Timing - and Cable Installation in an Athletic Stadium

ALGE TIMING

English

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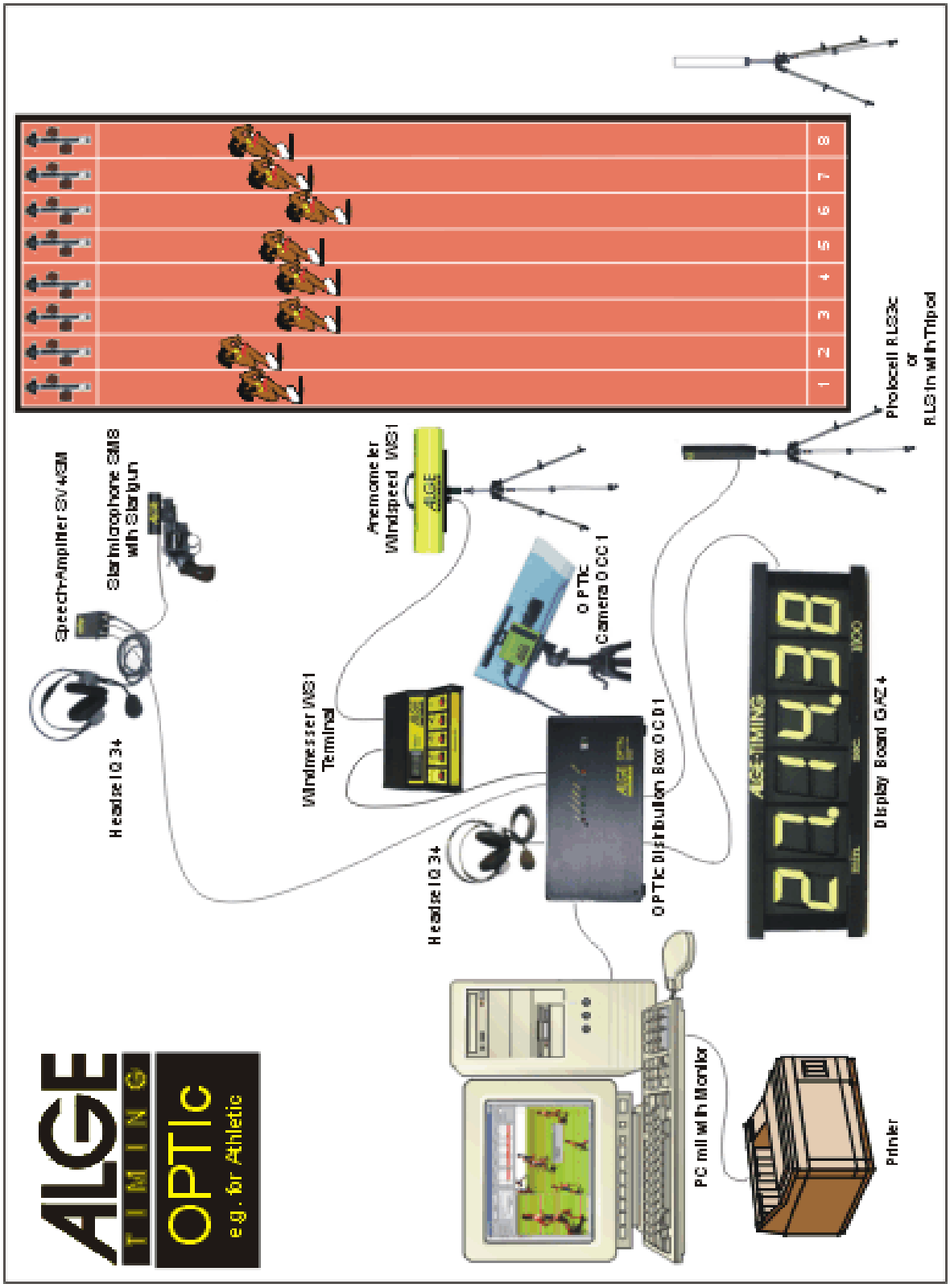
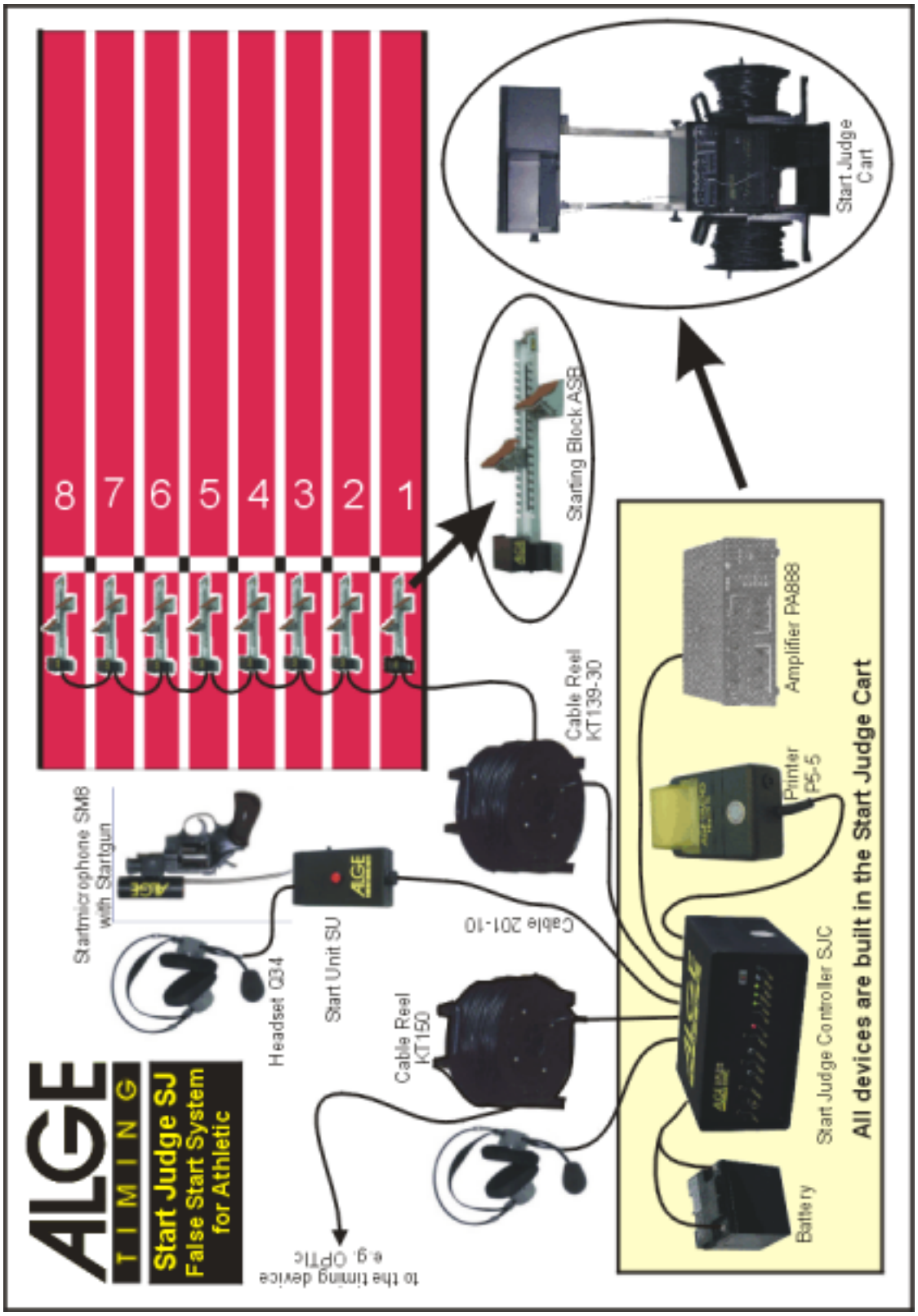
Setup of the Photofinish System

