Tomar 940L-DCP Digital Control Panel
Operation & Programming Instructions
Emergency Vehicle Warning Lightbar & Auxiliary Accessory Control System

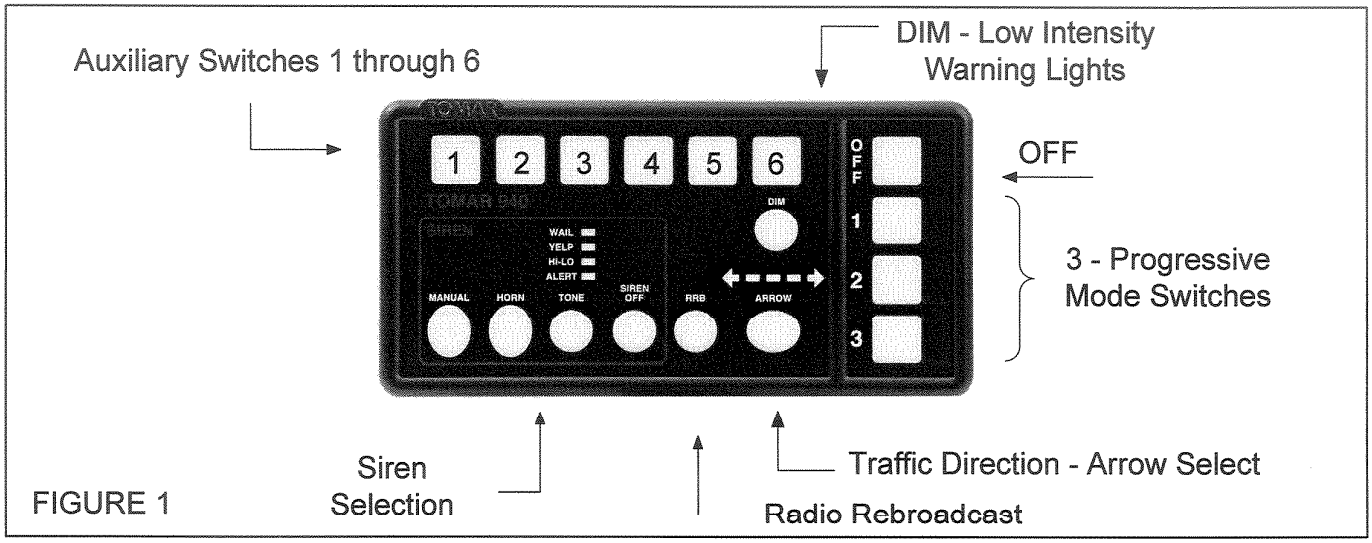

FIGURE 1

Tomar 940L-DCP Digital Control Panel Features:

- 3 - Progressive Mode Switches
- 6 - Programmable Auxiliary Switches
- DIM - Low Intensity Warning Light Activation
- Traffic Direction - Arrow Selection
- Radio Rebroadcast (when used with 940L-SIREN)
- Siren Control (when used with 940L-SIREN)
- Program Security - Programming access UNLOCKED (Factory Default)

Features detailed on page 2

Using the Tomar 940L-DCP Digital Control Panel To:

➢ **Control a 930L or 930NL Lightbar - using the Tomar 940L-SIREN**

The 940L-SIREN can be used to operate any of the 930L or 930NL Lightbars. Reference the IS0940L-SIREN Operation & Installation Instructions.

➢ **Control a 930LD Lightbar - using the Tomar 940L-DCP**

The 940L-DCP can be used to operate an 930LD Lightbar. Reference the IS0930LD Instructions.

➢ **Custom Program a Tomar 930L Lightbar - using the Tomar 940L-DCP**

The 940L-DCP Digital Control Panel can be directly connected to a 930L-24 LED Flasher to program any of the 930L Lightbars. Reference the IS0930L Instructions.

➢ **Custom Program a single Tomar 940L-DCP**

The 940L-DCP Digital Control Panel can be custom programmed.
Page 2 - Detailed Factory Default settings.
Page 3 - UNLOCKED programming instructions (Factory Default)
Page 4 - LOCKED programming instructions

➢ **Custom Program another Tomar 940L-DCP - using Tomar 940L-DCP (MASTER)**

A custom programmed 940L-DCP (MASTER) can be linked to another 940L-DCP (SLAVE) for rapid programming download. See page 9 for rapid programming instructions.

