

DX340ES

HD Wireless Headset System



Operating Instructions

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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.

Hereby, HM Electronics, Inc. declares that the DX340ES is in compliance with the essential requirements and other relevant provisions of R&TTE Directive 1999/5/EC.



This product 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 restriction 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 (2012/96/EU) 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.



HM Electronics, Inc. is not responsible for equipment malfunctions due to erroneous translation of its publications from their original English version. Illustrations in this publication are approximate representations of the actual equipment, and may not be exactly as the equipment appears.

SECTION 1. INTRODUCTION

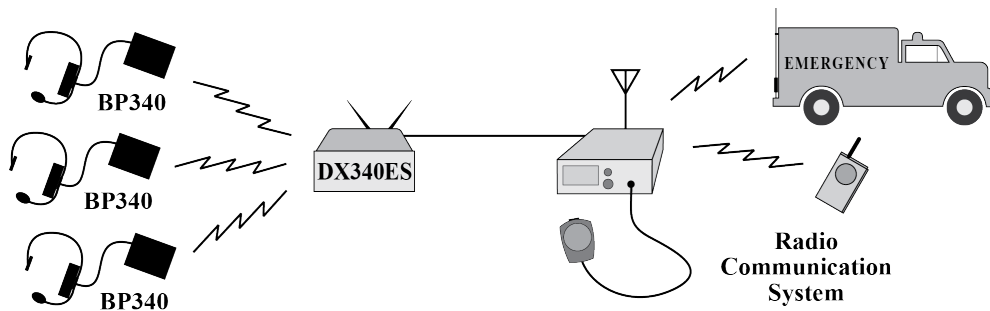
The DX340ES is a digital wireless communication system that enables hands-free two-way secure communication on two independent channels, or both channels at the same time. It can be operated with AC or battery power. Multiple base stations can be interconnected for expanded capabilities.

In addition to the standard communication among base station and belt-pac operators, the system can be configured to operate with almost any radio or digital matrix (4-Wire) communication system.

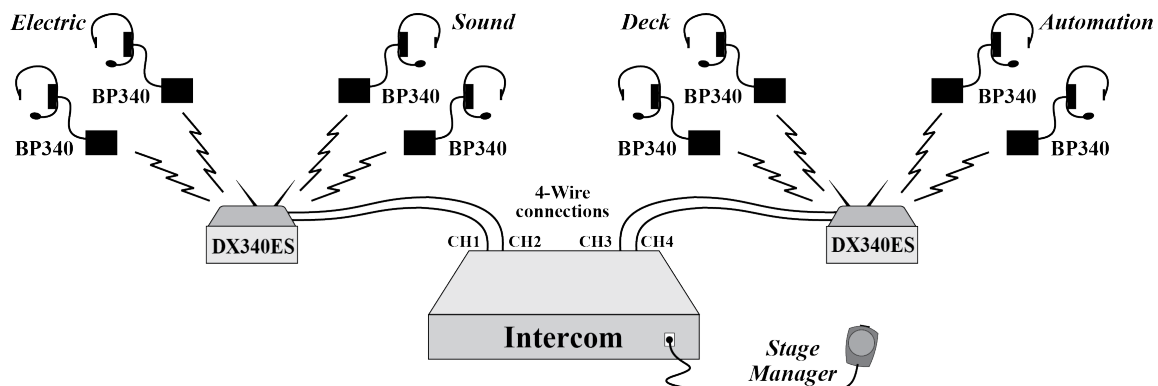
This manual provides detailed setup and operating instructions for your DX340ES system.

The following examples are of typical DX340ES applications.

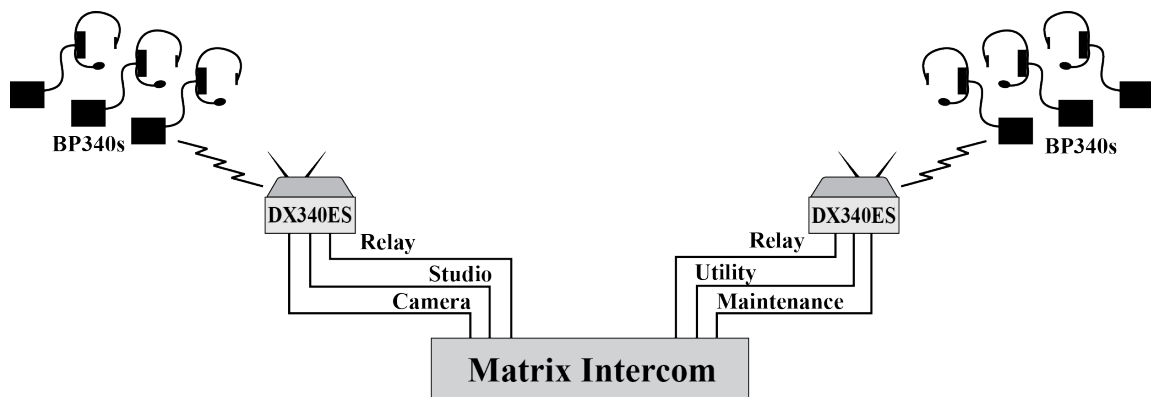
Radio Communication Center



Theatre



Broadcasting

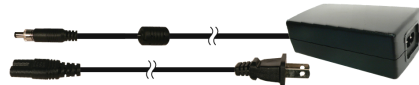


SECTION 2. EQUIPMENT IDENTIFICATION

STANDARD EQUIPMENT



MB340ES console



MB340ES power cords and adapter



Antennas



Headset



Battery Sled



8 and 10 pin Spring
Clamp Connector



Travel Case



Base Station
Interconnect Cable



Belpac with Headset,
Pouch and Battery

OR



All-in-one Headset
with Battery

AC40 (for belpac)

AC50 (for all-in-one headset)

AC50 US and
international
power supplies



Battery charger with power supply and cord for belpac and all-in-one headset batteries