The maximum distance between OPTI Distribution Box OCD1 and OPTI Line Camera OCC1 is 100 m.



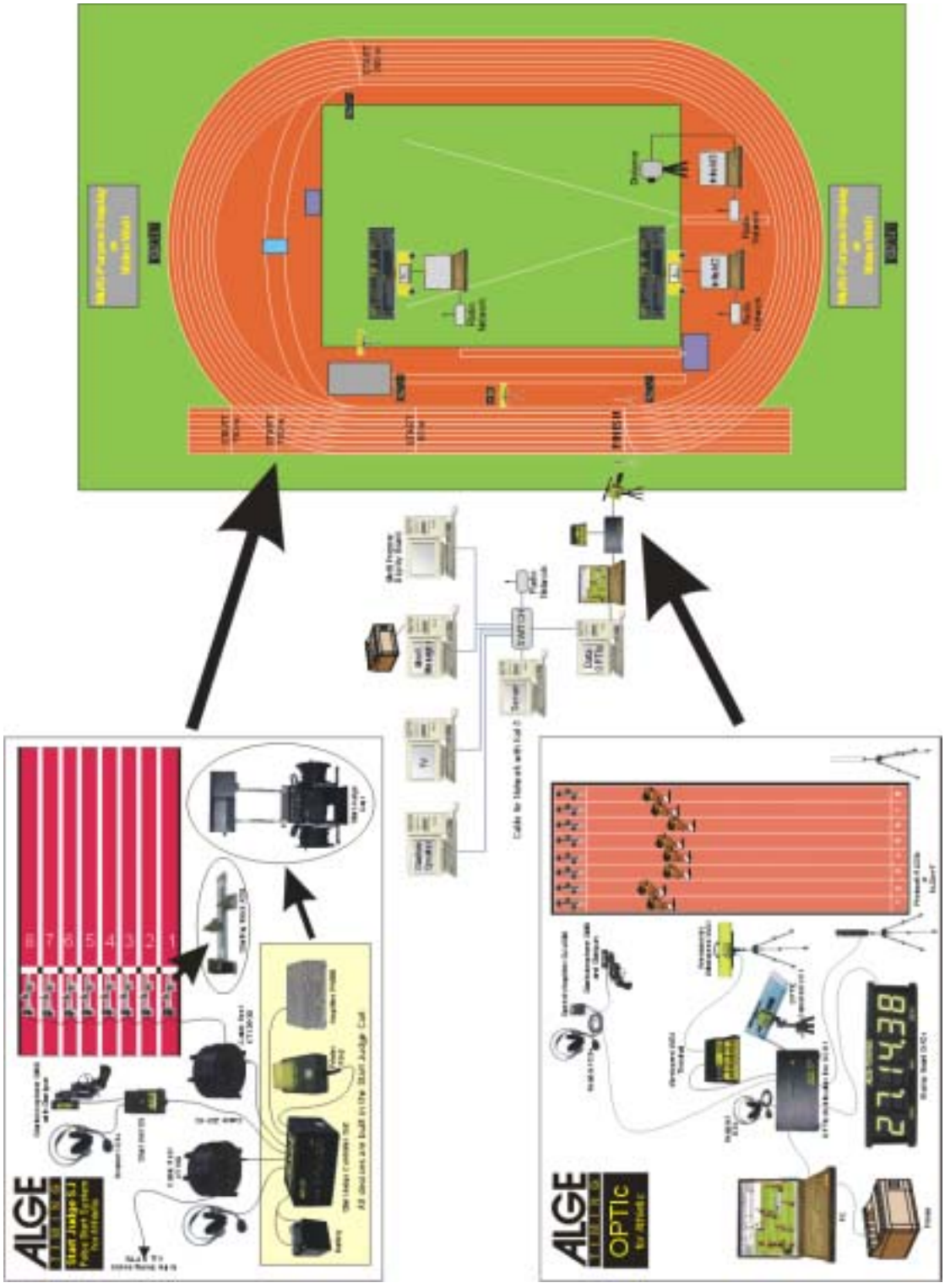
Setup of the False Start System Start Judge SJ



Complete Track and Field System

The System includes:

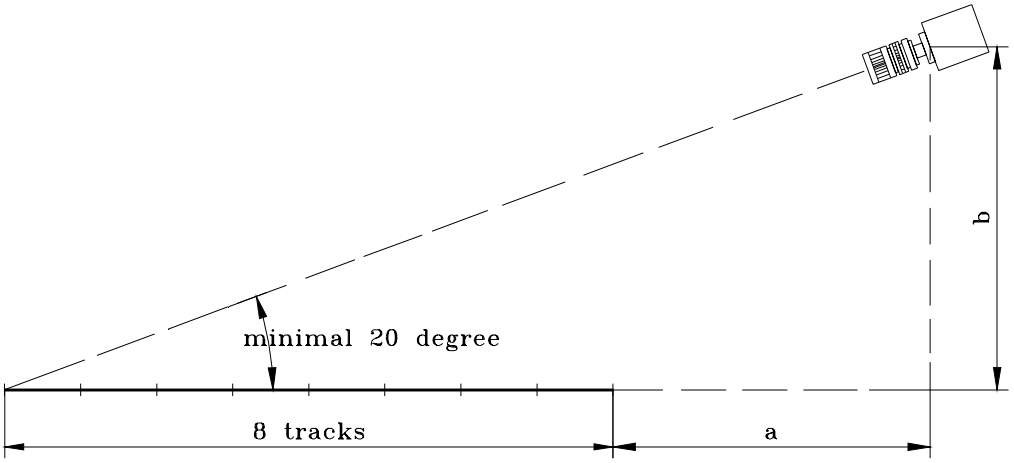
- Timing with OPTIc and Accessories
- False Start System Start Judge SJ
- Infiled Display Boards
- Big Matrix Stadium Display Board
- PC-Network für Evaluation