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➢ Factory Defaults and Programmable Features of the Tomar 940L-DCP

Personalize the 940L-DCP by custom programming some, or all, of the features detailed below.

AUXILIARY switches # 1 through 5 are factory default Toggle-On-Off, AUXILIARY switch # 6 is factory default Momentary. Each AUXILIARY switch can individually be programmed to Momentary, Time-Delay or Toggle-On-Off. However, AUXILIARY switch # 6 can be programmed to lower the volume of the Radio Rebroadcast / Microphone for use with the 940L-SIREN.

AUXILIARY	DEFAULT	PROGRAMMABLE
AUX # 1	Toggle-On-Off	Momentary or Time-Delay
AUX # 2	Toggle-On-Off	Momentary or Time-Delay
AUX # 3	Toggle-On-Off	Momentary or Time-Delay
AUX # 4	Toggle-On-Off	Momentary or Time-Delay
AUX # 5	Toggle-On-Off	Momentary or Time-Delay
AUX # 6	Momentary	Time-Delay or Toggle-On-Off or RRB/MIC Volume

The **3-PROGRESSIVE MODE** switches are Toggle-On-Off and are illuminated when activated. Mode 1 activates (1) control wire, Mode 2 activates (1 & 2) control wires and Mode 3 activates (1, 2 & 3) control wires. Each of the modes can have any, or all, of the AUXILIARY switches custom programmed to activate when the mode is selected. However, AUXILIARY # 6 can not be associated with a mode activation when programmed for RRB/MIC Volume control.

The **ARROW** is a Toggle-On-3 Cycle-Off button. The initial Traffic Direction mode is Left Arrow, followed by Right Arrow, Center-out and Off. The Traffic Direction selected will be indicated by the arrow display above the ARROW button.

The **ARROW** features can be activated independently, or in conjunction with, the **3-PROGRESSIVE MODE** switches.

The **DIM** switch is a Toggle-On-Off and is illuminated when Low Intensity Warning Light is activated.

The **OFF** switch will deactivate the active switches in the following order; 3-MODE switches, the ARROW switch, and all AUXILIARY switches. If all three are active, the first press of the OFF switch will deactivate the 3-MODE switches, the second press will deactivate the ARROW switch, and the third press will deactivate all the AUXILIARY switches. When programmed as RRB/MIC volume control, the AUXILIARY # 6 can not be deactivated by the OFF switch.

➢ Additional Features of the Tomar 940L-DCP when used with the 940L-SIREN

The **SIREN OFF** switch is Toggle-On-Off and is illuminated when OFF. With SIREN OFF, the MANUAL tone (Manual WAIL) and HORN may still be activated. The status of the SIREN OFF button will be retained even when power is removed from the 940L-DCP. When programmed for **Independent** control, the SIREN OFF status will not be retained when power is removed.

The **SIREN TONE** and **MANUAL** secondary tone can only be activated in Mode 3, and will be Off or On based on the last state of the SIREN OFF button.

The **TONE** switch allows the operator to change the selected tone to any 1 of 4 tones programmed as WAIL, YELP, HI-LO or ALERT. The factory default tone is WAIL. The last tone selected will remain the initial tone until the operator selects another. If power is removed, the default tone is restored.

The **MANUAL** button, when the SIREN Tone is not activated, will momentarily sound the MANUAL WAIL Tone. When the SIREN Tone is activated, the MANUAL button sounds the associated secondary tone for 4.5 seconds, or until the MANUAL button is pressed again. The factory default secondary tone for WAIL is YELP. The 4 TONE positions (WAIL, YELP, HI-LO and ALERT) all have an associated secondary tone, which can be custom programmed to any 1 of the 7 available tones.

The **HORN** button is a Momentary switch which activates the 940L-SIREN Electronic Air Horn.

The **RRB** (RADIO REBROADCAST) Toggle-On-Off button when activated will transmit radio or dispatch audio through the 940L-SIREN.

