



COM400CC COMMUNICATOR®

OPERATING INSTRUCTIONS

The COM400CC COMMUNICATOR® is a receiver/transmitter designed to be used with the HME Wireless Drive-Thru Audio System 400. This Communicator is worn around the user's collar, and a lightweight headset plugs into a connector on the unit.

These instructions provide detailed information for proper use of the COM400CC. Setup information for the audio system installer is in Appendix A.



Figure 1. COM400CC COMMUNICATOR®

I. COM400CC CONTROLS AND CONNECTORS

A. Controls

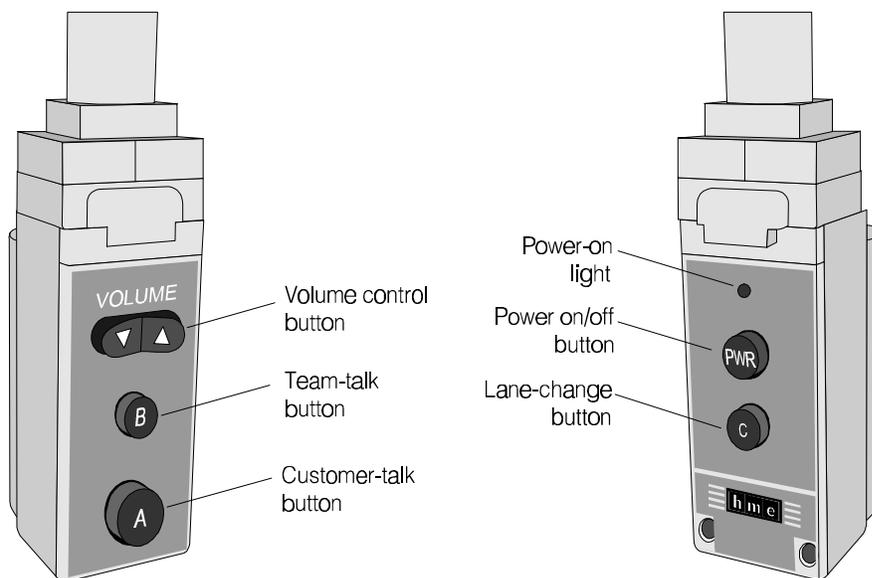


Figure 2. COM400CC control buttons

B. Connectors

Plug the headset cable connector into the cable connector on the COM400CC collar unit, as shown in Figure 3. Be careful to correctly match the positions of the pins inside the connector.

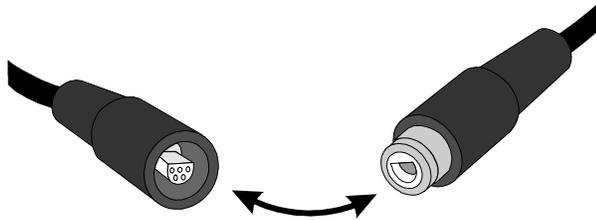


Figure 3. Cable connectors showing matching pin positions

II. WEARING THE COM400CC COMMUNICATOR®

- ! Place the Communicator collar unit around your neck and put the headset on your head as shown in Figure 4.
- ! Adjust the headset band so it rests securely on top of your head, with the microphone to the side of your mouth.
- ! Adjust the flexible arms of the Communicator so it fits comfortably around your collar.
- ! Fasten the clothing clips to your collar as shown in Figure 4.



Figure 4. Correct wearing of the COM400CC

III. OPERATING THE COM400CC COMMUNICATOR®

To operate the Communicator, use the control buttons shown in Figure 2 as follows:

In both single and dual drive-thru operations, Communicator button "A" is for communication with the customer, and button "B" is for communication with other crew members wearing Communicators. In dual drive-thru operations, the "C" button is used to switch between lanes 1 and 2.

A. Single Drive-Thru Lane, Full-Duplex Operation

<i>ACTION</i>	<i>RESULT</i>
<p>If you are using the Communicator latching feature: Press and release button "A" to latch communication channel open for speaking and listening to customer. The channel will unlatch, ending communication with the customer, if;</p> <ol style="list-style-type: none"> 1. you press and release button "A" again, or 2. you press button "B" or 3. the customer drives away <p>If you are not using the Communicator latching feature: Press and hold button "A" while speaking and listening to customer. Release when transaction is completed.</p>	<p>Customer hears your voice and you hear customer's voice (two-way conversation). Everyone wearing a Communicator will hear the conversation.</p>
<p>While customer is speaking, press the up ▲ or down ▼ arrow to adjust volume level.</p>	<p>Beep tones of increasing/decreasing loudness are heard in headset as volume increases/decreases. Customer's voice becomes louder or softer.</p>
<p>Press and hold button "B" to speak to other crew members wearing Communicators. Release to listen.</p>	<p>Other personnel wearing Communicators hear your voice in their headsets.</p>

