GAZ5

ALGE-TIMING

Manual

1.................**rotation switch**
2.................**toggle switch (format setting)**

up	=	ID-number and rank
middle	=	minutes/seconds/1/100
down	=	hours/minutes/seconds

3.................**toggle switch (function setting)**

up	=	RS485 operation
middle	=	RS232 operation
down	=	internal clock

4.................**data input/output**
      banana socket yellow and black – RS232 - identical on other side
5.................**data input/output:** banana socket white and blue – RS485
6.................**data input/output :** banana socket white and blue – RS485
7.................**Amphenol connection** (RS232 and power supply - double-sided)
8.................**on/off switch***
9.................**fuse for battery** (T3.15A)*
10...............**battery condition LED***
11...............**AC-power and charging LED****
12...............**fuse for mains** **
13...............**plug for mains** (90-132 VAC or 187 – 264 VAC / 50 or 60 Hz)**

*   Only display boards with integrated powerpack PP5
**   Only display boards with integrated powerpack PP5 or power supply unit PS5

The Amphenol connector you can rotate so it is easy to connect a cable.
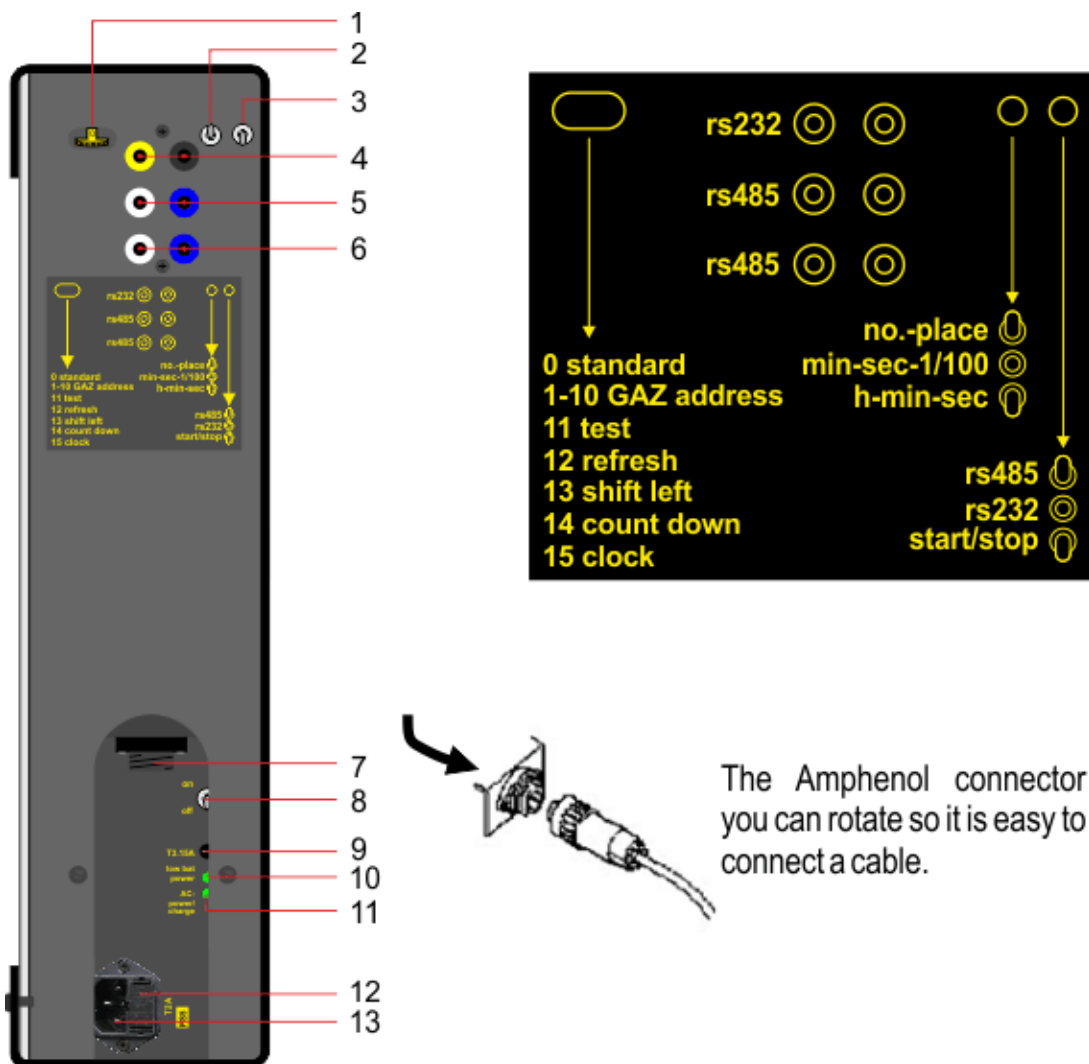
Important Information

General

Before using your ALGE·TIMING device read the complete manual carefully. It is part of the device and contains important information about installation, safety and its intended use. This manual cannot cover all conceivable applications. For further information or in case of problems that are mentioned not at all or not sufficiently detailed, please contact your ALGE·TIMING representative. You can find contact details on our homepage www.alge-timing.com

Safety

Apart from the information of this manual all general safety and accident prevention regulations of the legislator must be taken into account.
The device must only be used by trained persons. The setting-up and installation must only be executed according to the manufacturer's data.

Intended Use

The device must only be used for its intended applications. Technical modifications and any misuse are prohibited because of the risks involved! ALGE·TIMING is not liable for damages that are caused by improper use or incorrect operation.

Power supply

The stated voltage on the type plate must correspond to voltage of the power source. Check all connections and plugs before usage. Damaged connection wires must be replaced immediately by an authorized electrician. The device must only be connected to an electric supply that has been installed by an electrician according to IEC 60364-1. Never touch the mains plug with wet hands! Never touch live parts!

Cleaning

Please clean the outside of the device only with a smooth cloth. Detergents can cause damage. Never submerge in water, never open or clean with wet cloth. The cleaning must not be carried out by hose or high-pressure (risk of short circuits or other damage).