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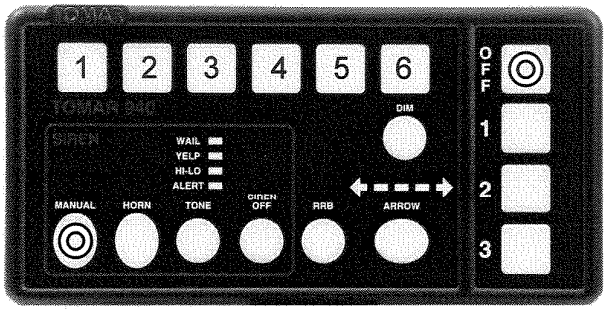


➢ **Programming a single UNLOCKED Tomar 940L-DCP (Factory Default)**

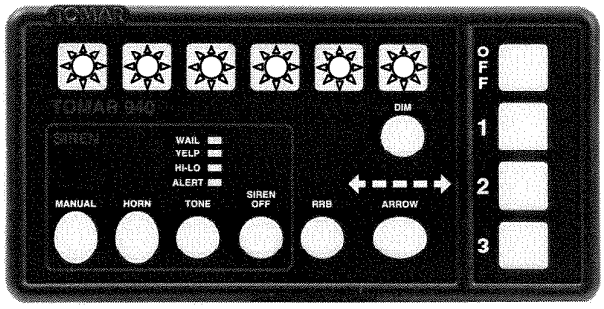
CAUTION: MAKE ALL CONNECTIONS BEFORE APPLYING POWER.

There are 2 ways of powering the 940L-DCP in order to enter programming mode.

1.) Using the 940L-SIREN-R: Connect the 940L-DCP to the Master RJ-45 port of a 940L-SIREN-R by using a Tomar RJ-45 CAT5 cable. The 940L-DCP is then energized when power is applied to the 940L-SIREN-R.

2.) Using the 940L-SIREN: The 940L-DCP is then energized when power is applied to the 940L-SIREN.

ENTER PROGRAMMING MODE: Press and hold, the **MANUAL** and **OFF** switches for 2 seconds simultaneously. The AUXILIARY switches 1-6 will blink three times to indicate successful activation of the 940L-DCP programming mode.



Go to page 5 for detailed programming instructions.

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➢ Programming a LOCKED Tomar 940L-DCP

ACCESS the PROGRAMMING JUMPER: To custom program a 940L-DCP which has been LOCKED, first remove the 4 side screws that secure the faceplate, then remove the 5 screws that secure the back plate. Locate the J2 Program Jumpers on the 940L-DCP printed circuit board. Refer to Figure 2 and note the location of the jumpers as installed from the factory for Operational Mode. For Programming Mode, remove the single jumper from the RUN location and install the jumper in the PGM location. Refer to the enlarged jumper diagrams in Figure 3.

CAUTION: MAKE ALL CONNECTIONS BEFORE APPLYING POWER.

ENTER PROGRAMMING MODE: When the jumper is installed for Programming Mode, the 940L-DCP will enter programming when power is applied. There are 2 ways of powering the 940L-DCP in order to enter programming mode.

1.) Using the 940L-SIREN-R: Connect the 940L-DCP to the Master RJ-45 port of a 940L-SIREN-R by using a Tomar RJ-45 CAT5 cable. The 940L-DCP is then energized when power is applied to the 940L-SIREN-R.

2.) Using the 940L-SIREN: Connect the 940L-DCP to the 940L-SIREN by using the existing Tomar RJ-45 CAT5 cable. The 940L-DCP is then energized when power is applied to the 940L-SIREN.

