

# IMARK

## PRODUCT DESCRIPTION



### MICROVOX VOICE OPERATED TX SWITCH

µProcessor Controlled Voice Operated Transmit Switch for Two-Way Radios

Imark Stock # [503512](#)

#### Features:

- µProcessor Controlled
- Adjustable Audio Delay
- Automatic Noise Threshold Sensing
- Weather Resistant Case
- Compact Size
- Quick-Connect Cable Plugs

#### DESCRIPTION:

The IMARK **Microvox** is a compact microprocessor controlled Voice Operated Transmit Switch (VOX) for use with two-way radios. The inclusion of a microprocessor enables proper management of all VOX functions as well as the inclusion of some features never before available in VOX units of this size, while enabling the traditional problems associated with VOX operation of radio transceivers to be overcome.

Two-way radios need up to 100mS to change from receive to transmit condition and to bring the transmitter output power up to 95% of normal output. It is during this 100mS of "Lost" power that the first voice syllable can be lost with disastrous results. The military or SWAT situation with "DON'T SHOOT" being a classic example.

The other main problem is that the background noise levels vary from environment to environment. The background noise level in an office is vastly different to that on a major highway or near working machinery. Normal VOX units have to have the microphone sensitivity adjusted for the particular working environment so that the operators can talk normally. Unfortunately, this results in the operator having to yell into the microphone when he changes from a noisy environment to a quiet environment. In the opposite case, the noise from the machinery will activate the VOX and keep it locked on transmit unnecessarily.

The IMARK Microvox includes an **audio delay** software algorithm to overcome the first problem, and an Automatic Noise Level Correction software algorithm to overcome the second problem.

The audio delay system delays all microphone audio for up to 500mS, before presenting it to the microphone input of the associated radio transceiver. This allows transmitters, receivers and repeaters enough time to activate and be ready to receive speech. With any other vox unit you could expect to miss at least half of the first word in every transmission with possible dangerous consequences. Thus, with the "DON'T SHOOT" example, you will not lose the "DON'T" part of the message. Similarly, other transmissions like "STOP", "GO", "WAIT", "UP" and "DOWN" may result in the message being missed completely. The audio delay in the IMARK Microvox overcomes this problem completely. Each MICROVOX transmission is always received in full!

The **Automatic Noise Level Correction** feature monitors background noise levels, constantly adjusting the transmit threshold point. Therefore false triggering on noise is virtually non-existent with an IMARK Microvox.

Developed specifically as a universal product, the Microvox can be fitted to almost any type of two-way radio. Numerous link settings can be activated to suit particular customer requirements. Miniature "snap-on" connectors are supplied for easy connection to suitable speaker & microphone cables. A stainless steel clothing clip is provided with all models for easy attachment to trouser waistbands or to overalls. A 400 mAH Nickel Cadmium Battery is included internally to suit radios that do not provide supply DC volts via the speaker/microphone connector, or if the user wishes to conserve the radio's battery capacity. This battery will operate the Microvox for 10 hours under normal working conditions.

The Microvox is housed in a rugged all metal enclosure. It is sealed to provide resistance to water and dust and is ideal for use in harsh environments.

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<b>SPECIFICATIONS:</b>	
DC Voltage Supply Range	7 - 16 Volts DC
DC Current Requirements	Stand-by: 20mA VOX Mode: 30mA
Voltage Indicators	Low Voltage Warning Tone, & Unacceptable Voltage Warning Tone
Side-Tone Operation	Real Time
Transmit Time Limits	30, 60, & 90 seconds, + Infinity (Link Selectable)
Acceptable Microphone Types	Electret & Dynamic (Link Selectable)
Input Adjustment Range	5mV p-p to 250mV p-p
Analogue Sample Rate	30 KHz in PTT Mode, 13 KHz in VOX Mode
Audio Delay in VOX Mode	5 to 2,000 mS (Link Selectable)
Intersyllable Delay in Vox Mode	125 to 2,000 mS (Link Selectable)
Switching Point Level in Vox Mode	Manual or Automatically Adjusted to suit Background Noise Level
Unit Dimensions	65(W) x 27(D) x 62(H) mm
Shipping Dimensions	230(W) x 155(D) x 92(H) mm
Unit Weight	295grams (excluding Cables)
Shipping Weight	440grams
Inclusions	Operators Manual, 4P & 6P Quick Connect Cable Plugs
Approvals	
Imark Stock #	503512
Options	