

APPENDIX 5
USERS MANUAL

TWO (2) PAGE USER INSTRUCTIONS FOLLOW THIS SHEET

YOU HAVE MADE AN EXCELLENT CHOICE!

Peltor PowerCom is a battery operated, simplex, 14-channel, wire-less UHF FM transceiver, built into a highly efficient hearing protection device, developed for secure speech communications in noisy environments.

In order to fully enjoy the product, it is important to read all of these instructions.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

- 1) **THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND**
- 2) **THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION**

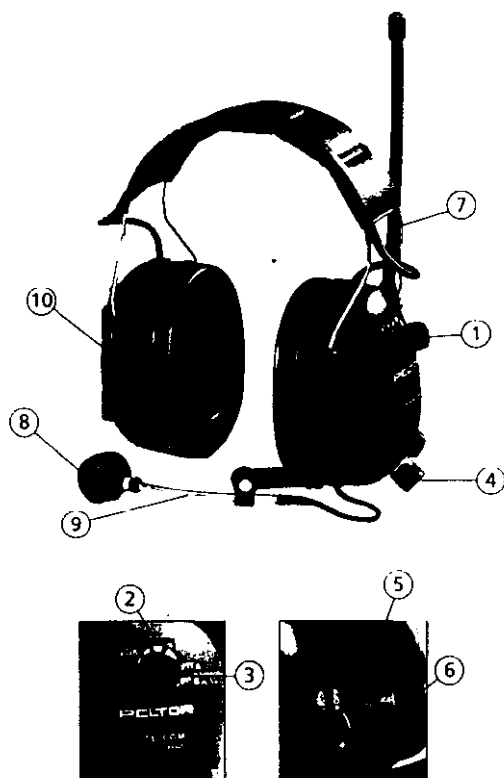
PowerCom allows wire-less communication with other PowerCom's or FRS-band radios on the same frequency. The Family Radio Service (FRS) is the newest generation in personal two-way communications. FRS radios operate in a license-free band (no FCC license for operation), on one of 14 license-free channels.

You can talk to another person using any FRS radio, provided that you are on the same frequency. Channel programming is described in this manual.

The radio has an automatic battery saver feature - at 8 seconds of non-use the radio goes into power save assuring long battery life.

The noise suppressing dynamic microphone is efficiently reducing background noise and improves speech intelligibility in noisy environments. Transmission can be initiated either in a hands-free, voice-activated mode or by manually operating the push-to-talk switch.

The applications for PowerCom are unlimited; forestry, construction industry, education and other areas where secure communication over distances are essential.

**(A)**

1. **Four-position selector switch**, three sensitivity positions for voice-activated (VOX) hands-free transmissions, and one sensitivity position for transmissions using PTT.

2. **VOX mode**, utilizing three positions for adjusting the VOX circuit sensitivity to the ambient noise level in order to provide appropriate activation of the microphone. The unit can be adjusted to work in noise levels up to ~115dBA.

3. **PTT (push-to-talk) Position**. The microphone is activated by use of the PTT-switch. This is the preferred mode for transmit-on-demand situations.

4. **On - Off switch and volume control**.

5. **PTT transmit switch**.

6.

7. **Antenna**

8. **Microphone**, noise suppressing dynamic differential microphone.

9. **Microphone-boom**, equipped with quick positioning feature and simple four-way adjustment feature.

10. **Battery compartment cover**, for quick and easy replacement of battery, 9 Volt alkaline type IEC 6LR61.

INSTRUCTIONS FOR USE

Unscrew and remove the battery compartment lid. Install a 9 Volt battery ensuring the right polarity as indicated in the battery compartment.

(B)**Headband:**

(B:1) Extend the cups and position the headset over the ears so that both ears are covered and that the foam cushions seal against the head.

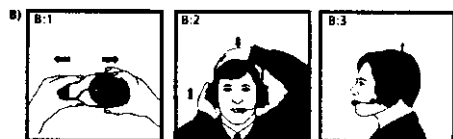
(B:2) Adjust the height of the cups by sliding each cup while holding the headband firmly against the head to accomplish a tight, comfortable fit.

(B:3) The headband should be positioned on top of head.

(C)

Hard Hat Attachment: Slide the hard hat attachment into the hard hat slot and press down until it snaps into position (see Figure C).

When the cups are in either store or ventilation position, the operating position is accomplished by pressing the cups against the head until the clicking sound indicates that the cups are in operating position. In order to prevent leakage, ensure that the neither the cup or the suspension touches the hard hat when the cups are in the operating position. The cups can be positioned in three modes; (C:2) Operating, (C:3) Ventilation and (C:4) Parked.



Important: For improved noise reduction efficiency, remove hair around the ears from under the cushions to improve the acoustical seal against the head. Eyeglass temples should be as thin as possible and conform close to the head for best performance.

Turn on the headset and adjust the volume for best listening level. Turn the power on by rotating the power volume knob clockwise. The radio will sound a melody tone to verify power. Adjust to desired volume.

In order to obtain optimum noise suppression, the microphone should be positioned 3 - 5 mm (.1 - .6 in) from the lips. For hands-free VOX operation, the VOX/PTT switch should be in VOX mode.

**(D)****Adjustment of the VOX sensitivity:**

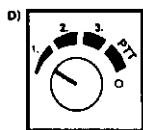
Maximum sensitivity (first VOX level) is appropriate for communication in low noise levels. A low voice signal will activate the transmission.

The third VOX level (lowest sensitivity) is appropriate for transmissions in high noise levels and require an increased voice signal in order to activate the transmitter. The optimum choice of sensitivity adjustment is dependent upon the actual noise level.

