LCS771

SIREN

(Also applies to LCS771-28)

Installation and Operating Instructions

PROUDLY MADE IN THE USA
An ISO 9001:2008 Certified Company

Star Headlight & Lantern Co., Inc.

455 Rochester Street Avon, NY 14414 Phone: 585-226-9787 FAX: 888-478-2797

SINCE 1889

STAR WARNING SYSTEMS® STARSIGNAL® VEHICLE PRODUCTS BRADFORD Vehicle Solutions www.starheadlight.com

PLIT553 REV B 6/18/21

Installation Information

MODEL: LCS771 or LCS771-28 or LCS771-LM **Serial #:** _____

PURCHASE DATE: _____

INSTALLATION DATE: _____

INSTALLER: _____

DEALER: _____

Model and serial number located on bottom of unit

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General Description

The LCS771 Siren Amplifier is a premium 200W unit designed for dual 100W speaker use. It can be utilized with or without an optional hand held microphone (not included with the LCS771-LM). The primary operating modes are Phaser, Yelp, Wail, Hands Free, Manual, Alert, and Radio. A Noise Canceling PA Override (when used with optional microphone) and push-button Horn Override are available in all modes. A manual push-button is provided for push-on/push-off tone toggle operation in the Phaser, Yelp, and Wail modes. It also allows manual siren control in the Manual or Alert modes. Any siren tone can be re-programmed to a more desired tone. Another feature allows cycling through Wail, Yelp, Phaser, and Standby by providing a signal to the horn ring auxiliary wire when the function switch is in the Hands Free (HF) position. A Park Kill option is provided for connection to a door switch, etc. to disable the siren when exiting the vehicle. Radio and PA volume controls are provided on the front panel. The front panel is backlighted with LED's for night visibility. This compact unit utilizes short circuit, high voltage, low voltage, and reverse polarity protection systems for maximum service life.

Installation Notes

Proper installation of the unit is essential for years of safe, reliable operation. Please read all instruction **before** installing the unit. Failure to follow these instructions can cause serious damage to the unit or vehicle and may void warranties.

Qualifications - The installer must have a firm knowledge of basic electricity, vehicle electrical systems and emergency equipment.

Keep These Instructions - Keep these instructions in the vehicle or other safe place for future reference. Advise the vehicle operator of the location.

Unpacking - Inspect contents for shipping damage. If found, alert carrier immediately. Contents should include unit with microphone, mounting bracket w/ hardware, microphone bracket with 2 screws, wiring connector, and these instructions. Contact your supplier immediately if any components are missing.

Mounting Tips

- Mount in a location with adequate ventilation to prevent overheating.
- Devices should be mounted only in locations listed in SAE standard J1849.
- Controls should be placed within convenient reach of the driver.
- Assure clearances before drilling in vehicle.
- Sound levels produced by attached speakers can cause permanent hearing loss.
- Never operate this unit without adequate hearing protection for you and others in the area. (OSHA 1910.95)
- Consider wire routing and access to connections.
- Install mounting bracket to vehicle using 1/4" hardware (not supplied).

Care should be taken when positioning this unit and cord so that the unit and/or cord does not interfere with the proper operation of the driver-side or passenger- side airbag! Failure to heed this warning may result in serious or fatal injury!!!

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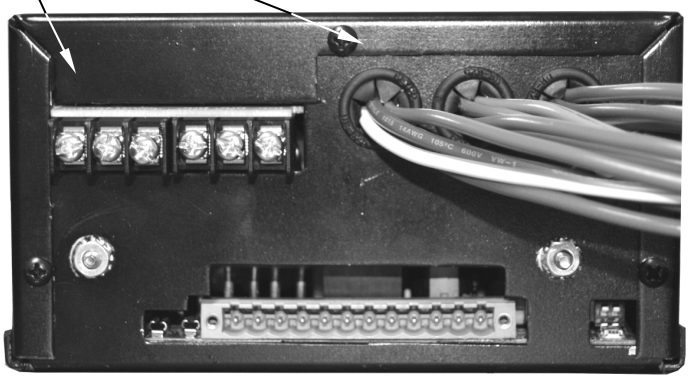
Electrical Connections

Electrical connections to this unit are made at several locations on the back of the siren:

