PLIANT MicroCom 2400M Compact Economical Wireless Intercom System User Manual

Contents

PLIANT MicroCom 2400M Compact Economical Wireless Intercom System

INTRODUCTION

We at Pliant Technologies want to thank you for purchasing MicroCom 2400M. MicroCom 2400M is a compact, economical wireless intercom system that operates in the 2.4GHz frequency band to provide excellent range and performance. The system features small, lightweight beltpacks and provides excellent sound quality, ease-of-use, and long-life battery operation.
In order to get the most out of your new MicroCom 2400M, please take a few moments to read this manual completely so that you better understand the operation of this product. This document applies to model PMC-2400M. For questions not addressed in this manual, feel free to contact the Pliant Technologies Customer Support Department.

PRODUCT FEATURES

- Economical single-channel system
- Simple to operate
- Up to 5 full-duplex users
- Unlimited shared users
- Unlimited listen-only users
- 2.4GHz frequency band
- Encrypted FHSS technology
- Small and lightweight
- Water-resistant construction
- Approx. 7.5-hour battery life
- Low latency (less than 35 ms)

WHAT'S INCLUDED WITH MICROCOM 2400M?

- Holster
- Neck Strap
- USB Charging Cable

OPTIONAL ACCESSORIES

Part Number	Description
MicroCom Accessories	
PAC-USB6-CHG	MicroCom 6-Port USB Charger
ACC-USB2-CHG	2-Port USB Vehicle Charger
PAC-MC-SFTCASE	MicroCom Soft Travel Case
PAC-MCXR-5CASE	MicroCom Hard Travel Case
CAB-4F-DMG	MicroCom to AD903 DMG to XLR-4F Cable
BT-11	Replacement Li-Ion Battery
Headsets	
PHS-SB11LE-DMG	SmartBoom® LITE Single Ear Pliant headset with Dual Mini connector for MicroCom
PHS-SB110E-DMG	SmartBoom PRO Single Ear Pliant headset with Dual Mini connector for MicroCom
PHS-SB210E-DMG	DMG: SmartBoom PRO Dual Ear Pliant headset with Dual Mini connector for MicroCom
PHS-IEL-M	MicroCom in-ear headset, single ear, left only

PHS-IER-M	MicroCom in-ear headset, single ear, right only
PHS-IELPTT-M	MicroCom in-hear headset with push-to-talk (PTT) button, single ear, left only
PHS-LAV-DM	MicroCom lavalier microphone and eartube
PHS-LAVPTT-DM	MicroCom lavalier microphone and eartube with PTT button

CONTROLS

DISPLAY INDICATORS

SETUP

1. Connect a headset to the beltpack. The beltpack headset connection supports dual mini and single mini headsets. Dual mini connectors can be inserted in either direction. Single mini connectors can be inserted in either port of the headset connection.
2. Power on. Press and hold the POWER button for three (3) seconds, until the screen turns on.
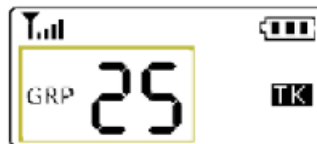
Figure 1: Group Edit Screen

3. Select a Group. Press and hold the MODE button for 3 seconds, until the "GRP" symbol is blinking on the LCD. Then, use the VOLUME +/–

   buttons to select a group number from 0–51. Short-press MODE to save your selection and proceed to ID setting.

Figure 2: ID Edit Screen

Important: Beltpacks must have the same group number to communicate.

4. Select an ID. When "ID" begins to blink on the LCD, use the VOLUME +/– buttons to select a unique ID number. Press and hold MODE to save your selection and exit the menu.

   - Pack IDs range from 00–05.
   - One pack must always use the "00" ID and serve as the master pack for proper system function. "MR" designates the master pack on its LCD.

Figure 3: ID Edit Screen
(Master ID)

   - Listen-only packs must use the "05" ID. You may duplicate ID
     "05" on multiple beltpacks if setting up listen-only users. (See "Receiving Mode Selection" on page 6 for more information about that process.)
   - Shared Talk beltpacks must use the "Sh" ID. You may duplicate ID "Sh" on multiple beltpacks if setting up shared users. However,
     the "Sh" ID cannot be used at the same time as the last full-duplex ID ("04").

