

2x48x1RU MINI (Bantam/TT) 48P-12A/TYPE 1 Most common

# 2x48 MINI (BANTAM/TT)

Our most popular audio patchbay with capacity for 48 jacks per row (our most common) or 52 jacks per row, manufactured start-to-finish right here in Marlow, New Hampshire!

#### MINI, MAXI, AND SKINI HIGHLIGHTS

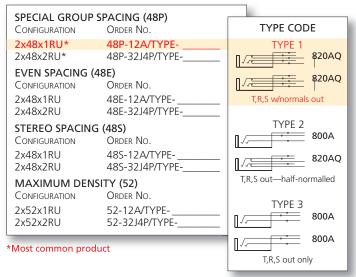
#### JACKS

- .078" Western Electric #1 gold alloy contacts.
- Hot-solder-dipped terminals, fanned for ease in wiring.
- Offset ground terminals for bussing of grounds available.
- Nylon support bumper ensures solid contact.
- Jack frame and bushing are plated with copper, nickel and bright chrome.

#### PANELS

- Panels come equipped with EIA mounting slots and tie bar.
- All one rack-unit (1RU) panels (1¾") come standard with 2-line designation strips.
- All two rack-unit (2RU) panels (3½") come standard with 4-line designation strips.

Insert type code to complete the order number



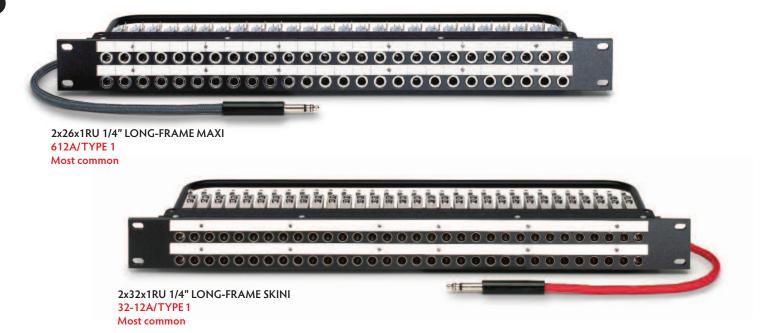


2x48x2RU MINI (Bantam/TT) 48S-32J4P/TYPE 1

# 603/446-3335

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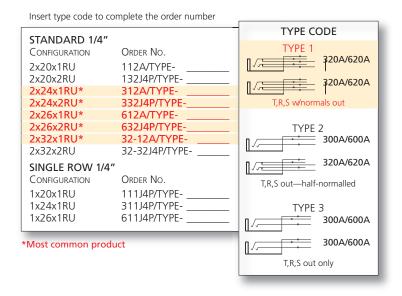




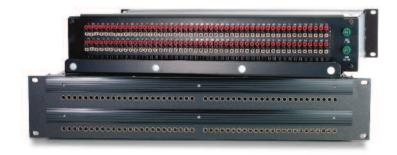
# 2x24, 2x26, 2x32 - 1/4" LONG-FRAME

We manufacture all our audio jacks, 1/4" Long-Frame MAXI jacks, SKINI jacks, and MINI jacks and panels at our own factory here in Marlow, New Hampshire. We guarantee the exacting specifications our customers have relied on for more than 60 years.

The SKINI jack design lets you fit 32 jacks per row, for additional patching capability without using up valuable rack space. These jacks are mechanically and electrically the same as our full-size Audio-Line 1/4" MAXI jacks – the only difference is the narrower SKINI jack profile.







2x48x2RU Self-contained WQP-07-P-C-48-N-2 Most common



2x48x1RU 4-foot harness WQP-05-P-H4-48-N-1 Most common

# 2x48 TO QCP PUNCHDOWN

Wired to ADC QCP Ultra-Patch punchdown backplates.

#### QCP HIGHLIGHTS

- Self-contained units available in 2RU (3½") panels only.
- Standard cable length between panel and backplate is 4 feet; any length can be provided.

#### Self-contained box

EO: EVERYTHING OUTCONFIGURATIONORDER NO.2x48x2RUWQP-05-P-C-48-N-2		
FN: FULL-NORMALLED       CONFIGURATION     ORDER NO.       2x48x2RU     WOP-06-P-C-48-N-2		
HN: HALF-NORM CONFIGURATION 2x48x2RU*	ALLED Order No. WOP-07-P-C-48-N-2	
NN: NON-NORMALLED           CONFIGURATION         ORDER NO.           2x48x2RU         WQP-08-P-C-48-N-2		
N = Grounds not bussed. Replace with B in order number for bussed grounds.		

\*Most common product

- ADC QCP Ultra-Patch backplates require a punchdown insertion tool (Order No. QB-2). Replacement tips are available (Order No. QB-2T).
- 110 $\Omega$  digital wire supplied in all FN, HN, and NN units.

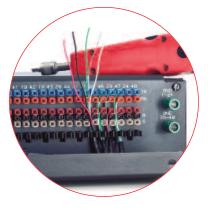
#### 4-foot harness

EO: EVERYTHING	ORDER NO.
2x48x1RU* 2x48x2RU	WQP-05-P-H4-48-N-1 WQP-05-P-H4-48-N-2
FN: FULL-NORMA CONFIGURATION 2x48x1RU	Order No.
2x48x2RU	WQP-06-P-H4-48-N-1 WQP-06-P-H4-48-N-2
HN: HALF-NORM CONFIGURATION	Order No.
2x48x1RU 2x48x2RU	WQP-07-P-H4-48- <mark>N</mark> -1 WQP-07-P-H4-48- <mark>N</mark> -2
NN: NON-NORM	ALLED Order No.
2x48x1RU 2x48x2RU	WQP-08-P-H4-48-N-1 WQP-08-P-H4-48-N-2
N = Grounds not bussed. Replace with B in order number for bussed grounds.	

\*Most common product

#### **QCP NORMALLING**

- EO =Tip, Ring, Sleeve, and normals brought out to backplate, everything out.
- FN=Tip, Ring, and Sleeve only out to backplate, full-normalled at jacks.
- HN=Tip, Ring, and Sleeve only out to backplate, half-normalled at jacks.
- NN=Tip, Ring, and Sleeve only out to backplate, non-normalled at jacks.



Punchdown Tooling

Insertion Tool	QB-2	
Replacement Tip	QB-2T	





# 2x24, 2x26, 2x32 TO QCP PUNCHDOWN

1/4" Long-Frame and streamlined SKINI patchbays wired to ADC QCP Ultra-Patch punchdown backplates, with either a self-contained chassis (14" deep) or harnessed (4-foot cable provided), using your choice of normalling.

Self-contained box

EO: EVERYTHING OUT Configuration Order No.			
2x24x2RU* 2x26x2RU*	WQP-01-E-C-24-N-2 WQP-01-E-C-26-N-2		
2x32x2RU FN: FULL-NOR Configuration			
2x24x2RU 2x26x2RU 2x32x2RU	WQP-02-E-C-24-N-2 WQP-02-E-C-26-N-2 WQP-22-E-C-32-N-2		
HN: HALF-NO Configuration 2x24x2RU			
2x26x2RU 2x32x2RU	WQP-03-E-C-26-N-2 WQP-23-E-C-32-N-2		
NN: NON-NOR CONFIGURATION			
2x24x2RU 2x26x2RU 2x32x2RU	WQP-04-E-C-24-N-2 WQP-04-E-C-26-N-2 WQP-24-E-C-32-N-2		
N = Grounds not bussed. Replace with B in order number for bussed grounds.			

\*Most common product

4-foot harness

EO: EVERYTH	ING OUT	HN: HALF-NO	RMALLED
Configuration	Order No.	Configuration	Order No.
2x24x1RU*	WQP-01-E-H4-24-N-2	2x24x1RU	WQP-03-E-H4-24-N-1
2x24x2RU	WQP-01-E-H4-24-N-2	2x24x2RU	WQP-03-E-H4-24-N-2
2x26x1RU	WQP-01-E-H4-26-N-1	2x26x1RU	WQP-03-E-H4-26-N-1
2x26x2RU	WQP-01-E-H4-26-N-2	2x26x2RU	WQP-03-E-H4-26-N-2
2x32x1RU	WQP-21-E-H4-32-N-1	2x32x1RU	WQP-23-E-H4-32-N-1
2x32x2RU	WQP-21-E-H4-32-N-2	2x32x2RU	WQP-23-E-H4-32-N-2
FN: FULL-NOF	MALLED Order No.	NN: NON-NO	RMALLED Order No.
2x24x1RU 2x24x2RU 2x26x1RU 2x26x2RU 2x32x1RU	WQP-02-E-H4-24-N-1 WQP-02-E-H4-24-N-2 WQP-02-E-H4-26-N-1 WQP-02-E-H4-26-N-2 WQP-22-E-H4-32-N-1 WOP-22-E-H4-32-N-2	2x24x1RU 2x24x2RU 2x26x1RU 2x26x2RU 2x32x1RU 2x32x1RU 2x32x2RU	WQP-04-E-H4-24-N-1 WQP-04-E-H4-24-N-2 WQP-04-E-H4-26-N-1 WQP-04-E-H4-26-N-2 WQP-24-E-H4-32-N-1 WQP-24-E-H4-32-N-2

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\*Most common product

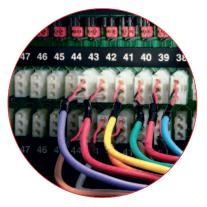
MAXI Q

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# MINI SHORTI QUICK-SWITCH™

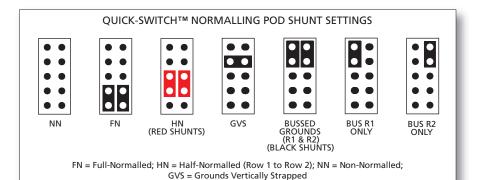
These 2x48 audio patchbays are wired to 3-Pin EDAC connectors and feature exceptional flexibility with Audio Accessories' exclusive Quick-Switch™ normalling system which allows you to set the individual normals and grounds on a per-jack-pair basis. This enables you to full-normal (FN), half-normal (HN), or non-normal (NN) by setting the switches into the appropriate position. Grounding options: isolated, bussed, or grounds vertically strapped (GVS).



Detail view of backplate.



