**Timing & Scoring Procedures**

**INTRODUCTION**

SCCA Timing & Scoring (T&S) is one of the unique road racing specialties where the staff has the responsibility to time cars during practice and qualifying sessions and scoring cars during a race

followed by the production of accurate results of the sessions.

Timing: Measuring the time required to complete a lap around a track or course

Scoring: Recording the number of laps completed for each car during a race.

This manual has been created as a training tool for new CFR T&S staff members. The manual is intended to be a procedure manual more so than a How-To manual. Much of the detail associated with the tasks described herein will be disclosed in various reference manuals as well as at race events during the training process.

**TIMING SYSTEM**

Present day timing systems utilize radio transmission between transponders mounted on entrants’ cars and a receiver (Decoder) located in the timing room. Each transponder has a unique digital code. An antenna (Detection Loop) is embedded in the track surface at the Start/Finish line and Pit Lane. The antennas detect radio signals from the transponders as they pass over the line (Passing) and sends the signals to a Decoder via coax cable. The Decoder does just that, it unscrambles the encrypted signals and sends the unique transponder numbers to a Primary computer that is running special timing software (Orbits 4). The Primary Computer software interprets the Decoder data, relates the transponder IDs to the respective competitors, and captures the related lap times. If a session is Practice or Qualifying , the software sorts the lap times for fast lap. If a session is a Race, the software captures the lap times and lap counts. It sorts the results by which car completes the most laps first within the specified race duration.

A second “Remote” computer is used that possesses related software (Orbits 4 Remote) which enables administrative features of the Primary software, e.g. Entrant updates, results manipulation, Grid preparation and printing.

At certain tracks (Sebring) a photocell can be installed as a backup to detect cars with no working transponders. Within the Orbits software, every car is detected by the photocell. If a transponder is not detected within a certain fraction of a second, the program generates a photocell passing in the Passing Log that is unassigned. The Primary Computer Operator must assign the correct car number(s) to photocell detections each time it/they pass the timing line. For cars with non-working transponders, the photocell detections must be closely monitored to ensure proper Car assignment.

For Endurance races the CFR uses remote Decoders at the entrance and exit of course Pit Lanes to measure Pit Stop times. The setup for and use of the remote decoders is described in the related user manual and the Orbits software manual.

**TIMING STAFF DUTIES**

* **Chief** : Many of the responsibilities and duties related to the Chief of T&S can be found in the General Competition Rules (GCRs) Section 5.10. The chief is also responsible for:
  + Setting up events in the software
  + Prepare for Live Timing
  + Installing and testing the timing equipment at the track
  + Coordinating with Registration regarding changes and additions
  + Maintaining course records
  + Distributing post-race results to webmasters, points keepers and SCCA National
  + Maintenance and upkeep of the timing equipment and supplies
* **Primary Computer Operator**: The Primary Computer Operator (Primary Operator) runs the timing software that captures and sorts the data coming from active track sessions. During all active sessions, the Primary Operator is required to verify that:
  + All transponders are functioning
  + All transponders are related to the correct car
  + All car numbers observed on track are the same as those in the software session.

Additional duties include:

Assign car numbers to cars that do not have working transponders and are photocell detected when applicable.

During a race, announce when the White Flag (Last Lap signal) is to be displayed

Listen intently to the radio for penalty and/or track status calls.

* **Remote Computer Operator**: The Remote Computer Operator(Remote Operator) is responsible for:
  + Making changes and corrections to competitor and session data as required
  + Printing and distributing session results
  + Producing starting Grids for races
  + Implementing penalties as required by the Stewards
  + Verify the proper placement of the Checkered Flag in Orbits to end a session or race.
  + Verify Starters and DNSs (Did Not Start) in race results
  + Printing additional session results and session data as required by the event staff, entrants and Media
  + Respond to radio calls as necessary
* **Taper**: Tapers are responsible for recording the order of cars as they cross the Start/Finish line. Tapers serve as independent witnesses related to the car passings. It is preferred that an odd number of tapers be assigned when available. Taping procedures are provided later in this document.
* **Auditor:** An Auditor is responsible for gathering the Tapers’ sheets, reviewing them for consistency and producing a best record of passings for a given lap.
* **Administrative Assistant**: An Administrative Assistant serves as the T&S greeter to visitors with inquiries and/or seeking results, submitting changes or other information. The Administrator is responsible for all paper management.

