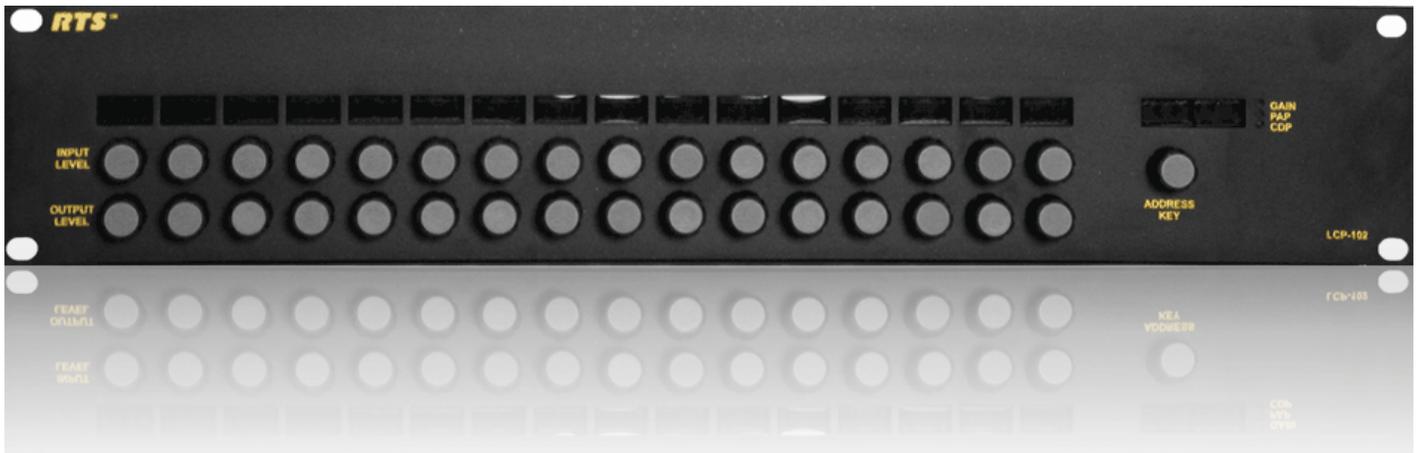


# *Model LCP-102*

## *Level Control Panel*

*Up to and including version 1.0*

## *User Manual*



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See the enclosed warranty card for further details.

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Technical questions should be directed to:

Customer Service Department  
Bosch Security Systems, Inc.  
12000 Portland Avenue South  
Burnsville, MN 55337 USA  
Telephone: 877-863-4169  
Fax: 800-323-0498  
Info@rtsintercoms.com

Technical Questions EMEA  
Bosch Security Systems Technical Support EMEA  
[http://www.rtsintercoms.com/contact\\_main.php](http://www.rtsintercoms.com/contact_main.php)

## RETURN SHIPPING INSTRUCTIONS

Customer Service Department  
Bosch Security Systems, Inc. (Lincoln, NE)  
Telephone: 402-467-5321  
Fax: 402-467-3279  
Factory Service: 800-553-5992

Please include a note in the box which supplies the company name, address, phone number, a person to contact regarding the repair, the type and quantity of equipment, a description of the problem and the serial number(s).

## SHIPPING TO THE MANUFACTURER

All shipments of product should be made via UPS Ground, prepaid (you may request from Factory Service a different shipment method). Any shipment upgrades will be paid by the customer. The equipment should be shipped in the original packing carton. If the original carton is not available, use any suitable container that is rigid and of adequate size. If a substitute container is used, the equipment should be wrapped in paper and surrounded with at least four (4) inches of excelsior or similar shock-absorbing material. All shipments must be sent to the following address and must include the Proof of Purchase for warranty repair. Upon completion of any repair the equipment will be returned via United Parcel Service or specified shipper, collect.