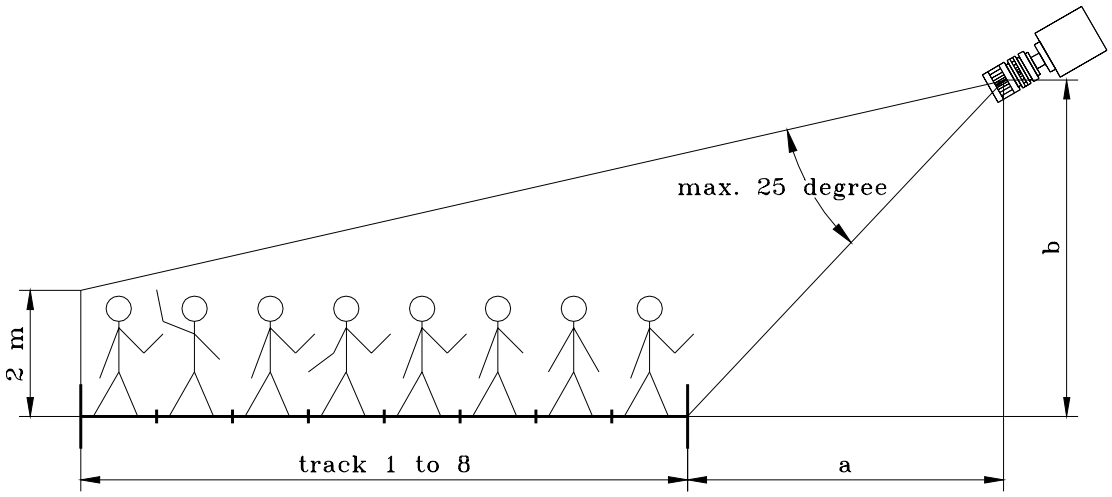


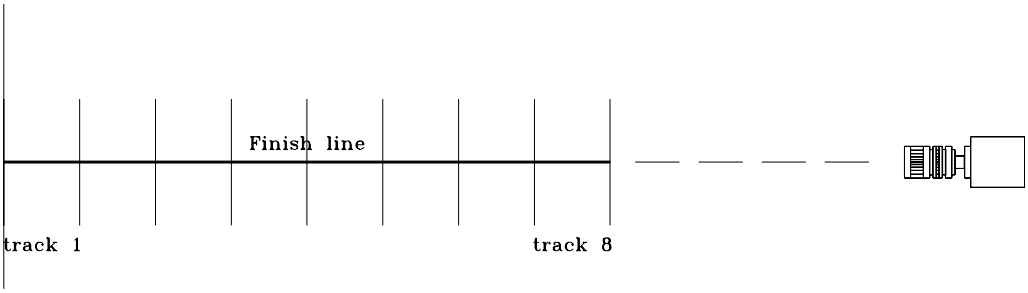
Setup of the OPTI Line Scan Camera

Positioning of the camera:

The camera must be placed exact in the stretch of the finish line. The distance between the camera and the track depends on the amount of lanes and the overall width of the track. The camera should have an angle of 20° to the track at the furthest lane.







The following table tells you witch distance the camera needs for a track stadium with 6 or 8 tracks. For a good camera position, this means a good angle to see the athletes you need to follow the instructions below.

- never use a lower angle than 20° from the track with the most distance to the camera (see picture on the page before).

- all tracks must be covered by the lens (you must see all tracks and a athlete on the outside track on the picture).

The following graphs are rogh calculation. It may differ depending on the objective that you use and on the resolution of the camera.

"yes" in the graph means that the camera position with the shown horizontal and vertical distance is good.

"no" in the graph means that the camera is not in a good horizontal or vertical distance. You cannot show all tracks or you have a very flat angle.