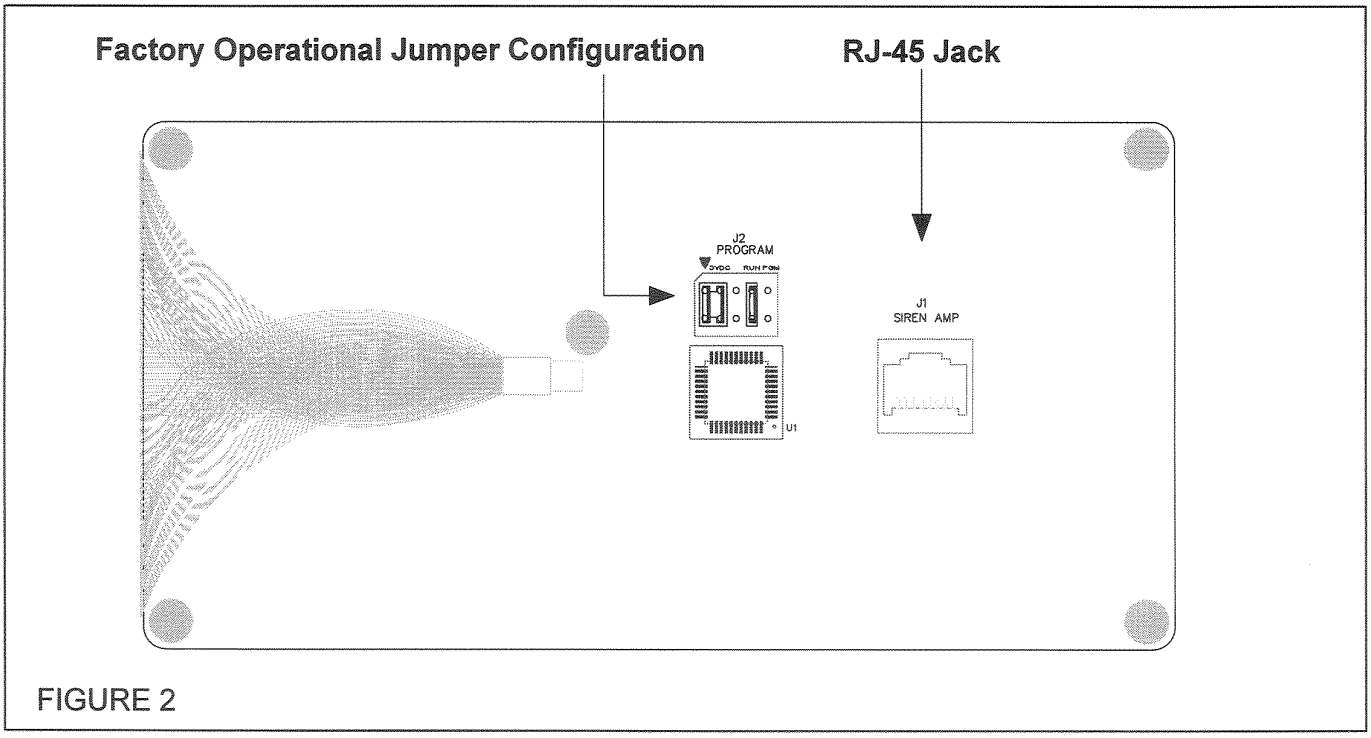

FIGURE 2

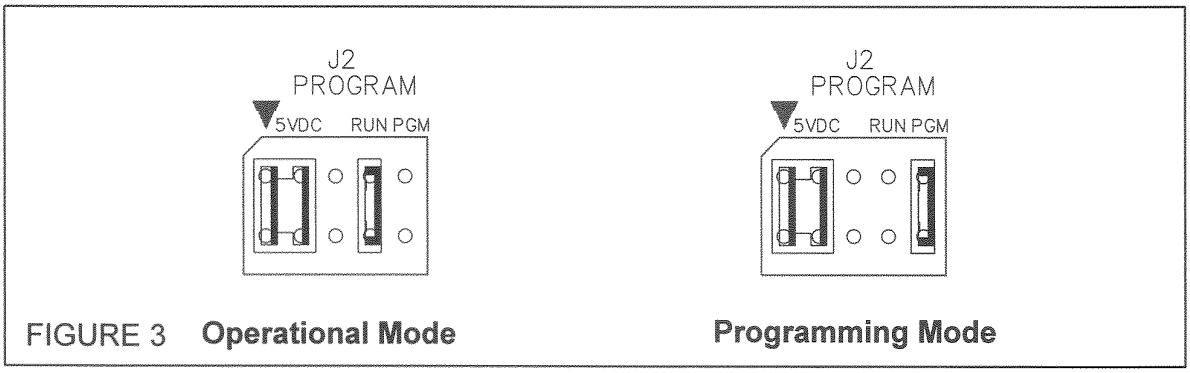

FIGURE 3 **Operational Mode** **Programming Mode**

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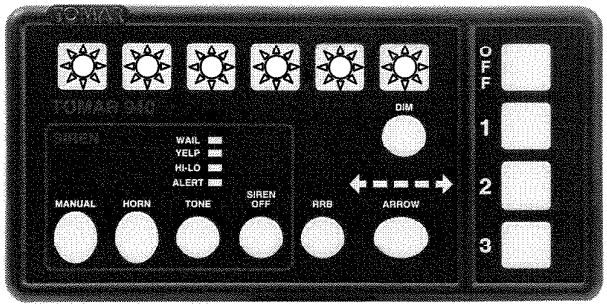
Entering 940L-DCP Programming Mode: Access programming mode as described on the previous pages for an UNLOCKED or a LOCKED 940L-DCP, and maintain power.

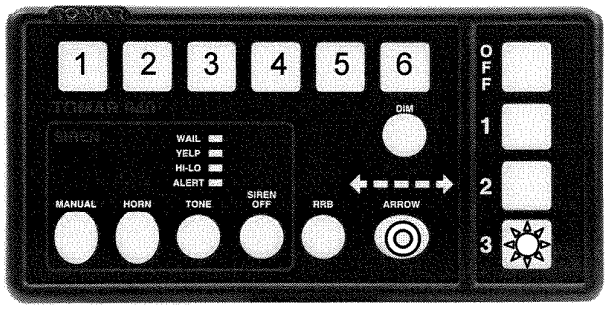
A. Once the 940L-DCP Programming Mode has been accessed, the Auxiliary switches 1-6 will blink three times to indicate successful activated programming mode.



CAUTION: The 940L-DCP Factory Default is Profile L. The 940L-DCP can be set for an alternate Profile N1 or Profile N2. Verify the 940L-DCP is set to the correct profile for proper operation of the DIM switch in your application.

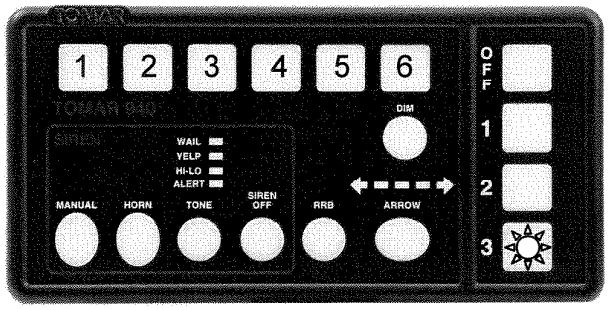