Factory Service Department  
Bosch Security Systems, Inc.  
8601 East Cornhusker Hwy.  
Lincoln, NE 68507 U.S.A.  
Attn: Service

 <p>THE LIGHTNING FLASH AND ARROWHEAD WITHIN THE TRIANGLE IS A WARNING SIGN ALERTING YOU OF "DANGEROUS VOLTAGE" INSIDE THE PRODUCT.</p>	<p><b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN</p> <p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>	 <p>THE EXCLAMATION POINT WITHIN THE TRIANGLE IS A WARNING SIGN ALERTING YOU OF IMPORTANT INSTRUCTIONS ACCOMPANYING THE PRODUCT.</p>
SEE MARKING ON BOTTOM/BACK OF PRODUCT		
<b>WARNING:</b> APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.		
<b>WARNING:</b> THE MAIN POWER PLUG MUST REMAIN READILY OPERABLE		
<b>CAUTION:</b> TO REDUCE THE RISK OF ELECTRIC SHOCK, GROUNDING OF THE CENTER PIN OF THIS PLUG MUST BE MAINTAINED.		
<b>WARNING:</b> TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.		
<b>WARNING:</b> TO PREVENT INJURY, THIS APPARATUS MUST BE SECURELY ATTACHED TO THE FLOOR/WALL/RACK IN ACCORDANCE WITH THE INSTALLATION INSTRUCTIONS.		
	This product is AC only.	

---

## *Important Safety Instructions*

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



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**NOTE:** The LCP-102 is not compatible with the CS9000 Series intercom systems.

For information on how to complete the configuration of some features, see the AZedit user manual.

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### *LCP-102 Description*

The LCP-102 combines the features of an analog trim panel, a **CDP** (Camera Delegate) panel, and a **PAP** (Program Assign Panel) in a single frame (2 rack units). You can easily switch between three (3) panel modes and make rapid configuration changes using the menu selector on the front panel. In each mode, you can make up to 64 assignments and then adjust the assignment levels. For example,

- In Trims mode, you can assign and adjust the analog input and output trims for up to 64 intercom ports.
- In PAP mode, you can select the program input source and set its level for each of 64 IFBs.
- In CDP mode, you can assign up to 64 intercom ports to any combination of party lines and then adjust the listen level for each participant on that party line.

The LCP-102 connects to the auxiliary data port of any ADAM, ADAM CS, Cronus or Zeus intercom system. Also, it has a loop connector for connection to an auxiliary device, such as another LCP-102, or a UIO-256/GPIO-16 frame. Since a single LCP-102 provides trim adjustments for 64 ports, only one (1) unit is required to completely configure an ADAM CS or Zeus system. For larger ADAM intercom systems, up to 15 additional LCP-102 frames can be connected via the loop connectors.

