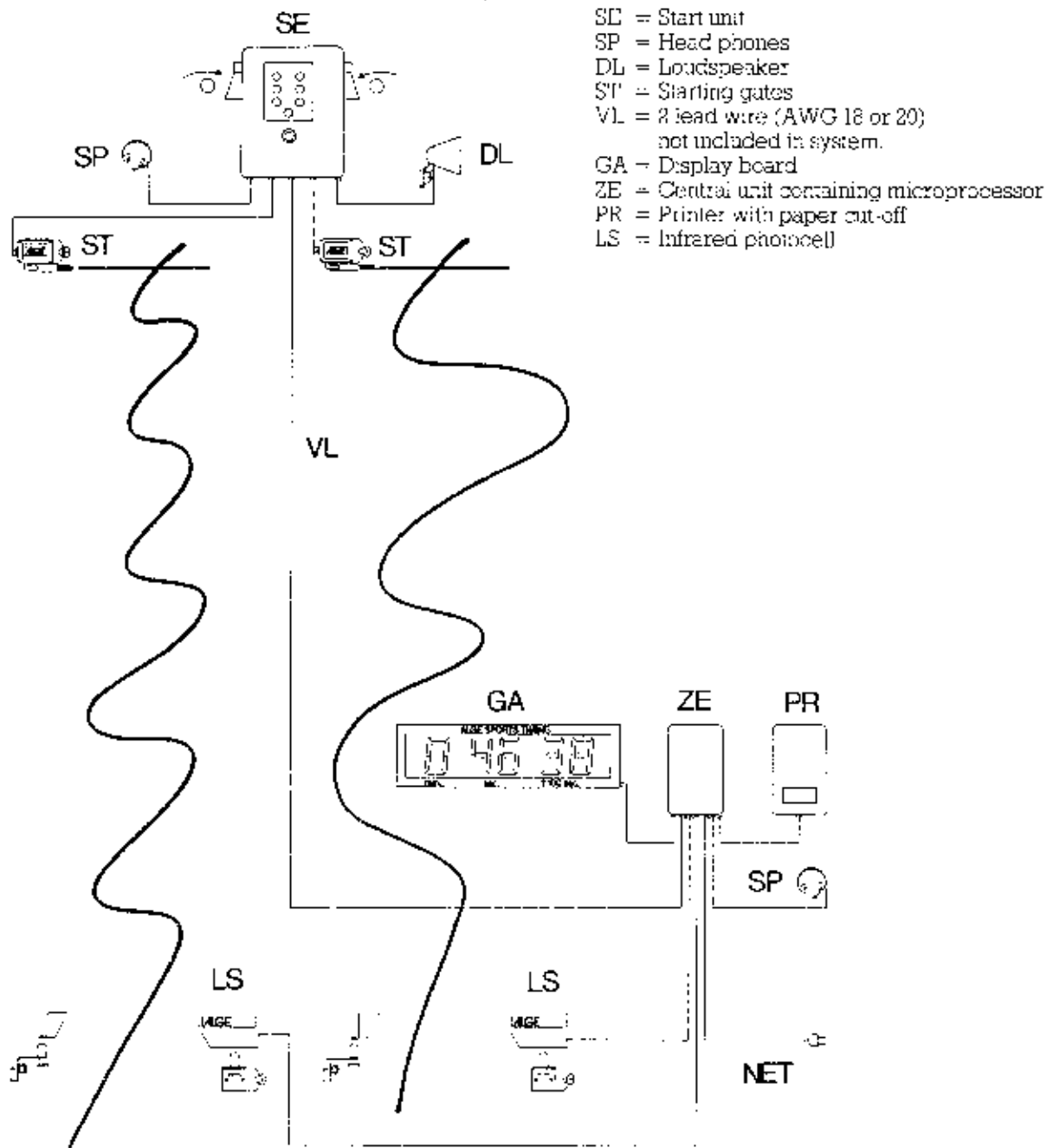


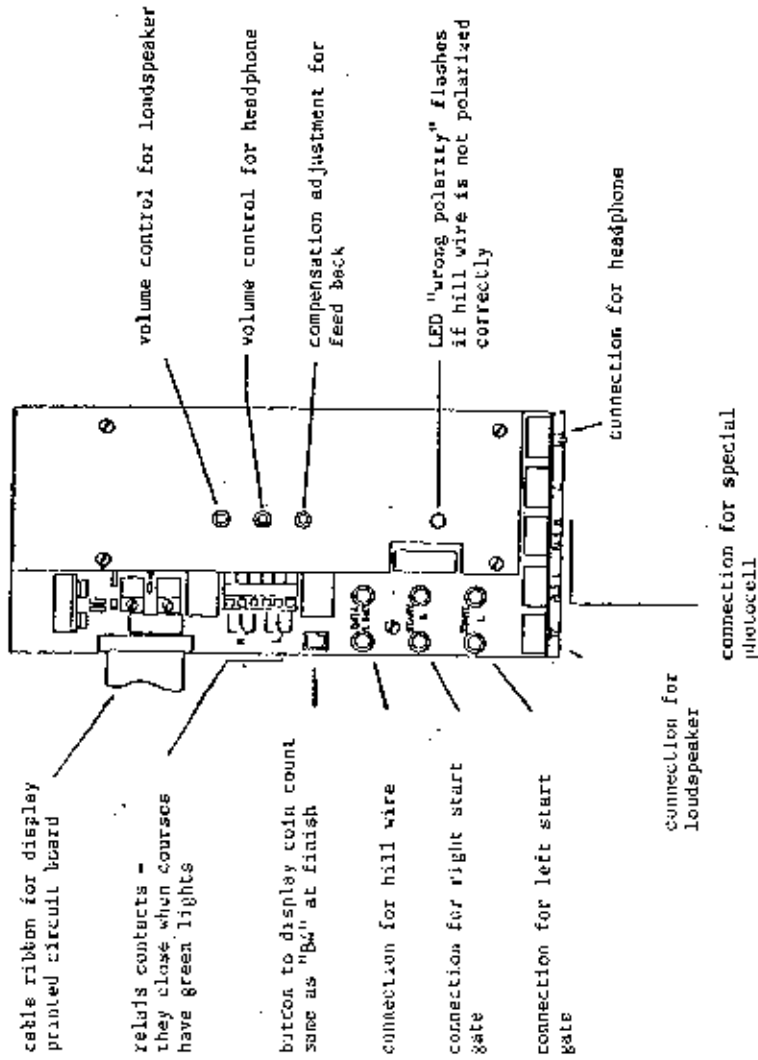
MANUAL

SELFTIMER SF2

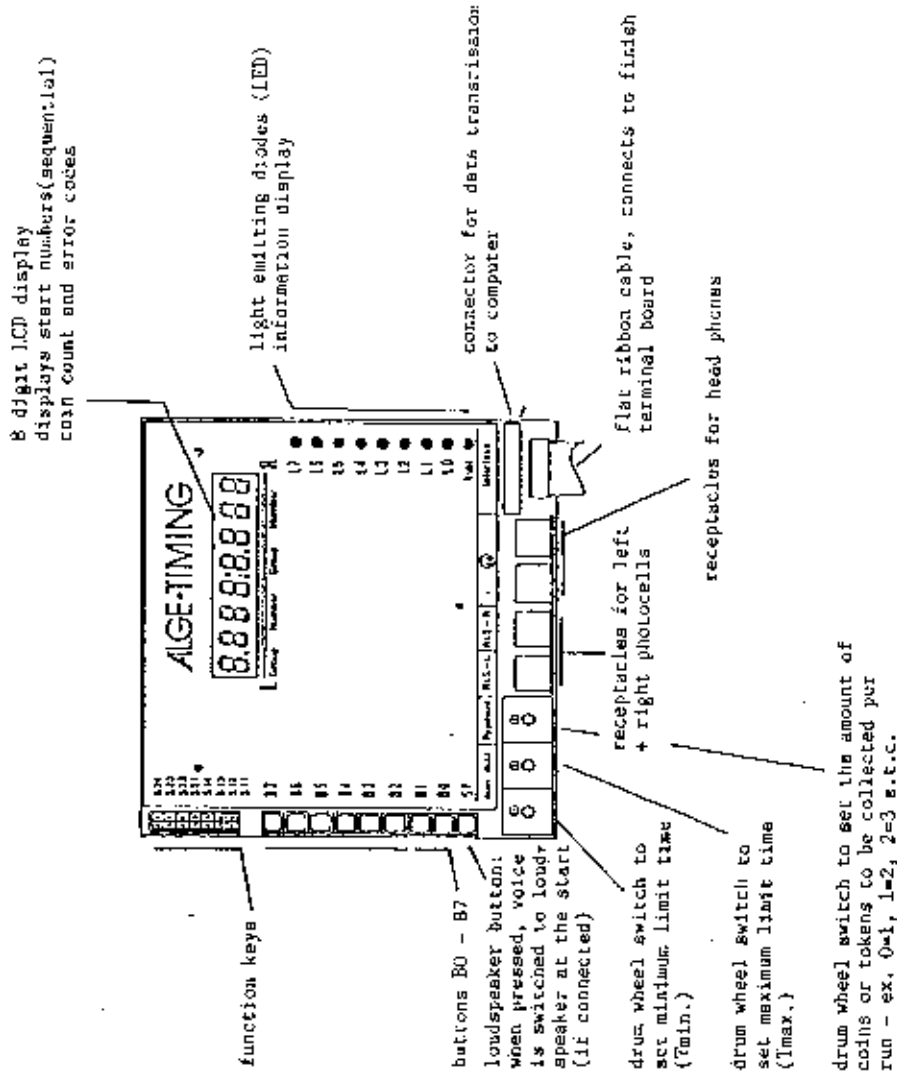


ALGE
 ELECTRONIC
 TIMING

SE UNIT CONNECTIONS & CONTROLS



ZE UNIT CONNECTIONS + CONTROLS



SELFTIMER SF2

INSTALLATION AND OPERATING INSTRUCTIONS.

Read these instructions before making any connections.

INSTALLATION:

The enclosed drawing gives you a block diagram of the system in its complete form. The only thing left to add would be an additional display board. You may not have obtained a printer or a dual course set up.

You should have the following items on hand:

- 1 - SE UNIT (coin acceptor)
- 2 - Headphones
- 1 - Loudspeaker
- 1 or 2- Starting Gates and wands (ST)
- 1 - Display Board (GA)
- 1 - ZE UNIT (main timing unit)
- 1 or 2- LS Infrared Photocells with reflector and brackets
- 1 - PR Printer (option) with audio/visual control box and cable
- 500 - Tokens

You will find the following brackets and cables:

- 1 - SE Mounting plate 12"x16" with bars for 1 1/2" pipe
- 1 or 2- ZE/PR Mounting plates 8"x12" with bars for 1 1/2" pipe
- 1 - Bag assorted bolts, nuts, spacers and corner brackets to mount SE, ZE and PR either to round pipe or flat surface.
- 1 or 2- Start Gate cables with green banana jacks
- 1 or 2- Photocell cables (gray or red) with 5 PIN DIN jacks
- 1 or 2- Yellow power/signal cords for display board and printer.
- 1 - Test cable with black/yellow banana jacks.

The idea behind supplying the various cables to our standard or your requested lengths with polarized plugs, is that a layman can install the system. Further, the use of different sized jacks virtually eliminates a wrong hook up.

YOU MUST HAVE AVAILABLE A GOOD START TO FINISH PAIR OF WIRE 18 or 20 AWG AND A GROUNDED 110V AC OUTLET AT THE FINISH.

One single pair cable will trigger both courses and allow two way communication at the same time.

