

*KP-5032 Keypanel  
and  
KP-4016 Keypanel  
Technical Manual*

*up to and including version 1.0.0*

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 <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></p> <p>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.		



**WARNING:** APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

**WARNING:** THE MAIN POWER PLUG MUST REMAIN READILY OPERABLE.

**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK, GROUNDING OF THE CENTER PIN OF THIS PLUG MUST BE MAINTAINED.

**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPRATUS TO RAIN OR MOISTURE.

**WARNING:** 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.
	

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## *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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# Table of Contents

---

<b>INTRODUCTION .....</b>	<b>11</b>
Features .....	11
Specifications .....	12
KP-4016/5032 Block Diagram .....	14
Reference View – KP-5032 .....	15
Connector Pinouts .....	17
 <b>INSTALLATION .....</b>	 <b>19</b>
Requirements .....	19
KP-5032 Installation .....	20
KP-4016 Installation .....	21
Configure the Keypanel .....	22
Power Up .....	24
Address Setting .....	25
Connections .....	26
 <b>BASIC OPERATION .....</b>	 <b>35</b>
Intercom Keys and Displays .....	35
Keypad Reference View .....	39
INFO button .....	43
Breadcrumb Menu Navigation .....	44
Shaft Encoder Knobs and Menu Navigation .....	44
Basic Intercom Key Operation .....	45
Key Gain Adjustment .....	47
Keypanel Volume Adjustments .....	48
Aux Volume Adjustments .....	49
Operation of Intercom Keys with Auto Functions .....	50
Operation of Intercom Keys with Options .....	51
Operation of Intercom Talk Keys with the Speaker DIM Setting .....	51
Operation of Intercom Keys assigned to TIF Ports .....	52
User Quick Select Scrolling .....	52
Call Waiting Operation .....	53
Graphical Call Waiting Window .....	54
Mute the Microphone/Speaker .....	56
Mic Select .....	57
User Programmable Buttons .....	59
Keypanel Color Window .....	61

Enhanced Tallies .....	68
Flash Text Characteristics Window .....	72
Show Icon Characteristics Window .....	74
Panel Tally .....	76
Create and Download New Icons .....	77
<b>FIRMWARE DOWNLOAD .....</b>	<b>79</b>
Download Firmware to the KP-5032/4016 From AZedit .....	79
Download Firmware to the Keypanel Using the Firmware Upload Tool .....	81
Enable Downloading New Bootloader from the Keypanel .....	83
Download Firmware Using the Bootloader .....	83
Display the FPGA Version on the Keypanel .....	85
Download and Upgrade the FPGA to the KP-5032/4016 .....	85
Download a Splash Screen .....	88
Download a Font File .....	90
<b>KP-4016/5032 MENU SYSTEM .....</b>	<b>93</b>
Main Menu Access .....	93
Menu System, Audio Options .....	94
Menu System, Display .....	118
Menu System, Key Assign Menu .....	122
Menu System, Key Options Menu .....	127
Menu System, OMNEO Offers .....	137
Menu System, RVON Offers (Only available when an RVON-IO is detected) .....	138
Menu System, Save Config .....	138
Menu System, Service .....	139
<b>TELEPHONE INTERFACE (TIF) OPERATION .....</b>	<b>159</b>
Receiving A Phone Call .....	159
Dialing and Hanging Up .....	159
Centralized Auto Dials .....	161
<b>KEYPAD QUICK REFERENCE .....</b>	<b>165</b>
Keypad Sequence Introduction .....	165
<b>KEYPANEL MENU QUICK REFERENCE .....</b>	<b>169</b>
Audio Options .....	169
Display Menu .....	176
Key Assign Menu .....	177
Key Options Menu .....	178
OMNEO Offers Menu .....	180
Save Config Menu .....	180
Service Menu .....	181

<b>EKP-4016 .....</b>	<b>185</b>
Introduction .....	185
Specifications .....	185
EKP-4016 Expansion Panel Reference View .....	186
Expansion Panel Cabling Reference .....	187
 <b>UNICODE SUPPORT .....</b>	 <b>189</b>
AZedit and Unicode Support .....	189
 <b>POWER SUPPLY MOUNTING OPTIONS .....</b>	 <b>193</b>
Power Supply Mounting Bracket Instructions .....	193



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# *List of Figures*

---

FIGURE 1.	KP-4016/5032 Audio Flow Block Diagram .....	14
FIGURE 2.	KP-5032 Reference View .....	15
FIGURE 3.	KP-4016 Reference View .....	16
FIGURE 4.	KP-5032 Installation .....	20
FIGURE 5.	KP-4016 Installation .....	21
FIGURE 6.	Female Headset Connector Set Screw Access Hole .....	27
FIGURE 7.	Male Headset Connector Set Screw Access Hole .....	28
FIGURE 8.	KP-5032 Keypad and KP-4016 Keypad .....	39
FIGURE 9.	Breadcrumb Navigation .....	44
FIGURE 10.	Key Function Position Explanation .....	45
FIGURE 11.	Talk/Listen Indicators .....	46
FIGURE 12.	Graphical Call Waiting Window .....	54
FIGURE 13.	Graphical Call Waiting Window Highlighted Call .....	55
FIGURE 14.	Keypanel Colors Window .....	61
FIGURE 15.	Color Grid .....	63
FIGURE 16.	Key Assignments Page .....	64
FIGURE 17.	Assignments Groups Page .....	65
FIGURE 18.	Miscellaneous Colors Page .....	67
FIGURE 19.	Flash Text Characteristics Window .....	72
FIGURE 20.	Show Icon Characteristic Window .....	74
FIGURE 21.	512 x 64 pixel bitmap of key overlay icons .....	77
FIGURE 22.	512x128 pixel bitmap of panel icons .....	78
FIGURE 23.	Automatic Gain Control Example .....	96
FIGURE 24.	EKP-4016 Expansion Panel Reference View - Front and Rear .....	186
FIGURE 25.	Expansion Panel Cabling .....	187
FIGURE 26.	Mounting Bracket – Horizontal on a Crossbar .....	197
FIGURE 27.	Mounting Bracket – Vertical from a Crossbar .....	197



# *Introduction*

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The KP-4016/5032 series keypanel delivers superior high-quality digital audio using OMNEO technology from Bosch with Dante audio over IP via either copper or fiber. The KP-4016/5032 series keypanels deliver top-notch audio, free of noise, delay, and other artifacts present in legacy technology. This family of keypanels includes a rich set of connectors as standard, including **GPIO** (General Purpose Input and Output) and **RC** (Rear Connector) kit. As with other RTS products, emphasis is placed on backward compatibility with previous generations of matrices including analog technology.

The KP-4016/5032 series utilizes the latest generation of wide angle TFT displays providing superior clarity, resolution, and longer display life delivering high- quality readability under a variety of lighting conditions.

---

## *Features*

- Superior digital, high-quality audio over IP (Internet Protocol) included through OMNEO technology, the branded IP-based solution from Bosch.
- Advanced signal processing, delivering a top-of-the-line audio experience, free of noise, echo, delay and other artifacts present in legacy technology.
- Backward compatible with legacy technologies, such as analog audio in USOC and 568-B formats.
- All previous optional hardware connectors (RC, GPI, etc) are now standard.
- New wide-angle high-definition display.
- Enhanced keypanel menus optimized for usability and ease of use.
- Front panel headset connector is field-swappable, making it simple to change the default 6-pin XLR headset connector with either a 5-pin XLR or 4-pin XLR headset connector without opening the unit, as needed.

## Specifications

### LCD Display

#### KP-4016:

Active Area ..... 120.10mm (wide) x 18.77mm (high)  
 Dot Resolution.....576 x 90 pixels  
 Color Resolution .....16-bit (64K) RGB color  
 View Angle.....80 degrees (typical; all directions)

#### KP-5032

Active Area ..... 120.10mm (wide) x 35.86mm (high)  
 Dot Resolution.....576 x 172 pixels  
 Color Resolution .....16-bit (64K) RGB color  
 View Angle..... 80 degrees (typical; all directions)

### Power Supply:

Type:..... External DC  
 AC Input:..... 100–240VAC 50/60Hz


### General Purpose Inputs and Outputs:

#### Outputs

Type (relays)..... SPDT  
 Contact Rating..... 1AMP @ 30VDC

#### Inputs

Type.....Optically Coupled  
 Input Voltage ..... 5-18 VDC on A+

♦A+ is internally pulled to 5VDC. Connect K- to  to activate.♦

### Inputs:

#### Matrix

Type..... Balanced  
 Typical Input Level ..... +8dBu  
 Typical Input Impedance.....>10kΩ  
 Maximum Input Level.....+20dBu  
 Supported Bandwidth.....100Hz to 20kHz

#### Aux 1 and Aux 2

Type..... Balanced  
 Typical Input Level ..... +8dBu  
 Typical Input Impedance.....>10kΩ

### Front Panel Mic

Type ..... Electret  
 Typical Input Level.....-42dBu  
 Typical Input Impedance .....1kΩ  
 Maximum Input Level .....-25dBu

### Rear Panel Mic

Type ..... Electret  
 Typical Input Level.....-42dBu  
 Typical Input Impedance .....1kΩ  
 Maximum Input Level .....-25dBu

### Front and Rear Headset Mic - Electret

Typical Input Level.....-42dBu  
 Typical Input Impedance .....1kΩ  
 Maximum Input Level .....-25dBu

### Front and Rear Headset Mic - Dynamic

Typical Input Level.....-50dBu  
 Typical Input Impedance .....600Ω  
 Maximum Input Level .....-25dBu

### Outputs:

#### Matrix

Type ..... Balanced  
 Typical Output Level .....+8dBu  
 THD+N%.....<0.20%  
 Typical Output Impedance.....600Ω  
 Maximum Output Level .....+20dBu  
 Frequency Response ..... 100Hz to 20kHz

### MIC/LINE Out

Type ..... Balanced  
 Typical Output Level .....+8dBu  
 THD+N%.....<0.20%  
 Typical Output Impedance.....600Ω  
 Maximum Output Level .....+20dBu  
 Frequency Response ..... 100Hz to 20kHz



### Headset - Front, Rear, Left, Right

Maximum Output Power .....	125mW for 32Ω load
Earphone Impedance .....	16Ω and above
THD+N% .....	<0.20%
Frequency Response .....	100Hz to 20kHz

### Speaker - Rear

Maximum Output Power .....	5W for 8Ω load
Speaker Impedance .....	4Ω and 8Ω
THD+N% .....	<0.20%
Frequency Response .....	100Hz to 20kHz

### Speaker - Front

SPL .....	84dBSPL for 1kHz sine wave @ 1 meter
-----------	--------------------------------------

### Digital:

#### OMNEO Channels

Typical OMNEO Latency .....	1ms
Frequency Response .....	20Hz - 20kHz

### Environmental:

#### Dimensions

#### KP-4016

17.39" W (without rack ears) x 1.72" H x 3.88" D  
(441.82mm x 43.8mm x 98.5mm  
[111.11mm including volume knobs and lever keys])

#### KP-5032

17.39" W (without rack ears) x 3.46" H x 3.88" D  
(441.82mm x 87.96mm x 98.5mm  
[111.11mm including volume knobs and lever keys])

### Weight

KP-4016 .....	3.5lb. (1.58kg)
KP-5032 .....	4.89lb (2.22kg)
Power Supply .....	0.53lb (0.24kg)
Power Supply Mounting Bracket .....	0.30lb (0.14kg)

### Temperature

Operating .....	0°C to 55°C (32°F to 131°F)
Storage .....	-20°C to 70°C (-4°F to 158°F)

### Power Consumption:

#### KP-4016

Nominal .....	12 Watts
Maximum .....	15 Watts
Maximum Volt Amp .....	48 VA

#### KP-5032

Nominal .....	13 Watts
Maximum .....	18 Watts
Maximum Volt Amp .....	48 VA

### Certification:

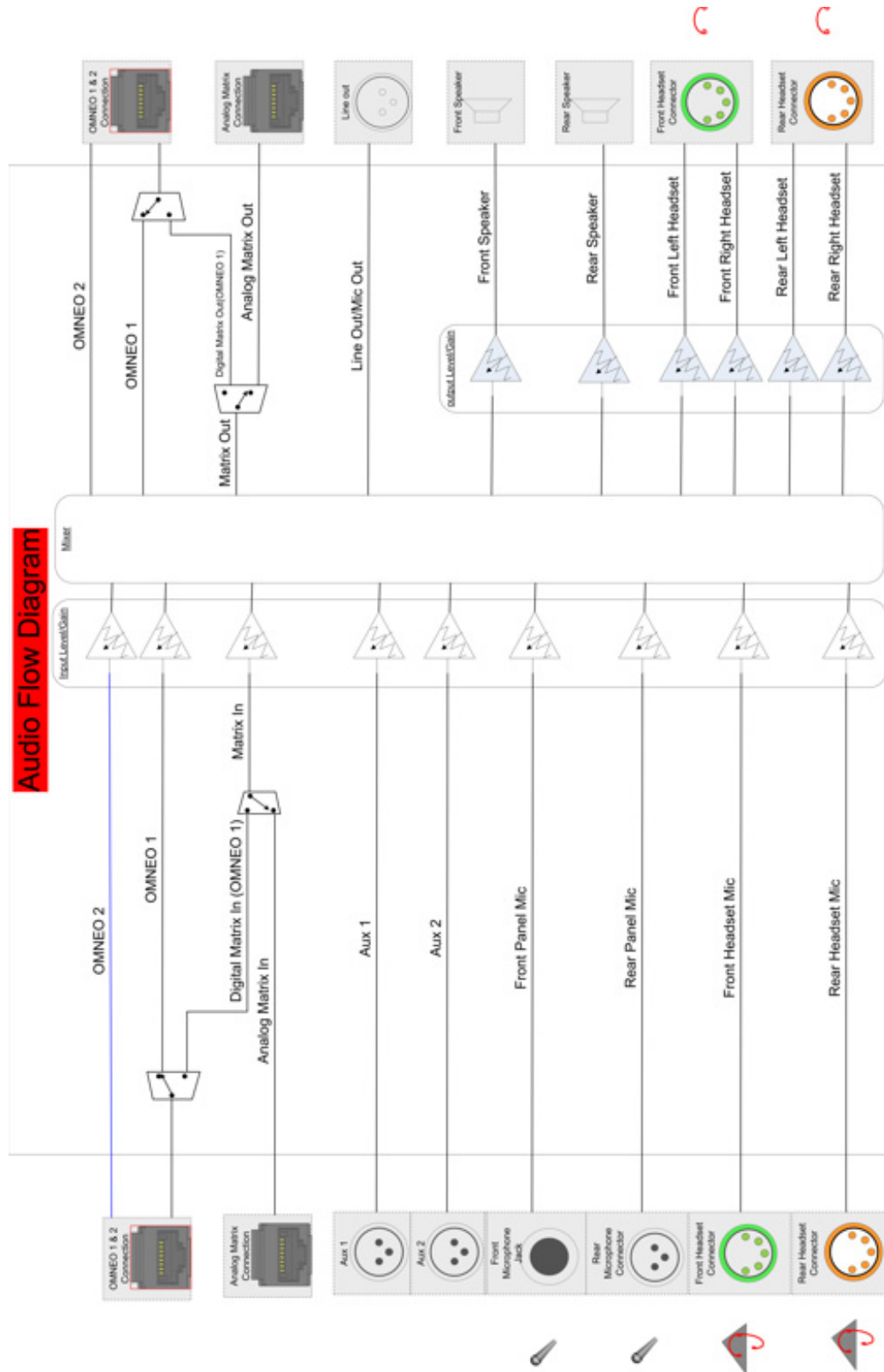
#### CE Compliance

- EMC
- EN55022 Class A
- VCCI Class A
- ICES-003
- FCC Part 15 Subpart B Class A
- AS/NZS CISPR22 Class A
- Korean KN 22
- EN 55024
- Korean KN 61000-4
- BSMI Class B

### Safety

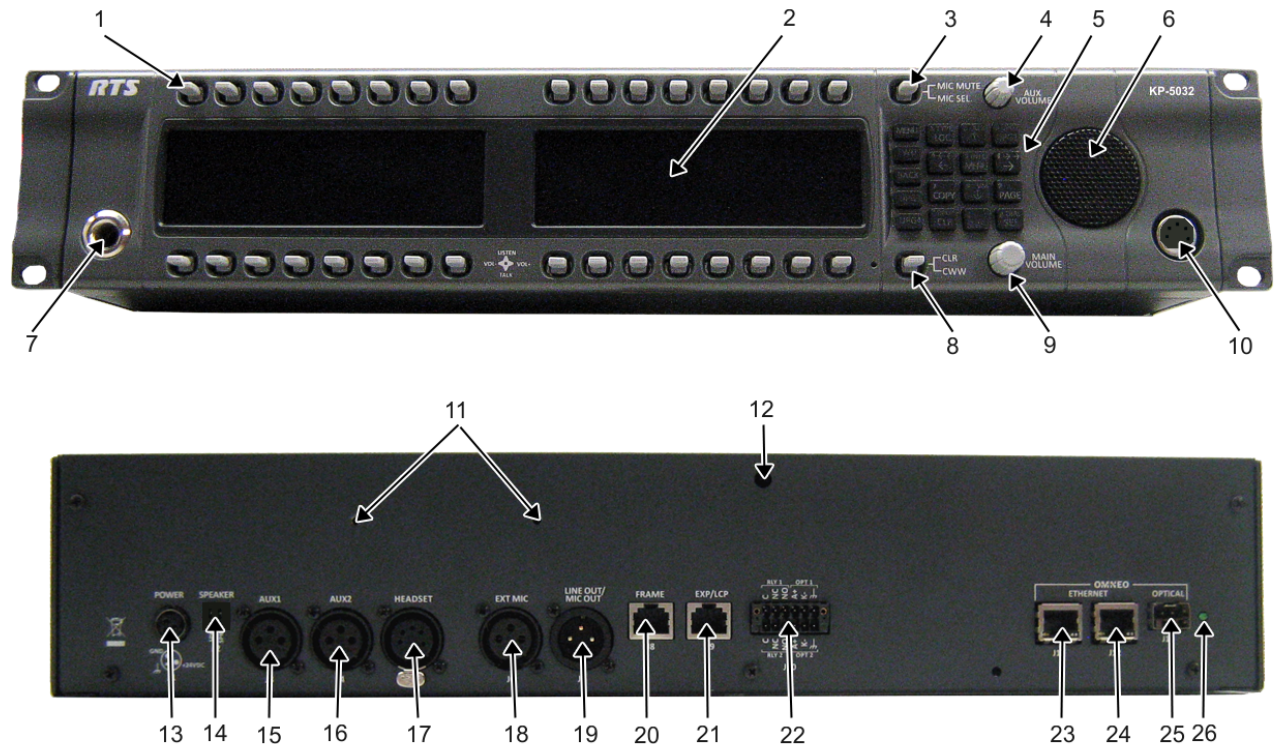
- UL 60950-4
- EN60950-1
- CB Report
- PSE

### KP-4016/5032 Block Diagram



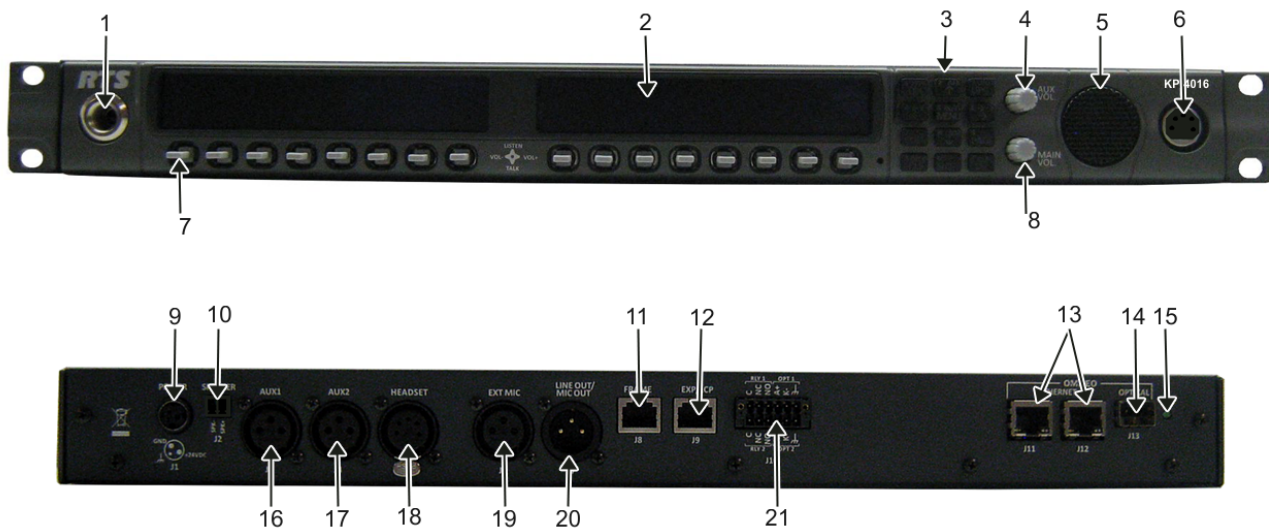
**FIGURE 1. KP-4016/5032 Audio Flow Block Diagram**

## Reference View – KP-5032



**FIGURE 2.** KP-5032 Reference View

- |  |   |
|--|---|
| 1. Multi-Directional Lever Keys                        | 22. GPIO Connector (6-position Terminal Block)  |
| 2. High Resolution, Wide-Angle LCD Display             | 23. OMNEO ETHERNET Connector (See “Ethernet Connector” on page 26)                                    |
| 3. MIC MUTE/MIC SEL Lever Key                          | 24. OMNEO ETHERNET Connector (See “Ethernet Connector” on page 26)                                    |
| 4. AUX VOLUME Knob/menu navigation                     | 25. OMNEO OPTICAL (fiber) Connector<br>SM SFP Module (F.01U.278.502)<br>MM SFP Module (F.01U.278.503) |
| 5. Keypad  | 26. OMNEO OPTICAL DETECT (fiber) Indicator LED  |
| 6. Main Speaker (Front)                                |   |
| 7. Microphone Connector                                |   |
| 8. CLR/CWW Lever Key                                   |   |
| 9. MAIN VOLUME Knob                                    |   |
| 10. Headset Connector (Front Panel)                    |   |
| 11. Power Supply Bracket Mounting Holes                |   |
| 12. Power Supply Cable Tie Mounting Hole               |   |
| 13. POWER Connector                                    |   |
| 14. SPEAKER Rear Connector (2-position Terminal Block) |   |
| 15. AUX 1 Connector                                    |   |
| 16. AUX 2 Connector                                    |   |
| 17. HEADSET Connector (Rear Panel)                     |   |
| 18. EXT MIC Connector                                  |   |
| 19. LINE OUT/MIC OUT Connector                         |   |
| 20. FRAME Connector                                    |   |
| 21. EXP/LCP Connector                                  |   |



**FIGURE 3.** KP-4016 Reference View

1. Microphone Connector
2. High Resolution, Wide-Angle LCD Display
3. Keypad
4. AUX VOL. Knob
5. Main Speaker (Front)
6. Headset Connector (Front Panel)
7. Multi-Directional Lever Keys
8. MAIN VOL. Knob
9. POWER Connector
10. SPEAKER Rear Connector (2-position Terminal Block)
11. RJ-45 FRAME Connector
12. RJ-45 EXP/LCP Connector
13. OMNEO ETHERNET Connector (See “Ethernet Connector” on page 26)
14. OMNEO OPTICAL (fiber) Connector  
SM SFP Module (F.01U.278.502)  
MM SFP Module (F.01U.278.503)
15. OMNEO OPTICAL (fiber) Indicator LED
16. AUX 1 Connector
17. AUX 2 Connector
18. HEADSET Connector (Rear Panel)
19. EXT MIC Connector
20. LINE OUT/MIC OUT Connector
21. GPIO Connector (6-position Terminal Block)

## Connector Pinouts

Power Supply: J1	
Pin	Assignment
Pin 1	24VDC
Pin 2	GND
Pin 3	Chassis GND

Rear Panel Mic: J6	
Pin	Assignment
1	REAR_PANEL_MIC_IN -
2	REAR_PANEL_MIC_IN +
3	GND

Rear Speaker: J2	
Pin	Assignment
Pin 1	Rear Speaker -
Pin 2	Rear Speaker +

MIC OUT/LINE OUT: J7	
Pin	Assignment
1	GND
2	MIC_OUT/LINE_OUT +
3	MIC_OUT/LINE_OUT -

Aux 1: J3	
Pin	Assignment
Pin 1	GND
Pin 2	AUX 1 IN +
Pin 3	AUX 1 IN -



Matrix Connector: J8 <sup>a</sup>		
Pin	RJ-45	RJ-12
1	RS485 +	
2	RS485 -	RS485 -
3	TO_KP_AUD +	FROM MATRIX +
4	FROM_KP_AUD +	TO MATRIX +
5	FROM_KP_AUD -	TO MATRIX -
6	TO_KP_AUD -	FROM MATRIX -
7	RS485 +	RS485 +
8	RS485 -	

a. Supports 568B and USOC wiring

AUX 2: J4	
Pin	Assignment
1	GND
2	AUX 2 IN +
3	AUX 2 IN -

EXP/LCP Connector: J9	
Pin	Assignment
1	LCP_DATA_STROBE
2	LCP_DATA_CLK
3	LCP_DATA_IN
4	GND
5	GND
6	
7	RS485 +
8	RS485 -

Rear Headset: J5	
Pin	Assignment
1	REAR_HS_MIC_IN -
2	REAR_HS_MIC_IN +
3	REAR_HS_COMMON
4	REAR_HS_L_OUT
5	REAR_HS_R_OUT

GPIO Connector: J10		
Pin	Assignment	Silk Screen
		Opto-2/Relay-2
1	Chassis GND	
2	OPTO2_CATHODE	K-
3	OPTO2_ANODE	A+
4	RELAY2_NO	NO
5	RELAY2_NC	NC
6	RELAY2_COM	C
		Opto-2/Relay-2
7	Chassis GND	
8	OPTO1_CATHODE	K-
9	OPTO1_ANODE	A+
10	RELAY1_NO	NO
11	RELAY1_NC	NC
12	RELAY1_COM	C

ETHERNET: J11	
Pin	Assignment
1	Data 1 +
2	Data 1 -
3	Data 2 +
4	Data 3 +
5	Data 3 -

ETHERNET: J11	
Pin	Assignment
6	Data 2-
7	Data 4+
8	Data 4-

ETHERNET: J12	
Pin	Assignment
1	Data 1 +
2	Data 1 -
3	Data 2 +
4	Data 3 +
5	Data 3 -
6	Data 2-
7	Data 4+
8	Data 4-

Front Panel Mic	
Pin	Assignment
Tip	REAR_PANEL_MIC_IN +
Ring	REAR_PANEL_MIC_IN -
Sleeve	CGND

Front Headset			
Pin	Assignment		
	4-Pin	5-Pin	6-Pin
1	FRONT_HS_MIC_IN-	FRONT_HS_MIC_IN-	FRONT_HS_MIC_IN-
2	FRONT_HS_MIC_IN+	FRONT_HS_MIC_IN+	FRONT_HS_MIC_IN+
3	FRONT_HS_COMMON	FRONT_HS_COMMON	FRONT_HS_COMMON
4	FRONT_HS_L_OUT	FRONT_HS_L_OUT	FRONT_HS_L_OUT
5		FRONT_HS_R_OUT	FRONT_HS_R_OUT
6			No Connect

---

### *Requirements*

The following keypanel firmware versions are needed for the specified KP-4016/5032 model:

*AZedit..... V5.0.0 or later*

*IPedit..... V3.2.0 or later*

*MCH-e..... V3.2.0 or later*

*AIO-16..... V1.6.0 or later*

*FWUT..... V3.3.0 or later*

*DNS-SD..... V3.3.0 or later*

*OMI..... V5.2.0 or later*

## KP-5032 Installation

**IMPORTANT:** If you plan to use the Power Supply Mounting Bracket, we recommend you install the mounting bracket before cabling the keypanel. For information on different power supply mounting options, see “Power Supply Mounting Options” on page 193.

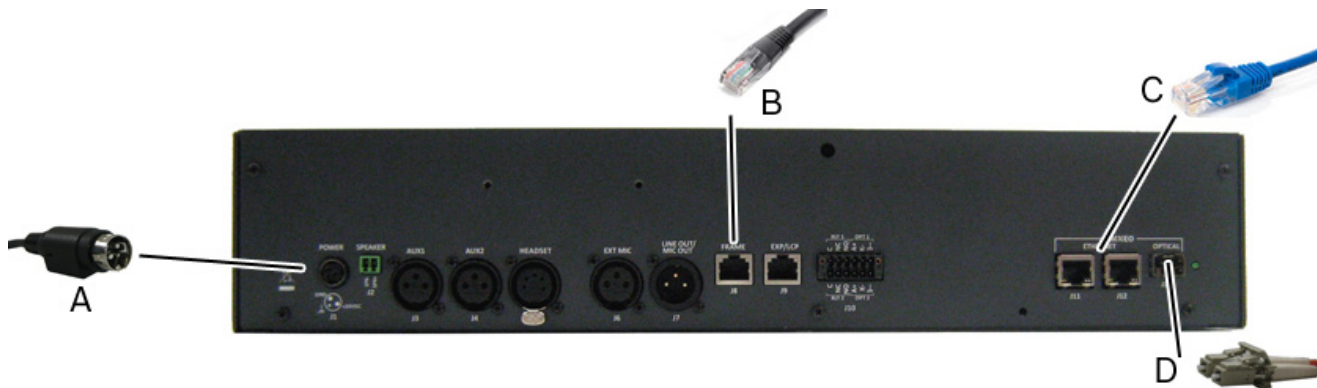


FIGURE 4. KP-5032 Installation

**IMPORTANT:** When an OEI-2 power supply is used on a KP-5032/4016 keypanel, the following warning icon blinks to display the wrong power supply is being used. No damage to the keypanel occurs.



To **install the KP-5032**, do the following:

1. On the rear panel of the KP-5032, plug the **24 VDC power connector (A)** of the power supply into the power connector on the back panel of the unit.
2. Connect an **RJ-12 or RJ-45 (568B or USOC) cable (B)** with RTS cabling to the J8 FRAME connector on the rear panel.  
OR  
Connect an **CAT-5e cable (C)** to either J11 or J12 ETHERNET connector on the rear panel.

**NOTE:** If you have the option J13 fiber connector installed, connect a **fiber connector (D)** to the OPTICAL fiber connector on the rear panel.

3. Once the unit is cabled, plug the **power supply power cord** into the wall outlet or a power strip.



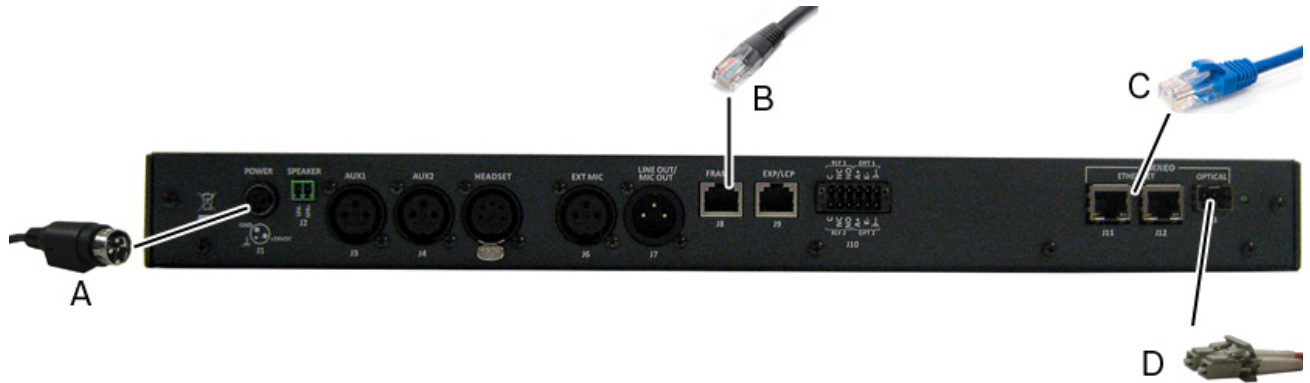
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## KP-4016 Installation

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**IMPORTANT:** For information on different power supply mounting options, see “Power Supply Mounting Options” on page 193.

---



**FIGURE 5.** KP-4016 Installation

To **install the KP-4016**, do the following:

1. On the rear panel of the KP-4016, plug the **24VDC power connector (A)** of the power supply into the power connector on the back panel of the unit.
2. Connect an **RJ-12 or RJ-45 (568B or USOC) cable (B)** with RTS cabling to the J8 FRAME connector on the rear panel.  
OR  
Connect an **CAT-5e cable (C)** to either J11 or J12 ETHERNET connector on the rear panel.

**NOTE:** If you have the optional J13 fiber connector installed, connect a **fiber connector (D)** to the OPTICAL fiber connector on the rear panel.

3. Once the unit is cabled, plug the **power supply power cord** into the wall outlet or a power strip.

---

## Configure the Keypanel

You can configure the OMI using AZedit and IPedit; however, only IPedit can be used to configure the keypanel.

### Configure the KP-4016/5032 using AZedit

To **configure the OMI to the KP-4016/5032 using AZedit**, do the following:

1. From the Status menu in AZedit, select **I/O Cards**.  
*The I/O Card Status window appears showing a list of installed cards.*
2. Right-click the **OMI card** you want to configure to the keypanel.  
*A pop-up menu appears.*
3. From the pop-up menu, select **OMNEO Configuration**.  
*The OMNEO Configuration window appears.*
4. From the OMNEO card drop down menu, select the **slot number** where the OMI card is located in the frame, if it is not already selected.  
*The Device Name field auto-populates with the name of the device.*
5. From the Local Channel drop down menu, select the **channel** you want to use to communicate to another keypanel across the network.

**NOTE:** Non-allocated channels appear with an asterisk (\*) next to them.

6. In the Partner Device Name field, enter the **name of keypanel** you want to use to communicate with.  
OR  
Select the **Browse icon** to select from a list of devices.

**NOTE:** To find the panel ID, see “Display Menu, Panel ID” on page 121.

7. In the Partner IP Address field, enter the **IP Address** of the device to which you want to connect. This field auto-populates when you select the Device Name.
8. From the Partner Device Type drop down menu, select the **type of device** to which the OMI card is connecting.
9. From the Partner Channel drop down menu, select the **channel** on the device to which the OMI communicates.
10. Once you are completely finished, click **Apply**.  
*Apply sends all the changes to all the cards in the intercom, or Click Cancel to discard all the changes made.*

## Add the KP-4016/5032 to the Device Catalog in IPedit

To **add the keypanel/device to IPedit**, do the following:

1. Open **IPedit**.
2. From the Device menu, select **Add**.  
*The Add Devices Window appears, open to the Search tab.*
3. Select the **keypanel** you want to add.  
*The Add button becomes active.*
4. Click the **Add button**.  
*The keypanel appears in the device catalog in the left panel.*
5. Click the **Done button**.  
*The Add Devices window closes.*

## Configure the Keypanel using IPedit

To **configure the keypanel using IPedit**, do the following:

Using the Device Configuration and Status Pane

1. In the Device Name field, enter a **device name** familiar to you.  
*By default, keypanels are given a default name.*
2. In the Description field, enter a **description for the keypanel**, if desired.

Using the Channel Configuration and Status Section:

3. From the column headings, select the **channel** you want to configure.
4. In the Channel Description field, enter a **channel description**, if applicable.
5. From the Destination Type drop down menu, select the **OMI card** to which the channel is connected.
6. In the Destination Device Name field, enter the **name of the device** to which the channel is connected.  
OR  
Click the ... button.  
*The Discovered Devices Window appears.*  
Expand the **local tree** to view the destination devices available.  
From the expanded tree, select the **device** you want for your destination device.  
Click **OK**.

**NOTE:** To find the panel ID, see “Display Menu, Panel ID” on page 121.

7. From the Destination Channel drop down menu, select the **destination channel** to which the channel is connected.
8. From the File menu, click **Save**.

---

## Connecting the KP-4016/5032 through the OMNEO Offers Menu

---

**IMPORTANT:** This step not needed when you configure the keypanel via IPedit.

---

To finish the configuration, you must configure the keypanel to talk with the OMI card in the frame. To do this, you must establish a connection using the OMNEO Offers menu on the keypanel. For more information, see “Menu System, OMNEO Offers” on page 137.

To **configure an available OMNEO device connection port**, do the following:

1. Starting at the OMNEO Offers|Keypanel menu, select **OKP**.
2. Press the **SEL button**.  
*A list of available OMNEO devices appears.*
3. Using the arrow buttons, select the **OMNEO device** you want to use.  
*An arrow appears next to the device.*
4. Press the **CLR button** to exit menu mode.



---

## Power Up

At power-up, if the keypanel is connected to the matrix, the alphanumeric display shows dashes in the light blue color key



. After several seconds, the intercom key assignments display with the appropriate color keys and alphas.

**NOTE:** If the keypanel cannot establish communications with the intercom system, all alphanumeric displays continue to show asterisks (\*\*\*\*) and the *Disconnected from Matrix* icon  appears in the panel display. Check the keypanel to matrix cable connection if this occurs. If the keypanel loses communications with the intercom, the panel display shows the Disconnected from Matrix icon and displays the  after approximately 30 seconds.

## Address Setting

### General Information

In ADAM intercoms using AIO-8 cards or AIO-16 cards with SCSI breakouts, and in ADAM-CS and Zeus/Zeus II intercoms, the intercom ports share data connections in groups of eight (8). Each keypanel is uniquely identified on the data port by its address. The method of determining the proper address varies for each intercom system. Use the method for your intercom system, as described on the following pages.

**TABLE 1.** KP-5032/4016 Addressing

Manually Addressed	Automatically Addressed
<p>You must manually address<sup>a</sup> the keypanel when using the following:</p> <ul style="list-style-type: none"> <li>• AIO-8 on ADAM</li> <li>• AIO-16 SCSI on ADAM</li> <li>• ADAM CS</li> <li>• Zeus I</li> <li>• Zeus II</li> </ul>	<p>The keypanel address is automatically detected when using the following:</p> <ul style="list-style-type: none"> <li>• AIO-16 MDR on ADAM and ADAM-M</li> <li>• Cronus</li> <li>• Zeus III and Zeus III LE/LE+</li> <li>• RVON Products - RVON-8, RVON-2, RVON-C, and RVON-16</li> </ul> <p><b>NOTE:</b> Keypanels using RVON-I/O may need to be individually addressed. See the RVON-I/O user manual for further instruction.</p>

a. To manually address the KP-5032/4016, see “Service Menu, Set Address” on page 154.

To see specific addressing information for:

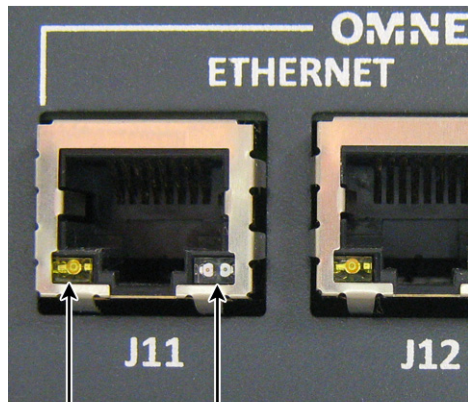
- ADAM with AIO-8 cards, see the ADAM technical manual (P/N F01U216986).
- ADAM CS, see the ADAM CS technical manual (P/N 93307517000).
- ADAM and ADAM-M with AIO-16 cards, see the AIO-16 user manual (P/N F01U193267).
- Cronus, see Cronus user manual (P/N F01U118890).
- Zeus III, see the Zeus III user manual (P/N F01U193289).
- Zeus III LE/LE+, see the Zeus III LE/LE+ user manual (P/N F01U193290).

**NOTE:** If you are connecting to an ADAM or ADAM-M frame with AIO-16 cards using MDR connectors or a Cronus frame, you do not need to set the address. If the AIO-16 is using SCSI breakouts, you must set the address.

## Connections

### Frame Connector

Use the Frame connector to connect to an intercom port of the intercom system. For the frame connector location, see Figure 3 on page 16. The intercom port you connect to should agree with the address you set previously.



**Left LED** (yellow)    **Right LED** (bi-color orange/green)

### Ethernet Connector

Use the Ethernet connector to connect the keypanel to a network system. Each RJ-45 Ethernet connector has two (2) LEDs:

**Left LED.** The left LED is yellow and indicates a network link is established. It flashes on/off whenever there is network activity.

**Right LED.** The right LED is bi-color (orange and green) and indicates the speed of the connection by the color that is displayed.

- A green LED indicates the port is operating at 1000Mbps (1 Gbps).
- An orange LED indicates the port is operating at 100Mbps.
- No LED color indicates the port is operating at 10Mbps. This is not suitable for OMNEO networking.

### Panel Microphone Connector

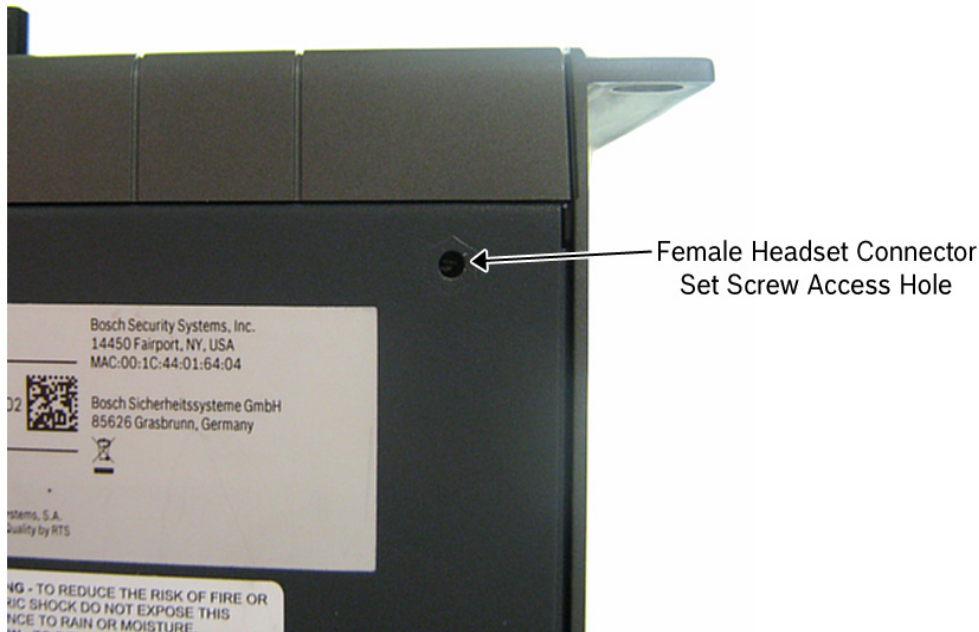
A panel microphone may be connected to the front or rear of the unit for talking with either the front/rear panel speaker or headphones used for listening. The connector accepts MCP5, MCP6, or MCP90 series panel microphones. Insert the microphone and rotate the entire microphone body several turns to lock it in place.

## Headset Connector

A stereo headset may be connected to the front or rear of the unit for use along with or in place of the front/rear panel speaker and a separate microphone. Headphones may be connected for use with a separate microphone.

### *Female Headset Connector*

For a female headset connector, the set screw access hole is located on the bottom-right side of the unit.



