

ALGE-TIMING Track & Field



ALGE-TIMING

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1 GENERAL

1.1 Who is ALGE-TIMING?

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

With a permanent staff of 30 people developing and producing continuously new products, **ALGE-TIMING** is the leader for electronic Timing and Scoring. 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 for the real big events like World-Championships.

ALGE is not very well known by the public as the key-business of **ALGE** is the development and distribution 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 such competitions.

2 Track & Field

Track & Field is one of the most complex sports for Timing and Scoring. Due to the combination of several disciplines, from running events over long jump to discus and more,

ALGE-TIMING is the only company which has full competition-equipment including Timing, Meet-Management and Scoreboard-Systems out of one hand.

We divide the Track & Field equipment into 4 sections.

- Running Events
- Infield Events
- Meet-Management
- Main-Scoreboard-System

The IAAF recognizes all ALGE Components. See the approvals under Point 4.

2.1 *Running Events*

For running Events we provide you with the stadium-installation, the starters equipment, the main and backup timing-system, the Wind gauge and with the required special scoreboards for the running time and unofficial winner-time. All these system components can work independently from each other, but during the competition they are all linked together.

2.1.1 **Permanent Cabling**

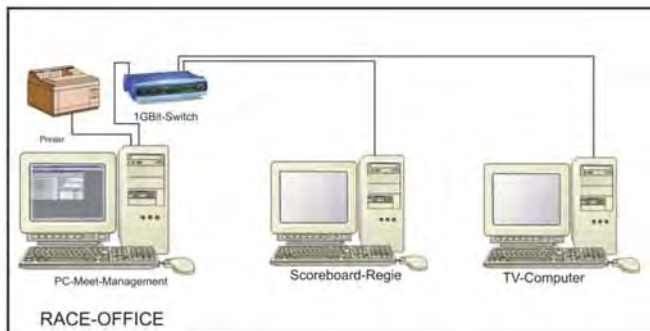
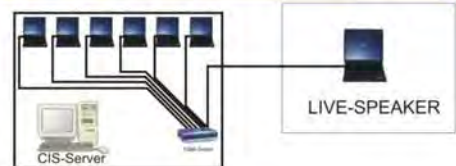
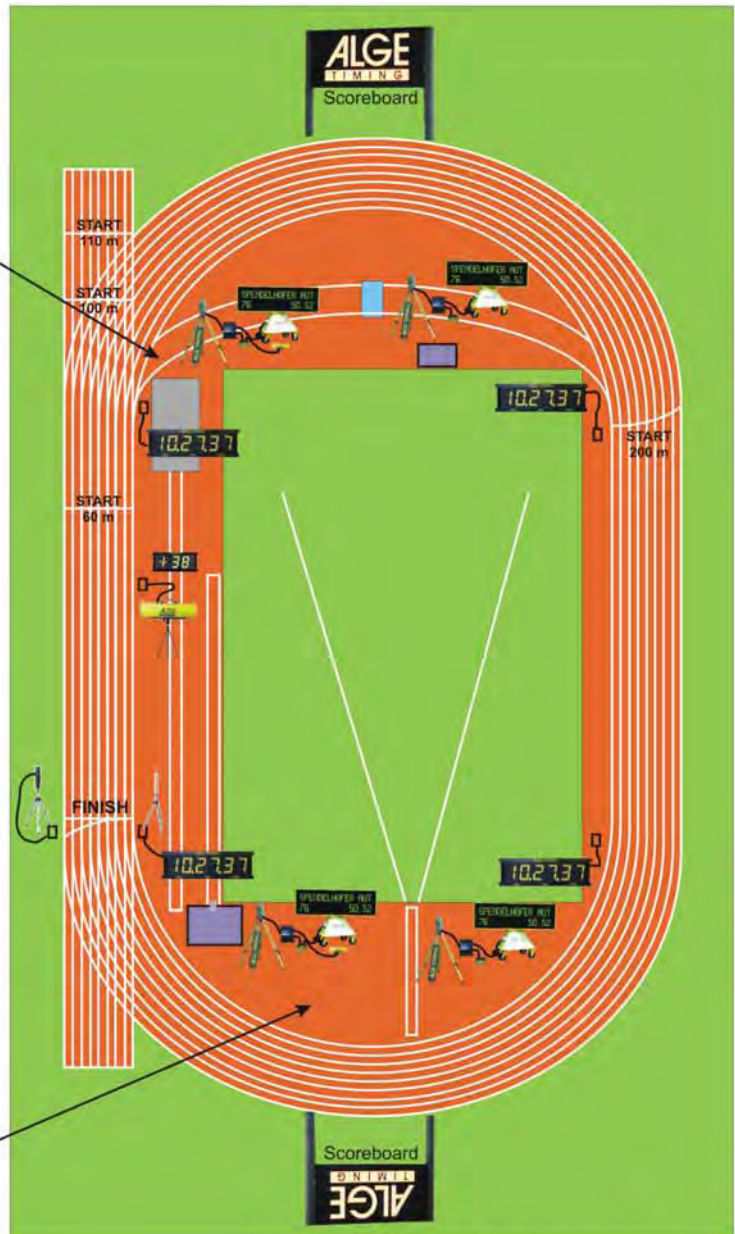
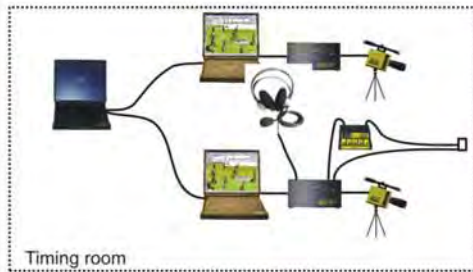
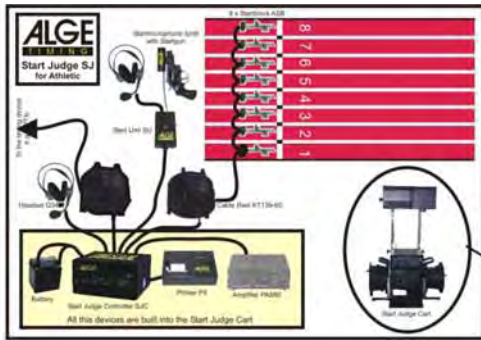
The permanent cabling is very important for the easy setup of the system.

Inside the manholes are the connectors for the starting-devices, scoreboards, wind gauge and for the photocells.

See the detailed Stadium-Installation Instructions under point 5.

