.

- ☞ Printer is on Print-Mode
- ☞ Press <PRINT>
- ☞ Printer is now in the Buffer-Mode
- ☞ Press <PRINT>
- ☞ Printer is again in the printing mode. It now prints all data collected during the buffer mode.

**Printer Off:** The printer is off and all data for the printer is lost.

- ☞ Printer is in Print-Mode
- ☞ Press <ALT> and <PRINT> at the same time
- ☞ Printer is switched off
- ☞ Press <ALT> and <PRINT> at the same time
- ☞ Printer is in Print-Mode

A red strip will become visible on one side of the paper when the paper roll is about to run out.

To change the paper, simply open the yellow cover and replace the empty roll with a new one. The loose end of the paper has to be fed through the yellow cover of the printer.

**2.3. How to connect other devices with the TdC 8001**

**Net-charging Device PS12:**



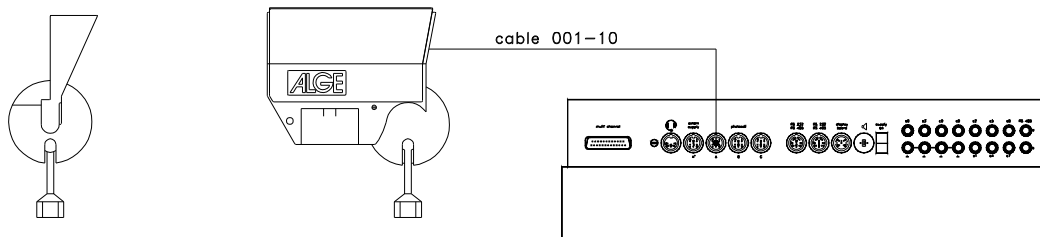
**External 12 Volt Battery:**



**Photocell RLS1n:**

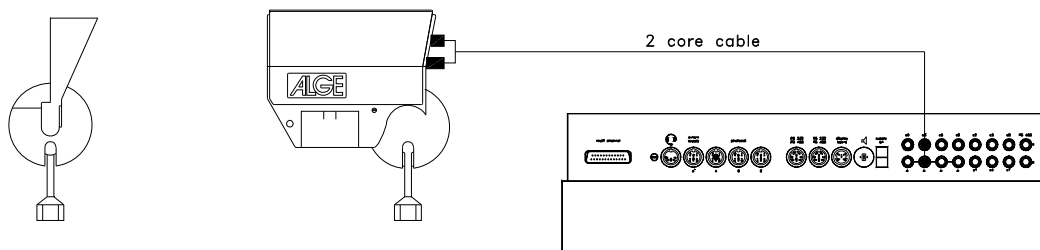
**Finish Photocell with power supply from the TdC 8001:**

You have to connect the photocell for the start or finish at socket (A') or (A). Use cable 002-xx for the start photocell and cable 001-xx for the finish photocell. When using a third photocell for the stage, you have to use cable 001-xx again. To connect the third photocell directly, you need the adapter 018--5.



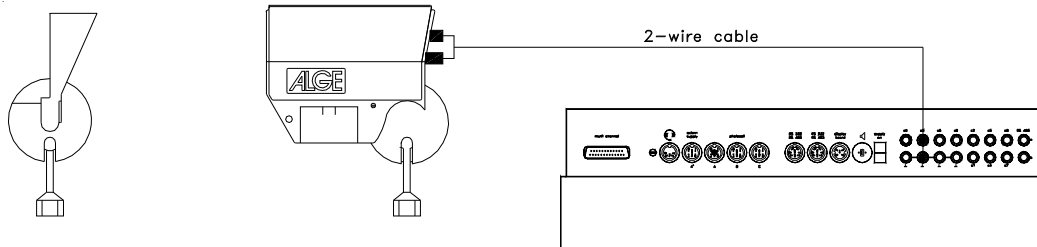
**Photocell with Battery (2 core cable):**

You can use any channel of the TdC 8001 with the banana plugs. For show jumping you need channel 0 (Start = green) and channel 1 (finish = red). You always have to plug in the second wire at any of the black bananasockets.



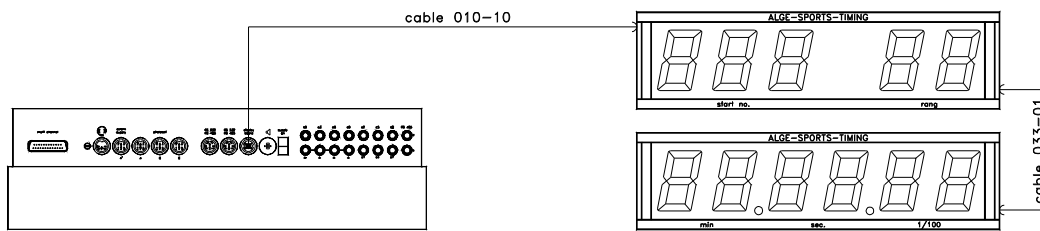
**Intermediate time (2-wire cable):**

You have a banana socket for each timing channel. If you connect a photocell with the banana socket you need an external supply for the photocell (battery into the photocell). Plug cable 027-02 at the photocell. From this cable you can go to the TdC 8001 with a 2-wire cable (e.g. cable real KT 500 or KT 300).

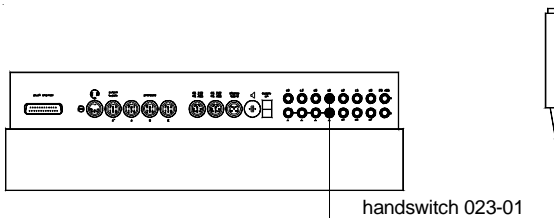


**Display Board GAZ4:**

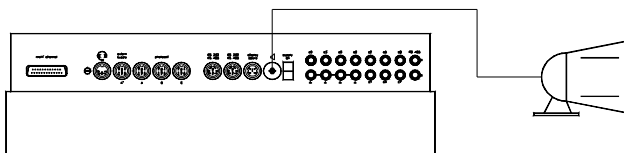
For distances over 10 metres you can use any 2-wire cable with banana plugs (e.g. cable real KT 500).



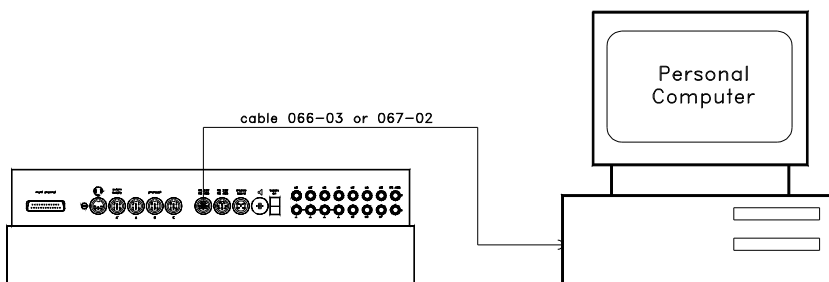
**Handswitch for Timeout:**



**Speaker DL:**



**Personal Computer:**

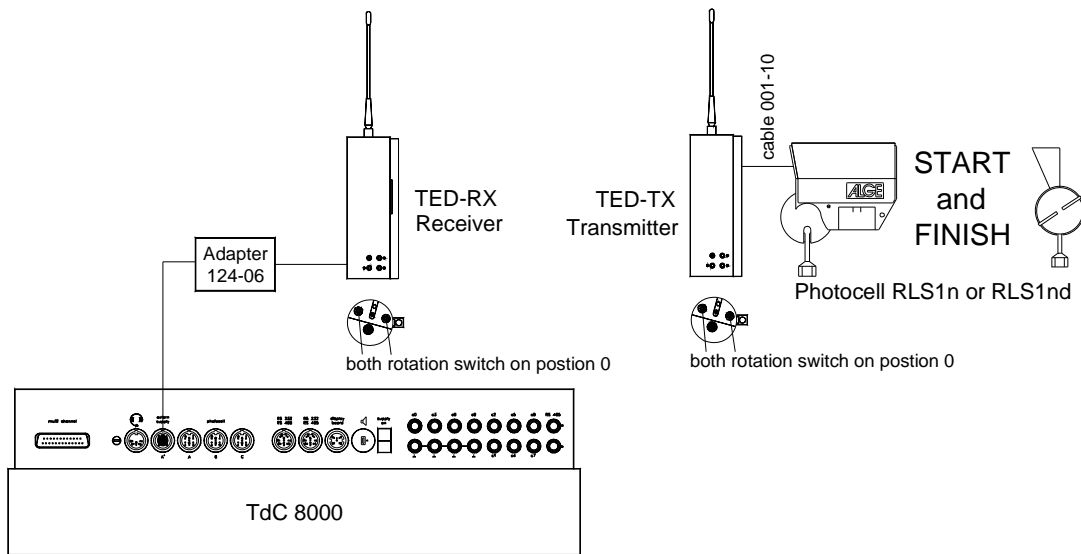


**☞ Photocell with Impulse Transmutation by Radio:**

It is possible to transmit the photocell impulse by radio. We mainly recommend to use this method for equestrian since start and finish change quite often. When using cable it is very difficult to lay them in a way that no danger for horses and persons occur.

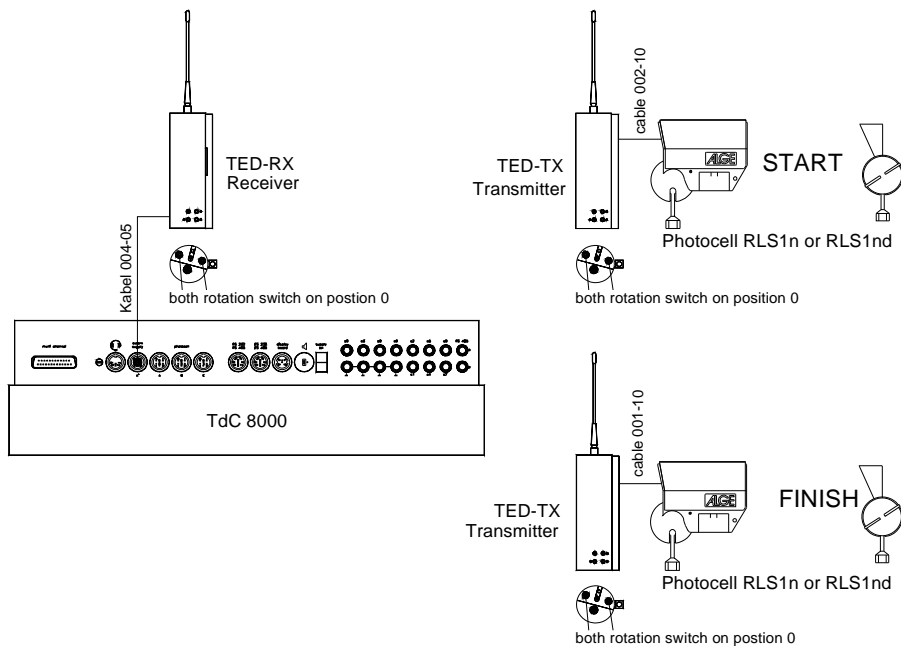
**☞ Start and Finish at the same place:**

You need to use adapter 124-06 in order to switch the photocell between start- and finish impulse.



**☞ Start and Finish at different places:**

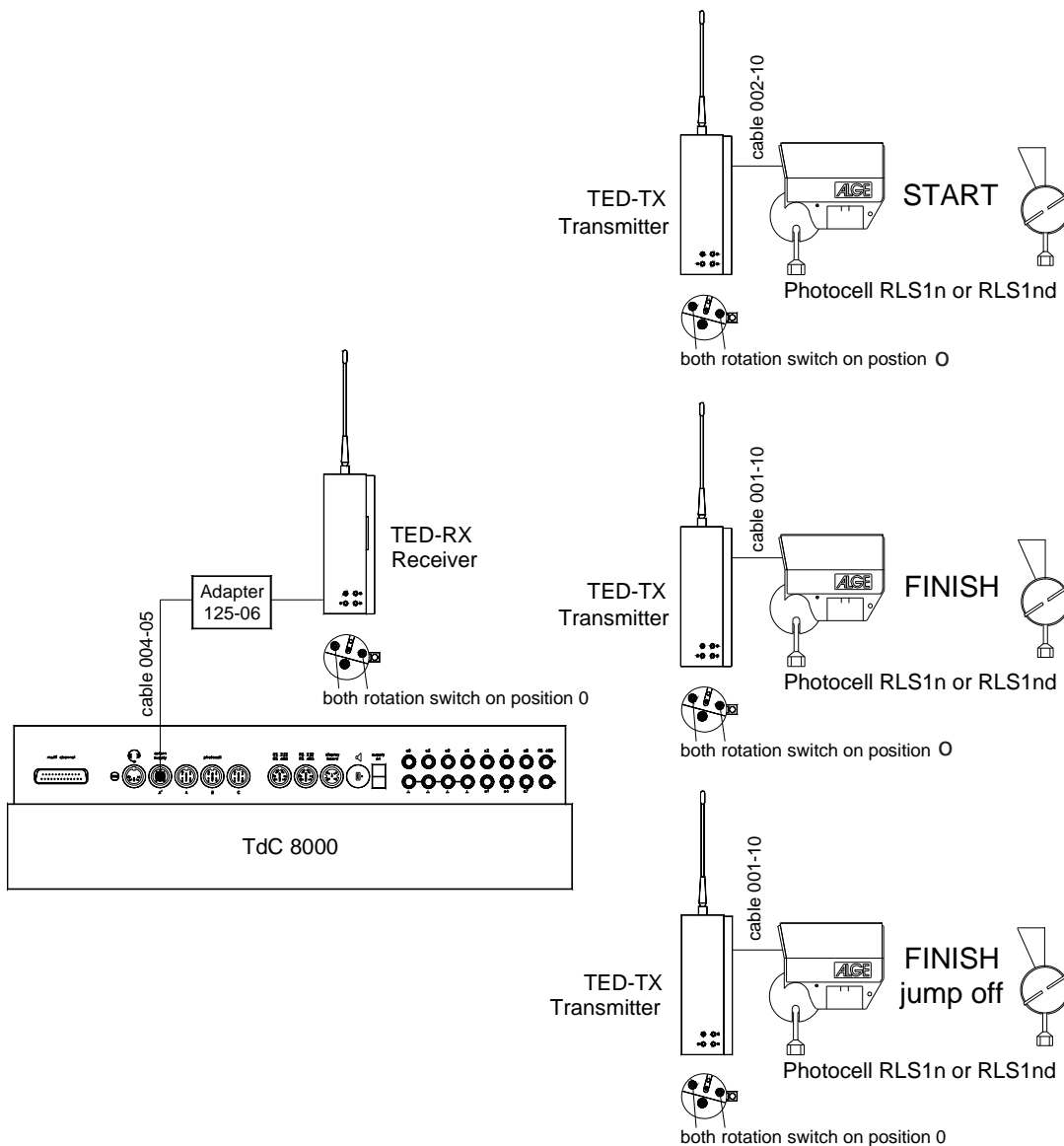
You need to have two radio transmitter (one for start and one for finish) and one radio receiver (at the timing device). If you want (or need) to switch on and off each photocell separately, you can use the adapter 125-06 instead of cable 004-05.











**Start and Finish as well as Jump Off Finish at different places:**

You need to have three different radio transmitters (one for start, one for finish and one for the finish of jump off) and one radio receiver (at the timing device). If you want (or need) to switch on and off each photocell separately, you can use the adapter 125-06 instead of cable 004-05 .



## 2.4. Language selection

You can select the language of the TdC 8001 plus. The machine starts always with the last language that you have selected.

|   |                 |                                  |     |
|---|-----------------|----------------------------------|-----|
|  | <b>German:</b>  | when turning the device on press | <1> |
|  | <b>English:</b> | when turning the device on press | <2> |
|  | <b>France:</b>  | when turning the device on press | <3> |
|  | <b>Italian:</b> | when turning the device on press | <4> |
|  | <b>Spanish:</b> | when turning the device on press | <5> |
|  | <b>Finish:</b>  | when turning the device on press | <6> |

### **How to choose the English language**

Before you turn on the TdC 8001 plus, press key <2> (keyboard (8)) and keep it pressed. Turn the device on. Release the <2> key when you can choose the program. From now on the TdC 8001 will start with the English program version.

## 2.5. Memory

The memory function in the TdC 8001 is designed to allow you to have up to four races with the same number range. Therefore, you could have a race for men with start numbers from 1 to 100 and a race for women with the same start numbers. If you have a race with different start numbers for each category, the group function should be used. Make sure that the organizing committee clearly lists the number range of the groups and how they should start. The TdC 8001 is designed to allow the orderly transfer of time keeping from one race to another. It is not designed to allow the switching of races spontaneously.

The TdC 8001 has a memory which will store approximately 18,000 times. You can store a maximum of 9,999 times per race. Race 1 and 2 together have a capacity to store 9,999 times. For instance, if you have stored 1,000 times in race 1 already, you have 8,999 times available in race 2. For race 3 and 4 you have a capacity to store 8,067 times at total.

A maximum of 256 heats (runs) can be stored for each race. You can clear the memory each time you turn the TdC 8001 on or if you change a race in the main menu.

For the actual heat the TdC 8001 always stores the start time (time of day), finish time (time of day), and run time, if you use the difference time mode. It always stores the memory time (total time from all previous heats) for the previous heat.

#### *Times stored in the first heat:*

- start time (difference time)
- finish time (difference time)
- intermediate time (each interm. time)
- run time
- total time

#### *Times stored in the second (third, etc.) heat:*

- memory time
- start time (difference time)
- finish time (difference time)
- intermediate time (each interm. time)

### 2.5.1. Memory Organisation:

There is a limited amount of memory capacity for each race

|                |   |
|----------------|---|
| <b>Race 1:</b> | about 8,600 times, if race 2 has no data stored |
| <b>Race 2:</b> | about 8,600 times, if race 1 has no data stored |
| <b>Race 3:</b> | about 8,600 times, if race 4 has no data stored |
| <b>Race 4:</b> | about 8,600 times, if race 3 has no data stored |

### 2.5.2. Clear Memory

After turning the TdC 8001 on (switch 26) you have to select the program. Then you are asked if you want to clear the memory. The info-display (7) shows the following message:

|                 |              |    |   |
|-----------------|--------------|----|---|
| Clear race:     | 9746/ 253 R1 | F1 | You can clear each race individually with the <F> keys. |
|                 | 0/ 253 R2    | F2 |   |
|                 | 651/ 6473 R3 | F3 |   |
| Continue: ENTER | 943/ 6473 R4 | F4 |   |

By pressing the <F> key, you select the race that you want to clear. You can select different races at the same time. It clears the memory when you press the <ENTER> key of the finish keyboard (8). E.g.: If you clear race 1 and 3, it shows the following figures on the info-display (7):

|                 |               |    |
|-----------------|---------------|----|
| Clear race:     | 9046/ 253 R1< | F1 |
|                 | 0/ 253 R2     | F2 |
|                 | 651/6473 R3<  | F3 |
| Continue: ENTER | 943/6473 R4   | F4 |

If you press <ENTER> without pressing an <F> key it will not clear the memory.

### 2.6. Select a Race

After clearing the memory you have to select the race that you want to use. You can keep a maximum of four races at the same time in the memory. Each race is completely independent. This means that for each race you can use the same bib numbers from 1 to 9999 and you can make up to 256 heats.

|                 |                |    |
|-----------------|----------------|----|
| Select race:    | 7012/ 2987 R1< | F1 |
|                 | 0/ 2987 R2     | F2 |
|                 | 651/ 6473 R3   | F3 |
| Continue: ENTER | 943/ 6473 R4   | F4 |

Two numbers are shown for each race. The first number shows how much memory you have used, the second how much memory you have still available. For a cleared race, zero is shown as first number. When "select race" is displayed, the cursor will be placed on the previous race. If you want to select that race again press <ENTER>. If you want to select a different race you can select with key <F1>, <F2>, <F3>, or <F4>. The race selected is always marked with an arrow.

#### **Memory was not cleared:**

If you select a race that is not cleared it will show the following message in the info-display (7):

|                 |            |    |                      |
|-----------------|------------|----|----------------------|
| Select Heat:    | SAME (1) < | F1 | (1) means first heat |
|                 | NEXT (2)   | F2 | (2) means sec. heat  |
| Continue: ENTER |            |    |                      |

If you select the same heat, you can continue to work in that same heat as you worked before. If you select the next heat, then a new heat is started.

If you select a new heat:

- All valid run times (or total times) will be stored as memory time
- All other times will be cleared (e.g. start-, finish-, intermediate time)

## 2.7. Timing Modes

We use two different timing modes: difference timing and absolute timing. You must select the timing mode before you start a race:

|                 |             |    |                  |
|-----------------|-------------|----|------------------|
| Select timing:  | ABSOLUTE    | F1 | select with <F1> |
|                 | DIFFERENCE< | F2 | select with <F2> |
| Continue: ENTER |             |    |                  |

### **Absolute:**

Time starts form 0:00.00

The run time (and intermediate times) are stored for each competitor.

This mode should be used for races with mass start.

*Advantage:* For each competitor only one memory place during the first heat (if you have no intermediate times)

*Disadvantage:* If you do not have a mass start, it will be impossible to make time corrections

*Selection:* Press <F1> and <ENTER>

### **Difference:**

The time of day is stored for each start and finish impulse. Therefore, you have to input the time of day first. It calculates the run time from the difference between finish time and start time.

This mode should be used for single starts and group start races.

*Advantage:* You can correct times.

*Disadvantage:* For each competitor you need at least three memory places (start-, finish-, run time)

*Selection:* Press <F2 > and <ENTER>

## 2.8. Test-Function - Checking the TdC 8001

When you press <TEST> the Info-Display (7) shows the following:

|           |           |           |    |       |    |    |    |    |    |
|-----------|-----------|-----------|----|-------|----|----|----|----|----|
| C0 =      | 4.9V      | battery   | =  | 7.3V  |    |    |    |    |    |
| C3 =      | 4.9V      | photocell | =  | 4.9V  |    |    |    |    |    |
| C6 =      | 4.9V      | extender  | =  | 0.00A |    |    |    |    |    |
| # # # # # | # # # # # |           |    |       |    |    |    |    |    |
| c0        | c1        | c2        | c3 | c4    | c5 | c6 | c7 | c8 | c9 |

The Test-Function shows the condition of the device. The condition of all ten channels is monitored (line 4). If one channel blinks, it means that it has a short-circuit. The voltage is shown for channel c0, c3 and c6 .

In addition it shows the voltage of the NiCad battery, the photocell and the current for the extender.

Channel c0, c3 and c6 should normally have about 5 V (open). When an impulse is received, the voltage must go down to 0 V.

When fully loaded, the battery has about 7.4 V. The empty battery has a voltage of about 5.5 V. At this voltage the device switches off. A battery warning appears on the info-display (7) when the power is 6.2 V or lower.

The stabilized voltage "photocell" supplies the photocells and must be about 5 V.

The current for extender-devices must be less than 1 A (interface RS 485 (d)). If the current reaches 1A it switches off the supply for the extender.

Line Test - Checking the Start and Finish Line:

Checking a 1 pair cable which is connected at banana socket c0, c3, or c6.

- Switch TdC 8001 on (switch 26)
- Select the program
- Make the program ready for timing
- press <TEST> (keep it pressed)
- The info-display (7) shows the TdC 8001 measurements
- Measurement of channel c0, c3 and c6 is important for the line test

**Short-Circuit-Test:**

- Cable is open on the start side
- Press <TEST> (press key until you finish the test)
- The voltage of the open channel (c0 , c3, or c6) must be about 4.9 Volt

**Resistance-Test:**

- Short circuit the pair on the start side (press banana plugs together)
- Press <TEST> (press key until you finish the test)
- The voltage with shorted channel (c0, c3, or c6) must be between 0 and 0.9 Volt. If the voltage is higher than 0.9 V the resistance of the cable is too high (maximum 2000 W loop resistance).

The line test meter is only for quick reference. Please use a multimeter set on Ohms for accurate testing of your wiring. Remember that resistance on the line will change due to weather conditions. Always check the condition of splices, especially in extremely cold temperatures. Scotchlocks and AMP locks have a bad habit of opening due to the expansion rate differences between the copper wire and the steel splicing plate. You should use the older "White Bean" connectors if there is a chance that temperatures will fall to below -10 F (-15°C).

Most of the problems with timing installations are due to wiring on the course. Please take the time to review your wiring early in the season. Bad splices and connections will only get worse as time goes on and they are a lot easier to deal with in fall before the pedestals get covered with snow.

Please call your ALGE agents for assistance with wiring. They are able to consult you on proper wiring plans and are usually available to travel to your site for more detailed work at reasonable expense.

**Needle of meter (3) swings:**

The needle of the meter starts to swing as soon as the photocell is out of line. Please check the set up of the photocell. A swinging needle could also oscillate during a very long timing impulse or through a short-cut of the cable.



## **2.9. Synchronize Start**

Synchronization between TdC 8001 and other timing devices is possible. You synchronize the TdC 8001 after you adjust the time before you start the timing.

Connect other timers through banana socket of channel c0 of the TdC 8001 with a 1 pair cable (or cable 004 at socket 19 or 20).

|                 |       |    |                            |
|-----------------|-------|----|----------------------------|
| Time: 10:15:23  | OK<   | F1 | time on display is correct |
| Date: 96-02-28  | WRONG | F2 | time on display is not     |
| Continue: ENTER |       |    | correct                    |

There are two ways to synchronize:

- Synchronization from the internal clock
- Manual synchronization

### **Synchronization from the internal clock:**

- Press <F1>
- Press <ENTER>
- The info-display (7) shows:

|                               |
|-------------------------------|
| Time: 10:15:45                |
| Date: 96-02-28                |
| Synchronize: on minute change |

- At the next sharp minute the TdC 8001 gives the synchronise impulse through channel c0.
- At the synchronization it gives a beep from the TdC 8001.
- The time of day disappears in the info-display (7).
- The TdC 8001 is ready for timing.

### **Manual synchronization:**

- Press <F2>
- Press <ENTER>
- The info-display (7) shows:

|                  |
|------------------|
| Time: 10:15:34   |
| Date: 96-01-16   |
| Save with: ENTER |

- Input (correct) the time of day with the finish keyboard (8) and confirm with <ENTER>.
- Input (correct) the date with the finish keyboard (8) and confirm with <ENTER>.

|                                     |
|-------------------------------------|
| Time: 10:16:00                      |
| Date: 96-03-28                      |
| Synchronize: START-key / channel C0 |

- Start the timers by pressing the <START> key or through an external impulse of channel c0.
- The TdC 8001 is ready for timing.

### 3. Keyboard Functions

The keyboard of the TdC 8001 has three different blocks:

- Start-keyboard (12)
- Finish-keyboard (8)
- Function-keyboard (9)

Because of the separated keyboard blocks it is possible for two persons to work on the TdC 8001 at the same time. One person can manage the start, the other the finish (and intermediate times). The display (1) works always together with the start-keyboard (12). The displays (5) and (6) work always with the finish-keyboard (8).

The function-keyboard (9) works together with the start-keyboard or finish-keyboard. It shows the information on the info-display (7)

#### 3.1.1. Start-Keyboard



Manual start-impulse (SZM on printer, C0M on RS232), precision only 1/100



It clears the start time of the start number shown on display (1). (FALSE START)  
If you press <ALT> and <CLEAR> together, it restores the cleared time again.



As long as you press <BLOCK> it will print all incoming start impulses (channel 0) as not valid. The time is marked on the first digit with a question mark (?).  
As long as you press <ALT> and <BLOCK> together, it ignores incoming start impulses (channel 0; see page 34)



To input the start number at the start. It shows the start number on the start-display (1).



To edit the start time of the start number in the start display (1).  
If you press <MENU> and <INPUT> at the same time you will get to start time input  
You can input times individually or in intervals, etc.



Each start number that you input you have to confirm with <ENTER>. Depending on the switch position of menu 53 the start number counts automatically up, down or remains.

#### 3.1.2. Finish-Keyboard



Manual stop-impulse (ZZM on printer, C1M on RS232), precision only 1/100



It clears the finish time of the start number shown on display (1). (FALSE FINISH)  
If you press <ALT> and <CLEAR> together, it restores the cleared time again.



As long as you press <BLOCK> it will print all incoming finish impulses (channel 1) as not valid. The time is marked on the first digit with a (?). The time does not stop.  
As long as you press <ALT> and <BLOCK> together, it ignores incoming finish impulses (channel 1).



To input the start number at the finish (intermediate time). It shows the start number on the finish-display (6).

To edit the finish time of the start number in the finish display (6).



If you press <MENU> and <INPUT> at the same time you can change the run time, memory time or intermediate time.



Each start number that you input you have to confirm with <ENTER>.

Increment start number:

- up: press <ENTER>
- down: press <ALT> and <ENTER> together

### 3.1.3. Function-Keyboard (9)



To confirm a YES/NO question



If you deny a YES/NO question



If you press <PRINT> it switches the printer into the buffer mode. This means that all information for the printer will be stored in the buffer. If you press again <PRINT> it will print all the data from the buffer. This function is mainly intended for changing the paper.

If you press <ALT> and <PRINT> together it switches the printer off. All printer information is now lost. If you press <PRINT> or <ALT> and <PRINT> again it switches the printer on.

If you press <MENU> and <PRINT> together it prints all adjustments of the main menu.



To test the TdC 8001 (see chapter 2.9 on page 18).



Key has no function yet.



To print the Classement (see chapter 4.5 on page 44).



Cursor-key up



Cursor-key down



Always use it together with another key. You have to press first <ALT> and then the second key. Do not release <ALT> before you have pressed the second key. <ALT> has a function together with <CLEAR>, <BLOCK>, <MENU> and <PRINT>.



Always use it together with another key. You have to press <MENU> first and then the second key. Do not release <MENU> before you have pressed the second key. <MENU> has a function with <ALT>, <INPUT>, <PRINT>, and <BLOCK>.



Function key 1: To select in a menu of the info-display (7) when the text is placed at the right side in line 1.



Function key 2: To select in a menu of the info-display (7) when the text is placed at the right side in line 2.



Function key 3: To select in a menu of the info-display (7) when the text is placed at the right side in line 3.



Function key 4: To select in a menu of the info-display (7) when the text is placed at the right side in line 4.



Memory for mass arrivals at the finish or intermediate time (see chapter 4.4).

## **4. SPECIAL FUNCTIONS**

### **4.1. TEST - Checking the TdC 8001**

see page 98



### **4.2. BLOCK - Deactivate the Impulse-Channels**



You can deactivate each impulse channel (c0 to c9). There are two possibilities to deactivate the channels.

- ☞ The TdC 8001 ignores each impulse of a selected channel (channel off)
- ☞ The TdC 8001 marks each impulse of a selected channel (with ?) . The time does not start or stop on the display and display board.

Channel 0 (start) and 1 (finish) you can deactivate directly.

#### **4.2.1. Blocking the Start**



- ☞ All start impulses (c0) are not valid and the time of day is marked with a (?) as long as you press <BLOCK> of the start-keyboard (12).

*Printer:*                   ?0043 ST 10:34:13.384  
*Display Board:*       no output  
*RS 232:*                 ?0043 C0 10:34:13.384(CR)

- ☞ As long as you press <ALT> and <BLOCK> of the start-keyboard (12) together, the TdC 8001 will ignore all start impulses (channel 0). The TdC 8001 does not store or output this time.

If you block the start impulse it will not start the clock.

**Attention:** For all equestrian programs the function of the block key can be changed in menu 58. If you change it to "LATCHIG BLOCKKEYS = ON" than you can activate and deactivate the start impulse (time of day it will register always).

#### **4.2.2. Blocking the finish**



- ☞ All finish impulses (c1) are not valid and the time of day is marked with a ? as long as you press <BLOCK> of the finish-keyboard (8). It does not stop the clock and it does not output a run time.

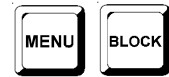
*Printer:*                   ?0043 FT 10:34:13.384  
*Display Board:*       no output  
*RS 232:*                 ?0043 C1 10:34:13.384(CR)

- ☞ As long as you press <ALT> and <BLOCK> of the finish-keyboard (8) together, the TdC 8000 will ignore all finish impulses (channel 1). The TdC 8001 does not store or output this time.

A stop impulse never stops the time on the display and display board as long as you press <BLOCK>.

**Attention:** For all equestrian programs the function of the block key can be changed in menu 58. If you change it to "LATCHIG BLOCKKEYS = ON" you can activate and deactivate the finish impulse (it will register time of day always).

### 4.2.3. Individual adjustment of the channels



You can adjust each channel individually. When you switch the TdC 8001 on and clear the memory you always have all channels active.

- If you press <MENU> and <BLOCK> together it shows the setting of each channel in the info-display (7).
- Select the channel with and .
- Press <F1> to switch between activated and deactivated
- A (+) means that the channel is activated.
- A (-) means that the channel is deactivated.
- Leave the menu by pressing <MENU> and <BLOCK> together.