Bottom Panel View – KP-5032

**FIGURE 6.** Female Headset Connector Set Screw Access Hole

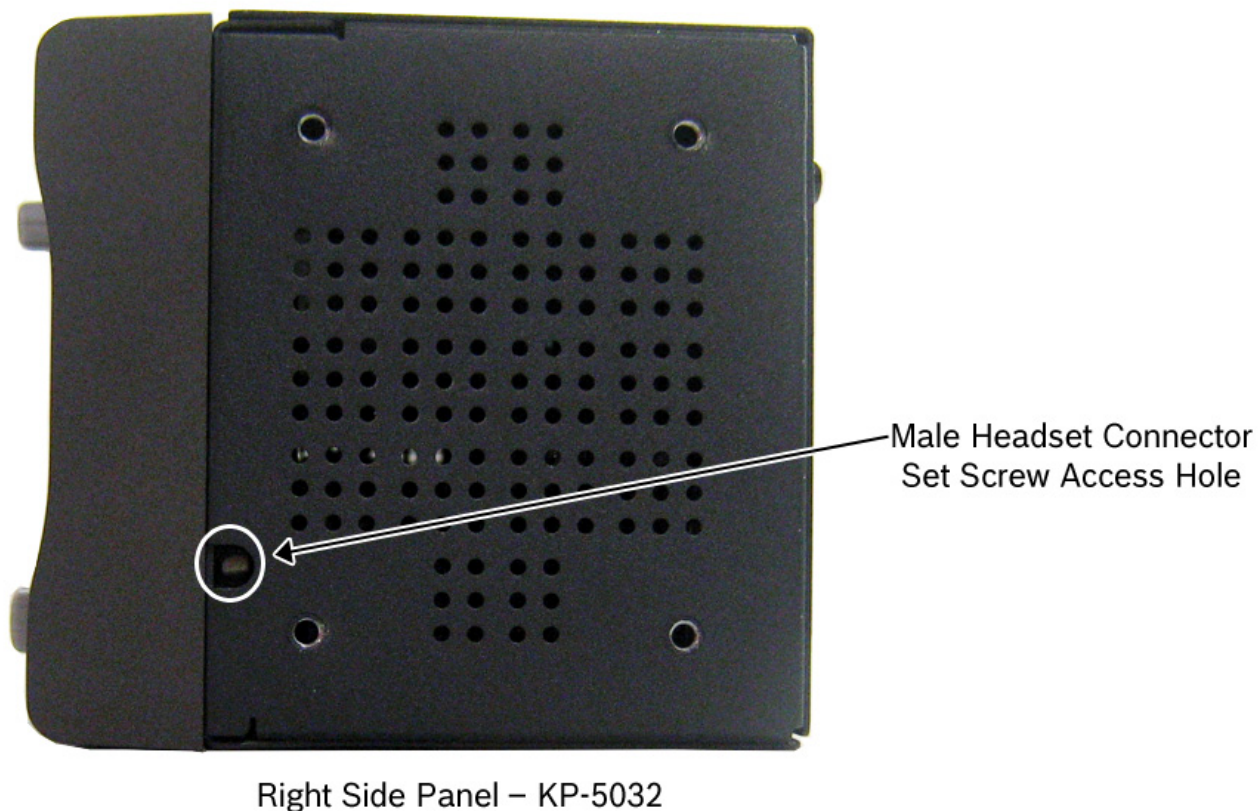
***Male Headset Connector***

For a male headset connector, the set screw access hole is located on the right-side of the unit.

---

**IMPORTANT:** The right-side rack ear must be removed to expose the set screw access hole.

---



**FIGURE 7.** Male Headset Connector Set Screw Access Hole



### *Changing the Front Headset Connector*

The front headset connector can be switched between a 6-pin, 5-pin, or 4-pin XLR connector.

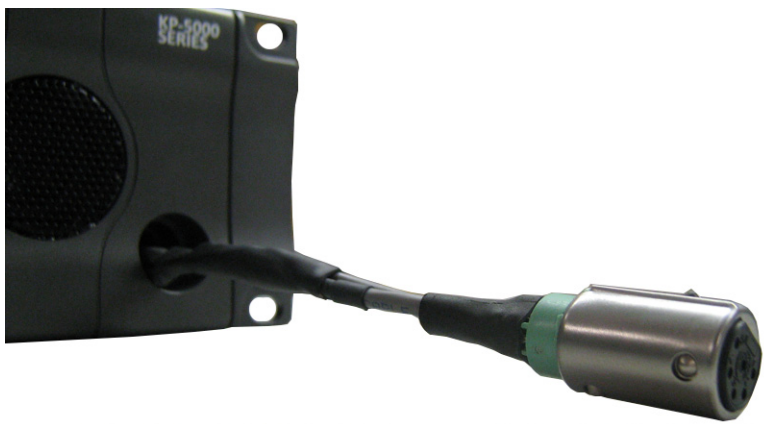
To **replace the front panel headset connector**, do the following:

**NOTE:** The instructions are the same for both the KP-5032 and KP-4016 keypanels.

1. Using a flat-blade screwdriver with 2.4mm wide (3/32 in.) tip, turn the **set screw counterclockwise** to loosen the connector from the unit.



2. Once the connector is loose, tip the **unit** and gently shake the **connector loose**.
3. Carefully pull the **headset cable** free from the chassis.

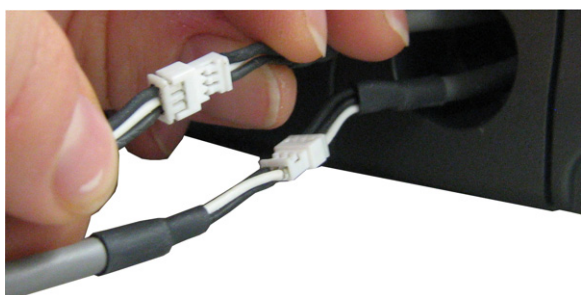


**NOTE:** If the cable assembly becomes caught, shift the cable up and down to clear the cable from the unit.

4. Cut the **shrink-tubing** from around the cables. Pay attention not to cut through the cables.



5. Disconnect **both cables** by pulling the cable-to-cable connectors apart.



6. Using the replacement headset connector, thread the **cables** through the supplied shrink-tubing.



7. Connect the **cable-to-cable connectors**.

**NOTE:** Take care to reconnect the proper gender connectors when reassembling the headset cable.

8. Position the **shrink-tubing** so any portion of the cable without an outer insulation layer is covered.



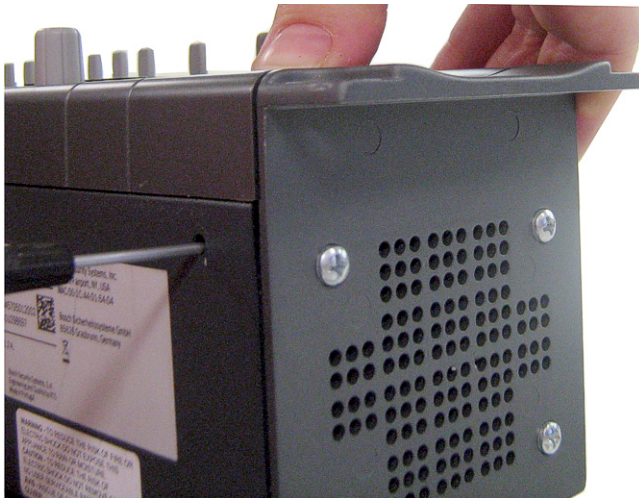
9. Using a heat gun, apply **even heat over the length and diameter of the tubing** (minimum temperature 100°C).

---

**IMPORTANT:** Since uncontrolled heat can cause uneven shrinkage, physical damage, and insulation failure, the use of open flame is not recommended. Avoid overheating the heat shrink-tubing because it can become brittle and/or charred.

---

10. Gently push the **headset connector cable** back into the unit.
11. Align the **rib on the headset connector with the notch in the connector opening** and press the connector completely in.
12. While holding the connector in place, turn the **set screw clockwise** to tighten the connector in position.



## GPIO 6-Position Terminal Block Connector

The **GPIO 6-Position Terminal Block Connector** is used to configure relays (outputs) and opto-isolators (inputs). Using the table, “GPIO Connector: J10” on page 18, connect the correct wires to the 6-position connector.

### Wire Specifications

*Solid Wire: 26-16AWG/0.13–1.5MM<sup>2</sup>*

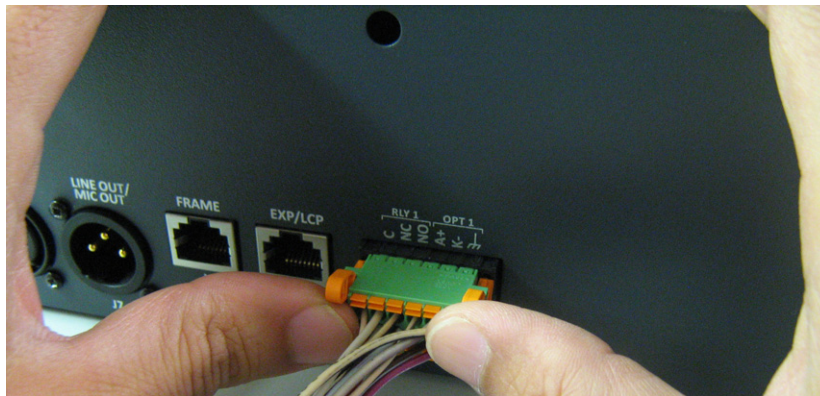
*Stranded Wire: 26-16AWG/0.13–1.5MM<sup>2</sup>*

To **connect the 6-position terminal block to the keypanel**, do the following:

1. Align the **terminal block connector** with the **6-position connector** on the rear side of the keypanel.
2. Gently push the **connector** into place.  
*You should see the locking levers lock into place.*

To **detach the 6-position terminal block connector from the keypanel**, do the following:

- > Using both thumbs, gently press up on the **locking levers**.  
*The connector is released from the keypanel.*





## Speaker 2-Position Terminal Block Connector

The **Speaker 2-Position Terminal Block Connector** is used to connect an external speaker to the keypanel. This may be a speaker in another room or a speaker the user likes to use.

### Wire Specifications

*Solid Wire: 26-16AWG/0.13–1.5mm<sup>2</sup>*

*Stranded Wire: 26-16AWG/0.13–1.5mm<sup>2</sup>*

*Torque: 3.0lb-IN/0.34Nm*

---

**WARNING:** The positive (+) and negative (-) terminals of the connector should be connected to the positive (+) and negative (-) terminals of the external speaker. These terminals should never be connected to GND or permanent damage can occur.

---

To **connect the 2-position terminal block to the keypanel**, do the following:

1. Align the **2-position terminal block connector with the 2-position connector** on the rear side of the keypanel.
2. Gently push the **connector** into place.

To **detach the 2-position terminal block connector from the keypanel**, do the following:

- > Using the thumb and fore-finger, carefully wiggle the **2-position terminal block** until it comes free from the connector.


















## Basic Operation

### Intercom Keys and Displays

#### Color Display Descriptions for Intercom Keys

The KP-4016/5032 display uses key colors to distinguish the type of key assignment is assigned to the key. Use Table 2, to help you determine the available key assignment colors.

**TABLE 2.** Default Key Colors

	Default Color	Description
	Amber	Waiting for Footswitch
	Bright Green	Listen Indicator, Local Matrix
	Brown	IFB Special List
	Teal	Point-to-Point
	Dark Yellow	ISO
	Light Blue	Unassigned, Test Mode (with Talk and Listen Indicators)
	Pale Yellow	Special Functions
	Magenta	Relay
	Pink	Party Line
	Red	Remote Matrix
	Salmon	IFB, Talk Indicator
	Pale Green	Special List
	Periwinkle	UPL Resource

## Display Icons

**Display Icons** are used to indicate the accessories and features enabled, disabled, active, and inactive. Use Table 3 for a complete description of each icon seen on the KP-5032/4016.

**TABLE 3.** Display Icon Descriptions













Icon	Icon Name	Description
	Matrix Connected	The keypanel is connected to the Matrix. This icon briefly displays at connection.
	Disconnected From Matrix	There is no connection between the Matrix and the keypanel. This icon is displayed as long as there is no Matrix data connection.  <b>NOTE:</b> When the keypanel is disconnected, it displays its Device Name (for OMNEO) or IP Address (for RVON) device connections.
	Firmware Download	Firmware is being downloaded to the keypanel. A progress bar displays: chunk progress overall progress chunk/overall progress  <b>NOTE:</b> For more information, see “Download Firmware to the KP-5032/4016 From AZedit” on page 79.
	Footswitch Active	The footswitch is active.
	Footswitch Enabled	The footswitch is enabled, but not active.  <b>NOTE:</b> When a keypanel key is latched while the Footswitch is enabled, the key display turns amber to signify it is waiting for the footswitch.
	Front Headphones	The front headphones are enabled. This indicates the front headset microphone is not enabled.
	Front Headset	The front headset is enabled.
	Front Headset Mic Muted	The front headset mic is muted.
	Front Microphone	The front microphone is enabled.
	Front Microphone Muted	The front microphone is muted. To mute the front microphone, see “Mute the Microphone/Speaker” on page 56.  <b>NOTE:</b> A flashing mute icon  appears on any active mics when the mic mute key is pressed.  If tone is enabled, which disables mics, the mute icon appears on any active mic, but does not flash.
	Front Speaker	The front speaker is enabled. To enable the front speaker, see “Audio Options Menu, Speaker” on page 116.



TABLE 3. Display Icon Descriptions



























Icon	Icon Name	Description
	Front Speaker Muted	The front speaker is muted.
	Rear Headphones	The rear headphones are enabled. This indicates the rear headset mic is not enabled. To enable the rear headphones, see “Audio Options Menu, Headset Speaker” on page 109.
	Rear Headset	The rear headset is enabled.
	Rear Headset Muted	The rear headset mic is muted.
	Rear Microphone	The rear microphone is active. To activate the rear microphone, see “Audio Options Menu, Panel Mic” on page 115.
	Rear Microphone Muted	The rear microphone is muted. To mute the rear microphone, see “Mute the Microphone/Speaker” on page 56.  <b>NOTE:</b> A flashing mute icon  appears on any active mics when the mic mute key is pressed.  If tone is enabled, which disables mics, the mute icon appears on any active mic, but does not flash.
	Rear Speaker	The rear speaker is active. To activate the rear speaker, see “Audio Options Menu, Speaker” on page 116.
	Rear Speaker Muted	The rear speaker is muted.
	Both Headphones	Both front and rear headphones are enabled. This indicates both the front and rear headset mics are disabled. To enable the front headphones, see “Audio Options Menu, Headset Speaker” on page 109.
	Both Headsets	Both front and rear headsets are active.
	Both Headsets Muted	Both front and rear headset mics are muted.
	Both Microphones	Both front and rear microphones are enabled.
	Both Microphones Muted	Both front and rear microphones are muted. To mute the front microphone, see “Mute the Microphone/Speaker” on page 56.  <b>NOTE:</b> A flashing mute icon  appears on any active mics when the mic mute key is pressed.  If tone is enabled, which disables mics, the mute icon appears on any active mic, but does not flash.

TABLE 3. Display Icon Descriptions

Icon	Icon Name	Description
	Both Speakers	Both front and rear speakers are enabled. To enable the front speaker, see “Audio Options Menu, Speaker” on page 116.
	Both Speakers Muted	Both front and rear speakers are muted.
	Snoop Tally Active	Snoop Tally is Active on the keypad. You must have the Hot Mic enabled to use snoop tallies. To enable snoop tallies, see “Service Menu, Snoop Tally” on page 155.
	Hot Mic	The hot mic is active. To activate Hot Mic, see “Audio Options Menu, Matrix Out” on page 112.
	Tone 1kHz Enabled	Tone 1kHz is enabled on the keypad. To enable tone 1kHz, see “Audio Options Menu, Tone Gen” on page 117.
	Tone 500Hz Enabled	Tone 500Hz is enabled on the keypad. To enable tone 500Hz, see “Audio Options Menu, Tone Gen” on page 117.
	Main Volume Bar	The main volume bar is used to control the volume for the keypad inputs and outputs, including all speaker and headset outputs, and matrix and aux inputs. If the volume of a speaker or headset is turned down to mute, the non-flashing mute icon appears on the speaker or headset.  <b>NOTE:</b> If both the front and rear speaker or headset are enabled, the mute icon only appears if both the front and rear volumes are in the mute position.
	Key Volume Bar	The key volume bar is used to control the listen gain on a per key level. The listen gain range is +6dB to -80db, or Mute.  <b>NOTE:</b> Listen must be assigned on the key assignment for this function to operate.
	OMNEO Enabled	The OMNEO matrix interface is enabled on the panel. For more information on OMNEO Offers, see “Menu System, OMNEO Offers” on page 137.
	OMNEO Disabled	The OMNEO matrix interface is disabled on the panel. For more information on OMNEO Offers, see “Menu System, OMNEO Offers” on page 137.
	Virtual Key Assignment	Keys are active on a virtual EKP that are not being displayed. For more information, see “Key Options Menu, Panel Swap” on page 132.  <b>NOTE:</b> A talk or listen bar (or both) displays to indicate which type of virtual keys are active.

## Keypad Reference View

With both the KP-4016 and KP-5032 there are three (3) tiers to each keypad's keypad: Primary Mode, SHIFT Mode, and Dial Mode.

### Primary Mode

**Primary Mode** is used for the most common keypad functions, such as CLR, SEL, and accessing the Main menu. There are no special keypad sequences to use these functions.

### Shift Mode

**SHIFT Mode** contains secondary functions used to access more functionality. The SHIFT mode functions are located in the upper-right corner of the keypad key.

**NOTE:** By default, the keypad backlight changes to *white* when the keypad is in SHIFT mode. For more information, see “Service Menu, Keypad” on page 144.

To **access Shift Mode**, do the following:

1. On the keypad, press the **SHIFT button**.
2. On the keypad, press the **SHIFT mode button** desired.

**NOTE:** Once you enter SHIFT mode, you can exit the mode by pressing the SHIFT key again, without pressing any other keys.

### Dial Mode

**DIAL Mode** is used to complete telephone operations. For more information, see “Telephone Interface (TIF) Operation” on page 159. When the keypad is in DIAL mode, the keypad keys support the standard telephone DTMF keypad configuration as a third tier function. The DTMF keypad is seen in the upper-left corner of the keypad keys.



FIGURE 8. KP-5032 Keypad and KP-4016 Keypad

Keypad Button	Shift Function	Dial Function	Description
LOC button	TYPE	1	<p>The LOC/TYPE(1) button displays the list of available intercoms (LOCations) available to scroll from. Select an intercom name to access the scroll lists for that intercom.</p> <p>The TYPE button displays the keypanel assignment types available for use.</p>
↑ button	AFK	2	<p>The ↑ (2) button moves you upward through the scroll list or available key assignments one (1) at a time.</p> <p>AFK is reserved for future use.</p>
UPG1 button	UPG2	3	<p>The UPG 1 and UPG 2 buttons are used to assign frequently used menu items. This allows users to access the menu items quickly. UPG buttons can also be programmed to trigger GPI outputs or panel swap events.</p>
← button	←←	4	<p>The ←/←← (4) button moves you backwards through the menu options or available key assignments one at a time or by the page.</p>
MENU button	INFO	5	<p>The MENU/INFO (5) button is used to access the top level menu structure or access a secondary menu of commonly used features (see, “INFO button” on page 43).</p> <p>The MENU button is used to access the top-level menu structure.</p> <ul style="list-style-type: none"> <li>&gt; Press the <b>Menu button</b> once.</li> </ul> <p><i>The top-level menu appears in the panel display.</i></p> <p><b>NOTE:</b> If the keypad backlight is set to Activate (Service Keypad Backlight), you must press the Menu button twice to access the top-level menu. Using the ← (4) and → (6) buttons you can scroll through the list of options available. When a selection is highlighted, Press the SEL button to navigate down one (1) level in the menu structure.</p> <p>To access the <b>INFO</b> menu, do the following</p> <ol style="list-style-type: none"> <li>1. Press the <b>SHIFT</b> button.</li> <li>2. Press the <b>MENU/INFO (5) button</b>.</li> </ol> <p><i>The INFO menu appears in the panel display.</i></p> <p>For more details about the INFO button, see “INFO button” on page 43.</p>
→ button	→→	6	<p>The →/→→ (6) button moves you backwards through the menu options or available key assignments one (1) at a time or by the page.</p>
COPY button		7	<p>The COPY (7) button is used to copy an incoming call key assignment from the CWW to a specific keypanel key.</p> <p>For example, if caller THRE calls the keypanel, and there is no keypanel key assigned, THRE appears in the CWW window in the keypanel display. If the keypanel operator wants to assign the caller (THRE) a key, use the COPY (7) key on the keypad, and then tap the keypanel key where THRE is to be assigned.</p> <p><b>NOTE:</b> You can also copy from key to key by pressing the COPY+SEL buttons, and then tapping the source key and target key.</p>
↓ button	VM	8	<p>The ↓ (8) button moves you downward through the scroll list or available key assignments one (1) at a time.</p> <p>VM is reserved for future use.</p>

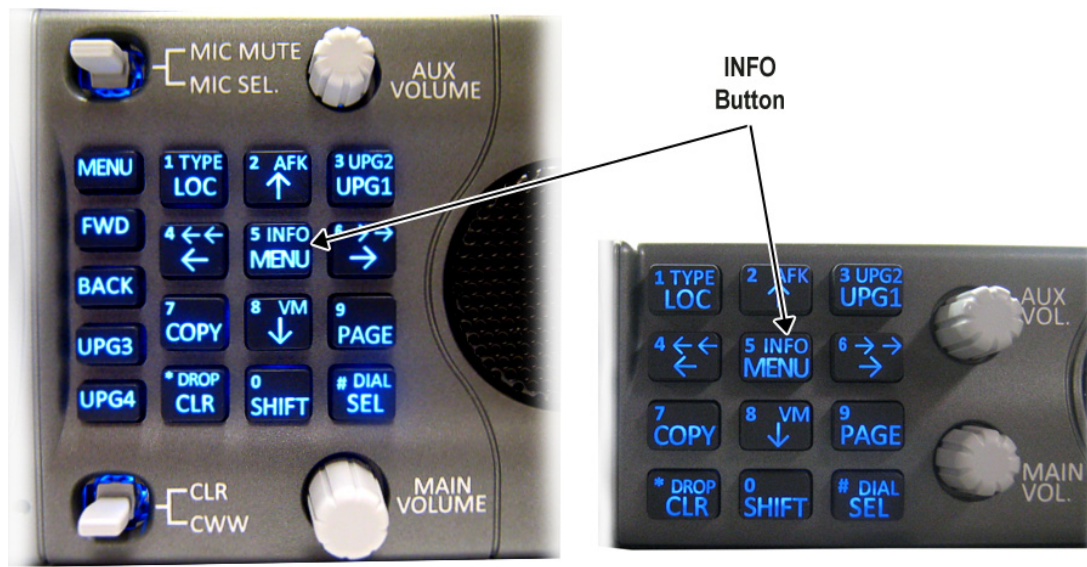
Keypad Button	Shift Function	Dial Function	Description
PAGE button		9	<p>The PAGE button is used to access a different setup page. You can configure up to 15 pages in the intercom system. The default number of pages is <i>four (4)</i>. To configure the number of pages available use the Intercom Configuration window, on the Options Page in AZedit.</p> <p>To <b>program a new page directly</b>, do the following:</p> <ul style="list-style-type: none"> <li>&gt; Press the <b>PAGE button</b>, &lt;#&gt;, then tap a <b>key</b>.</li> </ul> <p>To <b>enter the graphical page change mode</b>, do the following:</p> <ul style="list-style-type: none"> <li>&gt; Press the <b>PAGE+ SEL buttons</b>.</li> <li>OR</li> <li>Press the <b>SHIFT+PAGE buttons</b>.</li> </ul>
CLR button	DROP	*	<p>The CLR/DROP (*) button is used to clear the CWW window or the CLR button functions as a back button.</p> <p>To <b>clear a menu</b>, do the following:</p> <ul style="list-style-type: none"> <li>&gt; Press and hold the <b>CLR button</b> for half a second.</li> </ul> <p>If the CLR/DROP button is pressed when in TIF DIAL mode, it hangs up the TIF connection.</p> <p>To <b>access the DROP function</b>, do the following:</p> <ol style="list-style-type: none"> <li>1. Press the <b>SHIFT button (0)</b>, and then the <b>DROP button</b>. <i>Tap Key appears in the panel display.</i></li> <li>2. Tap the <b>key</b> you want to drop the call from.</li> </ol>
SHIFT button		0	<p>The SHIFT (0) button accesses the secondary keypad actions such as INFO, DROP, etc.</p>
SEL button	DIAL	#	<p>The SEL/DIAL (#) button is used to select options highlighted in the menu structure.</p> <p>Press SHIFT+DIAL and then press the TIF key, to enter TIF Dial mode.</p>

**KP-5032 Only Keypad Keys**

<b>Keypad Button</b>	<b>Description</b>
MENU button	<p>The MENU button is used to access the top-level menu structure.</p> <p>&gt; Press the <b>Menu button</b> once. <i>The top-level menu appears in the panel display.</i></p> <p><b>NOTE:</b> If the keypad backlight is set to Activate (Service Keypad Backlight), you must press the Menu button twice to access the top-level menu.</p>
FWD button	<p>The FWD button moves you forward through the menu option highlighted. For example, if Display is highlighted in the panel display and FWD is pressed, the second level of the display menu appears.</p>
BACK button	<p>The BACK button moves you backward, one (1) level, through the menu structure.</p> <p><b>NOTE:</b> If you are at the top-level of the menu structure and press BACK, you cannot move backward any further.</p>
UPG 3 button	<p>The UPG 3 button is used to assign a frequently used menu item. This allows users to access the menu item quickly. UPG buttons can also be programmed to trigger GPI outputs or panel swap events.</p>
UPG 4 button	<p>The UPG 4 button is used to assign a frequently used menu item. This allows users to access the menu item quickly. UPG buttons can also be programmed to trigger GPI outputs or panel swap events.</p>

## INFO button

The **INFO** button is used to access commonly used features and configuration options for the keypanels. These include the following:



Feature	Description
Panel ID	Displays the port number and alpha of the keypanel.
Level 2	Displays the Level 2 key assignments on the keypanel.
Listen	Displays the listen key assignments on the keypanel.
Callers	Displays a list of current callers to the keypanel.
Assign Types	Displays the assignment types of all the configured keypanel keys.
Matrices	Displays the Matrix for each key assignment.
Tone	Opens the Tone Generator menu. For more information, see “Audio Options Menu, Tone Gen” on page 117.
Setup Pages	Displays the setup pages assigned to each row of keys. You cannot change setup pages from this menu.
Reset Vols	Opens the Key Volumes Reset menu. For more information, see “Audio Options Menu, Key Volumes” on page 111.
Hidden Asgns	Displays key assignments assigned to virtual keys (ie, assignments not currently visible).
Test Panels	Enables the Test Panel feature. For more information, see “Service Menu, Test Panel” on page 156.
Ver	Displays the firmware version of the KP-5032/4016. For more information, see “Display Menu, Version” on page 121.

To **access the Info Menu**, do the following:

1. On the keypad, press the **SHIFT** button.
2. On the keypad, press the **INFO MENU (5)** button.  
*The INFO menu appears in the panel display.*

**NOTE:** To exit the INFO menu mode, press the **CLR** button.



---

### *Breadcrumb Menu Navigation*

**Breadcrumb Navigation** is a graphical aid to help users know where they are in the menu structure. The breadcrumb menu visually lays out a path of options selected up to the current menu position. It appears as a horizontal line above the menu options. (shown in Figure 9).



**FIGURE 9.** Breadcrumb Navigation

---

### *Shaft Encoder Knobs and Menu Navigation*

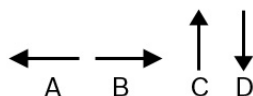
The **Aux Volume** shaft encoder, while the keypad is in menu mode, is used to move the selection from left to right. Or, in the case of a single menu item with up and down control, the shaft encoder is rotated to scroll through the available selections. This is particularly convenient when setting the keypad brightness or gain. Also, pressing the Aux Volume shaft encoder while in menu mode is the equivalent to FWD key operation, conversely, pressing the **MAIN Volume** shaft encoder in menu mode is the equivalent to the BACK key operation.

**NOTE:** The CLR button also performs the BACK function while in MENU mode. To exit the menu, press and hold the CLR button for half a second or press the CWW key up.



## Basic Intercom Key Operation

Coupled with the traditional operation of keys, the KP-5032/4016 keypanel also has an integrated **LCP** (Level Control Panel). This feature allows the user to adjust the volume for individual keys on the keypanel. Figure 10 displays the different key positions and their meanings.



A= Decrease Listen Volume  
B= Increase Listen Volume  
C= Listen  
D= Talk

**FIGURE 10.** Key Function Position Explanation

## Talk/Listen Indicator

The **Talk/Listen Indicator**, shown in Figure 11, displays a visual indicator when the talk and/or listen key is active. The talk and listen states of each key are represented by an LED-like horizontal bar at the bottom (talk) and top (listen) of each key.



**FIGURE 11.** Talk/Listen Indicators

By default, the listen indicator is *green* and the talk indicator is *red*. You can change the colors of the indicator by using the Key Color Window in AZedit. For more information, see “Keypanel Color Window” on page 61.


## Key Gain Adjustment

The **Key Gain Adjustment** is used to change the crosspoint listen gain on a specific key from the Matrix. This adjustment is automatically reflected in AZedit on the Crosspoint Gains window. (System|Gains|Crosspoint).

The range for this feature is  $-80\text{dB}$  to  $+6\text{dB}$ , and *Mute*.

**NOTE:** Key gain can only be adjusted when the listen function listens to a PP, PL, or, an IFB with an Auto-Talk function on the listen key and a Listen Source programmed for the IFB.

To **change key volumes**, do the following:

- > On the KP-5032/4016 front panel
  - Press the **keypanel key** to the right to increase the listen gain for the selected key assignment.
  - Press the **keypanel key** to the left to decrease the listen gain for the selected key assignment.  
*A volume status bar (  ) and the volume level, in dB, appear on the specified key in the panel display.*

**NOTE:** The volume bar shows a full width icon, but only colors the portion that represents volume. The remainder of the bar is shown in black. This is so when the key gains are always displayed, the user will know when a key is muted, as opposed to a key that cannot have gain adjusted.



→  
**Increase Key Volume**

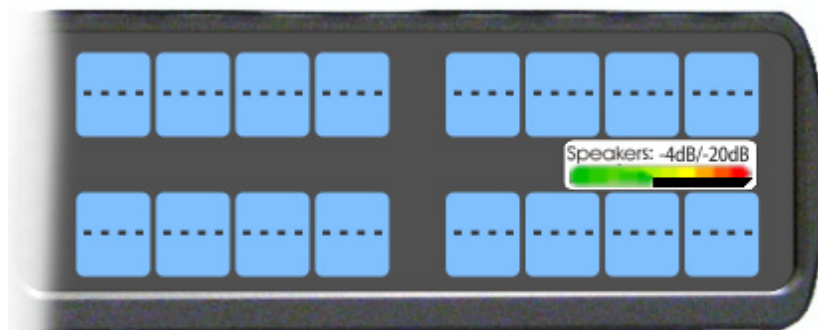
←  
**Decrease Key Volume**

## Keypanel Volume Adjustments

By default, the main volume control adjusts the Output Volume for the speaker (front/rear) or headset (front/rear), whichever is currently active.

Output volume ranges from  $+10\text{dB}$  to  $-48\text{dB}$  and *Mute*.

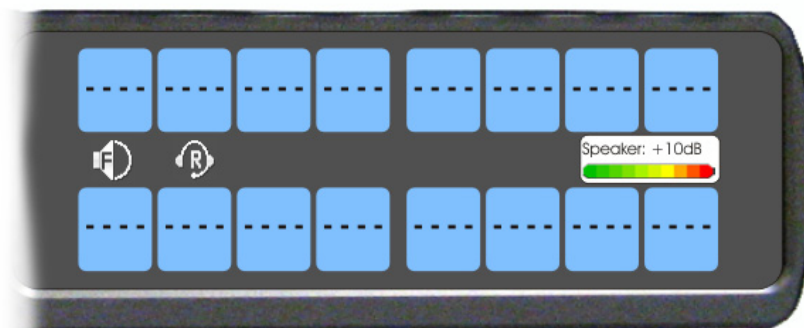
**NOTE:** If you gang speakers and/or headset volumes, you see a split volume bar. The front speaker or headset is the top portion of the bar, while the bottom portion of the bar is the rear speaker or headset volume. For more information on Gang Volumes, see “Audio Options Menu, Ganged Vols” on page 107.



To **adjust output volume level**, do the following:

- > On the KP-5032/4016, turn the **MAIN VOLUME encoder** to the right to increase the volume for the selected output.  
OR  
Turn the **MAIN VOLUME encoder** to the left to decrease the volume for the selected output.

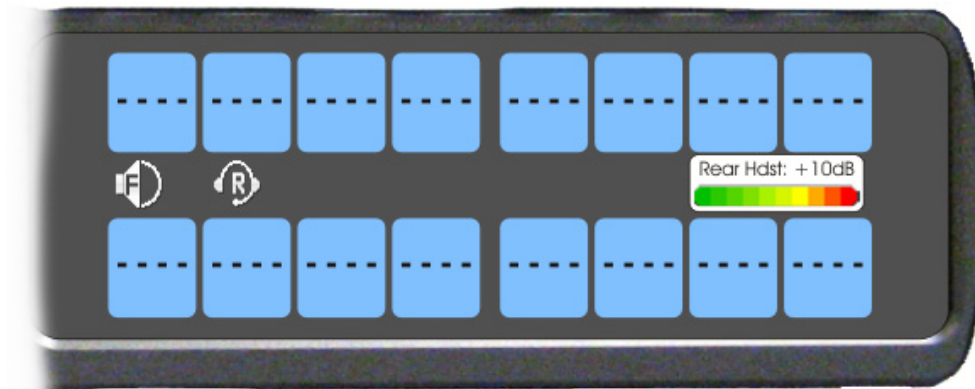
**NOTE:** When the MAIN VOLUME encoder is turned, the volume level bar appears in the panel display.



**NOTE:** You can save the volume adjustments to be power-up defaults using “Menu System, Save Config” on page 138.

To **select a different output volume control**, do the following:

- > On the KP-5032/4016, push the **MAIN VOLUME** encoder once.  
*The main volume focus switches to the next available output.*



### *Aux Volume Adjustments*

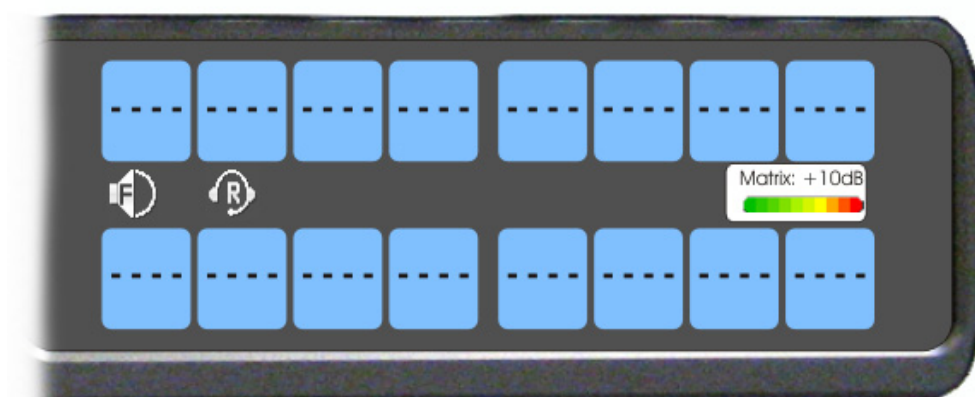
By default, the **Aux Volume** control knob adjusts the selected input volume, which can include Aux 1–2 or Matrix Input.

Input volume ranges from *+10dB to -48dB* and *Mute*.

To **adjust listen volume level**, do the following:

- > On the KP-5032/4016, turn the **AUX VOLUME** encoder to the right to increase the volume for the selected input.  
 OR  
 Turn the **AUX VOLUME** encoder to the left to decrease the volume for the selected input.

**NOTE:** When the AUX VOLUME encoder is turned, the volume level bar appears in the panel display.

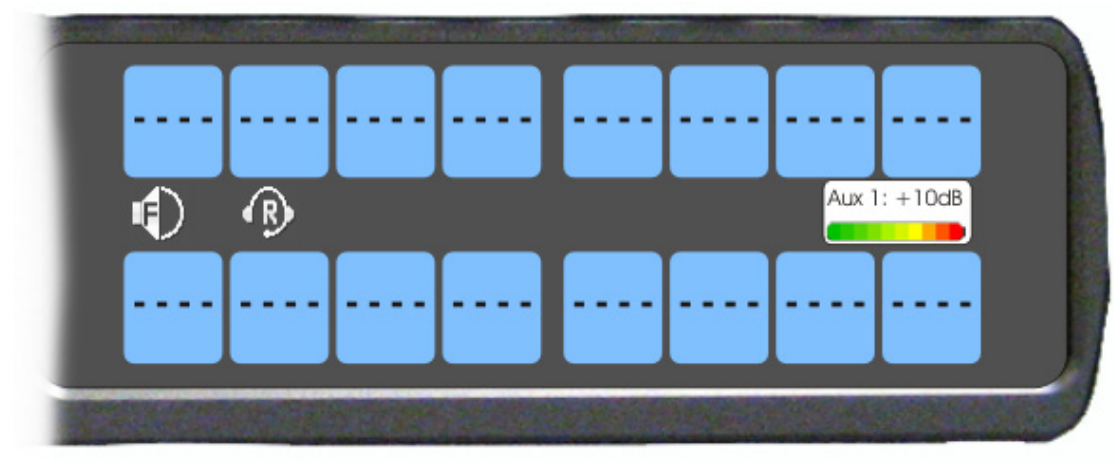


**NOTE:**

- You can save the volume adjustments to be power-up defaults using “Menu System, Save Config” on page 138.
- The inputs appear in the Aux Volume menu if they are enabled and mixed to an output.

To **change the focus of the volume control**, do the following:

- > On the KP-5032/4016, push the **AUX VOLUME encoder** once.  
*The aux volume focus switches to the next available input.*



### *Operation of Intercom Keys with Auto Functions*

**NOTE:** Assignment of keys with auto functions is described in the programming section that follows.

Operation of keys with auto functions, is as follows:

<i>Talk+auto follow</i>	Talk and listen can be activated separately. The listen assignment listens to whatever is assigned to the talk key.
<i>Talk+auto listen</i>	Both talk and listen activates when talk is activated.
<i>Talk+auto mute</i>	Listen turns off when talk is activated.
<i>Talk+auto reciprocal</i>	Listen is always on and talk may be turned on or off.
<i>Talk+auto table</i>	If an IFB talk key has an auto table listen assignment, talk and listen is independently activated. The listen key listens to whatever is defined as the IFB Listen Source for the IFB assigned to the talk key.
<i>All Call</i>	Activating this key activates all keys to the left of it, up to, but not including another all call key.
<i>Talk+DIM</i>	If a point-to-point key has the DIM function as a level 2 talk assignment, activating the key causes the crosspoint levels to diminish for any other intercom ports currently listening to the same destination and are in the same DIM tables.

---

## *Operation of Intercom Keys with Options*

### **Group Option Keys**

Activating the master key in a key group activates all keys in the group according to each key's individual key assignment. Activating a slave key does not affect any other keys in the group. For more information, see "Key Options Menu, Key Groups" on page 131.

### **Solo Key**

Activating a key with the solo option causes all other keys to turn off until the solo key is turned off. For more information, see "Key Options Menu, Solo" on page 135.

### **Exclusive Key**

Activating a key with the exclusive options causes all other Exclusive keys to turn off when activated. Unlike the solo option, when exclusive is deactivated, the keys turn off and stay off. For more information, see "Key Options Menu, Exclusive" on page 129.

### **Lock Key**

A key with the lock option on it is locked in the on or off position and cannot be changed until the lock is removed. For more information, see "Key Options Menu, Lock (Button Lock)" on page 132.

### **Chime Key**

When a chime is configured on key and a call is received, the chime is activated. You can configure length and type of chime for the key, as well. For more information, see "Key Options Menu, Chime" on page 128.

### **Clear Keys**

Clearing keys is used to remove any key options assigned to a specific key or UPG button assignment. For more information, see "Key Options Menu, Clear" on page 129.

### **Latching Keys**

Latching keys on a keypanel gives the user hands-free operation where keys stay active after quickly tapping the key. For more information, see "Key Options Menu, Latching" on page 131.

---

## *Operation of Intercom Talk Keys with the Speaker DIM Setting*

Activating any talk key causes the speaker or headphone volume at the keypanel to diminish by the amount specified in the DIM menu item on the Service menu. For more information, see "Audio Options Menu, Dim" on page 106.

**NOTE:** Do not confuse this with the Talk+DIM auto function previously described. Talk+DIM affects the speaker or headphones on other keypanels when a particular talk key is activated on the keypanel. Speaker DIM affects the speaker or headphone level on the keypanel when any talk key on the keypanel is activated.

---

## *Operation of Intercom Keys assigned to TIF Ports*

If a keypanel key is assigned to talk to an intercom port designated as a TIF port in AZedit, placing the key in the talk position activates the KP-5032/4016 dialing menu. For more information, see “Telephone Interface (TIF) Operation” on page 159.

To **designate an intercom port as a TIF port**, do the following:

1. In AZedit, select the **port** you want to designate as a TIF port on the Keypanel/Port window.
2. Click the **Edit button**.
3. On the Advanced tab, select the **Port is TIF check box**.
4. Send the **change** to the intercom system.

---

## *User Quick Select Scrolling*

**User Quick Select Scrolling** is a fast and easy way to call or assign a point-to-point key on the KP-5032/4016.

To **use the User Quick Select Scroll feature to call a user**, do the following:

1. On the KP-5032/4016 keypad, press the **left and right arrow buttons** to scroll through the list of point-to-point connections available.  
*The selected port is highlighted in white.*

**NOTE:** You can also use the left and right arrow buttons to page scroll through the list of ports available. Page scroll is useful when you have a large intercom system and you want to find a port quickly.

To page scroll, do the following:

Press the **SHIFT button** before pressing the **left or right arrow buttons**.

OR

Press the **SHIFT button** and then press and hold the **arrow button** to repeat scrolling a page at a time.

Remember, when you let go of the key, it exits SHIFT mode.

2. When the port is selected, press down on the **CWW key** to talk to the selected port.



---

## Call Waiting Operation

Occasionally, a keypanel may call and there is not a key assigned to talk back to the caller. In this case, the caller's name appears in the **CWW** (Call Waiting Window). For CWW key location, see "Reference View – KP-5032" on page 15.

**NOTE:** The KP-5032/4016 keypanels support a graphical call waiting window. For more information, see "Graphical Call Waiting Window Operation" on page 55.

To **answer a CWW call**, do the following:

- > Press down and hold the **CWW key** to talk back.

To **clear a name from the CWW window**, do the following:

- > When the CWW window is populated, tap up on the **CWW key**.

**NOTE:** If a second call is received in the CWW while a caller name is already displayed, the Call Waiting window flashes.

To **answer a second call**, do the following:

- > Tap the **CWW key** up to clear the first name, and then hold the **CWW key** down to talk to the second caller.

**NOTE:** By default, only the names of callers who are not currently assigned to intercom keys appear in the call waiting window. Alternately, you can force all caller names to display in the call waiting window. This is controlled by DIP Switch 2 on the ADAM Master Controller card or the *Always stack callers in the call waiting window* option found in AZedit (*Options|Intercom Configuration|Options*). Setting this option in AZedit overrides the DIP Switch 2 setting on the Master Controller.

### Graphical Call Waiting Window

Traditionally, incoming calls have been displayed on key 16 on the keypanel, flashing to indicate an incoming call. The KP-5032/4016 Series keypanel can keep a history of the last nine (9) callers and display them in a scrollable, graphical window above keys 15 and 16. The CWW displays three (3) calls at a time (only two (2) in Kanji) with a scroll arrow appearing if there are more than three (3) calls in the list.



FIGURE 12. Graphical Call Waiting Window

TABLE 4. Graphical CWW Call Description

Item	Description
New Call	White background
Selected Call / Not Talking	Cyan background
Selected Call / Talking	Green background
Old Call	Gray background

## Graphical Call Waiting Window Operation

Use Table 4 on page 54 and Figure 12 on page 54 to understand the different states of the CWW.

### *Display or Hide the CWW*

To **display the CWW**, do the following:

- > On the KP-5032/4016 panel, lift up on the **CWW key**.  
*The graphical call waiting window appears.*

To **hide the CWW**, do the following:

- > Press the **CLR button**.  
*The CWW closes.*

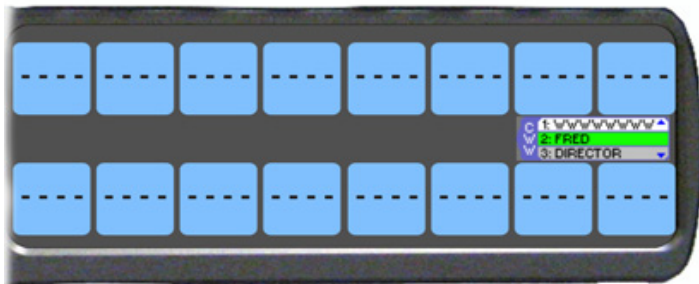
**NOTE:** If the CWW list is visible and not empty, it remains visible until hidden. If the CWW list is visible, but empty, it auto-hides after a five-second timeout.

### *Incoming Calls*

When a call is received at the KP-5032/4016 panel, the graphical CWW list appears on the keypanel display. Unlike the keypanel tally indicators in previous keypanel versions:

- the graphical CWW list appears on the keypanel display.
- the graphical CWW and the call flashes (tallies), rather than the CWW button.

