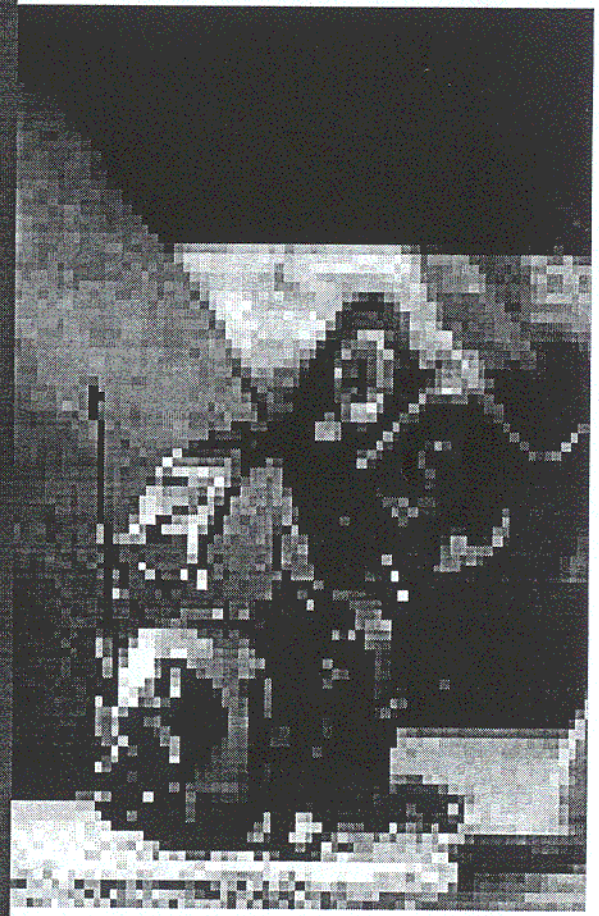
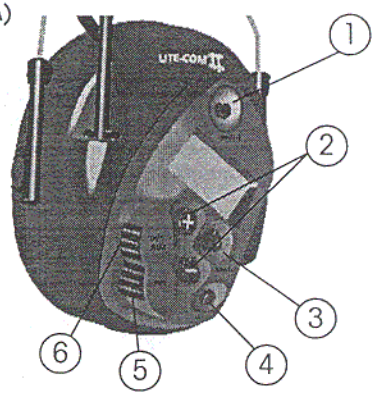
PELTOR®

AEARO COMPANY
FCC ID :
NUVPELTORLITE-COMII
JOB : 712XAU1
EXHIBIT # : 5

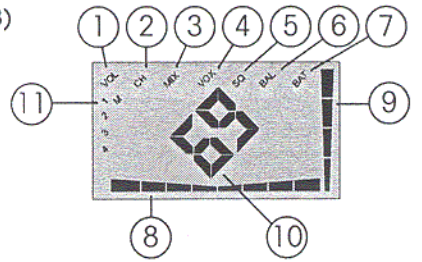
Peltor Lite-Com II



(A)



(B)



(E)

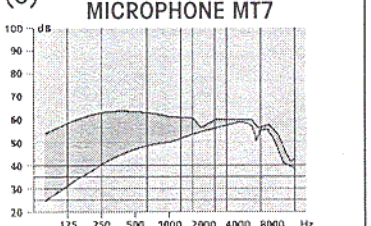
Attenuation headband

Model	Frequency [1]	125	250	500	1000	2000	4000	8000	H	M	L	SNR
MT7H7A430 950	Mean att. [2]	16.5	20.7	31.4	33.7	34.5	38.4	37.2				
	Stand. dev. [3]	2.4	2.3	1.8	3.3	2.2	3.1	4.7	33 dB	28 dB	21 dB	31 dB
	APV [4]	14.1	18.4	29.6	30.4	32.3	35.3	32.5				

