

# Warranty statement.

## Sound Projections Six Year Limited Warranty.

The Freedom FR-3neo is warranted to be free of defects in materials and workmanship for a period of 6 years from the date of original purchase, subject to the following conditions:

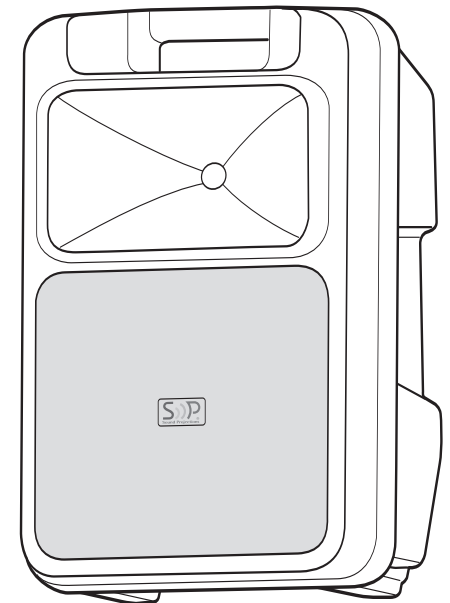
- This warranty excludes defects caused by normal wear, abuse, shipping damage or failure to use product in accordance with instructions. All warranty service must be performed or authorized by Sound Projections. Any service or modifications performed without authorization from Sound Projections may void this warranty.
- The lead acid rechargeable battery in the FR-3neo model is warranted for a period of 2 years.
- Wireless microphone and CD/MP3 player options are warranted for a period of two years.
- Prior to returning your system for repair and/or warranty service, please contact our customer service department at the address below for a Return Authorization (RA) number.

# User Guide Freedom FR-3neo

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560-23 Rev A, FR-3neo, 07/07



# Welcome

Congratulations on purchasing a portable sound system from Sound Projections. Our products combine superior design with quality components and rugged construction. We're proud of the products we manufacture, and appreciate the confidence you've shown by choosing us.

Please take a few of minutes to read this user guide. Our products incorporate many unique features, and your knowledge of them will enhance the performance of your system.

John Munroe, President  
and the entire staff at Sound Projections

# Unpacking

## System inspection and inventory.

Check the unit carefully for damage which may have occurred during transit, and contact the freight carrier immediately should you find damage.

## Save the shipping carton and packing materials.

The shipping box was designed to ship your unit safely.

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# Specifications for FR-3neo.

Rated power output.....	100 watts
Max SPL .....	123 dB 'loud' mode
.....	115 dB 'normal' mode
Frequency response .....	70 Hz - 15 kHz
Wireless system (optional).....	Shure 10 channel UHF
Battery life .....	4-8 hours typical
Power requirements .....	110/240 VAC - 50/60 Hz, 120 watts max
Dimensions (HWD) .....	23 x 15 x 13"
Weight .....	35 pounds (37lbs with OPT-HB1)
Inputs .....	(2) mic level, balanced, XLR
.....	(1) line level, 1/4" phone
.....	(1) tape/CD level, dual RCA
Outputs.....	(1) line level, 1/4" phone
.....	(1) tape/CD level, dual RCA
.....	(1) speaker output

Specifications and models subject to change without notice

# Important safeguards



**CAUTION:** To reduce the risk of electric shock, do not remove the cover. No user-serviceable parts inside. Refer servicing to qualified personnel.

**ATTENTION:** Pour éviter les risques de choc électrique, ne pas enlever le couvercle. Aucun entretien de pièces intérieures par l'utilisateur. Confier l'entretien au personnel qualifié.

**WARNING:** To prevent fire or electric shock, do not expose this equipment to rain or moisture.

**AVIS:** Pour éviter les risques d'incendie ou d'électrocution, n'exposez pas cet article à la pluie ou à l'humidité.

## Explanation of graphical symbols.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to humans.



The exclamation point, within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## Explication des symboles graphiques.



