



ATHLETICS SWITCHER - OUTDOOR

USER'S MANUAL

3459.501.02 | Version 1.0 |



Caution and safety precautions

- Never use any other charger than the supplied or a type approved by Swiss Timing. This could destroy the battery, cause damage to unit, and possibly cause personal injury due to fire or/and electrical shock.
- Never bypass a power cord ground lead by breaking off the ground pin, or by using inappropriate extension cords or adapters.
- Never plug a power cord into the AC power source until you have made sure that all installation, cabling and power levels, are proper, and that the applicable procedures in this manual have been followed.
- Protect the equipment against splashing, rain and excessive sun rays.
- Never use the device if it is damaged or insecure.
- Verify the selection of the power distribution.
- Verify that the voltage quoted on the rating plate is the same as your voltage. Connect the appliance only to power sockets with protective earth. The use of incorrect connection voids warranty.
- This program may be modified at any time without prior notification.
- Do not open the case; there is nothing that needs servicing inside it. Nevertheless, if the case must be opened, you must call for some qualified personnel. The power supply cable must be disconnected before opening the case.
- During the transport of all Swiss Timing equipment delivered with a reusable carry case, the said case should be used at all times. This is imperative to limit the damage, such as shocks or vibration that can be caused to the units during transport.
- The same cases should also be used when returning equipment to Swiss Timing for repair. Swiss Timing reserves the right to refuse all guarantees if this condition is not fulfilled.
- If the installation includes a horn, be sure to maintain a sufficient security distance from the public.

Documentation Updates

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Environment



This symbol indicates that this product should not be disposed with household waste. It has to be returned to a local authorized collection system. By following this procedure you will contribute to the protection of the environment and human health. The recycling of the materials will help to conserve natural resources.

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1 INTRODUCTION

The **Athletics Switcher Outdoor (ASO)** is a device for advanced competition level distributing input and output data of athletics devices and accessories.

It allows to connect and switch 2 photofinish (Primary & Secondary) cameras and laptops with false start system, timing scoreboards, wind gauge (sprint), finish photocells, headset, and additional RS422 output. Connection of additional photofinish camera infield (start & finish) is also available. Optional keyboard for intermediate photocells at 200m and 1500m. Power supply: 10-30VDC, external PSU 110-240 VAC/15VDC.

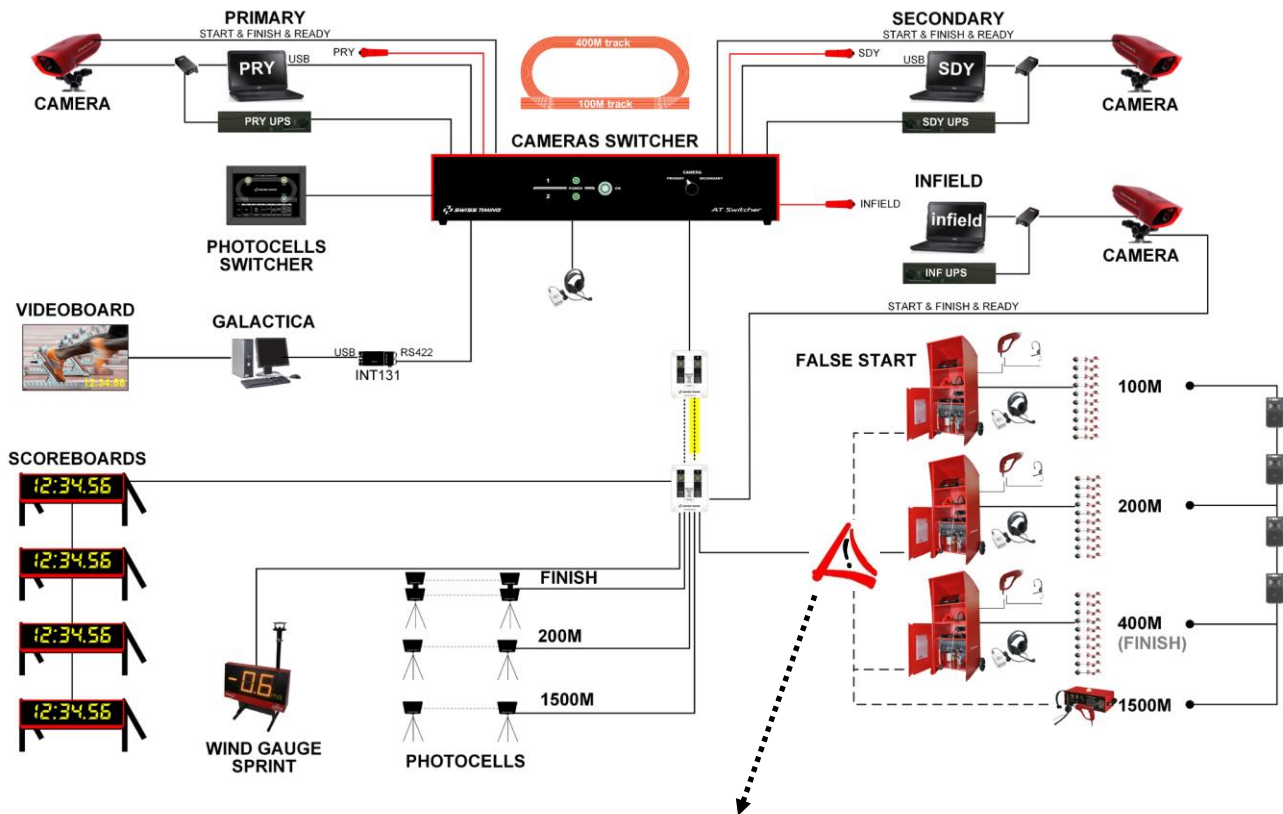
- Dedicated keyboard for photocell activation
- Possibility to connect 3 OSV cameras
- Data output can be switched between PRY and SDY cameras
- Switch start measurement command between PRY and SDY (wind gauge)
- Compatible with Mistral & Boreas wind gauge devices
- Wind speed and false start ASC data dispatched between PRY and SDY cameras
- OSV ready monitoring via 2 LEDs on Switcher Unit
- One interface with many functions