A "?" in the graph means that it will be difficult to show all 6 or 8 tracks in the picture (the angle of 25° might be too small).

A "W" in the graph means, that you will be a little bit bellow the recommended angle of 20° from the outside track to the camera.

Stadium with 6 lanes:

horithontal a

vertical b	**6 tracks**	**5 m**	**6 m**	**7 m**	**8 m**	**9 m**
	5 m	yes (?)	yes	yes (W)	no	no
	6 m	yes (?)	yes	yes	yes	yes
	7 m	yes (??)	yes (?)	yes	yes	yes
	8 m	yes (?)	yes (?)	yes	yes	yes

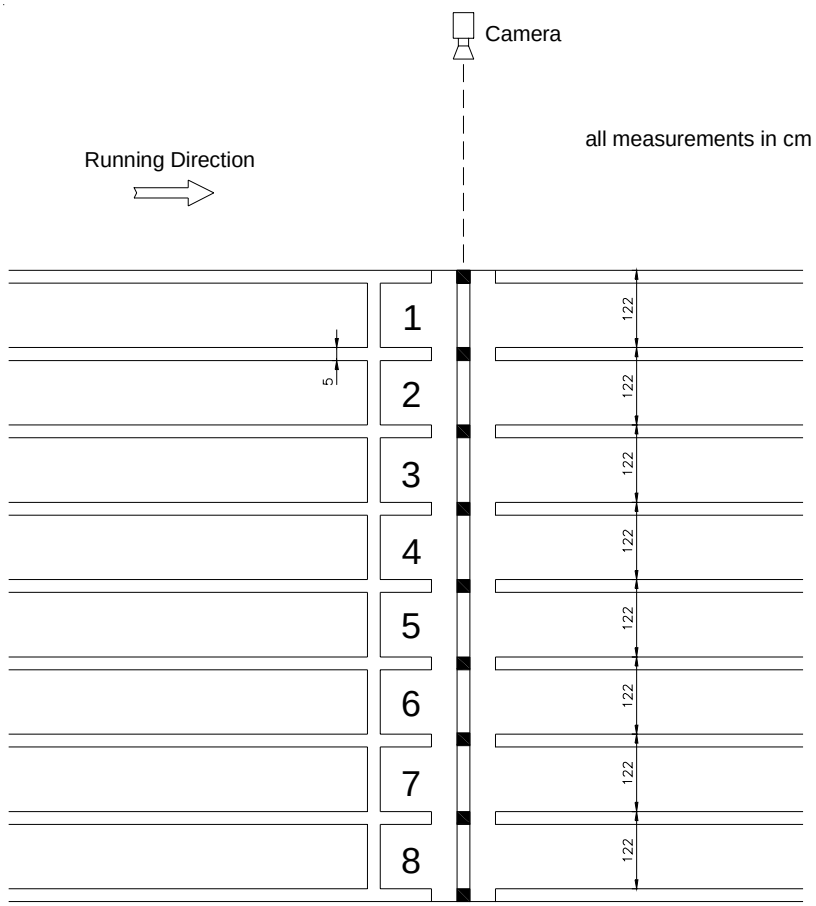
Stadium with 8 lanes:

horithontal a

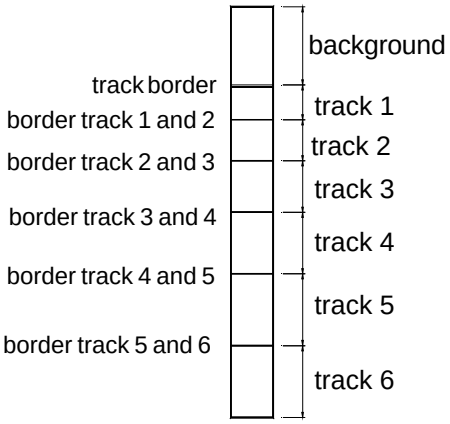
vertical b	**8 tracks**	**6 m**	**7 m**	**8 m**	**9 m**	**9 m**
	6 m	yes (??)	yes(?/W	no	no	no
	7 m	no	yes (?)	yes	yes	yes (W)
	8 m	no	yes (?)	yes	yes	yes
	9 m	no	yes (?)	yes	yes	yes

Alignment of the Camera for an athletic track

The finish line must be painted correct on the track. The intersection between finish line and track borders must be black (see drawing below). This black mark is absolutely necessary, in order to see the border between the lanes on the monitor and print out. On the monitor you see the line white and the border black. If this is not the case, you do not record the finish line and you have to adjust the camera again.



