

# Pipo® Communications

Emphasis is on Quality and Reliability  
TEL: (323) 466-5444 • WWW.PIPO.CC

## SMART DTMF ENCODER

### STEEL KEY MODELS

(9 Memories)

(w/PTT Relay & PTT Hold POT Adj.)

- PK-1K v6.5, 12 Key
- PK-2K v6.5, 16 Key
- PK-7VK v6.5, 12 Key
- PK-7HK v6.5, 12 Key
- PK-8K v6.5, 16 Key

### STEEL KEY MODELS

(99 Memories & ANI/ENI)

(w/PTT Relay)

- PK-1K ANI v6.5, 12 Key
- PK-2K ANI v6.5, 16 Key

### STEEL KEY MODELS

(9 Memories)

(w/PTT Transistor)

- PK-3 E1 v6.5, 12 Key
- PK-3 E1 v6.5, 16 Key
- PK-3 E2 v6.5, 12 Key
- PK-3 E2 v6.5, 16 Key

**FIRMWARE VERSION: 6.5**  
**HARDWARE VERSION: v6**

**COPY REVISION: 03/19/2021**  
**RELEASE DATE: 06/11/2018**

## FEATURES

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- DTMF MEMORY DIALING 9 MEMORIES
- DTMF STORE & SEND
- DTMF SINGLE TONE GENERATOR
- VARIABLE SINGLE TONE GENERATOR (50 HZ TO 5 KHZ)
- ONE TOUCH SEND (OTS)
- NO DTMF FREQUENCY ERROR
- WIDE VOLTAGE OPERATING RANGE (6 TO 26 VDC)
- WIDE TEMPERATURE OPERATING RANGE (-22 °F TO 160 °F)
- STEEL KEYS
- SEALED GOLD DOME CONTACTS
- WATER RESISTANT / DUST PROOF
- PTT KEYING RELAY W/POT ADJ. DELAY
- LEVEL OUTPUT POT ADJUSTABLE
- HIGH OR LOW IMPEDANCE OUTPUT
- PIEZO SIDE TONE

## CONNECTIONS

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### **PK-1/2K v6.5 – INPUTS/OUTPUTS**

#### WIRE:

RED ..... (J1-P1) ..... (+) 6-26 VDC  
GREEN ..... (J1-P2) ..... (-) GROUND  
BLACK ..... (J1-P3) ..... AUDIO OUT  
BROWN ..... (J1-P4) .... RELAY CONTACT\*  
BROWN/WHITE ..... (J1-P5) .... RELAY CONTACT\*

(\*SPST 26 Watts 1A @ 26 VDC, Resistive Load)

\*\*collector output goes low, 200 mA max @ 20 VDC)

#### CONNECTION:

#### JUMPER:

(JP1) ..... MEMORY DISABLE ..... (CLOSE)  
(JP2) ..... ST & SEND DISABLE ..... (CLOSE)  
(JP3) ..... HIGH IMPEDANCE ..... (OPEN)  
(JP3) ..... LOW IMPEDANCE ..... (CLOSE)  
(JP4) ..... PTT RELAY COIL ..... (CLOSE)\*  
(\*Installed)

#### PCB EYELET:

(G) ..... GROUND  
(M) ..... MIC MUTE TRANSISTOR\*\*  
(PTT) ..... PTT XMTR TRANSISTOR\*\*  
(\*collector output goes low, 200 mA max @ 20 VDC)

#### ADJUSTMENT:

(P1) ..... LEVEL OUTPUT POT ADJ.  
(P2) ..... PTT HOLD DELAY POT ADJ. (0 to 4 sec)



## INSTRUCTIONS

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### BASIC OPERATION

#### **DTMF LAST NUMBER REDIAL (LNR)\***

PRESS \* + # (TOGETHER) THEN RELEASE TO SEND.  
\*VOLATILE MEMORY, CLEARS WITH POWER OFF

#### **DTMF STORE AND SEND\***

**TO STORE:** PRESS \* + 0 (TOGETHER, TWICE), FOLLOWED BY NUMBERS TO STORE.  
**TO SEND:** PRESS 0 + # (TOGETHER), TWICE.