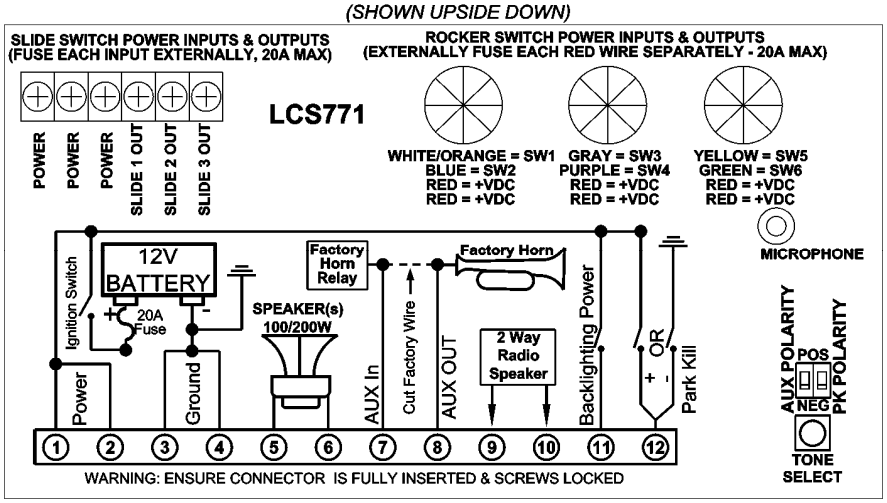
- Most siren related connections are made through the removable green 12-terminal connector located in the rear of the unit *(See below - Part # CPSS-153)*.
- Slide Switch power inputs and outputs are made through six metal screw terminals.
- Rocker Switch power inputs and outputs are made through three groups of loose wires that exit the rear of the unit.



Please note that this is an <u>upside down view</u> of the rear of the siren.

This allows you to see the wiring diagram located on the bottom of the siren, as well as giving you easier access to the screw heads found on the green terminal connector.

(SHOWN UPSIDE DOWN)



Wire Size and Termination

Examine the charts below to determine the proper gauge of the wire to use. Please review the following recommendations when making your electrical connections:

- For safety and reliability we highly recommend that you always use both Ground terminals (3 & 4 on the green connector) and all of the Power terminals (1 & 2 on the green connector, the three outer metal terminals, and the two red wires found in each wire bundle).
- Use only high quality crimp connectors. Make sure all connections are tight.
- Minimize the number of splices to reduce voltage drop.
- Route wiring to prevent wear, overheating, and interference with air bag deployment.
- Use grommets and sealant when passing through compartment walls.
- Ground connections should be made *directly to the negative of the vehicle battery*. Where not possible, only connect to substantial chassis components.
- Install and check all wiring before connection to vehicle battery.
- **CAUTION: All wires should be rated for at least 125% of their maximum current load. All wires connected to the positive terminal of the battery should be fused at the battery for their rated load.**
- Review the charts below that indicate the recommended wire gauge, based upon the length of the wire run and the current that will pass through the wire.

CPSS-153 WIRING GUIDE

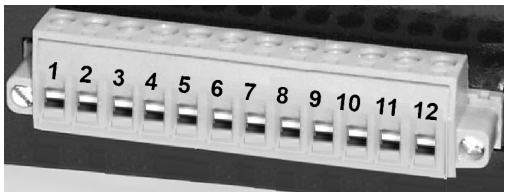
Terminal	Description	Typical Color	Typical Current	
1	Power	Red	10A*	20A Total
2	Power	Red	10A*	
3	Ground	Black	10A*	20A Total
4	Ground	Black	10A*	
5	Speaker 1	Brown	4A	
6	Speaker 2	Brown	4A	
7	AUX In	Green	3A	
8	AUX Out	Orange	3A	
9	Radio Repeat	Blue	0.1A	
10	Radio Repeat	Blue	0.1A	
11	Backlighting	Yellow	0.1A	
12	Park/Kill Input	White	0.1A	

*** 5A for LCS771-28**

RECOMMENDED WIRE GAUGE

Current	10'	20'	25'
< 2.0A	22 AWG	18 AWG	18 AWG
2.0-4.0A	18 AWG	16 AWG	16 AWG
4.1-5.5A	18 AWG	16 AWG	14 AWG
5.6-8.0A	16 AWG	14 AWG	14 AWG
8.1-12.0A	16 AWG	12 AWG	12 AWG

For ease of installation, you can remove the green connector from the siren while connecting your wires. Please note that when referencing terminal numbers using the wiring diagram on page 2, the screw heads face ***UP***, as pictured to the right.



Connections to the terminal block are summarized both in the chart above and in the wiring diagram on the previous page. For more detailed information, review the section on the following page.