Le symbole éclair avec point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de "voltage dangereux" non isolé d'ampleur suffisante pour constituer un risque d'électrocution.



Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter les utilisateurs de la présence d'instructions importantes pour la fonctionnement et l'entretien (service) dans le livret d'instruction accompagnant l'appareil.

# Getting started.

Whether you're a first-time user or an experienced presentation professional, the Freedom FR-3neo was designed with you in mind. Easy to use and loaded with features, you'll need only a few minutes to set up and begin operation. This user guide is full of valuable information — please read it!

## !! Charge the battery!

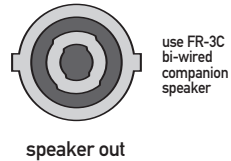
The FR-3neo is shipped with the battery fully charged. If stored for more than two weeks before use, plug it in to top off the battery. See “Charging the battery” on page 5.

## 1. Set up the sound system in front of your audience.

Proper set-up is important. For best sound distribution, put the unit on a speaker stand or table so the sound projects over the audience.

## Connecting an FR-3C Companion Speaker.

For expanded crowd coverage, connect unpowered companion speaker FR-3C to the speaker out jack on the panel of the Freedom.

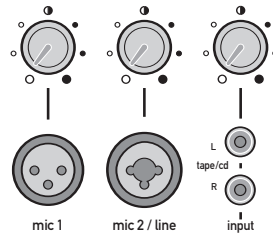


Note: The speaker output is designed specifically for use with the Freedom FR-3C companion speaker and SC55-4W or SC100-4W cable — DO NOT use other type external speakers or damage may result!

## 2. Plug a microphone or audio source into an input jack.

Connect a microphone, tape player or other source to the matching input jack; turn down the corresponding volume knob before turning on the FR-3neo. (See “Choosing an Input” on pages 6-7 for more information on input selection.)

If using the optional wireless microphone system, use the corresponding knob to control the volume.



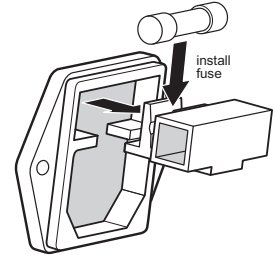
Note: See separate instructions for operation of the CD/MP3 player.

# Replacing the fuse.



**Warning!** Replace fuse with same type and rating as indicated on panel.

1. Remove power cord plug from panel mounted AC receptacle
2. Pry fuse carrier away from receptacle with small screwdriver
3. Remove fuse to be replaced.
4. Install new fuse
5. Insert fuse carrier with new fuse back into receptacle
6. Plug power cord back into AC receptacle



# Using talkover.

Press the red button to use the “talkover” feature, which automatically lowers the volume of all other inputs (including optional CD) when speaking on the microphone.

## When to use talkover.

Use talkover when making voice announcements over music or other program material being played through the sound system (without having to manually adjust the other volume controls). When you stop speaking into the microphone, the volume on other inputs smoothly returns to normal in 3 seconds.

**Note:** The talkover feature is assigned to optional wireless mic 1 if installed; otherwise, it is assigned to the mic 1 XLR input.)



talkover

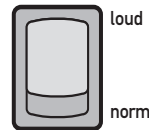
# Setting the tone controls.

Use the treble and bass controls to adjust for best sound quality and clarity. The top-center mark indicates a ‘flat’ response.

**For outdoor / voice applications:**  
Set the voice switch to “loud” for outdoor and other applications where powerful voice projection is needed.



treble



voice

Turn the bass control to the 9 o’clock position for maximum voice clarity (reducing the bass level will also increase battery life).



bass

**For indoor / music playback:**

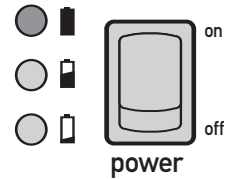
Set the tone controls to the flat (12 o’clock) position, then adjust for desired sound quality (be sure the voice switch is in the “normal” position).