Info-display (7):

|                          |    |    |    |    |    |    |    |    |    |        |    |
|--------------------------|----|----|----|----|----|----|----|----|----|--------|----|
| Channels on (+)/off (-): |    |    |    |    |    |    |    |    |    | CHANGE | F1 |
| +                        | +  | +  | +  | +  | +  | +  | +  | +  | +  |        |    |
| c0                       | c1 | c2 | c3 | c4 | c5 | c6 | c7 | c8 | c9 |        |    |

The adjustment above appears automatically when you turn the device after you cleared the memory:

The example below shows that channel c3 and c4 is switched off:

|                          |    |    |    |    |    |    |    |    |    |        |    |
|--------------------------|----|----|----|----|----|----|----|----|----|--------|----|
| Channels on (+)/off (-): |    |    |    |    |    |    |    |    |    | CHANGE | F1 |
| +                        | +  | +  | -  | -  | +  | +  | +  | +  | +  |        |    |
| c0                       | c1 | c2 | c3 | c4 | c5 | c6 | c7 | c8 | c9 |        |    |



### 4.3. Editing of Times

#### 4.3.1. Editing of start times

##### 4.3.1.1. Clear start times



- <CLEAR> of the start keyboard (12) clears the start time of the ID-number shown in display (1).
- The cleared time is now marked with a "c" (c= cleared).
- The printer prints the time with the c prefix.
- The output of RS 232 interface looks like: c0043 C0 10:34:13.384

##### 4.3.1.2. Restoring a cleared start time



- The correct start number must be shown in the start display (1). Then, press <ALT> and <CLEAR> on the start keyboard (12) together, it turns into a valid time out of the cleared time.
  - It stores the time as valid start time.
  - The printer prints a valid start time.
  - The RS 232 interface sends the valid start time.
  - You can only restore the last start that was cleared.
- Especially useful if a time is accidentally cleared.

##### 4.3.1.3. Changing start times



This function is used at any time to edit start times. If you press the <INPUT> of the start keyboard (12) it is possible to edit the start time. The following editing is possible:

- overwrite a start time with keyboard (12)
- copy the start time of a start number to another start number (if a racer loses his/her original number).
- identify the correct start time from many recorded impulses.

*Input functions:*

- Press <INPUT> of the start keyboard (12)
- The info-display (7) shows the valid start time of the start number you wish to edit.

```
Input:  0015 C0  13:15:35.486      NEW No
```

F1 e.g. start number 15, the last digit of the start number blinks, you can confirm or overwrite the start number

- You can increment through the start list with the cursor keys (⏪ and ⏩) or overwrite the start number with the start keyboard (12).
- Confirm your choice with <ENTER>
- The cursor is now at the first digit of the time:

```
Input:  0015 C0  13:15:35.486      NEW No
        c0015 C0  13:10:12.498
        ?0015 C0  13:17:28.938
```

F1 valid time  
time cleared with <CLEAR>  
time not valid (e.g. from <BLOCK>)

- You can select the correct time with the cursor key (⏪ and ⏩). When you press <ENTER> it makes the selected time valid.

- You can also overwrite the valid time (first line) with the numbers of the start keyboard (12) (manual input of the start time).
- You can assign the selected time to another start number by pressing <F1> and input the new start number.
- Exit the input menu by pressing <INPUT> of the start keyboard (12) again.

**Attention:**

- If it shows 00:00:00.000 as start time, it means that you have no start time yet.
- If you make another start time valid, it marks the old start time with a "c" (clear).  
e.g.: c 0009 ST 12:13.21.115

**Group start:** If you work with group start, you can change the start time like for the single start. In the input menu it shows the group number instead of the start number. You can only change the start time of the complete group, but not of a single competitor.

### 4.3.2. Editing of Finish Times

#### 4.3.2.1. Clear Finish Times



- <CLEAR> of the finish keyboard (8) clears the finish time of the start number shown in display (6).
- The run time gets replaced by the running time in the finish display (5).
- The cleared time is now marked with a c (c= cleared).
- The printer prints the time with a c prefix.
- The output of RS 232 interface looks like: c0043 C1 10:35:33.854

#### 4.3.2.2. Restoring a Cleared Finish Time



- The correct start number must be shown in the finish display (6). Then, press <ALT> and <CLEAR> on the finish keyboard (8) together, it makes a valid time out of the cleared time.
- The finish display (5) resumes the running time.
- It stores the time as valid finish time.
- The printer prints a valid finish time.
- The RS 232 interface sends the valid finish time.
- You can only restore the last finish that was cleared.  
Especially useful if a time is accidentally cleared.

#### 4.3.2.3. Changing Finish Times



Use this function to edit finish times. If you press the <INPUT> of the finish keyboard (8) you can edit the finish time of the start number shown on the finish display (6).

- overwrite a finish time with keyboard (8)
- copy the finish time of a start number to another start number (if you fail to identify the racer correctly when he crosses the line).
- identify the correct finish time from many recorded impulses.
- disqualification of a competitor (start number)

*Input functions:*

- Press <INPUT> of the finish keyboard (8)
- The info-display (7) shows the valid finish time of the start number you wish to edit.

```
Input:  0015 C1  13:15:35.486      NEW No F1
        DISQU.  F2
```

e.g. start number 15, the last digit of the start number blinks, you can overwrite the start number or change it with the cursor keys (←) and (→)

- You can increment through the finish list with the cursor keys (⏪ and ⏩) or input the start number with the finish keyboard (8).
- Confirm the start number with <ENTER>
- The cursor is now on the first digit of the time:

|                |              |        |    |                                   |
|----------------|--------------|--------|----|-----------------------------------|
| Input: 0015 C1 | 13:15:35.486 | NEW No | F1 | valid finish time                 |
| c0015 C1       | 13:10:12.498 | DISQU. | F2 | time cleared with <CLEAR>         |
| ?0015 C1       | 13:17:28.938 |        |    | time not valid (e.g. from <BLOCK> |

- You can select the correct finish time with the cursor key (⏪ and ⏩). When you press <ENTER> it makes the selected time valid.
- You can also overwrite the valid finish time (first line) with the numbers of the finish keyboard (8) (manual input of the finish time).
- If you want to give the selected time to another start number press <F1> and input the new start number.
- To disqualify the competitor (start number) press <F2>. The disqualified time is marked with a "d". For a disqualification it clears the start time, finish time, and run time.
- Exit the input menu by pressing <INPUT> of the finish keyboard (8) again.

**Attention:**

- If it shows 00:00:00.000 as finish time, it means that you have no finish time for this start number.
- If you make another finish time valid, it stores the old finish time with a "c" (clear).  
E.g.: c 0009 FT 12:15.22.157

#### 4.3.2.4. Editing run times and finish times



If you press <MENU> and <INPUT> of the finish keyboard (8) together you get into the menu to edit run times and finish times.

- Press <MENU> and <INPUT> at the same time.
- The info-display (7) shows the following:

|                 |              |    |                                |
|-----------------|--------------|----|--------------------------------|
| Input times:    | FINISH TIME< | F1 | <F1> to change the finish time |
|                 | RUN TIME     | F2 | <F2> to change the run         |
| Continue: ENTER |              |    |                                |

- Select the time you want to change with <F1>, <F2> or ⏪ and ⏩.
- Changes should be made as described in the following three chapters.
- Exit the menu by pressing <MENU> and <INPUT> together.

#### 4.3.2.4.1. Editing a Finish time



You can edit the following:

- overwrite a run time with keyboard (8)
- copy the run time of a start number to another start number.
- disqualification of a competitor (start number)

#### Changing a run time:

- Press <MENU> and <INPUT> together
- Press <F1>
- Press <ENTER>

- The info-display (7) shows the valid finish time of the start number shown in the finish display (1):

|        |         |              |        |    |                      |
|--------|---------|--------------|--------|----|----------------------|
| Input: | 0015 C1 | 10:01:35.139 | NEW No | F1 | e.g. start number 15 |
|        |         |              | DISQU. | F2 |                      |

- You can change the start number with the cursor keys (← and →) or input the start number with the finish keyboard (8).
- Confirm the start number with <ENTER>
- If you already have different times for this start number it shows the following::

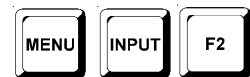
|        |          |              |        |    |                   |
|--------|----------|--------------|--------|----|-------------------|
| Input: | 0015 C1  | 10:01:35.139 | NEW No | F1 | valid finish time |
|        | c0015 C1 | 10:01:28.143 | DISQU. | F2 |                   |
|        | c0015 C1 | 10:01:28.163 |        |    |                   |

- You can overwrite the valid run time with the numbers of the finish keyboard (8) (manual input of the run time).
- If you want to copy the selected time to another start number press <F1> and assign it.
- To disqualify the competitor press <F2>. The disqualified time is marked with a "d". For a disqualification it clears the start time, finish time and run time.
- Exit by pressing <MENU> and <INPUT> of the finish keyboard (8) together.

**Attention:**

- If it shows 00:00:00.000 as run time, it means that you have no run time for this start number.
- If you make another run time valid, it stores the old run time with a "c" (clear).  
e.g.: c 0009 C1 00:01:35.486

#### 4.3.2.4.2. Editing a run time



You can edit the following:

- overwrite a run time with keyboard (8)
- you can copy the run time to another start number.
- disqualification of a competitor (start number)

#### Changing a memory time:

- Press <MENU> and <INPUT> together
- Press <F2>
- Press <ENTER>
- The info-display (7) shows the valid run time of the start number shown in the finish display (6):

|        |         |             |        |    |                      |
|--------|---------|-------------|--------|----|----------------------|
| Input: | 0015 RT | 0000055.139 | NEW No | F1 | e.g. start number 15 |
|        |         |             | DISQU. | F2 |                      |

- You can change the start number with the cursor keys (← and →) or input the start number with the finish keyboard (8).
- Confirm the start number with <ENTER>
- The cursor is now on the first digit of the time:

|         |         |                     |        |    |              |
|---------|---------|---------------------|--------|----|--------------|
| Input : | 0015 RT | <u>0</u> 00055.446< | NEW No | F1 | valid finish |
|         | 0015 RT | 000048.143          | DISQU. | F2 |              |
|         | 0015 RT | 000063.941          |        |    |              |

- You can overwrite the valid run time with the finish keyboard (8) (manual input of the finish time).
- If you want to copy the selected time to another start number press <F1> and assign it.
- To disqualify the competitor press <F2>. The disqualified time is marked with the prefix d. For a disqualification it clears the start time, finish time and run time.
- Exit the menu by pressing <MENU> and <INPUT> of the finish keyboard (8) together.

**Attention:**

- If it shows 00:00:00.000 as run time, it means that you have no run time for this start number.
- If you make another run time valid, it stores the old memory time with a "c" (clear).  
E.g.: c 0009 MT 00:01:32.446

- You can overwrite the valid intermediate time with the finish keyboard (8) (manual input).
- If you want to copy the selected time to another start number press <F1> and assign it.
- Exit the menu by pressing <MENU> and <INPUT> of the finish keyboard (8) together.

**Attention:**

- If it shows 00:00:00.000 as memory time, it means that you have no memory time for this start number.
- If you make another intermediate time valid, it stores the old intermediate time with a "c" (clear).  
E.g.: c0009 C2 00:01:32.446

#### **4.4. CLASS - Classement**



The software for the classement is only partly finished. During the next month we will finish this part of the software.

At the moment you can print the following lists:

- Did not Finish
- Disqualified
- Protocol

##### **Print a Classement:**

- Press the key <class>

```
Classement :          did not finish< F1
                   disqualified      F2
                   protocol         F3
Continue: ENTER
```

- Select with the arrow keys the classement that you want to print
- Press <ENTER>

##### **Did not Finish:**

It prints a list of all competitors that have a start time, but did not finish.

##### **Disqualified:**

It prints a list of all competitors who are disqualified.

##### **Protocol:**

You can print the following protocols:

- Start Time
- Finish Time
- Run Time
- Run Time Total
- Count Down Time
- Time Out Time

When selecting the protocol in the classement you can also select with the cursor keys the protocol and press <ENTER>.

#### **4.5. PRINT - Switching the Printer off or on**



When you switch TdC 8001 on it activates the printer automatically. After you have selected the program you can make the following adjustments for the printer:

**Print-Mode:** The printer prints all data. The printer is automatically in this mode when you switch the TdC 8001 on.

**Buffer-Mode:** All data for the printer is stored in the buffer. This mode you use e.g. to change the paper.



- Printer is in Print-Mode
- Press <PRINT>
- Printer is now in the Buffer-Mode
- Press <PRINT>
- Printer is again in the printing mode. It prints now all data collected during the buffer mode.

**Printer Off:** The printer is off and all data for the printer is lost.



- Printer is in Print-Mode
- Press <ALT> and <PRINT> at the same time
- Printer is switched off
- Press <ALT> and <PRINT> at the same time
- Printer is in Print-Mode

### **5. MAIN MENU - GENERAL ADJUSTMENTS**

The TdC 8001 is a very universal timing device. To cover a wide range of timing solutions it is possible to adjust each program individually. If you make changes in the main menu it stores this new values after you turn the machine off.

#### **Factory Default Setting:**

If you want the have the ALGE standard configuration do the following:

- turn TdC 8001 off (switch 26)
- press <ALT> and <MENU> together and keep it pressed
- turn TdC 8001 on (switch 26)
- release <ALT> and <MENU> after five seconds
- the main menu has now the ALGE standard configuration

You can also check and change the main menu set up through the RS 232 interface (see page 105, chapter 8.2.1 and page 106, chapter 8.2.2).

#### **How do you get into the main menu:**



- Select program
- press <ALT> and <MENU> together
- Press ↓ and ↑ to go through the menu. With the numeric keys of the finish keyboard (8) you can select a menu directly.
- Select the chosen menu with <YES>



**Main Menu Selections:**

|          |                               |                                    |                                  |
|----------|-------------------------------|------------------------------------|----------------------------------|
| Menu 1:  | Delay Time Start = 1.00 s     | Adjustable:                        | from 0.01 to 9.99 seconds        |
| Menu 2:  | Delay Time Finish = 0.30 s    | Adjustable:                        | from 0.01 to 9.99 seconds        |
| Menu 4:  | Display Time 1 = 03 s         | Adjustable:                        | 0 to 99                          |
| Menu 9:  | Running Tenth = OFF           | Adjustable:                        | ON or OFF                        |
| Menu 11: | Finish Rank = ON              | Adjustable:                        | ON or OFF                        |
| Menu 15: | Print Menus = ON              | Adjustable:                        | ON or OFF                        |
| Menu 16: | Print Linefeed = 1            | Adjustable:                        | from 0 to 9                      |
| Menu 17: | RS-232 Baudrate = 9600 Bd     | Adjustable:                        | 2400, 4800, or 9600 Baud         |
| Menu 18: | RS-232 Run time = OFF         | Adjustable:                        | ON or OFF                        |
| Menu 19: | D-Board Baudrate = 2400 Bd    | Adjustable:                        | only 2400 Baud                   |
| Menu 20: | D-Board Channel 2 = RUNNING   | Adjustable:                        | RUNNING or STANDING              |
| Menu 21: | Beep = ON                     | Adjustable:                        | ON or OFF                        |
| Menu 24: | Change Run                    | Adjustable:                        | SAME or NEXT run                 |
| Menu 25: | Change Race                   | You can select another race        |                                  |
| Menu 26: | D-Board-Test                  | Test program for the display board |                                  |
| Menu 36: | Penalty Points = 04.00        | Adjustable:                        | 0 to 99.99                       |
| Menu 37: | Time Violation 1 = 01.00      | Adjustable:                        | 0 to 99.99                       |
|          | Penaltyperiod = 04.00         | Adjustable:                        | 0 to 99.99                       |
| Menu 38: | Time Violation 2 = 01.00      | Adjustable:                        | 0 to 99.99                       |
|          | Penaltyperiod = 04.00         | Adjustable:                        | 0 to 99.99                       |
| Menu 39: | Parcours Time 1 = 000.00      | Adjustable:                        | 0 to 999.99                      |
| Menu 40: | Parcours Time 2 = 000.00      | Adjustable:                        | 0 to 999.99                      |
| Menu 41: | Block Time 1 = 000.00         | Adjustable:                        | 0 to 999.99                      |
| Menu 42: | Block Time 2 = 000.00         | Adjustable:                        | 0 to 999.99                      |
| Menu 43: | Count Down Time 1 = 000045.00 | Adjustable:                        | 0 to 23:59:59.99 or 0 to 6399.99 |
|          | Automatic Start = ON          | Adjustable:                        | ON or OFF                        |
| Menu 44: | Count Down Time 2 = 000030.00 | Adjustable:                        | 0 to 23:59:59.99 or 0 to 6399.99 |
|          | Automatic Start = ON          | Adjustable:                        | ON or OFF                        |
| Menu 45: | D-Board Count Down = ON       | Adjustable:                        | ON or OFF                        |
| Menu 46: | Time Out Signal = ON          | Adjustable:                        | ON or OFF                        |
| Menu 47: | Add PTM Immediately = OFF     | Adjustable:                        | ON or OFF                        |
| Menu 48: | Teams = OFF                   | Adjustable:                        | ON or OFF                        |
| Menu 50: | ADD Immediately = OFF         | Adjustable:                        | ON or OFF                        |
| Menu 53: | BIB-Counting = Manual         | Adjustable:                        | Up, Manual, Down                 |
| Menu 54: | Time-Out = 000                | Adjustable:                        | 0 to 000                         |
| Menu 55: | LED-Brightness = 9            | Adjustable:                        | 1 to 9                           |
| Menu 57: | Add PTO Immediately = ON      | Adjustable:                        | ON or OFF                        |
| Menu 58: | Latching Blockkeys = OFF      | Adjustable:                        | ON or OFF                        |
|          | Print Blocktimes = ON         | Adjustable:                        | ON or OFF                        |
| Menu 59: | Pulse from TED                | Adjustable:                        | Channel 0, Channel 1, Channel 9  |



**Rank for Finish Time:                      Menu 11:                      FINISH RANK = ON**

For each run time (or total time) it shows the rank on display (5) and on the display board. It shows the rank for as long as the display time has been set (see menu 4).

|                      |                      |    |                                |
|----------------------|----------------------|----|--------------------------------|
| Menu 11: FINISH RANK | ON<                  | F1 | shows rank                     |
|                      | OFF                  | F2 | no rank shown                  |
| Save with: ENTER     | confirm with <ENTER> |    | confirm selection with <ENTER> |

*Pre-adjusted value:* rank for finish time is on

**Print Menus:                                      Menu 15:                                      PRINT MENUS = ON**

Whenever you change an ALGE adjustment in the menus, the new adjustment (e.g. during the switch on procedure) is printed. If you select "PRINT MENUS = OFF" it will not print the menu adjustments. Also, changes made in the main menu will not be printed.

- on     = <F1>     the menu adjustments are printed
- off    = <F2>     the menu adjustments are not printed

|                      |     |    |                                |
|----------------------|-----|----|--------------------------------|
| Menu 15: PRINT MENUS | ON< | F1 | print menu                     |
|                      | OFF | F2 | do not print menu              |
| Save with: ENTER     |     |    | confirm selection with <ENTER> |

*Pre-adjusted value:* print menu adjustments

**Printer Linefeed:                              Menu 16:                                      PRINTER LINEFEED = 0**

After each printed paragraph, the printer can add blank lines (e.g. two blank lines that prevent tearing off the print). You can set between 1 and 9 blank lines. If you use zero (ALGE adjustment) the printer prints in every line.

|                                      |  |                                |
|--------------------------------------|--|--------------------------------|
| Menu 16: PRINTER LINEFEED = <u>0</u> |  | input amount of blank lines    |
| Save with: ENTER                     |  | confirm selection with <ENTER> |

*Pre-adjusted value:* Printer prints in every line (printer linefeed = 0)

**RS 232 Baudrate:                              Menu 17:                                      RS-232 BAUDRATE = 9600 Bd**

You can adjust the baud rate of the RS 232 interface (d): 2400, 4800, 9600, or 19200 baud.

|                          |          |    |                                |
|--------------------------|----------|----|--------------------------------|
| Menu 17: RS-232 BAUDRATE | 2400 Bd  | F1 | Select with <F1>               |
|                          | 4800 Bd  | F2 | Select with <F2>               |
|                          | 9600 Bd  | F3 | Select with <F3>               |
| Save with: ENTER         | 19200 Bd | F4 | confirm selection with <ENTER> |

*Pre-adjusted value:* 9600 Baud

**RS 232 Run Time:**

**Menu 18: RS-232 RUN TIME = OFF**

In the difference-timing mode, the RS 232 interface (d) always outputs the time of day. Additionally, you can output the run time.

output time of day and run time = <F1>

output time of day = <F2>

|                          |      |    |                                 |
|--------------------------|------|----|---------------------------------|
| Menu 18: RS-232 RUN TIME | ON   | F1 | output run time and time of day |
|                          | OFF< | F2 | output time of day              |
| Save with: ENTER         |      |    | Confirm selection with <ENTER>  |

*Pre-adjusted value:* RS-232 Runtime = off

**Display Board Baudrate:**

**Menu 19: D-Board Baudrate = 2400 Bd**

You can adjust the baud rate for the display board (24, 28): 2400, 4800, 9600, or 19200 baud. When using the ALGE display board you must use 2400 baud.

|                           |          |    |                                |
|---------------------------|----------|----|--------------------------------|
| Menu 19: D-BOARD BAUDRATE | 2400 Bd  | F1 | Select with <F1>               |
|                           | 4800 Bd  | F2 | Select with <F2>               |
|                           | 9600 Bd  | F3 | Select with <F3>               |
| Save with: ENTER          | 19200 Bd | F4 | Confirm selection with <ENTER> |

*Pre-adjusted value:* D-Board Baudrate = 2400 Baud

**Display Board Channel 2:**

**Menu 20: D-BOARD CHANNEL2 = RUNNING**

You can adjust the channel 2 of the display board interface (e) between running time, standing time and best time. If you have channel two on STANDING, it outputs no running time (only run times). The clasement is always going out through channel 2.

**TdC 8001 sold after 2008:**

It switches PIN1 of the DIN-plug "Display Board" (e). On the banana socket it output always the running time.

**TdC 8001 sold before 2008:**

Between channel 1 or 2 you can switch by turning the plug of the cable 010-10. Pin 1 of the DIN-socket has always the running time and PIN3 you can selct in this menu. The display output of the banana socket (i) outputs the same as PIN3.

|                            |           |    |                                |
|----------------------------|-----------|----|--------------------------------|
| Menu 20: D-BOARD CHANNEL 2 | RUNNING<  | F1 | output of running time         |
|                            | STANDING  | F2 | output of run times            |
|                            | BEST TIME | F3 | output of best time            |
| Save with: ENTER           |           |    | Confirm selection with <ENTER> |

- RUNNING = <F1> running time and clasement
- STANDING = <F2> run time and clasement
- BEST TIME = <F3> shows the best time

*Pre-adjusted value:* D-Board Channel 2 is running time

**Beep:**

**Menu 21: BEEP = ON**

The beep makes a sound for each timing impulse. The length of the beep depends on the adjusted delay time. If the beep bothers people in the timing shack it is possible to turn it off. The beep goes automatically on, as soon as you turn the TdC 8001 on.

|                  |      |    |             |
|------------------|------|----|-------------|
| Menu 21: BEEP    | ON   | F1 | Beep is on  |
|                  | OFF< | F2 | Beep is off |
| Save with: ENTER |      |    |             |

*Pre-adjusted value:* Beep is on

**Change Heat:**

**Menu 24: CHANGE HEAT**

You do not have to turn the TdC 8001 off to switch from one heat (e.g. heat 1) to the next heat (e.g. heat 2).

|                      |            |    |                           |
|----------------------|------------|----|---------------------------|
| Menu 24: Select Heat | SAME (1) < | F1 | Continue in the same heat |
|                      | NEXT (2)   | F2 | Select a new heat         |
| Save with: ENTER     |            |    | Confirm with <ENTER>      |

You can select if you want to continue in the same heat or if you want to continue in the next heat.

*Attention:* When you select the next heat, it is impossible to switch back to the previous heat.

**Changing Race:**

**Menu 25: CHANGE RACE**

You do not have to turn the TdC 8001 off to switch form one race to another.

If you press <YES> or <ENTER> you can select automatically the race. You will see the same selection as you have when you turn the TdC 8001 on. If you change a race within the menu you do not have to make a new synchronisation.

**Display Board Test:**

**Menu 26: D-BOARD-TEST = OFF**

In this menu you can check the display board or write on the board the time of day, ALGE or blank. If you have digits that do not work as they should, use this test to check them. Use the test <F4> especially if you use the display board the first time after a long time or if you have very cold weather (frozen segments).

With <F1>, <F2>, <F3>, or <F4> you can select the test mode. The arrow at the right end of the display shows the selected test. There are all together 7 display possibilities. To leave the display board test press <ENTER>.

|                       |           |                                      |
|-----------------------|-----------|--------------------------------------|
| Menu 26: D-BOARD-TEST | TIME<     | F1 Shows time of day                 |
|                       | ALGE      | F2 Shows ALGE                        |
|                       | BLANK     | F3 Blanks the board                  |
| Continue: ENTER       | 123456789 | F4 All 9 possible digit get a number |

|                       |            |                                 |
|-----------------------|------------|---------------------------------|
| Menu 26: D-BOARD-TEST | 123456789< | F1                              |
|                       | 0          | F2 Each digit counts up         |
|                       | 8          | F3 Each digit shows 8 and blank |
| Continue: ENTER       | 888888888  | F4 All digits show 8 and blank  |

- TIME It shows the time of day on the display board. With the arrow-keys you can move the time to the correct position. Exit with <ENTER>.
- ALGE It shows ALGE on the display board. With the arrow-keys you can move the time to the correct position. Exit with <ENTER>.
- BLANK..... It blanks the display board. Exit with <ENTER>.
- 123456789 ..... Each digit shows its position number. Exit with <ENTER>.
- 0 ..... Each single digit counts form 0 to 9. Exit with <ENTER>.
- 8 ..... Each single digit switch between blank and 8. Exit with <ENTER>.
- 888888888 ..... All digits switch between blank and 8. Exit with <ENTER>.

*Pre adjusted value:* GAZ-Test is not active

**Penalty Points:**

**Menu 36 Penalty Points = 04.00**

The standard penalty points for obstacle drop you can adjust in this menu. You can set the penalty points from 0.01 to 99.99. Normally there is a 4 point penalty for obstacle drop.

|                                 |                            |
|---------------------------------|----------------------------|
| Menu 36: PENALTY POINTS = 04.00 | Adjusted penalty points    |
| Penalty Time = 02.00            | Pre-adjusted Penalty time  |
| Save with: ENTER                | Save and exit with <ENTER> |

*Pre-adjusted value:* Penalty Points: 4 points  
Penalty Time: 2 seconds

**Time Violation 1:****Menu 37 Time Violation = 01.00**  
**Penaltyperiod = 04.00**

You can adjust the penalty points for time violation and the time for which this penalty point counts. The standard is one penalty point per started 4 seconds. This is also the pre-adjusted value

```
Menu 37: TIME VIOLATION 1 = 01.00
          PENALTYPERIOD    = 04.00

Save with: ENTER
```

Adjusted time penalty  
Adjusted time period per time valuation  
Save and exit with <ENTER>

*Pre-adjusted value:* Time Violation = 1 point  
Penalty Period = 4 seconds

**Time Violation 2:****Menu 38 Time Violation = 0,25**  
**Penaltyperiod = 04.00**

You can adjust the penalty points for time violation and the time for which this penalty point counts for the jump off. The standard is one penalty point per started 4 seconds. This is also the pre-adjusted value

```
Menu 37: TIME VIOLATION 2 = 01.00
          PENALTYPERIOD    = 04.00

Save with: ENTER
```

Adjusted time penalty  
Adjusted time period per time valuation  
Save and exit with <ENTER>

*Pre-adjusted value:* Time Violation = 1 point  
Penalty Period = 4 seconds

**Parcour Time 1:****Menu 39 Parcour Time 1 = 000.00**

It is very important that you adjust the parcour time (the maximum allowed time). If you do not input the parcour time it will not add penalty points for time violation.

```
Menu 39: PARCOUR TIME 1 = 000.00

Save with: ENTER
```

Input the maximum allowed time  
Save and exit with <ENTER>

*Pre-adjusted value:* no parcour time is pre-adjusted!

**Parcour Time 2:****Menu 40 Parcour Time 2 = 000.00**

It is very important that you adjust the parcour time (the maximum allowed time). If you do not input the parcour time it will not add penalty points for time violation in the second stage.

```
Menu 40: PARCOUR TIME 2 = 000.00

Save with: ENTER
```

Input the maximum allowed time  
Save and exit with <ENTER>

*Pre-adjusted value:* no parcour time is pre-adjusted!



**Block Time 1: Menu 41 Block Time 1 = 000.00**

As long as the block time is running, it will take every impulse of the finish photocell as a not valid impulse. This time will be printed only as time of day with a question mark. The time will not be stopped on the display (5) or display board. Use the block time for events, where the rider passes the finish photocell before he reaches the finish.

```
Menu 41: BLOCK TIME 1 = 000.00
```

Input the block time

```
Save with:: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre adjusted value:* no block time is pre-adjusted!

**Block Time 2: Menu 42 Block Time 2 = 000.00**

As long as the block time is running, it will take every impulse of the finish photocell as a not valid impulse. This time will be printed only as time of day with a question mark. The time will not be stopped on the display (5) or display board. Use the block time for events, where the rider passes the finish photocell before he reaches the finish. Block Time 2 is only for the second stage.

```
Menu 42: BLOCK TIME 1 = 000.00
```

Input the block time

```
Save with:: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre adjusted value:* no block time is pre adjusted!

**Count Down Time 1: Menu 43: Count Down Time 1 = 45 s  
Automatic Start = Ein**

You can input a count down time between 0 and 6499.99 seconds. This countdown time is for the first stage. Additionally you can adjust if the timing starts automatically when the countdown reaches zero, or if you want to wait with the timing start always for the photocell impulse.

```
Menu 43: COUNT DOWN TIME 1 = 000045.00  
AUTOMATIC START = ON
```

input the countdown time  
ON or OFF

```
Save with: ENTER
```

Confirm with &lt;ENTER&gt;

*Pre adjusted value:* Count Down Time 1 = 45 seconds and Automatic Start = ON

**Count Down Time 2: Menu 44 Count Down Time 2 = 30s  
Automatic Start = Ein**

This countdown time is for the second stage or jump off. Otherwise this is the same adjustment as for Count Down Time 1 (menu 43).

```
Menu 43: COUNT DOWN TIME 2 = 000030.00  
AUTOMATIC START = ON
```

input the countdown time  
ON or OFF

```
Save with: ENTER
```

Confirm with &lt;ENTER&gt;

*Pre adjusted value:* Count Down Time 2 = 30 seconds and Automatic Start = ON

## Countdown for Display Board:                      Menu 45 D-Board Count Down = ON

You can switch off the countdown for the display board. All other functions of the countdown work, if the countdown for the display board is off.

|                             |     |                            |
|-----------------------------|-----|----------------------------|
| Menu 45: D-BOARD COUNT DOWN | ON< | output on display board    |
|                             | OFF | no output on display board |
| Save with: ENTER            |     | Save and exit with <ENTER> |

*Pre-adjusted value:*                      D-Board Count Down = on

## Timeout-Signal:    Menu 46 Timeoutsignal = ON

You can switch the Timeout-Signal ON or OFF with this option.

|                             |     |                            |
|-----------------------------|-----|----------------------------|
| Menu 46: TIMEOUTSIGNAL = ON | ON< | On or off                  |
|                             | OFF |                            |
| Save with: ENTER            |     | Save and exit with <ENTER> |

*Pre-adjusted value:*                      TIMEOUTSIGNAL=ON

## Add PTO immediately:    Menu 47 Add PTO immediately

If you turn on this function the penalty-time will be added immediately to the running-time.

|                              |     |                            |
|------------------------------|-----|----------------------------|
| Menu 47: ADD PTO IMEADREATLY | ON< | On or off                  |
|                              | OFF |                            |
| Save with: ENTER             |     | Save and exit with <ENTER> |

*Pre-adjusted value:*                      add PTO immediately = OFF

The FEI rules ask to add the penalty seconds to the runtime immediately. If you select in this menu on "OFF", than the time will be added when you add for the total result (e.g. with F3 key).

## Input of Teams:    Menu 48    TEAMS = OFF

For team events you have to input the ID-numbers of the team members. You can input up to four team members.

|                  |       |    |   |                            |
|------------------|-------|----|---|----------------------------|
| Menu 48: TEAMS   | Tm 1: | 0, | 0 | input the bips of the team |
|                  |       | 0, | 0 |                            |
| Save with: ENTER |       |    |   | Confirm with <ENTER>       |

*Pre adjusted value:*                      Teams = OFF

**Add Immediately:**

**Menu 50**

**Add Immediately = OFF**

You can calculate the total result immediately after a rider goes through the finish or manual by pressing <F3>. The automatic calculation has the disadvantage in case you can not input penalty points before the rider finishes (e.g. if he drops the last barrier). In this case the display board will show a wrong result until the operator makes the correction.

|                          |      |                      |
|--------------------------|------|----------------------|
| Menu 50: ADD IMMEDIATELY | ON   | ON or OFF            |
|                          | OFF< |                      |
| Save with: ENTER         |      | Confirm with <ENTER> |

*Pre adjusted value:* Add immediately = OFF

**BIB-Counting:**

**Menu 53**

**BIB-Counting = Manual**

You can input always new bib's (manual), or automatic by pressing <ENTER> (count up or down).

|                        |         |    |                      |
|------------------------|---------|----|----------------------|
| Menu 53: BIB-Counting: | UP      | F1 | BIB counts up        |
|                        | Manual< | F2 | Manual BIB counting  |
|                        | Down    | F3 | BIB counts down      |
| Save with: ENTER       |         |    | Confirm with <ENTER> |

*Pre adjusted value:* BIB-Counting = Manual

**Timelimit for Time Jumping:**

**Menu 54**

**Time-Out = 0**

For a time jumping (Table C) there is a limit to finish the course. This maxim time we call time-out. If this time-out time is reached than the rider will be disqualified (it will print the actual bib number and "Time-Out" as well as "Disqualified". You can adjust the time limit between 0 and 999 seconds (0 = no time limit).

|                         |                                 |
|-------------------------|---------------------------------|
| Menu 54: TIME-OUT = 000 | Input the time limit in seconds |
| Save with: ENTER        | Confirm with <ENTER>            |

*Pre adjusted value:* Time-Out = 0

**Brightness of LED-Display Board**

**Menu 55**

**LED-Helligkeit = 9**

If you use a ALGE-LED-display board, than you can adjust the brightness in 10 steps. At night you should have the board in the dark mode (0), and at direct sun on the board in the bright mode (9)

|                                    |                      |
|------------------------------------|----------------------|
| Menu 55: LED-BRIGHTNESS = <u>9</u> | Input from 0 to 9    |
|                                    | 0 = dark             |
|                                    | 9 = bright           |
| Save with: ENTER                   | Confirm with <ENTER> |

*Pre adjusted value:* LED-brightness = 9

**Add penalty seconds immediately: Menu 57**

**Add PTO immediately = ON**

It is possible to add the penalty time from e.g. a barrier drop with time out for a build up time immediately or after the finish arrival.

|                              |     |    |                         |
|------------------------------|-----|----|-------------------------|
| Menu 55: ADD PTO IMMEDIATELY | ON  | F1 | add immediately         |
|                              | OFF | F2 | add manual after finish |
| Save with: ENTER             |     |    | Confirm with <ENTER>    |

*Pre adjusted value:* Add PTO immediately = ON

**Photocell Blocking: Menu 58**

**Latching Blockkeys = OFF**  
**Print Blocktimes = ON**

In Show Jumping it happens often that the rider passes several times the start or finish before the real start or finish should be active. It is possible to use an external switch and activate the photocells as needed. The disadvantage of this method is in case you forget to activate the photocell you have no time at all.