SET UP

DO NOT connect to power before all components are connected to each other. Mount the various items at your desired location within reach of the supplied cables.

ZE UNIT

A special key is provided to open and close the ZE unit.

Route the connecting cables through the hole on the bottom and make use of the stressrelief.

Connect photocell cables to the receptacles marked RLS R and RLS L.

Please note! The left course photocell seen from the finish looking up, plugs into the RLS R receptacle and vice versa.

Connect start/finish wire to banana receptacles marked DATA LINE.

To communicate with the start, connect the headset.

Connect the yellow cable to either side of the display board and either one of the two male receptacles on the bottom side of the ZE unit. If two display boards and/or printer is used the yellow cables may have different lengths. Second male receptacle on ZE unit is used for a printer. See separate sheet for correct printer operation and maintenance. A second board may be connected to ZE unit or ganged with first display.

If a third board is used for fastest time of day, it may be ganged with second board.

PHOTOCELL

This photocell is an infrared triggering device which is powered directly from the timer via 3 lead wire with 5 PIN DIN jacks up to a maximum of about 200 feet.

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 round or square post and are aligned with each other. The distance between the reflector and the emitter/receiver may not be less than three feet nor greater than eighty feet.

The emitter/receiver is connected with the supplied cable to the correspondingly marked jack on the ZE unit. Once all connections have been made and the timer has been turned on the cell has 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 that the reflector is at least three feet from the cell.

If the photocell is to be left outdoors for the entire season it should be covered with a light, clear plastic. This plastic will not affect operation.

STARTING GATE

The starting gate is fastened to a round or square post at the start at about knee height. When screwing on the start wand, care must be taken to tighten it completely so that it does not come loose by itself.

The starting gate has two banana plug/binding posts for the twin wire going to the SE unit.

The starting gate employs a switch with normally open contact which closes when the starting wand is opened to an angle of about 20 degrees.

This gate is of the self closing type, maintenance on it is minimal. We recommend that before each season all exterior friction points be cleaned and lubricated with LUBRIPLATE or a silicone grease.

SE UNIT

Route all cables through the hole on the bottom of the unit and make use of the stressrelief.

Connect the start/finish cable to the binding posts marked DATA LINE. Connect one or two start gates to the correspondingly marked posts - start R, start L. The courses are identified from the top looking down the hill. Therefore make sure the photocells are correctly set up on the finish line.

Connect headset to the correspondingly marked receptacle.

Position supplied plastic container on the shelf to catch the tokens.

This concludes the SE hook up for coin operation.

DISPLAY BOARD(S)

On the bottom side of the display you will find two toggle switches which both always must be in the left position. Next to them is a drum wheel with which a selection is made whether the selftimer is used with one or two display boards.

The following setting applies for the drum wheel:

- #4 - Display board only shows best time of day.
- #3 - Both times are displayed on one board with the course identified with R and L.
- #2 - Two boards are used, time is displayed for left course.
- #1 - Two boards are used, time is displayed for right course.

For one, two or three board connection, see paragraph SE UNIT.

OPERATION

Double check that all connections are made correctly then plug power cord into grounded 110V AC outlet. To test the installation, connect the headsets if not already done so.

Immediately check polarity of start/finish cable by observing the lamp marked "wrong polarity" in the SE unit. If this LED lights up, reverse wires from data line in SE or ZE unit.

By now the display board should say ALGE.

The following sequences will take place thereafter:

ZE unit - The liquid crystal display (LCD) will display a row of 8's.
- All LED lamps on panel marked LINE, LO - L7 will light up.

SE unit - The LCD display will stay blank until the internal rechargeable batteries are sufficiently charged. (Power is supplied from the ZE unit.
Thereafter the display will say OFF.

This state in both units, SE and ZE, will remain for a while. (Anywhere from 20 sec. to several minutes.

The operating state is reached when the SE unit displays two sets of 3 zeroes and the two yellow dots (request for payment) are visible.

The display on the ZE unit will read 00001:00001. The right most digit in the two sets of numbers starts keeping count of how many competitors started.

None of the LED's are lit except the one marked LINE.

If one or more LED's are still lit refer to error guide in ZE cover.

If for some reason the above sequence does not take place, disconnect from power, wait about one minute and connect the power again.

With the headsets in use, the volume can be controlled with the correspondingly marked knobs in each of the units SE and ZE.

The next step would be to set the minimum limit time and the maximum limit time. The minimum time (t_{min}) is a period for which the photocell will not trigger the timer when interrupted. It should be a time which the fastest skier will not reach. The maximum time (t_{max}) is the period in which a slow skier can pass the finish. Expiration of t_{max} will reset the timer automatically without interrupting the photocell.

Consult table in ZE cover for the various settings.

If the timer is delivered for use with tokens, the payment selector will be set to zero meaning that one coin (token) is necessary to free the start. If coins (quarters) are used, the payment selector can be set so that any amount from \$-.25 to \$4.- can be charged.

The timer is delivered set for individual start mode, one competitor in each course and payment mode.

FUNCTION DESCRIPTION

On the SE unit the two yellow indicators (please pay) are on. The competitors each deposit a token, the yellow will disappear and if no skier is in the course the green indicator will come on. Otherwise the competitor has to wait for the green. Once the skiers are in the course the red and yellow indicators come on. The next competitor in line will now pay and wait for the green to appear.

The SE unit will display both running times in seconds. A single display board will show one running time identified with L or R, depending which skier started first. If two boards are used, the running times of both courses are displayed. The competitor to cross the finish line first will stop his/her clock and display the time in 1/100 sec. on the display board as well as on the SE unit. The display in the SE unit will stay on for about ten seconds and either switch back to running time or to the stopped time of the second course. The same happens on the display board (single board) at the finish.

If the timer is in "several competitors in course" mode (14 R - 13 L ready after exceeding T min) the SE unit will not display running times only stopped times.

The finish time of a skier will remain on the display of SE unit until a new finish occurs. In case a printer is connected, every time a racer crosses the finish line, results are printed out as indicated in paragraph PRINTER.

