

HME

®

WS200

Wireless Speaker Station

OPERATING INSTRUCTIONS

The WS200 Speaker Station can be used with a DX100 or DX200 system, together with Beltpacs and WH200 All-in-one Headsets. It provides wireless communication through its built-in microphone and speaker or a plug-in headset. A remote speaker can also be connected to the unit. The Speaker Station can be used on a table top or mounted on the wall. It can be operated with standard AC power, 12-14VDC or with six AA batteries or an optional rechargeable battery. A power supply with cord and a battery sled are provided.



SETUP

Wall Mounting

If you choose to mount the WS200 on the wall and if AC operation is required, it must be mounted close enough to an electrical outlet to be reached with the power supply and cord.

- Hold the unit against the wall where you will mount it and mark the wall through the four holes in the flanges on its left and right sides.
- Drill holes in the wall at the four marked spots, and mount the WS200 over the holes with your selected hardware (not provided).

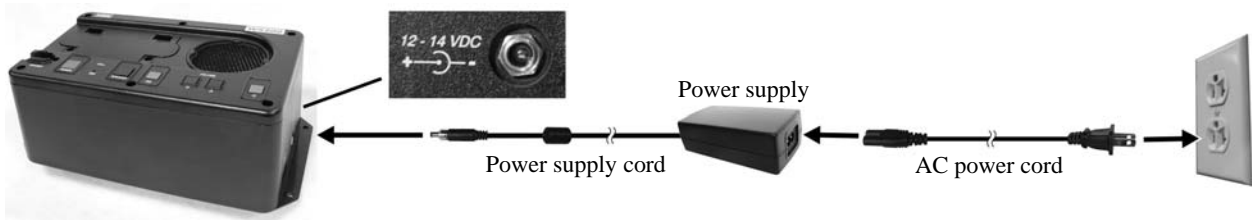


Power Setup

AC Power Operation

If using the WS200 with AC power —

- Plug the connector at the end of the power supply cord into the **12-14 VDC** power connector on right side of the unit. Turn the sleeve on the connector clockwise to secure it to the unit.
- Plug the large female connector at one end of the AC power cord into the power supply. Plug the other end of the AC power cord into an electrical outlet.



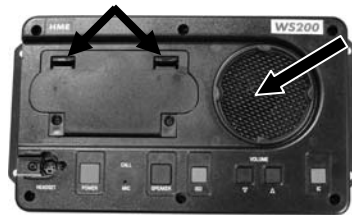
Having a fully charged (or new) battery in its battery compartment when operating the WS200 with AC or external DC power can prevent interruption of communication during a power outage. The WS200 will automatically switch to battery power.

Battery Operation

If using the WS200 with battery power —

- Press down and pull out on the two battery cover release latches and lift the cover to open the battery compartment.
- Insert six AA batteries into the battery sled, in the positions shown inside the sled, and install the sled in the battery compartment.

Battery cover
release latches



Battery sled
with batteries



NOTE: An HME BAT850 Rechargeable NiMH Battery can be used instead.

- Close the battery compartment by pressing down on its cover next to both of the latches at the same time until they snap in place.