BATTERY

The rechargeable Lithium-ion battery is installed in the device. Plug the USB charging cable into the USB port to recharge the battery. The charging LED in the right top corner of the device will illuminate solid red while the battery is charging and will turn off once the battery is fully charged. The battery charge time is approximately 3.5 hours from empty. The beltpack may be used while charging, but doing so may lengthen battery charge time.

OPERATION

- Talk – Use the TALK button to enable or disable talk for the device. This button changes with a single, short press. "TK" appears on the LCD when enabled.
  - For full-duplex users, use a single, short press to toggle talk on and off.
  - For Shared Talk users ("Sh"), press and hold while talking to enable it for the device. (Only one Shared Talk user can talk at a time.)

- Volume Up and Down – Use the + and – buttons to control the volume. "VOL" and a numerical value from 00–09 appear on the LCD when volume is adjusted.
- LED Modes –
  - Left-hand Talk/State LED is blue and double blinks when logged in and single blinks when logged out.
  - Right-hand Charging LED is red when battery is low and also red when charging in progress. LED turns off when charging is complete.

OPERATING MULTIPLE MICROCOM SYSTEMS IN ONE LOCATION
Each separate MicroCom system should use the same Group for all beltpacks in that system. Pliant recommends that systems operating in proximity to one another set their Groups to be at least ten (10) values apart. For example, if one system is using Group 03, another system nearby should use Group 13.

MENU SETTINGS

The following settings are adjustable from the beltpack menu.
To access the menu, press and hold the MODE button for 3 seconds, until the "GRP" symbol is blinking on the LCD. Then, short-press the MODE button the specified number of times to access the setting you wish to change. Once you have finished your changes, press and hold MODE to save your selection and exit the menu.

- Side Tone On/Off – Side tone allows you to hear yourself while talking. Louder environments may require you to increase your side tone.
  - To adjust side tone, access the beltpack menu, then press the MODE button twice. When the "S_" value is blinking on the LCD, use the VOLUME +/– buttons to select an option from S0–S5.
  - "S0" is off. "S1" is the lowest side tone level. "S5" is the highest.
  - The default side tone setting is "S3."
- Receiving Mode Selection – This setting allows you to set the beltpack to full duplex mode (both receiving and transmitting) or set it to receive only (i.e., listen only, which disables the beltpack's talk function).
  - To switch the receiving mode setting, access the beltpack menu, then press the MODE button three (3) times. When the "P_" value is blinking on the LCD, use the VOLUME +/– buttons to select between "PO" and "PF."
  - "PO" is full duplex (both receiving and transmitting). This mode may only be used with pack IDs 00–04.
  - "PF" is receive only (i.e., listen only). This mode may be used with any pack ID, but if you wish to set up multiple listen-only users, you may do so by repeating ID "05" as needed, and setting each pack to "PF" mode. This is an exception to the rule that all beltpacks must have a unique ID number.
  - The default mode setting is "PO."
- Microphone Sensitivity Level Control – Set microphone sensitivity based on your environment and headset capabilities. Louder environments may require you to reduce the mic sensitivity, while quieter environments may require you to increase it.
  - To adjust the mic sensitivity setting, access the beltpack menu, then press the MODE button four (4) times. When the "C_" value is blinking on the LCD, use the VOLUME +/– buttons to select an option from C1–C5.
  - "C1" is the lowest sensitivity level. "C5" is the highest.
  - The default microphone sensitivity level setting is "C1."
- Audio Output High/Low – Higher audio output is recommended for louder environments. Changing the output setting here results in a gain increase or decrease of 3 dB.
  - To switch the audio output setting, access the beltpack menu, then press the MODE button five (5) times.

When the "U_" value is blinking on the LCD, use the VOLUME +/− buttons to select between "UL" and "UH."

- UL" is audio output low. "UH" is audio output high.
- The default audio output setting is "UH" (audio output high).