1.1 Material delivered

- 1x ATH Switcher outdoor
- 1x Photocell switcher (*OPTION*)
- 1x UTG cable 10m. (ATH Switcher to fix cabling box)
- 2x DIN cable 10m. (ATH Switcher to PRY & SDY cameras)
- 1x External power supply 100-240VAC / 15VDC
- 3x Power cable (EU / UK / US)

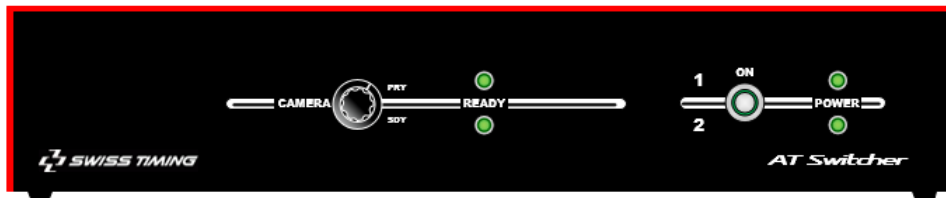
2 CONNECTIONS

2.1 Connections overview

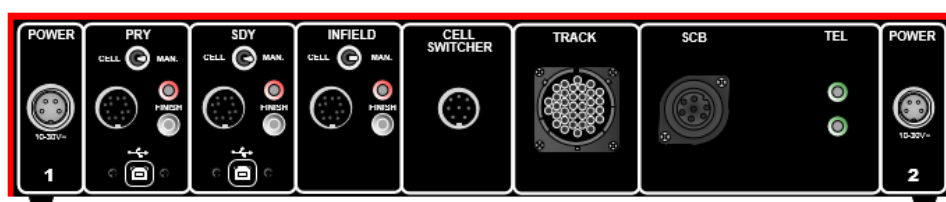


**Only one Start (StartTime) or False start (ASC) can be connected on the track.
All unused start systems must be disconnected.
You may only reconnect start system if necessary.**

