

WE SUPPORT YOUR SPORT!



ALGE-TIMING

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Version: 2008-10-29

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1 General

1.1 *Who is ALGE-TIMING ?*

ALGE TIMING is international known for electronic timing since many years. This is a huge success for a small electronic specialized company. ALGE-TIMING is based in the west of Austria at the border to Switzerland and only a few miles from the German border.

With a permanent staff of 30 people ALGE is developing and producing continuously new products. The products are sold over a net of independent representatives in all 5 continents and more than 40 countries.

ALGE got into the timing business at the point, when the mechanic clocks were replaced. Since there were only mechanic clocks, and because of the fact that ALGE is located in the middle of the Alps, there was a demand for electronic timing devices, that could measure more than one competitor on the slope for skiing. After ALGE had developed a device of this kind the big success in timing began.

Nowadays ALGE has probably the widest range of timing systems, from small training systems up to the high end competition system used in real big events like World-Championships, Olympics,...

ALGE is not very well known by the public as the key-business of ALGE is the development and selling of perfectly designed timing systems for customers and service-companies. Several service-companies doing Timing and Scoring at highest competition levels, including World championships and Olympics are using ALGE-TIMING equipment as there preferred system in many different sports. But of course the TV-Insert will show the company that is sponsoring these competitions.

1.2 *The only ALGE you want to have in your Pool*

The ALGE SWIM-MASTER timing system for aquatics is the most comfortable Timing and scoring system available.

The complete System complies with the rules of FINA, USWP, USA Swimming, US Diving, USA Synchro, AAU, SSCH, NFHS and NCAA.

1.2.1 Key Functions

The integrated Meet-Management Software makes it a pleasure to manage the whole competition as with no other system. Start lists, result lists and many other necessary lists are created fully automatically concerning to the actual rules of the FINA.

The 32-bit software module for timing is storing all the recorded data of the TMS in real-time on the hard disk of the computer. In case of computer-failure the TMS is storing the complete data in the integrated memory, which can be transmitted any time again to the computer. For training purpose or in case of a complete computer breakdown the competition can be continued with the TMS as standalone device!

1.2.2 Deviation from Real-Time

The FINA doesn't have any requirement about the allowed deviation from the real-time for timing devices.

The ALGE SWIM-MASTER has a temperature compensated quartz oscillator with a frequency of 10.000MHz and an allowed frequency deviation of +/-2,5 ppm at -25 to 50 degree Celsius and +/-0,01 ppm at 25 degree Celsius.

All timing channels have the same time reference and the internal resolution is 1/10.000 of a second. More than 140 channels can be monitored by one TMS.

1.2.3 Special rugged Touchpads

ALGE-TIMING put a lot of energy into one of the most important devices for swimming-events. Our engineers developed a touchpad, which is completely closed at the backside, this protects the built-in tape-switch from damage during installation in the pool. This touchpad is completely maintenance-free.

1.2.4 Electrical Safety

The ALGE SWIM-MASTER is developed to meet the most advanced specifications concerning electrical safety and electromagnetic disturbance. An official testing-result and a CE-confirmation are attached at the end of this documentation.

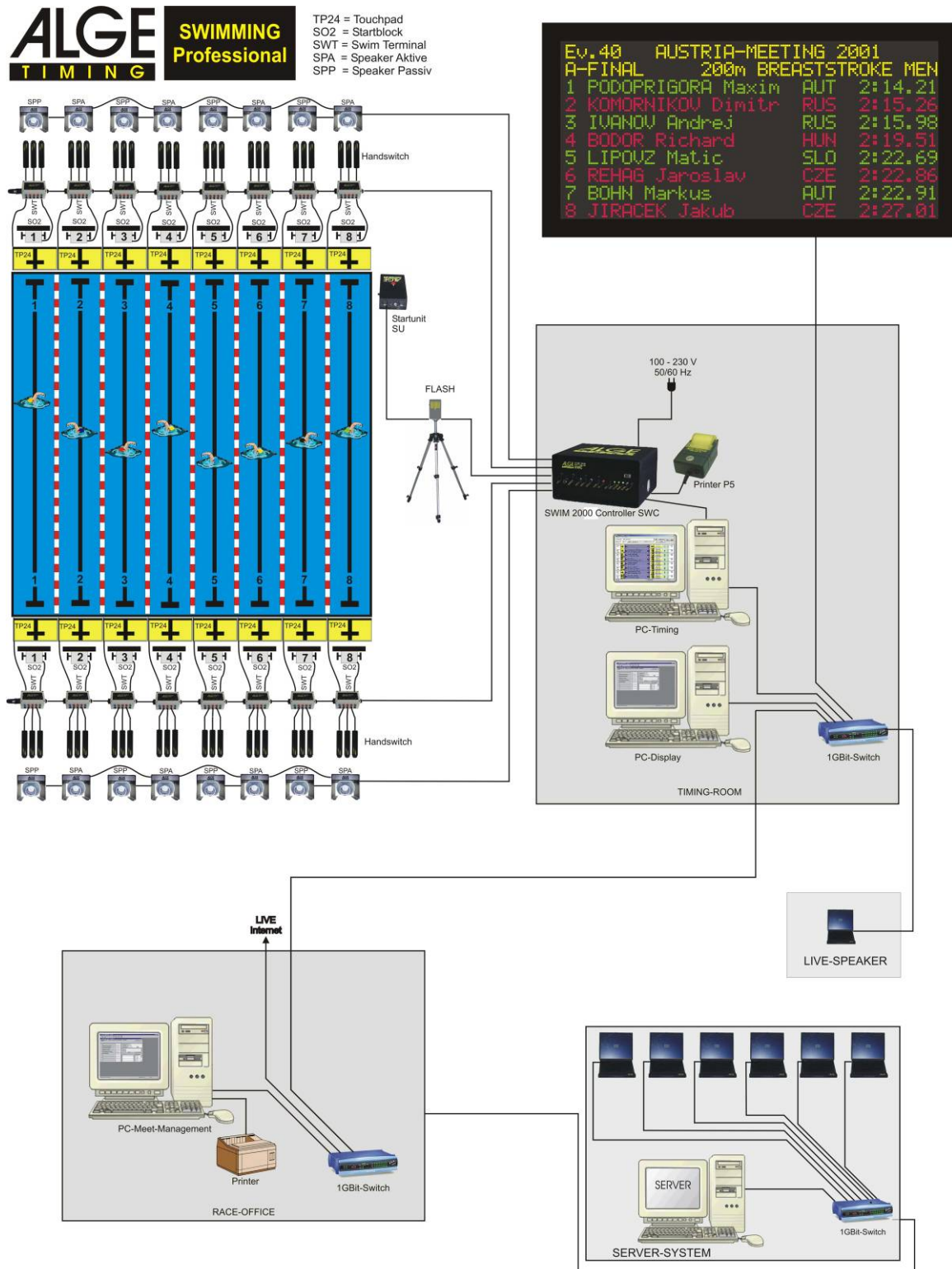
Even the flashlight is working internally with a maximum of 14V, this ensures the safety of the swimmers even if the device falls into the pool.