TIME DIFFERENTIAL SELECTION:

If two competitors would like to race against the clock side by side and at the same time would like to know the difference between the two times, the red button marked PARALLEL must be depressed. The white indicator will come on to verify this mode. Unless the timer is set for firm parallel mode this button must be depressed each time prior to the next pair of skiers leaving the start.

The central unit (ZE) contains a self test circuit that continuously checks the installation for possible problems. If some trouble should arise which is recognizable by the circuit, the display in the ZE unit would indicate the trouble in form of ERROR CODES. E.g. if "error 28" would show up, this would mean that the photocell from the right course is out of alignment. If the trouble is corrected the display goes back to normal but the LED lamp marked L4 will remain lit until the self test program is started with button B2.

SPECIAL NOTE:

Every time a change in programming of the timer must be made it is recommended that no skier is in either course. There is no need to turn off the timer. 05,75

MODE SELECTIONS

KEY FUNCTION DESCRIPTION:

Affixed to the inside of the ZE cover you will find the function table. Once familiar with the function of the timer, this table will serve as a quick reference guide.

"S" SWITCH SETTING

24L PARALLEL MUTUAL START, EUROPEAN STYLE:

5 seconds after pressing the "parallel button" on the SE unit, a count down sequence begins. If the parallel button is not depressed, even with switch 24 in L (left) position, the timer accepts starts individually.

The first competitor to open the start gate starts both clocks. The display board shows the running time of the skier that started first. (L = left course, R = right course).

The time of the first competitor to pass the finish line is displayed for 8 seconds and identified with L or R. Thereafter the board displays the time of the second competitor. After 8 seconds the display switches to the differential time. Example: L - 0,17 = "L" left course was behind right course by 17/100 seconds.

In the SE unit the exact same data is displayed as on the board. To display the time difference between the next pair the "parallel button" must be pressed again unless the timer is set for - parallel mode always on - (12R).

24R PARALLEL INDIVIDUAL START, AMERICAN STYLE:

The functioning is the same as in 24L except that each skier starts his/her own clock.

23L NORMAL COIN-OP OPERATION:

23R BOTH COURSES CLOSED:

The timer will not function in this setting. The two red "wait" indicators are on. This setting is used to temporarily close the courses for preparation or repairs without having to disconnect the timer from power.

22L NORMAL COIN-OP OPERATION ON BOTH COURSES:

22R LEFT COURSE CLOSED, RIGHT ONLY:

This setting is chosen if only one course is used. It will turn off the left course display elements and the parallel indicator. The left course coin acceptor however, will be switched over to the right course so that a coin or token deposited for left course does not get lost.

21L NORMAL COIN-OP OPERATION ON BOTH COURSES:

21R WIRE DIRECT TO R START GATE:

The right course in this position can be operated without start unit (SE). If for instance the start must be temporarily moved, it is not necessary to move the SE unit. The start gate is connected with an extension directly to the hill wire. The polarity in this case does not have to be observed. Communication to the finish however, is only possible from the SE unit. In this mode a maximum of four competitors can be timed in the "right r" course. For proper functioning of this mode it is presumed that no two skiers pass each other. This mode would be used if the SE unit became inoperative. Further, this mode would allow a hook up of another ALGE timing unit (S3, Tdc4000) with a special adaptor.

14L NORMAL COIN-OP OPERATION ON RIGHT COURSE:

The course is ready for another competitor whenever the previous skier has passed the finish or Tmax (maximum limit-time) has elapsed. This setting allows only one competitor in each course at any given time and should be used for normal operation.

14R R READY AFTER EXCEEDING Tmin.:

The right course will accept another start when the minimum limit-time (Tmin.) has elapsed. The drum wheel setting (Tmin.) in this case functions only as a start interval selector. This mode is to be used with known start intervals, where up to 4 competitors in the course are to be timed. Please note: The shortest start interval is 20 seconds.

13L NORMAL COIN-OP OPERATION ON LEFT COURSE:

Same as 14L but left course.

13R L READY AFTER EXCEEDING Tmin.:

Same as 14R but left course.

12L NORMAL COIN-OP OPERATION ON ONE OR BOTH COURSES:

12R PARALLEL MODE ALWAYS "ON":

This mode is used for a parallel competition with time differential. This eliminates pressing the "parallel button" anew before each new pair starts.

11L "L" FUNCTIONS, 8 KEYS BELOW:

11R "R" FUNCTIONS, 8 KEYS BELOW:

B KEY FUNCTION DESCRIPTION

Functions performed by "B" Keys with switch 11 in "R" position.

The keys B1 - B5 only work if either the right (B7), the left (B6) or both courses simultaneously have been preselected.

B7 - Data from right course.

When key B7 is pressed the digit for group "-" starts blinking. As of now all changes and introductions are valid for the right course. A repeat pressing of B7 turns the right course selection off.

B6 - Data from left course.

Same procedure as B7 but for left course. If both courses are selected, all following changes or introductions are valid for both courses.

B5 - Next group.

Key B5 allows to advance the group number by one of the preselected course (0-7 = 8 groups). When the timer is turned on the group number 0 will automatically come up. This is indicated with "-". When left in this setting, the timer looks at the whole field as one group.

B4 - Next starting number.

Key B4 allows to advance the start number by one. Without manual intervention the start number will automatically advance by one after each start impulse.

B3 - Reset starting number.

Key B3 resets start numbers back to 1.

B2 - Results.

With key B2 a ranking within one or several groups or all competitors can be called off.

Procedure:

1. Select right or left course with B7 or B6 key for which ranking is required.
2. Select the group with key B5 which needs to be ranked. (When "-" is displayed, ranking of all run times of the selected course is printed.)
3. Press key B2 to save the selected group in memory.
4. If a ranking for several groups is required, steps 2 and 3 must be repeated until all groups are in memory. (Maximum 5 groups per course).
5. Wait 5 - 10 seconds then press B2 once more for results print out.

