



# COM900BP Belt-Pac COMMUNICATOR®

## OPERATING INSTRUCTIONS

The COM900BP is a 900MHz receiver/transmitter designed to be used with the HME Wireless Drive-Thru Audio Systems 900 and 910. Its lightweight headset plugs into the belt-pac unit that is worn around the user's waist. Its simple, pushbutton operation with voice cues make the COM900BP especially user friendly.

*Before using the Communicator, place all Communicator batteries into the battery charger for charging. Refer to page 5.*

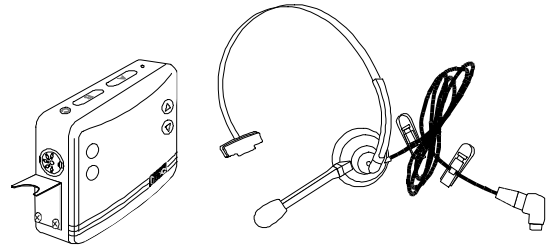


Figure 1.  
COM900BP COMMUNICATOR®

### I. COMMUNICATOR CONTROLS AND INDICATORS

- 1 – **ON and OFF POWER buttons**; turn Communicator on and off.
- 2 – **VOLUME control buttons**; adjust listening level in headset earpiece.
- 3 – **Power light**; lights when power goes on, and remains lit until battery needs replacing or Communicator is turned off. The power light blinks rapidly when transmitting on "A" or "B" channel.
- 4 – **Buttons A & B**; are used to communicate with customers and other team members. The two buttons are in convenient positions whether the Communicator is worn on the left or right hip.
- 5 – **Button C**; switches from one pair of frequencies to another, two channels higher. The power light will blink slowly, indicating alternate frequencies are being used.  
**NOTE:** All Communicators must be on the same frequencies.
- 6 – **Battery**; provides power for the wireless belt-pac Communicator.
- 7 – **Battery release latch**; slides to release battery for removal, and snaps in place when a battery is inserted to secure battery in Communicator.
- 8 – **5-pin DIN receptacle**; receptacle for earpiece/microphone cable connector.

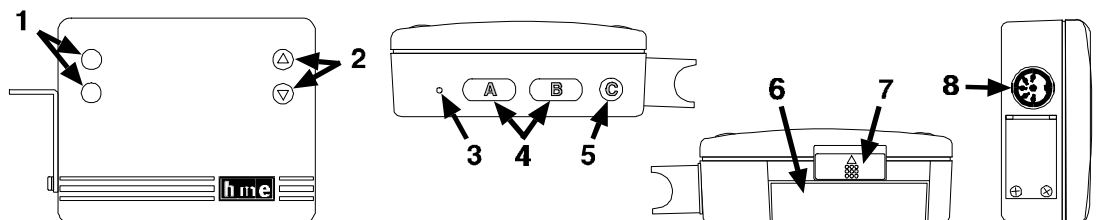


Figure 2. Communicator controls, connector and indicator light

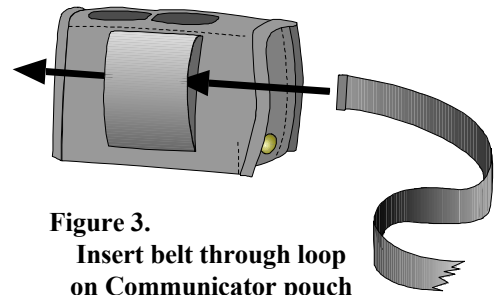
## II. COMMUNICATOR® OPERATION AND CARE

### A. Wearing the Communicator

#### 1. The Belt-Pac

##### Pouch with Belt Loop:

If your Communicator has a belt loop on the back of its pouch, insert the Communicator belt through the loop as shown in Figure 3. Adjust the belt to fit, and fasten it securely around your waist. The Communicator can be worn over either your right or left hip.