If required the whole timing system can be operated without mains for an entire day.

2 SWIMMING

The figure below shows the system-diagram of a complete system for competitive Swimming. On the next pages we will describe the function of each device in detail.

2.1 Timing-System



2.1.1 TMS TimeManager for Swimming

The TMS was developed by ALGE-TIMING in the year 2005 especially for aquatic sports. The demands for a device with an integrated USB-Interface was the main reason for the changeover from the SWC to the TMS.

It combines the most powerful electronic with the rugged design of ALGE.

The built-in amplifier and the built-in rechargeable battery make this device unique.

The TMS is the most modern timing-device; the Computer that is connected through USB or RS232 is only the display and the keyboard of this device.

In case of a computer-breakdown the TMS can store up to 10.000 times in the internally memory. These times can be restored at any time on the Computer or they can be printed directly on the P5-5 Online-Printer.

2.1.1.1 Technical characteristic

Measuring range:	23 hours, 59 minutes, 59,9999 seconds
Time reference:	TCXO 10 MHz (temperature compensated quartz oscillator)
Frequency deviation:	temperature range -25 to 50°C: +/- 2,5ppm (+/- 0,009s/h) with aging: +/- 1 ppm per year at 25 degree Celsius adjusted to +/- 0.1 ppm
Maximum Resolution:	1/10.000 seconds for all channels
Power supply:	internal: 12V gel cell battery external: 100-240 V 50/60Hz or 12-18 V DC
Dimensions:	256 x 215 x 136mm
Weight:	4kg

2.1.1.2 Connections and Interfaces

The TMS have several interfaces and connections for peripheral devices.
All interfaces and connections are fully protected against electrostatic damage!



Control elements and Connections at the front side:

start	Internal Start button for testing and emergency-functions
charge	LED shows if the rechargeable batteries are charging
ext. Supply	LED signalize external supply
power	LED shows the state of the internally battery
error	normally off, shows several error codes
talk	button to make an announcement by the operator
speaker	volume for the speakers
audio out	Chinch connection for external amplifiers
audio in	Regulator for audio in level
audio in	Chinch connection for line in
headphone	volume of headset
	connection for headset
micro	adjustment of the feedback for the microphone
Instrument	shows the capacity of the internal battery

Control elements and Connections at the back side:

printer1	RS232 interface for P5-5 online printer
printer2	full RS232 interface for 3rd party meet management software
TV/PC	full RS232 interface for PC-connection or TV-Output, automatically changing
display board	galvanic separated RS232 and RS485 data handling interface especially numeric scoreboards
PC/TV	USB-Interface for PC-connection or TV-Output, automatically changing
power	ON-OFF switch
mains	mains-supply, 100-240V 50/60Hz
2 x SPA	connection for start speakers SPA
SWT line1	ALGE-Timing bus for start side
SWT line2	ALGE-Timing bus for turn side
start	connection to synchronize with other timing devices
display-board	RS232 interface for numeric scoreboard
SU/FLASH	connection for SU2 -Start Unit and FLASH

2.1.2 P5-5 Online Protocol printer

The Printer P5-5 is directly supplied by the TMS.
Following information will be printed online in chronological order:

- Event number and Event name
- Heat number
- Sex
- Start time, intermediate and final times
- All impulses which are not inside a race in daytime
- Character size: 3mm height and 24 characters per line
- Printing speed: 5 lines per second
- Thermal paper printer



See also the separate manual for the P5-5 in the appendix!

2.1.3 SWT Swim Terminal

The SWT Swim Terminal is used to collect all the timing-impulses around the pool.

All SWT are identically and can be used in any lane.

The TMS automatically recognize the amount of connected Swim Terminals.

The Terminals are connected with the cable set SWCBLxx to the TMS.

