

To: All Competitors


Subject: Indianapolis 8 Hour Telemetry Requirements


Date: 10/2/2020


Time: 2:08 PM

The Stewards notify all 8 Hour Sporting Regulations Car competitors and all officials of the following:

The Sporting Regulations require all 8 hour participants to use the same Telemetry Equipment as GT World Challenge America. This supports our TV and Timing partners. The following 6 pages outline the requirements for our visiting teams. The installation is quite easy and please contact Chris Brown if you require assistance. Chris Brown mobile: 503-804-3289.


John Walsh
Steward (Chairman)


Robert Davis
Steward


Peter Cunningham
Steward

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This memorandum indicates, in conjunction with other diagrams / documentation, requirements for installations of the series mandated Tracking and Official Telemetry Data provision systems for 2020 GT WCA Events.

1. PURCHASES AND RENTAL

All units will be invoiced via the order form available from Team Relations.

COST BREAKDOWN BY CLASS:

GT3

Item	Cost USD	Description
Full Season Entries		
GPS & Telemetry + Power Cable	\$1915	One-time purchase, includes X2 RaceLink Pro, antennas and wiring loom
Lumirank Position Panel	\$125	Rental Only, per race
Lumirank Power Cable	\$35	One-time purchase, non-refundable
Single Race Entries		
GPS & Telemetry	\$170	Rental, per race, includes CAN module and GPS antenna
GPS Power Cable	\$190	One-time purchase, non-refundable
Lumirank Position Panel	\$125	Rental, per race
Lumirank Power Cable	\$35	One-time purchase, non-refundable

GT SPORTSCLUB, GT4, TCR, TC AND TCA

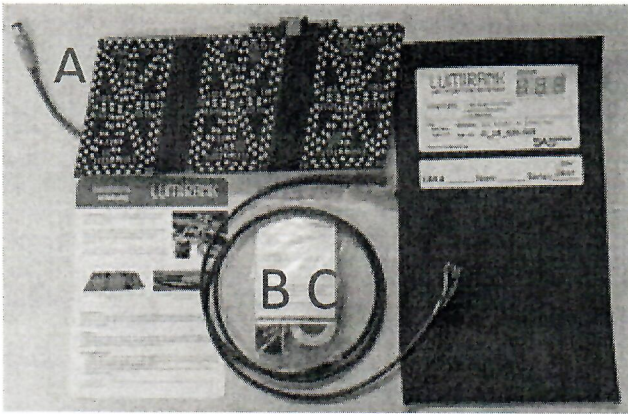
Item	Cost USD	Description
GPS	\$60	Rental, per race
GPS Power Cable	\$190	One-time purchase, non-refundable
Lumirank Position Panel	\$125	Rental, per race
Lumirank Power Cable	\$35	One-time purchase, non-refundable

OPTIONAL EQUIPMENT

Item	Cost USD	Description
Lumirank Driver Information Display (DID)	\$75	Rental Only, per race, No additional wiring needed.

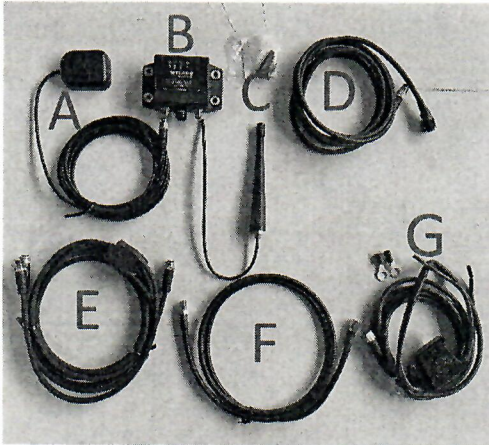
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ALL CLASES - LUMIRANK PANEL AND KIT



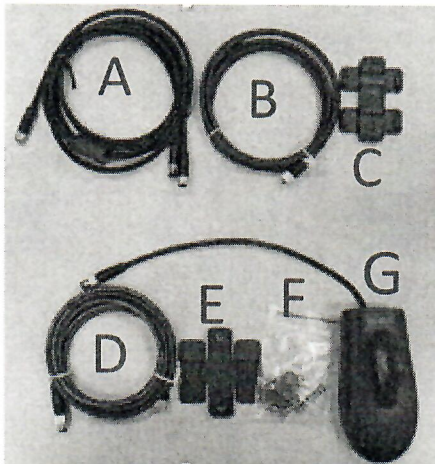
- A. Display Panel
- B. Power Cable, 1.6m length
- C. Velcro Strips & Tape

GT3 - MYLAPS X2 RACELINK PRO KIT



- A. GPS Antenna
 - B. X2 Racelink Pro
 - C. RF Antenna & Mount
 - D. Autosport Cable, 2.0m length
- (Updated NEW cable will be distributed at VIR)
- E. Y-Cable to Lumirank
 - F. RF Antenna Extension Cable
 - G. Not in use

