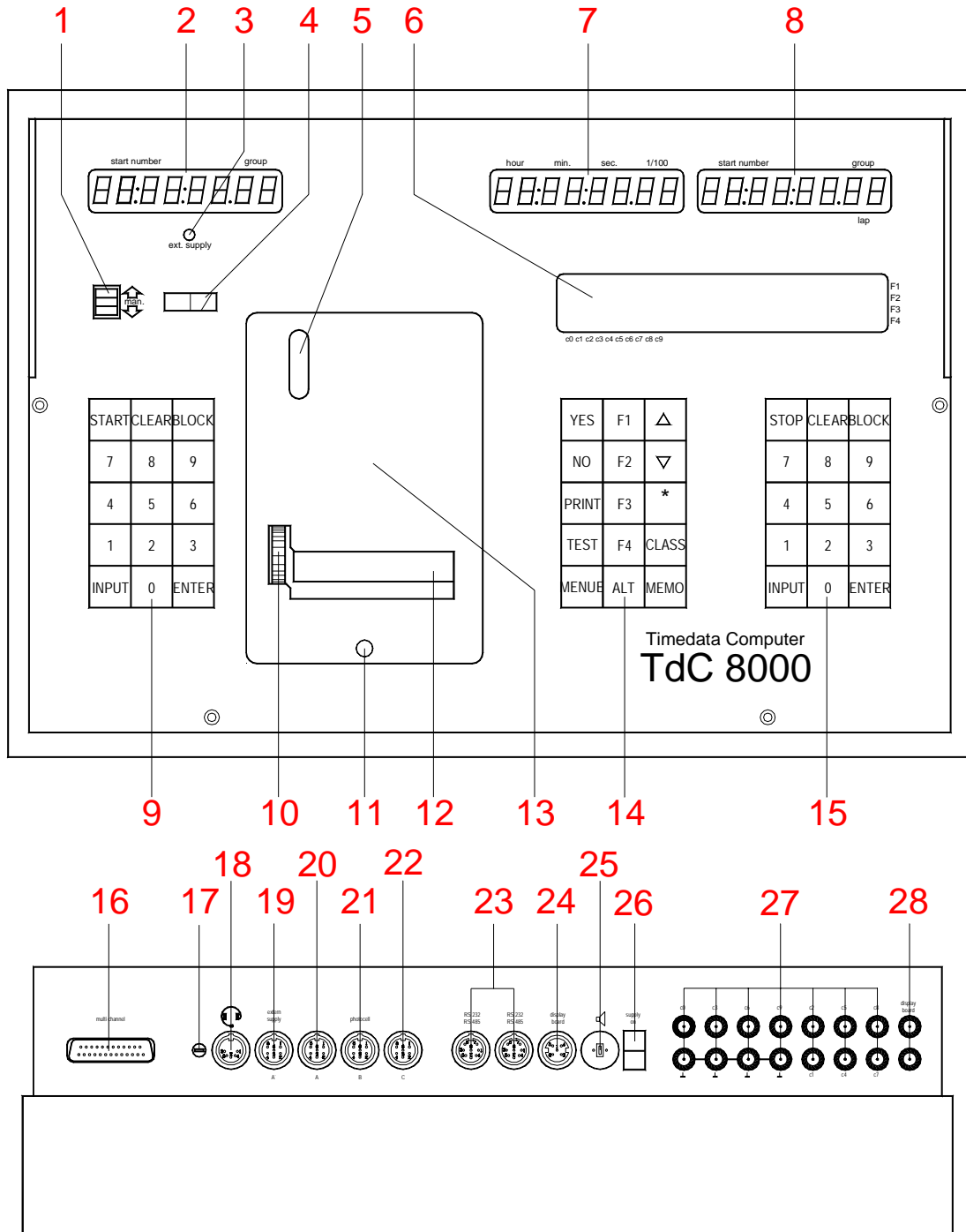




# ALGE

**T I M I N G**

ENGLISH



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| <p>1 Switch for start number input with three positions:<br/>up: increment up automatically as each racer starts<br/>middle: manual input of start numbers with keyboard (9)<br/>down: increment down automatically as each racer starts</p> <p>2 Display for the start</p> <p>3 External supply LED status light</p> <p>4 Meter for monitoring power supply, alignment of the photocell (c1 to c9)</p> <p>5 View port to examine paper supply</p> <p>6 Info-display 4 x 40 alphanumeric characters</p> <p>7 Display that shows the running and net time that corresponds with the start number input on the finish keyboard (15)</p> <p>8 Display that show the start number input for finish</p> <p>9 Start keyboard:<br/>START manual start impulse<br/>CLEAR clear false start<br/>BLOCK blocks start impulses for as long as you press it<br/>INPUT edit start times<br/>ENTER confirm input</p> <p>0 to 9 numeric keys to input start numbers for the start or editing start times</p> <p>10 paper advance wheel</p> <p>11 cover release button to open the printer cover (13) to change the paper</p> <p>12 paper cutter</p> <p>13 printer cover (open with cover release button 11)</p> <p>14 Function keyboard:<br/>YES key to confirm YES/NO questions<br/>NO key to deny YES/NO questions<br/>PRINT to switch the printer on and off<br/>Buffer mode on or off<br/>[Alt]+ PRINT: Printer on or off<br/>TEST info-display (6) shows the device test</p> <p>[↑] key to go up<br/>[↓] key to go down<br/>[*] key for special functions<br/>CLASS key to make a classement<br/>MEMO to activate the memo function if more competitors reach the finish at the same time<br/>MENU press this key first, followed by another to activate a special function: With [Alt] and &lt;MENU&gt; you get into the main menu</p> | <p>[Alt] press this key first, followed by another to activate a special function: With &lt;ALT&gt; and &lt;PRINT&gt; you toggle the printer on and off.</p> <p>[F1] function key 1 on info-display<br/>[F2] function key 2 on info-display<br/>[F3] function key 3 on info-display<br/>[F4] function key 4 on info-display</p> <p>15 Finish keyboard:<br/>STOP manual stop impulse<br/>CLEAR clear false finish<br/>BLOCK blocks finish impulses for as long as you press it<br/>INPUT edit of finish times<br/>ENTER confirm input<br/>0 to 9 numeric keys to input start numbers for the finish or editing finish times</p> <p>16 Connection for Extender and Multi Channel (channel 0 to 9)</p> <p>17 Volume for headset</p> <p>18 Jack for the headset</p> <p>19 DIN-jack mainly used to connect the finish photocell (inputs c0, c1, c2). Connection of power supply is possible. Identical with DIN-jack (20)</p> <p>20 DIN-jack mainly used to connect the finish photocell (inputs c0, c1, c2). Connection of power supply is possible. Identical with DIN-jack (19)</p> <p>21 DIN-jack mainly used to connect the a intermediate photocell (inputs c3, c4, c5). Connection of power supply is possible.</p> <p>22 DIN-jack mainly used to connect the a intermediate photocell (inputs c6, c7, c8). Connection of power supply is possible.</p> <p>23 Two identical DIN-jacks with RS-232 and RS-485 interface.</p> <p>24 DIN-jack to connect a ALGE GAZ</p> <p>25 DIN-jack to connect a speaker (Horn)</p> <p>26 On / Off - switch</p> <p>27 banana socket for all 10 timing channels. The four black jacks are common grounds for all channels.</p> <p>c0 Start channel<br/>c1 finish channel<br/>c2 intermediate time 1<br/>c3 intermediate time 2<br/>c4 intermediate time 3<br/>c5 intermediate time 4<br/>c6 intermediate time 5<br/>c7 intermediate time 6<br/>c8 intermediate time 7<br/>c9 intermediate time 8<br/>28 Banana socket for RS-485</p> |
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[www.alge-timing.com](http://www.alge-timing.com) for free.

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## 1. DEVICE DESCRIPTION

The TdC 8000 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 effective and fast. The new RS 485 interface holds open many feature uses for the TdC 8000.

The separated keyboard makes it possible to work with two persons on the TdC 8000 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 once
- ☞ Multiple results 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 once
- ☞ Multiple results 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. 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	--
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Amerik. Stage / Time	Program 126	76
Standard/Time 1	Program 127	84
Standard/Time 2	Program 128	
Team Jumping 1	Program 129	
Team Jumping 2	Program 130	
Team Jumping 3	Program 131	
Team Jumping 4	Program 132	
<b>Bycyclesports</b>	Program 14	--
Rad-Straße	Program 141	--
<b>Agility</b>	Program 15	--
Prüfung	Program 151	--
Spiele	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 time 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 Track 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 results 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 once
  - ☞ 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

## CYCLING:

### Cycle-Road:

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

## AGILITY:

### Examine:

- ☞ 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

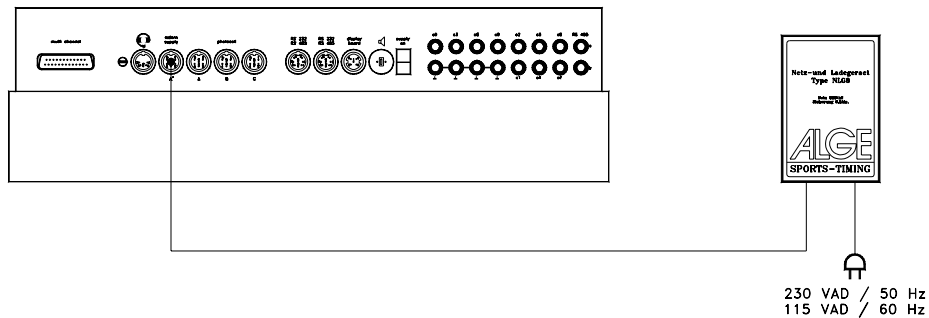
## 2. OPERATING

### 2.1. Power Supply

The TdC 8000 has a built in rechargeable-NiCad-battery-pack (4.5 Ah).

Charge the NiCad-battery-pack with the NLG8 or a 12 Volt car-battery. The charging voltage must be between 11 and 16 Volts. To load the TdC 8000 you need to turn it on.

#### 2.1.1. Net-Charging-Set NLG8



With the net-charging-device NLG8 you can load the TdC 8000 direct form the mains:

- ☞ Plug NLG8 at the mains.
- ☞ Plug NLG8 at the socket „extern. supply“ (19) or „photocell (20, 21 or 22).
- ☞ Turn TdC 8000 on (switch 26).
- ☞ The read LED (3) must burn.
- ☞ The TdC 8000 must be switched on during the charging process (internal charging electronic)
- ☞ You can load the TdC 8000 also during the normal timing operation.
- ☞ The charging process with the NLG8 need about 12 hours.
- ☞ The no-load-voltage is about 15 VDC.
- ☞ The charging voltage of the NLG8 is about 11.7 VDC

ALGE has two types of NLG8. One is with 230V/50Hz, the other with 115V/60 Hz. The voltage is printed on the NLG8 case. Please make sure that you use the NLG8 with the correct voltage for your mains.

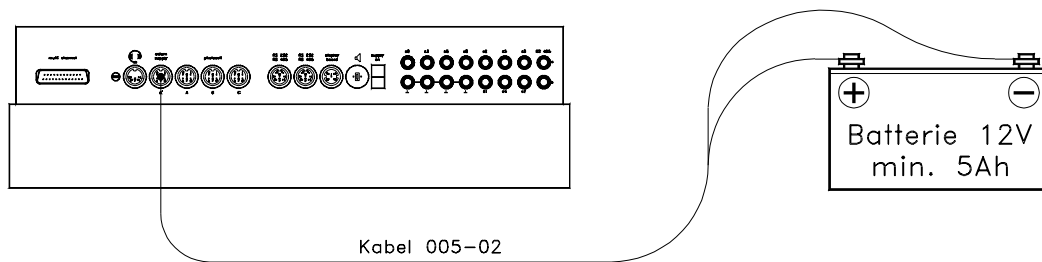
**Attention: You cannot load the TdC 8000 when switched off!**



## 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 8000.

- ☞ Connect cable 005-02 at socket "extern supply" (19) of the TdC 8000.
- ☞ Connect clips that says (+) at the plus pole of the battery.
- ☞ Connect clips that says (-) at the minus pole of the battery.



- ☞ Red LED (3) of the TdC 8000 must burn.

## 2.1.3. Working Time

The voltage is shown on the info-display (6) if you press <TEST>. Further it shows the battery condition always on the meter (4). As long as you have the needle of the meter in the green section you can operate the TdC 8000.

## 2.1.4. Condition of the Rechargeable-Battery

The TdC 8000 has six NiCad rechargeable batteries each with 1.2 V and 4.5 Ah. You can check the voltage by pressing <TEST>. It shows in the info-display the voltage. The TdC 8000 measures always the voltage of the batteries and shows a message as soon as they get empty.

**Early warning:** The info-display (6) 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 8000.

**Turn off:** The info-display (6) shows: "Empty battery!"  
The voltage is 5,8 Volt

If the voltage is 5.8 Volt it switches the TdC 8000 in a power down mode. This is necessary to save the memory. As soon as you supply the TdC 8000 with the NLG8 or a 12 Volt Battery you can continue to work. The TdC8000 is still synchronized.

## 2.2. Printer

When you switch TdC 8000 on it activates the printer automatically. After you 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 8000 on.

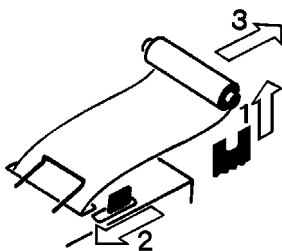
**Buffer-Mode:** All data for the printer are stored in the buffer. This mode you use e.g. to change the paper.

- ☞ 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 are 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-Mod
- ☞ **Paper Check** - Push cover release button (11).
- ☞ Remove the cover.
- ☞ Check the paper.

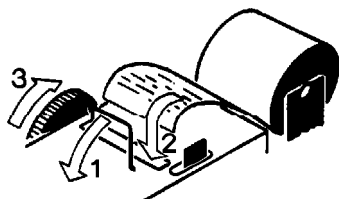
A black strip will become visible on the edge of paper, when the paper roll is about to run out.