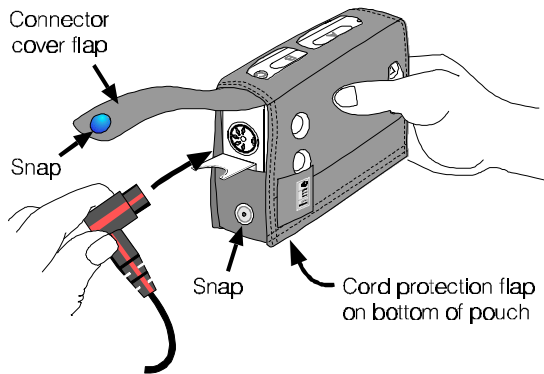


**Figure 3.**  
Insert belt through loop on Communicator pouch

##### Pouch with Belt Clip:

If your Communicator has a belt clip on the back of its pouch, simply squeeze open the belt clip and slide it over your belt or waist band. It can be worn on your left or right side.

#### 2. The Headset



**Figure 4.** Plug headset connector into receptacle on Communicator

Plug the headset-cable connector into the receptacle on the Communicator as shown in Figure 4. The connector is keyed so it can only be inserted in the correct position, with the cord extending downward. After plugging the connector into the receptacle, cover it with the connector cover flap shown in Figure 4. Loosen the snap on the cord protection flap on the bottom of the pouch, and resnap it with the flap over the cord.

Put the headset on your head and clip one of the clothing clips to your collar as shown in Figure 5. Clip the other clothing clip to the back of your shirt, above your waist.

**NOTE:** If other than an HME earpiece/microphone or headset will be used with the Communicator, be certain it has an electret microphone with an impedance of 1000-2000 ohms.



**Figure 5.** Correct wearing of the lightweight headset

## B. Operating the COMMUNICATOR®

Use the buttons shown in Figure 2 to operate the Communicator as follows:

- ! **ON button C** Press the **ON** button to turn the Communicator power on. You will hear “Power on, Lane one (or two)” in the headset earpiece. The Communicator will come on in the same lane you were operating when it was last turned off. Be certain the red power light goes on when the Communicator is turned on. If the power light does not go on, or if it goes off during Communicator operation, the battery must be changed.
- ! **Volume-control button C** Push and hold either the **A** or **B** button on top of the Communicator and speak into the microphone. You should hear your own voice in the earpiece. Press the up-arrow ▲ button to increase headset volume. As the volume increases, you will hear a series of beeps in the headset earpiece, increasing in pitch as the volume increases. Press the down-arrow ▼ button to decrease headset volume. As the volume decreases, you will hear a series of beeps in the headset earpiece, decreasing in pitch as the volume decreases. When you have finished talking, release the **A** or **B** button immediately.
- ! **(B) Team-talk button C** Press and hold button **B** to talk to other team members without the customer hearing your conversation. Release button **B** when you are finished.
- ! **(A) Customer-talk button C** If you are **not** operating in a hands-free mode, press and hold button **A** to talk to a customer. Release button **A** when you are finished. If you are operating in a hands-free mode (see below), press and release button **A** to talk to a customer. Press and release button **A** again when you are finished.
- ! **Hands-free mode C** To begin operating in the hands-free mode (hands-free ON), with the Communicator off, press and hold the **B** + up-arrow ▲ buttons while pressing the **ON** button. To get out of the hands-free mode (hands-free OFF), with the Communicator off, press and hold the **B** + down-arrow ▼ buttons while pressing the **ON** button.
- ! **(C) Lane-change button C** Press and release the **C** button to change drive-thru lane operation. If your system is set up for dual-lane operation, you will hear “Lane one” or “Lane two” in the headset earpiece.
- ! **OFF button C** Press and hold the **OFF** button for several seconds to turn the Communicator power off. You will hear “Power off” in the headset earpiece, just before the power goes off.

