

## VCM-Series Product Data Sheet

Model Name: **VCM-20 Digital Voice Module** ..... Rev. E

### **Contents**

**Description** \_\_\_\_\_ Page 2

-Summary

-Product Photo

-Feature

### **Function / Specification**

-Trigger Mode Description \_\_\_\_\_ Page 3

-Electronic Spec. \_\_\_\_\_ Page 4

### **Hardware Description**

-PCB Diagram \_\_\_\_\_ Page 5

-Jumpers / Connectors Description \_\_\_\_\_ Page 5

-Operation Note \_\_\_\_\_ Page 5

-PCB Dimension Diagram \_\_\_\_\_ Page 6

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### Introduction

**VCM-20** is a digital voice module. It directly plays back 8-bit mono PCM sound files digitized at 8,11,16,22,24,32 KHz. Sound files are programmed and stored in nonvolatile EPROM chips for instant, random access. There is no restriction on the length of each sound, as long as the total length of all sounds combined fit into the chips.

The board is designed to be a standalone device, powered by a single voltage supply. Sound playback can be triggered by a number of devices such as push button, motion sensor and dry contact closures. The built-in power amplifier can deliver up to 3W into a speaker, with adjustable volume control.

The board can be configured to operate in different modes. The configuration data is stored in EPROM chips along with sound bytes. On power up the board will configure itself automatically. There is no need to set switches manually.

There are many Playback Modes: Direct, Direct cycle, Binary, Parallel and Serial modes. All of input modes Setting by Rom-link software tool.

### Feature

- \*Max. Number of Messages:
  - 4 Messages in Direct Single Mode
  - 15 Messages in Parallel Mode
- \*Memory Type: EPROM(27Cxxx)
  - 1Mb/4Mb/8Mb
- \*Max. Memory Capacity: 8M-bits x 1
- \*Voice Length: (Max. 8Mbits)
  - 127 Seconds at 8KHz
  - 63 Seconds at 16KHz
- \*Supply Voltage: 12 VDC, 500mA
- \*Output amplifier: 3W (Ro = 4 ohm)

### Product Photo



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## Function / Specification

Input trigger pins numbers.	4 pins , Photo coupler isolated	
Input trigger acknowledge	Active Low.	
Exterior response signal	Busy signal and EOVS signal Output. (End of Voice Signal.)	
EPROM IC socket numbers	1	
EPROM IC type	1Mbits / 4Mbits / 8Mbits with jumper selections.	
Support sampling rate	8KHz / 11KHz / 16KHz / 22KHz / 24KHz / 32 KHz	
Max. Total length	127 seconds / 8KHz sampling rate	
Max. number of messages	255 messages in Serial mode.	
Max. address number of digital voice files	160 files	
Properties for every message	Edge / Level , Hold / Unhold , Retrigger / Irretrigger (All of trigger pins can independence setup. )	
<b>Trigger Mode Support / Trigger Pins Description / Max. Number of messages.</b>		
Direct Single mode	X0-X3	4 messages
Single Circulating mode	X0-X3	4 messages
Binary code mode with strobe signal	X0-X2, Strobe X3	8 messages
Parallel of binary code mode without Strobe signal	X0-X3	15 messages
Serial code mode	Rx	255 messages
Serial frame mode	Rx	255 messages

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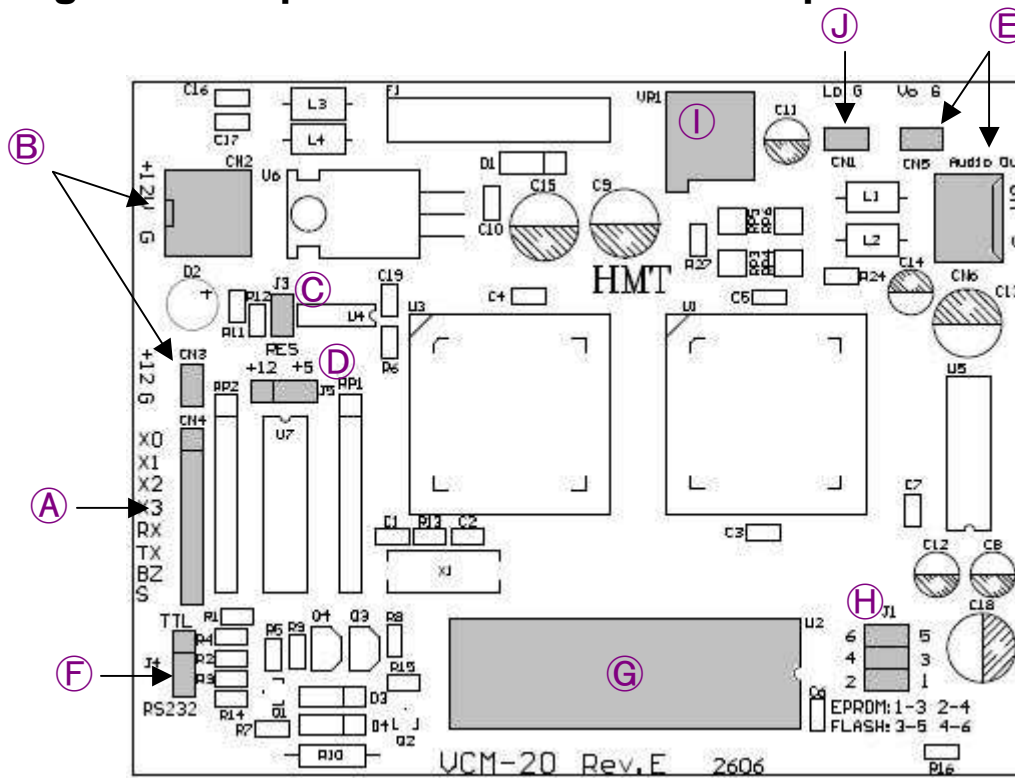
## Electronic Specification

Supply Voltage	DC 12V / 0.8A
Amplifier output	3 watt, Ro = 4 ohm
Consumption (Audio Output)	0.4A at DC 12 Vin
Consumption (Without Audio Output)	130mA at DC 12V
Trigger Inputs De-bounce Time	Signal length 80ms at least.
Watch Dog Function	Yes
Operating temperature	0°C - 70°C
Line Out	Yes
Volume Control	Yes
Serial baud rate and format	2400 bps / 4800 bps / 9600 bps, N, 8,1
Serial signal level	Tx: TTL, Rx: TTL / RS-232
PCB Dimension (L x W x H)	103 x 80 (mm)
Metal Box (Option)	No

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## PCB Diagram / Jumpers & Connectors Description



A	Input Pins Information See PCB label: Input Trigger Pins : X0-X3, Rx / Tx: Serial signal interface. B: Busy signal output, S: End of voice signal output.(Setting by Rom-Link Software tools.)		
B	Power Supply: DC 9-13V, 0.5A	G	EPROM IC Sockets #1
C	J5 : Normal set at 5V side.	H	EPROM Type with jumper Selections.
D	Volume Controller.	I	J3: System Reset.
E	CN5/CN6: Audio Out with Amplifier.	K	CN1: Audio line out.
F	J4:Serial mode input level selections.		

## Operation Note

When Power supply is on, the system should sound out “Beep! Beep! ( two times)” - It represents the P.C.B. and EPROM data programming are ready. If it doesn’t work normally, please check out Rom-link software setting and all connect wires.

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## PCB Dimension Diagram