Mandatory Electrical Connections

Ground - Connect terminals 3 & 4 of the green connector to the negative terminal of the battery.

⚠ ***(You MUST connect both of these terminals!!)***

Siren Power - Connect Terminals 1 & 2 of the green connector to a 10-16VDC ignition switched power source *(19-30VDC for the LCS771-28)*. Use minimum size #14 AWG wire.

⚠ ***(You MUST connect both of these terminals!!)***

Slide Switch Power - The three outer metal terminals are internally connected together and supply power to all three of the slide switch outputs. Connect at least one of these terminals (see chart below) through a 20 amp fuse to a 10-16VDC ignition switched power source. Use minimum size #14 AWG wire.

⚠

Total Current Draw Of All Slide Switch Lights	# of Connections to Input Terminals Required
0A-20A	1
21A-39A	2
41A-60A	3

Rocker Switch Power -Connect each red wire (six total) through a separate 20 amp fuse to a 10-16VDC ignition switched power source. Use minimum size #14 AWG wire.

⚠ ***(You MUST connect all 6 of these!!)***

Speaker - Connect terminals 5 and 6 of the green connector to your siren speaker.

⚠ ***(You MUST connect both of these terminals!!)***

Optional Electrical Connections

AUX IN/OUT - Terminals 7 & 8 of the green connector are typically connected to the steering wheel horn relay. They allow for several functions including siren operation in HF mode *(see **page 9**)*, Air Horn activation, or Manual "step up" function *(see **page 8**)*.

If you will be using any of these features, cut the wire that connects the horn relay to the horn. Connect the side from the relay to terminal 7. Connect the side from the horn to terminal 8. Review the wiring diagram on page 2 and ensure that you have the ***AUX Polarity*** DIP switch set for the correct polarity *(see **page 6**)*.

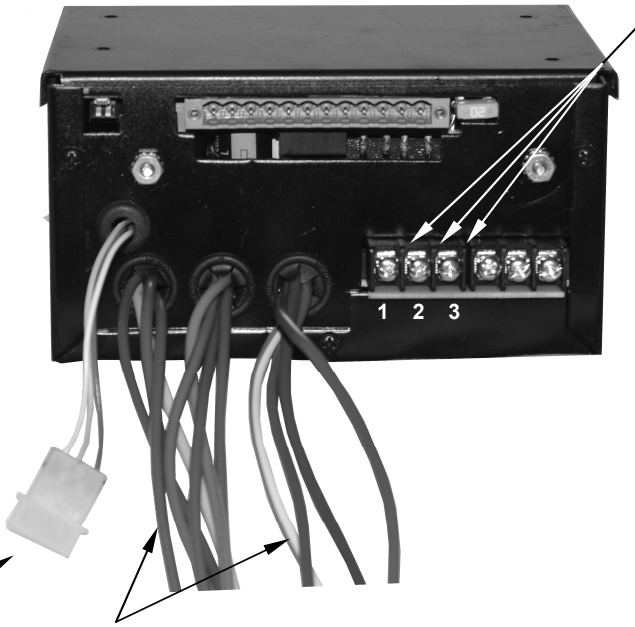
(You MUST connect both of these terminals as described above for proper operation of your vehicle horn!!)

Radio Repeat - If you would like the ability to re-broadcast your two-way radio over your siren speaker, connect terminals 9 & 10 of the green connector to the two-way radio speaker or output connector of the two-way radio.

Backlighting - Connect terminal 11 of the green connector to the dash lights, ignition switched power, or other switched 10-16VDC *(19-30VDC for the LCS771-28)* power source. This controls the backlighting for the face of the siren.

Park/Kill Feature - If you would like the siren to automatically disengage when the vehicle door is opened or when the vehicle is placed into park, connect terminal 12 of the green connector to the dome light, added door switch, or added park switch. Review the wiring diagram on the page 2 and ensure that you have the ***PK Polarity*** DIP switch set for the correct polarity *(see next page)*.

Slide Switch - *(Metal Terminal Block)* Connect the lights that you wish to activate with each corresponding slide switch position to the three metal terminals located towards the center of the siren (20A max each).
(Note: the second slide switch position activates both 1 and 2 and the third slide switch position activates 1, 2, and 3).



SW1 - SW6 - *(Bundled Wires)* Connect the lights that you wish to activate with each switch (S1-S6) to the corresponding wire color indicated in the wiring diagram on page 2 (20A max each).

Microphone - *(Connector With Red, Yellow, and White Wires)* If you ordered a model with the optional microphone (30232-2AMP), attach it to this connector (see page 11).