**T&S PROCEDURES**

**Event Preparation**

The Chief of T&S will initially prepare an event in the Orbits software. The Chief will also set up a Live Timing event within whatever service is being used.

At the close of Registration, the Registrar will email the entries to date to the Chief of T&S in a Tab-Delimited text format (GCR 5.6.). The chief of T&S will review the file and correct as necessary for consistency, typos and conformance to GCR rules and Orbits requirements. The Chief will then import the entrant file into the Orbits program on the Primary computer and assign cars to their respective Groups.

Upon first arrival at a track the Chief will set up and test the timing equipment. At the beginning of each day, the Chief will start up the timing system, sign on to the Internet and open the CFR email account. The Chief will also start any Live Timing routines being used.

Upon arrival at a track and each event morning thereafter, the Chief of T&S will coordinate with the Registrar to obtain any additions and/or corrections to entrant data. During event days, the Registrar may email and/or text the Chief with subsequent additions or changes.

**Flag Conditions**

Complete flag conditions are provided in Section 6.1 of the GCRs. Only the flags that affect T&S procedures are presented herein. These procedures apply to all track sessions.

* **Green Flag –** The session is active and the Orbits race clock is running.
* **Full-Course Yellow (FCY) –** Double Yellow Flags are displayed at all corner stations plus Start. Upon hearing theFCY call on the radio, the Primary Operator will initiate the Orbits Yellow Flag (F6). Under certain conditions a FCY may require the use of a Safety Car to group and control the cars on track. The session clock will continue during such a condition. When the session is restarted, the Operator will return the program to a Green Flag status (F5) when it is displayed by the Starter (See Restarts).
* **Black Flag All –** All cars are required to hold their position and drive into Pit Lane and stop where the Pit Marshal designates until the session is restarted. The Primary Operator will implement the Yellow Flag (F6) upon a BFA announcement. The session clock will continue to run. Under BFA restarts, the course will go Green upon release of the cars from the Pit Lane (GCR 6.8.). The Primary Operator should implement the Orbits Green Flag (F5) upon release of the cars.
* **Red Flag-** All cars are required to come to a controlled stop on the side of the track within view of a Flag Station (GCR 6.1.1.I). Upon notice of a Red Flag, the Operator will implement the Red Flag (F7) within Orbits. A Red Flag implemented within the Orbits program will stop the session clock. At the closure of a Red Flag condition the Chief Steward or Race Director will call for a Black Flag All (BFA) at which time all cars will return to Pit Lane to await further instruction (See Restarts).
* **Checker Flag -** A Checker Flag is used to signal that a race or session has been completed (GCR 6.10.4.A.). Once the Checker Flag is displayed, that race or session is ended regardless of when and where the flag was displayed. Checker Flag procedures are presented later in this document.
* **White Flag –** When waving at the Start Stand, it signals one Lap remaining in a race. T&S provides the notice to display the White Flag. (See Race Duration)

**Practice and Qualifying**

Before Practice and Qualifying sessions begin, the Primary Operator will ensure that the Live Timing routine is set for displaying the results via fast lap sort.

During Practice and Qualifying sessions other tasks include:

* **Verify transponder numbers** - During the first sessions of an event, the Primary Operator will make every effort to ensure that all competitors have the correct transponder numbers for their cars. The Primary Computer operator will make the necessary corrections to relate erroneous transponder numbers to the proper car number.
* **Verify transponder detections** - During all sessions of an event, the Primary Operator will verify that all transponders are being detected. Non-detected transponders will be reported to Race Control via radio.
* **Report any wrong or unreadable car numbers** – During the first sessions of an event, the T&S staff will announce any Car number that is either incorrect or unreadable. Such cars numbers will be reported to Race Control via radio (GCR 9.3.28.A., B. and 9.3.3.).
* **Results** – Session results will be printed and distributed in a timely fashion following the end of sessions. The Remote Operator will print the sessions Provisional Results to PDF files and Email to Tech for posting and copy making. Results must be posted for public view, either locally or at Tech depending upon the track arrangement (GCR 5.10.4.).

**Qualifying Session Rules**

Any car that goes to the Paddock (Behind the Wall) and returns to the track during a Qualifying session will lose credit for all lap times prior to the exit to the Paddock. Such an incident will be reported by Race Control. Following such notice, the Primary Operator will delete all previous lap times (GCR 6.2.2.).

