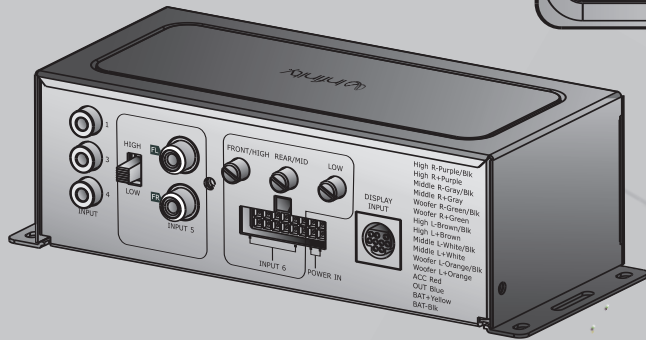
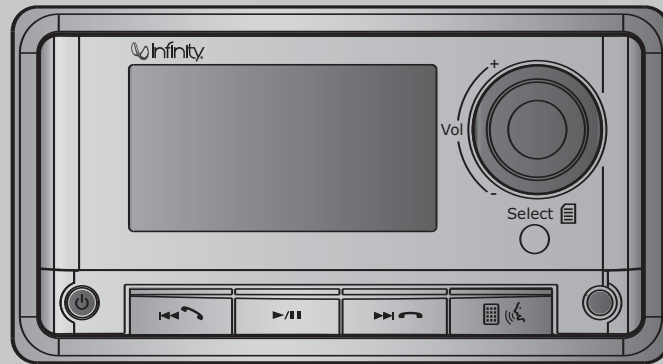


IMS Input Management System

instructions



kappa series

INTRODUCTION

THANK YOU for purchasing the Infinity® IMS Input Management System. So that we may better serve you should your new product require service, please retain your original purchase receipt and read the enclosed warranty registration card.

BOX CONTENTS

Your IMS box should contain all the items shown in *Figure 1*:

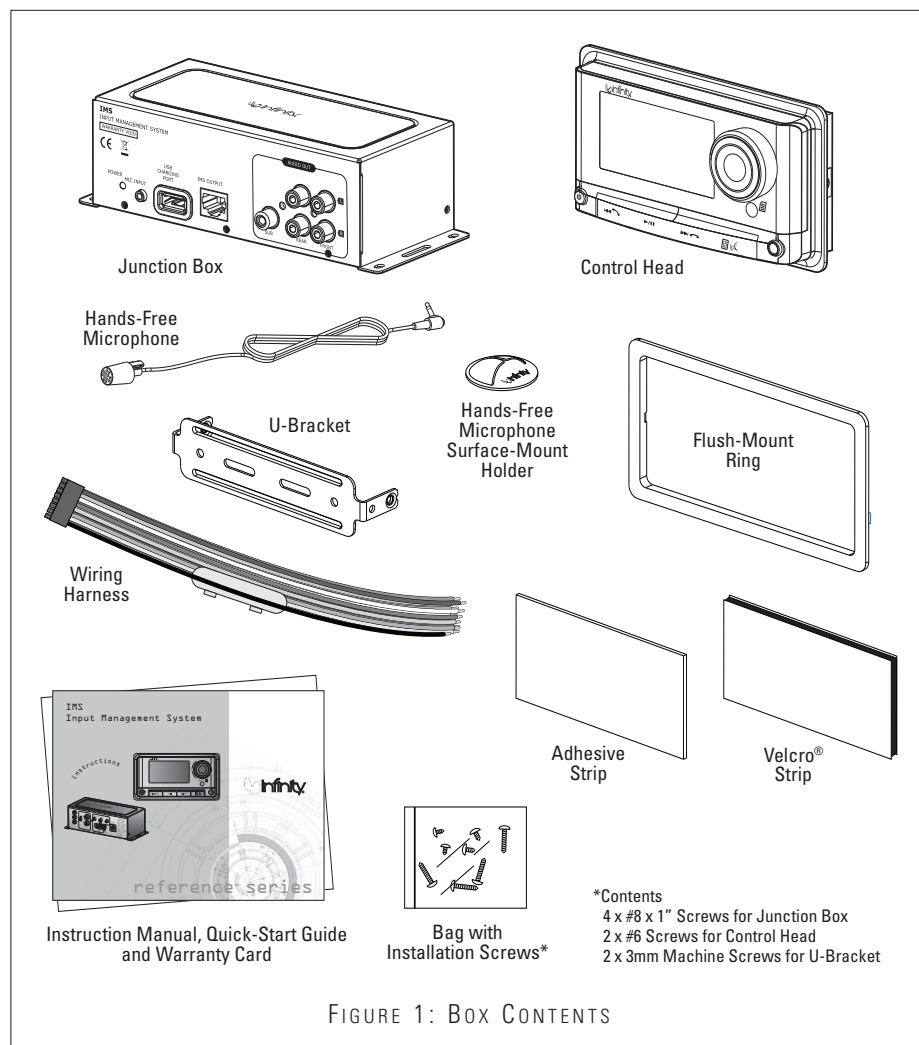


FIGURE 1: BOX CONTENTS

WARNING!

