

# ACTIVELINX™ Plates & Panels

Perfect Solutions for Extending the Distance of Your AV Signals

## Active Plate Options:

- VGA Desktop
- VGA Laptop
- USB
- HDMI/DVI
- Easy to Configure and Customize



OVER 6,000 PRODUCTS – ORDERING IS FAST & EASY

**800-530-8998**

THE PROFESSIONAL INSTALLERS FIRST CHOICE





## ActiveLinx™ Plates

Whether you are working in a digital environment or an analog one, Liberty's broad selection of ActiveLinx™ electronics for custom panels are the right solution to extend the distance that an electronic signal can travel without degradation. If your source is a VGA laptop, VGA desktop, HDMI/DVI computer or DVD player, or USB device such as a SmartBoard-style interactive whiteboard, only PanelCrafters adds electronics to a custom wall plate.

Regardless of your signal, Liberty's quality electronics provide the assurance that the AV system you are installing works consistently and flawlessly.

Fabricate your design from high-quality aluminum, plastic or stainless steel. Surface finishes range from clear, black or powder-coat colors selected to match other electronics in your system. Our advanced printing processes can be used to match paint colors, Pantone™ colors, wallpaper or wood grains!

### ACTIVE LINX USB PLATE

Front View



Back of Plates Include Active Electronics

Back View

### ACTIVE LINX HDMI/DVI PLATE

Front View



Back View

→ ADD LOGO TO ANY ACTIVE PLATE

AV Professionals use electronics to compensate for the losses and noise in every cable. Most engineers recommend a VGA extender when the cable length exceeds 50 feet. Some start at 25 feet. Audio signals have similar limits. Most DVI, HDMI and USB signals are lost when transmitted over 15 feet without special cable and electronics.








When it comes to performance, selection and value of ActiveLinx™ plates, only Liberty provides the complete range of electronics, connector options, plate sizes, and surfaces. Our solutions keep you competitive and profitable.

**Our ActiveLinx™ products fit into most standard-sized junction boxes.**

## Plate & Panel Surface Finishes

We offer three different styles of finishes: anodized, powder coated and specialty printed polycarbonate overlay.

These three different options enhance your project's prestige and performance.

|   |  |  |
|---|--|--|
| <p><b>ANODIZED</b></p>  <p><b>BRUSHED ALUMINUM</b></p>  <p><b>BLACK</b></p> | <p><b>POWDER COATED</b></p>  <p><b>WHITE</b></p>  <p><b>GRAY</b></p>  <p><b>BLACK</b></p> | <p><b>SPECIALTY PRINTED</b></p>  <p><b>SPECIAL</b></p>  <p><b>WOOD GRAIN</b></p> |
|---|--|--|

**We Offer the Only USB & HDMI Active Plates in the Industry!**  
Please see pages 6 & 7 for more details.

Specifications Subject to Change

|   |              |  |
|---|--------------|--|
|  | 800-530-8998 | THE AV PROFESSIONAL'S FIRST CHOICE<br><a href="http://LIBERTYCABLE.COM">LIBERTYCABLE.COM</a> |
|---|--------------|--|



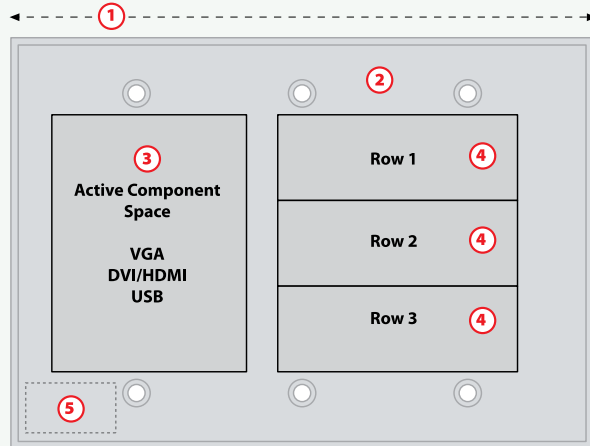
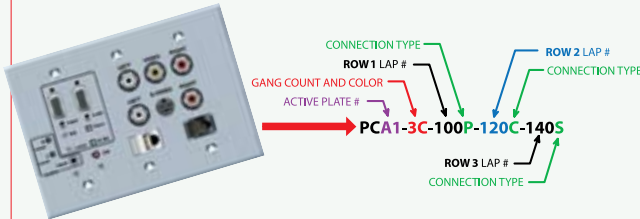
# Liberty ActiveLinX™ Plate Configuration