2x48x2RU Evenly spaced version of our original SHORTI. 2390W





Detail view of normalling pod settings. All units supplied half-normalled and bussed grounds as viewed above.



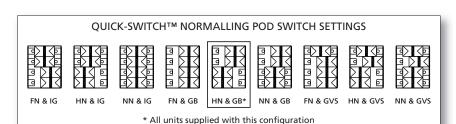
2x48x1.5RU Digital ready WEP-9615-SH

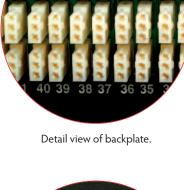


2x48x1RU Digital ready WEP-961-SH

#### MINI SHORTI HIGHLIGHTS

- 2x48 MINI (Bantam/TT) Audio Patchbay.
- Available in 1RU, 1.5RU, and 2RU.
- Tip, Ring, and Sleeve of each jack wired out to individual 3-Pin connectors.
- Reconfigurable normals and ground located on the rear of the unit.
- Cabling support tray for bundling down incoming cables.
- For use with analog or digital.
- All SHORTIs supplied with 3-Pin male mating connectors (E3M) and crimp pins.
- We suggest leaving a 1-foot service loop for ease of changing normalling.







Detail view of normalling pod switches. All units supplied half-normalled and bussed grounds as viewed above.

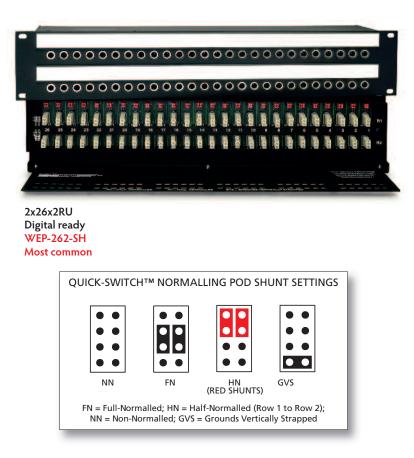
FN = Full-Normalled; HN = Half-Normalled (Row 1 to Row 2); NN = Non-Normalled; GVS = Grounds Vertically Strapped; IG = Isolated Ground; GG = Bussed Grounds

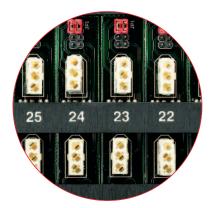


2x26x1RU Digital ready WEP-261-SH Most common

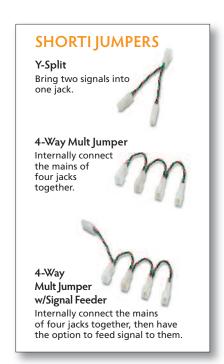
# 1/4" SHORTI QUICK-SWITCH™

This 2x26, 1/4" Long-Frame MAXI patchbay has the Tip, Ring, and Sleeve of each jack brought out to individual 3-Pin EDAC connectors. This unit features exceptional flexibility with our exclusive Quick-Switch™ normalling system which allows you to set the individual normals on a per-jack-pair basis.





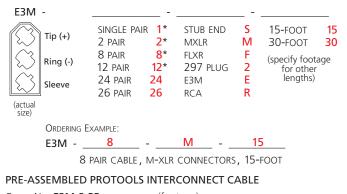
Detail view of backplate. 2RU SHORTI rear view.





#### SHORTI INTERCONNECT CABLES

Fill in the blanks to complete the order number



ORDER NO: E3M-8-PR- \_\_\_\_\_ (footage)

\*We can also manufacture cables using 110 $\Omega$  digital cable. Unless otherwise specified, all interface cables are made with analog cable. All connector fanouts are 2 feet long.

#### **CUSTOM SNAKES**

Call to order.



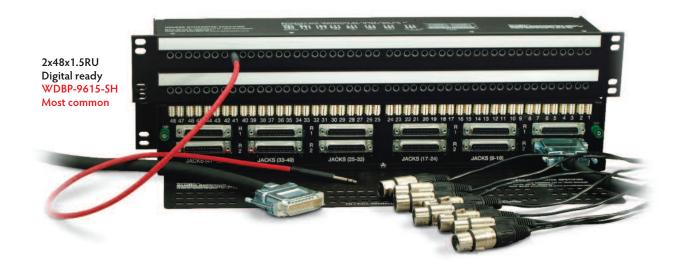


A 56-pin connector separated out to four 38-pin connectors.





www.patchbays.com (11

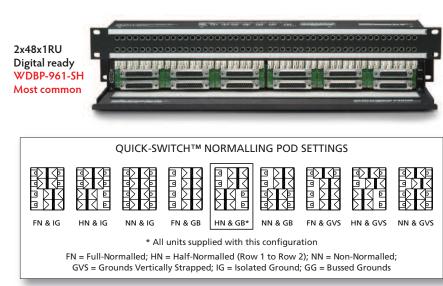


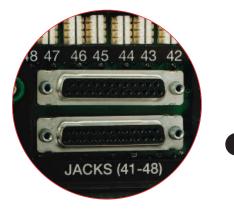
# MINI SHORTI DB25 (D-sub)

This 2x48 audio patchbay is wired to DB25 connectors. It features exceptional flexibility with the Audio Accessories, Inc. exclusive Quick-Switch<sup>™</sup> normalling system which allows you to set the individual normals and grounds on a per-jack-pair basis. This enables you to full-normal (FN), half-normal (HN), or non-normal (NN) by sliding the switches into the appropriate position. Grounding options: isolated, bussed or grounds vertically strapped (GVS).

#### **DB25 MINI SHORTI HIGHLIGHTS**

- Available in 1RU or 1.5RU.
- Tip, Ring and Sleeve of each jack wired out to a DB25 female connector (8 jacks in each).
- DB25 Connector pinned out for ProTools interface.
- Cabling support tray for bundling down incoming cables.





Detail view of rear backplate.



# DB25 INTERCONNECT CABLES

Available in 6-, 12- or 25-foot lengths; 8-pair cable is analog, individually jacketed and shielded, oxygen free and flexible. All DB25 connectors are heavy duty gold pins; all XLRs and 297 plugs are Neutrik. Call for details.

#### **DIGITAL AUDIO SHORTI** ()



2x32x2RU DAP-64-BNC3 Most common  $75\Omega$  BNC to Balanced AES 110Ω 3-Pin

# **DIGITAL AUDIO SHORTI**

These 2x32 digital audio patchbays are available in three configurations to provide you the flexibility needed for patching your digital audio.

#### **DIGITAL AUDIO SHORTI HIGHLIGHTS**

• Converts  $75\Omega$  to  $110\Omega$  via built-in balans.

• Meets AES3 standards.

audio patch cords.

- Uses standard BNC connectors on the rear of unit.
- Large designation strips for labeling. • Uses standard  $110\Omega$  MINI/TT



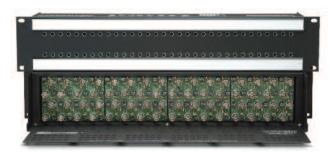
Detail view of rear backplate.



2x32x2RU DAP-64-3BNC Most common Balanced AES 110Ω 3-Pin to 75Ω BNC



2x48x2RU DAP-96-BNC  $75\Omega$  BNC to  $75\Omega$  BNC



2x32x2RU DAP-64-BNC Most common  $75\Omega$  BNC to  $75\Omega$  BNC

MINIEDAC



2x48x1RU WP-HN-48-N-1-F-SAC90 Most common

# 2x48 MINI W/EDAC

These connectorized MINI (TT/Bantam) patchbays incorporate EDAC 90-pin connectors. Other options include six 56-pin connectors or eight 38-pin connectors.

Insert SAC90, SAC56, or SAC38 to complete the order number

.172" MINI W/TIP Configuration	, RING, SLEEVE OUT ONLY (Full-Normalled at Jacks)	
2x48x1RU	WP-FN-48- <mark>N-</mark> 1-F-SAC	
2x48x1.5RU	WP-FN-48-N-1.5-F-SAC	
2x48x2RU	WP-FN-48-N-2-F-SAC	
.172" MINI W/TIP	, RING, SLEEVE OUT ONLY (Half-Normalled at Jacks)	
Configuration	Order No.	
2x48x1RU*	WP-HN-48-N-1-F-SAC	
2x48x1.5RU	WP-HN-48-N-1.5-F-SAC	
2x48x2RU	WP-HN-48-N-2-F-SAC	
.172" MINI W/TIF	RING, SLEEVE OUT ONLY (Non-Normalled at Jacks)	
Configuration	ORDER NO.	
2x48x1RU	WP-NN-48- <mark>N</mark> -1-F-SAC	
2x48x1.5RU	WP-NN-48-N-1.5-F-SAC	
2x48x2RU	WP-NN-48-N-2-F-SAC	
N = Grounds not bussed. Replace with B in order number for bussed grounds.		



ROW2 JOCKS 33-4 COMPARENT ROWS JOCKS 33-4 SAC56: six 56-pin connectors.

WP-HN-48-N-1-F-SAC56



SAC38: eight 38-pin connectors. WP-HN-48-N-1-F-SAC38

SAC90/120 pinout is standard

.172" MINI W/TIP, RING, SLEEVE (Full-Normals Out)		
Configuration         Order No.           2x48x1RU         WP-EOFN-48-N-1-F-SAC90/120           2x48x1.5RU         WP-EOFN-48-N-1.5-F-SAC90/120           xx48x2RU         WP-EOFN-48-N-2-F-SAC90/120		
.172" MINI W/TIP, RING, SLEEVE (Half-Normals Out) CONFIGURATION ORDER NO.		
2x48x1RU         WP-EOHN-48-N-1-F-SAC90/120           2x48x1.5RU         WP-EOHN-48-N-1.5-F-SAC90/120           2x48x2RU         WP-EOHN-48-N-2-F-SAC90/120		
N = Grounds not bussed. Replace with B in order number for bussed grounds.		



WP-EOHN-48-N-1-F-SAC90/120



2x24x1RU WP-HN-24-B-1-F-SAC90 Most common

# 2x24, 26, 32 MAXI W/EDAC

These connectorized 1/4" Long-Frame MAXI patchbays and our exclusive SKINI wired patchbays incorporate two 90-pin female connectors. EO configurations incorporate two 90-pin and one 120-pin connectors.