Playing loud music in an automobile can hinder your ability to hear traffic and permanently damage your hearing. We recommend listening at low or moderate levels while driving your car. Infinity accepts no responsibility for hearing loss, bodily injury or property damage resulting from the use or misuse of this product.

INSTALLATION

IMPORTANT

To get the most out of your IMS' features, we strongly recommend that installation be entrusted to a qualified professional. Although these instructions explain how to install, connect and set-up the IMS, they cannot show all of the different possible systems that can be assembled using the IMS. Please ask your authorized Infinity car audio dealer about professional installation.

INSTALLATION WARNINGS AND TIPS

- Always use protective eyewear when using tools
- Turn OFF the vehicle's audio system and other electrical devices before beginning installation. disconnect the (-) negative lead from the vehicle's battery.
- Check clearances on both sides of any planned mounting surface *before* drilling any holes or installing any screws. Remember that the screws can extend behind the mounting surface.
- At the installation locations, locate and make a note of all fuel lines, hydraulic brake lines, vacuum lines and electrical wiring. Use extreme caution when cutting or drilling in and around these areas.
- Before drilling or cutting holes, use a utility knife to remove unwanted fabric or vinyl to keep material from snagging in the drill bit.
- To minimize noise, when routing cables, keep input-signal cables away from power cables and speaker wires.
- When making connections, make certain they are secure and properly insulated.
- If the IMS' fuse must be replaced, use only the same type and rating as the original. Do not substitute another kind.

INSTALLING THE CONTROL HEAD

We recommend finding a location for the Control Head first, and then finding a location for the Junction Box that is within the length of the Control Head's integral 4m cable.

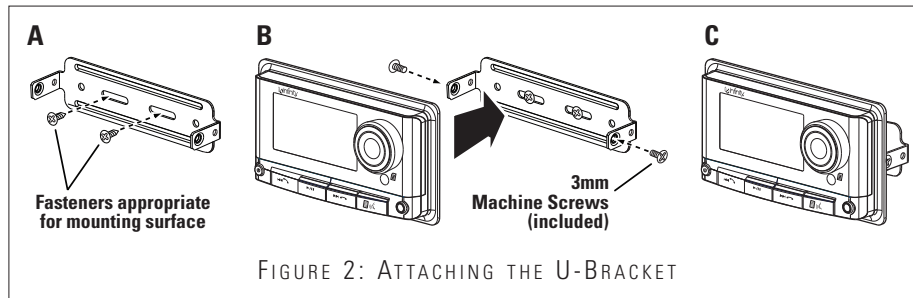
IMPORTANT INSTALLATION WARNINGS:

- **Do not install the Control Head where it may obstruct your view through the windshield, or of your vehicle's indicator displays.**
- **Do not install the Control Head where it may hinder the function of safety devices such as an airbag. Doing so may prevent the airbag from functioning properly in the event of an accident.**
- **Mount the Control Head in a location that is easily accessible.**

The Control Head can be surface-mounted using the included U-Bracket, Velcro® strip, or adhesive strip or it can be flush-mounted using the included Flush-Mount Ring.

Using the U-Bracket

1. Determine the location for the Control Head. Be sure to leave room to route the integral cable.
2. Attach the U-Bracket to the mounting location using fasteners that are appropriate for the mounting surface, as shown in *Figure 2*.
3. Attach the Control Head to the U-Bracket as shown in *Figure 2*.



Using the Velcro Strip

1. Determine the location for the Control Head. Be sure to leave room to route the integral cable.
2. Clean the mounting location with an alcohol swab or similar.
3. Remove the protective strip from the hook side of the Velcro strip and adhere the strip to the mounting location.
4. Remove the protective strip from the loop side of the Velcro strip and adhere the strip to the back of the Control Head.

Using the Adhesive Strip

1. Determine the location for the Control Head. Be sure to leave room to route the integral cable.
- IMPORTANT: Select the mounting location carefully – once the adhesive strip has been adhered to the surface it is not possible to remove it and re-adhere it elsewhere.**
2. Clean the mounting location with an alcohol swab or similar.
 3. Remove the protective strip from one side of the adhesive strip and adhere it to the back of the Control Head.
 4. Remove the remaining protective strip from the adhesive strip and adhere the Control Head to the mounting surface.

INSTALLING THE JUNCTION BOX

The Junction Box should be installed in an out-of-the-way location where you can route the input/output connections from all of the audio system's components.

IMPORTANT: The Junction Box must be mounted within 4m of the Control Head

Use the 4 supplied #6 screws to secure the Junction Box to the mounting surface.

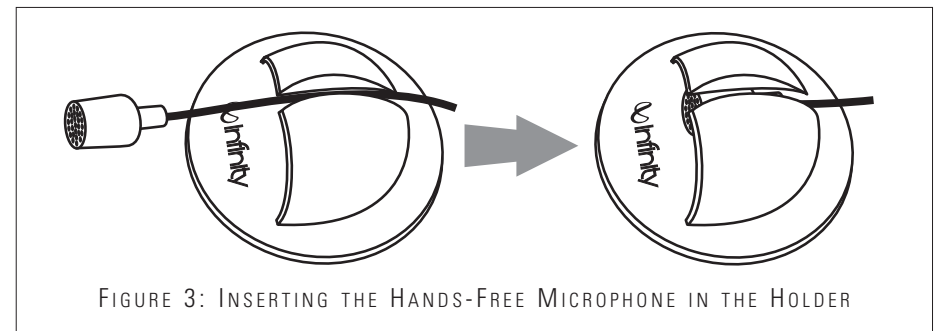
INSTALLING THE HANDS-FREE MICROPHONE

IMPORTANT INSTALLATION WARNINGS:

- Do not install the microphone where it may obstruct your view through the windshield, or of your vehicle's indicator displays.
- Do not install the microphone where it may hinder the function of safety devices such as an airbag. Doing so may prevent the airbag from functioning properly in the event of an accident.

