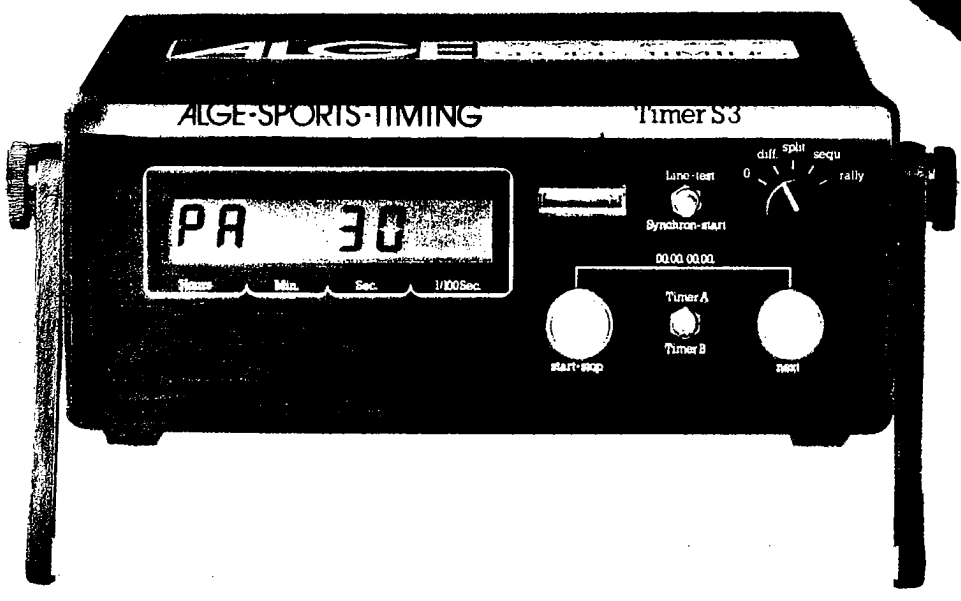
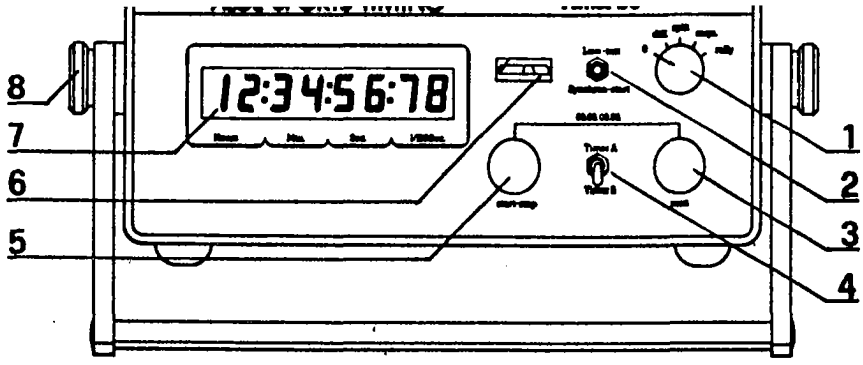
TIMER S3