A car that short cuts any portion of the track will not get credit for that lap time. Such a violation will be reported by Race Control. Given notice, the passing after which the short cut was taken will be deleted or invalidated by the Primary Operator (Event Supps).

Any infraction of general or safety rules may result in a penalty of the fast-lap time loss. Such a violation will be reported by Race Control or the Steward in charge for that session. The Remote Operator will make the appropriate revision to the session results with an announcement disclosing the penalty (GCR 5.10.4.B.6.).

A car must cross the Start/Finish or Pit Lane timing line under its own power to receive credit for a lap time. A push or tow across the line will not be counted (GCR 6.10.3.B.). When such a situation occurs, the Primary Operator will Delete or invalidate that passing.

Qualifying time ties are broken by comparing the second fastest times, and then the third, if needed, and so on until a difference is found (GCR 6.4.2.C.). The Remote Operator will make such determinations and revise the Qualification results and Grid accordingly.

**Grid Preparation**

The event Supplementary Regulations (Supps) will disclose the race starting grid criteria. The criteria may include Practice, Qualifying, and previous race fast times. If more than one session is used to determine a Grid, the Remote Operator will create a Merge of the related sessions within the Orbits program. A Merge will consider all selected sessions to determine the fastest times for a Grid. If only a Qualifying session is to be used for a starting Grid, the Qualifying session itself will serve as the Grid. If an event has scheduled more than one race for each Group, the Grid criteria for the subsequent race(s) will be provided in the Supps.

**Split Grids** - A steward may request a Split Grid for certain Class(s) cars within a race Group. The requesting steward will provide the split criteria with the request. If requested, the Remote Computer Operator will revise the starting Grid accordingly (GCR 5.5).

**The 120% Rule** – GCR 6.4.2.E. states, “Each driver/car combination must qualify within 120% of the qualifying time of the fastest qualifier in his class to be allowed to start his race. The Race Director or Chief Steward may waive this requirement and may allow non-qualifiers to grid behind qualifiers.” In most cases this rule is waived by CFR Stewards. If not waived, a T&S staff member must review Qualifying times and report any entrants that are over the 120% reference times for their Class.

The Chief of T&S will contact the Grid Chief to determine how many copies of a Grid will be required. The Remote Operator will print the required number of Grid copies. Delivery of the Grid copies is optional depending upon the track arrangement and T&S staff availability. Copies of the race Grid may also be distributed to various event staff members upon request and media personnel (GCR 5.10.5.).

**Race Procedures**

**Live Timing** – Before Race sessions begin, the Primary Operator will ensure that the Live Timing routine is set for displaying the results by position.

**Race Duration** – The duration of a race may be defined in terms of laps or run time. The duration will be provided in the event Schedule. The Chief will have the race duration set up within the program at event creation.

If a race is defined as a “Timed Race”, the Primary Operator should check the race duration settings for accuracy when accessing a race for timing. The Primary Operator must watch the race clock near race end in order to estimate when two laps remain within the specified time period (See Last Lap).

**Pace Lap –** At the beginning of the Pace Lap, the Primary Operator will initiate the Purple Flag in the Orbits program. Depending upon track configuration, the Purple Flag condition can be useful in verifying car numbers and transponder operations before a race starts. It is recommended that the T&S staff count the cars observed on the Pace Lap, plus any late starter(s). After the last car has passed on the Pace Lap the Operator can initiate the Green Flag (F5) within Orbits. The program race clock will be set such that it will not start until the first or Pole car crosses the Start/Finish line. It is recommended to delay implementing the Green Flag directly after the end of the Pace Lap in case: (1) there are multiple pace laps and (2) something happens on track that delays the actual start.

A car cannot improve its position during the Pace Lap (GCR 6.5.2.C.). Doing so will result in a penalty. T&S will be notified if such an infraction occurs.

**Race Start Rules**

**Race Starts -** After the Starter displays the Green Flag and Orbits is in Green status, the Primary Operator should compare the number of cars that actually take the Green in Orbits to those counted on the Pace Lap. Use of the Tapers’ Pace Lap tapes is recommended if the Primary Operator did not tape the Pace Lap. If there is a difference, the cause should be noted e.g. a failed transponder or a car did not make it around the track for the Start.

**Aborted Starts** – If the cars are not aligned properly for the start, the Starter may wave off the group and not display the Green Flag. In such a case the Primary Operator will initiate the Green Flag (F5) followed by the Yellow Flag (F6) in the Orbits program. According to the GCR 6.5.4.C., the race clock starts on an aborted start. When the Starter finally displays a Green Flag, the Primary Operator will return to a Green Flag Status within Orbits (F5).