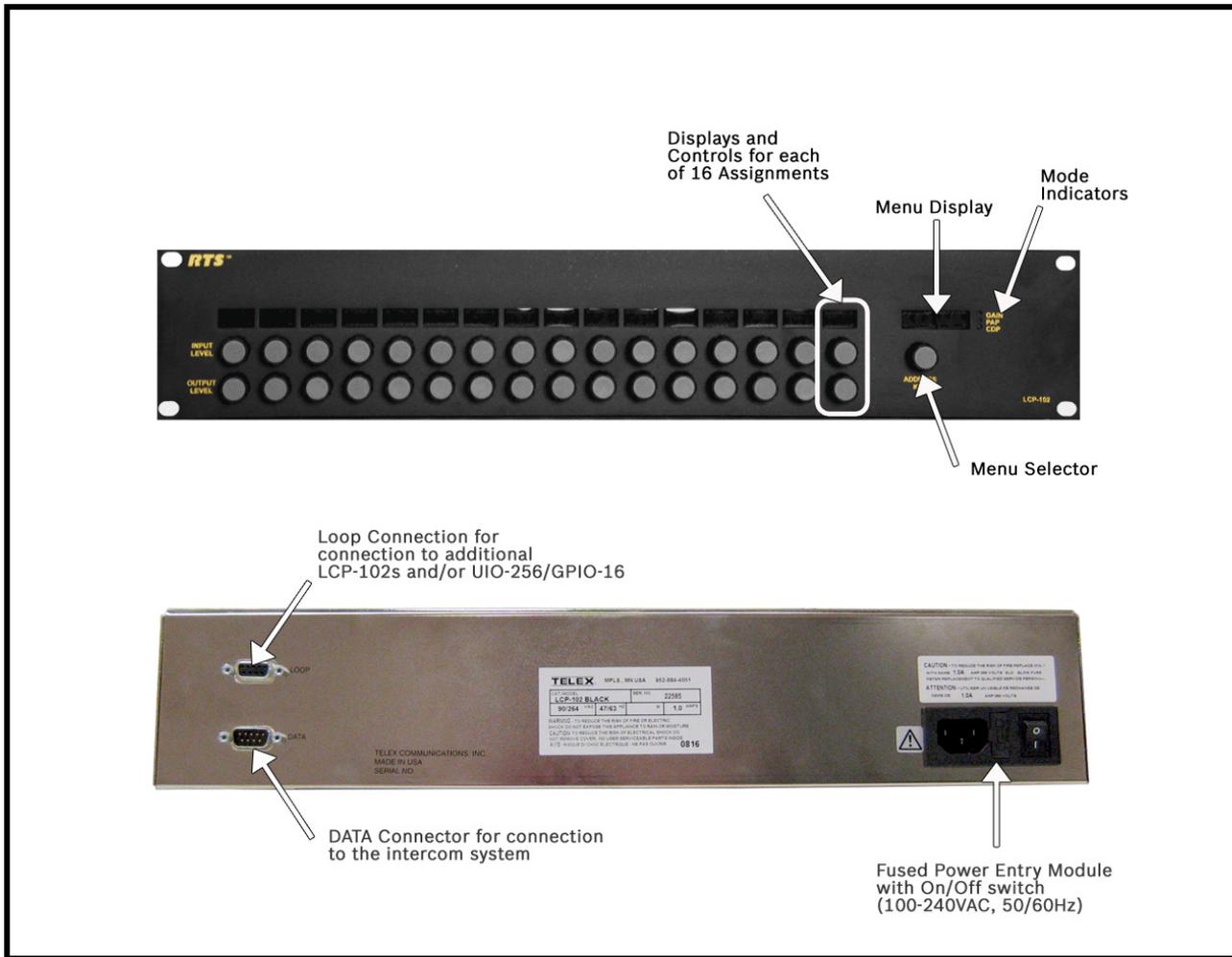


FIGURE 1. LCP-102 Reference View

*Specifications*

Dimensions:..... 2 RU, 19" W, 7" L  
 Weight: ..... 8.20 lbs  
 Power Consumption ..... 13 Watts

**Data Connector – DB-9 Male**

Pin 1 .....	Common
Pin 2 .....	Data –
Pin 3 .....	N/A
Pin 4 .....	N/A
Pin 5 .....	N/A
Pin 6 .....	N/A
Pin 7 .....	Data +
Pin 8 .....	N/A
Pin 9 .....	N/A

**Loop Connector – DB-9 Female**

Pin 1 .....	Common
Pin 2 .....	Data –
Pin 3 .....	N/A
Pin 4 .....	N/A
Pin 5 .....	N/A
Pin 6 .....	N/A
Pin 7 .....	Data +
Pin 8 .....	N/A
Pin 9 .....	N/A

---

### *Location and Mounting*

The LCP-102 occupies two (2) rack spaces in a standard 19-inch equipment rack or bay, and is 7.25 inches (184.2mm) deep behind the front panel (including the rear panel connectors). There are no special ventilation requirements. The LCP-102 should be mounted at or near operator eye-level when standing or sitting to permit easy access to the front panel controls and displays.

---

### *Connections*

System connections are summarized in Figure 2. Cable diagrams are shown in Figure 4 to Figure 9.

When connecting a UIO-256/GPIO-16 frame along with the LCP-102, you have a choice of two (2) methods:

- Using LOOP connector of the LCP-102
- Using a Y cable

If you have several LCP-102's connected in a chain, you can connect the UIO-256/GPIO-16 to the LOOP connector of the last LCP-102 in the chain, or you can insert it anywhere in the chain with a Y cable. Whichever configuration you use, you can also connect three (3) additional UIO-256/GPIO-16 frames to the first UIO-256/GPIO-16 in a ring configuration as illustrated in the UIO-256/GPIO-16 User Manual.