Liability Limitations

All technical information, data and information for installation and operation correspond to the latest status at time of printing and are made in all conscience considering our past experience and knowledge. Information, pictures and description do not entitle to base any claims. The manufacturer is not liable for damage due to failure to observe the manual, improper use, incorrect repairs, technical modifications, use of unauthorized spare parts. Translations are made in all conscience. We assume no liability for translation mistakes, even if the translation is carried out by us or on our behalf.

Disposal

If a label is placed on the device showing a crossed out dustbin on wheels (see drawing), the European directive 2002/96/EG applies for this device.
Please get informed about the applicable regulations for separate collection of electrical and electronical waste in your country and do not dispose of the old devices as household waste. Correct disposal of old equipment protects the environment and humans against negative consequences!

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1 DEVICE DESCRIPTION

The **ALGE** display boards of the fifth generation feature state-of-the-art techniques (C-MOS, microprocessor with watchdog).

In a shapely, plastic coated aluminium casing 7-segment digits are integrated to form the scoreboard. Available in 15, 25, 45 cm digit height, the digits guarantee a perfect readability.

Due to the low energy consumption, an operation with built-in rechargeable batteries is possible – on request, we assemble the PP5 into the display board.

ALGE display boards are ideal for far viewable displays of numerical data like time, speed, width, height, laps, valuation, weights, prices, temperatures, winning figures, exchange rates, etc. ...

The display board can be used as data receiver (e.g. of **ALGE** timing devices or of the handy-terminal **ALGE** Comet or Timy) or as autonomous clock.

ATTENTION!!
If the display board is often or continuously used outdoor, we recommend executing the digit test more often than during indoor use. So you can avoid segments blockage.

2 POWER SUPPLY

There are different possibilities for the power supply of the display board GAZ5.
The power supply is carried out by power pack (PP5), power supply (PS5) or an external supply.

2.1 Powerpack PP5

The power pack PP5 is built in on request. The power pack consists of NiMh-batteries (12V, 4.5Ah) and a charger (90-132 VAC and 187 – 264 VAC / 50 or 60 Hz).
A mains operation is even possible with empty batteries!
We do not offer the 45 cm figure height models with PP5.

Charging of the NiMh-batteries:
- Switch off the display board with switch (8), if no operation is necessary during the charging process.
- Connect provided line cord on the right side of the GAZ (13) and on 220V net.
- Charge pilot lamp (11) lights up.
- The charging time for full charging is approx. 14 hours (the charger is guarded by a charging protection).

Operation time after full charging as regular clock:
- GAZ with 15 cm digit height: approx. 70 hours
- GAZ with 25 cm digit height: approx. 35 hours

At low temperatures, the operating time decreases (at –20°C = 20% less performance).

2.2 Battery Voltage „END"

If the display shows "End", it means that the battery voltage is too low. The microprocessor switches off and the display board must be charged. If you connect the display board to the net, the display board automatically switches on. Previous adjustments like Refresh are stored und continue functioning.

2.3 Power Supply PS5

A power supply unit is built into the display board on request. With a special plug, you can connect the display board directly to mains (90-132 VAC or 187 – 264 VAC / 50 or 60 Hz).

2.4 External Battery

A 12V battery (car battery) with at least 2Ah must be connected to the display board. Please pay attention to the fact that the polarity of the battery clips is right [connect (+) with (+) and (-) with (-)].
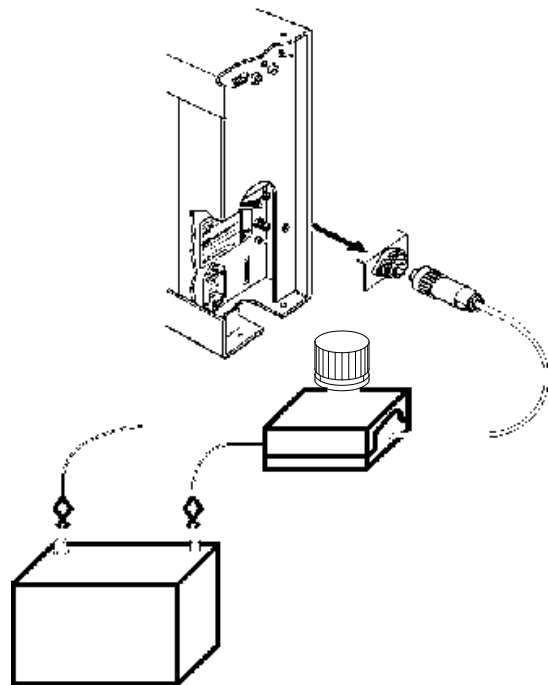
2.5 Interconnection of display boards

If two display boards are interconnected (e.g. rank/bib board and time board), only one display board should be connected to a power pack, a power supply or to a battery. Please use the cable 033-01.

cable 033-XX
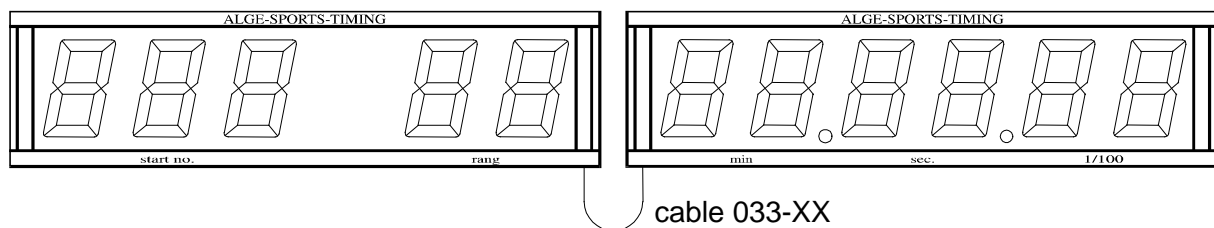
3 OPERATING METHODS AND SWITCH SETTINGS

3.1 Operating methods

The display board can be used as data receiver or as an autonomous (independent) clock.