**Split Starts –** If a split start occurs for a race group, The Primary Operator will initiate the Orbits Green Flag when the first split group receives the Green Flag from the Starter. No further action is required when the second split group takes the Green Flag (GCR 6.5.5.D.3.).

On certain tracks, a car may not go outside of the yellow painted line at track edge when the Green Flag is displayed. Doing so will result in a penalty. T&S will be notified if such an infraction occurs (Event Supps).

**Late Starters** – Any car(s) that appear on the track after the Pace Lap has begun will be held at the Pit exit to the course (Pit Out) until the group takes the Green Flag and passes Pit Out (GCR 6.5.6.). Depending upon the track configuration, late starters may cross the Start/Finish line on their way to Pit Out (Sebring Long Course & Daytona). They will be released after all of the starting cars have passed Pit Out. If a late starter is announced on the radio, it is recommended that the Primary Operator delay initiating the Orbits Green Flag until after the late starter has crossed the Pit detection loop so that the race clock will correctly start when the Pole car crosses the Start/Finish line (GCR 6.5.4.C.). After all cars have passed on the Green Flag, the Primary Operator must insert manual passings (F10) for the late starter(s) so that it/they will receive its/their Green Flag passing and its/their lap count will be correct.

**Determining Race Starters**- Cars shown on the Orbits Race Grid but did not appear on track are to be noted as DNS (Did Not Start). If a car turned a wheel on the track during the Pace Lap, it is considered a race starter even though it may not have taken the Green Flag (GCR 6.10.2.).

**Race Rules**

**Invalid Detections** - A car must cross the Start/Finish or Pit line under its own power to be scored for a Lap (GCR 6.10.3.B.). If a towed or pushed car’s transponder is detected at the Start/Finish or Pit line, the Primary Operator will delete that detection.

**Transponder Failures** – if a transponder fails during a race and there is no photocell provided (Daytona), it is recommended that the Primary Operator provide manual passings (F10) for such a car for the remainder of the race. Lap times for a manually scored car should not be validated within the Orbits Passing Log. Either Operator may add an Announcement stating that Car No. xx transponder failed in Lap yy and it was manually scored thereafter. Such an announcement will appear on the Official Race Results produced by Orbits. If a transponder does not function at all from the Purple Flag on, the Chief will determine if the car should be manually scored.

**Retirements** - A car that retires to the paddock from the pits or the track during its race may not return to the track unless the Supplemental Regulations, the Race Director or Chief Steward specifies otherwise (GCR 6.2.2.). No action is required by T&S unless the car returns without permission.

**Track Short Cuts** - A car that short cuts any portion of the track and gains position in a race will lose that position if it does not give the position gained back (Event Supps). The Primary Operator will make the appropriate adjustment within the Orbits session as instructed by the Chief Steward.

**Stopping a Race**

A race may be stoppedbya Black Flag All (BFA), Red Flag (RF) or Checker Flag (CF).

* Black Flag All - The Primary Operator will initiate the Yellow Flag (F6) within the Orbits program upon hearing the radio call from Race Control. When a Black Flag All occurs, the race clock will continue to run unless instructed otherwise by Race Control. If Race Control instructs a clock stop, The Primary Operator will initiate the Red Flag (F7) to stop the race clock. The Timing staff will await further instruction from Race Control ( See Race Restarts)
* Red Flag – When a Red Flag call is given, the Primary Operator will initiate the Red Flag (F7) within the Orbits program A Red Flag condition will automatically stop the race clock. The Timing staff will await further direction from Race Control. (see Race Restarts)
* Checker Flag – A Checker Flag will end a race regardless of whether it is displayed early, late or on the wrong car. If the Starter’s Checker Flag is displayed outside of the Orbits preset Auto Checker, the Primary Operator will initiate the Checker Flag (F8) within the Orbits program. The race clock will continue to run until the race is stopped within Orbits (See Ending a Race).

**Restarting a Race**

Race restarts may occur due to a Full Course Yellow (FCY), Black Flag All (BFA), or Red Flag (RF) condition.