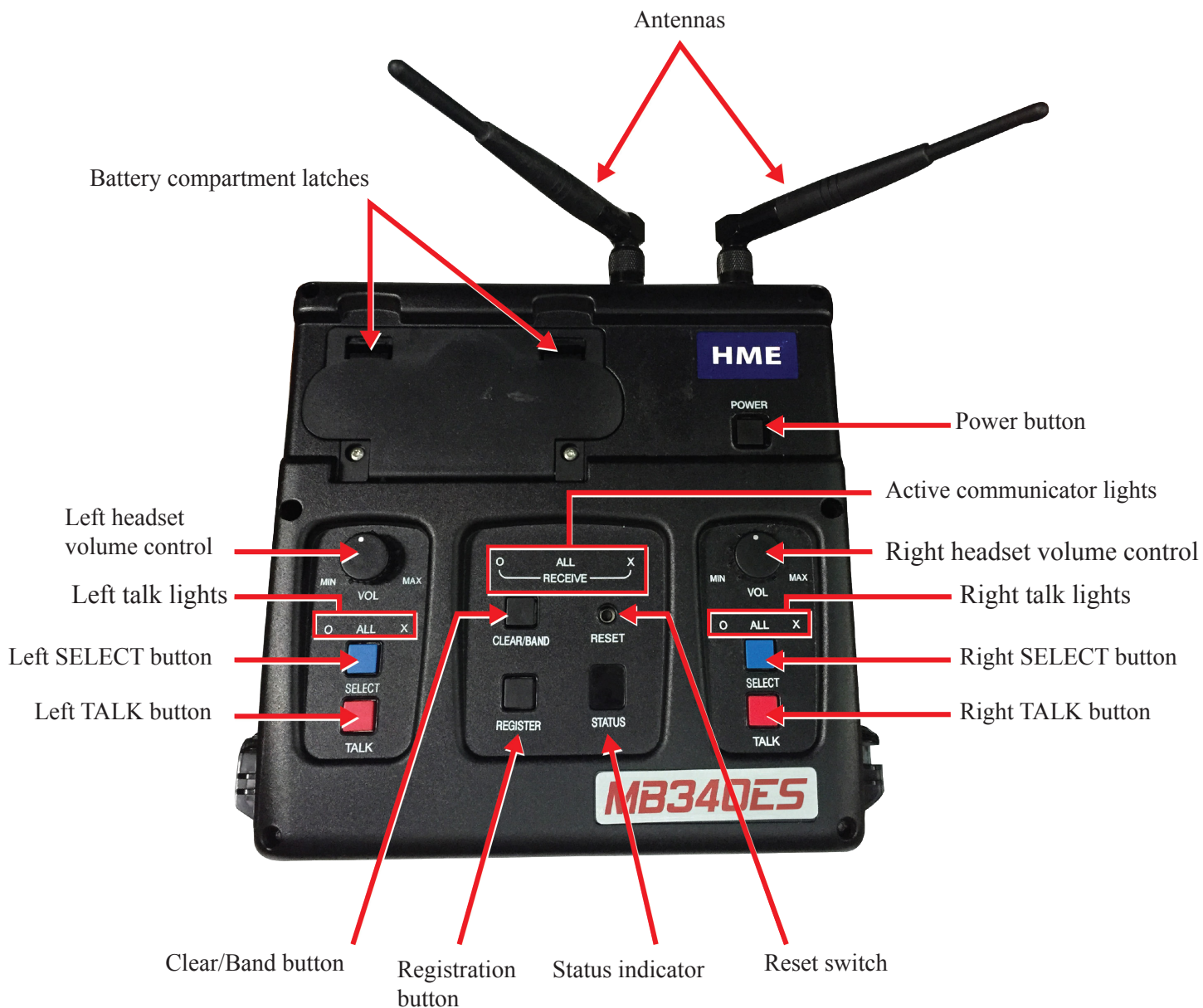
OPTIONAL EQUIPMENT

<p>Headset with dual ear muffs Model # CC-30-MD4</p> 	<p>Headset, all-in-one, with battery Model # WH340</p> 
<p>Headset extension cable, 6 ft (1.83 meter)</p> 	<p>Foam earmuffs for all-in-one headset</p> 
<p>Rechargeable battery for base station Model # BAT850</p> 	<p>Battery charger for base station batteries Model # AC850</p> 
<p>Remote antenna kit with 6 foot (1.83 meter) cable and bracket</p> 	<p>Remote antenna kit with 30 foot (9.14 meter) cable and bracket</p> 
<p>Adapter cable for headset with dynamic microphone and XLR connector Model # MD-XLR4F, MD-XLR4M, MD-XLR5F</p> 	

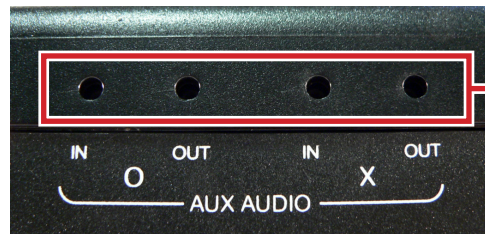
EQUIPMENT FEATURES

Base Station

Top Panel

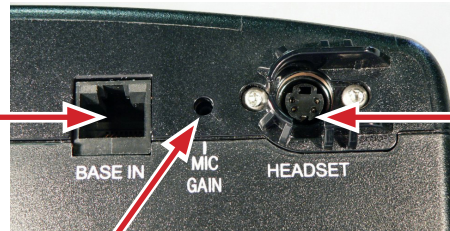


Front Panel



Auxiliary audio in/out
volume adjustments
(recessed)

Left Side Panel

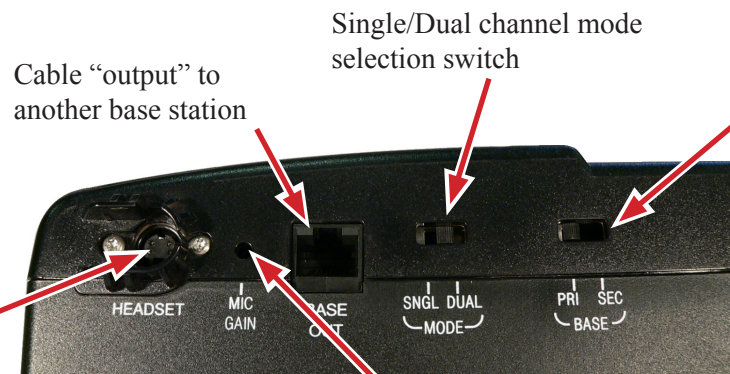


Cable "input" from
another base station

Left headset connector

Microphone gain adjustment
for left headset

Right Side Panel



Cable "output" to
another base station

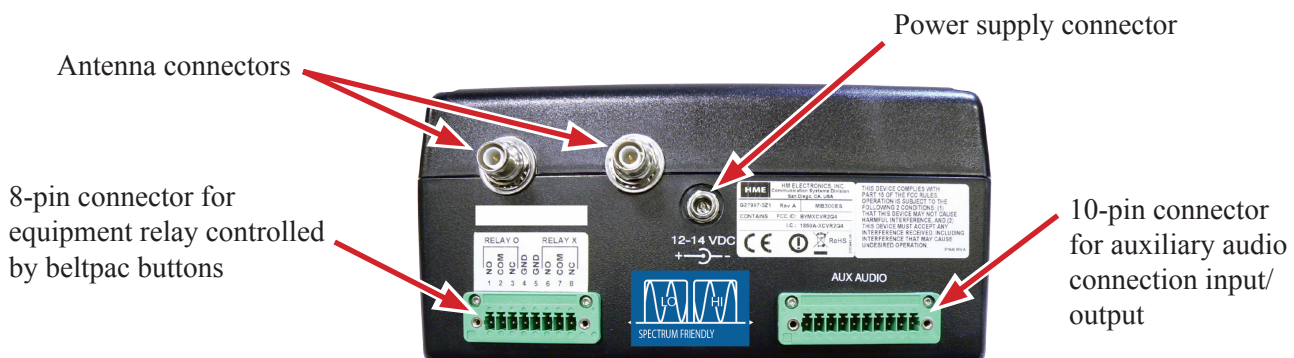
Single/Dual channel mode
selection switch

