LINK ELECTRONICS

MADE IN THE USA

# LINK ELECTRONICS, INC.

# CAPTION ENCODER/DECODER SD SDI/ANALOG
## MODEL PTC-892


### FEATURES

- V-Chip compatible & TSID ready
- Dual RS-232 com ports
- LTC input & "B" Type USB port
- Detailed front panel display with menus
- Data Recovery of both caption & text
- Weather Lift up to 4 lines
- SD SDI/analog encoded outputs
- User selectable data recovery modes
- Firmware version viewed from front panel
- User, power-up, and factory default settings
- SD analog decoded outputs including component
- Optional Modem w/ RI, OH, and CD indication
- User selectable encode modes, including newswire
- SD SDI to SD analog conversion
- Auto Detection of NTSC/PAL
- Encodes both caption and text

The PTC-892 is captioning encoder, decoder, and data recover capable of inserting, decoding, and recovering data of captions and text for NTSC/PAL for the following signals: composite, Y/C, S-video, RGB, YUV, and SDI.

Captioning and text may be inserted (encoded) in either field of the Vertical Blanking Interval (VBI). That inserted data may be displayed as open captions through the decoder output(s). In addition, caption data on the incoming or outgoing video may be recovered from either field of the VBI. This data can be sent to another encoder, to a language translation machine or program then re-encoded, or to be captured by a program to be manipulated. Each of these important functions (encoding, decoding, and data recovery) may be done silmultaneously. Each of these functions can be controlled by the front panel menus or by serial communications.

Inputs and outputs are provided for both SD SDI and SD analog, including composite, Y/C, S-video, YUV and RGB. The power loss feature bypasses the composite analog and SDI when AC power to the PTC-892 fails.

In response to the FCC mandated requirements, captions shall not interfere with emergency crawls. The PTC-892 incorporates a weather-lift feature that moves the caption up to 4 lines, whenever a contact-closure is detected on its GPI input. The number of lines can be controlled by the front panel or by software commands.

The serial communication port(s) allow for remote captioning. The dual ports allow multiple encoders to be controlled at once, a back up communication port, or to do data recovery out of its ports. Port 1 is either a "B" type USB port or RS-232 port. Port 2 is either a RS-232 port or an optional modem. Both ports can be set to have different baud rates (1200, 2400, 4800, 9600, 19200, 38400) independently through the front panel menus.

RS-232 port 2 will not go down to a baud rate of 1200, because new modems will not allow this. When the optional modem goes off-hook, it takes priority over the RS-232 port 2. The RS-232 port 2 control is restored when the modem hangs up.

Front panel LEDs show the unit status with NTSC/PAL detection, modem status, encode on/off, video presence detection, negative pedestal on/off, serial data detection, and LTC detection. Front panel push buttons allow the user to select input, select output, perform an encoder test, and bypass the encoder.

The PTC-892 is V-chip technology compliant and TSID ready. Link Electronics is incorporating this technology in the firmware of the PTC-892. The PTC-892 handles automatic repetition of the "V-Chip" data and can interweave it with existing line 21 closed captioning data.

The PTC-892 has a Longitudinal Time Code (LTC) input for precise caption timing with the video. A front panel Vacuum Fluorescent Display (VFD) shows various functions and menus. A rotary optical encoder, front panel knob, provides easy selection of the various operating and set-up functions.

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# MODEL PTC-892 CAPTION ENCODER/DECODER
# DIGITAL AND ANALOG

## VIDEO INPUTS:

SD SDI:
- Connector . . . . . one, BNC
- Standard . . . . . SMPTE 259M-C 270Mb/s
- Impedance . . . . . 75 Ohm, terminated
- Signal Level . . . . . 800mV ± 10%
- Return Loss . . . . . >18db to 270 MHz

SD analog:
- CV, Y and G (with sync) . . . . . one, BNC
- C, U and B . . . . . one, BNC
- V and R . . . . . one, BNC
- S-video . . . . . one, mini-din
- Impedance . . . . . 75 Ohm, terminated
- CV, Y and G (with sync) . . . . . 1Vpp ± 3db
- R, B, U and V (100% Sat) . . . . . 0.7Vpp ± 3db
- C (100% Sat) . . . . . 0.8Vpp ± 3db
- Return Loss . . . . . 40db
- Maximum DC on input . . . . . 3.2V DC

