

## CB411 Analog Caption Data Bridge

Standard Definition NTSC EIA-608B caption data bridge used to Bridge closed captions from a source video to a master video signal. Also capable of re-locating captions on screen.

The Model CB 411 Caption Data Bridge offers a simple means of maintaining a continuous Line 21 data service when processing of the encoded video signal is required. The Data Bridge is capable of bridging between two non-synchronous video inputs. It extracts the Line 21 data from both fields of the Source signal and inserts it into the Master signal. Vertical caption position can be restricted via a GPI input. This allows broadcasters the ability to re-position captions so they do not interfere with graphics or emergency alert crawls appearing at the top or bottom of the picture.

### SOURCE VIDEO INPUT CHARACTERISTICS

Video Input Level	1.0v p-p, Back Porch nominally at Ground
Input Impedance	75 Ohms
Input Return Loss	>=40dB to 5 MHz.
Input S/N Ratio	Unit will function down to 25 dB ratio (CCIR weighted) with typically one error per row at that level

### MASTER VIDEO INPUT SPECIFICATIONS

Video Input Level	1.0v p-p, Back Porch nominally at Ground
Video Input Circuit	Terminated except in by-pass mode
Input Impedance	75 Ohms
Input Return Loss	>=40dB to 5 MHz.

### MASTER VIDEO OUTPUT CHARACTERISTICS

Video Output Level	Out 1 bypass protected, OUT 2 & 3 Auxiliary video outputs. 1.0V p-p Nominal
Insertion Gain	Unity, $\pm 2$ IRE
Output Impedance	75 Ohms nominal
Output Return Loss	30dB to 5 MHz
Output DC Level	0V, $\pm 50$ mV at back porch level
Clamp Type	Keyed-back porch
Frequency Response	$\pm 0.1$ dB, 50KHz to 5MHz; +0.1dB, -0.5dB 5MHz to 8MHz
Line Tilt	Less than 1%
Field Tilt	Less than 1%
Differential Gain	0.5% at 1V p-p 10-90% APL
Differential Phase	0.25 degrees at 1V p-p 10-90%APL
Signal-to-Random-Noise Ratio	65dB or greater CCIR weighting
Spurious Signals	At least 60dB down (up to 5MHz); At least 40dB down (above 5MHz)
Keying Transients	Less than 2 IRE units

### FRONT PANEL DISPLAY

Power (On/Off)	Push-button switch with integral circuit breaker. White band indicates Off state.
Source Video Present	LED lit when source video is present.
Master Video Encode On	Push-button switch controls bypass state. LED lit for non-bypassed state.
Master Video Present	LED lit when master video is present.
Reset	Flush Push-button switch, resets the encoder.

### REAR PANEL CONNECTORS

Source Video In	BNC connector, internal 75 Ohm termination
Master Video In	BNC connector, internal 75 Ohm termination when not by-passed.
Master Video Out 1	BNC 75 Ohm connector, unity gain output. bypass protected, external termination required.
Encoder Out 2	BNC 75 Ohm connector, unity gain output. not bypass protected, external termination required.
GPI	RJ45 connector.
RS232	RJ12 connector.
Power	Standard non-captive 3-wire line cord, 6 feet long.

### PHYSICAL CHARACTERISTICS

Height	1.75 inches (4.45 cm)
Width	19 inches (48.3 cm)
Depth	51/4 inches (13.3 cm)
Mounting	Designed for rack mounting.
Weight	3 lbs. (1.36 kg)
Operating Ambient	0 C to +50 C

### POWER REQUIREMENTS

Line Frequency	47-440 Hz
Line Voltage	117 VAC $\pm 10\%$
Line Current	0.07 A maximum
Input Power	10 W maximum
Circuit Breaker	0.1 A trip current. In Power On/Off switch.