with special program for show jumping

manual

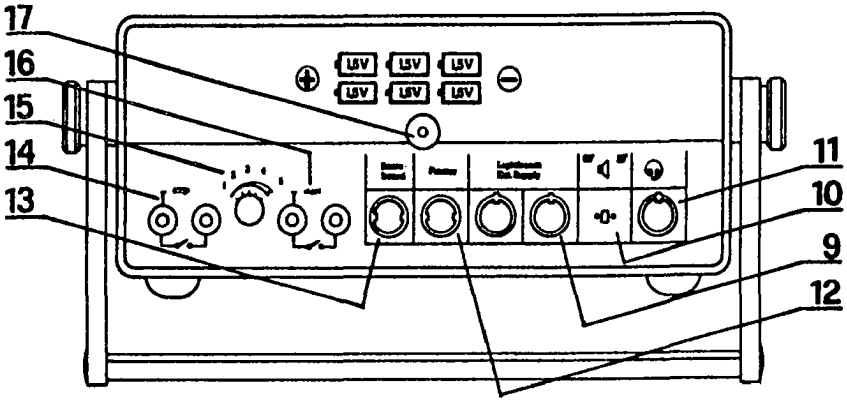
ALGE
ELECTRONIC
TIMING

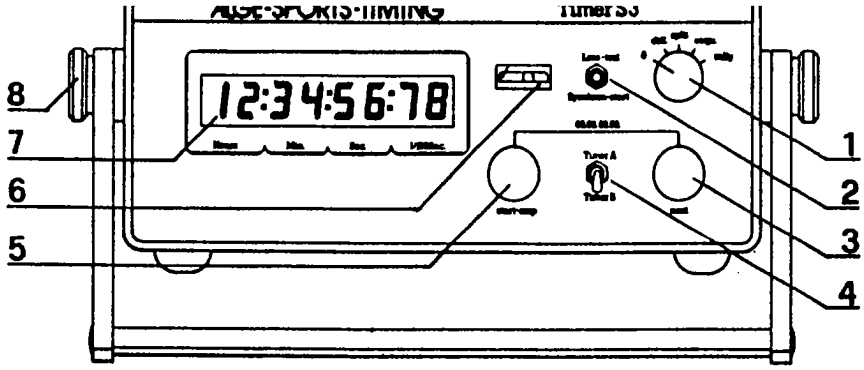




PART I a) Operating elements and conncections.

1 = On-off switch combined with operating mode selector switch.
2 = Center off toggle switch for line test and synchronous start.
3 = Rejoin button for stored times with additional functions as in instructions.
4 = Selector switch timer A - timer B.
5 = Start-stop button with additional functions as in instructions.
3+5= By simultaneously pressing buttons 3 and 5, the preselected timer is set to zero (not with the operating mode "difference" however). The display shows a row of eights as long as the two buttons are kept pressed so that all segments of the digits can be checked.
6 = Level meter for monitoring the power supply, the photoelectric cell alignment and the line status of the start/finish line.
7 = Eight digit liquid crystal display in hours, minutes seconds and hundredths of a second. With running time, the hundredths of a second are blanked out.
8 = Thumbscrews for bale adjustment.
9 = Two parallel connected 5 pin DIN recepticals for photoelectric cell (RLS1), an external power source (ALGE charger or external 12V battery).
10 = Output for loundspeaker. The start interval can be set to 30" or 60" by turning the plug 180 degrees. Please note: Functions only in the "difference" and "countdown clock" mode.
11 = Output for telephone headset K158.
12 = Output for printer P3.
13 = Output for ALGE "GAZ" display board. By turning the plug 180° it is possible to show either the running time (as on the timer display) or only the stopped time.
14 = Banana plug connection for manual switch or RLS1/E for stop or intermediate time .
15 = Potentiometer for setting the delay time, with five levels (2 msec/120 msec/1 sec/2 sec).
16 = Banana plug connection for a start facility with normally open contact for starting or stopping (ALGE starting gate STS3 or RLS1/E.
17 = Knurled nut for fastening cover of battery compartment.





PART I b) Power supply. Start-up.

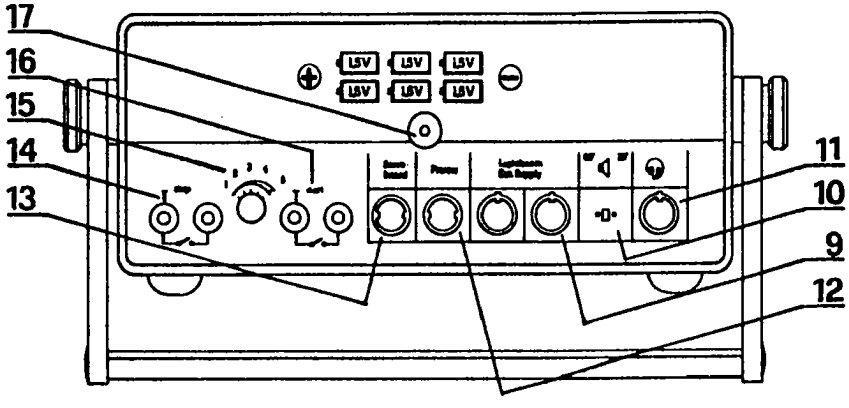
The low power consumption made possible by the highly advanced electronics and the liquid crystal display permit the use of six D size alkaline batteries.
The level meter (6) monitors the state of the batteries. The batteries do not have to be replaced until the needle no longer stays in the green field. The six batteries are then inserted in the battery compartment as illustrated on the battery compartment cover (rear panel of timer).
Important: Use only alkaline batteries.

