

**The most used gate of the World Cup ski teams**

**SETTELE STARTSYSTEMS**  
**START GATE SX WORLD CUP**

**Parallel event**  
**2 Gates Team event**  
**Random start**

**MANUAL**

**15.01.2026**

# SETTELE STARTSYSTEMS START GATE PARALLEL EVENT

## SETTELE STARTSYSTEMS

SETTELE STARTSYSTEMS offers different systems for the latest demands in Skicross and Boardercross. Through our own experience in Professional winter-sports we are always striving to develop the materials, and the mechanical system further, to target optimal performance for the respective area of application.

Since 2005 our company is an OFFICIAL PARTNER OF THE FIS (International Ski Federation). We work closely together with the FIS in the development of new systems, to do justice to the high requirements of the professional racing sport. The start system is used successfully on FIS point races, European Cups, World Cups, World Championships, and national events. After Vancouver in 2010, SETTELE STARTSYSTEMS is also the supplier for Sochi in 2014.

SETTELE STARTSYSTEM stands for high-quality products for professional winter-sports. We develop our existing systems and products constantly, in order to match the growing requirements. Thus, we are the first company to offer our START GATE SX WORLD CUP random generator.

**Please check out our website at [www.settele-startsystems.com](http://www.settele-startsystems.com) for more skicross and boardercross products.**

## START GATE Parallel Event

The SETTELE STARTSYSTEMS START GATE Parallel Event is the best choice for professional ski and boarder parallel events.

### Modular concept

The startgate can be extended at any time depending on the requirement.

### Made in Germany

High quality warranted by daily experience in construction and certificated factory. The SETTELE start gate is patent-protected.

### Recommended by FIS

SETTELE STARTSYSTEMS was the first recommended start gate by FIS. The start gate was developed with FIS and will be adapt to the newest challenges.

### Advertising space

The start gate offers advertising space at the gates and in intermediate areas of the starting positions.

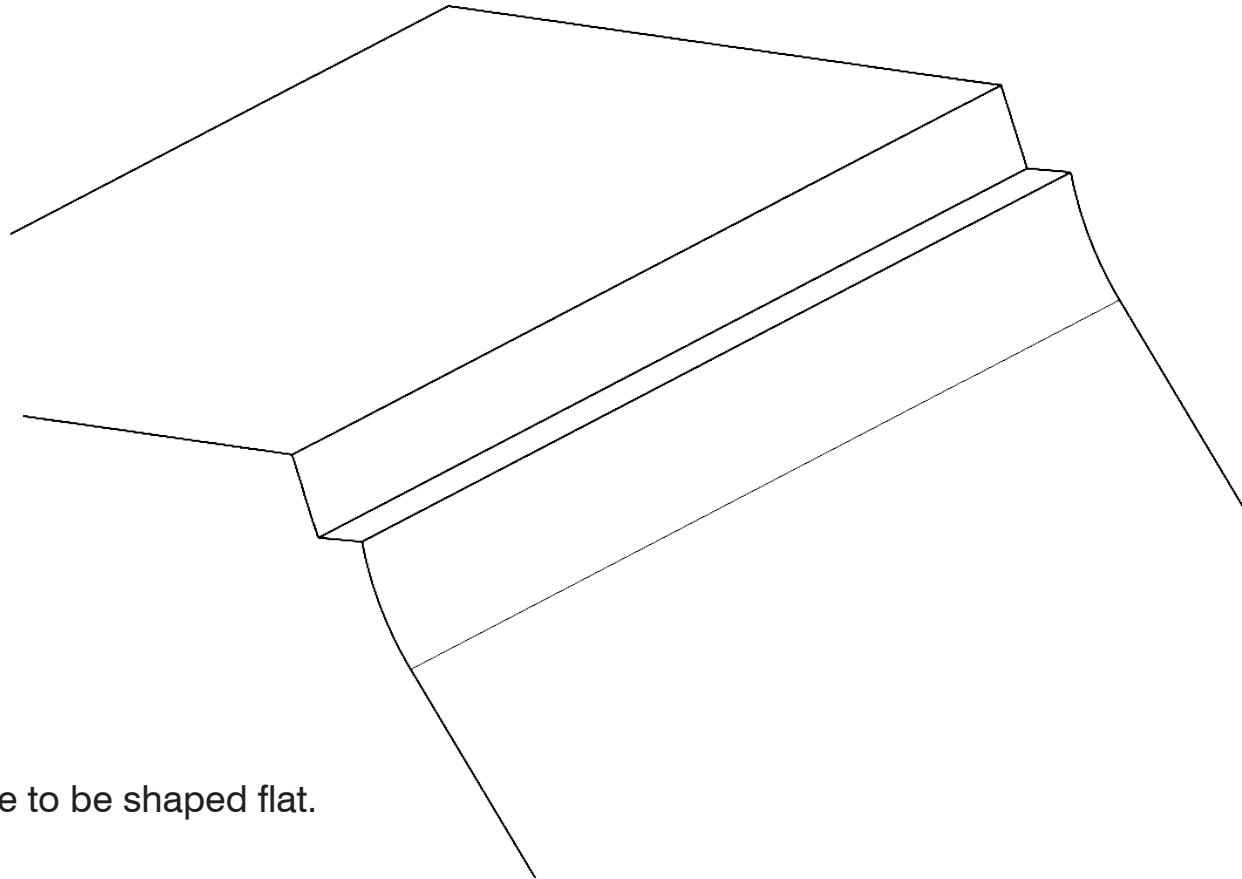
### Exact release - RANDOM SYSTEM

The exact release of both gates occurs through our multi-faceted RANDOM SYSTEM. The RANDOM SYSTEM offers several advantages: weather-resistant, robust mechanism, no time-lag due to fluctuations in temperature, at all times possible with Battery-power, low transport weight, various application possibilities.

### NEW - TOUCHSCREEN CONTROLLER

Our new touchscreen controller allows the direct input of starting lists and starting times. A delayed triggering of each single gate can be reached easily and comfortably. Our controller is the complete solution for all disciplines, especially for parallel and team events.