At each Terminal you can connect 5 peripheral devices as following;

- 1 x Touchpad
- 3 x Manual Button
- 1 x Relay Judging Pad



2.1.4 TP24 Touchpad

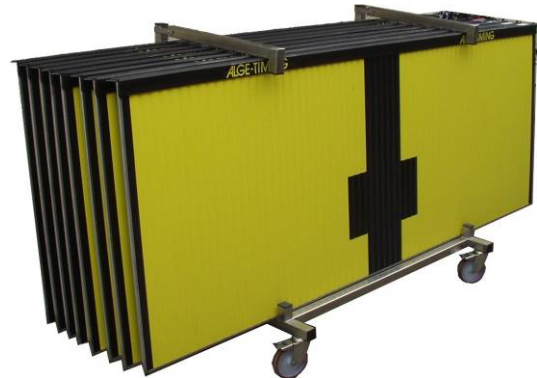
The ALGE Touchpad TP24 is without doubt the most rugged and best working touchpad available on the market.

The Touchpad is constructed in a sandwich construction as described below:

The complete front-side is covered with PVS lamellas which distributing the force of the swimmers to one of the 4 tape switches which are placed between these lamellas and the protecting full size stainless steel backside.

A sensitivity adjustment is not necessary as the 4 tape switches giving an extremely constant sensitivity over the full area.

We are also manufacturing touchpads with the size of 1855 x 906 x 10mm (TP18) and custom sized touchpads



2.1.4.1 Technical characteristic

Type:	TP24
Dimensions:	2444 x 906 x 10mm
Weight:	28 kg
Sensitivity:	2,5 to 3kg
Sensors:	4 Tapeswitches
Material:	Stainless steel 1.4571 and PVC lamellas
In accordance:	conforming to FINA, SSCH, AAU and NCAA requirements

2.1.5 Caddy

The storage trolley is made of stainless steel 1.4571 and can carry up to 10 touchpads TP24.

Dimensions: 850 x 1200 x 1200mm

Weight: 30kg, without touchpads!

2.1.6 Push Button 023-02

Especially rugged waterproof bush button with banana plugs are used for the manual time-keeping.

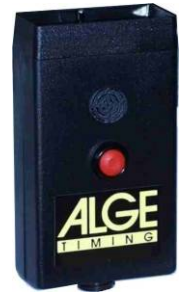


2.1.7 SU2 Start Unit

The SU2 is the Starters device that is operated by the starter. It has a built-in microphone and a speech amplifier.

With a small potentiometer, the starter can adjust the feedback to the local requirements.

The SU2 is connected with the cable reel KT199Z10 directly to the TMS or to the FLASH.



2.1.8 FLASH

The FLASH is used to as visual start signal for the competitors and the public. The advantage of a visual start signal is the practically not existing delay at all positions in the pool.

Due to the LED-Technology this flashlight meet all safety regulations in the pool area.

2.1.8.1 Technical characteristic

Type:	LED FLASH
Dimensions:	80 x 120 x 40mm
Weight:	0,4kg
Battery:	4,8V/2000mAH
Flashlight:	100 super bright green LED



2.1.9 SPA and SPP

The speaker system that is used by ALGE complies with the electrical safety rules of equipment in the pool area.

The SPA is permanently charged by the TMS if the TMS is connected to mains.

The SPA is connected in series to the TMS with the cable set SWSPA8. At each SPA there is also one SPP connected.



2.1.9.1 Technical characteristic

Type:	SPA
Dimensions:	250 x 180 x 180mm
Weight:	3kg
Battery:	12V/2,2Ah
Material:	Stainless steel 1.4571, powder coated
Max. Output power:	2 x 10W <1% Distortion

2.1.10 SWR2 Swim Relay Pad

Each SWR2 is made of stainless steel 1.4571. It provides Relay Take Off judging and take off time (statistic data).

A unique technology of the SWT makes it also available to have statistic data like start-reaction times and time of pressure. This special feature that is only available at ALGE can be upgraded at any time with a simple Software-upgrade.

The top surface is an ALGE-patented treatment that gives the swimmers a perfect grip and doesn't change these characteristics due to the use like sanded surfaces.

The SWR2 can be mounted on most starting blocks without any tools or screws. The mounting material is included in the shipment.

Dimensions: 500 x 500 x 23mm

Weight : 11,5kg



2.1.11 SO2 Starting Block

Each SO2 is made of stainless steel 1.4571. It provides Relay Take Off judging and take off time (statistic data).

A unique technology of the SO2 makes it also available to have statistic data like start-reaction times and time of pressure. This special feature that is only available at ALGE-TIMING can be upgraded at any time with a simple Software-upgrade.