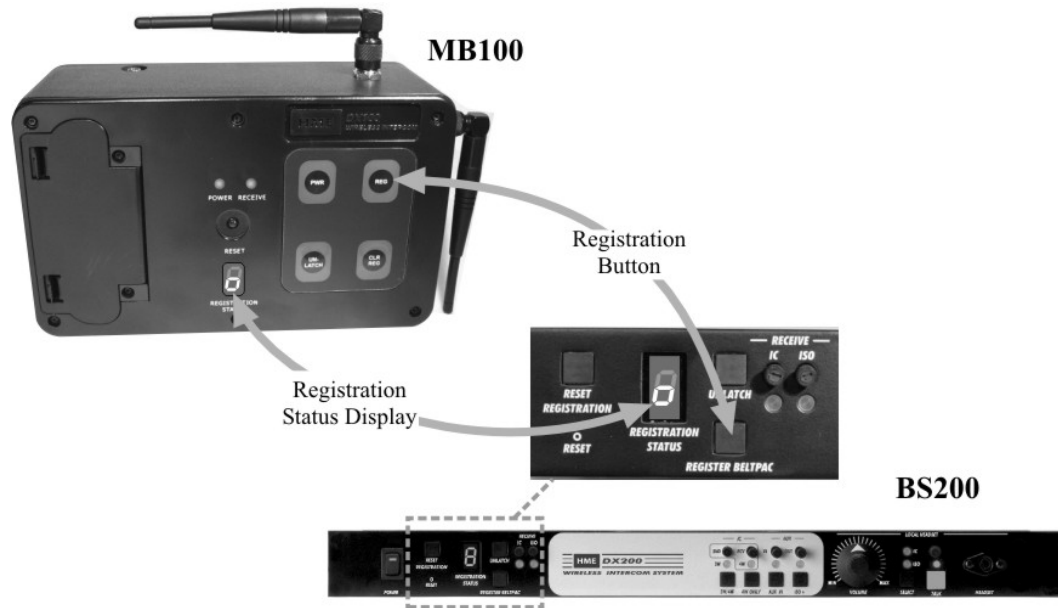
WS200 Registration

The first time you operate the WS200, you must register it for use with a specific DX100 or DX200 Base Station. The base station will then recognize the WS200 when its power is on, and will be able to tell the difference between it and other electronic equipment operating on similar frequencies, or DX family Beltpacs or All-in-one Headsets.

NOTE: The WS200 must be within 6 feet (1.83 meters) of the base station while being registered.

Registration Procedure:

- Be sure the WS200 is turned off and the base station power is on.
- On the base station, press and release the **REG/REGISTER BELTPAC** button.
 - The **REGISTRATION STATUS** display will show a small “o” for open.
- On the WS200, press and hold the **ISO** button while you press and release the **PWR/POWER** button to turn the unit on, and then release the **ISO** button. This will cause the WS200 to enter the registration mode.
 - The **REGISTRATION STATUS** display on the base station will continue to show a small “o.”
 - The **ISO** and **IC** lights on the WS200 will be blinking red then will change to a steady green **IC** light.



Registration buttons and indicators on MB100 and BS200 Base Stations

When registration is successfully completed:

- If you have a headset plugged into the WS200 or if the speaker is on, you will hear a voice message in the headset or speaker saying “Power on, Speaker, Version #, Begin registration, Registration complete...”
- The **REGISTRATION STATUS** display on the base station will show the ID number assigned to the WS200, for about 10 seconds.

NOTE: ID numbers are assigned sequentially to registered Beltpacs, All-in-one Headsets and Speaker Stations as 0 thru 9, A, b, C, d and E (up to 15 total).

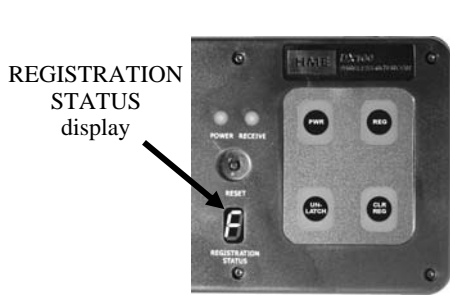
- The **IC** light on the WS200 will remain on steady green.

If registration failed:

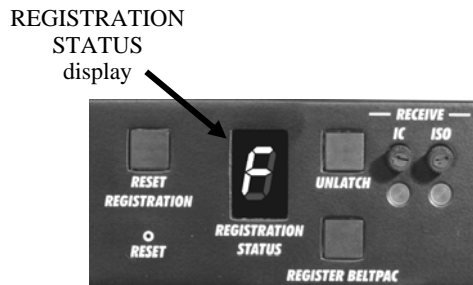
- A voice message will say “Power on, Speaker, Version #, Begin registration, ...”
The **ISO** and **IC** lights on the WS200 will be blinking red, and there may be a delay of up to 90 seconds before you hear “Registration failed.”
- Press the **RESET** button on the base station. When the **REGISTRATION STATUS** display becomes blank, press the **REG / REGISTER BELTPAC** button on the base station and register the WS200 again. If registration fails again, call your dealer for assistance.