MENU OPTIONS

Menu Setting	Options	Description
Side Tone	S0 S1, S2, S3*, S4, S5	Side Tone Off Side Tone Levels 1–5
Receiving Mode	PO* PF	Receiving and Transmitting Mode Receive-Only Mode (Listen-Only)
Mic Sensitivity Level	C1*, C2, C3, C4, C5	Mic Sensitivity Levels 1–5
Audio Output Level	UL UH*	Audio Output Low Audio Output High

* Default Settings Noted with Asterisk

RECOMMENDED SETTINGS BY HEADSET

Headset Model	Recommended Setting	
	Mic Sensitivity Level	Audio Output Level
Headset with boom mic	C1	UH
Headset with lavalier mic	C3	UH

Use the diagram of the wiring for the beltpack's TRRS connector if you choose to connect your own headphones. The microphone bias voltage range is 1.9V DC unloaded and 1.3V DC loaded.

Figure 4: TRRS Connector

DEVICE SPECIFICATIONS

Specification**	Details
Radio Frequency Type	ISM 2400–2483 MHz
Radio Interface	ISM 2400 MHz: FSK Modulation with Frequency Hopping
Voice Codec	16 bit / 16 KHz
Tx Max Output Power	100 mW
Rx Sensitivity	-95 dBm
Voice Latency	<35 ms
Frequency Channels	78 channels
Channel Spacing	2 MHz
Data Rate	2 Mbps
Battery Type	Rechargeable 3.7 V, 1,100 mA Li-ion fixed battery
Battery Life	Approx. 8 hours
Power Consumption Average	10 mA at Class 1 (100 mW)
Charge Type	USB Micro, 5V 1–2A
Frequency Response	50 Hz – 7 kHz
Maximum Full Duplex Users	5
Dimension / Weight	98 mm (H) x 49 mm (W) x 17 mm (D) / 88 g
Display	7-segment LCD

**Notice about Specifications: While Pliant Technologies makes every attempt to maintain the accuracy of the information contained in its product manuals, that information is subject to change without notice. Performance specifications included in this manual are design-centered specifications and are included for customer guidance and to facilitate system installation. Actual operating performance may vary. Manufacturer reserves the right to change specifications to reflect latest changes in technology and improvements at any time without notice.
NOTE: This model complies with ETSI standards (300.328 v1.8.1).

PRODUCT CARE AND MAINTENANCE

Clean using a soft, damp cloth.

CAUTION:
Do not use cleaners that contain solvents. Keep liquid and foreign objects out of the device openings. If the product is exposed to rain, gently wipe off all surfaces, cables, and cable connections as soon as possible and allow unit to dry before storing.

PRODUCT SUPPORT

Pliant Technologies offers technical support via phone and email from 07:00 to 19:00 Central Time (UTC–06:00), Monday through Friday.
1.844.475.4268 or +1.334.321.1160
technical.support@plianttechnologies.com

Visit **www.plianttechnologies.com** for product support, documentation, and live chat for help. (Live chat available 08:00 to 17:00 Central Time (UTC–06:00), Monday through Friday.)

RETURNING EQUIPMENT FOR REPAIR OR MAINTENANCE

All questions and/or requests for a Return Authorization Number should be directed to the Customer Service department (**customer.service@plianttechnologies.com**). Do not return any equipment directly to the factory without first obtaining a Return Material Authorization (RMA) Number. Obtaining a Return Material Authorization Number will ensure that your equipment is handled promptly.

All shipments of Pliant products should be made via UPS, or the best available shipper, prepaid and insured. The equipment should be shipped in the original packing carton; if that is not available, use any suitable container that is rigid and of adequate size to surround the equipment with at least four inches of shock-absorbing material. All shipments should be sent to the following address and must include a Return Material Authorization Number:

Pliant Technologies Customer Service Department

Attn: Return Material Authorization #

205 Technology Parkway

Auburn, AL USA 36830-0500

LICENSE INFORMATION

PLIANT TECHNOLOGIES MICROCOM™ FCC COMPLIANCE STATEMENT

00004236 (FCCID: YJHMC-1124G)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Compliance Information: 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 undesired operation.

IMPORTANT NOTE

FCC RF Radiation Exposure Statement: This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

The antennas used for this transmitter must be installed to provide a separation distance of at least 5 mm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

PLIANT WARRANTY STATEMENT

LIMITED WARRANTY

Subject to the conditions of this Limited Warranty, CrewCom and MicroCom products are warranted to be free

from defects in materials and workmanship for a period of two years from the date of sale to the end user, under the following conditions:

- First year of warranty included with purchase.
- Second year of warranty requires product registration on the Pliant web site. Register your product here:
  https://plianttechnologies.com/product-registration/

Subject to the conditions of this Limited Warranty, Tempest® professional products carry a two-year product warranty.