Installer Selectable Options

DIP Switch Settings:

There are two banks of DIP switches that control various options on this siren, a bank of 7 switches and a bank of 2 switches.

7 DIP Switch Bank

While facing the siren, on the left side of the box you will find an opening that allows you access to 7 DIP switches.

Please review the functions of each below:

1 Slide Switch ❷ also activates ❶. ***(default=ON)***

2 Slide Switch ❸ also activates ❶. ***(default=ON)***

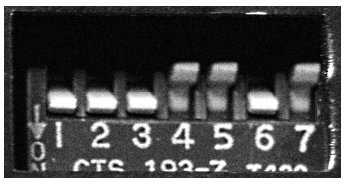
3 Slide Switch ❸ also activates ❷. ***(default=ON)***

4 Slide Switch ❶ activates Wail tone. ***(default=OFF)***

5 Slide Switch ❷ activates Wail tone. ***(default=OFF)***

6 Slide Switch ❸ activates Wail tone. ***(default=ON)***

7 Siren Backlighting only comes on with On/Off PA volume knob. ***(default=OFF)***

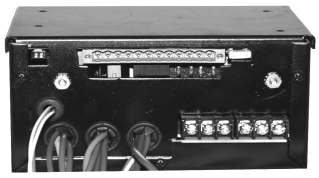


(Picture shown <u>upside down</u>.)

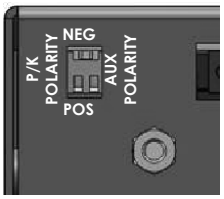
Flip the DIP switch accordingly to change any of the options. Towards the number ENABLES the option, away from the numbers DISABLES the option. The default switch positions are shown in the picture above.

2 DIP Switch Bank

(Auxiliary AND Park-Kill Input Polarity)



On the back of the siren, in the upper left hand corner, you will find an opening that allows you access to 2 DIP switches that allow you to change whether your Auxiliary and Park Kill inputs are positive or negative.



The Auxiliary input (terminal #7) and Park Kill input (terminal #12) are normally activated by applying a positive voltage to the appropriate terminal. If you would like to activate either function by connecting it to ground (negative) instead, use the DIP switches located on the back of the siren.

The default setting for both switches (Positive Switching) is such that the DIP switches are flipped AWAY from the closest edge of the siren *(i.e. DOWN in the picture to the right)*. To have either function activated when the input is grounded, flip the corresponding switch in the opposite direction (TOWARDS the edge of the siren).

(Installer Selectable Options CONT'D)

Optional Tone Programming

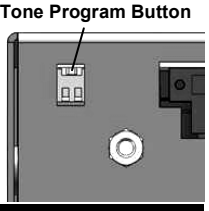
The LCS771 will produce 7 different tones/sounds by activating its various functions:

Function	Default Tone
Phaser Step Up (PHSR+MAN)	Two-Tone
PHSR	Phaser
YELP	Yelp
WAIL	Wail
MAN	Ramp Up
HORN	Air Horn
AUX	Air Horn

Proceed below if you wish to reprogram any of these functions for a different tone.

1. Power up the unit.
2. Activate the function you wish to change.
   - For PHSR, WAIL, and YELP functions, rotate the selector knob into the corresponding position.
   - For the MAN, HORN, or AUX functions, rotate the selector knob into the MANUAL or ALERT position, then press **and hold** the **MAN** button, **HORN** button, or **steering wheel horn**, respectively.
   - For the *Phaser Step Up function*, rotate the knob into the **PHSR** position, then press and release the **MAN** button.

   The tone currently programmed for that function will sound.
3. The ***Tone Program*** button can be found above the DIP switches on the rear of the siren. Using a paper clip, press and release it to cycle through the list of optional tones. *Review the chart below for the list of optional tones.*
4. De-activate the function to save the new tone.