The hands-free microphone's design allows it to work properly from a wide variety of installation locations. Experiment with different locations before permanently attaching the microphone or routing its cable. The microphone has a 'butterfly' clip that lets you attach it to a sun visor or similar location. A surface-mount mic holder is also included (see *Figure 3*). The holder has an adhesive pad on the bottom and is made of a flexible material so you can attach it to a curved surface. To attach the mic holder:

1. Clean the mounting surface with an alcohol swab or similar.
2. Remove the protective cover from the adhesive pad and adhere the mic holder to the mounting surface.
3. Run the mic cable through the slot in the holder and tuck the microphone under the holder's 'hood', as shown in *Figure 3*.



4. Route the cable to the Junction Box and plug it into the Input 2 jack (see *Figure 4*, on page 4).

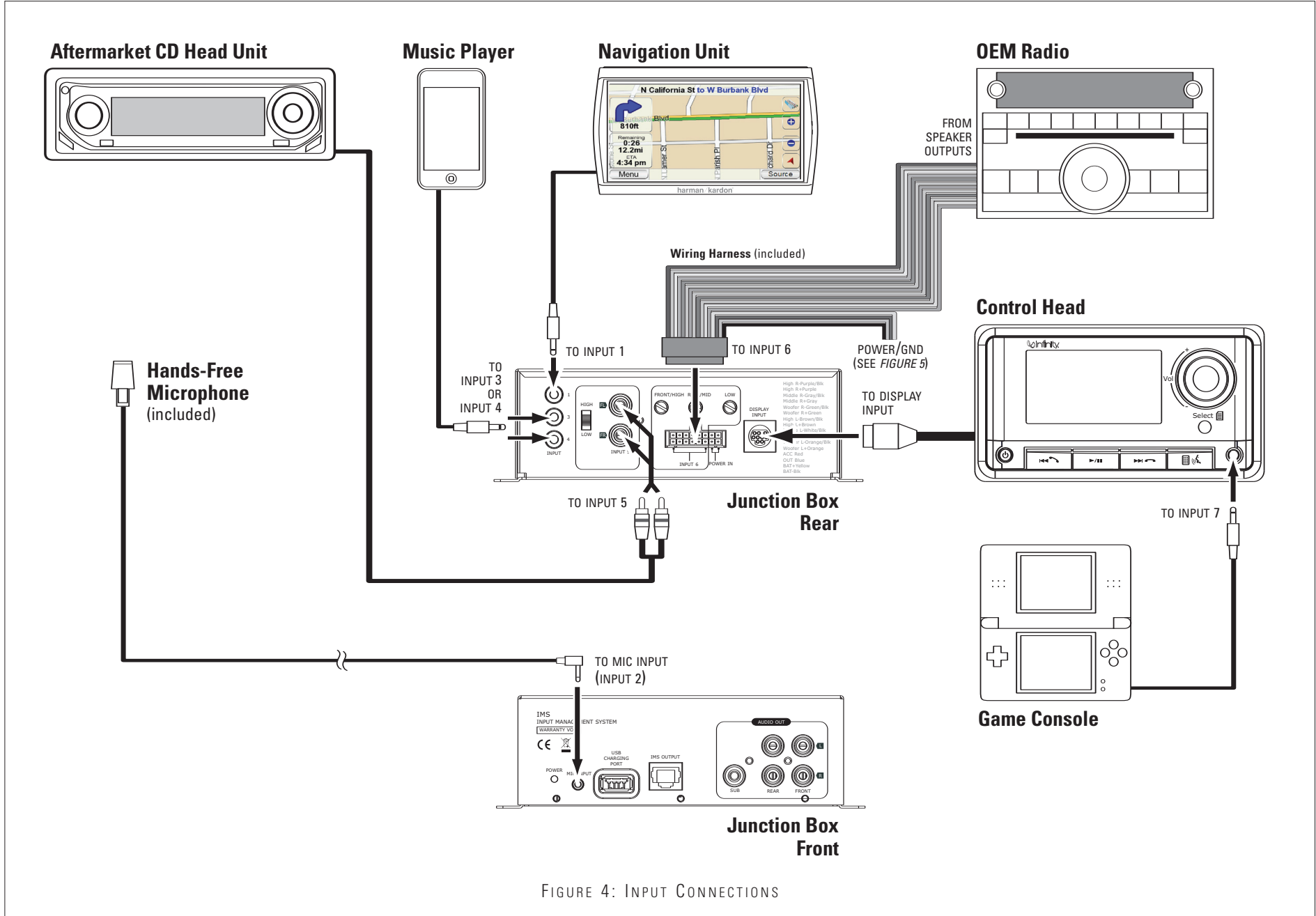


FIGURE 4: INPUT CONNECTIONS

CONNECTIONS

POWER CONNECTIONS

The included wiring harness contains the IMS power connections, as well as the Input 6 OEM radio speaker input connections. See *Input 6*, below for Input 6 connections.)