### Changing the Paper:

- ☞ Push cover release button (11) .
- ☞ Remove the cover.
- ☞ Remove the rest of the paper from the holder.
- ☞ Press the black lever forward and pull the paper out.

- ☞ Put the axle into the paper holder.
- ☞ Put the now roll on the paper holder.



- ☞ Insert the beginning of the paper into the paper feed of the printer. Make sure it is cleanly out.
- ☞ If necessary correct the paper path through pressing the black lever forward and adjusting the paper manually.
- ☞ Put the cover back and press the button until they stay in the lower position.

**Attention:** Please take care that the paper goes through the paper slotted hole of the cover when you put the cover back on.

### Clearing Jammed Paper:

- ☞ Press the black lever forward and pull back the remaining paper.
- ☞ Remove the serrated cutter by holding the black lever forward and sliding the cutter towards the lever and lifting upwards.
- ☞ Pull the print head back with your fingernail and remove any stuck paper with tweezers or small needlenose pliers.
- ☞ If the paper has jammed under the roller it will be necessary to remove it by sliding a piece of 35 mm film through the paper path and rocking it to and fro until the stuck paper is expelled. Use a piece of film about 20 cm long to have something to hold onto.

The printer is a very rugged device but needs regular maintenance for a long service life. Call your ALGE agent if you have further questions.

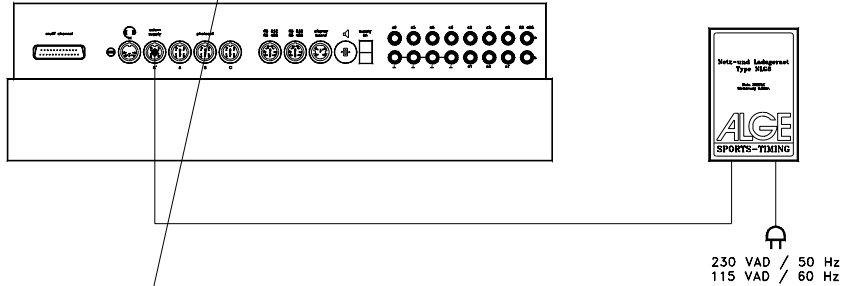
### Printer-Paper:

Electrosensitive paper 60 mm width, 40 mm diameter with about 25 m paper length (about 6000 lines). The electrosensitive paper is available at your ALGE representative. A black strip will become visible on the edge of paper, when a paper roll is about to run out.

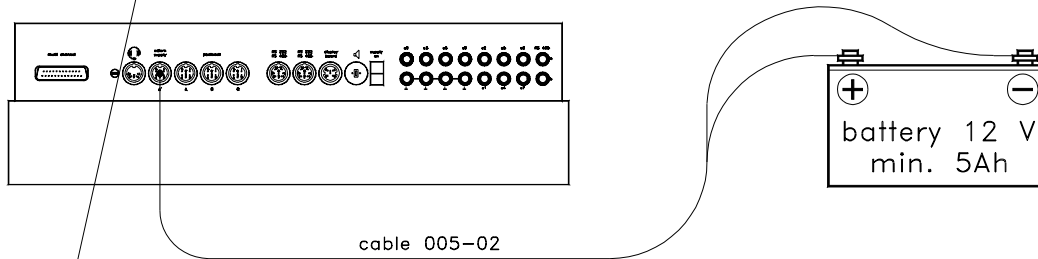
**Attention:** Do not pull on the paper when printing. Press the black lever forward and pull the paper carefully out, if the paper is repressed. The printer-paper has to stay dry!

**2.3. How to Connect other Devices with the TdC 8000**

**Net-Charging-Set NLG8:**



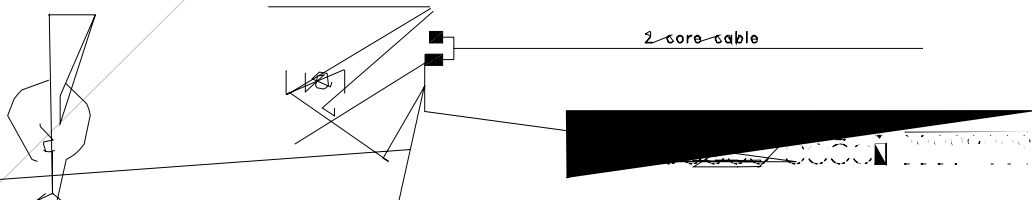
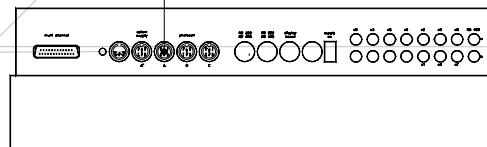
**External 12 Volt Battery:**



**Photocell RLS1n:**

**Finish Photocell with power supply from the TdC 8000:**

The photocell for the start or finish you must connect at socket (19) or (20). 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 again cable 001-xx. To connect the third photocell direct you need the adapter 018--5.

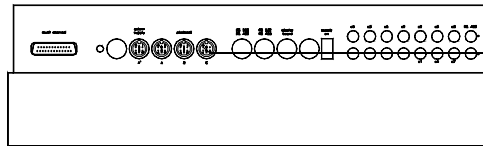


**Intermediate time (2-wire cable):**

For each timing channel you have a banana socket. 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 8000 with a 2-wire cable (e.g. cable real KT 500 or KT 300).



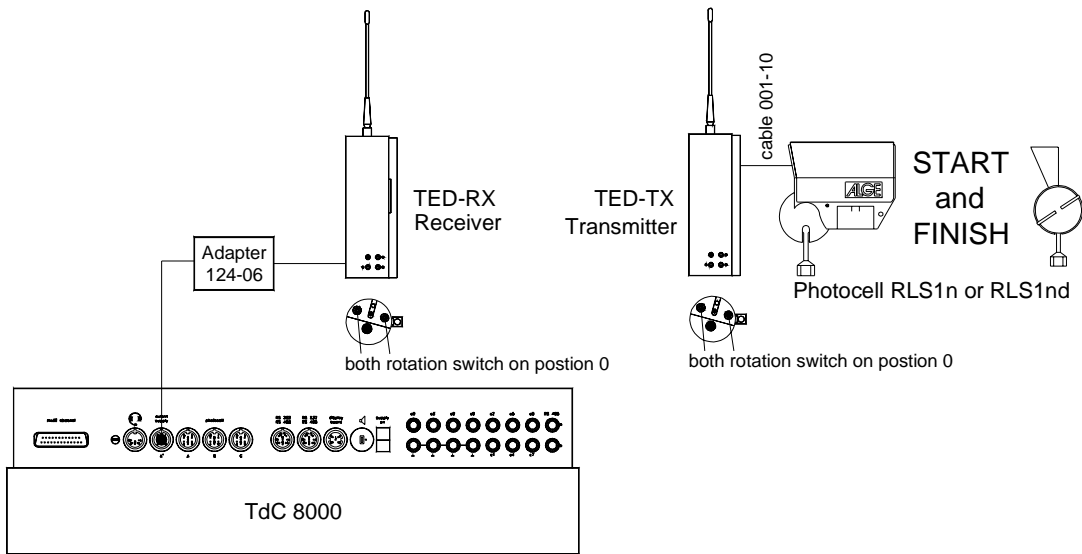
 **Display Board GAZ4:** For distances over 10 Meter you can use any 2-wire cable with banana plugs

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

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

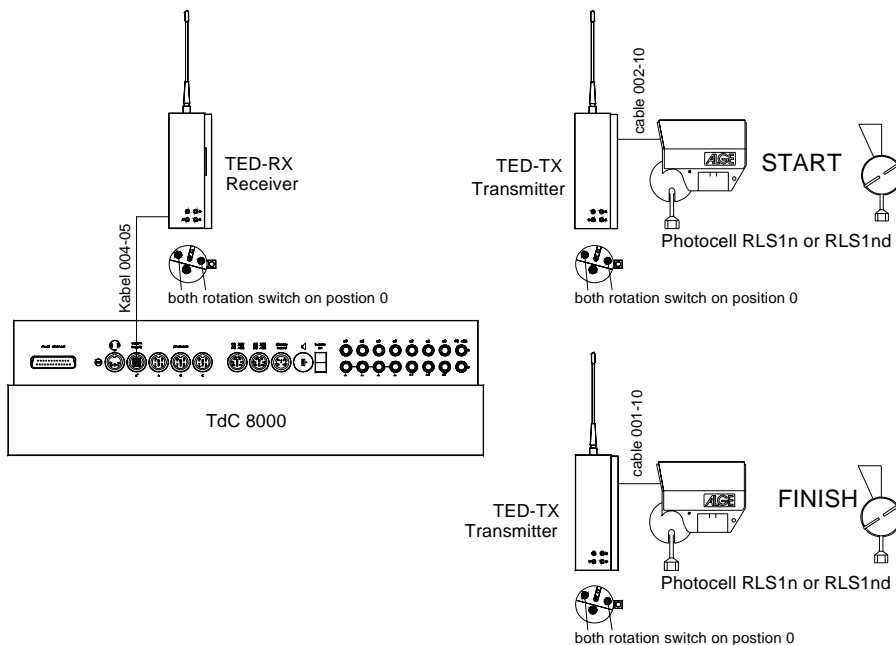
**☞ Start and Finish at the same place:**

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



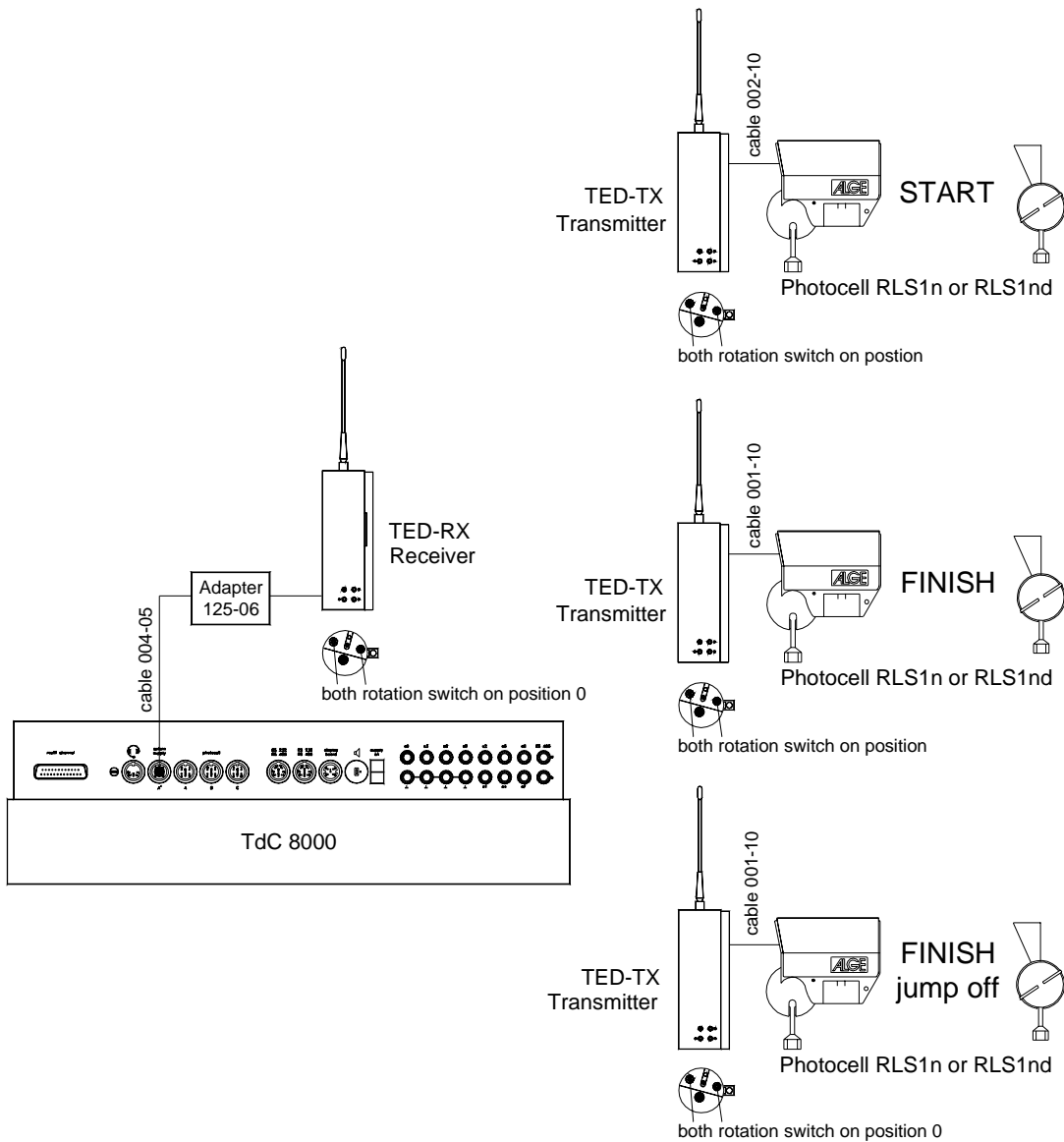
**☞ Start and Finish at different places:**

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 each photocell separate on and off you can use instead of cable 004-05 the adapter 125-06.








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

You need to have three different radio transmitter (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 each photocell separate on and off you can use instead of cable 004-05 the adapter 125-06.



## 2.4. Language selection

You can select the language of the TdC 8000 plus. The machine starts always with the last language that you selected.

-  **German:** when turning the device on press <1>
-  **English:** when turning the device on press <2>
-  **France:** when turning the device on press <3>
-  **Italian:** when turning the device on press <4>
-  **Spanish:** when turning the device on press <4>

### How to choose the English language

Before you turn the TdC 8000 plus on press key <2> (keyboard 15) and keep it pressed. Turn the device on. Release the <2> key when you can choose the program. From now on it will start the TdC 8000 with the English program version.

## 2.5. Memory

The memory function in the TdC 8000 is designed to allow you to have up to four races with the same number range. Therefore you could have a race for man with start numbers form 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 groups function should be used. Make sure that the organizing committee clearly lists the number range of the groups and how they should be run. The TdC 8000 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 on the spur of the moment.