Up to nine (9) calls can be stored in the CWW history scroll list. The most recent call is inserted at the top of the graphical CWW list (position 1) with a white background (See Figure 12 on page 54). Other items in the CWW list are shifted down, as necessary. The ninth call in the list is dropped when a new call is received.



**FIGURE 13.** Graphical Call Waiting Window Highlighted Call

**NOTE:** A highlighted item in the graphical CWW cannot be shifted off the CWW list.

To **scroll the CWW list**, do the following:

- > When the CWW list is visible, press the **arrow up button** or the **arrow down button**.  
*The highlight moves through the scroll list.*

To **answer a call on the graphical CWW**, do the following:

1. Scroll the **CWW** to highlight the call you want to answer.  
*The highlighted call is shown with a cyan background.*
2. Press and hold the **CWW key** to talk to the caller.  
*The highlight in the CWW list turns green and moves to the top of the list when talking with the caller.*
3. Release the **CWW key** to stop talking.  
*The call is ended. The background of the caller in the CWW list turns a light gray (if not highlighted).*


### ***Clearing the CWW List***

To **clear the CWW list**, do the following:

1. If the CWW is not visible, press the **CWW key** to make it visible and the call selected.
2. Use the up and down arrows to select the call to remove.
3. Repeat **step 2**, as necessary.

---

### ***Mute the Microphone/Speaker***

Depending on the sources selected, as shown in the panel display, when the Mic Mute switch is pressed UP, the corresponding features are muted (shown with a mute icon  overlaid on the feature icon). For Mic Mute key location, see “Reference View – KP-5032” on page 15.

**NOTE:** A flashing mute icon appears on any active mics when the mic mute key is pressed. If tone is enabled, which disables mics, the mute icon appears on any active mic, but does not flash.















## Mic Select

Every mic (input) or speaker/headset (output) can be configured as Always On or Enabled, Disabled, or Switched. Only mics, speakers, or headsets set to Switched are controlled by the MIC SEL key.















For more information, see:

- “Audio Options Menu, Headset Speaker” on page 109.
- “Audio Options Menu, Panel Mic” on page 115.
- “Audio Options Menu, Headset Mic” on page 107.

**TABLE 5.** Source Configuration Matrix and Display icons

	ALWAYS ON/ENABLED	SWITCHED	DISABLED	ICON DISPLAYED
<b>Panel Mic</b>				
	Front and Rear			
	Front	Rear		 OR 
	Rear	Front		 OR 
	Front		Rear	
	Rear		Front	
			Front and Rear	No icons display on the keypanel.
<b>Headset Mic</b>				
	Front and Rear			
	Front	Rear		 OR 
	Rear	Front		 OR 
	Front		Rear	
	Rear		Front	
			Front and Rear	No icons display on the keypanel.

**TABLE 5.** Source Configuration Matrix and Display icons

	ALWAYS ON/ENABLED	SWITCHED	DISABLED	ICON DISPLAYED
<b>Speaker</b>				
	Front and Rear			
	Front	Rear		 OR 
	Rear	Front		 OR 
	Front		Rear	
	Rear		Front	
			Front and Rear	No icons display on the keypanel.
<b>Headset</b>				
	Front and Rear			
	Front	Rear		 OR 
	Rear	Front		 OR 
	Front		Rear	
	Rear		Front	
			Front and Rear	No icons display on the keypanel.

---

## User Programmable Buttons

A **UPG** (User Programmable Button) gives you the option to assign frequently used menu items to a single button on the keypad, eliminating the need to navigate through the menu structure. Not all menu items can be programmed to the UPG buttons, such as any assignment group menu, any TIF menu items, or scrolling menu items. Basically, any menu that requires context or history cannot be saved. If a menu item cannot be saved, a prompt appears in the panel display showing *Cannot save this menu position*.

**NOTE:** You can program a UPG key to activate the screen saver option on the keypad. For more information, see “To activate the screen saver from a UPG key” on page 60.

The UPG keys can also be used to activate relays. When a relay is assigned to the button, and while the keypad is not in menu mode, pressing the UPG key activates the relay for as long as the UPG button is held down. Once the button is released, the relay becomes inactive.

**NOTE:** The UPG buttons can be cleared using Key Options|Clear from the keypad menu.

---

**IMPORTANT:** On the KP-4016 keypad, there are only two (2) UPG Buttons available. However, on the KP-5032, there are nine (9) UPG buttons available – UPG1 through 4 are displayed on the keypad, while UPG 5 through 9 are available as the SHIFT version of the left column buttons (MENU, FWD, BACK, UPG3, and UPG4).

---

To **assign a menu item to a UPG button on the KP-5032**, do the following:

1. On the KP-5032 keypad, press the **MENU button**.  
*The Information menu appears.*
2. Using the arrow buttons, navigate to the **menu item** you want to assign to a UPG button.
3. Press and hold the **UPG button** for two (2) seconds.  
*Menu position saved appears in the panel display.*

To **assign a menu item to a UPG button using the SHIFT menu**, do the following:

1. On the keypad, press the **MENU button**.  
*The Information menu appears.*
2. Using the arrow buttons, navigate to the **menu item** you want to assign to a UPG button.
3. Press the **SHIFT button** and then hold the **UPG button** for two (2) seconds.  
*Menu position saved appears in the panel display.*

To **assign a relay to a UPG button**, do the following:

1. On the KP-5032 keypad, press the **MENU button**.  
*The Information menu appears.*
2. From the Information menu, using the arrow buttons, select **Service**.
3. Press the **SEL button**.  
*The Service menu appears.*
4. Using the arrow buttons, select **Local GPIO**.
5. Press the **SEL button**.  
*GPIO Inputs and GPIO Outputs appears in the panel display.*
6. Using the arrow buttons, select **GPIO Outputs**.
7. Press the **SEL button**.  
*Relay 1 and Relay 2 appear in the panel display.*
8. Using the arrow buttons, select the **Relay 1**, or **Relay 2**.
9. Press the **SEL button**.  
*Not Assigned, Talk Key, and UPG 1 through UPG 9 appears in the panel display.*

**NOTE:** If you are using a KP-4016, there are only two (2) UPG assignments available. To assign a UPG on a KP-4016 or UPG5-9 on the KP-5032, you must first press the SHIFT button.

10. Using the arrow buttons, select a **UPG button**.  
*The relay is assigned to the desired UPG button.*

**NOTE:** Once a relay is programmed to the button, and the keypad is not in menu mode, pressing the UPG button activates the assigned relay until the button is released.

To **activate the screen saver from a UPG button**, do the following:

1. On the KP-5032/4016 keypad, press the **MENU button**.  
*The Information menu appears.*
2. Using the arrow buttons, select **Service**.
3. Press the **SEL button**.  
*The Service menu appears.*
4. Using the arrow buttons, select **Scrn Saver**.  
*Activate, Delay and Mode appear.*
5. Using the arrow buttons, select **Activate**.
6. Press the **SEL button**.  
*The screen saver activates on the keypad.*
7. Press and hold the **UPG button** you want to assign this option to for two (2) seconds.  
*Menu position saved appears in the panel display and the screen saver feature is assigned to the UPG button.*

Other Common UPG Assignments available:

- UPG Button to trigger panel swap, see “Key Options Menu, Panel Swap” on page 132.
- UPG Buttons to turn keys off with a single press, see “Key Options Menu, Turn Off” on page 136.
- UPG Buttons to DIAL or DROP a TIF, see “Dialing and Hanging Up” on page 159.



## Keypanel Color Window

The **Keypanel Color** window, shown in Figure 14, is used to change the text and background colors assigned to function types, key assignments, and talk/listen indications. You can modify local intercom key assignments and function type colors, as well as remote intercom function type colors, giving you the flexibility to distinguish different systems through the use of color patterns.

The Keypanel Color window is only available when the following requirements are met:

- running AZedit version 3.7.0 or later.
- running MCII-e version 2.1.0 or later.

**NOTE:** Key colors are associated with assignments and assignment types, not the physical keys they are assigned to.

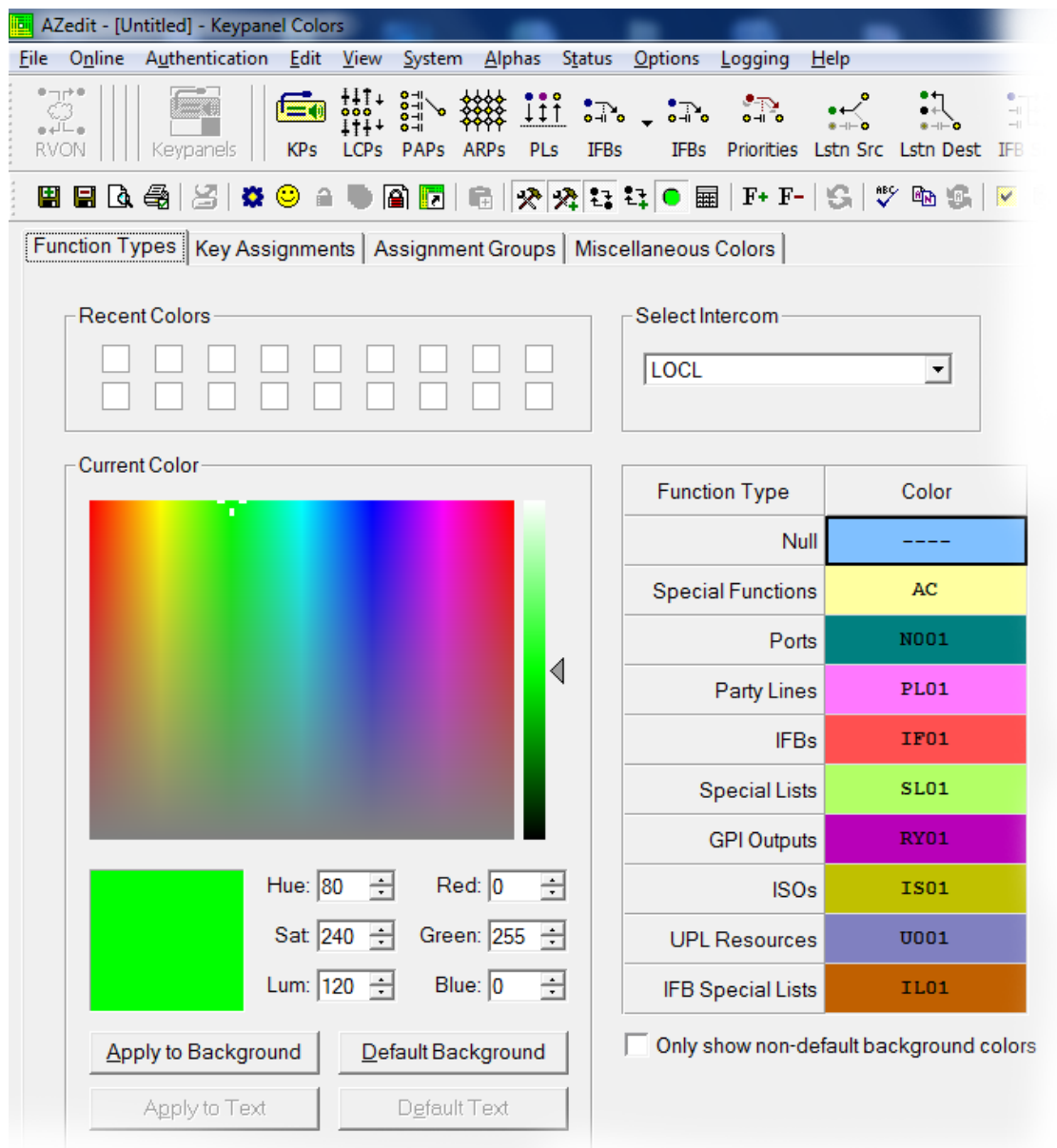


FIGURE 14. Keypanel Colors Window

---

## Function Types Page

The **Function Types** page, shown in Figure 14, is used to change the default colors assigned to the various keypanel function types.

### *Select Intercom Drop Down Menu*

The **Select Intercom** drop down menu is used to select the intercom system (*local* or *remote*) in which you want to change the color of the key function types.

---

## Recent Colors Group Box

---

The **Recent Colors** group box displays the 18 most recently used colors.

---

## Current Color Group Box

---

The **Current Color** group box displays the currently selected color (current color cell), whether from the color palette or recent colors. Also, using the Hue, Sat, Lum, Red, Green, and/or Blue spin boxes, you can adjust the selected color to create a unique color for the function type.

**NOTE:** You can drag and drop colors from the color picker or recent color check boxes, and drop it on the background or text area of one (1) of the cells in the Color Grid (Figure 15 on page 63). You can also select a color in the Color Grid and drop and drag it to the Current Color Cell field. By holding down the Ctrl key on the keyboard, you can select multiple cells in the Color Grid, thus allowing you to apply color to multiple key assignments.

### *Apply To Background Button*

The **Apply to Background** button is used to apply the color selection to the background.

### *Default Background Button*

The **Default Background** button is used to reset the background color to the default color.

### *Apply To Text Button*

The **Apply to Text** button is used to apply the color selection to the text of the type of assignment.

### *Default Text Button*

The **Default Text** button is used to reset the text color to the default color of the type of assignment.

**Color Grid**

Function Type	Color
Null	----
Special Functions	<b>AC</b>
Ports	<b>H001</b>
Party Lines	<b>PL01</b>
IFBs	<b>IF01</b>
Special Lists	<b>SL01</b>
GPI Outputs	<b>RY01</b>
ISOs	<b>IS01</b>
UPL Resources	<b>U001</b>
IFB Special Lists	<b>IL01</b>

**FIGURE 15.** Color Grid**Function Type Column**

The **Function Type** column displays the different function types you can make key color changes for.

Available selections are: *Null*, *Special Functions*, *Ports*, *Party Lines*, *IFBs*, *Special Lists*, *GPI Outputs*, *ISOs*, *UPL Resources*, and *IFB Special Lists*.

**Color Column**

The **Color** column displays the current text and background colors assigned to the function type.

**NOTE:** You must select the current color box next to the function type you want to change the color for. When selected, a thick black line appears around the box.

**Only Show Non-Default Background Colors Check Box**

The **Only Show Non-Default Background Colors** check box, if selected, shows colors only for function types set to a color other than their default color.

Key Assignment Page

The **Key Assignment** page, shown in Figure 16, is used to change the colors assigned to the various assignment types. This means you can assign different colors to the individual function type resources. For example, you can change the display color for the party line assignment number 003.

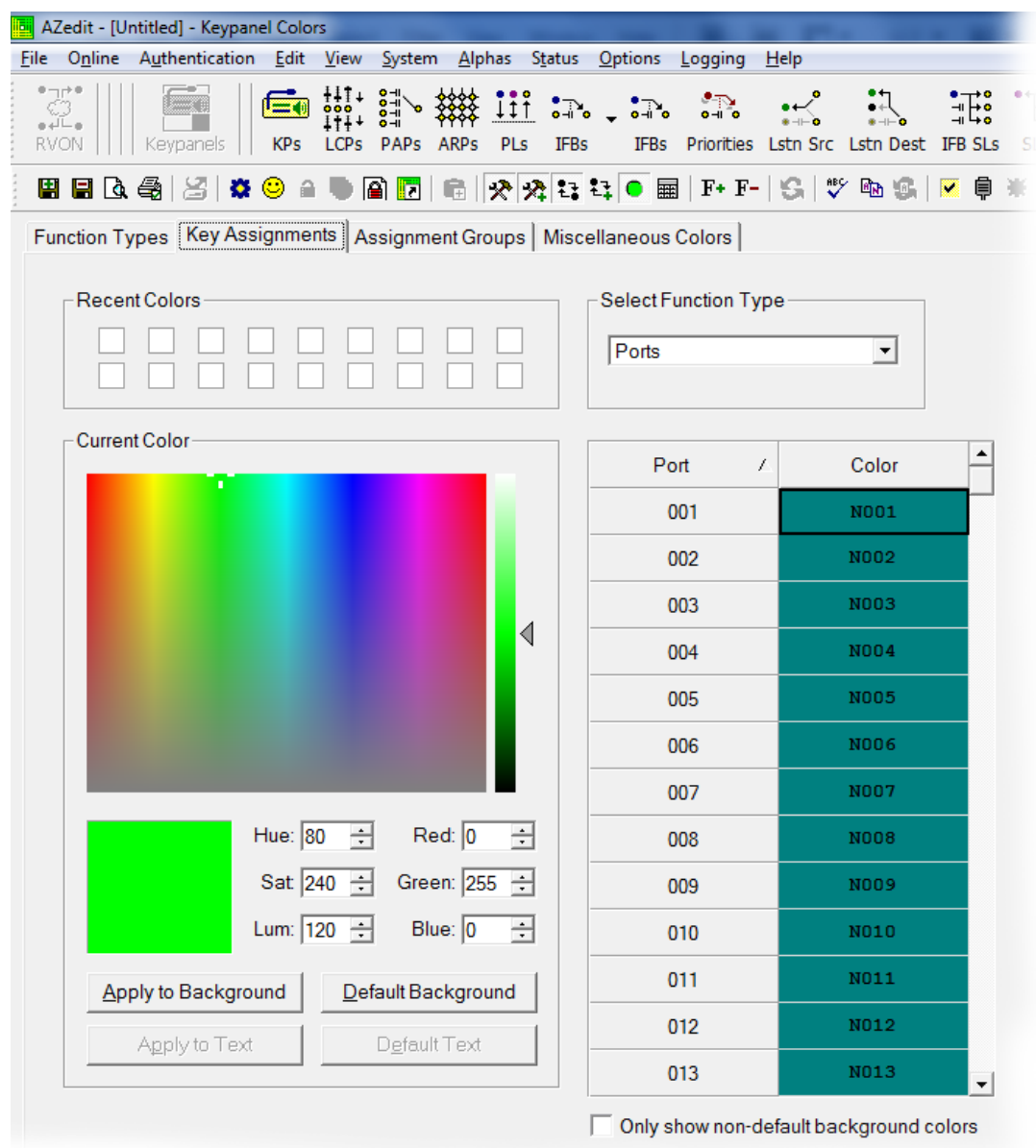


FIGURE 16. Key Assignments Page

Select Function Type Drop Down Menu

The **Select Function Type** drop down menu is used to select the function type you want to display the function number resources for.

Available selections for this field are: *Ports, Party Lines, IFBs, Special Lists, GPI Outputs, ISOs, UPL Resources, and IFB Special Lists.*

### Function Number Column

The **Function Number** column displays the function numbers (resources available) you can modify the color of the assigned key for.

**NOTE:** Key colors are associated with assignment types, not the keys they are assigned to.

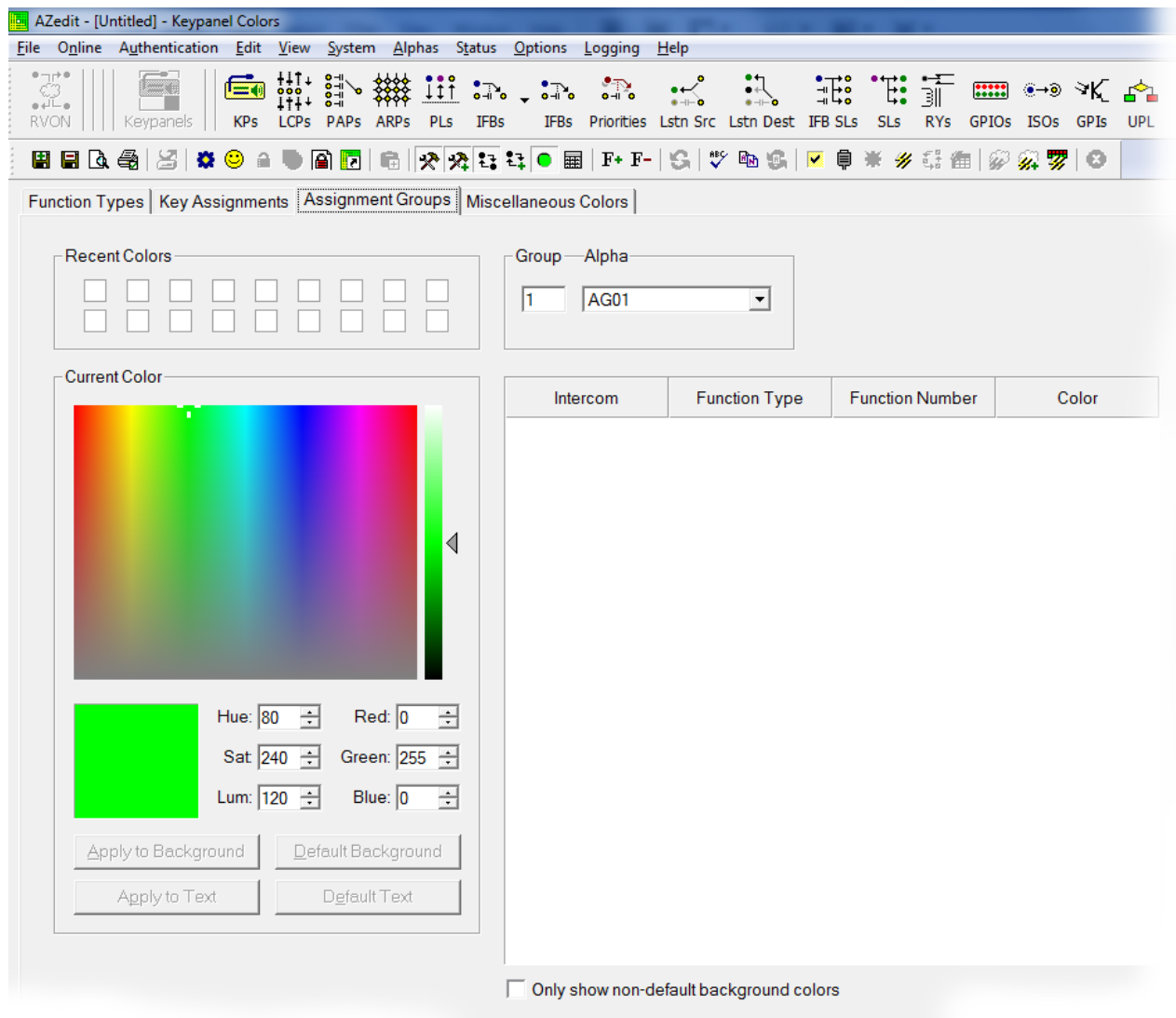
### Color Column

The **Color** column displays the current color assigned to the function number.

**NOTE:** You must select the current color box next to the function number you want to change the color for. When selected, a thick black line appears around the box indicating it is selected.

## Assignment Groups Page

The **Assignment Groups** page, shown in Figure 17, is used to change colors of the members of the different assignment groups.



**FIGURE 17.** Assignments Groups Page

**Select Assignment Group Drop Down Menu**

The **Select Assignment Group** drop down menu is used to select the assignment group whose members you want to modify the key colors for.

**Intercom Column**

The **Intercom** column displays the name of the intercom where the group resides.

**Function Type Column**

The **Function Type** column displays the type function assigned to the group.

**Function Number Column**

The **Function Number** column displays the number of the assignment group you select from the Assignment Group drop down menu. For more information, see “Select Assignment Group Drop Down Menu” on page 66.

**Color Column**

The **Color** column is used to select the assignment group member you want to modify the associated color with.

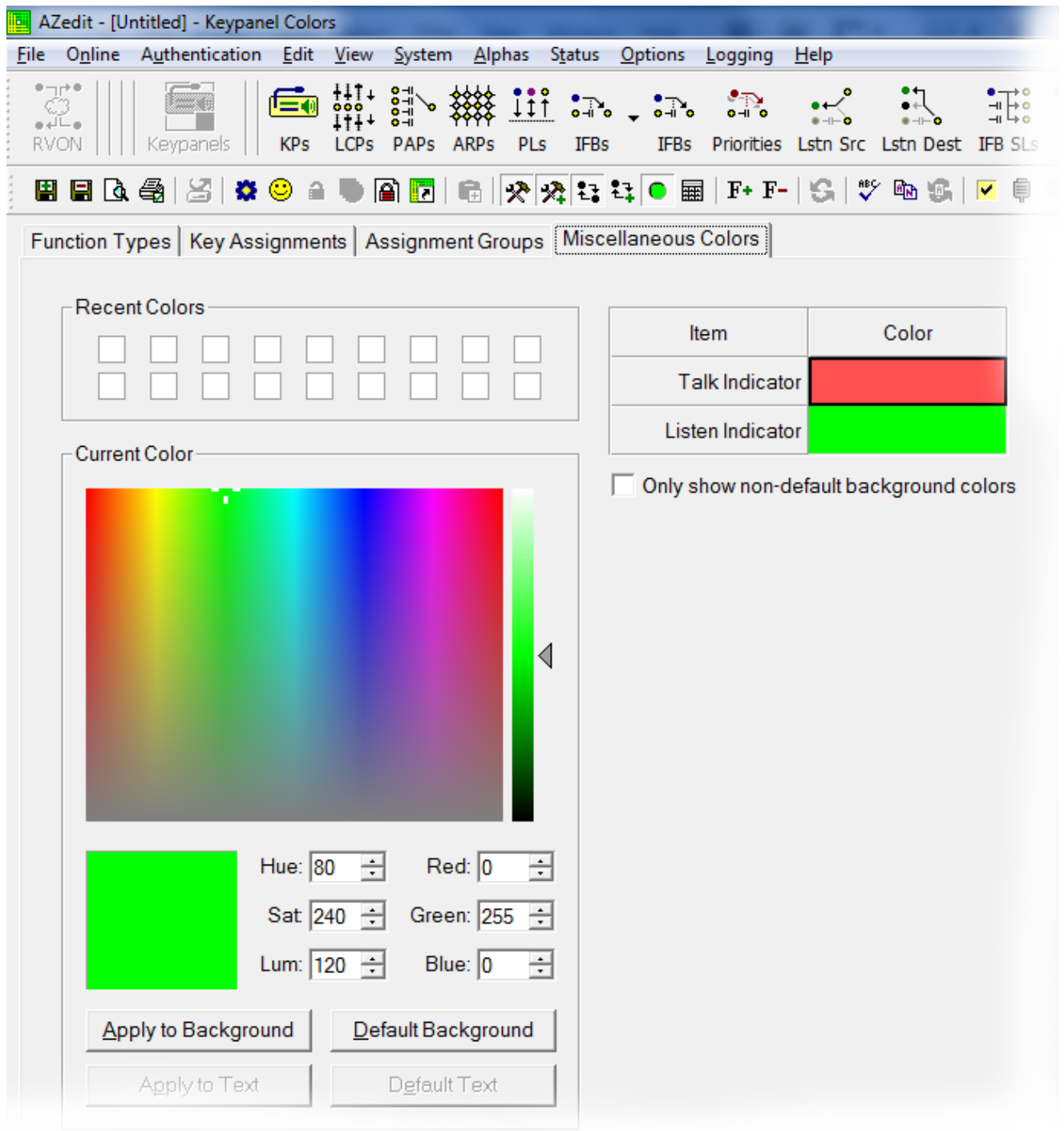
To **select the color column**, do the following:

- > Click the **color box** next to the assignment group member.  
*A thick, black outline appears around the selected color box.*

## Miscellaneous Colors Page

The **Miscellaneous Colors** page, shown in Figure 18, is used to change the colors of the talk and listen indicators seen on the KP-5032/4016 series keypanel when talk and/or listen is activated.

For more information on Talk and Listen indicators, “Talk/Listen Indicator” on page 46.



**FIGURE 18.** Miscellaneous Colors Page

## Enhanced Tallies

**Enhanced Tallies** allow you to configure, using AZedit, how all tallies are look on the keypanel. You are able to change how an incoming calls, PLs, IFBs, etc look on the keypanel. By default, an incoming call tally is indicated by a flashing alpha. With enhanced tallies, you can configure the text and background colors to trade-off, simulating a flashing keypanel. You can also configure a chime to be played when an incoming call is received, as well as an icon to appear announcing the call. For more information, see Table 8, “Tally Icon Descriptions,” on page 75.

### Requirements

AZedit version 5.0.0 or later

MCII-e version 3.2.0 or later

To **open the Enhanced Tallies window**, do the following:

1. Open **AZedit**.
2. From the menu bar, select **System|Miscellaneous|Enhanced Tallies**.  
*The Enhanced Tallies window appears.*

Tally #	Mode	Description	Duration	Characteristics	Chime #	Duration	Legacy Action
1	Flash Text	Incoming call	10 seconds	Text	<none>		Incoming Call Tally
2	No Tally	Extend call	Indefinite	Text	<none>		In Use Tally
3	Flash Text	Trunk in use	Indefinite	Text	<none>		In Use Tally
4	Flash Text	Trunk busy	Indefinite	Text	<none>		Busy Tally
5	Flash Text	IFB in use	Indefinite	Text	<none>		In Use Tally
6	Flash Text	IFB busy	Indefinite	Text	<none>		Busy Tally
7	Flash Text	PL in use	10 seconds	Text	<none>		Incoming Call Tally
8	Flash Text	General in-use	Indefinite	Text	<none>		In Use Tally
9	Flash Text	TIF off-hook	Indefinite	Text	<none>		In Use Tally
10	Flash Text	TIF ringing	Indefinite	Text	<none>		Busy Tally
11	No Tally	Tally #11			<none>		
12	No Tally	Tally #12			<none>		
13	No Tally	Tally #13			<none>		
14	No Tally	Tally #14			<none>		
15	No Tally	Tally #15			<none>		
16	No Tally	Tally #16			<none>		
17	No Tally	Tally #17			<none>		
18	No Tally	Tally #18			<none>		
19	No Tally	Tally #19			<none>		
20	No Tally	Tally #20			<none>		

**TABLE 6.** Enhanced Tallies Window



## Tally # Column

The **Tally #** column displays the tally number. This number is associated with the tally description and is used in creating UPL statements. AZedit supports 20 different tallies, however, the first 10 are predefined.

**TABLE 7.** Predefined Tallies

Tally #	Description
1	Incoming Call
2	Extend Call
3	Trunk in Use
4	Trunk Busy
5	IFB in Use
6	IFB Busy
7	PL in Use
8	General In Use
9	TIF Off-Hook
10	TIF Ringing

## Mode Column

The **Mode** column is used to select the type of tally to use.

There are three (3) options available:

*No Tally*

*Flash Text*                Flashes text for a user-determined (duration column) amount of time.

*Flash Icon*                Shows an icon for a user determined (duration column) amount of time. For more information, see Table 8, “Tally Icon Descriptions,” on page 75.

## Description Column

The **Description** column is used to enter a description of the tally you create.

---

**IMPORTANT:**        It is recommended you do not change the pre-defined tallies descriptions. Changing the description does not change pre-defined purpose of the tally. For example, if you change the description for IFB Busy to Trunk Busy, it still activates when an IFB is busy and may be confusing to users.

---

To **change the Description column**, do the following:

1. In the Description column, double-click the **tally description** you want to change.  
*The selected Description cell becomes active.*
2. In the cell, enter the **tally description** you want.

## Duration Column

The **Duration** column is used to select the duration the tally is activated for.

Available options for this field are: *Indefinite* and *one (1) second through five (5) minutes*.

To **set the tally duration**, do the following:

1. In the Duration column, select the **duration of the tally** you want to change.  
*A drop down menu appears.*
2. From the drop down menu, select the **desired duration**.

## Characteristics Column

The **Characteristics** column is used to configure the characteristics or behavior of the visual tally. Depending on what you select in the Mode column determines what is seen in this column. From the Characteristics column, you can access a configuration window for either Text or Icon selections. If No Tally is selected in the Mode column, the Characteristics column is blank.

To **open the Text configuration window**, do the following:

1. In the Characteristics column, click on the **cell with the word Text**.  
*The cell animates the tally as defined (for example, flashing text with color or animating icons) and an ellipsis button appears in the cell.*
2. Click the **Ellipsis button**.  
*The Flash Text Characteristics window appears. For more information, see “Flash Text Characteristics Window” on page 72.*

To **open the Icon configuration window**, do the following:

1. In the Characteristics column, click on the **cell with word Icon**.  
*An ellipsis button appears in the cell next to the word Icon.*
2. Click the **Ellipsis button**.  
*The Show Icon Characteristics window appears. For more information, see “Show Icon Characteristics Window” on page 74.*

## Chime # Column

The **Chime #** column is used to select the type of chime to play when a tally is activated.

Available options for this field are: *System Chime #1, System Chime #2, System Chime #3, and System Chime #4.*

To **set the chime**, do the following:

1. In the Chime # column, select the **chime cell** you want to change.  
A drop down menu appears.
2. From the drop down menu, select the **desired chime**.

## Duration Column

The **Duration** column is used to select the length of time to for the chime to last.

Available options for this field are: *One-shot and one (1) second through five (5) minutes.*

To **set the duration of the chime**, do the following:

1. In the Duration column, select the **duration of the tally** you want to change.  
*A drop down menu appears.*
2. From the drop down menu, select the **desired duration**.

## Legacy Action Column

The **Legacy Action** column is used to select how the tally descriptions is implemented on keypanels that do not support Enhanced Tallies.

Available options are:

*No Tally*  
*Incoming Call Tally*  
*In-Use Tally*  
*Busy Tally*

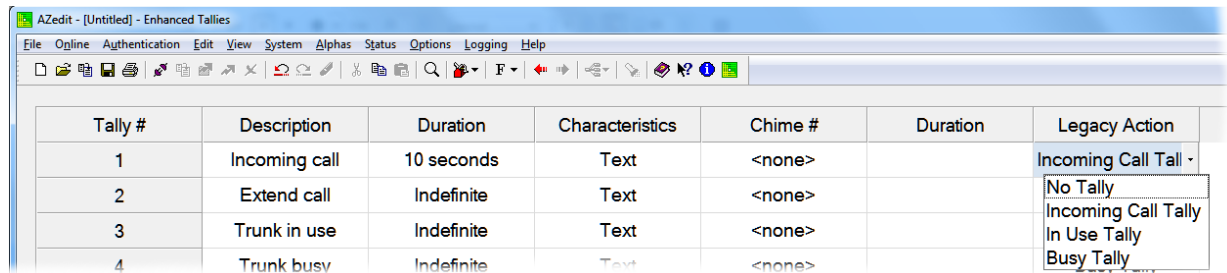
---

**IMPORTANT:** All keypanels preceding the KP-5032 and KP-4016 do not support Enhanced Tallies.

---

To select a **legacy action**, do the following:

1. Click in the **Legacy Action** column cell desired.  
*A drop down arrow appears.*
2. From the Legacy Action drop down menu, select **desired action**.



## Flash Text Characteristics Window

The **Flash Text Characteristics** window is used to configure the way a text tally behaves for the selected tally.

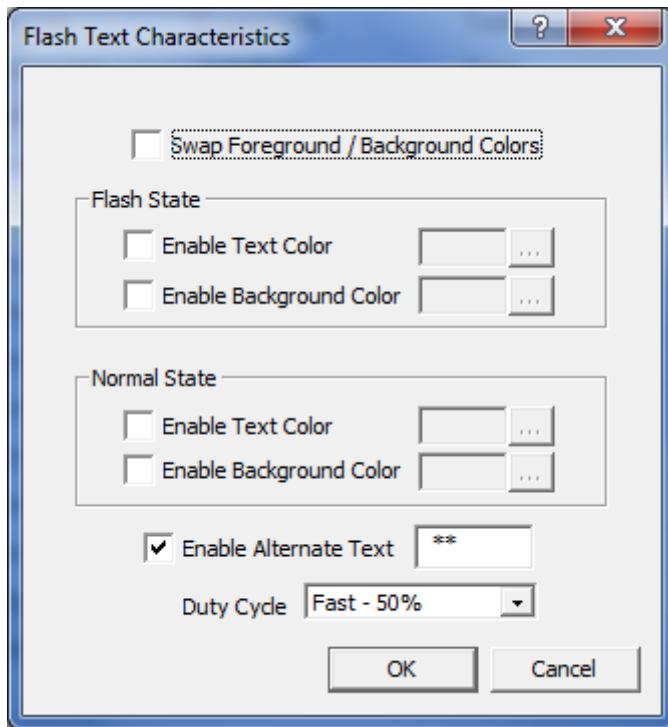


FIGURE 19. Flash Text Characteristics Window

### Swap Foreground / Background Colors Check Box

The **Swap Foreground / Background Colors** check box indicates the foreground color swaps with the background color creating a blinking effect on the keypad display.

## Flash State Group Box

The **Flash State** group box is used to assign text and background colors used when a tally state is flashing.

### Enable Text Color Check Box

The **Enable Text Color** check box enables the Selected Color cell and Browse button. This means you can modify the color of the Text displayed.

### Selected Color Cell and Ellipsis Button

The **Selected Color** cell displays the currently selected color of the text.

The **Ellipsis** button opens the Select Color window where you can assign a different color to the text.

### Enable Background Color Check Box

The **Enable Background Color** check box enables the Selected Color cell and Browse button. This means you can modify the color of the Background displayed.

***Selected Color Cell and Ellipsis Button***

The **Selected Color** cell displays the currently selected color of the background.

The **Ellipsis** button opens the Select Color window where you can assign a different color to the background.

**Normal State Group Box**

The **Normal State** group box is used to assign text and background colors used when there is no tally state present.

***Enable Text Color Check Box***

The **Enable Text Color** check box enables the Selected Color cell and Browse button. This means you can modify the color of the Text displayed.

***Selected Color Cell and Ellipsis Button***

The **Selected Color** cell displays the currently selected color of the text.

The **Ellipsis** button opens the Select Color window where you can assign a different color to the text.

***Enable Background Color Check Box***

The **Enable Background Color** check box enables the Selected Color cell and Browse button. This means you can modify the color of the Background displayed.

***Selected Color Cell and Ellipsis Button***

The **Selected Color** cell displays the currently selected color of the background.

The **Ellipsis** button opens the Select Color window where you can assign a different color to the background.

**Enable Alternate Text Check Box and Entry Field**

The **Enable Alternate Text** check box and entry field is used to enter alternate text or characters that appears intermittently with the existing tally text.

This field can contain up to four (4) characters.

**Duty Cycle Drop Down Menu**

The **Duty Cycle** drop down menu is used to select the rate the tally flashes.

Available options for this menu are:

<i>On Solid</i>	There is no flash
<i>Slow 25%</i>	The alternate text appears for 25%, while the existing text appears for 75% of the slow flash
<i>Slow 50%</i>	The alternate text and the existing text appear for 50% of the slow flash
<i>Fast 50%</i>	The alternate text and the existing text appear for 50% of the fast flash
<i>Fast 75%</i>	The alternate text appears for 75%, while the existing text appears for 25% of the fast flash

**OK Button**

The **OK** button is used to accept/apply the changes and close the window.

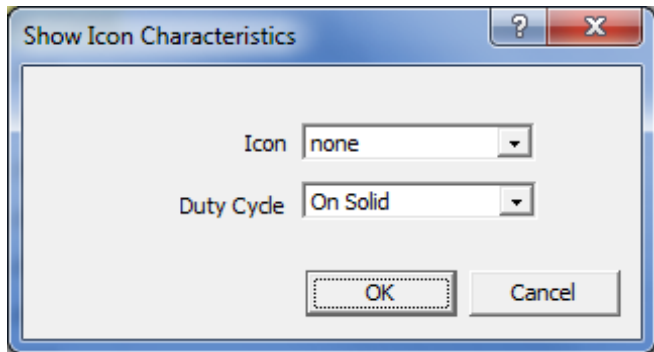
## Cancel Button

The **Cancel** button is used to reject the changes and close the window.

---

## Show Icon Characteristics Window

The **Show Icon Characteristics** window is used to configure which icon to display during a tally event and the rate at which it flashes during the event.



**FIGURE 20.** Show Icon Characteristic Window

## Icon Drop Down Menu

The **Icon** drop down menu is used to select the icon you desire. See “These icons are the default icons sent with the keypanel. These icons can be used for any purpose. Not all the icons are used as defaults. The descriptions in Table 8 are just suggested uses.” on page 75

## Duty Cycle Drop Down Menu

The **Duty Cycle** drop down menu is used to select the rate the icon flashes.

Available options for this menu are:

<i>On Solid</i>	There is no flash
<i>Slow 25%</i>	The icon appears for 25% of the slow flash
<i>Slow 50%</i>	The icon appears for 50% of the slow flash
<i>Fast 50%</i>	The icon appears for 50% of the fast flash
<i>Fast 75%</i>	The icon appears for 25% of the fast flash
<i>Animate</i>	4-frame animation, each frame displays for 25% of the time.

## OK Button

The **OK** button is used to accept/apply the changes and close the window.

## Cancel Button

The **Cancel** button is used to reject the changes and close the window.

## Enhanced Tally Icons

**Enhanced Tally Icons**, shown in Table 8, are used to visually alert keypanel users of different events occurring on the keypanel and in the Matrix system. The keypanel ships with these icons built-in by default. However, you can download new icons to the panel using AZedit.

**NOTE:** These icons are the default icons sent with the keypanel. These icons can be used for any purpose. Not all the icons are used as defaults. The descriptions in Table 8 are just suggested uses.

**TABLE 8.** Tally Icon Descriptions























Icon	Icon Name	Description
	Target	Incoming Call (animation supported) – A call is coming into the keypanel and the animation toggles the target every half second. Extended Call (animation not supported)– The extended call tally is generated when the key is on for a predetermined amount of time. In English intercoms, five (5) seconds pass before the tally begins, while in Japanese intercoms, two (2) seconds must pass
	Red Star	Trunk In-Use (animation not supported) Trunk Busy (animation supported) – The trunk is busy. The animation toggles the star on/off every quarter of a second.
	Black Star	IFB/ISO In Use (animation not supported) IFB/ISO Busy (animated) - The IFB/ISO is busy. The animation toggles the star on/off every quarter of a second.
	Orange Wave	PL In-Use (animation not supported)
	Gray Gear	General In-Use (animation not supported) - Used in Japanese intercoms. This tally is used to show when other keypanels are doing an action on the keypanel. In a Japanese intercom, if your panel is in-use (i.e., you turn on a talk key to anybody), and I have your assignment on my keypanel, the assignment on my keypanel displays the General In-Use tally, even though we are not talking to each other.
	Red Phone	TIF Ringing (animation supported) - The handset vibrates in the animation.
	Yellow Phone	TIF Offhook (animation supported) - The TIF key is active. The phone slow flashes every half second.
	Exclamation	Available for UPL Tally (animation supported) - The animation is a slow flash every half second.
	Heart	Available for UPL Tally (animation supported) - The animation is a slow flash every half second.
	Question	Available for UPL Tally (animation supported) - The animation is a slow flash every half second.
	Flag	Available for UPL Tally (animation supported) - The animation is a slow flash every half second.
	Person	Available for UPL Tally (animation supported) - The animation is a slow flash every half second.
	Link	Available for UPL Tally (animation supported) - The animation is a slow flash every half second.
	Car	Available for UPL Tally (animation supported) - The animation is a slow flash every half second.
	Lightening Bolt	Available for UPL Tally (animation supported) - The animation is a slow flash every half second.
	House	Available for UPL Tally (animation supported) - The animation is a slow flash every half second.

TABLE 8. Tally Icon Descriptions

Icon	Icon Name	Description
	Handset	Available for UPL Tally (animation supported) - The animation is a slow flash every half second.
	Lock	Available for UPL Tally (animation not supported)
	Speaker (this icon can be used for two actions)	Available for UPL Tally (animation supported) - The animation is a slow flash every half second. This icon can also be used for Voice Messaging.
	Play (this icon can be used for two actions)	Available for UPL Tally (animation supported) - The animation is a slow flash every half second. This icon can also be used for Voice Messaging.
	Message (this icon can be used for two actions)	Available for UPL Tally (animation supported) - The animation is a slow flash every half second. This icon can also be used for Voice Messaging.
	Red Circle (this icon can be used for two actions)	Available for UPL Tally (animation supported) - The animation is a slow flash every half second. This icon can also be used for Voice Messaging.

## Panel Tally

**Panel Tally** is used to notify a keypanel user of an event not specifically belonging to a key; for example, a blinking icon appears when a newscast is on air. Panel tallies are controlled through the use of UPL statements. Multiple UPL statements can be configured, but only one (1) icon displays at a time. Lower numbered icons take priority.

**NOTE:** The keypanel ships with these icons built-in by default. However, you can download new icons to the panel using AZedit.