Wiring harness power connections (see *Figure 5*):

- Yellow = +12V In
- Red = Accessory
- Black = Ground
- Blue = +12V Out (for amp turn-on)

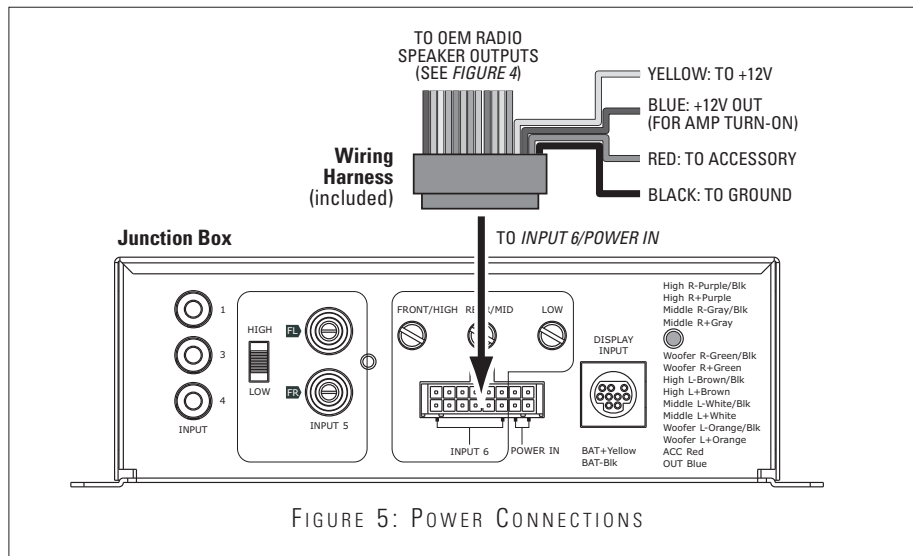


FIGURE 5: POWER CONNECTIONS

AUDIO INPUTS

(see *Figure 4*, on page 4)

INPUT 1: 3.5mm stereo jack. This input has priority over all other inputs, and is intended for the audio (voice command) output of a navigation system. When an audio signal is present at Input 1 the IMS will automatically switch to Input 1, and will return to the previous input when the Input 1 audio signal ceases.

INPUT 2: Bluetooth wireless and 2.5mm stereo jack. This input has priority over all other inputs except Input 1, and is intended for use with a Bluetooth-enabled phone. The included microphone plugs-into the Input 2 connector and enables hands-free performance, as well as voice dialing when used with a VD-capable phone. Input 2 is actually two separate inputs, since it also supports A2DP streaming from a music-enabled Bluetooth-capable phone, or from a portable music player via available dongles.

INPUT 3: 3.5mm stereo jack. For audio devices like portable music players, CD players, etc.

INPUT 4: 3.5mm stereo jack. For audio devices like portable music players, CD players, etc.

INPUT 5: Stereo RCA jack. Intended for use with an aftermarket CD head unit. Input 5 has selectable input sensitivity via a 2-position switch located next to the input connection:

- *High* is high-sensitivity, for use with low-output head units.
- *Lo* is low sensitivity, for use with high-output head units.

INPUT 6: 6-Pair bare wires on included wiring harness. Input 6 is intended for the speaker outputs of the vehicle's OEM radio. Input 6 has left and right Front (High), Rear (Middle) and Woofer connections.

The Input 6 wiring harness color-coding is:

- Front Left: Brown (+) Brown/Black (–)
- Front Right: Purple (+) Purple/Black (–)
- Rear Left: White (+) White/Black (–)
- Rear Right: Gray (+) Gray/Black (–)
- Woofer Left: Orange (+) Orange/Black (–)
- Woofer Right: Green (+) Green/Black (–)

If the OEM radio's speaker outputs are bandwidth-limited (high/midrange/low), connect them as follows:

- Radio high to IMS Front Left & Right
- Radio middle to IMS Rear Left & Right
- Radio low to IMS Woofer Left & Right

The Front/High, Rear/Middle and Woofer/Low input signals are blended to stereo by the IMS. After connecting the OEM radio to Input 6, you must balance these three inputs:

1. Turn the OEM radio ON and tune to a strong radio station.
2. Turn the Front/High blend control clockwise until the Blend LED just barely lights (see *Figure 5*). Then repeat with the Rear/Mid blend control and again with the Low blend control.

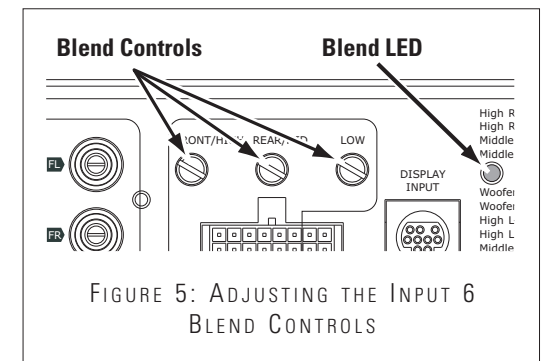


FIGURE 5: ADJUSTING THE INPUT 6 BLEND CONTROLS

INPUT 7: 3.5mm stereo jack. Located on the front of the Control Head, this jack is ideal for temporary connections (game consoles, portable DVD players, etc).