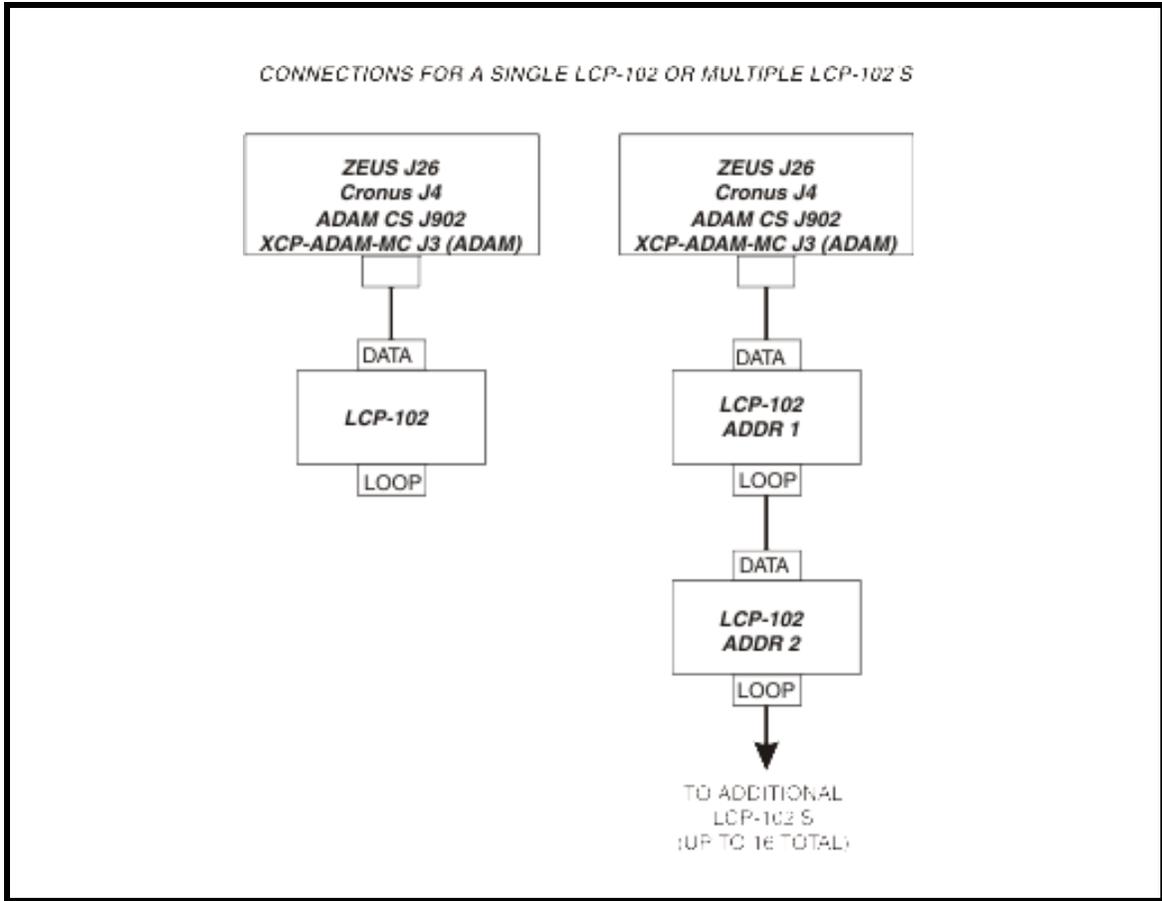


FIGURE 2. Connection example for a single LCP-102 or multiple LCP-102s

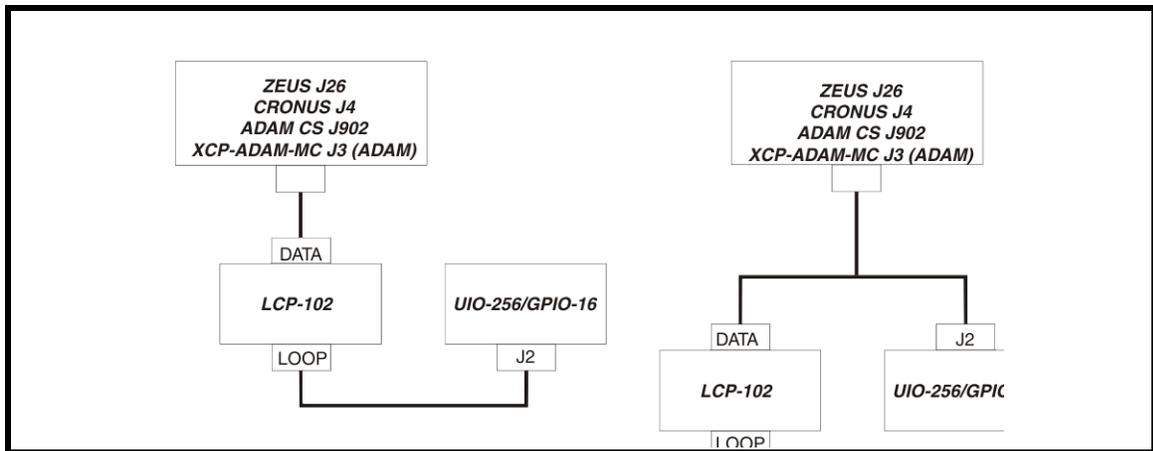
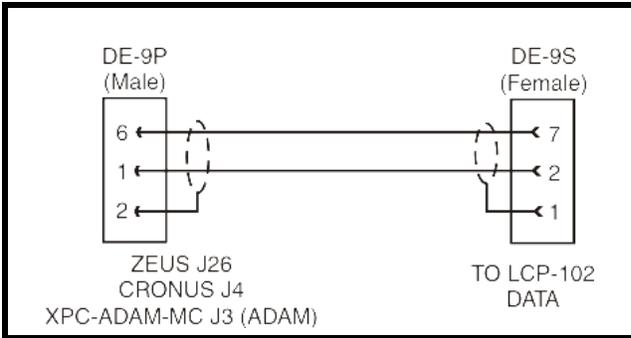
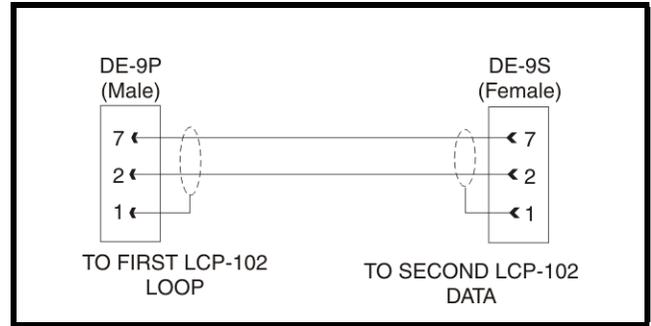


FIGURE 3. Connection example of an LCP-102 connecting to a UIO-256/GPIO-16

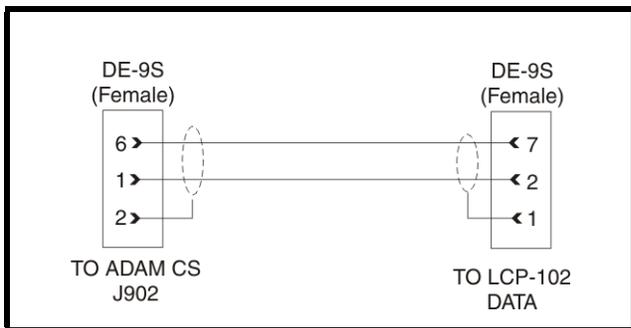