Available panel tally icons are:

### Suggested Use



Alarm, Appointment, Event



Alarm, Chime, Notify



Target, Incoming



Appointment, Event



On-Air, Live



Error





Warning



Positive, Notify



Favorite



Information



Negative



On Air



Warning, Alarm, Alert



Sports



Alarm, Chime, Notify

## Create and Download New Icons

### Key Overlay Icons

An overlay icon is an icon that lies on top of key in the display panel of the keypanel. There are 32 icons shipped with the keypanel and supported. However, you can create your own icons.

A single icon is 16 x 16 pixels. AZedit uses bitmaps rather than icon (.ico) files. This is so users can use the system tool Paint to create their icons, instead of a specialized icon editor. 32 icons are supported for key overlays, so the bitmap must be 512 pixels wide (16 pixels x 32 icons). Animation of icons is also supported (4 frames), so the bitmap is 64 pixels tall (16 pixel icons x 4 rows of icons), where each column of icons contains four (4) images for animation of the icon, and each row of icons represent stage 1–4 if the animation for each icon. Figure 21, shows a 512x64 pixels (a table of 32x4 icons).



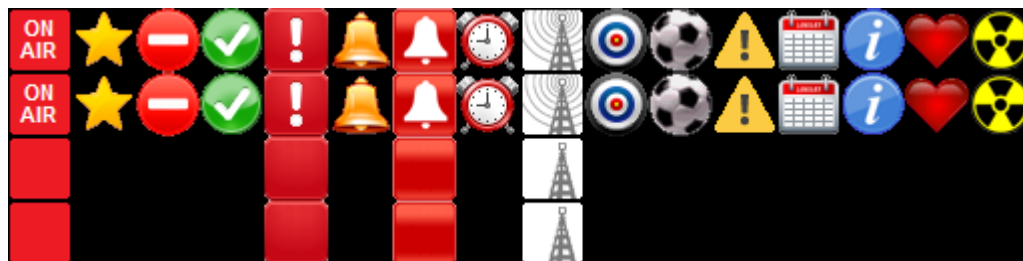
**FIGURE 21.** 512 x 64 pixel bitmap of key overlay icons

AZedit accepts a bitmap of narrower width (as long as it is a multiple of 16). This is done by extending the bitmap to 512 pixels by adding white space horizontally. Vertically, the bitmap needs to be 16 pixels high, and then repeat the image 3 more

times to make it 64 pixels high. Repeating the icon four times, indicates there is no animation. You can also create a bitmap 32 pixels high (two (2) frames per icon) and repeat the image once to make 64 pixels high (so there would be two frames of animation repeated).

## Panel Icons

For panel icons, the icons are 32x32 pixels. 16 panel icons are supported, as well as 4-frame animation, so the bitmap must be 512x128, producing a table of 16x4 icons (each icon 32x32 pixels), see Figure 22. Like key icons, AZedit accepts a narrower image (as long as it is a multiple of 32) and using white space to fill in the missing pixels. Shorter images are supported (as long as the image is either 32 or 64 pixels tall) and replicate (3 times, or once) to get an image measuring 128 pixels tall.



**FIGURE 22.** 512x128 pixel bitmap of panel icons

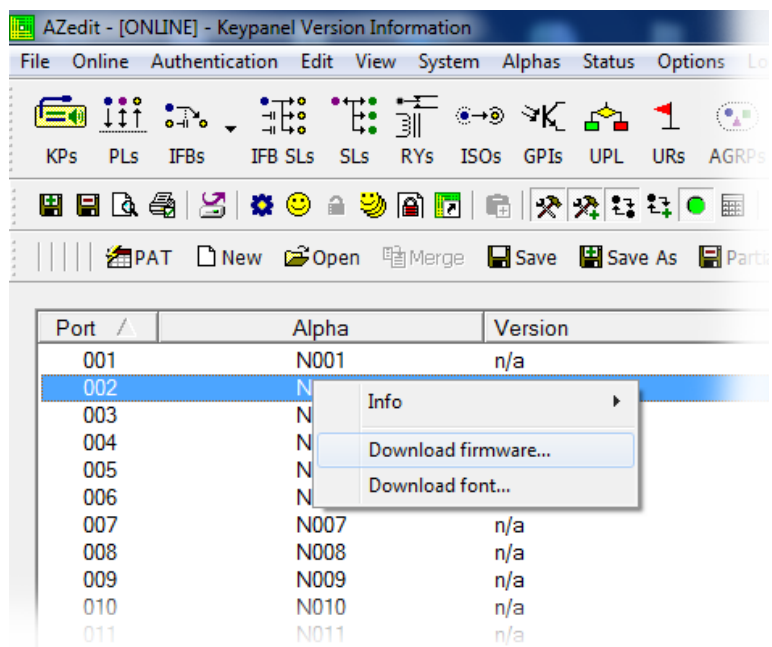
# Firmware Download

**NOTE:** The instructions provided below are shown using the KP-5032, but are applicable for all family keypanels.

## Download Firmware to the KP-5032/4016 From AZedit

To **download firmware to the keypanel**, do the following:

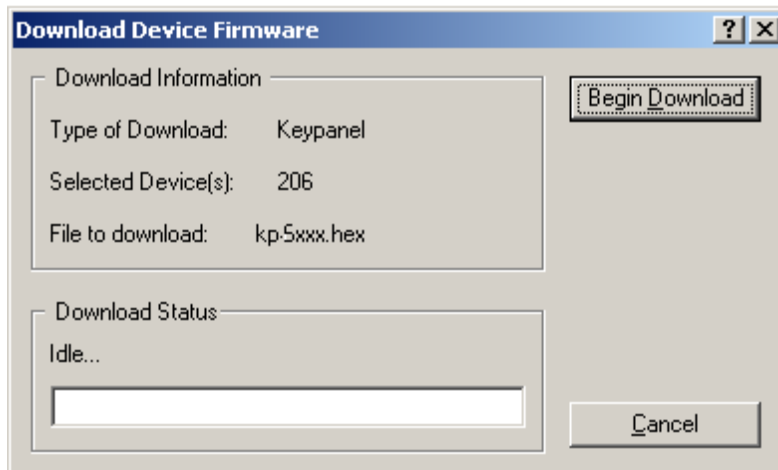
1. Open **AZedit**.
2. From the Status menu, select **Port**.  
*The Port Status window appears.*
3. Find the **port number** where the KP-5032/4016 is assigned.



4. Highlight the **Port** (keypanel) to be updated.  
*You may select more than one (1) at a time by holding CTRL key down while you select.*
5. Right-click the **highlighted selections**.  
*A popup menu appears.*
6. Select **Download firmware....**  
*The Firmware Download window appears.*

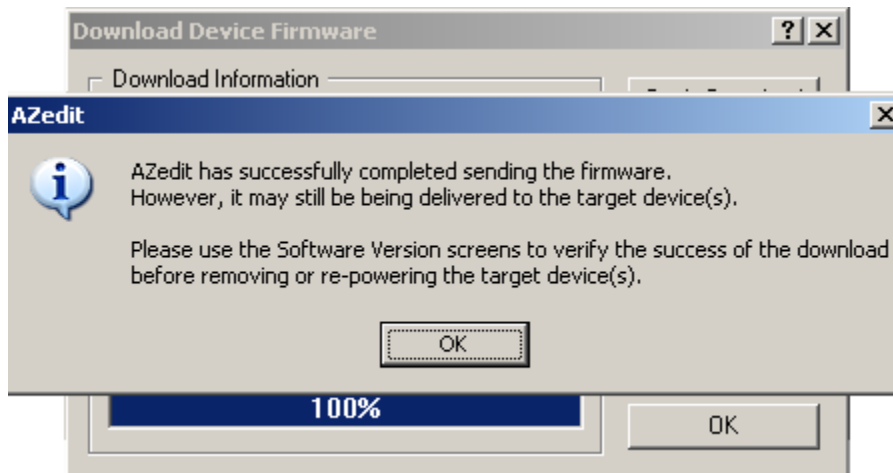
7. Using the browse button, browse to the **file to be downloaded**.
8. Click **Open**.

*The Download Device Firmware window appears.*



9. Click **Begin Download**.

*The download begins.*



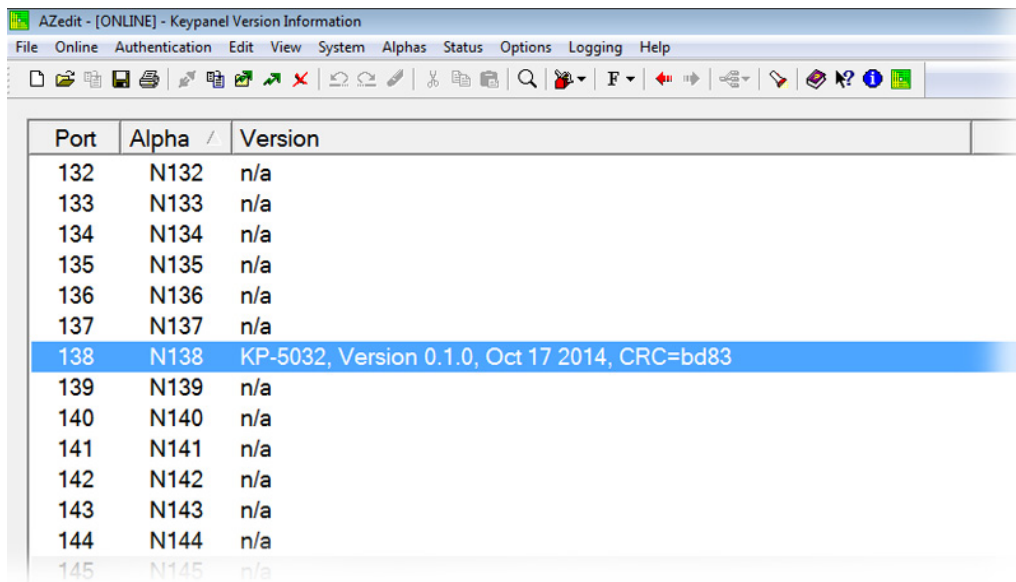
10. Click **OK**.

*The KP-5032/4016 firmware download finishes.*

**NOTE:**

- This can take up to 2 minutes to complete if connected via OMNEO and up to 15 minutes to complete if connected via AIO. Use the Keypanel Version Information window to follow the progress of the download. Also, the keypanel displays Firmware Download on the panel display until the download is complete.
- The KP-5032/4016 resets itself once the firmware download is complete and the flash reprogrammed.
- While the firmware is downloading, chunk progress is displayed by incremental blocks. Also, the keypanel displays an icon warning not to turn off the panel while the flash is being reprogrammed.

11. In the Keypanel Version Information window, verify the **version upgrade**.



Port	Alpha	Version
132	N132	n/a
133	N133	n/a
134	N134	n/a
135	N135	n/a
136	N136	n/a
137	N137	n/a
138	N138	KP-5032, Version 0.1.0, Oct 17 2014, CRC=bd83
139	N139	n/a
140	N140	n/a
141	N141	n/a
142	N142	n/a
143	N143	n/a
144	N144	n/a
145	N145	n/a

### *Download Firmware to the Keypanel Using the Firmware Upload Tool*

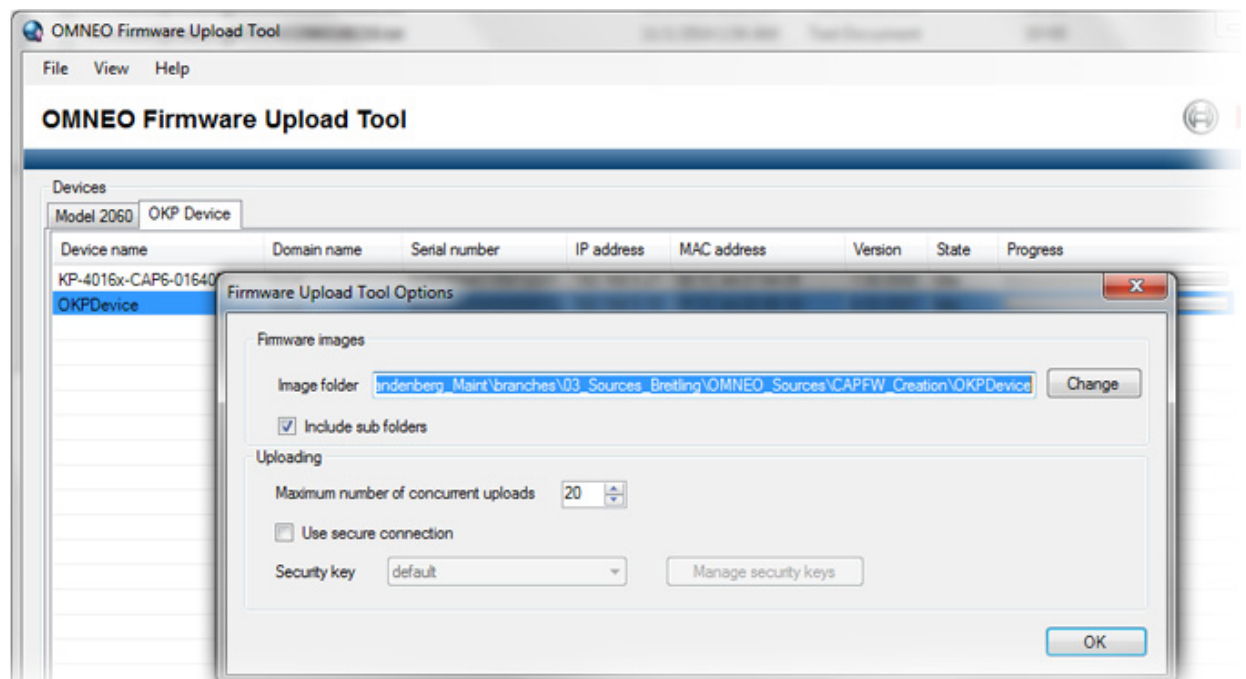
Required Firmware version:

*FWUT*

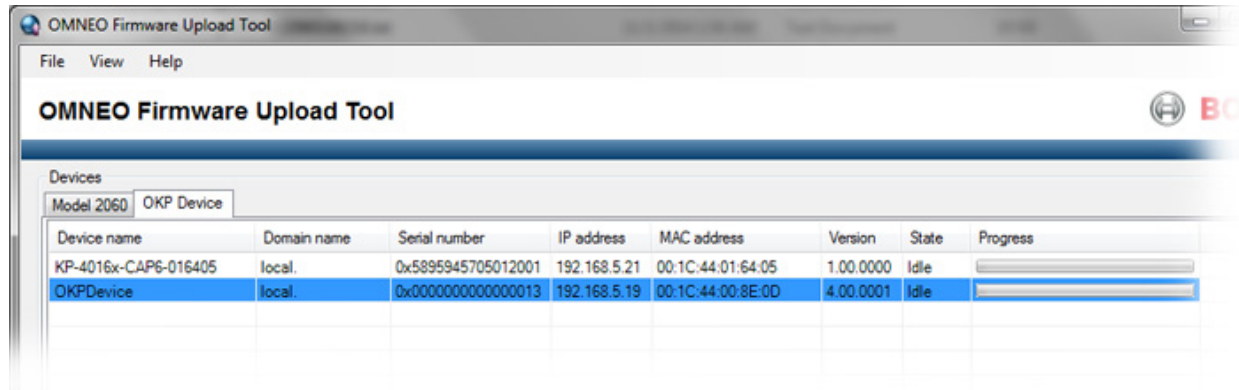
*V3.0.3 or later*

To **download firmware to the keypanel**, do the following:

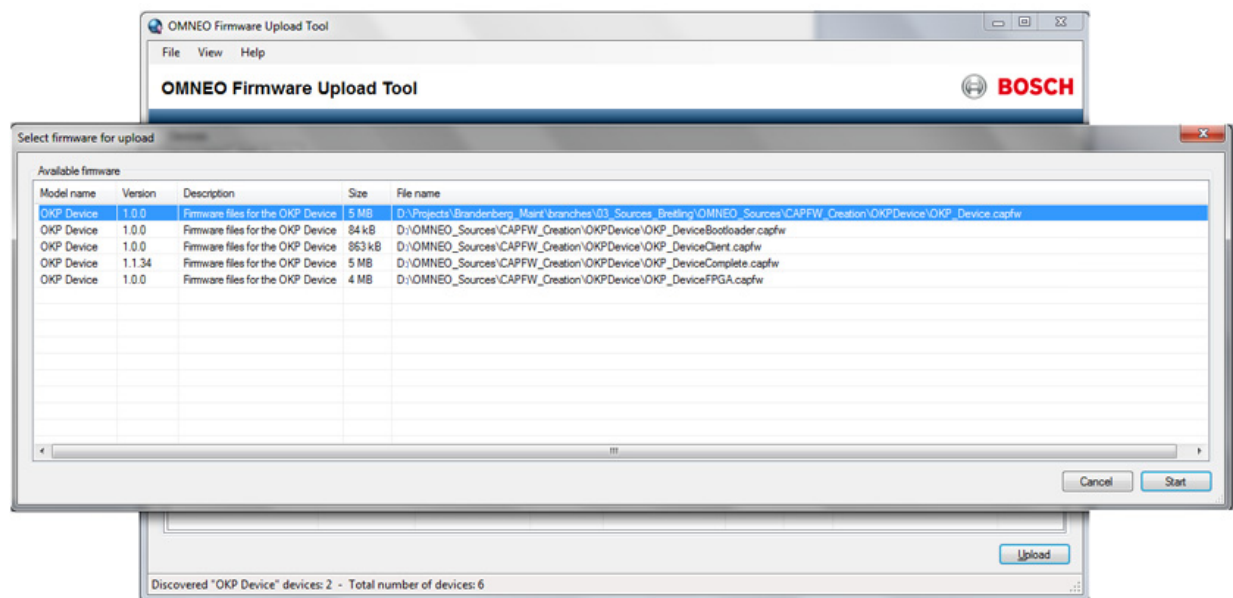
1. Open the **Firmware Upload Tool**.
2. From the File menu, select **Options**.  
*The Firmware Upload Tool Options window appears.*



3. Click the **Change** button.  
*The folder network window appears.*
4. Navigate to the **folder** where the firmware resides.
5. Click **OK**.
6. Click **OK**, again.  
*The Firmware Upload Tool Options window closes.*
7. From the OKP Device page, select the **device** you want to update.



8. Click the **Upload** button.  
*The Select Firmware for Upload window appears.*
9. From the list of firmware, select the **firmware** you want to download.



10. Click the **Start** button.
11. Once the firmware has been updated, the keypanel **reboots** automatically.

---

## Enable Downloading New Bootloader from the Keypanel

If the client image is corrupt, you may need to enable the bootloader upgrades from the keypanel, updating the bootloader on the keypanel is simple. Once you have enabled the keypanel to allow the firmware to be downloaded to it, you can use AZedit to configure the keypanel.

To **enable the bootloader on the keypanel**, do the following:

1. While pressing the Main Vol and Aux Vol encoders on the front of the keypanel at the same time, press the **MENU button**.  
*The main menu appears in the panel display.*
2. Using the left and right arrow buttons, select **Service**.
3. Press the **SEL button**.  
*The Service menu options appear in the panel display.*
4. Using the left and right arrow buttons, select **Boot Code**.
5. Press the **SEL button**.  
*Allow Download and Version X.X.X (where X represents version numbers) appears in the panel display.*
6. Using the left and right arrow buttons, select **Allow Download**.
7. Press the **SEL button**.  
*The keypanel now allows firmware downloads.*

**NOTE:** If the keypanel is powered off or loses power, the state of the Allow Download option resets to not enabled. You must reconfigure the option for it to allow new bootloader firmware to be downloaded.

---

## Download Firmware Using the Bootloader

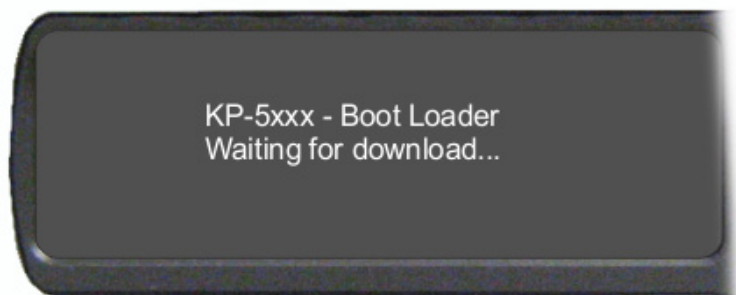
The **Bootloader** is used to upload a new bootloader image or upgrade the existing firmware to the keypanel.

**NOTE:** The instructions provided below are shown using the KP-5032 family keypanels.

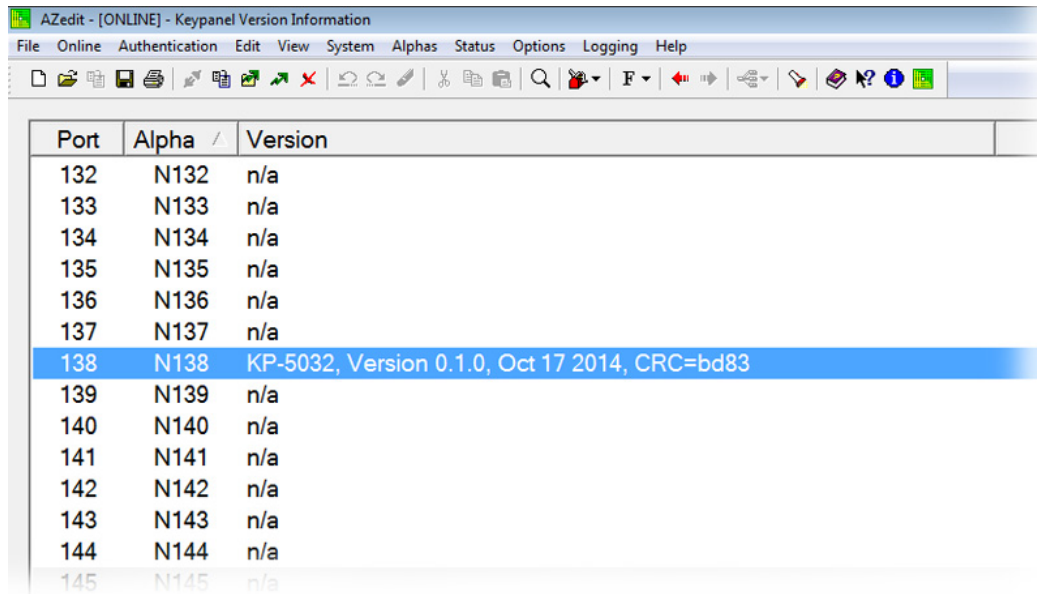
### Run the Bootloader

To **run the bootloader**, do the following:

1. Power **off** the keypanel.
2. Verify the **KP-5032/4016 is powered off**, but still connected to the FRAME.
3. At the same time, press and hold **keypanel key 15 in the listen position (up) and keypanel key 16 in the talk position (down)**, while you connect the **power cord** to the keypanel.  
*KP-5032/4016 - Boot Loader Waiting for download... appears in the panel display.*



4. In AZedit, from the Status menu, select **Software Versions**.  
*The Software Versions popup menu appears.*
5. From the Software Versions popup menu, select **Keypanels**.  
*The Keypanel Version Information window appears.*

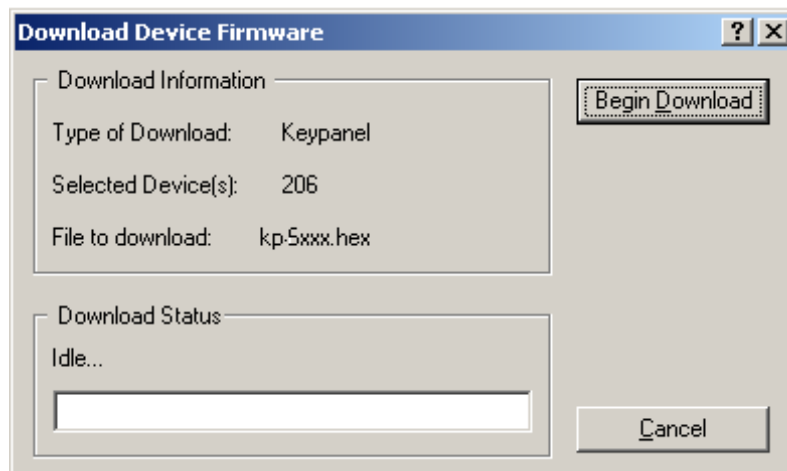


Port	Alpha	Version
132	N132	n/a
133	N133	n/a
134	N134	n/a
135	N135	n/a
136	N136	n/a
137	N137	n/a
138	N138	KP-5032, Version 0.1.0, Oct 17 2014, CRC=bd83
139	N139	n/a
140	N140	n/a
141	N141	n/a
142	N142	n/a
143	N143	n/a
144	N144	n/a
145	N145	n/a

6. From the Keypanel Version Information window, find and select the **specified KP-5032/4016**.

**NOTE:** Notice the Version column is showing KP-5032/4016 Bootloader Version 0.1.0 is shown.

7. Right-click on the **KP-5032/4016**.  
*A popup menu appears.*
8. From the popup menu, select **Download Firmware...**  
*The Firmware Download navigation window appears.*
9. Navigate to and select your **firmware file** (i.e., 59-5xxx.hex).
10. Click **Open**.  
*The Download Device Firmware window appears.*

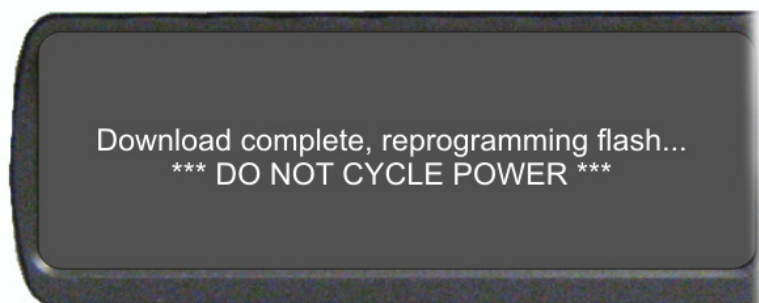


11. Click **Begin Download**.  
*The Download begins and a popup message appears.*
12. Click **OK**.  
*The KP-5032/4016 firmware download finishes.*



**NOTE:** This can take up to two (2) minutes to complete if connected via OMNEO and up to 15 minutes to complete if connected via AIO. Use the Keypanel Version Information window to follow the progress of the download (the number and percentage of chunks completed). Also, the firmware progression is displayed on the KP-5032/4016 panel display until the download is complete.

**NOTE:** Once the Boot Loader is finished downloading, it reboots itself and reprograms the flash.



---

### *Display the FPGA Version on the Keypanel*

To **display the FPGA version currently installed in the keypanel**, do the following:

1. While pressing the Main Vol and Aux Vol encoders on the front of the keypanel at the same time, press the **MENU button**.  
*The main menu appears in the panel display.*
2. Using the left and right arrow buttons, select **Service**.
3. Press the **SEL button**.  
*The Service menu options appear in the panel display.*
4. Using the left and right arrow buttons, select **FPGA Version**.
5. Press the **SEL button**.  
*Version X.X.X (where X represents the FPGA version numbers) appears in the panel display.*

---

### *Download and Upgrade the FPGA to the KP-5032/4016*

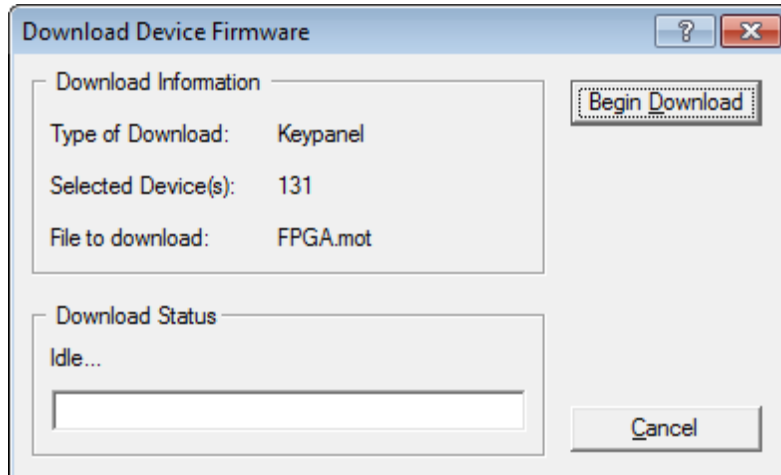
There are four (4) phases to upgrading the FPGA on a keypanel:

- Downloading the FPGA firmware to the matrix
- Downloading the FPGA firmware to the keypanel
- Processing the download
- Reprogramming the keypanel

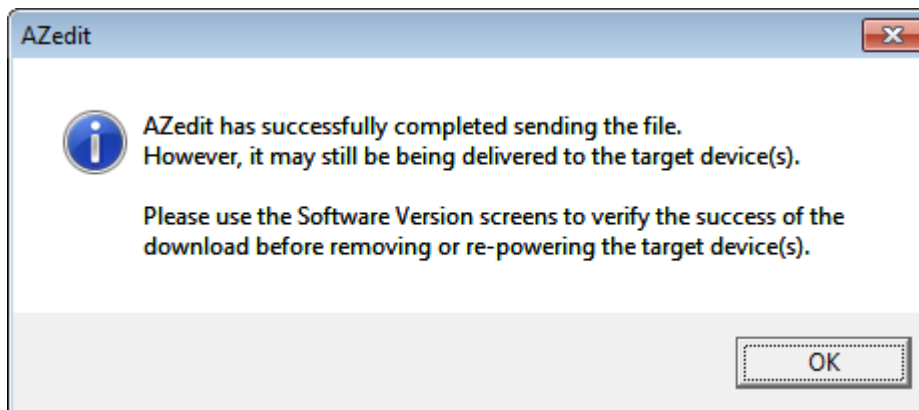
To **download the FPGA to the keypanel**, do the following:

1. Open **AZedit**.
2. From the Status menu, select **Software Versions|Keypanels**.  
*The Keypanel Version Information window appears.*
3. Find the **port number** where the KP-5032/4016 is assigned.
4. Highlight the **Port** (keypanel) to be updated.  
*You may select more than one (1) at a time by holding CTRL key down while you select.*

5. Right-click the **highlighted selections**.  
*A popup menu appears.*
6. Select **Download Firmware**.  
*The Firmware Download window appears.*
7. Using the browse button, navigate to the **FPGA file** you want to use.
8. Click **Open**.  
*The Download Device Firmware window appears.*

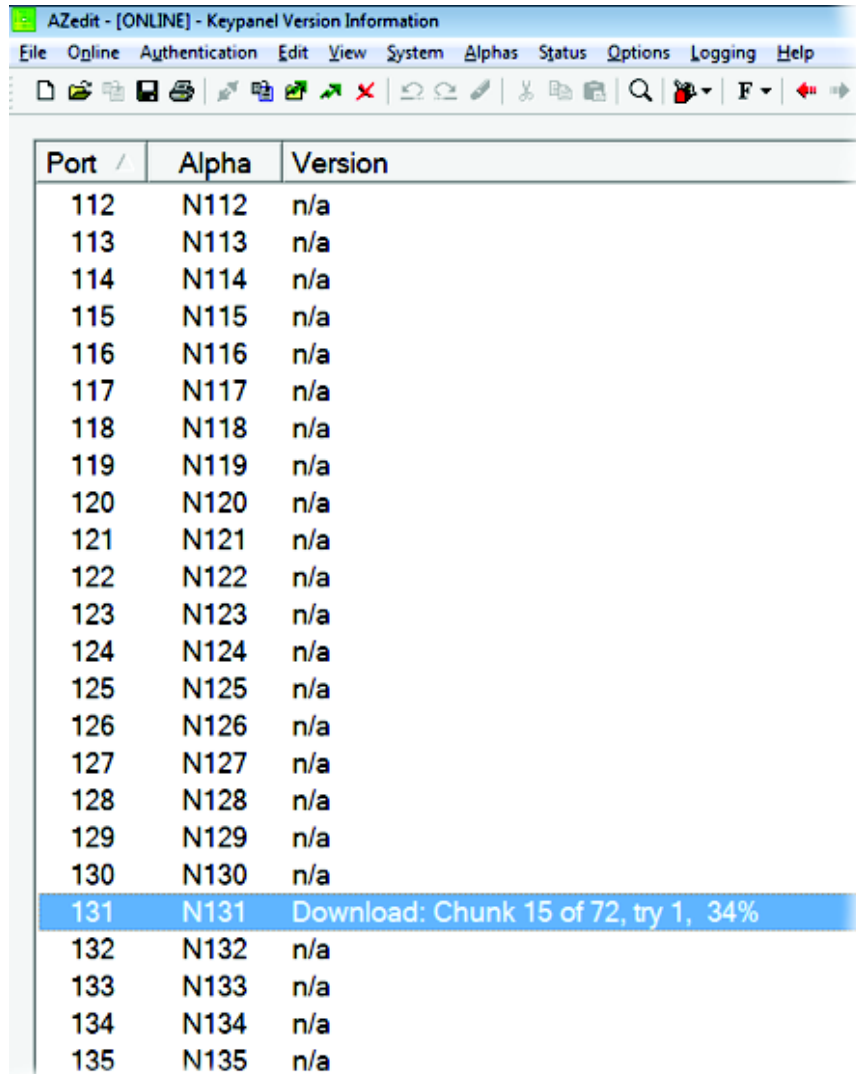


9. Click **Begin Download**.  
*The download begins. A progress bar appears to show the progress of the download.*



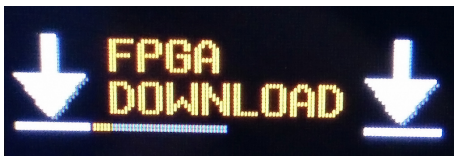
10. Click **OK**.  
*The KP-5032/4016 firmware download to the Matrix finishes. The Download FPGA Firmware To The Keypanel begins.*

11. Verify the Keypanel Version Information window is displaying the **numbers of chunks (of data) transferred to the keypanel**.

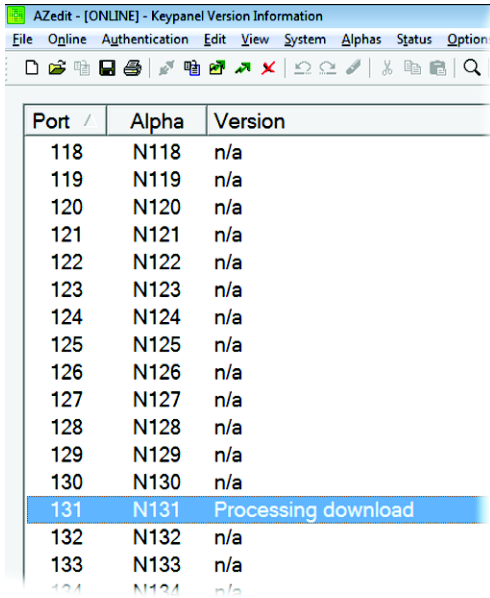


Port /	Alpha	Version
112	N112	n/a
113	N113	n/a
114	N114	n/a
115	N115	n/a
116	N116	n/a
117	N117	n/a
118	N118	n/a
119	N119	n/a
120	N120	n/a
121	N121	n/a
122	N122	n/a
123	N123	n/a
124	N124	n/a
125	N125	n/a
126	N126	n/a
127	N127	n/a
128	N128	n/a
129	N129	n/a
130	N130	n/a
131	N131	Download: Chunk 15 of 72, try 1, 34%
132	N132	n/a
133	N133	n/a
134	N134	n/a
135	N135	n/a

12. Verify the keypanel displays the **FPGA Downloading icon with progression bar**.  
*Once the download is complete, the keypanel has to process the downloaded file.*

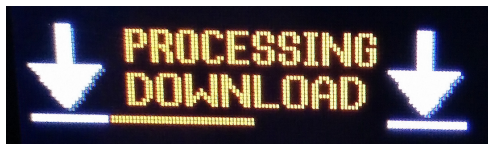


13. Verify the Keypanel Version Information window displays **Processing download** on the keypanel port you chose.

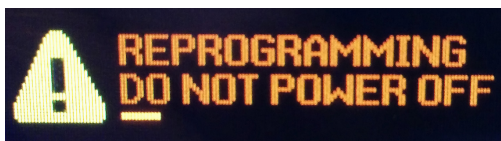


Port /	Alpha	Version
118	N118	n/a
119	N119	n/a
120	N120	n/a
121	N121	n/a
122	N122	n/a
123	N123	n/a
124	N124	n/a
125	N125	n/a
126	N126	n/a
127	N127	n/a
128	N128	n/a
129	N129	n/a
130	N130	n/a
131	N131	Processing download
132	N132	n/a
133	N133	n/a
134	N134	n/a

14. Verify the keypanel displays the **Processing Download** icon with progression bar.



15. Once the keypanel is finished processing the download, the keypanel begins to **reprogram**.  
*The keypanel flashes a Reprogramming: Do Not Turn Off icon in the display panel. This can take several minutes.*



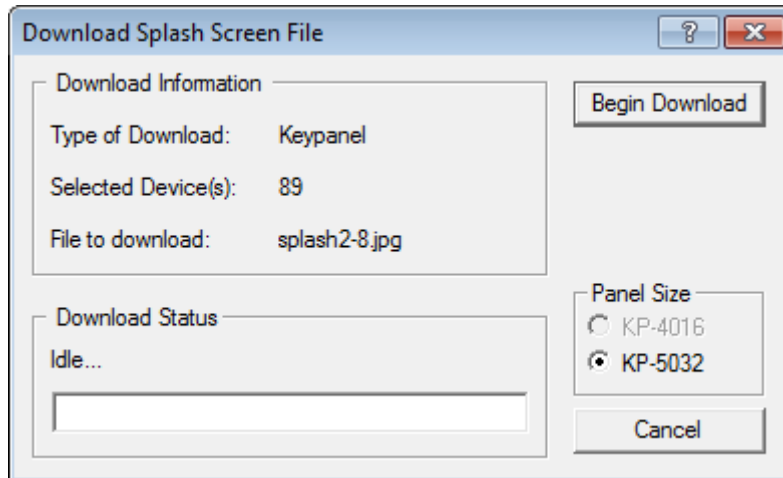
16. Once the reprogramming is complete, the keypanel **reboots**.

## Download a Splash Screen

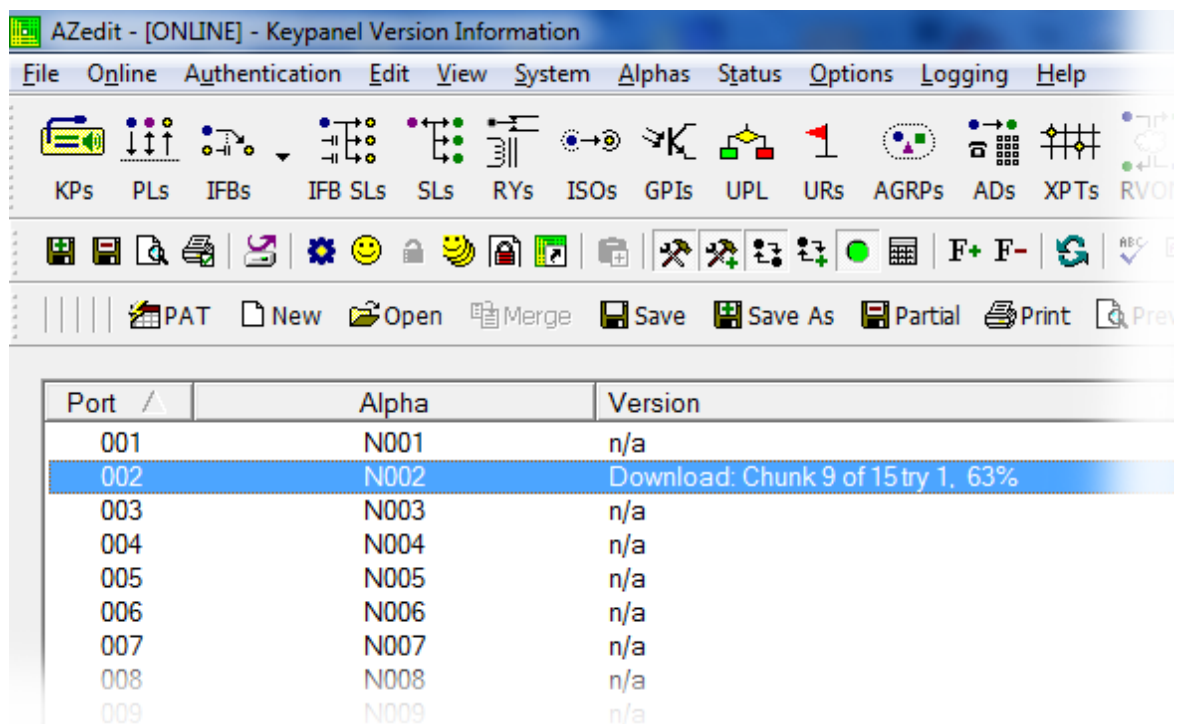
1. Open **AZedit**.
2. From the Status menu, select **Software Versions|Keypanels**.  
*The Keypanel Version Information window appears.*
3. Find the **port number** where the KP-5032/4016 is assigned.
4. Highlight the **Port** (keypanel) to be updated.  
*You may select more than one (1) at a time by holding CTRL key down while you select.*
5. Right-click the **highlighted selections**.  
*A popup menu appears.*
6. Select **Download splash screen...**.  
*The Splash Screen Download window appears.*

7. Click **Open**.

*The Download Splash Screen File window appears.*



8. In the Panel Size group box, select **KP-4016** or **KP-5032**.
9. Click **Begin Download**.  
*The download begins. A progress bar appears to show the progress of the download.  
Once the download is complete the Download Splash Screen File window closes.*
10. Verify the Keypanel Version Information window is displaying the **numbers of chunks (of data) transferred to the keypad**.



