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# Introduction

## The ADC Difference

For more than 50 years, ADC has led the industry as a premier developer of audio, video, and data patching products. This tradition continues today in our state-of-the-art manufacturing facilities, where virtually all of our own components are designed, engineered and manufactured.

All of ADC's products are designed for outstanding performance in demanding, real world situations. Our engineers understand the many different applications that are possible in the industry, and as a result, they create products that can solve difficult problems other manufacturers tend to overlook.



**View onto screw-machine area at Shakopee, MN facility**

Once you've found the ADC product that fits your needs, requesting it is simple with our easy-to-follow ordering information charts. The charts display all available options, and you simply select the catalog number for the specific product and feature set you want. If you don't see the specific configuration you need, contact ADC for information about custom designed products. Our Technical Assistance Center (TAC) is available 24 hours a day, seven days a week.

For an even faster and more convenient source of additional information about ADC's high-quality products, visit [www.adc.com](http://www.adc.com). From our website, you can search for a desired catalog number, or browse our online products and services area for specific part numbers.



**ADC's state-of-the-art facility in Shakopee, MN**

From durable patchbays and jackfields to precision jacks and connectors, consistent quality is the hallmark of everything ADC produces. Everything at ADC is built to last, from the corrosion-resistant nickel plating on our patch plugs, to the tough steel chassis of our patch panels. ADC anticipates common failure points and overcomes them using the best available materials. Our strict adherence to quality standards and careful manufacturing assures dependable, long-lasting products.





## Introduction

Products to meet your needs...

ADC continues to lead in innovative patching and connector products. As a result of listening to our customers, the following new and exciting products have been developed to enhance the performance and durability of your broadcast infrastructure:

### ProPatch® Miniature (PPM) Series Patching System

The ProPatch® Miniature (PPM) Series is an all new Super High-Density Coax (SHDC) patching system designed for High Definition (HD), SDI, AES audio, 5.1 and 7.1 audio applications where coax medium is preferred but space is at a premium. The system is available in both 1 and 1.5 rack unit configurations.



The 1 rack unit panel features a patent-pending pullout designation strip that dramatically increases space for text, and a high-density 2x48 circuit configuration of ports. The 1.5 rack unit panel features 4x48 ports.

### ProPatch® Programmable (PPP) Series Patching System

The ultimate audio patch panel is now a reality. The new ProPatch® Programmable patching system (patent number 6,875,060) combines the ruggedness and reliability of true WECO-compliant



jacks with a precision DIP switch, enabling users to change normalling and grounds quickly and easily. Specifically designed for tough mobile environments, the ultra-lightweight ProPatch Programmable panel weighs about six pounds and is only five-inches deep. It is available in both bantam and longframe styles. The ProPatch® Programmable modular system offers unprecedented reliability and flexibility in a convenient, space-saving size and lightweight package. Specifically engineered for everyday use in demanding mobile trucks, the ProPatch Programmable system is the only product in its class that passes stringent MIL-STD-202F standards for vibration and environmental requirements.



# Introduction

Products to meet your needs...

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Introduction

## UniPatch® GigE Patching System

ADC has designed a professional broadcast-quality Gigabit (1000 baseT) patching system for demanding professional environments where frequent patching and higher density is required. The system features a high-density 32-port normal-through card frame system to ADC Direct-Edge LSA-PLUS® termination system. Now you can patch Ethernet data properly using reliable durable military-grade jacks rated for 30,000 insertion/withdrawal cycles. The Cat 6 rated patch cords are keyed to ensure proper patching.



## ProPatch® Fiber (PPF) Series Patching System

ADC leads the fiber patching market with the ProPatch® Fiber (PPF) patching system, the industry's first true broadcast fiber solution. ADC's ProPatch® Fiber (PPF) Patching system is designed by broadcast professionals for broadcast professionals. ADC combines its proven innovation and quality in broadcast patching design and manufacturing with its industry leading proficiency in fiber connectivity. The result is a true broadcast fiber connectivity product offering. PPF is a compliment to the proven copper connectivity product line. Solutions range from Fiber Bulkhead Panels (FL2000 Series) and Fiber Management Trays (FMT Series) to High-Density Patching Solutions (OMX600® Series). The portfolio also includes Specialty Fiber Optic Cable, Fiber Cable Management Solutions (FiberGuide® and RiserGuide), Patch Cords and Accessories in all popular connector styles.