## SNOWCAT INSTRUCTION



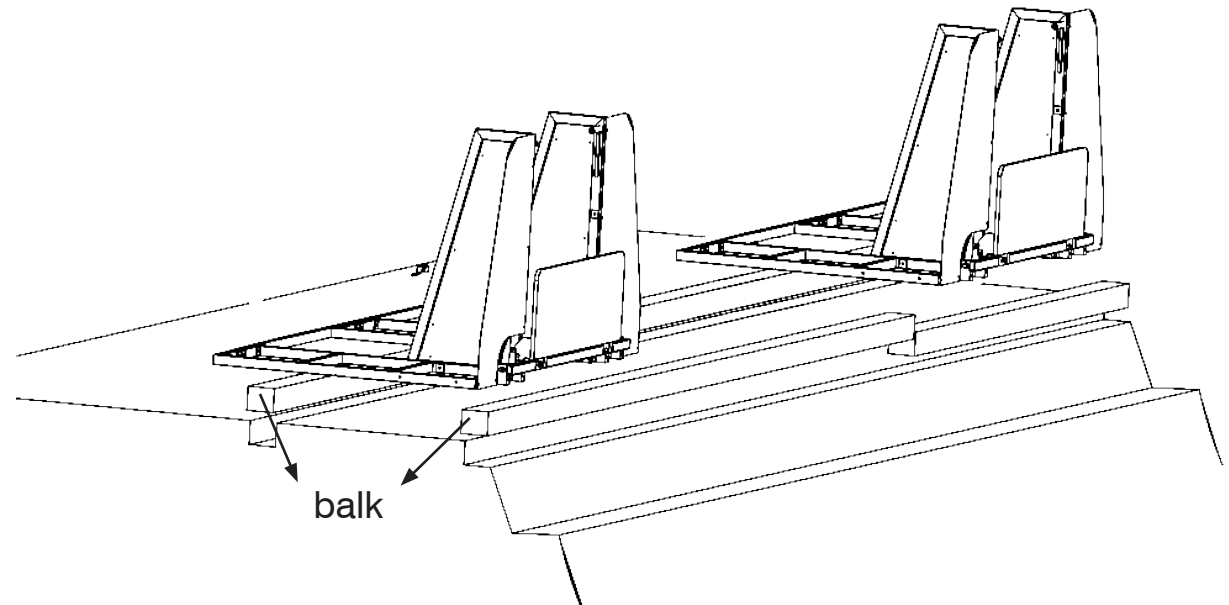
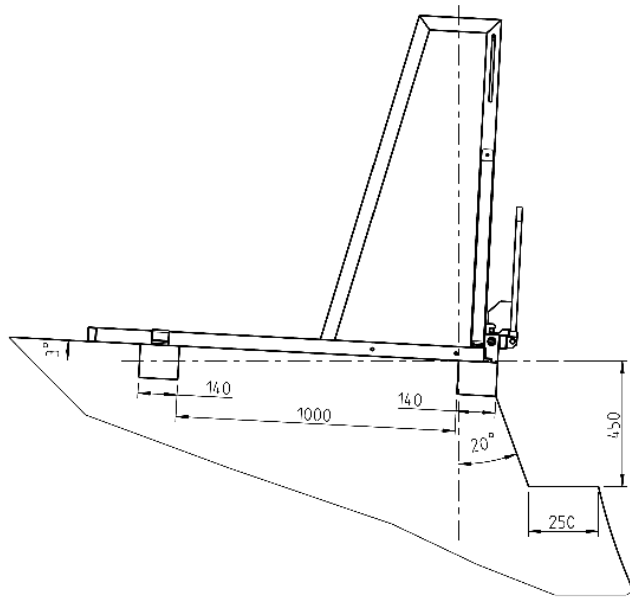
The starting point have to be shaped flat.


**Width:**

about 11m.

(7m between the gates + 2m each gate)

## SLOPE SETTINGS



 The Start Gate have to be 3° downgraded so place the balk in the background a little bit higher.  
The base slope under the gates have to be 20° to avoid gate damage, while opening the gates.

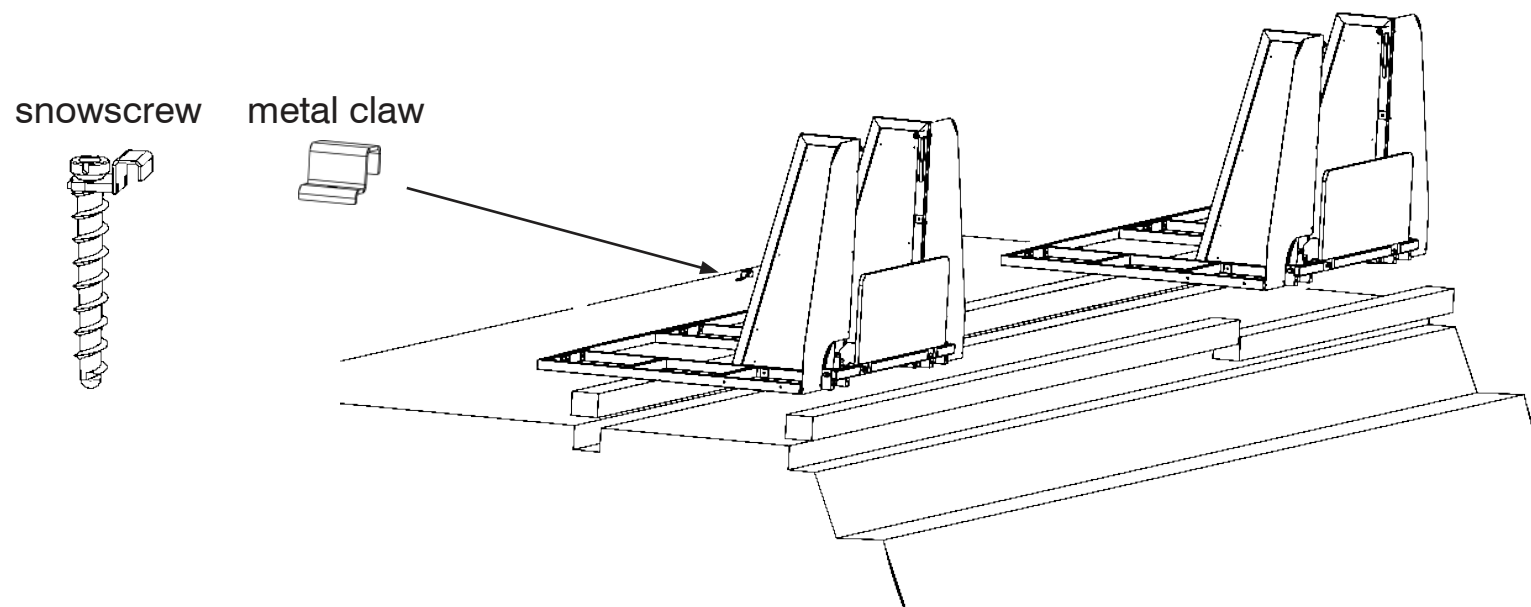
For better stability place two lines of wooden balks under the Start Gate. The length should be on each side 50cm longer than the Start Gate length.