Primary/Secondary base
station selection switch

Rear headset connector

Microphone gain adjustment
for right headset

Rear Panel



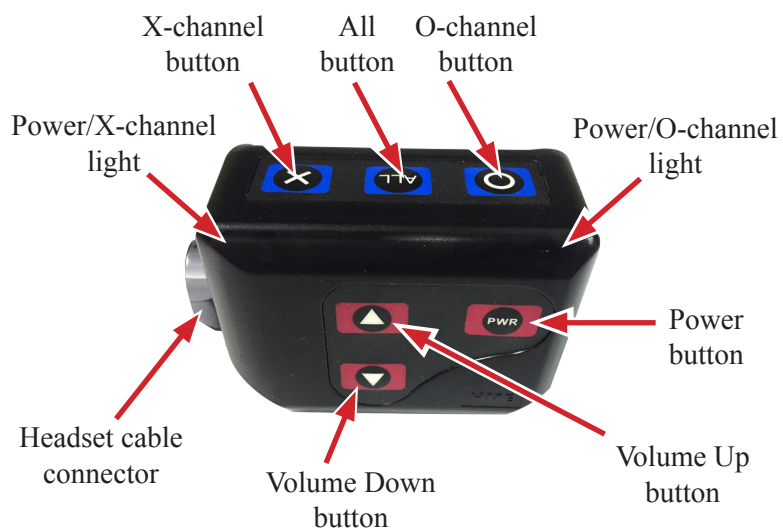
Antenna connectors

Power supply connector

8-pin connector for
equipment relay controlled
by belt pac buttons

10-pin connector
for auxiliary audio
connection input/
output

Beltpac



All-in-One Headset (optional)



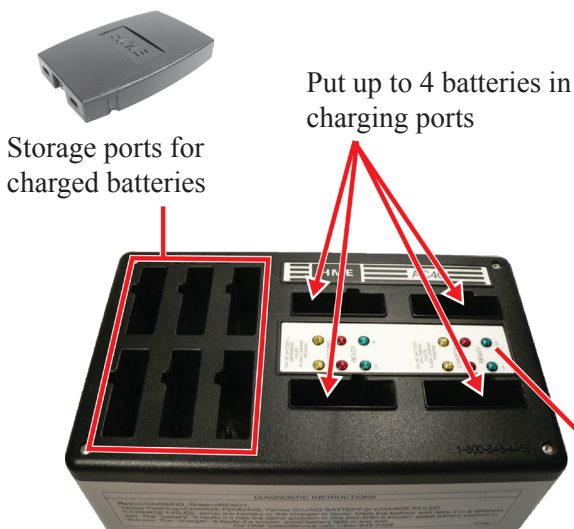
SECTION 3. EQUIPMENT SETUP

BATTERY CHARGER

NOTE: Set up the battery charger and charge all belt-pac and/or all-in-one headset batteries while you are setting up the base station.



- 1** Connect power supply to charger and electrical outlet.
- 2** Charge all belt-pac batteries. Charging time is approximately three hours.



Status lights next to each charging port **Red light**

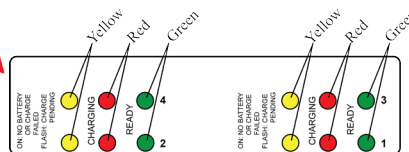
- Stays on steady while battery is charging

Green light

- Goes on when battery is fully charged

Yellow light

- Stays on steady when charging port is empty
- Flashes if battery is too hot to charge
- Next to battery in charging port means charge has failed – see instructions on side of charger



Put up to 4 batteries in charging ports



Red light

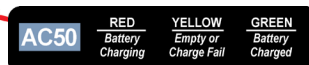
- When you place a battery in a port for charging, its status light will turn red.

Green light

- When a battery is fully charged, its status light is green.

Yellow light

- When a battery charging port is empty, its status light is yellow.



AC50 US and international power supplies and adapters



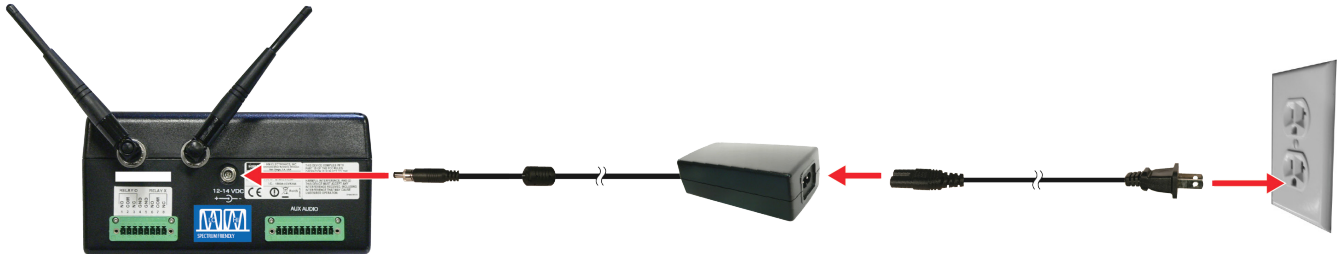
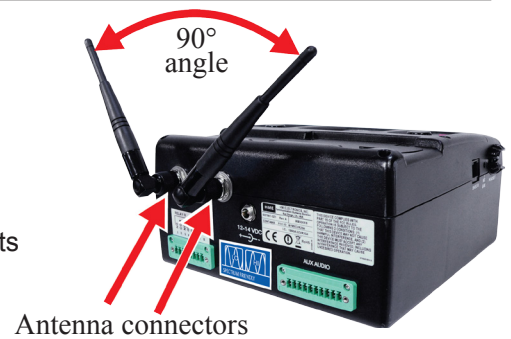
Plug the cord from the +5VDC power adapter into the battery charger, and then plug the power adapter into an electrical outlet.

BASE STATION

- 1 Fasten both antennas onto the connectors on the back of the base station.

Tighten at 90° angle.

- 2 Set up base station where no objects are blocking the line-of-sight from base station to the belt pacs. If base station can not be set up with no objects in line-of-sight between it and the belt pacs, install the antennas away from the base station. See [page 17](#) for remote antenna installation.



NOTE: A fully charged battery can be kept in the base station as a backup in case of AC power interruption.

If AC power is unavailable, the base station can operate on battery power (See [page 9](#)).

- 3 Plug power adapter into base station and screw nut onto connector, then plug power cord into power adapter and electrical outlet.

- 4 Press **POWER** button to turn power on.

- 5 Plug headsets into the base station, inserting headset plugs all the way into connectors.



Optional Battery Operation of Base Station

A base station can operate on battery power when AC power is unavailable.

NOTE: Always plug base station into AC power when available. To conserve battery power, turn the base station off when it is not being used.

Typical base station battery life when used continuously is as follows:

Energizer ULTIMATE Lithium5 hours
BAT850 Rechargeable Battery2¼ hours
Duracell Quantum35 minutes

- 1** If you are using the battery sled, insert six “AA” batteries.
- 2** Pull back on the battery compartment latches, and lift the battery compartment cover on the base station.