Liberty's ActiveLinX™ Plate (LAP) configuration guide is the easiest way to select the correct plate functionality for your AV project. Start by determining both the plate finish and overall plate size for your project.

Next select the set of ActiveLinX™ components and finally select the connectors sets by row. As the example shows, our plate numbering system provides you with complete design flexibility.

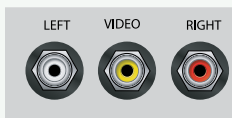
### Easy steps for a perfect active plate:

- |  |  |   |   |  |
|--|--|---|---|--|
| <b>Step 1:</b><br>Select Plate Size<br><b>2</b> Gang<br><b>3</b> Gang<br><b>4</b> Gang<br>Custom Size<br>(Some configurations not available in 2 gang) | <b>Step 2:</b><br>Select Plate Finish<br><b>B</b> -Black Anodized<br><b>W</b> -White<br><b>C</b> -Clear Anodized<br><b>I</b> -Ivory<br><b>K</b> -Gray Powdercoated<br><b>Y</b> -Black Powdercoated | <b>Step 3:</b><br>Select Active Component<br><b>A1.</b> VGA/RGBHV<br><b>A2.</b> VGA Desktop<br><b>A3.</b> VGA Laptop<br><b>A5.</b> USB<br><b>A6.</b> HDMI | <b>Step 4:</b><br>Select Connector Group from list on page 75 for each row. Designate connector types: S, P, C, T, B* | <b>Step 5:</b><br>Add Logo or other graphics |
|--|--|---|---|--|



\*Connection Types: S-Solderback/Punch Down, P-Passthrough, C-Screw Terminal, T-Pigtail, B-Breakout

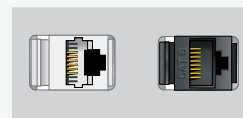
### Single LAP Connector Options for Row 1, 2, or 3 or all three



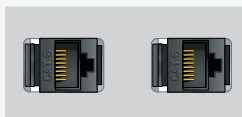
**LAP-100\***  
Connectors:  
• Composite Video  
• Stereo Audio



**LAP-120\***  
Connectors:  
• S-Video  
• Stereo Audio



**LAP-140\***  
Connectors:  
• RJ11  
• RJ45

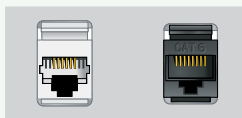


**LAP-142\***  
Connectors:  
• Dual RJ45s

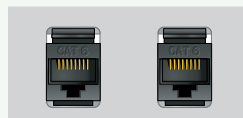


**LAP-180\***  
Connectors:  
• VGA

### Dual LAP Connector Options for Row 1 & 2, or 2 & 3



**LAP-240\***  
Connectors:  
• RJ11  
• RJ45



**LAP-242\***  
Connectors:  
• Dual RJ45s



**LAP-245\***  
Connectors:  
• RJ45



**LAP-270\***  
Connectors:  
• 3 & 4 Pin XLRs



**LAP-275\***  
Connectors:  
• Microphone or Control System

**More LAP Connector Options Available.**

**All Liberty Active Plates Can Be Designed By You!**

**WebBlox™**

Anyone with web access can use the program.

Go to Liberty's WebBlox on-line design tool for information.