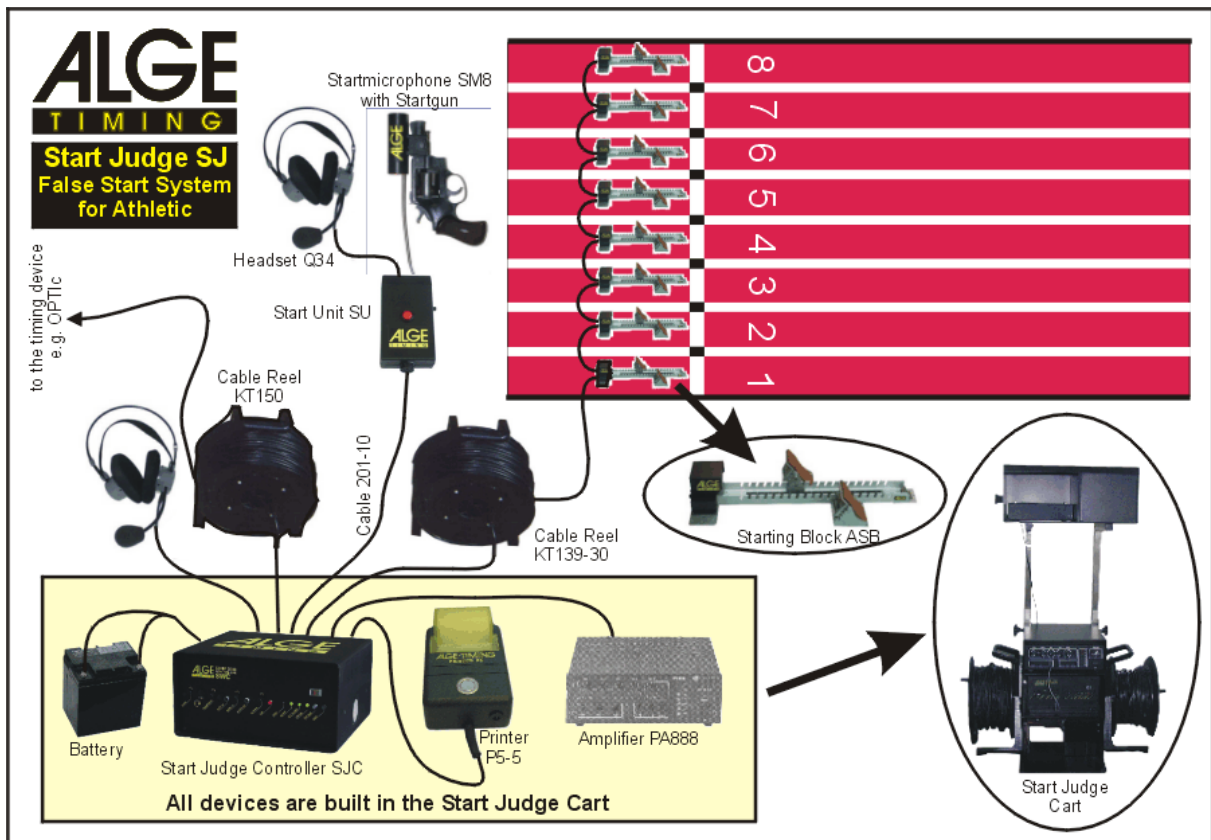
System Description

ALGE Track & Field System



2.1.2 Starters-Equipment

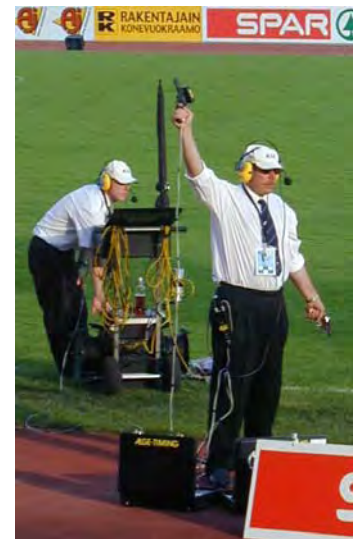
Since the rules for the false start has changed at 1st January 2003 the false-start judging devices are required to assist the starter to decide which competitors have made a false-start. Against the new rule, all competitors that are starting earlier than 0,1 second delay to the start must be disqualified if it is the second start-attempt. Even for a good starter it is very difficult to judge all competitors. This device is an important insurance for the starter to judge all false starts.



2.1.2.1 Start Judge SJCC

The Start Judge Controller Cart carries the complete timing-devices and the amplifier for the start signal. It is important to have these devices on wheels to bring them from one starting-position to the other.

A high accurate Timing device with temperature compensated quartz is the heart of this system. All impulses, which are measured by the controller, are compared to the start time. The differences to the start time are printed immediately on the P5-5 which is connected to the SJC. Lanes with false start are marked with a star!



2.1.2.2 Startingblocks ASB

These starting blocks have already an integrated false start detector.

For the following distances the Startingblocks are required:

- 100m, 110m
- 200m
- 400m

We offer 2 sets of 8 startingblocks as the transportation from one starting position to the other takes in general to much time between the events.



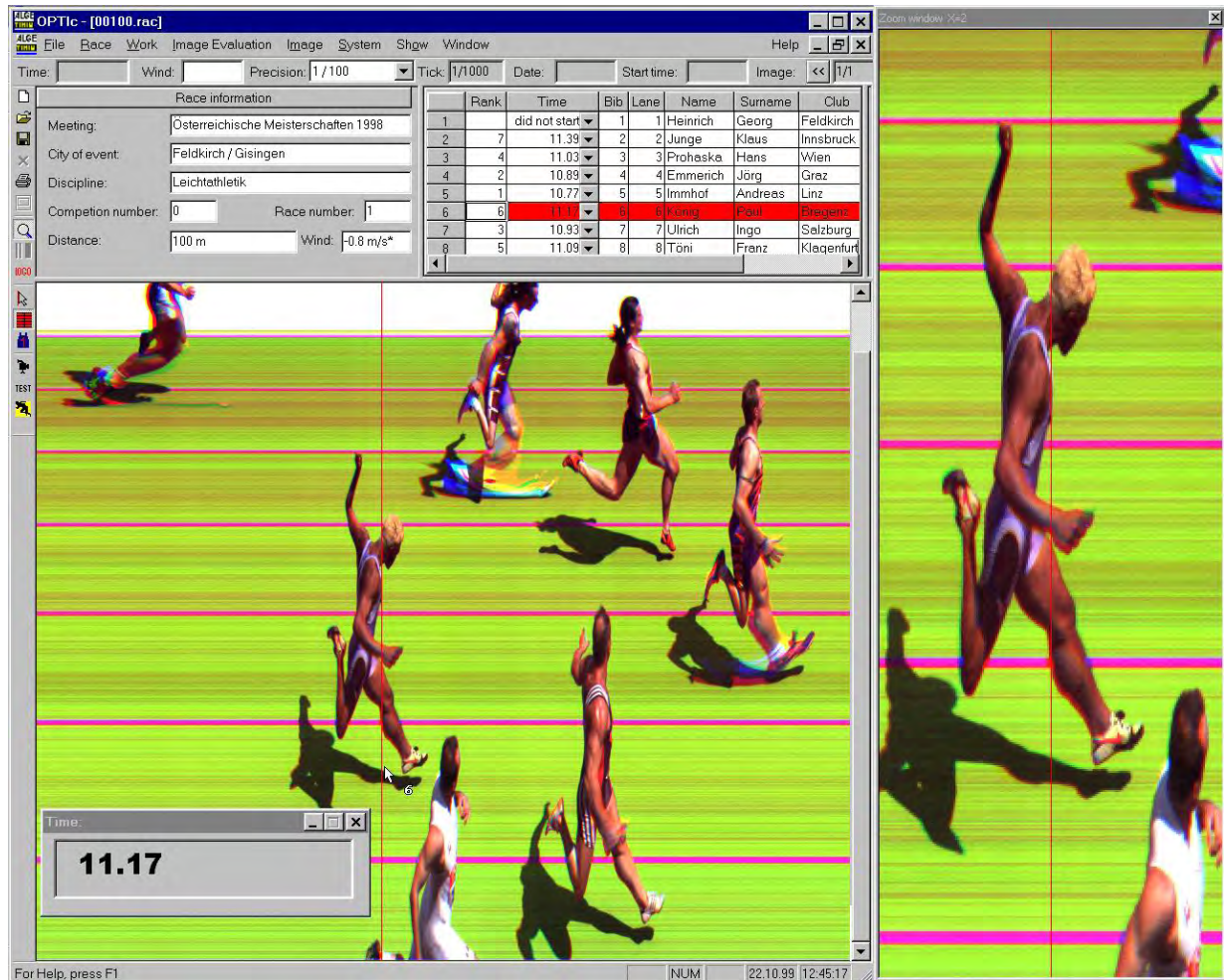
ATTENTION! We have now also False Start Sensors which can be attached to any existing starting blocks!

