



Track Worker Training 2023



Mechanical Engineering



Polytechnic Institute

Purpose

The purpose of this training is to properly inform track workers to enable them to maintain the safest possible environment during evGrandPrix racing events and, thereby, protect the drivers, themselves, and all others in attendance.

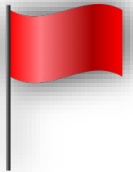
Safety is always top priority.

Overview

- Each team is responsible for assigning 1 track worker and each track worker is responsible for completing this training.
- A track worker will be placed at various locations around the infield of the track during qualifications and the race.
- Track workers are responsible for maintaining safe conditions by understanding the race rules and driver requirements.

Flags

- Each track worker will be provided with a YELLOW flag.
- Summary of the flags and driver's response to each:
 - **RED** – Driver immediately raises their hand and slows to a stop (in a controlled manner) off the racing line. Kart is switched OFF. Driver stays in kart until told to exit or proceed by race official. The RED flag is administered by the Race Director in the event of all track emergency.
 - **YELLOW** - Driver immediately raises their hand and slows to walking pace. Karts are not allowed to advance their position under a yellow flag. The YELLOW flag is administered by Race Director and Track Workers when track events require karts to proceed with caution to maintain safety.



Flags



- **GREEN** – The Race Director waves the GREEN flag to signal the start of the race or to resume the race to green flag conditions following a yellow or red flag. Under the green flag, drivers race at full speed. It is assumed the race is under green flag conditions unless another flag is shown.

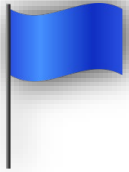


- **BLACK** – Driver is to slowly exit the track at the designated pit entry. The BLACK flag is administered by the Race Director when there is an issue that needs to be addressed with a race official and failure to adhere will result in a disqualification from the event.



- **ROLLED BLACK** – The driver has done something that the race officials deemed dangerous, hazardous or unsportsmanlike and the driver must correct it. A second offense will result in a BLACK flag.

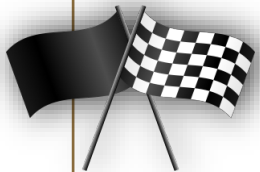
Flags



- **BLUE** – Informs the driver that the lead karts are approaching, and the driver must give them the right of way and the racing line if possible.



- **WHITE** - There is one lap left in the race. The flag will be given to the leader as he/she passes the head flagman.



- **BLACK & CHECKERED** - Signal that the race has come to an end, drivers must slow down and exit the track.

Flags

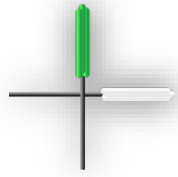


- **CHECKERED** - Signals the end of the race. Drivers must slow down, continue around the track at a controlled pace, and exit the track at pit entry. The winning driver will cycle all the around back to the flagman and be given the **CHECKERED** flag to take on a victory lap.

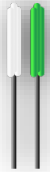


- **GREEN & YELLOW FLAGS** - GREEN and YELLOW flags being shown at the same time is the same as a RED flag. (SEE RED FLAG Details)

Flags



- **ROLLED Crossed Green and White Flags** - The flagman displays rolled crossed green and white flags to signify to the drivers that approximately half of the race is over.



- **ROLLED Green and White flags** – The flagman displays to rolled flags or double sticks held horizontal or vertical to inform the drivers there are two laps left in the race.