AUDIO OUTPUTS

The IMS has stereo *Front* and *Rear* RCA-type output connectors, and a mono *Sub* RCA-type output connector. All stereo sources appear at both the Front and Rear outputs, which are controlled by the IMS' Balance and Fader controls (see *Audio Adj*, on page 8).

The *Sub* output connector is a pass-through for the Input 6 *Woofer/Low* input signal and does not function for any other IMS input. The level of the *Sub* output is controlled by the IMS' Volume Knob, and is balanced with the Front and Rear outputs by the Sub Level control (see *Sub Level*, on page 8).

Connect the IMS' Front and Rear outputs to the system's front and rear amplifier inputs; connect the IMS' Sub output to the system's subwoofer amplifier input. See *Figure 6*.

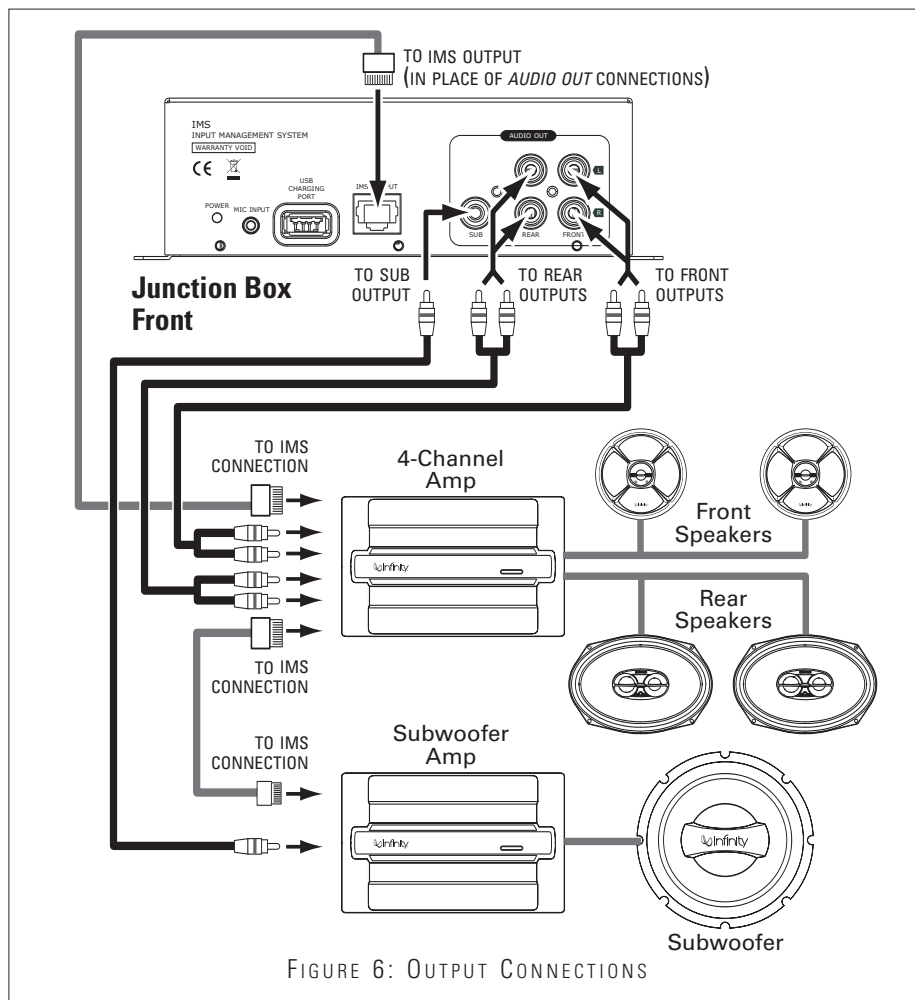


FIGURE 6: OUTPUT CONNECTIONS

IMS OUTPUT

This RJ45 connector duplicates the signal found at the *Audio Out* connections (see above), and can be used in place of the *Audio Out* RCA jacks when connecting the IMS to compatible Infinity Reference Series amplifiers. Connection is made via standard CAT-5 cable with RJ45 plugs. (See *Figure 6*.)

NOTE: WHEN USING THE IMS OUTPUT JACK IT IS NOT NECESSARY TO CONNECT THE +12V OUT WIRING HARNESS WIRE (SEE FIGURE 5, ON PAGE 5), SINCE THE IMS OUTPUT CONNECTION INCLUDES AN AMPLIFIER TURN-ON FUNCTION.

USB CHARGING PORT

A standard USB connector that supplies charging voltage to compatible music players and other components. See *Figure 7*. Use the USB charging cable included with the component.