2.1.3 Photo finish OPTIc2

ALGE OPTIc2 is a computerized color photo finish system with an excellent resolution.

The Color Line Scan Camera scans every movement at the finish line in true color (24 bit, 16.8 million colors) with a scan rate of up to 3000 lines per second. This data is stored in real-time on the HDD of the computer.

The vertical resolution of 3x1368 pixels guarantees a photorealistic picture, which is easy to evaluate by the operator.



The photo finish with its Computer is the most important system for timing in athletics.

If you have a main and backup system we recommend to use 2 independent computers for the evaluation also. This gives much more security as using 2 cameras on one Computer!

2.1.3.1 Technical Data

2.1.3.1.1 Camera OPTIc2n

Sensor:	3 x 1360 pixel (RGB)
Pixel Resolution:	max.1360 pixel
Number of Colors:	16.7 million colors
Scan Rate:	100 to 3000 lines per second
Recording Time:	unlimited; depends on PC HDD
Lens:	C-Mount lens adapter Option: Nikon lens adapter
Quartz Frequency:	TCXO 20.000 MHz (temperature compensated quartz oscillator)
Measuring Range:	23 hours, 59 min., 59.999 sec.
Frequency Deviation:	Temperature: +/- 2.5 ppm at -30 to +75°C (+/- 0.009 seconds per hour) Aging: +/- 1 ppm per year
Frequency Adjustment:	+/- 0.1 ppm at 25°C
Connections:	2 x start input (banana socket) 1 x finish input (banana socket) 2 x finish input (DIN-socket) 1 x display board (banana socket) 1 x motor zoom 1 x IEEE 1394a 6-pol bilingual 1 x GOF (LC duplex glass optical fiber connector) 1 x CAT5e cable with RJ45 plug 1 x power supply
Power Supply:	+9 - 36 VDC
Temperature Range:	0 to 50°C

2.1.3.1.2 Requirements for IEEE 1394 interface for PC

Compatibility:	IEEE 1394A or 1394B
OHCI compatible	
Transfer Rate:	min. 400 MBit per second



2.1.4 3-fold Photocell RLS3c

The Three-Fold-Photocell consists of photocells arranged on top of each other built into the same case. It has a reach between 2 and 15 m.

The use of the 3 photocells on top of each other guaranties that an athlet can not trigger the photocell with his hands. All 3 beams must be broken to trigger a time.

The photocell can be used in 2 different mode:

Photocell Area: Used for athletic. Only if all 3 photocells are triggered at the same time a impulse is produced. This prevents that the photocell from triggering with arms or legs (only with body), and produces an quite accurate „unofficial“ winners time. This photocell is very important, when a display board is used.

Single Photocell Use: All three photocells work independent; this means the first that is triggered will produce a timing impulse. This mode is used for some training-sessions.



2.2 Windgauge WS2-TY

The wind gauge WS2-TY is working with a mass flow sensor, which comply with the future rules of the IAAF. The operator has to enter the distance into the OPTIc2 Photofinish Software and then it is automatically operated by the OPTIc2 Software.

The same wind gauge is used at all Infield events where the Wind measuring is required. At the Infield-Events the WS2 is connected directly to the Infield-Computer!



2.3 Scoreboards for Running Time

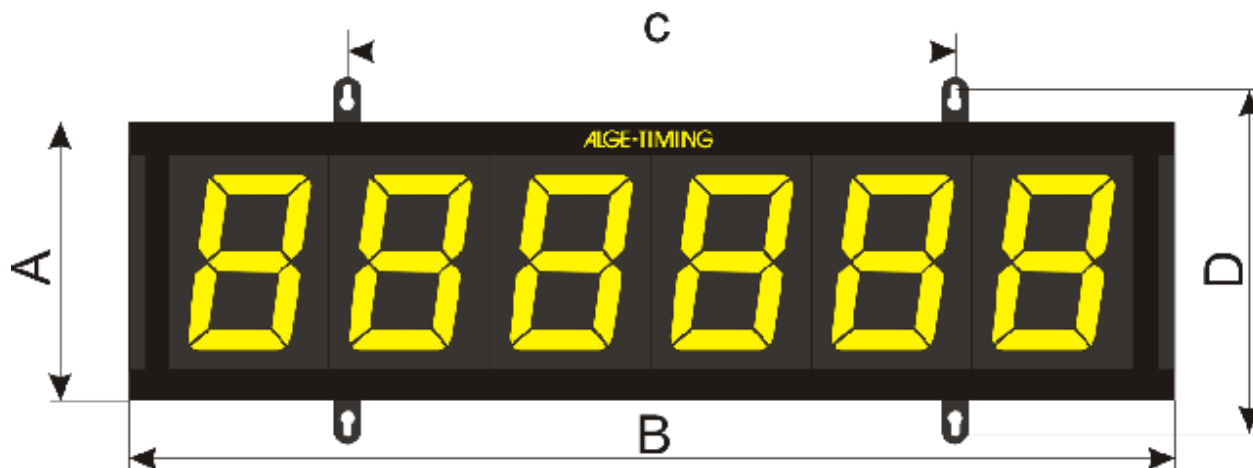
We offer 2 different types of scoreboards for the running time. Bistable Scoreboards with integrated rechargeable battery and LED-Scoreboards which are requiring Mains-Supply.

