SPECIFICATIONS

GENERAL

Performance specifications are nominal unless otherwise specified and are subject to change without notice.

General Frequency Range	902-928 MHz Std.
Operation mode	Duplex
Power Supply	3.6V NiMh internal rechargeable battery system/1800mah
Charger	Output 6vdc @500ma into 3.5mm jack, Input 120vac@7.5w
Weight	Approximately 16 oz.
Microphone	Electret, 3k Ohm

TRANSMITTER

RF Output	10 mW
Spurious & Harmonics	75 dB
Modulation	16K0F3E
Frequency Stability	xxxx
Voice Compressor	xxxx

RECEIVER

Receiver Circuit	xxx
Sensitivity	xxx
Modulation Acceptance	xxx
Selectivity	xxx
Spurious & Image	xxx
Intermod Response	xxx
Frequency Stability	xxx

APPROVALS AND AUTHORIZATIONS

FEDERAL COMMUNICATIONS COMMISSION

This headset complies with Part 15 of the FCC rules. Operation is subject to two conditions: (1) This device may not cause harmful interferance and (2) this device must accept any interferance received including interferance that may cause undesired operation.

EARMARK ®
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p/n 400070

OWNER'S MANUAL

OPERATING INSTRUCTIONS FOR THE VALCOMM 900 HEADSETS

I DESCRIPTION AND GENERAL INFORMATION

Your new Earmark ValComm 900 Headset provides you with hands-free communication capability. It has many features to assist in building your productivity. Earmark Headsets are supplied in a variety of models. Before going any further, please check the name plate label on your Headset and determine which of the below listed models you have.

MODEL	NETWORK DESCRIPTION
VC900-HD	FULL DUPLEX PAIR- VC900-HDA & VC900-HDB
VC900-HDA	FULL DUPLEX HEADSET FOR USE WITH VC900-BD BASE
VC900-HDB	FULL DUPLEX HEADSET FOR USE WITH LISTEN ONLY HEADSETS
VC900-HL	LISTEN ONLY HEADSET... NO MICROPHONE
VC900-HH	HALF DUPLEX HEADSET - REQUIRES REPEATING BASE OR HEADSET
VC900-HG	REPEATING HEADSET - USE WITH MULTIPLE VC900-HH OR HL

All the above models have certain features in common. Each has a variable rotary volume control which is also the main power on/off switch. There is also a continuous reading, Battery Condition Indicator Light on the back of every unit. And, with an Earmark portable radio, you always have the ability to actuate the transmitter with a Push To Talk (PTT) Switch or let the transmitter run all of the time.

II SETUP

As received, your new Earmark ValComm 900 Headset is ready for use in a typical, industrial operating environment. Only a few items require your attention before you start operations.

A. BATTERIES

Your Headset comes with rechargeable NiMh batteries. This power system should last approximately 16 hours when fully charged. The headset should be charged immediately when you receive it.

To recharge the headset, plug the power supply that came with your headset (see specs on back page) into the charging jack at the bottom of the side with the microphone. A charge session of 7-8 hours should completely charge the batteries. The LED next to the charging jack will stay a red or amber color as long as the charger is attached and functioning. If the light is amber, the headset is turned on... you should turn the headset off in order to charge faster.

Insert Charger Jack to Charge Headset

E. OUT OF RANGE INDICATOR

When you are out of range of the other ValComm 900 headset in your group, you will hear a sound in your ear that goes from high to low frequency. Immediately get closer to the other person or base. When you are back in range you will hear a sound which is low to high frequency.

This condition will not happen suddenly... you will have warning that you are drifting out of range when you hear sound quality begin to degrade.

V ACCESSORIES

A. HARD HAT MOUNTS

If you need a hard hat, you should equip your ValComm 900 Headset with Earmark's hard hat and hard hat brackets. Supplied as a package, the wide hard hat with ratchet suspension and the spring mount headset adapters assure the best fit and comfort. This option is not field installable. Contact Earmark for further information.

VI MAINTENANCE

A. REPLACEMENT PARTS

From time to time all devices need refreshing, especially soft parts such as headband pads, windscreens, and earmuffs. Replacement parts are available from Earmark directly or on our website www.earmark.com under "Order Parts". Please specify your Headset model when ordering.

B. SERVICE

Earmark has a full time service staff ready to perform maintenance on your radio. Whether in warranty or not, all radios are repaired quickly and professionally. Contact Earmark for more information or go to our website at www.earmark.com/service.