We can offer you an alternative method by using the <BLOCK> keys. If you switch in this menu the "Latching Blockkeys" on, than you can activate and deactivate the photocells. Use the <BLOCK> key of the start keyboard (12) for the start and the <BLOCK> key of the finish keyboard (8) for the finish to activate or deactivate the photocell.

The big advantage of this method is that you get even with a blocked impulse a time of day. This means if you miss to activate a photocell you still have the time of day to make the correct corrections. You can not miss a timing impulse.

With the adjustment "Print Blocktimes" you can adjust, if you want that it print the blocked times (time of day). The blocked times are always stored in the memory.

|                             |                  |                           |
|-----------------------------|------------------|---------------------------|
| Menu 58: LATCHING BLOCKKEYS | = OFF            | change with <YES> or <NO> |
| PRINT BLOCKTIMES            | = ON             | change with <YES> or <NO> |
| Select: YES/NO              | Save with: ENTER | Confirm with <ENTER>      |

*Pre adjusted value:* Latching bBlockkeys = Off and Print Blocktimes = ON

**Impulse Transmission by Radio: Menu 59**

**Pulse fromTED**

You can adjust if a timing impulse comes e.g. from the photocell direct by cable or by radio. An impuls signal sent by radio is always delayed. In case of ALGE radios we have an exact delay of 0,1 seconds (e.g. TED).

If the TdC 8001 receives the start or stop impulse through a radio it will calculate a wrong run time, since the start- or finish time is delayed. Since all times have the same mistake it does not matter much, but it matters much if you measure records. To compensate this delay you can adjust the channel that uses the radio signal. If you do so, the calculation of the run time will be correct.

|                                   |           |    |                         |
|-----------------------------------|-----------|----|-------------------------|
| Menu 59: PULSE FROM TED Channel 0 | = NO<     | F1 | on or off for channel 0 |
|                                   | Channel 1 | F2 | on or off for channel 1 |
|                                   | Channel 9 | F3 | on or off for channel 9 |
| Save with: ENTER                  |           |    | Confirm with <ENTER>    |

*Pre adjusted value:* Pulse form TED: off for all channels

## 6. PROGRAMS

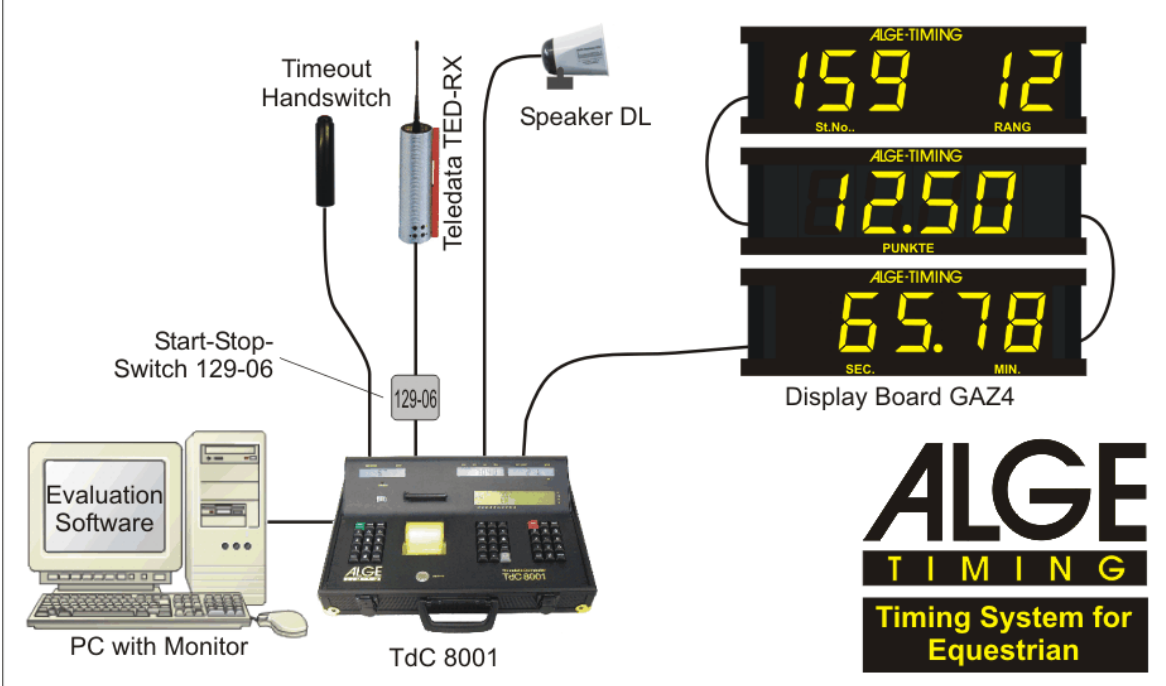
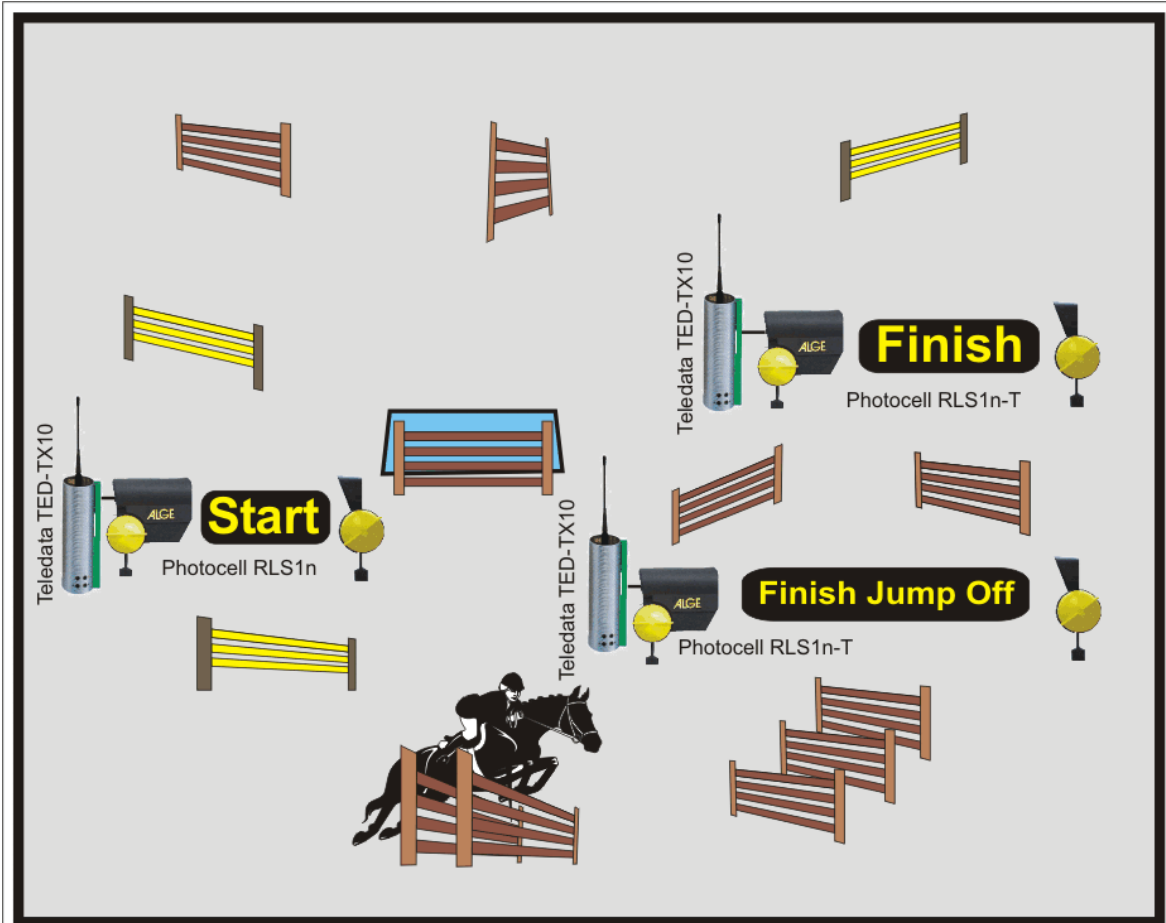
The TdC 8001 has a very flexible software that suits for most timing problems. You can select between the programs when you turn the TdC 8001 on. After about 5 seconds it shows the program that you used last time. Press <ENTER>, if you want to select this program.

Use the cursor keys (⏪ and ⏩) to select another program. When it shows the correct program in the info-display (7) press <ENTER>. You can also input the program number directly with the finish keyboard (8). Confirm the number with <ENTER>.

**You can select the following programs:**

| Program                 |   | Prog. Nummer | Seite |
|-------------------------|---|--------------|-------|
| <b>Split</b>            |   | Program 1    | --    |
| <b>Split Sequential</b> |   | Program 3    | --    |
| <b>Parallel Diff.</b>   |   | Program 4    | --    |
| <b>Parallel Netto</b>   |   | Program 5    | --    |
| <b>Dual Timer</b>       |   | Program 6    | --    |
| <b>Speed</b>            |   | Program 7    | --    |
| <b>Speed Skiing</b>     |   | Program 8    | --    |
| <b>Carving</b>          |   | Program 9    | --    |
| <b>10-Kanal-Timer</b>   |   | Program 10   | --    |
|                         | 10-Channel Timer 1                          | Program 101  | --    |
|                         | 10 Channel Timer 2                          | Program 102  | --    |
| <b>Show Jumping</b>     |   | Program 11   | 44    |
|                         | Table A1 - FEI article 238.1.1              | Program 111  | 47    |
|                         | Table A2 - FEI article 238.2.1              | Program 112  | 55    |
|                         | Table AM3 - FEI article 238.1.2             | Program 113  | 55    |
|                         | Table AM4 - FEI article 238.1.3             | Program 114  | 56    |
|                         | Table AM5 - FEI article 238.2.2             | Program 115  | 57    |
|                         | Table AM6 - FEI article 238.2.3             | Program 116  | 57    |
|                         | Table AM7 - FEI article 273.3.3 and 273.4.1 | Program 117  | 58    |
|                         | Table AM8 - FEI article 273.3.3 and 273.4.3 | Program 118  | 58    |
|                         | Table AM9                                   | Program 119  | 59    |
|                         | Table B1 - FEI article 269                  | Program 120  | 59    |
|                         | Table B2 - FEI article 269                  | Program 121  | 59    |
|                         | Table B3 - FEI article 269                  | Program 122  | 59    |
|                         | Time Jumping - Table C - FEI article 239    | Program 123  | 60    |
|                         | Two Stage Jumping - FEI article 274.5.2     | Program 124  | 69    |
|                         | Amerik. Stage F                             | Program 125  | 79    |
|                         | Amerik. Stage / Time                        | Program 126  | 90    |
|                         | Standard/Time 1 - FEI article 274.5.4       | Program 127  | 101   |
|                         | Standard/Time 2                             | Program 128  | 102   |
|                         | Team Jumping 1                              | Program 129  | 103   |
|                         | Team Jumping 2                              | Program 130  | 104   |
|                         | Team Jumping 3                              | Program 131  | 104   |
|                         | Team Jumping 4                              | Program 132  | 104   |
|                         | Table A Time Delayed                        | Program 133  | 104   |
| <b>Speed Satng</b>      |   | Program 12   |       |
| <b>Cycling</b>          |   | Program 14   | --    |
|                         | Rad-Straße                                  | Program 141  | --    |
| <b>Agility</b>          |   | Program 15   | --    |
|                         | Prüfung                                     | Program 151  | --    |
|                         | Spiele                                      | Program 152  | --    |
| <b>TdC Test</b>         |   | Program 16   | --    |

Example for the setup at the equestrian competition:



**ALGE**  
TIMING  
Timing System for Equestrian

## 6.1. Show Jumping (Equestrian) Program 11

There are different programs for equestrian. Adjust the program carefully before starting an event. If an event is started, you cannot go into a different program.

|  |   |
|--|---|
| <b>Prog. 111: Show Jumping Table A1</b><br><b>FEI article 238.1.1</b>              | <ul style="list-style-type: none"> <li>☞ Stage: ranking by points</li> <li>☞ no jump off</li> </ul>   |
| <b>Prog. 112: Show Jumping Table A2</b><br><b>FEI article 238.2.1</b>              | <ul style="list-style-type: none"> <li>☞ Stage: ranking by points and time</li> <li>☞ no jump off</li> </ul>  |
| <b>Prog. 113: Show Jumping Table AM3</b><br><b>FEI article 238.1.2</b>             | <ul style="list-style-type: none"> <li>☞ Stage: ranking by points</li> <li>☞ Jump off: ranking by points and time</li> </ul>  |
| <b>Prog. 114: Show Jumping Table AM4</b><br><b>FEI article 238.1.3</b>             | <ul style="list-style-type: none"> <li>☞ Stage: ranking by points</li> <li>☞ Jump off 1: ranking by points</li> <li>☞ Jump off 2: ranking by points and time</li> </ul>   |
| <b>Prog. 115: Show Jumping Table AM5</b><br><b>FEI article 238.2.2</b>             | <ul style="list-style-type: none"> <li>☞ Stage: ranking by points and time</li> <li>☞ Jump off: ranking by points and time</li> </ul>   |
| <b>Prog. 116: Show Jumping Table AM6</b><br><b>FEI article 238.2.3</b>             | <ul style="list-style-type: none"> <li>☞ Stage: ranking by points and time</li> <li>☞ Jump off 1: ranking by points and time</li> <li>☞ Jump off 2: ranking by points and time</li> </ul>                                   |
| <b>Prog. 117: Show Jumping Table AM7</b><br><b>FEI article 238.3.3 and 273.4.1</b> | <ul style="list-style-type: none"> <li>☞ Two stages: ranking by total points and time from second stage</li> <li>☞ Stage1 : ranking by points and time</li> <li>☞ Stage2 : ranking by points</li> </ul>                     |
| <b>Prog. 118: Show Jumping Table AM8</b><br><b>FEI article 238.3.3 and 273.4.3</b> | <ul style="list-style-type: none"> <li>☞ Two stages: ranking by total points and time from second stage</li> <li>☞ Stage 1: ranking by points</li> <li>☞ Stage 2: ranking by points and time</li> </ul>                     |
| <b>Prog. 119: Show Jumping Table AM9</b>   | <ul style="list-style-type: none"> <li>☞ Stage: ranking by total points and total time</li> <li>☞ Stage 1: ranking by points and time</li> <li>☞ stage 2: ranking by points and time</li> </ul>                             |
| <b>Prog. 120: Points Jumping B1</b><br><b>FEI article 269</b>                      | <ul style="list-style-type: none"> <li>☞ Stage: standard points-jumping</li> <li>☞ ranking by points and time, no time limit!</li> <li>☞ no jump-off</li> </ul>   |
| <b>Prog. 121: Points Jumping B2</b><br><b>FEI article 269</b>                      | <ul style="list-style-type: none"> <li>☞ Stage: points-jumping, ranking by points and time after expired parcourse time the horn will beep!</li> <li>☞ no jump-off</li> </ul>   |
| <b>Prog. 122: Points Jumping B3</b><br><b>FEI article 269</b>                      | <ul style="list-style-type: none"> <li>☞ Stage: points-jumping, ranking by points and time</li> <li>☞ time-penalties will be added after expired parcourse time</li> <li>☞ Jump off : ranking by points and time</li> </ul> |
| <b>Prog. 123: Show Jumping – Table C</b><br><b>FEI article 239</b>                 | <ul style="list-style-type: none"> <li>☞ Stage: ranking by total time from clear round time and penalty seconds</li> <li>☞ no jump off</li> </ul>   |



**Prog. 124: Two Stage Jumping**  
FEI article 274.5.2

- ☞ Stage 1: as Table A
- ☞ Stage 2: for everybody that made stage 1 without penalty and within the allowed time.
- ☞ Ranking by points and time from stage 2.

**Prog. 125: American Stage F**

- ☞ Stage 1: as Table A
- ☞ Stage 2: for everybody that made stage 1 without penalty and within the allowed time.
- ☞ Before the start of stage 2 is a adjustable count down.
- ☞ Ranking by points and time from stage 2.

**Prog. 126: American Stage/Time**

- ☞ Stage 1: as Table A
- ☞ Stage 2: for everybody that made stage 1 without penalty and within the allowed time.
- ☞ Stage 2 is done like Table C..

**Prog. 127: Standard / Time 1**  
FEI article 274.5.4

- ☞ Stage 1: for all competitors as Table A
- ☞ Stage 2: for everybody that made stage 1 without penalty and within the allowed time.
- ☞ Before the start of stage 2 is a 30 sec. count down.
- ☞ Stage 2 is against Table C.

**Prog. 128: Standard / Time 2**

- ☞ Stage 1: for all competitors as Table A
- ☞ Stage 2: for everybody that made stage 1 without penalty and within the allowed time.
- ☞ Stage 2 is done like Table C.

**Prog. 129: Team Jumping 1**

- ☞ Stage 1 is done like Table A2.
- ☞ The badest result out of the 4 competitors will be deleted!

**Prog. 130: Team Jumping 2**

- ☞ Stage 1 is done like Table AM3.
- ☞ The badest result out of the 4 competitors will be deleted!

**Prog. 131: Team Jumping 3**

- ☞ Stage 1 is done like Table A1.
- ☞ Stage 2.: ranking by total points and time of the second stage.
- ☞ The badest result out of the 4 competitors will be deleted!

**Prog. 132: Team Jumping 4**

- ☞ Stage 1 is done like Table A1.
- ☞ Stage 2.: ranking by total points.
- ☞ Jump-off is done like Table A2.
- ☞ The badest result out of the 4 competitors will be deleted!

**Prog. 133: Table A Time Delayed**

- ☞ Stage 1 is done like table A1.
- ☞ Each rider moves to the second stage.
- ☞ Stage 2.: ranking by total points (1st and 2nd stage) and in case of a tie the better time of the 2nd stage is important.

**Setup of the Timing-System**

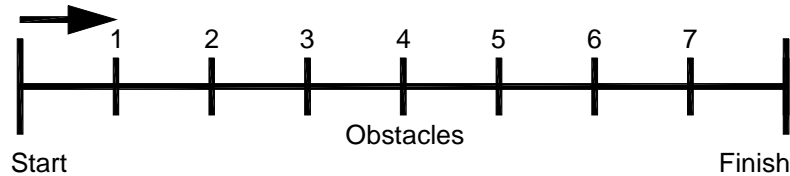
At most equestrian tournaments you must move the photocells for start and finish for the different competitions. This happens some times during the day and must be fast. Of course it makes it very difficult to lay cables. With cables you must be very carefully, that no horse or rider hurts himself and that the cable will not be damaged.

You can use the photocells very flexible and save together with a radio. This guarantees also a prompt and trouble-free change of start and finish.

**Classement:**

You can make a Classement for show jumping. For competitions with a jump off you can print after the standard parcours only the competitors of the jump off. Therefore it is important, that you print also a classement after the standard parcours. In the classement before the jump off you always have all competitors on the first rank that reach the jump off (without any penalty points).





**6.1.1. Program 111: Standard Show Jumping Table A1 - FEI article 238.1.1**



**Show Jumping Table A1:**       Stage: ranking by points  
     no jump off

**Penalty Points (standard set-up):**    *for obstacle drop:* 4 points  
*for time violation:* 1 point per started 4 seconds (adjustable)

**Adjustment:**

- Switch TdC 8001 on (switch 26)
- Select program 11 "Show Jumping" with cursor key ( and )
- Press <ENTER>
- Select program 111 "Table A" with cursor key ( and )
- Press <ENTER>
- Select race that you want to use and clear memory (e.g. <F1> for race 1)
- Press <ENTER>
- Select race (e.g. <F1> for race 1)
- Press <ENTER>
- Select the precision with key <F1> to <F4>. Standard is <F3> with 1/100 seconds
- Press <ENTER>
- Select the timing mode (we recommend <F2> for Difference Timing")
- Press <ENTER>
- Synchronize the TdC 8001 (with time of day and other timing devices)
- Input the time of day, confirm it with <ENTER>
- Input the date (Year-Month-Day) and confirm it with <ENTER>
- Make a start signal (channel 0 or press <START>)
- Press <ALT> and <MENU> together.
- Adjust menu 36, 37, 39, 41, 42, 43, 45, 46, 47, 50, 57, 58, and 59 as required by the circumstances of your event (see next page).
- Exit the menu with <NO> when you did all adjustments.

**Race operation:**

- Input the start number for the start with start keyboard (12)
- Confirm with <ENTER>
- The start-display (1) must show the correct start number.
- Display (5) must show the correct countdown time (e.g. 60 seconds).
- Display (6) shows the penalty points and penalty seconds.
- Clear the start by pressing <START> (or handswitch on channel 9). The countdown starts.
- The loudspeaker honks (if connected to socket 25) and gives the start free signal.
- Display (5) shows the countdown.
- If the rider does not pass the start photocell before the end of the countdown it will honk at the zero time.
- When the rider passes the start photocell it will start the time (display 7), or after expired count down time. (If Auto-Start is ON)

- Input penalty points (obstacle drop) by pressing <ENTER> (keyboard 15)
- Correction of total penalty points (obstacle drop) by input of total amount and pressing <INPUT> (keyboard 15)
- Time-out for set up of obstacle by pressing handswitch (channel 9). It stops the running time. When the time is stopped it is possible to input a penalty time (display 8, right number). The penalty time must be confirmed with <ENTER> (keyboard 15). It is possible to switch between penalty seconds and penalty points with the cursor keys.
- When a rider reaches the finish it stops the run time. The penalty points from time violation are calculated automatically.
- Press key <F3> to calculate the total penalty points and total run time.
- Input start number for the next competitor with keyboard (12), e.g. start number 2
- Confirm with <ENTER> (keyboard 9)
- etc.

**Adjustments that you have to make before the race starts:**

Before you start a race you have to check and maybe change some adjustments at the TdC 8001.

Press <ALT> and <MENU> at the same time to open the main menu. You can get directly into the needed sub menu by input of the menu number with keyboard (8) and confirm it with <ENTER>.

**Penalty Points:**

**Menu 36**

**Penalty Points = 04.00**

The standard penalty points for obstacle drop you can adjust in this menu. You can set the penalty points from 0.01 to 99.99. Normally there is a 4 point penalty for obstacle drop.

```
Menu 36: PENALTY POINTS = 04.00
```

Adjusted penalty points

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value:* 4 points

**Time Violation 1:**

**Menu 37**

**Time Violation 1 = 0,25**

You can adjust the penalty points for time violation. The adjustment is between 0.00 and 99.99 possible. It is also possible to adjust the time duration for the penalty. In the current rulse of FEI it is for each started four seconds 1 penalty point.

```
Menu 37: TIME VIOLATION 1 = 01.00
          PENALTYPERIOD    = 04.00
```

Adjust time penalty

Adjust time periode

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value:* 1.00 point and 4 seconds

**Parcour Time 1****Menu 39****Parcour Time 1 = 000.00**

It is very important that you adjust the parcour time (the maximum allowed time). If you do not input the parcour time it will not add penalty points for time violation.

```
Menu 39: PARCOUR TIME 1 = 000.00
```

Input the maximum allowed time

```
Save with: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre-adjusted value:* :no parcour time is pre-adjusted!

**Block Time:****Menu 41****Block Time 1 = 000.00**

As long as the block time is running, it will take every impulse of the finish photocell as a not valid impulse. This time will be printed only as time of day with a question mark. The time will not be stopped on the display (5) or display board. Use the block time for events where the rider passes the finish photocell before he reaches the finish.

```
Menu 41: BLOCK TIME 1 = 000.00
```

Input the block time

```
Save with: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre-adjusted value:* no block time is pre-adjusted!

**Count Down Time:****Menu 43****Count Down Time = 000045.00**  
**Automatic Start = ON**

You can adjust the count down time between 0 and 6399.99 seconds. The count down time is the time between the greeting of the judges and the time when the rider must start. It is possible to show the count down time on a display board (see menu 43). A horn (if connected) honks at the start and end of the count down.

```
Menu 43: COUNT DOWN TIME = 000045.00
          AUTOMATIKSTART = ON
```

Input count down time  
Automatic Start On or OFF

```
Save with:: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre-adjusted value:* : Count Down Time = 45 seconds, Automatic Start = On

**Countdown for Display Board Menu 45****D-Board Count Down = ON**

You can switch off the countdown for the display board. All other functions of the countdown work, if the countdown for the display board is off.

```
Menu 45: D-Board Count Down      ON<
                                         OFF
Save with: ENTER
```

output on display board  
no output on display board

Save and exit with &lt;ENTER&gt;

*Pre-adjusted value:* D-Board Count Down = on

**Timeoutsignal**

**Menu 46**

**Timeout signal = ON**

This setting controls if there is a beep at the start and end of the penalty-time.

```
Menu 46:                TIMEOUT = ON

Save with: ENTER
```

Input count down time

Save and exit with <ENTER>

*Pre-adjusted value:* Timeoutsignal on

**Add PTM immediately**

**Menu 47**

**Add PTM immediately = OFF**

You can switch off the countdown for the display board. All other functions of the countdown work, if the countdown for the display board is off.

```
Menu 47: ADD PTM IMMEDIATELY    ON
                                OFF<

Save with: ENTER
```

add PTM after Finish

Save and exit with <ENTER>

*Pre-adjusted value:* Add PTM immediately

The FEI rule ask to add the PTM immediately. If you set on OFF it will add the PTM after the rider finish and you press F3 to make the final time and penalty of the rider.

**Add immediately**

**Menu 50**

**Add immediately = OFF**

With this function you don't have to press the button F3 to finish a competitor! After a competitor is crossing the finishline it will automatically calculate his result!

```
Menu 50: ADD IMMEDIATELY        ON
                                OFF<

Save with: ENTER
```

automatic addition is on

Save and exit with <ENTER>

*Pre-adjusted value:* Add immediately = OFF

**BIB-counting**

**Menu 53**

**BIB-Counting = manual**

It is possible to input the BIB number of each rider with the keyboard 12. If you have continues rider numbers you can also select that you can count up or down by pressing <ENTER>

```
Menu 53: BIB-Counting          UP    F1
                                Manual< F2
                                Down  F3

Save with: ENTER
```

BIB count up

manual BIB input

BIB count down

Save and exit with <ENTER>

*Pre-adjusted value:* Manual

**Add penalty seconds immediately: Menu 57**

**Add PTO immediately = ON**

It is possible to add the penalty time from e.g. a barrier drop with time out for a build up time immediately or after the finish arrival.

|                              |     |    |                         |
|------------------------------|-----|----|-------------------------|
| Menu 55: ADD PTO IMMEDIATELY | ON  | F1 | add immediately         |
|                              | OFF | F2 | add manual after finish |
| Save with: ENTER             |     |    | Confirm with <ENTER>    |

*Pre adjusted value:* Add PTO immediately = ON

**Photocell Blocking: Menu 58**

**Latching Blockkeys = OFF**  
**Print Blocktimes = ON**

In Show Jumping it happens often that the rider passes several times the start or finish before the real start or finish should be active. It is possible to use an external switch and activate the photocells as needed. The disadvantage of this method is in case you forget to activate the photocell you have no time at all.

We can offer you an alternative method by using the <BLOCK> keys. If you switch in this menu the "Latching Blockkeys" on, than you can activate and deactivate the photocells. Use the <BLOCK> key of the start keyboard (12) for the start and the <BLOCK> key of the finish keyboard (8) for the finish to activate or deactivate the photocell.

The big advantage of this method is that you get even with a blocked impulse a time of day. This means if you miss to activate a photocell you still have the time of day to make the correct corrections. You can not miss a timing impulse.

With the adjustment "Print Blocktimes" you can adjust, if you want that it print the blocked times (time of day). The blocked times are always stored in the memory.

|                             |                  |                           |
|-----------------------------|------------------|---------------------------|
| Menu 58: LATCHING BLOCKKEYS | = OFF            | change with <YES> or <NO> |
| PRINT BLOCKTIMES            | = ON             | change with <YES> or <NO> |
| Select: YES/NO              | Save with: ENTER | Confirm with <ENTER>      |

*Pre adjusted value:* Latching bBlockkeys = Off and Print Blocktimes = ON

**Impulse Transmission by Radio: Menu 59**

**Pulse fromTED**

You can adjust if a timing impulse comes e.g. from the photocell direct by cable or by radio. An impuls signal sent by radio is always delayed. In case of ALGE radios we have an exact delay of 0,1 seconds (e.g. TED).

If the TdC 8001 receives the start or stop impulse through a radio it will calculate a wrong run time, since the start- or finish time is delayed. Since all times have the same mistake it does not matter much, but it matters much if you measure records. To compensate this delay you can adjust the channel that uses the radio signal. If you do so, the calculation of the run time will be correct.

|                                   |           |    |                         |
|-----------------------------------|-----------|----|-------------------------|
| Menu 59: PULSE FROM TED Channel 0 | = NO<     | F1 | on or off for channel 0 |
|                                   | Channel 1 | F2 | on or off for channel 1 |
|                                   | Channel 9 | F3 | on or off for channel 9 |
| Save with: ENTER                  |           |    | Confirm with <ENTER>    |

*Pre adjusted value:* Pulse form TED: off for all channels



### Penalty time for obstacle set up:

If a horse refuses to jump an obstacle and the obstacle drops, it is necessary to set up the obstacle again. For the set up you must stop the time (time-out) by pressing the handswitch (channel 9). Normally a penalty time is given to the rider. This penalty time will be added to the clear round time after he passes the finish. When the obstacle is set up press the handswitch again to finish the time-out.

- ☞ Press handswitch (channel 9).
- ☞ The time in the display (5) must stop.
- ☞ The pointer must point to the penalty seconds (right field of display 8).
- ☞ Input penalty seconds with keyboard (8).
- ☞ Confirm penalty seconds with <ENTER>.
- ☞ If you want to input penalty points as well change with cursor key the pointer to the penalty points (left field of display 8).
- ☞ Press handswitch (channel 9) when the obstacle is set up.
- ☞ The time in display (5) must run.

### Penalty points from time violation:

The penalty points from the time violation and obstacle set up will be automatically calculated if you input the maximum allowed time (menu 39, parcours time). The actual points you can always see in the info display (7). The printer and display board will update the score by pressing <F3>.

### Adding of penalty seconds:

The penalty seconds for obstacle set up must be added for the printer and display board after the finish. First you must print and show the result without penalty seconds. If you press the key <F3> it will add the penalty seconds and all data will be new calculated. It will print the final score and show it on the display board.

### Function of the Keyboard:

| Description                       | Keyboard 9 and 14 | Keyboard 15 and 14 |
|-----------------------------------|-------------------|--------------------|
| clear Start Time                  | CLEAR             |                    |
| recall last cleared Start Time    | ALT + CLEAR       |                    |
| clear Finish Time                 |                   | CLEAR              |
| recall last cleared Finish Time   |                   | ALT + CLEAR        |
| manipulate Start Time             | INPUT             |                    |
| manipulate Finish Time            |                   | INPUT              |
| manipulate Penalty Points         |                   | Points, than INPUT |
| manipulate Penalty Time           |                   | Time, than INPUT   |
| Menu 58: Latching Blockkeys = OFF |                   |                    |
| block Start Time                  | BLOCK             |                    |
| Ignore Start Time                 | ALT + BLOCK       |                    |
| block Finish Time                 |                   | BLOCK              |
| ignore Finish Time                |                   | ALT + BLOCK        |
| Menu 58: Latching Blockkeys = ON  |                   |                    |
| block Start Time                  | BLOCK             |                    |
| Ignore Start Time                 | ALT + BLOCK       |                    |
| block Finish Time                 |                   | BLOCK              |
| ignore Finish Time                |                   | ALT + BLOCK        |

**Timing Channels:** c0 = Start Channel      c2 to c8 .... no function  
                           c1 = Finish Channel      c9 = Countdown and Time-out

**ALGE adjustments for the main menu:**

|          |                   |   |           |          |                     |   |           |
|----------|-------------------|---|-----------|----------|---------------------|---|-----------|
| Menu 1:  | Delay Time Start  | = | 1.0 s     | Menu 37: | Time Violation 1    | = | 01.00     |
| Menu 2:  | Delay Time Finish | = | 0.3 s     |          | Penaltyperiod       | = | 04.00     |
| Menu 4:  | Seconds Mode      | = | 03 s      | Menu 39: | Parcour Time 1      | = | 000.00    |
| Menu 9:  | Running Tenth     | = | OFF       | Menu 41: | Block Time 1        | = | 000.00    |
| Menu 11: | Finish Rank       | = | ON        | Menu 43: | Count Down Time     | = | 000045.00 |
| Menu 15: | Print Menus       | = | ON        |          | Automatik Start     | = | ON        |
| Menu 16: | Printer Linefeed  | = | 1         | Menu 45: | D-Board C. Down     | = | ON        |
| Menu 17: | RS-232 Baudrate   | = | 9600 Baud | Menu 46: | Time Out Signal     | = | ON        |
| Menu 18: | RS-232 Run Time   | = | off       | Menu 47: | Add PTN Immediately | = | OFF       |
| Menu 19: | D-Board Baudrate  | = | 2400 Baud | Menu 50: | Add Immediate       | = | OFF       |
| Menu 20: | D-Board Chan. 2   | = | running   | Menu 53: | BIB-Counting        | = | Manual    |
| Menu 21: | Beep              | = | on        | Menu 55: | LED-Brightness      | = | 9         |
| Menu 24: | Change Parcour    |   |           | Menu 57: | Add PTO Immediately | = | ON        |
| Menu 25: | Change Race       |   |           | Menu 58: | Latching Blockkeys  | = | OFF       |
| Menu 26: | D-Board-Test      | = | OFF       |          | Print Blocktimes    | = | ON        |
| Menu 36: | Penalty Points    | = | 04.00     | Menu 59: | Pulse from TED      | = | OFF       |

**Info-display:**

The Info-display (7) shows the following:

- PP Penalty Points for obstacle drop
- PTM Penalty Points for Time Violation
- TP Total Penalty Points
- PTO Penalty Time of Time-out (obstacle set up)
- RT Run Time
- RTT Total Run Time including Penalty Seconds

|     |      |     |       |
|-----|------|-----|-------|
| PP  | 4.00 | PTO | 6.00  |
| PTM | 0.25 | RT  | 56.49 |
| TP  | 4.25 | RTT | 62.49 |

**Printer: Printing examples**