## MISCELLANEOUS INPUTS:

- Longitudinal Time Code . . . . +4db analog signal
- Weather Lift GPI . . . . . activated when shorted
- AC power . . . . . 85-264VAC 50/60Hz

## REAR PANEL CONNECTORS:

- Video . . . . . thirteen, BNC
- S-video . . . . . two, mini-din
- LTC . . . . . XLR plug
- Weather Lift GPI . . . . . 3.5 mono audio plug
- RS-232 . . . . . two, 9 pin D connectors
- Modem(optional) . . . . . RJ11
- USB . . . . . "B" type plug
- Power . . . . . IEC-320 male

## FRONT PANEL CONTROLS:

- AC power . . . . . On/Off
- Menu knob . . . . . Push/rotary
- Input Selection . . . . . six, push/push momentary
- Output Selection . . . . . Push/push momentary
- Test . . . . . Push/push momentary
- Bypass . . . . . Push/push momentary

| IN \ OUT | SDI | CV | YC | S-VID | YUV | RGB |
|---|---|---|---|---|---|---|
| SDI | NO OPEN | OPEN | OPEN | NO OPEN | OPEN | OPEN |
| | CLOSED | CLOSED | CLOSED | CLOSED | CLOSED | CLOSED |
| CV | | OPEN | | | | |
| | | CLOSED | | | | |
| YC | | | OPEN | NO OPEN | | |
| | | | CLOSED | CLOSED | | |
| S-VIDEO | | | OPEN | NO OPEN | | |
| | | | CLOSED | CLOSED | | |
| YUV | | | | | OPEN | |
| | | | | | CLOSED | |
| RGB | | | | | | OPEN |
| | | | | | | CLOSED |

**NOTE: With SDI input, the simultaneous outputs are;**
**1. CV, YC, S-VIDEO; 2. YUV; 3. RGB**

## VIDEO OUTPUTS:

Encoder outputs:

SD SDI:
- Connector . . . . . one, BNC
- Standard . . . . . SMPTE 259M-C 270Mb/s
- Impedance . . . . . 75 Ohm, terminated
- Signal Level . . . . . 800mV ± 10%
- Propagation Delay . . . . . 1200ns ± 5%

SD analog:
- CV, Y and G (with sync) . . . . . two, BNC
- C, U and B . . . . . one, BNC
- V and R . . . . . one, BNC
- S-video . . . . . one, mini-din
- All analog outputs . . . . . unity ± 5%
- Impedance . . . . . 75 Ohm
- Tilt . . . . . <1% ref. 30Hz square wave
- Hum . . . . . >70db, 1Vpp
- Overshoot and Ringing . . . . . <1%
- Propagation Delay . . . . . 180ns ± 5%
- Signal to noise ratio . . . . . >50db
- Differential gain . . . . . <1%
- Differential phase . . . . . <1°
- DC Offset . . . . . < ± 0.2V DC
- Frequency Response . . . . . -3db to 26MHz

## DECODER OUTPUTS:

SD analog:
- CV, Y and G (with sync) . . . . . two, BNC
- C, U and B . . . . . one, BNC
- V and R . . . . . one, BNC
- All analog outputs . . . . . unity ± 5%
- Impedance . . . . . 75 Ohm
- Character Level(CV,Y,R,G & B) . . . . . 90 IRE
- Background Level(CV,Y,R,G & B) . . . 10 IRE
- Background Insert(C,U and V) . . . . . 0V DC

## ENVIRONMENTAL

- Temperature . . . . . 0° to 50°C (ambient)
- Humidity . . . . . 10% to 90% non-condensing
- Power . . . . . 24 Watts

## MECHANICAL:

- Height . . . . . 1.75 inches
- Width . . . . . 19 inches
- Depth . . . . . 10.75 inches
- Weight . . . . . 5 Lbs


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