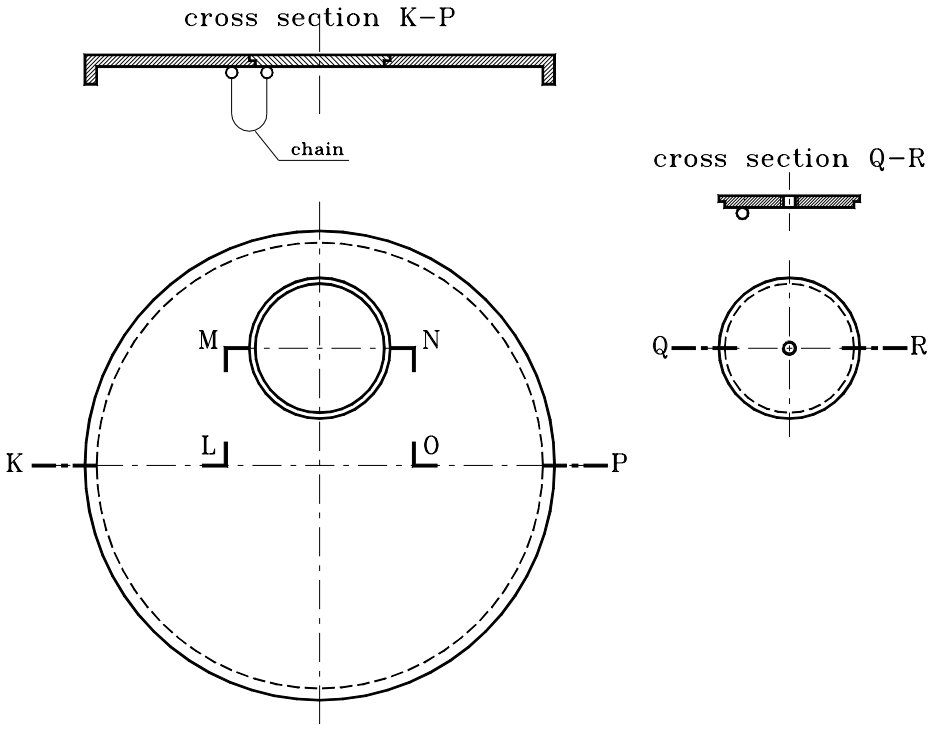
If you have the camera correct adjusted it must show the following picture in the mode "camera settings".

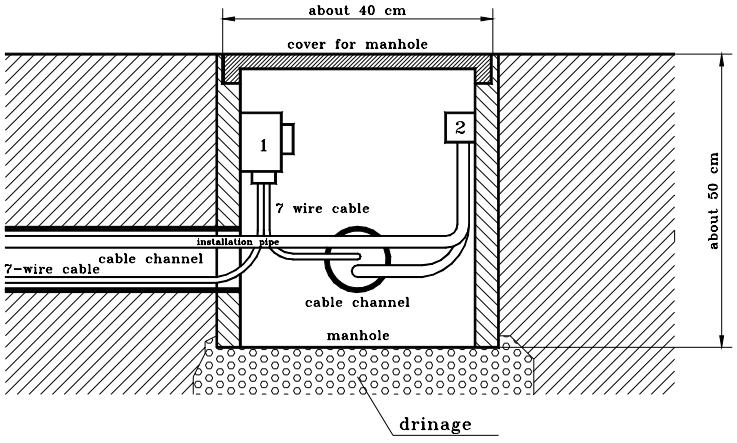


The background must have a white (bright) color in order to have a good contrast to the athletes. You must make sure that you can see a athlete as well on the track 1