GT4, TCR, TC AND TCA - MYLAPS RACELINK KIT

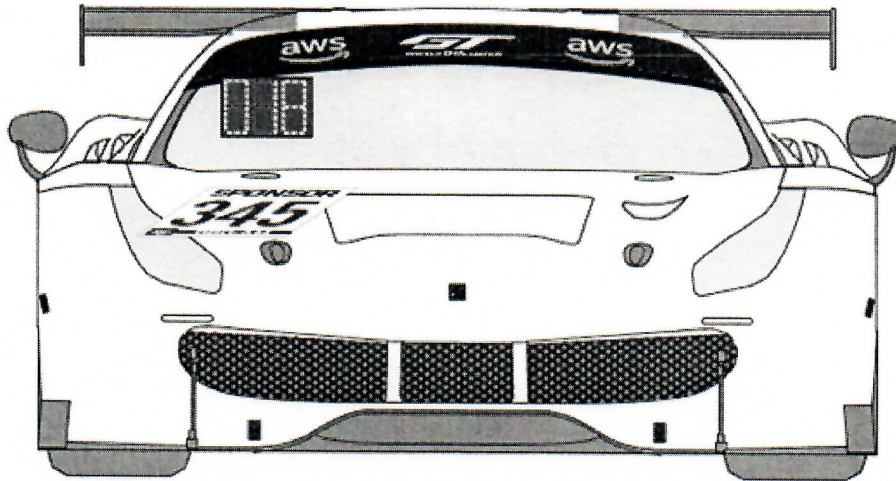


- A. Y-Cable to Lumirank
- B. Not in use
- C. Bracket (Medium)
- D. Extension Cable
- E. Bracket (Large)
- F. 1 Set of Screws
- G. Racelink GPS Antenna

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2. ALL CLASSES - LUMIRANK INSTALLATION

1. Attach the Velcro to the LED display board, note there are sperate kits for glass and lexan windscreens.
2. Stick the panel to the upper right side corner inside the windscreen, as shown below.
3. Tap over the perimeter of the panel with the provided black anti-glare tape. Not doing this will create a distraction to the driver of blinking glaring lights on the windscreen.



LUMIRANK POWER SUPPLY WIRING

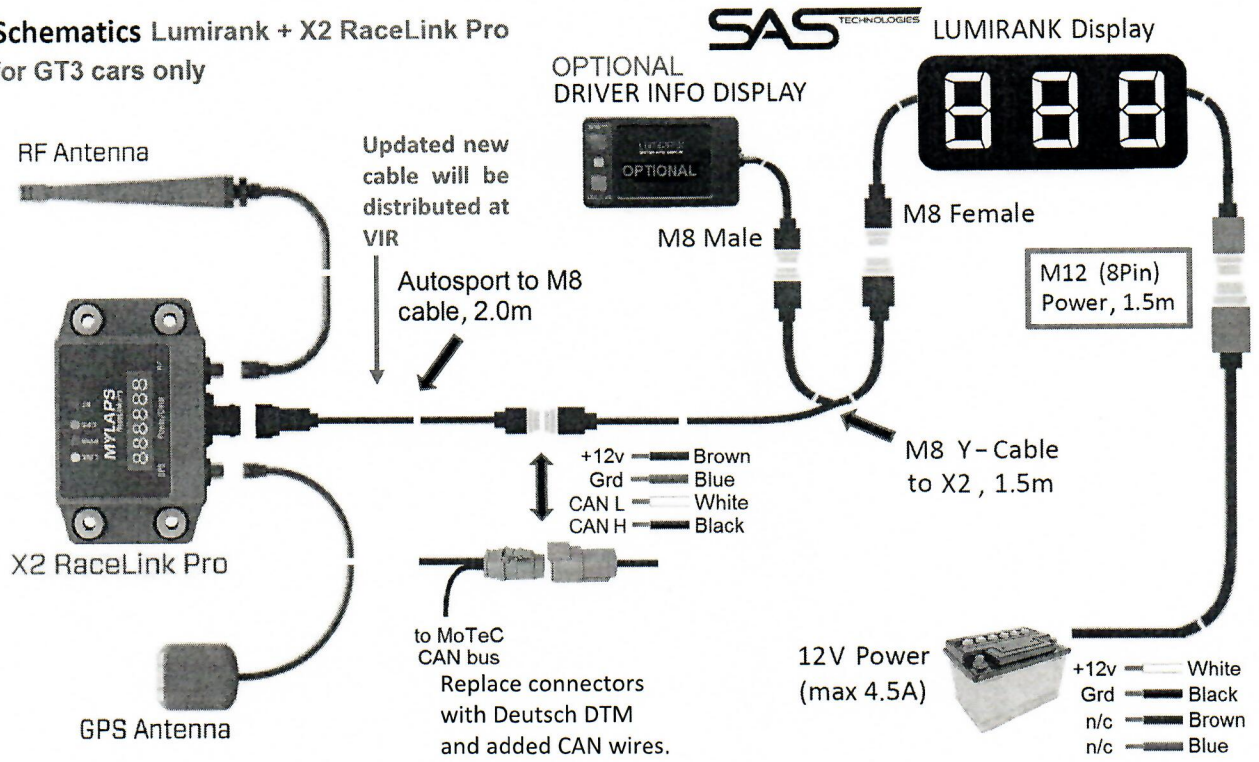
- Connect the green connectors together, this is the power cable. Only power and ground connection will come from the power cable going into the Lumirank panel. Please cut and isolate the other 2 wires.
- The MyLaps devices will get power distributed to them through the supplied Y-cable included in their kit.