If you try to register more than 15 Beltpacs, All-in-one Headsets or Speaker Stations:

- An **F** will appear on the **REGISTRATION STATUS** display on the base station and you will hear “Registration failed.”



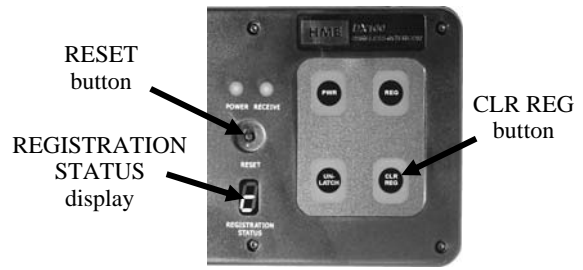
MB100 Base Station



BS200 Base Station

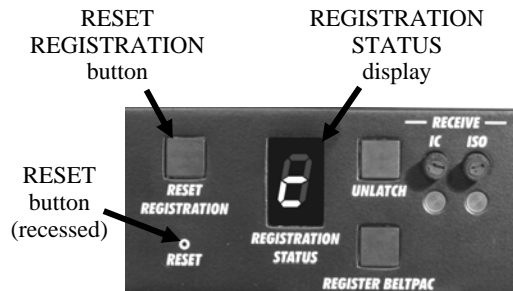
- Clear all current registrations as follows:

— **If you have a MB100 Base Station,** press the **CLR REG** button and the **RESET** button at the same time. Continue holding the **CLR REG** button after you release the **RESET** button, until the clear code “**c**” (lower case) appears on the **REGISTRATION STATUS** display.



MB100 Base Station

— **If you have a BS200 Base Station,** press the **RESET REGISTRATION** button and the **RESET** button at the same time. (To press the **RESET** button, insert a small paper clip or similar object into the **RESET** hole below the **RESET REGISTRATION** button.) Continue holding the **RESET REGISTRATION** button after you release the **RESET** button, until the clear code “**c**” (lower case) appears on the **REGISTRATION STATUS** display.



BS200 Base Station

- Register all active Beltpacs, All-in-one Headsets and Speaker Stations, one at a time. All previously registered units must be re-registered.

OPERATION



Headset Connection

If you are using a headset with the WS200, plug it into the headset connector. When using a headset, if the red light over the **SPEAKER** button is on, incoming communication can be heard through the headset and the speaker. If the red light over the **SPEAKER** button is off, incoming communication can only be heard through the headset.

Push-To-Talk (PTT) or Hands-Free (HF) Mode Setting

- Be sure the WS200 power is off.
- To set up the WS200 for operation in the PTT mode, press and hold the **VOLUME** down ▼ and **ISO** buttons while you press and release the **POWER** button to turn the unit on. Then release the **VOLUME** down ▼ and **ISO** buttons.
- To set up the WS200 for operation in the HF mode, press and hold the **VOLUME** up ▲ and **ISO** buttons while you press and release the **POWER** button to turn the unit on. Then release the **VOLUME** up ▲ and **ISO** buttons.

NOTE: Mode settings are saved in memory, and only need to be reset if you want to change between PTT and HF operation. Mode settings affect both ISO and IC communication.

Routine Operation

Power On/Off

- To turn **WS200 power on**, press and release the **POWER** button.
 - Red lights will go on over the **POWER**, **ISO** and **IC** buttons.
 - If listening with a headset, or the speaker is turned on, you will hear “Power on, Speaker #, Version #.”
 - The light over the **ISO** button will go off.
 - The light over the **IC** button will change to green.
- To turn **WS200 power off**, press and hold the **POWER** button for 2 seconds.