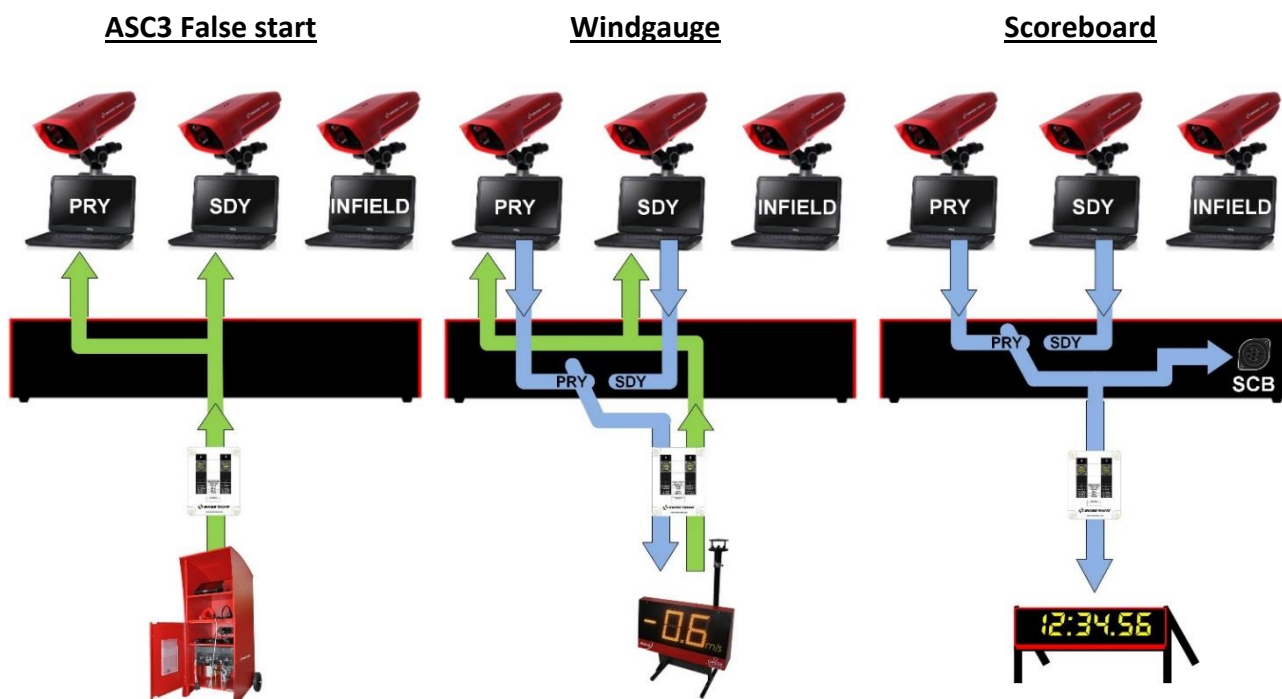
2.2 Front view



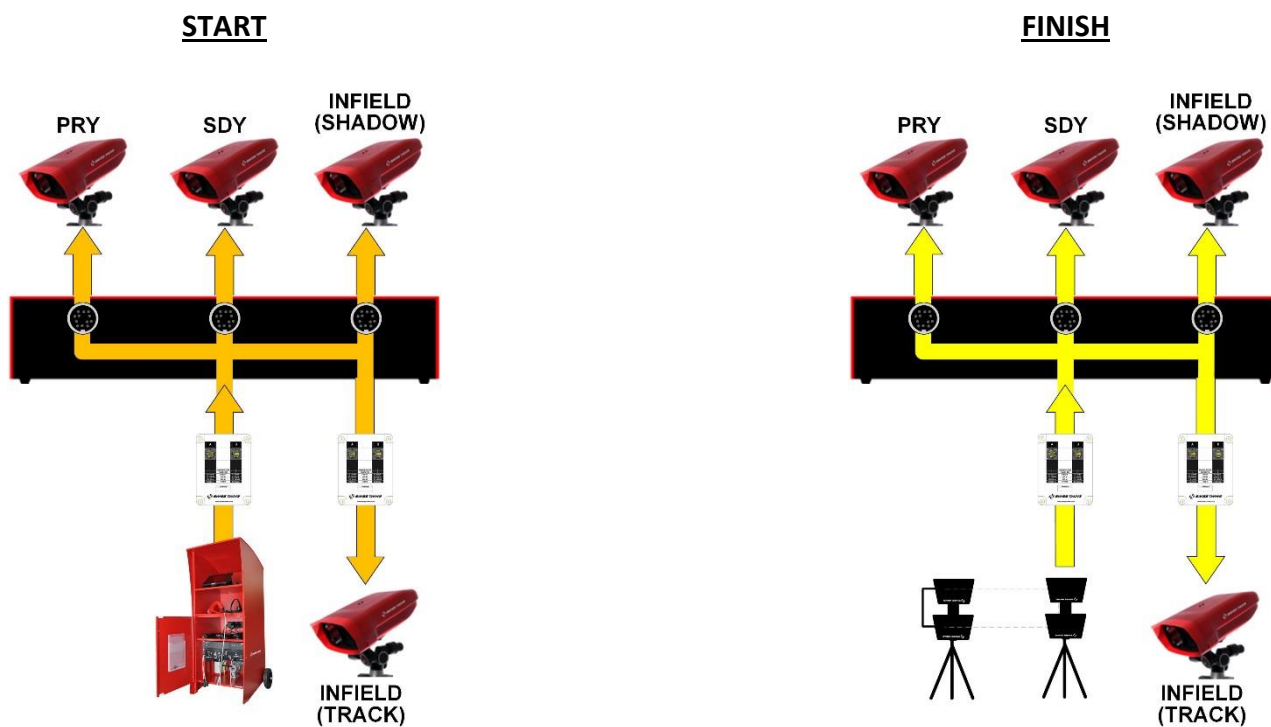
2.3 Rear View



2.4 Distribution of RS422 data



2.5 Distribution of START & FINISH contacts

