



Course Car Lights and Sirens

Rally Sport Ontario
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[Current Equipment]

- Six assemblies in varying states of repair
- Four full size light bars and two strobe bars
- Full description found in Appendix



[Status (Maintenance Issues)]

- Many issues with current systems:
 - Under rated wiring, no fuses, insufficient lengths of wire, under rated switches
 - Broken and missing mounting parts and straps
 - Sirens not working (2)
 - Missing control boxes (2)
 - Thanks to Peter G, Mark and Christine for the evaluation.

[Status (Systemic Issues)]

- Storage and maintenance
- Frequent malfunctions
- Damage to course cars
- Radio interference
- Insufficient mount equipment
- Some magnetic mounts

[Options: Replace or Rebuild]

■ Replace

- Major investment
- May address maintenance and systemic issues

■ Rebuild

- Major investment has already been made
- Requires strict maintenance and storage protocols
- Doesn't address systemic issues

Replacement Option – Integrated Light Bars

■ Pro

- Address all maintenance and systemic issues
- clean appearance and outstanding performance
- Modern wiring and switch gear (LED)

■ Con

- Requires proper storage and maintenance
- VERY expensive (\$2500 - \$5000 each!)
- Must be permanently mounted to car or affixed to rack system (different for each car \$250)



Replacement Option – Non-integrated Light Bars

■ Pros

- Less expensive
- Small, lighter (LED)
- Simple mounting
- Good performance

■ Cons

- Costly (\$350 to \$600 each)
- Generally magnetic mounts only
- No siren provisions
- No wiring or switch gear provided (varies)



Replacement Option – Interior Mount Lights

■ Pro

- Simple, light
- Easy to move between cars
- Various mounting options (windshield, sun visors, etc)
- Fair performance
- Very low power draw (LEDs)
- “stealth”



■ Cons

- No sirens
- Requires multiple accessory plugs
- Questionable mounting
- Costly (\$250 to \$500 each)
- Requires at least two per car
- Limited range (especially at night, very directional)
- “stealth”

[Replacement Option – Sirens]

- Integrated
- Non-integrated:
 - Commercial (\$300 to \$700 each)
 - “Budget” (\$7 to \$100)



[Recommendation]

- Current equipment: make necessary repairs, schedule periodic evaluation and maintenance, deal with storage issues
- Purchase small number of in-car equipment for further evaluation

Appendix

ID Number	Light Info	Horn Info	Mount Style	Wiring	RSO Lights		Switches
					Wire length	Wire Type	
01	Hella OWS 2RL007900 12VDC 55W/ 24VDC 70W Working	PowerHorn two sound 6-12VDC 115dB@1m Working	Ratchet Strap, aluminum base With duct tape anti scratch	Black – T90 12AWG (600V) Red – T90 14AWG (600V) Cable – Cat5E Patch Cable Cable – Belden 9502	Switches – 89" Power – 130"	Cat5E from lights to Switch Box multi-wire Red & Black wires wrapped with electrical tape	Led's no longer working SW1 – next to Amber Light SW2 – next to Green Light Common – White Common – Red NO – BK NO – BK
02	Federal Signal JetSonic Working	Incorporated into lights Not Working	Metal Base with 3 1/2" Suction Cups Hold down strap	Black – T90 12AWG (600V) Red – THHN 12AWG (600V) Cable – Cat5E Patch Cable	Switches – 120" Power – 153"	Cat5E from lights to Switch Box Red & Black wires with tywraps 4-6" apart and a 20A fuse on Red	Led's connected SW1 – Lights SW2 – Horn PB – horn warble
03	Lantern Co Star Head Light Strop 200J-1 12V 0.5A Working	Horn – unknown make Working	Roof Rack and Strap No pads on feet which are hard plastic	Black – TR-64 16AWG (300V) Red – TR-64 16AWG (300V) Cable – Cat5E Patch Cable	Switches – 125" Power – 164"	Cat5E from lights to Switch Box Red & Black wires with tape 4-6" apart and a 10A fuse on Red	Switch box missing Used from #2 for testing
04	Radio Shack Security Strobe Working	PowerHorn two sound 6-12VDC 115dB@1m Working	Aluminum base with hard feet No straps present	Black – low voltage wire Red – low voltage wire Cable – grey outer 12AWG 3 wire BR/GN/YE	To Box – 67" From Box – 110"	Grey Cable and Black and Red wires Grey Cable Positive – White butt connected to Green and Yellow wires Negative – Red butt connected to Brown wire	No LED's on box Connections are soldered with no protection from shorting
05	Federal Signal Model J Series A Working	PowerHorn two sound 6-12VDC 115dB@1m Not Working	Steel Base, 4 suction cups No straps present	Black – T90 12AWG (600V) Red – THHN 12AWG (600V) Cable – Cat5E Patch Cable	Switches – 128" Power – 180"	Cat5E from lights to Switch Box Red & Black wires connected to 12V cigarette Adapter 25A fuse on Red	Switch box missing Used from #2 for testing Note – 12V cigarette adapter with 13" lead was not properly connected to wires.
06	Star Warning Systems StarBar Strobe Working	Radio Shack Dual Sound Alarm 12V 550mA 105dBa Working	Aluminum Base with suction cups Hold down strap	White – RWC 14AWG (600V) Black – RWC 14AWG (600V) Cable – Belden 9502	White – 214" White – 214" Black – 205" Cable = 180"	With 20A fuse With 20A fuse	Yellow plastic denotes Horn Wrapped together with electrical tape



01



02

[Appendix]