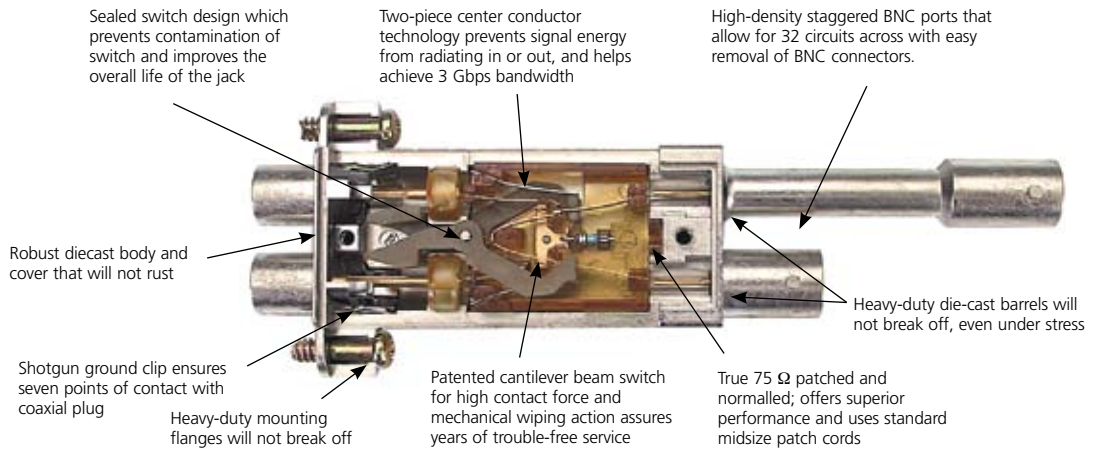


# Introduction

## Video Patching

ADC video jacks are the industry's preferred and premier jacks. Mechanical reliability and superior electrical performance make the ADC jackfields the highest quality patching solution in the market. ADC connectivity solutions, such as the MVJ and ADC BNC, are the patching solutions of choice for 1080p High Definition (SMPTE 424M) installations worldwide.

True 75  $\Omega$  jacks for today's high bandwidth services.



**MVJ-3 Midsize Super Video Jack Interior View**

### Features

- True 75  $\Omega$  for excellent digital performance when normalled or patched with ADC high-performance patch cords
- Gold-plated components assure signal quality and tarnish resistance, minimum 50 $\mu$  inch
- Sealed switch prevents external contamination
- All-solderless construction eliminates solder-related failures
- Long-beam bifurcated springs provide firm contact and prevent spring fatigue
- Closed-entry BNC center conductor prevents damage and provides reliable contact
- Two-piece center conductor prevents RFI radiation leakage
- Shotgun ground clip contacts plug at multiple points
- Tough diecast body will not rust or flex
- Captive mounting screws will not fall out
- Precision-tooled parts for consistent quality
- Meet MIL-STD-202F for environmental and mechanical reliability
- Patch plug never touches normal switch, dramatically increasing reliability