B. Single Drive-Thru Lane, Half-Duplex Operation

<i>ACTION</i>	<i>RESULT</i>
<p>Press and hold button "A" while speaking to customer.</p>	<p>Customer hears your voice.</p>
<p>Release button "A" and listen to customer.</p>	<p>Customer's voice is heard in headsets of everyone wearing Communicators.</p>
<p>While customer is speaking, press the up ▲ or down ▼ arrow to adjust volume level.</p>	<p>Beep tones of increasing/decreasing loudness are heard in headset as volume increases/decreases. Customer's voice becomes louder or softer.</p>
<p>Press and hold button "B" to speak to other crew members wearing Communicators. Release to listen.</p>	<p>Other personnel wearing Communicators hear your voice in their headsets.</p>

C. Dual Drive-Thru, Full-Duplex Operation

<i>ACTION</i>	<i>RESULT</i>
<p>If you are using the COMMUNICATOR® latching feature: Press and release button "A" to latch communication channel open for speaking and listening to customer in Lane 1 or 2. The channel will unlatch, ending communication with the customer, if;</p> <ol style="list-style-type: none"> 1. you press and release button "A" again, or 2. you press button "B," or 3. you press button "C," or 4. the customer drives away <p>If you are not using the Communicator latching feature: Press and hold button "A" while speaking and listening to customer in Lane 1 or 2. Release when transaction is completed.</p>	<p>Customer hears your voice and you hear customer's voice (two-way conversation). Everyone wearing Communicators set to the same channel hears the communication.</p>
<p>Press button "C" to switch to other lane.</p>	<p>You hear customer's voice from other lane.</p>
<p>While customer is speaking, press the up ▲ or down ▼ arrow to adjust volume level.</p>	<p>Beep tones of increasing/decreasing loudness are heard in headset as volume increases/decreases. Customer's voice becomes louder or softer.</p>
<p>Press and hold button "B" to speak to other crew members wearing Communicators. Release to listen.</p>	<p>Other personnel wearing Communicators hear your voice in their headsets.</p>

D. Dual Drive-Thru, Half-Duplex Operation

<i>ACTION</i>	<i>RESULT</i>
<p>Press and hold button "A" while speaking to customer in Lane 1 or 2.</p>	<p>Customer hears your voice. Everyone wearing Communicators hears the communication.</p>
<p>Release button and listen to customer.</p>	<p>Customer's voice is heard in headsets of everyone wearing Communicators.</p>
<p>While customer is speaking, press the up ▲ or down ▼ arrow to adjust volume level.</p>	<p>Beep tones of increasing/decreasing loudness are heard in headset as volume increases/decreases. Customer's voice becomes louder or softer.</p>
<p>Press and hold button "B" to speak to other crew members wearing Communicators. Release to listen.</p>	<p>Other personnel wearing Communicators hear your voice in their headsets.</p>
<p>Press button "C" to switch to other lane.</p>	<p>You hear customer's voice from other lane.</p>

E. Speed-Team Operation

Speed team operation is used during high-volume times. An order taker wearing a Communicator relays orders from outside into the store using the "B" channel. Placing the speed-team button on the base station in the ON position will disable the speaker and microphone in the speaker post or menu board, and disable the vehicle-alert tone.

IV. CHARGING THE BATTERIES

When there are good batteries in the COMMUNICATOR® and the power is on, the red light above the power (PWR) button will be lit. This light only indicates the power is on. It does not indicate how much power is left in the batteries. As the batteries weaken during routine use, you will hear a repeating beep in the earpiece, indicating the batteries need to be replaced. When this happens, remove both batteries from the Communicator as shown in Figure 5. Place **both** batteries in the AC900 Battery Charger for recharging. Refer to Figures 6 through 8. Replace the batteries in the Communicator with fresh, fully charged batteries. Typical battery life with normal use is 8 to 10 hours.

CAUTION: To prevent damage, turn Communicator OFF before removing or installing batteries !