11. Verify the keypanel displays the **Splash Screen Downloading icon with progression bar**.  
*Once the download is complete, the keypanel has to process the downloaded file.*



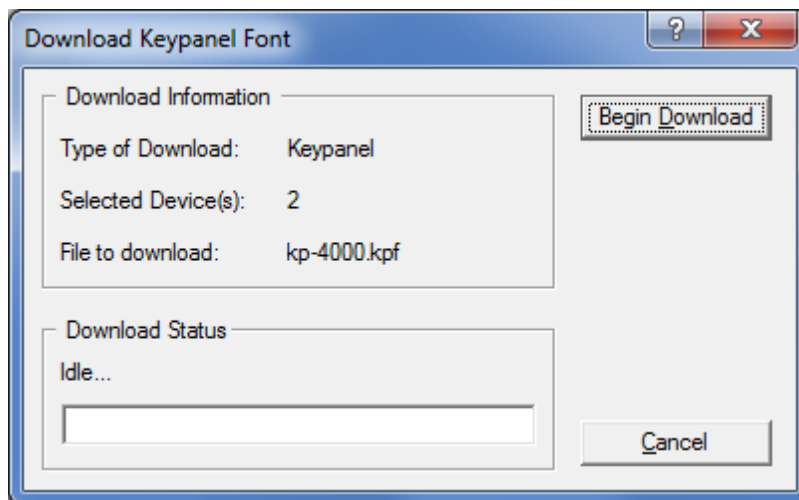
12. Once the keypanel is finished processing the download, the keypanel begins to **reprogram**.  
*The keypanel flashes a Reprogramming: Do Not Turn Off icon in the display panel. This can take several minutes.*



13. Once the reprogramming is complete, the keypanel **reboots**.

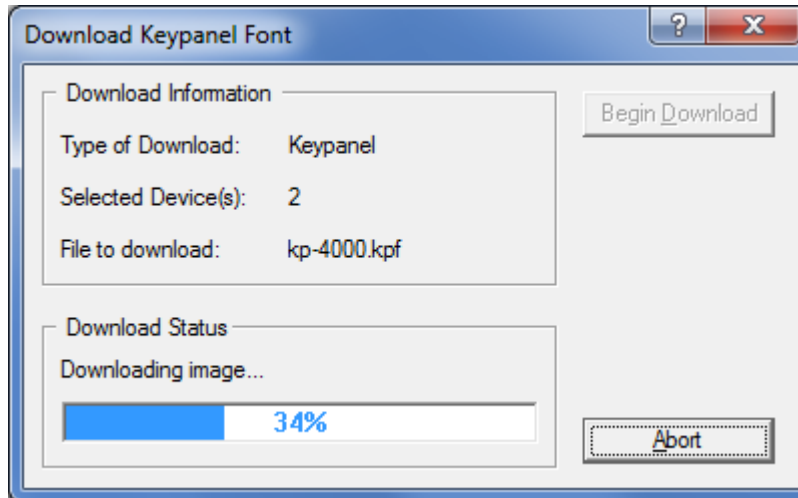
## Download a Font File

1. Open **AZedit**.
2. From the Status menu, select **Software Versions|Keypanels**.  
*The Keypanel Version Information window appears.*
3. Find the **port number** where the KP-5032/4016 is assigned.
4. Highlight the **Port** (keypanel) to be updated.  
*You may select more than one (1) at a time by holding CTRL key down while you select.*
5. Right-click the **highlighted selections**.  
*A popup menu appears.*
6. Select **Download font...**.  
*The Font Download window appears.*
7. Navigate to the **font file (.kpf)** you want to use.
8. Click **Open**.  
*The Download Keypanel Font window appears.*



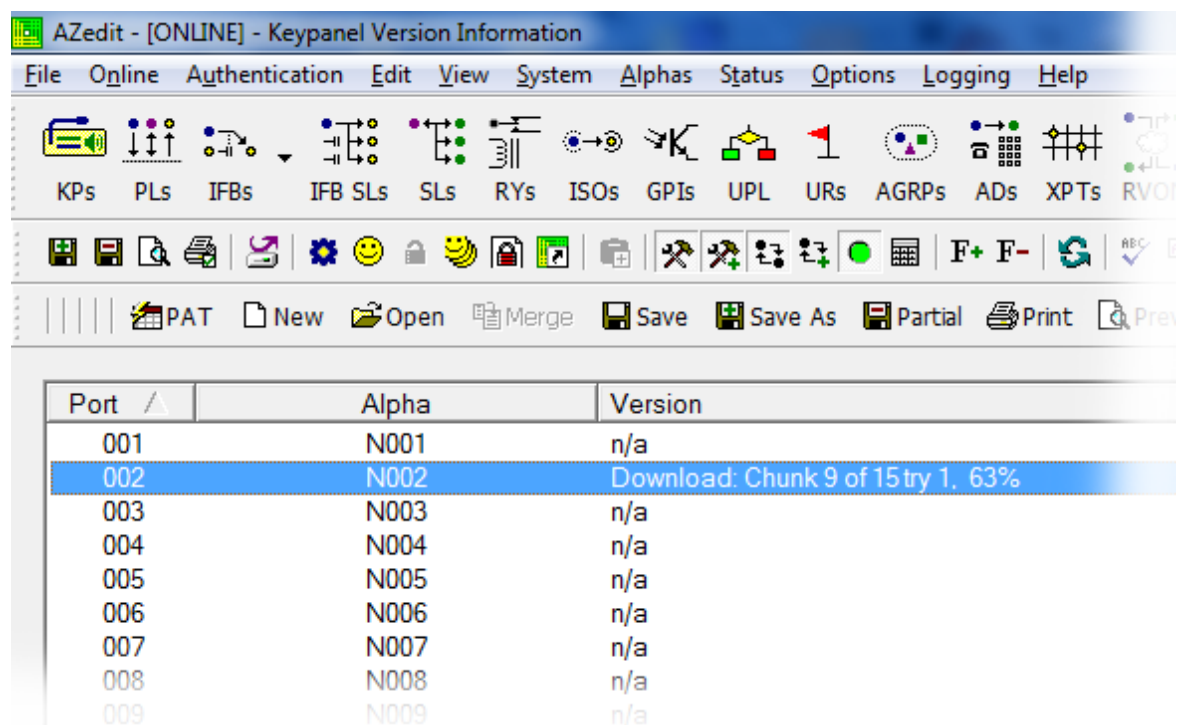
9. Click **Begin Download**.

*The download begins. A progress bar appears to show the progress of the download.*



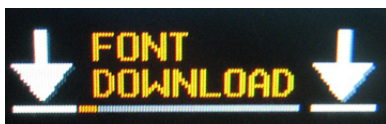
*Once the download is complete the Download Keypanel Font window closes.*

10. Verify the Keypanel Version Information window is displaying the **numbers of chunks (of data) transferred to the keypanel**.

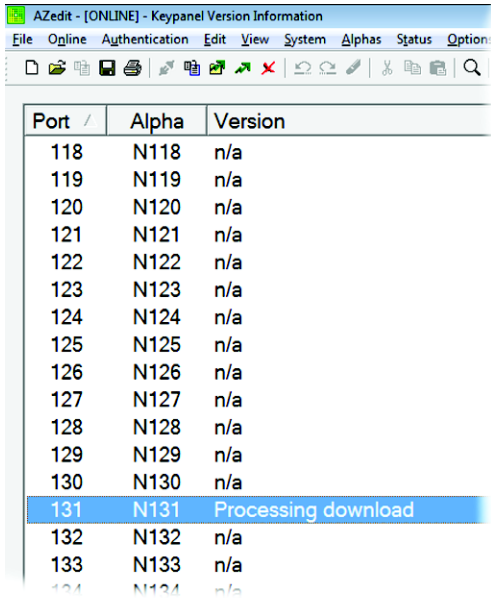


11. Verify the keypanel displays the **FONT Downloading icon with progression bar**.

*Once the download is complete, the keypanel has to process the downloaded file.*

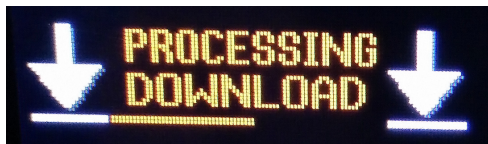


12. Verify the Keypanel Version Information window displays **Processing download** on the keypanel port you chose.



Port /	Alpha	Version
118	N118	n/a
119	N119	n/a
120	N120	n/a
121	N121	n/a
122	N122	n/a
123	N123	n/a
124	N124	n/a
125	N125	n/a
126	N126	n/a
127	N127	n/a
128	N128	n/a
129	N129	n/a
130	N130	n/a
131	N131	Processing download
132	N132	n/a
133	N133	n/a
134	N134	n/a

13. Verify the keypanel displays the **Processing Download** icon with progression bar.



14. Once the keypanel is finished processing the download, the keypanel begins to **reprogram**.  
*The keypanel flashes a Reprogramming: Do Not Turn Off icon in the display panel. This can take several minutes.*



15. Once the reprogramming is complete, the keypanel **reboots**.



# *KP-4016/5032 Menu System*

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**NOTE:** A menu system quick reference chart is located at “Keypanel Menu Quick Reference” on page 169.

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## *Main Menu Access*

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**IMPORTANT:** For more detailed information on Basic Key operation, see “Shaft Encoder Knobs and Menu Navigation” on page 44.

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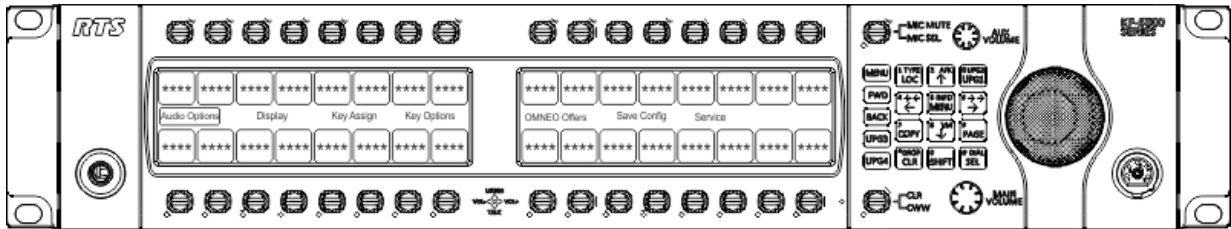
The **Main Menu** is the top most level of the menu structure.

Available selections for this menu are:

- Audio Options*
- Display*
- Key Assign*
- Key Options*
- OMNEO Offers*
- Save Config*
- Service*

To access the main menu structure, do the following:

1. On the keypanel keypad, press the **MENU** button.  
*The Information menu structure displays across the middle of the panel display.*



2. Using the arrow buttons on the keypad, navigate through the **menu options**.
3. Press the **SEL** button.  
*The submenu for the selection appears.*

## Menu System, Audio Options

Available options for this menu are:

*Advanced*  
*Chime*  
*Dim*  
*Ganged Vols*  
*Headset Mic*  
*Headset Spkr*  
*Inputs*  
*Key Volumes*  
*LCP 16 CLD*  
*Matrix Out*  
*Max Volume*  
*Mic Gain*  
*Mic Mute*  
*Min Volume*  
*Output Lev*  
*Panel Mic*  
*Preamp Out*  
*Sidetone*  
*Speaker*  
*Tone Gen*

## Audio Options Menu, Advanced

- AEC
- AGC
- Compression
- Filters
- Gating
- Metering
- Mixing
- Mix Mode

### *AEC*

**AEC** (Acoustic Echo Cancellation) is used to prevent feedback from occurring between the microphone and the speaker. AEC is only available on one (1) microphone; by default, it is enabled on the front panel mic. When the front panel mic is disabled, AEC operates on the rear microphone.

**NOTE:** AEC is not available for Headset Mics.

### *Mic Priority*

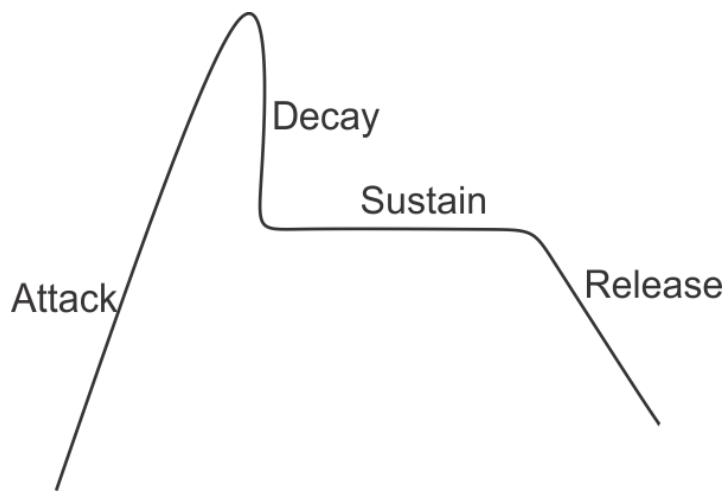
The **Mic Priority** menu is used to select the microphone to enable AEC on when both the front and rear mics are active.

To **configure mic priority on a microphone**, do the following:

1. Starting at the Audio Options|Advanced|AEC menu, select **Mic Priority**.
2. Press the **SEL button**.  
*Front Mic and Rear Mic appear in the panel display.*
3. Using the left and right arrow buttons, select **Front Mic** or **Rear Mic**.
4. Press the **SEL button**.  
*An arrow appears next to the selected option.*

## AGC

The **AGC** (Automatic Gain Control) menu is used to set the speed at which a microphone becomes active and the speed at which a sustainable level is achieved through the use of the Attack menu and the Decay menu. You can set these levels for the front, rear, and headset microphones used with the keypanel.



**FIGURE 23.** Automatic Gain Control Example

### **Attack**

The **Attack** menu item is used to set the speed at which the microphone gets to the activation threshold, the point where the circuit determines if the noise is a voice. The smaller the attack time, the faster the mic turns on.

Available options for this menu are:

0.5ms  
1ms (d)  
2ms

### **Decay**

The **Decay** menu item is used to set the speed at which the gain transitions to silence during release.

Available options for this menu are:

500ms  
750ms (default)  
1000ms

To **configure the attack speed for a microphone source**, do the following:

1. Starting at the Audio Options|Advanced|AGC menu, select **Attack**.
2. Press the **SEL button**.  
*Front Hdst, Front Mic, Rear Hdst, and Rear Mic appears in the panel display.*
3. Using the arrow buttons, select **Front Hdst, Front Mic, Rear Hdst, or Rear Mic**.
4. Press the **SEL button**.  
*The Fast Attack Speed scroll box appears in the panel display.*
5. Using the arrow buttons, select the **Attack speed** you desire.

To **configure the decay speed for a microphone source**, do the following:

1. Starting at the Audio Options|Advanced|AGC menu, select **Decay**.
2. Press the **SEL button**.  
*Front Hdst, Front Mic, Rear Hdst, and Rear Mic appears in the panel display.*
3. Using the arrow buttons, select **Front Hdst, Front Mic, Rear Hdst, or Rear Mic**.
4. Press the **SEL button**.  
*The Decay scroll box appears in the panel display.*
5. Using the up and down arrow buttons, select the **Decay speed** you desire.

### **Compression**

The **Compression** menu item is used change the audio's gain, meaning audio above the threshold is changed according to the compression selected. The compression is used to reduce the output level.

Compression can be applied to the following:

- Front Headset
- Front Mic
- Rear Hdst
- Rear Mic

Available options are:

*1:1*

*2:1*

*3:1(default)*

To **configure compression on a microphone**, do the following:

1. Starting at the Audio Options|Advance menu, select **Compression**.
2. Press the **SEL button**.  
*Front Hdst, Front Mic, Rear Hdst, and Rear Mic appear in the panel display.*
3. Using the arrow buttons, select the **microphone source**.
4. Press the **SEL button**.  
*The Compression Ratio scroll box appears in the panel display.*
5. Using the up and down arrow buttons, select the **compression ratio** you want to apply to the microphone source.

## Filters

**Filters** allow you to add a bandpass filter, a preset frequency response (equalization) filter or a notch filter to one (1) or more audio sources.

### Bandpass

The **Bandpass** menu is used to enable using bandpass filters as well as set a low and high frequency range where frequencies within the two (2) frequency points are passed and anything outside of the range is rejected.

To **configure a bandpass range for Inputs**, do the following:

1. Starting at the Audio Options|Advanced|Filters menu, select **Bandpass**.
2. Press the **SEL button**.  
*Inputs and Outputs appears in the panel display.*
3. Using the arrow buttons, select **Input**.
4. Press the **SEL button**.  
*Aux 1, Aux 2, OMNEO 1, and OMNEO 2 appear in the panel display.*
5. Using the arrow buttons, select either **Aux 1**, **Aux 2**, **OMNEO 1** or **OMNEO 2**.
6. Press the **SEL button**.  
*Frequencies and Mode appear in the panel display.*
7. Using the arrow buttons, select **Mode**.  
*Disabled and Enabled appear in the panel display.*
8. Using the arrow buttons, select **Enabled**.
9. Press the **SEL button**.  
*An arrow appears next to the selected option.*
10. Press the **CLR button**.  
*Frequencies and Mode appear in the panel display.*
11. Using the arrow buttons, select **Frequencies**.
12. Press the **SEL button**.  
*The Low Freq scroll box and the High Freq scroll box appear in the panel display.*
13. Using the up and down arrow buttons, select the **low frequency** you desire.
14. Using the left and right arrow buttons, select the **high frequency scroll box**.
15. Using the up and down arrow buttons, select the **high frequency** you desire.

To **configure a bandpass range for Outputs**, do the following:

1. Starting at the Audio Options|Advanced|Filters menu, select **Bandpass**.  
*Inputs and Outputs appears in the panel display.*
2. Using the arrow buttons, select **Output**.
3. Press the **SEL button**.  
*Front Hdst, Matrix Out, OMNEO 1, OMNEO 2, Preamp Out, and Rear Hdst appear in the panel display.*
4. Using the arrow buttons, select the **output** you desire to modify.

If Front Hdst or Rear Hdst is chosen:

- a. Press the **SEL button**.  
*Both, Left Chan, and Right Chan appear in the panel display.*
- b. Using the left and right arrow buttons, select either **Both**, **Left Chan**, or **Right Chan**.
5. Press the **SEL button**.  
*Frequencies and Mode appear in the panel display.*
6. Using the arrow buttons, select **Mode**.  
*Disabled and Enabled appear in the panel display.*
7. Using the arrow buttons, select **Enabled**.

8. Press the **SEL button**.  
*An arrow appears next to the selected option.*
9. Press the **CLR button**.  
*Frequencies and Mode appear in the panel display.*
10. Using the left and right arrow buttons, select **Frequencies**.
11. Press the **SEL button**.  
*The Low Freq scroll box and the High Freq scroll box appear in the panel display.*
12. Using the up and down arrow buttons, select the **low frequency** you desire.
13. Using the left and right arrow buttons, select the **high frequency scroll box**.
14. Using the up and down arrow buttons, select the **high frequency** you desire.

### **Equalization**

**Equalization** allows the user to select predefined settings that modify the frequency envelope of an audio channel. This is a 5-band equalizer. Each preset provides a different EQ to be applied to the audio.

Available selections for this menu are:

<i>Default</i>	0 dB (15Hz–20kHz)
<i>Hiss Reduction</i>	0 dB (15Hz–2kHz) -6dB (2kHz–12.6kHz)
<i>Rumble Reduction</i>	0 dB (15Hz–50Hz)

To **configure a preset frequency response for an input**, do the following:

1. Starting at the Audio Options|Advanced|Filters menu, select **Equalization**.  
*Inputs and Outputs appears in the panel display.*
2. Using the arrow buttons, select either **Input**.
3. Press the **SEL button**.  
*Front Hdst, Front Mic, Matrix In, Rear Hdst and Rear Mic appear in the panel display.*
4. Using the arrow buttons, select either **Front Hdst, Front Mic, Matrix In, Rear Hdst** or **Rear Mic**.
5. Press the **SEL button**.  
*Mode and Presets appear in the panel display.*
6. Using the arrow buttons, select **Mode**.  
*Disabled and Enabled appear in the panel display.*
7. Using the arrow buttons, select **Enabled**.
8. Press the **SEL button**.  
*An arrow appears next to the selected option.*
9. Press the **CLR button**.  
*Mode and Presets appear in the panel display.*
10. Using the arrow buttons, select **Presets**.
11. Press the **SEL button**.  
*Default, Hiss Reduction, and Rumble Reduction appear in the panel display.*
12. Using the arrow buttons, select **Default, Hiss Reduction, or Rumble Reduction**.
13. Press the **SEL button**.  
*An arrow appears next to preset selected.*

To **configure a preset frequency response for an output**, do the following:

1. Starting at the Audio Options|Advanced|Filters menu, select **Equalization**.  
*Inputs and Outputs appears in the panel display.*
2. Using the arrow buttons, select either **Output**.
3. Press the **SEL button**.  
*Front Spkr and Rear Spkr appear in the panel display.*
4. Using the arrow buttons, select either **Front Spkr** or **Rear Spkr**.
5. Press the **SEL button**.  
*Mode and Presets appear in the panel display.*
6. Using the arrow buttons, select **Mode**.  
*Disabled and Enabled appear in the panel display.*
7. Using the arrow buttons, select **Enabled**.
8. Press the **SEL button**.  
*An arrow appears next to the selected option.*
9. Press the **CLR button**.  
*Mode and Presets appear in the panel display.*
10. Using the arrow buttons, select **Presets**.
11. Press the **SEL button**.  
*Default, Hiss Reduction, and Rumble Reduction appear in the panel display.*
12. Using the arrow buttons, select **Default**, **Hiss Reduction**, or **Rumble Reduction**.
13. Press the **SEL button**.  
*An arrow appears next to preset selected.*

### **Notch**

The **Notch** menu allows you to add a notch filter to one (1) or more audio sources. This can be useful when the keypanel data port signal is being heard in the audio line due to cable routing problems.

By default, the notch filter is set to *Disabled*.

Available options for this menu are:

#### *Disabled*

<i>Narrow</i>	9500hz–9700Hz (200Hz band)
<i>Default</i>	9450hz–9750Hz (300Hz band)
<i>Wide</i>	9400hz–9800Hz (400Hz band)



## Gating

**Gating** (also called VOX) allows you to minimize or eliminate background noise problems by shutting off an audio source when the audio level drops below a certain threshold.

Gating can be applied to the following:

*Aux 1*

*Aux 2*

*Front Hdst*

*Front Mic*

*Matrix In*

*OMNEO 1*

*OMNEO 2*

*Rear Hdst*

*Rear Mic*

The range for the gating threshold is *-17dB* to *+18dB*, and *Disabled*.  
By default, the gating threshold is set to *Disabled*.

**NOTE:** 0dB threshold is 12dB below nominal. Nominal inputs are as follows:

<i>Aux 1-2</i>	<i>8dBu</i>
<i>Headset Mics</i>	<i>-50dBu</i>
<i>Matrix In</i>	<i>8dBu</i>
<i>Panel Mics</i>	<i>-42.5dBu</i>
<i>OMNEO 1-2</i>	<i>8dBu</i>

To **configure gating on the keypanel**, do the following:

1. Starting at the Audio Options|Advanced menu, select **Gating**.
2. Press the **SEL button**.  
*Aux 1, Aux 2, Front Hdst, Front Mic, Matrix In, OMNEO 1, OMNEO 2, Rear Hdst, and Rear Mic appear in the panel display.*
3. Using the left or right arrow buttons, select **Aux 1, Aux 2, Front Hdst, Front Mic, Matrix In, OMNEO 1, OMNEO 2, Rear Hdst, or Rear Mic**.
4. Press the **SEL button**.  
*The Threshold scroll menu appears.*
5. Using the up and down arrow buttons, select the **threshold** you desire.
6. Press **BACK** to go to the previous menu item  
OR  
Press and hold **CLR** to exit the menu structure.

## ***Metering***

**Metering** allows you to monitor an audio source connected to the keypanel. The energy of the incoming audio is split into five (5) bands and displayed on the left side of the keypanel when enabled.

The decibels display range is from 28dB below nominal to 8dB above nominal  
The bands are defined as:

*Band 1*                      *100Hz to 400Hz*

*Band 2*                      *400Hz to 800Hz*

*Band 3*                      *800Hz to 1.6kHz*

*Band 4*                      *1.6kHz to 3.2kHz*

*Band 5*                      *3.2kHz to 15kHz*

**NOTE:**      Only one (1) channel can be metered at a time.

You can enable metering on:

*Aux1*

*Aux2*

*Front Hdst*

*Front Mic*

*Matrix In*

*None (default)*

*OMNEO 1*

*OMNEO 2*

*Rear Hdst*

*Rear Mic*

To **enable metering**, do the following:

1. Starting at the Audio Options|Advanced menu, select **Metering**.
2. Press the **SEL button**.  
*Aux 1, Aux 2, Matrix In, None, Front Hdst, Front Mic, None, OMNEO 1, OMNEO 2, Rear Hdst, and Rear Mic appear in the panel display.*
3. Using the arrow key, select **Aux 1, Aux 2, Matrix In, None, Front Hdst, Front Mic, OMNEO 1, OMNEO 2, Rear Hdst, or Rear Mic**.
4. Press the **SEL button**.  
*An arrow appears next to the selected option.*

---

### *Mixing*

**Mixing** allows you to route selected audio signals to the following destinations:

- To Matrix
- Front Left Headphone
- Front Right Headphone
- Front Speaker
- Mic Pre Out
- OMNEO 1
- OMNEO 2
- Rear Speaker
- Rear Left Headphone
- Rear Right Headphone

---

**IMPORTANT:** If OMNEO is enabled, OMNEO 1 is not available because it is acting as the Matrix. On the other hand, if AIO is enabled, OMNEO 1 and OMNEO 2 are both available as auxiliary channels.

---

By default, the microphone signals are routed to the matrix. The matrix signal is routed to the front speaker and to the left and right channels of the front headphones. These defaults can be changed via the Audio Options sub-menus for Panel Mic, Headset Mic, Speaker, and Headset Speaker.

Available options for this menu are:

*Front Hdst*

*Front Spkr*

*OMNEO 1*

*OMNEO 2*

*Preamp out*

*Rear Hdst*

*Rear Spkr*

*To Matrix*

TABLE 9. Resources Table

Destination	Source	Front Panel Mic	Matrix Audio In	Front Headset Mic	Rear Headset Mic	Rear Panel Mic	Aux 1	Aux 2	OMNEO 1	OMNEO 2
Matrix OUT		a	X	a	a	a	X	X	X	X
Front Speakers		X	b	X	X	X	X	X	X	X
Front Headset Left		X	b	X	X	X	X	X	X	X
Front Headset Right		X	b	X	X	X	X	X	X	X
Rear Headset Left		X	b	X	X	X	X	X	X	X
Rear Speaker Left		X	b	X	X	X	X	X	X	X
Rear Speaker Right		X	b	X	X	X	X	X	X	X
Mic OUT		a	X	a	a	a	X	X	X	X
OMNEO Ch 1		X	X	X	X	X	X	X	X	X
OMNEO Ch 2		X	X	X	X	X	X	X	X	X

- a. Mic inputs cannot be mixed to the Matrix or preamp outputs using this menu. To mix mic inputs to the matrix output or preamp output, use the Panel Mic and Headset Mic menus.
- b. The Matrix input cannot be mixed to speaker or headset outputs using this menu. To mix Matrix In to speakers or headsets, use the Speaker and Headset Spkr menus.

To **configure mixing**, do the following:

- Starting at the Audio Options|Advanced menu, select **Mixing**.
- Press the **SEL button**.  
*Front Hdst, Front Spkr, OMNEO 1, OMNEO 2, Preamp Out, Rear Hdst, Rear Spkr, and To Matrix appear in the panel display.*
- Using the left or right arrow buttons, select a the **destination** to mix to (or the destination to which the sources will be mixed).

**NOTE:** If Front Hdst or Rear Hdst is an additional step of choosing Both, Left Chan, or Right Chan is required.

- Press the **SEL button**.  
*If Front Spkr or Rear Spkr is selected Aux 1, Aux 2, Front Hdst, Front Mic, OMNEO 1, OMNEO 2, Rear Hdst, and Rear Mic appears in the panel display.*  
*OR*  
*If OMNEO 1 or OMNEO 2 is selected Aux 1, Aux 2, Front Hdst, Front Mic, Matrix In, OMNEO 1, OMNEO 2, Rear Hdst, and Rear Mic appears in the panel display.*
- Using the left or right arrow buttons, select the **input** to mix to the selected output.
- Press the **SEL button**.  
*An arrow appears next to the selection.*

**NOTE:** Repeat steps 5 and 6 to select additional inputs to mix to the selected output.

### **Mix Mode**

The **Mix Mode** menu is used to control whether mixes made to the speakers and headsets are muted when they are not active.

Available options for this menu are:

- |  |  |
|--|--|
| <i>Mixes to Spkr/Hdst Switched (default)</i> | Aux inputs mixed to speakers or headsets are only heard when the panel is in the appropriate headset or speaker mode.    |
| <i>Mixes always active</i>                   | Aux inputs mixed to speakers or headset are always heard, regardless of whether the panel is in headset or speaker mode. |

To **configure Mix Mode**, do the following:

1. Starting at the Audio Options|Advanced menu, select **Mix Mode**.
2. Press the **SEL button**.  
*Mixes to Spkr/Hdst Switched and Mixes Always Active appear in the panel display.*
3. Using the left or right arrow buttons, select the **mix mode** you desire.
4. Press the **SEL button**.  
*An arrow appears next to the selection.*

### **Noise Gate**

The **Noise Gate** menu is used to enable or disable the audio level (-72dBu) at which the mic turns on. When noise gate is enabled, microphone noise gate is set to -72dBu; when the noise gate is disabled, the microphone is always on.

To **enable/disable noise gate**, do the following:

1. Starting at the Audio Options|Advanced menu, select **Noise Gate**.
2. Using the left or right arrow keys, move to the **Mic scroll box**.
3. Using the up or down arrow keys, select the **Front Hdst, Front Mic, Rear Hdst, or Rear Mic**.
4. Using the left or right arrow keys, move to the **State scroll box**.
5. Using the up or down arrow keys, select **Disable** or **Enable**.

## Audio Options Menu, Chime

The **Chime** menu is used to set the volume for each of the built-in chimes, as well as to enable or disable preview of chimes during chime selection in this menu and others that reference chimes.

Available configurable options for this menu are:

<i>Preview</i>	When enabled, a preview of the chime is played each time a new chime is selected or while the volume is being adjusted, so you can listen to what it sounds like.
<i>Chime</i>	Allows the user to select between four (4) system chimes.
<i>Volume</i>	Controls the volume of the chime. This field ranges from <i>-60dB to 10dB</i> . The default for this field is <i>-20dB</i> .

To **configure Chime on the keypad**, do the following:

1. Starting at the Audio Options menu, select **Chime**.
2. Press the **SEL button**.  
*The Preview, Chime, and Volume scroll boxes appear in the panel display.*
3. Using the up or down arrow buttons, select **Yes** or **No** for Preview.
4. Using the left or right arrow buttons, select **Chime**.
5. Using the up or down arrow buttons, select the **system chime desired**.
6. Using the left or right arrow buttons, select **Volume**.
7. Using the up or down arrow buttons, select the **volume** you want the chime to sound.

## Audio Options Menu, Dim

To **configure Dim on the keypad**, do the following:

1. Starting at Audio Options, select **Dim**.
2. Press the **SEL button**.  
*Headset and Speaker appear in the panel display.*
3. Using the left or right arrow buttons, select **Headset** or **Speaker**.
4. Press the **SEL button**.  
*Front and Rear appear in the panel display.*
5. Using the left or right arrow buttons, select **Front** or **Rear**.
6. Press the **SEL button**.  
*The Dim Amount scroll box appears.*
7. Using the up or down arrow buttons, select the **Dim Amount** you desire.

## Audio Options Menu, Ganged Vols

**Ganged Vols** is used to set what happens when adjusting the volume for a ganged channel pair when the volumes are not identical and one (1) of the volumes reaches the minimum or maximum level.

Available options:

<i>Disappearing Mode</i>	allows adjustments to continue when one of the volumes of the ganged pair hits a limit. This setting adjusts the volume difference until the difference or offset between the volumes disappears.
<i>Fixed Offset Mode</i>	prevents adjustments to continue when one of the volumes of the ganged pair hits a limit. This setting maintains the difference between the two volumes.

To **configure ganged volume**, do the following:

1. Starting at Audio Options, select **Ganged Vols**.
2. Press the **SEL button**.  
*Disappearing and Fixed Offset appear in the panel display.*
3. Using the left or right arrow buttons, select either **Disappearing** or **Fixed Offset**.
4. Press the **SEL button**.  
*An arrow appears next to the selected option.*

## Audio Options Menu, Headset Mic

The **Headset Mic** option allows the user to configure where audio is coming from and the type of microphone being used.

By default, if no headset is detected, the headset mic input is muted to avoid allowing noise to get to the system. This feature can be disabled.

### *Auto-Mute*

The **Auto-Mute** option is used to automatically mute the Mic Input when a headset mic is not detected.

Available selections for the Auto-mute menu are:

*Disabled*

*Enabled*

### *Mode*

Available selections for the Mode menu are:

*Disabled*

*Enabled*

*Switched* When set to Switched, the state of the Headset Mic is controlled by the Mic Sel key.

**NOTE:** The default for the front headset mic is *Switched*, while the default for the rear headset mic is *Disabled*.

## Type

Available selections for the Type menu are:

*Auto-Detect (default)*      The keypanel automatically detects the type of microphone connected.

*Dynamic*

*Electret*

To **configure the Headset Mic Auto-mute**, do the following:

1. Starting at the Audio Options menu, select **Headset Mic**.
2. Press the **SEL button**.  
*Front and Rear appear in the panel display.*
3. Using the right or left arrow buttons, select **Front** or **Rear**.
4. Press the **SEL button**.  
*Auto-Mute, Mode and Type appear in the panel display.*
5. Using the right or left arrow buttons, select **Auto-Mute**.
6. Press the **SEL button**.  
*Disabled and Enabled appear in the panel display.*
7. Using the right or left arrow buttons, select **Disabled** or **Enabled**.
8. Press the **SEL button**.  
*An arrow appears next to the selected option.*

To **configure the Headset Mic Mode**, do the following:

1. Starting at the Audio Options menu, select **Headset Mic**.
2. Press the **SEL button**.  
*Front and Rear appear in the panel display.*
3. Using the right and left arrow buttons, select **Front** or **Rear**.
4. Press the **SEL button**.  
*Auto-Mute, Mode and Type appear in the panel display.*
5. Using the right and left arrow buttons, select **Mode**.
6. Press the **SEL button**.  
*Disabled, Enabled, and Switched appear in the panel display.*
7. Using the right and left arrow buttons, select **Disabled**, **Enabled**, or **Switched**.
8. Press the **SEL button**.  
*An arrow appears next to the selected option.*

To **configure the Headset Mic Type**, do the following:

1. Starting at the Audio Options menu, select **Headset Mic**.
2. Press the **SEL button**.  
*Front and Rear appear in the panel display.*
3. Using the right and left arrow buttons, select **Front** or **Rear**.
4. Press the **SEL button**.  
*Auto-Mute, Mode and Type appear in the panel display.*
5. Using the right and left arrow buttons, select **Type**.
6. Press the **SEL button**.  
*Auto-Detect, Dynamic, and Electret appear in the panel display.*
7. Using the right and left arrow buttons, select **Auto-Detect**, **Dynamic**, or **Electret**.
8. Press the **SEL button**.  
*An arrow appears next to the selected option.*



## Audio Options Menu, Headset Speaker

The **Headset Spkr** menu option is used to control the headset detection functions: auto-transfer, which is used to detect if a headset is present and mode, which determines when and where audio is heard. Also from this menu, the Main shaft encoder is defined how to control the front and rear channels define how the Main shaft encoder controls the volume for the front and rear channels.

### *Volume Control*

Available selections for the Volume Control menu are:

*Ganged*                      The volume controls are tied to each other, only one knob is turned to adjust volume levels. The volume of both front and rear headset speakers are controlled together.

*Individual*                  The volume controls are separate to each other.

**NOTE:**      If you gang speakers and/or headset volumes, you may see a split volume bar if the front and rear have different volumes with ganging is enabled. The front speaker or headset is the top portion of the bar, while the bottom portion of the bar is the rear speaker or headset volume.

To **define how the Main Volume shaft encoder controls the volume for the front and rear channels**, do the following:

1. Starting at the Audio Options|Headset Spkr menu, select **Volume Control**.
2. Press the **SEL button**.  
*Ganged and Individual appear in the panel display.*
3. Using the left or right arrow buttons, select **Ganged** or **Individual**.
4. Press the **SEL button**.  
*An arrow appears next to the selected option.*

### *Auto-Transfer*

Available selections for the Auto-transfer menu are:

*Disabled*

*Enabled*                      When enabled, the keypad automatically enters or leaves headset mode when a headset is plugged in or removed.

To **configure the Headset Auto-Transfer function**, do the following:

1. Starting at the Audio Options|Headset Spkr menu, select **Front** or **Rear**.
2. Press the **SEL button**.  
*Auto-Transfer and Mode appear in the panel display.*
3. Using the left or right arrow buttons, select **Auto-Transfer**.
4. Press the **SEL button**.  
*Disabled and Enabled appear in the panel display.*
5. Using the left or right arrow buttons, select **Disabled** or **Enabled**.
6. Press the **SEL button**.  
*An arrow appears next to the selected option.*

## Mode

Available selections for the Mode menu are:

*Always On*

*Disabled*

*Switched*                      When set to Switched, the state of the Headset Spkr is controlled by the Mic Sel key.

**NOTE:**      The default for front is *Always On*, while the default for rear is *Disabled*.

To **configure the Headset Spkr Mode**, do the following:

1. Starting at the Audio Options|Headset Spkr menu, select **Front** or **Rear**.
2. Press the **SEL button**.  
*Auto-Transfer and Mode appear in the panel display.*
3. Using the left or right arrow buttons, select **Mode**.
4. Press the **SEL button**.  
*Both, Left Chan, and Right Chan appear in the panel display.*
5. Using the left or right arrow buttons, select the **mode** you want.
6. Press the **SEL button**.  
*Always On, Disabled, and Switched appear in the panel display.*
7. Using the left or right arrow buttons, select the **mode**.
8. Press the **SEL button**.  
*An arrow appears next to the selected option.*

## Audio Options Menu, Inputs

The **Inputs** menu is used to enable or disable the control for audio input through the front panel encoder. The KP-5032/4016 has five (5) Input connectors on the back panel of the unit. By default, all inputs are enabled. This means the inputs are visible as inputs in the Mixing menu and (if mixed somewhere) can be selected for volume control.

If disabled, the inputs are not visible in the mixing menu and cannot be selected for volume control.

**NOTE:**      Disabling an input does not undo any of the mixes you had previously established in the Mixing menu; however, it hides access to volume control of this input. This is useful if you want to set the matrix input volume, and then want to disable the volume control so users cannot adjust the Matrix volume.

To **enable or disable an input**, do the following:

1. Starting at the Audio Options|Inputs menu, select **Aux 1**, **Aux 2**, **Matrix In**, **OMNEO1** or **OMNEO2**.
2. Press the **SEL button**.  
*Disabled and Enabled appear in the panel display.*
3. Using the arrow buttons, select **Enabled** to enable the selected Input.  
OR  
Using the arrow buttons, select **Disabled** to disable the selected Input

## Audio Options Menu, Key Volumes

The **Key Volumes** menu is used to enable or disable the adjusting of crosspoint listen gains. If key volumes are enabled, the user can adjust the list gains for Matrix crosspoints from the keypanels. Alternatively, you can reset key gains back to their default settings.

Available options for this menu are: *Adjust*, *Minimum*, and *Reset*.

### **Minimum**

The **Minimum** menu item is used to allow an administrator to set a minimum crosspoint volume for individual keys. This prevents users from lowering the crosspoint volume to an inaudible or muted level.

Available options for the minimum volume levels are: *-80dB to +6dB*, and *Mute*.

**NOTE:** Key Volumes are either enabled for the entire keypanel or disabled for the entire keypanel. This setting cannot be set on a per key basis.

To **enable key volumes**, do the following:

1. Starting at the Audio Options|Key Volumes menu, select **Adjust**.
2. Press the **SEL button**.  
*Disabled and Enabled appear in the panel display.*
3. Using the left or right arrow buttons, select **Enabled**.
4. Press the **SEL button**.  
*Key volume adjustments are allowed by users.*

To **set the minimum volume on every key**, do the following:

1. Starting at the Audio Options|Key Volumes menu, select **Minimum**.
2. Press the **SEL button**.  
*Adjust Minimum Key Volumes appears in the panel display and the individual keys become active to change the minimum volume.*
3. Using the lever associated with the keypanel key, press **left or right to increase or decrease the volume**.

To **reset all key gains to their default value**, do the following:

1. Starting at the Audio Options|Key Volumes menu, select **Reset**.
2. Press the **SEL button**.  
*Cancel and Do Reset appear in the panel display.*
3. Using the left or right arrow buttons, select **Do Reset**.
4. Press the **SEL button**.  
*Volumes reset appears in the panel display.*

## Audio Options, Menu, LCP 16 CLD

The **LCP 16 CLD** (Level Control Panel) is connected to the keypanel. The LCP 16 CLD, when connected to a keypanel is only used to adjust input and output volumes. You may connect only one (1) LCP panel to the KP-5032 or KP-4016.

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**CAUTION:** Do not connect a KP-5032/4016 power supply to the LCP 16 CLD. Doing so could cause damage to the unit.

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**NOTE:** The LCP 16 CLD menu option in both the Audio Options and Display menus is also present when an LCP 16 CLD unit is connected to the keypanel or not.

To **configure an LCP 16 CLD via the KP-5032/4016 keypanel**, do the following:

1. Starting at the Audio Options|LCP 16 CLD menu, select the **encoder knob number** you want to configure.
2. Press the **SEL button**.  
*Inputs, Outputs, Sidetone, and Unassigned appears in the panel display.*
3. Using the left or right arrow buttons, scroll to select **Inputs** to configure the input level.  
OR  
Using the left or right arrow buttons, scroll to select **Outputs** to configure the output level.  
OR  
Using the left or right arrow buttons, scroll to select **Sidetone** to assign control of Sidetone level to the selected encoder.  
OR  
Using the left or right arrow buttons, scroll to select **Unassigned** to clear the assignment for the selected encoder.
4. Press the **SEL button**.  
*The LCP 16 CLD configuration is changed.*

## Audio Options Menu, Matrix Out

**Matrix Out** allows the user to select between Normal or Hot Mic. In Normal setting, audio from the selected active mic (based on the mic select feature, see “Audio Options Menu, Panel Mic” on page 115) goes out to the Matrix when any talk key is active. In the Hot Mic setting, audio from the mic goes out to the Matrix without regard to the talk key state.

By default, Matrix Out is set to *Normal* operation.

To **configure Matrix Out**, do the following:

1. Starting at the Audio Options| Matrix Out menu, select **Hot Mic** or **Normal**.
2. Press the **SEL button**.  
*An arrow appears next to the selected option.*

**NOTE:** When Hot Mic is enabled, the Hot Mic icon appears in the panel display.

## Audio Options Menu, Max Volume

The **Max Volume** menu is used to set the maximum level, in dB, of the volume the user can configure for a headset or a speaker. This feature prevents incoming audio from being too loud.

The range for this field is *-48dB to 10dB*, and *Mute*.

The default setting is *10dB*.

To **set the maximum volume for headsets or speakers**, do the following:

1. Starting at the Audio Options|Max Volume menu, select **Headset** or **Speaker**.
2. Press the **SEL button**.  
*Front and Rear appear in the panel display.*
3. Using the left or right arrow buttons, select **Front** or **Rear**.
4. Press the **SEL button**.  
*The Max Volume: scroll box appears in the panel display.*
5. Using the up and down arrow buttons, scroll to the **maximum volume** you desire.

## Audio Options Menu, Mic Gain

**Mic Gain** allows the user to adjust the mic gain level, in dB, and enable or disable mic gain on the keypanel. For more information, see “Key Gain Adjustment” on page 47, “Key Gain Adjustment” on page 47, and “Aux Volume Adjustments” on page 49.

The range for this field is *-20dB to 10dB*.

By default, this field is set to *0dB*.

To **set the Mic Gain level**, do the following:

1. Starting at the Audio Options|Mic Gain menu, select **Level**.
2. Press the **SEL button**.  
*Front Hdset, Front Mic, Rear Hdset, and Rear Mic appear in the panel display.*
3. Using the left or right arrow buttons, select the **source to configure mic gain**.
4. Press the **SEL button**.  
*The Mic Gain scroll box appears in the panel display.*
5. Using the up and down arrow buttons, scroll to the **mic gain level** you desire.

To **enable/disable mic gain from the front panel of the keypanel**, do the following:

1. Starting at the Audio Options|Mic Gain menu, select **Adjust**.
2. Press the **SEL button**.  
*Disabled, Front Hdset, Front Mic, Rear Hdset, and Rear Mic appear in the panel display.*
3. Using the left or right arrow buttons, select the **resource** you want to configure.

### Audio Options Menu, Mic Mute

The **Mic Mute** menu is used to disable the Mic Mute key. By disabling the mic mute key, users are not able to mute the microphone from the front panel.

By default, Mic Mute is *enabled*.

To **disable Mic Mute**, do the following:

1. Starting at the Audio Options menu, select **Mic Mute**.
2. Press the **SEL button**.  
*Disable and Enable appear in the panel display.*
3. Using the left or right arrow buttons, select **Disable**.
4. Press the **SEL button**.  
*An arrow appears next to the selected option.*

### Audio Options Menu, Min Volume

The **Min Volume** menu item is used to set the minimum volume level, in dB, for different sources on the keypanel. This is the minimum volume level available when using the Main Volume and Aux Volume control knob, located on the front of the keypanel.

Available sources are: *Headset, Speaker, Aux 1, Aux 2, Matrix In, OMNEO 1, and OMNEO 2.*

The range for this field is *-48dB to 10dB*, and *Mute*.

By default, this field is set to *Mute*.

To **set the min volume**, do the following,

1. Starting at the Audio Options|Min Volume menu, select the **source** to set the minimum volume on.
2. Press the **SEL button**.  
*The Min Volume: scroll box appears in the panel display.*

**NOTE:** When Headset or Speaker is selected, you must designate the front or rear headset or speaker.

3. Using the up and down arrow buttons, scroll to the **minimum volume** you desire.

### Audio Options Menu, Output Level

The **Output Level** menu is used to adjust the nominal audio output level to the matrix.

The range for this field is *0dB to 8dB*.

By default, the output level is set to *8dB*.

To **set the Output Level**, do the following:

- > Starting at the Audio Options|Output Level menu, select the **output level** you want to configure.

## Audio Options Menu, Panel Mic

The **Panel Mic** menu option is used to configure how the panel mic operates.

Available options for this field are:

*Disabled*

*Enabled*

*Switched*

When enabled, the state of the Panel Mic is controlled by the Mic Sel key.

**NOTE:** The default for the Rear Panel Mic is *disabled*, while the default for the Front Panel Mic is *switched*.

To **configure the panel mic**, do the following:

1. Starting at the Audio Options|Panel Mic menu, select **Front** or **Rear**.
2. Press the **SEL button**.  
*Disabled, Enabled, and Switched appear in the panel display.*
3. Using the left or right arrow buttons, select the **mode**.
4. Press the **SEL button**.  
*An arrow appears next to the selected option.*

## Audio Options Menu, Preamp Out

The **Preamp Out** menu is used to choose how audio is routed to the Preamp Output connector.

The selections available are:

*Disabled*

When Disabled is selected, keypanel audio is isolated from the preamp output connector.