```

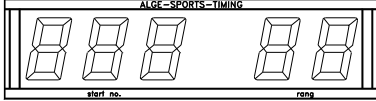


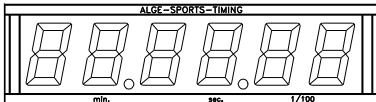


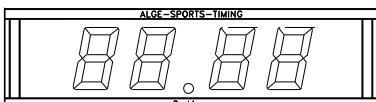


0001 C9 14:32:48.2506
      CD          21.85
      ST 14:33:26.3991
      P   + 4.00
      C9 14:33:52.1450
      TO          25.74
      PTO         +6.00
      C9 14:34:00.1828
      P   + 4.00
      FT 14:34:35.1821
      RT          60.74
-----
      PTO          6.00
      PTM          2.25
      PP           8.00
-----
      LZT          66.74
      TP           10.25
=====

```

- Start of Countdown
- Elapsed Countdowntime
- Start Time
- 4 penalty points for obstacle drop
- Start of time-out
- Time-out after 25.74 seconds run time
- 6 penalty seconds for obstacle set up
- End of time-out
- 4 Penalty Points for obstacle drop
- Finish Time
- Run Time
- Total penalty seconds
- Penalty points from time violation
- Penalty points for obstacle drop
- Total Run Time including penalty seconds
- Total penalty points (obstacle drop and time valuation)

**Display Board GAZ4:**

You can show the run time (and countdown time), points and start number/rank on ALGE display boards. In the main menu (menu 20, see page 34) you can activate channel 2. If you have activated channel two it shows only the run time or time to beat on the display board (no running time).

|                                       |   |   |  |
|---------------------------------------|---|---|--|
| <p>Start number / Rank:</p>           |  |  <p>thumb wheel switch<br/>at 1</p> |  <p>toggle switch<br/>upper position</p>  |
| <p>Run Time and<br/>Running Time:</p> |  |  <p>thumb wheel switch<br/>at 0</p> |  <p>toggle switch<br/>middle position</p> |
| <p>Penalty Points:</p>                |  |  <p>thumb wheel switch<br/>at 0</p> |  <p>toggle switch<br/>upper position</p>  |

**RS 232c Interface:**

*Transfer Format:* 1 start bit, 8 data bit, no parity bit, 1 stop bit  
*Transfer Speed:* 9.600 Baud pre-adjusted (adjustable: 2400, 4800, 19200)  
*Transfer Protocol:* ASCII

|                                 |  |
|---------------------------------|--|
| nNNNN(CR) active start number   |  |
| xNNNNxCCxxHH:MM:SS.zhtqxGR (CR) | time of day                                      |
| xNNNNxCCMxHH:MM:SS.zhtqxGR (CR) | time of day (manual impulse)                     |
| xNNNNxCDxxxxSSSSSS.zhxxxGR (CR) | countdown time                                   |
| xNNNNxTOxxxxSSSSSS.zhxxxGR (CR) | time-out   |
| xNNNNxRTxxxxSSSSSS.zhxxxGR (CR) | run time   |
| xNNNNxRTTxxxSSSSSS.zh (CR)      | run time including penalty time                  |
| xNNNNxPxxxxxxxxx+pp.pp (CR)     | penalty points for obstacle drop                 |
| iNNNNxPxxxxxxxxxpp.pp (CR)      | correction of penalty points for obstacle drop   |
| xNNNNxPTMxxxxxxxxpp.pp (CR)     | penalty points from time violation               |
| xNNNNxTPxxxxxxxxpp.pp (CR)      | total points (barrier drop and time violation)   |
| xNNNNxPTOxxxxxx+tt.tt (CR)      | penalty points for obstacle setup                |
| iNNNNxPTOxxxxxxtt.tt (CR)       | correction of penalty seconds for obstacle setup |

|               |  |
|---------------|--|
| x             | blank  |
| NNNN          | start number (four digits)   |
| CC            | timing channels (c0 to c9)   |
| C0            | channel 0 (start) C1 channel 1 (finish) C9 channel 9 (time-out)      |
| CCM           | manual impulse (with <START> or <STOP> from keyboard 9 or 15)        |
| CD            | countdown  |
| TO            | time-out   |
| RT            | run time   |
| RTT           | run time, including penalty time                                     |
| HH:MM:SS.zhtq | time in hours, minutes, seconds, and 1/10000 seconds                 |
| SSSSSS.zh     | time in seconds and 1/100 seconds                                    |
| GR            | group for team competition (from 01 to 99, no input for groups = 00) |
| P             | penalty points for obstacle drop                                     |
| PTM           | penalty points for time violation                                    |

|       |   |
|-------|---|
| TP    | total points (obstacle drop and time violation) |
| PTO   | penalty points for obstacle setup               |
| +     | penalty points or penalty seconds are added     |
| pp.pp | penalty points                                  |
| tt.tt | penalty seconds                                 |
| (CR)  | carriage return                                 |

**The following characters could be the first digit:**

|   |  |
|---|--|
| x | blank  |
| ? | time without valid start number              |
| c | cleared time (with <CLEAR>)                  |
| d | times cleared through disqualification       |
| i | times input manual: <INPUT>                  |
| n | new start number shown in finish display (6) |

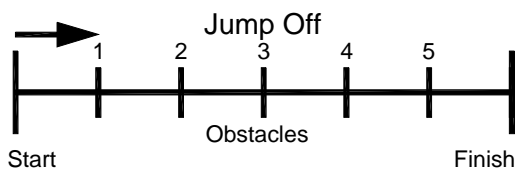
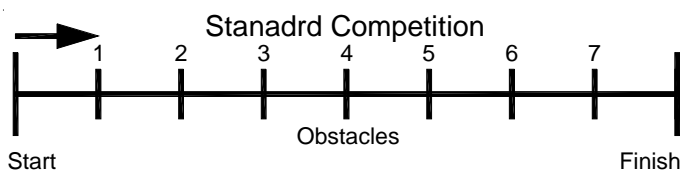
**RS 485 Interface:** not used for showjumping

**6.1.2. Program 112: Standard Show Jumping Table A2 - FEI article 238.2.1**

**Show Jumping Table A2:**     Stage: ranking by points and time  
                                       no jump off

To operate this program see page 47, 6.1.1. Standard Show Jumping A1

**6.1.3. Program 113: Table AM3 - FEI article 238.1.2**



**Show Jumping Table AM3:**     Stage: ranking by points  
                                       Jump off: ranking by points and time

To operate this program see page 42, 6.1.1. Standard Show Jumping A1  
 Make a classement before you change to the jump off. All competitors that are not allowed for the jump off will not be in the classement of the jump off.

**Changing to the Jump Off:**

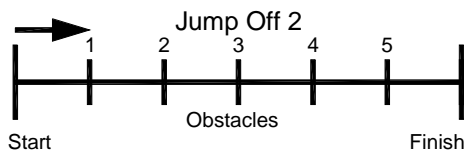
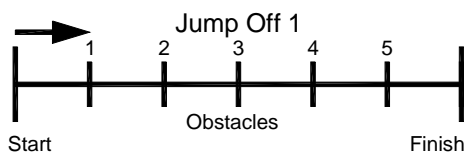
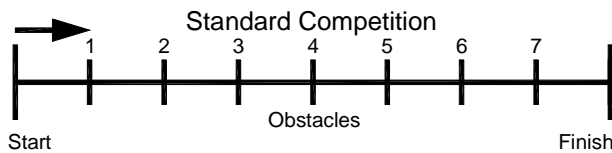
In order to change from the standard competition to the jump off you must use Menu 24 "CHANGE PARCOUR". You can get into the menu by pressing <MENU> and <ALT> simultaneous. Now use the cursor keys to change to Menu 24 and press <YES>. In the jump off you can use any start number again. Normally only riders with no penalty points in the standard competition are qualified for the jump off.

- The info display (7) shows the following:

|                  |             |    |                              |
|------------------|-------------|----|------------------------------|
| Select parcours: | PARCOUR 1   | F1 | back to standard competition |
|                  | JUMP OFF 1< | F2 | Continue with jump off       |
| Continue: ENTER  |             |    |                              |

- Select Jump Off with key <F2> and confirm with <ENTER>
- Adjust the following menus (see page 44): Menu 37 (time violation 1), Menu 39 (Parcour Time 1), Menu 41 (Block Time 1), and Menu 43 (Count Down Time 1).  
For the jump off you have a new parcours time. Mostly you have as well a new time violation (1 point per started second time violation). Important is as well that you adapt the block time to the new parcours time if you use the block time.
- Leave the menu with <NO> after you have made all changes.
- Continue to work as in the standard competition.

**6.1.4. Program 114: Standard Show Jumping Table AM4 - FEI article 238.1.3**

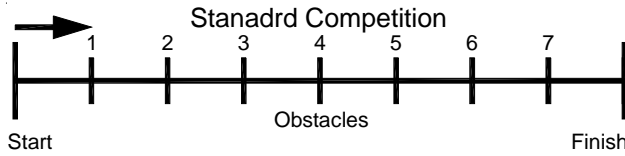


- ☞ Stage: ranking by points
- ☞ Jump off 1: ranking by points
- ☞ Jump off 2: ranking by points and time

To operate the standard competition see page 47, 6.1.1. Standard Show Jumping A1.

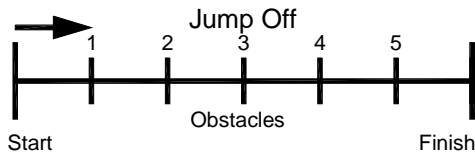
To operate the jump offs see page 55, 6.1.3. Standard Show Jumping AM3.

**6.1.5. Program 115: Standard Show Jumping Table AM5 - FEI article 238.2.2**



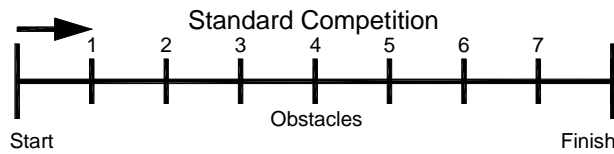
- ☞ Stage: ranking by points and time
- ☞ Jump off: ranking by points and time

To operate the standard competition see page 47, 6.1.1. Standard Show Jumping A1.



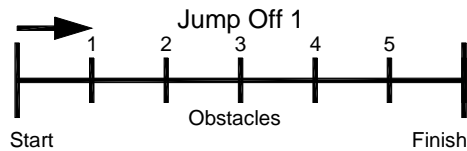
To operate the jump off see page 55, 6.1.3. Standard Show Jumping AM3.

**6.1.6. Program 116: Standard Show Jumping Table AM6 - FEI article 238.2.3**

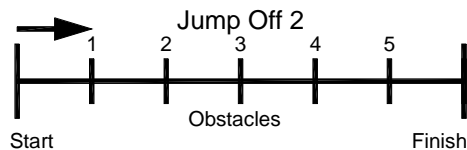


- ☞ Stage : ranking by points and time
- ☞ Jump off 1: ranking by points and time
- ☞ Jump off 2 : ranking by points and time

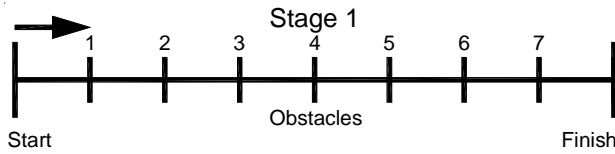
To operate the standard competition see page 47, 6.1.1. Standard Show Jumping A1.



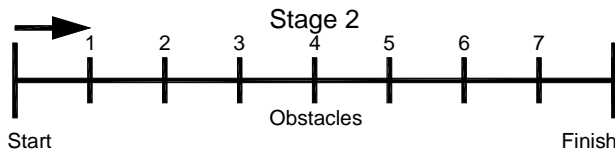
To operate the jump offs see page 55, 6.1.3. Standard Show Jumping AM3.



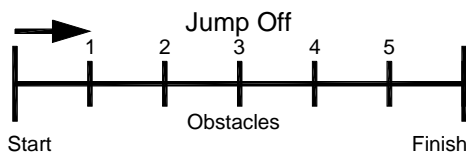
**6.1.7. Program 117: Table AM7 - FEI article 273.3.3.3 and 273.4.1**



- 👉 Stage 1: ranking by points and time
- 👉 Stage 2: ranking by total points and time of stage 2
- 👉 Jump off: ranking by points and time

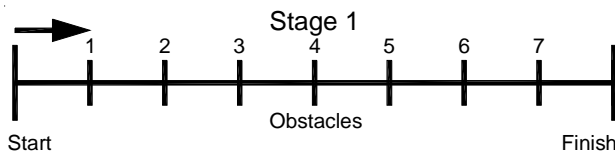


To operate stage 1 and 2 see page 47, 6.1.1. Standard Show Jumping A1.  
In order to get from stage 1 to stage 2, do the same as if you change to the jump off.

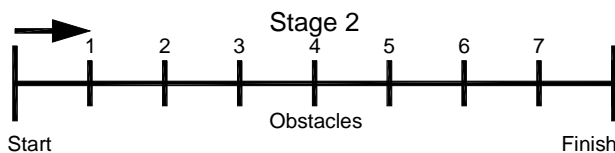


To operate the jump offs see page 57, 6.1.3. Standard Show Jumping AM3.

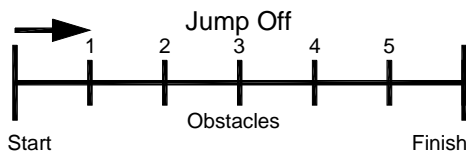
**6.1.8. Program 118: Table AM8 - FEI article 273.3.3 and 273.4.3**



- 👉 Stage 1: ranking by points and time
- 👉 Stage 2: ranking by total points and total time
- 👉 Jump off: ranking by points and time

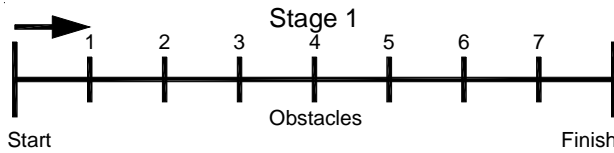


To operate stage 1 and 2 see page 47, 6.1.1. Standard Show Jumping A1.  
In order to get from stage 1 to stage 2 do the same as if you change to the jump off.

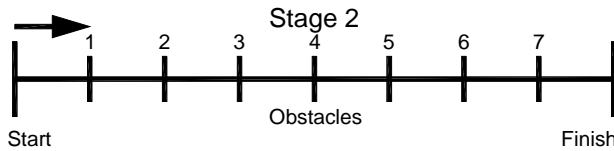


To operate the jump offs see page 55, 6.1.3. Standard Show Jumping AM3.

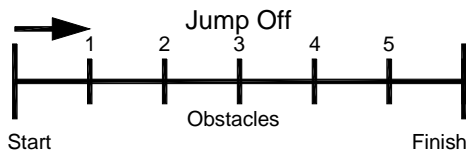
**6.1.9. Program: 119: Table AM9**



- ☞ Stage 1: ranking by points and time
- ☞ Stage 2: ranking by total points and total time
- ☞ Jump off: ranking by points and time

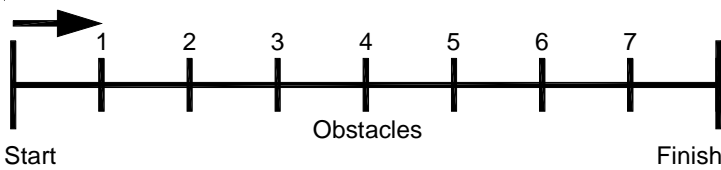


To operate stage 1 and 2 see page 47, 6.1.1. Standard Show Jumping A1.  
In order to get from stage 1 to stage 2 do the same as if you change to the jump off.



To operate the jump offs see page 55, 6.1.3. Standard Show Jumping

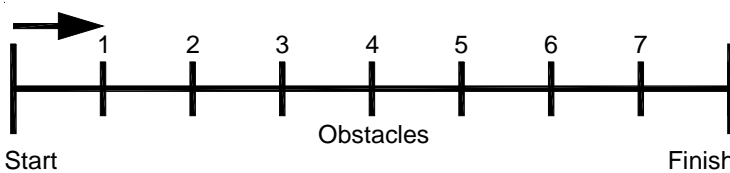
**6.1.10. Programm 120: Points jumping - Table B1 - FEI article 269**



- ☞ The rider gets the designated amount of points for any faultless obstacle. Dropped obstacles are zero points
- ☞ Stage: against time and points

For operation instructions see Point 6.1.1 Standardjumping A1.

**6.1.11. Programm 121: PointsJumping - Table B2 with allowed Parcourtime - FEI article 269**



- ☞ The rider gets the designated amount of points for any faultless obstacle. Dropped obstacles are zero points without time-penalties
- ☞ Stage: against time and points

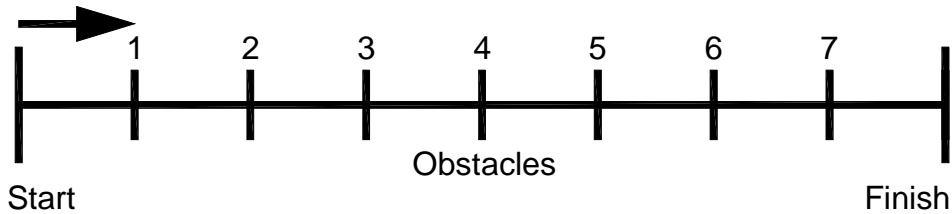
For operation instructions see Point 6.1.1 Standardjumping A1.

**6.1.12. Programm 122: Points Jumping - Table B3 with Jumpoff - FEI artichel 269**

- ☞ The rider get the designated amount of points for any faultless obstacle. Dropped obstacles are zero points without time-penalties
- ☞ Stage: against time and points
- ☞ Jump off: against table A2

For operation instructions see Point 6.1.1 Standardjumping A1.  
For operation instructions see Point 6.1.3 Standardjumping AM3



**6.1.13. Program 123: Table C - Time Penalty Jumping - Table C - FEI article 239**


You can use this program for Time Penalty Jumping (bareme C). Generally it has no penalty points, but penalty seconds. For each dropped obstacle you add a time penalty, depending on the course length and amount of obstacles.

**Adjustment:**

- Switch TdC 8001 on (switch 26)
- Select program 11 "Show Jumping" with cursor key (↓) and (→)
- Press <ENTER>
- Select program 116 "Time Penalty Jumping" with cursor key (↓) and (→)
- Press <ENTER>
- Select race that you want to use and clear memory (e.g. <F1> for race 1)
- Press <ENTER>
- Select race (e.g. <F1> for race 1)
- Press <ENTER>
- Select the precision with key <F1> to <F4>. Standard is <F3> with 1/100 seconds
- Press <ENTER>
- Synchronize the TdC 8001 (with time of day and other timing devices)
- press <F1> if the finish display (5) shows the correct time of day
- wait until TdC 8001 gives at the next full minute the synchronize signal to external devices (you are now ready for timing)
- press <F2> if the finish display (5) shows the wrong time of day
- input the time of day, confirm it with <ENTER> and make a start signal (channel 0 or press <START>).
- Press <ALT> and <MENU> together.
- Adjust menu 36, 37, 39, 41, 43, and 45 as required by the circumstances of your event (see next page).
- Exit the menu when you did all adjustments with <NO>.

**Race operation:**

- Input the start number for the start with start keyboard (12) (#1)
- Press <ENTER>
- The start-display (1) must show the correct start number
- Display (5) must show the correct countdown time (e.g. 60 seconds)
- Display (6) shows the penalty seconds for obstacle drop and time violation (left field) and penalty seconds for obstacle set up (right field).
- Make the start free by pressing <START> (or handswitch on channel 9). The countdown starts.
- The loudspeaker honks (if connected to socket 25) and gives the start free signal
- Display (5) shows the countdown
- If the rider does not pass the start photocell before the end of the countdown it will honk at the zero time
- When the rider passes the start photocell, the time will start (display 7)
- Input penalty seconds for obstacle drop by pressing <ENTER> (keyboard 15)

- Correction of total penalty points (obstacle drop) by input of total amount and pressing <INPUT> (keyboard 15)- Time-out for set up of obstacle by pressing handswitch (channel 9). It stops the running time. When the time is stopped it is possible to input a penalty time (display 8, right number). The penalty time must be confirmed with <ENTER> (keyboard 15). It is possible to switch between penalty seconds and penalty points with the cursor keys. This penalty time is added immediately to the run time.
- When a rider reaches the finish it stops the run time. The penalty points from time violation are calculated automatically.
- Press key <F3> to calculate the total run time including all penalty seconds.
- Input start number for the next competitor with keyboard (12), e.g. start number 2
- Confirm with <ENTER> (keyboard 9)
- etc.

**Adjustments that you have to make before the race starts:**

Before you start a race you have to check and maybe change some adjustments at the TdC 8001.

Press <ALT> and <MENU> at the same time to open the main menu. You can get directly into any sub menu by input of the menu number with keyboard (8) and confirm it with <ENTER>.

**Penalty Points:**

**Menu 36**

**Penalty Points = 04.00**

At the time penalty jumping you do not have penalty points that are given in seconds. The penalty seconds for obstacle drop you can adjust in this menu. You can set the penalty points from 0.01 to 99.99.

```
Menu 36: PENALTY POINTS = 04.00
```

Adjusted penalty seconds

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value:* 4 seconds

**Time Violation 1:**

**Menu 37**

**Time Violation 1 = 0,25**

You can adjust the penalty points for time violation. The adjustment is between 0.00 and 99.99 possible. It is also possible to adjust the time duration for the penalty. In the current rulse of FEI it is for each started four seconds 1 penalty point.

```
Menu 37: TIME VIOLATION 1 = 01.00
          PENALTYPERIOD    = 04.00
```

Adjust time penalty  
Adjust time periode

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value:* 1.00 point and 4 seconds

**Parcour Time 1:**

**Menu 39**

**Parcour Time = 000.00**

It is very important that you adjust the parcour time (the maximum allowed time). If you do not input the parcour time it will not add penalty seconds for time violation.

```
Menu 39: PARCOUR TIME 1 = 000.00

Save with: ENTER
```

Input the maximum allowed time

Save and exit with <ENTER>

*Pre-adjusted value:* no parcour time is pre-adjusted!

**Block Time:**

**Menu 41**

**Block Time 1 = 000.00**

As long as the block time is running, it will take every impulse of the finish photocell as a not valid impulse. This time will be printed only as time of day with a question mark. The time will not be stopped on the display (5) or display board. Use the block time for events where the rider passes the finish photocell before he reaches the finish.

```
Menu 41: BLOCK TIME 1 = 000.00

Save with:: ENTER
```

Input the block time

Save and exit with <ENTER>

*Pre-adjusted value:* no block time is pre-adjusted!

**Count Down Time:**

**Menu 43**

**Count Down Time = 000045.00**  
**Automatic Start = ON**

You can adjust the count down time between 0 and 6399.99 seconds. The count down time is the time between the greeting of the judges and the time when the rider must start. It is possible to show the count down time on a display board (see menu 43). A horn (if connected) honks at the start and end of the count down.

```
Menu 43: COUNT DOWN TIME = 000045.00
          AUTOMATIKSTART = ON

Save with:: ENTER
```

Input count down time

Automatic Start On or OFF

Save and exit with <ENTER>

*Pre-adjusted value:* Count Down Time = 45 seconds, Automatic Start = On

**Countdown for Display Board Menu 45**

**D-Board Count Down = ON**

You can switch off the countdown for the display board. All other functions of the countdown work, if the countdown for the display board is off.

```
Menu 45: D-Board Count Down          ON<
          output on display board
          OFF                          no output on display board

Save with: ENTER Save and exit with <ENTER>
```

output on display board

no output on display board

*Pre-adjusted value:* D-Board Count Down = on

**Timeoutsignal**

**Menu 46**

**Timeout signal = ON**

This setting controls if there is a beep at the start and end of the penalty-time.

```
Menu 46:                TIMEOUT = ON
                          Save with: ENTER
```

Input count down time

Save and exit with <ENTER>

*Pre-adjusted value:* Timeoutsignal on

**Add PTM immediately**

**Menu 47**

**Add PTM immediately = OFF**

You can switch off the countdown for the display board. All other functions of the countdown work, if the countdown for the display board is off.

```
Menu 47: ADD PTM IMMEDIATELY      ON
                                      OFF<
                          Save with: ENTER
```

add PTM after Finish

Save and exit with <ENTER>

*Pre-adjusted value:* Add PTM immediately = OFF

The FEI rule ask to add the PTM immediately. If you set on OFF it will add the PTM after the rider finish and you press F3 to make the final time and penalty of the rider.

**Add immediately**

**Menu 50**

**Add immediately = OFF**

With this function you don't have to press the button F3 to finish a competitor! After a competitor is crossing the finishline it will automatically calculate his result!

```
Menu 50: ADD IMMEDIATELY          ON
                                      OFF<
                          Save with: ENTER
```

automatic addition is on

Save and exit with <ENTER>

*Pre-adjusted value:* Add immediately = OFF

**BIB-counting**

**Menu 53**

**BIB-Counting = manual**

It is possible to input the BIB number of each rider with the keyboard 12. If you have continues rider numbers you can also select that you can count up or down by pressing <ENTER>

```
Menu 53: BIB-Counting           UP      F1
                                      Manual< F2
                                      Down   F3
                          Save with: ENTER
```

BIB count up

manual BIB input

BIB count down

Save and exit with <ENTER>

*Pre-adjusted value:* Manual

**Timelimit for Time Jumping: Menu 54**

**Time-Out = 0**

For a time jumping (Table C) there is a limit to finish the course. This maxim time we call time-out. If this time-out time is reached than the rider will be disqualified (it will print the actual bib number and "Time-Out" as well as "Disqualified". You can adjust the time limit between 0 and 999 seconds (0 = no time limit).

```
Menu 54: TIME-OUT = 000

Save with: ENTER
```

Input the time limit in seconds

Confirm with <ENTER>

*Pre adjusted value:* Time-Out = 0

**Add penalty seconds immediately: Menu 57**

**Add PTO immediately = ON**

It is possible to add the penalty time from e.g. a barrier drop with time out for a build up time immediately or after the finish arrival.

```
Menu 55: ADD PTO IMMEDIATELY      ON
                                       OFF
Save with: ENTER
```

F1 add immediately  
F2 add manual after finish

Confirm with <ENTER>

*Pre adjusted value:* Add PTO immediately = ON

**Photocell Blocking: Menu 58**

**Latching Blockkeys = OFF**  
**Print Blocktimes = ON**

In Show Jumping it happens often that the rider passes several times the start or finish before the real start or finish should be active. It is possible to use an external switch and activate the photocells as needed. The disadvantage of this method is in case you forget to activate the photocell you have no time at all.

We can offer you an alternative method by using the <BLOCK> keys. If you switch in this menu the "Latching Blockkeys" on, than you can activate and deactivate the photocells. Use the <BLOCK> key of the start keyboard (12) for the start and the <BLOCK> key of the finish keyboard (8) for the finish to activate or deactivate the photocell.

The big advantage of this method is that you get even with a blocked impulse a time of day. This means if you miss to activate a photocell you still have the time of day to make the correct corrections. You can not miss a timing impulse.

With the adjustment "Print Blocktimes" you can adjust, if you want that it print the blocked times (time of day). The blocked times are always stored in the memory.