* **Full Course Yellow Restart** – When a FCY situation occurs, racing for position stops and race positions are frozen until the race is restarted. Cars are not allowed to pass (GCR 6.1.1.B.). In most cases a Safety Car is dispatched to control and regroup the cars. Race Control will announce the restart. When the Starter displays the restart Green Flag, the Primary Operator will initiate the Green Flag (F5) within the Orbits Program.
* **Black Flag All Restart** – A BFA call will invoke the no-passing rule and bring the cars into Pit Lane. As stated above, the Orbits program will most likely be in a Yellow Flag state (F6). Depending on the situation, Race Control may request a restart grid. If requested, the Primary Operator will print out the passings of the last completely scored lap prior to the BFA call. The passing log will be used to arrange the cars as they were on course before the BFA incident. If the BFA was called in the midst of a race lap, the Primary Operator must delete the partial lead laps back to the last completely scored lap before the BFA incident was announced (GCR 6.8). The race clock will restart when the cars are released from the Pit Lane. At that point the Primary Operator will initiate the Green Flag (F5) within the Orbits Program.
* **Red Flag Restart** – At the end of a RF condition, the course will change to a BFA condition. Cars will drive to Pit Lane for a restart. The Primary Operator will keep the Orbits program in an RF state. Restart procedures will be the same as that for a BFA.

**Last Lap**

A waving White Flag at the Start Stand is used to indicate that one Lap remains in a race. As stated earlier, the duration of a race may be defined in terms of Laps, Time or whichever comes first. Typically the Chief has set up the race duration Auto-Checker feature in the Orbits program.

For a race defined by a number of Laps, the Auto-Checker feature in Orbits will provide an alert when two laps remain. At that point T&S will call in the White Flag alert to Race Control providing the lead car(s) and color.

Races defined in terms of Time are also set up in the Orbits Auto-Checker routine. However lead car speeds can change the time when the two-laps-remaining point occurs. It is incumbent upon the Primary Operator and Chief to watch the race time at race near-end in case it will be necessary to call for a White Flag before the Orbits Auto-Checker feature does. Several Chief Stewards have expressed a preference to call a race a few seconds to a minute early in an attempt to stay on the event schedule. This is particularly relevant when an event is behind schedule.

**Ending a Race**

A Checker Flag is used to signal that a race has been completed (GCR 6.10.4.A.). Normally the Orbits Auto-Checker routine is preset for the specified race duration. However there are times when the Checker Flag is displayed at the wrong point (early, late, on the wrong car) or when ordered by Race Control. Under any of the aforementioned conditions, the Primary Operator will initiate the Checker Flag (F8) within the Orbits program upon hearing the announcement.

Typically the Primary Operator and the Chief will be watching the race clock and/or lap count in an effort to call for the Last Lap White Flag. The likelihood of an early or late Checker display is quite rare.

An early Checker may be called by Race Control under certain circumstances such as weather threat or a significant delay in restarting a stopped race. If a Checker is displayed early or on the wrong car, the Primary Operator will move the Orbits Checker (Drag and Drop) to the lead car in the last completely scored lap. (GCR 6.10.4.B.).

In the event of an early Checker called by Race Control, a race will be recorded as complete as it was ended if 50% or more of the race duration was completed at the time the Checker was displayed (GCR 6.10.5.B.). If less than 50% of a race duration has been completed at the Checker, it will be regarded as incomplete (GCR 6.10.5.A.).

If a Checker Flag is displayed late whereby the race runs one or more laps than scheduled, the Primary Operator will move the Orbits Checker to the last completely scored lap that fits within the scheduled Race duration (GCR 6.10.4.C.).

Note: After the Checker Flag has been displayed, any car that has not yet taken the Checker has 5 minutes to complete its final lap (GCR 6.10.3.A.).

**Race Results**

Following the completion of a race, the Remote Operator will make any adjustments as necessary and print Provisional Results (GCR 5.10.4.). Provisional Results should also be printed to PDF format and promptly Emailed to Tech for posting, award presentation, impound activity and entrant copies. If there is a “Hold” ordered by any the Stewards, the Results will remain Provisional until the appropriate Steward releases them to be Official.

**Points Waiver (GCR 5.10.4.B.8.) -** A driver not competing for event/series awards will submit a Points Waiver that will be presented to T&S. Such drivers will be listed on the official results in the correct finishing position with a notation citing GCR 3.6.4. No points will be assigned, if any would have been earned. An earned lap record will remain intact.