Caution! When the timer S3 is not in use for an extended period and at the end of the season in particular, the batteries must be removed from the timer. Leaky batteries can ruin the high quality electronic components. A set of new batteries should be used at the beginning of the season.

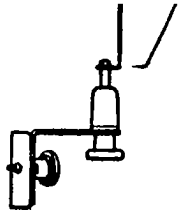
If the printer P3 is hooked up to the timer S3, alkaline batteries are insufficient because of the high power consumption of the printer.
For this case we offer rechargeable nickel cadmium batteries of the same shape and size as the alkaline batteries which can be placed in the battery compartment of the timer. The NiCad batteries can be completely charged in 14 hours with available power supply-charger or 12V exterior battery. The charger or 12V battery is connected to one of the two external supply jacks (9) of the timer S3.

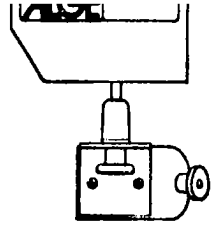
A 12V external battery can be used without internal NiCads as well.
A 12V battery with a capacity of approx. 5 Ah is sufficient for all day operation. Connect red battery clamp to positive pole and black clamp to negative pole of battery.
Please note: If S3 is supplied with 110V power supply and NiCad batteries, internal alkaline batteries may not be used in conjunction with charger or external 12V battery.

Start-up: By setting the desired operating mode with the operating mode selector switch (1), the timer S3 is switched on, the needle of the meter (6) moves into the green field (provided that the battery voltage or the supply is correct) and a row of eights appear on the display. The device is ready for operation only when the display shows 0.00.00 (after about four or five seconds).



TYPE RLS 1





PART III b) Infrared photocell RLS1 and RLS1/E

This photocell is a triggering device which is powered directly from the timer via a 3 lead wire (DIN plug only) up to a maximum of 150 feet. For longer distances see RLS1/E.
This cell is unaffected by extraneous light. It consists on one side of an emitter (upper lens) and a receiver (lower lens) and a reflector on the other side. Infrared pulsed light is emitted, reflected and received back.

The emitter/receiver and the reflector are fastened opposite each other at corresponding heights to a bar or similar object and are aligned with each other. The distance between the reflector and the emitter/receiver may not be less than three meters nor greater than twenty meters.

The emitter/receiver is connected with appropriate cable to the correspondingly marked jack of the switched on timing device. If the needle of the level meter on the timer swings rhythmically, the photocell is not properly aligned. In this case the cell is to be aligned so that the needle of the level meter on the back of the photocell comes to rest as far into the green field as possible.

Note carefully: When testing the photocell, be sure the reflector is at least 3 meters (9 feet) from photocell. If desired the cell can be supplied with a range of a minimum of 1 meter and a maximum of 4 meters (for bobsled and luge).

RLS1/E

This photocell functions and can be used exactly the same as RLS1 with the addition that it can be powered externally with a DC supply 6V to 15V. (6V handlantern battery sufficient).
When powered externally, only a 2 lead wire is needed for triggering. Connections are made to timer on either start or stop banana recepticals and the two binding posts on the photocell. AWG #20 or 22 is recommended for distances one mile or less.

Power consumption on both cells approximately 25 mA.

Connect enclosed power cord to 5 pin DIN receptical on photocell.
OBSERVE POLARITY.

Polarity for triggering (2 green binding posts) is unimportant.

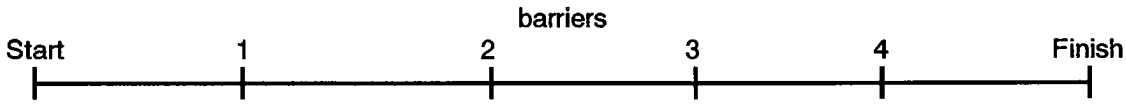
TIMER S3 FOR SHOW JUMPING

There are five different show-jumping-programs:

- standard show-jumping
- standard show-jumping in two stages
- time show-jumping
- two stage show-jumping
- standard show-jumping with American stage

Standard Show Jumping:

Switch on "diff"



1/4 penalty points for every second overtime

- toggle-switch on Timer A

- count-down is adjustable (0, 30, or 60 sec.)
  60 sec.: switch (1) on "diff" - press yellow button (3) till display shows LI 00
  30 sec.: switch (1) on "diff"
  00 sec.: no count-down; switch (1) on "diff" - press red button (5) till display shows LI 00

- Input "maximum runtime"
  for every 10 seconds press red button (5)
  for every 1 second press yellow button (3)

  It is possible to work without "maximum runtime". If you work without "maximum runtime" you won't get penalty points from the time.