[www.LibertyCable.com](http://www.LibertyCable.com)

Specifications Subject to Change

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**ACTIVE LINX™ PLATES & PANELS**



# ActiveLinx™ VGA/RGBHV Plates

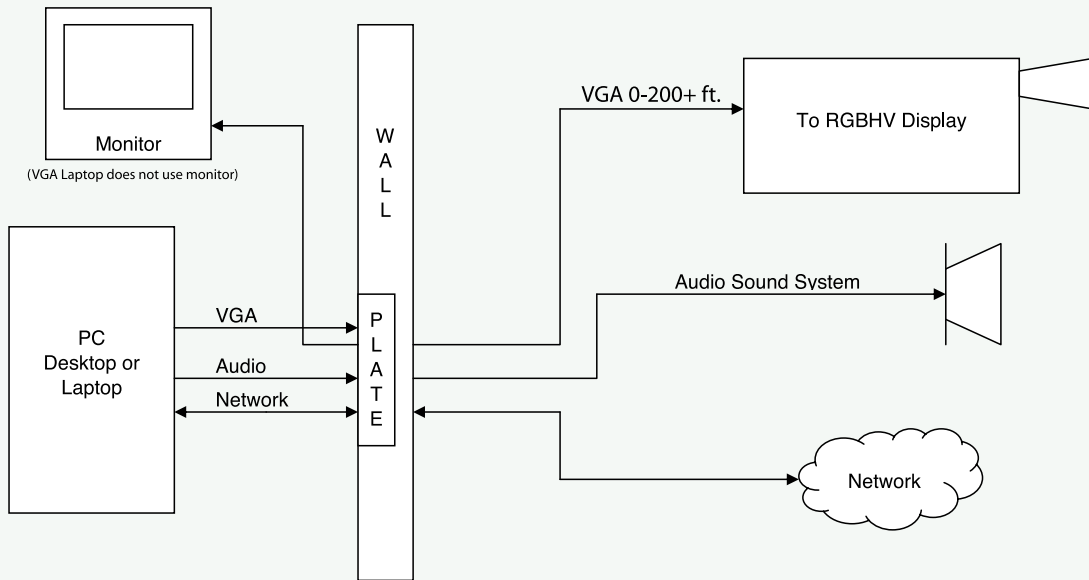
## VGA Desktop

Designed for use in larger systems or those with a desktop computer. The sync is processed for a more stable image with digital displays (LCD, DLP, and plasma). In addition, there is a buffered monitor output. The unbalanced audio from your computer is balanced and amplified, protecting against noise. The device is environmentally protected against moisture. There are 4 gain and EQ settings for distances in excess of 200'. Sync processing may be disabled.

## VGA Laptop

Designed specifically for use in smaller installations where the main sources are laptops, this device amplifies the video and sync signals for a more stable image at the display. The unbalanced audio from your computer is balanced and amplified to protect against noise. The device is environmentally protected against moisture. There are 4 gain and EQ settings for distances in excess of 200'.

### Desktop & Laptop Application Diagram, including RJ45 passthrough:



Front View



Part #: PCA2-2C-100P

Front View



Part #: PCA3-2C-100P



Back View of module is the same for both plates.

Specifications Subject to Change

ACTIVE LINX™ PLATES & PANELS



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## VGA Desktop & Laptop Specifications

Liberty's VGA Desktop and VGA Laptop are computer video interfaces featuring **850 MHz (-3dB)** RGB bandwidth for sharper images and active audio balancing to prevent extraneous noise, designed specifically for use in custom plates and panels.

Both interfaces are compatible with signals up to UXGA. The VGA Desktop adds a buffered local monitor output and Liberty's Dynamic Sync Correction (DSC)™. DSC digitally reforms sync signals, preventing pixel-tracking errors and other image noise encountered with digital display technologies such as DLP, LCD, and plasmas.

- The small size of the Liberty VGA Desktop and VGA Laptop interfaces allow for easy installation in floor boxes and are designed to fit one- two-, three-, and four-gang wall boxes as well as custom plates.