Attenuation for helmet attachement

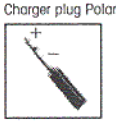
Model	Frequency [1]	125	250	500	1000	2000	4000	8000	H	M	L	SNR
MT7H7P3E430 950	Mean att. [2]	17.8	21.0	30.9	32.6	31.5	38.9	38.2				
	Stand. dev. [3]	2.0	1.8	3.6	3.3	2.7	3.7	3.9	31 dB	28 dB	22 dB	30 dB
	APV [4]	15.8	19.2	27.3	29.3	28.8	35.2	34.3				

(C)

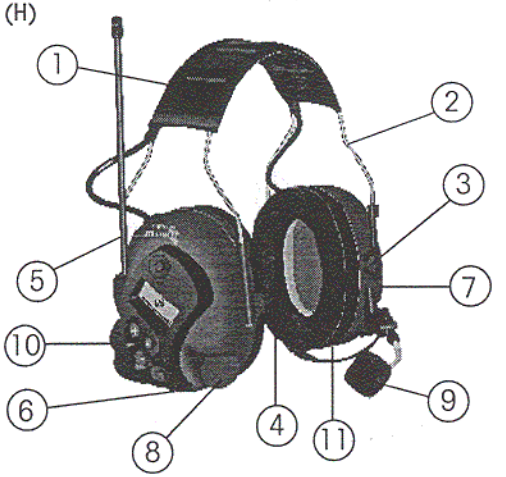


WARNING!
If rechargeable batteries are used, use only specified batteries according to charger manual. Drycell batteries may explode if charged.

Charger plug Polarity

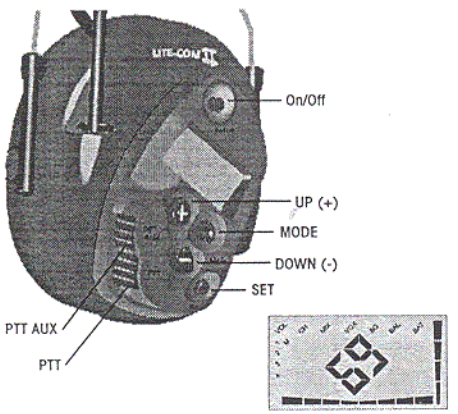


(H)



(G)

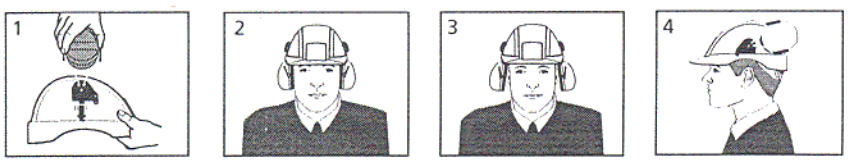
HY79 HY100 HYM1000 M60/2 1173 SV



Display	Panel
	On/Off (2 sekonds)
VOL	Volume (▲+ –▼)
CH	Chanel (1xMODE) (▲+ –▼)
MIX	MIX (2xMODE) (▲+ –▼)
VOX	VOX (3xMODE) (▲+ –▼)
SQ	Squelch (4xMODE) (▲+ –▼)
BAL	Balance (5xMODE) (◄ – + ►)
BAT	Battery (6xMODE) (▲+ –▼)

(J)

(K)



Peltor Lite-Com II Quick Reference

KEY

On/Off	Switches the Lite-Com on and off.
UP (+) DOWN (-)	Increases the level of the selected function. Decreases the level of the selected function.
MODE	Function key for switching functions in the menu. The selected function is shown on the display and confirmed with a voice message.
SET	Memory key for four memory slots. For programming memory slots.
PTT	Speech button for transmitting with the Lite-Com radio.
PTT AUX	Speech button for transmitting with connected external communication equipment.

DISPLAY

VOL	Noise level for ambient noise.
CH	Channel setting. Activated by pressing MODE once.
MIX	Sound level for radio signals received by the Lite-Com radio. Activated by pressing MODE two times.
VOX	Voice-controlled transmission. Activated by pressing MODE three times.
SQ	Squelch. Activated by pressing MODE four times.
BAL	Right-left balance. Activated by pressing MODE five times.
BAT	Battery-saving function. Activated by pressing MODE six times.
Level indicator	Scale that shows current settings for each function.
Battery indicator	Scale that shows the current voltage.
Channel	Shows the current channel, 1–14.