940N-DCP with Profile L is used for controlling a Tomar 930L.

For Profile L, when the MODE 3 switch is pressed, the ARROW switch is activated and the DIM will not be displayed.



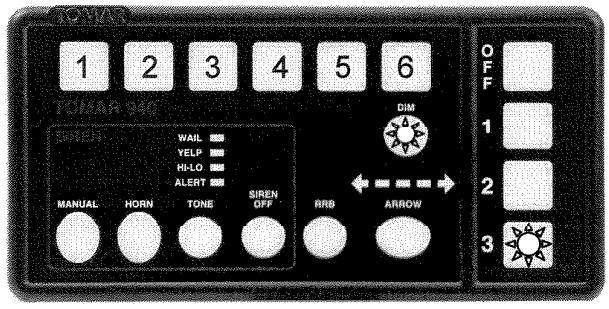
940N-DCP with Profile N1 is used for controlling a Tomar 930N or 930NH which has the older 930 power supplies.

For Profile N1, when the MODE 3 switch is pressed, the DIM and the ARROW should NOT be displayed.



940N-DCP with Profile N2 is used for controlling a Tomar 930N or 930NH which has the new 930SM power supplies.

For Profile N2, when the MODE 3 switch is pressed, the DIM should be displayed and the ARROW should NOT be displayed.



To Configure Profile N1 or N2:
Press MODE 3 and toggle the ARROW Off.
DIM ON for Profile N2
DIM OFF for Profile N1
Press OFF to save profile setting.

To Configure Profile L:
Press MODE 3 and then activate the ARROW switch
Press OFF to save profile setting.