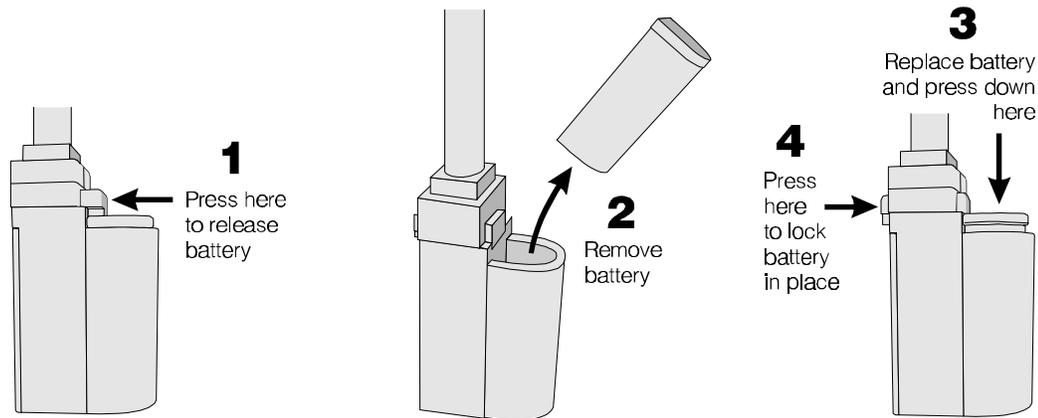


Figure 5. Remove and replace Communicator battery

Use the AC900 Battery Charger as follows:

Place up to four batteries in the charger for charging at a time, as shown in Figure 6. The red Charging light, adjacent to a battery being charged will go on and remain on while the battery is charging. Routine battery charging takes up to 3 hours.

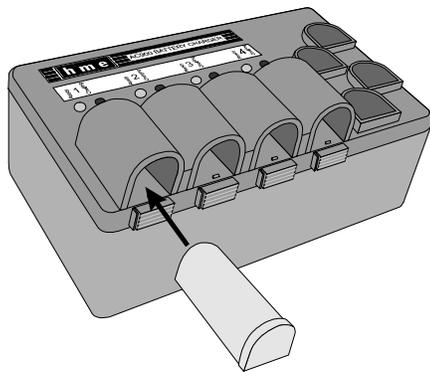


Figure 6. Inserting a battery into the AC900 battery charger

NOTE: The COM400CC uses "smart batteries." That means each battery maintains a history of the number of times it has been charged. The AC900 Battery Charger reads and updates this history each time a battery is charged. This information is used to automatically initiate conditioning cycles, which improve the battery's performance and prolong its life. A conditioning cycle consists of a complete discharge before a battery is charged. This happens each time the battery history indicates it has been charged 10 times since the last conditioning cycle. While a battery is discharging, the red Charging light next to it will blink on and off at 2-second intervals. The conditioning cycle takes up to 6 hours.

Refer to Diagnostic Light Table on page 6 for other Charging light functions.

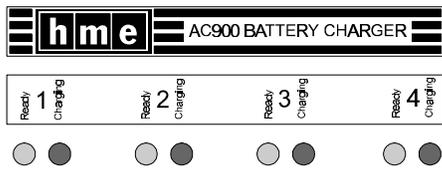


Figure 7.
Battery charging indicator lights

Battery charging takes approximately 2 hours and 20 minutes. When a battery is fully charged and ready for use, its red light will go off and the green Ready light next to it will go on. Refer to Figure 7.

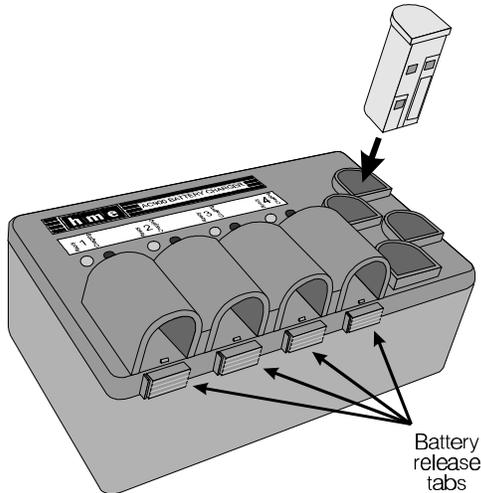


Figure 8.
AC900 battery release tabs and battery going into storage port

To remove a fully charged battery from the battery charger, press down on the battery release tab next to it, and push the battery from the end near the status lights.