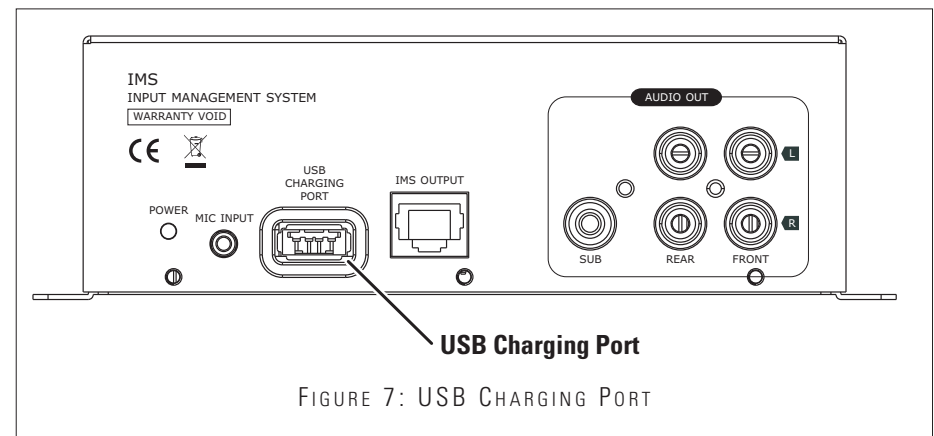


FIGURE 7: USB CHARGING PORT

NOTE: THE USB CHARGING PORT ONLY SUPPLIES A CHARGING VOLTAGE — IT DOES NOT ENABLE ANY AUDIO OR CONTROL FUNCTIONS.

OPERATION

FRONT-PANEL CONTROLS

(see Figure 7)

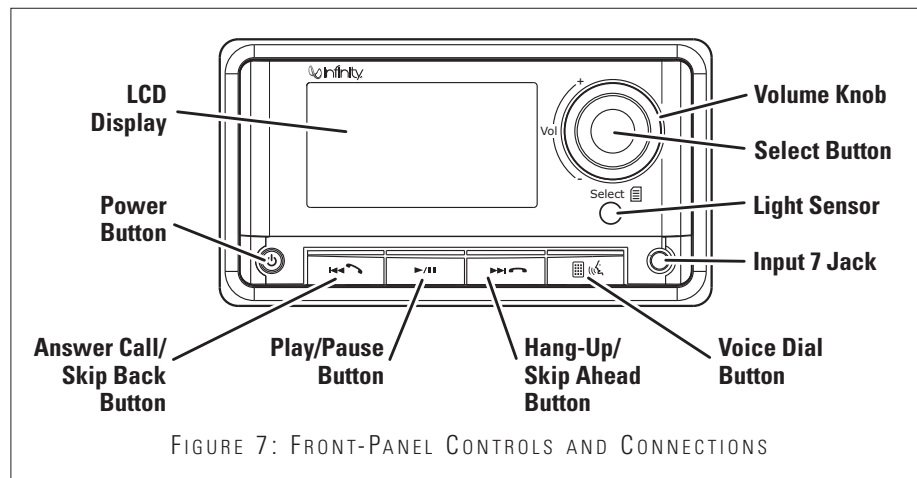


FIGURE 7: FRONT-PANEL CONTROLS AND CONNECTIONS

VOLUME KNOB: Turn to raise and lower the IMS volume, and to highlight and adjust items in menu screens.

NOTE: EACH TIME YOU SELECT A DIFFERENT INPUT THE VOLUME WILL CHANGE TO THE LEVEL SETTING FROM THE PREVIOUS TIME THAT INPUT WAS ACTIVE.

SELECT BUTTON: During normal operation, press to enter the menu system. When menu screens are active, press to select items.

LIGHT SENSOR: The Light Sensor detects the amount of ambient light and automatically sets the LCD Display for day or night viewing. See Figure 8.

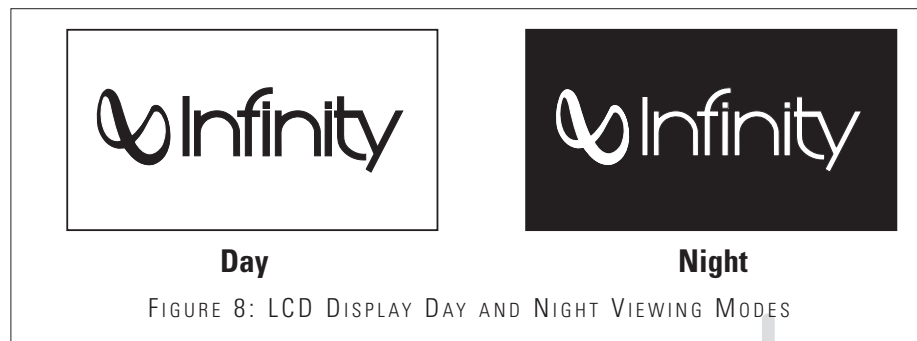


FIGURE 8: LCD DISPLAY DAY AND NIGHT VIEWING MODES

INPUT 7 JACK: 3.5mm stereo jack that is ideal for temporary input connections such as game consoles and portable DVD players. See Figure 4, on page 4.

VOICE DIAL BUTTON: Activates voice-dialing when used with a VD-capable Bluetooth cell phone. See *Using the IMS with a Cellular Phone*, on page 9.

HANG-UP/SKIP AHEAD BUTTON: When making a telephone call on a Bluetooth cell phone paired through Input 2 (see *Using With A Cellular Phone*, on page 9), pressing the Hang-Up/Skip Ahead button disconnects the phone call.