Data receiver of:
- ALGE TdC 8001
- ALGE TdC 8000
- ALGE TdC 4000
- ALGE OPTIc2
- ALGE OPTIc
- ALGE OPTI 1sw
- PC

- ALGE Timy / Timy2
- ALGE Videotimer VT2
- ALGE Comet
- ALGE Timer S4
- ALGE Timer S3
- ALGE Self Timer SF2

Autonomous clock:
- Clock, counting up from 0:00.00
- Clock with pre-adjusted time
- Countdown with Timeout

3.2 Function Settings (Toggle Switch 3)

Switch between different interfaces and the internal clock with the toggle switch (3).

Toggle Switch (3) up:

Display board shows data from RS485 interface

Toggle Switch (3) in middle position:

Display board shows data from RS232 interface

Toggle Switch (3) down:

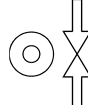Display board shows the internal clock

3.3 Format Settings (Toggle Switch 2)

The toggle switch (2) controls the output format. The above mentioned data correspond to a 6 digits standard display board.

Toggle Switch (3) up:
- Rotation switch (1) at 0: display of start number (3 digits) and rank (2 digits) if a ALGE TdC is connected
- Rotation switch (1) at 13: display of ID-number (3 digits) and hours (2 digits) if ALGE TDC is connected

Toggle Switch (3) in middle position:
- Rotation Switch (1) at 0: display of time in minutes, seconds, tenth and hundredth
- Rotation Switch (1) at 13: display of time in minutes (1-digit), seconds, thousandths

**Toggle Switch (3) down:**
- Rotation Switch (1) at 0: display of time in hours, minutes and seconds
- Rotation Switch (1) at 13: display of time in hours (1 digit), minutes, seconds and tenths

3.4 Rotation Switch (1)

The rotation switch (1) has 16 different types of settings. Used as data receiver, you work in position 0 or 13 (all outputs are shifted by one position to the left)
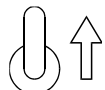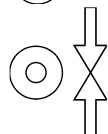The functions for the autonomous clock will be active in position 14 and 15
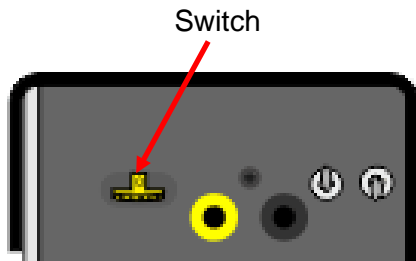
Switch


```
0 ............... Standard
1 - 10 ........ GAZ address
11 ............. Test
12 ............. Refresh
13 ............. Shift left
14 ............. Count down
15 ............. Clock
```

Standard 0
If the GAZ works as data receiver of ALGE timing device the switch is set to position 0.

GAZ address 1 – 10
Settings 1 to 10 are used for addressing at operations with ALGE Selftimer or interconnected display boards.

Test 11
Setting 11 contains a test program, with which you can check every single digit. With the toggle switch (3) you can chose different kinds of testing programs.

 test switch and signal input
DL….shortcut / DH….open

 all digits count up, one by one

 all digits change between the display of 8 and blank

Refresh 12
Setting 12 is responsible for the refresh. The refresh causes that the GAZ writes all figures anew every 10 seconds.
This feature is used for GAZ e.g. mounted on a car-top. In this case it may happen that the figures are not written correctly due to vibrations of the car. After switching on "refresh", the display shows „r on". Adjust the shift switch to the requested position.

Shift 13
Setting 13 shifts all digits by one position to the left.
Apart from that, it has the same function as setting 0.
Shift is necessary if tenth or thousandth seconds must be shown at the last digit of the display board (e.g. car sports, speed skating, cross country skiing, skeleton...)

Countdown 14
Setting 14 is responsible for the countdown operation (see chapter 6).

Clock 15
Setting on 15 is responsible for the internal clock (see chapter 5)

3.5   Shift output format by one digit

It is possible to shift the output format of the GAZ by one digit to the left. Set the switch (1) to position 13. This is required for sports, where tenth or thousandth seconds must be shown (e.g. motor sports, speed skating, and skeleton)

Digit 6	Digit 5	Digit 4	Digit 3	Digit 2	Digit 1	Position of Toggle Switch (2)	Positon of Rotation Switch (1)
Nh	Nz	NE		Rz	Re	top	0
M	M	S	S	z	h	middle	0
H	H	M	M	S	S	bottom	0
Nh	Nz	NE		H	H	top	13
M	S	S	z	h	t	middle	13
H	M	M	S	S	z	bottom	13

Nh................. Start number (hundredth digit)
Nz .... Start number (tenth digit)
Ne................ Start number (1 digit)
Rz .... Rank (tenth digit)
Re................ Rank (1 digit)
H................... Hour
M .... Minute
S .... Second
z.................... 1/10 Seconds
h .... 1/100 Seconds
t .... 1/1000 Seconds

4 DISPLAY BOARD CONTROLLED BY TIMING DEVICE

4.1 Display Board GAZ5 controlled by ALGE TDC

- Connect data line 010-10 or 037-10 to ALGE TdC and attach the GAZ (4) with a 2-wire cable. Pay attention to the polarity of the GAZ plugs (4), black banana plug to black socket and yellow banana plug to yellow socket.
- Place rotation switch (1) at „0" or „13".
- Adjust requested display configurations with toggle switch (3) (see chapter 3.3).
    o Start number / rank
    o Minutes, seconds, hundredth, (thousandth)
    o Hours, minutes, seconds (tenth)
- Switch power on
    o For GAZ with integrated powerpack use switch (7)
    o For GAZ without powerpack through external power supply (e.g. 12 V battery, mains as described in chapter 2).
- The display board signalizes the program version and subsequently with displaying „ALGE" the operational readiness.
- Switch on ALGE TdC and the display board goes blank.
- Select the program that you want use in TdC and start timing. As soon as the TdC shows a running time it also shows on the display.