The TdC 8000 has memory which will store approximately 18,000 times. Per race you can store a maximum of 9,999 times. Together race 1 and 2 have a capacity to store 9,999 times. For instance, if you have stored 1000 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 a total of 8067 times.

For each race a maximum of 256 heats (runs) can be stored. You can clear the memory each time you turn the TdC 8000 on, or if you change a race in the main menu.

For the actual heat the TdC 8000 always stores the start time (time of day), finish time (time of day), and run time, if you use the difference time mode. For the previous heat it always stores the memory time (total time from all previous heats).

#### *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**

- Race 1:** about 8,600 times, if race 2 has no data stored
- Race 2:** about 8,600 times, if race 1 has no data stored
- Race 3:** about 8,600 times, if race 4 has no data stored
- Race 4:** about 8,600 times, if race 3 has no data stored



## 2.5.2. Clear Memory

After turning the TdC 8000 on (switch 26) you have to select the program. Then you are asked if you want to clear the memory. The info-display (6) 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	
	943/ 6473 R4	F4	
Continue: ENTER			

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 (15). E.g.: If you clear race 1 and 3 it shows the following figures on the info-display (6):

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

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
	943/ 6473 R4	F4
Continue: ENTER		

Two numbers are shown for each race. The first number shows how much memory you have used, and the second how much memory you have available. For a cleared race it shows zero 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 (6):

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. From the difference between finish time and start time it calculates the run time.

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

*Advantage:* You can correct times.

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

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

## 2.8. Test-Function - Checking the TdC 8000

When you press <TEST> the Info-Display (6) 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 are monitored (line 4). If one channel blinks, it means that it has a short-circuit. For channel c0, c3 and c6 the voltage is shown.

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 reached 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 (6) 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 (23)). If the current reaches 1 A it switches the supply for the extender off.

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 8000 on (switch 26)
- Select the program
- Make the program ready for timing
- press <TEST> (keep it pressed)
- The info-display (6) shows the TdC 8000 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 plug 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 the Fall before the pedestals get covered with snow.

Please call your ALGE agent for assistance with wiring. They are able to consult with 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 be caused during a very long timing impulse or through a short-cut of the cable.

## 2.9. Synchronize Start

Synchronization between TdC 8000 and other timing devices is possible. You synchronize the TdC 8000 after you adjust the time before you start the timing.

Connect other timers through banana socket of channel c0 of the TdC 8000 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 make the synchronization:

- Synchronization from the internal clock
- Manual synchronization

Synchronization from the internal clock:

- Press <F1>
- Press <ENTER>
- The info-display (6) shows:

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

- At the next sharp minute the TdC 8000 gives the synchronise impulse through channel c0.
- At the synchronization it gives a beep form the TdC 8000.
- The time of day disappears in the info-display (6).
- The TdC 8000 is ready for timing.

Manual synchronization:

- Press <F2>
- Press <ENTER>
- The info-display (6) shows:

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

- Input (correct) the time of day with the finish keyboard (15) and confirm with <ENTER>.
- Input (correct) the date with the finish keyboard (15) 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 8000 is ready for timing.

## 3. Keyboard Functions

The keyboard of the TdC 8000 has three different blocks: - Start-keyboard (9)

- Finish-keyboard (15)
- Function-keyboard (14)

Because of the separated keyboard blocks it is possible for two persons to work on the TdC 8000 at the same time. One person can manage the start, the other the finish (and intermediate times). The display (2) works always together with the start-keyboard (9). The display (7) and (8) works always with the finish-keyboard (15).

The function-keyboard (14) works together with the start-keyboard or finish-keyboard. It shows the informations on the info-display (6)

### 3.2.1. Start-Keyboard



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



It clears the start time of the start number shown on display (2). (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 ?.

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 (2).



To edit the start time of the start number in the start display (2).  
If you press <MENU> and <INPUT> at the same time you get to start time input mode. You can input times individual or in intervals, etc.



Each start number that you input you must confirm with <ENTER>. Depending on the switch position of switch (1) the start number counts automatically up, down, or stays.

### 3.2.2. 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 (2). (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 (8).

To edit the finish time of the start number in the finish display (8).



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 must confirm with <ENTER>. Increment start number: - up: press <ENTER> down: press <ALT> and <ENTER> together

**3.2.3. Function-Keyboard (14)**



To confirm a YES/NO question



If you do not confirm 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 to use when you change 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 8000 (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

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

It goes always together with another key. You have to press first <MENU> and then the second key. Do not release <MENU> before you 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 (6) when the text is placed at the right side in line 1.

Function key 2: To select in a menu of the info-display (6) when the text is placed at the right side in line 2.

Function key 3: To select in a menu of the info-display (6) when the text is placed at the right side in line 3.

Function key 4: To select in a menu of the info-display (6) 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 on page 42).

## 4. SPECIAL FUNCTIONS

### 4.1. TEST - Checking the TdC 8000

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 8000 ignores each impulse of a selected channel (channel off)
- ☞ The TdC 8000 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 direct.

#### 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 (9).

*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 (9) together, the TdC 8000 will ignore all start impulses (channel 0). The TdC 8000 does not store or output this time.

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

#### 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 (15). 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 (15) together, the TdC 8000 will ignore all finish impulses (channel 1). The TdC 8000 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>.



### 4.2.3. Individual adjustment of the channels

You can adjust each channel individual. When you turn the TdC 8000 on and clear the memory you have always all channels active.

- If you press <MENU> and <BLOCK> together it shows the setting of each channel in the info-display (6).
- Select the channel with  $\phi$  and  $\pounds$  .
- 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 (6):*

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

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

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

Channels on (+)/off (-):	CHANGE	F1
+ + + - - $\pounds$ + + + +		
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 (9) clears the start time of the start number shown in the display (2).
- 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 (2). Then, press <ALT> and <CLEAR> on the start keyboard (9) together, it makes 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 (9) it is possible to edit the start time. The following editing is possible:

- over write a start time with keyboard (9)
- copy the start time of a start number to another start number (if a racer loses their original number).
- identify the correct start time from many recorded impulses.

##### Input functions:

- Press <INPUT> of the start keyboard (9)
- The info-display (6) 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  
over write the start  
number

- You can increment through the start list with the cursor keys (⌘ and ⌘) or over write the start number with the start keyboard (9).
- 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 F1
         c0015 C0  13:10:12.498
         ?0015 C0  13:17:28.938
```

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 over write the valid time (first line) with the numbers of the start keyboard (9) (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 (9) 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 instead of the start number the group number. You can change only the start time of the complete group, but not from a single competitor.

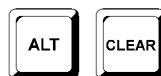
## 4.3.2. Editing of Finish Times

### 4.3.2.1. Clear Finish Times



- <CLEAR> of the finish keyboard (15) clears the finish time of the start number shown in display (8).
- The run time gets replaced by the running time in the finish display (7).
- 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

### 4.3.1.2. Restoring a Cleared Finish Time



- The correct start number must be shown in the finish display (8). Then, press <ALT> and <CLEAR> on the finish keyboard (15) together, it makes a valid time out of the cleared time.
- The finish display (7) 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 (15) it is can edit the finish time of the start number shown on the finish display (8).

- over write a finish time with keyboard (15)
- copy the finish time of a start number to another start number (if you fail to identify the racer correctly when he cross 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 (15)
- The info-display (6) 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 over write 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 (15).
- 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 over write the valid finish time (first line) with the numbers of the finish keyboard (15) (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 (15) 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



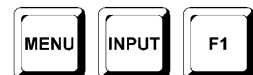
If you press <MENU> and <INPUT> of the finish keyboard (15) together you get into the menu to edit run times and finish times.

- Press <MENU> and <INPUT> at the same time.
- The info-display (6) shows the following:

Input times:	FINISH TIME<	F1	<F1> to change the run time
	RUN TIME	F2	
timeContinue: ENTER			<F2> to change the memory

- Select the time you want to change with <F1>, <F2> or ␣ and ␣.
- Changes are made like described in 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:

- over write a run time with keyboard (15)
- 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 (6) shows the valid finish time of the start number shown in the finish display (2):

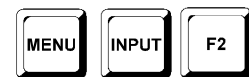
Input:	001 <u>5</u> C1	10:01:35.139	NEW No	F1	e.g. start number 15
			DISQU.	F2	

- You can change the start number with the cursor keys (␣ and ␣) or input the start number with the finish keyboard (15).
- Confirm the start number with <ENTER>
- If you have already different times for this start number it show the following::

Input:	0015 C1	<u>1</u> 0:01:35.139	NEW No	F1	valid finish time
	c0015 C1	<u>1</u> 0:01:28.143	DISQU.	F2	
	c0015 C1	<u>1</u> 0:01:28.163			

- You can over write the valid run time with the numbers of the finish keyboard (15) (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 (15) 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:

- over write a run time with keyboard (15)
- 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 (6) shows the valid run time of the start number shown in the finish display (8):

Input:	001 <u>5</u> 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 (15).
- Confirm the start number with <ENTER>
- The cursor is now on the first digit of the time:

Input :	0015 RT	000055.446<	NEW No F1	valid finish
	0015 RT	000048.143	DISQU. F2	
	0015 RT	000063.941		

- You can over write the valid run time with the finish keyboard (15) (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 (15) 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 over write the valid intermediate time with the finish keyboard (15) (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 (15) 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 that 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 select the protocol in the classement you can select with the cursor keys also the protocol and press <ENTER>.

#### 4.6. PRINT - Switching the Printer off or on

When you switch TdC 8000 on it activates the printer automatically. After you 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 8000 on.

**Buffer-Mode:** All data for the printer are 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 are 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 8000 is a very universal timing device. To cover a wide range of timing solutions it is possible to adjust each program individual. 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 8000 off (switch 26)
- press <ALT> and <MENU> together and keep it pressed
- turn TdC 8000 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 (15) you can select a menu direct.
- 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 3:	Seconds Mode = OFF	Adjustable: ON or OFF
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 = 0	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 37:	Time Violation 1 = 0.25	Adjustable: 0 to 99.99
Menu 38:	Time Violation 2 = 1	Adjustable: 0 to 99.99
Menu 39:	Parcour Time 1 = 000.00	Adjustable: 0 to 999.99
Menu 40:	Parcour 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 = 1 min.	Adjustable: 0 to 23:59:59.99 or 0 to 6399.99
Menu 44:	Count Down Time 2 = 1 min.	Adjustable: 0 to 23:59:59.99 or 0 to 6399.99
Menu 45:	D-Board Count Down = ON	Adjustable: ON or OFF



## Start Delay Time:

**Menu 1: DELAY TIME START = 1.00 s**

You can adjust the start delay time between 0.00 to 9.99 seconds.

To input the start delay time use the finish keyboard (15). Confirm the adjusted time with <ENTER>.

*Pre adjusted value: 1,00 s*

```
Menu 1: DELAY TIME START = 1.00 s
```

input delay time

```
Save with: ENTER
```

confirm delay time with  
<ENTER>

## Finish Delay Time:

**Menu 2: DELAY TIME FINISH = 0,30 s**

You can adjust the finish delay time between 0.00 and 9,99 seconds.

To input the finish delay time use the finish keyboard (15). Confirm the adjusted time with <ENTER>.

*Pre adjusted value: 0,30 s*

```
Menu 2: DELAY TIME FINISH = 0.30 s
```

input delay time

```
Save with: ENTER
```

confirm delay time with  
<ENTER>

## Seconds Mode

**Menu 3: SECONDS MODE = OFF**

Normally is the seconds mode off. If you use the seconds mode you have no minutes. This means the clock jumps at 60 seconds not to 1 minute, but continues to count 61, 62, 63, etc. This mode is necessary for some sports.

```
Menu 3: SECONDS MODE
```

```
ON
```

F1 Seconds mode activated

```
OFF<
```

F2 Normal time

```
Save with: ENTER
```

*Pre adjusted value:* Seconds mode off

## Running Tenth:

**Menu 9: Running Tenth = ON**

The finish display (7) and the interface "display board" (24) can output the running tenth second (the ALGE-display-board cannot show the running tenth second). The running tenth second is important to feed a video generator (for TV).

on = <F1> running tenth second is on

off = <F2> running tenth second is off

```
Menu 9: RUNNING TENTH
```

```
ON
```

F1

running tenth is on

```
OFF<
```

F2

running tenth is off

```
Save with: ENTER confirm with <ENTER>
```

*Pre adjusted value:* running tenth seconds are on

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

For each run time (or total time) it shows the rank on display (7) and on the display board. It shows the rank as long as you have the display time adjusted (see menu 4).

Menu 11: FINISH RANK	ON<	F1	shows rank
	OFF	F2	no rank shown
Save 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 it prints the new adjustment (e.g. during the switch on procedure). If you select "PRINT MENUS = OFF" it will not print the menu adjustments. Also changes made in the main menu wont be printed.

on = <F1> it prints the menu adjustments  
off = <F2> it does not print the menus adjustments

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**

The printer can print after each paragraph linefeed (e.g. two linefeed to have the printed lines above the cutter). You can adjust between 1 and 9 linefeeds. If you use zero (ALGE adjustment) it prints in every line.

Menu 16: PRINTER LINEFEED = <u>0</u>		input amount of linefeed
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 (23): 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**

The RS 232 interface (23) outputs always in the difference-timing mode the time of day. Additional 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 CHANNEL 2 = OFF**

You can adjust the channel 2 of the display board interface (24). 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°.

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

RUNNING = <F1> running time and classement  
STANDING = <F2> run time and classement

*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 8000 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 8000 off to switch form 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.

## Change Race Race:

## Menu 25: CHANGE RACE

You do not have to turn the TdC 8000 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 8000 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	88888888	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>.

**88888888** 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
        Penalty Time = 02.00
```

Adjusted penalty points  
Preadjusted 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 = 0,25**

You can adjust the penalty points for time violation. The adjustment is between 0.00 and 99.99 possible. The penalty points are added for each started second time violation. Normally it is a 0.25 time violation for standard show jumping.

```
Menu 37: TIME VIOLATION 1 = 00.25
```

Adjusted time penalty

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre adjusted value:* 0,25 points

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

You can adjust the penalty points for time violation. The adjustment is between 0.00 and 99.99 possible. The penalty points for jump off are added for each started second time violation. Normally it is a 1 point time violation for standard show jumping.

```
Menu 38: TIME VIOLATION 2 = 01.00
```

Adjusted time penalty

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre adjusted value:* 1.00 points

**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 <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 (7) 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 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 (7) 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

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 1 = 00:01:00.00

You can input the countdown time for carving or show jumping. The time is adjustable between 0 and 23:59:59.99 for carving and 0 and 6399.99 seconds for show jumping.

```
Menu 43: Count Down Time 1 = 00:01:00.00
         Automatic Start = ON

Save with: ENTER
```

input the countdown time  
ON or OFF

Confirm with <ENTER>

*Pre adjusted value:*Count Down Time 1 = 60 seconds (Show Jumping)  
Automatic Start = ON

**Count Down Time 2:**

**Menu 44: Count Down Time 2 = 00:01:00.00**

You can input the countdown time for the second stage of show jumping. The time is adjustable between 0 and 6399.99 seconds.

```
Menu 44: Count Down Time 2 = 000030.00
          Automatic Start = ON

Save with: ENTER
```

input the countdown time  
ON or OFF

Confirm with <ENTER>

*Pre adjusted value:*Count Down Time 2 = 30 seconds (Show Jumping)  
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

**Timeout-Signal**

**Menu 46 Timeoutsignal= ON**

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

```
MENU 46: TIMEOUTSIGNAL = ON          ON<
                                          OFF

Save with:: ENTER
```

On or off

Save and exit with <ENTER>

*Pre adjusted value::* TIMEOUTSIGNAL = ON

**Add PTO imediately**

**Menu 47: Add PTO imediately**

If you turn on this function the Penalty-Time will be added imediately to the running-time.

```
Menu 47: add PTO imediately          EIN<
                                          AUS

Save: ENTER
```

EIN oder AUS

Save and exit with <ENTER>

*Pre adjusted value::* add PTO imediately = OFF

Against the FEI Rules you have to show the runtime without any Penaltyseconds. The penaltyseconds will be added after you press F3!