*Hot Mic*

When Hot Mic is selected, audio is always available at the preamp output connector.

*Invert*

When Inverted is selected, keypanel audio is routed to the preamp output connector when no talk key is active.

*Switched (default)*

When Switched is selected, keypanel audio is routed to the preamp output connector when a talk key is active.

To **configure the preamp output connector**, do the following:

1. Starting at the Audio Options|Preamp Out menu, select the **preamp out option** you want.
2. Press the **SEL button**.  
*An arrow appears next to the selected option.*

## Audio Options Menu, Sidetone

The **Sidetone** menu is used to configure the level, in dB, at which the user hears their own voice. Most people prefer some amount of sidetone to overcome the muffled sensation when talking, especially when wearing a dual-sided headset.

The range for this field is *-65dB to 0dB*.

By default, the sidetone level is set at *-20dB*.

You can also configure the mode sidetone operates.

The available options for the sidetone mode are:

*Always On*

*Disabled*

*Switched (default)*      When set to Switched, the user's voice is heard only when a talk key is activated.

To **set the sidetone level**, do the following:

1. Starting at the Audio Options|Sidetone menu, select **Level**.
2. Press the **SEL button**.  
*The Sidetone Level scroll menu appears in the panel display. By default, sidetone is set to -20dB.*
3. Using the up and down arrow buttons, adjust the **sidetone level**.

To **set the sidetone mode**, do the following:

1. Starting at the Audio Options|Sidetone menu, select **Mode**.
2. Press the **SEL button**.  
*Always On, Disabled, and Switched appear in the panel display.*
3. Using the left or right arrow buttons, select the **mode** to operate sidetone.
4. Press the **SEL button**.

## Audio Options Menu, Speaker

The **Speaker** menu option is used to configure how the speaker operates. Also from this menu the Main Volume shaft encoder is defined how to control the front and rear channels.

Available selections are:

*Always On*

*Disabled*

*Switched*      When set to Switched, the state of the speaker is controlled by the Mic Sel key.

To **configure the speaker**, do the following:

1. Starting at the Audio Options|Speaker menu, select **Front** or **Rear**.
2. Press the **SEL button**.  
*Always On, Disabled and Switched appear in the panel display.*
3. Using the left or right arrow buttons, select the **option** you want configured.
4. Press the **SEL button**.  
*An arrow appears next to the selected option.*



## Volume Control

Available selections for the Volume Control menu are:

**NOTE:** For more information on Ganged Volume configuration, see “Audio Options Menu, Ganged Vols” on page 107.

*Ganged* The volume controls are tied to each other, only one (1) knob is turned to adjust volume levels. The volume of both front and rear headset speakers are controlled together.

*Individual* The volume controls are independent of each other.

To **define how the Main shaft encoder controls the volume for the front and rear channels**, do the following:

1. Starting at the Audio Options|Speaker menu, select **Volume Control**.
2. Press the **SEL button**.  
*Ganged and Individual appear in the panel display.*
3. Using the left or right arrow buttons, select either **Ganged** or **Individual**.
4. Press the **SEL button**.  
*An arrow appears next to the selected option.*

## Audio Options Menu, Tone Gen

**Tone Gen** (tone generation) allows the user to turn the tone generator on or off. The tone generator is used to check the audio path from the keypad to the matrix.

Available selects for this menu are:

*500Hz Tone (default)*

*1kHz Tone*

To **enable/disable the tone generator**, do the following:

- > Starting at the Audio Options|Tone Gen menu, select **Tone Off** to disable the tone generator.  
OR  
Using the left or right arrow buttons, select **Tone On** to enable the tone generator.  
*An arrow appears next to the selected option.*

To **set the frequency level for the tone**, do the following:

1. Starting at the Audio Options|Tone Gen menu, select **Frequency**.
2. Press the **SEL button**.  
*1kHz Tone and 500Hz Tone appears in the panel display.*
3. Using the left or right arrow buttons, select **1kHz Tone** or **500Hz Tone**.  
*An arrow appears next to the selected option. If tone is enabled, an icon indicating 500Hz or 1kHz displays once the menu is exited.*

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## Menu System, Display

Use this menu to display information about the keypanel configuration.

The information available for display is as follows:

*Assign Type*  
*Auto Dial*  
*Chans On*  
*Chime*  
*Exclusive*  
*Key Groups*  
*Key List*  
*LCP 16 CLD*  
*Level 2 (Key Assignments)*  
*Listen (Assignments)*  
*Matrix*  
*Panel ID*  
*Solo Key*  
*(Keypanel Firmware) Version*

### Display Menu, Assign Type

**Assign Type** displays the talk level 1 assignment types for all keys.

To **display the types of key assignments assigned to the KP-5032/4016**, do the following:

1. On the keypanel keypad, press **MENU**.  
*The Information menu appears.*
2. Using the left and right arrow buttons, select **Display**.
3. Press the **SEL button**.  
*The Display submenu appears.*
4. Using the left and right arrow buttons, select **Assign Type**.
5. Press the **SEL button**.  
*The assignment types appear on the appropriate key displays.*

### Display Menu, Auto Dial

**Auto Dial** displays the keypanel keys assigned 1-touch auto dial numbers. 1-Touch auto dial numbers are configured using the locally stored numbers on the keypanel. Once a 1-touch auto dial key is configured, press the configured key to cause the TIF to go off-hook and auto dial the selected number.

To **display the auto dial numbers assigned to the keypanel keys**, do the following:

1. Starting at the Display menu, select **Auto Dial**.
2. Press the **SEL button**.  
*1-Touch Auto Dial appears in the panel display and the keys with 1-Touch Auto Dial numbers assigned are indicated with a red bar talk bar.*

## Display Menu, Chans On

**Chans On** displays a scroll list of all intercom ports with crosspoints currently closed to this keypanel. Chans On is typically used to locate an open mic or other open audio source that needs to be shut off. The most likely cause is a talk key that has been left on at some keypanel. In this case, use the arrow buttons to quickly page-scroll through the list of names. Press the call waiting window key to ask the person at the other end of the connection to turn off the talk key.

To **display the Chans On information**, do the following:

1. Starting at the Display menu, select **Chans On**.
2. Press the **SEL button**.  
*The Chans On display appears showing the active channels.*

## Display Menu, Chime

**Chime** displays all keys with the chime option enabled on them in red. For more information, see “Key Options Menu, Chime” on page 128.

To **display keys with Chime enabled**, do the following:

1. Starting at the Display menu, select **Chime**.
2. Press the **SEL button**.  
*The Chime display appears showing chime enabled keys in red.*

## Display Menu, Exclusive

**Exclusive** displays all keys with the exclusive key assignment. For more information, see “Key Options Menu, Exclusive” on page 129.

To **display the Exclusive Keys information**, do the following:

1. Starting at the Display menu, select **Exclusive**.
2. Press the **SEL button**.  
*The Exclusive display appears showing exclusive keys in red.*

**NOTE:** You can assign more than one (1) Exclusive key. Only one (1) key marked as an Exclusive key can be turned on at any time. Pressing an Exclusive key turns off any other Exclusive key already active.

## Display Menu, Key Groups

**Key Groups** displays a scroll list of groups available on the keypanel.

To **display the different groups available**, do the following:

1. Starting at the Display menu, select **Key Groups**.
2. Press the **SEL button**.  
*Group 1, Group 2, Group 3, and Group 4 appear in the panel display.*
3. Using the arrow buttons, select the **Group** you want to display.
4. Press the **SEL button**.  
*The Master key appears in red, while the slave keys appear in green.*

## Display Menu, Key List

**Key List** displays and allows users to see all the other assignments on other keypanel pages not currently showing in the keypanel display.

To **display the Key List information**, do the following:

1. Starting at the Display menu, select **Key List**.
2. Press the **SEL button**.  
*The Key List displays all the assignments not currently displayed on the keypanel.*

## Display Menu, LCP 16 CLD

**LCP 16 CLD** displays the LCP 16 CLD shaft encoder assignments for the keypanel key.

To **display the LCP 16 CLD assignments on the KP-5032/4016**, do the following:

1. Starting at the Display menu, select **LCP 16 CLD**.
2. Press the **SEL button**.  
*The LCP 16 CLD assignments appear under the corresponding keys in the KP-5032/4016 Series display panel.*

**NOTE:** If an LCP 16 CLD is not detected by the KP-5032/4016 keypanel, the message LCP 16 CLD Assigns (LCP Not Detected) appears.

## Display Menu, Level 2

**Level 2** displays the talk level 2 assignments for any key that has them assigned. Talk level 2 assignments are used to call two (2) users at one (1) time, activated when the Level 1 assignment is used.

To **display the Level 2 Talk information**, do the following:

1. Starting at the Display menu, select **Level 2**.
2. Press the **SEL button**.  
*The Level 2 display appears showing the level 2 talk assignments.*

## Display Menu, Listen

**Listen** displays the listen assignments for all keys, if applicable.

To **display the Level 2 Talk information**, do the following:

1. Starting at the Display menu, select **Listen**.
2. Press the **SEL button**.  
*The Listen display appears showing the listen assignments for all keys (if assigned).*

## Display Menu, Matrix

**Matrix** displays the intercom system name for all talk level 1 key assignments. The local intercom is represented by a green key, while a remote intercom is represented by a red key. If a key assignment is not present on a key, an unassigned key displays.

In non-trunked intercom systems, the intercom system name is always LOCL (local). In trunked systems, intercom system names are created in TrunkEdit (*Intercoms|Names*).

To **display the matrix intercom system name**, do the following:

1. Starting at the Display menu, select **Matrix**.
2. Press the **SEL button**.  
*The Matrix display appears showing the matrix intercom system.*

## Display Menu, Panel ID

**Panel ID** displays the port number to which the keypanel is connected.

**NOTE:** When the keypanel is not scroll enabled, the Panel ID displays only the port number in the panel display. When the keypanel is scroll enabled, the port number and port alpha are displayed.

To **display the panel ID**, do the following:

1. Starting at the Display menu, select **Panel ID**.
2. Press the **SEL button**.  
*The Panel ID display appears showing the port number and alpha (if applicable) for the keypanel.*

## Display Menu, Solo

**Solo** displays the key with the solo assignment. For more information, see “Key Options Menu, Latching” on page 131.

To **display the Solo Key information**, do the following:

1. Starting at the Display menu, select **Solo**.
2. Press the **SEL button**.  
*The Solo display appears showing solo keys in red.*

**NOTE:** You may only assign one (1) solo key at a time.

## Display Menu, Version

**Version** displays the firmware version currently running on the keypanel.

**NOTE:** For firmware upgrades, contact customer service. The keypanel firmware can be upgraded through AZedit.

To **display the firmware version currently loaded on the keypanel**, do the following:

1. Starting at the Display menu, select **Version**.
2. Press the **SEL button**.  
*The Version display appears showing firmware version for the keypanel.*

---

## Menu System, Key Assign Menu

The **Key Assign** menu is used to assign intercom key assignments and auto functions to keypanel keys.

Available options for this menu are:

*Matrix (only in trunked systems)*

*Pt-to-Pt*

*Party Line*

*IFB*

*Special List*

*Sys Relay*

*Camera ISO*

*UPL*

*IFSL*

*Auto Func*

To **access the key assign menu options**, do the following:

1. Starting at the Key Assign menu, select the **key assignment type** you want to assign.
2. Press the **SEL button**.  
*A scroll list of available assignments appears.*

### Key Assign Menu, Matrix (Trunked System Only)

**Matrix** only appears for trunked intercom systems. You must select a remote intercom matrix before assigning intercom keys to destinations in that matrix. You do not need to select matrix to assign keys to destinations in your own matrix. Also, you do not need to select matrix when assigning an auto function key to a matrix.

To **assign a remote assignment to the KP-5032/4016**, do the following:

1. Starting at the KeyAssign|Matrix menu, select a **remote intercom**.
2. Press the **SEL button**.  
*A scroll list of available assignments appears.*
3. Using the arrow buttons, select the **assignment** you want to assign to the keypanel key.
4. Press the **SEL button**.  
*A list of auto-functions appear.*
5. Using the arrow buttons, select the **auto-function** you want to assign to the assignment, if applicable.
6. Press the **SEL button**.  
*Tap Key appears in the panel display.*
7. Press down on the **keypanel key position** where you want the assignment to appear.  
*The alpha name appears on the key.*

## Key Assign Menu, Pt-to-Pt

**Pt-to-Pt** assigns a key that talks or listens to another intercom port.

**NOTE:** Some Pt-to-Pt destinations may be non-keypanel devices that cannot activate talk and listen paths. Therefore, if you want full communication, you may need to assign both talk and listen on the key. For more information, see “Key Assign Menu, Auto Func” on page 126.

To **assign Pt-to-Pt to the keypanel key**, do the following:

1. Starting at the Key Assign|Pt-to-Pt menu, select the **port** you want to assign to the keypanel key.
2. Press the **SEL button**.  
*A list of auto-functions appear.*
3. Using the arrow buttons, select the **auto-function** you want to assign to the Pt-to-Pt assignment, if applicable.
4. Press the **SEL button**.  
*Tap Key appears in the panel display.*
5. Press down on the **keypanel key position** where you want the Pt-to-Pt assignment to appear.  
*The key color changes and the alpha appears on the key.*

## Key Assign Menu, Party Line

**Party Line** assigns a key that talks and/or listens to a party line. Party Lines are defined in AZedit.

**NOTE:** Party Line members are usually non-keypanel devices that cannot activate talk and listen paths. Therefore, if you want full communication, you need to assign both talk and listen on the key. If all communications are normally 2-way, you may wish to assign the key as Talk+Auto Listen.

To **assign a Party Line to the keypanel key**, do the following:

1. Starting at the KeyAssign|Party Line menu, select the **party line** you want to assign to the keypanel key.
2. Press the **SEL button**.  
*A list of auto-functions appear.*
3. Using the arrow buttons, select the **auto-function** you want to assign to the Party Line assignment, if applicable.
4. Press the **SEL button**.  
*Tap Key appears in the panel display.*
5. Press down on the **keypanel key position** where you want the Party Line assignment to appear.  
*The key color changes and the alpha appears on the key.*

## Key Assign Menu, IFB

**IFB** assigns the IFB assignment type to a key. By default, all IFBs are restricted. You must select the appropriate scroll enable check box in AZedit, to see IFBs.

To **assign an IFB to the keypanel key**, do the following:

1. Starting at the KeyAssign|IFB menu, select the **IFB assignment** you want to assign to the keypanel key.
2. Press the **SEL button**.  
*A list of auto-functions appear.*
3. Using the arrow buttons, select the **auto-function** you want to assign to the IFB assignment, if applicable.
4. Press the **SEL button**.  
*Tap Key appears in the panel display.*
5. Press down on the **keypanel key position** where you want the IFB assignment to appear.  
*The key color changes and the alpha appears on the key.*

## Key Assign Menu, Spcl List

**Spcl List** assigns a key that talks and/or listens to a special list. The key is not available until members have been assigned to the special list in AZedit.

**NOTE:** Special List members can be non-keypanel devices that cannot activate talk and listen paths. Therefore, if you want full communication with all members of the special list, you may need to assign both talk and listen on the key.

To **assign a Special List to the keypanel key**, do the following:

1. Starting at the KeyAssign|Special List menu, select the **Special List** you want to assign to the keypanel key.
2. Press the **SEL button**.  
*A list of auto-functions appear.*
3. Using the arrow buttons, select the **auto-function** you want to assign to the Special List assignment, if applicable.
4. Press the **SEL button**.  
*Tap Key appears in the panel display.*
5. Press **down** on the keypanel key position where you want the Special List assignment to appear.  
*The key color changes and the alpha appears on the key.*

## Key Assign Menu, Sys Relay

**Sys Relay** refers to any of several types of control devices that can exist in the intercom system, including:

- The 8 GPI outputs from an ADAM Frame (J11 on the XCP-ADAM-MC Breakout Panel).
- The 8 GPI outputs from an ADAM CS Frame (J903 on the ADAM CS back panel).
- The relay outputs of an FR9528 Relay Frame (RELAY OUTPUTS connector on the FR9528 back panel).
- The 16 GPI outputs of a UIO-256 or GPIO-16 Frame (J5 on the UIO-256/GPIO-16 back panel).

To **assign a Relay to the keypanel key**, do the following:

1. Starting at the KeyAssign|Sys Relay menu, select the **relay** you want to assign to the keypanel key.
2. Press the **SEL button**.  
*A list of auto-functions appear.*

**NOTE:** You will not hear anything if you listen to a Relay, but you can activate the relay with either a talk or listen key.

3. Using the arrow buttons, select the **auto-function** you want to assign to the relay assignment, if applicable.
4. Press the **SEL button**.  
*Tap Key appears in the panel display.*
5. Press down on the **keypanel key position** where you want the Relay assignment to appear.  
*The key color changes and the alpha appears on the key.*



## Key Assign Menu, Camera ISO

**Camera ISO** assigns an **ISO** (isolate) assignment type to the key. By default, all ISOs are restricted. You must select the appropriate scroll enable check box in AZedit, to see ISOs.

To **assign a Camera ISO to the keypanel key**, do the following:

1. Starting at the KeyAssign|Camera ISO menu, select the **ISO** you want to assign to the keypanel key.
2. Press the **SEL button**.  
*A list of auto-functions appear.*
3. Using the arrow buttons, select the **auto-function** you want to assign to the Camera ISO assignment, if applicable.
4. Press the **SEL button**.  
*Tap Key appears in the panel display.*
5. Press down on the **keypanel key position** where you want the Camera ISO assignment to appear.  
*The key color changes and the alpha appears on the key.*

## Key Assign Menu, UPL Resources

**UPL Resources** assigns a key the UPL resource assignment type to the key. By default, all UPL resources are restricted. You must select the appropriate scroll enable check box in AZedit, to see UPLs.

To **assign a UPL to the keypanel key**, do the following:

1. Starting at the KeyAssign|UPL menu, select the **UPL** you want to assign to the keypanel key.
2. Press the **SEL button**.  
*A list of auto-functions appear.*

**NOTE:** You will not hear anything if you listen to a UPL Resource, but you can activate the UPL with either a talk or listen key.

3. Using the arrow buttons, select the **auto-function** you want to assign to the UPL assignment, if applicable.
4. Press the **SEL button**.  
*Tap Key appears in the panel display.*
5. Press down on the **keypanel key position** where you want the UPL assignment to appear.  
*The key color changes and the alpha appears on the key.*

## Key Assign Menu, IFB SL

**IFB SL** (IFB Special List) is similar to a special list, except the members of these special lists are IFB assignments. IFB SLs are useful when a producer of a news program needs to talk to all the talent at the same time (most talent assignments are IFB assignments).

To **assign an IFSL to the keypanel key**, do the following:

1. Starting at the KeyAssign|IFSL menu, select the **IFSL** you want to assign to the keypanel key.
2. Press the **SEL button**.  
*A list of auto-functions appear.*
3. Using the arrow buttons, select the **auto-function** you want to assign to the IFSL assignment, if applicable.
4. Press the **SEL button**.  
*Tap Key appears in the panel display.*
5. Press down on the **keypanel key position** where you want the IFSL assignment to appear.  
*The key color changes and the alpha appears on the key.*

## Key Assign Menu, Auto Func

**Auto Func** assigns an auto function to the key.

Available options for this menu are:

<i>AF</i>	Auto Follow for listen keys only.	Listens to what is assigned on the Talk key.
<i>AL</i>	Auto Listen for listen keys only.	When Talk is pressed, the Listen turns on.
<i>AM</i>	Auto Mute for listen keys only.	If Listen is active and Talk is pressed, Listen turns off.
<i>AR</i>	Auto Recip for listen keys only.	Listen is always on.
<i>AC</i>	All Call for talk level 1 only.	Turns all Talk keys on to the left of the AC key, up to the next AC key or the end of the row.
<i>Dim</i>	Dim Table function, for talk level 2 on point-to-point keys only.	

To **assign an Auto Function**, do the following:

1. Starting at the KeyAssign|Auto Funcs menu, select the **auto function** you want to assign to the keypanel key.
2. Press the **SEL button**.  
*Tap Key appears in the panel display.*
3. Press the **keypanel key** to which you want to assign the auto function.

---

## Menu System, Key Options Menu

The **Key Options Menu** is used to configure many of the keypanel operation options, such as auto dial functions, chime keys and duration, exclusive keys, key group assignments, solo key configuration, latching options, button lock, and tally operation.

Available options for this menu are:

*Auto Dial*  
*Chime*  
*Clear*  
*Exclusive*  
*Icons*  
*Key Groups*  
*Latching*  
*Lock*  
*Panel Swap*  
*Solo*  
*Tallies*  
*Turn Off*

### Key Options Menu, Auto Dial

**Auto Dial** stores commonly used phone numbers in the auto dial list locally on the keypanel.

You can also create a centralized auto dial list which is stored on the Master Controller and maintained through AZedit. For more information, see “Centralized Auto Dials” on page 161.

You can configure *up to 100 locally stored auto dial numbers*.

You can also configure 1-Touch TIF Auto Dial. 1-Touch Auto Dials are configured using the locally stored numbers on the keypanel. Once a 1-Touch Auto Dial key is configured, pressing the configured key causes the TIF to go off-hook and auto dial the selected number.

To **store an auto dial number**, do the following:

1. Starting at the Key Options|Auto Dial menu, select **Numbers**.
2. Press the **SEL button**.  
*#01:<empty> appears in the panel display.*

**NOTE:** Use the arrow buttons, to scroll to the **auto dial entry** you want to use. There are up to 100 auto dial entries available.

3. Press the **SEL button**.  
*#01: with a blinking cursor appears in the panel display.*
4. Using the keypanel keypad, enter the **phone number** you want to store (for example, 5551234567).

---

**IMPORTANT:** You must use FWD/BACK on the KP-5032 or Aux Shaft Encoder push (FWD)/MAIN Shaft Encoder push (BACK) on the KP-4016.

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5. On the keypanel keypad, press **FWD**.  
*Save Number? appears in the panel display.*
6. Press the **SEL button**.  
*The auto dial position number and telephone number appear in the panel display.*

To **delete a stored auto dial number**, do the following:

1. Starting at the Key Options|Auto Dial menu, select **Numbers**.
2. Press the **SEL button**.  
*#01:<empty> appears in the panel display.*
3. Using the arrow buttons, select the **Auto Dial number** you want to remove.
4. Press the **SEL button**.  
*#01: with a flashing cursor appears.*

**NOTE:** #01 is used for example purposes only. Depending on the auto dial number you want to delete determines the number seen here.

5. Press **FWD**.  
*Save Number? appears.*
6. Press the **SEL button**.  
*#01: <empty> appears in the panel display. The auto dial number is erased.*

To **configure a 1-touch auto dial key**, do the following:

1. Starting at the Key Options|Auto Dial menu, select **1-Touch**.
2. Press the **SEL button**.  
*Tap Key appears in the panel display.*
3. Tap the **key** you want to put the TIF 1-Touch assignment.  
*A scroll list of auto dial phone numbers appear.*
4. Using the arrow buttons, select the **phone number** you want to assign to the key.
5. Press the **CLR** button to exit out of Menu Mode.

**NOTE:** To hang up after using the 1-Touch key, you must use the TIF menu or assign Drop to a UPG key. For more information, see “User Programmable Buttons” on page 59.

## Key Options Menu, Chime

**Chime** indicates a chime tone sounds on incoming call announcements for selected keypanel keys. You can configure the chime tone to activate for a specified amount of time after a call is received.

The range for this field is one (1) second to five (5) minutes.

**NOTE:** Keys that have the currently selected Chime and Duration are shown with a red talk bar. Keys with a different chime or duration are shown with a green talk bar. Keys with no chime do not show a talk bar.

To **add a chime tone to keypanel keys**, do the following:

1. Starting at the Key Options, select **Chime**.
2. Press the **SEL button**.  
*A Chime scroll box and a Duration scroll box appear in the panel display.*
3. Using the up and down arrow buttons, select the **system chime** you desire (for example, System #2, System #3, System #1, and System #4).
4. Press the **SEL button**.  
*The focus moves to the duration scroll box.*
5. Using the up and down arrow buttons, select the **duration of the chime**.
6. Tap **down** on each keypanel key to which you want to add Chime.

**NOTE:** Assigning <none> clears the chime from the key. When you change chime types, if Preview is enabled, you hear the chime play. Also, if you lift the listen key for any key showing it has a chime assigned, you hear the chime associated with that key.

## Key Options Menu, Clear

The **Clear** menu option is used to clear any key options that have been assigned to a specific key or the clear the UPG button assignment.

To **clear a key's key options**, do the following:

1. Starting at the Key Options menu, select **Clear**.
2. Press the **SEL button**.  
*Tap Key appears in the panel display.*
3. Tap the **key** or **UPG key** you want to clear the key options from.  
*The key options are removed from the keypad key.*
4. Press the **CLR button** to exit the menu structure.

## Key Options Menu, Exclusive

**Exclusive** allows the user to set up keys that cause any other exclusive keys to turn off when activated. Unlike the solo option, when the exclusive option is deactivated, the other exclusive key turns off and does not turn back on. You can assign multiple exclusive keys.

To **create an exclusive key assignment**, do the following:

1. Starting at the Key Options menu, select **Exclusive**.
2. Press the **SEL button**.  
*Tap Key appears in the panel display.*
3. Tap **down** on any keypad key you want to assign the exclusive key option.  
*The key display turns red.*

To **remove an exclusive key assignment**, do the following:








1. Starting at the Key Options menu, select **Exclusive**.
2. Press the **SEL button**.  
*Tap Key appears in the panel display.*
3. Tap **down** on each red keypad key from which you want to remove the exclusive key option.  
*The selected keys return to the unassigned state (light blue color).*

## Key Options Menu, Icons

The **Icons** menu option is used to enable icon overlays for various key states. There are seven (7) key states that can be indicated using an icon.

By default, icons are enabled, which means they are displayed.

The icons available are:

	Gold Star	Key is Solo Key
	Black Phone	Key has TIF Assignment
	Globe	Key has Remote/Trunk assignment
	Bell	Key has Chime
	Plus	Key is Group Master
	Number Sign	Key has Auto-Dial
	Minus	Key is Exclusive

To **enable/disable icon overlays**, do the following:

1. Starting at the Key Options menu, select **Icons**.
2. Press the **SEL button**.  
*An Icon scroll box and a Display scroll box appear in the panel display.*
3. Using the up and down arrows, select the **key state** you want from the Icon scroll box.
4. Using the left and right arrows, select **Display**.
5. Using the up and down arrows, select **Enable** to display the icon.  
OR  
Using the up and down arrows, select **Disable** to hide the icon.
6. Repeat **steps 3 through 5** until you are finished.

## Key Options Menu, Key Groups

**Key Groups** is used to create a key group. A key group allows the user to activate a group of keys by activating one (1) key (the master key). When the master key is activated, all keys in the group become active.

You can create *up to four (4) key groups*.

To **create a key group**, do the following:

1. Starting at the Key Options|Key Groups menu, select the **Group** (1–4) you want to create.
2. Press the **SEL button**.  
*Tap Master Key appears in the panel display.*
3. Tap **down on the keypad key** you want to act as the master key.  
OR  
Press **FWD** to skip creating a Master key  
*The selected key turns red and Tap Slave Key(s) appears in the panel display.*

**NOTE:** A group without a master key cannot be activated by a key press, but may still be activated by a GPI Input or UPG key.

4. Tap **down on the keypad keys** you want to be activated when the master key is selected.  
*The selected keys turn green.*

To **delete a key group**, do the following:

1. Starting at the Key Options|Key Groups menu, select the **Group** (1-4) you want to delete.
2. Press the **SEL button**.  
*Tap the Master Key appears in the panel display.*
3. Press the **FWD** key.  
*The selected key returns to the unassigned state (light blue color) and Tap Slave Key(s) appears in the panel display.*
4. Tap **down on the green keypad keys** you want to remove from the group.  
*The selected keys turn green.*

## Key Options Menu, Latching

**Latching** is used to enable or disable the keypad key to stay on when pressed. When Latching is enabled, the talk function stays on after the talk key is pressed briefly. Otherwise, the talk function only works when the button is pressed. You configure globally across all keys, or on a per key basis.

**NOTE:** A key only latches if it is pressed and released within 0.5 seconds. Otherwise, the key always turns off when released.

By default, latching is *enabled*.

To **set latching on a keypad key**, do the following:

1. Starting at the Key Options menu, select **Latching**.
2. Press the **SEL button**.  
Global and Per Key appear in the panel display.
3. Using the left and right arrow buttons, select either **Global** or **Per Key**.
4. Press the **SEL button**.  
*Disabled and Enabled appear in the panel display.*
5. Using the arrow buttons, select **Enabled** or **Disabled**.  
*An arrow appears next to the selected option.*

## Key Options Menu, Lock (Button Lock)

**Lock** is used to lock keypad keys in the on or off position. Each key may be independently locked on or off.

To **lock a button on**, do the following:

1. Starting at the Key Options| menu, select **Lock**.
2. Press the **SEL button**.  
*Tap Key appears in the panel display.*
3. Tap a **key** once to lock it on.  
*A green indicator appears. This indicates the key is locked on.*  
OR  
Tap the **key again** to lock it off.  
*A red indicator appears indicating the key is locked off, meaning the user cannot turn the key on or off.*  
OR  
Tap the **key again** to release the lock.
4. Press **CLR** to exit the menu structure.

## Key Options Menu, Panel Swap

**Panel Swap** gives users the ability to quickly and easily change a group of keypad assignments on the keypad. This is done through the use of virtual expansion panels. Panel swap differs from changing setup pages because the keys can stay active even when they are no longer visible on the main panel. Also, panel swap allows the user a 1-touch trigger to complete two (2) actions at once.

**IMPORTANT:** The number of actual physical keys on the keypad and any attached actual physical expansion panel must be less than the numbers of keys per port supported by the intercom.

For example, the KP-5032 has 32 physical keys and the matrix supports 64 keys per port; therefore, two (2) virtual EKP can be used (since each EKP adds 16 physical keys to the keypad).

However, a KP-5032 with two (2) EKP-4016s already has 64 physical keys, so virtual EKPs cannot be used unless the Intercom is configured for 96 or 128 ports.

Panel swap can be activated by (or triggered by) a UPG key, a GPI Input, or GPI Output allowing local or remote access. A GPI board does not need to be installed to be controlled by GPI Outputs. However you must set up a Setup Page in AZedit for the virtual EKP to be able to assign key assignments.

**TABLE 10.** Number of Virtual EKPs supported with different keypad and intercom configurations

Intercom configured for 64 keys	# of Physical EKP-4016 Panels attached	# of Virtual EKPs supported on KP-5032	# of Virtual EKPs supported on KP-4016
	0	2	3
	1	1	2
	2	0	1
	3	n/a	0
Intercom configured for 96 keys	# of Physical EKP-4016 Panels attached	# of Virtual EKPs supported on KP-5032	# of Virtual EKPs supported on KP-4016
	0	4	5
	1	3	4
	2	2	3
	3	1	2
	4	0	1
	5	n/a	0



**TABLE 10.** Number of Virtual EKPs supported with different keypanel and intercom configurations

	# of Physical EKP-4016 Panels attached	# of Virtual EKPs supported on KP-5032	# of Virtual EKPs supported on KP-4016
<b>Intercom configured for 128 keys</b>	0	6	7
	1	5	6
	2	4	5
	3	3	4
	4	2	3
	5	1	2
	6	0	1
	7	n/a	0

***Panel Swap Control Options***

There are five (5) ways to activate panel swap:

*Keypad FWD*

*Keypad BACK*

*Keypad UPG1 to 9*

*GPI Inputs Opto 1 and Opto 2*

*GPI Outputs Relay 1 and 2*

***Navigation Mode for Panel Swap***

Once you have selected the control trigger, select what panel swap action is performed:

*Cycle To:* Cycle to the Next or Previous panel.

*Switch To:* Switch to a specific panel (for example, MAIN, EKP1, EKP2, etc.

The following icon appears briefly when the Main page is showing **MAIN**.


The following icon appears when the first virtual EKP is showing **EKP1**. Subsequent virtual EKPs display their number in the icon.

*Toggle To:* Toggle between MAIN and a specific virtual EKP.

*Unassigned* Used to erase the panel swap action from a trigger or control mechanism.

### Panel Swap Key States

**Key States** define what happens to the key states when a row of keys is not currently visible. There are two (2) possible modes of operation:

- Force Off*    Talk and listen key states are forced off when the row of keys is not visible.
- Retain*        Talk and listen key states are retained when the row of keys is not visible.  
When retain is selected and active talk or listen keys are not visible, the following icon shows in the panel display. 

In the menu structure, under Panel Swap, the menu items Control and Key States appear, but are unavailable on the keypanel until one (1) or more virtual EKPs are enabled.

To **enable virtual keypanels**, do the following:

1. Starting at the Key Options|Panel Swap menu, select **Virtual EKPs**.
2. Press the **SEL button**.  
*None, 1 EKP, 2 EKPs, etc appear in the panel display.*

---

**IMPORTANT:**        The number of virtual EKPs that appear in the selections depends on the number of keys per port the intercom is configured for.

---

3. Using the arrow buttons, select the **maximum number of virtual EKPs to enable**.
4. Press the **SEL button**.  
*An arrow appears next to the selected option.*
5. Press the **CLR button** to exit the menu.

To **configure how to access the virtual EKPs from the front of the keypanel**, do the following:

1. Starting at the Key Options|Panel Swap menu, select **Control**.
2. Press the **SEL button**.  
*GPI Inputs, GPI Outputs, and Keypad appear in the panel display.*
3. Using the arrow buttons, select the **control mechanism** desired.
4. Press the **SEL button**.  
*The appropriate sub-control mechanism appears (see “Panel Swap Control Options” on page 133).*
5. Using the arrow buttons, select the **sub-control mechanism**.
6. Press the **SEL button**.  
*Cycle To, Switch To, Toggle To, and Unassigned appear in the panel display.*
7. Using the arrow buttons, select the **navigation mode** desired.
8. Press the **SEL button**.  
*A list of actions for the keypanel action appears in the panel display (see “Panel Swap Key States” on page 134).*
9. Using the arrow buttons, select the **action** desired.
10. Press the **SEL button**.  
*An arrow appears next to the selected option.*
11. Press the **CLR button** to exit the menu.

To **configure the panel swap key states**, do the following:

1. Starting at the Key Options|Panel Swap menu, select **Key States**.
2. Press the **SEL button**.  
*Force Off and Retain appear in the panel display.*
3. Using the arrow buttons, select the **key state** you want to enable (see “Panel Swap Key States” on page 134).

4. Press the **SEL button**.  
*An arrow appears next to the selected option.*
5. Press the **CLR** button to exit the menu.

To **erase any programming from the panel swap configuration**, do the following:

1. Starting at the Key Options|Panel Swap menu, select **Control**.
2. Press the **SEL button**.  
*GPI Inputs, GPI Outputs, and Keypad appear in the panel display.*
3. Using the arrow buttons, select the **control mechanism you want to erase**.
4. Press the **SEL button**.  
*The appropriate sub-control mechanism appears (see “Panel Swap Control Options” on page 133).*
5. Using the arrow buttons, select the **sub-control mechanism you want to erase**.
6. Press the **SEL button**.  
*Cycle To, Switch To, Toggle To, and Unassigned appear in the panel display.*
7. Using the arrow buttons, select **Unassigned**.
8. Press the **SEL button**.  
*An arrow appears next to the selected option.*
9. Press the **CLR** button to exit the menu.

### Key Options Menu, Solo

**Solo** allows the user to set up a key that causes all other keys to turn off when activated. However, when the solo key is released, the keys that were turned off by the solo key turn back on.

You can assign only one (1) solo key.

To **create a solo key**, do the following:

1. Starting at the Key Options menu, select **Solo**.
2. Press the **SEL button**.  
*Tap Key appears in the panel display.*
3. **Tap down on the keypad key** you want to configure as solo.  
*The selected talk key indicator turns red.*

To **remove a solo key**, do the following:

1. Starting at the Key Options menu, select **Solo**.
2. Press the **SEL button**.  
*Tap Key appears in the panel display.*
3. **Tap down on the red solo keypad key** you want to remove the solo assignment.  
*The selected talk key indicator turns red.*

## Key Options Menu, Tallies

**Tallies** are used to indicate incoming calls with blinking alpha assignments. You can configure tally time as 5, 10, or 15 seconds or set it as indefinite.

If indefinite is selected, when a caller presses and releases the talk key, a tally with a minimum duration appears. If the call is answered before the minimum duration is met, the tally is cancelled. However, if indefinite is selected and a caller presses and holds (or latches) the talk key, the tally continues until the caller releases the key. This means the tally continues through the call if the caller does not release the key.

**NOTE:** When KP-5032/4016 keypanels are connected to legacy intercoms (for example, intercoms that do not support Enhanced Tallies, the available options for this menu are relevant.

When KP-5032/4016 keypanels are connected to intercoms that support Enhanced Tallies, the Enhanced Tallies view allows you to globally configure how the tally behaves. (the options in the Tally menu in the keypanel are not relevant). For more information, see “Enhanced Tallies” on page 68.

By default, tallies are set to *15 seconds*.

To **set the tally time on an incoming call**, do the following:

1. Starting at the Key Options|Tallies menu, select **Min Duration**.
2. Press the **SEL button**.  
*A Min Duration scroll box appears in the panel display.*
3. Using the up and down arrow buttons, select the **duration** you desire.

To **set the tally time to indefinite on an incoming call**, do the following:

1. Starting at the Key Options|Tallies menu, select **Indefinite**.
2. Press the **SEL button**.  
*Disabled and Enabled appear in the panel display.*
3. Using the up and down arrow buttons, select **Disable** or **Enable**.

## Key Options Menu, Turn Off

The **Turn Off** menu item allows the user to quickly turn off all keys, all talk keys, or all listen keys. This menu item can be used with the programmable UPG keys to create a UPG key which can turn off all keys with one (1) push of a key.

To **turn off keys on the keypanel using the menu**, do the following:

1. Starting at the Key Options|Turn Off menu, select **All Keys, Talk Keys, or Listen Keys**.
2. Press the **SEL button**.  
*Turn Keys Off? appears in the keypanel panel display.*
3. Press the **SEL button**.  
*Keys Turned Off appears in the keypanel panel display.*
4. Press **CLR** to clear the keypanel panel display.

To **configure a UPG to turn off keys**, do the following:

1. Starting at the Key Options|Turn Off menu, select **All Keys, Talk Keys or Listen Keys**.
2. Press the **SEL button**.  
*Turn Keys Off? appears in the keypanel panel display.*
3. Press the **SEL button**.  
*Keys Turned Off appears in the keypanel panel display.*

4. On the keypad, press and hold a **UPG** key until the message Menu position saved appears in the keypad panel display.  
*Keys Turned Off appears in the keypad panel display once the UPG key is released.*
5. Press **CLR** to clear the keypad panel display.

To **configure a UPG to require a confirmation before turning off keys**, do the following:

1. Starting at the Key Options|Turn Off menu, select **All Keys**, **Talk Keys** or **Listen Keys**.
2. Press the **SEL** button.  
*Turn Keys Off? appears in the keypad panel display.*
3. On the keypad, press and hold a **UPG** key until the message Menu position saved appears in the keypad panel display.  
*Turn Keys Off? reappears in the keypad panel display.*
4. Press the **SEL** button.  
*Keys Turned Off appears in the keypad panel display.*

---

## Menu System, OMNEO Offers

The **OMNEO Offers** menu item is used to configure the keypad to communicate with the matrix via an OMNEO or AIO connection. From this menu, you can also configure the OMNEO channels to be used for AUX Inputs.

### OMNEO Matrix Connection Configuration

To **configure an available OMNEO device connection port**, do the following:

1. Starting at the OMNEO Offers|Keypad menu, select **OKP**.
2. Press the **SEL** button.  
*A list of available OMNEO devices appears.*
3. Using the arrow buttons, select the **OMNEO device** you want to use.  
*An arrow appears next to the device.*
4. Press **CLR** to exit menu mode.

### OMNEO Aux Port Configuration

To **configure the OMNEO channels as Aux Inputs**, do the following:

1. Starting at the OMNEO Offers|Keypad menu, select **Aux Input**.
2. Press the **SEL** button.  
*OMNEO 1 and OMNEO 2 appears in the panel display.*
3. Using the arrow buttons, select **OMNEO 1** or **OMNEO 2**.
4. Press the **SEL** button.  
*A list of available OMNEO offers appears in the panel display.*
5. Using the arrow buttons, select the **OMNEO offer** you want to configure as an Aux Input.
6. Press the **SEL** button.  
*The OMNEO Aux Input is configured.*

---

### *Menu System, RVON Offers (Only available when an RVON-IO is detected)*

The **RVON Offers** menu item is used to configure the matrix connection when an RVON-I/O is attached to the AIO port on the back of the keypanel.

#### **RVON-IO Matrix Connection**

*RVON-I/O* RVON-16, RVON-8, RVON-C, and RVON-I/O (in local mode). Use the Frame connection on the back panel of the keypanel.

**NOTE:** For more information about RVON-I/O configuration, see the RVON-I/O user manual (F.01U.193.280).

To **configure the Matrix connection port**, do the following:

1. Starting at the RVON Offers|Keypanel menu, select the **Matrix connection type** you want to use.

**NOTE:** If an RVON-I/O is connected to the keypanel, RVON-I/O replaces the AIO menu option.

2. Using the arrow buttons, select the **port** you want to use.  
*An arrow appears next to the port.*

---

### *Menu System, Save Config*

The **Save Config** menu option is used to save custom settings made in the Audio Options, Key Options or Service menus. Once you have made modifications via these menus, run Save Cfg to store the custom settings in non-volatile memory. This ensures your custom settings are saved when the keypanel is powered down. You can run Reset Config (see “Service Menu, Reset Cfg” on page 153), to erase all custom settings.

To **run a save config**, do the following:

1. On the keypad, press **MENU**.  
*The main menu appears.*
2. Using the arrow buttons, select **Save Config**.
3. Press the **SEL button**.  
*Configuration Saved appears in the panel display.*

---

## *Menu System, Service*

The information available for key assign is as follows:

*Alphas*  
*Display*  
*Footswitch*  
*Intercom Mode*  
*Key View*  
*Keypad*  
*LCD Backlight*  
*Local GPIO*  
*OMNEO Setup*  
*Page Change*  
*Reset Cfg*  
*RVON Setup*  
*Scrn Saver*  
*Set Address*  
*Snoop Tally*  
*Test Panel*

### **Service Menu, Alphas**

The **Alphas** menu is used to select the alpha size (length) and type to be displayed for key assignments.

**NOTE:** When a Reset Cfg is performed, the Alpha Size and Poll ID do not get reset.

Available options are:

*4 Chars*  
*6 Chars*  
*8 Chars*  
*8 Chars (Unicode)*

**IMPORTANT:** Keypanel on the same AIO-8, or on the same group of eight (8) on an AIO-16, Zeus I/II (but not III), or ADAM CS must have the same alpha size selected. But each group of eight (8) can support a different alpha size.

To **set the alpha size**, do the following:

1. Starting at the Service|Alphas menu, select **4 Chars**, **6 Chars**, **8 Char**, or **8 Chars (Unicode)**.
2. Press the **SEL button**.  
*Cancel and Save and Restart appear in the panel display.*
3. Using the arrow buttons, select **Save and Restart**.
4. Press the **SEL button**.  
*The keypad restarts itself with the new alpha size.*

## Service Menu, Display

The **Display** menu is used to enable the menu context, display speaker volume and to switch the display to emulate a KP-32 keypanel.

### *Menu Context*

The **Menu Context** feature is used to enable or disable the bread-crumbs navigation in the upper-left corner of the keypanel panel display. Breadcrumb navigation helps provide context in navigating through the keypanel menu.

**NOTE:** Not available on the KP-4016 due to display space constraints.

### *Display Volume*

The **Display Volume** feature is used to enable always-on display of the volume bar for Front Headset, Front Speaker, Matrix, Rear Headset, or Rear Speaker, depending on what is selected from the encoder knobs.

### *KP32 Emulation*

The **KP32 Emulation** is used to switch the display alphas and background to emulate the KP32 with the black background and green lettering.

**IMPORTANT:** Only the display of key and key assignment changes, the menu structure and other display elements do not revert to the KP32 display.