PELTOR Lite-Com II
Wireless communication headset
The Peltor Lite-Com offers reliable, effective wireless communication between two or more people, even in noisy environments. User-friendliness is key with Peltor Lite-Com. Since the Lite-Com is also an active hearing protector, which attenuates noise to harmless levels, it ensures safety and increased working enjoyment.

Peltor Lite-Com is a battery operared, simplex, 14-channel, wire-less UHF FM transceiver, built into highly efficent 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. Operationis 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 undesired operation.

Lite-Com allows wire-less communication with order Lite-Com`c or FRS-band radios on the same frequency. The Family Radios Service (FRS) is the newest generation in personal two-way communications. FRS radios operate in a license-free band (no FCC license for operatio), on one of 14 license-free channels.

PROPERTIES
- Wireless communication headset with 14 channels. Output Power 150/25mW, giving an outdoor range of over 2/0,5 miles in normal conditions.
- Active hearing protector with stereo reception. Limits noise levels to protect against harmful noise.
- The communication radio function is first priority, but earphone signals can be mixed with ambient noise.
- Can also be used as a headset for other communication equipment. An external signal attenuates other signals by 20 dB.
- The battery saving function allows a usage time of about 40 hours (10% transmission, 10% reception and 80% stand-by). A warning signal is emitted every 30 seconds when battery power is low. In battery save mode 0 the power is 150 mW and in mode 1-5 25mW.
- Automatic shut-off after 2 hours if no function is activated. Three tones are emitted every 30 seconds for five minutes before shut-off.
- Polarity protection guards the electronics if batteries are installed incorrectly.
- Selected setting levels are confirmed orally with a voice message and displayed. The last setting is stored when the unit is switched off.

ADVANTAGES (Fig. H)
1. Extra broad headband (MT7H7A460A with soft padding for the best comfort throughout the working day. **Specially designed helmet attachments** (MT7P3*460A) with attachments for visor and rain protection.
2. Individually sprung bands of stainless steel give an even distribution of pressure around the ears. Steel headbands maintain their resilience better than regular plastic bands through a wide temperature range.
3. Low, two-point fasteners and easy height adjustment with no protruding parts.
4. Soft, wide, foam/fluid-filled sealing rings with built-in pressure-relief channels provide low pressure, effective sealing and individual comfort.
5. Flexible antenna with low attachment and high receptivity.
6. Audio input for connecting external communication equipment, such as another communication radio or cellular telephone.
7. Battery cover for easy battery replacement (two alkaline 1.5 V AA batteries included). Battery saving function for 40 hours' operating time between battery replacements.
8. Microphones that pick up and amplify ambient noises up to the maximum harmless level.
9. Ambient-noise compensated speech microphone for high speech recognition with Quick Positioning for easy configuration.
10. Keypad allowing easy, convenient regulation of the Lite-Com functions **(Fig. A)**.
11. Charging jack

A:1. On/Off	Switches the Lite-Com on and off.
A:2. Up (+) Down (-)	Increases the level of the selected function. Decreases the level of the selected function.
A:3. MODE	Function key for switching functions in the menu. The selected function is shown on the display and confirmed with a voice message.
A:4. SET	Memory key for four memory slots. For programming memory slots.
A:5. PTT	Speech button for transmitting with the Lite-Com radio.
A:6. PTT AUX	Speech button for transmitting with connected external communication equipment.

- **Display**, which normally shows the selected channel, noise level and battery capacity **(Fig. B)**. When you change other settings, the results are displayed for 5 seconds.

B:1. VOL — Noise level for ambient noise.

B:2. CH — Channel setting. Activated by pressing MODE (A:3) once.

B:3. MIX — Sound level for radio signals received by the Lite-Com radio. Activated by pressing MODE two times.

B:4. VOX — Voice-controlled transmission. Activated by pressing MODE three times

B:5. SQ — Squelch. Activated by pressing MODE four times.

B:6. BAL — Right-left balance. Activated by pressing MODE five times.