Optional Tones

Tones For WAIL, YELP, and PHSR, and Phaser Step-Up Function	
1	WAIL *(Wail default)* §, *, †
2	YELP *(Yelp default)* §, *
3	PHASER *(PHSR default)*
4	TWO-TONE *(PHSR Step Up default)*
5	MECHANICAL WAIL (FIRE ENGINE) †
6	MAX YELP §, *
7	HOOT
8	RAPID HOOT
9	AIR HORN & YELP
10	GHOST
11	RAPID GHOST
12	SINGLE AIR HORN
13	SINGLE QUICK
14	DOUBLE POST POP AIR HORN
15	TWO TONE AIR HORN
16	STANDARD AIR HORN
17	CONTINUOUS TONE
18	CONTINUOUS BEEP

Tones For MAN Button and AUX Wire	
1	STANDARD AIR HORN *(AUX default)*
2	LOW FREQUENCY AIR HORN
3	RAPID AIR HORN
4	AIR HORN II
5	DOUBLE POST POP AIR HORN
6	SINGLE AIR HORN
7	SINGLE QUICK AIR HORN
8	TWO TONE AIR HORN
9	MANUAL *(MAN default)* *
10	MECHANICAL MANUAL (FIRE ENGINE)

Tones for Horn Button	
1	STANDARD AIR HORN *(default)*
2	LOW FREQUENCY AIR HORN
3	RAPID AIR HORN
4	AIR HORN II
5	DOUBLE POST POP AIR HORN
6	SINGLE AIR HORN
7	SINGLE QUICK AIR HORN
8	TWO TONE AIR HORN

►►►► System Reset ◄◄◄◄

If you would like to reset ALL of the siren programming options to their defaults, activate any tone and press the ***Program button*** for nine (9) seconds. The LED will flash once, then twice, then three times, and all siren tones will stop.

§ = SAE approved
* = California Title 13 approved when configured properly
† = See next page

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(Installer Selectable Options CONT'D)

Wind Down or Hard Stop Option †

By default, the Wail tones indicated by the "†" in the Optional Tone list on the previous page will "wind down" when they are de-activated. If you prefer to have them immediately stop (i.e. hard stop), hold the Program Button for 3 seconds (until the LED flashes once). This will change it to a hard stop. Repeat to change back to the wind down option.

Tone Disable Option

Some municipalities may ban the use of specific tones, such as the ***Phaser*** tone. Review the *Optional Tone Programming* feature described on the previous page to reprogram the **PHSR** default tone from **Phaser** to any of the other tones listed.

Auxiliary-Manual Function Option

By default, when the siren is in **PHSR**, **YELP**, or **WAIL** modes, and the AUX function is activated (typically by the steering wheel horn relay), the siren will produce the standard Air Horn Tone (#1 in the Optional Tones list) and temporarily override the siren tone. If you would rather have the AUX function (i.e. steering wheel horn) mimic the MAN button *(see MAN button functions on page 9)*, then you should program the AUX function for tone #9 (Manual) or #10 (Mechanical Manual). To do this, follow the procedure outlined on the previous page.

Specifications

Input Voltage	10 - 16 VDC (LCS771) or 19-30VDC (LCS771-28) - Negative ground
Input Current (LCS771)	8.0 Amps @ 13.6 VDC (single 100W speaker) 16 Amps @ 13.6 VDC (dual 100W speakers)
Input Current (LCS771-28)	4.0 Amps @ 28 VDC (single 100W speaker) 8 Amps @ 28 VDC (dual 100W speakers)
Standby Current	Switch Off/Backlighting Off - Less than 4 mA Switch On/Backlighting Off - Less than 7 mA Switch Off/Backlighting On - Less than 18 mA Switch On/Backlighting On - ≈ 22 mA
Audio Frequency	200Hz - 10 kHz ± 3db
Output Power	105 WATTS RMS MAX. (15.0 VDC - single 100W speaker) 200 WATTS RMS MAX. (15.0 VDC - dual 100W speakers)
Siren Frequency	675Hz - 1633Hz
High Voltage Protection	>16VDC will cause siren output to cease, resumes at normal voltage (>30VDC for the LCS771-28)
Short Circuit Current	50 AMPS (supply circuit must be capable of supplying this)
Operating Temperature	-22° F to +140°F
Diagnostic Indicator	LED indicator provides diagnostic feedback
Connections	Detachable 12-terminal connector, attached 6-terminal block, 12 loose wires
Size	6" Wide, 5.8" Deep, 2-1/2" High
Shipping Weight	6 lbs.

Operation

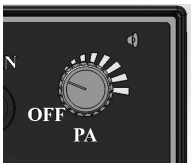
General

This unit is designed for easy operation under the stress associated with high-speed pursuit. Most siren functions are accessible with one simple motion without repetitive activation of switches or automatic timed switching that can interfere with desired operation.

Power/PA Knob

The **PA** knob is located in the upper right hand corner of the front face. It has two functions:

ON/OFF - This knob turns the siren on and off. While in the OFF position none of the siren functions will work. Also, the vehicle horn will function normally, if connected properly.