ISO / IC Buttons

The **ISO button** is used to communicate with Beltpac and All-in-one Headset users registered to your base station, and in the case of the BS200 Base Station, with the base station operator. Pressing the **ISO** button on the WS200 will also send audio to any wired product connected to **AUX OUT** on the BS200 Base Station if the **ISO+** button on the base station is on. The **ISO** feature can be locked out, causing the **ISO** button to function the same as the **IC** button.

The **IC button** is used to communicate with Beltpac and All-in-one Headset users registered to your base station, and in the case of the BS200 Base Station, with the base station operator. Pressing the **IC** button on the WS200 will also send audio to the 2-wire and/or 4-wire connector on the rear panel of the BS200 Base Station.

Push-To-Talk Mode

- Press and hold the **ISO** or **IC** button while speaking.
 - The green light over the button will be flashing when the unit is transmitting.
- Release button to listen on headset speaker or internal speaker, if “**ON**.”
 - The green light over the button will be on steady.
- Adjust volume level with **VOLUME** up ▲ and down ▼ buttons if necessary.

Hands-Free Mode

You must be using a headset plugged into the WS200, and the speaker must be off for hands-free operation.

- Quickly press and release the **ISO** or **IC** button.
 - The green light over the button will be flashing.
- Speak and listen as in a normal telephone conversation.
- Adjust volume level with the **VOLUME** up ▲ and down ▼ buttons if necessary.
- Press and release the **ISO** or **IC** button again to end communication.
 - The green light over the **IC** button will be on steady.
- Press and release the **ISO** or **IC** button if you want to speak again.
 - The green light over the button will begin flashing again.
- Pressing and holding the **ISO** or **IC** button for more than a half second will result in PTT operation.

ISO Lockout Mode

To set the WS200 with the ISO feature locked out, with the power off, press and hold the **IC** button while you press and release the **POWER** button. You will hear “Power on, Speaker #, Version #, ISO off.” When set up for the ISO Lockout mode, the **ISO** button will operate the same as the **IC** button, in either hands-free or PTT communication.

To reset the ISO feature for normal **ISO** button communication, with the power off, press and hold the **ISO** and **IC** buttons while you press and release the **POWER** button. You will hear “Power on, Speaker #, Version #, ISO on.”

CALL Light Function

If the CL200 (optional) Call Light button is pressed, or a call tone from an RTS or ClearCom intercom system is received through the CL200 on the 2-wire circuit:

- One short beep will sound in the WS200 speaker or headset, and will also be heard through all Beltpacs or All-in-one Headsets registered to the same base station as the WS200.
- The yellow **CALL** light next to the **POWER** button on the WS200 will flash 3 times and pause, then flash 3 times and pause, then flash 3 final times.

Headset Microphone Gain Adjustment

Some users speak louder or softer than others. The headset microphone gain adjustment helps to compensate for these differences, raising or lowering the voice level of the user speaking into the microphone. Increase microphone gain for softer voices, decrease for louder voices.

- To adjust microphone gain, first be sure the internal speaker is off.
- Press and hold the **ISO** button while pressing the **VOLUME** up ▲ or down ▼ arrow.
 - When you reach maximum microphone gain, you will hear “Maximum.”
 - When you reach minimum microphone gain, you will hear a double beep.

There are 16 steps between maximum and minimum microphone gain levels.

Headset Sidetone Adjustment

Sidetone is the level of your own voice that you hear in the headset earpiece as you speak into the microphone.

- To increase or decrease the sidetone level, first be sure the internal speaker is off.
- Press and hold the **IC** button while pressing the **VOLUME** up ▲ or down ▼ arrow.
 - When you reach maximum sidetone level, you will hear “Maximum.”
 - When you reach minimum sidetone level, you will hear a double beep.

There are 5 steps between maximum and minimum sidetone levels.

NOTE: A trim pot is provided for fine tuning adjustments with a small screwdriver, through the hole labeled **SIDE TONE** on the left side of the WS200.