- Store runtime:
  press toggle-switch (2) down (synchron-start).
  display shows "count-down-time" (PA 60, PA 30, or 00 00)

- Start of count-down:
  Press red button (5) or external hand-switch (headphone connector pin 4 and 5 or photocell connector pin 3 and 6).
  The extern speaker hunks shortly.
  Ten seconds before the end of count-down is a warning hunk
  Count-down is finished when horn continuously honks.
  Through pressing both red and yellow button (3 and 5) horn stops honking.

- Start:
  Start impulse (photocell)
  Display (7) shows running time (toggle-switch 4 on Timer A)

- Input of penalty points for barrier drop:
  Toggle switch (4) on position "timer B". The display (7) shows now the points. If you press the yellow button it adds one point (for four points you have to press the yellow button four times.
  Put toggle switch (4) back to position "timer A".

- Time-out (for set up of barriers):
  Press red button (5) (or external handswitch headphone connection pin 4 and 5 or photocell connection pin 3 and 6). The speaker should make a short honk.
  The time starts running trough pressing the same button again.

- Input of penalty-time:
  Press yellow button (3) till it shows the right penalty in the display (0, 6, 8, or 10 seconds are possible).
  It is only possible to input the penalty-time during the time-out.

- Add of penalty times:
  When you finish the time-out through pressing the red button (5) (or external hand-switch) all penalty-times will be totalled and stored in the memory.

- Stop of the run-time:
  The timer stops through an impulse from the photocell. The time is shown in the display (7) (toggle-switch (4) on timer A)
  If there were a wrong impulse press yellow button (3) and the time continues to go.

- Total run-time and penalty-time:
  Press red button (5) after the finish of a competitor. Now the display shows the total-time (adds run-time and penalty-time).

- Calculation of penalty-points from overtime:
  The penalty-point from overtime are calculated automatically
  and shown on the display by pressing toggle-switch on "Timer B".

- Reset of the Timer:
  Press yellow button (3) and hold it, then press red button (5) too.
  A reset is not possible during time-out.

All show-jumping programs take no impulses during the first 10 seconds, and during the time-out.

If you get a wrong stop-signal press yellow button (3) and the time continues to run.

Display-board:

It is possible to show the time and penalty points on a ALGE-display-board.

The toggle switch of the display board that shows the time must be in middle position (thumb-wheel-switch on position 0).

The toggle switch of the display board that shows the time must be in upper position (thumb-wheel-switch on position 0).

Printer P3:

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 ALGE-SPORTS-TIMING
     PRINTER P3

*** REITPROGRAMM ***

  STANDARD SPRINGEN

UMLZ 1     055 sek.
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CD        21 sek.
TO      017.92
PS         6 sek.
PP         4.00
TO      045.83
PS         8 sek.

LZ        55.35
PP TM      0.25
PP         4.25
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TZ        69.35
PP TM      3.75
PP         7.75
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maximum runtime is 55 sec.

start after 21 sec. of count-down
time-out after 17.92 sec.
6 penalty seconds
4 penalty points for barrier drop
time-out after 45.83 sec.
8 penalty seconds

runtime (without penalty time)
penalty-points from over-time
penalty-points (over-time and barrier drop)

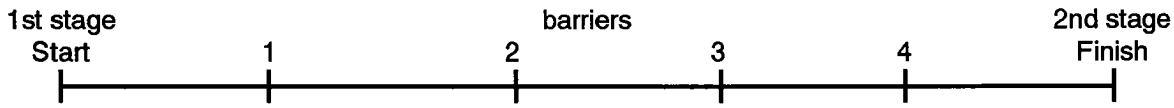
total time (runtime and penalty-time)
penalty time from the total time
total points (total time and barrier drop)

STANDARD SHOW-JUMPING IN TWO STAGES:

FIRST STAGE:

Toggle-switch (4) on timer A

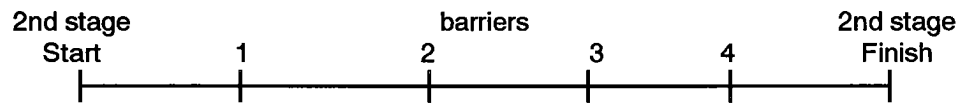
Switch (1) on "diff" (count-down is adjustable like in program "standard show jumping").