To **activate KP32 Emulation**, do the following:

1. Starting at the Service|Display menu, select **KP32 Emulation**.
2. Press the **SEL button**.  
*Disabled and Enabled appear in the panel display.*
3. Using the arrow buttons, select **Enabled**.
4. Press the **SEL button**.  
*The display panel changes to the KP32 Emulation mode.*




## Service Menu, Footswitch

The **Footswitch** menu allows the user to enable the footswitch feature and configure how a latched talk key behaves when the footswitch is released. In normal footswitch operation, latched talk keys go into a ready state waiting for the footswitch to be pressed. When the footswitch is pressed, the latched talk keys become active. Then, when the footswitch is released, the latched talk keys go back into a ready state. You can configure the keypanel so latched talk keys become unlatched when the footswitch is released. In this mode, the footswitch is a one-time operation. Pressing the footswitch turns the keys on and releasing the footswitch turns the keys off, unlatching them so the keys are unable to come on again with the next press of the footswitch. To use the footswitch again, you must re-latch the desired talk keys. For more information, “Key Options Menu, Latching” on page 131.

A footswitch is a foot-triggered switch used to activate keypanel keys.



By default, the Footswitch is *disabled*.

	Footswitch Active	The footswitch is active.
	Footswitch Enabled	<p>The footswitch is enabled, but not active.</p> <p><b>NOTE:</b> When a talk key is latched while the Footswitch is enabled, the key display turns amber  to signify it is waiting for footswitch activity.</p>

### Enabling

To **enable the footswitch**, do the following:

1. Starting at the Service|Footswitch menu, select **Mode**.
2. Press the **SEL button**.  
*Disabled Enabled appear in the panel display.*
3. Using the arrow buttons, select **Enabled**.
4. Press the **SEL button**.  
*An arrow appears next to Enabled. When Footswitch is enabled, a green or yellow footswitch appears on the right side of the left panel display.*

### Disabling

To **disable the footswitch**, do the following

1. Starting at the Service|Footswitch menu, select **Mode**.
2. Press the **SEL button**.  
*Disabled Enabled appears in the panel display.*
3. Using the arrow buttons, select **Disabled**.
4. Press the **SEL button**.  
*An arrow appears next to Disabled.*
5. Press **CLR** to exit menu mode.

### Latch Operation

To **have talk keys unlatch when the footswitch is released**, do the following:

1. Starting at the Service|Footswitch menu, select **Latched Keys**.
2. Press the **SEL button**.  
*Retain and Unlatch appear in the panel display.*
3. Using the arrow buttons, select **Unlatch**.
4. Press the **SEL button**.  
*An arrow appears next to Unlatched.*
5. Press **CLR** to exit menu mode.

To **have talk keys return to the latched state when the footswitch is released**, do the following:

1. Starting at the Service|Footswitch menu, select **Latched Keys**.
2. Press the **SEL button**.  
*Retain and Unlatch appear in the panel display.*
3. Using the arrow buttons, select **Retain**.

4. Press the **SEL** button.  
*An arrow appears next to Retain.*
5. Press **CLR** to exit menu mode.

## Service Menu, Intercom Mode

The **Intercom Mode** menu is used to select the type of firmware you have in your intercom so the keypad can display alphas in the correct font/language and modify the behavior of some functions to match the intercom behavior.

Available options are *Alternate* and *Standard*.

**NOTE:** Standard mode is the default and should be used in most cases. Alternate mode is primarily used for intercoms running Japanese firmware.

To **select the intercom mode**, do the following:

1. Starting at the Service|Intercom Mode menu, select **Alternate** or **Standard**.  
*An arrow appears next to selected option.*
2. Press the **SEL button**.  
*The selections Cancel and Save and Restart appear.*
3. Using the arrow buttons, select **Cancel** to cancel out of the action.  
OR  
Using the arrow buttons, select **Save and Restart** to save the changes.
4. Press the **SEL button**.

## Service Menu, Key View

The **Key View** menu is used to configure the keypad keys to show key crosspoint gains, show listen assignments, or show the matrix for each key assignment.

**NOTE:** Show Lstn and Show Mtx are mutually exclusive options. Only one (1) of these options may be enabled at a time.

Available options for this menu are:

<i>Show Gain</i>	The crosspoint gain bar graph for each key is shown below the talk assignment.
<i>Show Lstn</i>	The listen assignment for each key is shown above the talk assignment.
<i>Show Mtx</i>	The matrix name for each key assignment is shown above the talk assignment.

---

**IMPORTANT:** When the keypad is configured for 8 Char or 8 Char (Unicode), none of these options are available.

---

To **configure the Key View**, do the following:

1. Starting at the Service menu, select **Key View**.
2. Press the **SEL button**.  
*Show Gain, Show Lstn, and Show Mtx appear in the panel display.*
3. Using the left and right arrow buttons, select **Show Gain** to show gain on the key display.  
OR  
Using the left and right arrow buttons, select **Show Lstn** to show listen assignments on the key display.  
OR  
Using the left and right arrow buttons, select **Show Mtx** to show the matrix assignments on the key display.
4. Press the **SEL button**.  
*Disabled and Enabled appear in the panel display.*
5. Using the left and right arrow buttons, select **Enabled** or **Disabled**.
6. Press the **SEL button**.  
*An arrow appears next the selected option.*

## Service Menu, Keypad

**Keypad** menu is used to choose the default function assigned to the SEL key when not in menu mode.

### Backlight

The **Backlight** menu is used to select the color and brightness of the keypad backlight LEDs at various usage states and to configure the keypad mode.

#### Setup

The **Setup** menu allows you to configure the color and brightness of the keypad backlight LEDs various actions are performed on the keypad.

Brightness ranges from 0% to 100%.

By default, brightness is set to 30% for the Inactive state; and 100% for the Active and Shift states.

Available options for this menu are:

<i>Inactive</i>	Set the color and brightness of the keypad backlight LEDs when the keypad is in the inactive state.
<i>Active</i>	Set the color and brightness of the keypad backlight LEDs when the keypad is in the active state.
<i>Shift State</i>	Set the color and brightness of the keypad backlight LEDs when the keypad is in the SHIFT state. For more information, see “INFO button” on page 43.

#### Activation

The **Activation** menu is used to configure how and when the keypad backlights. When Activate is selected, the backlight activates when the user presses any keypad key on the keypad. Within the Activate menu, you can select whether the first key is processed or swallowed.

Available selections for this field are:

*On Keypress (swallowed)* – The first keypad key pushed when the keypad is Inactive is only used to activate the keypad, the actual keypad key push event is not acted upon.

Note, this action is not part of the key sequence, but simply a way to activate the backlight on the keypad.

*On Keypress (processed)* – The first keypad key pushed when the keypad is Inactive, activates the keypad and then be processed.

*Always* The keypad backlight is always in the active state.

*Never* The keypad backlight is always in the inactive state.

**NOTE:** When the keypad menu is not active, the backlight stays lit for five (5) seconds of inactivity before returning to the inactive state. However, when the keypad menu is active, the backlight stays lit for one (1) minute before exiting the menu system and returning to the inactive state.

To **configure the keypad Setup option**, do the following:

1. Starting at the Service|Keypad menu, select **Backlight**.
2. Press the **SEL button**.  
*Activation and Setup appear in the panel display.*
3. Using the left and right arrow buttons, select **Setup**.
4. Press the **SEL button**.  
*Inactive, Active, and Shift State appear in the panel display.*
5. Using the left and right arrow buttons, select **Inactive**, **Active**, or **Shift State**.
6. Press the **SEL button**.  
*Blue and White appear in the panel display.*
7. Using the left and right arrow buttons, select the **color** you desire.
8. Press the **SEL button**.  
*The Brightness scroll box appears.*
9. Using the up and down arrow buttons, select the **brightness** you desire.
10. Press the **SEL button**.

To **set the keypad Activation option**, do the following:

1. Starting at the Service|Keypad menu, select **Backlight**.
2. Press the **SEL button**.  
*Activation and Setup appear in the panel display.*
3. Using the left and right arrow buttons, select **Activation**.
4. Press the **SEL button**.  
*Activated (default), Always Inactive, and Always Active appear in the panel display.*
5. Using the arrow buttons, select **Activated** to have the keypad backlight always on.  
OR  
Using the arrow buttons, select **Always Inactive** to have the keypad backlight never on.  
OR  
Using the arrow buttons, select **Always Active** to have the keypad turn on when the keypad is pressed.

If **Activated** is selected, do the following

- a. Press the **SEL button**.  
*Processed First Press and Swallow First Press appear in the panel display.*
  - b. Using the left and right arrow buttons, select **Processed First Press** or **Swallow First Press**.
6. Press the **SEL button**.  
*An arrow appears next the selected option.*

**SEL Key**

The **SEL Key** menu allows the user to choose what function the SEL key performs when not in menu mode. This menu allows you to set up the SEL key functionality.

Available selections for this field are:

<i>Auto (default)</i>	The key function is automatically selected based on whether you are in Standard or Alternate intercom mode. In Standard mode, the SEL key is assigned Assignment Group functionality, while in Alternate mode, the SEL key is assigned Quick Assign functionality.
<i>Assignment Groups</i>	The key function is given Assignment Groups. This displays the scroll lists of a collection of user-selectable key assignments. When you select a group, a scroll list of the members of the group appear, which then can be called or programmed onto a key. For more information see, "Assignment Groups Page" on page 65.
<i>Quick Assign</i>	The key function is given Quick Assign. When you configure the SEL key with Quick Assign, you are actually selecting your most used key type, for example, P-P with AL. When the SEL key is pressed with a quick assign configured to it, a menu appears with Assign or Clear. The user can then quickly configure a key with a pre-configured assignment by selecting Assign, or clear the key assignment by selecting Clear.

To **set the keypad Mode option**, do the following:

1. Starting at the Service|Keypad menu, select **Backlight**.
2. Press the **SEL button**.  
*Color and Mode appear in the panel display.*
3. Using the left and right arrow buttons, select **Mode**.
4. Press the **SEL button**.  
*Activated (default), Always Inactive, and Always Active appear in the panel display.*
5. Using the arrow buttons, select **Always On** to have the keypad backlight always on.  
OR  
Using the arrow buttons, select **Always Off** to have the keypad backlight never on  
OR  
Using the arrow buttons, select **Activate** to have the keypad turn on when the keypad is pressed.
6. Press the **SEL button**.  
*An arrow appears next the selected option.*

## Service Menu, LCD Backlight

The **LCD Backlight** menu option allows you to set the brightness of the panel display of all keypanels, just the main panel or any expansion panel connected to the main keypanel.

The range for this field is 0–100%.

The default is 65%.

To **configure the LCD backlight**, do the following:

1. Starting at the Service|Keypad menu, select **Backlight**.
2. Press the **SEL button**.  
*All Panels, Main Panel, Exp 1–7 appears in the panel display.*
3. Using the left and right arrow buttons, select the **panel** you want to adjust the brightness.  
If you select All Panels, continue to **step 4**.  
If you select Main Panel or any of the Expansion Panels, do the following:
  - a. Press the **SEL button**.  
*Both, Left and Right appear in the panel display.*
  - b. Using the left and right arrow buttons, select **Both, Left or Right**.  
*Continue to step 4.*
4. Press the **SEL button**.  
*The Brightness scroll box appears in the panel display.*
5. Using the up and down arrow buttons, select the **brightness** you want to display.

## Service Menu, Local GPIO

**Local GPIO** is used to configure GPIO inputs and outputs. Inputs can be assigned to activate intercom keys (including group master keys). Outputs can be activated by talk or UPG keys.

Further configuration can be done to allow GPIO Inputs to track the state of the Output. For example, an output is activated (and is being tracked by an input), the input is also activated. This feature allows GPIO Outputs to control Talk Key or Key Group activation.

In addition to tracking, you can also configure the way an Input GPIO Key Group is configured. By default, when a key group is activated, the keys are forced on until the key group is deactivated. This is referred to as Level Mode. Alternatively, you can configure the key group to Edge Mode. This option turns on keys in a key group when the group is activated, but allows the user to turn off individual keys even if the key group is still active.

To **configure a GPIO Input to control an individual talk key**, do the following:

1. Starting at the Service|Local GPIO menu, select **GPIO Inputs**.
2. Press the **SEL button**.  
*Opto 1 and Opto 2 appear in the panel display.*
3. Using the arrow buttons, select **Opto 1** or **Opto 2**.
4. Press the **SEL button**.  
*Function and Mode appear in the panel display.*
5. Using the arrow buttons, select **Function**.
6. Press the **SEL button**.  
*Key Group, Not Assigned, and Talk Key appear in the panel display.*
7. Using the arrow buttons, select **Talk Key**.
8. Press the **SEL button**.  
*Tap Key appears in the panel display.*
9. Tap the **talk key** to be controlled by the GPIO Input.  
*The selected keypanel key red talk indicator LED appears.*

To **configure a GPIO Input to control a Key Group**, do the following:

1. Starting at the Service|Local GPIO menu, select **GPIO Inputs**.
2. Press the **SEL button**.  
*Opto 1 and Opto 2 appear in the panel display.*
3. Using the arrow buttons, select **Opto 1** or **Opto 2**.
4. Press the **SEL button**.  
*Function and Mode appear in the panel display.*
5. Using the arrow buttons, select **Function**.
6. Press the **SEL button**.  
*Key Group, Not Assigned, and Talk Key appear in the panel display.*
7. Using the arrow buttons, select **Key Group**.
8. Press the **SEL button**.  
*Group 1, Group 2, Group 3, and Group 4 appear in the panel display.*
9. Using the arrow buttons, select the **group** to be controlled by the GPIO Input.
10. Press the **SEL button**.  
*Level and Edge appear in the panel display.*
11. Using the arrow buttons, select **Level** or **Edge**.
12. Press the **SEL button**.  
*An arrow appears next to the selected option.*

To **setup a GPIO Input to track its corresponding GPIO Output**, do the following:

1. Starting at the Service|Local GPIO menu, select **GPIO Inputs**.
2. Press the **SEL button**.  
*Opto 1 and Opto 2 appear in the panel display.*
3. Using the arrow buttons, select **Opto 1** or **Opto 2**.
4. Press the **SEL button**.  
*Function and Mode appear in the panel display.*
5. Using the arrow buttons, select **Mode**.
6. Press the **SEL button**.  
*Normal and Track Output appear in the panel display.*
7. Using the arrow buttons, select **Track Output**.
8. Press the **SEL button**.  
*An arrow appears next to the selected option.*

To **configure local control of a GPIO Output**, do the following:

1. Starting at the Service|Local GPIO menu, select **GPIO Outputs**.
2. Press the **SEL button**.  
*Relay 1 and Relay 2 appear in the panel display.*
3. Using the arrow buttons, select **Relay 1** or **Relay 2**.
4. Press the **SEL button**.  
*Not Assigned, Talk Key and UPG 1 through UPG 9 (KP-5032) or UPG 1 and UPG 2 (KP-4016) appears in the panel display.*
5. Using the arrow buttons, select the **method** you want to control the GPIO Output.  
*If a UPG key is selected, configuration is finished.*
6. Press the **SEL button**.  
*Tap Key appears in the panel display. If Talk Key is selected proceed to the next step.*
7. Tap the **key** to be used to trigger the GPIO Output.  
*The selected keypanel key turns red.*



## Service Menu, OMNEO Setup

The **OMNEO Setup** menu option is used to configure the OMNEO device name, enable DHCP, address the OMNEO device for the keypanel and set up the static IP configuration, if DHCP is disabled.

---

**IMPORTANT:** If you change the device name on the keypanel, you must change how other device are configured, so they can continue to make connection offers to this keypanel.

---

To **enable DHCP from the keypanel**, do the following:

1. Starting at the Service|OMNEO Setup menu, select **OKP**.

**NOTE:** OKP refers to the OMNEO keypanel using the OMNEO connection; however, if an OEI-2 is also attached to the AIO port, you see both OKP and OEI-2 options for selection.

2. Press the **SEL button**.  
*Device Name, DHCP, and IP Parameters appear in the panel display.*
3. Using the arrow buttons, select **DHCP**.
4. Press the **SEL button**.  
*Disabled and Enabled appear in the panel display.*
5. Using the arrow buttons, select **Enabled**.
6. Press the **SEL button**.
7. Press the **CLR** button to exit the menu.

To **configure the OKP's device name**, do the following:

1. Starting at the Service|OMNEO Setup menu, select **OKP**.
2. Press the **SEL button**.  
*Device Name, DHCP, and IP Parameters appear in the panel display.*
3. Using the arrow buttons, select **Device Name**.  
*The name of the OKP card appears in the panel display with the first character of its name blinking.*
4. Using the up and down arrow buttons or the Aux shaft encoder, select a **new character at the current position**.
5. Using the left and right arrow buttons or the Main shaft encoder, move to the **next or previous character position**.
6. Press **SHIFT** to insert a character at the current position.
7. Press the **SEL button**.  
OR  
Press the **AUX** shaft encoder to move to the next character.

**NOTE:** Press BACK or press the MAIN shaft encoder to cancel editing. A confirmation is required.

8. Press **FWD** or move to the end of the name and Press the SEL button (or the AUX shaft encoder) to save changes.
9. Repeat **steps 7 and 8** until you have modified the device name.
10. Press **FWD**.  
*The message Save Name? appears on the panel display.*
11. Press the **SEL button**.

To **configure the OKP IP parameters**, do the following:

1. Starting at the Service|OMNEO Setup menu, select **OKP**.
2. Press the **SEL button**.  
*Device Name, DHCP, and IP Parameters appear in the panel display.*
3. Using the arrow buttons, select **DHCP**.
4. Press the **SEL button**.  
*Disabled and Enabled appear in the panel display.*
5. Verify DHCP is **disabled**.

**NOTE:** When making changes to the OKP IP parameters, DHCP must be disabled before changing the name or IP Address. If DHCP is enabled, you can still view the IP Parameters, but you cannot make changes to them.

6. Press **BACK**.
7. Using the arrow buttons, select **IP Parameters**.

**NOTE:** SEL/FWD moves to the next octet, unless already on the last octet, in which case it saves the current IP Address. CLR/BACK moves to the previous octet, unless already on the first octet, in which case it cancels editing of the IP Address.

8. Press the **SEL button**.  
*IP Address, Gateway, Netmask, Domain, and DNS Server 1 appear in the panel display.*
9. Press the **SEL button**.  
*The IP Address appears with the first octet blinking in the panel display.*
10. Using the number pad, enter the **first octet number** in the IP Address.
11. Press the **SEL button**.  
*The focus shifts to the second octet.*
12. Using the number pad, enter the **second octet number** in the IP Address.
13. Press the **SEL button**.  
*The focus shifts to the third octet.*
14. Using the number pad, enter the **third octet number** in the IP Address.
15. Press the **SEL button**.  
*The focus shifts to the last octet.*
16. Using the number pad, enter the **last octet number** in the IP Address.
17. Press the **SEL button**.  
*The OMNEO Setup menu options appear in the panel display.*

To **configure the Gateway Address**, do the following:

1. Using the arrow buttons, select **Gateway**.
2. Press the **SEL button**.  
*The Gateway Address appears with the first octet blinking in the panel display.*
3. Using the number pad, enter the **first octet number** in the Gateway Address.
4. Press the **SEL button**.  
*The focus shifts to the second octet.*
5. Using the number pad, enter the **second octet number** in the Gateway Address.
6. Press the **SEL button**.  
*The focus shifts to the third octet.*
7. Using the number pad, enter the **third octet number** in the Gateway Address.
8. Press the **SEL button**.  
*The focus shifts to the last octet.*
9. Using the number pad, enter the **last octet number** in the Gateway Address.
10. Press the **SEL button**.  
*The OKP Setup menu options appear in the panel display.*

To **configure the Netmask Address**, do the following:

1. Using the arrow buttons, select **Netmask**.
2. Press the **SEL button**.  
*The Netmask Address appears with the first octet blinking in the panel display.*
3. Using the number pad, enter the **first octet number** in the Netmask Address.
4. Press the **SEL button**.  
*The focus shifts to the second octet.*
5. Using the number pad, enter the **second octet number** in the Netmask Address.
6. Press the **SEL button**.  
*The focus shifts to the third octet.*
7. Using the number pad, enter the **third octet number** in the Netmask Address.
8. Press the **SEL button**.  
*The focus shifts to the last octet.*
9. Using the number pad, enter the **last octet number** in the Netmask Address.
10. Press the **SEL button**.  
*The RVON Setup menu options appear in the panel display.*
11. Press **CLR** to exit menu mode.

To **configure the Domain name**, do the following:

1. Using the arrow buttons, select **Domain**.
2. Press the **SEL button**.  
*The domain name appears with the first character blinking in the panel display.*
3. Using the up and down arrow buttons or the Aux shaft encoder, select a **new character at the current position**.
4. Using the left and right arrow buttons or the Main shaft encoder, move to the **next or previous character position**.
5. Press **SHIFT** to insert a character at the current position.
6. Press the **SEL button**  
OR  
Press the **AUX** shaft encoder to move to the next character.

**NOTE:** Press **BACK** or press the **MAIN** shaft encoder to cancel editing. A confirmation is required.

7. Press **FWD** or move to the end of the name and Press the **SEL button** (or the **AUX** shaft encoder) to save changes.
8. Repeat **steps 3** and **13** until you have modified the device name.
9. Repeat **steps 3** to **7** until the domain is named.

10. Once finished, press the **FWD** button.  
*Save Name? appears in the panel display.*
11. Press the **SEL** button.

To **configure DNS Server**, do the following:

1. Using the arrow buttons, select **DNS Server**.
2. Press the **SEL** button.  
*The DNS I Server Address appears with the first octet blinking in the panel display.*
3. Using the number pad, enter the **first octet number** in the DNS Address.
4. Press the **SEL** button.  
*The focus shifts to the second octet.*
5. Using the number pad, enter the **second octet number** in the DNS Address.
6. Press the **SEL** button.  
*The focus shifts to the third octet.*
7. Using the number pad, enter the **third octet number** in the DNS Address.
8. Press the **SEL** button.  
*The focus shifts to the last octet.*
9. Using the number pad, enter the **last octet number** in the DNS Address.
10. Press the **SEL** button.  
*The OMNEO Setup menu options appear in the panel display.*
11. Press **CLR** to exit menu mode.

## Service Menu, Page Change

**Page Change** is used to select whether you are allowed to change setup pages while talk keys are active. By default, in Standard Intercom Mode, page changes are allowed when talk keys are active. However, the default in Alternate Intercom Mode does not allow page changes to occur when talk keys are active.

Available options:

<i>Auto</i>	The default is followed depending on the Intercom Mode: Standard or Alternate.
<i>Always Allow</i>	Page changes are allowed while Talk Keys are active.
<i>No Talk Keys</i>	Page changes are not allowed while Talk Keys are active. A red bar appears above/below the keys signifying page changes are not allowed. If the talk key is turned off, the red bar turns blue and page changes can be done.

To **configure page change operation**, do the following:

1. Starting at the Service|Page Change menu, select **Page Change**.
2. Press the **SEL** button.  
*Auto, Always Allow, and No Talk Keys appear.*
3. Using the arrow buttons, select the **page change option** you desire.
4. Press the **SEL** button.  
*An arrow appears next to the selected option.*

## Service Menu, Reset Cfg

**Reset Cfg** restores almost all custom settings to the defaults and erases all stored autodial numbers. Reset Cfg does not change the selected alpha size, intercom mode, poll ID, or headset transfer state.

To **reset the keypad configuration**, do the following:

1. Starting at the Service|Reset Cfg menu, select **Do Reset**.
2. Press the **SEL button**.  
*Configuration Reset appears in the panel display.*

## Service Menu, Scr Saver

**Scr Saver** allows the user to configure the way the screen saver feature operates.

Available selections for this menu are:

<i>Activate</i>	Allows the user to activate the screen saver immediately (used to test current display settings).
<i>Delay</i>	Allows the user to set the delay for Display Dim (for example, when the display will dim) and to set the delay for Activation (for example, when the screen saver becomes active). Both features can be set from 30 minutes, up to 12 hours, or disabled.
<i>Display Dim</i>	Allows the user to set the brightness of the panel display from 0-100%. This setting is a percentage of the current LCD brightness. For example, if you configured your backlight for 60%, then in this menu, 100% is equal to 60% and 0% is equal to 35%.
<i>Mode</i>	Can be set to Bitmap, Display Off (sleep mode), or Text.

The default setting for this option is:

<i>Delay</i>	<i>One (1) hour for both display dim and screen-saver activation</i>
<i>Display Dim</i>	<i>25%</i>
<i>Mode</i>	<i>Text</i>

**NOTE:** Activating any lever key, keypad button, or shaft encoder deactivates the screen-saver, as will an incoming call.

To **manually activate the screen saver**, do the following:

1. Starting at the Service|Scrn Saver menu, select **Activate**.
2. Press the **SEL button**.  
*The screen saver is activated on the keypad panel display.*

To **set the delay option for the keypad screen saver**, do the following:

1. Starting at the Service|Scrn Saver menu, select **Delay**.
2. Press the **SEL button**.  
*Display Dim and Activation appear in panel display.*
3. Using the left and right arrow buttons, select **Display Dim**.
4. Press the **SEL button**.  
*The Delay Time: scroll box appears in the panel display.*
5. Using the arrow buttons, select the **amount of time** you want to expire before the display dims.
6. Press **BACK**.  
*Display Dim and Activation appear in panel display.*
7. Using the left and right arrow buttons, select **Activation**.

8. Press the **SEL button**.  
*The Delay Time: scroll box appears in the panel display.*
9. Using the arrow buttons, select the **amount of time** you want to expire before the screen saver becomes active.

To **set the brightness of the display**, do the following:

1. Starting at the Service|Scrn Saver menu, select **Display Dim**.
2. Press the **SEL button**.  
*The Brightness scroll box appears in the panel display.*
3. Using the up and down arrow buttons, scroll to the **display brightness** you desire.

To **set the screen saver mode (type)**, do the following:

1. Starting at the Service|Scrn Saver menu, select **Mode**.
2. Press the **SEL button**.  
*Bitmap, Display Off and Text appear in the panel display.*
3. Using the arrow buttons, select **Bitmap** to have a bitmap image display when the screen saver activates.  
OR  
Using the arrow buttons, select **Display Off** to put the display into sleep mode when the screen saver activates.  
OR  
Using the arrow buttons, select **Text** to have a text message display when the screen saver activates.
4. Press the **SEL button**.  
*If Bitmap or Text is selected, the options Bounce or Scroll appear.*
5. Using the arrow buttons, select **Bounce** to have the bitmap or text bounce across the display.  
OR  
Using the arrow buttons, select **Scroll** to have the bitmap or text scroll across the display.

## Service Menu, Set Address

**Set Address** is used to indicate the poll ID of the keypanel. See “KP-5032/4016 Addressing” on page 25 to determine if you need to set the keypanel address. The poll ID is the number (or address) at which an AIO card or intercom attempts to communicate with the keypanel. The Poll ID number is directly related to the connection port on the breakout panel.

Available options for the Poll ID are 1–8.

To **set the address**, do the following:

1. Starting at the Service|Set Address menu, select the **poll ID** for the keypanel.
2. Press the **SEL button**.  
*Cancel or Save and Restart appear in the panel display.*
3. Using the arrow buttons, scroll to **Save and Restart**.
4. Press the **SEL button**.  
*Restarting.... appears. The keypanel resets. Once the restart is complete, the Poll ID is enabled.*

## Service Menu, Snoop Tally

**Snoop Tally**, when enabled, indicates to keypanel users somebody is listening to them. For example, snoop tallies are displayed on keypanel 1, if there is another keypanel (2) which is listening to keypanel 1 via a point-to-point or a special list, but is not talking to keypanel 1. Snoop tallies are suppressed if keypanel 1 has any talk keys turned on, or if the hot mic is not enabled.

From this menu, you can set the type of chime indication you want and the duration of the tally.

Available Tally durations available are: *One-shot* and *1 second to 5 minutes*.

**NOTE:** Hot Mic must be activated on the keypanel for snoop tally to work. For more information, see “Audio Options Menu, Matrix Out” on page 112.

By default, snoop tally is *disabled* (no chime).

To **enable snoop tallies on the keypanel**, do the following:

1. Starting at the Service menu, select **Snoop Tally**.
2. Press the **SEL button**.  
*The Chime scroll box and the Duration scroll appear in the panel display.*
3. Using the up and down arrow buttons, select the **type of chime** you desire.
4. Using the left and right arrow buttons, select **Duration**.
5. Using the up and down arrow buttons, select the **duration** of the tally.

## Service Menu, Test Panel

**Test Panel** allows the user to check the operation of all keys and displays on the keypanel.

**TABLE 11.** Test Panel Key Descriptions

<i>Display</i>	<i>Action</i>
	All alpha numeric displays show a % symbol when in Test Panel mode.
	Press down on any key.
	Press up on any key.
	Press to the right on any key (excluding the MIC MUTE/MIC SEL and CLR/CWW).
	Press to the left on any key (excluding the MIC MUTE/MIC SEL. and CLR/CWW).
<-AUX>	Rotate the Aux Volume encoder knob counterclockwise.
<+AUX>	Rotate the Aux Volume encoder knob clockwise.
<-MAIN>	Rotate the Main Volume encoder knob counterclockwise.
<+MAIN>	Rotate the Main Volume encoder knob clockwise.
<-MIC>	Press left on the MIC MUTE/MIC SEL. key.
<+MIC>	Press right on the MIC MUTE/MIC SEL. key.
<MUTE>	Press up on the MIC MUTE/MIC SEL. key.
<MIC>	Press down on the MIC MUTE/MIC SEL. key.
<-CWW>	Press left on the CLR/CWW key.
<+CWW>	Press right on the CLR/CWW key.
<CLR>	Press up on the CLR/CWW key.
<CWW>	Press down on the CLR/CWW key.
<Menu>	Press the MENU button.
<Fwd>	Press the FWD button.
<Back>	Press the BACK button.
<UPG3>	Press the UPG3 button.
<UPG4>	Press the UPG4 button.



To **enable the test panel**, do the following:

1. On the keypanel keypad, press **MENU**.  
*The Information menu appears in the panel display.*
2. Using the arrow buttons, select **Service**.
3. Press the **SEL button**.  
*The Service submenu appears in the panel display.*
4. Using the arrow buttons, select **Test Panel**.
5. Press the **SEL button**.  
*The Test Panel display appears.*
6. Using Table 11 on page 156, test the **keypanel keys**.



## Telephone Interface (TIF) Operation

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**NOTE:** Telephone operation requires an optional **TIF** (Telephone Interface). You must assign an intercom key to talk/listen to the TIF. We recommend a talk + auto follow assignment. See the TIF User Manual (PN F01U193285) for specific TIF configuration options.

---

### Receiving A Phone Call

When there is an incoming telephone call, the TIF alpha begins to tally.

To **receive a phone call**, do the following:

- > Press the **key** to answer the call.

**NOTE:** TIF assignments tally when the phone is ringing. By default, the assignments also tally while the phone is off-hook. This operation can be disabled by selecting the *Don't generate tallies for off-hook TIF assignments* check box in AZedit (Options|Intercom Configuration|Options page).

---

### Dialing and Hanging Up

**NOTE:** Auto Dial only appears in the TIF menu options when auto dial numbers are configured.

#### Manual Dial

**NOTE:** You can enter manual dial mode by pressing SHIFT+DIAL and then tapping the TIF assignment.

To **manually dial**, do the following:

1. On the keypanel, lift the **TIF key** up to turn listen on.
2. Press the **TIF key** down to turn the Talk key on.  
*Auto Dial, Hang Up, Manual Dial, and Redial appear in the panel display.*

**NOTE:** This only happens if the assignment port is marked as Port is TIF in AZedit.

3. Using the arrow buttons, select **Manual Dial**.
4. Press the **SEL button**.  
*Dial: appears in the panel display.*
5. Using the keypad, dial the **number** you want to call.
6. Press the **SEL button**.  
*The call is placed.*

## Keypanel Hang Up

**NOTE:** You can also hang up a TIF by pressing SHIFT+DROP, and then tapping the TIF assignment.

To **hang up the telephone**, do the following:

1. On the keypanel, press the **TIF key** down to turn it on.  
*Auto Dial, Hang Up, Manual Dial, and Redial appear in the panel display.*
2. Using the arrow buttons, select **Hang Up**.
3. Press the **SEL button**.  
*The call is disconnected.*

To **program a keypanel UPG key to activate the TIF key**, do the following:

1. Press the **SHIFT + DIAL keys**.
2. Press and hold the desired **UPG button** to which you want to program the TIF activation.  
*The message Menu position saved appears and the TIF activation is assigned to the key.*

To **redial a phone number**, do the following:

1. On the keypanel, press the **TIF listen key** on.
2. On the keypanel, press the **TIF talk key** on.  
*Auto Dial, Hang Up, Manual Dial, and Redial appear in the panel display.*
3. Using the arrow buttons, select **Redial**.
4. Press the **SEL button**.  
*The last dialed number is connected. The TIF key alpha flashes and Hang Up appears in the panel display.*
5. Press the **SEL button** to disconnect the call.  
*The call is ended.*

To **program a keypanel UPG key to hang up the TIF key**, do the following:

1. Press the **SHIFT + DIAL keys**.
2. Press and hold the desired **UPG button** to which you want to program Hang Up.  
*The message Menu position saved appears and the TIF activation is assigned to the key.*

## Auto Dial

To **autodial a phone number**, do the following:

1. On the keypanel, press the **TIF listen key** on.
2. On the keypanel, press the **TIF talk key** on.  
*Auto Dial, Hang Up, Manual Dial, and Redial appear in the panel display.*
3. Using the arrow buttons, select **Auto Dial**.
4. Press the **SEL button**.  
*The Auto Dial numbers appear in the panel display.*
5. Using the arrow buttons, select the **Auto Dial number** you want to call.
6. Press the **SEL button**.  
*The call is placed. The TIF key alpha flashes and Hang Up appears in the panel display.*

---

## Centralized Auto Dials

The **Centralized Auto Dials** allows up to 999 phone numbers to be stored in the intercom as a scrollable list from the keypanels. Auto dials are telephone numbers frequently dialed and are maintained using the AZedit Intercom Configuration Software. Customizing auto dial numbers in AZedit is as easy as entering the telephone number and selecting whether or not it is scroll enabled.

The following firmware versions must be loaded to utilize centralized auto dials in your intercom system:

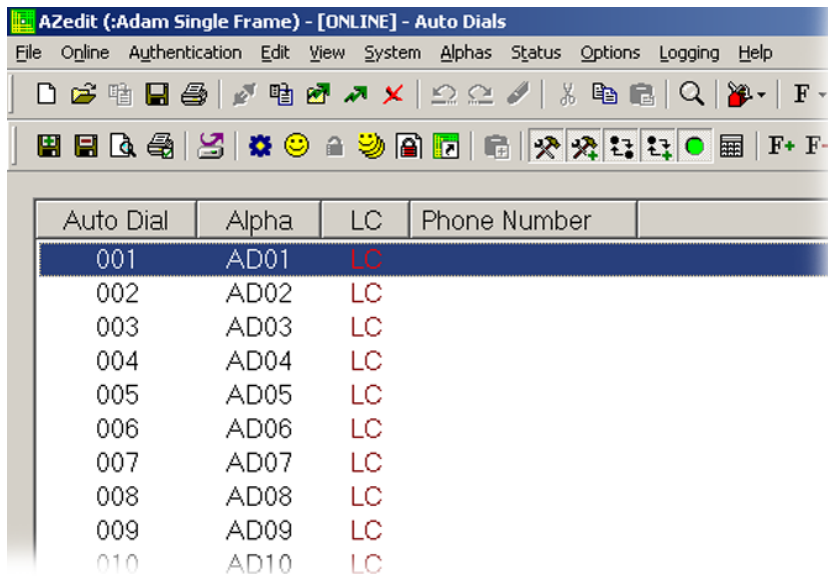
- AZedit Intercom Software V3.6.1 or later
- MCII-e V2.0.4 or later
- PeriphII-e (Ethernet) V1.20.0 or later
- Periph Controller (Standard) V10.20.0 or later
- DBX V1.20.0 or later
- Cronus Firmware V1.5 or later
- Zeus II Firmware V3.4.0 or later
- Zeus III Firmware V1.0.0 or later
- KP 32 CLD Firmware V1.3.0 or later
- KP-5032/4016 Firmware V1.0.0 or later

## Centralized Auto Dial

The **Centralized Auto Dial** can be used two (2) different ways, with TIF assignments or with keypad sequences. You can also configure locally stored auto dial numbers on the keypad. For more information, see “Key Options Menu, Auto Dial” on page 127.

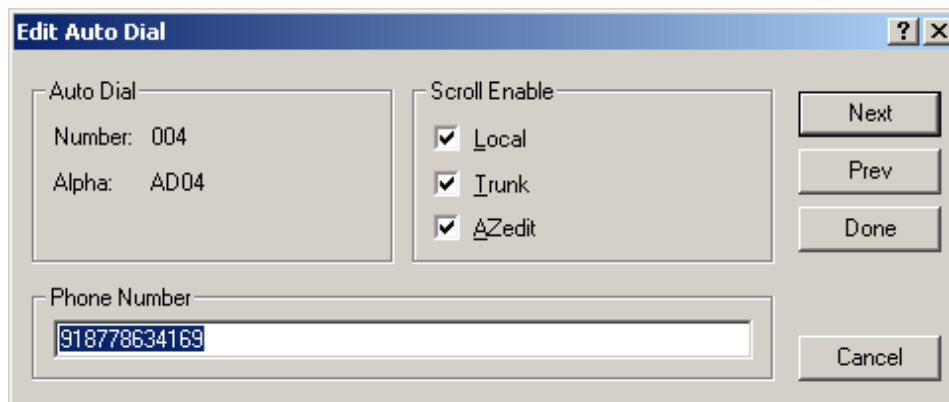
To **access the Auto Dials window**, do the following:

- > From the System menu in AZedit, select **Auto Dial**.  
*The Auto Dials window appears.*



To **add a telephone number to the Auto Dial database**, do the following:

1. From the System menu in AZedit, select **Auto Dial**.  
*The Auto Dial window appears.*
2. From the Auto Dial column, double-click an **auto dial number**.  
*The Edit Auto Dial window appears.*



3. From the Scroll Enable group box, select the **scroll enable check boxes** you want to configure for the auto dial number.
4. In the Phone Number field, enter the **telephone number** you want to have for that auto dial sequence.

**NOTE:** Entering \*99 creates a pause in dialing. This is used to dial extensions or select preset options.

5. Click **Next** to enter another number.  
*The next blank Edit Auto Dials window appears.*  
 OR  
 Click **Done** to close the Edit Auto Dial window.  
*The Auto Dials window appears with the new number in the list.*

To **add a description to the telephone number you added to the Auto Dial database**, do the following:

1. From the Alphas menu in AZedit, select **Auto Dial**.  
*The Auto Dial Alphas window appears.*
2. Double-click the **AD resource number** to which you want to add the description.  
*The Edit Alpha/Description window appears.*

3. In the Description field, enter a **unique description** for the auto dial number. For example, Studio 1A NYC.
4. In the Alpha 4, Alpha 6, or Alpha 8 field, enter a **recognizable 4-, 6- or 8-character Alpha**. For example, 1ANY.
5. Click **Done** when you are finished.  
 OR  
 Click **Next** to enter another Alpha Description.

Auto Dial	Alpha	LC	Phone Number
001	AD01	LC	
002	AD02	LC	3910
003	AD03	LC	3911
004	AD04	LC	93175551212
005	AD05	LC	
006	AD06	LC	
007	AD07	LC	
008	AD08	LC	
009	AD09	LC	
010	AD10	LC	

6. From the Online menu in AZedit, select **Send Changes**.  
*The Send Changes window appears.*
7. Click **OK**.  
*The changes are sent to the intercom and the telephone number is added to the intercom system auto dial table.*

To use **centralized auto dial numbers**, do the following:

1. On the keypanel, press the **TIF assignment key**.  
*Hang Up, Icom ADial, Manual Dial, and Redial appear in the panel display.*
2. Using the arrow buttons, scroll to **Icom ADial**.
3. Press the **SEL button**.  
*You enter the centralized auto dial list. A scrollable list of available Auto Dial numbers appear in the panel display.*
4. Using the arrow buttons, scroll to the desired **auto dial number**.
5. Press the **SEL button**.  
*The number connects.*

To use **centralized auto dial numbers with keypanel keypad sequences**, do the following:

1. Press the **SHIFT + DIAL keys**.  
*Tap Key appears in the panel display.*
2. Press the **TIF assignment key**.  
*A dial tone is heard.*
3. Using the keypad, enter #NNN (where NNN is the Auto Dial number assignment in AZedit).  
*The number is dialed.*



# *Keypad Quick Reference*

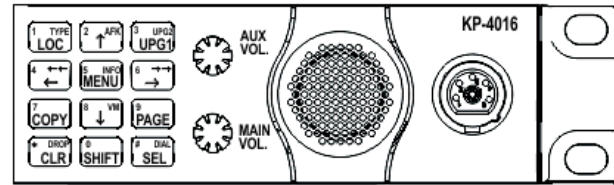
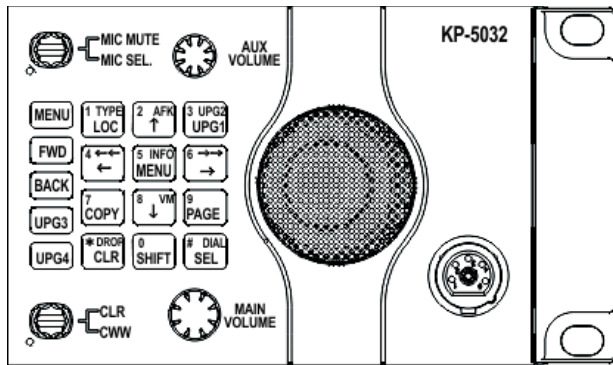
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## *Keypad Sequence Introduction*

Keypad sequences are a series of keypad strokes made on the keypanel, which in turn displays specific information (such as keypanel ID, talk level 2 assignments, etc.). Keypanel sequences are shortcuts via the keypanel keypad.

As with other keypanels, the KP-5000/4000 Series allows you to lock the entire menu or only the service menu. This is implemented through AZedit (System|Miscellaneous|Keypad Menu Password). For more information, see the AZedit user manual (p/n F01U239453).