WHITE	+ 12V / 4,5A switched
BLACK	GROUND
BROWN	NC (not in use, please isolate them)
BLUE	NC (not in use, please isolate them)

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3. GT WORLD CHALLENGE AMERICA (GT3 CLASS)

Schematics Lumirank + X2 RaceLink Pro for GT3 cars only



- All devices must be installed in accordance with SRO, manufacturers, and official timekeeping (TSL) instructions.
- Both the RF Antenna and GPS Antenna must be mounted externally to the vehicle, as high as possible (roof preferred), and have a clear view around the vehicle at all times. Both antennas must be at minimum 15cm / 6 inches from any other GPS or RF antenna, transmitting or receiving device. The GPS antenna must also be located within 5cm of the longitudinal axis centreline of the vehicle.
- The X2 RaceLink Pro device is free to be placed where the team best sees fit. Location consideration must be given to an easy visual check of the status lights by any Technical Official for system diagnosis, and to cable lengths of the connectivity to GPS antenna, RF antenna, Lumirank Panel and CAN bus connection to the MoTeC series spec logger.
- **Power Installation:** The entire layout above receives power only through the green M12 connector going into the Lumirank panel first. Power is then delivered to the X2 RaceLink Pro from the Lumirank.
- **CAN Installation:** The X2 RaceLink Pro sends basic telemetry and GPS data to race control. This data is received via CAN from the MoTeC series spec logger, either CAN1 or CAN2. The Autosport to M8 cable & Y-Cable as pictured above, are both really long. These will need to cut off on both sides, at a length that works best for your installation to keep the wires as short as possible. The connectors are replaced with a 4 position DTM, as detailed below. You will then splice two additional wires for CAN into this connector on the MyLaps RaceLink side, which will then be connected into the MoTeC logger.
- The Lumirank contains a CAN resistor, so this effectively becomes the end of the CAN bus. If both of your MoTeC CAN buses are already used and cannot support this addition, it will be necessary to purchase a CAN-to-CAN adapter, so as to separate the CAN bus yet relay messages into the X2 RaceLink Pro.

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MyLaps X2 RaceLink Pro

Mating connector:
ASU603-05SN
Pin 1 = 12v - brown
Pin 2 = Gnd - blue
Pin 3 = CAN L - white
Pin 4 = CAN H - black
Pin 5 = n/c

Interconnect

Lumirank side = DTM06-4S
RaceLink side = DTM04-4P
Pin 1 = 12v - brown
Pin 2 = Gnd - blue
Pin 3 = CAN L - white
Pin 4 = CAN H - black