For the ALGE TDC4000 use cable 010-01. As soon as the display of the ALGE TDC4000 shows a running time, the GAZ should also show it (otherwise twist the connection plug at ALGE TDC4000 by 180° degrees).
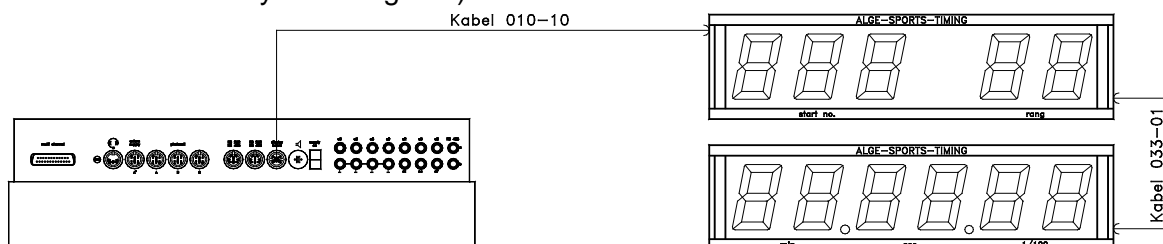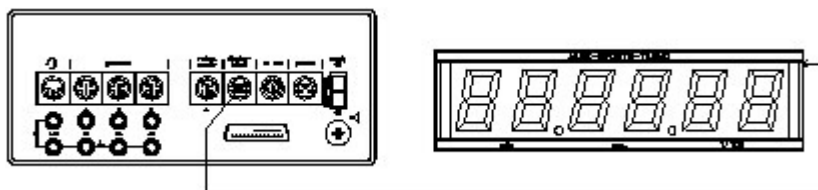
4.2 GAZ5 controlled by ALGE Timy

- Connect data line 037-10 to ALGE Timy and attach the GAZ (4) with a 2-wire cable. Pay attention to the polarity of the GAZ plugs (4), black banana plug to black socket and yellow banana plug to yellow socket.
- Place rotation switch (1) at „0" or „13".
- Adjust requested display configurations with toggle switch (3) (see chapter 3.3).
    - Start number / rank
    - Minutes, seconds, hundredth, (thousandth)
    - Hours, minutes, seconds (tenth)
- Switch power on
    - For GAZ with integrated powerpack use switch (7)
    - For GAZ without powerpack through external power supply (e.g. 12 V battery, mains as described in chapter 2).
- The display board signalizes the program version and subsequently with displaying „ALGE" the operational readiness.
- Switch on ALGE Timy and the display board goes blank.
- Select the program that you want use in Timy and start timing. As soon as the Timy shows a running time it also shows on the display.

4.3 GAZ5 controlled by ALGE Timer S4

- Connect data line 010-10, 037-10 or 060-10 to ALGE Timer S4 and attach the GAZ (4) with a 2-wire cable. Pay attention to the polarity of the GAZ plugs (4), black banana plug to black socket and yellow banana plug to yellow socket.
- Place rotation switch (1) at „0" or „13".
- Adjust requested display configurations with toggle switch (3) (see chapter 3.3).
    - Minutes, seconds, hundredth, (thousandth)
    - Hours, minutes, seconds (tenth)
- Switch power on
    - For GAZ with integrated powerpack use switch (7)
    - For GAZ without powerpack through external power supply (e.g. 12 V battery, mains as described in chapter 2).
- The display board signalizes the program version and subsequently with displaying „ALGE" the operational readiness.
- Switch on ALGE Timer S4 and the display board goes blank.

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- Select the program that you want use in Timer S4 and start timing. As soon as the timing device shows a running time it also shows on the display.

Cable 010-10, 037-10 or 060-10 from **ALGE** Timer S4 to the display board can be lengthened with a 2-wire cable (for approx. 1km). You can also use **ALGE** cable reels KT300 (300m) or KT500 (500m) as extension.

4.4   GAZ5 controlled by Comet

- Connect data line 030-10 to **ALGE** Comet and attach the GAZ (4) with a 2-wire cable. Pay attention to the polarity of the GAZ plugs (4), black banana plug to black socket and yellow banana plug to yellow socket.
- Place rotation switch (1) at „0" or „13".
- Adjust requested display configurations with toggle switch (3) (see chapter 3.3).
  - o Minutes, seconds, hundredth, (thousandth)
  - o Hours, minutes, seconds (tenth)
- Switch power on
  - o For GAZ with integrated powerpack use switch (7)
  - o For GAZ without powerpack through external power supply (e.g. 12 V battery, mains as described in chapter 2).
- The display board signalizes the program version and subsequently with displaying „ALGE" the operational readiness.
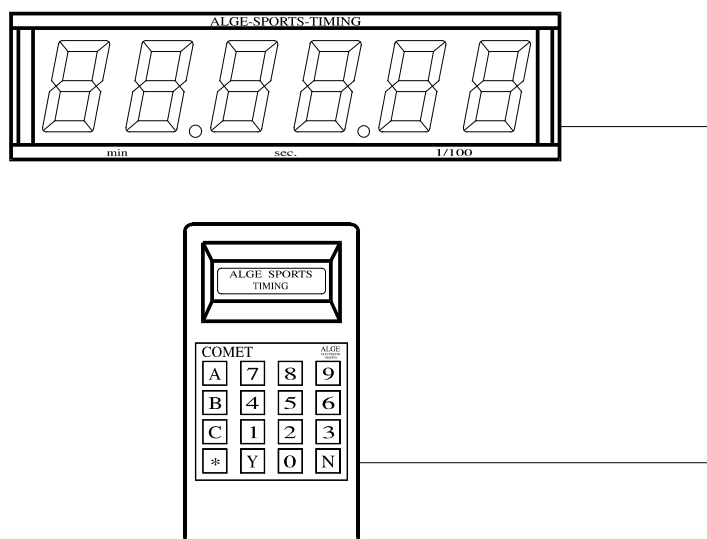- Switch on **ALGE** Comet and the display board goes blank.
- Select the program that you want use in the Comet and start timing. As soon as the timing device shows a running time it also shows on the display.