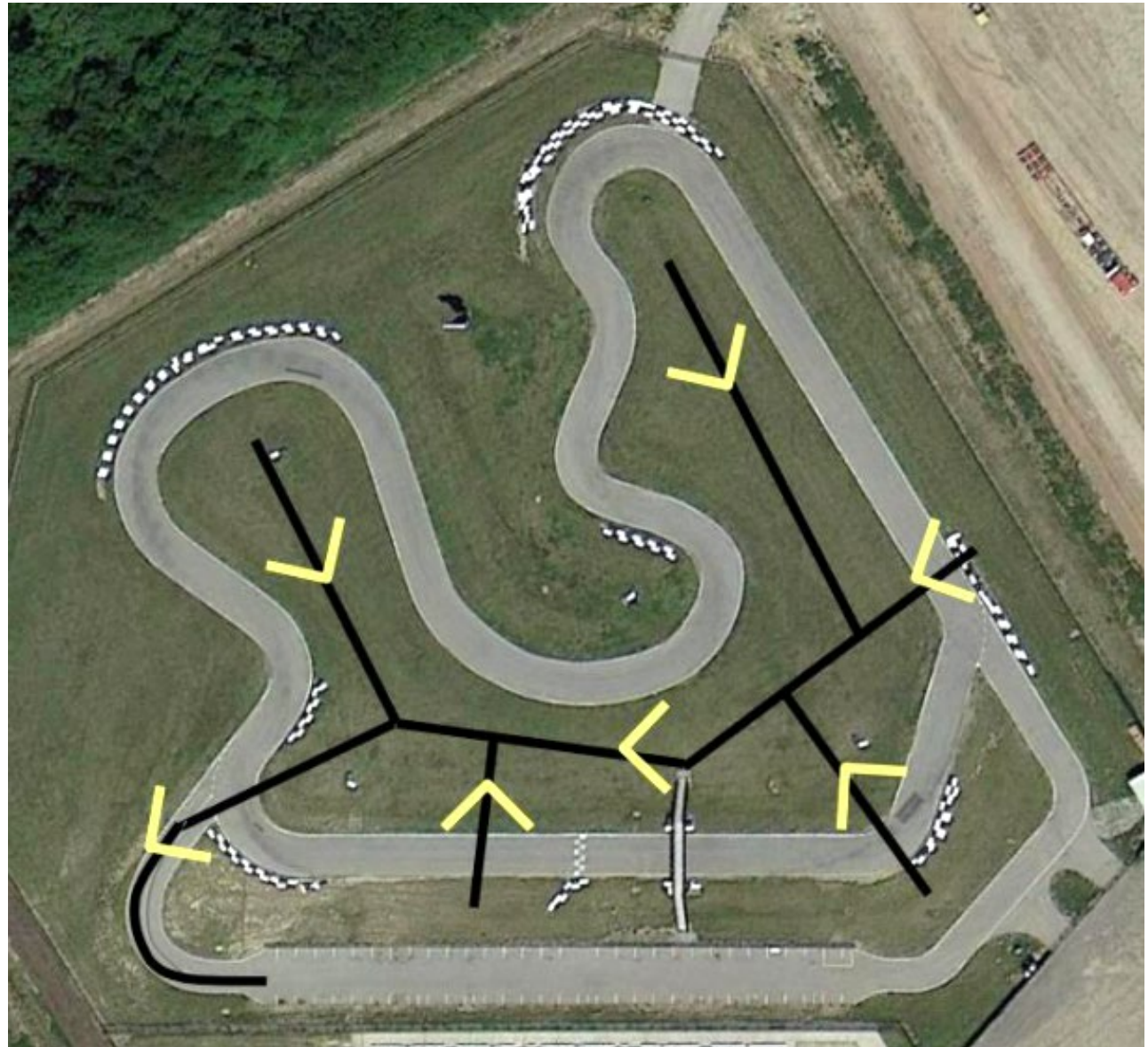
Scenarios

- **Scenario #1: A kart stops during the race.**

- **Situation:** A kart stops on the track for an unknown reason. The driver is to do the best they can to move the kart as far off the racing line as possible, ideally to the infield grass. Once stopped, the driver is to raise both hands in the air to signal to the track workers.
- **Track Worker response:**
 - The nearest track worker immediately begins waving the yellow flag and continues waving the yellow flag until the situation has been resolved and full racing conditions may be resumed safely.
 - When it is safe to do so, a second track worker approaches the stopped kart.
 - If the kart is still operational, when it is safe, push it back onto the track (off the racing line) and signal to the driver to proceed. If the kart is not able to move on its own, follow the steps below.
 - Confirm power is turned off by with ignition switch and by depressing the e-stop.
 - Safely push the kart to the grass at least 20 feet from the track. The infield is preferred, but only if safe to do so. If the kart is already in the grass on the outside of the track, only cross the track at designated locations and when fully safe to do so.
 - Once the kart is in the infield, with approval from a track worker, the driver may exit the vehicle and they may push their kart back to pit lane following the diagram on next slide.
 - If the kart can not be pushed and it is not in a safe position, have the driver exit the kart and request help from 2 additional track workers. 3 trackers plus the driver lift the kart and move it to a safe location.

Returning karts to pit lane

Cross the track at the preferred crossing points.



Scenarios

- **Scenario #2: One or more karts spin out on the track**

- **Situation:** One or more karts are possibly not facing the direction of the racing line. The driver is to raise their hand and wait for track worker instructions.
- **Track Worker response:**
 - The nearest track worker immediately begins waving the yellow flag and continues waving the yellow flag until the situation has been resolved and full racing conditions may be resumed safely.
 - If the kart is operational and can return itself to the racing line, the track worker signals to the driver to proceed when there is sufficient space for them to get up to speed and rejoin the racing line.
 - If the kart is not operational, follow the instructions in scenario #1.

Scenarios

- **Scenario #3: Two or more are involved in an accident.**
 - **Situation:** Karts contact with each other in such a way that causes one or more to be displaced from the racing line. One or more karts are possibly not facing the direction of the racing line. The driver is to raise their hand and wait for track worker instructions.
 - **Track Worker response:**
 - The nearest track worker immediately begins waving the yellow flag and continues waving the yellow flag until the situation has been resolved and full racing conditions may be resumed safely.
 - Check that the driver is not hurt. If the driver is hurt, immediately signal to the Race Director and stay with the driver until help arrives. Keep the driver in their kart. The Race Director will determine the necessary response to best help the driver.
 - Check for significant damage to the kart that would prevent it from operating safely.
 - If the driver is not hurt, the kart does not have limiting damage, and the kart is operational, the track worker signals to the driver to proceed when there is sufficient space for them to get up to speed and rejoin the racing line.
 - If the kart is not operational, follow the instructions in scenario #1.

Other General Items

- Stay alert and always pay attention.
- Phones, smartwatches, etc. are not allowed on the track. Your team will face fines if you use any of these or similar devices while on the track.
- Do not turn your back to oncoming traffic
- Look both ways before crossing the track
- Put straw bales back after accidents
- Clear debris off the track - Show significant parts from karts to a safety official for next steps. Be careful as parts from karts may be hot.
- Spread out as needed
- Help each other out
- A vest is **REQUIRED**
- Gloves are suggested but not required

Response Summary

- Push running karts back onto the track when it is safe to do so
- Do not let drivers get out of their kart while it is on the track
- Move non-operational karts at least 20 feet off the track (infield if possible)
- If a kart will roll, ROLL IT, do not carry it

SAFETY IS ALWAYS TOP PRIORITY