PA Volume Control - This knob also provides you the ability to adjust the public address volume. It should be set when the vehicle is parked. Typically you should set the PA volume to the maximum possible level with no feedback (squeal).

Selector Switch

The rotary selector switch controls the primary operating function of the siren.

PHSR - Ultra-fast changing tone used for maximum attention.

YELP - A rapidly changing tone used in congested areas.

WAIL - A slower changing tone used on highways.

HF - Hands Free - A silent standby mode also known as Horn Ring Cycler. Allows the user to cycle through the tones programmed for the WAIL, YELP, PHSR, and OFF by repeatedly pressing the horn or other switch connected to the AUX input. Changing the rotary knob to any other mode will resume normal siren operation.

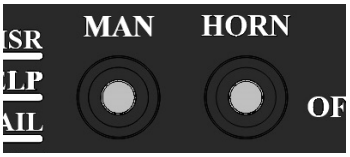
MAN - A silent standby mode that allows push-button Manual, push-button Horn, and Public Address operation. The siren output winds down when the MAN button is released.

ALERT - A silent standby mode that allows push-button Manual, push-button Horn and Public Address operation. The siren output terminates immediately when the MAN button is released.

RADIO - Also known as Radio Repeat, this function amplifies a **two-way** radio speaker input for re-broadcast outside the vehicle. The PA remains functional, but no siren tones are available in this position.

(Operation CONT'D)

The front panel of the LCS771 contains two momentary push-button switches for the Manual function and the Air Horn.



MAN Button

Rotary Switch Position	*Function When MAN Pressed*
MAN or HF	Produces a rising siren tone while being pressed. The siren output "winds down" when the MAN button is released. *(Note: The MAN button has no effect when in HF mode and a tone is active.)*
ALERT	Also produces a rising tone, but the siren output immediately stops when the button is released.
PHSR/YELP/WAIL	The MAN button will "step" the siren up to the tone programmed for the next function: (**WAIL➡YELP➡PHSR➡Phaser Step Up**) These quicker tones are used to momentarily alert motorists at intersections and very highly congested areas. Pressing the MAN button once changes to the next faster tone. Pressing the MAN button again, reverts the siren back to the original tone.

HORN Button

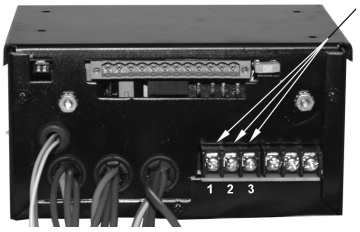
Pressing the HORN button provides a simulated air-horn tone while pressed. This can be used to either replace or to supplement the normal vehicle horn and is useful at intersections. This tone will override all other siren tones. *See page 7 for programming optional Air Horn tones.*

Slide Switch

The slide switch is designed for quick pursuit mode operation. The far left position (OFF) will not activate any outputs.

Position ❶: Activates the first set of lights (connected to Terminal 1 shown to the right).

Position ❷: Activates both the 1st and 2nd set of lights (connected to Terminal 2 shown to the right).



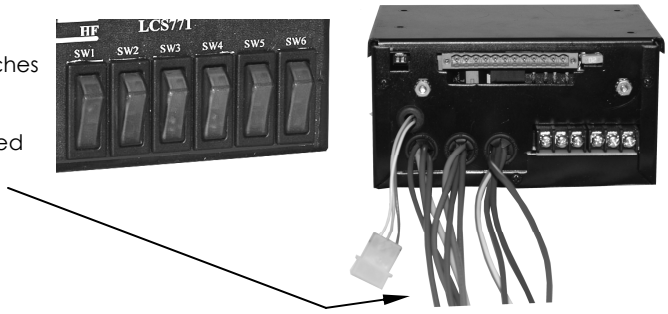
Position ❸: Generally used for the ***FULL PURSUIT MODE***. It allows for quick activation of both the lights and the siren in one motion. When the slide switch is moved to **Position ❸**, all three sets of lights (connected to all 3 terminals) will activate and the siren will go into WAIL mode.

Note: The auto-activation of the siren may be disabled or enabled for other slide switch positions, if desired. *(Refer to the **DIP Switch Settings** section on page 6)*.

(Operation CONT'D)

Rocker Switches

6 lighted rocker switches control the devices connected to the corresponding colored wires described on pages 2-5.