Cable 030-10 is a 3-wire cable, which supplies the **ALGE** Comet from the display board.

Cable 060-10 is a 2-wire cable, which is particularly used in connection with cable reels KT300 or KT500. With these cables, **ALGE** Comet is not supplied from the display board.

5 CLOCK

5.1 Start stopwatch at 0:00:00.00

- Place rotation switch (1) at position 15.
- Select time format with toggle switch (2) on middle position (min, sec, 1/100) or down position (hour, min, sec).
- Put toggle switch (3) in middle position (RS232).
- Connect push-button 023-02 to GAZ5 banana plugs (4) or use toggle switch (3) as switch (position start/stop gives a start or stop impulse).
- Switch GAZ on and wait until it shows 0:00.00.
- Trigger push-button, clock starts.
- Trigger push-button again and time stops (intermediate time).
- Trigger push-button again and time continues (after intermediate time).
- Reset the clock to 0:00.00 by pushing the push-button until „ALGE" appears.

5.2 Clock starts from pre-adjusted time

- Place rotation switch (1) at position 15.
- Select time format with toggle switch (2) on middle position (min, sec, 1/100) or down position (hour, min, sec).
- Put toggle switch (3) in middle position (RS232).
- Connect push-button 023-02 to GAZ5 banana plugs (4) or use toggle switch (3) as switch (position start/stop gives a start or stop impulse).
- Switch on GAZ and wait until it shows 0:00.00.
- Set the start time by pressing the push-button until the first digit that you want to change shows zero (0).
- Trigger push-button until it shows the desired value and keep it pressed until it shows the next digit that you want to change.
- Continue until you have adjusted the start time.
- Trigger push-button to start the clock.
- Trigger push-button again and time stops (intermediate time).
- Trigger push-button again and time continues (after intermediate time).
- Reset the clock to 0:00.00 by pushing the push-button, until „ALGE" appears.

6 COUNTDOWN WITH TIMEOUT

As countdown time, you can at the most indicate 99 hours, 59 minutes and 59 seconds. The countdown starts at the pre-adjusted time and ends at zero.

- Place rotation switch (1) at position 14.
- Select time format with toggle switch (2) on middle position (min, sec, 1/100) or down position (hour, min, sec).
- Put toggle switch (3) in middle position (RS232).
- Connect push-button 023-02 to GAZ5 banana plugs (4) or use toggle switch (3) as switch (position start/stop gives a start or stop impulse).
- Switch GAZ on and wait until it shows 0:00.00.
- Set the countdown start time by pressing the push-button until the first digit that you want to change shows zero (0).
- Trigger push-button until it shows the value that you want on this digit and keep it pressed until it shows the next number that you want to change.
- Continue until you have adjusted the countdown time.
- Trigger push-button to start the countdown.
- Trigger push-button again to stop the countdown (timeout).
- Trigger push-button again and time continues to count down.
- Reset the clock to 0:00.00 by pushing the hand switch, until „ALGE" appears.

7 TECHNICAL DATA OF GAZ5

Electronic: Microprocessor technology in CMOS-technique with watchdog.

Display elements: Bistable 7-segment digits, yellow on black ground, minor electric power consumption, best readability, great operating safety

Casing: Aluminium casing, plastics coated (black) with plexi cover, designed for outdoor usage

Time Base: Quartz oscillator with 9.2160 MHz

Power Consumption: Standby Current: 10 mA (Surge current per segment in operating moment (every second at running clock))

Figure Height	max. Current	Impulse Duration
150 mm	123 mA	120 ms
250 mm	360 mA	120 ms
450 mm	360 mA	150 ms

Connections: Two Amphenol plugs (left and right on each side of display board)
1 ......+11 to 20 Volt
2 ......0 Volt
3 ......no connection
E ......Data
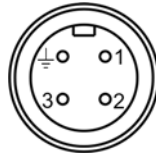
Two data plugs for RS232: Data line (RXD).........yellow
Ground ....black

Two data plugs for RS485: a ....white
b ....blue

Fuses: 1 x T 2 A / 220 V ....mains fuse
1 x T 3.15 A / 220 V ....battery fuse

Power supply: **external**: 11 - 20 V DC, 2 A

**Power Pack PP5:** rechargeable battery and charger are built into display board (on request).
- *Rechargeable Battery:* NiMh rechargeable batteries
- *Capacity:* 4.5 Ah / 12 V
- *Charging time:* 14 hours
- *Operating duration:* approx. 30 hours (25 cm digit height)
- *Charging connection:* 90-132 VAC and 187–264 VAC / 50 – 60Hz (built-in high voltage protection)

Power Supply PS5: built in power supply (on request).
- *Mains supply:* 90-132 VAC and 187 – 264 VAC / 50 - 60 Hz

Temperature range: -25 to 50°C (-13 to 122 F)

Dimensions and weights:
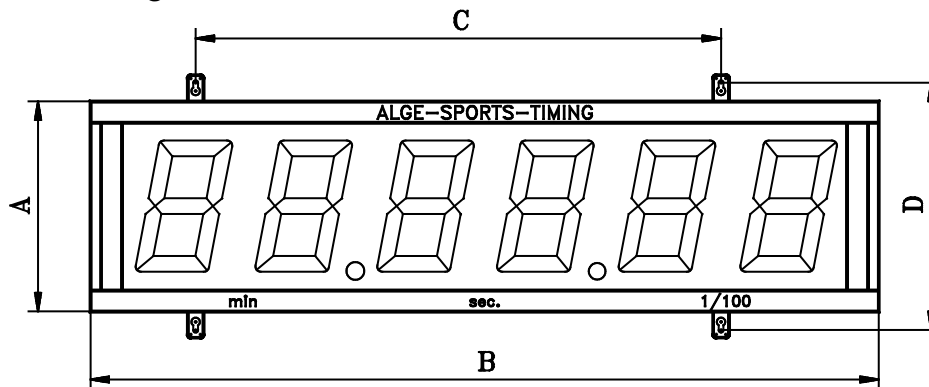
Model	kg	A (mm)	B (mm)	C (mm)	D (mm)	Depth (mm)	Readability approx. m	Operation time approx. h*
GAZ5 515	12	290	956	556	375	100	75	60
GAZ5 615	13	290	956	556	375	100	75	60
GAZ5 525	20	393	1493	1093	480	100	125	20
GAZ5 625	21	393	1493	1093	480	100	125	20
GAZ5 545	45	664	2490	2090	738	120	225	11
GAZ5 645	48	664	2490	2090	738	120	225	11

* At temperatures below 0°C, the operating duration decreases (at –20°C = approx. 20%)

7.1 Interface format

7.1.1 Serial Interface RS232:

Signal compatible with RS232C interface, serial, no handshake operation.