Two (2) methods for connecting a UIO-256/GPIO-16 with the LCP-102, up to three (3) mor UIO-256/GPIO-16 frames may be connected to the first UIO-256/GPIO-16 in a ring configuration as described in the UIO-256 and GPIO-16 User Manuals.



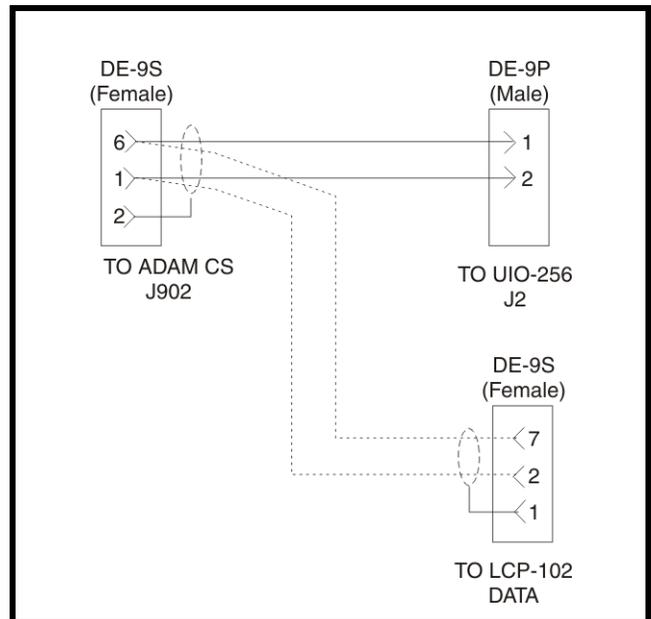
**FIGURE 4.** Interconnect cable from a Zeus, Cronus or ADAM intercom system to the LCP-102