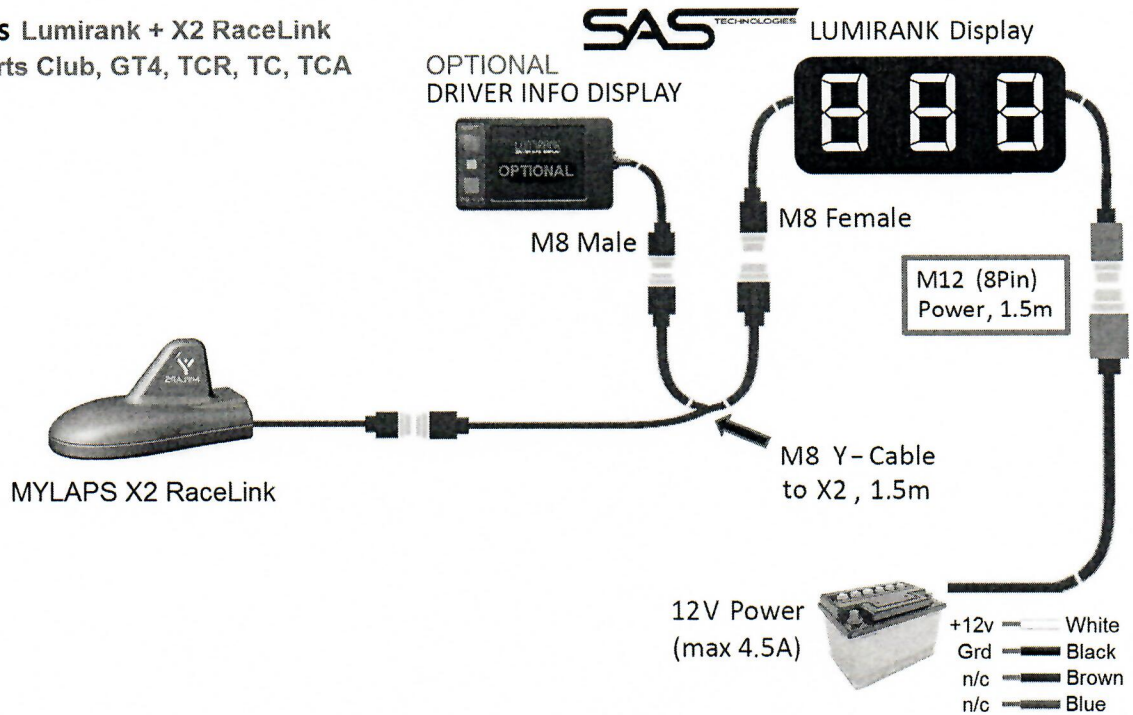
SRO GT3 CAN specification to MyLaps X2 RaceLink Pro (1Mbit/s only!)

Pre-made MoTeC CAN templates are available via email from Chris Brown, cb@cb-racing.com

Channel	CAN ID	Byte order	Start bit	Type	Scale	Offset	Units	Min Update	Notes
Engine RPM	0x5B1	Motorola	0	U16	1	0	rpm	10 Hz	10 Hz
Manifold Pres	0x5B1	Motorola	16	U16	1	0	mbar	10 Hz	series MAP sensor
Ground Speed	0x5B1	Motorola	32	U16	0.1	0	kph	10 Hz	fastest rolling wheel
Throttle Pos	0x5B1	Motorola	48	U8	1	0	%	10 Hz	butterfly (0-100%)
Timer 4	0x5B1	Motorola	56	U8	1	0		10 Hz	0-255 counter at 10 Hz
Brake Pres Front	0x5B2	Motorola	0	S16	0.01	0	bar	10 Hz	
Steering Angle	0x5B2	Motorola	16	S16	0.1	0	deg	10 Hz	
Gear	0x5B2	Motorola	32	U8	1	0		10 Hz	
- not used -	0x5B2		40	16					
Timer 4	0x5B2	Motorola	56	U8	1	0		10 Hz	0-255 counter at 10 Hz
GPS Latitude	0x5B3	Motorola	0	S32		0		10 Hz	
GPS Longitude	0x5B3	Motorola	32	S32		0		10 Hz	
GPS Speed	0x5B4	Motorola	0	S16	0.1	0	kmh	10 Hz	
GPS Heading	0x5B4	Motorola	16	S16	0.01	0	deg	10 Hz	
GPS Time	0x5B4	Motorola	32	S16	0.1	0	hhmmss	10 Hz	
GPS Sats Used	0x5B4	Motorola	48	U8	1	0		10 Hz	
Timer 4	0x5B4	Motorola	56	U8	1	0		10 Hz	0-255 counter at 10 Hz
Tire Pres FL	0x5B5	Motorola	0	U8	1	0	kPa	1 Hz	
Tire Pres FR	0x5B5	Motorola	8	U8	1	0	kPa	1 Hz	
Tire Pres RL	0x5B5	Motorola	16	U8	1	0	kPa	1 Hz	
Tire Pres RR	0x5B5	Motorola	24	U8	1	0	kPa	1 Hz	
- not used -	0x5B5		32	32					

3. GT SPORTSCLUB, GT4, TCR, TC AND TCA

**Schematics Lumirank + X2 RaceLink
for GT Sports Club, GT4, TCR, TC, TCA**



- All devices must be installed in accordance with SRO, manufacturers, and official timekeeping (TSL) instructions.
- The X2 RaceLink fin device incorporates both a GPS antenna and a RF antenna. It must have a clear line of sight of the sky at all times during racing conditions. It must be at minimum 15cm / 6 inches from any other GPS or RF antenna, transmitting or receiving device. It must also be located within 5cm of the longitudinal axis centreline of the vehicle.
- Location consideration must be given to allow easy visual check of the status lights on the RaceLink device, and any associated cabling, lengths and connectivity to the Lumirank Panel.

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