When manual operation of the transmitter is desired, the VOX/PTT switch should be in the PTT positions. However, transmit is always possible by pushing the PTT-switch independently of VOX-position. Press the PTT switch during transmit and release for receiving.

Note: When transmitting, you should hear your own voice through the speakers.

To transmit, hold the radio 2-3 inches from your mouth, press the push-to-talk button on the radio side, and speak clearly into the microphone area of the radio. For best quality, speak slowly and in a normal tone of voice. There is no need to speak loudly.

**Should the transmitter not work properly in VOX mode:**

- Is the VOX sensitivity setting appropriate for the level of your voice?
- Is the microphone positioned in close proximity to your mouth?
- Is the other user transmitting simultaneously or is the VOX sensitivity set so high that the transmitter is constantly activated?
- Are you speaking loud enough?

Suggestions for proper operation

- When using VOX mode, speak in a constant flow and avoid silent periods between words.
- Inform the other listener when your transmission stops. Avoid conflicting transmissions between the two units.

IMPORTANT USER INFORMATION

PowerCom must be worn, adjusted, cleaned and maintained in accordance with the instructions in this manual.

- In order to fully benefit from the superior noise attenuation, always wear PowerCom 100% of the time you are exposed to noise!
- Regularly clean the outside of PowerCom using warm water and a mild detergent.
The unit must not be submerged in water.
- Do not store or place PowerCom in temperatures exceeding +55°C (130°F). Do not place the unit behind a car windshield or in direct sunlight.
- Certain chemicals may negatively effect this product. The manufacturer can provide further information.
- Batteries should be replaced when disruptions in the reception occur or when the received signal volume weakens.
- PowerCom and especially the cushions may degrade over time and should be examined regularly to verify that they are not cracked or otherwise damaged.

NOTE: If these instructions are not followed properly, the noise attenuation properties and functionality of the unit may be negatively effected.

TECHNICAL SPECIFICATIONS

(E)

Attenuation data

The PowerCom noise attenuation properties are tested and approved in accordance with the ANSI S3.19-1974 standard.

Measurements on products designed for hard hat attachment were conducted on the Peltor Hard Hat G22C.

(G)

Voltage: 7-9V using the standard 9V battery (IEC6LR61)

Battery Life Expectancy: At 20% transmitting and 80% standby/ receiving, a 9V-battery type IEC6LR61 will last approximately 14 hours.

Microphone: Dynamic differential microphone with 230 impedance and with 12 dB noise suppression at 1 kHz.

Operating Distance: Max. 3,200 m (2 miles) over level terrain

Audio Frequency Range: 125 - 8000 Hz.

Battery Life Expectancy: Receive only, 20 hours with 9V IEC6LR61 battery

FRS Radio Specifications

Operating Channels: 1

Total Number of Channels Available: 14

Output Power: 0.5 Watts (FCC maximum)

Battery Life: 10 hours (typical)

Channel/Frequency:

- | | |
|----|--------------|
| 1 | 462.5625 MHz |
| 2 | 462.5875 MHz |
| 3 | 462.6125 MHz |
| 4 | 462.6375 MHz |
| 5 | 462.6625 MHz |
| 6 | 462.6875 MHz |
| 7 | 462.7125 MHz |
| 8 | 467.5625 MHz |
| 9 | 467.5875 MHz |
| 10 | 467.6125 MHz |
| 11 | 467.6375 MHz |
| 12 | 467.6625 MHz |
| 13 | 467.6875 MHz |
| 14 | 467.7125 MHz |

Channel Programming Instructions

Remove the ear cushion and foam from the right earcup, turn the unit so that the antenna is pointing towards you and locate the channel programming dip switches at the left side of the bottom PC/board.. To select an operating channel, move the switches per the chart below (we suggest you use a pointed utensil like a ballpoint pen). All radios must be on the same frequency to communicate with each other.

NOTE: Switch 5 is not used in programming

Example of dip switches set for Channel 9



Switch: 1/down 2/up 3/up 4/down

Channel 1 *	- Frequency 462.5625 MHz	Switch: 1/up	2/up	3/up	4/up
Channel 1 *	- Frequency 462.5625 MHz	Switch: 1/up	2/up	3/up	4/down
Channel 1 *	- Frequency 462.5625 MHz	Switch: 1/down	2/down	3/down	4/down

*NOTE: There are three combinations for Channel 1, any can be used.

Channel 2	- Frequency 462.5875 MHz	Switch: 1/up	2/up	3/down	4/up
Channel 3	- Frequency 462.6125 MHz	Switch: 1/up	2/up	3/down	4/down
Channel 4	- Frequency 462.6375 MHz	Switch: 1/up	2/down	3/up	4/up
Channel 5	- Frequency 462.6625 MHz	Switch: 1/up	2/down	3/up	4/down
Channel 6	- Frequency 462.6875 MHz	Switch: 1/up	2/down	3/down	4/up
Channel 7	- Frequency 462.7125 MHz	Switch: 1/up	2/down	3/down	4/down
Channel 8	- Frequency 467.5625 MHz	Switch: 1/down	2/up	3/up	4/up
Channel 9	- Frequency 467.5875 MHz	Switch: 1/down	2/up	3/up	4/down
Channel 10	- Frequency 467.6125 MHz	Switch: 1/down	2/up	3/down	4/up
Channel 11	- Frequency 467.6375 MHz	Switch: 1/down	2/up	3/down	4/down
Channel 12	- Frequency 467.6625 MHz	Switch: 1/down	2/down	3/up	4/up
Channel 13	- Frequency 467.6875 MHz	Switch: 1/down	2/down	3/up	4/down
Channel 14	- Frequency 467.7125 MHz	Switch: 1/down	2/down	3/down	4/up

Power-Com