The first part of the race is the same than "standard show jumping".

Everybody is qualified for the second part of the race, who has no penalty points during the first part.

SECOND STAGE:



- Toggle-switch (4) on Timer B otherwise everything like "standard show-jumping".
- After the start of a competitor toggle-switch (4) on position "Timer A" in order to show the time on display (7).
- Every started second overtime is 1 penalty-point.

In the program show-jumping with two stages there is a difference in the second stage with the calculations modus. Per started second it is now one penalty-point. The second stage is also a different and shorter parcour.

TIME SHOW-JUMPING:

1 penalty-point per started second overtime!
3 to 8 penalty-seconds per barrier drop!

In this mode are no penalty-points, but penalty-seconds.

- Toggle-switch (4) on "Timer A".
- Switch (1) on "split". Select count-down-time like in program standard show jumping. Penalty-time for time-out is 0, 6, 8 or 10 seconds (everything like standard show jumping).
- Input of penalty-seconds for barrier dropping:
  Switch (1) on "seq."
  Press yellow button (3) (penalty from 3 to 8 seconds).
  Switch (1) back on "split"
- Add penalty-seconds:
  Automatically after the end of time-out (0, 6, 8, 10 sec.)
  for penalty-seconds with time-out.

  Barrier dropping penalty seconds (3 to 8 sec.) automatically thorough switching switch (1) back form "seq." to "split".
- Add penalty-time from overtime:
  Press red button (5) (after competitor finished)

If a competitor is over the limit-time, ever started second overtime means 1 penalty second (see below).

The addition works only up to 99.99 sec.

Printer P4:

UMLZ 1 050 sek.	maximum run time is 50 sec.

CD 16 sek.	Start after 16 sec. of count-down
TO 012.63	Time-out after 12.63 sec.
PS 6 sek.	6 penalty seconds
PS 5 sek.	5 penalty seconds (barrier drop)
PS 5 sek.	5 penalty seconds (barrier drop)
LZ 51.88	run-time without penalty-time
PS 2 sek.	2 penalty seconds for overtime

TZ 69.88	Total-time = run-time + penalty-time
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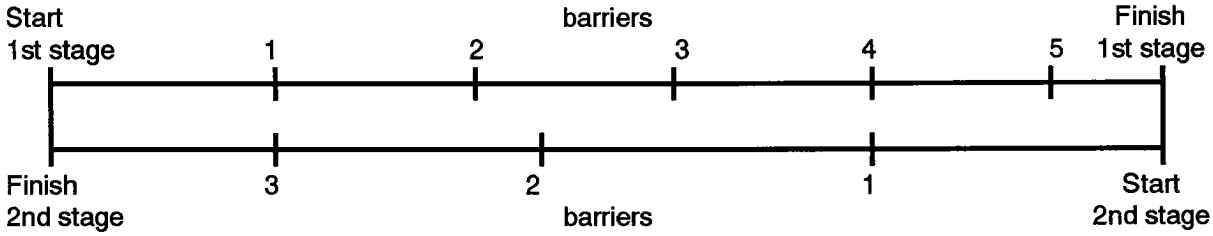
TWO STAGE SHOW-JUMPING:

Switch on "sequ."



The finish of the first stage is also the start of the second stage, if the competitor is in time and has no penalties. If a competitor has a penalty or overtime he is finished after the first stage.