To make it more exciting for the public we reccomend to work with this setting ON.

## 6. PROGRAMS

The TdC 8000 has a very flexible software that suits for most timing problems.

To can select between the programs when you turn the TdC 8000 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 (6) press <ENTER>.

You can also input the program number direct with the finish keyboard (15). Confirm the number with <ENTER>.

**You can select the following programs:**

Program	Prog. Number	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-Channel-Timer</b>	Program 10	--
10-Kanal Timer 1	Program 101	--
10 Kanal Timer 2	Program 102	--
<b>Pferdesport</b>	Program 11	41
Standard Jumping A1	Program 111	43
Standard Jumping A2	Program 112	49
Standard Jumping AM3	Program 113	49
Standard Jumping AM4	Program 114	50
Standard Jumping AM5	Program 115	51
Standard Jumping AM6	Program 116	51
Standard Jumping AM7	Program 117	52
Standard Jumping AM8	Program 118	52
Standard Jumping AM9	Program 119	
Points Jumping 1	Program 120	
Points Jumping 2	Program 121	
Points Jumping 3	Program 122	
Time Jumping C	Program 123	53
Zwei-Phasen Jumping	Program 124	60
Amerik. Stechen F	Program 125	68
Amerik. Stechen / Time	Program 126	76
Standard/Time 1	Program 127	84
Standard/Time 2	Program 128	
Team Jumping 1	Program 129	
Team Jumping 2	Program 130	
Team Jumping 3	Program 131	
Team Jumping 4	Program 132	
<b>Bicycling</b>	Program 14	--
Road	Program 141	--
<b>Agylity</b>	Program 15	--
Prüfung	Program 151	--
Spiele	Program 152	--
<b>TdC Test</b>	Program 16	--



## 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>Show Jumping Table A1:</b> Program 111	<ul style="list-style-type: none"> <li>☞ Stage: ranking by points</li> <li>☞ no jump off</li> </ul>
<b>Show Jumping Table A2:</b> Program 112	<ul style="list-style-type: none"> <li>☞ Stage: ranking by points and time</li> <li>☞ no jump off</li> </ul>
<b>Show Jumping Table AM3:</b> Program 113	<ul style="list-style-type: none"> <li>☞ Stage: ranking by points</li> <li>☞ Jump off: ranking by points and time</li> </ul>
<b>Show Jumping Table AM4:</b> Program 114	<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>Show Jumping Table AM5:</b> Program 115	<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>Show Jumping Table AM6:</b> Program 116	<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>Show Jumping Table AM7:</b> Program 117	<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>Show Jumping Table AM8:</b> Program 118	<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>Show Jumping Table AM9:</b> Program 119	<ul style="list-style-type: none"> <li>☞ Stage: ranking by total points and totaltime</li> <li>☞ Stage 1: ranking by points and time</li> <li>☞ stage 2: ranking by points and time</li> </ul>
<b>Points Jumping B1:</b> Program 120	<ul style="list-style-type: none"> <li>☞ Stage: standard points-jumping</li> <li>☞ ranking by points and time, no timelimit!</li> <li>☞ no jump-off</li> </ul>
<b>Points Jumping B2:</b> Program 121	<ul style="list-style-type: none"> <li>☞ Stage: points-jumping, ranking by points and time after expired parcourtime the horn will beep!</li> <li>☞ no jump-off</li> </ul>
<b>Points Jumping B3:</b> Program 122	<ul style="list-style-type: none"> <li>☞ Stage: points-jumping, ranking by points and time</li> <li>☞ time-penalties will be added after expired parcour-time</li> <li>☞ Jump off : ranking by points and time</li> </ul>
<b>Show Jumping – Table C:</b> Program 123	<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>



## Setup of the Timing-System

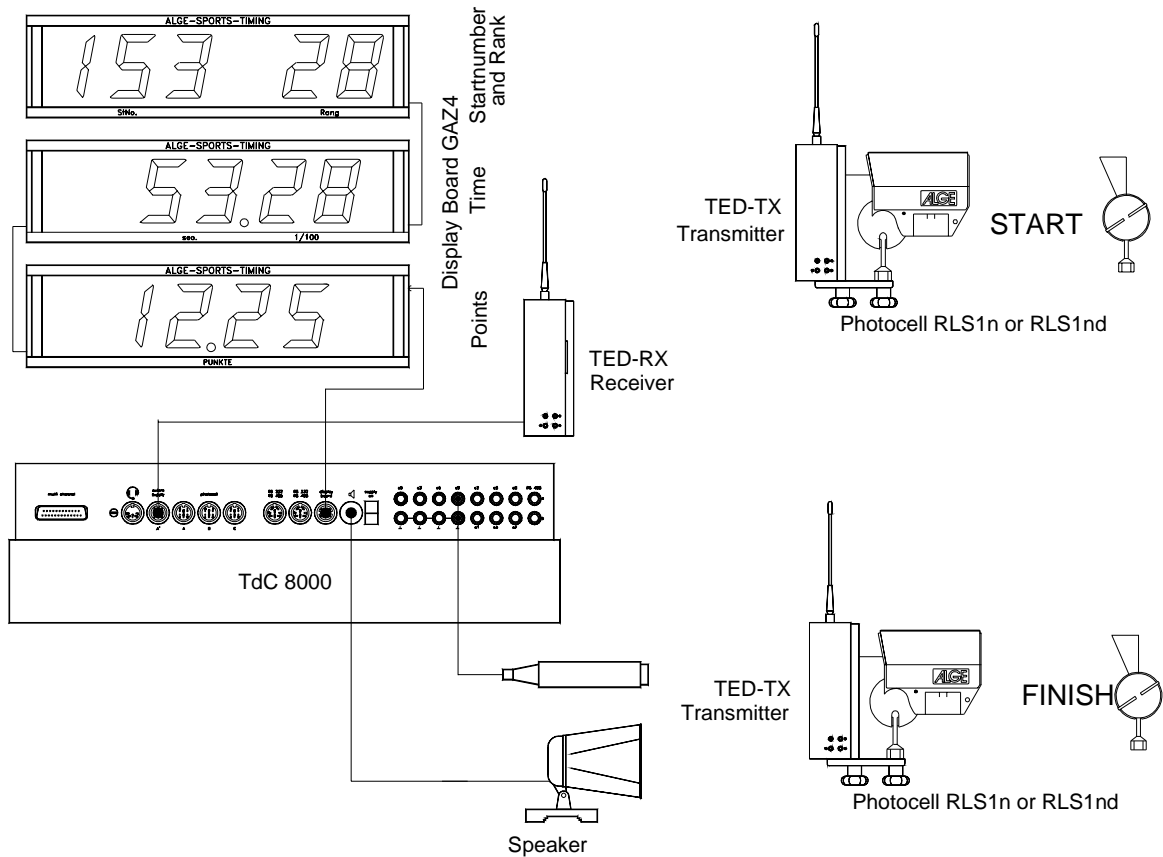
At most equestrian tournaments you must move the photocells for start and finish for the different competitions. This happens some times during the day and must be fast. Of course it makes it very difficult to lay cables. With cables you must be very carefully, that no horse or rider hurts himself and 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:

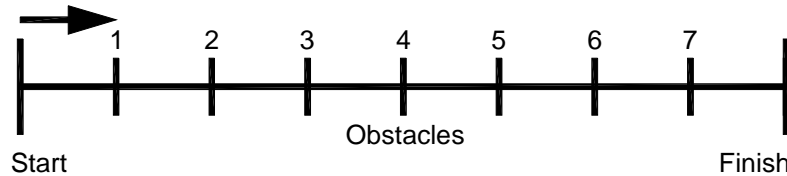
You can make a Classement for show jumping. For competitions with a jump off you can print after the standard parcours only the competitors of the jump off. Therefore it is important, that you print the also a classement after the standard parcours. In the classement before the jump off you have always all competitors on the first rank that reach the jump off (nor penalty points).

## Example for the setup at the equestrian competition:



## 6.1.1. Standard Show Jumping Table A1:

Program 111



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

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

### Adjustment:

- Switch TdC 8000 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 8000 (with time of day and other timing devices)
- press <F1> if the finish display (7) shows the correct time of day
- wait until TdC 8000 gives at the next full minute the synchronize signal to external devices (you are now ready for timing)
- press <F2> if the finish display (7) 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, 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 (9)
- Confirm with <ENTER>
- The start-display (2) must show the correct start number
- Display (7) must show the correct countdown time (e.g. 60 seconds)
- Display (8) 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 (7) 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 (9), 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 8000.

Press <ALT> and <MENU> at the same time to open the main menu. If can get direct into the needed sub menu by input of the menu number with keyboard (15) 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. The penalty points are added for each started second time violation. Normally it is a 0.25 time violation for standard show jumping.

Menu 37: TIME VIOLATION 1 = 00.25
Save with: ENTER

Adjusted time penalty

Save and exit with <ENTER>

*Pre adjusted value:* 0,25 points

## 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 <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 (7) 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 <ENTER>

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

## Count Down Time 1: Menu 43

**Count Down Time 1 = 000060.00**

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 = 000060.00
          AUTOMATIK START = ON
```

Input count down time  
Auto-Start after expired countdown

```
Save with:: ENTER
```

Save and exit with <ENTER>

*Pre adjusted value::* Count Down Time = 60 seconds  
Automatik 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
```

output on display board  
no output on display board

```
Save with:: ENTER
```

Save and exit with <ENTER>

*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::* Count Down Time = 60 seconds  
Automatik Start = 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

## 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

### 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 (7) must stop.
- ☞ The pointer must point to the penalty seconds (right field of display 8).
- ☞ Input penalty seconds with keyboard (15).
- ☞ 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 (7) 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 (6). 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.

<b>Function of the keyboard:</b>	<b>Keyboard 9 and 14</b>	<b>Keyboard 15 and 14</b>
clear Start Time	CLEAR	
recall last cleared Start Time	ALT + CLEAR	
clear Finish Time		CLEAR
recall last cleared Finish Time		ALT + CLEAR
block Start Time	BLOCK	
Ignore Start Time	ALT + BLOCK	
block Finish Time		BLOCK
ignore Finish Time		ALT + BLOCK
manipulate Start Time	INPUT	
manipulate Finish Time		INPUT
manipulate Penalty Points		Points, than INPUT
manipulate Penalty Time		Time, than INPUT

**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 24:	Change Parcour		
Menu 2:	Delay Time Finish	=	0.3 s	Menu 25:	Change Race		
Menu 3:	Seconds Mode	=	OFF	Menu 26:	D-Board-Test	=	OFF
Menu 9:	Running Tenth	=	OFF	Menu 36:	Penalty Points	=	04.00
Menu 11:	Finish Rank	=	ON	Menu 37:	Time Violation 1	=	00.25
Menu 15:	Print Menus	=	ON	Menu 39:	Parcour Time 1	=	000.00
Menu 16:	Printer Linefeed	=	0	Menu 41:	Block Time 1	=	000.00
Menu 17:	RS-232 Baudrate	=	9600 Baud	Menu 43:	Count Down Time	=	060.00
Menu 18:	RS-232 Run Time	=	off		Automatik Start	=	ON
Menu 19:	D-Board Baudrate	=	2400 Baud	Menu 45:	D-Board C. Down	=	ON
Menu 20:	D-Board Chan. 2	=	standing	Menu 50:	Add Imediate	=	OFF
Menu 21:	Beep	=	on				