**Midsize Video Jack**  
(MVJ-3/MVJ-3T)



**Standard Size Super Video Jack**  
(SVJ-2/SVJ-2T)



# Introduction

## Video Patching

Video Jacks	Designation	Catalog Number	Standard	Application	Normalized	Terminated (75 Ω)	Jacks per Row	Panel Type*	Panel Color	Page
	MVJ	MVJ-3	WECO Midsize	Analog, Serial Digital, HDTV, SMPTE 424M, 1080p	Yes	No	32	PPE/PPi	Black/Gray	19
	MVJT	MVJ-3T	WECO Midsize	Analog, Serial Digital, HDTV, SMPTE 424M, 1080p	Yes	Yes	32	PPE/PPi	Black/Gray	19
	CJM	CJ3014N/CJ4014N	WECO Midsize	Analog, Serial Digital, HDTV, L-Band, S-Band	No	No	32	PPE/PPi	Black/Gray	22
	CJMT	CJ3014N-75/CJ4014N-75	WECO Midsize	Analog, Serial Digital, HDTV, L-Band, S-Band	No	Yes	32	PPE/PPi	Black/Gray	22
	SVJ	SVJ-2	WECO Standard Size	Analog, Serial Digital, HDTV, SMPTE 424M, 1080p	Yes	No	24/26	PPE/PPi	Black/Gray	24
	SVJT	SVJ-2T	WECO Standard Size	Analog, Serial Digital, HDTV, SMPTE 424M, 1080p	Yes	Yes	24/26	PPE/PPi	Black/Gray	24
	CJ	CJ2014N	WECO Standard Size	Analog, Serial Digital, L-Band, S-Band HDTV, SMPTE 424M, 1080p	No	No	24/26	PPE/PPi	Black/Gray	27
	CJT	CJ2014N-75	WECO Standard Size	Analog, Serial Digital, L-Band, S-Band HDTV, SMPTE 424M, 1080p	No	Yes	24/26	PPE/PPi	Black/Gray	27
	SMJ	SMJ-2100N	MUSA Standard	Analog, Serial Digital, L-Band, S-Band HDTV, SMPTE 424M, 1080p	No	No	24/26	PPE/PPi	Black/Gray	29
	N	SI2000	WECO Standard Size	AES Audio, Analog	Yes	No	24/26	PPE/PPi	Black/Gray	27
	75N	SI2000N-75	WECO Standard Size	AES Audio, Analog	Yes	Yes	24/26	PPE/PPi	Black/Gray	27
	SHDC-LCC-HP	SHDC-LCC-HP	High Density Coax LCC	Analog, Serial Digital, HDTV, SMPTE 424M, 1080p	Yes	Configurable	48	PPM	Black	14
	SHDC-LCC-NN	SHDC-LCC-NN	High Density Coax LCC	Analog, Serial Digital, L-Band, S-Band HDTV, SMPTE 424M, 1080p	No	No	48	PPM	Black	14
	SHDC-LCC	SHDC-LCC	High Density Coax LCC	AES Audio, Analog	Yes	Configurable	48	PPM	Black	14
	SHDC-1023-HP	SHDC-1023-HP	High Density Coax 1.0/2.3	Analog, Serial digital, HDTV	Yes	Configurable	48	PPM	Black	14
	SHDC-1023-NN	SHDC-1023-NN	High Density Coax 1.0/2.3	Analog, Serial digital, HDTV, L-Band, S-Band	No	No	48	PPM	Black	14
	SHDC-1023	SHDC-1023	High Density Coax 1.0/2.3	AES Audio, Analog	Yes	Configurable	48	PPM	Black	14

\* All panes are 19" wide

(PPi) ProPatch Integrated – Integrated Cable Bar (PPE) ProPatch Economical – No Cable Bar (PPM) ProPatch Miniature



# Introduction

## Audio Patching

### Legendary Jacks

When it comes to audio and video jack design, ADC makes them perform better, last longer and connect more reliably than anyone else. Our jacks and all of their working components are designed and manufactured in our own facilities under the strictest quality control. Every jack is identical and exceptional in quality and performance.

### Audio Jacks

ADC audio jacks are built to perform and to last.



**Longframe Audio Jack**

(Exclusively used in prewired ADC ProPatch® Audio)





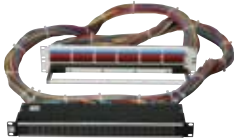

**Bantam Audio Jack**

(Shown with plug inserted)

### Features

- All ADC jacks are WECCO-standard and military grade
- Reliable WECCO Alloy #1 gold self-cleaning crossbar contacts wipe away debris with each use
- Solder-free wire-wrap tails prevent intermittents from cold solder joints or flux migration (prewired only)
- Solder-style jacks provide the option of do-it-yourself installation
- Tested to withstand tough applications, including vibration, temperature, moisture, and salt air corrosion
- Extended spring beams, computer-torqued screws, and precision-molded insulators ensure consistent quality, long life, and reliability
- Durable precision diecast (bantam) or stamped steel (longframe) frames

### Audio Panels

	Description	Panel Type*	Standard	Normalling	Application	Jacks per Row	Page
	ProPatch® Programmable	PPP	Longframe	Programmable jacks, Factory Pre-Configured	Analog/Digital	24/32	51
		PPP	Bantam	Programmable jacks, Factory Pre-Configured	Analog/Digital	48	51
	ProPatch® Professional	PPA	Longframe	Factory Configured	Analog/Digital	24/26	58
		PPB	Bantam	Factory Configured	Analog/Digital	48	58
	ProPatch® Umbilical	BJF1	Longframe	Factory Configured, with Umbilical	Analog/Digital	24/26	65
		BJF2					
		BJF3	Bantam	Factory Configured with Umbilical	Analog/Digital	48	65
		BJF4					
	ProPatch® Lite	PPA	Longframe	Solder	Analog/Digital	24/26	69
		PPB	Bantam	Solder	Analog/Digital	48	69

\* All panels are 19" wide and black

### Understanding Audio Normalling

Normalling creates a default circuit through the patch panel to connect equipment together in the arrangement you normally or most frequently use. When you plug in a patch cord, you break this "normal" circuit and create a temporary new circuit. ProPatch® lets you select from a variety of normalling options.