```
Menu 58: LATCHING BLOCKKEYS      = OFF
        PRINT BLOCKTIMES        = ON
Select: YES/NO Save with: ENTER
```

change with <YES> or <NO>  
change with <YES> or <NO>

Confirm with <ENTER>

*Pre adjusted value:* Latching bBlockkeys = Off and Print Blocktimes = ON

**Impulse Transmission by Radio:**

**Menu 59**

**Pulse from TED**

You can adjust if a timing impulse comes e.g. from the photocell direct by cable or by radio. An impuls signal sent by radio is always delayed. In case of ALGE radios we have an exact delay of 0,1 seconds (e.g. TED).

If the TdC 8001 receives the start or stop impulse through a radio it will calculate a wrong run time, since the start- or finish time is delayed. Since all times have the same mistake it does not matter much, but it matters much if you measure records. To compensate this delay you can adjust the channel that uses the radio signal. If you do so, the calculation of the run time will be correct.

|                         |                 |    |                         |
|-------------------------|-----------------|----|-------------------------|
| Menu 59: PULSE FROM TED | Channel 0 = NO< | F1 | on or off for channel 0 |
|                         | Channel 1 = NO  | F2 | on or off for channel 1 |
|                         | Channel 9 = NO  | F3 | on or off for channel 9 |
| Save with: ENTER        |                 |    | Confirm with <ENTER>    |

*Pre adjusted value:* Pulse form TED: off for all channels

**Input of penalty seconds for obstacle drop:**

*Pre-adjusted value:*

The pointer between the penalty seconds for obstacle drop and penalty seconds for obstacle setup must point to the left field (display (6)). Change pointer with cursor key if necessary.

If you press <ENTER> (keyboard 15) it will increase the penalty seconds for obstacle drop by the pre-adjusted value (menu 35).

*Variable value:*

The pointer between the penalty seconds for obstacle drop and penalty seconds for obstacle setup must point to the left field (display (6)). Change pointer with cursor key if necessary.

Input penalty seconds for obstacle drop and confirm with <ENTER> (keyboard 15).

*Changing of total points:*

The pointer between the penalty seconds for obstacle drop and penalty seconds for obstacle setup must point to the left field (display (6)). Change pointer with cursor key if necessary.

Input total penalty seconds for obstacle drop and confirm with <INPUT> (keyboard 15).

**Penalty time for obstacle set up:**

If a horse refuses to jump a obstacle and the obstacle drops, it is necessary to set it up again. For the set up you must stop the time (time-out) by pressing the handswitch (channel 9). Normally a penalty time is given to the rider. This penalty time will be added to the clear round time after he passes the finish. When the obstacle is set up press the handswitch again to finish the time-out.

- ☞ Press handswitch (channel 9).
- ☞ The time in the display (5) must stop.
- ☞ The pointer must point to the penalty seconds (right field of display 8).
- ☞ Input penalty seconds with keyboard (8).
- ☞ Confirm penalty seconds with <ENTER>.
- ☞ If you want to input penalty points as well change with cursor key the pointer to the penalty points (left field of display 8).
- ☞ Press handswitch (channel 9) when the obstacle is set up.
- ☞ The time in display (5) must run.

**Penalty time from time violation:**

The penalty time from the time violation will be automatically calculated if you input the maximum allowed time (menu 38, parcour time). If you have also a penalty time from obstacle set up, then this time will be added when pressing the <F3> key after the rider had finished.

**Recalculation of the Total Time:**

The penalty seconds for obstacle set are added immediately to the run time. Penalty seconds for obstacle drop and time violation are added after the rider had finished. When you press the <F3> key it adds all up and prints the total time.

**Function of the keyboard:**

| Description                              | Keyboard 9 and 14 | Keyboard 15 and 14 |
|--|-------------------|--------------------|
| clear Start Time                         | CLEAR             |                    |
| recall last cleared Start Time           | ALT + CLEAR       |                    |
| clear Finish Time                        |                   | CLEAR              |
| recall last cleared Finish Time          |                   | ALT + CLEAR        |
| manipulate Start Time                    | INPUT             |                    |
| manipulate Finish Time                   |                   | INPUT              |
| manipulate Penalty Points                |                   | Points, than INPUT |
| manipulate Penalty Time                  |                   | Time, than INPUT   |
| <b>Menu 58: Latching Blockkeys = OFF</b> |                   |                    |
| block Start Time                         | BLOCK             |                    |
| Ignore Start Time                        | ALT + BLOCK       |                    |
| block Finish Time                        |                   | BLOCK              |
| ignore Finish Time                       |                   | ALT + BLOCK        |
| <b>Menu 58: Latching Blockkeys = ON</b>  |                   |                    |
| block Start Time                         | BLOCK             |                    |
| Ignore Start Time                        | ALT + BLOCK       |                    |
| block Finish Time                        |                   | BLOCK              |
| ignore Finish Time                       |                   | ALT + BLOCK        |

**Timing Channels:**      c0 = Start Channel                      c2 to c8 .... no function  
    c1 = Finish Channel                      c9 = Countdown and Time-out

**ALGE adjustments for the main menu:**

|          |                   |   |           |          |                     |   |           |
|----------|-------------------|---|-----------|----------|---------------------|---|-----------|
| Menu 1:  | Delay Time Start  | = | 1.0 s     | Menu 39: | Parcour Time 1      | = | 000.00    |
| Menu 2:  | Delay Time Finish | = | 0.3 s     | Menu 41: | Block Time 1        | = | 000.00    |
| Menu 4:  | Seconds Mode      | = | 03 s      | Menu 43: | Count Down Time     | = | 000045.00 |
| Menu 9:  | Running Tenth     | = | OFF       |          | Automatik Start     | = | ON        |
| Menu 11: | Finish Rank       | = | ON        | Menu 45: | D-Board C. Down     | = | ON        |
| Menu 15: | Print Menus       | = | ON        | Menu 46: | Time Out Signal     | = | ON        |
| Menu 16: | Printer Linefeed  | = | 1         | Menu 47: | Add PTN Immediately | = | OFF       |
| Menu 17: | RS-232 Baudrate   | = | 9600 Baud | Menu 50: | Add Immediate       | = | OFF       |
| Menu 18: | RS-232 Run Time   | = | off       | Menu 53: | BIB-Counting        | = | Manual    |
| Menu 19: | D-Board Baudrate  | = | 2400 Baud | Menu 54: | Time-Out            | = | 0         |
| Menu 20: | D-Board Chan. 2   | = | running   | Menu 55: | LED-Brightness      | = | 9         |
| Menu 21: | Beep              | = | on        | Menu 57: | Add PTO Immediately | = | ON        |
| Menu 25: | Change Race       |   |           | Menu 58: | Latching Blockkeys  | = | OFF       |
| Menu 26: | D-Board-Test      | = | OFF       |          | Print Blocktimes    | = | ON        |
| Menu 36: | Penalty Points    | = | 04.00     | Menu 59: | Pulse from TED      | = | OFF       |
| Menu 37: | Time Violation 1  | = | 01.00     |          |                     |   |           |
|          | Penaltyperiod     | = | 04.00     |          |                     |   |           |

**Info-display:**

|      |   |     |       |
|------|---|-----|-------|
| PPS  | 5 | PTO | 6.00  |
| PSTM | 2 | RT  | 56.49 |
| TPS  | 7 | RTT | 62.49 |

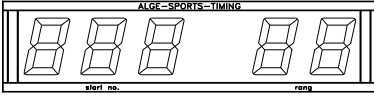


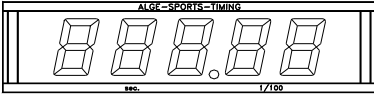


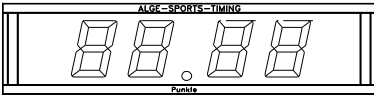


The Info-display (7) shows the following:  
 PPS ..... Penalty points for obstacle drop  
 PSTM ..... Penalty points for time violation  
 TPS ..... Total penalty points  
 PTO ..... Penalty time of time-out (obstacle set up)  
 RT ..... Run time  
 RTT ..... Total run time including penalty seconds

**Printer: Printing examples**

|       |      |               |   |
|-------|------|---------------|---|
| 0001  | C9   | 11:02:43.7845 | Start of countdown  |
|       | CD   | 26.16         | Start of rider 26.16 seconds before the countdown ends                |
|       | ST   | 11:03:17.6226 | Start Time  |
|       | PS   | + 5.00        | 5 penalty seconds for obstacle drop                                   |
|       | C9   | 11:03:43.8243 | Start of time-out   |
|       | TO   | 26.20         | Time-out after 26.20 seconds run time                                 |
|       | PTO  | +6.00         | 6 penalty seconds for obstacle set up (added immediately to run time) |
|       | C9   | 11:03:57.7907 | End of time-out   |
|       | PS   | + 5.00        | 5 penalty seconds for obstacle drop                                   |
|       | RT   | 11:04:22.0790 | Finish Time   |
|       | RT   | 56.49         | Run Time including penalty seconds for obstacle setup                 |
| ----- |      |               |   |
|       | PSTM | 5.00          | Penalty seconds for time violation                                    |
|       | PPS  | 10.00         | Penalty seconds for obstacle drop                                     |
|       | PTO  | 6.00          | Penalty seconds for obstacle set up                                   |
| ----- |      |               |   |
|       | RTT  | 71.49         | Total Run Time including all penalty seconds                          |

**Display Board GAZ4:**

You can show the run time (and countdown time), penalty seconds and start number/rank on ALGE display boards. In the main menu (menu 19, see page 35) you can activate channel 2. If you have activated channel 2, it shows only the run time or time to beat on the display board (no running time).

|  |   |  |   |
|--|---|--|---|
| <p><i>Start number / Rank:</i></p>       |  | <br>thumb wheel switch<br>on 1 | <br>toggle switch<br>upper position  |
| <p><i>Run Time and Running Time:</i></p> |  | <br>thumb wheel switch<br>on 0 | <br>toggle switch<br>middle position |
| <p><i>Penalty Seconds:</i></p>           |  | <br>thumb wheel switch<br>on 0 | <br>toggle switch<br>upper position  |



## RS 232c Interface:

*Transfer Format:* 1 start bit, 8 data bit, no parity bit, 1 stop bit  
*Transfer Speed:* 9.600 Baud pre-adjusted (adjustable: 2400, 4800, 19200)  
*Transfer Protocol:* ASCII

|                                  |   |
|----------------------------------|---|
| nNNNN (CR)                       | active start number                                     |
| xNNNNxCCxxHH:MM:SS.zhtqxGR (CR)  | time of day   |
| xNNNNxCCMxxHH:MM:SS.zhtqxGR (CR) | time of day (manual impulse)                            |
| xNNNNxCDxxxxSSSSSS.zhxxxGR (CR)  | countdown time  |
| xNNNNxTOxxxxSSSSSS.zhxxxGR (CR)  | time-out  |
| xNNNNxRTxxxxSSSSSS.zhxxxGR (CR)  | run time  |
| xNNNNxRTTxxxSSSSSS.zh (CR)       | run time including penalty time                         |
| xNNNNxPSxxxxxxxx+tt.tt (CR)      | penalty time for obstacle drop                          |
| iNNNNxPSxxxxxxxxtt.tt (CR)       | correction of penalty time for obstacle drop            |
| xNNNNxPSTMxxxxxxxxtt.tt (CR)     | penalty seconds from time violation                     |
| xNNNNxPPSxxxxxxxxtt.tt (CR)      | total penalty seconds (barrier drop and time violation) |
| xNNNNxPTOxxxxxx+tt.tt (CR)       | penalty seconds for obstacle setup                      |
| iNNNNxPTOxxxxxxtt.tt (CR)        | correction of penalty seconds for obstacle setup        |

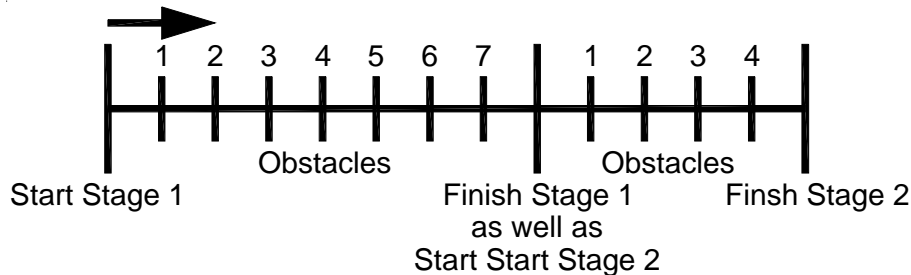
|               |  |
|---------------|--|
| x             | blank  |
| NNNN          | start number (four digits)   |
| CC            | timing channels (c0 to c9)   |
| C0            | channel 0 (start)  |
| C1            | channel 1 (finish)   |
| C9            | channel 9 (time-out)   |
| CCM           | manual impulse (with <START> or <STOP> from keyboard 9 or 15)        |
| CD            | countdown  |
| TO            | time-out   |
| RT            | run time   |
| RTT           | run time, including penalty time                                     |
| HH:MM:SS.zhtq | time in hours, minutes, seconds and 1/10000 seconds                  |
| SSSSSS.zh     | time in seconds and 1/100 seconds                                    |
| GR            | group for team competition (from 01 to 99, no input for groups = 00) |
| PS            | penalty seconds for obstacle drop                                    |
| PSTM          | penalty seconds for time violation                                   |
| PPS           | total penalty seconds (obstacle drop and time violation)             |
| PTO           | penalty points for obstacle set up                                   |
| +             | penalty points or penalty seconds are added                          |
| tt.tt         | penalty seconds  |
| (CR)          | carriage return  |

*The following characters could be the first digit:*

|   |  |
|---|--|
| x | blank  |
| ? | time without valid start number              |
| c | cleared time (with <CLEAR>)                  |
| d | times cleared through disqualification       |
| i | times input manual: <INPUT>                  |
| n | new start number shown in finish display (6) |

**RS 485 Interface:** not used for showjumping

**6.1.14. Program 124: Two Stage Show Jumping - FEI article 274.5.2**



Program with two stages. All competitors ride the first stage. Whoever passes the first stage without penalty points will be allowed for the second stage. If a rider has penalty points in the first stage he will not be allowed for the second stage.

**Standard penalty points per started second time violence:**

- Stage 1: 1 penalty point per started 4 seconds time violation
- Stage 2: 1 penalty point per started 4 seconds time violation

**Adjustment:**

- Switch TdC 8001 on (switch 26)
- Select program 11 "Show Jumping" with cursor key (¢ and £)
- Press <ENTER>
- Select program 121 "Two Stage Jumping" with cursor key (¢ and £)
- Press <ENTER>
- Select race that you want to use and clear memory (e.g. <F1> for race 1)
- Press <ENTER>
- Select race (e.g. <F1> for race 1)
- Press <ENTER>
- Select the precision with key <F1> to <F4>. Standard is <F3> with 1/100 seconds
- Press <ENTER>
- Select the timing mode (we recommend <F2> for Difference Timing")
- Press <ENTER>
- Synchronize the TdC 8001 (with time of day and other timing devices)
- Input the time of day, confirm it with <ENTER>
- Input the date (Year-Month-Day) and confirm it with <ENTER>
- Make a start signal (channel 0 or press <START>)
- Press <ALT> and <MENU> together.
- Adjust menu 36, 37, 39, 41, 42, 43 and 45 as required by the circumstances of your event (see next page).
- Exit the menu when you did all adjustments with <NO>.

**Race operation:**

- Input the start number for the start with start keyboard (12) (#1)
- Press <ENTER>
- Display (1) must show the correct start number
- Display (5) must show the correct countdown time (e.g. 60 seconds)
- Display (6) shows the penalty points and penalty seconds
- Clear the start by pressing <START> (or handswitch on channel 9). The countdown starts.
- The loudspeaker honks (if connected to socket 25) and gives the start free signal
- Display (5) shows the countdown
- If the rider does not pass the start photocell before the end of the countdown it will honk at the zero time
- When the rider passes the start photocell it will start the time (display 7)

- Input penalty points (obstacle drop) by pressing <ENTER> (keyboard 15)
- Correction of total penalty points (obstacle drop) by input of total amount and pressing <INPUT> (keyboard 15)
- Time-out for set up of obstacle by pressing handswitch (channel 9). It stops the running time. When the time is stopped it is possible to input a penalty time (display 8, right number). The penalty time must be confirmed with <ENTER> (keyboard 15). It is possible to switch between penalty seconds and penalty points with the cursor keys.
- When a rider reaches the finish it stops the run time. If he has penalty points you must press key <F3> to calculate the total points and total time.
- If a rider reaches the finish without penalty points and within the allowed time, it will stop the time for a few seconds (menu: display time 1). After this it shows the time of stage 2 (it starts this time at the same time with the finish impulse of stage 1).
- Press key <F3> to calculate the total penalty points and total run time after the rider finish stage 2
- Input start number for the next competitor with keyboard (12), e.g. start number 2
- Confirm with <ENTER> (keyboard 9)
- etc.

**Adjustments that you have to make before the race starts:**

Before you start a race you have to check and maybe change some adjustments at the TdC 8001.

Press <ALT> and <MENU> at the same time to open the main menu. You can get directly into the needed sub menu by input of the menu number with keyboard (8) and confirm it with <ENTER>.

**Penalty Points:**

**Menu 36**

**Penalty Points = 04.00**

The standard penalty points for obstacle drop you can adjust in this menu. You can set the penalty points from 0.01 to 99.99. Normally there is a 4 point penalty for obstacle drop.

```
Menu 36: PENALTY POINTS = 04.00

Save with: ENTER
```

Adjusted penalty points

Save and exit with <ENTER>

*Pre adjusted value:* 4 points

**Time Violation 1:**

**Menu 37**

**Time Violation 1 = 0,25**

You can adjust the penalty points for time violation. The adjustment is between 0.00 and 99.99 possible. It is also possible to adjust the time duration for the penalty. In the current rulse of FEI it is for each started four seconds 1 penalty point.

```
Menu 37: TIME VIOLATION 1 = 01.00
          PENALTYPERIOD   = 04.00

Save with: ENTER
```

Adjust time penalty

Adjust time periode

Save and exit with <ENTER>

*Pre-adjusted value:* 1.00 point and 4 seconds

**Time Violation 2:****Menu 38****Time Violation = 0,25**  
**Penaltyperiode = 04.00**

You can adjust the penalty points for time violation and the time for which this penalty point counts for the jump off. The standard is one penalty point per started 4 seconds. This is also the pre-adjusted value

```
Menu 37: TIME VIOLATION 2 = 01.00
          PENALTYPERIOD    = 04.00

Save with: ENTER
```

Adjusted time penalty  
Adjusted time period per time valuation  
Save and exit with <ENTER>

*Pre-adjusted value:* Time Violation = 1 point  
Penalty Period = 4 seconds

**Parcour Time 1:****Menu 39****Parcour Time 1 = 000.00**

It is very important that you adjust the parcour time 1 (the maximum allowed time for stage 1). If you do not input the parcour time it will not add penalty points for time violation during stage 1.

```
Menu 39: PARCOUR TIME 1 = 000.00

Save with: ENTER
```

Input the maximum allowed time  
Save and exit with <ENTER>

*Pre-adjusted value:* : no parcour time is pre-adjusted!

**Parcour Time 2:****Menu 40****Parcour Time 2 = 000.00**

It is very important that you adjust the parcour time 2 (the maximum allowed time for stage 2). If you do not input the parcour time it will not add penalty points for time violation during stage 2.

```
Menu 40: PARCOUR TIME 2 = 000.00

Save with: ENTER
```

Input the maximum allowed time  
Save and exit with <ENTER>

*Pre-adjusted value:* : no parcour time is pre adjusted!

**Block Time 1:****Menu 41****Block Time 1 = 000.00**

As long as the block time 1 is running, it will take every impulse of the finish photocell as a not valid impulse during stage 1. This time will be printed only as time of day with a question mark. The time will not be stopped on the display (5) or display board. Use the block time for events where the rider passes the finish photocell before he reaches the finish.

```
Menu 41: BLOCK TIME 1 = 000.00

Save with: ENTER
```

Input the block time  
Save and exit with <ENTER>

*Pre-adjusted value:* : no block time is pre-adjusted!

**Block Time 2:**

**Menu 42**

**Block Time 2 = 000.00**

As long as the block time 2 is running, it will take every impulse of the finish photocell as a not valid impulse during stage 2. This time will be printed only as time of day with a question mark. The time will not be stopped on the display (5) or display board. Use the block time for events where the rider passes the finish photocell before he reaches the finish.

```
Menu 42: BLOCK TIME 2 = 000.00

Save with: ENTER
```

Input the block time

Save and exit with <ENTER>

*Pre-adjusted value:* : no block time is pre-adjusted!

**Count Down Time 1:**

**Menu 43**

**Count Down Time = 000045.00  
Automatic Start = ON**

You can adjust the count down time between 0 and 6399.99 seconds. The count down time is the time between the greeting of the judges and the time when the rider must start. It is possible to show the count down time on a display board (see menu 43). A horn (if connected) honks at the start and end of the count down.

```
Menu 43: COUNT DOWN TIME 1 = 000045.00
          AUTOMATIC START = ON

Save with: ENTER
```

Input count down time  
Automaticstart ON or OFF

Save and exit with <ENTER>

*Pre-adjusted value:* : Count Down Time = 45 seconds

**Countdown for Display Board Menu 45**

**D-Board Count Down = ON**

You can switch off the countdown for the display board. All other functions of the countdown work, if the countdown for the display board is off.

```
Menu 45: D-Board Count Down      ON<
                                     OFF

Save with: ENTER
```

output on display board  
no output on display board

Save and exit with <ENTER>

*Pre-adjusted value:* : D-Board Count Down = on

**TIMEOUTSIGNAL:**

**Menü 46**

**TIME OUT SIGNAL = ON**

With this function you can turn the horn for the Timeout On or OFF.

```
Menü 46:      TIME OUT SIGNAL      ON<
                                     OFF

Save with: ENTER
```

ON or OFF

Save and exit with <ENTER>

*Pre-adjusted value:* : Timeoutsignal ON

## Add PTM immediately

### Menu 47

## Add PTM immediately = OFF

You can switch off the countdown for the display board. All other functions of the countdown work, if the countdown for the display board is off.

```
Menu 47: ADD PTM IMMEDIATELY      ON
                                      OFF<
Save with: ENTER
```

add PTM after Finish

Save and exit with <ENTER>

*Pre-adjusted value:* Add PTM immediately = OFF

The FEI rule ask to add the PTM immediately. If you set on OFF it will add the PTM after the rider finish and you press F3 to make the final time and penalty of the rider.

## Add immediately

### Menu 50

## Add immediately = OFF

With this function you don't have to press the button F3 to finish a competitor! After a competitor is crossing the finishline it will automatically calculate his result!

```
Menu 50: ADD IMMEDIATELY          ON
                                      OFF<
Save with: ENTER
```

automatic addition is on

Save and exit with <ENTER>

*Pre-adjusted value:* Add immediately = OFF

## BIB-counting

### Menu 53

## BIB-Counting = manual

It is possible to input the BIB number of each rider with the keyboard 12. If you have continues rider numbers you can also select that you can count up or down by pressing <ENTER>

```
Menu 53: BIB-Counting              UP   F1
                                      Manual< F2
                                      Down F3
Save with: ENTER
```

BIB count up

manual BIB input

BIB count down

Save and exit with <ENTER>

*Pre-adjusted value:* Manual

## Add penalty seconds immediately: Menu 57

## Add PTO immediately = ON

It is possible to add the penalty time from e.g. a barrier drop with time out for a build up time immediately or after the finish arrival.

```
Menu 55: ADD PTO IMMEDIATELY      ON   F1
                                      OFF  F2
Save with: ENTER
```

add immediately

add manual after finish

Confirm with <ENTER>

*Pre adjusted value:* Add PTO immediately = ON

**Photocell Blocking:**

**Menu 58**

**Latching Blockkeys = OFF**  
**Print Blocktimes = ON**

In Show Jumping it happens often that the rider passes several times the start or finish before the real start or finish should be active. It is possible to use an external switch and activate the photocells as needed. The disadvantage of this method is in case you forget to activate the photocell you have no time at all.

We can offer you an alternative method by using the <BLOCK> keys. If you switch in this menu the "Latching Blockkeys" on, than you can activate and deactivate the photocells. Use the <BLOCK> key of the start keyboard (12) for the start and the <BLOCK> key of the finish keyboard (8) for the finish to activate or deactivate the photocell.

The big advantage of this method is that you get even with a blocked impulse a time of day. This means if you miss to activate a photocell you still have the time of day to make the correct corrections. You can not miss a timing impulse.

With the adjustment "Print Blocktimes" you can adjust, if you want that it print the blocked times (time of day). The blocked times are always stored in the memory.

```
Menu 58: LATCHING BLOCKKEYS    = OFF
          PRINT BLOCKTIMES      = ON

Select: YES/NO  Save with: ENTER
```

change with <YES> or <NO>  
change with <YES> or <NO>

Confirm with <ENTER>

*Pre adjusted value:* Latching bBlockkeys = Off and Print Blocktimes = ON

**Impulse Transmission by Radio:**

**Menu 59**

**Pulse fromTED**

You can adjust if a timing impulse comes e.g. from the photocell direct by cable or by radio. An impuls signal sent by radio is always delayed. In case of ALGE radios we have an exact delay of 0,1 seconds (e.g. TED).

If the TdC 8001 receives the start or stop impulse through a radio it will calculate a wrong run time, since the start- or finsih time is delayed. Since all times have the same mistake it does not matter much, but it matters much if you measure records. To compensate this delay you can adjust the channel that uses the radio signal. If you do so, the calculation of the run time will be correct.

```
Menu 59: PULSE FROM TED  Channel 0 = NO<
                               Channel 1 = NO
                               Channel 9 = NO

Save with: ENTER
```

F1 on or off for channel 0  
F2 on or off for channel 1  
F3 on or off for channel 9  
Confirm with <ENTER>

*Pre adjusted value:* Pulse form TED: off for all channels

**Input of penalty points:**

*Pre-adjusted value:* The pointer between the penalty points and penalty seconds must point to the penalty points (display (6), left field). Change pointer with cursor key if necessary. If you press <ENTER> (keyboard 15) it will increase the penalty points by the pre-adjusted value (menu 35).

*Variable value:* The pointer between the penalty points and penalty seconds must point to the penalty points (display (6), left field). Change pointer with cursor key if necessary. Input penalty points and confirm with <ENTER> (keyboard 15).

*Changing of total points:* The pointer between the penalty points and penalty seconds must point to the penalty points (display (6), left field). Change pointer with cursor key if necessary. Input total points and confirm with <INPUT> (keyboard 15).



**Penalty time for obstacle set up:**

If a horse refuses to jump an obstacle and the obstacle drops, it is necessary to set up the obstacle again. For the set up you must stop the time (time-out) by pressing the handswitch (channel 9). Normally a penalty time is given to the rider. This penalty time will be added to the clear round time after he passes the finish. When the obstacle is set up press the handswitch again to finish the time-out.

- Press handswitch (channel 9).
- The time in the display (5) must stop.
- The pointer must point to the penalty seconds (right field of display 8).
- Input penalty seconds with keyboard (8).
- Confirm penalty seconds with <ENTER>.
- If you want to input penalty points as well change with cursor key the pointer to the penalty points (left field of display 8).
- Press handswitch (channel 9) when the obstacle is set up.
- The time in display (5) must run.

**Penalty points from time violation:**

The penalty points from the time violation and obstacle set up will be automatically calculated, if you input the maximum allowed time (menu 39, parcour time). The actual points you can always see in the info display (7). The printer and display board will update the score by pressing <F3>.

**Adding of penalty seconds:**

The penalty seconds for obstacle set up must be added for the printer and display board after the finish. First you must print and show the result without penalty seconds. If you press the key <F3> it will add the penalty seconds and all data will be new calculated. It will print the final score and show it on the display board.

**Function of the keyboard:**

| Description                              | Keyboard 9 and 14 | Keyboard 15 and 14 |
|--|-------------------|--------------------|
| clear Start Time                         | CLEAR             |                    |
| recall last cleared Start Time           | ALT + CLEAR       |                    |
| clear Finish Time                        |                   | CLEAR              |
| recall last cleared Finish Time          |                   | ALT + CLEAR        |
| manipulate Start Time                    | INPUT             |                    |
| manipulate Finish Time                   |                   | INPUT              |
| manipulate Penalty Points                |                   | Points, than INPUT |
| manipulate Penalty Time                  |                   | Time, than INPUT   |
| <b>Menu 58: Latching Blockkeys = OFF</b> |                   |                    |
| block Start Time                         | BLOCK             |                    |
| Ignore Start Time                        | ALT + BLOCK       |                    |
| block Finish Time                        |                   | BLOCK              |
| ignore Finish Time                       |                   | ALT + BLOCK        |
| <b>Menu 58: Latching Blockkeys = ON</b>  |                   |                    |
| block Start Time                         | BLOCK             |                    |
| Ignore Start Time                        | ALT + BLOCK       |                    |
| block Finish Time                        |                   | BLOCK              |
| ignore Finish Time                       |                   | ALT + BLOCK        |

**Timing Channels:** c0 = Start Channel  
c1 = Finish Channel

c2 to c8 = no function  
c9 = Countdown and Time-out



**ALGE adjustments for the main menu:**

|          |                   |   |           |          |                     |   |           |
|----------|-------------------|---|-----------|----------|---------------------|---|-----------|
| Menu 1:  | Delay Time Start  | = | 1.0 s     | Menu 38: | Time Violation 1    | = | 01.00     |
| Menu 2:  | Delay Time Finish | = | 0.3 s     |          | Penaltyperiod       | = | 04.00     |
| Menu 4:  | Seconds Mode      | = | 03 s      | Menu 39: | Parcour Time 1      | = | 000.00    |
| Menu 9:  | Running Tenth     | = | OFF       | Menu 40: | Parcour Time 2      | = | 000.00    |
| Menu 11: | Finish Rank       | = | ON        | Menu 41: | Block Time 1        | = | 000.00    |
| Menu 15: | Print Menus       | = | ON        | Menu 42: | Block Time 2        | = | 000.00    |
| Menu 16: | Printer Linefeed  | = | 1         | Menu 43: | Count Down Time     | = | 000045.00 |
| Menu 17: | RS-232 Baudrate   | = | 9600 Baud |          | Automatik Start     | = | ON        |
| Menu 18: | RS-232 Run Time   | = | off       | Menu 45: | D-Board C. Down     | = | ON        |
| Menu 19: | D-Board Baudrate  | = | 2400 Baud | Menu 46: | Time Out Signal     | = | ON        |
| Menu 20: | D-Board Chan. 2   | = | running   | Menu 47: | Add PTN Immediately | = | OFF       |
| Menu 21: | Beep              | = | on        | Menu 50: | Add Immediate       | = | OFF       |
| Menu 25: | Change Race       | = |           | Menu 53: | BIB-Counting        | = | Manual    |
| Menu 26: | D-Board-Test      | = | OFF       | Menu 55: | LED-Brightness      | = | 9         |
| Menu 36: | Penalty Points    | = | 04.00     | Menu 57: | Add PTO Immediately | = | ON        |
| Menu 37: | Time Violation 1  | = | 01.00     | Menu 58: | Latching Blockkeys  | = | OFF       |
|          | Penaltyperiod     | = | 04.00     |          | Print Blocktimes    | = | ON        |
|          |                   |   |           | Menu 59: | Pulse from TED      | = | OFF       |

**Info-display:**

|     |      |     |       |
|-----|------|-----|-------|
| PP  | 4.00 | PTO | 6.00  |
| PTM | 0.25 | RT  | 56.49 |
| TP  | 4.25 | RTT | 62.49 |

The Info-display (7) shows the following:

PP ... Penalty Points for obstacle drop  
PTM . Penalty Points for Time Violation  
TP .... Total Penalty Points

PTO . Penalty Time of Time-out (obstacle set up)  
RT .... Run Time  
RTT .. Total Run Time including Penalty Seconds

**Printer: Printing examples**

```

0001 C9 10:05:34.3287
      CD      21.25
      ST 10:06:13.0690
      FT 10:07:08.9435
      RT      55.87
-----
      ST 10:07:08.9435
      P   + 4.00
      C9 10:07:33.0026
      TO      24.05
      PTO     +6.00
      C9 10:07:45.4011
      FT 10:08:04.0274
      RT      42.58
-----
      PTO      6.00
      PTM     7.00
      PP      4.00
-----
      RTT     48.58
      TP     11.00
=====

```

Start of countdown  
Start of rider 21.25 seconds before the countdown ends  
Start Time  
Finish Time of Stage 1  
Run Time of Stage 1

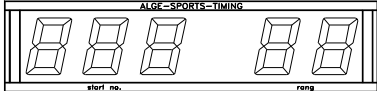


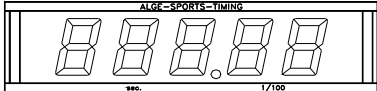


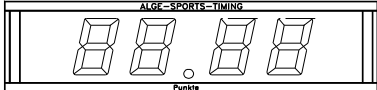


Start Time of Stage 2  
4 Penalty Points for obstacle drop  
Start of time-out  
Time-out after 24.05 seconds run time of stage 2  
6 penalty seconds for obstacle set up  
End of time-out  
Finish Time if stage 2  
Run Time of stage 2

Total penalty seconds  
Penalty points from time violation  
Penalty points for obstacle drop

Total Run Time including penalty seconds  
Total penalty points (obstacle drop and time valuation)

## Display Board GAZ4:

You can show the run time (and countdown time), penalty seconds and start number/rank on ALGE display boards. In the main menu (menu 19, see page 46) you can activate channel 2. If you have activated channel 2, it only shows the run time or time to beat on the display board (no running time).

|  |   |  |   |
|--|---|--|---|
| <p><i>Start number / Rank:</i></p>       |  | <br>thumb wheel switch<br>on 1 | <br>toggle switch<br>upper position  |
| <p><i>Run Time and Running Time:</i></p> |  | <br>thumb wheel switch<br>on 0 | <br>toggle switch<br>middle position |
| <p><i>Penalty Seconds:</i></p>           |  | <br>thumb wheel switch<br>on 0 | <br>toggle switch<br>upper position  |

## RS 232c Interface:

*Transfer Format:* 1 start bit, 8 data bit, no parity bit, 1 stop bit  
*Transfer Speed:* 9.600 Baud pre-adjusted (adjustable: 2400, 4800, 19200)  
*Transfer Protocol:* ASCII

|                                  |   |
|----------------------------------|---|
| nNNNN (CR)                       | active start number                                     |
| xNNNNxCCxxHH:MM:SS.zhtqxGR (CR)  | time of day   |
| xNNNNxCCMxxHH:MM:SS.zhtqxGR (CR) | time of day (manual impulse)                            |
| xNNNNxCDxxxxSSSSSS.zhxxxGR (CR)  | countdown time  |
| xNNNNxTOxxxxSSSSSS.zhxxxGR (CR)  | time-out  |
| xNNNNxRTxxxxSSSSSS.zhxxxGR (CR)  | run time  |
| xNNNNxRTTxxxSSSSSS.zh (CR)       | run time including penalty time                         |
| xNNNNxPSxxxxxxxx+tt.tt (CR)      | penalty time for obstacle drop                          |
| iNNNNxPSxxxxxxxxtt.tt (CR)       | correction of penalty time for obstacle drop            |
| xNNNNxPSTMxxxxxxxxtt.tt (CR)     | penalty seconds from time violation                     |
| xNNNNxPPSxxxxxxxxtt.tt (CR)      | total penalty seconds (barrier drop and time violation) |
| xNNNNxPTOxxxxxxxx+tt.tt (CR)     | penalty seconds for obstacle setup                      |
| iNNNNxPTOxxxxxxxxtt.tt (CR)      | correction of penalty seconds for obstacle setup        |

|               |  |
|---------------|--|
| x             | blank  |
| NNNN          | start number (four digits)   |
| CC            | timing channels (c0 to c9)   |
| C0            | channel 0 (start) C1 channel 1 (finish) C9 channel 9 (time-out)      |
| CCM           | manual impulse (with <START> or <STOP> from keyboard 9 or 15)        |
| CD            | countdown  |
| TO            | time-out   |
| RT            | run time   |
| RTT           | run time, including penalty time                                     |
| HH:MM:SS.zhtq | time in hours, minutes, seconds and 1/10000 seconds                  |
| SSSSSS.zh     | time in seconds and 1/100 seconds                                    |
| GR            | group for team competition (from 01 to 99, no input for groups = 00) |
| PS            | penalty seconds for obstacle drop                                    |
| PSTM          | penalty seconds for time violation                                   |

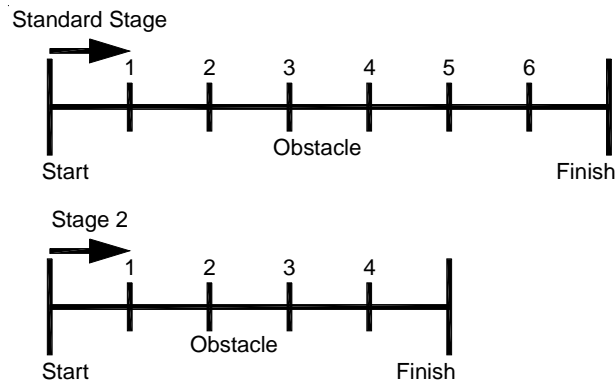
|       |  |
|-------|--|
| PPS   | total penalty seconds (obstacle drop and time violation) |
| PTO   | penalty points for obstacle setup                        |
| +     | penalty points or penalty seconds are added              |
| tt.tt | penalty seconds  |
| (CR)  | carriage return  |

**The following characters could be the first digit:**

|   |  |
|---|--|
| x | blank  |
| ? | time without valid start number              |
| c | cleared time (with <CLEAR>)                  |
| d | times cleared through disqualification       |
| i | times input manual: <INPUT>                  |
| n | new start number shown in finish display (6) |

**RS 485 Interface:** not used for showjumping

**6.1.15. Program 125: American Stage F:**



Program for American stage. All competitors ride the first stage. The first stage is a standard stage. Whoever passes the first stage without penalty points will be allowed for the second stage. If a rider has penalty points in the first stage he will not be allowed for the second stage. The second stage is as well a standard stage. Between stage 1 and stage 2 is a countdown of 30 seconds.

**Standard penalty points per started second time violence:**

- Stage 1: 1 penalty point per started 4 seconds time violence
- Stage 2: 1 penalty point per started 4 seconds time violence

**Adjustment:**

- Switch TdC 8001 on (switch 26)
- Select program 11 "Show Jumping" with cursor key (¢ and £)
- Press <ENTER>
- Select program 122 "American Stage F" with cursor key (¢ and £)
- Press <ENTER>
- Select race that you want to use and clear memory (e.g. <F1> for race 1)
- Press <ENTER>
- Select race (e.g. <F1> for race 1)
- Press <ENTER>
- Select the precision with key <F1> to <F4>. Standard is <F3> with 1/100 seconds
- Press <ENTER>
- Select the timing mode (we recommend <F2> for Difference Timing")
- Press <ENTER>
- Synchronize the TdC 8001 (with time of day and other timing devices)
- Input the time of day, confirm it with <ENTER>
- Input the date (Year-Month-Day) and confirm it with <ENTER>
- Make a start signal (channel 0 or press <START>)
- Press <ALT> and <MENU> together.
- Adjust menu 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 50, 55, 57, 58 and 59 as required by the circumstances of your event (see next page).
- Exit the menu when you did all adjustments with <NO>.

**Race operation:**

- Input the start number for the start with start keyboard (12) (#1)
- Press <ENTER>
- Display (1) must show the correct start number
- Display (5) must show the correct countdown time (e.g. 60 seconds)
- Display (6) shows the penalty points and penalty seconds
- Clear the start by pressing <START> (or handswitch on channel 9). The countdown starts.
- The loudspeaker honks (if connected to socket 25) and gives the start free signal
- Display (5) shows the countdown

- If the rider does not pass the start photocell before the end of the countdown it will honk at the zero time
- When the rider passes the start photocell it will start the time (display 7)
- Input penalty points (obstacle drop) by pressing <ENTER> (keyboard 15)
- Correction of total penalty points (obstacle drop) by input of total amount and pressing <INPUT> (keyboard 15)
- Time-out for set up of obstacle by pressing handswitch (channel 9). It stops the running time. When the time is stopped it is possible to input a penalty time (display 8, right number). The penalty time must be confirmed with <ENTER> (keyboard 15). It is possible to switch between penalty seconds and penalty points with the cursor keys.
- When a rider reaches the finish it stops the run time. If he has penalty points you must press key <F3> to calculate the total points and total time.
- If a rider reaches the finish without penalty points and within the allowed time, it will stop the time for a few seconds (menu: display time 1). After this it shows the count down time for stage 2 (normally 30 sec. count down).
- The count down can be started with the key <START> or through channel 9.
- When the rider passes the start photocell it will start the time (display 7)
- Penalty points and timeout is the same as for the first stage.
- Press key <F3> to calculate the total penalty points and total run time after the rider finish stage 2
- Input start number for the next competitor with keyboard (12), e.g. start number 2
- Confirm with <ENTER> (keyboard 9)
- etc.

### **Adjustments that you have to make before the race starts:**

Before you start a race you have to check and maybe change some adjustments at the TdC 8001.

Press <ALT> and <MENU> at the same time to open the main menu. You can get directly into the needed sub menu by input of the menu number with keyboard (8) and confirm it with <ENTER>.

#### **Penalty Points:**

#### **Menu 36**

**Penalty Points = 04.00**

The standard penalty points for obstacle drop you can adjust in this menu. You can set the penalty points from 0.01 to 99.99. Normally there is a 4 point penalty for obstacle drop.