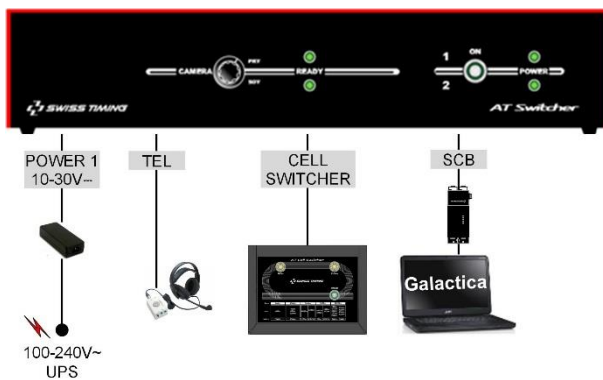


3 CABLING

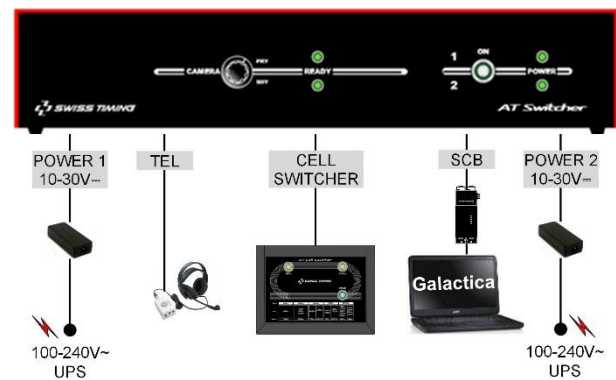
There are several possible cabling solutions and you will find some examples below.