2.3.1 Bistable Scoreboards

We can offer following different models:

- GAZ4 5xx with 5 digits showing times up to 9:59.99
- GAZ4 6xx with 5 digits showing times up to 59:59.99 (mm:ss.th) or 23:59:59 (hh:mm:ss)
- GAZ4 7xx with 7 digits showing times up to 9:59:59.99

All of the above models are available in 3 different sizes, 150mm, 250mm and 450mm. For Track&Field we recommend the 25cm models.



Standard Typ	Weight (kg)	(mm)					Reading Distance in Meter *	Operation Time in Hours **
		A	B	C	D	Depth		
GAZ4 515	12	290	956	556	352	100	75	60
GAZ4 615	13	290	956	556	352	100	75	60
GAZ4 525	21	393	1493	1093	455	100	125	20
GAZ4 625	22	393	1493	1093	455	100	125	20
GAZ4 545	45	664	2490	2090	726	120	225	11
GAZ4 645	48	664	2490	2090	726	120	225	11



2.3.2 LED-Scoreboards

We can offer following different models:

- D-LINExxx-5-x-x with 5 digits showing times up to 9:59.99
- D-LINExxx-6-x-x with 5 digits showing times up to 59:59.99 (mm:ss.th) or 23:59:59 (hh:mm:ss)
- D-LINExxx-7-x-x with 7 digits showing times up to 9:59:59.99

All of the above models are available in several sizes, 57mm, 100mm, 150mm, 250mm, 450mm, 600mm, 1000mm and 1500mm. For Track&Field we recommend the 250mm models.



	Amount of Digits	Figure-height	Height	Width	Depth	Distance between hangers	Maximal current on 12V side	Reading Distance
		[mm]					[A]	[m]
Indoor Models:								
D-LINE57-I-6-E0	6	57	130	500	60	200	0,9	25
D-LINE100-I-6-E0	6	100	180	800	60	500	0,9	50
D-LINE150-I-6-E0	6	150	250	956	60	556	0,9	75
D-LINE250-I-6-E0	6	250	350	1493	60	1093	2,9	125
D-LINE450-I-6-E0	6	450	600	2490	60	2090	4,5	225
D-LINE600-I-6-E0	6	600	800	3400	60	3000	5,9	270
Outdoor Models:								
D-LINE150-O-6-E0	6	150	250	956	60	556	0,9	75
D-LINE250-O-6-E0	6	250	350	1493	60	1093	2,9	125
D-LINE450-O-6-E0	6	450	600	2490	60	2090	4,5	225
D-LINE600-O-6-E0	6	600	800	3400	60	3000	5,9	270

2.4 Lapcounter

ALGE can offer a wide range of electronic Lap Counters with a figure height of 15 or 25 cm and two or three figures. It can be with one face, two faces or three faces. The unit is complete with integrated power pack (built-in battery and charger), tripod, external push button, and if required with a bell.



The lap counter has two program modes:

Countdown Laps: From an adjusted value you count with every lap down until zero. After zero the lap counter goes back to the adjusted value.

Countup Laps: For every lap you count one lap up.

The lap counter has an automatic powerdown (switches the LED off) to save batteries. The energy saving mode happens after the counter shows for 10 minutes the same value.

The lap counter is made for outdoor useage and has extra bright red LED, that you can see well in direct sun light. It has a rugged aluminium case and is well tested in all weather conditions.

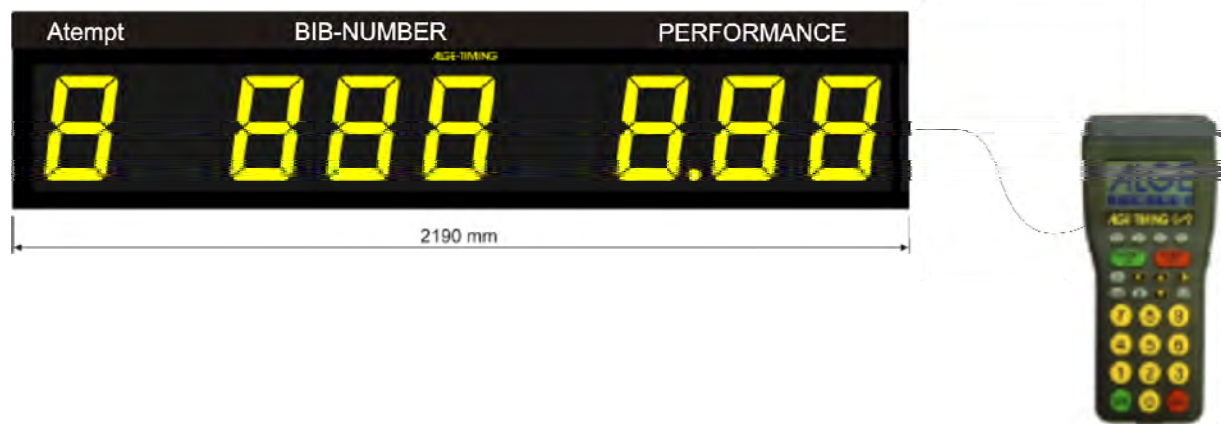
2.5 Infield-Scoreboards

Depending on the Schedule of the competition you need between 3 and 5 complete Infield-Stations. Depending on your Budget we can offer several different solutions for this purpose.

2.5.1 Bistable Numeric Infield-Scoreboards

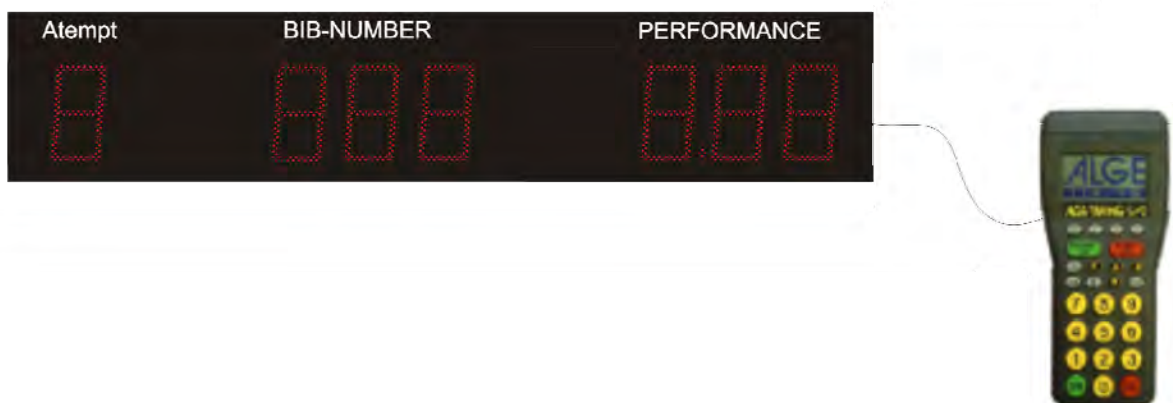
These Scoreboards are working independently with a Timy or directly from The Meet-Management-Software.