```
Menu 36: PENALTY POINTS = 04.00
```

Adjusted penalty points

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value:* 4 points

**Time Violation 1:****Menu 37****Time Violation 1 = 0,25**

You can adjust the penalty points for time violation. The adjustment is between 0.00 and 99.99 possible. It is also possible to adjust the time duration for the penalty. In the current rulse of FEI it is for each started four seconds 1 penalty point.

```
Menu 37: TIME VIOLATION 1 = 01.00
          PENALTYPERIOD    = 04.00
```

Adjust time penalty  
Adjust time periode

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value:* 1.00 point and 4 seconds

**Time Violation 2:****Menu 38****Time Violation = 0,25**  
**Pentalyperiode = 04.00**

You can adjust the penalty points for time violation and the time for which this penalty point counts for the jump off. The standard is one penatly point per started 4 seconds. This is also the pre-adjusted value

```
Menu 37: TIME VIOLATION 2 = 01.00
          PENALTYPERIOD    = 04.00
```

Adjusted time penalty  
Adjusted time period per time valuation

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value:* Time Violation = 1 point  
Penalty Period = 4 seconds

**Parcour Time 1:****Menu 39****Parcour Time 1 = 000.00**

It is very important that you adjust the parcour time 1 (the maximum allowed time for stage 1). If you do not input the parcour time it will not add penalty points for time violation during stage 1.

```
Menu 39: PARCOUR TIME 1 = 000.00
```

Input the maximum allowed time

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value: :* no parcour time is pre-adjusted!

**Parcour Time 2:****Menu 40****Parcour Time 2 = 000.00**

It is very important that you adjust the parcour time 2 (the maximum allowed time for stage 2). If you do not input the parcour time it will not add penalty points for time violation during stage 2.

```
Menu 40: PARCOUR TIME 2 = 000.00
```

Input the maximum allowed time

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value: :* no parcour time is pre adjusted!

**Block Time 1:****Menu 41****Block Time 1 = 000.00**

As long as the block time 1 is running, it will take every impulse of the finish photocell as a not valid impulse during stage 1. This time will be printed only as time of day with a question mark. The time will not be stopped on the display (5) or display board. Use the block time for events where the rider passes the finish photocell before he reaches the finish.

```
Menu 41: BLOCK TIME 1 = 000.00
```

Input the block time

```
Save with: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre-adjusted value:* : no block time is pre-adjusted!

**Block Time 2:****Menu 42****Block Time 2 = 000.00**

As long as the block time 2 is running, it will take every impulse of the finish photocell as a not valid impulse during stage 2. This time will be printed only as time of day with a question mark. The time will not be stopped on the display (5) or display board. Use the block time for events where the rider passes the finish photocell before he reaches the finish.

```
Menu 42: BLOCK TIME 2 = 000.00
```

Input the block time

```
Save with: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre-adjusted value:* : no block time is pre-adjusted!

**Count Down Time 1:****Menu 43****Count Down Time = 000045.00**  
**Automatic Start = ON**

You can adjust the count down time between 0 and 6399.99 seconds. The count down time is the time between the greeting of the judges and the time when the rider must start. It is possible to show the count down time on a display board (see menu 43). A horn (if connected) honks at the start and end of the count down.

```
Menu 43: COUNT DOWN TIME 1 = 000045.00
          AUTOMATIC START = ON
```

Input count down time  
Automaticstart ON or OFF

```
Save with: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre-adjusted value:* : Count Down Time = 45 seconds

**Count Down Time 2:****Menu 44****Count Down Time 2 = 30s**  
**Automatic Start = Ein**

This countdown time is for the second stage or jump off. Otherwise this is the same adjustment as for Count Down Time 1 (menu 43).

```
Menu 43: COUNT DOWN TIME 2 = 000030.00
          AUTOMATIC START = ON
```

input the countdown time  
ON or OFF

```
Save with: ENTER
```

Confirm with &lt;ENTER&gt;

*Pre adjusted value:* : Count Down Time 2 = 30 seconds and Automatic Start = ON

**Countdown for Display Board Menu 45**

**D-Board Count Down = ON**

You can switch off the countdown for the display board. All other functions of the countdown work, if the countdown for the display board is off.

|                             |     |                            |
|-----------------------------|-----|----------------------------|
| Menu 45: D-Board Count Down | ON< | output on display board    |
|                             | OFF | no output on display board |
| Save with: ENTER            |     | Save and exit with <ENTER> |

*Pre-adjusted value:* D-Board Count Down = on

**TIMEOUTSIGNAL: Menü 46**

**TIME OUT SIGNAL = ON**

With this function you can turn the horn for the Timeout On or OFF.

|                          |     |                            |
|--------------------------|-----|----------------------------|
| Menü 46: TIME OUT SIGNAL | ON< | ON or OFF                  |
|                          | OFF |                            |
| Save with: ENTER         |     | Save and exit with <ENTER> |

*Pre-adjusted value:* Timeoutsignal ON

**Add PTM immediately Menu 47**

**Add PTM immediately = OFF**

You can switch off the countdown for the display board. All other functions of the countdown work, if the countdown for the display board is off.

|                              |      |                            |
|------------------------------|------|----------------------------|
| Menu 47: ADD PTM IMMEDIATELY | ON   | add PTM after Finish       |
|                              | OFF< |                            |
| Save with: ENTER             |      | Save and exit with <ENTER> |

*Pre-adjusted value:* Add PTM immediately = OFF

The FEI rule ask to add the PTM imediately. If you set on OFF it will add the PTM after the rider finish and you press F3 to make the final time and penalty of the rider.

**Add immediately Menu 50**

**Add immediately = OFF**

With this function you don't have to press the button F3 to finish a competitor! After a competitor is crossing the finishline it will automatically calculate his result!

|                          |      |                            |
|--------------------------|------|----------------------------|
| Menu 50: ADD IMMEDIATELY | ON   | automatic addition is on   |
|                          | OFF< |                            |
| Save with: ENTER         |      | Save and exit with <ENTER> |

*Pre-adjusted value:* Add immediately = OFF



**BIB-counting**

**Menu 53**

**BIB-Counting = manual**

It is possible to input the BIB number of each rider with the keyboard 12. If you have continues rider numbers you can also select that you can count up or down by pressing <ENTER>

|                       |         |    |                            |
|-----------------------|---------|----|----------------------------|
| Menu 53: BIB-Counting | UP      | F1 | BIB count up               |
|                       | Manual< | F2 | manual BIB input           |
|                       | Down    | F3 | BIB count down             |
| Save with: ENTER      |         |    | Save and exit with <ENTER> |

*Pre-adjusted value:* Manual

**Add penalty seconds immediately: Menu 57**

**Add PTO immediately = ON**

It is possible to add the penalty time from e.g. a barrier drop with time out for a build up time immediately or after the finish arrival.

|                              |     |    |                         |
|------------------------------|-----|----|-------------------------|
| Menu 55: ADD PTO IMMEDIATELY | ON  | F1 | add immediately         |
|                              | OFF | F2 | add manual after finish |
| Save with: ENTER             |     |    | Confirm with <ENTER>    |

*Pre adjusted value:* Add PTO immediately = ON

**Photocell Blocking:**

**Menu 58**

**Latching Blockkeys = OFF  
Print Blocktimes = ON**

In Show Jumping it happens often that the rider passes several times the start or finish before the real start or finish should be active. It is possible to use an external switch and activate the photocells as needed. The disadvantage of this method is in case you forget to activate the photocell you have no time at all.

We can offer you an alternative method by using the <BLOCK> keys. If you switch in this menu the "Latching Blockkeys" on, than you can activate and deactivate the photocells. Use the <BLOCK> key of the start keyboard (12) for the start and the <BLOCK> key of the finish keyboard (8) for the finish to activate or deactivate the photocell.

The big advantage of this method is that you get even with a blocked impulse a time of day. This means if you miss to activate a photocell you still have the time of day to make the correct corrections. You can not miss a timing impulse.

With the adjustment "Print Blocktimes" you can adjust, if you want that it print the blocked times (time of day). The blocked times are always stored in the memory.

|                             |                  |                           |
|-----------------------------|------------------|---------------------------|
| Menu 58: LATCHING BLOCKKEYS | = OFF            | change with <YES> or <NO> |
| PRINT BLOCKTIMES            | = ON             | change with <YES> or <NO> |
| Select: YES/NO              | Save with: ENTER | Confirm with <ENTER>      |

*Pre adjusted value:* Latching bBlockkeys = Off and Print Blocktimes = ON

**Impulse Transmission by Radio: Menu 59**

**Pulse from TED**

You can adjust if a timing impulse comes e.g. from the photocell direct by cable or by radio. An impuls signal sent by radio is always delayed. In case of ALGE radios we have an exact delay of 0,1 seconds (e.g. TED).

If the TdC 8001 receives the start or stop impulse through a radio it will calculate a wrong run time, since the start- or finish time is delayed. Since all times have the same mistake it does not matter much, but it matters much if you measure records. To compensate this delay you can adjust the channel that uses the radio signal. If you do so, the calculation of the run time will be correct.

|                         |                 |    |                         |
|-------------------------|-----------------|----|-------------------------|
| Menu 59: PULSE FROM TED | Channel 0 = NO< | F1 | on or off for channel 0 |
|                         | Channel 1 = NO  | F2 | on or off for channel 1 |
|                         | Channel 9 = NO  | F3 | on or off for channel 9 |
| Save with: ENTER        |                 |    | Confirm with <ENTER>    |

*Pre adjusted value:* Pulse form TED: off for all channels

**Input of penalty points:**

*Pre-adjusted value:* The pointer between the penalty points and penalty seconds must point to the penalty points (display (6), left field). Change pointer with cursor key if necessary. If you press <ENTER> (keyboard 15) it will increase the penalty points by the pre-adjusted value (menu 35).

*Variable value:* The pointer between the penalty points and penalty seconds must point to the penalty points (display (6), left field). Change pointer with cursor key if necessary. Input penalty points and confirm with <ENTER> (keyboard 15).

*Changing of total points:* The pointer between the penalty points and penalty seconds must point to the penalty points (display (6), left field). Change pointer with cursor key if necessary. Input total points and confirm with <INPUT> (keyboard 15).

**Penalty time for obstacle set up:**

If a horse refuses to jump an obstacle and the obstacle drops, it is necessary to set up the obstacle again. For the set up you must stop the time (time-out) by pressing the handswitch (channel 9). Normally a penalty time is given to the rider. This penalty time will be added to the clear round time after he passes the finish. When the obstacle is set up press the handswitch again to finish the time-out.

- Press handswitch (channel 9).
- The time in the display (5) must stop.
- The pointer must point to the penalty seconds (right field of display 8).
- Input penalty seconds with keyboard (8).
- Confirm penalty seconds with <ENTER>.
- If you want to input penalty points as well, change with cursor key the pointer to the penalty points (left field of display 8).
- Press handswitch (channel 9) when the obstacle is set up.
- The time in display (5) must run.

**Penalty points from time violation:**

The penalty points from the time violation and obstacle set up will be automatically calculated, if you input the maximum allowed time (menu 39, parcour time). The actual points you can always see in the info display (7). The printer and display board will update the score by pressing <F3>.

**Adding of penalty seconds:**

The penalty seconds for obstacle set up must be added for the printer and display board after the finish. First you must print and show the result without penalty seconds. If you press the key <F3> it will add the penalty seconds and all data will be new calculated. It will print the final score and show it on the display board.

**Function of the keyboard:**

| Description                              | Keyboard 9 and 14 | Keyboard 15 and 14 |
|--|-------------------|--------------------|
| clear Start Time                         | CLEAR             |                    |
| recall last cleared Start Time           | ALT + CLEAR       |                    |
| clear Finish Time                        |                   | CLEAR              |
| recall last cleared Finish Time          |                   | ALT + CLEAR        |
| manipulate Start Time                    | INPUT             |                    |
| manipulate Finish Time                   |                   | INPUT              |
| manipulate Penalty Points                |                   | Points, than INPUT |
| manipulate Penalty Time                  |                   | Time, than INPUT   |
| <b>Menu 58: Latching Blockkeys = OFF</b> |                   |                    |
| block Start Time                         | BLOCK             |                    |
| Ignore Start Time                        | ALT + BLOCK       |                    |
| block Finish Time                        |                   | BLOCK              |
| ignore Finish Time                       |                   | ALT + BLOCK        |
| <b>Menu 58: Latching Blockkeys = ON</b>  |                   |                    |
| block Start Time                         | BLOCK             |                    |
| Ignore Start Time                        | ALT + BLOCK       |                    |
| block Finish Time                        |                   | BLOCK              |
| ignore Finish Time                       |                   | ALT + BLOCK        |

**Timing Channels:** c0 = Start Channel  
c1 = Finish Channel

c2 to c8 = no function  
c9 = Countdown and Time-out

**ALGE adjustments for the main menu:**

|          |                   |   |           |          |                     |                  |           |
|----------|-------------------|---|-----------|----------|---------------------|------------------|-----------|
| Menu 1:  | Delay Time Start  | = | 1.0 s     | Menu 39: | Parcour Time 1      | =                | 000.00    |
| Menu 2:  | Delay Time Finish | = | 0.3 s     | Menu 40: | Parcour Time 2      | =                | 000.00    |
| Menu 4:  | Seconds Mode      | = | 03 s      | Menu 41: | Block Time 1        | =                | 000.00    |
| Menu 9:  | Running Tenth     | = | OFF       | Menu 42: | Block Time 2        | =                | 000.00    |
| Menu 11: | Finish Rank       | = | ON        | Menu 43: | Count Down Time     | =                | 000045.00 |
| Menu 15: | Print Menus       | = | ON        |          | Automatik Start     | =                | ON        |
| Menu 16: | Printer Linefeed  | = | 1         | Menu 44: | Count Down Time     | =                | 000030.00 |
| Menu 17: | RS-232 Baudrate   | = | 9600 Baud |          | Automatik Start     | =                | ON        |
| Menu 18: | RS-232 Run Time   | = | off       | Menu 45: | D-Board C. Down     | =                | ON        |
| Menu 19: | D-Board Baudrate  | = | 2400 Baud | Menu 46: | Time Out Signal     | =                | ON        |
| Menu 20: | D-Board Chan. 2   | = | running   | Menu 47: | Add PTN Immediately | =                | OFF       |
| Menu 21: | Beep              | = | on        | Menu 50: | Add Immediate       | =                | OFF       |
| Menu 25: | Change Race       |   |           | Menu 53: | BIB-Counting        | =                | Manual    |
| Menu 26: | D-Board-Test      | = | OFF       | Menu 55: | LED-Brightness      | =                | 9         |
| Menu 36: | Penalty Points    | = | 04.00     | Menu 57: | Add PTO Immediately | =                | ON        |
| Menu 37: | Time Violation 1  | = | 01.00     | Menu 58: | Latching Blockkeys  | =                | OFF       |
|          | Penaltyperiod     | = | 04.00     |          |                     | Print Blocktimes | =         |
| Menu 38: | Time Violation 1  | = | 01.00     | Menu 59: | Pulse from TED      | =                | OFF       |
|          | Penaltyperiod     | = | 04.00     |          |                     |                  |           |

**Info-display:**

The Info-display (7) shows the following:

- PP ..... Penalty Points for obstacle drop
- PTM ..... Penalty Points for Time Violation
- TP ..... Total Penalty Points
- PTO ..... Penalty Time of Time-out (obstacle set up)
- RT ..... Run Time
- RTT ..... Total Run Time including Penalty Seconds

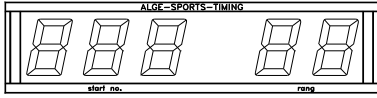


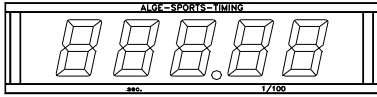


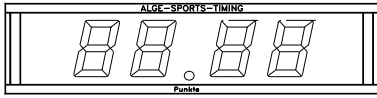


|     |      |     |       |
|-----|------|-----|-------|
| PP  | 4.00 | PTO | 6.00  |
| PTM | 1.00 | RT  | 56.49 |
| TP  | 5.00 | RTT | 62.49 |

**Printer: Printing examples**

|         |               |   |
|---------|---------------|---|
| 0001 C9 | 15:56:13.8831 | Start of countdown of standard stage                    |
| CD      | 21.99         | Start of rider 21.21 seconds before the countdown ends  |
| ST      | 15:56:51.8846 | Start Time  |
| FT      | 15:57:48.8243 | Finish Time of Stage 1                                  |
| RT      | 56.93         | Run Time of Stage 1                                     |
| -----   |               |   |
| C9      | 15:57:58.4042 | Start of countdown of stage 2                           |
| CD      | 7.19          | Start of rider 7.19 seconds before the countdown ends   |
| ST      | 15:58:21.2087 | Start Time of stage 2                                   |
| P       | + 4.00        | 4 penalty points for obstacle drop                      |
| C9      | 15:58:38.6239 | Start of time-out                                       |
| TO      | 17.41         | Time-out after 17.41 seconds run time of stage 2        |
| PTO     | +6.00         | 6 penalty seconds for obstacle set up                   |
| C9      | 15:58:43.3348 | End of time-out   |
| FT      | 15:59:10.2629 | Finish time if stage 2                                  |
| RT      | 44.34         | Run time of stage 2                                     |
| -----   |               |   |
| PTO     | 6.00          | Total penalty seconds                                   |
| PTM     | 9.00          | Penalty points from time violation                      |
| PP      | 4.00          | Penalty points for obstacle drop                        |
| -----   |               |   |
| RTT     | 50.34         | Total run time including penalty seconds                |
| TP      | 13.00         | Total penalty points (obstacle drop and time valuation) |
| =====   |               |   |

**Display Board GAZ4:**

You can show the run time (and countdown time), points and start number/rank on ALGE display boards. In the main menu (menu 19, see page 46) you can activate channel 2. If you have activated channel 2, it shows only the run time or time to beat on the display board (no running time).

|                                       |   |  |   |
|---------------------------------------|---|--|---|
| <p>Start number / Rank:</p>           |  | <br>thumb wheel switch<br>on 1 | <br>toggle switch<br>upper position  |
| <p>Run Time and<br/>Running Time:</p> |  | <br>thumb wheel switch<br>on 0 | <br>toggle switch<br>middle position |
| <p>Penalty Points:</p>                |  | <br>thumb wheel switch<br>on 0 | <br>toggle switch<br>upper position  |

**RS 232c Interface:**

*Transfer Format:* 1 start bit, 8 data bit, no parity bit, 1 stop bit  
*Transfer Speed:* 9.600 Baud pre-adjusted (adjustable: 2400, 4800, 19200)  
*Transfer Protocol:* ASCII

|                                  |  |
|----------------------------------|--|
| nNNNN (CR)                       | active start number                              |
| xNNNNLCCxxHH:MM:SS.zhtqxGR (CR)  | time of day                                      |
| xNNNNLCCMxxHH:MM:SS.zhtqxGR (CR) | time of day (manual impulse)                     |
| xNNNNLCDxxxxSSSSSS.zhxxxGR (CR)  | countdown time                                   |
| xNNNNLTOxxxxSSSSSS.zhxxxGR (CR)  | time-out   |
| xNNNNLRTxxxxSSSSSS.zhxxxGR (CR)  | run time   |
| xNNNNxRTTxxxSSSSSS.zh (CR)       | run time including penalty time                  |
| xNNNNxPxxxxxxxxx+pp.pp (CR)      | penalty points for obstacle drop                 |
| iNNNNxPxxxxxxxxxpp.pp (CR)       | correction of penalty points for obstacle drop   |
| xNNNNxPTMxxxxxxxxpp.pp (CR)      | penalty points from time violation               |
| xNNNNxTPxxxxxxxxpp.pp (CR)       | total points (barrier drop and time violation)   |
| xNNNNxPTOxxxxxx+tt.tt (CR)       | penalty points for obstacle setup                |
| iNNNNxPTOxxxxxxtt.tt (CR)        | correction of penalty seconds for obstacle setup |

|               |  |
|---------------|--|
| x             | blank  |
| NNNN          | start number (four digits)   |
| L             | indicates the stage (1 or 2)   |
| CC            | timing channels (c0 to c9)   |
| C0            | channel 0 (start)  |
| C1            | channel 1 (finish)   |
| C9            | channel 9 (time-out)   |
| CCM           | manual impulse (with <START> or <STOP> from keyboard 9 or 15)        |
| CD            | countdown  |
| TO            | time-out   |
| RT            | run time   |
| RTT           | run time, including penalty time                                     |
| HH:MM:SS.zhtq | time in hours, minutes, seconds, and 1/10000 seconds                 |
| SSSSSS.zh     | time in seconds and 1/100 seconds                                    |
| GR            | group for team competition (from 01 to 99, no input for groups = 00) |

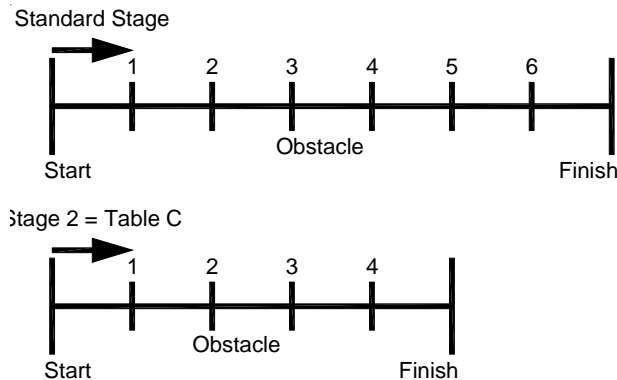
|       |   |
|-------|---|
| P     | penalty points for obstacle drop                |
| PTM   | penalty points for time violation               |
| TP    | total points (obstacle drop and time violation) |
| PTO   | penalty points for obstacle setup               |
| +     | penalty points or penalty seconds are added     |
| pp.pp | penalty points                                  |
| tt.tt | penalty seconds                                 |
| (CR)  | carriage return                                 |

**The following characters could be the first digit:**

|   |  |
|---|--|
| x | blank  |
| ? | time without valid start number              |
| c | cleared time (with <CLEAR>)                  |
| d | times cleared through disqualification       |
| i | times input manual: <INPUT>                  |
| n | new start number shown in finish display (6) |

**RS 485 Interface:** not used for showjumping

**6.1.16. Program 126: American Stage / Time**



Program for American stage. All competitors ride the first stage. The first stage is a standard stage. Whoever passes the first stage without penalty points will be allowed for the second stage. If a rider has penalty points in the first stage, he will not be allowed for the second stage. The second stage is ridden as Table C. Between stage 1 and stage 2 is a countdown of 30 seconds.

**Standard penalty points per started second time violence:**

- Stage 1: 1 penalty point per started 4 seconds time violence
- Stage 2: 1 penalty point per started 4 seconds time violence

**Adjustment:**

- Switch TdC 8001 on (switch 26)
- Select program 11 "Show Jumping" with cursor key (␣ and ␣)
- Press <ENTER>
- Select program 122 "American Stage F" with cursor key (␣ and ␣)
- Press <ENTER>
- Select race that you want to use and clear memory (e.g. <F1> for race 1)
- Press <ENTER>
- Select race (e.g. <F1> for race 1)
- Press <ENTER>
- Select the precision with key <F1> to <F4>. Standard is <F3> with 1/100 seconds
- Press <ENTER>
- Select the timing mode (we recommend <F2> for Difference Timing)
- Press <ENTER>
- Synchronize the TdC 8001 (with time of day and other timing devices)
- Input the time of day, confirm it with <ENTER>
- Input the date (Year-Month-Day) and confirm it with <ENTER>
- Make a start signal (channel 0 or press <START>)
- Press <ALT> and <MENU> together.
- Adjust menu 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 50, 55, 57, 58 and 59 as required by the circumstances of your event (see next page).
- Exit the menu when you did all adjustments with <NO>.

**Race operation:**

- Input the start number for the start with start keyboard (12) (#1)
- Press <ENTER>
- Display (1) must show the correct start number
- Display (5) must show the correct countdown time (e.g. 60 seconds)
- Display (6) shows the penalty points and penalty seconds
- Clear the start by pressing <START> (or handswitch on channel 9). The countdown starts.
- The loudspeaker honks (if connected to socket 25) and gives the start free signal

- Display (5) shows the countdown
- If the rider does not pass the start photocell before the end of the countdown, it will honk at the zero time
- When the rider passes the start photocell it will start the time (display 7)
- Input penalty points (obstacle drop) by pressing <ENTER> (keyboard 15)
- Correction of total penalty points (obstacle drop) by input of total amount and pressing <INPUT> (keyboard 15)
- Time-out for set up of obstacle by pressing handswitch (channel 9). It stops the running time. When the time is stopped, it is possible to input a penalty time (display 8, right number). The penalty time must be confirmed with <ENTER> (keyboard 15). It is possible to switch between penalty seconds and penalty points with the cursor keys.
- When a rider reaches the finish, the run time stops. If the rider has penalty points, you must press key <F3> to calculate the total points and total time.
- If a rider reaches the finish without penalty points and within the allowed time, it will stop the time for a few seconds (menu: display time 1). After this it shows the count down time for stage 2 (normally 30 sec. count down).
- The count down can be started with the key <START> or through channel 9.
- When the rider passes the start photocell it will start the time (display 7)
- The second stage is judged by Table C, this means that an obstacle drop is penalized by a time penalty.
- Press key <F3> to calculate the total penalty points and total run time after the rider finish stage 2.
- Input start number for the next competitor with keyboard (12), e.g. start number 2
- Confirm with <ENTER> (keyboard 9)
- etc.

**Adjustments that you have to make before the race starts:**

Before you start a race you have to check and maybe change some adjustments at the TdC 8001.

Press <ALT> and <MENU> at the same time to open the main menu. You can get directly into the needed sub menu by input of the menu number with keyboard (8) and confirm it with <ENTER>.

**Penalty Points:**

**Menu 36**

**Penalty Points = 04.00**

The standard penalty points for obstacle drop you can adjust in this menu. You can set the penalty points from 0.01 to 99.99. Normally there is a 4 point penalty for obstacle drop.

|                                 |
|---------------------------------|
| Menu 36: PENALTY POINTS = 04.00 |
| Save with: ENTER                |

Adjusted penalty points

Save and exit with <ENTER>

*Pre-adjusted value:*      4 points



**Time Violation 1:****Menu 37****Time Violation 1 = 0,25**

You can adjust the penalty points for time violation. The adjustment is between 0.00 and 99.99 possible. It is also possible to adjust the time duration for the penalty. In the current rule of FEI it is for each started four seconds 1 penalty point.

```
Menu 37: TIME VIOLATION 1 = 01.00
          PENALTYPERIOD    = 04.00
```

Adjust time penalty  
Adjust time periode

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value:* 1.00 point and 4 seconds

**Time Violation 2:****Menu 38****Time Violation = 0,25**  
**Penaltyperiode = 04.00**

You can adjust the penalty points for time violation and the time for which this penalty point counts for the jump off. The standard is one penalty point per started 4 seconds. This is also the pre-adjusted value

```
Menu 37: TIME VIOLATION 2 = 01.00
          PENALTYPERIOD    = 04.00
```

Adjusted time penalty  
Adjusted time period per time valuation

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value:* Time Violation = 1 point  
Penalty Period = 4 seconds

**Parcour Time 1:****Menu 39****Parcour Time 1 = 000.00**

It is very important that you adjust the parcour time 1 (the maximum allowed time for stage 1). If you do not input the parcour time it will not add penalty points for time violation during stage 1.

```
Menu 39: PARCOUR TIME 1 = 000.00
```

Input the maximum allowed time

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value:* no parcour time is pre-adjusted!

**Parcour Time 2:****Menu 40****Parcour Time 2 = 000.00**

It is very important that you adjust the parcour time 2 (the maximum allowed time for stage 2). If you do not input the parcour time it will not add penalty points for time violation during stage 2.

```
Menu 40: PARCOUR TIME 2 = 000.00
```

Input the maximum allowed time

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre-adjusted value:* no parcour time is pre adjusted!

**Block Time 1:****Menu 41****Block Time 1 = 000.00**

As long as the block time 1 is running, it will take every impulse of the finish photocell as a not valid impulse during stage 1. This time will be printed only as time of day with a question mark. The time will not be stopped on the display (5) or display board. Use the block time for events where the rider passes the finish photocell before he reaches the finish.

```
Menu 41: BLOCK TIME 1 = 000.00
```

Input the block time

```
Save with: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre-adjusted value:* : no block time is pre-adjusted!

**Block Time 2:****Menu 42****Block Time 2 = 000.00**

As long as the block time 2 is running, it will take every impulse of the finish photocell as a not valid impulse during stage 2. This time will be printed only as time of day with a question mark. The time will not be stopped on the display (5) or display board. Use the block time for events where the rider passes the finish photocell before he reaches the finish.

```
Menu 42: BLOCK TIME 2 = 000.00
```

Input the block time

```
Save with: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre-adjusted value:* : no block time is pre-adjusted!

**Count Down Time 1:****Menu 43****Count Down Time = 000045.00**  
**Automatic Start = ON**

You can adjust the count down time between 0 and 6399.99 seconds. The count down time is the time between the greeting of the judges and the time when the rider must start. It is possible to show the count down time on a display board (see menu 43). A horn (if connected) honks at the start and end of the count down.

```
Menu 43: COUNT DOWN TIME 1 = 000045.00
          AUTOMATIC START = ON
```

Input count down time  
Automaticstart ON or OFF

```
Save with: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre-adjusted value:* : Count Down Time = 45 seconds

**Count Down Time 2:****Menu 44****Count Down Time 2 = 30s**  
**Automatic Start = Ein**

This countdown time is for the second stage or jump off. Otherwise this is the same adjustment as for Count Down Time 1 (menu 43).