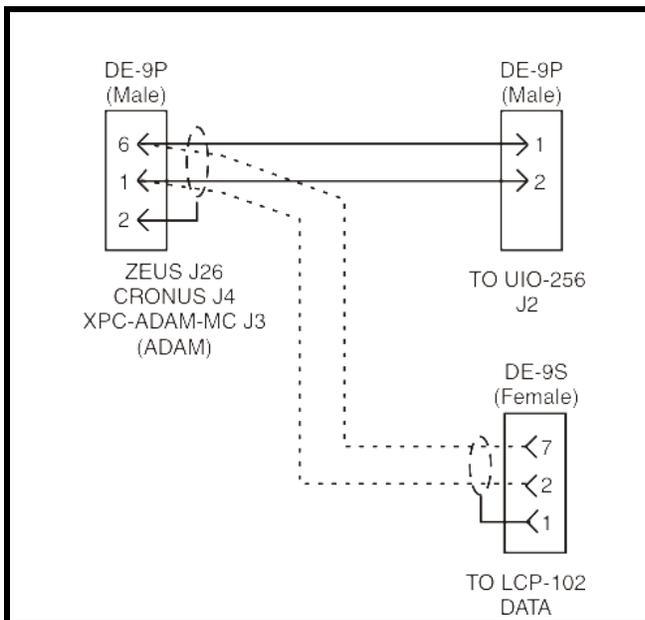
**FIGURE 7.** Cable to interconnect two LCP-102s (All intercom systems)



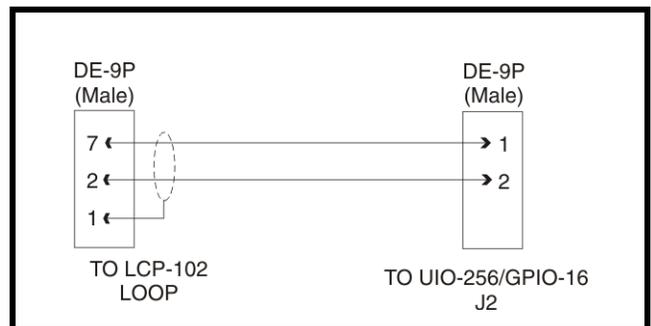
**FIGURE 5.** Interconnect cable from an ADAM CS intercom system to the LCP-102



**FIGURE 8.** Y cable for connection of an LCP-102 and a UIO-256/GPIO-16 to an ADAM CS intercom system.



**FIGURE 6.** Y cable for connection of an LCP-102 and a UIO-256/GPIO-16 to a Zeus, Cronus, or ADAM intercom system.



**FIGURE 9.** Cable to connect UIO-256/GPIO-16 to the LCP-102 (All intercom systems)

## Power Up and Initial Settings

### Applying Power

During a normal power up the alphanumeric displays first show asterisks (\*\*\*). After a few moments, some assignments may appear in the displays above selected keys (depending upon whether or not anything was previously assigned using the intercom system configuration software). If there are currently no assignments, the displays show dashes. If the LCP-102 connected to the intercom system cannot establish communication with the intercom system, all LCP-102 displays continue to show asterisks. In this case, check the cable from the first LCP-102 to the intercom system and verify the intercom system is operational.

**NOTE:** If more than one (1) LCP-102 is used, set the addresses using the programming menus, as described in “Programming Menus.”

### Programming Menus

The LCP-102 Programming Menus are accessed using the ADDRESS KEY. The menus are summarized in Table 1.