B:7. BAT — Battery-saving function. Activated by pressing MODE six times.

B:8 Level indicator — Scale that shows current settings for each function.

B:9 Battery indicator — Scale that shows the current voltage.

B:10 Channel — Shows the current channel, 1–69.

B:11 SET — Select and program four channels. Press SET (A:4) repeatedly to select a stored channel. The number of the stored channel is shown on the display. All functions can be programmed individually for each memory slot.

INSTRUCTIONS FOR USE

ON/OFF

Switch the Lite-Com on and off by pressing and holding the ON/OFF button for 2 seconds. A tone indicates that the function is completed.

VOLUME (ambient noise level)

Ambient sound amplification – when the Lite-Com is used as an active hearing protector – is regulated with the UP (+) and DOWN (-) selectors. The change is confirmed with a voice message and on the scale in the display. If the level selector is pressed and held, the settings are adjusted continuously and a tone is emitted at the end point. You can also switch off ambient noise amplification by reducing the volume to its lowest position (indicated with a tone) using the DOWN (-) button, then holding the button for about 2 seconds. A tone indicates that the action is completed.

WARNING! This setting attenuates ambient noises through the hearing protector, and they may become inaudible. To re-activate the function, press UP (+) and the Lite-Com once again works as an active-volume hearing protector that limits sound levels.

CHANNEL

Set the channel for transmitting and receiving by pressing MODE once. A voice message confirms the setting. Then select the desired channel with either level selector, UP (+) or DOWN (-). A voice message confirms the channel change. Hold the level selector button to change channels continuously. A tone indicates that the unit has returned to volume settings.

The Lite-Com is equipped with automatic scanning to help you find channels that are often activated by other nearby radio traffic. Avoid these channels and select one with minimal activity. Activate automatic scanning by pressing PTT twice in rapid succession. The receiver searches until it finds an active channel or until you manually cancel the search by pressing PTT.

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

MIX (Sound level from the Lite-Com radio)

Regulate the sound level of radio signals received by the Lite-Com by pressing MODE twice. A voice message confirms the setting. Amplification has five positions, which you can change with the level selectors, UP (+) and DOWN (-). A voice message confirms the change. If you press a level selector constantly, the setting changes continuously and a tone is emitted at the end position. At the bottom end position, the Lite-Com is switched off and can be switched on again with UP (+). **WARNING!** Radio communication can no longer be heard. Re-activate the function by pressing UP (+).

VOX (Voice controlled transmission)

Adjust microphone sensitivity by pressing MODE three times. A voice message confirms the setting. Select the desired sensitivity with the level selectors: UP (+) when the ambient noise level is high and DOWN (-) when it is low and a greater microphone sensitivity is allowed. A voice message confirms the change. If you press the level selector constantly, the setting changes continuously and a tone is emitted at the end position. Switch off voice control by pressing and holding DOWN (-) for 2 seconds at the end position. A tone indicates that the action is complete, and now you can only transmit by pressing PTT (A:5). To re-activate the function, press the UP (+) level selector.

SQUELCH (eliminates background noise)

Adjust the sensitivity of the squelch function by pressing MODE four times. A voice message confirms the setting. The squelch function has six levels and can be changed with the level selectors, UP (+) and DOWN (-). A voice message confirms the change. The usual setting is 1 or 2, but 3 to 5 may be necessary to avoid interference from other traffic on the channel.
At the bottom end position, squelch is disconnected, which can be necessary for receiving very weak signals. Switch it back on by pressing UP (+). If you press and hold a level selector, the setting changes continuously and a tone is emitted at the end position.

BALANCE

Adjust the balance between the right and left earphones by pressing MODE five times. A voice message confirms the setting. The balance can be adjusted nine steps with the UP (+) and DOWN (-) level selectors. A voice message confirms the change. If you press and hold a level selector, the setting changes continuously and a tone is emitted at the end position.

BATTERY (power save)

A power-save function increases the time between battery replacements. Select it by pressing MODE six times. A voice message confirms the setting. You can adjust the setting by six steps using the UP (+) or DOWN (-) level selectors. A voice message confirms the change. If you press and hold a level selector, the setting changes continuously and a tone is emitted when it reaches the end position.