#### **DTMF MEMORY DIALING (1 TO 9 LOCATIONS, 30 DIGITS EACH)**

**TO STORE:** PRESS \* + 0 (TOGETHER), THEN 1 (FOR MEMORY 1 LOCATION) FOLLOWED BY THE NUMBERS TO STORE.

**TO STORE:** PRESS \* + 0 (TOGETHER), THEN 2 (FOR MEMORY 2 LOCATION) FOLLOWED BY THE NUMBERS TO STORE.

**TO SEND:** MEMORY 1 LOCATION, PRESS 0 + # (TOGETHER) THEN 1.

**TO SEND:** MEMORY 2 LOCATION, PRESS 0 + # (TOGETHER) THEN 2.

### SPECIAL FEATURES

#### **DTMF SINGLE TONE GENERATOR**

(PRESS 0 + 1 (TOGETHER) = 697Hz  
(PRESS 0 + 2 (TOGETHER) = 770Hz  
(PRESS 0 + 3 (TOGETHER) = 852Hz  
(PRESS 0 + 4 (TOGETHER) = 941Hz  
(PRESS 0 + 5 (TOGETHER) = 1209Hz  
(PRESS 0 + 6 (TOGETHER) = 1336Hz  
(PRESS 0 + 7 (TOGETHER) = 1477Hz  
(PRESS 0 + 8 (TOGETHER) = 1633Hz  
(PRESS 0 + 9 (TOGETHER) = 1000Hz

#### **VARIABLE TONE GENERATOR (50Hz TO 5kHz)**

PRESS \* + 0 + # (TOGETHER) FOR 3 SECONDS, THEN RELEASE. (STARTS AT 1kHz)  
PRESS \* TO DECREASE FREQ., PRESS # TO INCREASE FREQ. (50Hz INCREMENTS)  
PRESS 0 TO RETURN TO 1kHz TONE. PRESS ANY KEY TO EXIT FEATURE.

#### **VERISON ID**

PRESS \* + 1 (TOGETHER) FOR VERSION ID

#### **ONE TOUCH SEND (OTS) ACTIVATION**

TO ENABLE PRESS \* + # (TOGETHER) FOR 10 SECONDS, RELEASE AFTER DUAL-BEEP. ENTER 55 DUAL-BEEP THEN #.  
TO DISABLE PRESS \* + # (TOGETHER) FOR 10 SECONDS, RELEASE AFTER DUAL-BEEP. ENTER 54 DUAL-BEEP THEN #.

#### **OTS (1 TO 9 LOCATIONS, 30 DIGITS EACH)**

**TO STORE:** PRESS \* + 0 (TOGETHER), THEN 1 (FOR MEMORY 1 LOCATION) FOLLOWED BY THE NUMBERS TO STORE.

**TO STORE:** PRESS \* + 0 (TOGETHER), THEN 2 (FOR MEMORY 2 LOCATION) FOLLOWED BY THE NUMBERS TO STORE.

**TO SEND:** MEMORY 1 LOCATION, PRESS 1.

**TO SEND:** MEMORY 2 LOCATION, PRESS 2.

### SPECIFICATIONS

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POWER & CURRENT .....	w/Relay	6-26 VDC	>600 $\mu$ A stby	45 mA Operate
	w/Transistor	6-26 VDC	>600 $\mu$ A stby	8 mA Operate
TEMPERATURE .....	-22 °F to 160 °F			
MEMORY .....	9 Locations, up to 30 Digits Each, Store & Send, Last Number Redial			
MEMORY ANI Version .....	99 Locations, up to 30 Digits Each, Store & Send, Last Number Redial, End Wait & ANI/ENI			
AUDIO OUTPUT .....	Adjustable -2 dB Max @ 600 Ohms			
(unbalanced hi-Z audio output) .....	No Load = 0 dBm, 775 $\mu$ V, rms, 2v pp			
(unbalanced hi-Z audio output) .....	600 Ohm Load = -40 dBm			
(unbalanced low-Z audio output) ....	51k Jumped, 600 Ohm Load = +1 dB			
DISTORTION .....	Less than 2%			
HIGH SPEED SIGNALLING .....	5 dps (100/100 ms) *DEFAULT, 10 dps (50/50 ms), 20 dps (25/25 ms)			
PTT SEND DELAY .....	800 ms			
PTT HOLD DELAY .....	1 sec			