Store fully charged batteries in the storage ports on the right side of charger until you need them, as shown in Figure 8.

Diagnostic Light Table		
Light behavior	What it means	What to do
Red blinks: 2 times quick - 3 seconds off	Discharge error	Either the battery or the charger has a problem. Mark the battery and retry in a different charging port. The battery is faulty if it has the same problem in a different port AND a known-good battery passes in the same ports. The charger circuitry is faulty if a known-good BATTERY fails in the same ports.
Red blinks: 3 times quick - 3 seconds off	Charging error	
Red blinks: 4 times quick - 2 seconds off	Low-battery error	
Red blinks: 5 times quick - 2 seconds off	Charging error	
Green blinks: 2 second on - 2 second off	Read-write error	
Green blinks: 3 times quick - 3 seconds on	Memory full	
Red and Green blink alternately	Authentication error	

V. CARING FOR THE EQUIPMENT

A. Proper Handling of the Headset Cable and Connector

ALWAYS	NEVER
<ul style="list-style-type: none"><input type="radio"/> Align the connector key and pins with key and holes in the receptacle when plugging the headset into the Communicator.	<ul style="list-style-type: none"><input type="radio"/> Twist the headset connector into the Communicator receptacle.
<ul style="list-style-type: none"><input type="radio"/> Grasp the connector to plug in or unplug the headset.	<ul style="list-style-type: none"><input type="radio"/> Grasp and pull the cable to unplug headset.
<ul style="list-style-type: none"><input type="radio"/> Use both hands to remove the headset from your head.	<ul style="list-style-type: none"><input type="radio"/> Remove the headset with only one hand.
<ul style="list-style-type: none"><input type="radio"/> Use both hands to adjust the microphone position.	<ul style="list-style-type: none"><input type="radio"/> Adjust the microphone position with only one hand.
<ul style="list-style-type: none"><input type="radio"/> Handle the headset cable with care.	<ul style="list-style-type: none"><input type="radio"/> Pull, twist, bend or knot the headset cable.
<ul style="list-style-type: none"><input type="radio"/> Carry and hang the headset by its metal headband.	<ul style="list-style-type: none"><input type="radio"/> Carry or hang the headset by its cable.

B. Cleaning the Communicator and Battery Contacts

1. The Communicator

The following cleaning procedure is recommended at least once each month.

- ! Remove the batteries from the Communicator.
- ! 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 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.

2. The battery contacts

Clean the battery contacts in the COM400CC COMMUNICATOR® and on the batteries and battery charger monthly as follows:

CAUTION: Always turn the Communicator off and unplug the battery charger before cleaning them.

Remove all batteries from the Communicator and battery charger. This should be done when no batteries are being charged in the battery charger. Wet the tip of a cotton swab with rubbing alcohol, and squeeze the excess alcohol from the swab. Use the damp swab to wipe the metal contacts on each battery, and inside the two battery compartments on the Communicator and the four battery ports on the battery charger. Allow the contacts to dry before placing batteries back into the Communicator or battery charger.

VI. IN CASE OF PROBLEMS

If you have any problem with operation of the COM400CC COMMUNICATOR®, first refer to the troubleshooting checklist in your System 400 Operating Instructions. If you still have a problem with the COM400CC, call HME at 1-800-848-4468.

VII. SPECIFICATIONS

- | | |
|-------------------|--|
| 1. Battery (NiMH) | 8 hours |
| 2. RF Frequency | Receive — FCC Part 90
Transmit — FCC Part 90 |
| 3. Weight | 12 ounces (3.40kg) — including battery |
| 4. Controls | Buttons "A," "B" and "C"
Power button
Volume control |
| 5. Indicator | Red LED
Solid when receiving only.
Blinking when transmitter is activated, or
on secondary lane for dual-lane systems |
| 6. Connector | LT |

VII. FCC NOTICE

HME wireless radio frequency systems are type-accepted in the United States under Part 90 of the Federal Communications Commission (FCC) Code of Federal Regulations, and type-approved in Canada by Industry and Science Canada. Because licensing depends on the system's application, it is the user's responsibility to apply for a license from the FCC in the U.S. and its possessions, or from Industry and Science Canada in Canada and its territories. Licensing requirements vary from country to country. Contact your local licensing agency for specific requirements.

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 Communicator batteries:

Before using the COM400CC COMMUNICATOR®, charge all batteries in the battery charger as described on pages 5 and 6.