## Info-display:

The Info-display (6) 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
-----
      RTT      66.74
      TP     10.25
  
```

Start of countdown  
 Start of rider 21.85 seconds before the countdown ends  
 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

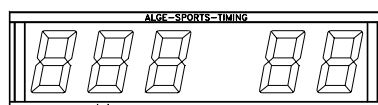
Total penalty seconds  
 Penalty points from time violation  
 Penalty points for obstacle drop

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 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:

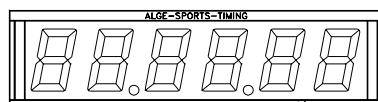


thumb wheel switch  
at 1



toggle switch  
upper position

Run Time and  
Running Time:

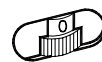
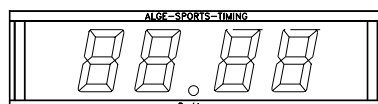


thumb wheel switch  
at 0



toggle switch  
middle position

Penalty Points:



thumb wheel switch  
at 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
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
xNNNNxRTTxxxxSSSSSS.zh(CR)	run time including penalty time
xNNNNxPxxxxxxxx+pp.pp(CR)	penalty points for obstacle drop
iNNNNxPxxxxxxxxpp.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 (8)

**RS 485 Interface:** no function

## 6.1.2. Standard Show Jumping Table A2:

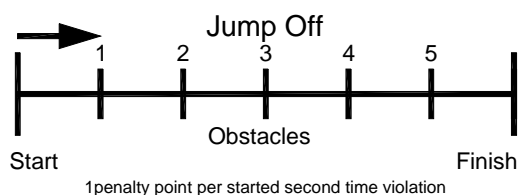
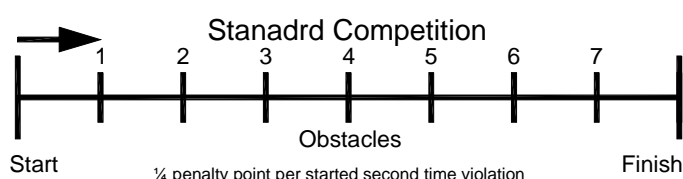
Program 112



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

To operate this program see page 42, 6.1.1. Standard Show Jumping A1

## 6.1.3. Standard Show Jumping Table AM3:

Program 113



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.

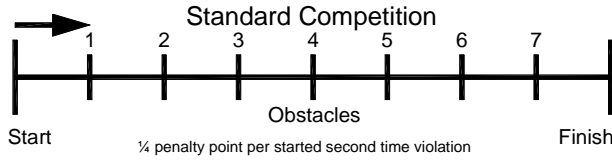
- The info display (6) shows the following:

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.
- Leaf the menu with <NO> after you made all changes.
- Continue to work as in the standard competition.

**6.1.4. Standard Show Jumping Table AM4:**

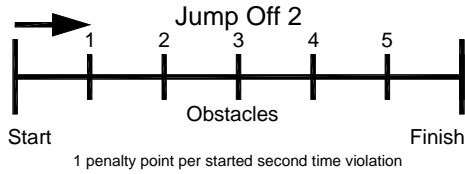
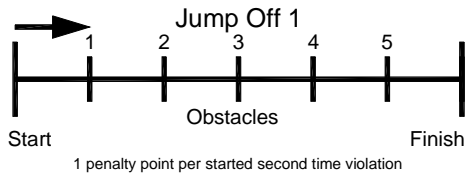
**Program 114**



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

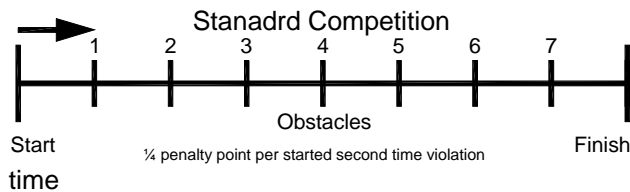
To operate the standard competition see page 42, 6.1.1. Standard Show Jumping A1.

To operate the jump offs see page 50, 6.1.3. Standard Show Jumping AM3.



**6.1.5. Standard Show Jumping Table AM5:**

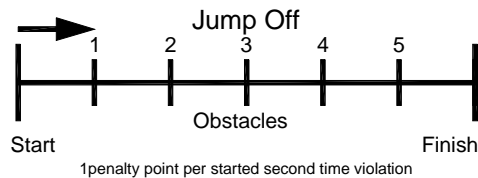
**Program 115**



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

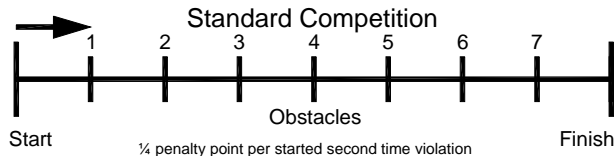
To operate the standard competition see page 42, 6.1.1. Standard Show Jumping A1.

To operate the jump off see page 50, 6.1.3. Standard Show Jumping AM3.

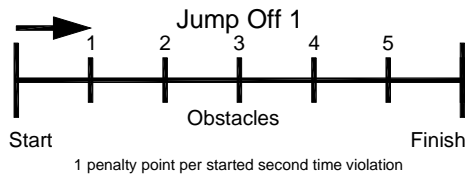


## 6.1.6. Standard Show Jumping Table AM6:

Program 116

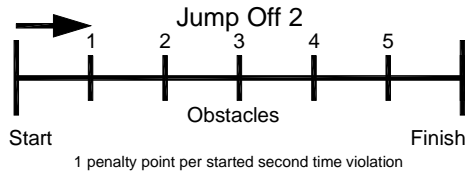


- ☞ Stage: ranking by points and time
- ☞ Jump off 1: ranking by points and time
- ☞ Jump off 2: ranking by points and time



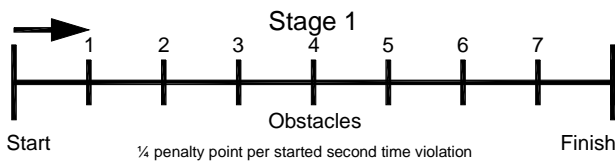
To operate the standard competition see page 42, 6.1.1. Standard Show Jumping A1.

To operate the jump offs see page 50, 6.1.3. Standard Show Jumping AM3.

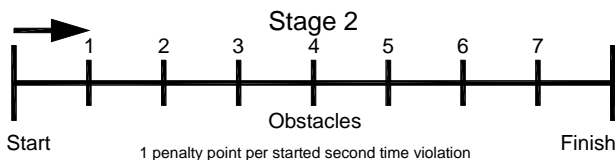


## 6.1.7. Standard Show Jumping Table AM7:

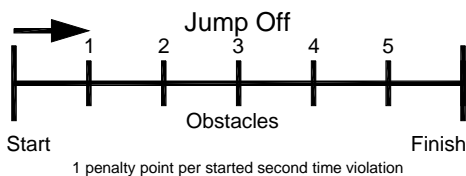
Program 117



- ☞ 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



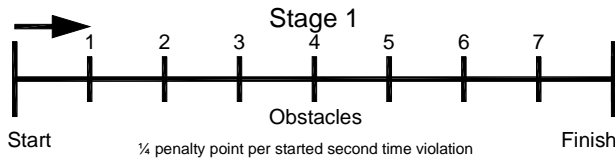
To operate stage 1 and 2 see page 42, 6.1.1. Standard Show Jumping A1.  
In order to get from stage 1 to stage 2 do the same as if you change to the jump off.



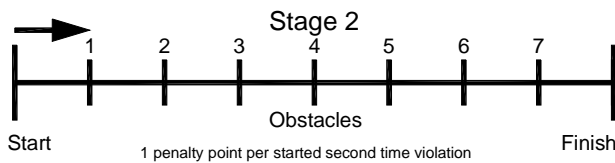
To operate the jump offs see page 50, 6.1.3. Standard Show Jumping AM3.

**6.1.8. Standard Show Jumping Table AM8:**

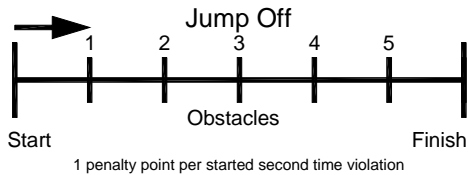
**Program 118**



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



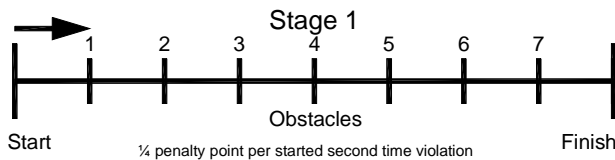
To operate stage 1 and 2 see page 42, 6.1.1. Standard Show Jumping A1. In order to get from stage 1 to stage 2 do the same as if you change to the jump off.



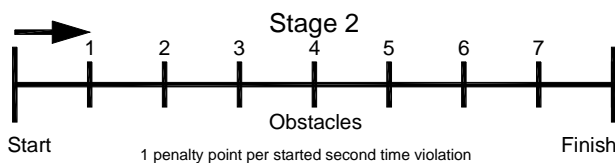
To operate the jump offs see page 50, 6.1.3. Standard Show Jumping AM3.

**6.1.8. Standard Show Jumping Table AM9:**

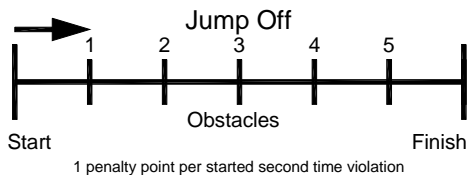
**Program 119**



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



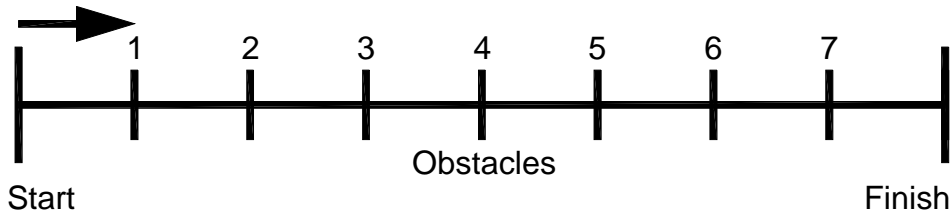
To operate stage 1 and 2 see page 42, 6.1.1. Standard Show Jumping A1. In order to get from stage 1 to stage 2 do the same as if you change to the jump off.



To operate the jump offs see page 50, 6.1.3. Standard Show Jumping

**6.1.10. Points jumping (B1)**

**Programm 120**

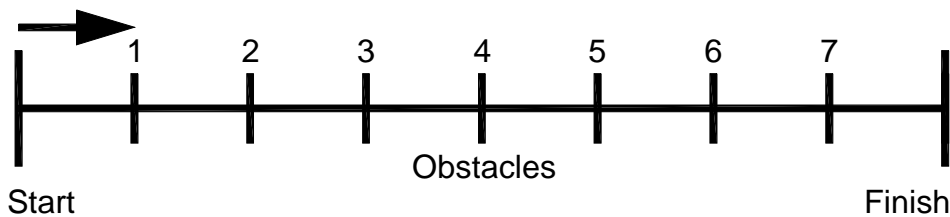


- ☞ The rider get the designated amount of points for any faultless obstacle.  
Dropped Obstacles are zero points
- ☞ Stage: against Time and Points

For operationinstructions see Point 5.1.1 Standardjumping A1.

**6.1.11. Points jumping (B2) with allowed Parcourtime**

**Programm 121**



- ☞ 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

For operationinstructions see Point 5.1.1 Standardjumping A1.

**6.1.12. Points jumping (B3) with Jumpoff**

**Programm 122**

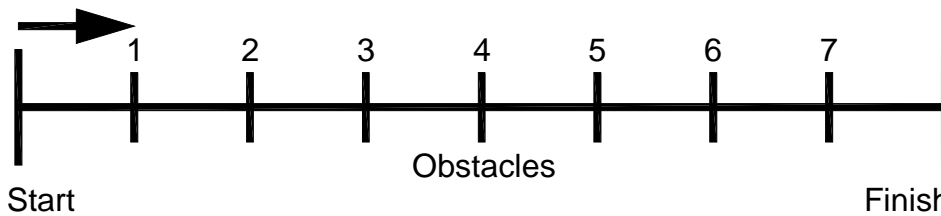
- ☞ The rider get the designated amount of points for any faultless obstacle.  
Dropped Obstacles are zero points without Time-Penalties
- ☞ Stage: against Time and Points
- ☞ Jumpoff: Against Table A2

For operationinstructions see Point 5.1.1 Standardjumping A1.  
For operationinstructions see Point 5.1.3 Standardjumping AM3



**6.1.9. Table C - Time Penalty Jumping (Bareme C):**

**Program 120**



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

**Adjustment:**

- Switch TdC 8000 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 8000 (with time of day and other timing devices)
- press <F1> if the finish display (7) shows the correct time of day
- wait until TdC 8000 gives at the next full minute the synchronize signal to external devices (you are now ready for timing)
- press <F2> if the finish display (7) 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 (9) (#1)
- Press <ENTER>
- The start-display (2) must show the correct start number
- Display (7) must show the correct countdown time (e.g. 60 seconds)
- Display (8) 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 (7) 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 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 (9), 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 8000.

Press <ALT> and <MENU> at the same time to open the main menu. If can get direct into the any sub menu by input of the menu number with keyboard (15) 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
Save with: ENTER
```

Adjusted penalty seconds

Save and exit with <ENTER>

*Pre adjusted value:* 4 seconds

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

You can adjust the penalty seconds for time violation. The adjustment is between 0 and 99 possible. The penalty seconds are added for each started second time violation. Normally time violation it is 1 second.

```
Menu 37: TIME VIOLATION 1 = 01
Save with: ENTER
```

Adjusted time penalty

Save and exit with <ENTER>

*Pre adjusted value:* 1 second

## 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 (7) 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 = 000060.00