The ranking process can be stopped any time by pressing key B2.

B1 - Disqualification.

With Key B1 a racer can be disqualified.

Procedure:

1. Select the course with key B7 or B6 in which the racer ran.
2. Select the group with key B5 in which the racer ran.
3. Select the start (sequential) number of the racer.
4. Press B1 and the preselected competitor will be erased from memory.

- To disqualify a whole group, select first the course in which the group ran then select the group with key B5. Once the group to be disqualified is reached, keep Key B5 depressed while simultaneously pressing Key B1.

- To disqualify a whole course, select the course and while key B7 or Key B6 is held down, simultaneously press Key B1.

Caution: Once disqualified, times can no longer be ranked since they are erased from memory.

B0 - Ignore signal from finish beam.

With Key B0 a triggering by the photo cell from both courses can be locked out. E.g. if it is apparent that somebody unauthorized is to cross the finish line, the stop signal can be locked out by pressing Key B0.

SP - Press to speak through loudspeaker at start.

While the SP button is kept depressed, communication from the finish head set is transferred to the loudspeaker.

Functions performed by "B" keys with switch I1 in "L" position.

B7 - To enter time set mode.

With Key B7 the time set mode is accessed. As confirmation, light information L7 is illuminated.

Keys B2 - B6 now allow setting the clock.

B6 - The years are advanced by one with each pressure of button B6 (1985 - 2007). On the display however, only the two right most digits are displayed. E.g. 01 = 2001, 97 = 1997 e.t.c.

B5 - The months are advanced by one (1 - 12).

B4 - The days are advanced by one. The program takes the correct amount of days per month and leap years into account.

B3 - Introduction of hours.

B2 - Introduction of minutes.

Pressing B2 stops the clock and resets the seconds to zero.

B7 - After above settings are complete, pressing B7 again starts the clock. The L7 information light goes out and after 10 seconds the display switches back to the start numbers. From now on each print out contains time of day and date. Further, with the timer left on, the date change at midnight automatically clears the memory and erases the best time of day.

B6 - To enter handicap set mode.
By pressing button B6 the timer goes into handicap (par time) setting mode. This mode is recognizable with the display showing HC 0:00,00 and L7 information light being on.
Button B1 - B5 now allow to enter the par time.

B5: Introduce 1 minutes
B4: " 10 seconds
B3: " 1 seconds
B2: " 1/10 seconds
B1: " 1/100 seconds.

Pressing B6 button again enters the par time into memory.

The par time is the time against which all run times are being compared. The percentage or handicap is printed out in addition to the competitors time.

Example: Competitors time = 0:33,00
Par time = 0:30,00

The result is a handicap of 010,0 meaning that the competitor time is ten percent longer than the par time.

To eliminate the handicap print out, the par time must be set to zero "HC 0:00,00".

B5 - Used for service purposes only.

B4 - Display coin counter.
Pressing B4 displays the amount of tokens or coins that have been deposited. This number may be different from the starting numbers. The coin counter display stays on for about 10 seconds before reverting back to start numbers.

B3 - Reset coin counter.
Press B3 to start from zero count.

B2 - Self test program on.
Pressing B2 initiates a test program which checks all important functions of the system. If prior to pressing B2, the LED L4 was illuminated, the already corrected error code is displayed once more. While the test program is running, both courses are closed.

- B1 - No payment for right course.
 Key B1 allows to turn the pay (yellow) indicator in the SE unit on or off. When turned off, no payment is necessary to free the clock. The moment a competitor crosses the finish line or minimum limit time is reached (depending on mode) the red signal switches directly to green. The no payment mode is indicated by the illuminated information light L1.
- B0 - No payment for left course.
 Same as B1 but for left course.

LED LIGHT INFORMATION:

- L7 - System in time set mode.
 The illuminated light L7 indicates that the system can be set for time, date and handicap. (Switch 11 in L position).
- L6 - Selected program running, wait.
 L6 is lit to indicate that a program can not be executed, due to a skier in the course. The test program however, will be started the moment both courses are unoccupied.
- L5 - Results.
 L5 is lit while the system is in ranking mode (B2) and results are printed.
- L4 - There is, or was trouble.
 L4 would be lit if any kind of interference or trouble is or was present. The cause of the interference is displayed on the LCD in form of the error codes. If the cause of the problem is corrected, the LCD display reverts back to start numbers. The L4 light however, remains illuminated until the test program is started.
 (Key B2 with switch 11 in L position).
- L3 - System in parallel mode.
 The L3 LED is illuminated at the moment a parallel slalom is in progress.
- L2 - Self test program running, wait.
 For the duration of the running test program LED L2 is lit.
- L1 - No payment for right course.
 L1 LED illuminated, indicates that the right course can be operated without payment.
- L0 - No payment for left course.
 Same as L1 but for left course.

LINE-Connection to start unit ON.
 Lit LED indicates established connection between start and finish. An occasional flicker of this LED is normal.

ERROR CODES:

- Error 01 - SE unit is sending no data.
Hill wire could be interrupted.
- Error 02 - SE unit is sending wrong data.
This code is displayed if something is wrong with the SE unit,
or if the Nicad batteries in the SE unit are totally
discharged.
The cure: Most often it is sufficient to disconnect the system
from power and after one minute connecting it again.
- Error 03 - Hill wire to start unit short circuited.
Hill wire may have a short or has wrong polarity.
- Error 04 - Hill wire disconnected or disturbed.
May indicate that the hill wire is cross connected (used with
other devices at the same time).
- Error 05 - Hill wire resistance too high.
May be caused by a bad splice.
- Error 06 - Reserve.
- Error 07 - Reserve.
- Error 08 - Finish beam for right course not aligned.
When finish beam goes out of alignment, the red "wait"
indicator in the SE unit comes on after about 4 seconds.
The moment the cell is realigned, the system goes back to
normal.
- Error 09 - Finish beam for left course not aligned.
Same as 08.
- Error 10 - T_{min} on drum wheel is same or greater than T_{max} .