3.1 Timing Room connections

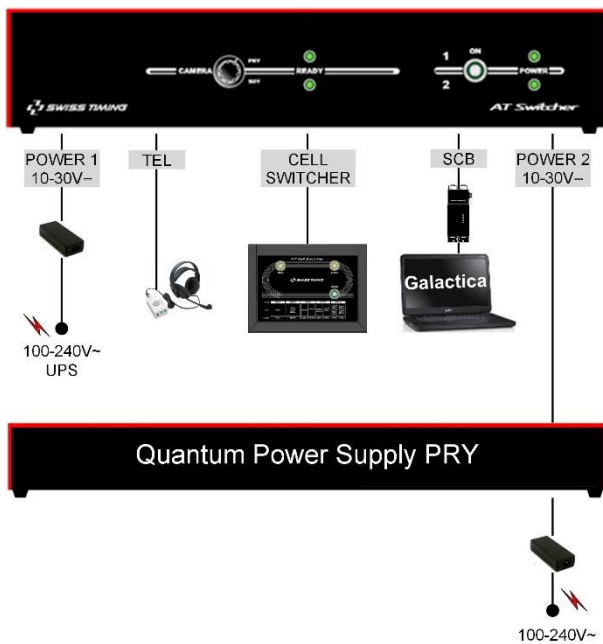
3.1.1 Single power supply



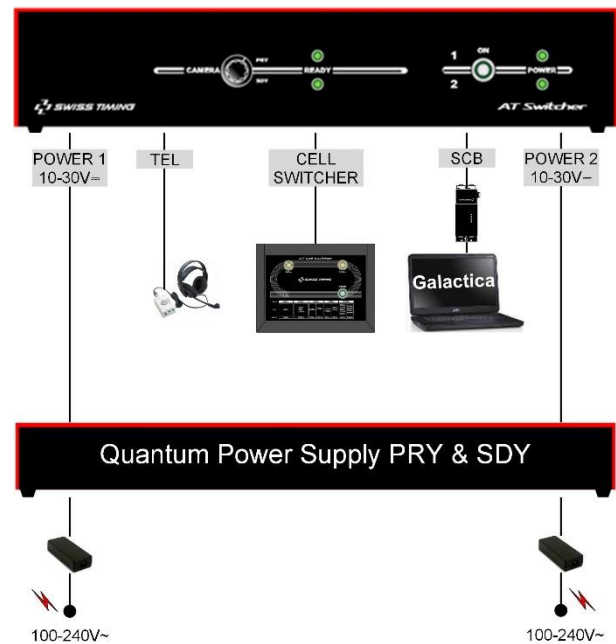
3.1.2 Double power supply



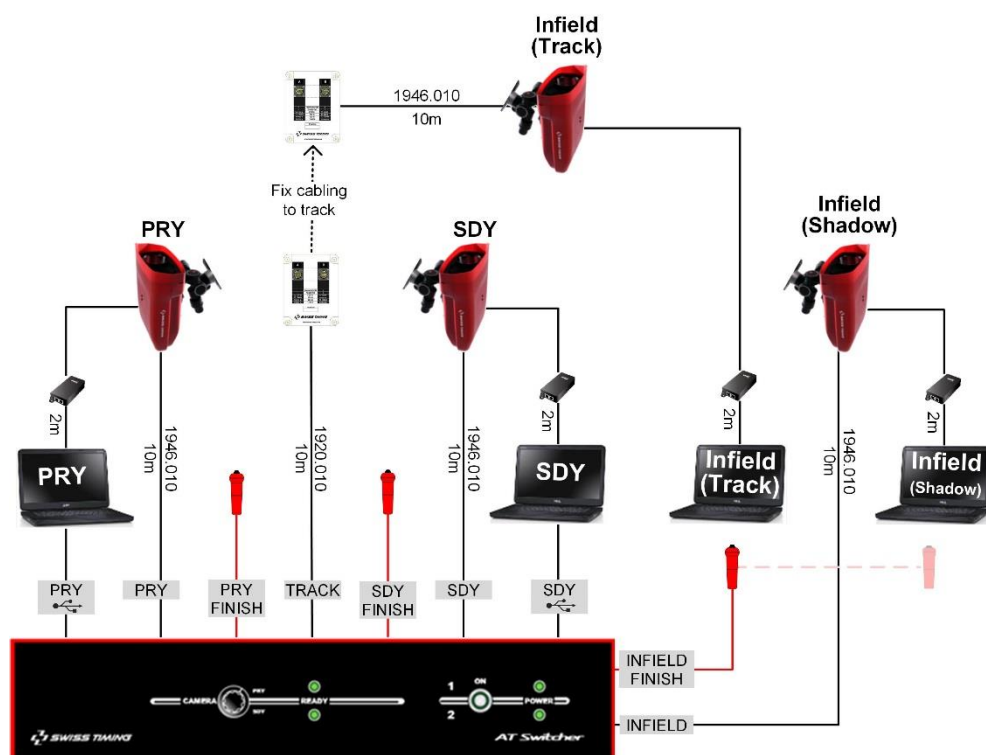
3.1.3 Single power supply and external battery



3.1.4 Double external batteries

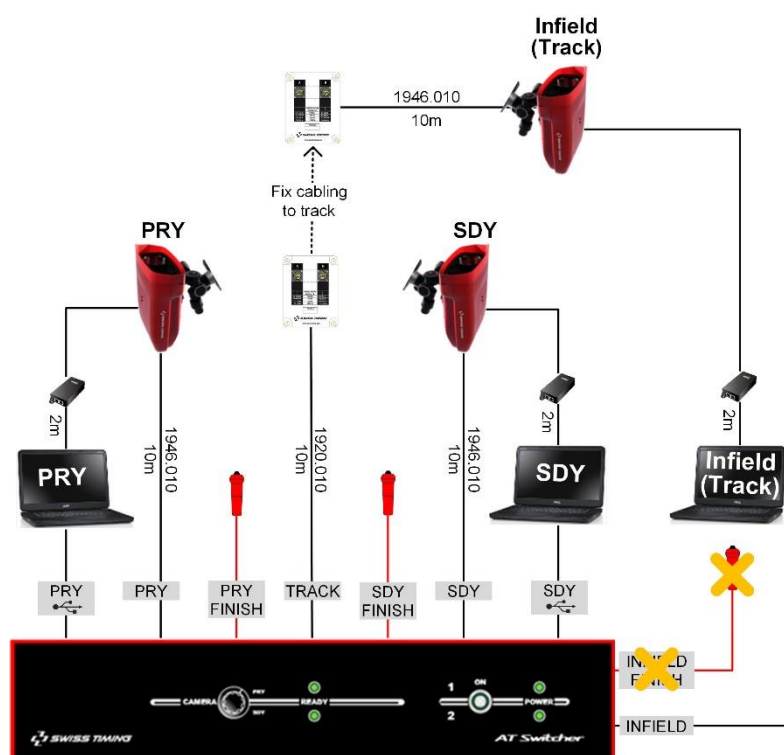


3.2.4 Cameras Primary & Secondary & Infield (Track & Shadow)



The selection of the INFIELD switch  is valid for Infield Track and Shadow cameras. If CELL is selected, both cameras will record when Finish photocell is activated. If MAN is selected, both cameras will record when pushbutton is activated.