#### Programmable Normals (ProPatch® Programmable and UniPatch® only)

Selectable normals allow the user to select any typical normal configuration by setting switches on an impedance-matched dip switch located on the individual audio card.

#### Normals Strapped (fully normalled)

In a fully normalled configuration, the normals of each jack in the top row are internally strapped to the normals of the jack below it with the tip (T), ring (R), and sleeve (S) contacts brought out to the rear panel terminations. At the rear panel, equipment is wired to the two jacks, creating a normal circuit. To break this normal connection, you insert a patch cord into either jack.

#### Half-Normalled

In a half-normalled configuration, the normals of the bottom jack are internally wired to the tip (T) and ring (R) connections of the top jack, and the tip, ring, and sleeve of both jacks are brought out to the rear terminations. Equipment is wired to the two jacks at the rear terminations, creating a normal circuit. Inserting a plug into the top jack monitors the circuit without breaking it, and inserting a plug into the bottom jack breaks the circuit.

#### No Normals

A panel without normals has jacks that are open (no normal connection) until patched. When the patch cord is inserted, the signal flows through the cord and jack to or from the equipment connected to the jack at the rear terminations. No normal patch panels require looping plugs (u-links) or patch cords to complete the circuit.

#### Normals Out

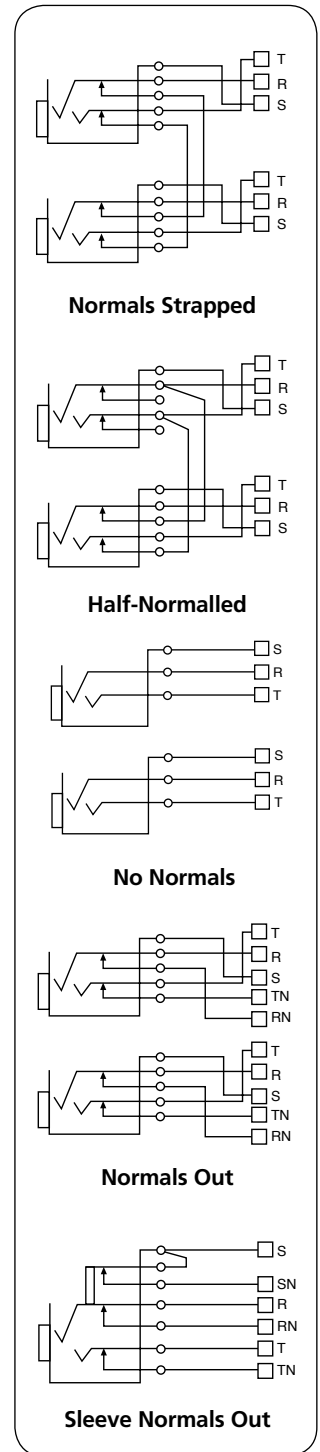
In this configuration normals are brought out to the rear terminations where you can strap them as you want them. Note that you cannot change the normalling on panels with internal normals because normalling is done at the jacks. Select the normals out option if you need the ability to change normals.

#### Sleeve Normals Out

Sleeve normals out are the same as normals out except that a sleeve normal is switched inside the jack in addition to tip and ring normals. The sleeve normal is also brought out and is typically used for a ground connection. Making it switchable allows grounds for different functions to be separated to prevent ground loops that produce audio hum.

#### Bussed Grounds

In a bussed-grounds configuration the ground connections of all jacks are brought out to the rear terminations and connected together. This provides a common ground for all jacks.