Radio Volume

The radio repeat volume (Radio) control is recessed in the upper left hand corner of the front face. This should be set when the vehicle is parked. First set the volume level of the vehicle's two-way radio to its normal operating volume. Adjust the siren's rotary selector switch into the RADIO position. Insert a small, flat blade screwdriver into the RADIO volume adjustment port. Turn in a clockwise direction to increase the sound level.

Auxiliary Input

The auxiliary input may be connected to the vehicle horn ring or other switching device *(see pages 2-4)*. It provides the same operation as pressing the HORN button or can be programmed to function like the MAN button.

Park-Kill Cutout

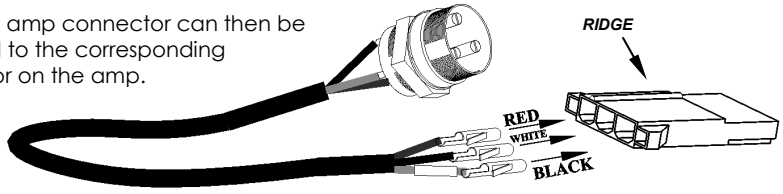
During installation, the Park-Kill input may be connected to a door switch *(see page 2)*. It will automatically turn off any siren tone when the door is opened. The siren tone will continue to be cut off even when the door is closed. Changing any switch or input will restore normal function.

Detachable Microphone *(Included with LCS771 / Optional for the LCS771-LM)*)

The microphone (P/N P30232-2) can be used for public address operation. It will override any siren tone when its push-to-talk (button on the side) is pressed.

Connect the microphone to the adapter harness (SWH-40). Review the diagram below for proper pin layout. Note the ridge in the connector.

The white amp connector can then be attached to the corresponding connector on the amp.



STARSIGNAL VEHICLE PRODUCTS

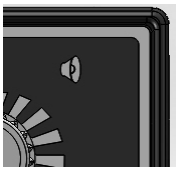
Troubleshooting

This unit is designed to provide years of reliable service under even the worst conditions. Many times there may appear to be a problem with the unit when the true problem is in the speaker(s) or improper installation. The following chart shows typical symptoms and possible causes.

Symptom	Possible Cause	Check
No power	Connector loose	Check connector
	Siren 20A fuse blown	Is power hooked up backwards? Positive ground vehicle? Is an external fuse or circuit breaker used?
	Loose connection at power source	Are the negative leads connected to a good ground?
No siren tone - PA works	High voltage protection	The input voltage must be less than 16 volts for LCS771 or less that 34 volts for LCS771-28.
	Low voltage protection	The input must be greater than 10V (LCS771) or 19V (LCS771-28) with the siren turned on.
	Microphone button stuck	Does microphone button release properly?
No siren tone - No sound	Park Kill polarity option set wrong	Is the PK jumper option properly configured?
	Park Kill activated	Does the siren work when Park Kill input is disconnected?
	Bad speaker or speaker wiring	Check for a short. Check for an open.
No PA	PA volume not set properly	Have you tried turning the PA volume control?
Distorted siren sound	Speaker assembly loose	Is the speaker bell or tip loose?
	Intermittent Aux. Input connection	Is the Aux. Input connected properly to horn relay?
	Low or high vehicle voltage	Input voltage must be between 10-16 volts (LCS771) or 19-30volts (LCS771-28) while siren is on and drawing full current.
Intermittent siren tone	High voltage protection	Is the vehicle voltage regulator working properly?
	Low voltage protection	Is the connector tight on the back of the unit? Is there a loose connection on a power lead? The input must be greater than 10V (LCS771) or 19V (LCS771-28) with the siren on and drawing full current.
	Microphone button activation	Is something lying on the microphone?
	Circuit breaker in supply connection	Is a circuit breaker used with at least a 50A rating?
	Shorted speaker or speaker wire	Does the speaker have water damage, or is a wire pinched?
Horn function or Manual or Phaser stuck on	Manual or Horn push buttons stuck	Does the switch return fully when released?
	Aux. Input improperly connected	Is the Aux. Input used and wired properly?
	Aux. Input Polarity Option set wrong	Is the AUX polarity jumper option properly configured?
No Radio	Unit not connected to radio	Is the radio connected properly to the unit?
	Radio volume too low	Can you hear the radio in the vehicle? Adjust the Radio volume control
Wrong siren tone	Siren tones programmed incorrectly?	Re-program tones/Use System Reset (page 7-8)
Rocker Switch not functioning	No power through switches	Check the wiring connections and verify voltage on the rocker switch input **and** output wires (bundled)
Slide Switch not functioning	No power through switch	Check the wire connections and verify voltage at the slide switch input **and** output terminals