Battery
compartment
latches

Battery
compartment
cover



Battery sled



BAT850 Battery



- 3** Insert the battery sled or rechargeable BAT850 battery (optional) into the battery compartment, and close the cover.
- 4** If you are using the BAT850 battery, insert it in the AC850 battery charger (optional) for recharging after each use.

Follow the instructions received with the charger. Charging time is approximately 3 hours.



AC850 Battery Charger

NOTE: When base station battery power is low, everyone connected or registered to that base station will hear a headset tone that repeats every 8 seconds. Additionally, both headset select lights will blink.

Spectrum Friendly™ Interference Avoidance

Multiple base stations can operate on high or low parts of the frequency band to prevent interference, which may be characterized as popping sounds in the headset.

For example, with four base stations, set two on low band and set the other two on high band as follows:

- 1 Turn the base station power on.

The STATUS window will show “8” for a few seconds.

After the “8” disappears, the STATUS window will be blank.



- 2 Press and hold the **CLEAR/BAND** button, then simultaneously press and hold the **REGISTER** button.

The STATUS window will show **L**, **H** or **A**.



- 3 Press the CLEAR/BAND button repeatedly to cycle through the frequency band:
L = Low end, **H** = High end and **A** = All.

Stop at the desired setting and wait until “c” appears on the STATUS display.



NOTE:

Base stations are shipped in the “A” (default) position.

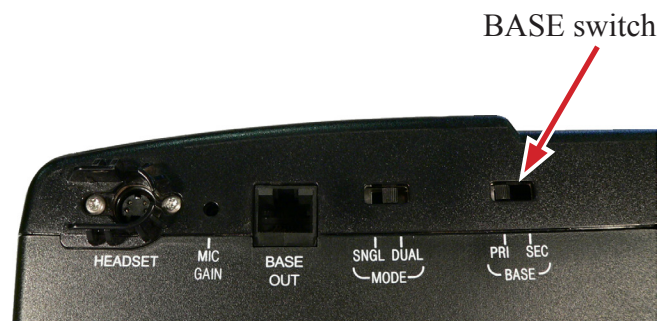
The letter “c” will only appear on the STATUS display if you are setting the frequency band the first time or if you are changing the setting.

If you stop at **L**, **H** or **A** that was already set, an “8” will appear for a few seconds and the STATUS display will turn blank.

If you change a base station's existing frequency band setting, you will have to re-register all belt pacs and/or all-in-one headsets that were registered to that base station.

Base Switch (Disabled in this version)

PRI or SEC setting functionality for the BASE Switch is disabled in this version. The switch can be set to either position.



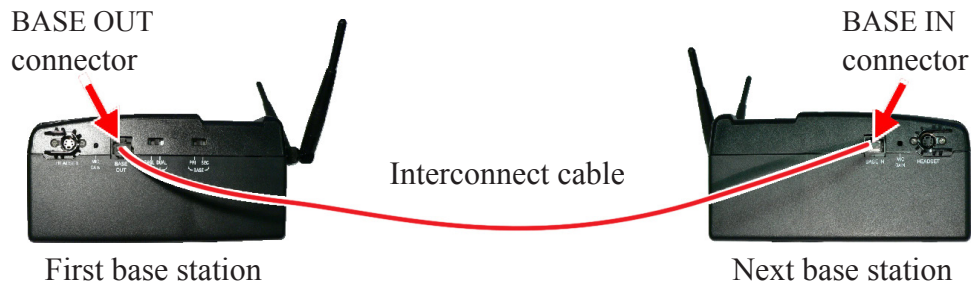
Right side of base station

Multiple Base Stations

Up to 20 crew members can communicate using the DX340ES (five per base station) by interconnecting up to four base stations as described below.

Audio Connection

Connect base stations with the provided interconnect cable, from the BASE OUT connector on one to the BASE IN connector on the other.

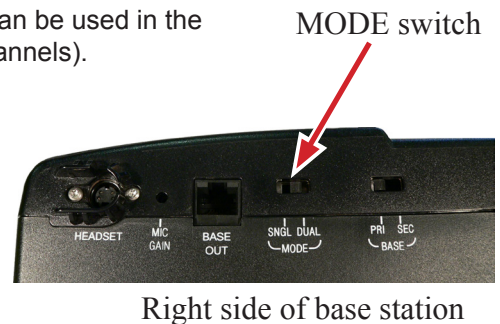


Single/Dual Channel Setting

In the single-channel (SNGL) mode — four beltpacs and/or all-in-one headsets can be used in the hands-free mode, communicating in “O” channel only.

In the dual-channel (DUAL) mode — three beltpacs and/or all-in-one headsets can be used in the hands-free mode, communicating in either “O” or “X” channel, or “ALL” (both channels).

On the right side of the base station(s), set the MODE switch to the single or dual-channel position.



Base Station Microphone Gain Adjustment

The microphone gain adjustment allows you to adjust the level of your voice as it is transmitted from the headsets plugged into the base station

Microphone gain must be adjusted for each base station headset.

- 1** Using a headset plugged into the right side of a base station, locate the recessed MIC GAIN adjustment hole on the right side of the base station.
- 2** Insert a small screwdriver in the hole, and turn the adjustment clockwise (to increase) or counterclockwise (to decrease) microphone gain.
- 3** Speak into the right headset microphone and listen to your voice level (sidetone) as you adjust the microphone gain.
- 4** Using a headset plugged into the left side of the base station, locate the MIC GAIN adjustment on the left side of the base station, and then repeat Steps 2 and 3.
- 5** Repeat Steps 1 through 4 for each base station.



NOTE: Base station microphone gain is factory set at about one-third from minimum level.

REGISTRATION

Belpac and All-in-one Headset

NOTE: All-in-one headset registration is the same as the belpac registration described below, except for Step 2. If you have more than one base station, you must register each belpac to the base station in which it will be used.

- 1 Turn the base station power on, and the belpac power off.
- 2 Plug the headset into the belpac, and put the headset on your head (belpac registration only).
- 3 Press the **REGISTER** button on the base station registration panel. A lower case “o” will appear on the STATUS window.
- 4 Press and hold the **ALL** button on the belpac as you press and release its **PWR** (power) button. After a brief delay, you should hear “Registration complete”. An ID number for the belpac will appear briefly on the STATUS window.
- 5 Repeat Steps 1 through 4 for each belpac.



NOTE: If registration is not successful, you will hear “Registration failed” and the STATUS window will be blank. If this happens, refer to **TROUBLESHOOTING** in Section 5, [page 22](#).

NOTE:

If you're attempting to register more than 15 belpacs to a base station:

- An “F” (Full) will appear in the STATUS window, and you will hear “Registration failed” in the headset.
- Clear all current registrations by pressing and holding the **CLEAR/BAND** button while you press and release the **RESET** button with the point of a pen. Continue holding the **CLEAR/BAND** button after you release the **RESET** button until the clear code “c” (lower case) appears on the STATUS window.
- Register all belpacs, one at a time, including previously registered belpacs.