B. BATTERY CONDITION

The red light next to the Volume knob is an indicator of battery condition. As long as the LED stays lit, the battery is adequately charged. When the battery charge degrades too much, the LED will go blink and you will hear a beeping noise in your headset. This means you only have a few minutes of power left and should recharge your headset.

C. PTT SWITCH

The PTT (Push To Talk) switch is located on the bottom of the microphone side of your headset (below the mode switch). Pressing it will override any other setting and allow you to talk.

D. MODE SWITCH

The Mode Switch is between the PTT switch and the microphone. This switch selects the two operating modes, "ON" or "OFF".

Mode Switch

Duplex and Repeating Headsets offer a selection of Continuous Transmit (ON) and Push to Talk (OFF). When the mode control is switched to OFF, you must press the PTT button to talk. When in ON, the microphone is always live.

Half-Duplex Headsets do not have a Mode Control switch. They are always push to talk using the PTT button.

Listen Only Headsets do not have a Mode Control switch nor a PTT switch. They have no microphone and do not transmit.

B. EARMUFFS

Your Earmark Headset comes with hypo-allergenic, noise cancelling foam filled earmuffs. These earmuffs are specially manufactured for your ValComm 900 Headset and are fabricated with a polyurethane skin over custom foam. Washable fabric sanitary covers are available from Earmark if desired.

C. SELECTING FREQUENCY

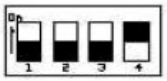
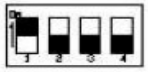
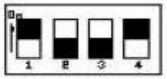
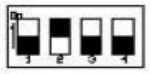
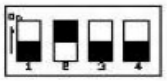
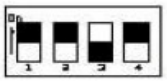
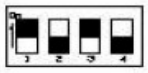
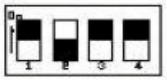
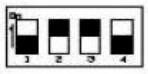
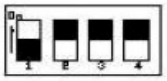
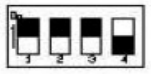
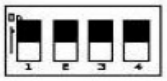
Your ValComm Headset provides 16 possible channels (numbers 0-15) of operation in the unlicensed 902-928 mhz frequency band. All headsets are shipped set to channel zero (0), but can be changed easily.

To change channels, do the following:

- Turn off the power on the headset
- Pull apart the headset cups so that you are looking into the ear cavity on the side with the microphone.
- Find the square cutout in the guard (see figure)... you will see a square DIP switch that has four little slide switches on it.
- Set the channel you want to one of the combinations shown on next page using a sharp object to slide the switches.
- Turn on the headset

Dipswitch Location in Ear Cup

ValComm Dip Switch Settings

Switch	Channel	Switch	Channel
	Ch 0		Ch 8
	Ch 1		Ch 9
	Ch 2		Ch 10
	Ch 3		Ch 11
	Ch 4		Ch 12
	Ch 5		Ch 13
	Ch 6		Ch 14
	Ch 7		Ch 15

III THE ValComm 900 MICROPHONE

A. ARMORED GOOSENECK MICROPHONE

Earmark designs and provides only "noise cancelling" Microphones. With a noise cancelling design, the front and back of the microphone respond differently to outside noise energy. It's all done to give you an advantage when you have to work and talk in high noise. The microphone's front side, the side closest to your mouth, hears your voice up to 16 times better than the microphone's back side. That's why it's so important to talk into the front side. At Earmark, we mark our microphones so the side you talk into the side marked "Talk". You're always ok if you keep the Talk side closest to you.

Noise cancelling works best when you *"close talk"* the microphone. To *close talk* means to keep the microphone's front side very close to your lips, within 1/4 inch. When you keep the microphone's front side close to your lips, you'll sound great, and your voice will seem much louder than the outside noise around you. The extra effort required to use a noise cancelling Microphone the right way really pays off; it dramatically improves sound quality.

Maintaining your microphone requires very little effort. Preventative maintenance is the key to long life. First and foremost, make certain the end is covered by a windscreen. The windscreens keeps the metallic micro-mesh guards from getting dirty as well as reducing the effects of air noise across the microphone. When the micro-mesh guards get blocked with dust and moisture, they block the sound energy from getting through and make it hard to talk. Guard blockage, caused by a missing windscreen, is the most common reason for microphone failure.

IV CONTROLS AND OPERATION

A. ON/OFF VOLUME SWITCH

This switch turns the Headset ON and provides a continuous volume control, from min to max. Located behind the earcup, the switch is easy to find and large enough to control with a gloved hand.

Volume control location