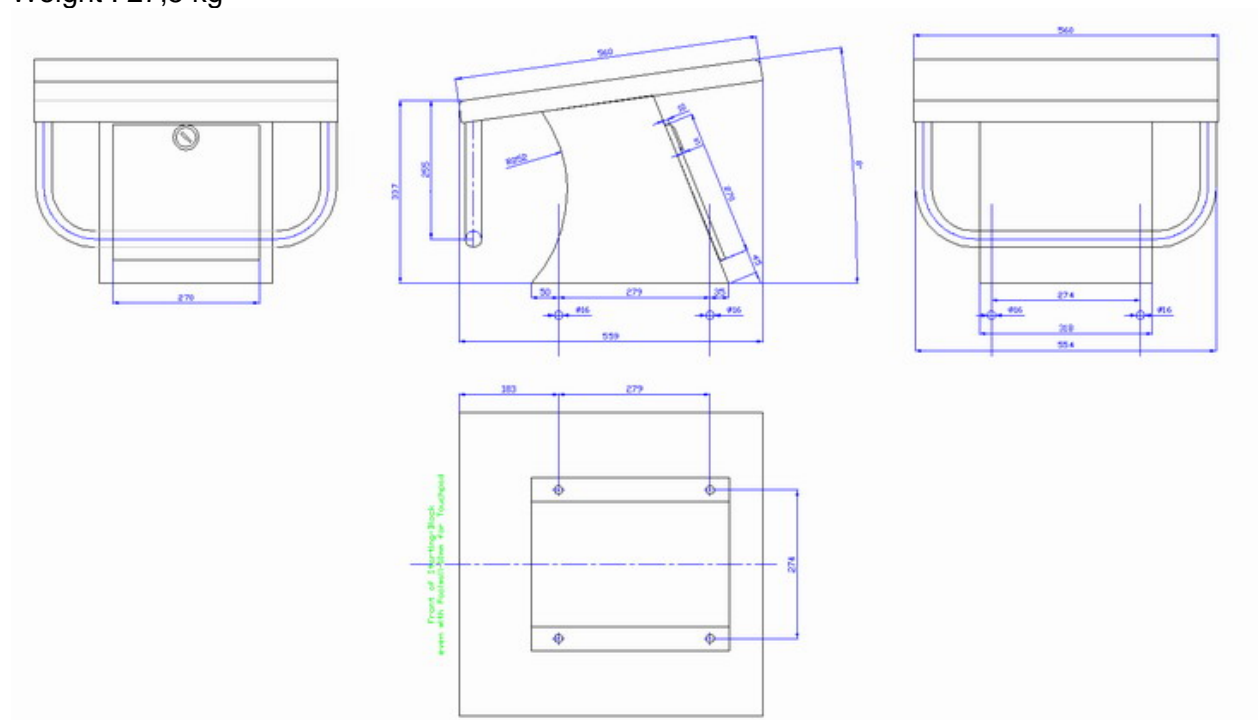
The top surface is an ALGE-patented treatment that gives the swimmers a perfect grip and doesn't change these characteristics due to heavy use.



The SO2 is designed for swimming pools with 300mm high turn walls

Dimensions: 560x560x337mm

Weight : 27,5 kg



2.1.12 SO2-EX Starting Block

Each SO2-EX is made of stainless steel 1.4571.

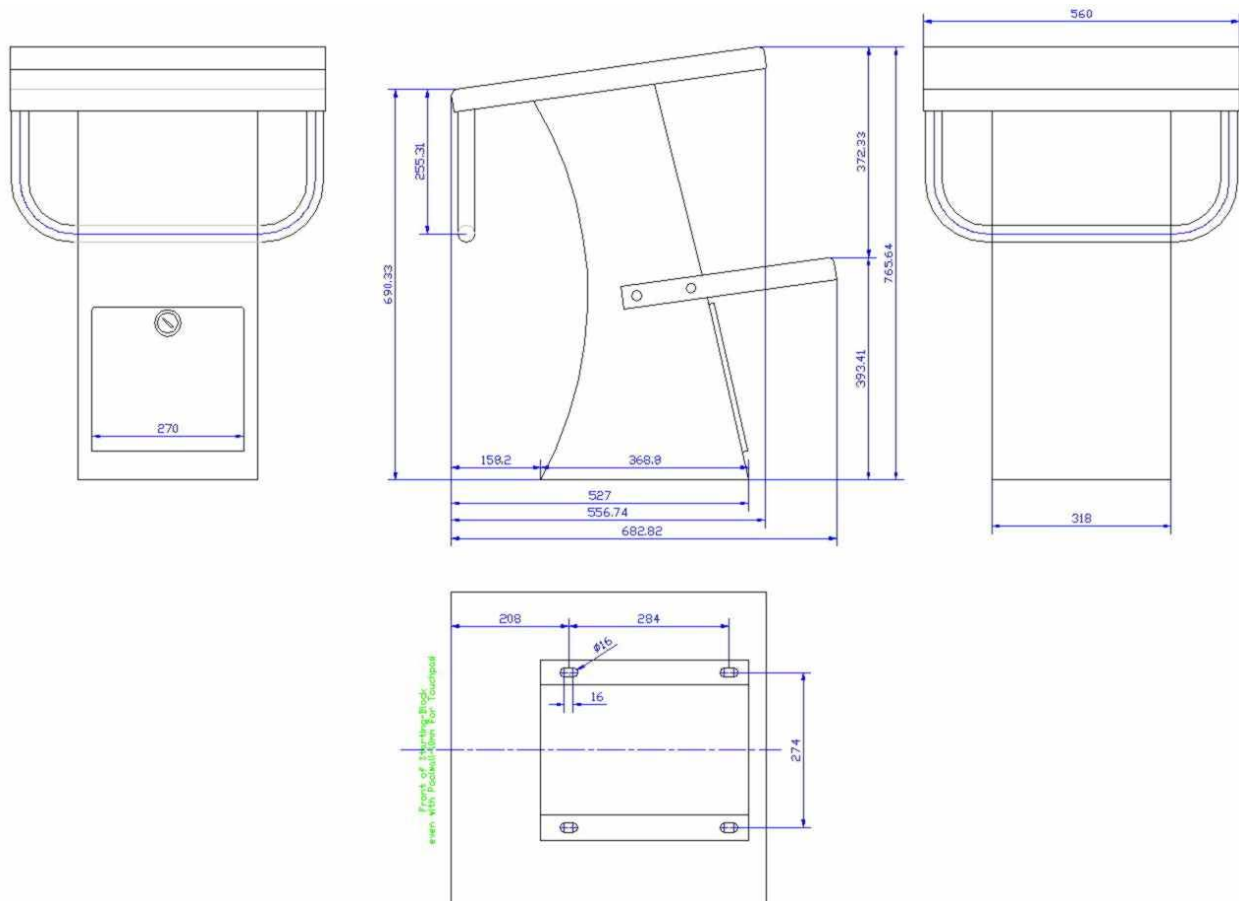
It provides Relay Take Off judging and take off time (statistic data).