SELFTIMER WITH BATTERY POWER:

The Selftimer can be powered by a battery with 12 - 24 Volts. The ideal would be 18 Volts (12V battery and 6V battery in series).

If the printer is hooked up, 12V operation will not guarantee proper functioning of the printer at sub zero temperatures, since the heater built into the mechanism is not strong enough to heat the print mechanism and cutter properly. If the timer is powered by a 24V battery, the battery may not be charged simultaneously, since the voltage to the timer will be more than 24V and may cause damage.

The battery is to be connected to the terminals "+ BATT -". A proper battery cable is available as an accessory.

The power consumption depends on the frequency of use but is at an average about 1,5 Amps.

The operation with a fully charged 45 Ah battery is:

Capacity of battery : Average power consumption = 45Ah : 1,5A = 30 hrs.

The value decreases about 30% at low temperatures.

PRINTER

The proper all season operation is ensured if the device is not left outside during the night at -10 degrees F or below.

The printer, just as the display board, receives its data and power from the central unit (ZE) via the yellow cable.

For proper functioning the printer must be connected to the ZE before the power is turned on. There should also be a new roll of paper in the device to last for the maximum amount of runs. A new roll will last about a total of 300 time printouts. If single course is used, 300 skiers would be recorded, in dual course mode 150 skiers per course.

A built-in sensor keeps the printer from operating without paper. The normal operation of the Selftimer keeps going on until a new roll of paper is installed. The printer has its own memory for up to ten times. While the paper is being changed the times are stored. When the cutter cover is closed the printer starts printing the times in memory.

TO CHANGE PAPER:

Unscrew printer cover with the special key. Flip up the cutter cover (aluminum plate 4 1/2"x6") which exposes the printing mechanism and the paper holder.

To remove remaining paper from mechanism, gently pull on upper end while turning the white paper advance wheel down.

Remove the teflon spindle from holder.

Insert new roll of paper and guide into print mechanism slot (shiny side down) while turning paper advance wheel down. Let paper exit about 5"-6" and guide through cutter slot.

Close cutter cover slowly and pull paper taut.

The moment the cutter cover is closed, the printer will start printing if there are times in memory.

Use paper guide drawing on inside of main cover.

Close main cover and screw down tight, specially when the printer is left outdoors.

This printer, like the other devices of this installation, is ruggedly built but it should not be dropped or otherwise abused.

The hard copy can produce the following information:

The year, month, day (if programmed)

Time of day (if programmed)

Ski area name or other programmable info.

Best run time of the day.

Competitors time with course identification and sequential number.

Handicap points (if programmed-)

-

List of Limit-time:

Selector switch:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
max. sec:	10	20	30	40	50	60	75	90	105	120	140	160	180	210	240	300
min. sec:	0	5	10	15	20	25	30	35	40	45	50	60	75	90	105	120

i.e.: minimal limit-time 35 sec. 0 switch position 7
maximal limit-time 75 sec. = switch position 6

List for preselection of coins :

selector switch position:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
coin 1:	1	2	3	4	5	2	3	4	5	3	4	5	4	5	5	10
coin 2:	1	1	1	1	2	2	2	2	2	3	3	3	4	4	5	1

For systems with a coin-collector only for a kind of coin or only for chips, the line "coin 1" is valid.

For systems which have coin-collectors for coins and chips together the line " coin 1" is valid for coins and the line " coin 2" is valid for chips.

For systems which have a coin-collector for two different kinds of coins the line "coin 1" is valid for coins with a lower value and the line "coin 2" is valid for coins with the higher value.

i.e. There is a Self Timer with a coin-collector for coins and chips. Start should be made by inserting either three coins or one chip.

switch position 2

SE UNIT CONNECTIONS & CONTROLS

cable ribbon for display
printed circuit board

relais contacts -
they close when courses
have green lights

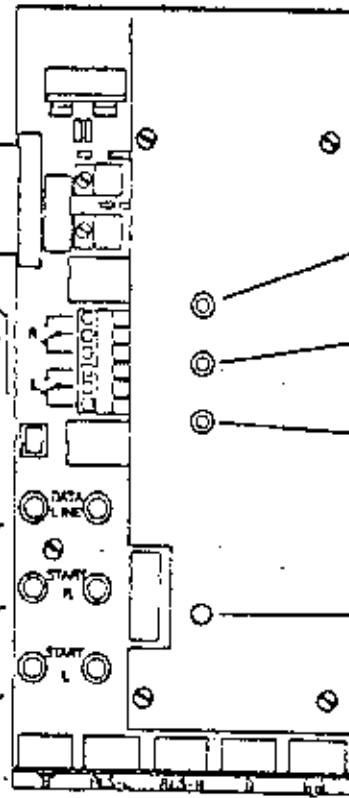
button to display coin count
same as "B4" at finish