### Full balks length:

4x starter gates about 50cm + 7240cm + 50cm

6x starter gates about 50cm + 10560cm + 50cm

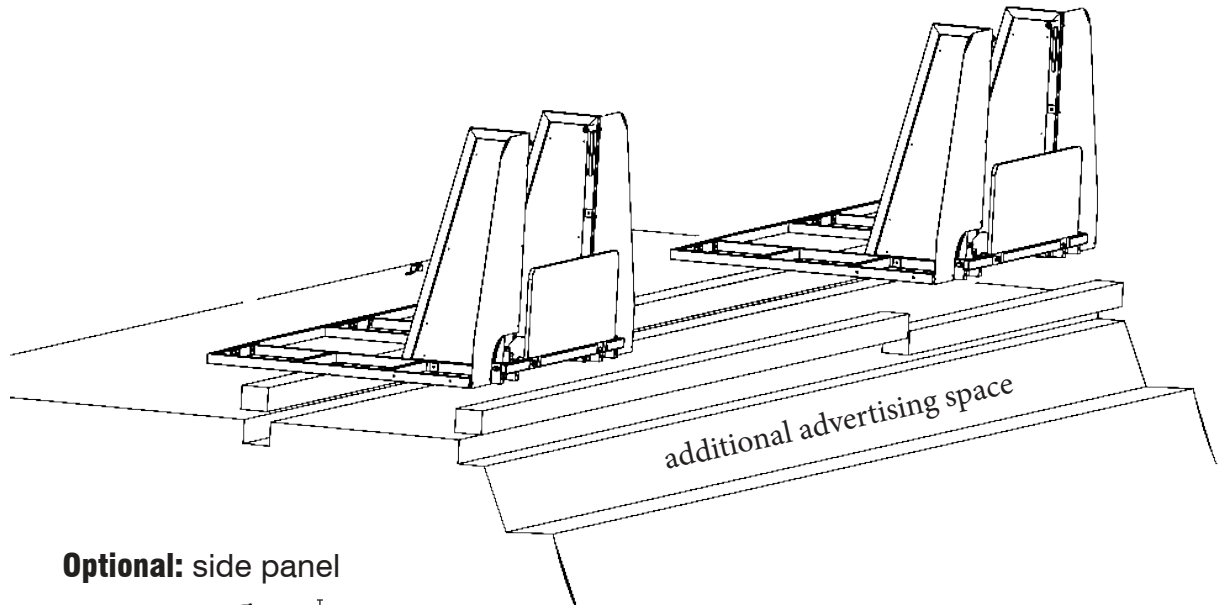
## Start Gate fixation



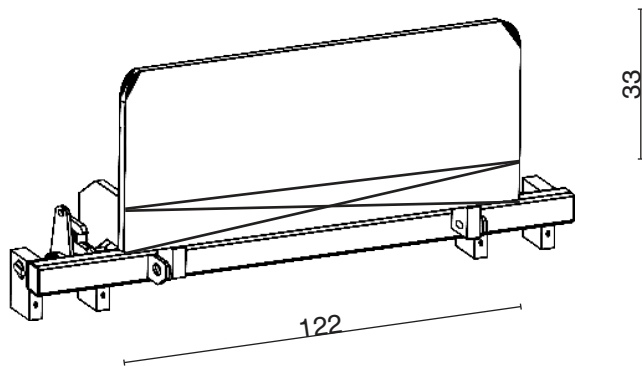
Fix the Start Gate to the wood with metal claws and screws or use snowscrews.  
At the end cover the starting lanes with snow.

## Advertising Space

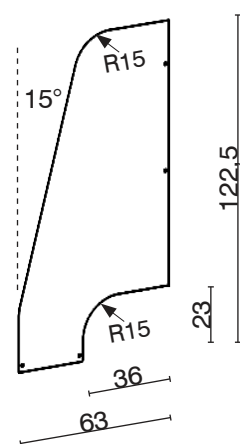
Unit: cm



gate



Optional: side panel



# SETTELE STARTSYSTEMS START GATE PARALLEL EVENT

# COMPONENTS

## Delivered (2 modul standard edition):

### Screws:

- 4x hexagon screw M 10x20
- 4x hexagon screw M 10x50
- 15x hexagon screw M 10x70
- 9x hexagon screw M 10x90
- 6x M 6x25
- 6x M 6 washer
- 4x star knob screw
- 36x M 10 washer

### Start Gate Parts:

- 4x base frame (001)
- 2x connecting profile (002)
- 4x upright frame (left and right) (003)
- 4x handle (004)
- 4x long bearing (005)
- 2x gate (006) (incl. 1 with short release lever,  
**(Random System):** 1 with long release lever)
- 4x protective cover (009)

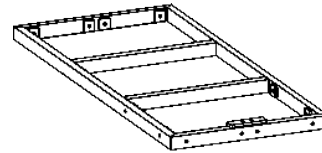
### Optional:

- 4x side panel (012)

### You need:

- ratch, hexagon socket screw key

base frame (001)



connecting profile (002)



upright frame (003)



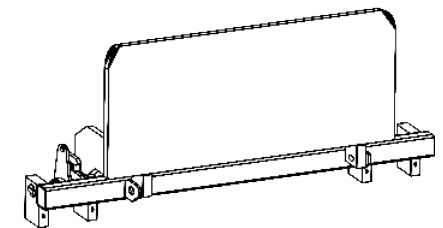
handle (004)



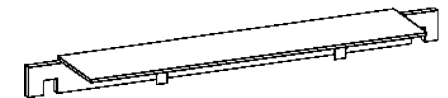
long bearing (005)



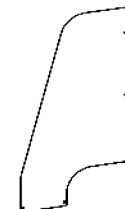
gate (006)



protective cover (009)



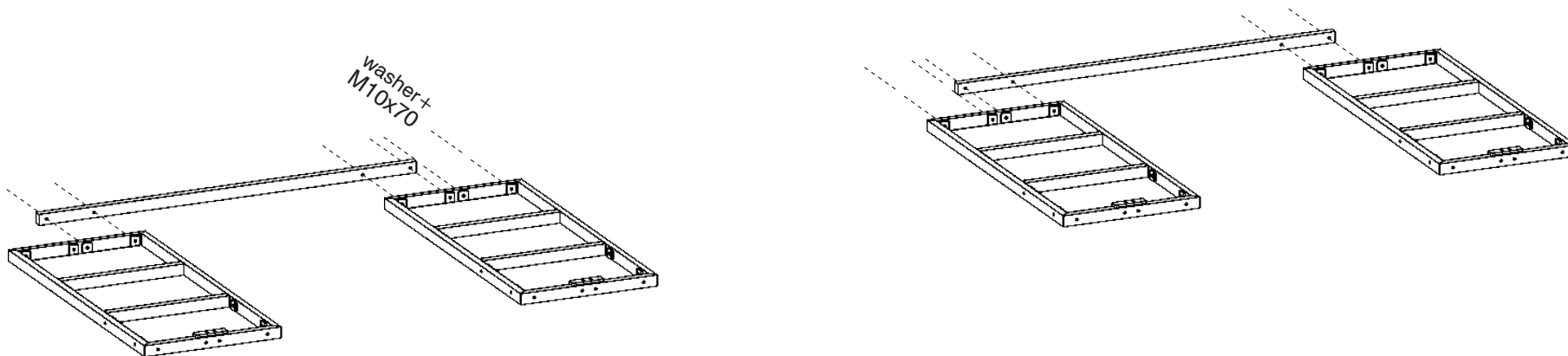
Optional: side panel (012)





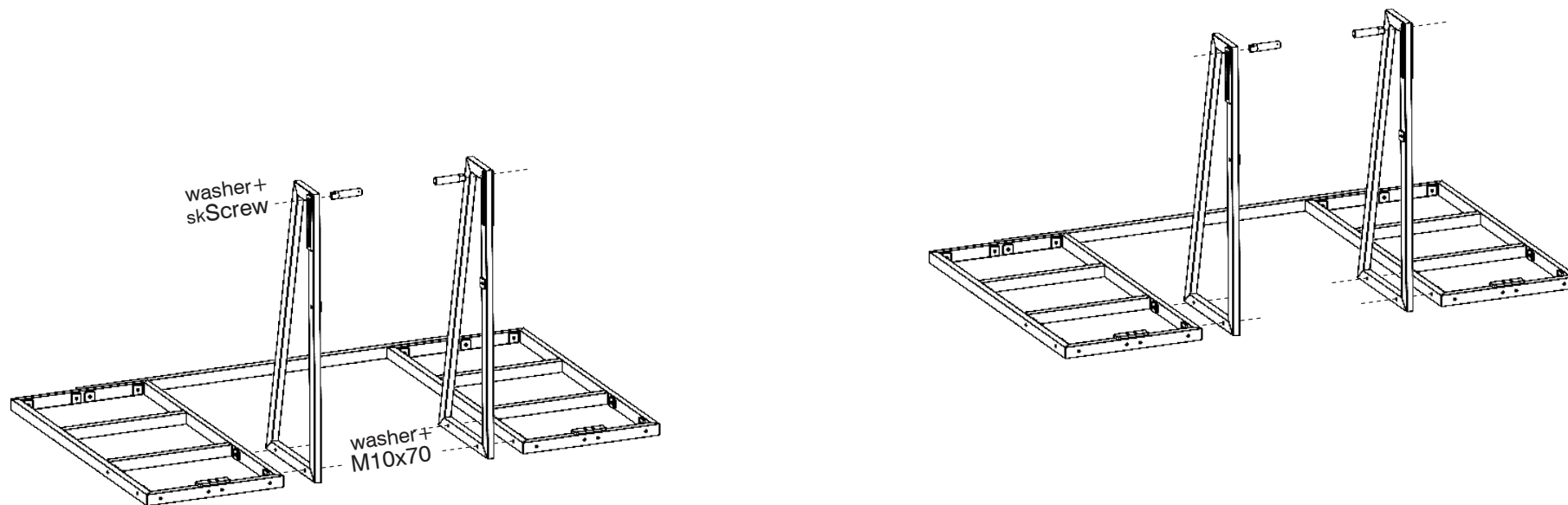
Tighten all screws at the very end for an easier and correct assembly.