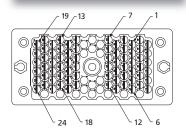
SAC 90/120 Two 90-pin and one 120-pin connectors (for EO configurations).

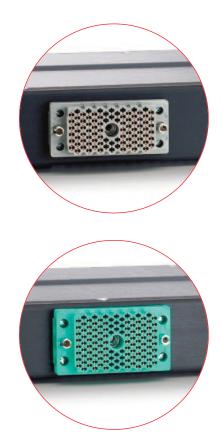
EO: EVERYTHII 1/4" Long-Fram ConFiguration 2x24x1RU 2x24x2RU 2x26x1RU 2x26x2RU 2x32x1RU 2x32x2RU FN: FULL-NORI 1/4" Long-Fram	e TRS with Normals Out ORDER NO. WP-EO-24-N-1-F-SAC90/120 WP-EO-24-N-2-F-SAC90/120 WP-EO-26-N-1-F-SAC90/120 WP-EO-26-N-2-F-SAC90/120 WP-EO-32-N-1-F-SAC120 WP-EO-32-N-2-F-SAC120 MALLED	
Full-normalled at		
CONFIGURATION		
2x24x1RU	WP-FN-24-N-1-F-SAC90	
2x24x110 2x24x2RU	WP-FN-24-N-2-F-SAC90	
2x26x1RU	WP-FN-26-N-1-F-SAC90 WP-FN-26-N-2-F-SAC90	
2x26x2RU 2x32x1RU	WP-FN-26-N-2-F-SAC90 WP-FN-32-N-1-F-SAC120	
2x32x1RU 2x32x2RU	WP-FN-32-N-1-F-SAC 120 WP-FN-32-N-2-F-SAC 120	
HN: HALF-NOF		
1/4" Long-Fram		
CONFIGURATION	,	
2x24x1RU*		
2x24x2RU*	WP-HN-24-N-2-F-SAC90	
2x26x1RU*	WP-HN-26-N-1-F-SAC90	
2x26x2RU*	WP-HN-26-N-2-F-SAC90	
2x32x1RU	WP-HN-32-N-1-F-SAC120	
2x32x2RU	WP-HN-32-N-2-F-SAC120	
NN: NON-NOR	MALLED	
1/4" Long-Fram		
CONFIGURATION	Order No.	
2x24x1RU	WP-NN-24-N-1-F-SAC90	
2x24x2RU	WP-NN-24-N-2-F-SAC90	
2x26x1RU	WP-NN-26-N-1-F-SAC90	
2x26x2RU	WP-NN-26-N-2-F-SAC90	
2x32x1RU	WP-NN-32-N-1-F-SAC120	
2x32x2RU	WP-NN-32-N-2-F-SAC120	
N = Grounds not bussed. Replace with B in order number for bussed grounds.		

\*Most common product

Standard unless otherwise specified

Standar	a anness e	viner wise s	peemea	
EDAC SAC90 PINOUT				
Јаск	Tip (+)	Ring (-)	Sleeve (GND)	
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26.	A B C D E F X Y Z AA B B K B B M B B F F H C J K L C M W AW	H J K L M N AE F H A A K A L B S T B U V W B X N P C C C C C U Z A	R S T U V W A M A R A R A R S T U V W A M A R A R S T U V W A M A R A R S C D U V W A M A R S C C D V W A N A R S C C D V W A R S C C D V W A R S C D V W A R S C C D V W A R S C D V W A R S C D V V W A R S C D V V W A R S C D S C D S C D S C D S S C D S S S C D S S S S	







2x24x1RU to 3-Pin WEP-HN-C-24-N-1-D Most common



2x48x2RU to 3-Pin WEP-HN-C-48-N-2-D Most common

# MINI AND MAXI TO 3-PIN

3-Pin connectors are often the best choice because you can quickly reconfigure jacks at the connector. Our line includes MINI (TT/Bantam), 1/4" Long-Frame MAXI and our exclusive SKINI patchbays wired to EDAC 3-Pin connectors. Both self-contained (most common) and harnessed cable versions are available.

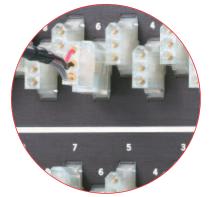
#### **3-PIN HIGHLIGHTS**

- Incorporates a unisex crimp-able EDAC/ELCO pin.
- Quick reconfiguration of jacks via the connector.
- Choose a self-contained unit (most common) or harnessed cable version at no additional cost.
- 4-foot cables are standard. Longer cables available.
- All units are supplied with mating connectors and pins.
- EDAC crimp tool available for crimping your pins. (See page 11.)

#### 1/4" MAXI TO 3-PIN

EO: EVERYTHING OUT		HN: HALF-NORMALLED	
CONFIGURATION	Order No.	CONFIGURATION	Order No.
2x24x1RU	not available	2x24x1RU*	WEP-HN-C-24-N-1-D
2x24x2RU	WEP-EO-C-24-N-2-D	2x24x2RU	WEP-HN-C-24-N-2-D
2x26x1RU	not available	2x26x1RU	WEP-HN-C-26-N-1-D
2x26x2RU	WEP-EO-C-26-N-2-D	2x26x2RU	WEP-HN-C-26-N-2-D
2x32x1RU	not available	2x32x1RU	WEP-HN-C-32-N-1-D
2x32x2RU	WEP-EO-C-32-N-2-D	2x32x2RU	WEP-HN-C-32-N-2-D
FN: FULL-NOR	MALLED	NN: NON-NORMALLED	
CONFIGURATION	Order No.	CONFIGURATION	Order No.
2x24x1RU	WEP-FN-C-24-N-1-D	2x24x1RU	WEP-NN-C-24-N-1-D
2x24x2RU	WEP-FN-C-24-N-2-D	2x24x2RU	WEP-NN-C-24-N-2-D
2x26x1RU	WEP-FN-C-26-N-1-D	2x26x1RU	WEP-NN-C-26-N-1-D
2x26x2RU	WEP-FN-C-26-N-2-D	2x26x2RU	WEP-NN-C-26-N-2-D
2x32x1RU	WEP-FN-C-32-N-1-D	2x32x1RU	WEP-NN-C-32-N-1-D
2x32x2RU	WEP-FN-C-32-N-2-D	2x32x2RU	WEP-NN-C-32-N-2-D
N = Grounds not bussed. Replace with B in order number for bussed grounds.			

\*Most common product



Quickly reconfigure jacks at the connector.

#### **3-PIN NORMALLING**

- EO=Tip, Ring, Sleeve and normals brought out to connectors, everything out.
- FN = Tip, Ring, Sleeve only out to connectors, full-normalled at jacks.
- HN=Tip, Ring, Sleeve only out to connectors, half-normalled at jacks.
- NN=Tip, Ring, Sleeve only out to connectors, non-normalled at jacks.

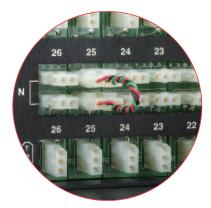
#### .172" MINI TO 3-PIN

FN: FULL-NORMALLED		
CONFIGURATION	Order No.	
2x48x1RU 2x48x2RU	WEP-FN-C-48- <mark>N</mark> -1-D WEP-FN-C-48- <mark>N</mark> -2-D	
HN: HALF-NORM	IALLED	
CONFIGURATION	Order No.	
2x48x1RU	WEP-HN-C-48-N-1-D	
2x48x2RU*	WEP-HN-C-48-N-2-D	
NN: NON-NORMALLED		
CONFIGURATION	Order No.	
2x48x1RU 2x48x2RU	WEP-NN-C-48 <mark>-N</mark> -1-D WEP-NN-C-48 <mark>-N</mark> -2-D	

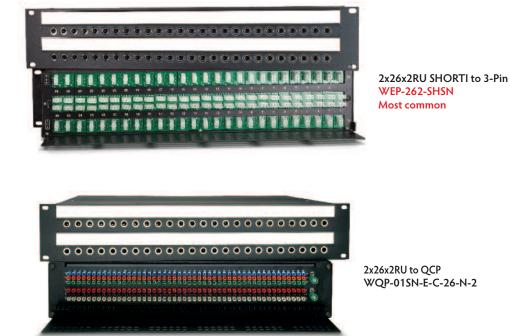
\*Most common product

P atchbays with sleeve-normalling jacks are more essential these days, due to increased use of condenser microphones (which require a constant power supply). These microphones receive their required DC power supply through the balanced audio signal lines and the ground line of the microphone cord. Voltage is applied to both the hot(+) and cold(-) wires, and is returned to the power supply by the shield (ground) wire. This method of supplying power to a microphone is known as phantom power.

When making a connection requiring phantom power through a normalled patchbay, you need to provide that channel with a discrete, normalled ground path as well. During unpatched operation, you have to normal the sleeve of the source to the sleeve of the destination jack to maintain a complete power circuit, since the sleeve returns the DC voltage to the power supply. When patched, all three normal contacts must be broken to avoid directing that channel's phantom power to multiple sources.



Detail view of WEP-262-SHSN backplate.



#### SLEEVE NORMALLING HIGHLIGHTS

#### SHORTI

- 2x26x2RU to 3-Pin EDAC connectors with Tip, Ring, Sleeve, and Tip normal, Ring normal, and Sleeve normal brought out.
- Mating connectors and pins and prewired sleeve-normalling jumpers supplied.

#### PUNCHDOWN

• Available in either 2x24, 2x26, or 2x48 wired to ADC QCP punchdown backplates.

1/4" LONG-FRAME TO<br/>SELF-CONTAINED QCPEOSN: Everything Out - Sleeve NormalCONFIGURATIONORDER NO.2x24x2RUWQP-01SN-E-C-24-N-22x26x2RUWQP-01SN-E-C-26-N-2

.172" MINI TO QCP (2X48) FNSN: TRS out only -Sleeve Normal Internally at Jack CONFIGURATION ORDER NO. 2x48x2RU WQP-06SN-P-C-48-N-2 (self-contained) 2x48x2RU WQP-06SN-P-H4-48-N-2 (4-foot harness)

# 1/4" LONG-FRAME TO 3-PIN SHORTI CONFIGURATION ORDER NO. 2x26x2RU\* WEP-262-SHSN (Includes mating connectors, pins, and normalling jumpers)

\*Most common product

# WIRED OPTIONS



2x48x1RU 1718W-HN-48-1RU Most common

### **50-PIN AMP**

Most commonly used in patching for intercom systems. Tip and Ring only out to the 50-pin amp connectors, half normalled at jacks, bussed grounds.