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 = 000060.00
          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 = 60 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 Save and exit with <ENTER>
```

output on display board  
no output on display board

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

## 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 (8)). 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 (8)). 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 (8)). 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 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 (7) must stop.
- ☞ The pointer must point to the penalty seconds (right field of display 8).
- ☞ Input penalty seconds with keyboard (15).
- ☞ 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 (7) 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 finish.

## 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 finish. When you press the <F3> key it adds all up and prints the total time.

### Function of the keyboard:

	Keyboard 9 and 14	Keyboard 15 and 14
clear Start Time	CLEAR	
recall last Start Time that was cleared	ALT + CLEAR	
clear Finish Time		CLEAR
recall last Finish Time that was cleared		ALT + CLEAR
block Start Time	BLOCK	
ignore Start Time	ALT + BLOCK	
block Finish Time		BLOCK
ignore Finish Time		ALT + BLOCK
manipulate Start Time	INPUT	
manipulate Finish Time		INPUT
manipulate Penalty Time (obstacle drop)		Points, then INPUT
manipulate Penalty Time (obstacle set up)		Points, then INPUT

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: Delaytime Start	= 1.0 sec.	Menü 25: Change Race	
Menu 2: Delaytime Ziel	= 0.3 sec.	Menü 26: D-Board-Test	= OFF
Menu 3: Secondmode	= OFF	Menü 36: Penalty	= 04.00
Menu 9: Running Tenth	= OFF	Menü 37: Time Violation1	= 01
Menu 11: Runtime Rank	= ON	Menü 39: Parcourtime 1	= 000.00
Menu 15: Print Menu	= ON	Menü 41: Blocktime 1	= 000.00
Menu 16: Line Feed	= 0	Menü 43: Count Down Time 1	= 000060.00
Menu 17: RS-232 Baudrate	= 9600 Baud	Automatic Start	= ON
Menu 18: RS-232 Runtime	= OFF	Menü 45: D-Board Count Down	= ON
Menu 19: D-Board Baudrate	= 2400 Baud	Menü 46: Timeoutsignal	= ON
Menu 20: D-Board Chan. 2	= running	Menü 47: add PTM imediate	= OFF
Menu 21: Sound	= ON		

### Info-display:

The Info-display (6) 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

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

### Printer: Printing examples

#### Start of countdown

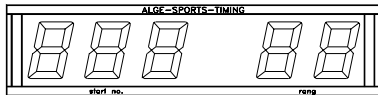


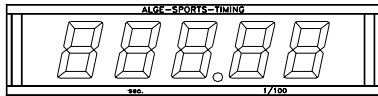


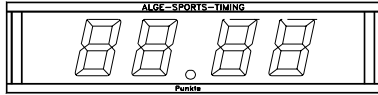


0001	C9	11:02:43.7845
	CD	26.16
	ST	11:03:17.6226
	PS	+ 5.00
	C9	11:03:43.8243
	TO	26.20
	PTO	+6.00
	C9	11:03:57.7907
	PS	+ 5.00
	RT	11:04:22.0790
	RT	56.49
-----		
	PSTM	5.00
	PPS	10.00
	PTO	6.00
-----		
	RTT	71.49

Start of rider 26.16 seconds before the countdown ends

- Start Time
- 5 penalty seconds for obstacle drop
- Start of time-out
- Time-out after 26.20 seconds run time
- 6 penalty seconds for obstacle set up (added immediately to run time)
- End of time-out
- 5 penalty seconds for obstacle drop
- Finish Time
- Run Time including penalty seconds for obstacle setup
  
- Penalty seconds for time violation
- Penalty seconds for obstacle drop
- Penalty seconds for obstacle set up
  
- 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 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).

<p><i>Start number / Rank:</i></p>		 thumb wheel switch on 1	 toggle switch upper position
<p><i>Run Time and Running Time:</i></p>		 thumb wheel switch on 0	 toggle switch middle position
<p><i>Penalty Seconds:</i></p>		 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
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
xNNNNxPSxxxxxxxx+tt.tt ( CR )	penalty time for obstacle drop
iNNNNxPSxxxxxxxx+tt.tt ( CR )	correction of penalty time for obstacle drop
xNNNNxPSTMxxxxxxxx+tt.tt ( CR )	penalty seconds from time violation
xNNNNxPPSxxxxxxxx+tt.tt ( CR )	total penalty seconds (barrier drop and time violation)
xNNNNxPTOxxxxxxxx+tt.tt ( CR )	penalty seconds for obstacle setup
iNNNNxPTOxxxxxxxx+tt.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

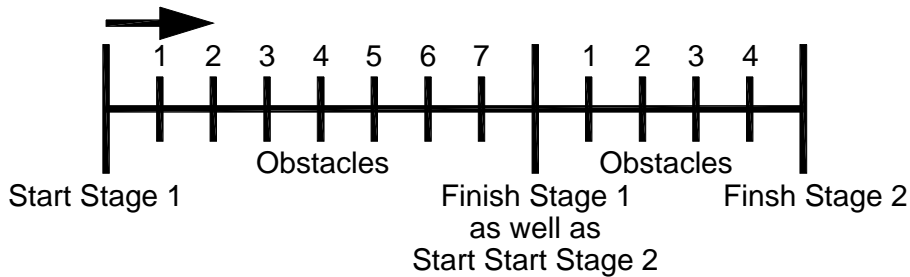
**The following characters could be the first digit:**

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 (8)

**RS 485 Interface:                    no function**

**6.1.10. Two Stage Show Jumping:**

**Program 121**



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: ¼ penalty point per started second time violence
- Stage 2: 1 penalty point per started second time violence

**Adjustment:**

- Switch TdC 8000 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 8000 (with time of day and other timing devices)
- press <F1> if the finish display (7) shows the correct time of day
- wait until TdC 8000 gives at the next full minute the synchronize signal to external devices (you are now ready for timing)
- press <F2> if the finish display (7) 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, 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 (9) (#1)
- Press <ENTER>
- Display (2) must show the correct start number
- Display (7) must show the correct countdown time (e.g. 60 seconds)
- Display (8) 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 (7) 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 (9), 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 8000.

Press <ALT> and <MENU> at the same time to open the main menu. If can get direct into the needed sub menu by input of the menu number with keyboard (15) 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 = 0,25

You can adjust the penalty points for time violation. The adjustment is between 0.00 and 99.99 possible. The penalty points are added for each started second time violation. Normally it is a 0.25 time violation for standard show jumping.

```
Menu 37: TIME VIOLATION 1 = 00.25
```

Adjusted time penalty

```
Save with: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre adjusted value:* 0,25 points

## Time Violation 2: Menu 38 Time Violation = 1,00

You can adjust the penalty points for time violation of stage 2. The adjustment is between 0.00 and 99.99 possible. The penalty points are added for each started second time violation. Normally it is a 1 point time violation.

```
Menu 38: TIME VIOLATION 2 = 01.00
```

Adjusted time penalty

```
Save with: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre adjusted value:* 1.00 points

## 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 &lt;ENTER&gt;

*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 &lt;ENTER&gt;

*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 (7) 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 (7) 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 = 000060.00**

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 = 000060.00
        AUTOMATIC START = EIN
```

Input count down time  
Automaticstart ON or OFF

```
Save with:: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre adjusted value::* Count Down Time = 60 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

## TIMEOUTSIGNAL = EIN

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

Menü 46:            TIMEOUTSIGNAL	ON <
	OFF
Save with:: ENTER	

ON or OFF

Save and exit with <ENTER>

*Pre adjusted value::*    Timeoutsignal ON

## PTO sofort addierent:       Menü 47

## PTO sofort addieren = AUS

For the Scoreboard you can add the PTO immediately.  
This is more exciting for the public!  
Attention! The FEI want to show always the pure runtime!

Menü 47:            add PTO immediate	ON <
	OFF
Save with:: ENTER	

ON or OFF

Save and exit with <ENTER>

*Pre adjusted value:*    Add PTO immediate is OFF

### Input of penalty points:

*Pre-adjusted value:* The pointer between the penalty points and penalty seconds must point to the

penalty points (display (8), 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 (8), 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 (8), 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 (7) must stop.
- + The pointer must point to the penalty seconds (right field of display 8).
- + Input penalty seconds with keyboard (15).
- + 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 (7) 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 (6). 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:	Keyboard 9 and 14	Keyboard 15 and 14
clear Start Time	CLEAR	
recall last Start Time that was cleared	ALT + CLEAR	
clear Finish Time		CLEAR
recall last Finish Time that was cleared		ALT + CLEAR
block Start Time	BLOCK	
Ignore Start Time	ALT + BLOCK	
block Finish Time		BLOCK
ignore Finish Time	ALT + BLOCK	
manipulate Start Time	INPUT	
manipulate Finish Time		INPUT
manipulate Penalty Points		Points, than INPUT
manipulate Penalty Time		Time, than INPUT

**Timing Channels:** c0 = Start Channel      c2 to c8 ... no function  
 Version: E-01-08-08      c1 = Finish Channel      c9 = Countdown and Time-out

ALGE adjustments for the main menu:

Menu 1: Delaytime Start	= 1.0 sec.	Menü 25: Change Race	
Menu 2: Delaytime Ziel	= 0.3 sec.	Menü 26: D-Board-Test	= OFF
Menu 3: Secondmode	= OFF	Menü 36: Penalty	= 04.00
Menu 9: Running Tenth	= OFF	Menü 37: Time Violation1	= 01
Menu 11: Runtime Rank	= ON	Menü 39: Parcourtime 1	= 000.00
Menu 15: Print Menu	= ON	Menü 41: Blocktime 1	= 000.00
Menu 16: Line Feed	= 0	Menü 43: Count Down Time 1	= 000060.00
Menu 17: RS-232 Baudrate	= 9600 Baud	Automatic Start	= ON
Menu 18: RS-232 Runtime	= OFF	Menü 45: D-Board Count Down	= ON
Menu 19: D-Board Baudrate	= 2400 Baud	Menü 46: Timeoutsignal	= ON
Menu 20: D-Board Chan. 2	= running	Menü 47: add PTM imediate	= OFF
Menu 21: Sound	= ON		

**Info-display:**

The Info-display (6) 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 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
=====

```

```

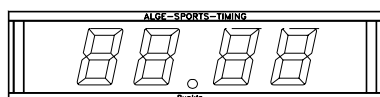
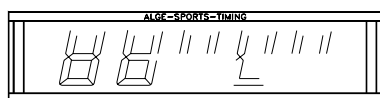
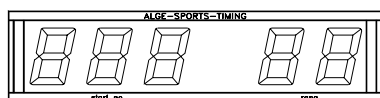
Start of countdown
Start of rider 21.21 seconds before the countdown ends
Start Time
Finish Time of Stage 1
Run Time of Stage 1

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)

```



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:**

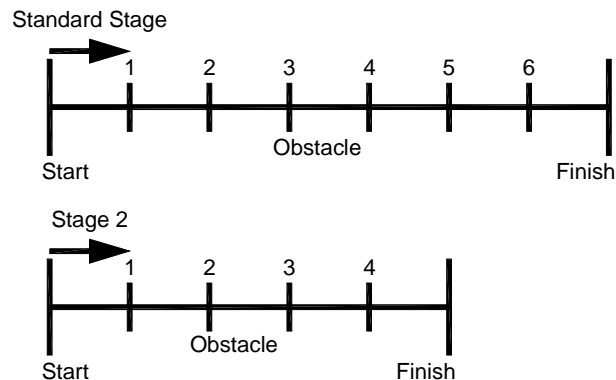
x	blank
?	time without valid start number
c	cleared time (with <CLEAR>)
d	times cleared through disqualification
i	times input manual: <INPUT>
n	new start number shown in finish display (8)

**RS 485 Interface:                    no function**



**6.1.11. American Stage F:**

**Program 122**



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: ¼ penalty point per started second time violence
- Stage 2: 1 penalty point per started second time violence

**Adjustment:**

- Switch TdC 8000 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 8000 (with time of day and other timing devices)
- press <F1> if the finish display (7) shows the correct time of day
- wait until TdC 8000 gives at the next full minute the synchronize signal to external devices (you are now ready for timing)
- press <F2> if the finish display (7) 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, 38, 39, 40, 41, 42, 43, 44, 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 (9) (#1)
- Press <ENTER>
- Display (2) must show the correct start number
- Display (7) must show the correct countdown time (e.g. 60 seconds)

- Display (8) 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 (7) 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 (9), 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 8000.

Press <ALT> and <MENU> at the same time to open the main menu. If can get direct into the needed sub menu by input of the menu number with keyboard (15) 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 = 0,25**

You can adjust the penalty points for time violation. The adjustment is between 0.00 and 99.99 possible. The penalty points are added for each started second time violation. Normally it is a 0.25 time violation for standard show jumping.

```
Menu 37: TIME VIOLATION 1 = 00.25
```

Adjusted time penalty

```
Save with: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre adjusted value:* 0,25 points

**Time Violation 2: Menu 38 Time Violation = 1,00**

You can adjust the penalty points for time violation of stage 2. The adjustment is between 0.00 and 99.99 possible. The penalty points are added for each started second time violation. Normally it is a 1 point time violation.

```
Menu 38: TIME VIOLATION 2 = 01.00
```

Adjusted time penalty

```
Save with: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre adjusted value:* 1.00 points

**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 &lt;ENTER&gt;

*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 &lt;ENTER&gt;

*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 (7) 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 <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 (7) 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 = 000060.00**

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 = 000060.00
          Automaticstart = ON
```

Input count down time  
Automaticstart is ON

```
Save with:: ENTER
```

Save and exit with &lt;ENTER&gt;

*Pre adjusted value::* Count Down Time = 60 seconds

## Count Down Time 2: Menu 44 Count Down Time = 000030.00

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 44: COUNT DOWN TIME 2 = 000030.00

Save with:: ENTER
```

Input count down time

Save and exit with <ENTER>

*Pre adjusted value::* Count Down Time = 30 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:: ENTERSave and exit with <ENTER>
```

output on display board  
no output on display board

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

## TIMEOUTSIGNAL: Menü 46 TIMEOUTSIGNAL = EIN

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

```
Menü 46:      TIMEOUTSIGNAL      ON <
                                   OFF
Save with:: ENTER
```

ON or OFF

Save and exit with <ENTER>

*Pre adjusted value::* Timeoutsignal ON

## PTO sofort addierent: Menü 47 PTO sofort addieren = AUS

For the Scoreboard you can add the PTO immediately.  
This is more exciting for the public!  
Attention! The FEI want to show allways the pure runtime!