A unique technology of the SO2-EX makes it also available to have statistic data like start-reaction times and time of pressure. This special feature that is only available at ALGE-TIMING can be upgraded at any time with a simple Software-upgrade.

The top surface is an ALGE-patented treatment that gives the swimmers a perfect grip and doesn't change these characteristics due to heavy use.

The SO2-EX is designed for swimming pools with flat overflow-systems.

Dimensions: 560x560x337mm
Weight : 37kg



2.1.13 PC-Software

The System includes several Software packages for Timing, Meet-Management and Scoreboard control.

2.1.13.1 Timing-Software

The timing software is only display and keyboard for the high accurate timing-device ALGE TMS, which is working with a temperature compensated quartz oscillator (TCXO).

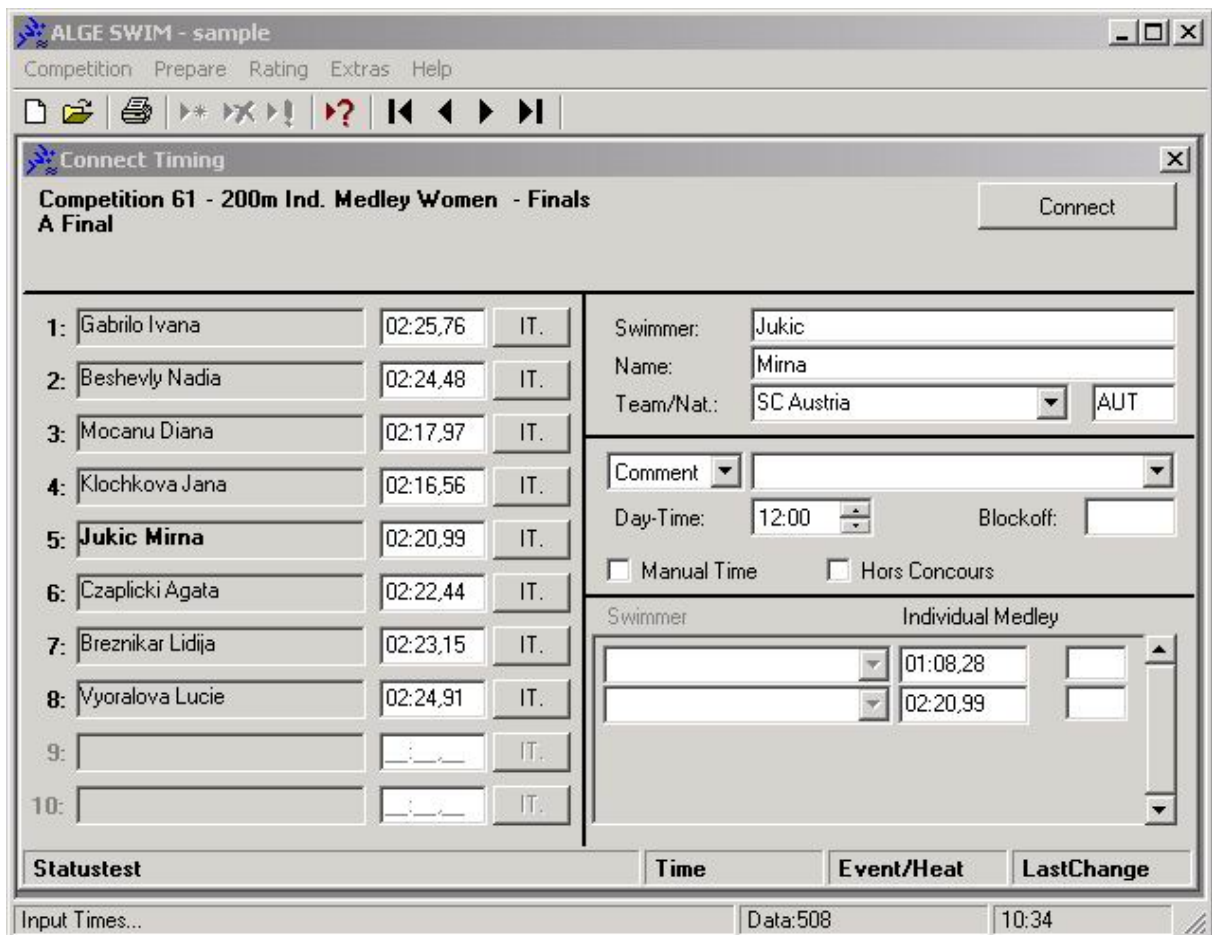
Heat	Start	Name	Country	Manual Time	Touchpad Time	Score	End
8	+	Szekendi Anais	SC Austria, AUT	00:00,00	00:00,00	0	8
7	+	Straus Tjasa	Branik Maribor, SLO	00:00,00	00:00,00	0	7
6	+	Gangl Edina	Flexum Se, HUN	00:00,00	00:00,00	0	6
5	+	Rychlewski Nicole	SC Austria, AUT	00:00,00	00:00,00	0	5
4	+	Bombek Petra	Branik Maribor, SLO	00:00,00	00:00,00	0	4
3	+	Salcinovic Ena	PK Zenica, BIH	00:00,00	00:00,00	0	3
2	+	Babos Elisa	A.S. Edera Trieste, ITA	00:00,00	00:00,00	0	2
1	+	Miljus Janja	Branik Maribor, SLO	00:00,00	00:00,00	0	1

The Software displays all impulses in a very easy way, understandable by everybody. It is also comparing the Manual times with the touchpad time and warns the operator if there is a bigger difference than adjusted.