SET (Memory slots for function settings)

The Lite-Com radio can be programmed with specific configurations of all functions for different situations. You access the four memory slots by pressing SET 1–4 times. A voice message confirms the memory slot and a tone indicates that no memory slot is selected. After selecting a memory slot, you can store a channel and other functions by pressing and holding SET until a tone confirms the storage or that the channel number goes out and lights up again in the display.

PTT (Manual transmission with the Lite-Com radio)

Press PTT to transmit with the Lite-Com radio.

PTT AUX (Manual transmission with external communication equipment)

Press PTT AUX to transmit through externally connected communication equipment. Press PTT AUX twice in rapid succession to lock the microphone in transmission mode, making the Lite-Com work as a headset for the connected external equipment. Press PTT AUX or PTT once to unlock.

Set-up (Basic setting)

You can adjust several functions by pressing SET and ON/OFF at once until the display is activated. Then release ON/OFF before SET and use MODE to select the function you want to change. Adjust the settings using the level selectors, UP (+) or DOWN (-). The level indicator on the display shows the settings. Save your settings by pressing ON/OFF until the display goes dark.

Function	Description	Setting
VOL	Maximum transmission time	1–5 minutes
CH	Automatic return to VOL	1=On,0=Off
MIX	Return to basic settings	Use UP (+) to go from 0 to 5
VOX	Voice messages and blocked VOX while receiving (Antivox*)	0=Voice Off, Antivox* Off 1=Voice On, Antivox* Off 2=Voice Off, Antivox* On 3=Voice On, Antivox* On
SQ	External VOX	1=On, 0=Off
BAL	External connections (check the setting in the brochure included with the cable)	0=Com radio, no attenuation 1=Telephone, no attenuation 2=Telephone, auto attenuation** 3=Telephone, no attenuation, voice call 4= Telephone, auto attenuation, voice call** 5=Walkman, auto/ manual attenuation***
BAT	Automatic shut-off after 2 hours	1=On, 0=Off

*Antivox means that the VOX function is switched off and you can only transmit using the PTT button when someone else is transmitting.

** The microphone is automatically attenuated when transmitting with PTT during a phone call. If the phone is unintentionally disconnected during transmission, use a mode with no attenuation.

** *The Walkman is automatically attenuated during transmission and reception on the LC. You can also attenuate the Walkman manually by pressing PTT Aux. Press the button again to resume.

Further configuring functions

Most functions in the Lite-Com can have the basic settings configured according to customer wishes. Contact your Peltor dealer for more information.

ASSEMBLY/CONFIGURATION

Batteries

Unscrew and fold out the battery cover. Use two 1.5-V AA batteries (included). Make sure that the + and – poles of the battery are turned in the right direction (see the figure in the cover).

WARNING!

If you use re-chargeable batteries, install them only according to the charger manual. Dry-cell batteries can explode if recharged.

Headband (Fig. J)

(J:1) Extend the cups. Place the headset over your ears so that the sealing rings fit snugly.
(J:2) Adjust the height of the cups to fit snugly and comfortably by sliding the cup up or down while holding the headband flat.
(J:3) The headband should lie flat over the top of the head.

Helmet attachment (Fig. K)

(K:1) Snap the helmet attachment into the slot on the helmet.
Note: The cups have three positions: Working position (K:2), ventilation position (K:3) and parking position (K:4).
When in use, the cups must be placed in working positions. Press the headband wires inwards until you hear a click on both sides. Make sure that the cup and the headband in working position do not snag or drag on anything, which might cause leakage.

100% use of a working hearing protector is the only sure protection from hearing loss.
If you spend time in environments with more than 85 dB A-weighted noise, you need to protect your hearing, because the hearing receptors deep in your ears may be irreparably damaged. If you remove the protectors for even a tiny portion of the time you spend in noisy situations, you are in the danger zone. A comfortable hearing protector designed for the specific noise levels in which it is used, is the best guarantee that people will use their hearing protectors all the time and gain full protection against hearing loss. For the best protection, brush aside hair around the ears so that the sealing rings fit snugly against the head. Spectacle frames must be as thin as possible and fit closely to the head.