- Required depth is 2.875" unless 90° BNC connectors are used.
- Dynamic Sync Correction (DSC) – Digital sync re-creation guarantees smooth images with LCD, DLP, plasma, or other digital display devices. (VGA Desktop only, may be disabled)
- Level/Peaking – A four position DIP switch allows for adjustment of image brightness and sharpness. This feature compensates for signal attenuation from cables, capacitance, and other devices in the system. Pre-sets are 0-50', 50-100', 100-150' and 150-200+ feet.
- Liberty offers hundreds of LAP connector groups to choose from, including custom configurations with pass-through connectors or other with active devices including HDMI, USB and HDMI.

| VIDEO                         |   |
|-------------------------------|---|
| Gain .....                    | Unity (0.7V), 15% with 3dB peaking (0.8V), 30% with >6dB peaking (0.9V)   |
| Bandwidth .....               | 850 MHz (-3dB)  |
| VIDEO INPUT AND LOOP THROUGH  |   |
| Number/signal type .....      | 1 analog RGBHV, RGBS, RGSB, YUV   |
| VGA Desktop .....             | (1) 15-pin HD female buffered input connector and (1) 15-pin HD female local monitor buffered output connector  |
| VGA Laptop .....              | (1) 15-pin HD female buffered input   |
| Nominal level .....           | 0.7V p-p for RGB  |
| Minimum/maximum levels .....  | Analog: 0.3V to 1.45V p-p with no offset at unity gain  |
| Impedance .....               | 75 ohms   |
| Horizontal frequency .....    | 15 kHz to 150 kHz (optimum: 15 kHz to 150 kHz)  |
| Vertical frequency .....      | 30 Hz to 170 Hz input   |
| VIDEO OUTPUT                  |   |
| Number/signal type .....      | 1 HD15 buffered output with input sync format matching output sync format (RGBHV, RGBS, RGSB, YUV)  |
| For both VGA Desktop & Laptop |   |
| Connectors .....              | 5 BNC female in epoxy base  |
| Nominal level .....           | 0.7V p-p for RGB  |
| Minimum/maximum levels .....  | Analog: 0.7V to 0.9V p-p (switch selectable) w/peaking and 0.7V p-p input   |
| Impedance .....               | 75 ohms   |
| SYNC                          |   |
| Input type .....              | RGBHV, RGBS, RGSB or YUV  |
| Output type .....             | matches input   |
| Input level .....             | 2.0V to 5.5V p-p with +0.2VDC offset max.   |
| Output level .....            | 4.0V to 5.0V p-p, unterminated  |
| Input impedance .....         | 510 ohms  |
| Output impedance .....        | 75 ohms   |
| Sync processing .....         | Liberty Dynamic Sync Correction digitally recreates sync waveform for stable images on LCD, DLP, plasma and other digital displays (VGA Desktop Only) |

Specifications Subject to Change

| AUDIO - ALL MODELS             |   |
|--------------------------------|---|
| Gain .....                     | Unbalanced output: 0dB; balanced output: +6dB   |
| Response .....                 | DC to 100 kHz, ±0.5dB   |
| Input Number/signal type ..... | 1 stereo, unbalanced, 20 Hz to 20 kHz   |
| Connector .....                | 3.5 mm stereo female jack (2 channel), unbalanced; tip (L), ring (R), sleeve (ground)   |
| Impedance .....                | >5 kohms unbalanced, DC coupled   |
| Nominal level .....            | -10dBV (316mV)  |
| Maximum level .....            | +8.5dBu (unbalanced) at 1%THD+N   |
| AUDIO OUTPUT                   |   |
| Number/signal type .....       | 1 buffered, stereo (2 channel), balanced/unbalanced   |
| VGA Desktop .....              | 1 buffered, stereo (2 channel), balanced/unbalanced   |
| Connectors .....               | Phoenix connector, 6 pole   |
| Impedance .....                | 100 ohms, unbalanced, 100 ohms balanced   |
| Gain error .....               | ±0.1dB channel to channel   |
| Maximum level (600 ohm) .....  | +14dBm, balanced at stated %THD+N<br>NOTE: 0dBu = 0.775 volts (RMS).  |
| GENERAL                        |   |
| External Power .....           | 100VAC to 240VAC, 50/60 Hz, 5 watts, external, auto-switchable; input to a 9 to 12VDC, Polarity tolerant, Phoenix connector on module. Product requires 0.2 A (minimum). (A 12VDC, 600mA power supply is included.) |
| Rack mount .....               | Customer option   |
| Dimensions .....               | 1.8" w x 2.75" t x 1.5" d   |