Set the voice switch to the “normal” position when playing music and for most indoor applications.

# CD/MP3 player operation.

See separate instructions for operation and features of the CD/MP3 player.

3. Turn the power switch ON (plug in power cord for AC operation). Observe LED indicators to confirm battery level and power.



**Battery Power:** The green light indicates the battery is at or near full charge and ready to use. The yellow light means 30-60% usage remains, and red means less than 30% remains and that the battery should be charged before use (see “Charging the battery.” )

**AC Power:** When plugged into an AC power outlet, the green LED will stay on constantly as the system is being powered from the AC line (not the battery). Occasionally, when playing loudly, the LED’s may flicker between green and yellow - this is normal.

4. Adjust the volume level and sound quality.

Increase the volume of the input being used to desired level (be sure the microphone or input source is turned on!) Adjust base and treble controls and set voice switch as necessary (see page 12 for more details).

# Charging the battery.

- !! For maximum operating time, charge the battery after EVERY use.

The performance of the built-in battery will be greatly improved if the system is charged completely after each use — storing the unit in a partially-discharged condition will reduce the service life of the battery. (The Freedom may be left plugged into an AC outlet during storage for optimum results.)

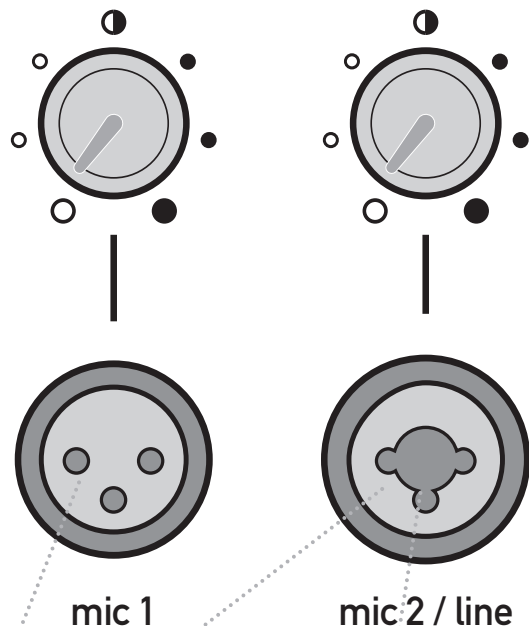
## Charging the battery.

Turn the power switch “off”, then plug the cord into a standard AC outlet to charge the Freedom battery. The unit automatically begins charging, indicated by the yellow “charging” LED.

When the green “full” LED lights steady, the battery is 90% charged and may be used immediately or left plugged in another 1-2 hours to top-off the battery before use or storage.



# Choosing an input.



Plug a microphone with an XLR connector into mic input one or two. The knob above the jack controls the volume level.

The mic inputs are balanced and low impedance, and supply phantom power (**10 volts**) for condenser type microphones.

When using long mic cables, use a balanced microphone to help prevent hum and interference.

Plug any line-level source with a 1/4" phone plug (tape player, music instrument, etc) into the line input. The knob above the jack controls the volume level.

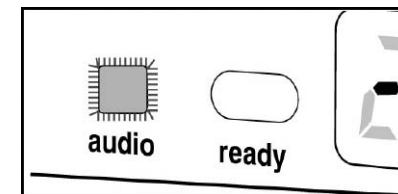
The line input is an unbalanced line level input.

Use shielded cable to avoid hum or interference.

To daisy-chain two sound systems together for greater crowd coverage, connect the line output from one system into the line input of the other.

## Testing the audio.

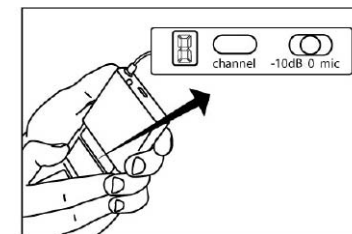
- Speak into the microphone. The audio LED on the wireless receiver should flicker green or amber.
- !! If the audio LED flickers red, adjust the gain (see below).