Changing Batteries

When batteries are becoming weak, you will hear “Change battery” from the speaker or headset. When this happens, remove the battery sled from the WS200 and replace the six batteries in it with fresh AA batteries. Be sure battery polarity is correct when replacing the batteries.

Rechargeable BAT850 Batteries

If you are using the optional HME BAT850 Rechargeable Battery, remove the battery from the WS200 and replace it with a fully charged battery. Recharge the battery in the optional AC850 Battery Charger according to the instructions received with the charger. Charging time is approximately 3 hours.



AC850 Battery Charger

Auxiliary Speaker Connection

An 8 ohm auxiliary speaker can be connected to the right side of the WS200, using the enclosed 2-position connector plug. Adjustments affecting the WS200 speaker will also affect the parallel auxiliary speaker.



EQUIPMENT SPECIFICATIONS

Frequency Range:	2400 – 2483.5 MHz
Frequency Response:	200 Hz to 3.5 kHz
Power Requirements:	Six AA batteries (NiMH optional), 12-14VDC or 100-240VAC, 50-60Hz
Temperature Range:	-4 to 131°F (-20 to 55°C) typical
Size:	9.38" x 5.16" x 3.34" (23.83 x 13.11 x 8.48 cm)
Weight:	2.56 lb with battery (1.16 kg)
Headset Connector:	4-Pin Mini-DIN
Microphone:	Electret
Speaker:	1.5W min into 8Ω
Headset Output:	160mW into 32Ω

Controls and Connectors

Top Panel:	Headset connector Power button Speaker button ISO button Volume up ▲ and down ▼ buttons IC button Indicator lights (red/green/yellow)
Left Panel:	Side Tone adjustment
Right Panel:	12-14 VDC power connector 8Ω speaker connector

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.

This equipment has been tested and found to comply with the limits for 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 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.

Any changes or modifications not expressly approved by HM Electronics, Inc. could void the user's authority to operate the equipment. To comply with FCC radiation exposure requirements, use of this device is limited to configurations tested and approved by HM Electronics. Other accessories used with this device must not contain any metallic components.

This device is a radio transmitter and receiver. When it is on, it receives and sends out RF energy. In August 1996, the U.S. Federal Communications Commission (FCC) adopted RF exposure guidelines with safety levels for hand-held wireless devices. These guidelines are consistent with the safety standards previously set by both U.S. and international standards bodies in the following reports:

- ANSI C95.1 (American National Standards Institute, 1999)
- NCRP Report 86 (National Council on Radiation Protection and Measurements, 1986)
- ICNIRP (International Commission on Non-Ionizing Radiation Protection, 1996)

This device complies with the standards set by these reports and the FCC guidelines.

The term "IC:" before the certification/registration number only signifies that the Industry Canada technical specifications were met.



Hereby, HM Electronics, Inc. declares that this device is in compliance with the essential requirements and other relevant provisions of R&TTE Directive 1999/5/EC.

This device operates in the 2400 to 2483.5 MHz frequency range. The use of this frequency range is not yet harmonized between all countries. Some countries may restrict the use of a portion of this band or impose other restrictions relating to power level or use. You should contact your Spectrum authority to determine possible restrictions.

Waste Electrical and Electronic Equipment (WEEE)

The European Union (EU) WEEE Directive (2002/96/EC) places an obligation on producers (manufacturers, distributors and/or retailers) to take-back electronic products at the end of their useful life. The WEEE Directive covers most HME products being sold into the EU as of August 13, 2005. Manufacturers, distributors and retailers are obliged to finance the costs of recovery from municipal collection points, reuse, and recycling of specified percentages per the WEEE requirements.

Instructions for Disposal of WEEE by Users in the European Union

The symbol shown below is on the product or on its packaging which indicates that this product was put on the market after August 13, 2005 and must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of the user's waste equipment by handing it over to a designated collection point for the recycling of WEEE. The separate collection and recycling of waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local authority, your household waste disposal service or the seller from whom you purchased the product.