2x48x1RU WSP-802F-S-48-N-1

#### **STUB ENDS**

With Stub Ends (pigtails), either you or we can provide the connections at the other end. Although typically supplied with a 6-foot cable, longer cabling is also available.

#### HIGHLIGHTS

- For cabling over 12 feet we typically use a multi-conductor snake cable.
- We can prewire XLRs, 297 plugs, or whatever connectors you require on the ends of your stub end cable(s).

1/4" LONG-FRAME		
CONFIGURATION	Order No.	
2x24x1RU	1811W-HN-24-1RU	
2x25x1RU	1811W-HN-25-1RU	
.172" MINI		
CONFIGURATION	Order No.	
2x48x1RU*	1718W-HN-48-1RU	
2x48x2RU	1718W-HN-48-2RU	
2x50x1RU	1718W-HN-50-1RU	
2x50x2RU	1718W-HN-50-2RU	

\*Most common product

CONFIGURATION	Order No.				
2x24 EO	WSP-401-S-24-N-1				
2x24 FN	WSP-403F-S-24-N-1				
2x24 HN	WSP-403H-S-24-N-1				
2x24 NN	WSP-403N-S-24- <mark>N-1</mark>				
2x26 EO	WSP-401-S-26-N-1				
2x26 FN	WSP-403F-S-26-N-1				
2x26 HN	WSP-403H-S-26-N-1				
2x26 NN	WSP-403N-S-26- <mark>N-1</mark>				
2x32 EO	WSP-601-S-32-N-1				
2x32 FN	WSP-602F-S-32-N-1				
2x32 HN	WSP-602H-S-32-N-1				
2x32 NN	WSP-602N-S-32-N-1				
2x48 EO	WSP-801-S-48- <mark>N-1</mark>				
2x48 FN	WSP-802F-S-48-N-1				
2x48 HN	WSP-802H-S-48-N-1				
2x48 NN	WSP-802N-S-48- <mark>N-1</mark>				
N = Grounds not bussed. Replace with B					

a order number for bussed grounds.
 1 = One Rack-Unit (1RU) front panel.
 Replace with 2 for 2RU front panel.

CONFIGURATION

2x26 EO

2x48 FN 2x48 HN



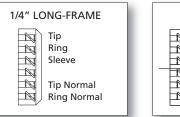
2x48x2RU WKP-HN-SC-48-N-2

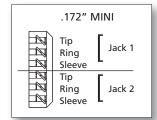
### SHORTI TO KRONE BLOCKS

A cost-effective alternative punchdown system.

#### HIGHLIGHTS

- Available only in 2RU (3½").
- Wiring requires the Krone Punch-down Tool (Order No. KPT-Tool).
- You can wire your panel using AWG 22, 24, or 26 solid or stranded wire.
- We recommend using the same AWG wire type on each terminal. (Max. two wires per terminal.)
- Gas-tight connections.
- Silver-plated contacts.



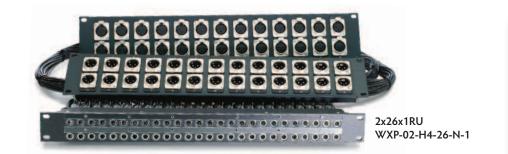


Order No.

WKP-EO-SC-26-N-2 WKP-FN-SC-48-N-2

WKP-HN-SC-48-N-2





# PATCHBAYS TO XLR

A great way to tie in all those XLR cables via a patchbay.

Configuration	Order No.				
2x24x1RU FN	WXP-02-H4-24- <mark>N-1</mark>				
2x24x1RU HN	WXP-03-H4-24- <mark>N-1</mark>				
2x26x1RU FN	WXP-02-H4-26- <mark>N-1</mark>				
2x26x1RU HN	WXP-03-H4-26- <mark>N-1</mark>				
2x32x1RU FN	WXP-22-H4-32- <mark>N-1</mark>				
2x32x1RU HN	WXP-23-H4-32- <mark>N-1</mark>				
2x48x1RU FN	WXP-06-H4-48- <mark>N-1</mark>				
2x48x1RU HN	WXP-07-H4-48- <mark>N</mark> -1				
N = Grounds not bussed. Replace with B in order number for bussed grounds. 1= One Rack-Unit (1RU) front panel. Replace with 2 for 2RU front panel. FN denotes full normalled.					
HN denotes half normalled.					



CONFIGURATION	Order No.
2x24x2RU FN 2x24x2RU HN	SWP-478-24F- <mark>N</mark> SWP-478-24H-N
N = Grounds not b in order number fo	ussed. Replace with B r bussed grounds.

# **MAXI WITH BARRIER STRIPS**

Tip, Ring, and Sleeve only are brought out to the barrier strips. Normals strapped internally.



# PATCHBAYS TO CANNON DL96R

Available in two rows of 48 MINI jacks mounted on a 1RU (1<sup>3</sup>/<sub>4</sub>") panel, with Tip, Ring, and Sleeve only out to the DL96R connectors. Any normalling type can be supplied.

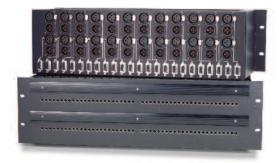
CONFIGURATION	Order No.
2x48x1RU FN 2x48x1RU HN	WP-FN-48 <mark>-N</mark> -1-DL96R WP-HN-48- <mark>N</mark> -1-DL96R
	bussed. Replace with B or bussed grounds.

CA	NNON	DL96R	PINOUT
CA JACK 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16.	TIP(+) A1 A2 A3 A4 A5 A6 A7 A8 D1 D2 D3 D4 D5 D6 D7 D8	Ring(-) B1 B2 B3 B4 B5 B6 B7 B8 E1 E2 E3 E4 E5 E6 E7 E8	
8.	A8	88	C8
9.	D1	E1	F1
10.	D2	E2	F2
11.	D3	E3	G1
12.	D4	E4	G2
13.	D5	E5	G7
14.	D6	E6	G8
15.	D7	E7	F7
16.	D8	E8	F8
17.	L1	K1	J1
18.	L2	K2	J2
19.	L3	K3	H1
20.	L4	K4	H2
21.	L5	K5	H7
22.	L6	K6	H8
23.	L7	K7	J7
24.	L8	K8	J8
25.	P1	N1	M1
26.	P2	N2	M2



# CUSTOM? NO PROBLEM.

No one in the industry has a better reputation than we do for making your patchbay the way you want it.



COMBINATION XLR AND D-SUB

Not so standard, this 3RU (5%") panel has a combination of XLRs and D-sub 9-pin connectors. This is truly custom.



#### **MULTIPLE CONNECTORS**

This 8x32 MINI panel was made for an OEM of audio consoles here in the U.S. We put a number of different pair counts and connector types on the unit, to allow plugging directly into the console for easy installation.



#### **INTERCONNECT BACKPLATE**

We've taken the ADC backplate and wired it to D-sub 37-pin connectors so that the end user can plug right into a router and have all the terminations easily accessible for punching down.

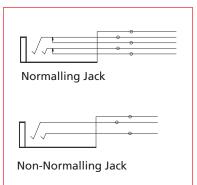


# This 2x32 2RU has Row 1 to a 90-pin EDAC and Row 2 off to a loose multiconductor snake cable with XLR connectors. Normalling on this unit is internal at the jacks, another example of a custom unit supplied to our customer's specifications.

0) 603/446-3335

# OCCOSSION NORMALLING and GROUNDING

ormalling is a wiring scheme whereby a signal path is established from one audio device to another without the use of a patch cord. This is known as the "normal path." The normal path between a pair of jacks is most commonly wired internally from



the source jack (Row 1) to the destination jack (Row 2). All of our jacks are available in two types: jacks with normal switches (normalling jacks), and jacks without normal switches (nonnormalling jacks). Plugging a patch cord into

one of the normalling jacks

will break the normal switch connections, allowing the user to reroute the signal path through the patch cord. When the patch cord is unplugged from the jack, the normal path is restored. Normal paths may be installed all at once or may be field-configured as the equipment changes.

# We can also meet your grounding requirements in a number of different ways:

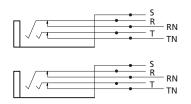
**Grounds Not Bussed (N).** All jacks are isolated and each independent ground is brought out to rear termination.

**Grounds Bussed (B).** All jacks are bussed together, making a common ground. This common ground is then routed to a binding post at the rear of the panel.

**Grounds Vertically Strapped (GVS).** The grounds of each vertical jack-pair are connected. Horizontally, the grounds of these vertical jack-pairings are still isolated. This allows the user to maintain a solid ground path from source to destination.

**Grounded to Specific Application.** If you need one row bussed and the other not, or have another method you need implemented, we will accommodate to meet your requirements.

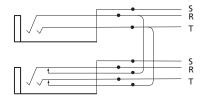
#### EVERYTHING OUT (TYPE 1)



An "Everything Out" signal path is the most flexible of all normalling types. Instead of wiring the normal paths internally, all contacts (TRS and normals) from both top and bottom jacks are brought out to separate rear termination points, giving the user full control of the normalling scheme at the rear of the panel.

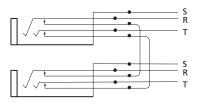
#### HALF-NORMALLED

(TYPE 2)



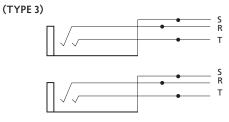
A "Half-Normalled" signal path occurs when the Tip(+) and Ring(-) connections of a non-normalling jack (source) are wired respectively to the Tip Normal and Ring Normal connections of a normalling jack (destination). Plugging a patch cord into the source jack (Row 1) allows the user to monitor the source signal without interrupting the normal path. The normal path can be interrupted and redirected only by inserting a plug into the destination jack (Row 2).

#### FULL-NORMALLED (TYPE 1)



A "Full-Normalled" signal path occurs when a pair of normalling jacks are wired together at the normals. This normal signal path can be interrupted and redirected by plugging a patch cord into either jack.