## Accessing and setting the gain switch.

Multiple gain settings are available on the body-pack transmitter.

- **mic**: Use for most (low sensitivity) headband or lapel microphones.
- **0dB**: Use for (high sensitivity) headband microphones and instruments.
- **-10dB**: Use for high-output instruments and line-level signals.



## Locking and unlocking transmitter controls.

The transmitter (handheld and body-pack) has a locking feature which prevents accidental muting during performance.

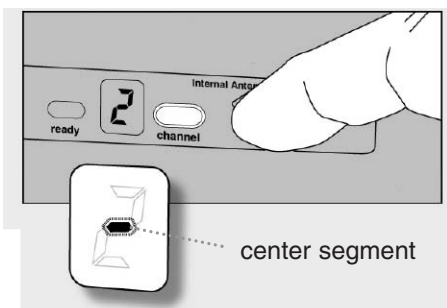
- To lock controls: Turn transmitter off. Remove Battery Cover. Press and hold Channel Button. Press and release Power/Mute button.  
Power/Mute LED will flash red and green.
- To unlock controls: Press and hold Power/Mute button down until Power/Mute LED flashes red and green.

# Changing wireless channels.

## Setting the receiver channel.

1. Turn off the transmitter.
2. Press and hold the channel button on the receiver until the display starts flashing.
3. While the display is flashing, press the channel button to select channels 0-9.

When the number stops flashing, the channel is active.



- !! (The center segment also acts as an interference indicator. When interference is detected, the center segment will appear different from the other segments while cycling through channels. A flashing center segment for channels 0, 1, and 7 and a solid center segment for all other channels will appear when interference is detected by the receiver.)

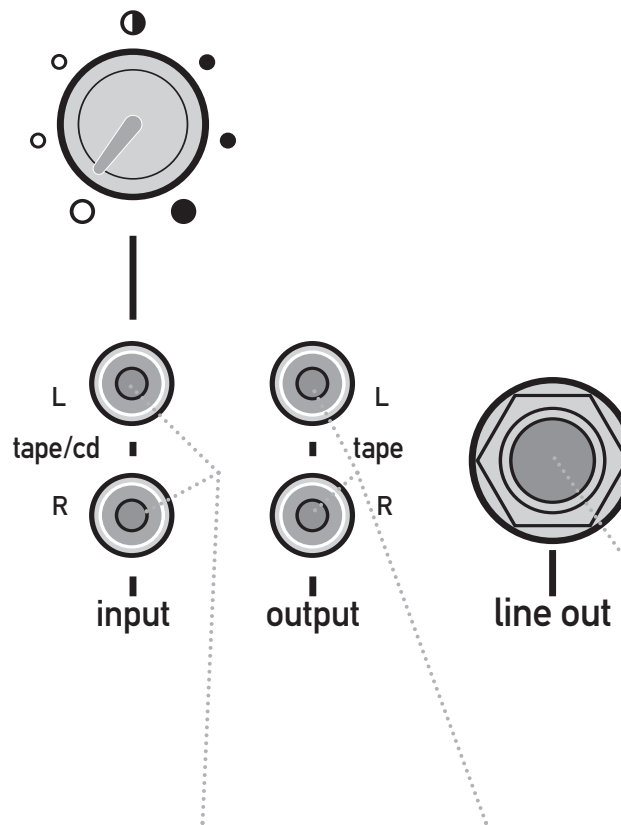
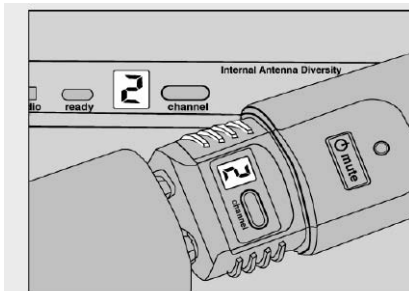
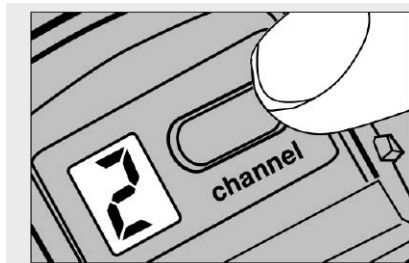
## Setting the transmitter channel.