Standard Settings
    2400 Baud (adjusted)
    1 Start bit
    8 Data ASCII-Bit
    1 Stop bit
    No Parity bit

7.1.2 Interface RS485:

Adjusted Baud rate: 2400 Baud

7.1.3 Interface protocol for RS232 and RS485

On the following page the protocols are indicated which can be sent of the ALGE timing devices to the display boards.

|	
J	Identifier for interconnected display board A to J (A = board 1, B = board 2, C = board 3... J = board 10)
Nt	Start number (thousandth-digit)
Nh	Start number (hundredth-digit)
Nz	Start number (tenth-digit)
Ne	Start number (1-digit)
H	Hours
M	Minutes
S	Seconds
z	1/10 Seconds
h	1/100 Seconds
t	1/1000 Seconds
Rz	Rank (tenth-digit)
Re	Rank (1-digit)
X	Carriage Return (0D Hex.) or Line Feed (0A Hex.) and Carriage Return (0D Hex.)
.	Identifier for running time if dot on fourth digit.
A	ALGE TdC 4000: Identifier for intermediate time 1 (at fourth digit)
B	ALGE TdC 4000: Identifier for intermediate time 2 (at fourth digit)
C	ALGE TdC 4000: Identifier for ending time (at fourth digit)
D	ALGE TdC 4000: Identifier for total time (at fourth digit)
K	Comet: 1 = Start channel, 2 = Start channel, 4 = Stop channel or 8 = Stop channel
Tc	Timer identification at the Comet (Timer A or B)
Tt	Timer S4 Split and 3-Parcours: Identification parcours A, B or C
Pr	Identification for Timer S4 parcours
PZ	Timer S4 Show Jumping: fault points (tenth-digit)
PE	Timer S4 Show Jumping: fault points (1-digit)
Pz	Timer S4 Show Jumping: fault points (1/10 points)
Ph	Timer S4 Show Jumping: fault points (1/100 points)
#h	Timer S4 18-Channel-Timer: continuous number (hundredth-digit)
#z	Timer S4 18-Channel-Timer: continuous number (tenth-digit)
#e	Timer S4 18-Channel-Timer: continuous number (1-digit)
Pp	Timer S4 Parallel slalom: Identification for show jumping
r	Timer S4 Parallel slalom: Identification for red parcours (ASCII r)
b	Timer S4 Parallel slalom: Identification for blue parcours (ASCII b)
S	Timer S4 Speed: Identification for speed timing
§	Timer S4 Speed: Identifier for measurement (01Hex=km/h, 02Hex=m/s or 03Hex=mph)
Z	Timer S4 Speed: Speed
F	Timer S4 Swim: Identifier for interconnected display board A to H (A=Tafel1, B=Tafel2... H=Tafel8)

| Device	Function	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ranking board	time for board 1	J	Nh	Nz	Ne						H	H	..	M	M	..	S	S	.	z	h	t	Rz	Re	X
ranking board	running time board 10	J	Nh	Nz	Ne						H	H	..	M	M	..	S	S							X
TDC 4000	running time	Nh	Nz	Ne	.					H	H	..	M	M	..	S	S	.	z					X	
TDC 4000	intermediate 1	Nh	Nz	Ne	A					H	H	..	M	M	..	S	S	.	z	h	t	Rz	Re	X	
TDC 4000	intermediate 2	Nh	Nz	Ne	B					H	H	..	M	M	..	S	S	.	z	h	t	Rz	Re	X	
TDC 4000	run time	Nh	Nz	Ne	C					H	H	..	M	M	..	S	S	.	z	h	t	Rz	Re	X	
TDC 4000	total time	Nh	Nz	Ne	D					H	H	..	M	M	..	S	S	.	z	h	t	Rz	Re	X	
Comet Stopwatch	run time	Nh	Nz	Ne	K	Tc			Nt	H	H	..	M	M	..	S	S	.	z	h	t	X			
Timer S4 / Split	running time			Tt						H	H	..	M	M	..	S	S	.		h		X			
Timer S4 / Split	run time			Tt	.					H	H	..	M	M	..	S	S	.	z	h	t	X			
Timer S4 / 3-Parcours	running time	Pz	Pr	Tt	.					H	H	..	M	M	..	S	S	.	z		t	X			
Timer S4 / 3-Parcours	run time	Pz	Pr	Tt						H	H	..	M	M	..	S	S	.	z	h	t	X			
Timer S4 / Show Jumping	running time	#h	Pz							H	H	..	M	M	..	S	S	.	z	h		Pz	Ph	X	
Timer S4 / Show Jumping	run time	#h	Pz							H	H	..	M	M	..	S	S	.	z	h	t	Pz	Ph	X	
Timer S4 / 18-Channel	running time		#z	##						H	H	..	M	M	..	S	S	.	z	h		X			
Timer S4 / 18-Channel	run time		#z	##						H	H	..	M	M	..	S	S	.	z	h	t	X			
Timer S4 / Parallel Slalom 1	run time "red winns"	Pp	r		Pp	S								r	..	S	z	.	h	t					
Timer S4 / Parallel Slalom 1	run time "blue winns"	Pp	b		Pp									b	..	S	z	.	h	t	X				
Timer S4 / Parallel Slalom 2	running time "red"	Pp	r		.								M	M	..	S	S	.	z	h	t	X			
Timer S4 / Parallel Slalom 2	run time "blue"												M	M	..	S	S	.	z	h	t	X			
Timer S4 / Parallel Slalom 3	difference time red winns	Pp	r			S			§					r	..	S	Z	.	Z	Z	Z	h			
Timer S4 / Speed	speed	F				.								Z	M	Z	Z	.	Z	Z	X		X		
Timer S4 / Swimming	running time (ranking)	F													M	..	S	S	.	z	h		X		
Timer S4 / Swimming	run time (ranking)														M	..	S	S	.	z	h	t	X		
Timer S4 / Swimming	running time (board 1)														M	..	S	S	.	z	h		X		
Timer S4 / Swimming	run time (board 1)					.							M	M	..	S	S	.	z	h	t	Re	X		
Timer S4 / Automatic	running time	#h	#z	##	.					H	H	..	M	M	..	S	S	.	z	h		X			
Timer S4 / Automatic	run time	#h	#z	##	.					H	H	..	M	M	..	S	S	.	z	h	t	X			