Beltpac or All-In-One Headset Adjustments

Sidetone Adjustment (Beltpac only, not on all-in-one headset)

When you speak into the microphone, you can hear sidetone (your own voice) in the belt pac headset.

Sidetone can be adjusted as follows:

- 1** Be sure the belt pac power is on.
- 2** While holding down the “O” button, press the volume-up (▲) or volume-down (▼) button as many times as needed to reach an acceptable level. If you reach the high limit, you will hear “maximum” in the headset. If you reach the low limit, you will hear double beeps.

Maximum sidetone level is recommended.

Microphone Gain Adjustment

Some users speak louder or softer than average.

The microphone gain adjustment helps to compensate for extremes in speaking level of coaches using belt pacs or all-in-one headsets.

NOTE: The microphone gain can be monitored through sidetone, or preferably by someone else using a belt pac or all-in-one headset, or at the base station.

- 1** Be sure the belt pac or all-in-one headset power is turned on.
- 2** While holding down the **X button**, press the volume-up ▲ or volume-down ▼ button as many times as needed to reach an acceptable level. If you reach the high limit, you will hear “maximum” in the headset. If you reach the low limit, you will hear double beeps.

Recommended microphone gain levels are:

- Belt pacs – 12 presses down from maximum.
- All-in-one headsets – 8 presses down from maximum.

NOTE: Microphone gain and sidetone adjustments will be saved in memory. A reset is not required when the unit is turned off and on.

OPTIONAL REMOTE ANTENNA INSTALLATION

It may be necessary to place the antennas away from the base station if it is not possible to avoid obstructions between it and the beltpacs and/or all-in-one headsets.

Remote antenna kits with either 6 foot (1.83 meter) or 30 foot (9.14 meter) cables can be used to mount the antennas wherever necessary to alleviate this problem.

To order a remote antenna kit, refer to the optional equipment shown on [page 3](#). Installation instructions are enclosed with the remote antenna kit

OPTIONAL AUXILIARY EQUIPMENT CONNECTION

Auxiliary equipment such as audio/video recorder or a hardwired intercom can be connected to the rear panel of the base station. Equipment requiring 4-Wire audio interfacing, such as audio/video recorders or hardwired intercoms, can be connected to the 10-pin connector and plugged into the rear panel of the base station.

Equipment requiring relay closure, such as a router or mobile radio, can be connected to the 8-pin connector and plugged into the rear panel of the base station.

- 1** Connect the wires from your auxiliary audio equipment to the enclosed 10-pin connector in accordance the table below.

Pin	Connections	
1	Aux In – O	Differential pair
2	Aux In – O	
3	Aux Out – O	Differential pair
4	Aux Out – O	
5	Ground	
6	No Connection	
7	Aux In – X	Differential pair
8	Aux In – X	
9	Aux Out – X	Differential pair
10	Aux Out – X	

- 2** Connect the enclosed 8-pin connector to the wires from equipment you would like to control from the O, X or ALL buttons on your belt pacs and/or all-in-one headsets (i.e. long range radio).



8 and 10-pin spring clamp connectors

- 3** Plug the connector into the back panel of the base station as shown above.
- 4** By inserting a small screwdriver in the holes on the front panel of the base station, you can adjust the IN and OUT sound level of “O” and “X” communication channels as needed.



SECTION 4. EQUIPMENT OPERATION

THE BASICS

Base Station Operation



- 1 Press base station **POWER button** to turn on power.
- 2 Place the left or right headset on your head, then use the left or right base station headset controls to adjust.
- 3 Adjust the headset volume as needed.

CAUTION: Having your headset at a high volume level for a long time can cause hearing damage.

- 4 Press the channel **SELECT button**; a Green light appears above **O**, **ALL** or **X** selection — Press the **SELECT button** again to change selection.
- 5 To talk to beltpac or all-in-one headset users, press and release **TALK button** – the Green light turns red. Talk and listen as you would in normal telephone conversation. Press and release **TALK button** again when you finish talking. (You will still hear the other users, but they will not hear you.)

NOTE: Base station TALK buttons do not activate relay closures.

- 6 To turn base station off, press and hold **POWER button** until the lights turn off.

Belpac / All-In-One Headset Operation

The O, X and ALL button functions described below are for operation in the standard default mode. The buttons can also be set to function in other modes. See [page 19](#) for operating mode setups.

1 Be certain a fully charged battery is in the unit.

2 If you're using belpac —

Plug the headset into belpac, and place the headset on your head.
Slide belpac into its pouch, and clip it on your belt.

3 Press and release the **PWR** (power) button to turn the unit on.



Belpac power button



All-in-one headset power button (above earpiece on inside surface)

4 Press and release the **O** button to communicate with O-channel users, or press the **X button** to communicate with X-channel users.



Speak to O-channel users and activate O relay



Speak to X-channel users and activate X relay

5 To communicate with both O and X channel users, press and hold the **ALL button** while talking.



Speak to all O and X channel users and activate both O and X relays

6 Adjust the belpac or headset volume as needed.



Increase volume



Decrease volume

CAUTION: Having your headset at a high volume level for a long time can cause hearing damage.

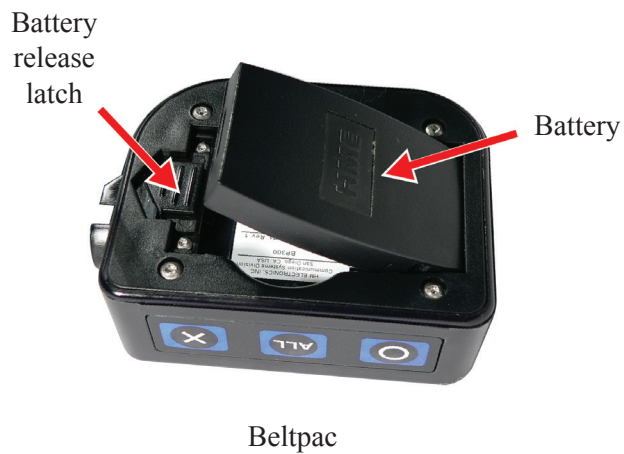
7 To turn the unit off, press and hold the power button for about two seconds until you hear "Power off".

Changing Batteries

Belpac batteries typically provide 20 hours of continuous use in listen mode.

If you hear “Change battery” in your headset:

- 1** If you’re using belpac, remove it from its pouch.
- 2** Slide the battery release latch in direction of the arrow.
- 3** Lift the battery out of belpac.
- 4** If using a headset, press blue release button.
- 5** Slide the headset battery out from underneath.
- 6** Place the battery in the battery charger port for recharging.
- 7** Install a fully charged battery in the belpac or headset.
- 8** If using a belpac, place it back in its pouch.



Belpac or All-In-One Headset Operating Mode Setup

Set up belpacs and/or all-in-one headsets to operate in the desired mode by pressing and holding the button combinations shown below. Button combinations work in unison with the **PWR** (power) button.