2.1.13.2 Meet-Management Software

The Timing Manager is compatible with Hy-Tek, SPLASH and other Meet Manager Software.

The evaluation program will do all the work in organizing your competition. From the registrations to the start bill, start lists...



This Software makes the handling of your event as easy as never before!

2.1.13.3 ALGE CIS

The CIS (Commentator Information Software) is an easy to use application that is running on touch screen computers to enable the speaker and commentators to operate it easily. The commentators can view the information which is interesting for them in Real-Time and they can switch from event to event as they like.

2.1.13.4 ALGE LIVE-TV!

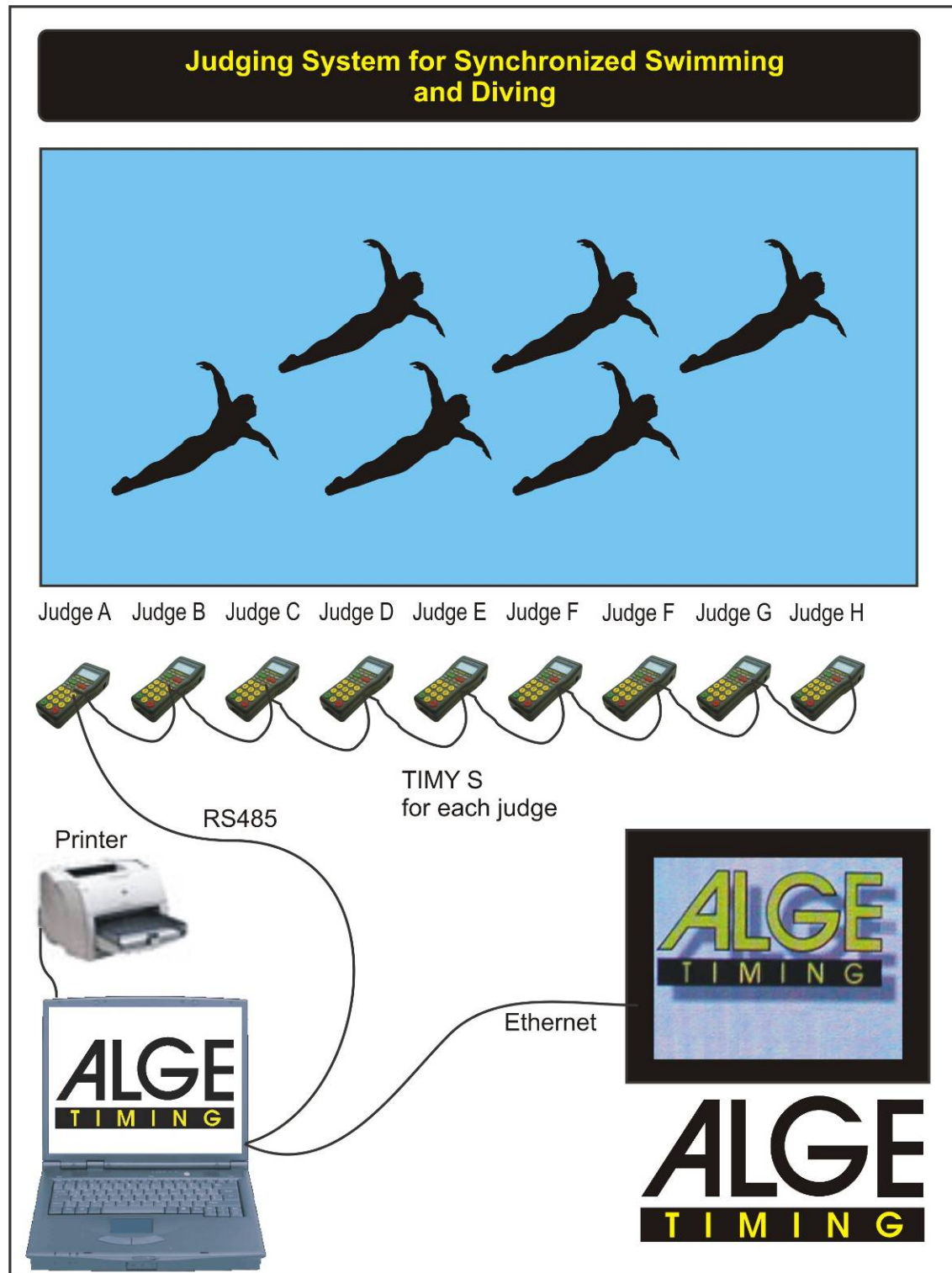
We don't recommend buying such a system for your own use unless you are offering professional Timing-Service.

Of course on request we can provide you with such systems.

But we would recommend hiring this service for any upcoming big competition where you need TV-inserts. That way you always have the up-to-date Video-Equipment and staff which can operate it on your competition.