1. Put the base frames (001) parallel on the ground.



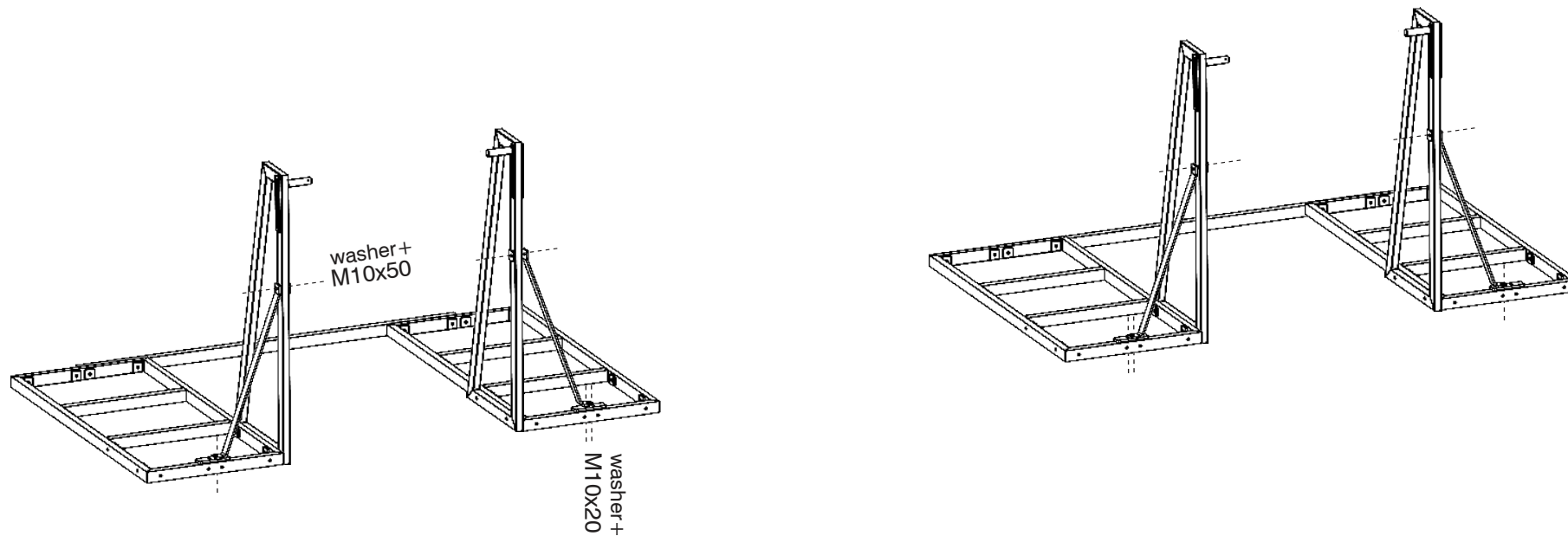
2. Bolt the connecting profile (002) to the middle of the back of the base frame using a washer and a hexagon screw M 10x70.

3. Connect the upright frame (003) with the base frame (001) using a washer and a hexagon screw M 10x70.

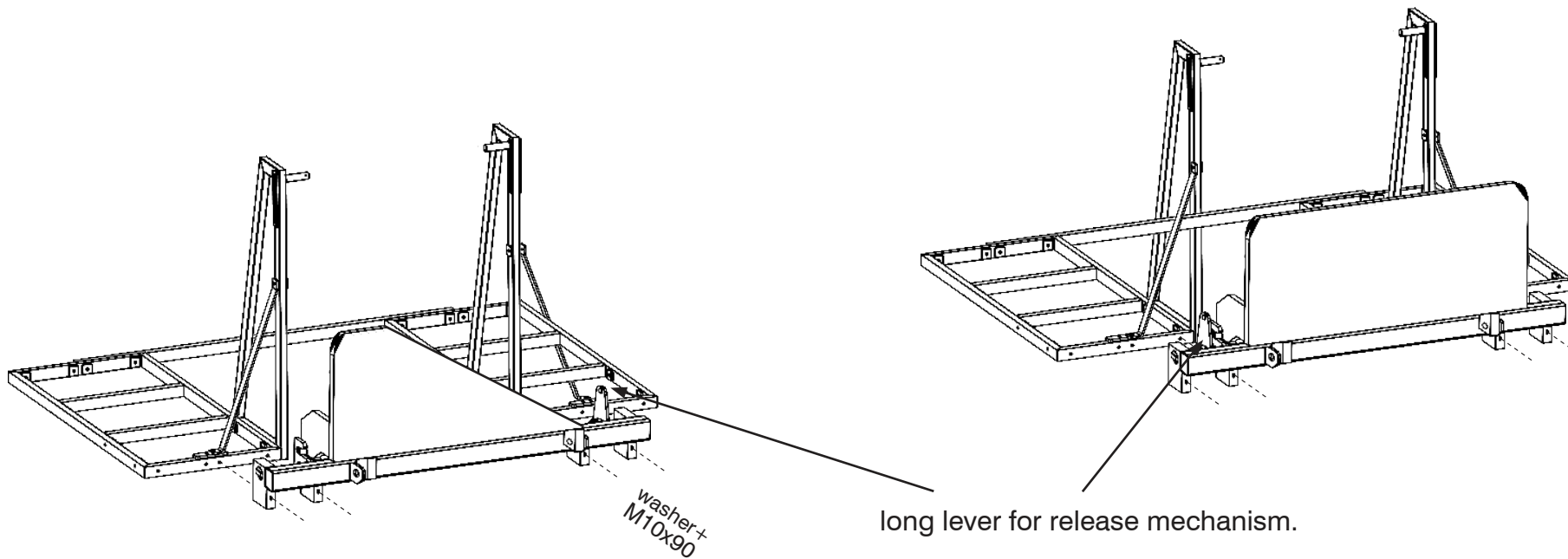


4. Connect the handles (004) with the upright frame (003) using a washer and a star knob screw.

5. Connect the long bearing (005) with the base frame (001) (washer + M 10x20) and the upright frame (003) (washer + M 10x50).