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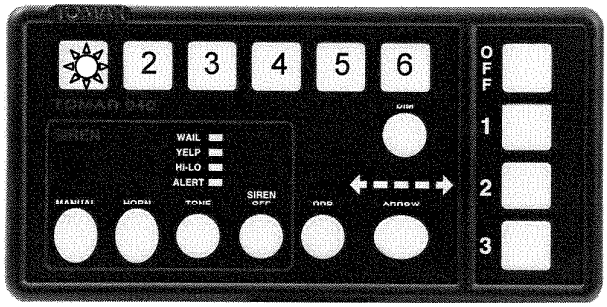
There are 5 areas of operation that can be custom programmed. These features can be programmed in any order. Press OFF once to exit and save each phase of the programming. **WARNING**: The 2nd consecutive time OFF is pressed the programming mode is ended and the 940L-DCP will be **UNLOCKED**.

- Modify individual AUXILIARY switch activation types
- Associate some or all of the AUXILIARY switches to active with a MODE switch
- Select the initial SIREN TONE
- Modify the associated MANUAL Secondary Tone for one or all of the SIREN TONES
- Select how the SIREN TONE is activated.

A.) Modify individual AUXILIARY switch types.

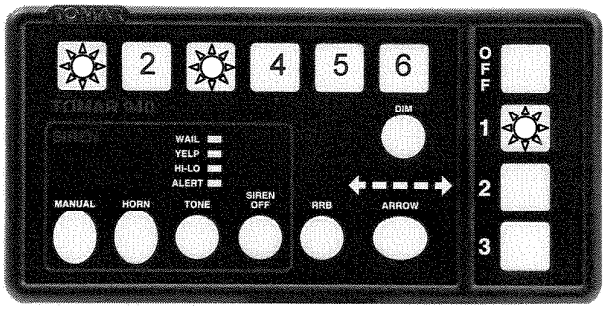


Press an Auxiliary switch to activate.
Press the Auxiliary switch repeatedly until the desired switch flash display is indicated.
Press OFF.
Repeat to modify other Auxiliary switches.

Illuminated	Switch Activation Type
Steady	Toggle-On-Off
Single Flash	Momentary
Double Flash	Time-Delay (Approximately 8 Second On-Time)
Triple Flash	RRB / MIC Volume Control (Aux # 6 Only)

NOTE: Aux # 6 RRB/MIC volume control, when activated will lower the volume in operational mode.

B.) Associating one or more AUXILIARY switches to activate with a MODE switch. The operator is able to manually activate or deactivate the Auxiliary switches regardless of programming.



Example: Aux # 1 & 3 to activate in Mode 1

Press Mode 1 - Press desired active Auxiliary Switches for Mode 1.
Press OFF.
Press Mode 2 - Press desired active Auxiliary Switches for Mode 2.
Press OFF.
Press Mode 3 - Press desired active Auxiliary Switches for Mode 3.
Press OFF.

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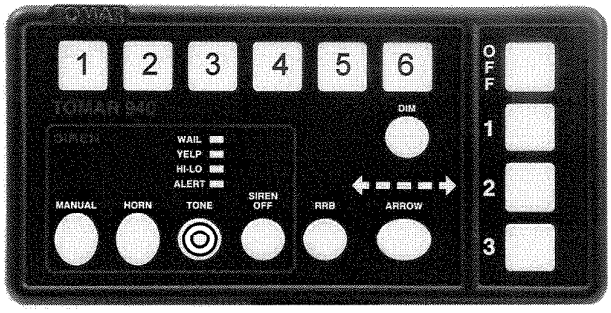
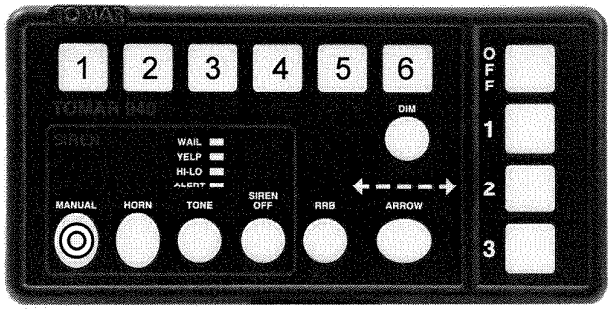
C.) Selecting the initial SIREN TONE.
The operator is able to manually select, activate and deactivate the SIREN tone regardless of programming.