```
Menü 47:      add PTO immediate   ON <
                                   OFF
Save with:: ENTER
```

ON or OFF

Save and exit with <ENTER>

*Pre adjusted value:* Add PTO immediate is OFF

### Input of penalty points:

*Pre-adjusted value:* The pointer between the penalty points and penalty seconds must point to the penalty points (display (8), 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 (8), 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 (8), 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 (7) must stop.
- + The pointer must point to the penalty seconds (right field of display 8).
- + Input penalty seconds with keyboard (15).
- + 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 (7) 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 (6). 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:	Keyboard 9 and 14	Keyboard 15 and 14
clear Start Time	CLEAR	
recall last Start Time that was cleared	ALT + CLEAR	
clear Finish Time		CLEAR
recall last Finish Time that was cleared		ALT + CLEAR
block Start Time	BLOCK	
Ignore Start Time	ALT + BLOCK	
block Finish Time		BLOCK
ignore Finish Time		ALT + BLOCK
manipulate Start Time	INPUT	
manipulate Finish Time		INPUT
manipulate Penalty Points		Points, than INPUT
manipulate Penalty Time		Time, than INPUT

**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 21: Beep = on
Menu 2: Delay Time Finish = 0.3 s	Menu 25: Change Race
Menu 3: Seconds Mode = off	Menu 26: D-Board-Test = off
Menu 4: Display Time 1 = 03 sec.	Menu 36: Penalty Points 1 = 04.00
Menu 9: Running Tenth = off	Menu 37: Time Violation 1 = 00.25
Menu 11: Finish Rank = on	Menu 38: Time Violation 2 = 01.00
Menu 15: Print Menus = on	Menu 39: Parcour Time 1 = 000.00
Menu 16: Printer Linefeed = 0	Menu 40: Parcour Time 2 = 000.00
Menu 17: RS-232 Baudrate = 9600 Baud	Menu 41: Block Time 1 = 000.00
Menu 18: RS-232 Run Time = off	Menu 42: Block Time 2 = 000.00
Menu 19: D-Board Baudrate = 2400 Baud	Menu 43: Count Down Time 1 = 0060.00
Menu 20: D-Board Channel 2 = standing	Menu 44: Count Down Time 2 = 0030.00
	Menu 45: D-Board Count Down = on

**Info-display:**

The Info-display (6) 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

0001	C9	15:56:13.8831
	CD	21.99
	ST	15:56:51.8846
	FT	15:57:48.8243
	RT	56.93
-----		
	C9	15:57:58.4042
	CD	7.19
	ST	15:58:21.2087
	P	+ 4.00
	C9	15:58:38.6239
	TO	17.41
	PTO	+6.00
	C9	15:58:43.3348
	FT	15:59:10.2629
	RT	44.34
-----		
	PTO	6.00
	PTM	9.00
	PP	4.00
-----		
	RTT	50.34
	TP	13.00
=====		

**Printer: Printing examples**

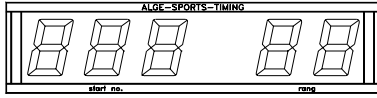


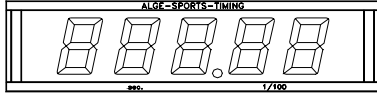


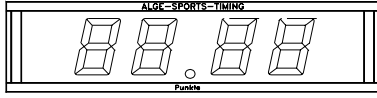


Start of countdown of standard stage  
 Start of rider 21.21 seconds before the countdown ends  
 Start Time  
 Finish Time of Stage 1  
 Run Time of Stage 1

Start of countdown of stage 2  
 Start of rider 7.19 seconds before the countdown ends  
 Start Time of Stage 2  
 4 Penalty Points for obstacle drop  
 Start of time-out  
 Time-out after 17.41 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), 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).

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

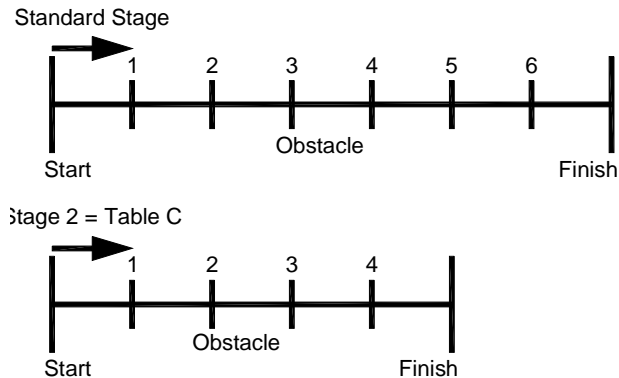
**The following characters could be the first digit:**

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 (8)

RS 485 Interface:                    **no function**

**6.1.11. American Stage / Time:**

**Program 123**



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: ¼ penalty point per started second time violence
- Stage 2: 1 penalty second per started second time violence

**Adjustment:**

- Switch TdC 8000 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 8000 (with time of day and other timing devices)
- press <F1> if the finish display (7) shows the correct time of day
- wait until TdC 8000 gives at the next full minute the synchronize signal to external devices (you are now ready for timing)
- press <F2> if the finish display (7) 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, 38, 39, 40, 41, 42, 43, 44, 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 (9) (#1)
- Press <ENTER>
- Display (2) must show the correct start number
- Display (7) must show the correct countdown time (e.g. 60 seconds)
- Display (8) 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 (7) 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)
- The second stage is judged by Table C, this means a 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 (9), 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 8000.

Press <ALT> and <MENU> at the same time to open the main menu. If can get direct into the needed sub menu by input of the menu number with keyboard (15) 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
          PENALTY TIME = 02.00
```

Adjusted penalty points

```
Save with: ENTER
```

Save and exit with <ENTER>

*Pre adjusted value:* 4 points

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

You can adjust the penalty points for time violation. The adjustment is between 0.00 and 99.99 possible. The penalty points are added for each started second time violation. Normally it is a 0.25 time violation for standard show jumping.

```
Menu 37: TIME VIOLATION 1 = 00.25

Save with: ENTER
```

Adjusted time penalty

Save and exit with <ENTER>

*Pre adjusted value:*            0,25 points

**Time Violation 2:                      Menu 38                      Time Violation = 1,00**

You can adjust the penalty points for time violation of stage 2. The adjustment is between 0.00 and 99.99 possible. The penalty points are added for each started second time violation. Normally it is a 1 point time violation.

```
Menu 38: TIME VIOLATION 2 = 01.00

Save with: ENTER
```

Adjusted time penalty

Save and exit with <ENTER>

*Pre adjusted value:*            1.00 points

**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 (7) 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 (7) 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 = 000060.00**

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 = 000060.00
         AutomaticStart = ON

Save with:: ENTER
```

Input count down time

Save and exit with <ENTER>

*Pre adjusted value::*      Count Down Time = 60 seconds

**Count Down Time 2:              Menu 44                      Count Down Time = 000030.00**

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 44: COUNT DOWN TIME 2 = 000030.00
         AutomaticStart = ON

Save with:: ENTER
```

Input count down time

Save and exit with <ENTER>

*Pre adjusted value::*      Count Down Time = 30 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

## TIMEOUTSIGNAL = EIN

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

Menü 46:            TIMEOUTSIGNAL	ON <
	OFF
Save with:: ENTER	

ON or OFF

Save and exit with <ENTER>

*Pre adjusted value::*    Timeoutsignal ON

## PTO sofort addierent:       Menü 47

## PTO sofort addieren = AUS

For the Scoreboard you can add the PTO immediately.  
This is more exciting for the public!  
Attention! The FEI want to show always the pure runtime!

Menü 47:            add PTO immediate	ON <
	OFF
Save with:: ENTER	

ON or OFF

Save and exit with <ENTER>

*Pre adjusted value:*       Add PTO immediate is OFF

**Input of penalty points:**

*Pre-adjusted value:* The pointer between the penalty points and penalty seconds must point to the penalty points (display (8), 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 (8), 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 (8), 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 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 (7) must stop.
- ☞ The pointer must point to the penalty seconds (right field of display 8).
- ☞ Input penalty seconds with keyboard (15).
- ☞ 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 (7) 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 (6). 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 (7) must stop.
- ☞ The pointer must point to the penalty seconds (right field of display 8).
- ☞ Input penalty seconds with keyboard (15).
- ☞ 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 (7) 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 from obstacle set up, then this time will be added when pressing the <F3> key after the rider finish.

## Recalculation of the Total Time (stage 2):

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 finish. When you press the <F3> key it adds all up and prints the total time.

Function of the keyboard:	Keyboard 9 and 14	Keyboard 15 and 14
clear Start Time	CLEAR	
recall last Start Time that was cleared	ALT + CLEAR	
clear Finish Time		CLEAR
recall last Finish Time that was cleared		ALT + CLEAR
block Start Time	BLOCK	
Ignore Start Time	ALT + BLOCK	
block Finish Time		BLOCK
ignore Finish Time		ALT + BLOCK
manipulate Start Time	INPUT	
manipulate Finish Time		INPUT
manipulate Penalty Points		Points, than INPUT
manipulate Penalty Time		Time, than INPUT

**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 21: Beep	= on
Menu 2: Delay Time Finish	= 0.3 s	Menu 25: Change Race	
Menu 3: Seconds Mode	= off	Menu 26: D-Board-Test	= off
Menu 4: Display Time 1	= 03 sec.	Menu 36: Penalty Points 1	= 04.00
Menu 9: Running Tenth	= off	Menu 37: Time Violation 1	= 00.25
Menu 11: Finish Rank	= on	Menu 38: Time Violation 2	= 01.00
Menu 15: Print Menus	= on	Menu 39: Parcour Time 1	= 000.00
Menu 16: Printer Linefeed	= 0	Menu 40: Parcour Time 2	= 000.00
Menu 17: RS-232 Baudrate	= 9600 Baud	Menu 41: Block Time 1	= 000.00
Menu 18: RS-232 Run Time	= off	Menu 42: Block Time 2	= 000.00
Menu 19: D-Board Baudrate	= 2400 Baud	Menu 43: Count Down Time 1	= 000060.00
Menu 20: D-Board Channel 2	= standing	Menu 44: Count Down Time 2	= 000030.00
		Menu 45: D-Board Count Down	= on



### Info-display:

Auf dem Infodisplay (6) werden folgende Informationen angezeigt:

1: PP	4.00	PTO	6.00
PTM	0.25	RT	56.49
TP	4.25	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

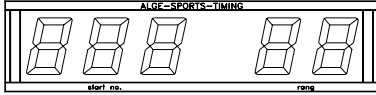


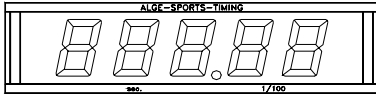


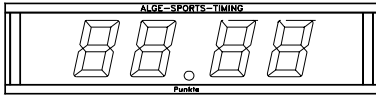


- PP Penalty Points for Obstacle Drop
- PTM Penalty Points for Time Violation
- TP Total Penalty Points
- PTO Penalty Time of Timeout
- RT Run Time
- RTT Run Time including all Penalty Times
- PPS Penalty Seconds for Obstacle Drop
- PSTM Penalty Seconds for Time Violation
- TPS Total Penalty Seconds

### 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).

<p>Start number / Rank:</p>		 thumb wheel switch on 1	 toggle switch upper position
<p>Run Time and Running Time:</p>		 thumb wheel switch on 0	 toggle switch middle position
<p>Penalty Points or Penalty Seconds:</p>		 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
xNNNNLCCxHH: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)
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
PPS	total penalty seconds
PTO	penalty points for obstacle setup
+	penalty points or penalty seconds are added
tt.tt	penalty seconds
(CR)	carriage return

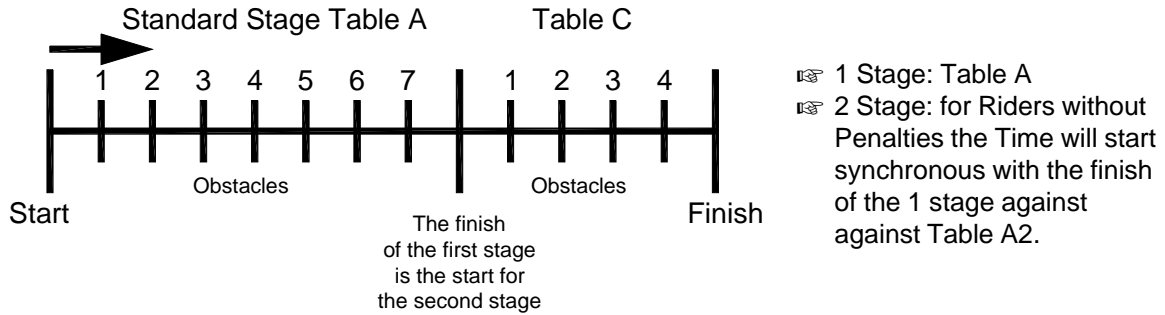
**The following characters could be the first digit:**

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 (8)

**RS 485 Interface:                    no function**

5.1.17. Standard / Time 1

Program 127

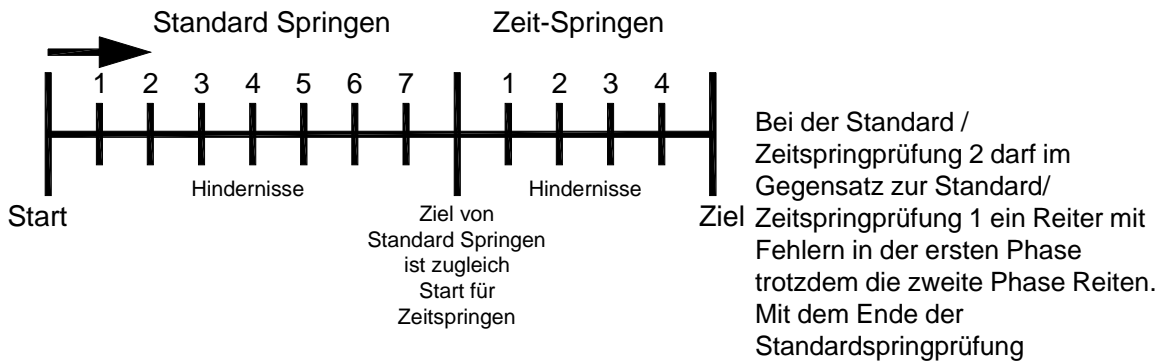


**Printout of TdC8000 Standard/Time Jumping 1:**

0003	C9	8:55:39.6196	Start of Countdowntime 1
	CD	25.49	Start 25.49 Sek. before the end of the CD 1
	ST	8:56:14.1283	Starttime 1st stage
	FT	8:57:07.8849	Finishtime 1st stage
	RT	53.75	Runtime 1st stage
-----			
2	PS	+4.00	4 Penaltypoints for dropped obstacle
	C9	8:57:32.9913	Timeout-ZTime
	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 Penaltypoints for dropped obstacle
	FT	8:58:06.3393	Finishtime 2nd stage
	RT	47.39	Runtime 2nd stage
-----			
0003	PSTM	9.00	Penalties from overtime
	PPS	8.00	Penalties from Obstacle dropping
-----			
	RTT	70.39	Total Result

**6.1.18. Standard / Time2**

**Program 128**



startetgleichzeitig die Zeitspringprüfung.