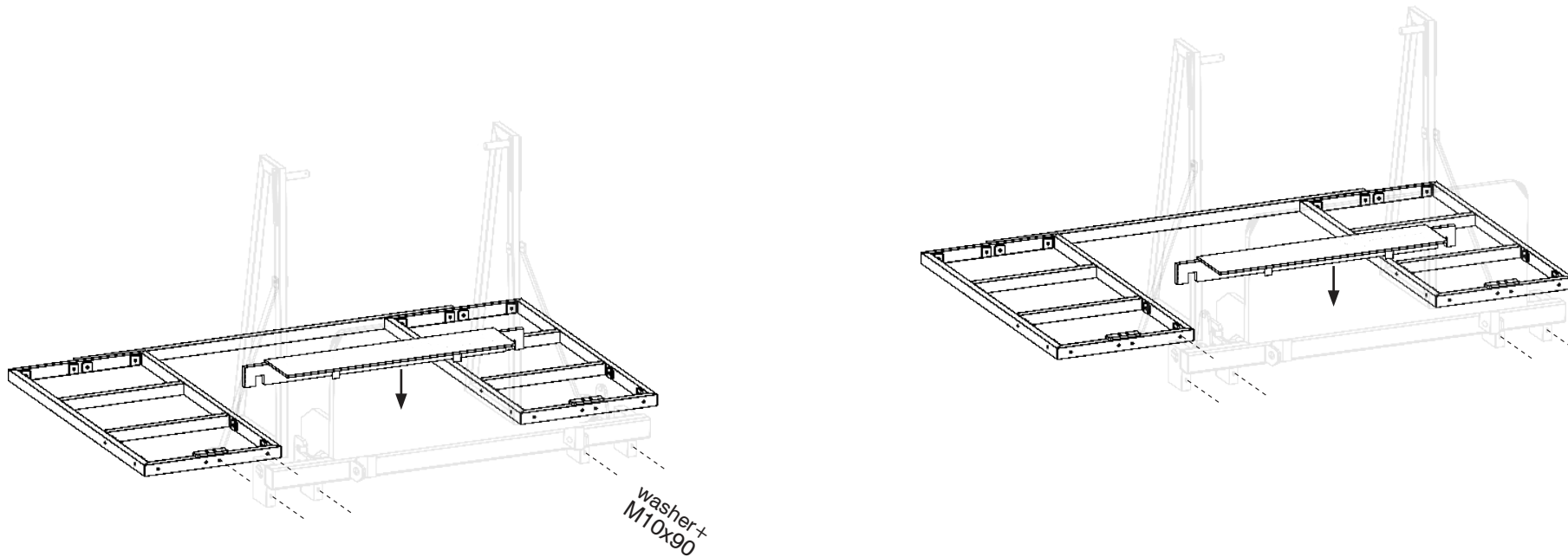


6. Fix the gates (006) on the base frame with M 10x90. The gates have to be closed.

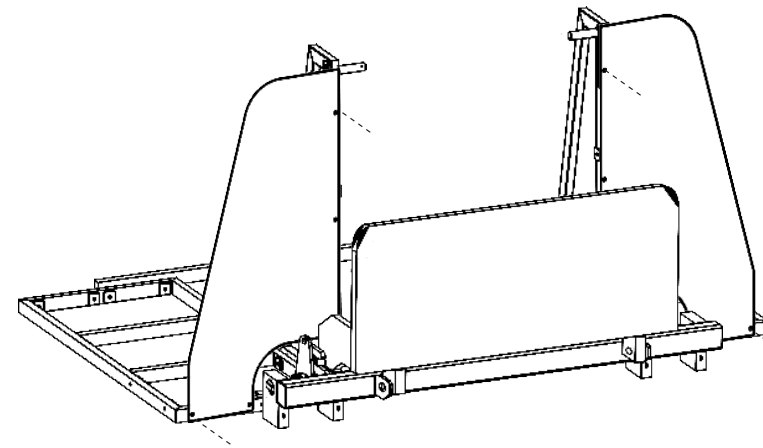
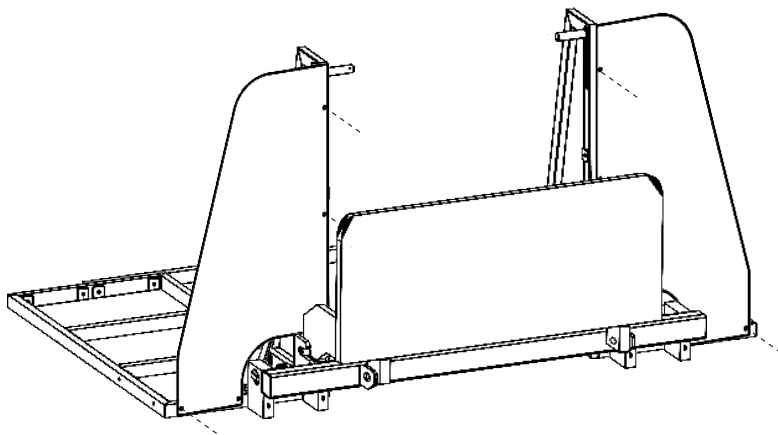


If you use your 4 Gate World Cup System for a 2 Gate Parallel Event, the long levers are on the same side. It does not matter (see electronic setup)

7. Put the protective cover(009) over the gate and the base frame.



**Optional:** Connect the side panels (012) with the upright frame (003) using washers and M 6 x 25 screws. To connect the side panels (012) and the base frame (001) use washers and M10 x 20 screws.



# **RANDOM SYSTEM MANUAL**

**-random start-**

15.01.2026

## **SETTELE START SYSTEMS**

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# SETTELE SPORTSYSTEMS RANDOM SYSTEM

## SETTELE SPORTSYSTEMS

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## RANDOM SYSTEM

The SETTELE RANDOM SYSTEM is an expansion for the START GATE SX World Cup for automatic starting.

Our reliable and robust RANDOM SYSTEM distinguishes itself by its compatibility with all SETTELE SPORTSYSTEMS.

**The RANDOM SYSTEM can be used with all start systems and by an easy press of a button, releases the start gate randomly, at time delays between 0.5 and 5 seconds.**

By the mechanical construction method which works without magnets, our RANDOM SYSTEM is especially not affected on weather conditions, and a correct start is therefore guaranteed any time. The system co-operates with the Mains powers supply (230 V in Europe or 110 V of North America) or with Battery power, available from us called ACCU POWERPACKS.

Signal light arrangement:

A signal light arrangement can be connected any time to our SYSTEM RANDOM to provide an optical start signal.

Optional voice output:

A voice output delivers optional steady acoustic start signals. A Sound-system is necessary for this.

The POWERPACK batteries were developed by us for the RANDOM SYSTEM. It weighs approximately 8kg. A suitable battery charger with overcharge protection has been integrated.

## IMPORTANT SAFETY INSTRUCTIONS:



The exclamation point is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



The lightning flash is intended to alert the user to the presence of uninsulated „dangerous voltage“ within the product's enclosure that may be sufficient magnitude to constitute a risk of electric shock to persons.

## BEFORE EACH USE

1. inspect the condition of the units. Check for loose screws, misalignment or binding of moving parts, the condition of the electric wire and its plug, and any other condition that may affect its safe operation.
2. check if all electric contacts are dry, clean and not twisted.
3. check all cables for damage.
4. check all units for damage.

## SAFETY INSTRUCTIONS

1. read these instructions.
2. keep these instructions.
3. heed all warnings.
4. follow all instructions.
5. prevent strong vibrations .
6. the temperature range must be between maximum +30 degrees Celsius and minimum - 30 degrees Celsius.
7. to reduce the risk of electric shock, do not remove any cover.
8. do not install near any heat sources such as stoves.

**Refer assembling and servicing to qualified service personnel.**

## IMPORTANT SAFETY INSTRUCTIONS:

9. do not install near any heat sources such as stoves.
10. protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the units.
- 11. plugging the power adapter have always to be the last step of installation to avoid system damage and electric shock!**
12. follow the right connecting order.
13. install the units on dry ground.
14. the unit are protected against splash water, but avoid any wetness.
15. all moving parts have to be freestanding.
16. Do not get too close to moving parts.

## AFTER EACH USE

- 1. first disconnect the power supply (power source and/or ACCU powerpack) to avoid system damage and electric shock!**
2. follow the connecting order in the opposite way.
3. check if all electric contacts are dry, clean and not twisted.
4. check all cables for damage.
5. check all units for damage.
6. all units have to be dry and clean.
7. put the random system in the provided box and store the system at a dry place.

Please make sure that the connection plugs are not wet or covered with snow.

Protect all electric and mechanical parts from wetness and ice.

On cold and wet days, it is better to put the magnetic release and the control box in the warm overnight so that they do not freeze.

If you have a short circuit, check all the plugs and reinsert the fuse.