MAINTENANCE

Clean the headset exterior regularly with soap and warm water. **Note: Do not immerse in water.**
Do not store the headset at temperatures above +55°C – for example, in a windscreen or window. The headset (particularly the sealing rings) can deteriorate over time. Check regularly that no cracks or sound leakage occur. Certain chemical substances can also damage the product. Contact the manufacturer for more information.
When the battery indicator in the display is dark and the Lite-Com emits the low-power signal (three tones every 30 seconds), it is time to replace the batteries. After 5 minutes the Lite-Com switches off automatically. Never replace or install batteries with the power on. Before switching on, make sure that the batteries are inserted correctly. Rechargeable NiMH batteries have a maximum charge of 1.2 V. Therefore, the battery indicator only shows up to position 3 even when the batteries are fully charged.
Always wear, adjust, clean and maintain the headset according to these instructions. If these instructions are not followed, attenuation and function can be negatively affected.

TECHNICAL DATA

Attenuation data
The Lite-Com 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 G2001C.

Frequency: 462.5635-467.7125 MHz
Channels: 14

Output power: .084/.033 WATTS
Range: Outdoors approx. 2/0,5 miles depending on conditions
Traffic method: Simplex
Energy consumption: Stand-by and reception 40-90 mA
Transmission approx. 230 mA
Operational temperature: –20°C to +55°C
Storage temperature: –40°C to +55°C
Weight including batteries: MT7H7A460A 390 g
MT7H7P3E460A 410 g

Attenuation values (Fig. E)

1. Frequency
2. Average value
3. Standard deviation

PELTOR LITE-COM II MODELS

MT7H7A460A with headband
MT7H7P3E460A with helmet attachment for PELTOR G2001C hardhat

SPARE PARTS AND ACCESSORIES (Fig. G)

1. Hygiene kit

HY79 Easy-to-replace hygiene kit consisting of two attenuating cushions, two foam rings and snap-in sealing rings. Replace at least twice a year to ensure constant attenuation, hygiene and comfort.

2. Clean – single-use protectors

HY100 Single-use protectors that are easy to apply to the sealing rings. Packages of 100 pairs.

3. Mike Protector

HYM1000 Moisture, wind and hygienic protection for speech microphone, which effectively improves the microphone's life span. Packages of 5 metres, about 50 replacements.

Wind muff for speech microphone

M40/1 Effective protection from wind hiss; increases life span and protects the speech microphone. One per package.

4. Wind muff for ambient microphones

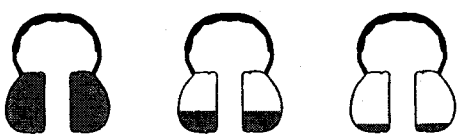
M60/2 Effective protection from wind hiss. One pair per package.

5. Battery cover

1173 SV Battery cover of rugged polypropylene.

Connection cables for external communication equipment

FL6R Connection cable with Peltor J11 connector (compatible with 4-pole Nexus TP-120) for use with a Peltor adapter and communication radio.
FL6S Connection cable with 2.5 mm stereo connector for use with cellular telephone.
FL6T Connection cable with 3.5 mm stereo connector. MONO connected. For use with Peltor Workstyle environmental radio etc.



(I) 100% wear time – The only assurance against hearing injury.
(I:1) Wear time 100% Provides predicted protective effect.
(I:2) Wear time 99% 5 minutes carelessness per day reduces the protective effect dramatically.
(I:3) Wear time 90% You can no longer be sure of effective protection levels.

- Daily exposure to environments containing noise levels of over 85 dB, A-weighed sound level, means you must protect your hearing.
- It is the hair cells deep inside the ear that become damaged and do not heal. The injury becomes permanent.
- A comfortable and acceptable hearing protector, suited to the noise level of the specific work place provides the best motivation for 100% wear time, and consequently the best protection against permanent injury.