At the monitor you see the track and the lane borders in different

Sample for a Manhole

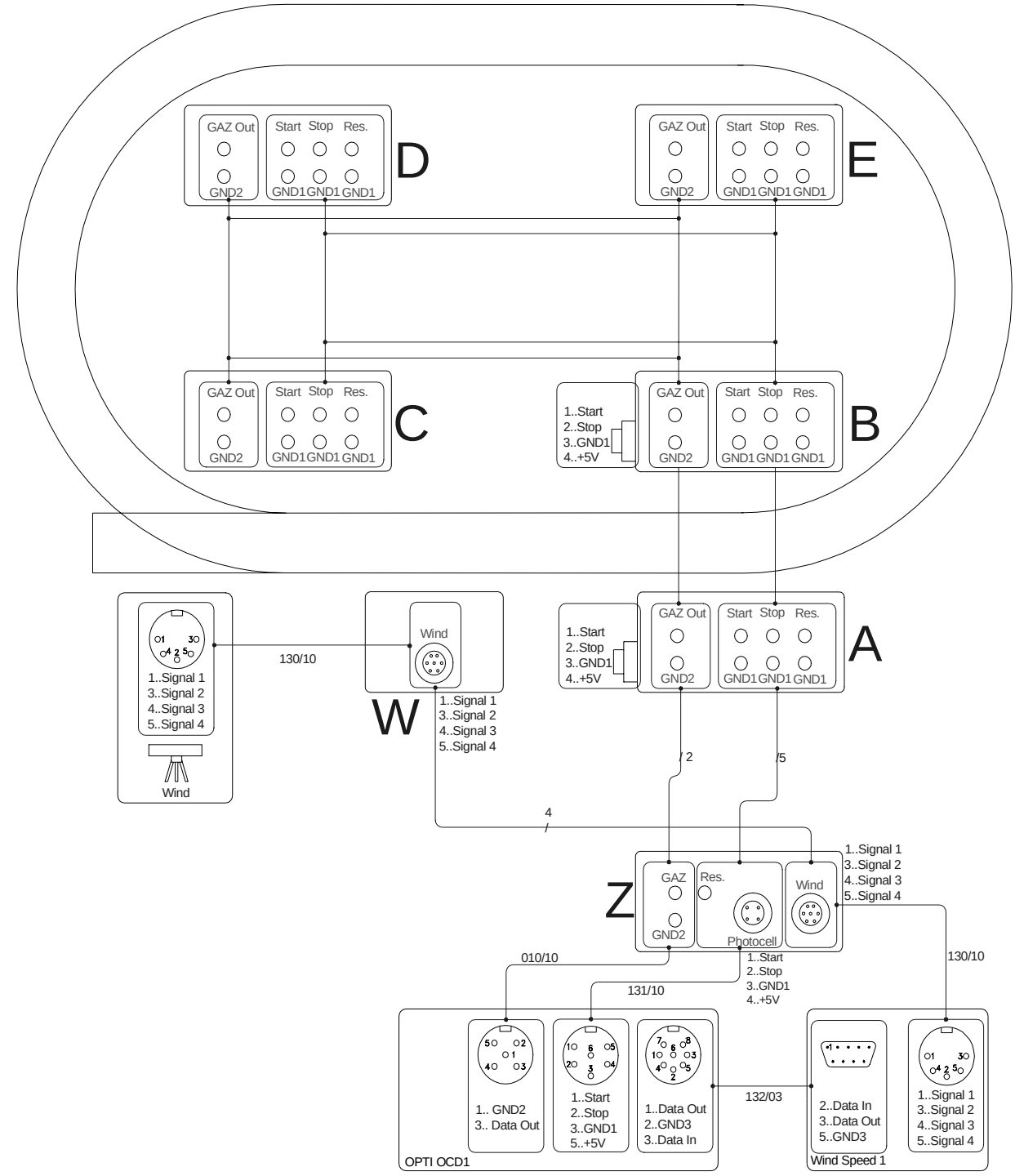




1 ALGE connections (banana sockets)
2 Mains 220 VAC

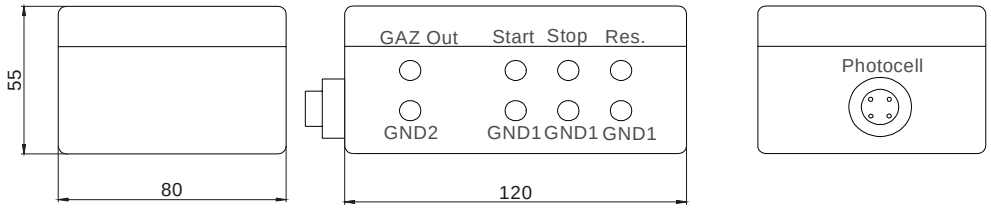
We recomand a mainhole like the one above for your timing cable installation in your athletic stadium.