## C. Changing COMMUNICATOR® Batteries

### 1. When to replace batteries

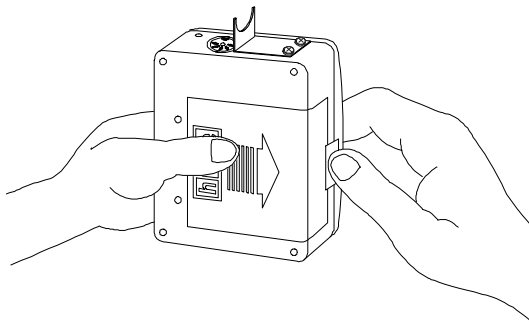
When a good battery is in the Communicator and the power is on, the red light on top of the unit will be lit. This light only indicates the power is on. It does not indicate how much power is left in the battery. As a battery weakens during routine use, you will hear a repeating beep in the earpiece, indicating the battery needs to be replaced. Typical battery life with normal use is 8 to 10 hours.

**CAUTION: Turn Communicator OFF before removing batteries !**

To prevent damage, turn the Communicator OFF before removing or installing batteries.

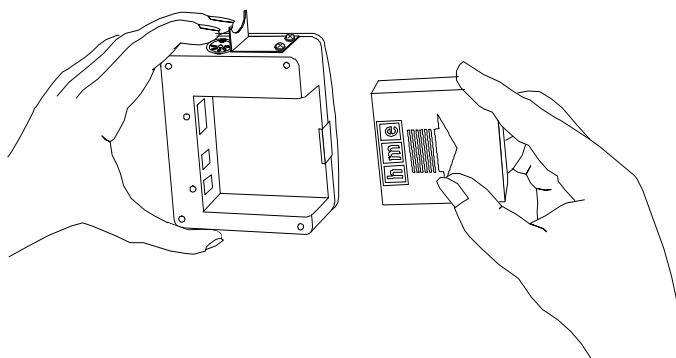
### 2. How to remove and install batteries

To remove the battery from a Communicator, slide the battery latch open and push the battery in the direction of the large arrow on the battery as shown in Figure 6.



**Figure 6. Opening the battery compartment**

To install a fully charged NiCd battery in a Communicator, insert the battery in the battery compartment with the arrow on the battery pointing out as shown in Figure 7. Slide it into the tracks on both sides of the compartment until its catch clicks securely in place.

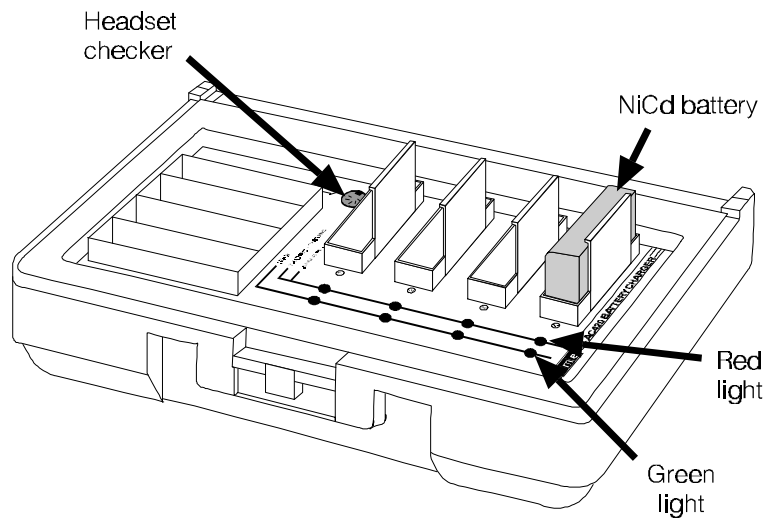


**Figure 7. Installing the battery**

## D. Charging the Batteries

Place up to four batteries in the battery charger to charge at the same time, as shown in Figure 8. A few seconds after each battery is placed in the charger, the red CHARGING light on the panel adjacent to the battery, will indicate the battery charging status. See the CHARGING LIGHT STATUS TABLE for a detailed explanation of what is happening. When a battery is fully charged, the green READY light on the panel adjacent to it will light. (approximately 4 hours) It can then be placed back into a Communicator.