Speaker Diagnostics

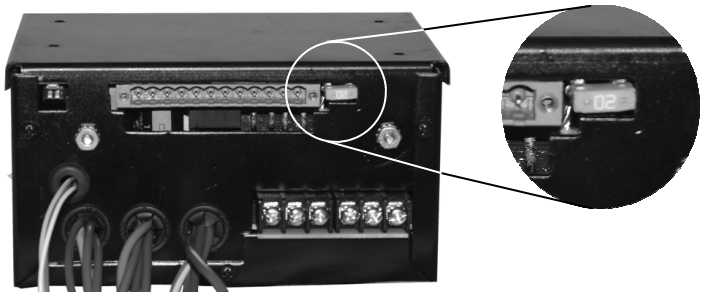
There is a diagnostic LED shaped like a speaker located in the upper right hand corner of the front panel. This LED will only turn on while a tone is trying to be generated. It can be used to help identify the siren/speaker status.



Steady - Speaker is connected and operating properly.
Single Flash - Standby Mode
Double Flash - Short/Over Current
Triple Flash - Park-Kill Activated
Quad Flash - Improper Voltage (too high or low)
Off - No speaker is connected, or
- The siren is Off, or
- The speaker or wire connection has come loose or is electrically open

Fuse

This audio and logic circuitry in this unit is protected by a 20A automotive type fuse located on the back of the siren. If it blows, be sure to identify the cause of the blown fuse prior to replacing it.



Please note: *There should also be separate user supplied fuses on all of your power input wires.*

Service

Parts

Part	Description
S30234-37	Siren Top Cover
S30235-37	Siren Bottom Mounting Plate
P30069-38	Microphone Bracket with Screws
P30056-16	1/4-20 x 3/8" Hex Locking Bolt
P30028-23	20 Amp Automotive Fuse
P30232-2	Optional Noise Cancelling Microphone
SWH-40	Adapter Cable (Mic to Amp)
30232-2AMP	Optional Noise Cancelling Microphone With Adapter Cable
P30208-10	Microphone Strain Relief
P30032-8	TIP36CPowerTransistor
P30239-1	Rotary Selector Switch Knob
P30147-44P	Mounting Bracket
P30052-30	Case Screws

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An ISO 9001:2008 Certified Company

ONE YEAR LIMITED WARRANTY

The manufacturer warrants each new product against factory defects in material and workmanship for one year after the date of purchase. The owner will be responsible for returning to the Service Center any defective item(s) with the transportation costs prepaid. The manufacturer will, without charge, repair or replace *at its option*, products, or part(s), which its inspection determines to be defective. Repaired or replacement item(s) will be returned to the purchaser with transportation costs prepaid from the service point. A copy of the purchaser's receipt must be returned with the defective item(s) in order to qualify for the warranty coverage. Exclusions from this warranty include, but are not limited to, bulbs, strobe tubes, domes, and/or the finish. This warranty shall not apply to any light, which has been altered, such that in the manufacturer's judgment, the performance or reliability has been affected, or if any damage has resulted from abnormal use or service.

There are no warranties expressed or implied (including any warranty of merchantability or fitness), which extend this warranty period. **The loss of use of the product, loss of time, inconvenience, commercial loss or consequential damages, including costs of any labor, are not covered**. The manufacturer reserves the right to change the design of the product without assuming any obligation to modify any product previously manufactured.

This warranty gives you specific legal rights. You might also have additional rights that may vary from state to state. Some states do not allow limitations on how long an implied warranty lasts. Some states do not allow the exclusion or limitation of incidental or consequential damages. Therefore, the above limitation(s) or exclusion(s) may not apply to you.

If you have any questions concerning this or any other product, please contact our **Customer Service Department** at (585) 226-9787.

If a product must be returned for any reason, please contact our Customer Service Department to obtain a Returned Materials Authorization number (RMA #) before you ship the product back.
Please write the RMA # clearly on the package near the mailing label.

NOTICE

Due to continuous product improvements, we must reserve the right to change any specifications and information, contained in this manual at any time without notice. Signal Vehicle Products and/or the manufacturer make no warranty of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Signal Vehicle Products and/or the manufacturer shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this manual.

Star Headlight & Lantern Co., Inc.
455 Rochester Street Avon, NY 14414 Phone: 585-226-9787 FAX: 888-478-2797
STAR WARNING SYSTEMS® STARSIGNAL® VEHICLE PRODUCTS BRADFORD Vehicle Solutions www.starheadlight.com
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