## Electronic components

**2x Base carrier**



**2x Magnetic release**



**Power connection**  
cable number 6



**Control unit**



**2x Signal light/  
Acoustic horn**

cable number 2A  
cable number 2B



**Start buzzer**

cable number 1



**2x Magnetic release connection**

cable number 3/5



## Optional electronic components

### ACCUMUALTOR POWERPACK

#### Accu connection

cable number 7->6



#### Power connection

cable number 6



Power  
6

Power output to control unit  
7

110V voltage transformer

## Control unit

## Magnetic release

3A  
3B

## Power

6

### Fuse

Remove cap to reach fuse

### Signal light Acoustic horn

2A  
2B

### Start buzzer

1



### Voltage display

180-230V

### Setup touchscreen

Setup for different race modi

Buttons F1-F4

### Output time measurement

Provides the starting signal to your time measurement.  
2 Gates: Red A and Blue B

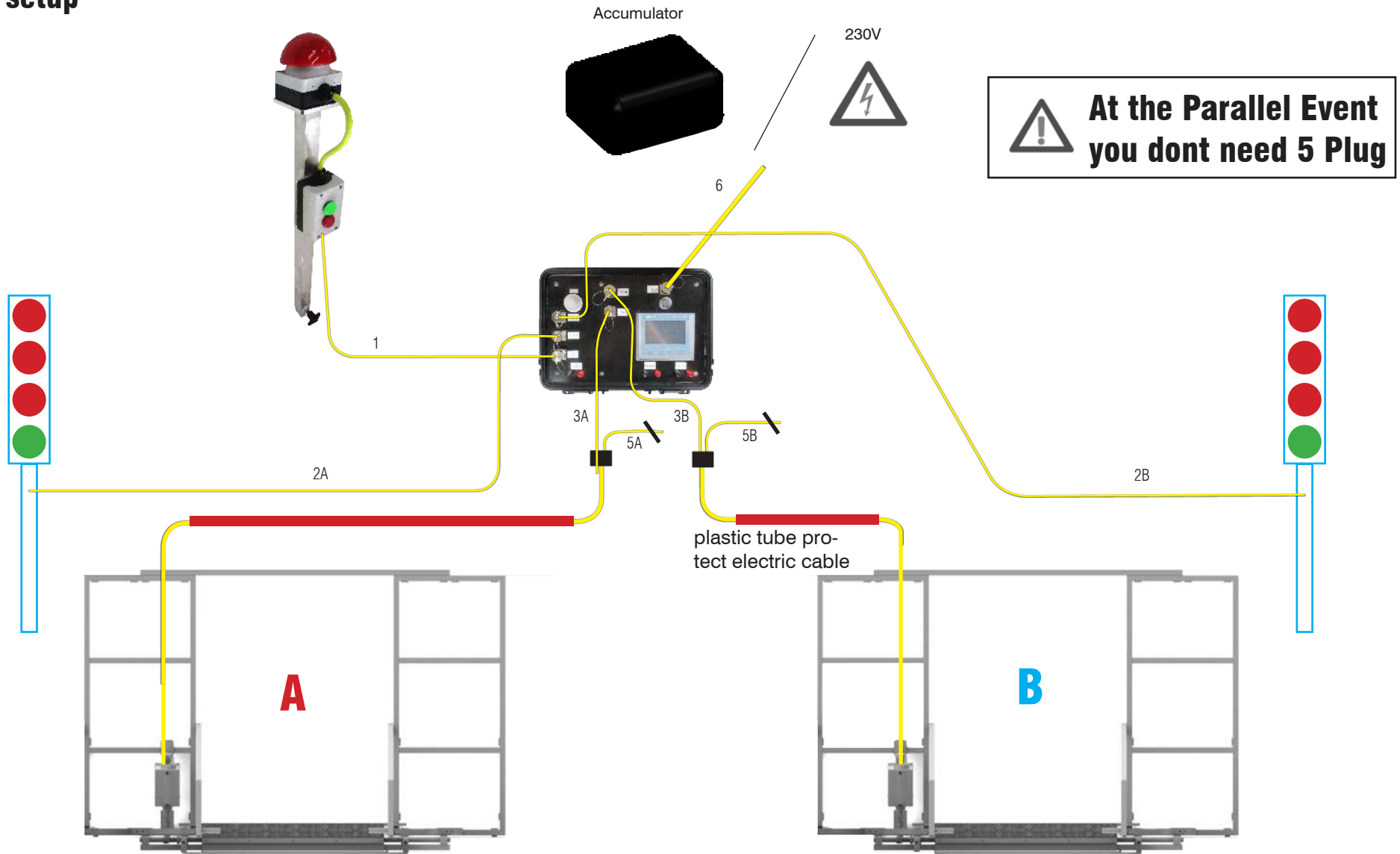
### Input start impulse (Teamevent)

Trigger for the second (and following) start impulse from the time measurement system at the team race format. This opens the gate for the next runner when the first runner crosses the finish line.

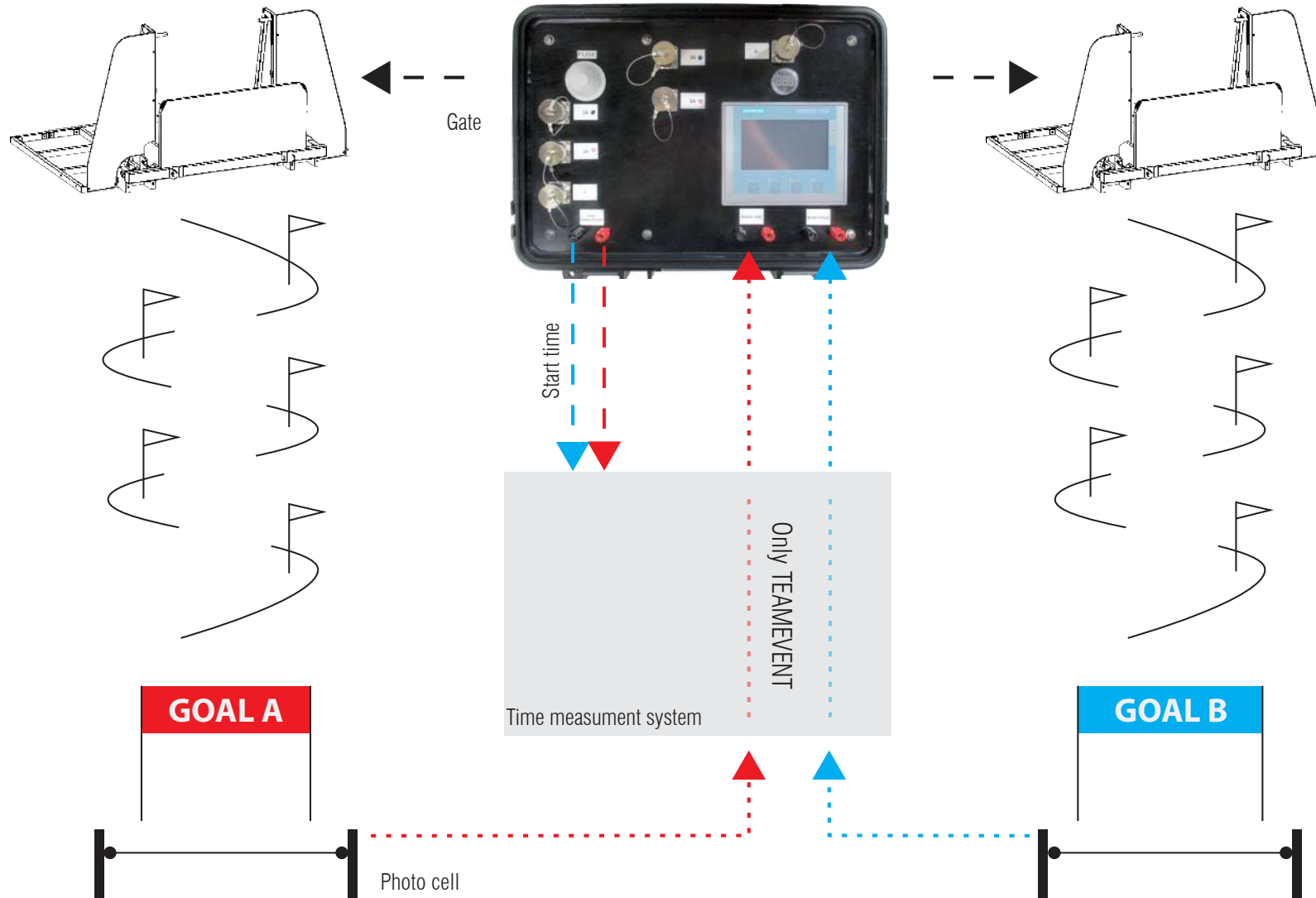
**Please note: the electronic parts cable number should be the same as the control socket number**