**Ausdruck vom einem Reiter beim Standard/Zeit Springen 2:**

0003	C9	8:55:39.6196	Start der Countdownzeit 1
	CD	25.49	Start 25.49 Sek. vor Ablauf des Countdown
	SZ	8:56:14.1283	Startzeit des Grundparcour (1.Phase)
	1	P + 4.00	Fehlerpunkte für Hindernisabwurf (1.Phase)
	ZZ	8:57:07.8849	Zielzeit des Grundparcour (1.Phase)
	LZ	53.75	Laufzeit des Grundparcour (1.Phase)
-----			
2	PS	+4.00	Hindernissabwurf 4 Strafsekunden
	C9	8:57:32.9913	Timeout-Zeit
	TO	25.10	Timeout nach 25.10 Sekunden
	PTO	+ 6.00	Strafsekunden für Timeout
	C9	8:57:44.0528	Tageszeit für Ende des Timeout
2	PS	+ 4.00	Hindernissabwurf 4 Strafsekunden
	ZZ	8:58:06.3393	Zielzeit der 2.Phase
	LZ	47.39	Laufzeit der 2.Phase
-----			
0003	PSTM	9.00	Strafsekunden aus Zeitüberschreitung
	PPS	8.00	Strafsekunden aus Hindernissabwurf
-----			
	LZT	70.39	Laufzeit inclusive aller Strafzeiten
	TP	4.00	Fehlerpunkte der 1.Phase

## 6.1.19. Team Jumping 1

## Program 129

### 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

Spezial Settings:

You can edit the Teams at any Time under 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!** Anby 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 Penaltytime
- TZTm ..... Runtime including Penaltytime (Team)

To Operate the TdC see Point 5.1.1.

## 6.1.20. Team Jumping 2

## Program 130

### Program for Team Jumping 2 against Table AM3:

- ☞ Firstz Stage with Points
- ☞ Jumpoff
- ☞ 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. Team Jumping 3****Program 131**

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. Team Jumping 4****Program 132**

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!

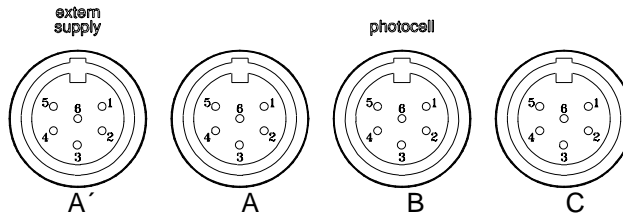
## 7. TECHNICAL DATA

<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 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; keeps data when switched off through internal rechargeable battery
<b>Display:</b>	start display (2): numeric liquid crystal display, 8 digits, figure height 12.7 mm, finish display (7): numeric liquid crystal display, 8 digits, figure height 12.7 mm, finish display (8): numeric liquid crystal display, 8 digits, figure height 12.7 mm, info-display (6): alphanumeric liquid crystal display 4 x 40 characters, figure height 4.8 mm
<b>Operating elements:</b>	On-/Off-switch (26) Turn over switch (1) Start Keyboard (9) Function Keyboard (14) Finish Keyboard (15)
<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 <i>external:</i> 210 to 240 VAC with Net-Charging-Device NLG8
<b>Power consumption:</b>	without external devices from the internal NiCd battery: about 80 mA 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 Triggering with < 1V (falling flank) about 2V
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 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' (20 and 19):**

- 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 (21):**

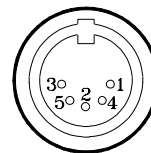
- 1 input channel 3 (start)
- 2 input channel 4 (stop)
- 3 common ground
- 4 input external supply (6 to 15 VDC)
- 5 output +5 VDC stabilized
- 6 input channel 5 (intermediate time)

**Jack C (22):**

- 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)

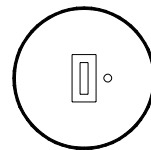
**7.1.2. Headset Jack (18)**

- 1 microphone of headset
- 2 common ground
- 3 loud speaker of headset
- 4 common ground
- 5 input channel 9



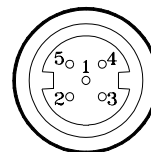
**7.1.3. Speaker Jack (25)**

- 1 speaker signal
- 2 common ground



**7.1.4. Display Board Jack (24)**

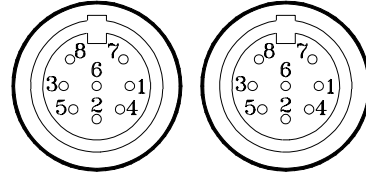
- 1 common ground
- 2 output supply (6 to 15 VDC)
- 3 output data channel 1
- 4 output supply (6 to 15 VDC)
- 5 output data channel 1 or 2



**7.1.5. RS 232 / RS 485 (23)**

- 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

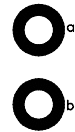


**7.1.6. Display Board (28)**

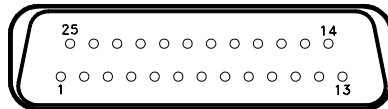
Display board interface with data output channel 2 (yellow (or white) banana socket) and ground (black (or blue) banana socket).

**7.1.7. Banana Socket for Channel 0 to 9 (27)**

All channels you can connect on the banana sockets. For all 9 channel you have four ground connections.



**7.1.8. Multi Channel (16)**



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" (24)	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 ext. supply (5.3 to 14.8 VDC)
12	common ground	24	common ground
		25	external supply (+6 to 15 VDC)

## 7.2. RS 232 Interface (16, 23)

**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
xNNNNxCCMxxHH: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 form C0 to C9
xNNNNIRTxxHH:MM:SS.zhtxxGR (CR)	Dual Timer, run time
xNNNNiCCxxHH:MM:SS.zhtqx## (CR)	Parallelslalom, Intermediate Time or Finish Time
xNNNNiRTxxHH:MM:SS.zhtqx## (CR)	Parallelslalom, Run Time
xNNNNiDTRxxHH:MM:SS.zhtxx## (CR)	Parallelslalom, Difference Time of Run
xNNNNiTxxHH:MM:SS.zhtqx## (CR)	Parallelslalom, Total Time
xNNNNiDTTxxHH:MM:SS.zhtxx## (CR)	Parallelslalom, Total Difference Time
pNNNNiCCxxHH:MM:SS.zhtqx## (CR)	Parallelslalom, Finish Time calculated form Penalty Time
pNNNNiRTxxHH:MM:SS.zhtqx## (CR)	Parallelslalom, Run Time calculated form Penalty Time
pNNNNiTxxHH:MM:SS.zhtqx## (CR)	Parallelslalom, Total Time calculated form Penalty Time
xNNNNxkmhxxxxsxxxxx.ssxxxxGR (CR)	speed measurement
xNNNNxkmhxxxxsxxxxx.ssxxxxx (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 (8)
x	blank
NNNN	start number (four 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 (8)
- p calculated time from Penalty Time

**Pin arrangement:** see

**Cable form TdC 8000 to PC (9-Pin):** 067-02  
**Cable form TdC 8000 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 baud rate of the RS 232 interface (23): 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 (23) outputs always in the difference-timing mode the time of day. Additional 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 8000 adjustments through the RS 232 interface:

You can check the following adjustments through the RS 232 interface:

Precision:

- RS232 question: PRE=?
- TdC 8000 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 8000 answer: TI = DIFFERENC difference timing
- TI = ABSOLUT absolute timing

Laps for the Split-Sequential program:

- RS232 question: LAPS = ?
- TdC 8000 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:	BDDDB?
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>Display Board Test:</b>	
<b>Start Number Automatic:</b>	<b>Menu 12</b>	<b>Menu 25</b>	
RS232 question:	STNOA?	RS232 question:	not possible
RS232 order:	STNOA=OFF	RS232 order:	not possible
Adjustable:	OFF, START, FINISH	<b>Penalty Time for Parallel Slalom:</b>	<b>Menu 26</b>
<b>Print Start Time:</b>	<b>Menu 13</b>	RS232 question:	PT?
RS232 question:	PST?	RS232 order:	PT=1.500
RS232 order:	PST=OFF	Adjustable:	sec. and 1/1000 sec.
Adjustable:	ON or OFF		

<b>ID for Channel 4 in Parallel Slalom: Menu 27</b>	Adjustable: 0.1 to 99.99
RS232 question: IDC4?	<b>Time Violation 1: Menu 36</b>
RS232 order: IDC4=BLUE	RS232 question: TV1?
Adjustable: B or L (blue or left)	RS232 order: TV1 = 00.25
<b>Start Channel for Dual Timer: Menu 28</b>	Adjustable: 0 to 99.99
RS232 question: STS?	<b>Time Violation 2: Menu 37</b>
RS232 order: STS=SEPARATE	RS232 question: TV2?
Adjustable: SEPARATE, COMMON	RS232 order: TV2 = 01.00
<b>Ranking for Dual Timer: Menu 29</b>	Adjustable: 0 to 99.99
RS232 question: RNKC?	<b>Parcour Time 1: Menu 38</b>
RS232 order: RNKC=SEPARATE	RS232 question: PAT1?
Adjustable: SEPARATE, COMMON	RS232 order: PAT1 = 000.00
<b>Printing Times for Speed: Menu 30</b>	Adjustable: 0 to 999.99
RS232 question: PRT?	<b>Parcour Time 2: Menu 39</b>
RS232 order: PRT=OFF	RS232 question: PAT2?
Adjustable: OFF or ON	RS232 order: PAT2 = 000.00
<b>Measuring Distance Speed: Menu 31</b>	Adjustable: 0 to 999.99
RS232 question: DST?	<b>Block Time 1: Menu 40</b>
RS232 order: DST=0100	RS232 question: BT1?
Adjustable: + 1 to 9999	RS232 order: BT1 = 000.00
<b>Measuring Unit for Speed: Menu 32</b>	Adjustable: 0 to 999.99
RS232 question: SPU?	<b>Block Time 2: Menu 41</b>
RS232 order: SPU=kmh	RS232 question: BT2?
Adjustable: kmh, m/s or mph	RS232 order: BT2 = 000.00
<b>Min. Speed: Menu 33</b>	Adjustable: 0 to 999.99
RS232 question: MINSP?	<b>Countdown Time: Menu 42</b>
RS232 order: MINSP=0010	RS232 question: CDT?
Adjustable: 1 to 9999	RS232 order: CDT=00:01:00.00
<b>Penalty Points Menu 34</b>	Adjustable: 00:00:00.00 to 23:59:59.99
RS232 question: PP?	<b>D-Board Count Down: Menu 43</b>
RS232 order: PP = 04.00	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 8000 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 need to input also the data that you want transferred (e.g. start numbers, start number blocks, groups).

#### Classement "NOT FINISHED":

NOF(CR) all competitors that did not finished 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 continues 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 (classes)
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)
CCLLRT(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. 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

### 7.3. RS 485 Interface (16, 23, 28): no function

Transfer Speed: 30 kBaud  
 Pin Arrangement: see page 121

### 7.4. Display Board Interface (24)

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

Attention: Switch between channel 1 and channel 2 by turning the plug of socket (24) 180°.

Channel 1 has always the same output as shown in display 7 and 8. The adjusted display time (see menu 4 on page 52) is always valid for display 7 and 8 and channel 1 of the display board interface (24). Channel 1 does not output a classement.

You can switch channel 2 in the main menu (menu 19 on page 56) between running and standing time (run time). On channel 2 you have always an output of the classement.

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@xxxxsxss.ssxRR(CR)	Speed
ANNNxxxxxHH:MM:SS.zhtRR(CR)	sequential time for program Split-Sequential

NNN start number (3 digit)

. a point on the fourth digit is the identification for a running time

A,B,C, ...,H,I,J address for display board (digit 1)

A,B,C, ...,H,I,J identification of the channel (digit 4)

HH:MM:SS.zht time in hours, minutes, seconds, and 1/1000 seconds

© speed measurement: output of the following ASCII characters

01 Hex. for km/h, 02 Hex. for m/s, 03 Hex. for mph

RR rank

x blank

(CR) carriage return

Pin Arrangement: see on page 103

Cable from TdC 8000 to display board GAZ4: 010-10

Cable form TdC 8000 to Teledata TED-TX with supply: 107-10

In the main menu you can do the following adjustment for the display board interface (24):

## Display Time 1: Menu 4: DISPLAY TIME 1 = 03 s

You can adjust the amount of time that it shows a stopped time on the display (7) or display board. This time we call display time 1. You can select the display time between 0 and 99 seconds.

Menu 4: DISPLAY Time 1 = 03 s	input seconds with finish keyboard (15)
Save with: ENTER	Confirm input with <ENTER>

Pre adjusted value: Display Time 1 = 3 seconds

## Display Time 2: Menu 5: DISPLAY TIME 2 = 03 s

You can adjust the amount of time that it shows the second stopped time in the second heat (total time or run time) on the display (7) or display board. This time we call display time 2. You can select the display time between 0 and 99 seconds.

```
Menu 5: DISPLAY Time 2 = 03 s

Save with: ENTER
```

input seconds with finish keyboard (15)

Confirm input with <ENTER>

Pre adjusted value: Display Time 2 = 3 seconds

## Display Board Channel 2: Menu 18: D-BOARD CHANNEL 2 = OFF

You can adjust the channel 2 of the display board interface (24). If you have channel two on 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°.

```
Menu 18: D-BOARD CHANNEL 2          ON
                                       OFF<

Save with: ENTER
```

F1 output of run times  
F2 output of running time

Confirm selection with <ENTER>

ON = <F1> run time and classement  
OFF = <F2> running time and classement

Pre adjusted value: D-Board Channel 2 is off (running time)