Mode	Button Combination	Button Functions
Head Coach (default)	Hold X + O + ALL and press PWR	X, O & ALL have normal functions
NOTE: Belpacs and all-in-one headsets are shipped in the default mode.		
O-channel only	Hold O and press PWR	X & O work as O ALL has no function
O-channel + ALL	Hold O + ALL and press PWR	X & O work as O ALL has normal function
X-channel only	Hold X and press PWR	X & O work as X ALL has no function
X-channel + ALL	Hold X + ALL and press PWR	X & O work as X ALL has normal function
O-channel + X-channel only	Hold X + O and press PWR	X & O have normal functions ALL has no function
Latching (Hands-Free, Full-Duplex)	Hold ALL + ▲ and press PWR	X & O will latch on when pressed and released, for a normal two-way conversation
Push-To-Talk (PTT)	Hold ALL + ▼ and press PWR	X, O & ALL must be pressed and held while you talk, and released to listen

NOTE: Mode settings will be stored to memory, so your belpacs and/or all-in-one headsets will have the same mode settings each time you power them off and on.

NOTE: ALL does not latch on, and must be held down to hear both **O** and **X**.

RADIO APPLICATIONS

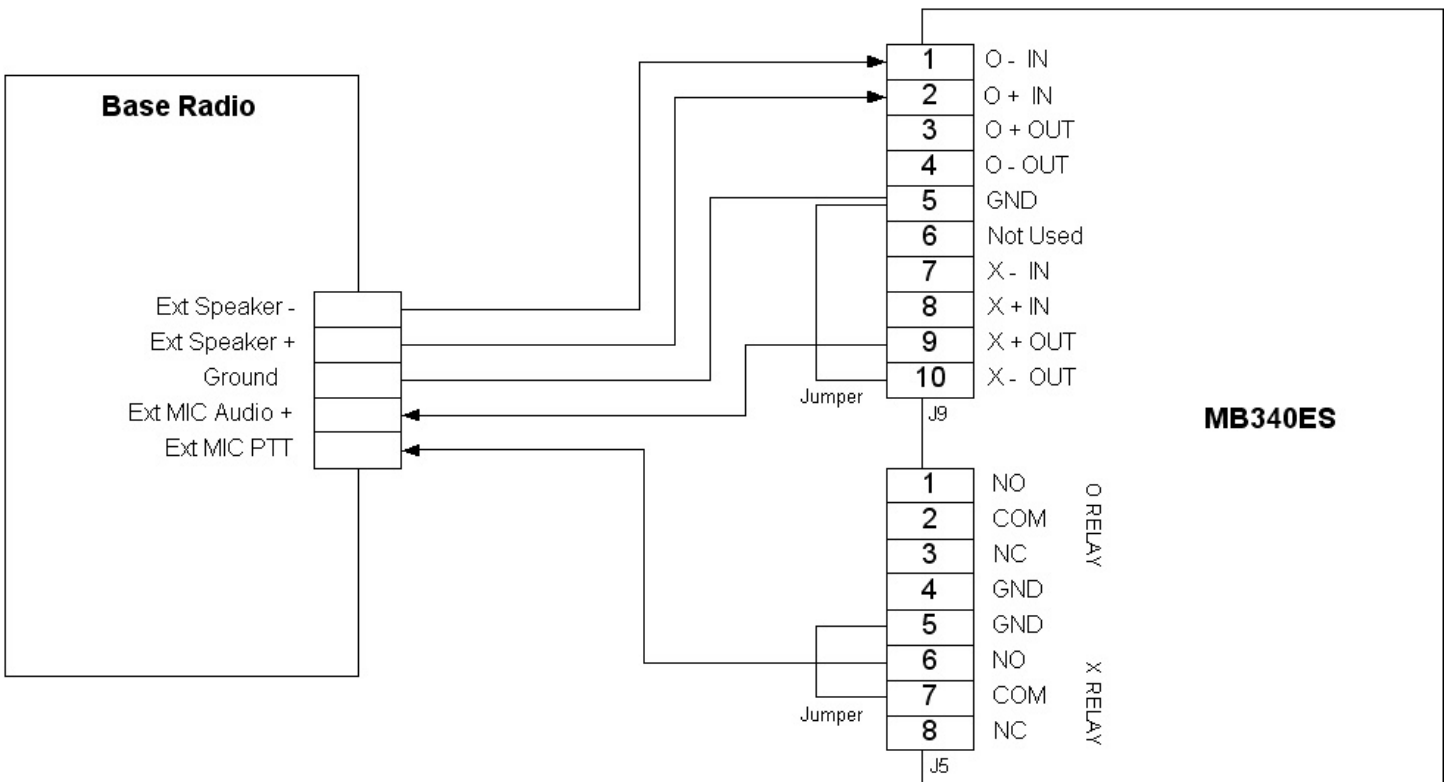
Emergency Services

Operating Scenario

- All crew members will hear both the Crew Channel and Radio Channel simultaneously.
- All crew members have the ability to talk to other crew members in either Latching (hands-free) or PTT (push-to-talk) modes, using either the **O** or **X** buttons.
- All crew members have the ability to talk to the radio channel in a PTT mode, using the **ALL** button.

Beltpac Configuration

- Set for Latching mode with the **O** and **ALL** buttons enabled.
- The **X** button will work as a second **O** button.



NOTE: Application shown is for radio equipment requiring Ext MIC PTT connection to be pulled low to key radio transmitter.

