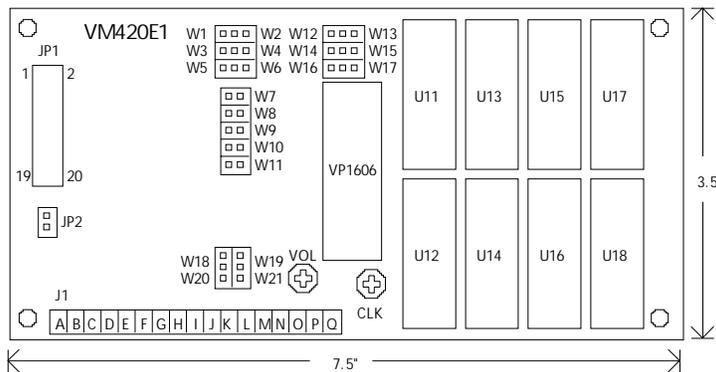


VM420E1

128-Message Playback Board



- **Operation Mode:** playback only
- **Max. Number of Messages:** 128
- **Memory Type:** EPROM
- **Memory Capacity:** 8 chips of 512K - 8M
- **Max. Message Length @ 32K:** 33 min.
- **Supply Voltage:** 24VDC (default) or 12VDC
- **Typical Operating Current:** 300mA
- **Max. Audio Output:** 1W
- **Battery Operation:** not suitable
- **Options:** none

General Description

The VM420E1 is a digital voice module which can randomly playback up to 128 pre-programmed messages. It is totally self-contained and requires only a power supply, a speaker and a few trigger signals to operate.

Desired messages must be digitized and programmed into EPROM chips by using the VP880 voice development system. Since EPROM is nonvolatile, there is no need for battery backup. The sampling rate is adjustable so higher sampling rates (and higher memory cost) can be used for applications requiring better sound quality.

Messages must be organized in 1, 2, 4 or 8 groups, with up to 16 messages in each group. Message length is flexible within the group, but messages may not span across group boundary. Each message is uniquely represented by a Group Code (3 bits) and an ID Code (4 bits). The Group Code is determined by installing the EPROM into a certain socket. The ID Code is assigned by the VP880 when the messages are assembled.

To play a certain message, apply its Group Code on pins INE (LSB) to ING (MSB), and its ID Code on INA (LSB) to IND (MSB). Then pull the ST\ pin to ground momentarily. The RD\ pin will go low and stay low to acknowledge the receipt of the ~STROBE signal. After the board finds the message, the BUSY\ pin will go low and stay low while the message is being played. The message will stop automatically when it reaches the end. To interrupt the message, apply active high pulse to the RESET pin. The AUDIO output is differential. The built-in power amp can be bypassed to obtain line level output by moving jumper W18 to W20, W19 to W21.

Installation Guide

Power & Signal Connector: JP1 (or J1)

PIN1: INA input	PIN9: INE input
PIN2: BUSY\ output	PIN10: RD\ output
PIN3: INB input	PIN11: INF input
PIN4: RESET input	PIN12, 14: SP (audio) output
PIN5: INC input	PIN13: EXT CLK input
PIN6: ST\ (strobe) input	PIN15, 16: 12V&24V input
PIN7: IND input	PIN17, 18: +5V output
PIN8: ING input	PIN19, 20: GND (ground)

EPROM Size Jumpers (all chips used must be the same size)

512K: W7, W12, W14, W16
1M: W8, W12, W14, W16
2M: W9, W13, W14, W16
4M: W10, W13, W15, W16
8M: W11, W13, W15, W17

Group Count Jumpers

1 group: W1, W3, W5 (U11-U18=group 0)
2 groups: W1,W3,W6 (U11,13,15,17=group 0, others=group 1)
4 groups: W1, W4, W6 (U11,13=group 0, U15,17=group 1, U12,14=group 2, U16,18=group 3)
8 groups: W2, W4, W6 (U11=group 0, U13=group 1, U15=group 2, U17=group 3, U12=group 4, U14=group 5...)

Supply Voltage Jumper

JP2 open = 24VDC, JP2 close = 12VDC

Power Amp Bypass Jumpers

To bypass the power amp, move W18 to W20, W19 to W21.

Sample Rate Adjustment: Pot CLK (32-64 Kbps)

Volume Control: Pot VOL

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