**Penalties -** The Race Director, Chief Steward, Chairman SOM, or Tech Chief will inform the Chief of T&S of any penalties pending for a group race. The related results report cannot be declared Official until the matter is resolved (GCR 5.10.4.B.1.). When penalties are submitted, the Chief or Remote Operator will modify the Provisional results as required (GCR 7.5). When penalties are accessed, notations should be made on the results describing the penalty(s) and related GCR reference(s) (GCR 5.10.4.B.6.). GCR references to the more popular penalties are provided in the References section of this document. Following the completion of penalty assessment, the Provisional results can be labeled Official if there are no further open issues e.g. protest, appeal, etc.

**Endurance Races (Enduros)**

The event Supps will define the Enduro race rules. As the name implies, an Enduro race length is defined in terms of time, typically 60 or 90 minutes. Endurance races are conducted under the same rules as other races. However there are some extra rules, namely mandatory Pit Stop(s). The Supps will disclose a Pit Stop minimum time. It will be defined as 5 minutes plus the time in seconds that is required to travel the full Pit Lane of the course at the Pit Lane speed limit. The CFR uses remote Decoders to directly measure the time from Pit In to Pit out. The Remote Operator will monitor Pit Stop activity during Enduros.

At the close of an Enduro the Remote Operator will print and distribute Provisional results in the same manner as that for sprint races. The Remote Operator will also print a Pit Stop Report and Laps of Competitors (Reduced) within Orbits. The Chief or Remote Operator will review the Pit Stop Report and Laps of Competitors for short or no Pit Stops. The results of the review will be reported to the Enduro Steward for penalty assessment, if any. Penalties for short or no Pit Stops will be provided in the respective Enduro series rules (See References).

**End of the Day**

At the end of each event day, the Chief shall upload the appropriate completed sessions to the MyLaps/Speedhive web site.

When all duties are completed for the day, the Chief will shut down the timing equipment. Equipment shutdown includes disconnecting the Decoder(s) from the power source **and** the detection loops. When shutting down the Primary computer, it is strongly recommended that an Orbits program backup be made to a removable storage device.

**TAPING PROCEDURES**

(later)

**RADIO PROTOCOL**

The Flagging and Communication specialty (F&C) furnishes multi-channel radios for the event staff. The radios utilize a Primary Channel (usually Channel 1) which is dedicated to essential track session and event schedule communication. All members of the event staff are normally tuned to the Primary channel. A second Temporary Alternate Channel (TACx) is used for non-essential communication. The x in TACx discloses the alternate channel number. In most cases the Temporary Alternate Channel is Channel 2, thus “TAC2”. Race Control monitors the TAC continuously and can be used for essential communication when the Primary channel is busy.

The T&S staff will monitor the Primary channel to be aware of track session status. Radio use is open to all T&S Staff. Personnel using a radio to transmit should keep conversation essential, brief and to the point. Short transmissions preserve battery life. The T&S staff should use TAC2 for non-essential conversation.

When making a radio call, press the transmit button and pause a second or so before speaking. Identify your specialty and what specialty you are calling e.g. “Timing to Control”. Speak slowly and clearly with your message when your called party responds.

**REFERENCES**

**General Competition Rules** (GCRs) [www.scca.com/downloads](http://www.scca.com/downloads) Note: download the latest version.

**Car Number Specification** – GCR 9.3.28.A., B. & 9.3.3

**SE Division ECR Rules** - http://www.sedivracing.org/SEDIVOpsManual2014.pdf

**FL Cup Rules** - http://www.cfrscca.org/Files/2017\_Florida\_Cup\_Rules.pdf

**TES Enduro Rules -** [**https://docs.wixstatic.com/ugd/64ae3b\_b1407f60e5464b34b6990fc956e917e8.pdf**](https://docs.wixstatic.com/ugd/64ae3b_b1407f60e5464b34b6990fc956e917e8.pdf)

**Regions Listing –** [**www.scca.com/pages/file-cabinet**](http://www.scca.com/pages/file-cabinet)

**Orbits Manual -** [**https://www.mylaps.com/support/software-firmware/**](https://www.mylaps.com/support/software-firmware/) **(requires Log in)**

**Pit Lane Timing Manual – (Drop Box later)**

**Penalties** – GCR Section 7

* Passing under Yellow – GCR 6.1.1.B
* Passing on Pace Lap – GCR 6.5.2.C.
* Passing the Safety Car – GCR 6.6.2.B.3.ii.
* Avoidable Contact – GCR 6.11.1.A.
* Blocking – GCR 6.11.1.D.
* Under Weight – GCR 9.3.49.