#### NON-NORMALLED



A "Non-Normalled" signal path occurs when both the source and destination jacks are non-normalling jacks. Since there are no normal connections on the jacks, there can be no normal path; the signal moves straight through and cannot be interrupted via the insertion of a patch cord.

www.patchbays.com (21

# **RUBBER-JACKET AUDIO PATCH CORDS**

These cost-effective patch cords have nickel-plated plugs and are available for both 1/4" Long-Frame and .172" MINI (Bantam/TT).

# PATCH CORD HOLDERS

These solid and durable patch cord holders are available for Audio 1/4" Long-Frame and MINI, and Video Patch Cords. They will hold up to 50 patch cords each, tilted at a convenient angle for easy access.

RUBBER-JACKET PATCH CORDS							
.172″ M	IINI						
COLOR	18″	24″	36″				
Red	TTR-18	TTR-24	TTR-36				
Black	TTB-18	TTB-24	TTB-36				
1/4″ LO	1/4" LONG-FRAME						
Color	18″	24″	36″				
Red	LFR-18	LFR-24	LFR-36				
Black	LFB-18	LFB-24	LFB-36				

PATCH CORD	HOLDERS
MAXI (1/4") MINI (TT) Video	PCH-X PCH-N VPCH-X



# **HOLE PLUGS**

For panels with and without jacks installed.

# PATCHBAY CLEANING TOOLS

These Vertigo burnisher and injector tools are used for cleaning the audio jacks in your jack fields. Extreme caution must be used when cleaning with these tools.

PANEL HOLE PLUGS		PATCHBAY CLEANING TOO	DLS	Hole Plugs
1/4" Long-Frame (MAXI) 1/4" SKINI .172" MINI (TT) JACK HOLE PLUGS 1/4" Long-Frame (MAXI)	PHP-1 PHPS-1 PHPM-1 JHP-1	1/4" Long-Frame Burnisher 1/4" Long-Frame Injector .172" MINI/TT Burnisher .172" MINI/TT Injector CAIG D5 Spray	MAXI-BT MAXI-IT MINI-BT MINI-IT D5-CAN	
1/4" SKIŇI .172" MINI (TT)	JHPS-1 JHPM-1			
EDAC CONNE	CTOR	5		

Patchbay Cleaning Tools

Insert pin number 38, 56, 90 or 120 to complete the order number

EDAC CONNECTORS				
Configuration Female FN Male FN Female AS Male AS Shell	Order F M F M	No. FN FN AS AS SH		
FN = fixed nut; AS = actuating screw; Female (recessed pins); Male (exposed pins)				







M90AS



<u>AUDIO PATCH CORDS</u>

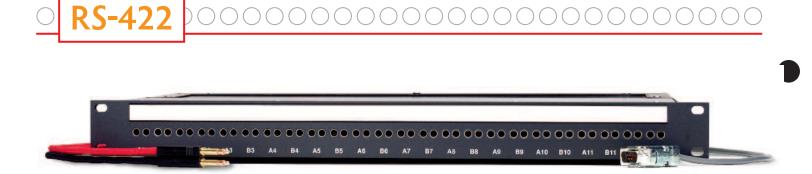
# 1/4" AND MINI AUDIO PATCHCORDS

Our cords feature a woven DuPont nylon outer braid. Cords are reinforced 6 inches back from each plug end for extra strength. All cords are  $110\Omega$  digital ready. We offer four colors: red, black, gray, and green. Custom colors also available.