```
Menu 43: COUNT DOWN TIME 2 = 000030.00
          AUTOMATIC START = ON
```

input the countdown time  
ON or OFF

```
Save with: ENTER
```

Confirm with &lt;ENTER&gt;

*Pre adjusted value:* : Count Down Time 2 = 30 seconds and Automatic Start = ON

**Countdown for Display Board    Menu 45**

**D-Board Count Down = ON**

You can switch off the countdown for the display board. All other functions of the countdown work, if the countdown for the display board is off.

|                             |     |
|-----------------------------|-----|
| Menu 45: D-Board Count Down | ON< |
|                             | OFF |
| Save with: ENTER            |     |

output on display board  
no output on display board

Save and exit with <ENTER>

*Pre-adjusted value:*    D-Board Count Down = on

**TIMEOUTSIGNAL:**

**Menü 46**

**TIME OUT SIGNAL = ON**

With this function you can turn the horn for the Timeout On or OFF.

|                  |                 |     |
|------------------|-----------------|-----|
| Menü 46:         | TIME OUT SIGNAL | ON< |
|                  |                 | OFF |
| Save with: ENTER |                 |     |

ON or OFF

Save and exit with <ENTER>

*Pre-adjusted value:*    Timeoutsignal ON

**Add PTM immediately**

**Menu 47**

**Add PTM immediately = OFF**

You can switch off the countdown for the display board. All other functions of the countdown work, if the countdown for the display board is off.

|                              |      |
|------------------------------|------|
| Menu 47: ADD PTM IMMEDIATELY | ON   |
|                              | OFF< |
| Save with: ENTER             |      |

add PTM after Finish

Save and exit with <ENTER>

*Pre-adjusted value:*    Add PTM immediately = OFF

The FEI rule ask to add the PTM imediately. If you set on OFF it will add the PTM after the rider finish and you press F3 to make the final time and penalty of the rider.

**Add immediately**

**Menu 50**

**Add immediately = OFF**

With this function you don't have to press the button F3 to finish a competitor! After a competitor is crossing the finishline it will automatically calculate his result!

|                          |      |
|--------------------------|------|
| Menu 50: ADD IMMEDIATELY | ON   |
|                          | OFF< |
| Save with: ENTER         |      |

automatic addition is on

Save and exit with <ENTER>

*Pre-adjusted value:*    Add immediately = OFF

**BIB-counting**

**Menu 53**

**BIB-Counting = manual**

It is possible to input the BIB number of each rider with the keyboard 12. If you have continues rider numbers you can also select that you can count up or down by pressing <ENTER>

|                       |         |    |                            |
|-----------------------|---------|----|----------------------------|
| Menu 53: BIB-Counting | UP      | F1 | BIB count up               |
|                       | Manual< | F2 | manual BIB input           |
|                       | Down    | F3 | BIB count down             |
| Save with: ENTER      |         |    | Save and exit with <ENTER> |

*Pre-adjusted value:* Manual

**Add penalty seconds immediately: Menu 57**

**Add PTO immediately = ON**

It is possible to add the penalty time from e.g. a barrier drop with time out for a build up time immediately or after the finish arrival.

|                              |     |    |                         |
|------------------------------|-----|----|-------------------------|
| Menu 55: ADD PTO IMMEDIATELY | ON  | F1 | add immediately         |
|                              | OFF | F2 | add manual after finish |
| Save with: ENTER             |     |    | Confirm with <ENTER>    |

*Pre adjusted value:* Add PTO immediately = ON

**Photocell Blocking:**

**Menu 58**

**Latching Blockkeys = OFF  
Print Blocktimes = ON**

In Show Jumping it happens often that the rider passes several times the start or finish before the real start or finish should be active. It is possible to use an external switch and activate the photocells as needed. The disadvantage of this method is in case you forget to activate the photocell you have no time at all.

We can offer you an alternative method by using the <BLOCK> keys. If you switch in this menu the "Latching Blockkeys" on, than you can activate and deactivate the photocells. Use the <BLOCK> key of the start keyboard (12) for the start and the <BLOCK> key of the finish keyboard (8) for the finish to activate or deactivate the photocell.

The big advantage of this method is that you get even with a blocked impulse a time of day. This means if you miss to activate a photocell you still have the time of day to make the correct corrections. You can not miss a timing impulse.

With the adjustment "Print Blocktimes" you can adjust, if you want that it print the blocked times (time of day). The blocked times are always stored in the memory.

|                             |                  |                           |
|-----------------------------|------------------|---------------------------|
| Menu 58: LATCHING BLOCKKEYS | = OFF            | change with <YES> or <NO> |
| PRINT BLOCKTIMES            | = ON             | change with <YES> or <NO> |
| Select: YES/NO              | Save with: ENTER | Confirm with <ENTER>      |

*Pre adjusted value:* Latching bBlockkeys = Off and Print Blocktimes = ON

**Impulse Transmission by Radio: Menu 59**

**Pulse from TED**

You can adjust if a timing impulse comes e.g. from the photocell direct by cable or by radio. An impuls signal sent by radio is always delayed. In case of ALGE radios we have an exact delay of 0,1 seconds (e.g. TED).

If the TdC 8001 receives the start or stop impulse through a radio it will calculate a wrong run time, since the start- or finish time is delayed. Since all times have the same mistake it does not matter much, but it matters much if you measure records. To compensate this delay you can adjust the channel that uses the radio signal. If you do so, the calculation of the run time will be correct.

|                         |                 |    |                         |
|-------------------------|-----------------|----|-------------------------|
| Menu 59: PULSE FROM TED | Channel 0 = NO< | F1 | on or off for channel 0 |
|                         | Channel 1 = NO  | F2 | on or off for channel 1 |
|                         | Channel 9 = NO  | F3 | on or off for channel 9 |
| Save with: ENTER        |                 |    | Confirm with <ENTER>    |

*Pre adjusted value:* Pulse form TED: off for all channels

**Input of penalty points:**

*Pre-adjusted value:* The pointer between the penalty points and penalty seconds must point to the penalty points (display (6), left field). Change pointer with cursor key if necessary. If you press <ENTER> (keyboard 15) it will increase the penalty points by the pre-adjusted value (menu 35).

*Variable value:* The pointer between the penalty points and penalty seconds must point to the penalty points (display (6), left field). Change pointer with cursor key if necessary. Input penalty points and confirm with <ENTER> (keyboard 15).

*Changing of total points:* The pointer between the penalty points and penalty seconds must point to the penalty points (display (6), left field). Change pointer with cursor key if necessary. Input total points and confirm with <INPUT> (keyboard 15).

**Penalty time for obstacle set up (stage 1):**

If a hours refuses to jump a obstacle and the obstacle drops, it is necessary to set up the obstacle again. For the set up you must stop the time (time-out) by pressing the handswitch (channel 9). Normally a penalty time is given to the rider. This penalty time will be added to the clear round time after he passes the finish. When the obstacle is set up press the handswitch again to finish the time-out.

- ☞ Press handswitch (channel 9).
- ☞ The time in the display (5) must stop.
- ☞ The pointer must point to the penalty seconds (right field of display 8).
- ☞ Input penalty seconds with keyboard (8).
- ☞ Confirm penalty seconds with <ENTER>.
- ☞ If you want to input penalty points as well change with cursor key the pointer to the penalty points (left field of display 8).
- ☞ Press handswitch (channel 9) when the obstacle is set up.
- ☞ The time in display (5) must run.

**Penalty points from time violation (stage 1):**

The penalty points from the time violation and obstacle set up will be automatically calculated, if you input the maximum allowed time (menu 39, parcour time). The actual points you can always see in the info display (7). The printer and display board will update the score by pressing <F3>.

**Adding of penalty seconds (stage 1):**

The penalty seconds for obstacle set up must be added for the printer and display board after the finish. First you must print and show the result without penalty seconds. If you press the key <F3> it will add the penalty seconds and all data will be new calculated. It will print the final score and show it on the display board.

**Penalty time for obstacle set up (stage 2):**

If a horse refuses to jump an obstacle and the obstacle drops, it is necessary to set up the obstacle again. For the set up you must stop the time (time-out) by pressing the handswitch (channel 9). Normally a penalty time is given to the rider. This penalty time will be added to the clear round time after he passes the finish. When the obstacle is set up press the handswitch again to finish the time-out.

- ☞ Press handswitch (channel 9).
- ☞ The time in the display (5) must stop.
- ☞ The pointer must point to the penalty seconds (right field of display 8).
- ☞ Input penalty seconds with keyboard (8).
- ☞ Confirm penalty seconds with <ENTER>.
- ☞ If you want to input penalty points as well, change with cursor key the pointer to the penalty points (left field of display 8).
- ☞ Press handswitch (channel 9) when the obstacle is set up.
- ☞ The time in display (5) must run.

**Penalty time from time violation (stage 2):**

The penalty time from the time violation will be automatically calculated if you input the maximum allowed time (menu 38, parcour time). If you have also a penalty time of obstacle set up, then this time will be added when pressing the <F3> key after the rider has finished.

**Recalculation of the Total Time (stage 2):**

The penalty seconds for obstacle set up are immediately added to the run time. Penalty seconds for obstacle drop and time violation are added after the rider has finished. When you press the <F3> key it adds all up and prints the total time.

**Function of the keyboard:**

| Description                              | Keyboard 9 and 14 | Keyboard 15 and 14 |
|--|-------------------|--------------------|
| clear Start Time                         | CLEAR             |                    |
| recall last cleared Start Time           | ALT + CLEAR       |                    |
| clear Finish Time                        |                   | CLEAR              |
| recall last cleared Finish Time          |                   | ALT + CLEAR        |
| manipulate Start Time                    | INPUT             |                    |
| manipulate Finish Time                   |                   | INPUT              |
| manipulate Penalty Points                |                   | Points, than INPUT |
| manipulate Penalty Time                  |                   | Time, than INPUT   |
| <b>Menu 58: Latching Blockkeys = OFF</b> |                   |                    |
| block Start Time                         | BLOCK             |                    |
| ignore Start Time                        | ALT + BLOCK       |                    |
| block Finish Time                        |                   | BLOCK              |
| ignore Finish Time                       |                   | ALT + BLOCK        |
| <b>Menu 58: Latching Blockkeys = ON</b>  |                   |                    |
| block Start Time                         | BLOCK             |                    |
| ignore Start Time                        | ALT + BLOCK       |                    |
| block Finish Time                        |                   | BLOCK              |
| ignore Finish Time                       |                   | ALT + BLOCK        |

**Timing Channels:**      c0 = start channel                      c2 to c8 = no function  
    c1 = finish channel                      c9            = countdown and time-out

**ALGE adjustments for the main menu:**

|          |                   |   |           |          |                     |   |           |
|----------|-------------------|---|-----------|----------|---------------------|---|-----------|
| Menu 1:  | Delay Time Start  | = | 1.0 s     | Menu 39: | Parcour Time 1      | = | 000.00    |
| Menu 2:  | Delay Time Finish | = | 0.3 s     | Menu 40: | Parcour Time 2      | = | 000.00    |
| Menu 4:  | Seconds Mode      | = | 03 s      | Menu 41: | Block Time 1        | = | 000.00    |
| Menu 9:  | Running Tenth     | = | OFF       | Menu 42: | Block Time 2        | = | 000.00    |
| Menu 11: | Finish Rank       | = | ON        | Menu 43: | Count Down Time     | = | 000045.00 |
| Menu 15: | Print Menus       | = | ON        |          | Automatik Start     | = | ON        |
| Menu 16: | Printer Linefeed  | = | 1         | Menu 44: | Count Down Time     | = | 000030.00 |
| Menu 17: | RS-232 Baudrate   | = | 9600 Baud |          | Automatik Start     | = | ON        |
| Menu 18: | RS-232 Run Time   | = | off       | Menu 45: | D-Board C. Down     | = | ON        |
| Menu 19: | D-Board Baudrate  | = | 2400 Baud | Menu 46: | Time Out Signal     | = | ON        |
| Menu 20: | D-Board Chan. 2   | = | running   | Menu 47: | Add PTN Immediately | = | OFF       |
| Menu 21: | Beep              | = | on        | Menu 50: | Add Immediate       | = | OFF       |
| Menu 25: | Change Race       | = |           | Menu 53: | BIB-Counting        | = | Manual    |
| Menu 26: | D-Board-Test      | = | OFF       | Menu 55: | LED-Brightness      | = | 9         |
| Menu 36: | Penalty Points    | = | 04.00     | Menu 57: | Add PTO Immediately | = | ON        |
| Menu 37: | Time Violation 1  | = | 01.00     | Menu 58: | Latching Blockkeys  | = | OFF       |
|          | Penaltyperiod     | = | 04.00     |          | Print Blocktimes    | = | ON        |
| Menu 38: | Time Violation 1  | = | 01.00     | Menu 59: | Pulse from TED      | = | OFF       |
|          | Penaltyperiod     | = | 04.00     |          |                     |   |           |

**Info-display:**

The following information will be shown on the info display (5):

|    |     |      |     |       |
|----|-----|------|-----|-------|
| 1: | PP  | 4.00 | PTO | 6.00  |
|    | PTM | 1.00 | RT  | 56.49 |
|    | TP  | 5.00 | RTT | 62.49 |

|    |      |   |     |       |
|----|------|---|-----|-------|
| 2: | PPS  | 8 | PTO | 6.00  |
|    | PSTM | 3 | RT  | 63.85 |
|    | TPS  | 7 | RTT | 70.85 |

- 1: / 2: ..... Stage 1 or 2
- PP ..... Penalty points for obstacle drop
- PTM ..... Penalty points for time violation
- TP ..... Total penalty points
- PTO ..... Penalty time of timeout
- RT ..... Run time
- RTT ..... Run time including all penalty times
- PPS ..... Penalty seconds for obstacle drop
- PSTM ..... Penalty seconds for time violation
- TPS ..... Total penalty seconds

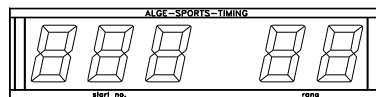
**Printer: Printing examples**

|       |      |               |  |
|-------|------|---------------|--|
| 0001  | C9   | 15:21:07.4778 | Start of countdown of standard stage                   |
|       | CD   | 36.61         | Start of rider 36.61 seconds before the countdown ends |
|       | ST   | 15:21:30.8788 | Start time   |
|       | FT   | 15:22:28.3725 | Finish time of stage 1                                 |
|       | RT   | 57.49         | Run time of stage 1                                    |
| ----- |      |               |  |
|       | C9   | 15:22:33.3276 | Start of countdown of stage 2                          |
|       | CD   | 11.86         | Start of rider 11.86 seconds before the countdown ends |
|       | ST   | 15:22:51.4615 | Start time of stage 2                                  |
|       | P    | + 4.00        | 4 penalty seconds for obstacle drop                    |
|       | C9   | 15:23:05.4628 | Start of time-out                                      |
|       | TO   | 14.00         | Time-out after 14.00 seconds run time of stage 2       |
|       | PTO  | +6.00         | 6 penalty seconds for obstacle set up                  |
|       | C9   | 15:23:09.5767 | End of time-out  |
|       | FT   | 15:23:32.7037 | Finish time if stage 2                                 |
|       | RT   | 43.12         | Run time of stage 2                                    |
| ----- |      |               |  |
|       | PSTM | 4.00          | Total penalty seconds for time violation               |
|       | PPS  | 4.00          | Total penalty seconds for obstacle drop                |
| ----- |      |               |  |
|       | RTT  | 47.12         | Total run time including all penalty seconds           |


**Display Board GAZ4:**

You can show the run time (and countdown time), points, and start number/rank on ALGE display boards. In the main menu (menu 19, see page 46) you can activate channel 2. If you have activated channel two, it shows only the run time or time to beat on the display board (no running time).

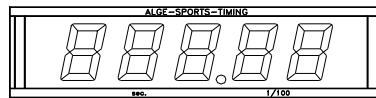
Start number / Rank:





 thumb wheel switch on 1

 toggle switch upper position

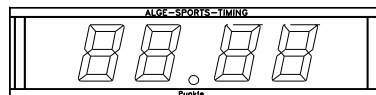
Run time and running time:





 thumb wheel switch on 0

 toggle switch middle position

Penalty points or penalty seconds:



 thumb wheel switch on 0

 toggle switch upper position



## RS 232c Interface:

*Transfer Format:* 1 start bit, 8 data bit, no parity bit, 1 stop bit  
*Transfer Speed:* 9.600 Baud pre-adjusted (adjustable: 2400, 4800, 19200)  
*Transfer Protocol:* ASCII

|                                 |  |
|---------------------------------|--|
| nNNNN (CR)                      | active start number                              |
| xNNNNLCCxxHH:MM:SS.zhtqxGR (CR) | time of day                                      |
| xNNNNLCCMxHH:MM:SS.zhtqxGR (CR) | time of day (manual impulse)                     |
| xNNNNLCDxxxxSSSSSS.zhxxxGR (CR) | countdown time                                   |
| xNNNNLTOxxxxSSSSSS.zhxxxGR (CR) | time-out   |
| xNNNNLRTxxxxSSSSSS.zhxxxGR (CR) | run time   |
| xNNNNxRTTxxxSSSSSS.zh (CR)      | run time including penalty time                  |
| xNNNNxPxxxxxxxxx+pp.pp (CR)     | penalty points for obstacle drop                 |
| iNNNNxPxxxxxxxxxpp.pp (CR)      | correction of penalty points for obstacle drop   |
| xNNNNxPTMxxxxxxxxpp.pp (CR)     | penalty points from time violation               |
| xNNNNxTPxxxxxxxxpp.pp (CR)      | total points (barrier drop and time violation)   |
| xNNNNxPTOxxxxx+tt.tt (CR)       | penalty points for obstacle setup                |
| iNNNNxPTOxxxxx+tt.tt (CR)       | correction of penalty seconds for obstacle setup |

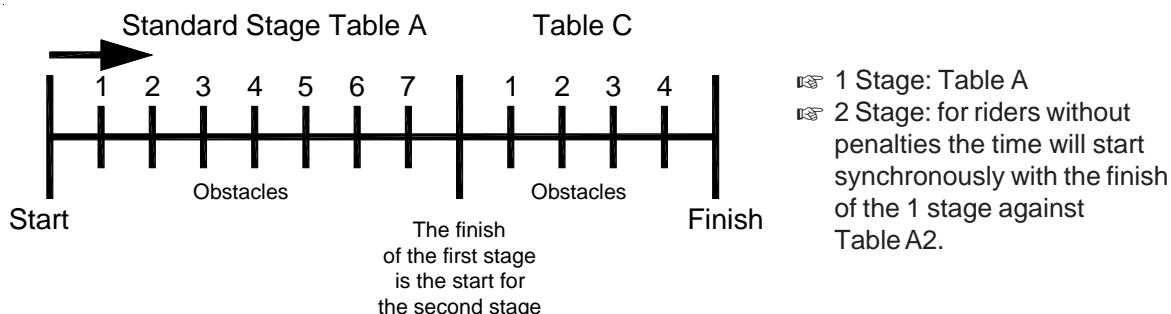
|               |  |
|---------------|--|
| x             | blank  |
| NNNN          | start number (four digits)   |
| L             | indicates the stage (1 or 2)   |
| CC            | timing channels (c0 to c9)   |
| C0            | channel 0 (start) C1 channel 1 (finish) C9 channel 9 (time-out)      |
| CCM           | manual impulse (with <START> or <STOP> from keyboard 9 or 15)        |
| CD            | countdown  |
| TO            | time-out   |
| RT            | run time   |
| RTT           | run time, including penalty time                                     |
| HH:MM:SS.zhtq | time in hours, minutes, seconds, and 1/10000 seconds                 |
| SSSSSS.zh     | time in seconds and 1/100 seconds                                    |
| GR            | group for team competition (from 01 to 99, no input for groups = 00) |
| P             | penalty points for obstacle drop                                     |
| PTM           | penalty points for time violation                                    |
| PPS           | total penalty seconds  |
| PTO           | penalty points for obstacle setup                                    |
| +             | penalty points or penalty seconds are added                          |
| tt.tt         | penalty seconds  |
| (CR)          | carriage return  |

### The following characters could be the first digit:

|   |  |
|---|--|
| x | blank  |
| ? | time without valid start number              |
| c | cleared time (with <CLEAR>)                  |
| d | times cleared through disqualification       |
| i | times input manual: <INPUT>                  |
| n | new start number shown in finish display (6) |

**RS 485 Interface:** not used for showjumping

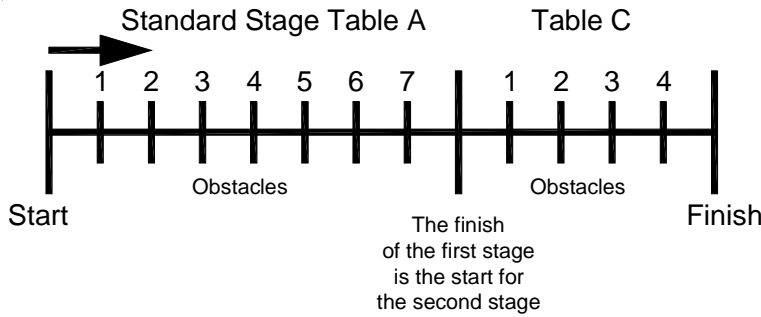
### 5.1.17. Program 127: Standard / Time 1 - FEI article 274.5.4



### Printout of TdC8000 Standard/Time Jumping 1:

|       |      |              |   |
|-------|------|--------------|---|
| 0003  | C9   | 8:55:39.6196 | Start of countdown time 1                   |
|       | CD   | 25.49        | Start 25.49 Sek. before the end of the CD 1 |
|       | ST   | 8:56:14.1283 | Start time 1st stage                        |
|       | FT   | 8:57:07.8849 | Finish time 1st stage                       |
|       | RT   | 53.75        | Run time 1st stage                          |
| ----- |      |              |   |
| 2     | PS   | +4.00        | 4 Penalty points for dropped obstacle       |
|       | C9   | 8:57:32.9913 | Time out - time                             |
|       | TO   | 25.10        | End of timeout                              |
|       | PTO  | + 6.00       | Penaltytime for timeout                     |
|       | C9   | 8:57:44.0528 | End of timeout as daytime                   |
| 2     | PS   | + 4.00       | 4 Penalty points for dropped obstacle       |
|       | FT   | 8:58:06.3393 | Finish time 2nd stage                       |
|       | RT   | 47.39        | Run time 2nd stage                          |
| ----- |      |              |   |
| 0003  | PSTM | 9.00         | Penalties from overtime                     |
|       | PPS  | 8.00         | Penalties from obstacle dropping            |
| ----- |      |              |   |
|       | RTT  | 70.39        | Total Result                                |

**6.1.18. Program 128: Standard / Time2**



The only difference to Standard/ Time1 is that the rider is allowed to go to the second stage even if he has penalties in the first stage.

- ☞ 1 Stage: Table A
- ☞ 2 Stage: for riders without penalties the time will start synchronously with the finish of the 1 stage against Table A2.

**Printout of TdC8000 Standard/Time Jumping 2:**

|       |      |              |
|-------|------|--------------|
| 0003  | C9   | 8:55:39.6196 |
|       | CD   | 25.49        |
|       | SZ   | 8:56:14.1283 |
| 1     | P    | + 4.00       |
|       | ZZ   | 8:57:07.8849 |
|       | LZ   | 53.75        |
| ----- |      |              |
| 2     | PS   | +4.00        |
|       | C9   | 8:57:32.9913 |
|       | TO   | 25.10        |
|       | PTO  | + 6.00       |
|       | C9   | 8:57:44.0528 |
| 2     | PS   | + 4.00       |
|       | ZZ   | 8:58:06.3393 |
|       | LZ   | 47.39        |
| ----- |      |              |
| 0003  | PSTM | 9.00         |
|       | PPS  | 8.00         |
| ----- |      |              |
|       | LZT  | 70.39        |
|       | TP   | 4.00         |

Start of Countdown - time 1  
 Start 25.49 Sek. before the end of the CD 1  
 Start time 1st stage  
 Penalty of First Stage  
 Finish time 1st stage  
 Run time 1st stage

-----

4 Penalty points for dropped obstacle  
 Timeout - time  
 End of timeout  
 Penalty time for timeout  
 End of timeout as daytime  
 4 Penalty points for dropped obstacle  
 Finish time 2nd stage  
 Run time 2nd stage

-----

Penalties from overtime  
 Penalties from obstacle dropping

-----

Total Result

**6.1.19. Program 129: Team Jumping 1**

**Program for Team Jumping 1 against Table A2:**

- ☞ one stage, ranking against points and time
- ☞ only the best 4 riders will be added for the Classement

**Special Settings:**

You can edit the teams at any time in Menue 48

|                 |       |         |
|-----------------|-------|---------|
| Menue 48: TEAMS | Tm 1: | 1 , 2   |
|                 |       | 48 , 9  |
|                 | Tm 2: | 3 , 7   |
| Save: ENTER     |       | 47 , 14 |

Team 1 besteht aus den Reitern 1,2,48 und 9.

Team 2 besteht aus den Reitern 3,7,47 und 14.

To go back to the timing-mode just insert a "0" for the next Team.  
*ATTENTION! Any competitor can be designated only to one Team!*

**Infodisplay:**

|       |      |      |       |
|-------|------|------|-------|
| 1: PP | 4.00 | PTO  | 6.00  |
| PTM   | 0.25 | LZ   | 56.49 |
| TP    | 4.25 | LZT  | 62.49 |
| TPTm  | 4.25 | TZTm | 62.49 |

- 1: / 2: ..... First Stage
- PP ..... Penalty points obstacle-drop
- PTM ..... Penalty points time violation
- TP ..... Total points
- TPTm ..... Total points (Team)
- PTO ..... Penalty time of timeout
- RT ..... Runtime
- RTT ..... Runtime including penalty time
- TZTm ..... Runtime including penalty time (team)

To operate the TdC see point 5.1.1.

**6.1.20. Program 130: Team Jumping 2**

**Program for Team Jumping 2 against Table AM3:**

- ☞ First stage with points
- ☞ jump off
- ☞ Only the best 4 riders will be added for the classement

**Spezial Settings:** See on top (Team Jumping 1)

**Infodisplay:** See on top (Team Jumping 1))

To operate the TdC see point 5.1.1.

**6.1.21. Program 131: Team Jumping 3**

Programm for team jumping 3 against AM3:

- ☞ 1. stage against table A1
- ☞ Ranking against total points and time of the second stage
- ☞ Only the best 4 riders will be added for the classement

Special Settings: see point 5.1.19 (Team Jumping 1)

Infodisplay: see point 5.1.19 (Team Jumping 1)

See point 5.1.1. to operate the TdC8000!

**6.1.22. Program 132: Team Jumping 4**

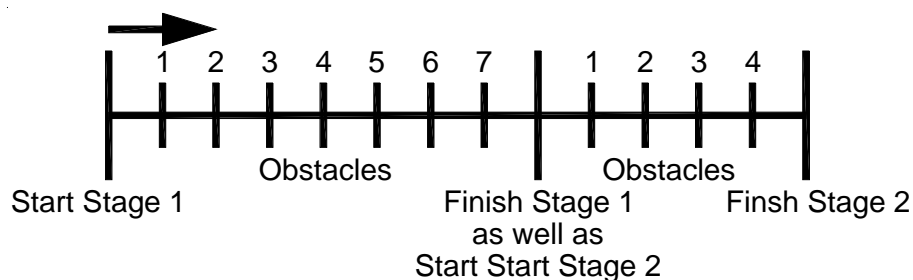
Programm for Team Jumping 4

- ☞ 1. stage against Table A1
- ☞ Ranking against total points and time of the second stage
- ☞ Jumpoff against Table A2
- ☞ Only the best 4 riders will be added for the classement

Special Settings: See point 5.1.19 (Team Jumping 1)

Infodisplay: See point 5.1.19 (Team Jumping 1)

See point 5.1.1. to operate the TdC8000!

**6.1.23. Program 133: Table A Time Delayed**

Jumping competition used mainly in France. The jumping is in two phases. Both phases are done by FEI article 238.1.1 (standard). If a rider finishes the first phase, than he will reach automatically the second phase, also if he has barrier drops or time penalty. The second phase starts automatically with the end of the first phase.

If a rider reaches in the first or second phase the double procures time he will be disqualified.

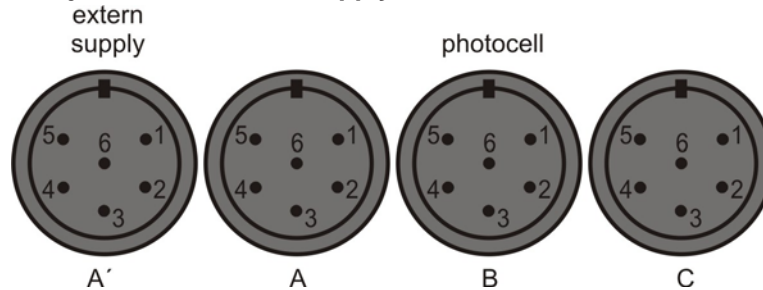
The result is done with total points from of 1<sup>st</sup> and 2<sup>nd</sup> phase. If riders have the same amount of points the better run time in the second course is important.

## 7. TECHNICAL DATA

|   |  |
|---|--|
| <b>Measuring range:</b>                     | 23 hours, 59 minutes, 59,9999 seconds  |
| <b>Crystal frequency:</b>                   | TCXO 11.520 MHz (Temperature Compensated Crystal Oscillator)   |
| <b>Accuracy:</b>                            | at changeable temperature range<br>from -25 to +50°C: +/- 2,5 ppm at (+/- 0,009 s/h.)  |
| Aging:                                      | +/- 1 ppm per year   |
| Frequency adjustment:                       | +/- 0,1 ppm at 25°C  |
| <b>Temperature Operative Timing Range::</b> | -25 to 50°C (-10F to 122F)   |
| <b>Memory:</b>                              | about 2 x 8.600 times with start numbers;<br>keeps data when switched off through internal rechargeable battery  |
| <b>Display:</b>                             | start display (1): numeric liquid crystal display, 8 digits,<br>figure height 12.7 mm,<br>finish display (5): numeric liquid crystal display, 8 digits,<br>figure height 12.7 mm,<br>finish display (6): numeric liquid crystal display, 8 digits,<br>figure height 12.7 mm,<br>info-display (7): alphanumeric liquid crystal display<br>4 x 40 characters, figure height 4.8 mm |
| <b>Operating elements:</b>                  | On-/Off-switch (g)<br>Turn over menu 53<br>Start Keyboard (12)<br>Function Keyboard (9)<br>Finish Keyboard (8)   |
| <b>Electronic:</b>                          | most advanced C-MOS technology with 80C167 microprocessor  |
| <b>Power supply:</b>                        | <i>internal:</i> NiCd rechargeable battery 7.2 V / 4.5 A<br><i>external:</i> 210 to 240 VAC with Net-Charging-Device NLG8  |
| <b>Power consumption:</b>                   | without external devices from the internal NiCd battery:<br>about 80 mA<br>when printing: about 500 mA   |
| <b>Charging supply:</b>                     | +11 to 16 VDC (Pin 4 from socket 19, 20, 21 and 22)  |
| <b>Impulse length:</b>                      | Input resistance 10 kW against +5V<br>Triggering with < 1V (falling flank)<br>Hysteresis about 2V  |
| <b>Output 5VDC stabilized:</b>              | total max. of 120 mA   |
| <b>Loudspeaker output:</b>                  | for 8 Ohm speaker, $U_{\max} = 24 V_{pp}$  |
| <b>Casing:</b>                              | case with key to lock, top you can take away<br>front panel of aluminium   |
| <b>Dimensions:</b>                          | 450 x 320 x 150 mm   |
| <b>Weight:</b>                              | 7.5 kg   |

## 7.1. Connection System

### 7.1.1. Photocell jacks and external supply



#### Jack A and A' (A and A'):

- 1 input channel 0 (start)
- 2 input channel 1 (stop)
- 3 common ground
- 4 input external supply (6 to 15 VDC)
- 5 output +5 VDC stabilized
- 6 input channel 2 (intermediate time)

#### Jack B (B):

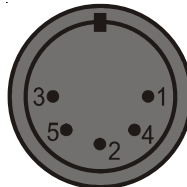
- 1 input channel 3 (start)
- 2 input channel 4 (stop)
- 3 common ground
- 4 input external supply (6 to 15 VDC)
- 5 output +5 VDC stabilized
- 6 input channel 5 (intermediate time)

#### Jack C (C):

- 1 input channel 6 (start)
- 2 input channel 7 (stop)
- 3 common ground
- 4 input external supply (6 to 15 VDC)
- 5 output +5 VDC stabilized
- 6 input channel 8 (intermediate time)

### 7.1.2. Headset Jack (c)

- 1 microphone of headset
- 2 common ground
- 3 loud speaker of headset
- 4 common ground
- 5 input channel 9



### 7.1.3. Speaker Jack (f)

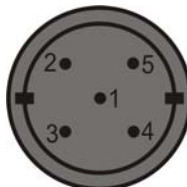
- 1 speaker signal
- 2 common ground



### 7.1.4. Display Board Jack (e)

#### TdC 8001 built before 2008:

- 1 common ground
- 2 output supply (6 to 15 VDC)
- 3 output data channel 1
- 4 output supply (6 to 15 VDC)
- 5 output data channel 1 or 2



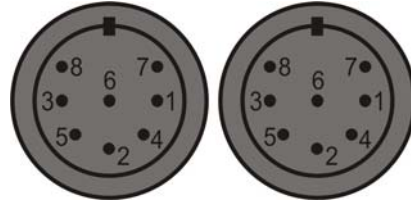
#### TdC 8001 built 2008 or later:

- 1 output data channel 1 or 2
- 2 common ground
- 3 empty
- 4 empty
- 5 empty
- 6 empty
- 7 output external supply (6 to 15 VDC)



**7.1.5. RS 232 / RS 485 (d)**

- 1 RS 232, Data TXD (transmit)
- 2 RS 232, common ground
- 3 RS 232, Data RXD (receive)
- 4 RS 232, CTS
- 5 RS 232, RTS
- 6 RS 485, line A
- 7 RS 232, output external supply (6 to 15 VDC)
- 8 RS 485, line B



**7.1.6. Display Board (i)**

**TdC 8001 built before 2008:**

Display board interface with data output channel 1 or 2 (yellow or white banana socket) and ground (black or blue banana socket). The channel you can select in the menu.

**TdC 8001 built 2008 or later:**

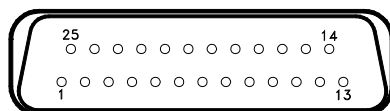
Display board interface with data output channel 1 (yellow banana socket) and ground (black (or blue) banana socket).



**7.1.7. Banana Socket for Channel 0 to 9 (h)**

All channels you can connect on the banana sockets. For all 9 channel you have four ground connections.

**7.1.8. Multi Channel (a)**



- |   |   |
|---|---|
| 1 channel 9   | 13 output +5 VDC stabilized                 |
| 2 channel 0 (start)                                     | 14 channel 1                                |
| 3 channel 2   | 15 channel 5                                |
| 4 channel 3   | 16 channel 8                                |
| 5 channel 7   | 17 channel 6                                |
| 6 data output (like channel 2 from "display board" (e)) | 18 channel 4                                |
| 7 RS 485 B  | 19 empty                                    |
| 8 RS 485 A  | 20 empty                                    |
| 9 Clock A   | 21 empty                                    |
| 10 Clock B  | 22 empty                                    |
| 11 empty  | 23 output external supply (5.3 to 14.3 VDC) |
| 12 common ground  | 24 common ground                            |
|   | 25 external supply (+6 to 15 VDC)           |



**7.2. RS 232 Interface (c,d)**

**Transfer Format:** 1 start bit, 8 data bit, no parity bit, 1 stop bit

**Transfer Speed:** 9.600 Baud pre adjusted (adjustable: 2400, 4800, 19200)

**Transfer Protocol:** ASCII

|                                  |  |
|----------------------------------|--|
| xNNNNxCCxxHH:MM:SS.zhtqxGR (CR)  | time from C0 to C9   |
| xNNNNxCCMxHH:MM:SS.zhtqxGR (CR)  | manual time from <START> or <STOP> button                                    |