When using the IMS to control a paired Bluetooth music player or cell phone's music play functions, pressing the Hang-Up/Skip Ahead button skips ahead to the next music track.

PLAY/PAUSE BUTTON: When using the IMS to control a Bluetooth music player or cell phone's music play functions through Input 2, pressing the Play/Pause button pauses the currently-playing track. Pressing the Play/Pause button again resumes play.

ANSWER CALL/SKIP BACK BUTTON: When using a Bluetooth cell phone paired through Input 2 (see *Using With A Cellular Phone*, on page 9), pressing the Answer Call/Skip Back Button will answer an incoming phone call.

When using the IMS to control a paired Bluetooth music player or cell phone's music play functions, pressing the Hang-Up/Skip Ahead button skips back to the beginning of the current music track. Pressing the button multiple times skips to previous music tracks.

POWER BUTTON: Turns the IMS ON and OFF.

LCD DISPLAY: Provides information about the IMS' operating status, and displays adjustment menus. During normal operation, the LCD display will look as shown in Figure 9.

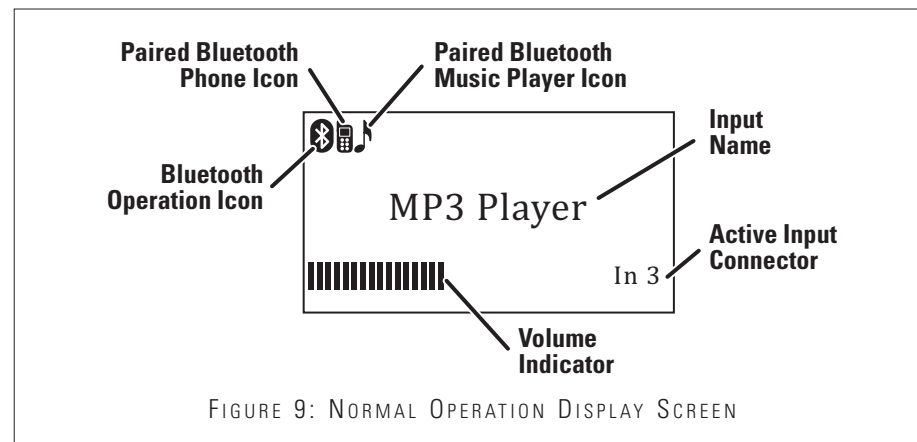


FIGURE 9: NORMAL OPERATION DISPLAY SCREEN

MENUS

During normal operation, pressing the Select button activates the main menu screen (see *Figure 10*). Rotate the Volume Knob to highlight one of the five items and press the Select button to select it.

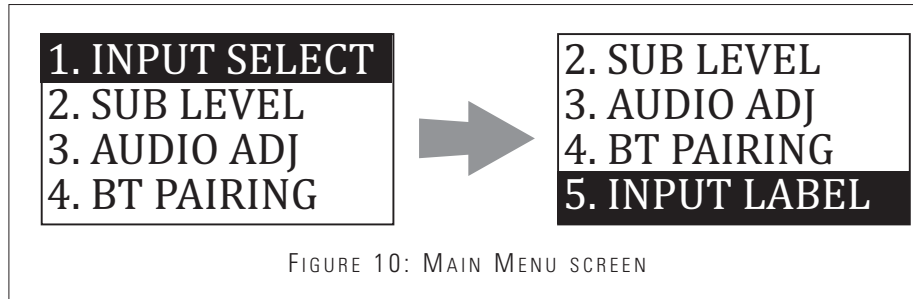


FIGURE 10: MAIN MENU SCREEN

NOTE: THE IMS WILL RETURN TO THE NORMAL OPERATION SCREEN IF YOU DON'T MAKE A MENU SELECTION WITHIN 3 SECONDS.

INPUT SELECT: Turn the Volume Knob to scroll-through the available inputs. As you scroll, the display will show each input's name and its connection number will flash (see *Figure 11*, left). When the desired input is shown, press the Select button and the IMS will change to that input.

NOTE: EACH INPUT RETAINS THE VOLUME SETTING FROM THE PREVIOUS TIME IT WAS THE ACTIVE INPUT.

IMPORTANT: When an audio signal or phone call is received at Input 1 or Input 2 the IMS will automatically switch to that input for as long as the audio signal or phone call lasts, then will switch back to the previously-active input. If Input 2 is the active input when audio is received at Input 1 the IMS will mix the audio from both Input 1 and Input 2 so you can continue with a cellphone call when a navigation prompt occurs.