## Keypad Sequences



Keypad	Description
MENU	Open the main menu
FWD	Move one (1) selection forward through highlighted menu option
BACK	Move one (1) selection backwards through highlighted menu option
LOC	Display a list of available intercoms available to scroll from
Arrow Up	Scroll upward through scroll list or available key assignments one at a time
Arrow Left	Move backwards through menu options or available key assignments one at a time
MENU (middle of the keypad)	Open the main menu
Arrow Right	Move forward through menu options or available key assignments one at a time
COPY	Copy incoming call key assignment from the CWW
Down Arrow	Scroll downward through scroll list or available key assignments one at a time
PAGE	Access setup pages
CLR	Clear the CWW (Acts as a BACK button in menu mode, or by holding it down, exits the menu structure.)
SHIFT	Access secondary keypad actions
SEL	Select options highlighted in a menu
SHIFT, 1	Displays the keypad assignment types
SHIFT, 4	Move backwards through menu options or available key assignments a page at a time
SHIFT, 5	Open the INFO menu
SHIFT, 6	Move forward through menu options or available key assignments a page at a time
SHIFT, DROP, <key>	Hang up TIF on key
SHIFT, DIAL, <key>	Enter dial mode on TIF on key
7, <key>	Copy the CWW to a key
0,0,0,8,1	Show panel ID
0,0,0,8,2	Show talk level 2 assignments
0,0,0,8,3	Show listen assignments
0,0,0,8,7	Enable tone
0,0,0,8,0	Enter test mode
0,0,3,1,SEL,<listen key>	Program a listen key with an AL assignment
0,0,3,2,SEL,<listen key>	Program a listen key with an AF assignment
0,0,3,3,SEL,<listen key>	Program a listen key with an AM assignment
0,0,3,4,SEL,<listen key>	Program a listen key with an AR assignment
0,0,3,7,SEL,<listen key>	Program a listen key with an AT assignment
0,0,3,5,SEL,<talk key>	Program a talk key with an AC assignment
0,0,0,8,8	Show setup pages
0,7,<key>,<key> or 7, SEL, <key>,<key>	Copy the first key to the second key
9, <page>, SEL <key>	Select setup page for row of keys
2 (up) or 4 (left)	Enter scroll list mode, scroll up/left

## Keypad Sequences

8 (down) or 6 (right) | Enter scroll list mode, scroll down/right

The following sequences also require the assignments are marked as Local scroll enable in AZedit:

**NOTE:** IFB, RY, ISO, and IFSL are not locally scrollable, by default.

0,0,1, <port>,SEL,<key>	Program a key with a port assignment
0,0,2, <PL num>, SEL,<key>	Program a key with a PL assignment
0,0,0,1, <SL num>,SEL,<key>	Program a key with a SL assignment
0,0,0,2, <IFB num>,SEL,<key>	Program a key with an IFB assignment
0,0,0,3, <ISO num>,SEL, <key>	Program a key with an ISO assignment
0,0,0,4, <RY num>,SEL,<key>	Program a key with an RY assignment



# Keypanel Menu Quick Reference

## Audio Options

Advanced				
AEC				
Mic Priority				
		Front Mic (default)		
		Rear Mic		
AGC				
Attack				
		Front Hdst Front Mic Rear Hdst Rear Mic	Fast Attack Speed	0.5ms 1ms (default) 2ms
Decay				
		Front Hdst Front Mic Rear Hdst Rear Mic	Decay	500ms (default) 750ms 1000ms
Compression				
		Front Hdst Front Mic Rear Hdst Rear Mic	Compression Ratio:	1:1 2:1 3:1(default)

Filters			
Bandpass			
Inputs			
Aux 1			
Aux 2			
OMNEO 1			
OMNEO 2			
Frequencies			
		Low Freq	0 Hz (default)
			15.6Hz
			31.5Hz
			50Hz
		High Freq	22kHz (default)
			16kHz
			8KHz
			4KHz
Mode			
		Disabled (default)	
		Enabled	
Outputs			
		Both	
		Left Chan	
		Right Chan	
Front Hdst			
Rear Hdst			
Frequencies			
		Low Freq	
			0 Hz (default)
			15.6Hz
			31.5Hz
			50Hz
		High Freq	
			22kHz (default)
			16kHz
			8KHz
			4KHz
Mode			
		Disabled (default)	
		Enabled	
		Matrix Out	
		OMNEO 1	
		OMNEO 2	
		Preamp Out	
Frequencies			
		Low Freq	
			0 Hz (default)
			15.6Hz
			31.5Hz
			50Hz
		High Freq	
			22kHz (default)
			16kHz
			8KHz
			4KHz
Mode			
		Disabled (default)	
		Enabled	

Equalization				
		Front Hdst	Modes	Disabled (default)
		Front Mic		Enabled
		Matrix In	Presets	Default (default)
		Rear Hdst		Hiss Reduction
		Rear Mic		Rumble Reduction
Outputs				
		Front Spkr	Modes	Disabled (default)
		Rear Spkr		Enabled
			Presets	Default (default)
				Hiss Reduction
				Rumble Reduction
Notch				
Notch Filter				
		Disabled (default)		
		Narrow		
		Default		
		Wide		
Gating				
	Aux 1			
	Aux 2			
	Front Hdst			
	Front Mic			
	Matrix In			
	OMNEO 1			
	OMNEO 2			
	Rear Hdst			
	Rear Mic			
		Threshold		
			Disabled (default)	
			-17dB – 18dB	
Metering				
	Aux 1			
	Aux 2			
	Front Hdst			
	Front Mic			
	Matrix In			
	None (default)			
	OMNEO 1			
	OMNEO 2			
	Rear Hdst			
	Rear Mic			
Mixing				
	Front Hdst Rear Hdst	Both Left Chan Right Chan	Aux 1	
			Aux 2	
			Front Hdst	
			Front Mic	
			OMNEO 1	
			OMNEO 2	
			Rear Hdst	
			Rear Mic	

	Front Spkr OMNEO 1 OMNEO 2 Rear Spkr	Aux 1 Aux 2 Front Hdst Front Mic Matrix In OMNEO 1 OMNEO 2 Rear Hdst Rear Mic	
	Preamp Out To Matrix	Aux 1 Aux 2 Matrix In OMNEO 1 OMNEO 2	
Mix Mode			
	Mixes to Spkr/Hdst Switched (default)		
	Mixes Always Active		
Noise Gate			
	Front Hdst	Disabled (default) Enabled	
	Front Mic		
	Rear Hdst		
	Rear Mic		
Chime			
Preview			
	Yes (default) No		
Chime			
	System #1-4		
Volume			
	-20dB (default) -60dB – 10dB		
Dim			
Headset			
	Front Rear	Dim Amount:	0dB (default) -32dB – 0dB
Speaker			
	Front Rear	Dim Amount:	-8dB (default) -48dB – 0dB Mute
Ganged Vols			
	Disappearing (default) Fixed Offset		
Headset Mic			
Front	Auto-Mute	Disabled Enabled (default)	
	Mode	Disabled Enabled Switched (default)	
	Type	Auto-Detect (default) Dynamic Electret	



Rear	Auto-Mute	Disabled Enabled (default)	
	Mode	Disabled (default) Enabled Switched	
	Type	Auto-Detect (default) Dynamic Electret	
Headset Spkr			
Front	Auto-Transfer	Disabled Enabled (default)	
	Mode	Both, Left Chan Right Chan	Always On (default) Disabled Switched
Rear	Auto-Transfer	Disabled Enabled (default)	
	Mode	Both, Left Chan Right Chan	Always On Disabled (default) Switched
Volume Control			
	Ganged		
	Individual (default)		
Inputs			
Aux 1			
	Disabled		
	Enabled (default)		
Aux 2			
	Disabled		
	Enabled (default)		
	Ganged		
Matrix In			
	Disabled		
	Enabled (default)		
OMNEO 1			
	Disabled		
	Enabled (default)		
OMNEO 2			
	Disabled		
	Enabled (default)		
	Ganged		
Key Volumes			
Adjust			
	Disabled		
	Enabled (default)		
Minimum			
	Adjust Minimum Key Volumes		
Reset			
	Cancel		
	Do Reset		
		Volumes Reset	

LCP 16 CLD		
Encoder #1 – #16		
	Inputs	Aux 1 Aux 2 Matrix In OMNEO 1 OMNEO 2
	Outputs	Both Hdsts Both Spkrs Front Hdst Front Spkr Rear Hdst Rear Spkr
	Sidetone	
	Unassigned (default)	
	Matrix Out	
Hot Mic		
Normal (default)		
Max Volume		
Headset	Front	Max Volume: -48dB – 10dB (default), Mute
Speaker	Rear	
Mic Gain		
Adjust		
	Disabled (default) Front Hdst Front Mic Rear Hdst Rear Mic	
Level		
	Front Hdst Front Mic Rear Hdst Rear Mic	Mic Gain: 0dB (default) -20dB – 10dB
Mic Mute		
Disabled		
Enabled (default)		
Min Volume		
Headset	Front	Min Volume: Mute (default) -48dB – 10dB
Speaker	Rear	
Aux 1		
Aux 2		
Matrix In		
OMNEO 1 OMNEO 2		
Output Level		
Output Level:	8dB (default) – 0dB	

Panel Mic		
Front	Disabled	
	Enabled	
	Switched (default)	
Rear	Disabled (default)	
	Enabled	
	Switched	
Preamp Out		
Disabled		
Hot Mic		
Invert		
Switched (default)		
Sidetone		
Level		
		Sidetone Level: -20dB (default), -65dB to 0dB
Mode		
Always On		
Disabled		
Switched (default)		
Speaker		
Front	Always On	
	Disabled	
	Switched (default)	
Rear	Always On	
	Disabled (default)	
	Switched	
Volume Control	Ganged	
	Individual (default)	
Tone Gen		
Frequency	1KHz Tone	
	500Hz Tone (default)	
Tone Off (default)		
Tone On		

*Display Menu*

Assign Type	Shows key's assignment types
Auto Dial	Shows keys with 1-Touch Auto Dial assigned
Chans On	Shows scroll list of current callers
Chime	Shows keys with Chime assigned
Exclusive	Shows which keys are Exclusive keys
Key Groups	Group 1 - shows which key is Master, and which keys are Group Slaves Group 2 - shows which key is Master, and which keys are Group Slaves Group 3 - shows which key is Master, and which keys are Group Slaves Group 4 - shows which key is Master, and which keys are Group Slaves
Key List	Shows scroll list of hidden key assignments assigned to virtual keys
LCP 16 CLD	LCP 16 CLD Assigns *displays "LCP not detected" if none are attached
Level 2	Level 2 Assignments - Shows the talk level 2 assignment for each key assignment
Listen	Listen Assignments - Shows the listen assignment for each key assignment
Matrix	Key Assignment Matrices - Shows the matrix for each key assignment
Panel ID	<Panel ID> - Shows the port number and alpha for this keypanel
Solo Key	Solo Keys - Shows which key is the solo key
Version	Version X.X.X - shows the keypanel firmware version

## Key Assign Menu

Matrix (only displays if there are remote matrices. Selecting Matrix displays a list of remote intercoms.)	<Ports/Assignments>	Listen Talk Lvl1 Talk Lvl2 Talk+AF Talk+AL Talk+AM Talk+AR Talk+AT	Tap Key
Pt-to-Pt			
Party Line			
IFB			
Special List			
Sys Relay			
Camera ISO			
UPL Resource			
IFB Spcl List			
Auto Funcs	All Call Auto Follow Auto Listen Auto Mute Auto Recip Auto Table DIM	Tap Key	

## Key Options Menu

Auto Dial		
	Numbers	
	#01 – #100	
	1-Touch	
	Tap Key	
Chime		
	Chime	
	<none>	
	System #1	
	System #2	
	System #3	
	System #4	
	Duration	
	One-shot (default)	
	1 second	
	2 seconds	
	3 seconds	
	4 seconds	
	5 seconds	
	10 seconds	
	15 seconds	
	20 seconds	
	30 seconds	
	60 seconds	
	90 seconds	
	2 minutes	
	3 minutes	
	4 minutes	
	5 minutes	
Clear		
	Tap Key	
Exclusive		
	Tap Key	
Icons		
	Icon	
	Key has TIF Asgn	
	Key is Solo Key	
	Key is Exclusive Key	
	Key has Auto-Dial	
	Key is Group Master	
	Key has Chime	
	Key has Trunk Asgn	
	Display	
	Disabled	
	Enabled (default)	
Key Groups		
	Group 1	Tap Slave Key
	Group 2	
	Group 3	
	Group 4	
	Tap Master Key	

Latching			
	Global		
		Disabled	
		Enabled (default)	
	Per Key		
		Tap Key	
Lock			
	Tap Key		
Panel Swap			
	Control		
		GPI Inputs	
		Opto 1	
		Opto 2	
			Cycle To
			Next Previous
			Switch To
			MAIN EKP 1 - EKP 7
			Toggle To
			EKP 1 - EKP 7
			Unassigned (default)
		GPI Outputs	
		Relay 1	
		Relay 2	
			Cycle To
			Next Previous
			Switch To
			MAIN EKP 1 - EKP 7
			Toggle To
			EKP 1 - EKP 7
			Unassigned (default)
		Keypad	
		BACK	
		FWD	
		UPG 1 - UPG9	
			Cycle To
			Next Previous
			Switch To
			MAIN EKP 1 - EKP 7
			Toggle To
			EKP 1 - EKP 7
			Unassigned
	Key States		
		Force Off (default)	
		Retain	
	Virtual EKPS		
		None	
		1 EKP through 7 EKPs for KP-4016	
		1 EKP through 6 EKPs for KP-5032	
Solo			
	Tap Key		

Tallies		
	Indefinite	
		Disabled (default)
		Enabled
	Min Duration	
		Min Duration:
		5 seconds
		10 seconds
		15 seconds (default)
Turn Off		
	All Keys	
		Turn Keys Off?
		Keys Turned Off
	Talk Keys	
		Turn Keys Off?
		Keys Turned Off
	Listen Keys	
		Turn Keys Off?
		Keys Turned Off

### *OMNEO Offers Menu*

Keypanel		
	OKP	
		<Port #> - Shows currently selected connection offer, or <none>
	AIO - If an RVON-IO or an OEI-2 is connected, it shows that device instead	
		Disabled
		Enabled (default)
Aux Input		
	OMNEO 1	
		<Port #> - shows currently selected connection offer, or <none>
	OMNEO 2	
		<Port #> - shows currently selected connection offer, or <none>

### *Save Config Menu*

Configuration Saved		
---------------------	--	--



## Service Menu

Alphas	
	4 Chars (default)
	6 Chars
	8 Chars
	8 Chars (Unicode)
Display	
Menu Context	
	Disabled
	Enabled (default)
Show Volume	
	Disabled (default)
	Enabled
KP32 Emulation	
	Disabled (default)
	Enabled
Footswitch	
Mode	
	Disabled (default)
	Enabled
Latched Keys	
	Retain (default)
	Unlatch
Intercom Mode	
Alternate	
	Standard (default)
Key View	
Show Gain	
	Disabled (default)
	Enabled
Show Lstn	
	Disabled (default)
	Enabled
	Enabled (Suppress Auto)
Show Mtx	
	Disabled (default)
	Enabled
	Enabled (Suppress Local)
Keypad	
SEL Key	
	Auto (default)
	Assign Groups
	Quick Assign

Backlight									
Activation									
Activate									
On Keypress (swallowed) (default)									
On Keypress (processed)									
Always									
Never									
Setup									
Inactive									
Brightness: ###% (default is 30%)									
Color:									
Blue (default)									
White									
Active									
Brightness: ###% (default is 100%)									
Color:									
Blue (default)									
White									
Shift State									
Brightness: ###% (default is 100%)									
Color:									
Blue									
White (default)									
LCD Backlight									
All Panels									
Brightness:									
65% (default)									
35% – 100%									
Main Panel									
Both, Left, Right									
Brightness:									
65% (default)									
35% – 100%									
EXP 1 – 7									
Both, Left, Right									
Brightness:									
65% (default)									
35% – 100%									
Local GPIO									
GPIO Inputs									
Opto1 Opto2	Function	Key Group	Group 1	Level	Cancel				
			Group 2		Save and Restart				
			Group 3	Edge	Cancel				
			Group 4		Save and Restart				
		Not Assigned (default)							
	Talk Key		Tap Key						
Mode	Normal (default)								
	Track Output								

GPIO Outputs			
Relay 1 Relay 2		Not Assigned (default)	
		Talk Key	Tap Key
		UPG1 – UPG9	
OMNEO Setup			
OKP			
OEI-2 (if attached)			
Device Name		<displays device name and allows editing>	
DHCP			
		Disabled (default)	
		Enabled	
IP Parameters			
		IP Address <displays IP Address and allows editing>	
		Netmask <displays Netmask and allows editing>	
		Gateway <displays Gateway and allows editing>	
		DNS Server 1 <displays DNS Server and allows editing>	
		Domain <displays Domain Name and allows editing>	
Page Change			
Auto (default)			
Always Allow			
No Talk Keys			
Reset Cfg			
Cancel			
Do Reset			
		Configuration Reset	
Scrn Saver			
Activate			
Delay			
Display Dim			
		Delay Time:	1 hour (default) (30 min, 1 – 12 hours, and Disabled)
Activation			
		Delay Time:	1 hour (default) (30 min, 1 – 12 hours, and Disabled)
Display Dim			
		Brightness: 25% (default) (0% – 100%)	
Mode			
Bitmap			
		Bounce	
		Scroll (default)	
Display Off			
Text (default)			
		Bounce	
		Scroll (default)	
Set Address			
Poll ID <1–8>			
Cancel			
Save and Restart			
Snoop Tally			
Chime:			
		none (default), System #1, System #2, System #3, System #4	
Duration:			
		One-shot (default) (1 sec, 2 sec, 3 sec, 4 sec, 5 sec, 10 sec, 15 sec, 20 sec, 30 sec, 60 sec, 90 sec, 2 min, 3 min, 4 min, 5 min)	
Test Panel			



# EKP-4016

---

## Introduction

Connecting directly to the KP-4016/5032 color keypanel, the EKP-4016 (Expansion Panel Color Display) provides an additional 16 keys per expansion panel to your intercom application.

Use the supplied RJ-45 expansion cable (included with the EKP-4016) and refer to Figure 25, “Expansion Panel Cabling,” on page 187, for information on how to connect up to six (6) additional expansion panels (if the intercom is configured for 128 keys) with a KP-5032, or seven (7) additional expansion panels (if the intercom is configured for 128 keys) with a KP-4016.

---

## Specifications

### LCD Display

#### Active Area

120.10mm (wide) x 18.77mm (high)

#### Dot Resolution

576 x 90 dots

#### Color Resolution

16-bit (64K) RGB color

#### View Angle

80 degrees (typical; all directions)

### Connector

EXP IN RJ-45

EXP OUT RJ-45

### General

#### EKP-4016

##### Storage Temperature

-40°C to 70°C (-40°F to 158°F)

##### Operating Temperature

0°C to 55°C (32°F to 131°F)

##### Dimensions

17.39”L x 1.72”H x 3.92”D (441.82mm x 43.8mm x 99.5mm)

##### Weight

2.91lb (1.32kg)

##### Power Consumption

Nominal – 6 Watts

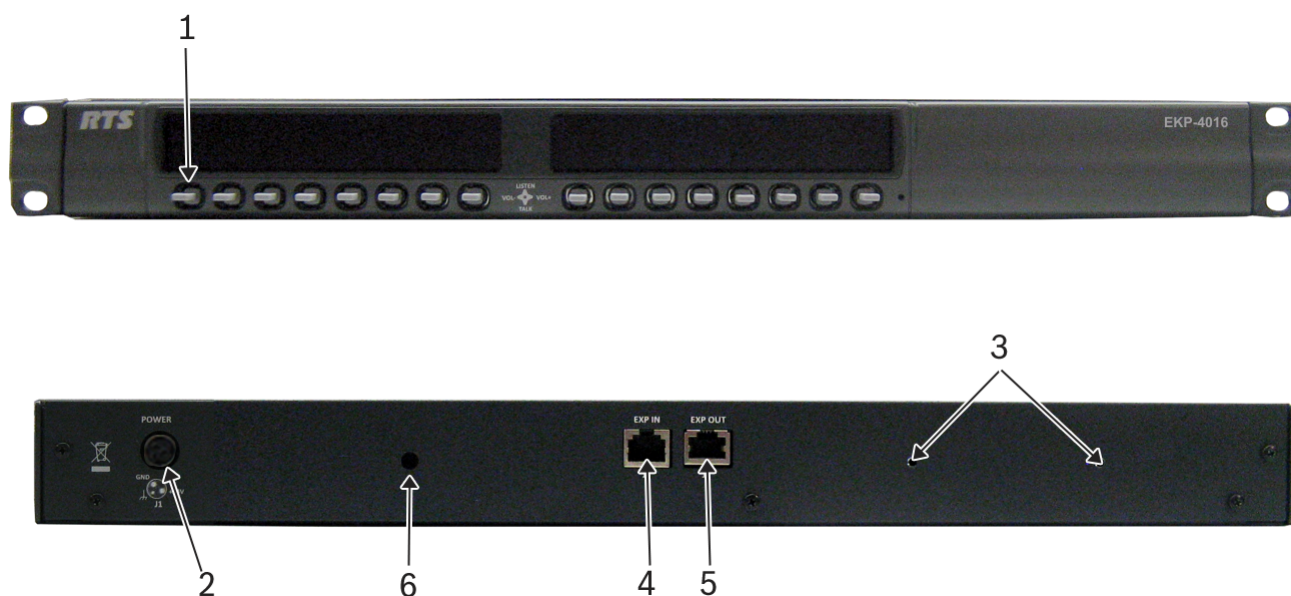
Maximum – 7 Watts

Maximum Volt Amp - 48VA

##### Input Power

100~240VAC, 50~60Hz

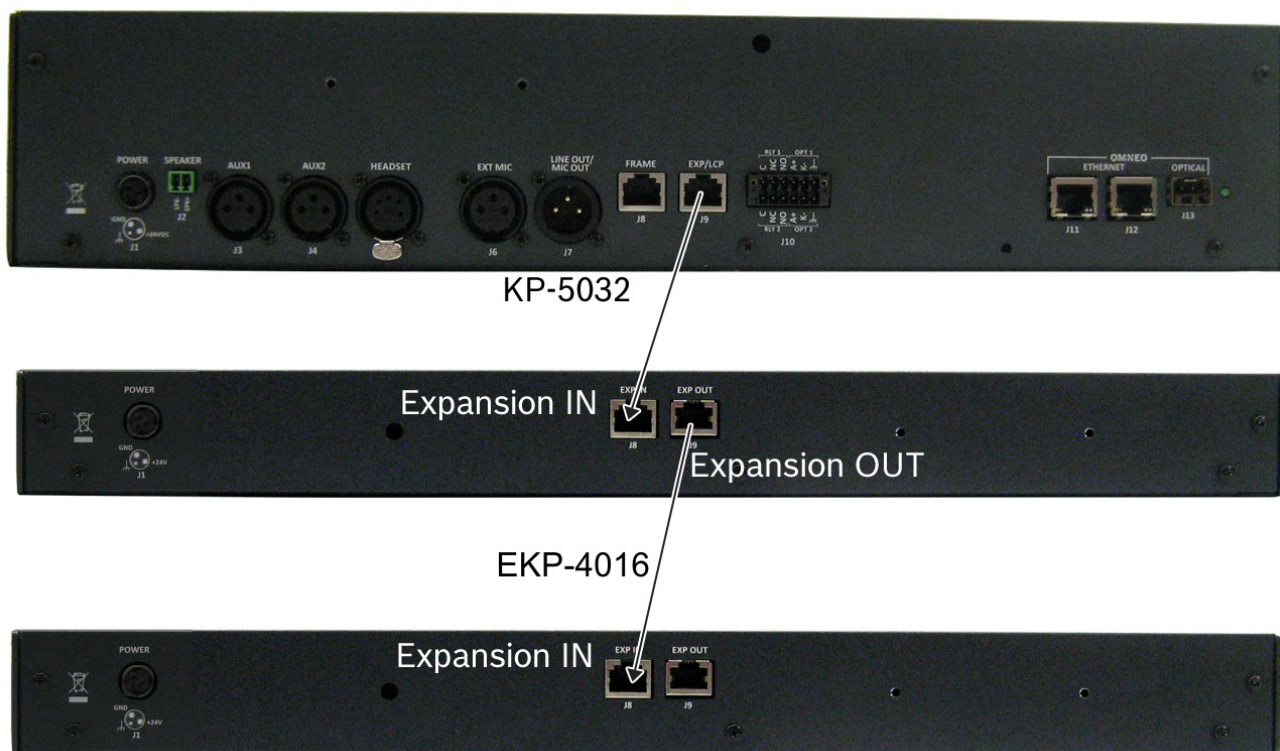
### *EKP-4016 Expansion Panel Reference View*



**FIGURE 24.** EKP-4016 Expansion Panel Reference View - Front and Rear

1. Expansion Keys
2. AC/Power
3. Power Supply Bracket Mounting Holes
4. RJ-45 Expansion IN
5. RJ-45 Expansion OUT
6. Power Supply Cable Tie Mounting Hole

## Expansion Panel Cabling Reference



**FIGURE 25.** Expansion Panel Cabling

RJ-45 EXP IN (expansion)	
Pin	Assignment
1	NC
2	NC
3	NC
4	NC
5	NC
6	NC
7	RS485 +
8	RS485 -

RJ-45 EXP OUT (expansion)	
Pin	Assignment
1	NC
2	NC
3	NC
4	NC
5	NC
6	NC
7	RS485 +
8	RS485 -





# *Unicode Support*

---

## *AZedit and Unicode Support*

Minimum firmware revision requirements for Unicode support are:

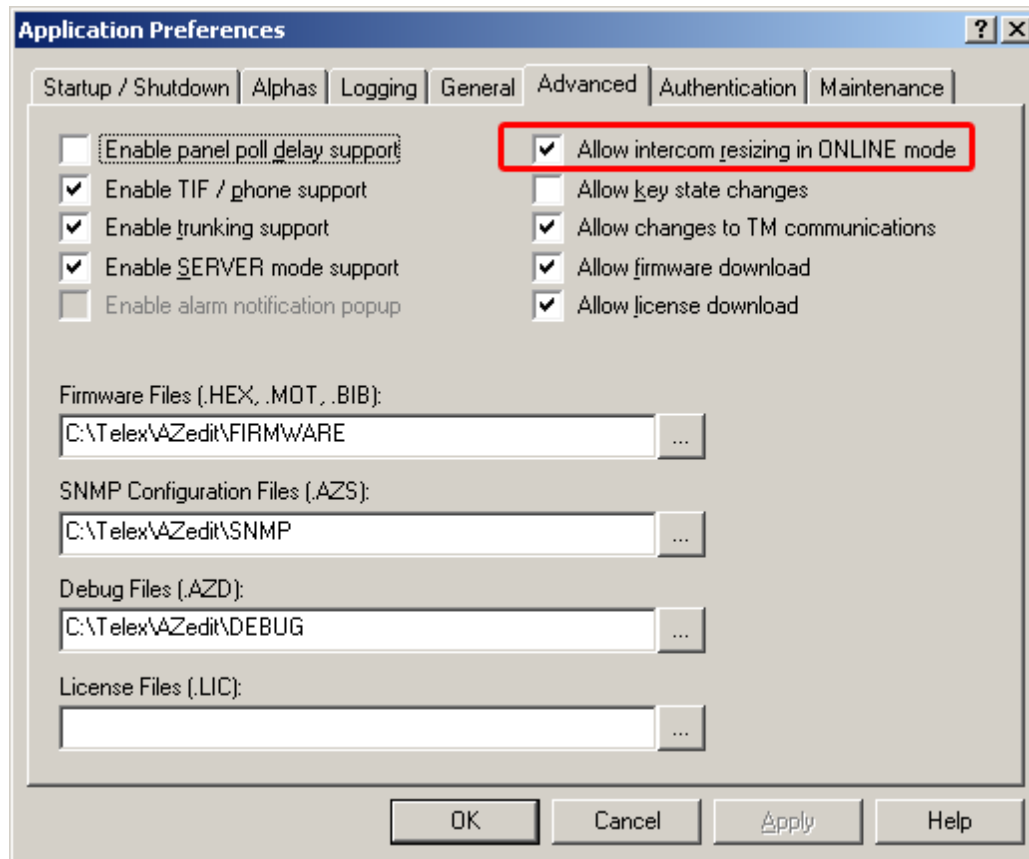
- MCII-e v2.4.0 or later
- AIO-8 v10.5.0 or later
- AIO-16 v1.3.0 or later
- Cronus v1.8.0 or later
- Zeus III v1.3.0
- KP 32 CLD v1.3.0 or later
- KP 12 CLD v1.1.0
- RP-1000 v2.0.0
- KP12/4U v1A.0.26 (Cyrillic character set only)
- KP-5032/4016 v1.0.0

To **configure the keypanel for Unicode operation**, do the following:

1. On the keypanel, select **Service|Alphas|8 Chars (Unicode)|Save and Restart**.

**NOTE:** If using the keypanel with Japanese firmware, you must also configure the correct Intercom Mode. See “Service Menu, Intercom Mode” on page 143.

2. From the Options menu in AZedit, select **Preferences**.  
*The Application Preferences window appears.*
3. Select the **Advanced** tab.  
*The Advanced page appears.*
4. Select the **Allow intercom resizing in ONLINE mode** check box.



5. Click **Apply**.
6. Click **OK**.  
*The Application Preferences window closes.*

---

**IMPORTANT:** You are about to erase the entire intercom setup! Be sure to save your file.

---

7. From the Options menu, select **Intercom Configuration**.  
*The Intercom Configuration window appears.*
8. Click the **Options** tab.  
*The Options page appears.*

9. Select the **Enable Unicode Alphas** check box.

The image shows the 'Intercom Configuration' window with the 'Options' tab selected. The window has a title bar with a question mark and a close button. Below the title bar are two tabs: 'Resources' and 'Options'. The 'Options' tab contains several settings:

Setting	Value
Talk levels	2
Listen levels	1
Panels with Key Labels	34
Key Labels Per Panel	64
Setup pages per port	4
Physical panels per port	4
Keys per setup page	16
Maximum IFB priority	3

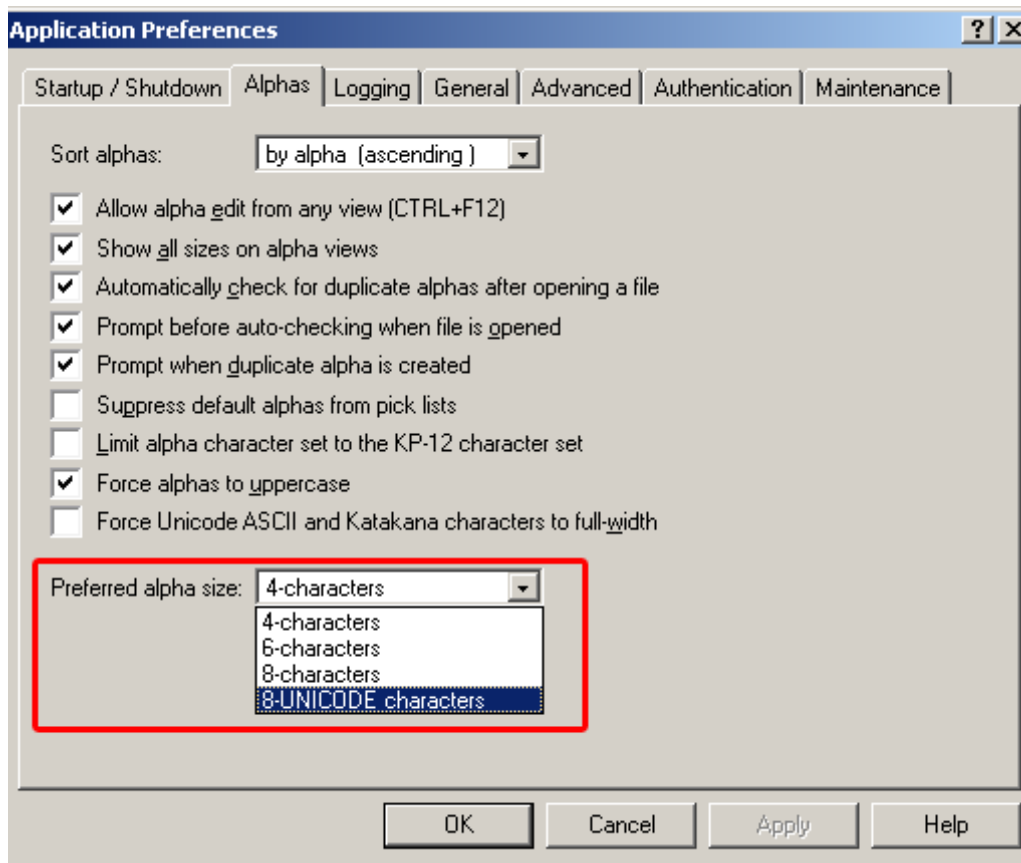
Below the numeric settings are two columns of checkboxes:

Checkbox	Label
<input type="checkbox"/>	Use input alphas
<input type="checkbox"/>	Auto listen functions pick up all talk levels
<input type="checkbox"/>	Always stack callers in call waiting window
<input type="checkbox"/>	Configure onboard GPI Outputs in FR9528 mode
<input type="checkbox"/>	Allow for remote trunk master
<input checked="" type="checkbox"/>	Enable Unicode Alphas
<input type="checkbox"/>	Don't generate tallies for in-use trunk assignments
<input type="checkbox"/>	Don't generate tallies for off-hook TIF assignments
<input type="checkbox"/>	Don't generate indefinite PL tallies
<input type="checkbox"/>	Generate snoop tallies

At the bottom right of the window is a 'Reset to Defaults' button. At the very bottom are four buttons: 'Apply', 'Cancel', 'Test', and 'Help'.

10. Click **Apply**.  
*The Intercom Configuration window closes.*
11. From the Options menu, select **Preferences**.  
*The Application Preferences window appears.*
12. Click the **Alphas** tab.  
*The Alphas window appears.*

13. From the Preferred alpha size drop down menu, select **8-UNICODE characters**.



14. Click **Apply**.
15. Click **OK**.  
*The Application Preference window closes.*
16. From the Online menu, select **Send Changes**.  
*The changes are sent to the intercom.*

## Power Supply Mounting Options

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### Power Supply Mounting Bracket Instructions

---

**IMPORTANT:** The KP-4016 can only be mounted directly into a rack and cannot have the power supply mounted to the unit.

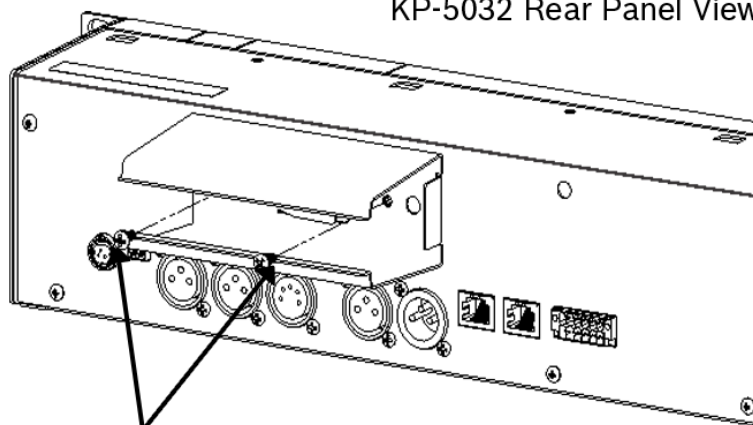
---

#### Mounting the Power Supply to KP-5032 Unit

To mount the power supply mounting bracket to an KP-5032, do the following:

1. Align the **power supply mounting bracket** screw holes with the appropriate mounting holes on the rear panel of the KP-5032 unit.
2. Using a screwdriver, attach the **power supply mounting bracket** with the two (2) supplied screws.

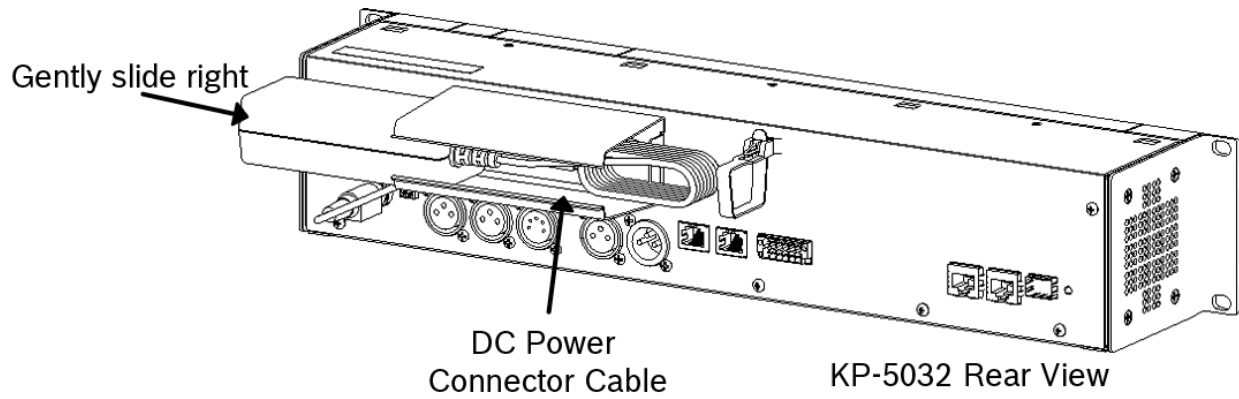
KP-5032 Rear Panel View



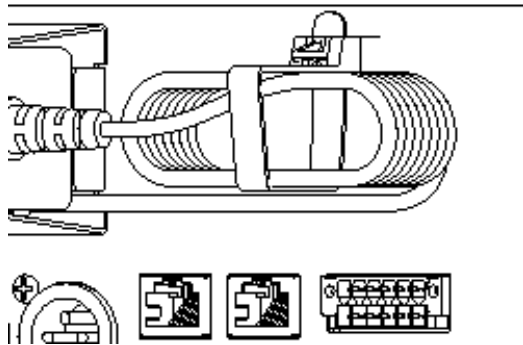
Mounting Screws

3. Attach the **power supply cable tie clip** to the predefined clip mounting hole on the rear of the keypanel unit.
4. Attach the **DC power connector** to the unit.
5. Carefully thread the **power cable** through the bracket, in order to utilize the power supply cable tie.

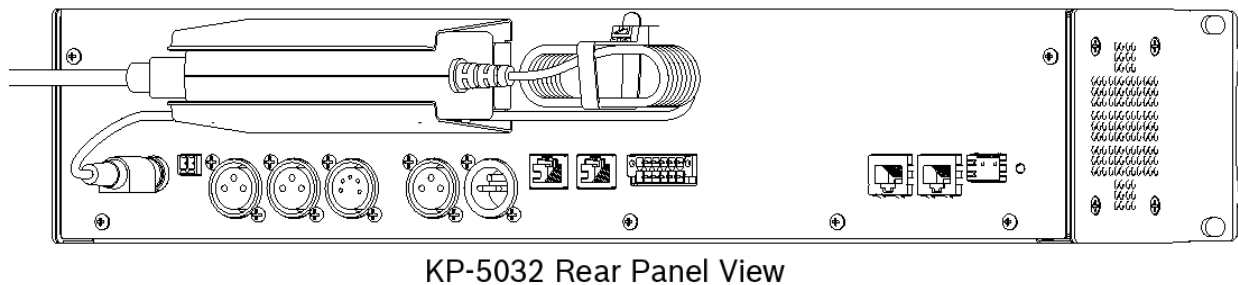
- From the left-hand side of the mounting bracket, carefully slide the **power supply** into the bracket.



- Carefully coil the **power supply cord** and insert it into the cord clip.



- Attach the **AC power connector** to the power outlet on the power supply.

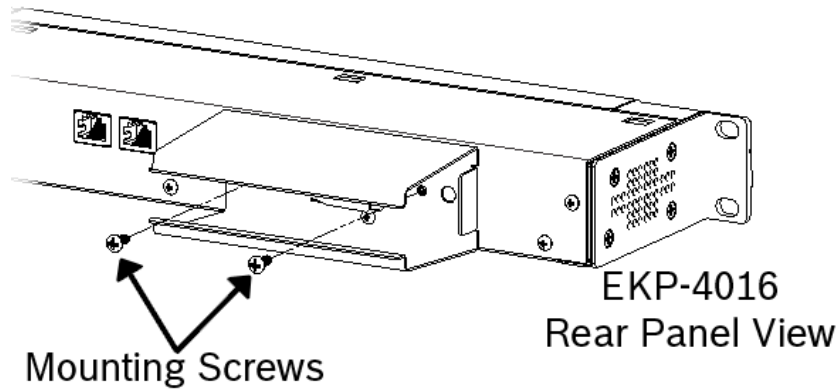


- Plug the **power cord** into an electrical outlet.

## Mounting the Power Supply to EKP-4016 Unit

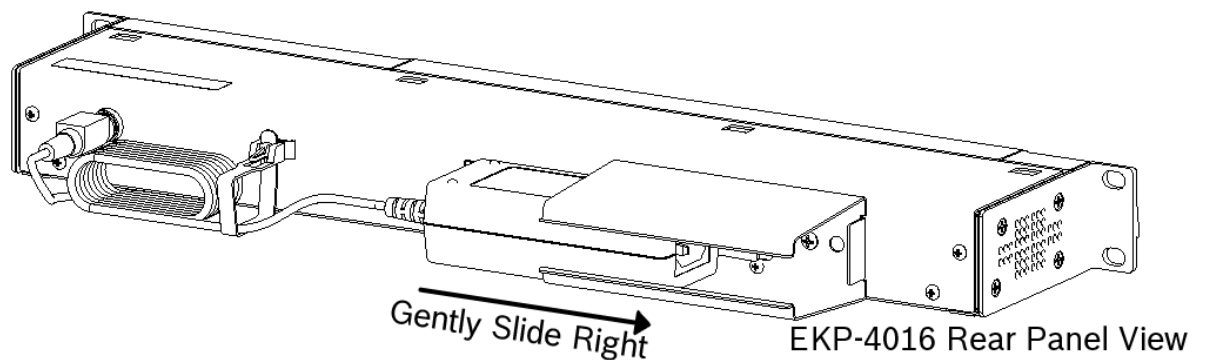
To mount the power supply mounting bracket to an EKP-4016, do the following:

1. Align the **power supply mounting bracket** screw holes with the appropriate mounting holes on the rear panel of the EKP-4016 unit.
2. Using a screwdriver, attach the **power supply mounting bracket** with the two (2) supplied screws.



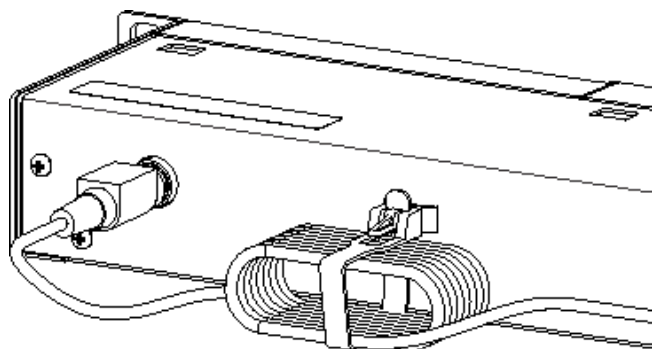
3. Attach the **power supply cable tie clip** to the predefined clip mounting hole on the rear of the keypanel unit.
4. From the left-hand side of the mounting bracket, carefully slide the **power supply** into the bracket.

**NOTE:** The Frame and EXP OUT connections cannot be populated until the power supply mounting bracket is fully installed.



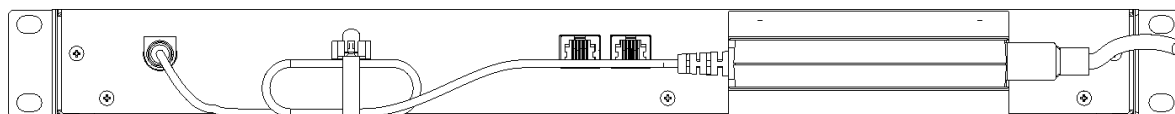
5. Attach the **DC power connector** to the unit.

6. Carefully coil the **power supply cord** and insert it into the cord clip.



## EKP-4016 Rear Panel View

7. Attach the **AC power connector** to the power outlet on the power supply.

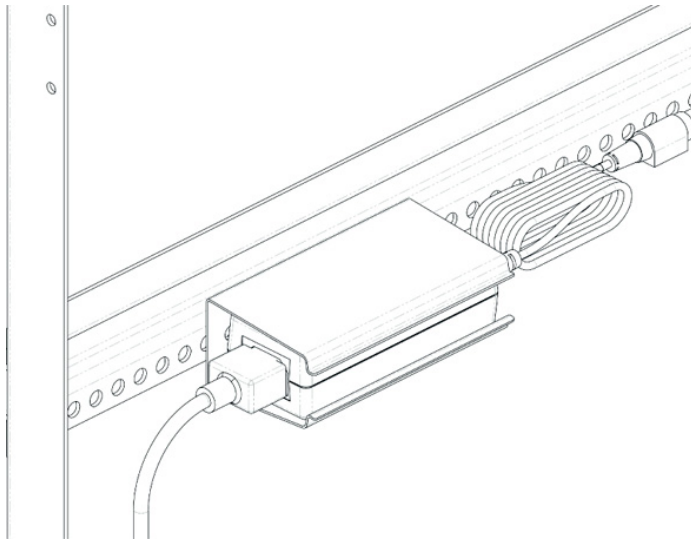


8. Plug the **power cord** into an electrical outlet.

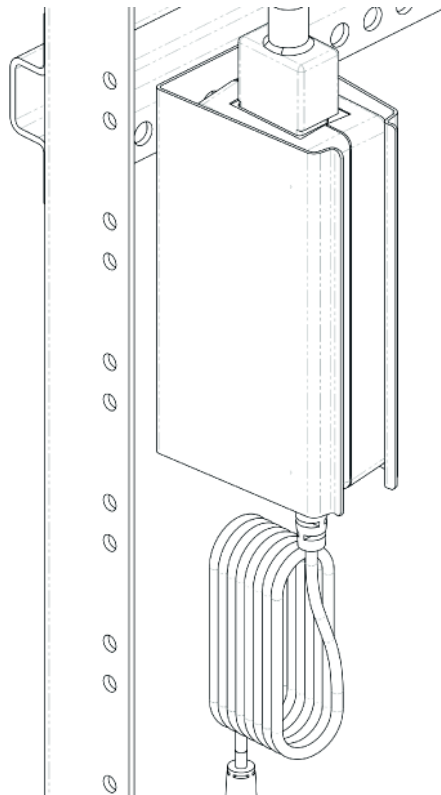


## Mounting the Power Supply to a Standard Rack

The **Power Supply Mounting** bracket can be directly attached to a standard rack, horizontally or vertically as shown in Figure 26 and Figure 27.



**FIGURE 26.** Mounting Bracket – Horizontal on a Crossbar



**FIGURE 27.** Mounting Bracket – Vertical from a Crossbar

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