They are very easy to use and they are supplied by an internal rechargeable Battery for at least 20 hours.



2.5.2 LED-Type numeric Infield Scoreboards

These scoreboards are perfect if you have mains in the Infield. The brightness is adjustable so it can fit for bright daylight and even indoor-events or evening-events.



2.5.3 LED-Full Matrix Infield Scoreboards

These scoreboards are good for any level of competition!

They are connected to the Stadium-Ethernet and they can be operated by the Infield-Computers at each location.

A special function enables to drive the scoreboards all together from one location. This function is especially interesting to show the running time of finals also on these scoreboards!

Several different models are available, from single sided, single colour on a permanent stand up to full colour double-sided with electrically rotating stand.

Additionally you can have several sizes and resolutions of this Infield-Scoreboard.



2.5.4 Concentration-Clocks

In most events the Concentration-Clock has to be separated from the Result display like the one described under points 2.5.1 - 2.5.3.

We can offer 2 different types of Concentration clocks.

The bistable Type which has the advantage of battery operation for more than 20 hours and the LED-Type which has the advantage to have a lower price, but is depending on external power!



The system looks always the same. A tiny XE is the Command console for the Judge and a 3-digit numeric scoreboard shows the countdown.

2.6 *Distance Measuring Device*

Just press the button and save valuable time. Never before have you been ready to measure this quickly!

How it works:

In PowerSearch mode, the instrument rotates around the standing axis and sends out a vertical laser fan. As soon as it finds a prism, the instrument stops rotating and automatically targets the prism.

Track and Field Measurements:

Measurement in athletic - we can supply the software for the following disciplines:

- **Throwing Events:**
 - Discus
 - Shot Put
 - Hammer
 - Javelin

- **Jump Disciplines:**
 - Long Jump
 - Tripple Jump
 - High Jump
 - Pole Vault



2.7 Meet Management System

This is one of the key-advantages of the ALGE Track and Field-System. **ALGE-TIMING** is the only provider where you can get the complete equipment out of one hand, the only guarantee that all components are 100% compatible with each other one.

A stadium-Software package consists of following Software components:

- ALGE TRACK&FIELD, this Software is installed on the computer in the race-office. You can register the competitors, print start and result lists. You can just easy manage the whole competition.
- ALGE Timing-Client, this module is installed on a computer just beside the OPTIC Photo finish. You import the times measured with the Photo finish into the database of the Meet-Manager. The Timing-Client is linked with Ethernet to the Meet-Manager
- ALGE Infield-Client, this module is installed on each infield computer, which are located mobile at all infield-disciplines. This software is also controlling the Infield-Scoreboards and reading the measurements from the ALGE Distance-Measuring devices and from the ALGE Wind gauge.
- ALGE LiveBoard, this module is feeding the large screen scoreboards. The operator can choose the information to be shown on the scoreboard and he can also show advertisings.
- ALGE-CIS, this module is an information system for the speaker and for the press. The speaker and the press must be equipped with touch screen computers or there own notebooks and then they are able to see all the results of their interest in real time. They can have a look on competitor-details and on unofficial standings with one click. In the ALGE software package there is a license for up to 5 terminals included. For most competitions this will be enough and for big international competitions we can rent you an upgrade of the system for a fair price.
- ALGE LIVE-TV, this is an optional module, which we do not recommend the normal user. It is required to create the TV-Inserts for LIVE-TV. As this is a very professional device it requires a lot of knowledge from the user. ALGE-TIMING can rent you such system for any big international competition including a professional operator.

IMPORTANT FACT!

Most other suppliers will not deliver any Meet-Management System. For big competitions there is no problem, as you require anyway a professional service-team. But such a system should be used as much as possible

Here a small sample of the problems of other systems:

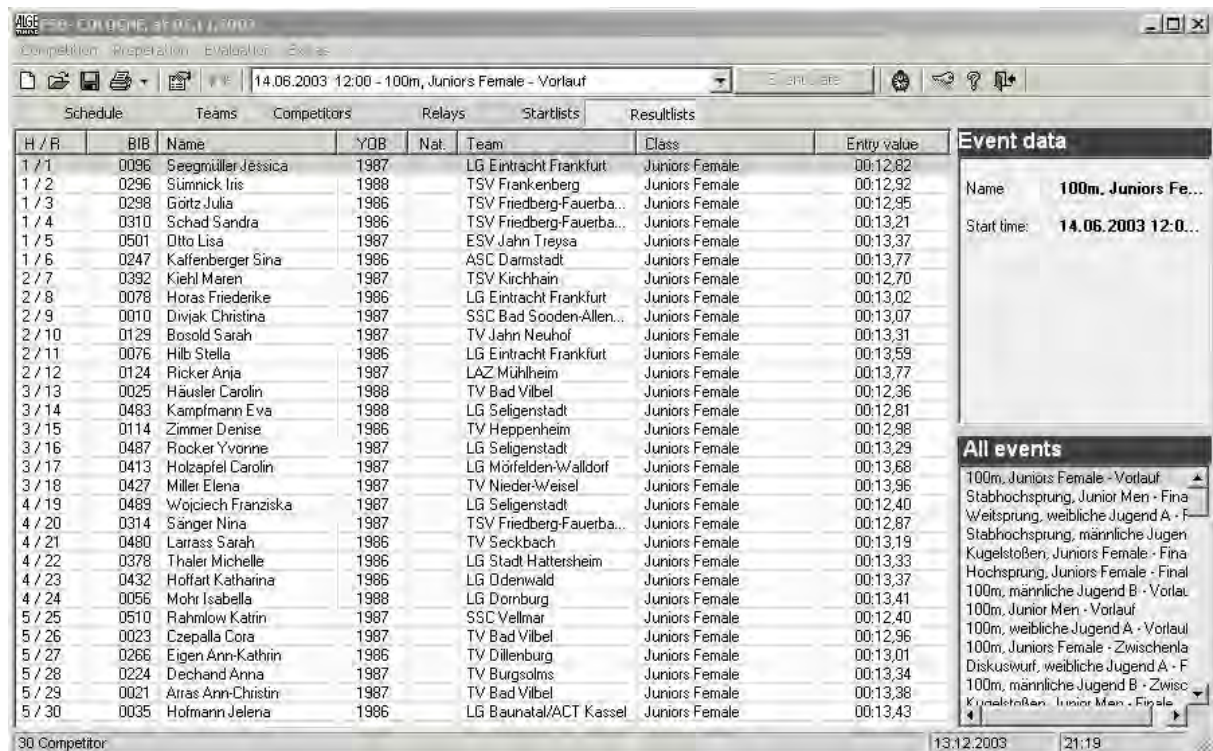
You have a Timing-System from company A and a Video-Wall from company B. For big international competitions you have a professional service team and they will provide the TV-broadcasting company with the standings for the TV. The TV will feed the Video-Wall with the LIVE-TV.