Stage 1:	1/4 penalty points per started second overtime	(Toggle switch (4) on Timer A)
Stage 2:	1 penalty point per started second overtime	(Toggle switch (4) on Timer B)

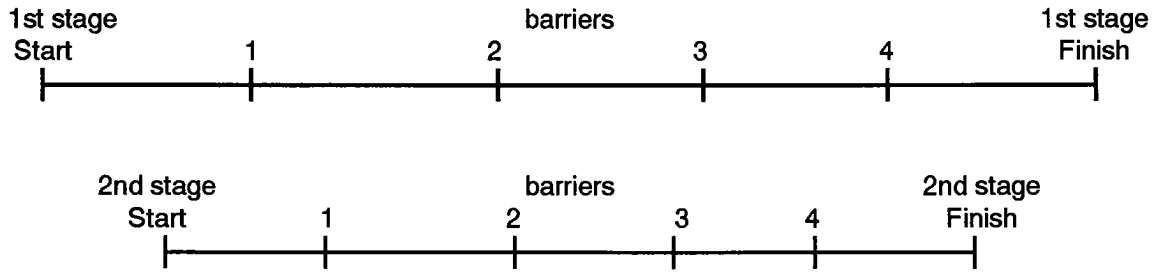
The operation and function is like "standard show-jumping", except after input of runtime first stage you have to input the runtime of the second stage and store it.

Qualified for the second stage is everybody without penalty.
Is somebody starting for the second stage:

- press yellow button (3). Now it shows the time from the second stage (the time started by finishing the first stage) in the display (7).

STANDARD SHOW-JUMPING WITH AMERICAN STAGE:

Switch on "rally"



Stage 1: 1/4 penalty points per started second overtime (Toggle switch (4) on Timer A)
Stage 2: 1 penalty point per started second overtime (Toggle switch (4) on Timer A or B)

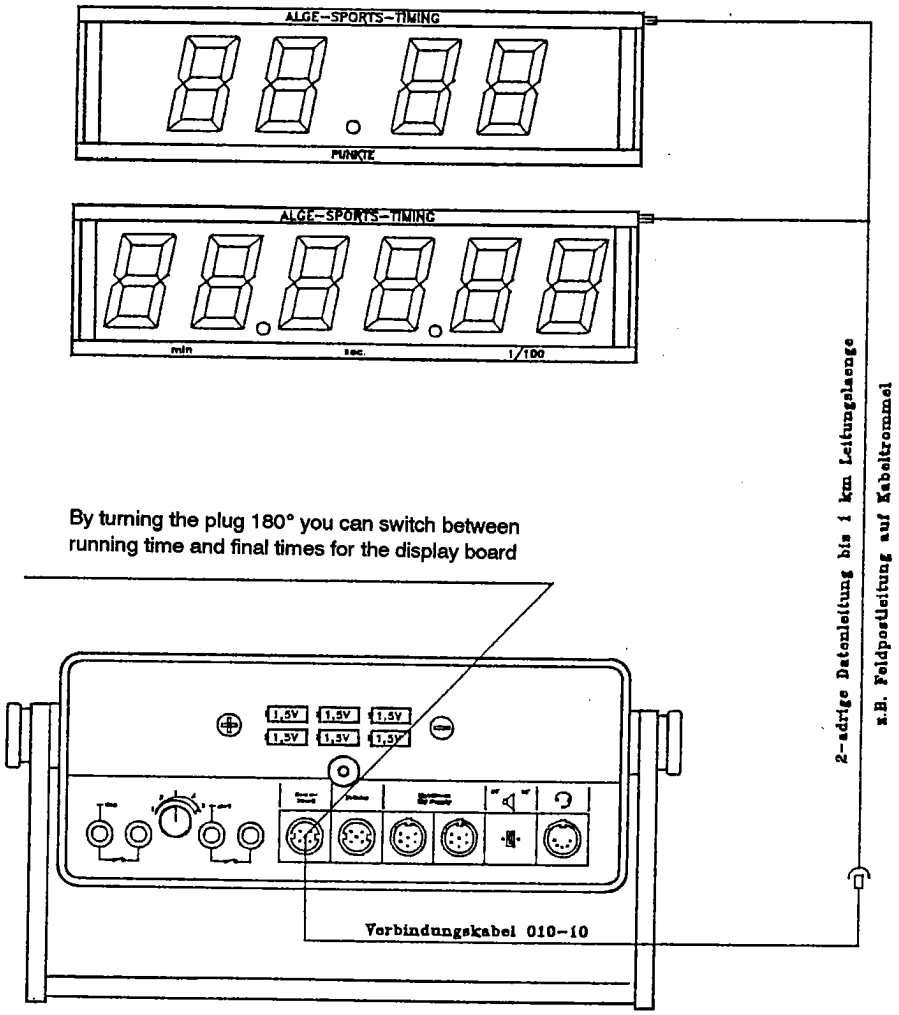
One penalty-point per started second overtime.
Toggle switch (4) on position Timer A.