8 SETTINGS FOR GAZ5

The display board can be adjusted to the requested display format – depending on the usage – with the toggle switch (3) or the rotation switch (1)

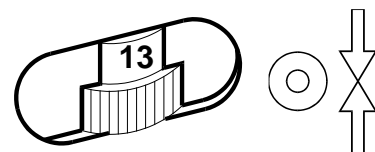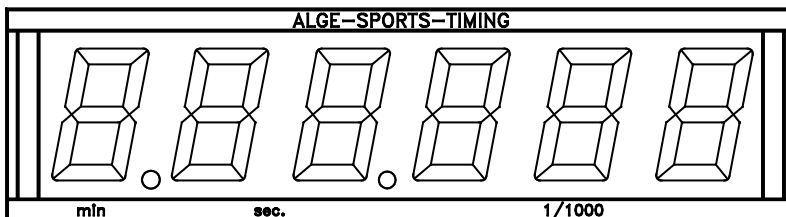The following examples are based on a standard display board GAZ5 with 6 or 5 digits.

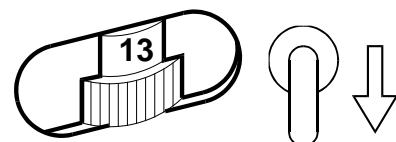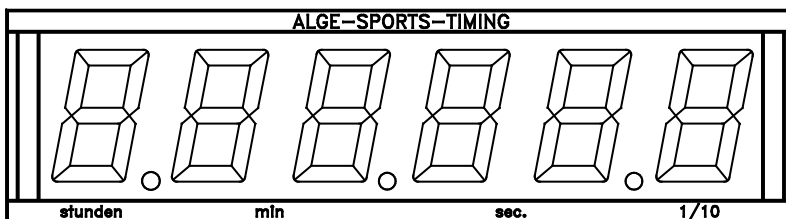Minutes, seconds, 1/100 seconds:

min   sec.   1/100

Hours, minutes, seconds:

stunden   min   sec.
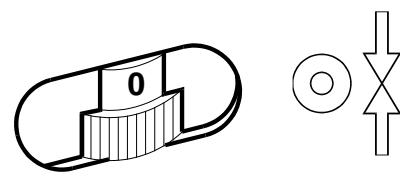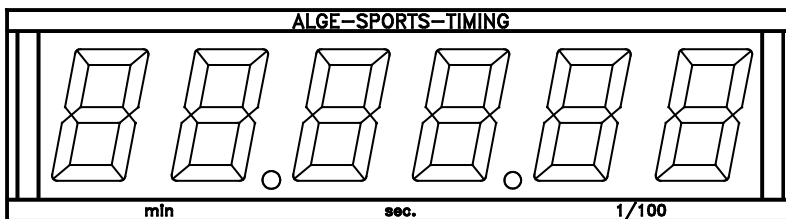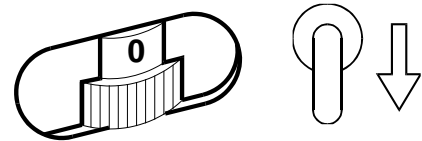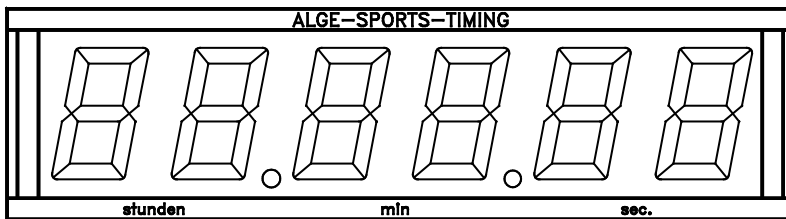
Minutes, seconds, 1/1000 seconds:

min   sec.   1/1000

Hours, minutes, seconds, 1/10 seconds:

stunden   min   sec.   1/10

Start number / rank:

You can use a 5-digit or 6-digit display board. At the 6-digit display board, the fourth digit left will always be black (blank).
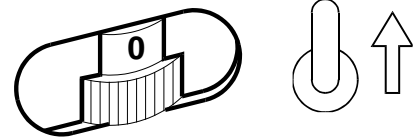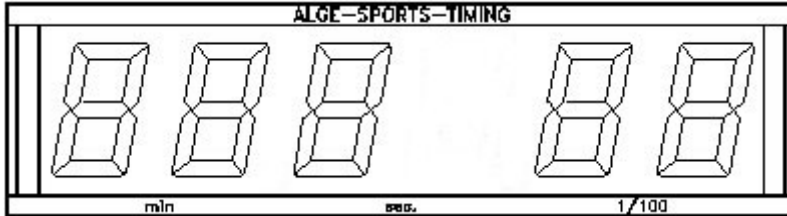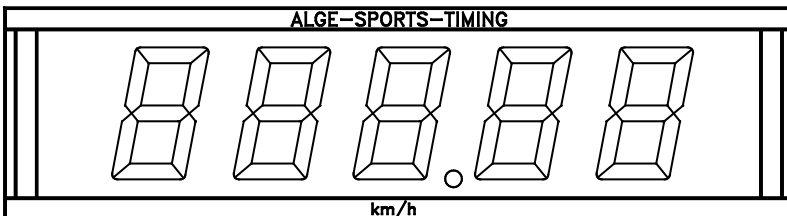