**CAUTION: Do not remove batteries from the charger until the green READY light is lit or the red light is flashing, or the charger will reset and the charge cycle will begin again.**



**Figure 8.**  
Battery charger shown with a properly installed battery

CHARGING LIGHT STATUS TABLE – WITH BATTERY INSERTED		
RED CHARGING LIGHT	WHAT IT MEANS	WHAT TO DO
OFF	Charger doesn't see the battery	SEE NOTE
STEADY ON	Battery is being charged	Wait. Do not remove battery.
BLINKS: 2 seconds ON; 2 seconds OFF	Battery is being discharged	Wait. Do not remove battery.
BLINKS: 2 times quick; 3 seconds OFF	DISCHARGE ERROR	Battery is not discharging properly. SEE NOTE
BLINKS: 3 times quick; 3 seconds OFF	CHARGING ERROR	Battery is not charging properly. SEE NOTE
BLINKS: 4 times quick; 2 seconds OFF	LOW BATTERY ERROR	SEE NOTE
BLINKS: 5 times quick; 2 seconds OFF	CHARGING ERROR	SEE NOTE
<b>NOTE:</b> Either the battery or the charger has a problem. Mark the battery and retry in a different slot. The battery is faulty if it has the same problem in a different slot AND a known-good battery passes in the same slots. The charger circuitry is faulty if a known-good BATTERY fails in the same slots.		

**In the event of an electrical power outage —**

such as from a lightning storm or power generator failure, if you experience problems with your HME equipment after the electricity comes on again, unplug the AC power adapters from their electrical outlets, then plug them back in.

## E. Caring for the COMMUNICATOR®

### 1. How to handle the Headset Cable and Connector

<b>ALWAYS</b>	<b>NEVER</b>
<p><b>A</b>lign the connector key and pins with key and holes in the receptacle when plugging the headset into the Communicator.</p> <p><b>F</b>asten cable to pouch with strain relief strap.</p> <p><b>C</b>lip the cable to your clothing with the clothing clips.</p> <p><b>G</b>rasp the connector to plug in or unplug the headset.</p> <p><b>U</b>se both hands to remove the headset from your head.</p> <p><b>U</b>se both hands to adjust the microphone position.</p> <p><b>H</b>andle the headset cable with care.</p> <p><b>C</b>arry and hang the headset by its metal headband.</p>	<p><b>T</b>wist headset connector into Communicator receptacle.</p> <p><b>A</b>llow cable to be stressed at connector.</p> <p><b>A</b>llow cable to hang freely.</p> <p><b>G</b>rasp and pull cable to unplug headset.</p> <p><b>R</b>emove headset with only one hand.</p> <p><b>A</b>adjust microphone position with only one hand.</p> <p><b>P</b>ull, twist, bend or knot the headset cable.</p> <p><b>C</b>arry or hang the headset by its cable.</p>

### 2. How to Clean the Communicator

- ! The following cleaning procedure is recommended at least once each month.
- ! Remove the Communicator from the pouch.
- ! Remove battery from the Communicator.
- ! Wash the belt and pouch in a washing machine with normal laundry detergent. Dry them in a dryer or hang them up to dry.
- ! Clean the Communicator with a damp sponge. Wet the sponge and wring it out so it is damp, not dripping wet. Spray household cleaner on the sponge (NOT DIRECTLY ON THE EQUIPMENT). Clean the Communicator with the sponge, and dry it thoroughly.
- ! Clean the metal battery contacts on the battery with alcohol on a cotton swab. Wet the tip of the swab with alcohol and squeeze the excess alcohol from it. Wipe each contact with the swab, and be certain all the contacts are dry before installing the batteries.
- ! Place the battery back in the Communicator, and place the Communicator back in the pouch, fastening the strap securely over it.
- ! Clean the headset and cable with a damp sponge sprayed with household cleaner. The foam muff on the headset earpiece is easily replaced for sanitary purposes. To order extra foam muffs, call your local HME sales representative.