**TABLE 1.** The LCP-102 Programming Menus

PAGE SEL Menu Items	SERVICE Menu Items
Page 1	DIMMER
Page 2	SET ADDR
Page 3	SET MODE
Page 4	VER

### Setting the Panel Address

Before programming any assignments, each LCP-102 should be set to a unique panel address as follows:

**NOTE:** Each programming step should be performed within approximately 10 seconds. Otherwise, the LCP-102 automatically cancels the procedure.

To set the address for the LCP-102, do the following:

1. Turn the **ADDRESS KEY encoder** until *SERVICE* displays.
2. Tap the **ADDRESS KEY encoder** once.  
*DIMMER* appears in the menu display.
3. Turn the **ADDRESS KEY encoder** until *SET ADDR* displays.
4. Tap the **ADDRESS KEY encoder** once.  
*ADDR 1* appears in the menu display.
5. Tap the **ADDRESS KEY encoder** to select ADDR 1 for the first LCP-102.  
*This stores the setting, and all displays show asterisks for a few moments. Then, all displays show dashes.*
6. Double-tap the **ADDRESS KEY encoder** to exit programming mode when finished. Otherwise, the LCP-102 automatically exits after 10 seconds.

**NOTE:** The address setting is retained in the LCP-102 memory when power is removed.

7. Repeat **step 1 through step 6** to set addresses on additional LCP-102s, select ADDR 2, ADDR 3 for the third for the second LCP-102 and so on.

## Adjusting the Dimmer

To **adjust the dimmer**, do the following:

1. Turn the **ADDRESS KEY encoder** until *SERVICE* displays.
2. Tap the **ADDRESS KEY encoder** once.  
*DIMMER* appears in the display window.
3. Tap the **ADDRESS KEY encoder** again.  
*One (1) or more right-pointing arrowheads appear.*
4. Turn the **ADDRESS KEY encoder** to increase or decrease the brightness of the arrowheads.
5. Tap the **ADDRESS KEY encoder** to save changes.  
*All displays flash asterisks at the new brightness level and then returns to normal operation.*



---

### *Panel Mode Selection*

The LCP-102 has three (3) panel modes:

- TRIMS
- PAP
- CDP

To **select the LCP-102 panel mode**, do the following:

1. Turn the **ADDRESS KEY encoder** until *SERVICE* appears.
2. Tap the **ADDRESS KEY encoder**.
3. Turn the **ADDRESS KEY encoder** until *SET MODE* appears.
4. Tap the **ADDRESS KEY encoder**.
5. Turn the **ADDRESS KEY encoder** to until the *desired mode* (Trims, PAP, or CDP) appears.
6. Tap the **ADDRESS KEY encoder** to select the panel mode desired.

---

### *Page Select*

Within each panel mode, there are four (4) setup pages of assignments available. Each page lets you setup 16 assignments. You can then switch between pages to view settings or make changes.

To **select pages**, do the following:

1. Turn the **ADDRESS KEY encoder** until *PAGE SEL* appears.
2. Tap the **ADDRESS KEY encoder**.
3. Turn the **ADDRESS KEY encoder** until *PAGE 1* appears.
4. Tap the **ADDRESS KEY encoder**.  
*Any assignments already configured for the page appear in the display window. Otherwise, the display show dashes.*

You are now ready to setup assignments on the newly selected page. Refer to the following paragraphs that apply to the currently selected panel mode.

---

## *TRIMS Mode Assignments and Operation*

In TRIMS mode, you assign individual ports of the intercom system to display and then adjust the input and output trims. This is the same as adjusting the analog input/output gains in AZedit.

### **TRIMS Mode Assignment**

To **configure TRIMS mode assignments**, do the following:

1. Place the **LCP-102 in TRIMS mode**, as described in “Panel Mode Selection” on page 3.
2. Select **one (1) of the four (4) setup pages**, as described in “Page Select” on page 3.
3. Tap the **specific key encoders** to select one (1) of the 16 assignable displays currently not being used.
4. Turn the **encoder** to scroll through the list of intercom ports.
5. Tap the **encoder** to select the intercom port.  
*The selected intercom port is now assigned to the display.*
6. Repeat **step 1 through step 5**, as needed.