Press TONE.
Press TONE repeatedly until the desired initial tone is illuminated.
Press OFF.



D.) Modify the associated MANUAL Secondary Tone for one or all of the SIREN TONES.



Factory Default Tone Associations

TONE	Associated MANUAL Secondary Tone
WAIL	YELP
YELP	Hyper-YELP
HI-LO	Hyper-HI-LO
ALERT	Hyper-ALERT

The factory default initial tone of WAIL (Illuminated Steady), has a factory default associated MANUAL Secondary Tone of YELP (Slow Flashing). Each primary tone can be associated with 1 of 6 secondary tones listed below. **NOTE: If only one Tone indicator is illuminated and flashing - then the TONE has been associated with the hyper version of the same tone.**

TONE - Steady	MANUAL Secondary Tone	
WAIL	Slow Flashing WAIL = WAIL	
YELP	Slow Flashing YELP = YELP	Fast Flashing YELP = hyper-YELP
HI-LO	Slow Flashing HI-LO = HI-LO	Fast Flashing HI-LO = hyper-HI-LO
ALERT	Slow Flashing ALERT = ALERT	Fast Flashing ALERT = hyper-ALERT

Press MANUAL.
Press TONE to select a primary tone.
Press MANUAL until the slow or rapid flashing indicator corresponds with the desired secondary tone.
Press Tone to select another primary tone.
Press MANUAL until the slow or rapid flashing indicator corresponds with the desired secondary tone.
Repeat as desired.
Press OFF.

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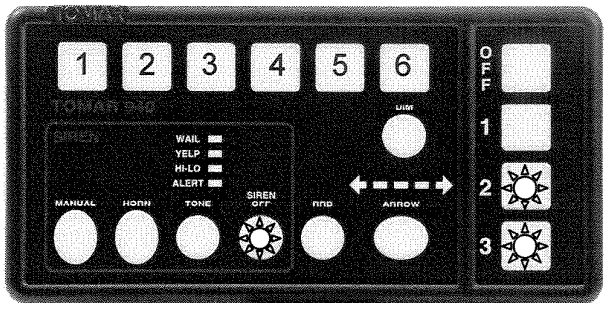
E.) Select how the SIREN TONE is activated.



Example: SIREN TONE ON in Modes 2 & 3

Press SIREN OFF - The current configuration will be displayed by the switches illuminated in the following combinations (see the chart below).
Press Mode 1, 2 or 3 - to activate the desired Mode(s) for the SIREN TONE.
or
Press SIREN OFF - for **Independent** SIREN OFF control.
Press OFF.

SIREN OFF	MODE 1	MODE 2	MODE 3	SIREN TONE - Programmed
Steady	Steady	Steady	Steady	ON in All Modes
Steady	OFF	Steady	Steady	ON in Modes 2 & 3
Steady	OFF	OFF	Steady	ON in Mode 3 (Factory Default)
Flashing	OFF	OFF	OFF	Independent SIREN OFF

IMPORTANT: The 940L-DCP programming feature is UNLOCKED (Factory Default) and can be LOCKED to secure unauthorized access. Once a 940L-DCP has been LOCKED, the only way to access programming is to manually move the Programming Jumper as described on page 4. Once programming mode has been accessed, the 940L-DCP will be LOCKED or UNLOCKED, depending on how the programming mode is exited.

EXIT PROGRAMMING - UNLOCKED: Pressing **OFF** again will exit the 940L-DCP programming mode. The Auxiliary Switches 1-6 will blink (**six**) times to indicate successful recording of the 940L-DCP programming mode. Now remove power from the 940L-DCP.

EXIT PROGRAMMING - LOCKED: Pressing consecutively **DIM, HORN & OFF** within 2 seconds will exit the 940L-DCP programming mode. The Auxiliary Switches 1-6 will blink (**three**) times to indicate successful recording of the 940L-DCP programming mode. Now remove power from the 940L-DCP.

If the 940L-DCP programming mode was entered by moving the Programming Jumper and the 940L-DCP is to be used in Operational Mode, then return the Programming Jumper to the RUN location. Refer to Figure 3 on page 4.