1/4" LONG BRASS PLU							
Color	1′	18″	2'	3′	4'	6′	9'
Red	611A	618A	612A	613A	614A	616A	619A
Black	611B	618B	612B	613B	614B	616B	619B
Gray	611C	618C	612C	613C	614C	616C	619C
Green	611D	618D	612D	613D	614D	616D	619D
NICKEL-PL		GS*					
Color	1'	18″	2'	3′	4'	6′	9'
Red	621A	628A	622A	623A	624A	626A	629A
Black	621A	628B	622A	623B	624B	626B	629B
	621C	628C	622C	623C	624C	626C	629C
Gray Green	621C	628C	622C	623D	624C	626D	629D
					0240	0200	0290
1/4" TO M							
COLOR	1′	18″	2'	3′	4'	6′	9′
Red	631A	638A	632A	633A	634A	636A	639A
Black	631B	638B	632B	633B	634B	636B	639B
Gray	631C	638C	632C	633C	634C	636C	639C
Green	631D	638D	632D	633D	634D	636D	639D
1/4" TO FE		R (Nickel-r	lated only	y)*			
COLOR	1′	18″	2'	3'	4'	6′	9′
Red	641A	648A	642A	643A	644A	646A	649A
Black	641B	648B	642B	643B	644B	646B	649B
Gray	641C	648C	642C	643C	644C	646C	649C
Green	641D	648D	642D	643D	644D	646D	649D
_							
.172" MINI BRASS PLU							
Color	1'	18″	2′	3′	4′	6′	9′
		18″ 818A	2' 812A	3′ 813A	4' 814A	6′ 816A	9′ 819A
Color	1′						
Color Red	1′ 811A	818A	812A	813A	814A	816A	819A
Color Red Black	1′ 811A 811B	818A 818B	812A 812B	813A 813B	814A 814B	816A 816B	819A 819B
Color Red Black Gray Green	1' 811A 811B 811C 811D	818A 818B 818C 818D	812A 812B 812C	813A 813B 813C	814A 814B 814C	816A 816B 816C	819A 819B 819C
COLOR Red Black Gray Green NICKEL-PL	1' 811A 811B 811C 811D ATED PLU	818A 818B 818C 818D GS*	812A 812B 812C 812D	813A 813B 813C 813D	814A 814B 814C 814D	816A 816B 816C 816D	819A 819B 819C 819D
COLOR Red Black Gray Green NICKEL-PL. COLOR	1' 811A 811B 811C 811D ATED PLU 1'	818A 818B 818C 818D GS* 18"	812A 812B 812C 812D 2'	813A 813B 813C 813D 3'	814A 814B 814C 814D 4'	816A 816B 816C 816D	819A 819B 819C 819D 9'
COLOR Red Black Gray Green NICKEL-PL. COLOR Red	1' 811A 811B 811C 811D ATED PLU 1' 821A	818A 818B 818C 818D GS* 18" 828A	812A 812B 812C 812D 2' 822A	813A 813B 813C 813D 3' 823A	814A 814B 814C 814D 4' 824A	816A 816B 816C 816D 6' 826A	819A 819B 819C 819D 9' 829A
COLOR Red Black Gray Green NICKEL-PL COLOR Red Black	1' 811A 811B 811C 811D ATED PLU 1' 821A 821B	818A 818B 818C 818D GS* 18" 828A 828B	812A 812B 812C 812D 2' 822A 822B	813A 813B 813C 813D 3' 823A 823B	814A 814B 814C 814D 4' 824A 824B	816A 816B 816C 816D 6' 826A 826B	819A 819B 819C 819D
COLOR Red Black Gray Green NICKEL-PL. COLOR Red Black Gray	1' 811A 811B 811C 811D ATED PLU 1' 821A 821B 821C	818A 818B 818C 818D <b>GS*</b> 18" 828A 828B 828C	812A 812B 812C 812D 2' 822A 822B 822C	813A 813B 813C 813D 3' 823A 823B 823C	814A 814B 814C 814D 4' 824A 824B 824C	816A 816B 816C 816D 6' 826A 826B 826C	819A 819B 819C 819D 9' 829A 829B 829C
COLOR Red Black Gray Green NICKEL-PL COLOR Red Black Gray Green	1' 811A 811B 811C 811D ATED PLU 1' 821A 821B 821C 821D	818A 818B 818C 818D 65* 18" 828A 828B 828C 828D	812A 812B 812C 812D 2' 822A 822B 822C 822D	813A 813B 813C 813D 3' 823A 823B 823C 823D	814A 814B 814C 814D 4' 824A 824B	816A 816B 816C 816D 6' 826A 826B	819A 819B 819C 819D
COLOR Red Black Gray Green NICKEL-PLL COLOR Red Black Gray Green MINI TO M	1' 811A 811B 811C 811D ATED PLU 1' 821A 821B 821C 821D 1ALE XLR (	818A 818B 818C 818D GS* 18" 828A 828B 828C 828D (Nickel-pla	812A 812B 812C 812D 822A 822B 822C 822D ated only)	813A 813B 813C 813D 3' 823A 823B 823C 823D	814A 814B 814C 814D 4' 824A 824A 824B 824C 824D	816A 816B 816C 816D 6' 826A 826B 826C 826D	819A 819B 819C 819D 9' 829A 829B 829C 829D
COLOR Red Black Gray Green NICKEL-PL COLOR Red Black Gray Green MINI TO M COLOR	1' 811A 811B 811C 811D ATED PLUU 1' 821A 821B 821C 821D 1ALE XLR ( 1'	818A 818B 818C 818D GS* 18" 828A 828B 828C 828D (Nickel-pla 18"	812A 812B 812C 812D 822A 822B 822C 822D ated only) 2'	<ul> <li>813A 813B 813C 813D</li> <li>3' 823A 823B 823C</li> <li>* 3'</li> </ul>	814A 814B 814C 814D 4' 824A 824B 824C 824D 4'	816A 816B 816C 816D 6' 826A 826B 826C 826D 6'	819A 819B 819C 819D 9' 829A 829B 829C 829D 9'
COLOR Red Black Gray Green NICKEL-PL COLOR Red Black Gray Green MINI TO M COLOR Red	1' 811A 811B 811C 811D ATED PLUU 1' 821A 821C 821D 1ALE XLR ( 1' 831A	818A 818B 818C 818D <b>GS*</b> 18" 828A 828C 828D (Nickel-pla 18" 838A	812A 812B 812C 812D 2' 822A 822B 822C 822D ated only) 2' 832A	813A 813B 813C 813D 3' 823A 823B 823C 823D * 3' 833A	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A	816A 816B 816C 816D 6' 826A 826C 826D 6' 836A	819A 819B 819C 819D 9' 829A 829B 829C 829D 9' 839A
COLOR Red Black Gray Green NICKEL-PL COLOR Red Black Gray Green MINI TO M COLOR Red Black	1' 811A 811B 811C 811D ATED PLUU 1' 821A 821D 1ALE XLR ( 1' 831A 831B	818A 818B 818C 818D <b>GS*</b> 18" 828A 828B 828C 828D (Nickel-pla 18" 838A 838B	812A 812B 812C 812D 2' 822A 822B 822C 822D ated only) 2' 832A 832B	<ul> <li>813A 813B 813C 813D</li> <li>3' 823A 823B 823C 823D</li> <li>*</li> <li>*</li> <li>3' 833A 833B</li> </ul>	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A 834A	816A 816B 816C 816D 6' 826A 826B 826C 826D 6' 836A 836B	819A 819B 819C 819D 9' 829A 829B 829C 829D 9' 839A 839B
COLOR Red Black Gray Green NICKEL-PL. COLOR Red Black Gray Green MINI TO M COLOR Red Black Gray	1' 811A 811B 811C 811D ATED PLU 1' 821A 821B 821C 821D IALE XLR ( 1' 831A 831B 831C	818A 818B 818C 818D <b>GS*</b> 18" 828A 828B 828C 828D (Nickel-pla 18" 838A 838B 838C	812A 812B 812C 812D 2' 822A 822B 822C 822D ated only) 2' 832A 832B 832C	<ul> <li>813A 813B 813C 813D</li> <li>3' 823A 823B 823C</li> <li>3' 833A 833B 833C</li> </ul>	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A 834A 834B 834C	816A 816B 816C 816D 6' 826A 826B 826C 826D 6' 836A 836B 836C	819A 819B 819C 819D 9' 829A 829B 829C 829D 9' 839A 839B 839C
COLOR Red Black Gray Green NICKEL-PL. COLOR Red Black Gray Green MINI TO M COLOR Red Black Gray Green	1' 811A 811B 811C 811D ATED PLU 1' 821A 821D 1ALE XLR ( 1' 831A 831B 831C 831D	818A 818B 818C 818D <b>GS*</b> 828A 828C 828D (Nickel-pla 18" 838A 838B 838C 838D	812A 812B 812C 812D 2' 822A 822D 822C 822D 2' 832A 832B 832C 832D	<ul> <li>813A 813B 813C 813D</li> <li>3' 823A 823B 823C 823D</li> <li>*</li> <li>*</li> <li>3' 833A 833B 833C 833D</li> </ul>	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A 834A	816A 816B 816C 816D 6' 826A 826B 826C 826D 6' 836A 836B	819A 819B 819C 819D 9' 829A 829B 829C 829D 9' 839A 839B
COLOR Red Black Gray Green NICKEL-PL. COLOR Red Black Gray Green MINI TO M COLOR Red Black Gray Green	1' 811A 811B 811C 811D ATED PLU 1' 821A 821B 821C 821D IALE XLR ( 1' 831A 831B 831C 831D EMALE XL	818A 818B 818C 818D <b>GS*</b> 18" 828A 828B 828C 828D (Nickel-pla 18" 838A 838B 838C 838D <b>R</b> (Nickel-	812A 812B 812C 812D 2' 822A 822B 822C 822D ated only) 2' 832A 832B 832C 832D plated onl	813A 813B 813C 813D 823A 823B 823C 833A 833A 833B 833C 833D ly)*	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A 834A 834A 834C 834D	816A 816B 816C 816D 6' 826A 826C 826C 826D 6' 836A 836B 836C 836D	819A 819B 819C 819D 9' 829A 829C 829D 9' 839A 839B 839C 839D
COLOR Red Black Gray Green NICKEL-PL. COLOR Red Black Gray Green MINI TO N COLOR Red Black Gray Green MINI TO FI COLOR	1' 811A 811B 811C 811D ATED PLU 1' 821A 821B 821C 821D IALE XLR ( 1' 831A 831B 831C 831D EMALE XL 1'	818A 818B 818C 818D <b>GS*</b> 18" 828A 828C 828D (Nickel-pla 18" 838A 838B 838C 838D <b>R (Nickel-</b> 18"	812A 812B 812C 812D 2' 822A 822C 822D ated only) 2' 832A 832B 832C 832D plated onl 2'	<ul> <li>813A 813B 813C 813D</li> <li>3' 823A 823D</li> <li>3' 833A 833B 833C 833D</li> <li>by)* 3'</li> </ul>	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A 834A 834B 834C 834D 4'	816A 816B 816C 816D 6' 826A 826C 826D 6' 836A 836B 836C 836D 6'	819A 819B 819C 819D 9' 829A 829C 829D 9' 839A 839B 839C 839D 9'
COLOR Red Black Gray Green NICKEL-PL. COLOR Red Black Gray Green MINI TO N COLOR Red Black Gray Green MINI TO FI COLOR Red	1' 811A 811B 811C 811D ATED PLU 1' 821A 821B 821C 821D TALE XLR ( 1' 831A 831B 831C 831D EMALE XL 1' 841A	818A 818B 818C 818D <b>GS*</b> 18″ 828A 828C 828D (Nickel-pla 18″ 838A 838A 838A 838C 838D <b>R</b> (Nickel- 18″ 848A	812A 812B 812C 812D 2' 822A 822C 822D ated only) 2' 832A 832B 832C 832D plated onl 2' 842A	813A 813B 813C 813D 3' 823A 823D 823C 833A 833B 833C 833D Iy)* 3' 843A	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A 834B 834C 834D 4' 834A	816A 816B 816C 816D 6' 826A 826C 826D 6' 836A 836B 836C 836D 6' 846A	819A 819B 819C 819D 9' 829A 829C 829D 9' 839A 839B 839C 839D 9' 849A
COLOR Red Black Gray Green NICKEL-PL. COLOR Red Black Gray Green MINI TO N COLOR Red Black Gray Green MINI TO FI COLOR Red Black	1' 811A 811B 811C 811D ATED PLU 1' 821A 821B 821C 821D IALE XLR ( 1' 831A 831B 831C 831D EMALE XL 1' 841A 841B	818A 818B 818C 818D <b>GS*</b> 18″ 828A 828C 828D (Nickel-pla 18″ 838A 838C 838D <b>R</b> (Nickel- 18″ 848A 848A	812A 812B 812C 812D 2' 822A 822C 822D ated only) 2' 832A 832B 832C 832D plated onl 2' 842A 842B	813A 813B 813C 813D 3' 823A 823B 823C 833A 833A 833B 833C 833D ly)* 3' 843A 843B	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A 834B 834C 834D 4' 834A 834D 4' 834A	816A 816B 816C 816D 6' 826A 826B 826C 826D 6' 836A 836B 836C 836D 6' 846A 846B	819A 819B 819C 819D 9' 829A 829C 829D 9' 839A 839B 839C 839D 9' 849A 849B
COLOR Red Black Gray Green NICKEL-PL COLOR Red Black Gray Green MINI TO N COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green	1' 811A 811B 811C 811D ATED PLUU 1' 821A 821B 821C 821D IALE XLR ( 1' 831A 831D EMALE XL 1' 841A 841B 841C	818A 818B 818C 818D <b>GS*</b> 18" 828A 828C 828D (Nickel-pla 18" 838A 838C 838D <b>R (Nickel-</b> 18" 848A 848B 848C	812A 812B 812C 812D 2' 822A 822C 822D ated only) 2' 832A 832B 832C 832D plated onl 2' 842A 842B 842C	813A 813B 813C 813D 3' 823A 823B 823C 823D * 3' 833A 833B 833C 833D by)* 3' 843A 843B 843C	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A 834B 834C 834D 4' 844A 844B	816A 816B 816C 816D 6' 826A 826B 826C 826D 6' 836A 836C 836D 6' 846A 846B 846C	819A 819B 819C 819D 9' 829A 829C 829D 9' 839A 839C 839D 9' 849A 849B 849C
COLOR Red Black Gray Green NICKEL-PL COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green	1' 811A 811B 811C 811D ATED PLUU 1' 821A 821B 821C 821D IALE XLR ( 1' 831A 831B 831C 831D EMALE XL 1' 841A 841B 841C 841D	818A 818B 818C 818D <b>GS*</b> 18" 828A 828C 828D (Nickel-pla 18" 838A 838C 838D <b>R (Nickel-</b> 18" 848A 848B 848C 848D	812A 812B 812C 812D 2' 822A 822C 822D ated only) 2' 832A 832C 832D plated onl 2' 842A 842C 842D	813A 813B 813C 813D 3' 823A 823B 823C 823D * 3' 833A 833C 833D by)* 3' 843A 843B 843C 843D	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A 834B 834C 834D 4' 834A 834D 4' 834A	816A 816B 816C 816D 6' 826A 826B 826C 826D 6' 836A 836B 836C 836D 6' 846A 846B	819A 819B 819C 819D 9' 829A 829C 829D 9' 839A 839B 839C 839D 9' 849A 849B
COLOR Red Black Gray Green NICKEL-PL COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green	1' 811A 811B 811C 811D ATED PLUU 1' 821A 821B 821C 821D IALE XLR ( 1' 831A 831D IALE XLR ( 1' 831A 831D EMALE XL 1' 841A 841B 841C 841D L, 5/16" (.3)	818A 818B 818C 818D <b>GS*</b> 18" 828A 828C 828D (Nickel-pla 18" 838A 838D 838D <b>R (Nickel-</b> 18" 848A 838D <b>R (Nickel-</b> 18" 848A 848D 848D 848D 848D	812A 812B 812C 812D 2' 822A 822C 822D ated only) 2' 832A 832B 832C 832D plated onl 2' 842A 842C 842D ERS (BRAS	813A 813B 813C 813D 3' 823A 823B 823C 823D * 3' 833A 833C 833D by)* 3' 843A 843B 843C 843D 55 PLUGS)	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A 834B 834C 834D 4' 844A 844B 844C 844D	816A 816B 816C 816D 6' 826A 826B 826C 826D 6' 836A 836C 836D 6' 846A 846B 846C 846D	819A 819B 819C 819D 9' 829A 829C 829D 9' 839A 839C 839D 9' 849A 849C 849D
COLOR Red Black Gray Green NICKEL-PL COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green MINI TO FI COLOR	1' 811A 811B 811C 811D ATED PLUU 1' 821A 821C 821D IALE XLR ( 1' 831A 831C 831D IALE XLR ( 1' 841A 841B 841C 841D L, 5/16" (.3	818A 818B 818C 818D <b>GS*</b> 18" 828A 828B 828C 828D (Nickel-pla 18" 838A 838C 838D <b>R (Nickel-</b> 18" 848A 848A 848A 848B 848C 848D <b>312) CENT</b> 18"	812A 812B 812C 812D 2' 822A 822B 822C 822D ated only) 2' 832A 832C 832D plated onl 2' 842A 842B 842C 842D ERS (BRAS 2'	<ul> <li>813A 813B 813C</li> <li>813D</li> <li>3' 823A 823B 823C</li> <li>823C</li> <li>833A 833C</li> <li>833C</li> <li>833C</li> <li>843A 843A 843B 843C</li> <li>843C</li> <li>843C</li> <li>843C</li> <li>843C</li> <li>843D</li> <li>843C</li> <li>843D</li> <li>843C</li> <li>843D</li> <li>843D</li> <li>843D</li> <li>843D</li> </ul>	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A 834A 834B 834C 834D 4' 844A 844B 844C 844D 4'	816A 816B 816C 816D 6' 826A 826B 826C 826D 6' 836A 836B 836C 836D 6' 846A 846B 846C 846D 6'	819A 819B 819C 819D 9' 829A 829B 829C 829D 9' 839A 839C 839D 9' 849A 849B 849C 849D 9'
COLOR Red Black Gray Green NICKEL-PL COLOR Red Black Gray Green MINI TO M COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green	1' 811A 811B 811C 811D ATED PLUY 1' 821A 821C 821D IALE XLR ( 1' 831A 831C 831D EMALE XLR 1' 841A 841B 841C 841D L, 5/16" (.3)	818A 818B 818C 818D <b>GS*</b> 18" 828A 828B 828C 828D (Nickel-pla 18" 838A 838B 838C 838D <b>R (Nickel-</b> 18" 848A 848C 848D <b>R 48B</b> 848C 848D <b>312) CENT</b> 18" 858A	812A 812B 812C 812D 2' 822A 822B 822C 822D ated only) 2' 832A 832C 832D plated onl 2' 842A 842C 842D ERS (BRAS 2' 852A	<ul> <li>\$13A \$13B \$13C \$13D</li> <li>\$13D \$23A \$23B \$23C \$23C \$23C \$23C \$23C \$23C \$23C \$23C</li></ul>	814A 814B 814C 814D 4' 824A 824B 824C 824D 4' 834A 834C 834D 4' 834A 834C 834D 4' 844A 844B 844C 844D	816A 816B 816C 816D 6' 826A 826B 826C 826D 6' 836A 836B 836C 836D 6' 846A 846B 846C 846D 6' 856A	819A 819B 819C 819D 9' 829A 829B 829C 829D 9' 839A 839C 839D 9' 849A 849A 849B 849C 849D 9' 859A
COLOR Red Black Gray Green NICKEL-PL COLOR Red Black Gray Green MINI TO M COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green	1' 811A 811B 811C 811D ATED PLUU 1' 821A 821A 821D IALE XLR ( 1' 831A 831C 831D EMALE XLL 1' 841A 841B 841C 841D L, 5/16" (.3 1' 851A 851B	818A 818B 818C 818D <b>GS*</b> 18" 828A 828B 828C 828D <b>(Nickel-pla</b> 18" 838A 838B 838C 838D <b>R (Nickel-</b> 18" 848A 848B 848C 848D <b>B12) CENT</b> 18" 858A 858B	812A 812B 812C 812D 2' 822A 822D 822D ated only) 2' 832A 832C 832D plated onl 2' 842A 842D plated onl 2' 842A 842C 842D ERS (BRAS 2' 852A 852B	<ul> <li>\$13A \$13B \$13C \$13D</li> <li>\$13D \$23A \$23B \$23C \$23D</li> <li>\$23A \$23B \$23C \$23D</li> <li>\$3' \$833A \$33B \$33C \$33D</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$100 \$100 \$100 \$100 \$100 \$100 \$100 \$10</li></ul>	814A 814B 814C 814D 4' 824A 824C 824D 4' 834A 834C 834D 4' 834A 834C 834D 4' 844A 844C 844D 4' 854A 854B	816A         816B         816C         816D         6'         826A         826C         826D         6'         836A         836D         6'         846A         846B         846C         846D         6'         856A	819A 819B 819C 819D 9' 829A 829B 829C 829D 9' 839A 839C 839D 9' 849A 849C 849D 9' 859A 859B
COLOR Red Black Gray Green NICKEL-PL. COLOR Red Black Gray Green MINI TO M COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green MINI TO FI COLOR Red Black Gray Green MINI DUAI COLOR Red Black Gray Green	1' 811A 811B 811C 811D ATED PLU 1' 821A 821D IALE XLR ( 1' 831A 831C 831D EMALE XLR 1' 841A 841C 841D L, 5/16" (.Ξ 1' 851A 851C	818A 818B 818C 818D <b>GS*</b> 18" 828A 828B 828C 828D (Nickel-pla 18" 838A 838B 838C 838D <b>R (Nickel-</b> 18" 848A 848B 848C 848D <b>B12) CENT</b> 18" 858A 858B 858C	812A 812B 812C 812D 2' 822A 822B 822C 822D ated only) 2' 832A 832C 832D plated onl 2' 842A 842C 842D ERS (BRAS 2' 852A 852C	<ul> <li>813A 813B 813C</li> <li>813D</li> <li>823A 823B 823C</li> <li>833A 833B 833C</li> <li>833C</li> <li>843A 843B</li> <li>843A</li> <li>843B</li> <li>843C</li> <li>843D</li> <li>853A</li> <li>853A</li> <li>853C</li> </ul>	814A 814B 814C 814D 4' 824A 824C 824D 4' 834A 834C 834D 4' 834A 834C 834D 4' 844A 844C 844D 4' 854A 854A	816A         816B         816C         816D         6'         826A         826C         826C         836A         836B         836C         836D         6'         846A         846D         6'         856A         856B         856B	819A 819B 819C 819D 9' 829A 829C 829C 839A 839C 839D 9' 849A 849B 849C 849D 9' 859A 859B 859C
Color Red Black Gray Green NICKEL-PL Color Red Black Gray Green MINI TO M Color Red Black Gray Green MINI TO FI Color Red Black Gray Green MINI TO FI Color Red Black Gray Green	1' 811A 811B 811C 811D ATED PLUU 1' 821A 821A 821D IALE XLR ( 1' 831A 831C 831D EMALE XLL 1' 841A 841B 841C 841D L, 5/16" (.3 1' 851A 851B	818A 818B 818C 818D <b>GS*</b> 18" 828A 828B 828C 828D <b>(Nickel-pla</b> 18" 838A 838B 838C 838D <b>R (Nickel-</b> 18" 848A 848B 848C 848D <b>B12) CENT</b> 18" 858A 858B	812A 812B 812C 812D 2' 822A 822D 822D ated only) 2' 832A 832C 832D plated onl 2' 842A 842D plated onl 2' 842A 842C 842D ERS (BRAS 2' 852A 852B	<ul> <li>\$13A \$13B \$13C \$13D</li> <li>\$13D \$23A \$23B \$23C \$23D</li> <li>\$23A \$23B \$23C \$23D</li> <li>\$3' \$833A \$33B \$33C \$33D</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$833A</li> <li>\$100 \$232 \$3' \$100 \$100 \$100 \$100 \$100 \$100 \$100 \$10</li></ul>	814A 814B 814C 814D 4' 824A 824C 824D 4' 834A 834C 834D 4' 834A 834C 834D 4' 844A 844C 844D 4' 854A 854B	816A         816B         816C         816D         6'         826A         826C         826D         6'         836A         836D         6'         846A         846B         846C         846D         6'         856A	819A 819B 819C 819D 9' 829A 829B 829C 829D 9' 839A 839C 839D 9' 849A 849C 849D 9' 859A 859B