Now imagine you have a local championship where the TV will do no Live broadcasting. In this case you have a Video-Wall to show the standings, but you don't have anybody preparing the Video-Signal. The ALGE-system can always show the results on your ALGE-Video-Wall, even if there is no broadcasting company doing that job and no professional service team is preparing any LIVE video inserts.

The Video-Wall is just used as a Result-Scoreboard and the operator of the scoreboard can also show any results or advertisings.

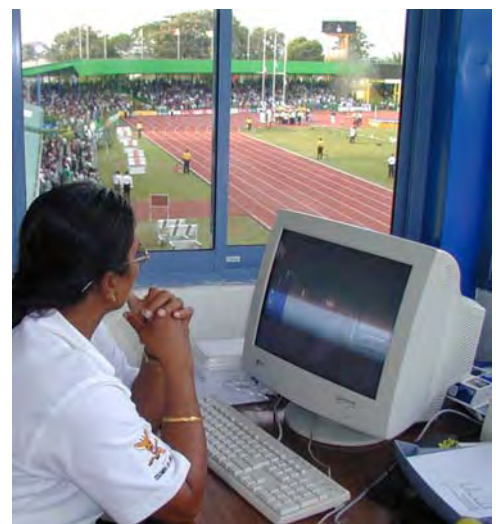
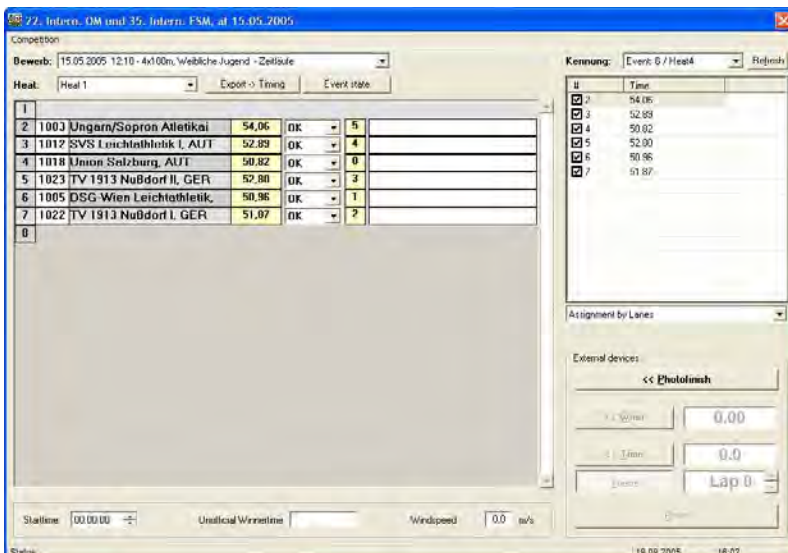
2.7.1 ALGE TRACK&FIELD

An easy to operate 32-Bit application software that enables you to print the Results within a few seconds after the last athlete has finished. Immediately after you receive the results from any event you are able to print the results. Right now this Software is available in German and English language, but we will translate the software into any language required. Till now this includes German, English, Finnish, Malay and Tschech.



2.7.2 ALGE TIMING CLIENT

The Timing-Client is an easy to operate Software Module that is required to collect the data from the photo finish. It is very easy to operate and it guarantees that the results will be as fast as possible in the race office. The Timing-Client is connected via Ethernet to the race-office!



2.7.3 ALGE TECHNICAL-CLIENT

The Timing-Client is an easy to operate Software Module that is required to collect the data from the Infield. It is very easy to operate and it guarantees that the results will be as fast as possible in the race office. Additionally it is controlling the infield scoreboards and collecting the results from the ALGE Distance-Measuring devices and from the ALGE Wind gauge.



ALGE 22. Intern. OM und 35. Intern. FSM, at 15.05.2005

Competition: 15.05.2005 11:45 - Kugelstoßen, Weibliche Jugend - Vor/Endkampf

Group: Group 1 Try: 1 Event state

1	22	Anetzberger Teresa	9,35	0,0	OK	11
2	62	Gejmovska Romana	7,13	0,0	OK	18
3	26	Leidl Tina	7,73	0,0	OK	16
4	47	Molozina Julija	9,02	0,0	OK	13
5	49	Stonkute Zivile	x	0,0	OK	19
6	159	Shaforostova Iryna	10,07	0,0	OK	3
7	179	Jurackova Jana	7,37	0,0	OK	17
8	181	Pavliakova Lucia	6,70	0,0	OK	14
9	252	Kraushofer Marina		0,0	CAN	
10	24	Feiler Tina	10,82	0,0	OK	5
11	64	Sirilova Martina	7,94	0,0	OK	9
12	11	Kaczmarek Klaudia	10,19	0,0	OK	7
13	279	Bilek Anna-Kristina	7,93	0,0	OK	12
14	13	Teschlade Sarah	x	0,0	OK	10
15	104	Lancaricova Zuzana	8,34	0,0	OK	15
16	117	Machurova Jitka	12,66	0,0	OK	1
17	43	Intaite Alfreda	12,20	0,0	OK	aw
18	50	Tamolyte Sandra	12,40	0,0	OK	2
19	329	Hauer Olivia	9,84	0,0	OK	4
20	12	Langguth Lisa	10,15	0,0	OK	6