### III. SPECIFICATIONS

1. Battery voltage	4.8V nominal
1. Battery life	9 hours
2. RF Frequency	Receive — 902-904 MHz Transmit — 926-928 MHz
3. Dimensions	3 "H x 4 "W x 1½"D (86mm x 114mm x 38mm)
4. Weight	11 ounces (.31Kg) — including battery
5. Controls	Touch sensitive — Buttons "A," "B" and "C" Power ON and OFF buttons Volume control buttons
6. Indicator	Red Power-on LED — Solid when receiving only. Blinking when transmitter is activated.
7. Connector	5-pin DIN

#### FCC NOTICE:

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.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by HM Electronics, Inc. could void the users authority to operate this equipment.

## Appendix A      C      INSTALLER SETUP

### 1.    **Charge batteries:**

Before using the COM900BP COMMUNICATOR®, place the batteries in the AC420 Battery Charger and let them charge until the green, **Ready** lights go on (3-5 hours).

### 2.    **Reset the COM900BP:**

With a fully charged battery in the Communicator, reset the unit to system configuration default settings as follows.

- ! With the Communicator off, press and hold A + B + C buttons, then press ON.
- ! Release.
- ! Wait for the red "power" light to come on.
- ! Press the C button twice quickly, within 5 seconds after the light comes on. You will hear "Reset" in the headset, then "Power On, Lane X."

### 3.    **Set channel frequency:**

Set the Communicator frequency as follows, to be certain it is the same as the audio system base station frequency. Refer to Frequency Selection Table on the back of this page.

- ! With the Communicator off, press and hold A + C buttons while pressing ON.
- ! Release. You will hear "Channel X" in the headset, telling you the frequency of the Communicator. Refer to the tables on the following page. To change the frequency, press the volume control up ▲ or down ▼ until you reach the desired frequency. Press the A or B button to save the channel and exit. You will hear "Channel X saved, power on, lane X." The channel will be saved into memory after a normal shutdown.

### 4.    **Check system status:**

- ! Press the ON button to turn the Communicator power on. With the Communicator on, press and hold the ON button again, while you press and hold the A button for 2 seconds.
- ! Release the ON and A buttons after the status report begins. You will hear the following system status information in the headset:  
"Single lane" or "Dual lane," "Lane one" or "Lane two" for dual lane configurations,  
"Channel X" for the Communicator frequency (refer to Frequency Selection Table on next page),  
"Handsfree on" or "Handsfree off," "VOX on" or "VOX off," "On channel" or "Off channel" or  
"Low channel," "PLL on" or "PLL off," and the firmware version.

### 5.    **Single/Dual-lane operation:**

- ! To set the Communicator for single-lane operation; with the Communicator off, press and hold the A button while pressing ON. You will hear "Single lane" then "Power on, lane X."
- ! To set the Communicator for dual-lane operation; with the Communicator off, press and hold the C button while pressing ON. You will hear "Dual lane" then "Power on, lane X."

### 6.    **Power off:**

To turn the Communicator power off, press and hold the OFF button for several seconds. You will hear "Power off" in the headset earpiece just before the power goes off.



Single-Lane or Dual-Lane 1 Frequencies			Dual-Lane 2 Frequencies (If set for Dual-Lane Mode)		
Channel Number	Receive Frequency	Transmit Frequency	Channel Number	Receive Frequency	Transmit Frequency
1	902.30	926.30	1	903.10	927.10
2	902.40	926.40	2	903.20	927.20
3	902.50	926.50	3	903.30	927.30
4	902.60	926.60	4	903.40	927.40
5	902.70	926.70	5	903.50	927.50
6	902.80	926.80	6	903.60	927.60
7	902.90	926.90	7	903.70	927.70
8	903.00	927.00	8	903.80	927.80

**NOTE:** In dual-lane operation, dual-lane 1 frequencies are programmable. Dual-lane 2 frequencies are not programmable, but occur automatically when lane 1 frequencies are programmed.