➢ Custom Programming another Tomar 940L-DCP

A previously custom programmed 940L-DCP (MASTER) can be used to rapidly download the custom program to another 940L-DCP (SLAVE).

Programming with an UNLOCKED 940L-DCP: Programming with an UNLOCKED 940L-DCP (MASTER), will result in an UNLOCKED 940L-DCP (SLAVE).

1.) Connect the previously custom programmed 940L-DCP (MASTER) to the Master RJ-45 port of the 940L-SIREN-R by using a Tomar RJ-45 CAT5 cable.

2.) Apply power to the 940L-SIREN-R

3.) Press and hold, the **MANUAL** and **OFF** switches for 2 seconds simultaneously. The Auxiliary switches 1-6 will blink (**three**) times to indicate successful activation of the 940L-DCP (MASTER) programming mode.

4.) Now connect the 940L-DCP (SLAVE) to the Slave RJ-45 port of the 940L-SIREN-R by using a Tomar RJ-45 CAT5 cable. The Auxiliary switches on the SLAVE will blink (**three**) times to indicate successful activation of the 940L-DCP Programming Mode.

5.) To perform **Rapid Download**, simply press the RRB button on the 940L-DCP (MASTER). The Auxiliary switches 1-6 on the 940L-DCP (MASTER) will progressively illuminate all 6 Auxiliary switches. The 940L-DCP (SLAVE) auxiliary switches 1-6 will then blink (**three**) times to indicate successful download of the custom program.

6.) Remove 940L-DCP (SLAVE) from the Slave RJ-45 port of the 940L-SIREN-R.

7.) To program an additional 940L-DCP (SLAVE) repeat steps 4 through 6.

8.) Pressing **OFF** twice will exit the 940L-DCP (MASTER) programming mode. The Auxiliary Switches 1-6 will blink (**six**) times to indicate that programming mode has been exited.

9.) Remove power from the 940L-SIREN-R.

Programming with a LOCKED 940L-DCP: Programming with a LOCKED 940L-DCP (MASTER), will result in a LOCKED 940L-DCP (SLAVE).

1.) Remove the single jumper from the RUN location and install the jumper in the PGM location. Refer to the instructions and diagrams on page 4.

2.) Connect the previously custom programmed 940L-DCP (MASTER) to the Master RJ-45 port of 940L-SIREN-R by using a Tomar RJ-45 CAT5 cable.

3.) Apply power to the 940L-SIREN-R. The Auxiliary switches 1-6 will blink (**three**) times to indicate successful activation of the 940L-DCP (MASTER) programming mode.

4.) Now connect the 940L-DCP (SLAVE) to the Slave RJ-45 port of the 940L-SIREN-R by using a Tomar RJ-45 CAT5 cable. The Auxiliary switches on the SLAVE will blink (**three**) times to indicate successful activation of the 940L-DCP Programming Mode.

5.) To perform **Rapid Download**, simply press the RRB button on the 940L-DCP (MASTER). The Auxiliary switches 1-6 on the 940L-DCP (MASTER) will progressively illuminate all 6 Auxiliary switches. The 940L-DCP (SLAVE) auxiliary switches 1-6 will then blink (**three**) times to indicate successful download of the custom program.

6.) Remove 940L-DCP (SLAVE) from the Slave RJ-45 port of the 940L-SIREN-R.

7.) To program an additional 940L-DCP (SLAVE) repeat steps 4 through 6.

8.) Pressing consecutively **DIM, HORN & OFF** within 2 seconds will exit the 940L-DCP (MASTER) programming mode. The Auxiliary Switches 1-6 will blink (**three**) times to indicate that programming mode has been exited.

9.) Remove power from the 940L-SIREN-R.

NOTE: If the 940L-DCP (MASTER) is to be used in RUN (operational) mode, the jumper must be returned to the RUN location. Refer to the instructions and diagrams on page 4.

➢ Adding Auxiliary Switch Label Inserts to the Tomar 940L-DCP

To add Auxiliary Switch Label Inserts to the 940L-DCP, first remove the 4 side screws that secure the faceplate. Select the Label Inserts you wish to use and remove each along the perforated edge. With the 940L-DCP faceplate removed, hold the Label Insert by the tab and install each in the corresponding Auxiliary Switch tab holder along the top edge of the 940L-DCP membrane.