\*Most common product





# **RS-422 SERIAL DATA PATCHBAY**

Four units available - 8, 12, 16 or 24 in and out.



RS-422-1U-16 8 in 8 out



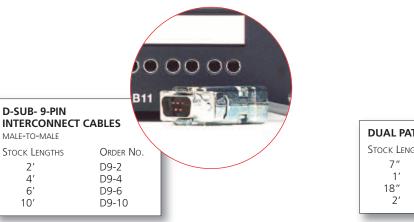
RS-422-2U-32 16 in 16 out



RS-422-1U-24 12 in 12 out



RS-422-2U-48 24 in 24 out



DUAL PATCH CO	RDS
Stock Lengths	Order No.
7″	857AB
1′	851AB
18″	858AB
2'	852AB
_	

 $) \cap ($ 

MALE-TO-MALE

2′

4′

6′ 10'

# BREAKOUT I/O MODULES



# **BREAKOUT MODULE PANELS**

Organize your audio cabling with our 2RU Breakout Panels. Mix and match any two modules that fit into one backplate.

DB25 female on rear of modules.



XLRF4M4DB25F



E3F8BNC



E3F8DB25F

DB25 (D-SUB) BREAKOUT MODULES DESCRIPTION 4-XLR Females & 4 XLR Males to 1-DB25F 8-XLR Females Combo's to 1-DB25F 8-XLR Males to 1-DB25F 8-E3F's to 1-DB25F

Order No. XLRF4M4DB25F XLRC8DB25F XLRM8DB25F E3F8DB25F

75Ω/110Ω CONVERTER BREAKOUT MC	DULES
DESCRIPTION	Order No.
8-BNC's to 1-DB25F	BNC8DB25F
4-BNC's to 4-Female XLRs	XLRF4BNC
4-BNC's to 4-Male XLRs	XLRM4BNC
8-E3F's to 8-BNC's	E3F8BNC

3-PIN BREAKOUT MODULES	
Description	Order No.
4-XLR Females and 4-XLR Males to 8-E3F	XLRF4M4E3F
8-XLR Females Combo's to 8-E3F	XLRC8E3F
8-XLR Males to 8-E3F	XLRM8E3F
3-PIN TO AMP CHAMP 50-PIN BREAKOUT	
Description	Order No.
25-E3Fs to 1-Amp 50-Pin	E3F25AMP50F
Miscellaneous	Order No.
19″ 2RU Backplate	2x2RU-BP

19" 2RU Backplate	2x2RU-E
Cover Blank	CBlank
Note: The XLR Female combo connectors accept	both Female XI

Note: The XLR Female combo connectors accept both Female XLRs or a 297 plug. The E3Fs denotes EDAC 3-Pin Female connectors.