Infield Board

62 -1-
GEJMOVSKA R.
SVK 1:15

Inv	Result	Free Text
C-Clock	90s	Clear
Logo 1	Logo 2	Permanent

Competitor

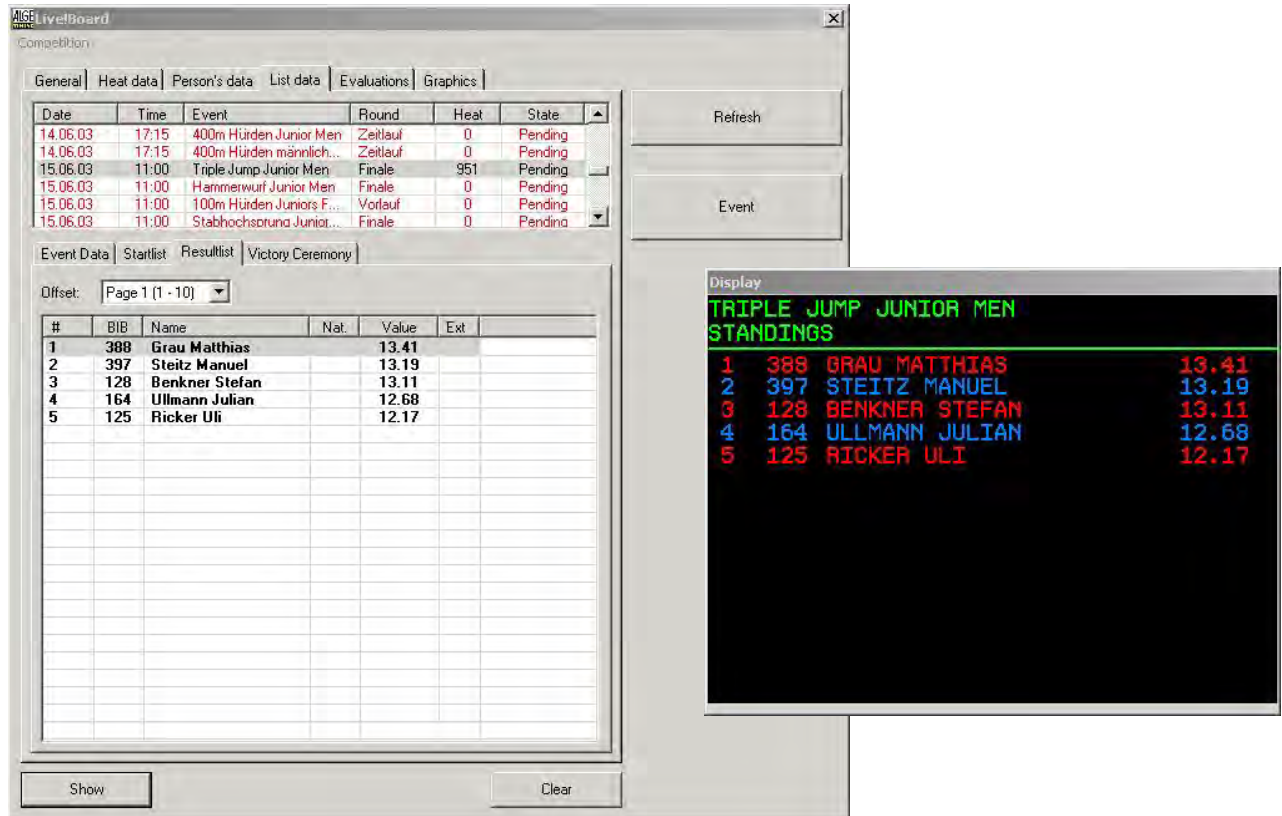
62 Gejmovska Romana

Athlete approach	<< Wind	0.0	<<Prev.
Submit Result	7,13	<< Distance	00.00
			Next>>

2.7.4 ALGE LiveBoard!

This unique Software is used to show any kind of information on your ALGE large scale LED-Scoreboard or Video-Wall.

It shows a preview and it is possible to have the running time also directly on your ALGE LED-Scoreboard.



2.7.5 ALGE CIS

The CIS (Commentator Information Software) is an easy to use application, which 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.

2.7.6 ALGE LIVE-TV!

As mentioned before only professionals can use this module and we don't recommend buying such a system for your own use. Of course on request we can provide you with such systems or better we can provide you for the big competitions where you require TV-Inserts with such systems and additionally with experienced staff to operate it.

2.8 Main Scoreboard

With the Main-Scoreboard you can show the LIVE-TV information prepared by the broadcasting-company and you can show the results directly prepared by the ALGE LiveBoard Software.



We can offer Scoreboards in any size and resolution!

3 Training-Equipment

Additionally to the Competition-Systems ALGE-TIMING can provide you with State of the Art Timingsystems to make your Training measurable. With the Windspeed WS2-TY you already have a Timy which is able to cover below Training-Measurements!!

3.1 Training System for running

This System is able to measure where the strength and weak points of your Athlete is. The System can be setup very customized to fit your budget. Mainly it consists out of a TIMY P or Timy S plus several photocells and a startbeep STB1.

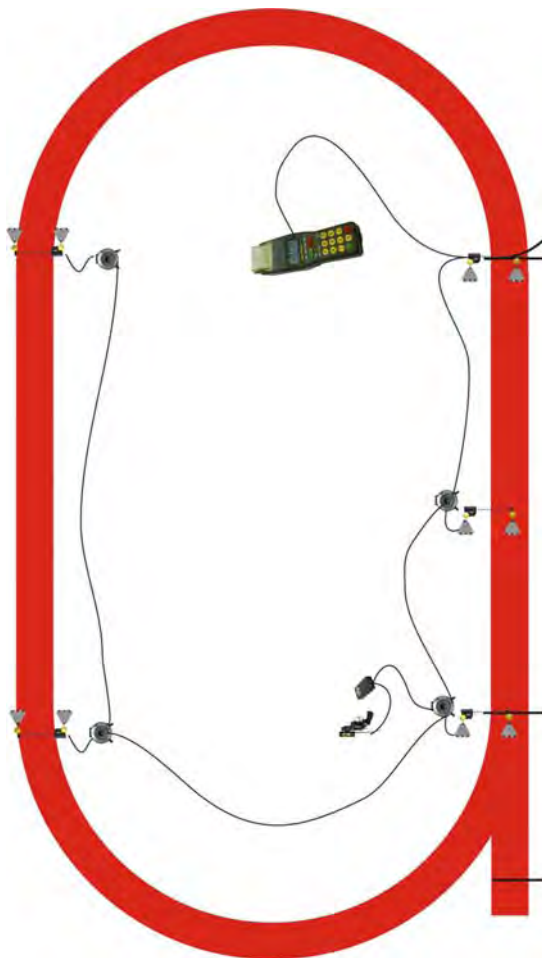
As more photocells you have as more detailed information it will give you.

The Start can be triggered also with a Starting block or with a simple Foot contact switch FKS.

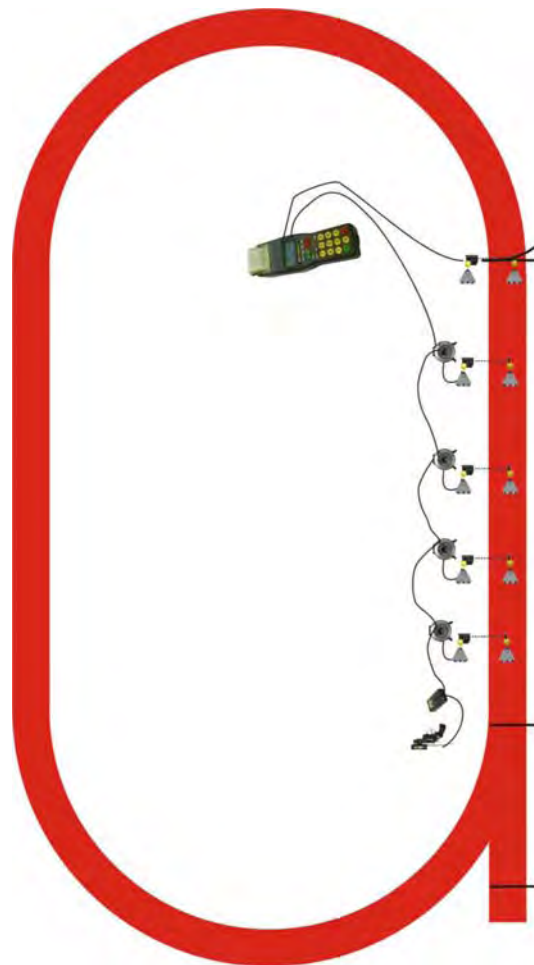
Examining the results of such a measurement will help you to concentrate the training on the section where the athlete could be stronger.