3 Diving & Synchronized Swimming

ALGE-TIMING can provide you with state of the art judging systems for diving and synchronized swimming. It was never as easy as for the judges to enter there rating into the system as with the unique TIMY S connected safely with RS485.



3.1 Judges Console TIMY

The TIMY S is not only a Judges Console; furthermore it is also a highly accurate Timing-Device which can be used as Backup-System for Swimming or especially for Training.

3.1.1 Timy Software

- Backup:** timer to measure time of day (e.g. backup or reference timer for PC)
- Stopwatch L:** simple timing program total ranking list
- Stopwatch:** universal timing program that is able to time more than one run (net time/total time). Group start and ranking is also possible.
- MultiTimer:*** timing program with the possibility to link more Timy together (separate Timy for start, intermediate time(s), and finish)
- TrackTimer:** Timing for events with have lanes (e.g. athletic, swimming)
- Training:** universal trainings software (many intermediate times are possible)
- Speed:** speed measurement in km/h, m/s, or mph
- Terminal:** terminal for judges, e.g. ski jumping, figure skating, diving, synchronized swimming
- Commander:** terminal to control a display board
- Calculator:** to calculate net times and total times



3.1.2 Timy Models



Timy XE

The Timy XE is a timer without printer. It has a temperature compensated quartz oscillator for time measurement with the highest precision and an extended temperature range for operational use down to -20°C (-4°F).



Timy PXE

The Timy PXE is a timer with integrated printer. It has a temperature compensated quartz oscillator for time measurement with the highest precision and an extended temperature range for operational use down to -20°C (-4°F).

3.1.3 Technical Data

- Processor:** Siemens C161 with 3,3 V technology
- Crystal Frequency:** 12.8 MHz with TCXO or standard quartz
- Time Resolution:** 1/10,000 s
- Program Memory:** FLASH Memory with 8 MBit
- Data Memory:** RAM with 2 MBit (about 13,000 times)
- Display:** monochrome LCD graphic display
128 x 64 pixel, available with standard-
or with extended temperature range
- Keyboard:** silicon keyboard, 26 keys
- Connections:** 1 x DIN-socket for photocell (7)
1 x banana socket pair – start input (5)
1 x banana socket pair - finish input (6)
1 x banana socket pair – display board (4)
1 x D-Sub 25-pin (3)
• 9 timing channels
• RS 232 (PC-connection)
• display board
• RS 485 (network)
• power supply (7–15 VDC out)
1 x USB (1)
1 x power supply (7 - 15 VDC in) (2)
- Channel Extension:** per extension 8 channels, max. 99 channels
- Power Supply:** **Internal:**
6 x AA-Alkaline 6 x 2 Ah or
6 x AA-NiCd 6 x 1 Ah or
6 x AA-NiMH 6 x 1,5 Ah
External:
Power Supply PS12, 12 V battery, or 7-15 VDC
- Power Consumption:** data given at 20°C (68 F)
Alkali: without printer about 50 hours
NiCd: without printer about 25 hours
NiMH: without printer about 38 hours
Alkali: not possible with printer
NiCd: about 3000 lines
NiMH: about 4500 lines
- Charging Duration:** about 14 hours
- Printer:** graphic thermo printer, max. 5 lines per sec.
- Temperature Range:** Timy S and P: -5 to 60°C (23 to 140 F)
Timy XE and PXE: -20 to 60°C (-4 to 140 F)
- Measurements:** Timy S and XE: 204 x 91 x 50 mm
Timy P and PXE: 307 x 91 x 65 mm
- Weight:** Timy S and XE: 450 g (no battery)
Timy P and PXE: 650 g (no battery and paper)

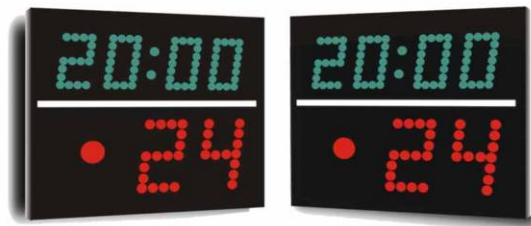
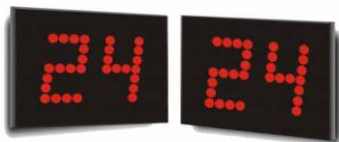
4 Water Polo

Depending on the scoreboard you choose the Water Polo System can be very different. On numeric scoreboards it will be operated with a separate Game-Console and on Matrix-Scoreboards a PC-Software is controlling the Game. Additionally we offer several special scoreboards for Water Polo.

4.1 Numeric Standalone Systems

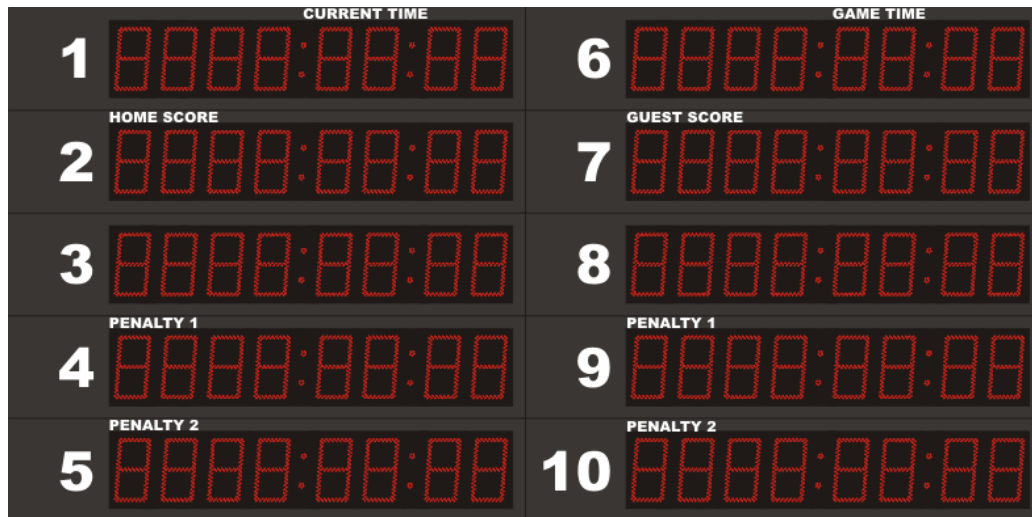
We offer several different standalone scoreboards for Waterpolo, from small portable systems up to professional competition systems.