To **cancel or clear an assignment**, do the following:

1. Tap either **assignment encoder knob**.  
*The display goes blank.*
2. Tap the **encoder knob** once again.  
*The display returns to showing dashes, indicating no assignments.*

### **TRIMS Mode Operation**

For each assigned display, turn the upper encoder under the display to change the input level. Turn the lower encoder to change the output level. Turning an encoder one (1) notch in either direction displays the current level. Further rotation changes the level.

---

## *PAP Mode Assignments and Operation*

In PAP mode, you set up IFBs and then adjust the level from the defined program input to the defined IFB output.

### **PAP Mode Assignment**

To **assign PAPs to the LCP-102**, do the following:

1. Run **AZedit** and define the **output port for each IFB** you want to set up, then send **changes** to the intercom system.

**NOTE:** For each IFB, you can define or change the input port either from the intercom system configuration software or from the LCP-102, but you must always define the output port first using the intercom system.

2. Place the **LCP-102 in PAP mode**, as described in “Panel Mode Selection” on page 3.
3. Select **one (1) of the four (4) setup pages**, as described in “Page Select” on page 3.
4. Tap the **encoder knob** under one of the currently unused assignable displays to enter IFB assign mode.
5. Turn the **encoder knob** to scroll through the list of IFBs.
6. Tap the **encoder knob** once to assign the IFB to the display assignment.

**NOTE:** If you already assigned the input port for the IFB using the intercom system configuration software, you can skip step 5 and 6.

7. With the display showing the name of the IFB, tap the **encoder knob**.  
*The LCP-102 enters input port assignment mode. The scroll list of intercom ports appear in the display.*

8. Turn the **upper encoder knob** to select the intercom port where the program source for the IFB is connected.
9. Tap the **encoder** to assign the selected port.  
*The display shows the IFB name, and the IFB is completely set up.*
10. Repeat **step 5** and **step 6** to make further assignments.

To **cancel or clear an assignment**, do the following:

1. Tap either **assignment encoder knob**.  
*The display goes blank.*
2. Tap the **encoder knob** once again.  
*The display returns to showing dashes, indicating no assignments.*

## PAP Mode Operation

To **change the program level**, do the following:

- > Turn **either encoder knob**.  
*Turning the encoder knob on notch in either direction displays the current level. Further rotation changes the level.*

---

## CDP Mode Assignments and Operation

In CDP mode, you use each display and its encoders to assign one (1) intercom port to any party line. Then, during operation, you can adjust the level at which that port hears the party line audio.

### CDP Mode Assignments

To **assign CDPs to the LCP-102**, do the following:

1. Place the **LCP-102 in PAP mode**, as described in “Panel Mode Selection” on page 3.
2. Select **one (1) of the four (4) setup pages**, as described in “Page Select” on page 3.
3. Tap the **encoder knob** under one of the currently unused assignable displays.
4. Double-tap **either encoder knob** to access a scroll list of intercom ports.
5. Turn the **encoder knob** to locate the intercom port you want to assign to a party line.
6. Tap the **encoder knob** to select the intercom port.
7. Tap the **encoder knob** again to access the scroll list of party lines.
8. Turn the **encoder knob** to locate the party line you want to assign the intercom port to.
9. Tap the **encoder knob**.  
*This assigns the port to the party line as a talker/listener, and the name of the port reappears in the display window.*
10. Repeat **step 1** through **step 9**.

To **cancel or clear an assignment**, do the following:

1. Tap either **assignment encoder knob**.  
*The display goes blank.*
2. Tap the **encoder knob** once again.  
*The display returns to showing dashes, indicating no assignments.*

## CDP Mode Operation

To **change the listen level for a port**, do the following:

- > Turn either encoder knob one (1) notch in either direction to display the current level. Further rotation changes the level.

To **display the party line the port is assigned**, do the following:

- > Tap **either encoder knob** once.  
*The party line displays for about four (4) seconds, and then the port name reappears.*

---

## *Saving Configuration Changes*

The settings for address, current panel mode and current setup pages are saved in LCP-102 and are kept if the power turns off.

All display assignments and level settings are uploaded to the intercom system and become part of the online configuration. This configuration is retained if there is a loss of power to the intercom system. However, if you wish to have a backup copy of your settings, save the settings to disk using your intercom system configuration software.

*Notes*

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