3.2.5 Additional timer



An additional timer can be connected to the START and FINISH contacts through the INFIELD camera connector. A specific cable is needed according to the timer model.

In this configuration, select the INFIELD switch  in position CELL. Do not use pushbutton (MAN)

3.3 Rear panel description

3.3.1 Power 10-30VDC



There are 2 DC power inputs, the second one is used as Backup. You can connect:

- 1 external power supply or 1 external battery 12VDC (POWER 1 or POWER 2)
- 2 external power supplies (POWER 1 and POWER 2)
- 1 external power supply and 1 external battery 12VDC (POWER 1 and POWER 2)
- 2 external batteries 12VDC (POWER 1 and POWER 2)



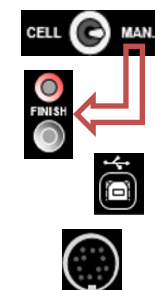
If only power supplies are connected to the ASO, add an Uninterruptable Power Supply (UPS).



3.3.2 Cameras



3 cameras can be connected to the ASO unit. Primary and Secondary cameras are positioned in the timing room and Infield could be installed in the track or in the control room as Shadow.



Select CELL if recording is started by FINISH photocell or MAN if started by a pushbutton.

The pushbutton is connected in the two bananas plugs.

USB computer connection.

Myria connection (START & FINISH)

To connect OSV STAR camera, please use adapter cable 3503.628.



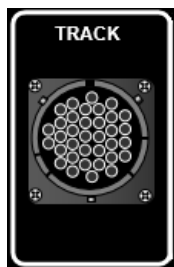
3.3.3 Cell Switcher (OPTION)



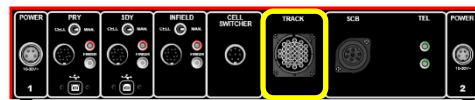
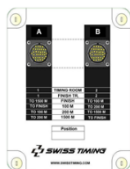
Cell switcher is recommended when intermediate times (220M and/or 1500M) are needed.



3.3.4 Track



Connect the ASO to the track with the cable 1920.010.



3.3.5 Galactica

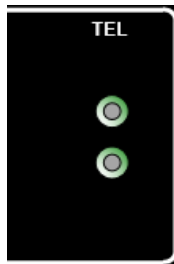


Connect the Galactica computer (INT131) with the cable 1871.xxx (xxx= cable length in meters / 010, 025).



Only the running time is transferred (same information as track scoreboards).

3.3.6 Telephone



Connect the telephone unit to the track with the cable 1878.xxx (xxx= cable length in meters / 010, 050, 100).



4 OPERATING

4.1 Power on

When cabling is done as specified in previous chapters, switch on the unit by pressing the ON button. The POWER leds will light up if power is connected.



4.2 Primary & Secondary Selection

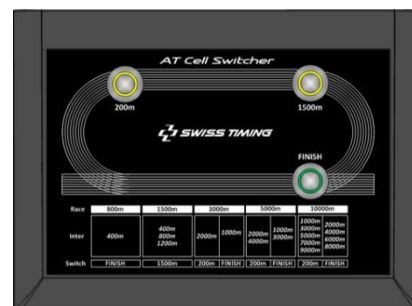
Before the first race, select the switch in position Primary (PRY). When a problem appears during the event, select the switch in position secondary (SDY). Data will be immediately switched.



When camera Primary is READY, the corresponding led will light up.
When camera Secondary is READY, the corresponding led will light up.
The camera Infield READY is not displayed.

4.3 Photocell switcher (OPTION)

If intermediates times (200M - 400M - 1500M) are requested, connect the Photocell Switcher to the Athletics Switcher. A board will help you to select the correct intermediate time according to the race length.



4.3.1 Intermediate time 200M or 1500M

When the first racer arrives near the intermediate photocell, press and hold the intermediate button (200M or 1500M) until the racer crosses the photocell, then release the button.

4.3.2 Intermediate time 400M (FINISH)

When the first racer arrives near the intermediate photocell, press the intermediate button (FINISH). After the first racer has crossed the photocell, release the button (FINISH).

4.3.3 Finish time

Before the end of the race, arm the FINISH photocell by pressing the FINISH button. The button will light up as a confirmation of the FINISH.