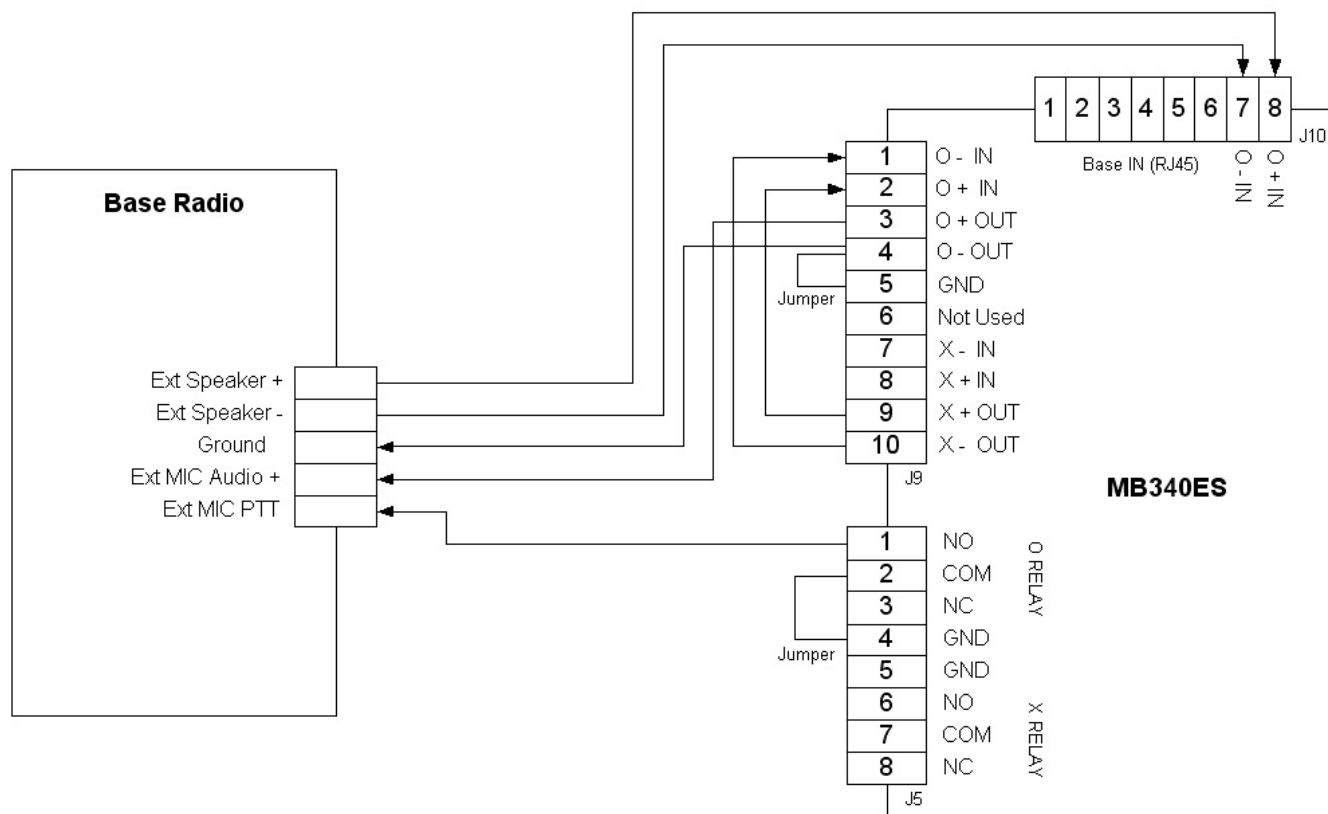
Production Crew with Separate Radio Channel

Operating Scenario

- Production Manager will monitor Radio Channel and Production Crew Channel simultaneously, hands free. Production Manager can selectively talk to Radio channel or Production Crew Channel.
- Production Crew members will hear and talk to Production crew members only.
- Radio Crew members will hear and talk to radio Crew members only.

Belpac Configuration

- Production Manager Belpac set for **X** and **O** and **ALL** (monitor on **O**).
- Crew Belpac set for **X** only.



NOTE: Application shown is for radio equipment requiring Ext MIC PTT connection to be pulled low to key radio transmitter.

SECTION 5. TROUBLESHOOTING

If you are unable to correct any of the problems described below or if your problem is not covered, call 1-800-848-4468 for assistance.

1 Power light on base station does not come on when power button is pressed.

- Be sure the power supply is properly connected to the base station, and the power cord is properly connected to the power supply and electrical outlet.
- If operating on battery power, be sure the battery is charged and in the battery compartment with the cover is securely closed.

2 Beltpac/Headset power lights do not turn green.

- Be sure the base station power is on.
- Turn beltpac/headset power on and off.
- Beltpac/Headset may be too far from the base station.

3 When trying to register a beltpac/headset, you hear “registration failed”.

- Press the **RESET** button on the base station with the point of a pen.
- The STATUS window will show “8” and then become blank.
- Try again to register the beltpac/headset.
- If registration fails again, call your dealer for assistance.

4 No one can hear me when I talk.

- Be sure you are pressing the **X** or **O** button on the beltpac/headset or the **TALK** button on the base station.
- Be sure you are pressing the button for the correct channel.
- Be sure the headset plug is properly connected to the beltpac or base station.

5 With more than one base station, one base station operator cannot hear O or ALL transmission from another base, or another base station operator cannot hear X or ALL transmission from another base.

- Be sure interface cable is properly connected from BASE OUT on one base station to BASE IN on the next base station, and so on.
- If problem is not resolved, try using a different interface cable.

6 No or low auxiliary audio sound.

- Check wiring from auxiliary equipment to AUX AUDIO connector on back of the base station.
- Turn AUX AUDIO adjustments on front of base station with a small standard (flat) screw driver, clockwise to increase level and counterclockwise to decrease level.

7 Beltpacs or all-in-one headset users cannot hear or talk to base station operators using base station headsets.

- Be sure base station headsets are fully plugged into the base station headset connectors.
- Be sure the appropriate SELECT lights are red (**O**, **X** or **ALL**) when base station operators are talking.
- Be sure everyone talking or listening is on the right channel (**O**, **X** or **ALL**).

8 Beltpac range is bad.

- Be sure antennas are properly connected and tightened on base station.
- Be sure base station is positioned where there are no physical obstructions blocking line-of-sight from the base station to the beltpacs and/or all-in-one headsets.

9 Beeping is heard in base station headset and SELECT lights are blinking.

- Base station is operating on battery power, and the battery is low.

10 Not all beltpac buttons are working.

- Button functions may have been changed to work in the desired operating mode (see [page 19](#)).

11 There is interference from a cordless telephone.

- If there is a 2400MHz cordless telephone nearby, interference may occur.
- If it does occur, changing frequencies on the telephone should eliminate the problem.
- If it does not, move the phone as far as possible from the base station, or use another type phone.

(If your base station does not have a battery backup)

In the event of an electrical power outage, such as from lightning or a power generator failure, if you experience problems with your DX340ES equipment after the power comes on again, unplug the AC power supply from its electrical outlet and wait 15 seconds, then plug it back in.

FREQUENTLY ASKED QUESTIONS

1 Are the battery charger and base station power supplies interchangeable?

Yes, but it is NOT interchangeable with the AC50 battery charger.

2 What is the maximum recommended number of base stations that can be linked together with interconnect cables?

Four.

3 Can I use more than three beltpacs on a single base station in dual channel mode?

Yes, but only three users will be able to transmit at the same time. Up to 15 beltpacs can be registered to a single base station. Beltpacs and all-in-one headsets should be placed in press-to-talk mode when more than three beltpacs or all-in-one headsets are used.

4 What should I do if my carrying case and equipment get wet?

Dry them out thoroughly before further use. Be sure all equipment is dry before using it again.

CAUTION: Plugging wet electrical equipment into an AC power outlet is dangerous!