# **VIDEO JACK INFORMATION**

e can accommodate all of your video patching needs with our selection of video panels and jacks. Shown on the next pages are our most common video panels. If your application requires a different panel layout or configuration, our technicians will work with you to design a panel that fits your application. We supply ADC, Canare, Kings, and Trompeter video jacks with our panels.

**Self-Normalling.** A self-normalling video jack internally routes a signal from one video device to another. Typically, BNC connectors are used with the rear source (input, Row 1), and rear destination (output, Row 2). On the front are standard video patch ports. The internal normal path runs from the rear source to the rear destination. The signal can be rerouted by inserting a patch cord into either front port. Removal of the patch cord returns the signal to the normal path (i.e., "self-normalled"). These video jacks are available so that, in a patched mode, the unused signal is either terminated to a characteristic impedance of  $75\Omega$ , or unterminated (open circuit).

**Termination.** Due to the broadband high-frequency signals used in serial digital circuits, serious consideration must be given to the proper termination of all unused signals (although there are some monitoring and special test functions that do not require termination). Proper termination of the high-frequency video signal cancels cable reactive components, improves return loss, minimizes stubbing and antenna effects, and also helps in meeting RFI/EMI criteria. All of the terminated video jacks we supply terminate with a 75 $\Omega$  characteristic impedance, and are digital HD ready.

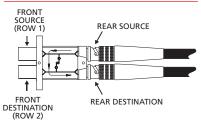


**Single Unterminated** These jacks route signals straight through, with no normalling and no termination.

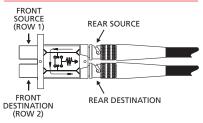


#### Single Terminated

When patched, these jacks route signals straight through. When unpatched, the rear port's BNC connection is terminated to a 75 $\Omega$  load.



**Dual Self-Normalling Unterminated** When patched, these jacks route signals straight through with no termination of unused signals. When unpatched, the rear source port is normalled to the rear destination port.



Dual Self-Normalling Terminated Most common

When patched, these jacks route signals straight through, and any unused signal is terminated to a 75 $\Omega$  load. When unpatched, the rear source port is normalled to the rear destination port.

**STANDARD SIZE VIDEO** 

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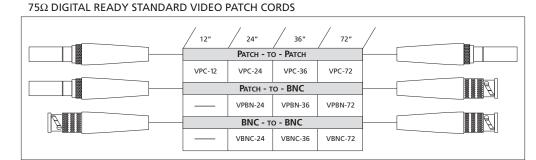
2x26x2RU 632D4P/SVJ-2TX Most common

2x24x1RU

# 2x24, 2x26 HD VIDEO PATCHBAYS

	$75\Omega$ , Dual Self-Normalling Terminated *	75Ω, Dual Self-Normalling Unterminated	75 $\Omega$ , Single Unterminated	75 $\Omega$ , Single Terminated
1 & 2RU VIDEO	PANELS WITH ADC JAC	KS		
CONFIGURATION	Order No.	Order No.	Order No.	Order No.
2x24x1RU	412D/SVJ-2TX	412D/SVJ-2X	412D/CJ2014N	412D/CJ2020N75
2x26x1RU	612D/SVJ-2TX	612D/SVJ-2X	612D/CJ2014N	612D/CJ2020N75
2x24x2RU	432D4P/SVJ-2TX	432D4P/SVJ-2X	432D4P/CJ2014N	432D4P/CJ2020N75
2x26x2RU*	632D4P/SVJ-2TX	632D4P/SVJ-2X	632D4P/CJ2014N	632D4P/CJ2020N75
1 & 2RU VIDEO	PANELS WITH CANARE	JACKS		
CONFIGURATION	Order No.		Order No.	
2x24x1RU	VJ2E241U/DVJB-W		VJ2E241U/DVJB-S	
2x26x1RU	VJ2E261U/DVJB-W		VJ2E261U/DVJB-S	
2x24x2RU	VJ2E242U/DVJB-W		VJ2E242U/DVJB-S	
2x26x2RU	VJ2E262U/DVJB-W		VJ2E262U/DVJB-S	
1 & 2RU VIDEO	PANELS WITH KINGS JA	CKS		
CONFIGURATION	Order No.	Order No.	Order No.	Order No.
2x24x1RU	412D/7780-2	412D/7780-3	412D/7520-9	412D/7520-10
2x26x1RU	612D/7780-2	612D/7780-3	612D/7520-9	612D/7520-10
2x24x2RU	432D4P/7780-2	432D4P/7780-3	432D4P/7520-9	432D4P/7520-10
2x26x2RU	632D4P/7780-2	632D4P/7780-3	632D4P/7520-9	632D4P/7520-10
1 & 2RU VIDEO	PANELS WITH TROMPE			
CONFIGURATION	Order No.	Order No.	Order No.	Order No.
2x24x1RU	412D/HDVDPT	412D/HDVDP	412D/J3W	412D/J13W-75
2x26x1RU	612D/HDVDPT	612D/HDVDP	612D/J3W	612D/J13W-75
2x24x2RU		432D4P/HDVDP	432D4P/J3W	432D4P/J13W-75
2x26x2RU	632D4P/HDVDPT	632D4P/HDVDP	632D4P/J3W	632D4P/J13W-75
		ating cycles. Canare jacks are		
30,000 mating cyc		nating cycles. Trompeter jacks	are rated to exceed SIVIPTE 29.	zivi specifications and
se,000 mating cyc				

\*Most common product

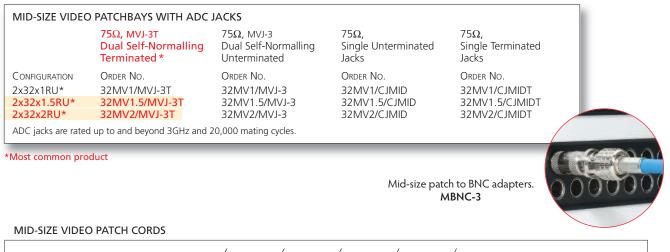


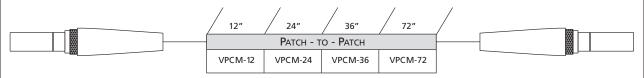
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The highest density video panel currently available, these mid-size video patchbays are typically supplied with your choice of ADC, Kings, or Trompeter dual self-normalling,  $75\Omega$  terminated, digital-ready jacks. Dual self-normalling unterminated, single unterminated, and single terminated jacks are also available.

#### 2x32x2RU 32MV2/MVJ-3T Most common

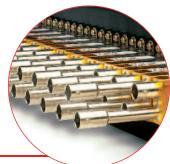






### 6x32x4RU

This 4RU (7") 32-position mid-size video patchbay is affectionately known as the "Big Boy."



Rear view of mid-size video patchbay showing staggered BNC termination.

3x32x2RU 32MV23/CJMVJ3T

**MID-SIZE VIDEC** 

# 3x32x2RU

A mid-size 3x32 video patchbay with an additional monitor row on top.



# 2x32x1RU

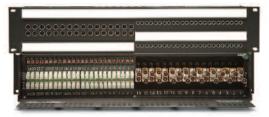
2x32 mid-size HD video patchbay with Kings and Trompeter jacks.

	75Ω, 7790-1	75Ω, 7790-2	75Ω, HDVDPMT	75Ω, HDVDPM
	Dual Self-Normalling	Dual Self-Normalling	Dual Self-Normalling	Dual Self-Normalling
	Terminated	Unterminated	Terminated	Unterminated
Configuration	Order No.	Order No.	Order No.	Order No.
2x32x1RU	32MV1/7790-1	32MV1/7790-2	32MV1/HDVDPMT	32MV1/HDVDPM
2x32x1.5RU	32MV1.5/7790-1	32MV1.5/7790-2	32MV1.5/HDVDPMT	32MV1.5/HDVDPM
2x32x2RU	32MV2/7790-1	32MV2/7790-2	32MV2/HDVDPMT	32MV2/HDVDPM



### PREWIRED HALF-AUDIO HALF-VIDEO

Designed for those smaller rooms that don't really need a full audio or video patchbay. The audio side is pre-wired to EDAC 3-Pin connectors. All video jacks are HD ready.



16 video, 48 audio WSP-32AVSH Audio portion is SHORTI programmable

Configuration	Order No.
2x12 video & 24 1/4" audio	WSP-24AV2
2x13 video & 26 1/4" audio	WSP-26AV2
2x12 video & 48 MINI audio (FN)	WSP-96AV2FN
2x12 video & 48 MINI audio (HN)	WSP-96AV2HN
2x16 mid-size video & 48 MINI audio*	WSP-32AVSH
*Audio portion is SHORTI programmable	



SINGLE SINGLE Unterminated TERMINATED CONFIGURATION Order NO. Order NO. 1x24x1RU 311J4P/J3W 311J4P/J13W-75 1x26x1RU 611J4P/J3W 611J4P/J13W-75 32MV11/CJMIDT 1x32x1RU 32MV11/CJMID

1x32x1RU 32MV11/CJMIDT

### SINGLE-ROW VIDEO

A simple single-row video panel with your choice of jacks.



# 

BNC-32

### **BNC BACKPLATES**

Our BNC backplate incorporates the Canare BCJ-JR connectors. Connectors are fully isolated from each other on this standard 19" rack-mount panel. All backplates come with designation strips and silk-screened numbers.

1RU BNC BACKPLATE	
Order No.	
BNC-12	
BNC-16	
2RU BNC BACKPLATE	
BNC-24 BNC-32	

#### **RGB VIDEO PANELS**

Nothing fancy here, just a video panel with the jack configuration layout to accommodate the RGB pattern. Only available in 2x24x2RU (3½") panel. RGB cords are available in 2 ft. and 3 ft. lengths.

# RGB VIDEO PANELS AND CORDSITEMORDER NO.

RGB Panel 2-ft. Patch Cord 3-ft. Patch Cord Order No. 699VZ/HDVDPT RGB-2 RGB-3