The operation and function is like "standard show-jumping", except after input of runtime (first stage) you have to input the runtime of the second stage and store it.

Qualified for the second stage is everybody without penalty in the first stage.

If a competitor finishes the first stage without penalty, he has 30 seconds to prepare himself for the second stage. The 30 second count-down starts after pressing the red button (5) (a bell rings which means the count-down starts).

Display-Board GAZc:

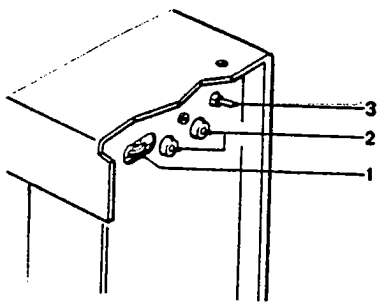


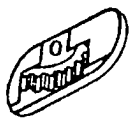
Display board for time:

- toggle switch (3): middle position
- thoumb-wheel-switch (1): position 0

Display board for points:

- toggle switch (3): upper position
- thoumb-wheel-switch (1): position 0





thumb-wheel-switch

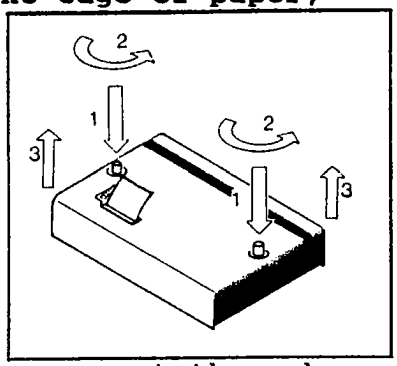
Printer P3:

Metallic paper printer with cable to connect at the Videotimer VT2/S3 (12).

The printer gets the power supply from the Videotimer. It prints every start-time marked with SZ, every finish-time marked with ZZ. If you make a manual Start with button (5), it prints "MS" next to the start-time.

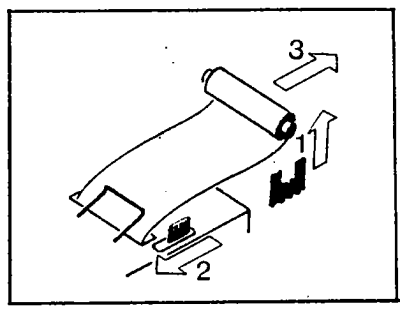
Paper Check:

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



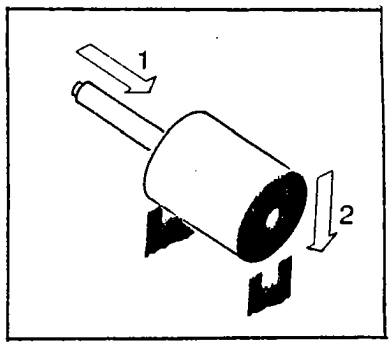
- Push the two cover release buttons down so they jump up. Remove the cover.
- If you have enough paper, put the cover back and press the two buttons down until they stay in the lower position.

ATTENTION: Make sure that the paper comes out through the slotted hole in the cover.

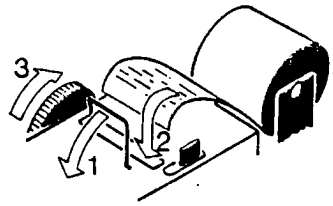


Changing the Paper:

- Remove the rest of the paper from the holder.
- Press the black lever forward and pull the paper out.
- Put the axle into the new paper roll.
- Put the new roll on the paper holder.
- Move paperbow into the forward position.
- Insert the beginning of the paper into the paper feed of the printer.