Subject to the conditions of this Limited Warranty, all headsets and accessories (including Pliant-branded batteries) carry a one-year warranty.

Date of sale is determined by the invoice date from an authorized dealer or authorized distributor to the end user. The sole obligation of Pliant Technologies, LLC during the warranty period is to provide, without charge, parts and labor necessary to remedy covered defects appearing in products returned prepaid to Pliant Technologies, LLC. This warranty does not cover any defect, malfunction, or failure caused by circumstances beyond the control of Pliant Technologies, LLC, including but not limited to negligent operation, abuse, accident, failure to follow instructions in the Operating Manual, defective or improper associated equipment, attempts at modification and/or repair not authorized by Pliant Technologies, LLC, and shipping damage.

Unless applicable state law provides otherwise, Pliant Technologies extends this limited warranty to only the end user who originally purchased this product from an authorized dealer or authorized distributor. Pliant Technologies does not extend this warranty to any subsequent owner or other transferee of the product.

This warranty is valid only if the original proof of purchase issued to the original purchaser by an authorized dealer or authorized distributor, specifying the date of purchase, and the serial number, where applicable, is presented with the product to be repaired. Pliant Technologies reserves the right to refuse warranty service if this information is not provided or if a product's serial numbers have been removed or effaced.

This limited warranty is the sole and exclusive express warranty given with respect to Pliant Technologies, LLC products. It is the responsibility of the user to determine before purchase that this product is suitable for the user's intended purpose. ANY AND ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE DURATION OF THIS EXPRESS LIMITED WARRANTY. NEITHER PLIANT TECHNOLOGIES, LLC NOR ANY AUTHORIZED RESELLER WHO SELLS PLIANT PROFESSIONAL INTERCOM PRODUCTS IS LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND.

PARTS LIMITED WARRANTY

Replacement parts for Pliant Technologies, LLC products are warranted to be free from defects in materials and workmanship for 120 days from the date of sale to the end user.

This warranty does not cover any defect, malfunction, or failure caused by circumstances beyond the control of Pliant Technologies, LLC, including but not limited to negligent operation, abuse, accident, failure to follow instructions in the Operating Manual, defective or improper associated equipment, attempts at modification and/or repair not authorized by Pliant Technologies, LLC, and shipping damage. Any damage done to a replacement part during its installation voids the warranty of the replacement part.

This limited warranty is the sole and exclusive express warranty given with respect to Pliant Technologies, LLC products. It is the responsibility of the user to determine before purchase that this product is suitable for the user's intended purpose. ANY AND ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE DURATION OF THIS EXPRESS LIMITED WARRANTY. NEITHER PLIANT TECHNOLOGIES, LLC NOR ANY AUTHORIZED RESELLER WHO SELLS PLIANT PROFESSIONAL INTERCOM PRODUCTS IS LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND.

This warranty does not cover any defect, malfunction, or failure caused by circumstances beyond the control of Pliant Technologies, LLC, including but not limited to negligent operation, abuse, accident, failure to follow instructions in the Operating Manual, defective or improper associated equipment, attempts at modification and/or repair not authorized by Pliant Technologies, LLC, and shipping damage. Any damage done to a replacement part during its installation voids the warranty of the replacement part.

This limited warranty is the sole and exclusive express warranty given with respect to Pliant Technologies, LLC products. It is the responsibility of the user to determine before purchase that this product is suitable for the user's intended purpose. ANY AND ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE DURATION OF THIS EXPRESS LIMITED WARRANTY. NEITHER PLIANT TECHNOLOGIES, LLC NOR ANY AUTHORIZED RESELLER WHO SELLS PLIANT PROFESSIONAL INTERCOM PRODUCTS IS LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND.

Documents / Resources

PLIANT MicroCom 2400M Compact Economical Wireless Intercom System [pdf] User Manual
MicroCom 2400M, Compact Economical Wireless Intercom System, MicroCom 2400M Compact Economical Wireless Intercom System, Economical Wireless Intercom System, Wireless Intercom System, Intercom System, PMC-2400M

References

- **Pliant Technologies Wireless Intercom Solutions**
- **Pliant Product Registration**

Manuals+,