Below you will find a few pictures of different scoreboards.



4.2 Combined with swimming

This is a very versatile combination of a swimming-scoreboard that can be used also as Water polo scoreboard. The Console is the same one as for the standalone systems.



4.3 Matrix-Scoreboards

The ALGE-TIMING Full matrix or video-walls can be driven directly by the standard waterpolo-console. This is a huge advantage compared to other systems since any person can operate the scoreboard in most competitions.

If there is a huge competition you can drive the board also directly by the controller. But in addition you can use the Waterpolo PC-Software which enables you to have any type of Statistics.

5 Scoreboards

The Scoreboard is the interface between the public and your sport-event.

ALGE-TIMING has probably the widest range of different scoreboards.

From bistable electromagnetic technology, which is very rugged and could be operated with battery over numeric LED-Scoreboards to true color Video walls.

ALGE-TIMING can deliver the perfect solution for your pool.

5.1 Bistable Electromagnetic Scoreboards

These scoreboards are extremely rugged and have a superior readability in direct sunlight. These scoreboards are also available with integrated Battery, which can supply the scoreboard for a whole day.

These scoreboards are available in 150 and 250 mm number height. Different shapes and colors are available.

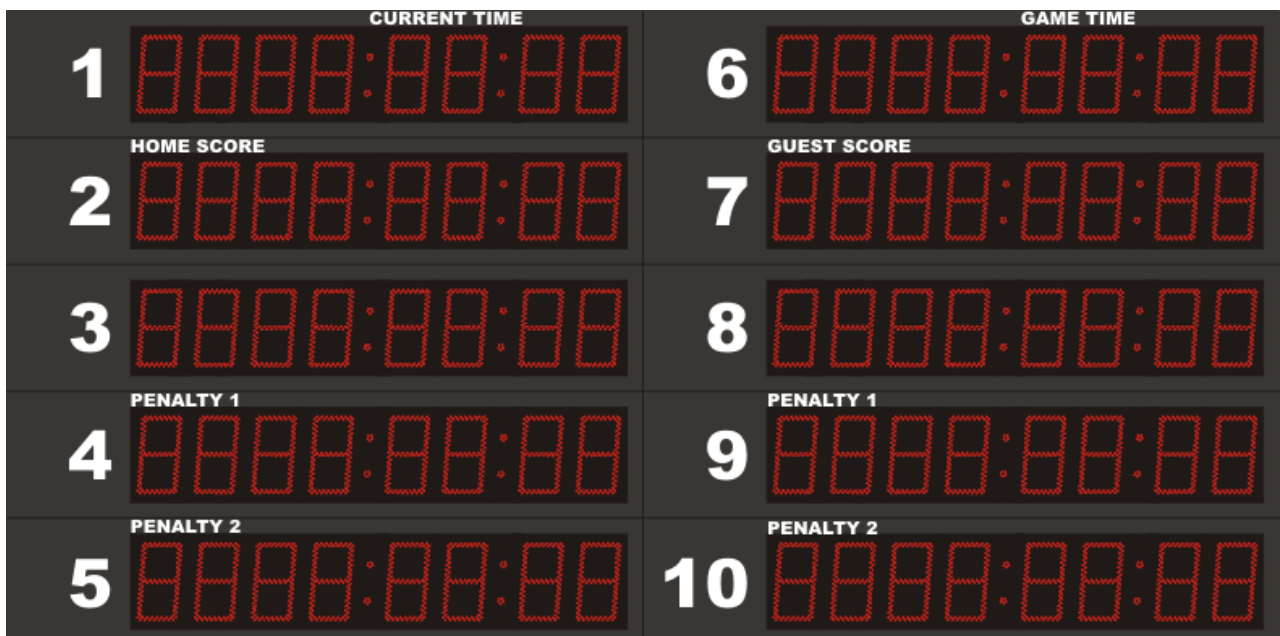


5.2 Numeric LED-Scoreboards

The perfectly assembled scoreboards in LED-technology have a very good solution for a numeric scoreboard. We manufacture numeric LED-Scoreboards with number heights of 100, 150, 250, 450 and 600mm. Where the 10cm Version is produced only for indoors we have all other sizes available as indoor and outdoor models. For outdoors a higher brightness is required.

All numeric Scoreboards can be delivered in different shapes and colors.

Additionally we offer Text-Fields, which can be added on top of the numeric scoreboards to show event-information or advertisings.



5.3 Video-Walls and Full Matrix LED Scoreboards

ALGE-TIMING can provide you with a large-scale scoreboard from single-colour up to full colour video-wall. All these scoreboards are customized to the clients location.



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