connection for hill wire

connection for right start
gate

connection for left start
gate

connection for
loudspeaker



volume control for loudspeaker

volume control for headphone

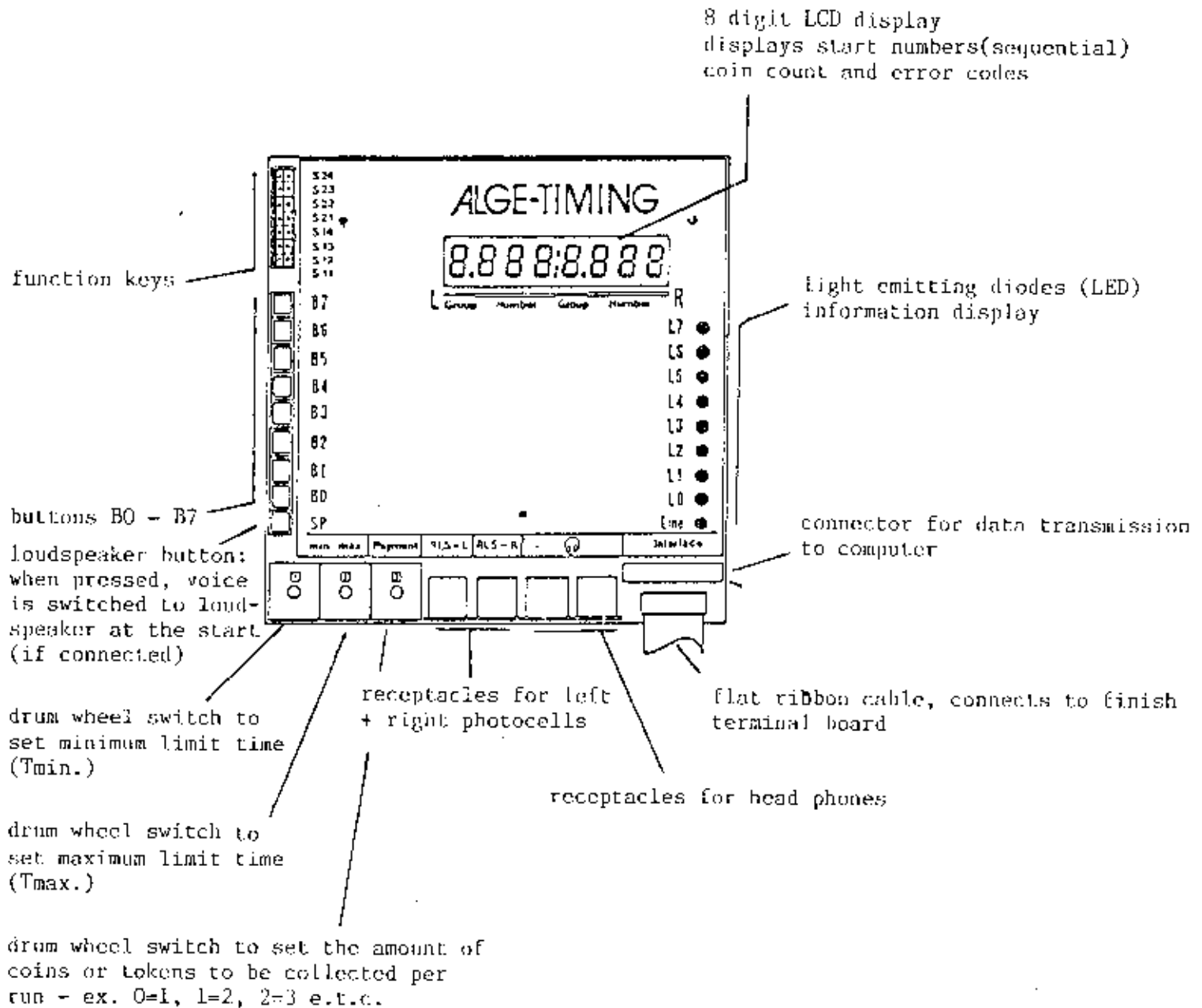
compensation adjustment for
feed back

LED "wrong polarity" flashes
if hill wire is not polarized
correctly

connection for headphone

connection for special
photocell

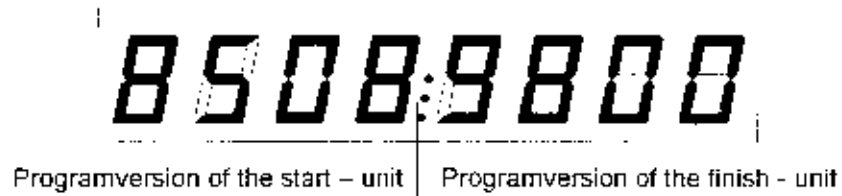
ZE UNIT CONNECTIONS + CONTROLS



New opportunities with the selftimer SF2

- Always free of charge operation
- Speedtrap

You can check the programmversion with the button B5 of the finish - unit.
Indication on the Display: e.g.



Free of charge operation

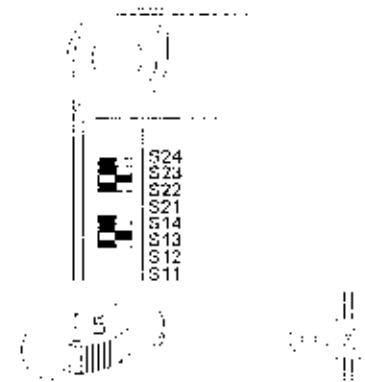
you can change to the free of charge operation with switch S23.