Counter (with Comet program Commander):
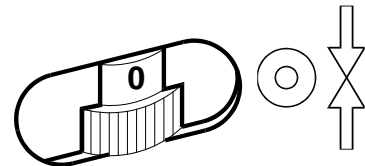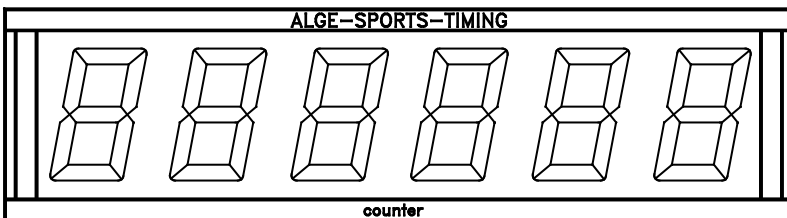
Speed measurement:

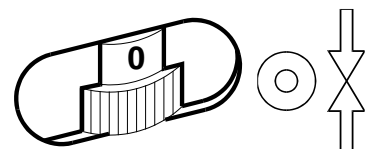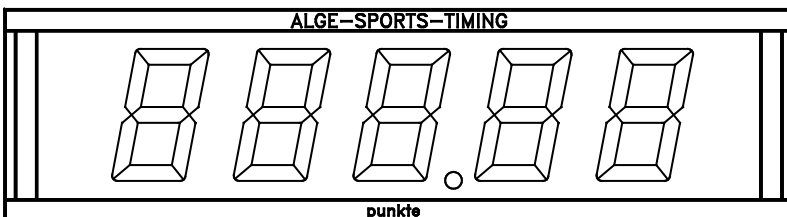The speed can be displayed – depending on the timing device – in km/h, m/s or mph.

Toggle switch middle and rotation switch on	0	1.23 km/h
Toggle switch middle and rotation switch on	13	12.3 km/h
Toggle switch down and rotation switch on	0	123 km/h

Points:

Points can be controlled by a Comet (program Commander), Timer S4 (program equestrian) or by a personal computer.

9 RANKING BOARD

### *What is a ranking display board for?*
To display 2 to 10 lines with the appropriate bib and rank. It is possible to scroll a ranking list.

Usage of a ranking board:
At big events for display of the latest intermediate and end results.

What is required for a ranking board?
- 1 ALGE TdC
- 1 PC
- 1 Software ALGE-TimeNET2
- 2 to 10 pcs. ALGE GAZ (bib / rank)
- 2 to 10 pcs. ALGE GAZ (time)
- 1 charger NGAZ/R for all display boards
- 1 x cable reel KT300 or 2-wired cable
- 1 adapter 069-02
- X x cable 033-01
- X x cable 033-10
- 1 x cable 010-01
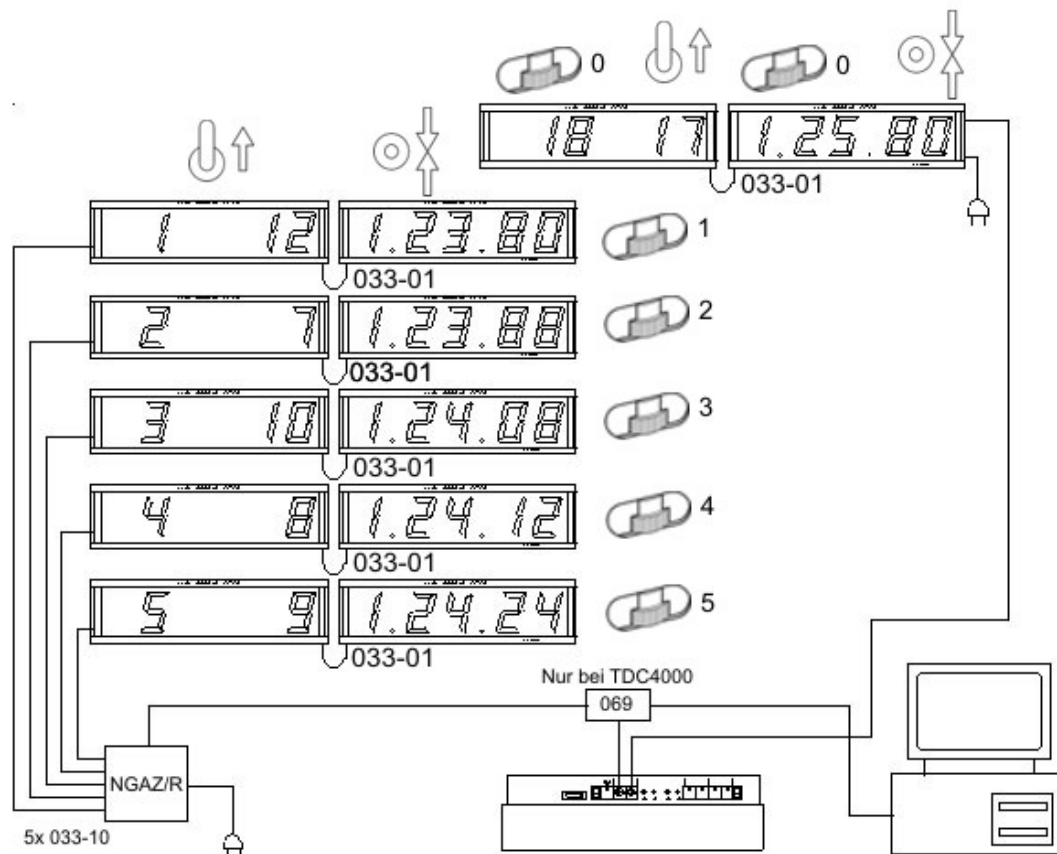
Subject to alternations!

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