After the last racer has crossed the photocell, release the button (FINISH).



The **CELL** switch of the camera managing the running time should be selected on **CELL**.

5 USB CONNECTION

5.1 Install drivers

1. Power on your computer and boot to Windows.
2. Put the driver CD in the CD-ROM then run the PL-2303 driver (See *Fig.1* and 2)

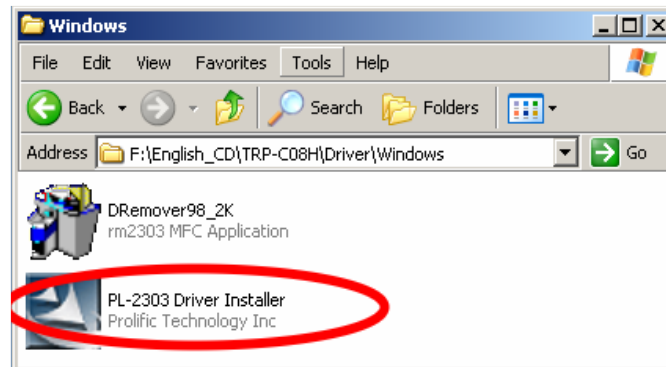


Fig. 1



Fig. 2

3. Connect Athletics Switcher PRY or SDY with your computer by USB cable.
4. Windows will auto detect four "new USB devices" and start **InstallShield** Wizard (See *Fig.3*)



Fig. 3

5. After driver installation, please follow the below process to verify whether the device was properly installed. Click Start – Setting -- Control panel -- double click system icon – Hardware Device Manager -- Double click on ports (COM&LPT) (See Fig. 4).

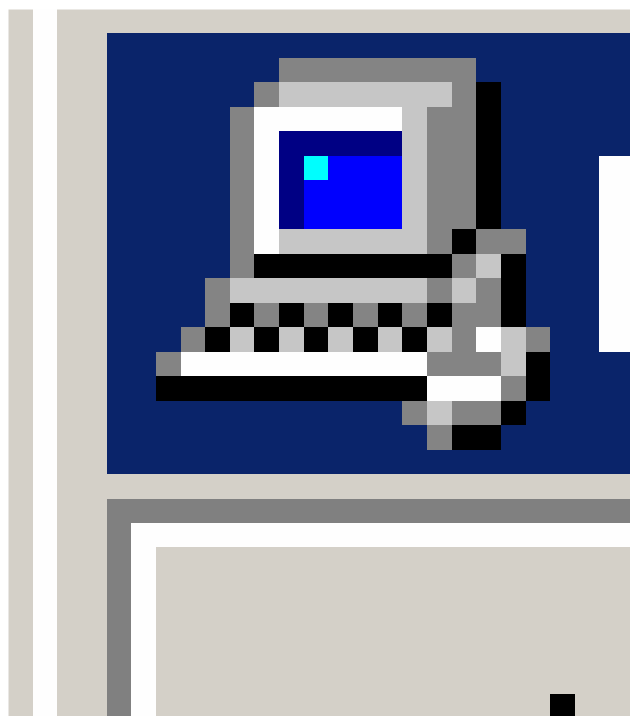


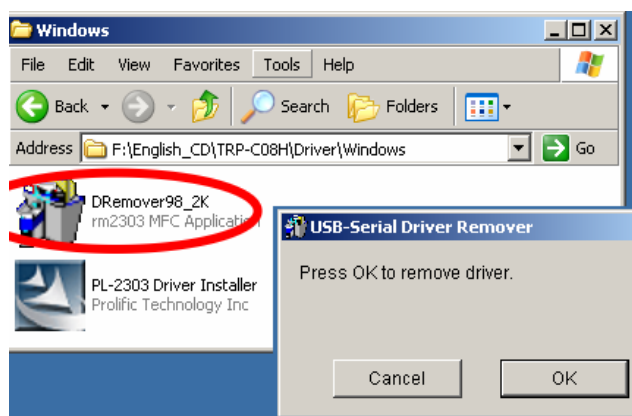
Fig. 4

6. If the device has been correctly installed, you may see 4 ports new COM devices listing. This means Windows has assigned the device to the COM# port.

*There could be a difference in the port numbers of the Device Manager window, as the PL2303 driver will auto assign a COM number from your system.