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## ActiveLinx™ VGA/RGBHV Plates

Designed specifically for use in smaller installations where the sources are both laptops and desktops, this device amplifies the video and sync signals for a more stable image at the display.

The unbalanced audio from your computer is balanced and amplified to protect against noise. End user adjustments are available on the outside of the plate.



- Connectors:
- 1 AD10 (VGA/XGA/Audio)
  - 2 RJ-45
  - 1 S-Video
  - 2 RCA

**PCA1-3C-120P-242P**



- Connectors:
- 1 AD10 (VGA/XGA/Audio)
  - 1 RJ-45
  - 1 RJ-11
  - 1 S-Video
  - 4 RCA
  - 1 RCA to BNC

**PCA1-3C-100P-120P-240P**



**Back View**

| SPECIFICATIONS FOR ACTIVELINX™ VGA/RGBHV PLATES |  |
|---|--|
| INPUTS .....                                    | VIDEO: 1 XGA analog red, green, blue signals: 0.7 Vpp/75 Ω, H and V sync, TTL level, on an HD15F connector; AUDIO: 1 PC unbalanced stereo audio on a 3.5mm mini jack; 1 unbalanced stereo line audio on RCA connectors |
| OUTPUTS .....                                   | VIDEO: 1 RGBHV on 5 BNC connectors 0.7 Vpp/75 Ω, RGB TTL level syncs 1 composite video 1 Vpp/75Ω on 2 Pins   |
| MAX. OUTPUT LEVEL.....                          | VIDEO: 2Vpp; AUDIO: 7Vpp   |
| BANDWIDTH (-3dB).....                           | VIDEO: XGA: 350MHz; AUDIO: >100kHz   |
| DIFF. GAIN .....                                | XGA: 0.07%   |
| DIFF. PHASE.....                                | XGA: 0.04 Deg.   |
| K-FACTOR .....                                  | XGA: 0.1%  |
| S/N RATIO.....                                  | XGA: 75.1dB; AUDIO: 76.84dB  |
| CROSSTALK (all hostile) .....                   | VIDEO: XGA: 63.6dB; AUDIO: -91dB   |
| CONTROLS .....                                  | VIDEO: XGA EQ: 0dB to +4.5dB @ 50MHz; AUDIO: Line level: -70dB to +6.2dB   |
| COUPLING.....                                   | VIDEO: XGA : DC; AUDIO: AC at input; DC at output  |
| AUDIO THD + NOISE .....                         | 0.028%   |
| AUDIO 2nd HARMONIC .....                        | 0.012%   |
| POWER SOURCE.....                               | 12 VDC, 145mA  |
| DIMENSIONS.....                                 | 6.9cm x 5.0cm x 11.4cm (2.72" x 1.97" x 4.49"; W, D, H)  |
| WEIGHT.....                                     | 0.3 kg (0.67 lbs.) approx  |
| ACCESSORIES .....                               | Power supply   |

## ActiveLinx™ HDMI/DVI Plates

This module is designed for support of digital signals used to drive displays. It extends the distance between the source and the display up

to about 75'. The devices are powered from the USB port so no external power is needed. Liberty offers other devices to go beyond those distances.