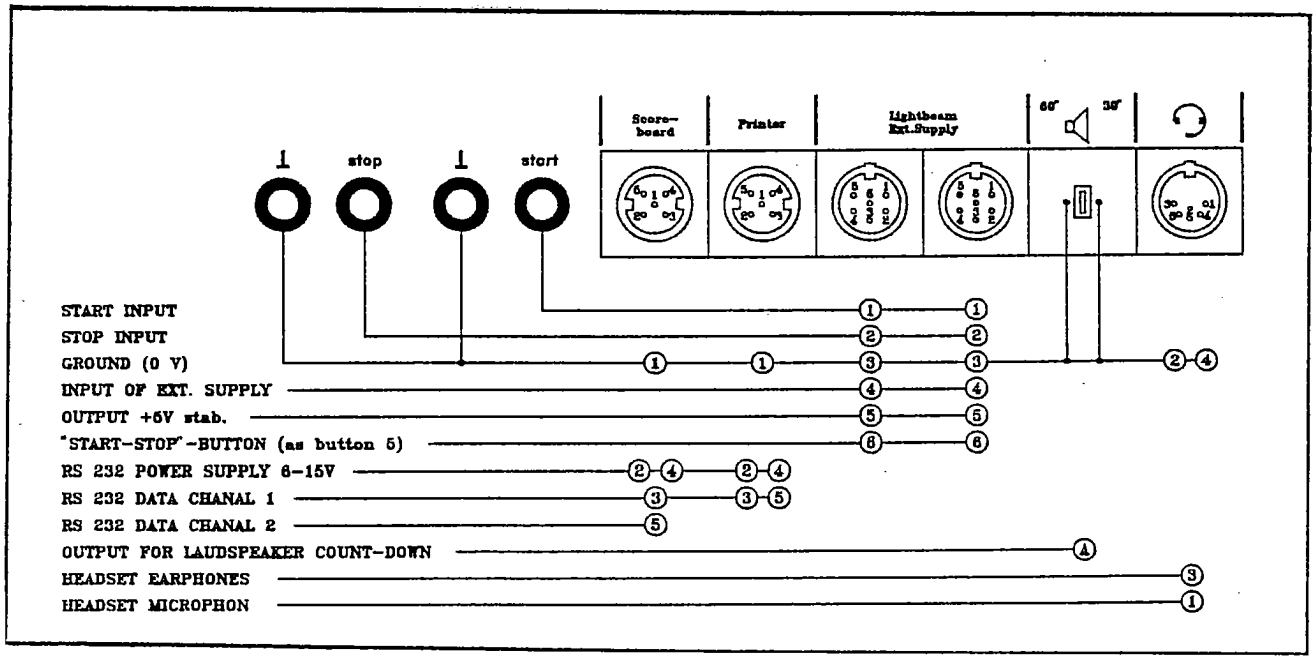


- Turn paper advance wheel towards the rear until the paper comes out.
- If necessary correct the paper guide through pressing the black lever forward.
- Put the cover back and press the two buttons until they stay in the lower position.



Technical Data:

Timing range:	23 hours, 59 min., 59.99 sec.
Accuracy:	+/- 0.005 sec./h at 20°C +/- 0.05 sec./h at -15 to 50°C
Quartz frequency:	6240 kHz
Operative temp. range:	-25°C to +65°C
Memory:	2 x 12 times
Display:	LCD 7-segment display
Power consumption:	approx. 0.1A at 7.5 to 16 Volt
Battery life:	Alkaline without printer: 80 - 100 hours
Power supply:	internal with 6 x UM Alkaline batteries or 6 x UM-NiCd rechargeable external with +9 to 16 VDC (ALGE NLG4)



Computer interface - output for display board (13) and printer (12)

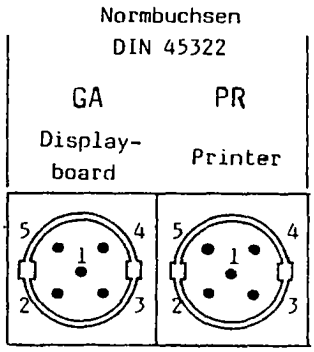
serial data output, compatible to V24 and RS 232, without handshake

Transfer rate: 2400 baud

Transfer format: 1 start bit
7 data bit
no parity bit
2 stop bit

Handshake: no handshake

Data format: standard 23 byte data, line feed, carriage return



PIN	GAZ	Printer
1	ground	ground
2	+7 to 15 V supply voltage	+7 to 15 V supply voltage
3	serial data finishtime	serial data finishtime
4	+7 to 15 V supply voltage	+7 to 15 V supply voltage
5	serial data of the running time	serial data of the finishtime