**Example: Plug the Start buzzer connection (cable number 1) to the Start buzzer socket (number 1) on control unit**

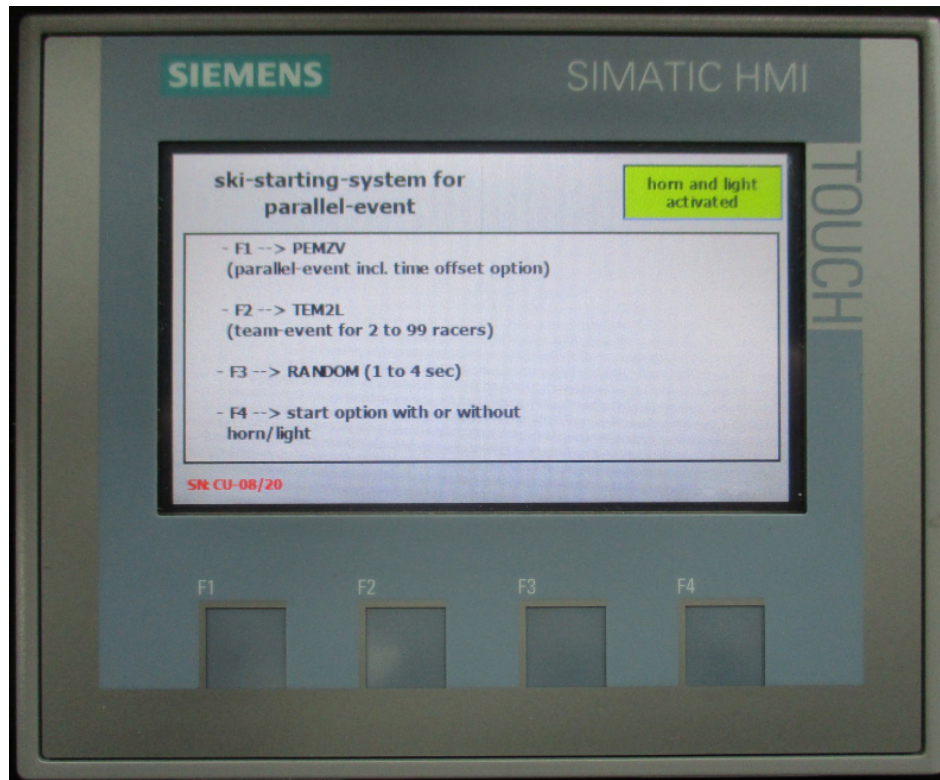
**Electronic setup  
Parallel**



## Control unit and time measurement



## Setup touchscreen



On plug the power the system will be startet. Wait about 15 seconds for the main screen to appear.

### Main screen

Select one of three different race modi:

#### 1. Parallelevent

Button F1 -> PEMZV (parallel-event with variable time offset)

#### 2. Teamevent

Button F2 -> TEM2L (team-event for 2 to 99 team racer)

#### 3. Random

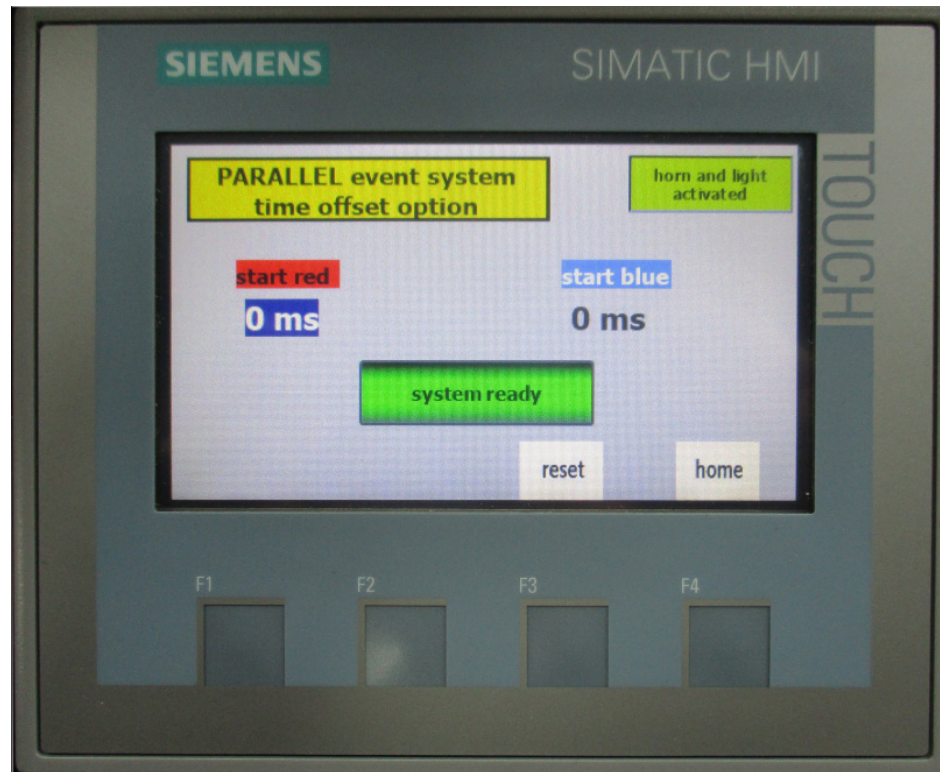
Button F3 -> RANDOM (1 to 4 seconds delay)

#### Optional

Button F4 -> Start option with (without) horn/lights .

This option provides a 6 second countdown before opening the gates at the parallel- or teamevent. Without this option the gates will open immediately after pressing the start buzzer.

## Setup touchscreen



### 1. Parallelevent - Main screen

The release for each gate can be set individually.

On touching the delay time button the input field will be opened for input the time offset (start red or start blue)

Button F3 -> reset (race will be aborted, time offset will be reseted)