2. Check/Set Communicator frequency:

Check the Communicator frequency to be certain it is the same as the audio system base station frequency. If necessary, set the Communicator frequency as follows.

- ! Turn the Communicator off by pressing and holding the power (PWR) button until the red power light goes off, then release the button.
- ! Use a Phillips (crosspoint) screwdriver to remove the panel covering the Communicator DIP switches as shown in #1 and 2 of Figure 9.
- ! Compare the positions of the audio system base station SW1 frequency selection switches 1 - 8 on the Interface Circuit Board with the DIP switch settings in Table 1 to determine the transmit and receive frequencies.
- ! Check the positions of the Communicator DIP switches (#3 in Figure 9) to be certain its transmit frequency settings match the receive frequency of the base station, and its receive frequency settings match the transmit frequency of the base station. Refer to Table 2 below.

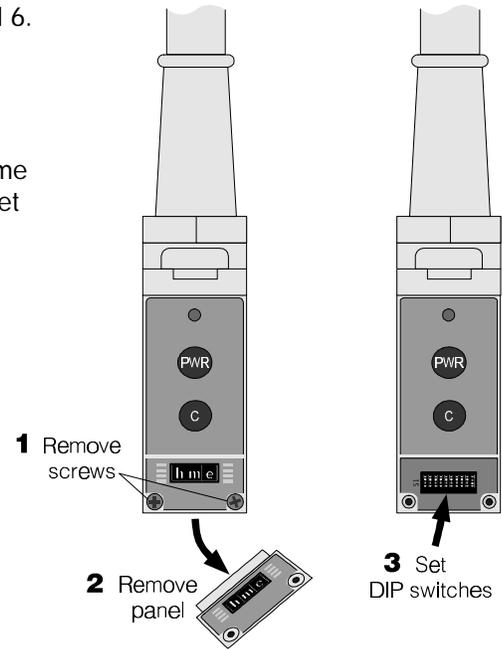


Figure 9.
Setting Communicator frequency

Frequency selection tables:

Table 1.

Frequency Selection Switch in Audio System Base Station					
Receive Frequency		DIP Switch Settings			
Single Lane *Dual Lane 1	*Dual Lane 2	1	2	3	4
468.4875	468.8375	OFF	OFF	OFF	OFF
468.7625	469.1375	ON	OFF	OFF	OFF
468.8375	469.4625	OFF	ON	OFF	OFF
469.1375	469.6375	ON	ON	OFF	OFF
469.4625	469.6625	OFF	OFF	ON	OFF
469.6375	469.8875	ON	OFF	ON	OFF
469.6625	468.4875	OFF	ON	ON	OFF
469.8875	468.7625	ON	ON	ON	OFF
Transmit Frequency		DIP Switch Settings			
Single Lane *Dual Lane 1	*Dual Lane 2	5	6	7	8
457.5125	457.5625	OFF	OFF	OFF	OFF
457.5375	457.5875	ON	OFF	OFF	OFF
457.5625	457.6125	OFF	ON	OFF	OFF
457.5875	457.5125	ON	ON	OFF	OFF
457.6125	457.5375	OFF	OFF	ON	OFF

Table 2.

Frequency Selection Switch in COM400CC COMMUNICATOR [®]					
Transmit Frequency		DIP Switch Settings			
Single Lane *Dual Lane 1	*Dual Lane 2	1	2	3	4
468.4875	468.8375	OFF	OFF	OFF	OFF
468.7625	469.1375	ON	OFF	OFF	OFF
468.8375	469.4625	OFF	ON	OFF	OFF
469.1375	469.6375	ON	ON	OFF	OFF
469.4625	469.6625	OFF	OFF	ON	OFF
469.6375	469.8875	ON	OFF	ON	OFF
469.6625	468.4875	OFF	ON	ON	OFF
469.8875	468.7625	ON	ON	ON	OFF
Receive Frequency		DIP Switch Settings			
Single Lane *Dual Lane 1	*Dual Lane 2	5	6	7	8
457.5125	457.5625	OFF	OFF	OFF	OFF
457.5375	457.5875	ON	OFF	OFF	OFF
457.5625	457.6125	OFF	ON	OFF	OFF
457.5875	457.5125	ON	ON	OFF	OFF
457.6125	457.5375	OFF	OFF	ON	OFF

NOTE: Switch #1 in the Communicator is on the left side.

Switch #9 in the Communicator is for enabling the dual-lane feature.

ON = dual-lane OFF = single lane

Switch #10 enables the latching feature.