See the recommended System configuration below.

Long-Distance Training:

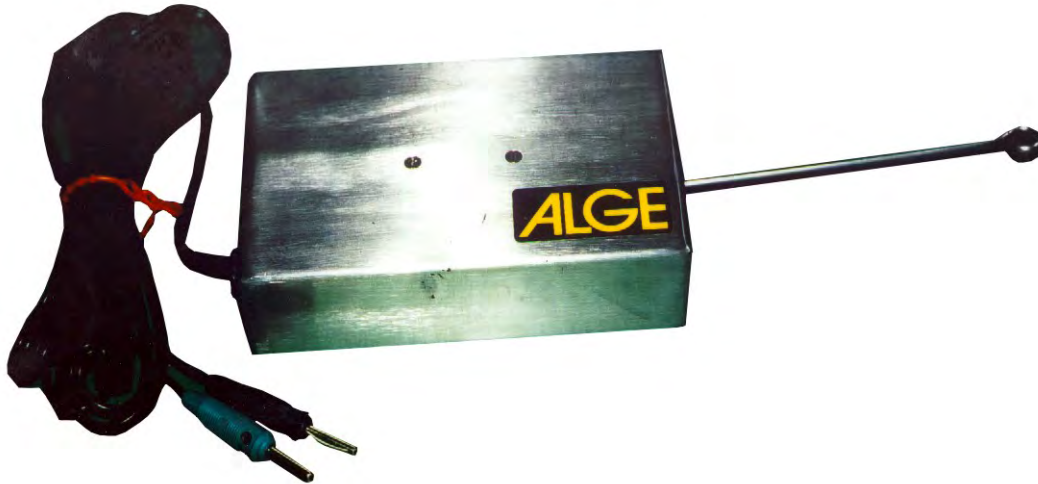


Sprint-Training:



3.2 Reaction-Training

This is a very simply and effective Training-System to measure the reaction of your athletes. The Timy together with the Startgun and a Foot-contact switch is the system for this purpose.



3.3 Jump-Force Test

With the ALGE-TIMING Jump platform you can measure the Time your athlete is able to “fly”. This is in direct relation with the technique and force the athlete has for jumps.

4 Approvals



To: Mr Albert Vetter, Alge Timing

From: Sandro Giovannelli

Re: Photofinish System

Date: 21 June, 1999

Number of pages: 1 (including this cover)

If you do not receive all pages, please contact Monte Carlo (377) 93 10 88 88

Dear Sir,

The IAAF Technical Committee have examined the ALGE OPTIC Colour Photofinish System based on technical document and video which were sent to IAAF by the manufacturer ALGE Timing.

After examining the equipment, the Technical Committee concluded that the ALGE OPTIC Colour Photofinish System satisfies to IAAF Standards and is eminently suited to international athletic competitions.

The new Photofinish System is an upgrade to colour of the previously approved OPTI1ew System.

As you probably know, the IAAF Certification System does not cover timing equipment but will soon define the technical specifications and test procedures for this equipment to be controlled.

Yours sincerely,

Sandro Giovannelli
Director of Competitions

System Description ALGE Track & Field System

ALGE
TIMING

10/10 '00 17:04

002/002



INTERNATIONAL AMATEUR ATHLETIC FEDERATION

Fédération Internationale d'Athlétisme Amateur

ALGE TIMING
Roman Merhar
Rotkreuzstrasse 39
A-6890 Lustenau
AUSTRIA

Monaco, 10 October 2000

Ref: Approval of SJC Start-Judge-Controller (ASB)

Dear Sir,

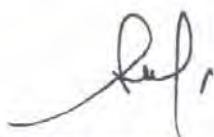
The IAAF Technology Working Group has examined the false start control system developed by ALGE Timing, SJC, based on the technical documents, which were sent to IAAF by the manufacturer Alge.

After examining the equipment, the IAAF concluded that the ALGE SJC Start-Judge-Controller satisfies to IAAF Rules and is eminently suited to international athletic competitions.

The above false start control apparatus was previously tested during the Grand Prix II in Linz and was very successful in detecting doubtful starts.

As you probably know, the IAAF Certification System does not cover false start equipment but will soon define the technical specifications and test procedures for this equipment to be certified.

Yours sincerely,



Sandro Giovannelli
IAAF Competitions Director

17 rue Princesse-Florestine • BP 359 • MC 98007 MONACO Cedex
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RÉPUBLIQUE
NEUCHÂTEL



ET CANTON DE
(SUISSE)

OBSERVATOIRE ASTRONOMIQUE ET CHRONOMÉTRIQUE DE NEUCHÂTEL

CERTIFICAT DE VÉRIFICATION

délivré à

ALGE Timing Lustenau (A)

pour le garde-temps : OPTIC

No 9809013

Intervalle de temps					
effectif			mesuré		
0h	0m	0.000	0h	0m	0.000
..2.....	0.....	0.000	..1.....	59.....	59.9985
..4.....	0.....	0.000	..3.....	59.....	59.9970
..6.....	0.....	0.000	..5.....	59.....	59.9960
..8.....	0.....	0.000	..7.....	59.....	59.9950
10.....	0.....	0.000	..9.....	59.....	59.9940
12.....	0.....	0.000	11.....	59.....	59.9930
14.....	0.....	0.000	13.....	59.....	59.9920
16.....	0.....	0.000	15.....	59.....	59.9910
18.....	0.....	0.000	17.....	59.....	59.9905
20.....	0.....	0.000	19.....	59.....	59.9895

Température : 21°C ± 1°C

Position : horizontale

P. Le directeur de l'Observatoire,

H. Perrenboger

NEUCHÂTEL, le 16 mars 1999

5 Stadium-Installation

Under this chapter we are explaining all the important cabling which is required to run a Track & Field Competition. For smaller Events it is enough if you have the cabling just for the Timing-System. For bigger events you should also have the Computer-Network for the Infield-Events.

System Description
ALGE Track & Field System



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http: www.alge-timing.com