Button F4 -> home - back to main screen

## Setup touchscreen



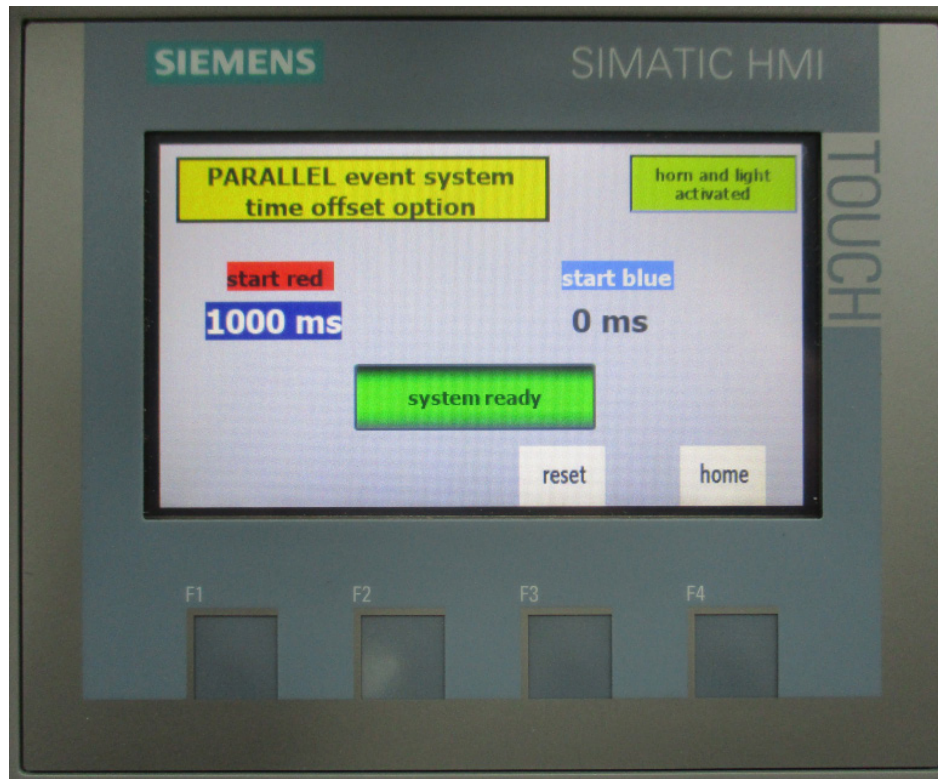
### 1. Parallelevent - Input time difference screen

You are able to edit a delay time up to 99999ms (nearly 100 seconds).

On touching the numbers the delay amount will be fed in.

Please use the enter symbol to adopt the delay time.

## Setup touchscreen



### 1. Parallelevent - Main screen

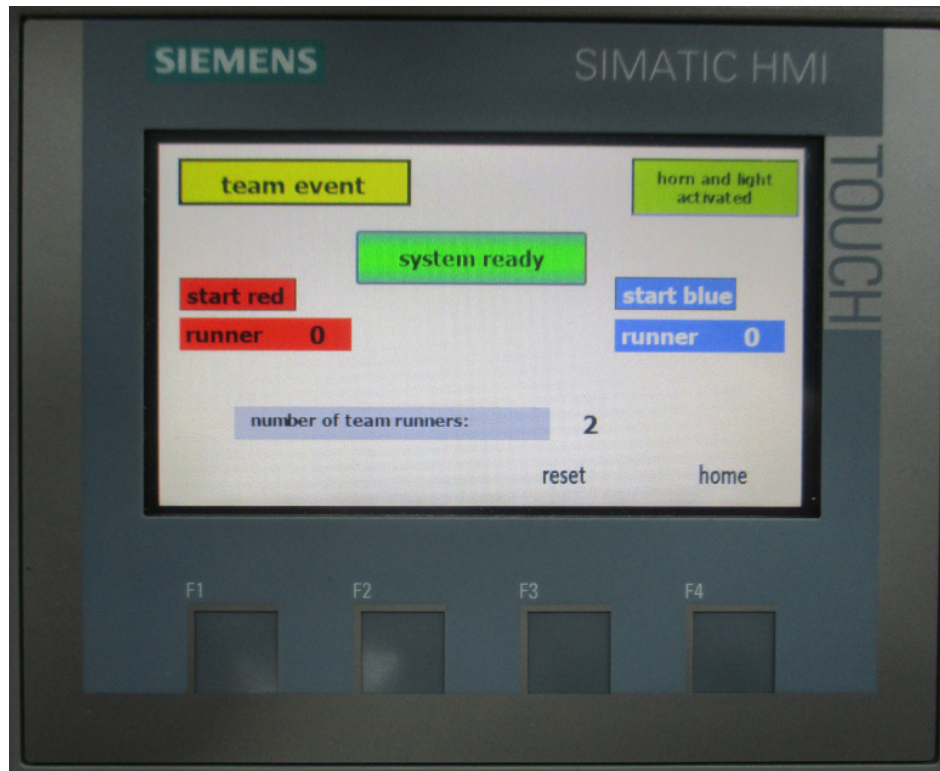
After pressing the enter symbol at the input time difference screen you will be send back to the parallelevent main screen with the adopted delay time.

In this example, pressing the start buzzer opens the blue gate after a countdown of 6 seconds (light and horn – is activated). The red gate opens with countdown on delay of 1 second.

To deactivate the countdown, press the F4 „Option“ key on the main screen of the control unit.

*To communicate the starting signal for your time measurement use the „output time measurement“ contact at the control unit.*

## Setup touchscreen



## 2. Teamevent - Main screen

On touching the number field of „number of team runners“ the input field will be opened for choose the number of team runners. You can choose from 2 to 99 team runners. Confirm pressing enter.

When the first team racer will reach the finish line the respective starting signal will be initiated and the gate will be opened (assigned the red and the blue team).

The same procedure applies for the eventually following racers.

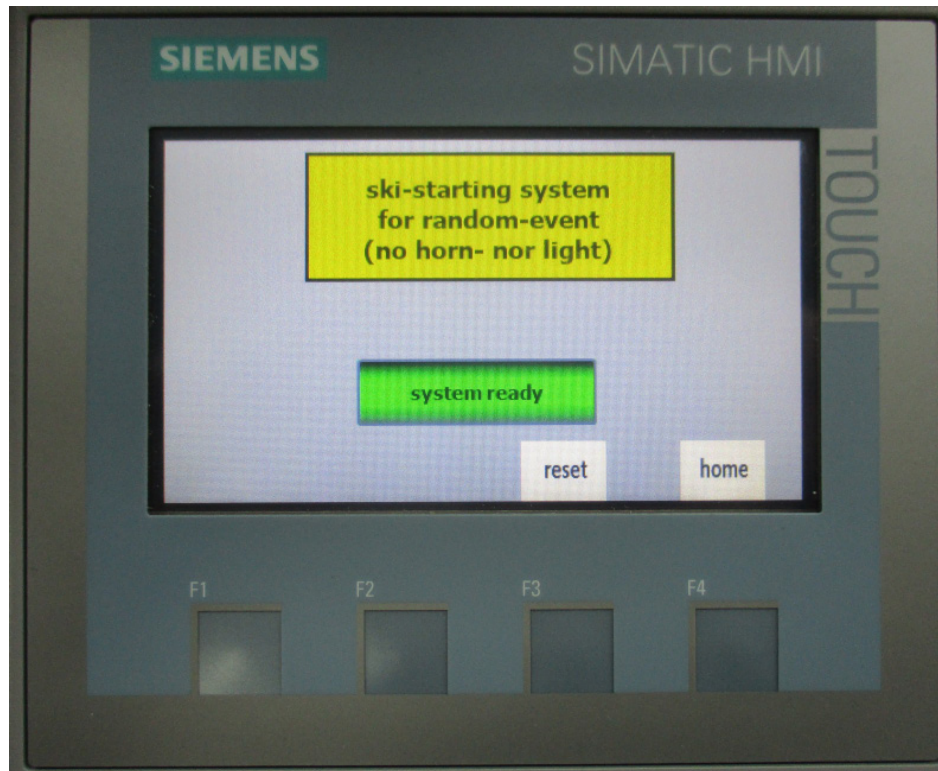
*To communicate the starting signal for your time measurement use the „output time measurement“ contact at the control unit.*

*To communicate the finish line signal (starting signal for the next runner) form your time measurement use the „Input start impulse“ contacts at the control unit. (see page -3-)*

Button F3 -> reset (race will be aborted, time offset will be reseted)

Button F4 -> home - back to main screen

## Setup touchscreen



### 3. Random - Main screen

This race-event can be used for a parallel start on a random delay of 1 to 4 seconds.

Button F3 -> reset (race will be aborted, time offset will be reseted)

Button F4 -> home - back to main screen

Thank you very much and have fun with your new

**SETTELE SPORTSYSTEMS**  
**START GATE SX WORLD CUP**



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