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GENERAL INSTRUCTIONS ALLISON RESEARCH ANALOG PROGRAMMERS 65K-A1-XX

The 65K-A1-XX accepts and produces analog control voltages in the range of 0 to +5.6 VDC. These control voltages are processed in blocks of 16 functions, each 16 handled by one MUX-65K card. Each MUX-65K card serves as a 16 channel input multiplexer and as a 16 channel output de-multiplex/sample and hold. Up to four MUX-65K cards may be accommodated in the 65K-A1-XX frame. Expansion up to 4096 analog functions may be accomplished via 65K-A2-XXX expander frames.

The 65K-A1-XX package contains, as well as the MUX-65K cards, a Master Decoder D-65K, a Master Encoder E1-65K, a Priority Processor E2-65K, a Digital In/Out Card I/O-65K and an Analog Adaptor A I/O-65K.

With the exception of the A I/O-65K Analog Adaptor and the MUX-65K cards, the programmer is identical to programmers used in all digital Allison Research Memory Plus Systems.

INCREMENTATION

The incrementation of control voltages is 128 steps for each function, arranged so that 96 steps of 25 MV each occur for control voltages between 0 and +2.4 VDC, while an additional 32 steps of 100 MV occur from +2.4 VDC to +5.6 VDC.

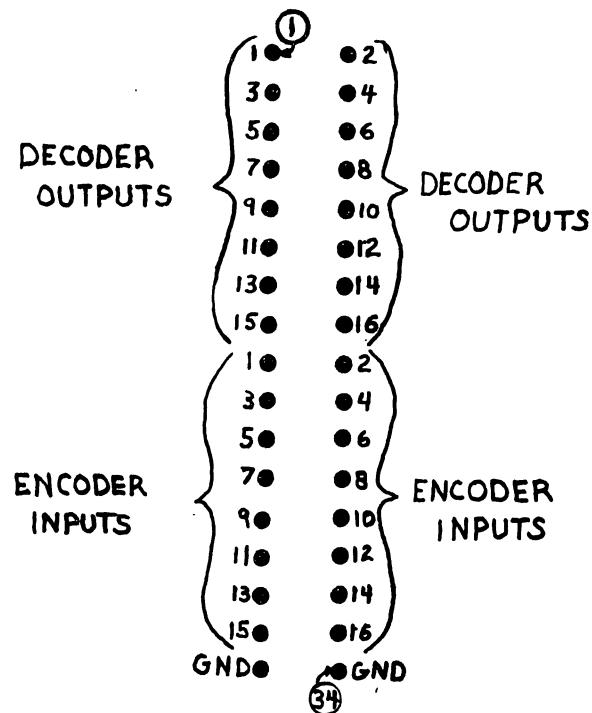
When properly used with VCA's exhibiting a 20 dB/Volt relationship (0 volts= maximum gain), a 112 dB range is processed. In such a configuration, .5 dB resolution will be realized over the upper 48 dB of range, followed by 2 dB resolution over the lower 64 dB of range.

CONNECTIONS

Connection to the encoder inputs and decoder outputs are made at the rear of the unit, directly to the connectors which hold the MUX-65K cards. There are 34 wire wrap pins provided for connection to the console for each MUX-65K card. It is suggested that a 3M #3424-0000 flat wire connector be used as a termination device.

When facing the programmer from the rear, the blocks of wire wrap pins are numbered "To Console - 1,2,3,4". Block #1 should be used for console faders #1 through #16, Block #2 for faders #17 through #32 and so forth.

The following is a diagram of the pin out of each connection block:



65K-A1-XX CONNECTIONS

STORAGE MEDIUM CONNECTIONS

Again facing the rear of the programmer, you will find two connection points (right rear of unit) labeled "To Tape" (encoder data output) and "From Tape" (decoder data input). You will also note a nearby ground, or "Common" point.

Connection to a conventional audio tape machine track(s) should be made at this point.

TAPE MACHINE REQUIREMENTS

When an audio tape machine is used for storage, no adjustments are necessary, other than those for normal audio usage. With the tape machine set for a standard +4 dBm interface, the encoded level will be approximately -20 dBm.

The code should not be passed through noise reduction equipment or other peripherals.

The following requirements are placed on the storage medium:

Signal to noise ratio = at least 15 dB (includes signal to crosstalk)
 Bandwidth = 10 KHz
 Speed variations = Less than ± 50% (long term)

Because of the 15 dB signal to crosstalk requirement, adjacent data tracks are not tolerable on most machines. Data tracks may, however, be adjacent to audio tracks.

PARITY SYSTEMS - DECODE LIGHT

Due to the multiple parity systems employed in the 65K programmer, it is virtually impossible to decode the data in error. While severe tape defects may cause the deletion of associated data words, the effect is only to hold the last correctly received data. With average quality tape, the data deletion rate is on the order of one word per 3 minutes, and is not heard as a defect.

The "decoding" light will be on when data is being properly decoded.