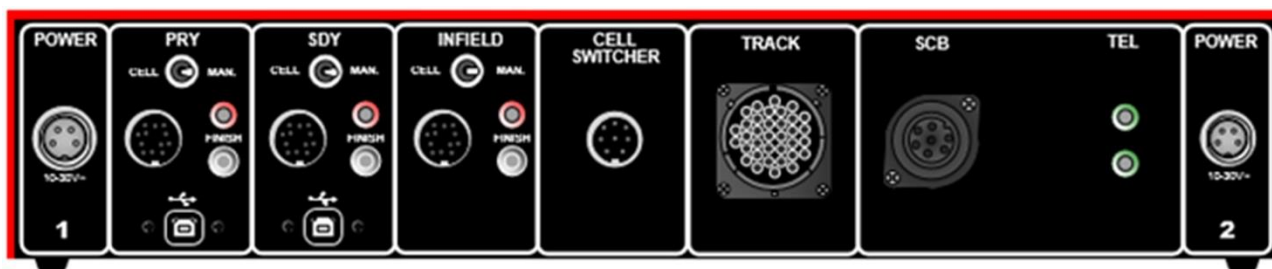
1.2 Remove drivers

Use the **DRemover98_2k** to remove **INT131 driver**. Double click **DRemover98_2k**. If INT131 driver software has already been installed, the modify, repair or remove the program window will appear, then select “Remove” to clean INT131 driver completely.



It is necessary to update the driver when INT131 adds new features or functions. Use the **DRemover98_2k** to remove old version **INT131 driver**. Double click **DRemover98_2k**. If an older version of the INT131 driver software existed in the system, the modify, repair or remove the program window will appear, then select “Remove” to clean INT131 driver completely. Once the software has been removed, install the new software.

6 CONNECTORS DESCRIPTION



POWER 1 10-30VDC	
DC Input	
DIN 4pMT	
1	+10-30V
2	GND
3	
4	

PRY /SDY INFELD	
Contacts	
DIN 12pFT	
A	
B	READY +
C	FINISH +
D	FINSH -
E	START +
F	START -
G	
H	
J	
K	
L	READY -
M	

CELL SWITCHER	
Contacts	
DIN 8pFT	
1	INPUT CELL +
2	
3	
4	200M +
5	1500M +
6	FINISH +
7	POWER +
8	GND

SCB	
RS422	
Tuchel 7pFT	
1	POWER OUT +
2	
3	TX-
4	TX+
5	
6	
E	GND

POWER 2 10-30VDC	
DC Input	
DIN 4pMT	
1	+10-30V
2	GND
3	
4	

TRACK											
Contacts / RS422											
UTG 35pFT											
A	←	ASC -	L	←	200M +	X	→	Infield FINISH +	h	→	TEL Line a
B	←	ASC +	M	←	200M -	Y	→	Infield FINISH -	i	→	TEL Line b
C			N	→	WG Power +	Z	←	Infield READY +	j		
D			P	→	WG GND	a	←	Infield READY -	k		
E	←	WG RS422 +	R	→	WG RS422 +	b	→	Infield START +	m		
F	←	WG RS422 -	S	→	WG RS422 -	c	→	Infield START -			
G	→	SCB RS422 +	T			d	→	READY +			
H	→	SCB RS422 -	U			e	→	READY -			
J	←	1500M +	V	←	FINISH +	f	←	START +			
K	←	1500M -	W	←	FINISH -	g	←	START -			

→	To TRACK
←	From TRACK

SCB	Scoreboard
WG	WindGauge

7 TECHNICAL SPECIFICATIONS

7.1 Mechanical characteristics

	Athletics Switcher	Photocells Switcher
<i>Dimensions:</i> <i>Dimensions:</i> <i>Abmessungen:</i>	440 x 300 x 55 mm	200 x 150 x 60 mm
<i>Weight:</i> <i>Poids:</i> <i>Gewicht:</i>	3.7 kg	0.6 kg
<i>Protection:</i> <i>Protection:</i> <i>Schutzklasse:</i>	IP42 (indoor use)	
<i>Working temperature:</i> <i>Température de fonctionnement:</i> <i>Betriebstemperatur:</i>	0°C to 50° C	
<i>Temperature range storage:</i> <i>Température de stockage:</i> <i>Lagertemperatur:</i>	-30 to 85°C	

7.2 Electrical characteristics

<i>Power supply:</i> <i>Alimentation:</i> <i>Speisung:</i>	<i>External power supply :</i> 110 - 240 VAC / 15VDC Athletics Switcher : 10 - 30VDC
<i>Power consumption:</i> <i>Consommation électrique:</i> <i>Stromverbrauch:</i>	Max. 90 VA
<i>CE Standards:</i>	

8 APPENDICE

8.1 Index figures

No table of figures entries found.

8.2 Version history

Version	Modifications since last version
1.0	Initial version

NOTES

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