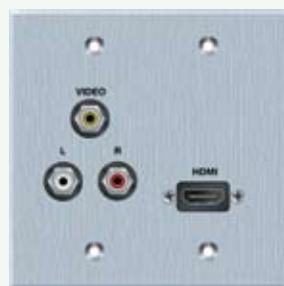


- Connectors:
- 1 A50 (HDMI Repeater)
  - 2 RCA
  - 1 S-Video

**PCA6-2C-220P**



**Back View**



- Connectors:
- 1 A50 (HDMI Repeater)
  - 2 RCA
  - 1 RCA to BNC

**PCA6-2C-200P**

Many more active plate stock options available. Please refer to Liberty's MiniLog #617 or PanelCrafters.com

Specifications Subject to Change

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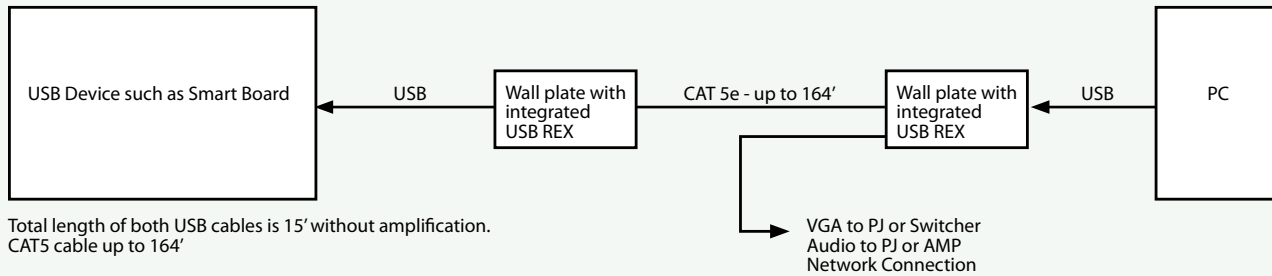
ACTIVELINX™ PLATES & PANELS

# ActiveLinx™ USB Plates

Our USB module allows the PC and the USB device to be placed up to 180 feet apart. In-wall cables are CAT5e, either plenum or non-plenum. The devices are powered from

the USB port so no external power is needed. Both a LEX (at the PC) and a REX (at the USB device) are required. No configuration is required.

## USB Application Diagram:



- Available in three- & four-gang plate configurations.
- Our USB Active Device extends the range of USB up to 164 ft. using Category 5 Cable. Requires no external power adapter.
- Transmits power and data over the same Category 5 cable.
- System includes local and remote units, USB cable and user guide.

### Front View



### Back View

| SPECIFICATIONS ACTIVELINX™ USB PLATES:         |  |
|--|--|
| Range (over Category 5 UTP cable)              | .....50 meters (165 ft)  |
| # USB device ports (at REX)                    | .....1   |
| USB device support (connected directly to REX) | ..... Any full-speed (12 Mb/s) or low-speed (1.5 Mb/s) device                              |
| USB hub support                                | ..... Up to 3 hubs can be connected in series.   |
| Maximum power available to USB at REX          | ..... 300 mA when LEX is supplied with 500 mA;<br>600 mA when LEX is supplied with 1000 mA |
| USB cable                                      | .....2 meters (6.6 ft)   |
| LEX connector (upstream)                       | ..... 1 x USB Type B   |
| LEX connector (downstream)                     | ... 1 x RJ-45  |
| REX connector (upstream)                       | ..... 1 x RJ-45  |
| REX connector (downstream)                     | ... 1 x USB Type A   |
| LEX dimensions                                 | ..... 100 mm x 70 mm x 30 mm (4.0" x 2.8" x 1.2")  |
| LEX weight                                     | .....0.1 kg (0.2 lb)   |
| REX dimensions                                 | ..... 100 mm x 70 mm x 30 mm (4.0" x 2.8" x 1.2")  |
| REX weight                                     | .....0.1 kg (0.2 lb)   |
| Temperature range                              | .....4°C to 40°C   |
| Regulatory testing                             | .....FCC, CE Class B   |

