Xico, Inc. 9736 Eton Avenue Chatsworth, CA 91311-4305 USA

MODEL 4917SE MULTI-COERCIVITY READER/ENCODER FOR PRODUCTION, QUALITY CONTROL AND RESEARCH

Features

- Manual swipe read-after-write encoder
- Accepts media 7 to 45 mils thick
- Select ISO Track #1 or #2 or #3
- Select encode current for 250-6000 Oe
- Select encode density as 75, 105, 150 or 210 BPI
- Select data format as ISO ALPHA/BCD, Multi-Message ALPHA/BCD, HEX, or XICO MOD ALPHA/BCD
- Locate encoded data where desired
- Read waveform outputs for oscilloscope
- Determine proper current for encoding
- Auto monitor of encode quality
- EIA RS-232C interface to Host system
- Demo software included
- User programmable for auto operation

Description

The Model 4917SE Multi-Coercivity Encoder combines the features currently available among several different Xico encoder models with the desired configuration selected by Host software command. A front panel display provides a visual indication of the system setup. The system combines a swipe encoder module with a controller which performs all read and encode functions under Host instruction. BNC connectors are provided on the rear of the unit to allow the User to view the read signals on an oscilloscope. The system has separate read and write heads for automatic read-after-write verification of the encoded data with a single pass of the card.

The RS-232C interface Host may be a Dumb Terminal using keystroke transmission of commands or a PC for programmable automatic operation. The Host Command and Response Set is the same as that used in other Xico models. The system permits a selection of the proper encode head current for magstripe media over the nominal vendor coercivity range of 250 to 6000 Oersteds. Inclusion of HEX Data Formats permits the encoding of arbitrary data bit patterns. A special read algorithm verifies that the manual swipe operation is within the dynamic range for proper encoding.

The Model 4917SE Multi-Coercivity Encoder allows the User to "tailor" the encoding to the particular media at hand and is particularly useful for research, media manufacturing and testing, and encoding services which handle many different media and encoding protocols.

Operational Notes

Host. The Model 4917SE requires a Host connected to its RS-232C port for input/output of data and commands. The Host may be a standard Dumb terminal or an appropriately programmed computer. Operation of the 4917SE is under Host control using simple ASCII character commands. LEDs on the front panel signify the selected track, bit density and format. A three character display is provided to show the encode current setting.

Interface. The RS-232C port accepts a standard male D-25 connector and is configured as DTE equipment. DIP switches are provided on the rear panel for setting baud rate, parity, word length, linefeed, echo and transmission terminator.

Waveform Monitor. BNC connectors on the rear panel provide read signals useful in the evaluation of magnetic stripes and the quality of encoding. The standard model has outputs for Track #1 Integrated Read Signal, Track #2 Integrated Read Signal, and Track #2 Amplified Read Signal. These signals are intended to be monitored with an oscilloscope. Note that the integrated read signal is a measure of encoded stripe remanence. These signals can be used to determine the optimum encode current for a particular stripe (i.e., its effective "coercivity").

Encode Current. The encode head current in the Model 4917SE can be set at any value from 1 to 255 milliamps by Host Command. This feature permits the optimum encoding of magnetic stripes covering a broad range of vendor "coercivities" from about 250 to about 6000 oersteds. The feature also permits QA testing of card batches for compliance with a specified encode current spec. The User should note carefully that there is no currently consistent relationship between a vendor specified stripe "coercivity" and the head current required for proper encoding.

Encoding. The Model 4917SE is an extremely flexible instrument for encoding and evaluating magnetic stripes. The User configures the unit for a particular application or test by use of Host Commands. Note particularly that any feature (density, format, data placement) may be chosen for any track.

Data Location. The Model 4917SE can place the encoded data at different positions along the data track. The data location is set by Host Command before encoding.

Encode Density. Any of the four encode densities (75, 105, 150, 210 BPI) can be selected for any of the three tracks.

Encode Formats. In addition to the familiar ISO Standard ALPHA and BCD Formats, the Model 4917SE provides four additional formats which can be used to encode a card with any bit-pattern the User desires. All formats are selected by Host Command. The Multi-Message ALPHA and BCD Formats are used to encode the data two or more times, with encoded data strings separated by ten clocking bits. The HEX Format allows the User to specify every bit

encoded on the card, i.e., an arbitrary bit pattern, and hence, to use a proprietary data format known only to the User. The XICO MOD ALPHA/BCD Formats permit the use of the full character sets as data characters, thus eliminating the ISO restrictions. Host-selected custom formats are available as options.

Encode Quality. The Model 4917SE automatically monitors parameters which affect the quality of encoding during a swipe and loudly "beeps" twice if the swipe speed is outside the range for the desired quality. Desired quality level is set by Host Command.

Feature Selection. On power-up, the Model 4917SE configures itself with a specific DEFAULT selection for every feature of the Model 4917SE. The DEFAULT settings provide a convenient configuration for encoding cards. Alternate features are selected by Host Commands which are standard ASCII characters.

Specifications

- I/O Connection: Male D-25 for RS-232C
BNC for Read Signals
- Interface: RS-232C
- Card Thickness: .007 to .045 inches
- Power: +5, ±12 VDC (Supplied)
- Warranty: One year
- Head Life: 500,000 passes
- Dimensions: 10.0”W x 3.6”H x 10.7”L
- Weight: 9 lbs.
- Material: Metal enclosure
- Environment: 5° to 45° C