Cable Box Position in the Stadium



Cable Box LSV

Cable Box LSV AB for manhole A and B



Banana Socket for Timing Impulse:

Start	green
Stop	red
Reserve	white
Ground 1	black (3 x)

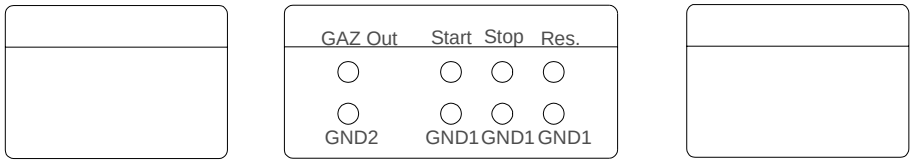
Banana Socket for Display Board:

Data	yellow
Ground 2	black

Amphenol Socket (4 pin) for Photocell:

1	Start
2	Stop
3	Ground 1
4	+5V DC stabilized

Cable Box LSV CDE for Manhole C, D, and E:



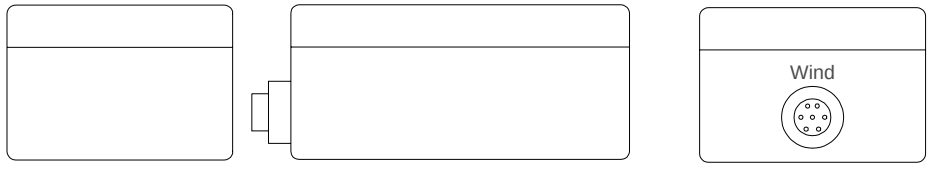
Banana Socket for Timing Impulse:

Start	green
Stop	red
Reserve	white
Ground 1	black (3 x)

Banana Socket for Display Board:

Data	yellow
Ground 2	black

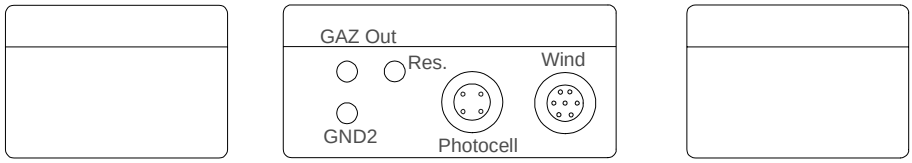
Cable Box LSV W for Anemometer Windspeed WS1 (manhole W):



Amphenol Socket (7 pol) for Anemometer (only ALGE Windspeed WS1):

1	Signal 1
2	empty
3	Signal 2
4	empty
5	Signal 3
6	empty
7	Signal 4

Cable Box LSV Z for Finish House:



Amphenol Socket (4 pin) for Photocell:

1	Start
2	Stop
3	Ground 1
4	+5V DC stabilized

Amphenol Socket (7 pol) for Anemometer (only ALGE Windspeed WS1):

1	Signal 1
2	empty
3	Signal 2
4	empty
5	Signal 3
6	empty
7	Signal 4

Banana Socket for Display Board:

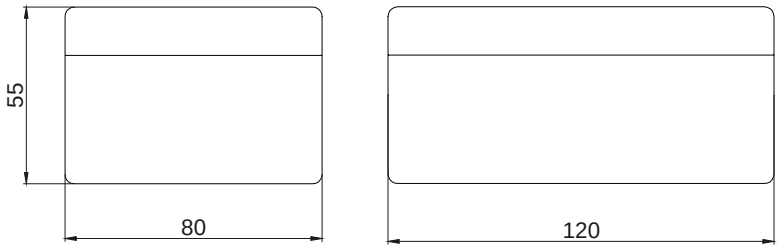
Data	yellow
Ground 2	black

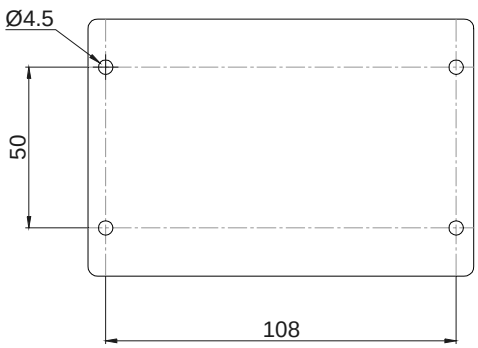
Banana Socket for Reserve:

Reserve	white

Mounting Holes of the Cable Box:

The mounting holes are identical for all Cable Boxes (A, B, C, D, E, W and Z). Please take care that the Cable Boxes are well closed, so no water can get into the box. Be also careful where the cable enters the box. Here it must be also water proof closed. If you get water in the Cable Box it might cause troubles.





Cabling for Timing in a Track and Field Stadium