| xNNNNxRTxxHH:MM:SS.zhtxxGR (CR)  | run time   |
| xNNNNxTTxxHH:MM:SS.zhtxxGR (CR)  | total time   |
| xNNNNxSQxxHH:MM:SS.zhtxxGR (CR)  | sequential time (lap time)   |
| xNNNNiCCxxHH:MM:SS.zhtxxGR (CR)  | Dual Timer, times from C0 to C9  |
| xNNNNiRTxxHH:MM:SS.zhtxxGR (CR)  | Dual Timer, run time   |
| xNNNNiCCxxHH:MM:SS.zhtqx## (CR)  | Parallelsalom, intermediate time or finish time                              |
| xNNNNiRTxxHH:MM:SS.zhtqx## (CR)  | Parallelsalom, run time  |
| xNNNNiDTRxxHH:MM:SS.zhtxx## (CR) | Parallelsalom, difference time of run  |
| xNNNNiTTxxHH:MM:SS.zhtqx## (CR)  | Parallelsalom, total time  |
| xNNNNiDTTxxHH:MM:SS.zhtxx## (CR) | Parallelsalom, total difference time   |
| pNNNNiCCxxHH:MM:SS.zhtqx## (CR)  | Parallelsalom, finish time calculated form penalty time                      |
| pNNNNiRTxxHH:MM:SS.zhtqx## (CR)  | Parallelsalom, run time calculated from penalty time                         |
| pNNNNiTTxxHH:MM:SS.zhtqx## (CR)  | Parallelsalom, total time calculated from penalty time                       |
| xNNNNxkmhxxxxs:ssss.ssxxxGR (CR) | speed measurement  |
| xNNNNxkmhxxxxs:ssss.ssxxxx (CR)  | speed measurement for speed skiing   |
| ?NNNNxCCxxHH:MM:SS.zhtqxGR (CR)  | illegal time   |
| m0000xCCxxHH:MM:SS.zhtqxGR (CR)  | times stopped with <MEMO>  |
| cNNNNxCCxxHH:MM:SS.zhtqxGR (CR)  | cleared time   |
| dNNNNxCCxxHH:MM:SS.zhtqxGR (CR)  | disqualified time  |
| iNNNNxCCxxHH:MM:SS.zhtxxGR (CR)  | manipulated time (<INPUT>)   |
| xxxxxxC0xxHH:MM:SS.zhtqxGR (CR)  | start time after a group start   |
| xNNNNxRTx+HH:MM:SS.zhtxxGR (CR)  | stopped countdown-time (allowed)   |
| xNNNNxRTx-HH:MM:SS.zhtxxGR (CR)  | stopped countdown-time (bellow the zero value)                               |
| nNNNN (CR)                       | new start number shown in finish display (6)                                 |
| x                                | blank  |
| NNNN                             | start number (4 digits)  |
| 0000                             | start number 0 for times stopped with <MEMO>                                 |
| i                                | Identification of the course; r (= red/right), b (= blue) or l (left) course |
| CC                               | timing channels (c0 to c9)   |
| CCM                              | manual impulse (with <START> or <STOP> from keyboard 9 or 15)                |
| C0                               | channel 0 (start) C5 channel 5   |
| C1                               | channel 1 (finish) C6 channel 6  |
| C2                               | channel 2 C7 channel 7   |
| C3                               | channel 3 C8 channel 8   |
| C4                               | channel 4 C9 channel 9   |
| RT                               | run time   |
| TT                               | total time   |
| SQ                               | sequential Time (lap time)   |
| DTR                              | difference time of run   |
| DTT                              | total difference time  |
| kmh                              | speed (possible output depending on unit used: kmh, mps, mph)                |
| +                                | countdown was stopped before it reached zero                                 |
| -                                | countdown was stopped after zero   |
| HH:MM:SS.zht                     | time in hours, minutes, seconds and 1/1000 seconds                           |
| HH:MM:SS.zhtq                    | time in hours, minutes, seconds and 1/10000 seconds                          |
| sssss.ss                         | speed for 0.00 up to 99999.99 measured in km/h in speed skiing               |
| GR                               | group (from 01 to 99, no input for groups = 00)                              |
| ##                               | continuous number for each lap   |
| (CR)                             | Carriage return  |

The following characters could be the first digit:

- x blank
- ? time without valid start number
- m time from memo (memory)
- c cleared time (with <CLEAR>)
- d times cleared through disqualification
- i times input manual: <INPUT>
- n new start number shown in finish display (6)
- p calculated time from penalty time

**Pin arrangement:** see point 7.1.5

**Cable form TdC 8001 to PC (9-Pin):** 067-02

**Cable form TdC 8001 to PC (25-Pin):** 066-03

*In the main menu you can adjust the following:*

RS 232 Baudrate: Menu 15: RS-232 BAUDRATE = 9600 Bd

You can adjust the baudrate of the RS 232 interface (d): 2400, 4800, 9600 or 19200 baud.

*Pre adjusted value:* 9600 Baud

RS 232 Run Time: Menu 16: RS-232 RUN TIME = OFF

The RS 232 interface (d) always outputs in the difference-timing mode the time of day. Additionally you can output the run time.

output time of day and run time = <F1>

output time of day = <F2>

*Pre-adjusted value:* RS-232 output is time of day

### **7.2.1. Checking the TdC 8001 adjustments through the RS 232 interface:**

You can check the following adjustments through the RS 232 interface:

Precision:

RS232 question: PRE=?

TdC 8001 answer: PRE = 1 s

precision is 1 second

PRE = 1/10 s

precision is 1/10 seconds

PRE = 1/100 s

precision is 1/100 seconds

PRE = 1/1000 s

precision is 1/1000 seconds

Timing mode:

RS232 question: TI=?

TdC 8001 answer: TI = DIFFERENC

difference timing

TI = ABSOLUT

absolute timing

Laps for the split-sequential program:

RS232 question: LAPS = ?

TdC 8001 answer: LAPS = 4

Adjusted amount of laps (1 to 99)

**7.2.2. Adjustment of the Main Menu through the RS 232 interface:**

You can adjust the main menu direct from a PC through the RS 232 interface.

|                                |                      |  |                       |
|--------------------------------|----------------------|--|-----------------------|
| <b>Delay Time Start:</b>       | <b>Menu 1</b>        | <b>Print Menus:</b>                      | <b>Menu 14</b>        |
| RS232 question:                | DTS?                 | RS232 question:                          | PM?                   |
| RS232 order:                   | DTS=0.30             | RS232 order:                             | PM=ON                 |
| Adjustable:                    | 0,00 to 9,99 seconds | Adjustable:                              | ON or OFF             |
| <b>Delay Time Finish:</b>      | <b>Menu 2</b>        | <b>Print Linefeed:</b>                   | <b>Menu 15</b>        |
| RS232 question:                | DTF?                 | RS232 question:                          | PLF?                  |
| RS232 order:                   | DTS=0.30             | RS232 order:                             | PLF=ON                |
| Adjustable:                    | 0,00 to 9,99 seconds | Adjustable:                              | ON or OFF             |
| <b>Seconds Mode:</b>           | <b>Menu 3</b>        | <b>RS 232 Baudrate:</b>                  | <b>Menu 16</b>        |
| RS232 question:                | SM?                  | RS232 question:                          | BDRS?                 |
| RS232 order:                   | SM=ON                | RS232 order:                             | BDRS=9600             |
| Adjustable:                    | ON or OFF            | Adjustable:                              | 2400, 4800, 9600 Bd   |
| <b>Display Time 1:</b>         | <b>Menu 4</b>        | <b>RS 232 Run Time:</b>                  | <b>Menu 17</b>        |
| RS232 question:                | DIT1?                | RS232 question:                          | RSRT?                 |
| RS232 order:                   | DIT1=03              | RS232 order:                             | RSRT=OFF              |
| Adjustable:                    | 0 to 99 seconds      | Adjustable:                              | ON or OFF             |
| <b>Display Time 2:</b>         | <b>Menu 5</b>        | <b>Display Board Baud Rate:</b>          | <b>Menu 18</b>        |
| RS232 question:                | DIT2?                | RS232 question:                          | BDDB?                 |
| RS232 order:                   | DIT2=03              | RS232 order:                             | RTRS=OFF              |
| Adjustable:                    | 0 to 99 seconds      | Adjustable:                              | ON or OFF             |
| <b>Display Thousandth:</b>     | <b>Menu 6</b>        | <b>Display Board Channel 2:</b>          | <b>Menu 19</b>        |
| RS232 question:                | DI1/1000?            | RS232 question:                          | DBC2?                 |
| RS232 order:                   | DI1/1000=ON          | RS232 order:                             | DBC2=RUNNING          |
| Adjustable:                    | ON or OFF            | Adjustable:                              | RUNNING, STANDING     |
| <b>Info-Display:</b>           | <b>Menu 7</b>        | <b>Beep:</b>                             | <b>Menu 20</b>        |
| RS232 question:                | IDIS?                | RS232 question:                          | BEEP?                 |
| RS232 order:                   | IDIS=START           | RS232 order:                             | BEEP=ON               |
| Adjustable:                    | START, FINISH, OFF   | Adjustable:                              | ON or OFF             |
| <b>Running Time:</b>           | <b>Menu 8</b>        | <b>Handicap Time:</b>                    | <b>Menu 21</b>        |
| RS232 question:                | RT?                  | RS232 question:                          | HT?                   |
| RS232 order:                   | RT=RUN               | RS232 order:                             | HT=00:01:12.34        |
| Adjustable:                    | RUN or Total         | Adjustable:                              | time in 1/100 seconds |
| <b>Running Tenth:</b>          | <b>Menu 9</b>        |  | Handicap off:         |
| RS232 question:                | R1/10?               |  | HT=00:00:00.000       |
| RS232 order:                   | R1/10=OFF            | <b>Input of Groups:</b>                  | <b>Menu 22</b>        |
| Adjustable:                    | ON or OFF            | RS232 question:                          | not possible          |
| <b>Intermediate Rank:</b>      | <b>Menu 10</b>       | RS232 order:                             | not possible          |
| RS232 question:                | RNKIT?               | <b>Change Run:</b>                       | <b>Menu 23</b>        |
| RS232 order:                   | RNKIT=ON             | RS232 question:                          | not possible          |
| Adjustable:                    | ON or OFF            | RS232 order:                             | not possible          |
| <b>Finish Rank:</b>            | <b>Menu 11</b>       | <b>Change Race:</b>                      | <b>Menu 24</b>        |
| RS232 question:                | RNKFT?               | RS232 question:                          | not possible          |
| RS232 order:                   | RNKFT=ON             | RS232 order:                             | not possible          |
| Adjustable:                    | ON or OFF            |  |                       |
| <b>Start Number Automatic:</b> | <b>Menu 12</b>       | <b>Display Board Test:</b>               |                       |
| RS232 question:                | STNOA?               | <b>Menu 25</b>                           |                       |
| RS232 order:                   | STNOA=OFF            | RS232 question:                          | not possible          |
| Adjustable:                    | OFF, START, FINISH   | RS232 order:                             | not possible          |
| <b>Print Start Time:</b>       | <b>Menu 13</b>       | <b>Penalty Time for Parallel Slalom:</b> | <b>Menu 26</b>        |
| RS232 question:                | PST?                 | RS232 question:                          | PT?                   |
| RS232 order:                   | PST=OFF              | RS232 order:                             | PT=1.500              |
| Adjustable:                    | ON or OFF            | Adjustable:                              | sec. and 1/1000 sec.  |

**ID for Channel 4 in Parallel Slalom: Menu 27**

RS232 question: IDC4?  
 RS232 order: IDC4=BLUE  
 Adjustable: B or L (blue or left)

**Start Channel for Dual Timer: Menu 28**

RS232 question: STS?  
 RS232 order: STS=SEPARATE  
 Adjustable: SEPARATE, COMMON

**Ranking for Dual Timer: Menu 29**

RS232 question: RNKC?  
 RS232 order: RNKC=SEPARATE  
 Adjustable: SEPARATE, COMMON

**Printing Times for Speed: Menu 30**

RS232 question: PRT?  
 RS232 order: PRT=OFF  
 Adjustable: OFF or ON

**Measuring Distance Speed: Menu 31**

RS232 question: DST?  
 RS232 order: DST=0100  
 Adjustable: + 1 to 9999

**Measuring Unit for Speed: Menu 32**

RS232 question: SPU?  
 RS232 order: SPU=kmh  
 Adjustable: kmh, m/s or mph

**Min. Speed: Menu 33**

RS232 question: MINSP?  
 RS232 order: MINSP=0010  
 Adjustable: 1 to 9999

**Penalty Points Menu 34**

RS232 question: PP?  
 RS232 order: PP = 04.00  
 Adjustable: 0.1 to 99.99

**Time Violation 1: Menu 36**

RS232 question: TV1?  
 RS232 order: TV1 = 00.25  
 Adjustable: 0 to 99.99

**Time Violation 2: Menu 37**

RS232 question: TV2?  
 RS232 order: TV2 = 01.00  
 Adjustable: 0 to 99.99

**Parcour Time 1: Menu 38**

RS232 question: PAT1?  
 RS232 order: PAT1 = 000.00  
 Adjustable: 0 to 999.99

**Parcour Time 2: Menu 39**

RS232 question: PAT2?  
 RS232 order: PAT2 = 000.00  
 Adjustable: 0 to 999.99

**Block Time 1: Menu 40**

RS232 question: BT1?  
 RS232 order: BT1 = 000.00  
 Adjustable: 0 to 999.99

**Block Time 2: Menu 41**

RS232 question: BT2?  
 RS232 order: BT2 = 000.00  
 Adjustable: 0 to 999.99

**Countdown Time: Menu 42**

RS232 question: CDT?  
 RS232 order: CDT=00:01:00.00  
 Adjustable: 00:00:00.00 to 23:59:59.99

**D-Board Count Down: Menu 43**

RS232 question: DBCD?  
 RS232 order: DBCD=ON  
 Adjustable: ON or OFF

**7.2.3. Call Data through the RS 232 Interface**

Through the RS 232 interface you can call all data of the memory of the TdC 8001 e.g. from a PC. Each command is closed with a carriage return (in the following examples it is listed as (CR) ).

If you want a classement of intermediate times, you must identify the channel number (C2 to C9).

If you want a "SINGLE" classement, you also need to input the data that you want to transfer (e.g. start numbers, start number blocks, groups).

**Classement "NOT FINISHED":**

NOF(CR) all competitors which did not finish the race

**Classement "DISQUALIFIED":**

DIS(CR) all disqualified competitors

**Classement "START ORDER":**

STO(CR) Start order for the 2nd heat (for BIBO)

## Classement "ALL":

|             |   |
|-------------|---|
| CALRT(CR)   | Classement of the run time from all competitors                       |
| CAL01RT(CR) | Classement of all run times of a lap (01 = lap 1)                     |
| CAL01SQ(CR) | Classement of all sequential times of a lap (01 = lap 1)              |
| CALMT(CR)   | Classement of the memory time from all competitors                    |
| CALTT(CR)   | Classement of the total time from all competitors                     |
| CALITC2(CR) | Classement of the intermediate time C2 from all competitors           |
| CALITC3(CR) | Classement of the intermediate time C3 from all competitors           |
| CALITC4(CR) | Classement of the intermediate time C4 from all competitors           |
| CALITC5(CR) | Classement of the intermediate time C5 from all competitors           |
| CALITC6(CR) | Classement of the intermediate time C6 from all competitors           |
| CALITC7(CR) | Classement of the intermediate time C7 from all competitors           |
| CALITC8(CR) | Classement of the intermediate time C8 from all competitors           |
| CALITC9(CR) | Classement of the intermediate time C9 from all competitors           |
| CALBRT(CR)  | Classement of all competitor of the BLUE course for Dual Timer        |
| CALRRT(CR)  | Classement of all competitor of the RED (right) course for Dual Timer |
| CALLRT(CR)  | Classement of all competitor of the left course for Dual Timer        |

## Classement "GROUPS" and "ALL"

|               |  |
|---------------|--|
| CGRALRT(CR)   | Group classement of the run time from all groups             |
| CGRALMT(CR)   | Group classement of the memory time from all groups          |
| CGRALTT(CR)   | Group classement of the total time from all groups           |
| CGRALITC2(CR) | Group classement of the intermediate time C2 from all groups |
| CGRALITC3(CR) | Group classement of the intermediate time C3 from all groups |
| CGRALITC4(CR) | Group classement of the intermediate time C4 from all groups |
| CGRALITC5(CR) | Group classement of the intermediate time C5 from all groups |
| CGRALITC6(CR) | Group classement of the intermediate time C6 from all groups |
| CGRALITC7(CR) | Group classement of the intermediate time C7 from all groups |
| CGRALITC8(CR) | Group classement of the intermediate time C8 from all groups |
| CGRALITC9(CR) | Group classement of the intermediate time C9 from all groups |
| CGRALLBRT(CR) | Group classement of the BLUE course for Dual Timer           |
| CGRALLRRT(CR) | Group classement of the RED (right) course for Dual Timer    |
| CGRALLLRT(CR) | Group classement of the left course for Dual Timer           |

## Classement "GROUPS" and "SINGLE":

After the instruction for "GROUPS" and "SINGLE" you must input the groups. Input each group with a 2 character number and confirm it with a carriage return. Input after the last group 00 and a carriage return.

|               |  |
|---------------|--|
| CGRSIRT(CR)   | Group classement of the run time from selected groups                    |
| CGRSIMT(CR)   | Group classement of the memory time from selected groups                 |
| CGRSITT(CR)   | Group classement of the total time from selected groups                  |
| CGRSIITC2(CR) | Group classement of the intermediate time C2 from selected groups        |
| CGRSIITC3(CR) | Group classement of the intermediate time C3 from selected groups        |
| CGRSIITC4(CR) | Group classement of the intermediate time C4 from selected groups        |
| CGRSIITC5(CR) | Group classement of the intermediate time C5 from selected groups        |
| CGRSIITC6(CR) | Group classement of the intermediate time C6 from selected groups        |
| CGRSIITC7(CR) | Group classement of the intermediate time C7 from selected groups        |
| CGRSIITC8(CR) | Group classement of the intermediate time C8 from selected groups        |
| CGRSIITC9(CR) | Group classement of the intermediate time C9 from selected groups        |
| CGRSILBRT(CR) | Group classement of the BLUE course for Dual Timer from selected groups  |
| CGRSILRRT(CR) | Group classement of red (right) course from selected groups (Dual Timer) |
| CGRSILLRT(CR) | Group classement of the left course for Dual Timer from selected groups  |
| 01(CR)        | e.g. group 1   |
| 04(CR)        | e.g. group 4   |
| 07(CR)        | e.g. group 7   |
| 00(CR)        | finish with this input   |



### Classement "CLASS":

After the instruction for "CLASSES" input the classes. You can make a class out of different start number blocks. Each start number block has the first and last start number (each four digits) of a continuous sequence. Both start numbers are separated by a hyphen. Each number block is separated by a carriage return. Input after the last number block 0000-0000 and carriage return.

|               |   |
|---------------|---|
| CCLRT(CR)     | Classement of the run time from start number blocks (classes)                             |
| CCL01RT(CR)   | Classement of run times of a lap (01=lap) from start number blocks (classes)              |
| CCL01SQ(CR)   | Classement of sequential times of a lap (01 = lap 1) from start number blocks             |
| CCLMT(CR)     | Classement of the memory time from start number blocks (classes)                          |
| CCLTT(CR)     | Classement of the total time from start number blocks (classes)                           |
| CCLITC2(CR)   | Classement of the intermediate time C2 from start number blocks (classes)                 |
| CCLITC3(CR)   | Classement of the intermediate time C3 from start number blocks (classes)                 |
| CCLITC4(CR)   | Classement of the intermediate time C4 from start number blocks (classes)                 |
| CCLITC5(CR)   | Classement of the intermediate time C5 from start number blocks (classes)                 |
| CCLITC6(CR)   | Classement of the intermediate time C6 from start number blocks (classes)                 |
| CCLITC7(CR)   | Classement of the intermediate time C7 from start number blocks (classes)                 |
| CCLITC8(CR)   | Classement of the intermediate time C8 from start number blocks (classes)                 |
| CCLITC9(CR)   | Classement of the intermediate time C9 from start number blocks (classes)                 |
| CCLBRT(CR)    | Classement of the run time from blocks (classes) from the blue course (Dual Timer)        |
| CCLRRT(CR)    | Classement of the run time from blocks (classes) from the red (right) course (Dual Timer) |
| CCLRRT(CR)    | Classement of the run time from blocks (classes) from the left course (Dual Timer)        |
| 0001-0024(CR) | Start number block, e.g. form StNo. 1 to StNo. 24   |
| 0065-0073(CR) | Start number block, e.g. form StNo. 65 to StNo. 73  |
| 0105-0124(CR) | Start number block, e.g. form StNo. 105 to StNo. 124                                      |
| 0000-0000(CR) | Finish with this input  |

### Classement "LEADING TEN":

|             |  |
|-------------|--|
| CFTRT(CR)   | Classement of the leading ten run times                                |
| CFT01RT(CR) | Classement of the leading ten run times of a lap (01=lap)              |
| CFT01SQ(CR) | Classement of the leading ten sequential times of a lap (01 = lap 1)   |
| CFTMT(CR)   | Classement of the leading ten memory times                             |
| CFTTT(CR)   | Classement of the leading ten total times                              |
| CFTITC2(CR) | Classement of the leading ten intermediate times from channel C2       |
| CFTITC3(CR) | Classement of the leading ten intermediate times from channel C3       |
| CFTITC4(CR) | Classement of the leading ten intermediate times from channel C4       |
| CFTITC5(CR) | Classement of the leading ten intermediate times from channel C5       |
| CFTITC6(CR) | Classement of the leading ten intermediate times from channel C6       |
| CFTITC7(CR) | Classement of the leading ten intermediate times from channel C7       |
| CFTITC8(CR) | Classement of the leading ten intermediate times from channel C8       |
| CFTITC9(CR) | Classement of the leading ten intermediate times from channel C9       |
| CFTBRT(CR)  | Classement of the leading ten of the BLUE course for Dual Timer        |
| CFTRRT(CR)  | Classement of the leading ten of the RED (right) course for Dual Timer |
| CFTLRT(CR)  | Classement of the leading ten of the left course for Dual Timer        |

### Classement "SINGLE":

After the instruction for "SINGLE" you must input the start numbers. Input each start number with a 4 character number and confirm it with a carriage return. Input after the last number 0000 and a carriage return.

|             |  |
|-------------|--|
| CSIRT(CR)   | Classement of the run time of individual start numbers                     |
| CSI01RT(CR) | Classement of the run time of a lap (01=lap) with individual start numbers |
| CSI01SQ(CR) | Classement of the sequential times of a lap with individual start numbers  |
| CSIMT(CR)   | Classement of the memory time of individual start numbers                  |
| CSITT(CR)   | Classement of the total time of individual start numbers                   |
| 0001(CR)    | input start number   |
| 0005(CR)    | input start number   |
| 0012(CR)    | input start number   |
| 0000(CR)    | finish with this input   |

### Classement "ADD":

After the instruction for "ADD" you must input the start numbers that you want added. Input each start number with a 4 character number and confirm it with a carriage return. Input after the last number 0000 and a carriage return.

|             |   |
|-------------|---|
| CADRT(CR)   | Add run times from competitors                              |
| CAD01RT(CR) | Add run times of a lap (01=lap) from competitors            |
| CAD01SQ(CR) | Add sequential times of a lap (01 = lap 1) from competitors |
| CADMT(CR)   | Add memory times from competitors                           |
| CADTT(CR)   | Add total times from competitors                            |
| CADITC2(CR) | Add intermediate times from channel C2 from competitors     |
| CADITC3(CR) | Add intermediate times from channel C3 from competitors     |
| CADITC4(CR) | Add intermediate times from channel C4 from competitors     |
| CADITC5(CR) | Add intermediate times from channel C5 from competitors     |
| CADITC6(CR) | Add intermediate times from channel C6 from competitors     |
| CADITC7(CR) | Add intermediate times from channel C7 from competitors     |
| CADITC8(CR) | Add intermediate times from channel C8 from competitors     |
| CADITC9(CR) | Add intermediate times from channel C9 from competitors     |
| 0001(CR)    | input start number  |
| 0005(CR)    | input start number  |
| 0012(CR)    | input start number  |
| 0025(CR)    | input start number  |
| 0000(CR)    | finish with this input                                      |

### Classement "PROTOCOL" and "ALL":

|             |  |
|-------------|--|
| PALST(CR)   | Protocol of all start times  |
| PALFT(CR)   | Protocol of all finish times                                       |
| PALRT(CR)   | Protocol of all run times  |
| PALSQ(CR)   | Protocol of all sequential times (lap times)                       |
| PALMT(CR)   | Protocol of all memory times                                       |
| PALTT(CR)   | Protocol of all total times  |
| PALITC2(CR) | Protocol of all intermediate times of channel C2                   |
| PALITC3(CR) | Protocol of all intermediate times of channel C3                   |
| PALITC4(CR) | Protocol of all intermediate times of channel C4                   |
| PALITC5(CR) | Protocol of all intermediate times of channel C5                   |
| PALITC6(CR) | Protocol of all intermediate times of channel C6                   |
| PALITC7(CR) | Protocol of all intermediate times of channel C7                   |
| PALITC8(CR) | Protocol of all intermediate times of channel C8                   |
| PALITC9(CR) | Protocol of all intermediate times of channel C9                   |
| PALBRT(CR)  | Protocol of all run times of the blue course for Dual Timer        |
| PALRRT(CR)  | Protocol of all run times of the red (right) course for Dual Timer |
| PALLRT(CR)  | Protocol of all run times of the left course for Dual Timer        |

### Classement "PROTOCOL" and "SINGLE":

After the instruction for "PROTOCOL" and "SINGLE" input the start number blocks. You can use more than one start number block. Each start number block has the first and last start number (each four digits) of a continuous sequence. Both start numbers are separated by a hyphen. Each number block is separated by a carriage return. Input after the last number block 0000-0000 and carriage return.

|             |   |
|-------------|---|
| PSIST(CR)   | Protocol of selected start times                      |
| PSIFT(CR)   | Protocol of selected finish times                     |
| PSIRT(CR)   | Protocol of selected run times                        |
| PSISQ(CR)   | Protocol of selected sequential times (lap times)     |
| PSIMT(CR)   | Protocol of selected memory times                     |
| PSITT(CR)   | Protocol of selected total times                      |
| PSIITC2(CR) | Protocol of selected intermediate times of channel C2 |
| PSIITC3(CR) | Protocol of selected intermediate times of channel C3 |

PSIITC4(CR) Protocol of selected intermediate times of channel C4  
 PSIITC5(CR) Protocol of selected intermediate times of channel C5  
 PSIITC6(CR) Protocol of selected intermediate times of channel C6  
 PSIITC7(CR) Protocol of selected intermediate times of channel C7  
 PSIITC8(CR) Protocol of selected intermediate times of channel C8  
 PSIITC9(CR) Protocol of selected intermediate times of channel C9  
 PSIBRT(CR) Protocol of selected run times of the blue course for Dual Timer  
 PSIRRT(CR) Protocol of selected run times of the red (right) course for Dual Timer  
 PSILRT(CR) Protocol of selected run times of the left course for Dual Timer  
 0001-0024(CR) Start number block, e.g. from StNo. 1 to StNo. 24  
 0065-0073(CR) Start number block, e.g. from StNo. 65 to StNo. 73  
 0105-0124(CR) Start number block, e.g. from StNo. 105 to StNo. 124  
 0000-0000(CR) Finish with this input

**7.3. RS 485 Interface (c.d): no function**

Transfer Speed: 30 kBaud  
 Pin Arrangement: see page 121

**7.4. Display Board Interface (e)**

Transfer Format: 1 start bit, 8 data bit, no parity bit, 1 stop bit  
 Transfer Speed: 2.400 Baud (adjustable 4.800, 9600, 19200 Baud)  
 Transfer Protocol: ASCII

The display board interface has two different channels:

- Channel 1: running time
- Channel 2: running time and classement or run time and classement

You can adjust the channel 2 of the display board interface (e). If you have channel two on STANDING, it outputs no running time (only run times). It outputs the classement always on channel 2. You can select between channel 1 and channel 2 by turning the plug of the display board cable 180° for TDC8001 sold before 2008. For TdC8001 sold after 2008 you can switch the channel on the DIN plug (e) by using Menu 20 (see next page).

The banana plug (i) has for devices sold after 2008 always the running time. For devices sold before 2008 it has either the running time or standing time (depending on the adjustment in menu 20).

|                             |  |
|-----------------------------|--|
| NNN.xxxxxxxM:SSxxx(CR)      | running time (without 1/10 seconds)          |
| NNN.xxxxHH:MM:SSxxx(CR)     | running time (without 1/10 seconds)          |
| NNN.xxxxHH:MM:SS.zxx(CR)    | running time (with 1/10 seconds)             |
| NNNCxxxxHH:MM:SS.zhtRR(CR)  | channel C1, run time with rank               |
| NNNCxxxxHH:MM:SS.zhtxx(CR)  | channel C1, run time without rank            |
| NNNDxxxxHH:MM:SS.zhtRR(CR)  | channel C1, total time with rank             |
| NNNDxxxxHH:MM:SS.zhtxx(CR)  | channel C1, total time without rank          |
| NNNAxxxxHH:MM:SS.zhtRR(CR)  | channel C2, intermediate time 1              |
| NNNBxxxxHH:MM:SS.zhtRR(CR)  | channel C3, intermediate time 2              |
| NNNExxxxHH:MM:SS.zhtRR(CR)  | channel C4, intermediate time 3              |
| NNNFxxxxHH:MM:SS.zhtRR(CR)  | channel C5, intermediate time 4              |
| NNNGxxxxHH:MM:SS.zhtRR(CR)  | channel C6, intermediate time 5              |
| NNNHxxxxHH:MM:SS.zhtRR(CR)  | channel C7, intermediate time 6              |
| NNNIxxxxHH:MM:SS.zhtRR(CR)  | channel C8, intermediate time 7              |
| NNNJxxxxHH:MM:SS.zhtRR(CR)  | channel C9, intermediate time 8              |
| NNNSxxx©xxxxsxs.ssxRR(CR)   | speed  |
| ANNNxxxxxHH:MM:SS.zhtRR(CR) | sequential time for program Split-Sequential |





**Display Board Channel 2:**

**Menu 20: D-BOARD CHANNEL2 = RUNNING**

You can adjust the channel 2 of the display board interface (e) between running time, standing time and best time. If you have channel two on STANDING, it outputs no running time (only run times). The classement is always going out through channel 2.

**TdC 8001 sold after 2008:**

It switches PIN1 of the DIN-plug "Display Board" (e). On the banana socket it output always the running time.

**TdC 8001 sold before 2008:**

Between channel 1 or 2 you can switch by turning the plug of the cable 010-10. Pin 1 of the DIN-socket has always the running time and PIN3 you can select in this menu. The display output of the banana socket (i) outputs the same as PIN3.

|                            |           |    |
|----------------------------|-----------|----|
| Menu 20: D-BOARD CHANNEL 2 | RUNNING<  | F1 |
|                            | STANDING  | F2 |
|                            | BEST TIME | F3 |
| Save with: ENTER           |           |    |

output of running time  
output of run times  
output of best time  
Confirm selection with  
<ENTER>

RUNNING = <F1> running time and classement  
STANDING = <F2> run time and classement  
BEST TIME = <F3> shows the best time

*Pre-adjusted value:* D-Board Channel 2 is running time

**Brightness of LED-Display Board Menu 55**

**LED-Helligkeit = 9**

If you use a ALGE-LED-display board, than you can adjust the brightness in 10 steps. At night you should have the board in the dark mode (0),and at direct sun on the board in the bright mode (9)

|                                    |
|------------------------------------|
| Menu 55: LED-BRIGHTNESS = <u>9</u> |
| Save with: ENTER                   |

Input from 0 to 9  
0 = dark  
9 = bright  
Confirm with <ENTER>

*Pre adjusted value:* LED-brightness = 9