1. Open battery compartment of wireless transmitter and locate the channel button.
2. Press and hold the channel button on the transmitter until the display starts flashing.
3. While the display is flashing, press again to select channels 0-9.

When the number stops flashing, the channel is active.

Receiver and transmitter channels should match.

- !! **Note:** On systems with two wireless receivers, each must operate on a different channel!



Plug the outputs from a tape player or external CD player with RCA jacks into the tape/cd input. The knob above the jacks controls the volume level.

The tape/cd input is a line level input.

This is a summing input, meaning the left and right channels will combine for a mono input signal.

Connect the RCA outputs to a tape player's input to record the sound system.

The tape output is a line-level, summed and composite signal of the sound system inputs.

Connect line output to the line input of another Freedom to daisy-chain systems together.

The line output is an unbalanced, line-level and composite signal of the sound system inputs.

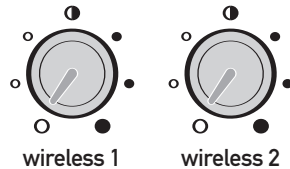
# Wireless system operation.

The Freedom FR-3neo is available with single or dual built-in Shure wireless receivers. The instructions on the following pages describe how to set-up and operate the receiver units and wireless transmitters.

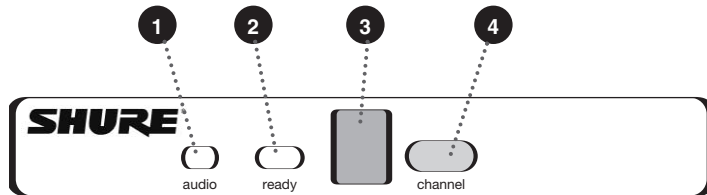


## Operating the optional wireless mic system.

The built-in wireless receiver(s) turn on automatically when the Freedom is turned “on.” Note the location of the wireless mic volume controls on the Freedom’s rear panel. (There are no exterior antennas; they are built-in to the receiver.)



## Features and controls of the built-in wireless receiver.

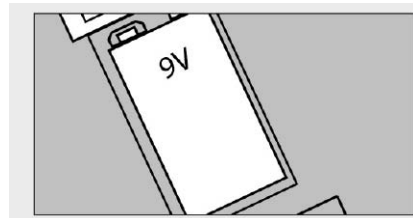


- 1 audio LED:** Indicates strength of incoming audio signal: green for normal, amber for strong, red for peak.
- 2 ready LED:** Green light indicates wireless system is receiving signal.
- 3 Channel number readout:** See “Setting the receiver channel” on page 10.
- 4 channel button:** See “Setting the receiver channel” on page 10.

## Setting-up the wireless transmitter and receiver.

- 1. Install battery:** If you haven't installed the battery, do it now and leave the cover off.

Expected life for a 9 volt alkaline battery is approximately 8 hours. When the Power/Mute LED on the transmitter glows red, the battery should be replaced immediately.



- 2. On/Mute/Off Button:**  
The wireless transmitter (microphone or belt-pack) uses a single button for “on”, “mute” and “off”.

Press the button for 1 second for “on” (LED green), push again for “mute” (LED orange), push again to return to “on.”

Press and hold button for 2 seconds to turn off (LED off).

- 3. Transmitter Channel Display:**  
When transmitter is “on”, momentarily pressing the channel button will illuminate the channel display. (see page 10 for channel setting procedure).

Confirm that the transmitter and the receiver display the same channel.

The ready LED on the receiver should be illuminated.

- 4. Replace battery cover.**