SF2 adjustment for a speedtrap

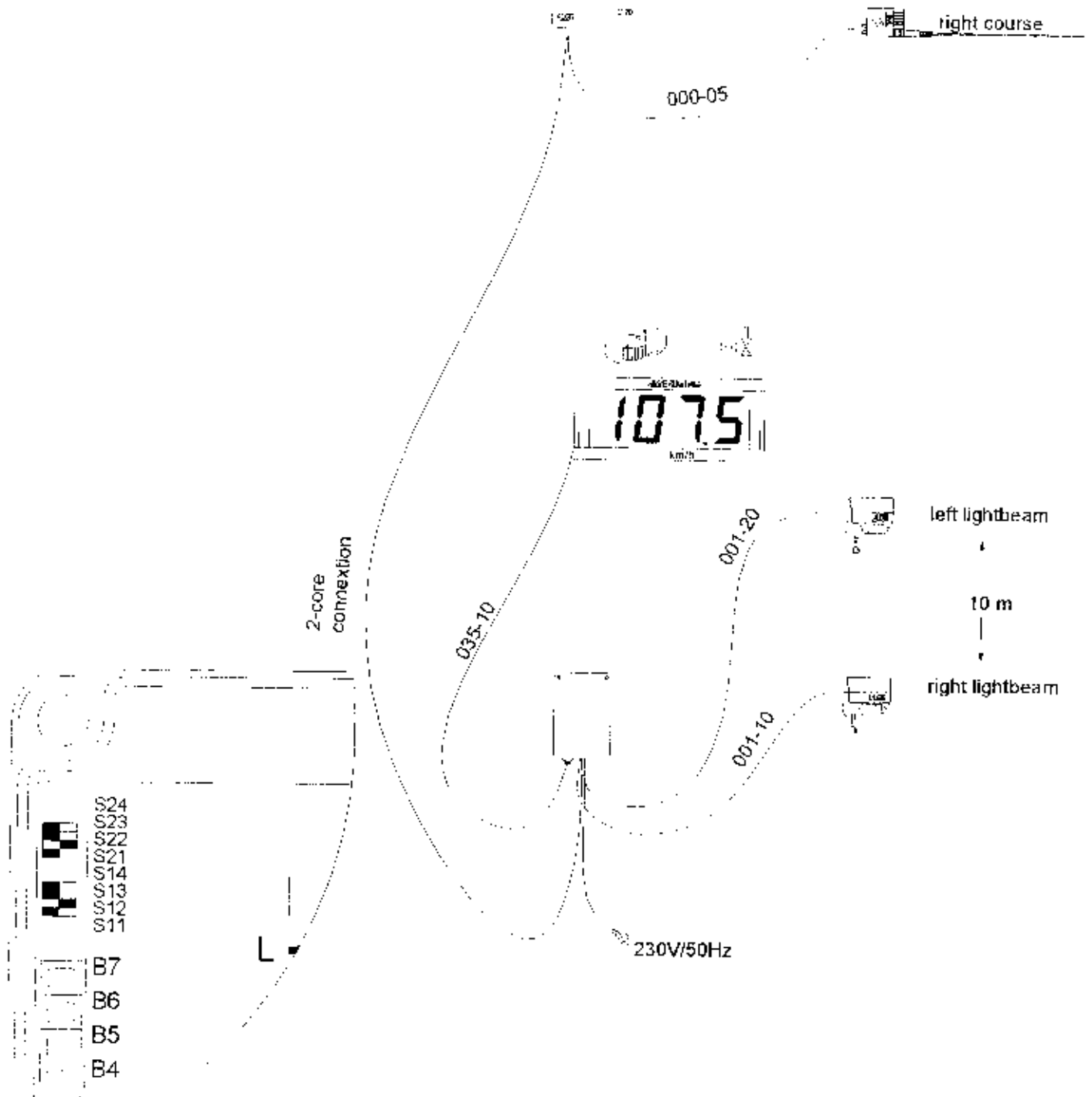
For the speedtrap – operation you have to switch S22 and S12 to the right position.

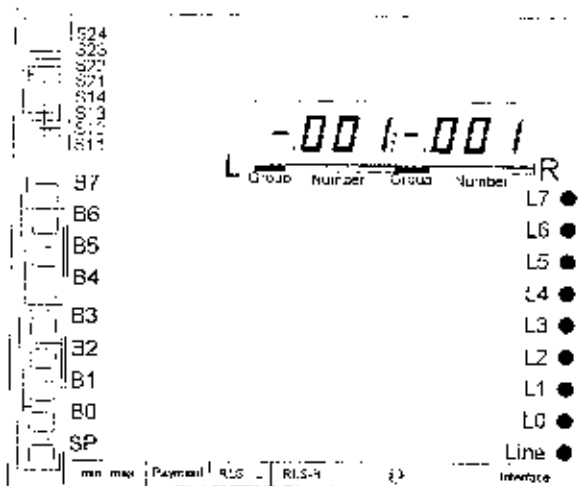
Adjustment for the scoreboard GAZ4 or GAZc

- | | | |
|----------|-------|-------------------------------------|
| adress 1 | | Runtime + speed |
| adress 2 | | Intermediate time + speed |
| adress 3 | | Intermediate time + runtime + speed |
| adress 4 | | Maximum speed of the day |
| adress 5 | | Speed (standard for speedtrap) |



SF 2 SPEED-TRAP





S switch settings

Left side

24L	Paralell, mutual start
23L	normal operation
22L	normal operation
21L	normal operation
14L	normal operation
13L	normal operation
12L	normal operation
11L	Push-button funktion left

right side

24R	Paralell, individual start
23R	free of charge operation
22R	left course closed, only right
21R	without startunit
14R	R ready after exceeding T _{min}
13R	L ready after exceeding T _{min}
12R	always paralell
11R	Push-button funktion right

Push-button funktion left

B7	set time funktion
B6	set handicap
B5	display programversion
B4	display starts
B3	reset starts
B2	testprogram on/off
B1	no payment for right course
B0	no payment for left course
SP	announcement over startspeaker

Push-button funktion right

B7	data from right course
B6	data from left course
B5	next group
B4	next starting number
B3	reset starting number
B2	results
B1	disqualification
B0	ignore finishimpuls

Set clock

B6	year
B5	month
B4	day
B3	hour
B2	minute

Set handicap

B5	minute
B4	10 th seconds
B3	seconds
B2	1/10 seconds
B1	1/100 seconds

LED information

L7	set time
L6	wait
L5	result
L4	defect, interruption
L3	parallelmode
L2	test
L1	no payment for right course
L0	no payment for left course
Line connexion	

Errorcodes:

Error 01	startunit doesn't response
Error 02	startunit is sending wrong data
Error 03	short circuit on line (start-finish)
Error 04	hillwire disturbed
Error 05	hillwire disconnected or to high resistance
Error 06	reserve
Error 07	reserve
Error 08	right lightbeam isn't adjusted
Error 09	right lightbeam isn't adjusted
Error 10	T _{min} is equal or greater than T _{max} .

Thumbwheelswitch settings

setting	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
T _{max} .sek.	10	20	30	40	50	60	75	90	105	120	140	160	180	210	240	∞
T _{min} .sek.	0	5	10	15	20	25	30	36	40	45	50	60	75	90	105	120