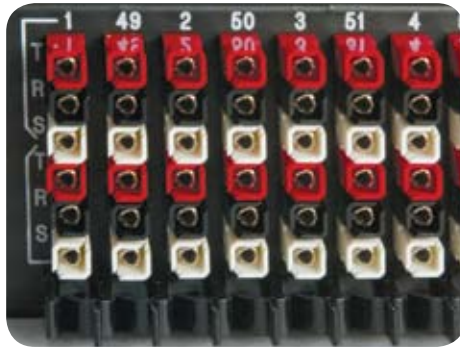
# Introduction

## Termination Systems

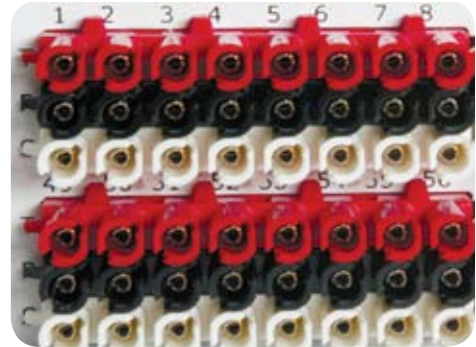
### Quick Connect Punch (QCP)

The original twisted pair QCP termination system set a new standard, making punchdown wiring fast and reliable. The QCP IV system is an even faster, more robust punchdown system compatible with existing QCP tools. The new connectors come in 1x8 blocks insulated on both sides of the panel for better short protection. Because the connectors do not require the tool to be oriented before punching, the QCP IV system punches down instantly, saving you the laborious prewiring, soldering, and crimping required for connectorized panels.

Many ADC products come with a choice of QCP II or QCP IV. Both are a tremendous improvement over solder or crimped connectorized systems, but each has its advantages. QCP II allows greater density and individual replacement. QCP IV is a more durable connector and does not require orienting the tool before punching.



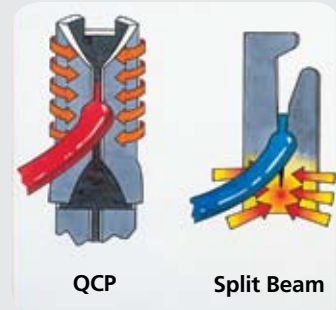
QCP II



QCP IV

#### Features

- ADC's exclusive, patented QCP II and QCP IV split-cylinder punchdown termination system is faster and easier to install and more reliable than any other termination system, including solder.
- Dependable, durable, split-cylinder design holds up to three stranded or solid wires, 22 to 26 gauge (0.32 mm to 0.128 mm)
- No intermittents with gastight connections. Uniform split channel width holds each wire firmly, unlike telco punchdowns with V-shaped channels or soldered connections that use flux and may have unreliable solder joints
- Easy pre-lacing makes installation faster. Color-coding prevents wiring mistakes
- Labor-saving punch terminates and cuts wire in one simple motion. New QCP IV installs even faster because you don't have to orient the tool before punching
- Faster and easier changes in circuits or normals than soldered connector systems. Rated for up to 200 insertion/withdrawal cycles
- QCP II terminations are individually mounted and insulated for easy repair or replacement
- QCP IV terminations are mounted in 1x8 blocks insulated on both sides of the panel. This design, plus the recessed conductors, eliminates shorts



QCP

Split Beam



# Introduction

## Termination Systems

### LSA-PLUS®

LSA-PLUS technology has been used in billions of connections worldwide, and continues to set the pace for others to follow.

- Accepts 26-22 AWG insulated conductors
- Accepts solid or stranded insulated conductors
- Accepts two insulated conductors of the same type (solid or stranded) and size (26-22 AWG)
- Can be re-terminated 200 or more times



LSA-PLUS

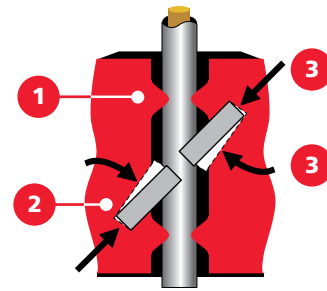


ADC leaves more wire between contact points; provides a more reliable stress resistant connection.



Typical primary wire after being punched into a 110 IDC; positioning contacts at a 90-degree angle results in a weak connection, which is prone to breakage.

LSA-PLUS IDC vs. 110 and 66 Block IDCs



**Silver-plated angled contacts are the most secure available, anywhere.**

- 1 Insulation clamping ribs hold the wire securely—isolating the contact area from vibration and mechanical stress.
- 2 Silver-plated contact tags at 45-degree angles across the wire's axis make a solid, gas-tight connection.
- 3 Axial and torsional restoring forces make a solid, gas-tight connection.

### Features

#### LSA-PLUS Contacts

- Split beam technology
- $(F1=F2)$  = no movement
- Balancing of forces eliminates the tendency for a conductor to be forced out of the contact over time

#### 110 and 66 Type Contacts

- Wedge technology
- $(F2>F1)$  = wire movement
- Unequal forces at top and bottom cause conductor movement over time