SECTION 6. TECHNICAL DATA

EQUIPMENT SPECIFICATIONS

Base Station

GENERAL

Frequency Range:	All, 2400 – 2483.5 MHz Low, 2401.92 to 2439.94 MHz High, 2443.39 to 2481.41 MHz
Frequency Response:	200 Hz to 7 kHz
Power Requirements:	100-240VAC, 50-60Hz 12-14VDC or six AA batteries (NiMH optional)
Temperature Range:	32-122°F (0-50°C)
Size:	8" x 8" x 3.5" (20.32 x 20.32 x 8.89 cm)
Weight:	2.75 lb with battery (1.25 kg)
# of Beltpacs per Base:	15 can be registered; any 3 full simultaneous full-duplex in 2-channel mode
8-Wire I/O:	RJ45, 600Ω balanced out, high impedance in
Auxiliary Audio:	10-Ckt Phoenix connector, 600Ω balanced out, high impedance in, level adjustable
Headset Connectors:	4-pin mini-DIN
Electret microphone:	45 KΩ
Headset Output:	200mW into 32Ω
Top Panel Controls & Indicators: ..	Power button Left and Right headset controls Rotary knobs for headset volume (VOL) adjustment Headset SELECT buttons (O=Offense, X=Defense or ALL) Headset TALK buttons Registration controls CLEAR/BAND button REGISTER button RESET switch (recessed) STATUS indicator Headset transmit dual-color LEDs, left and right (red/green) – O, X, ALL RECEIVE LEDs (green) – O, X, ALL
Front Panel:	Auxiliary input and output level adjustments
Left Panel:	8-wire audio port Microphone gain adjustment Left headset connector
Right Panel:	Right headset connector Microphone gain adjustment 8-wire audio port Single/Dual selection switch Primary/Secondary selection switch (Disabled in this version)
Rear Panel:	Auxiliary input and output connectors Antenna connectors
Antenna Type:	External ½ -wave dipole (R-TNC connector) RX/TX horizontal/vertical diversity
System Distortion:	<2%
Communication Security:	64-bit encryption dual-slot diversity

Type:	Frequency hopping, spread spectrum
Transmit Power:	100mW burst
Modulation Type:	Gaussian filtered FSK, TDMA
Frequency Stability:	13 ppm
Harmonics/Spurious:	Exceeds FCC and ETSI specifications over temperature

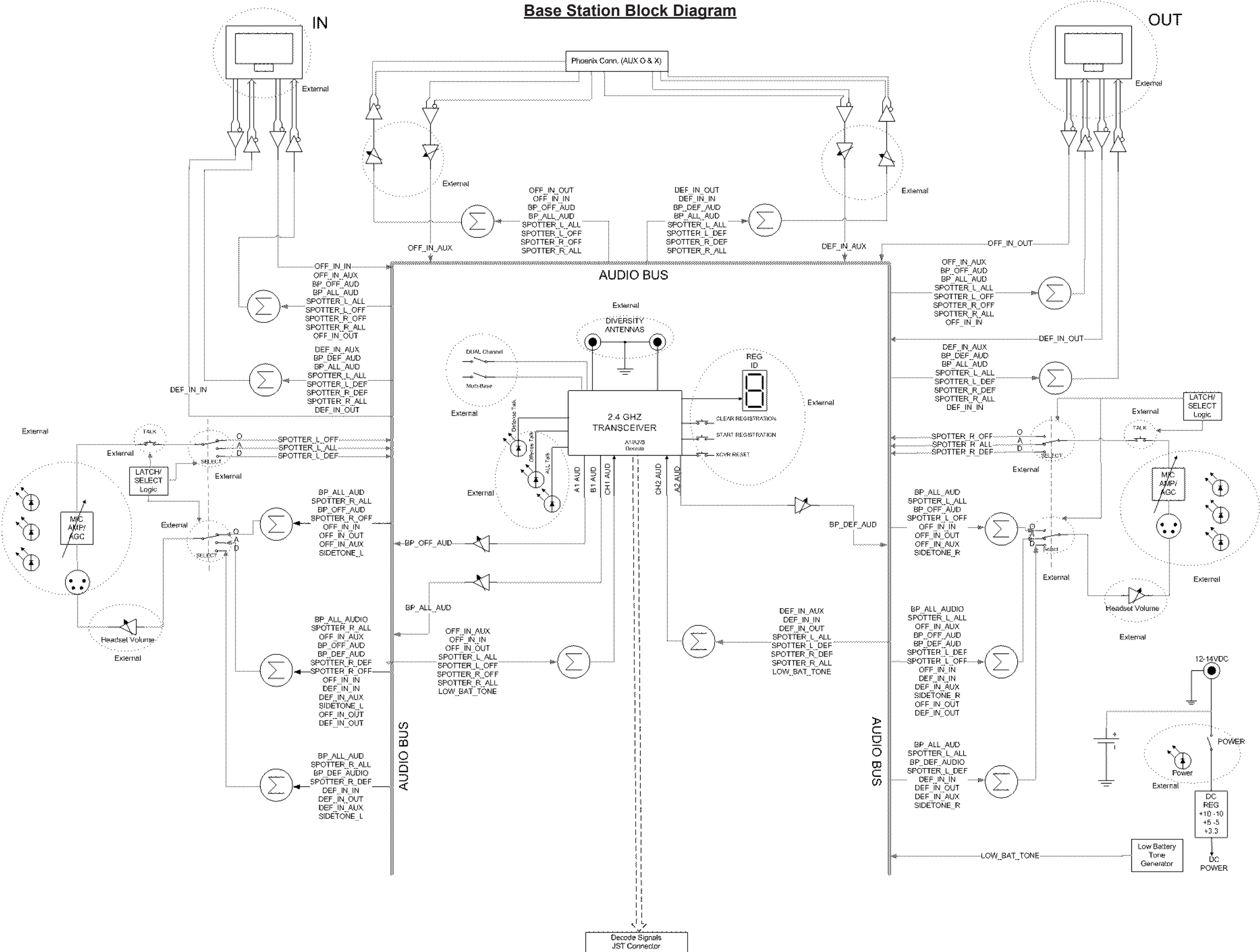
Type:	Frequency hopping, spread spectrum
RF Sensitivity:	<-90dBm w 10-3 BER
Frequency Stability:	13 ppm
Distortion:	<2%

Frequency Range:	2400 MHz – 2483.5 MHz
Antenna:	Internal, horizontal/vertical diversity
Frequency Response:	200 Hz to 7 kHz
Transmit Power:	100mW burst
RF Sensitivity:	<–90dBm w 10-3 BER
Battery Requirements:	3.6V lithium ion, rechargeable
Battery Life:	Hands-free – up to 14 hours PTT – up to 20 hours
Temperature Range:	32-122°F (0-50°C)
Weight:	7.4 oz (.21 kg) with battery and pouch
Headset Connector:	4-pin, mini-DIN
Microphone:	Electret
Headset Output:	160mW into 32Ω
Controls:	Power PWR, Volume-up ▲, Volume-down ▼, O, X, ALL
Indicators:	Dual-color LED (red/green)

Frequency Range:	2400 MHz – 2483.5 MHz
Antenna:	Internal
Frequency Response:	200 Hz to 7 kHz
Transmit Power:	100mW burst
RF Sensitivity:	<-90dBm w 10-3 BER
Battery Requirements:	3.6V lithium ion, rechargeable
Battery Life:	Hands-free – up to 14 hours PTT – up to 20 hours
Temperature Range:	32-122°F (0-50°C)
Weight:	5.7 oz (.16 kg) with battery
Microphone:	Electret
Headset Output:	160mW into 32Ω
Controls:	Power, Volume-up ▲, Volume-down ▼, O, X, ALL
Indicators:	Transmit LED (red in defense / green in offense) Power LED (red/green)

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Base Station Block Diagram



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