Specifications Subject to Change

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ACTIVELINX™ PLATES & PANELS

# ACTIVELINX™ Plates & Panels

## Easy-to-Use Design & Quoting Tools

## Proofing Process for Quality at Every Step

|                         |  |
|-------------------------|--|
| <b>CADBlox</b>          | <ul style="list-style-type: none"> <li>CADBlox is a plate &amp; panel design template system for AutoCAD™ users.</li> <li>The user friendly drag and drop design method makes plate layout simple.</li> </ul>                    |
| <b>CADQuote</b>         | <ul style="list-style-type: none"> <li>CADQuote is a quoting application for users of CADBlox.</li> <li>It allows CADBlox users to quote their panel designs from their desktop.</li> </ul>                                      |
| <b>CADBlox V-SERIES</b> | <ul style="list-style-type: none"> <li>CADBlox V-Series is a plate &amp; panel design template system for Microsoft Visio™ users.</li> <li>It contains standard plate sizes and connectors as pre-built Visio shapes.</li> </ul> |
| <b>WebBlox</b>          | <ul style="list-style-type: none"> <li>WebBlox is a graphical, web-based design program for building plates &amp; panels.</li> <li>Anyone with web access can use this program.</li> </ul>                                       |

**We guarantee a flawless product each time and every time.** PanelCrafters™ quotes and up-front proofs provide the following features:

APPROVAL REQUIRED (sign below and return)

①

P.O. NUMBER:

| Connector List:                       |           |  |
|---------------------------------------|-----------|--|
| Qty                                   | P/N       | Description  |
| Material: 0.125 inch 6061 T6 Aluminum |           |  |
| 1                                     | X8        | 4 PIN FEMALE XLR SILVER  |
| 1                                     | PMM-012-D | VGA/XGA/AUDIO AMP/TRANSMITTER PANEL MOUNTABLE (LOCAL LOOP OUT) |
| 1                                     | S6SIL     | TCS415BHG 4-PIN S-VIDEO FEEDTHRU                               |
| 2                                     | R10RED    | 30-410-3/8 ISOLATED RCA FEEDTHRU                               |
| 2                                     | R10WHT    | 30-410-3/8 ISOLATED RCA FEEDTHRU                               |
| 1                                     | R21YEL    | RJ-BCJR ISOLATED RCA TO BNC                                    |

②

③

|                       |                                     |                                    |                               |  |
|-----------------------|-------------------------------------|------------------------------------|-------------------------------|--|
| <b>PANEL CRAFTERS</b> | Reference: Active Catalog Plate     | Company Name: Liberty Wire & Cable | Engraved Units: sheets #1# 34 | To approve, sign top left corner and return with Purchase Order. Changes to materials or layout may require quoting and/or reproofing. |
|                       | Part Number: PCA1-3C-100P-120P-2755 | Panel Color: Ivory                 | Text Color: Black             |  |
| ④                     |                                     | ⑤                                  | ⑥                             | ⑥  |

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>① - Approval box for you to sign when ordering plates.</li> <li>② - Itemized material list including connector descriptions.</li> <li>③ - Precise graphical representation of the finished plate. <ul style="list-style-type: none"> <li>Lead time and pricing breakdowns by requested quantity.</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>④ - Company and project reference information (provided by you). <ul style="list-style-type: none"> <li>Full dimensions are shown when needed to ensure accuracy.</li> </ul> </li> <li>⑤ - Unique part number for each plate or panel design (for easy ordering and reordering).</li> <li>⑥ - Plate specifications including plate material, thickness, color and finish.</li> </ul> |
|--|---|

**Liberty Wire & Cable**  
A DIVISION OF COMMUNICATIONS SUPPLY CORPORATION

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Colorado Springs, CO 80921

3301-E Woodpark Blvd.  
Charlotte, NC 28206

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**800-323-2040**

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