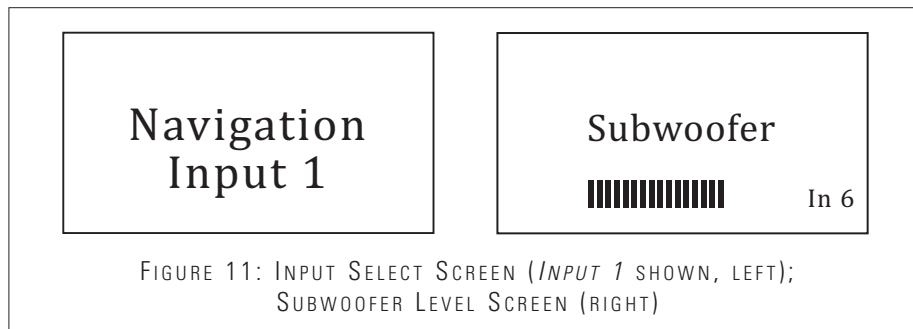


FIGURE 11: INPUT SELECT SCREEN (INPUT 1 SHOWN, LEFT); SUBWOOFER LEVEL SCREEN (RIGHT)

SUB LEVEL: Lets you balance the subwoofer volume with the rest of the sound (see *Figure 11*, right). The Sub Level control only functions with an OEM radio woofer output that is connected to Input 6. For all other inputs the Sub Level control does not function.

AUDIO ADJ: Lets you adjust the following audio parameters: bass, treble, balance, and fader (see *Figure 12*). Press the Select button to cycle-through the items and turn the Volume Knob to make adjustments.

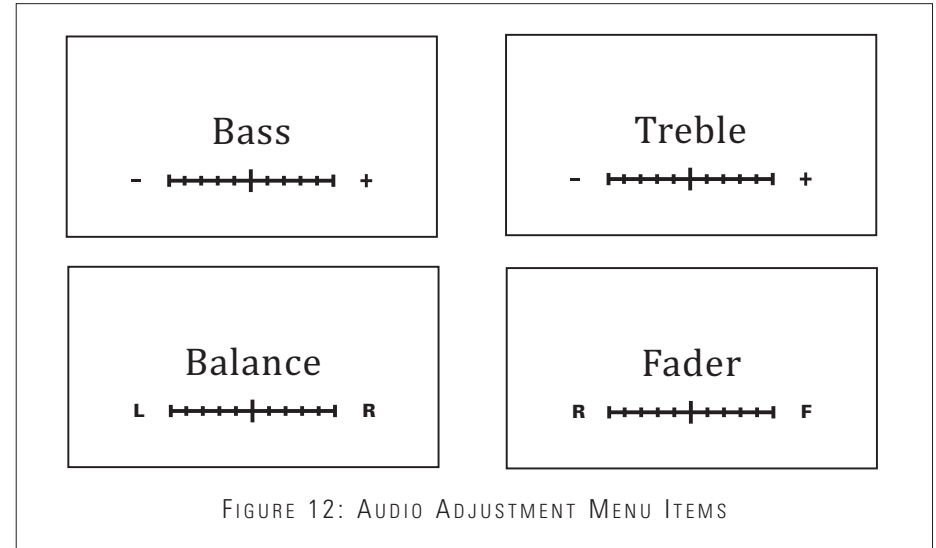


FIGURE 12: AUDIO ADJUSTMENT MENU ITEMS

BT PAIRING: Enables pairing for operation with a Bluetooth-capable cellphone through Input 2. For details see *Bluetooth Pairing*, on page 9.

INPUT LABEL: Lets you assign a name to each input connection (see *Figure 13*). The following input names are available: Radio, Navigation, DVD, Game, MP3 Player, Phone/BT Audio, XM Radio, Sirius, iPod, Radar, Input 1, Input 2, Input 3, Input 4, Input 5, Input 6, Input 7, Hide. You can assign the same name to as many inputs as you wish.

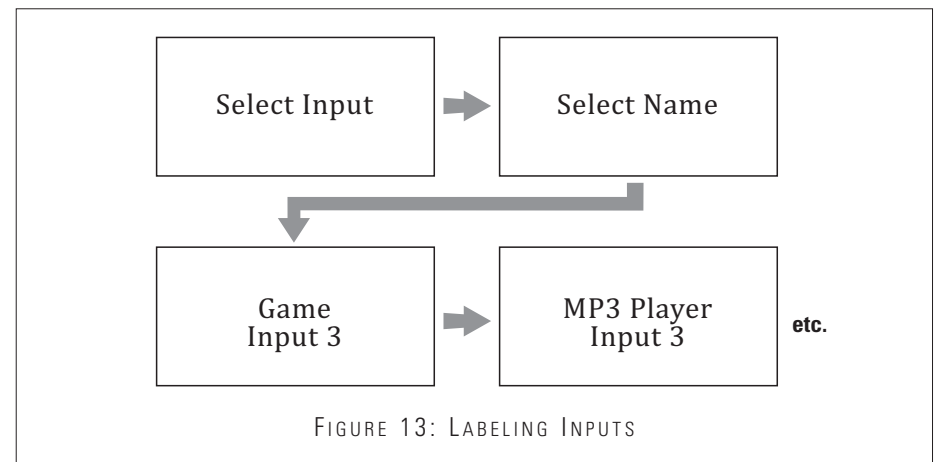


FIGURE 13: LABELING INPUTS

HIDE: Naming an input *Hide* removes it from the Input Select rotation (so you don't have to cycle-through unused inputs). To return the input to the rotation use the Input Label function to assign a different name to it.

RADIO: Whenever the IMS is turned OFF via the Accessory power wire (such as when the vehicle's ignition is switched off while the IMS is ON), when the IMS is turned back ON it will automatically default to whichever input is labeled *Radio*.

USING THE IMS WITH A CELLULAR PHONE

Since different Bluetooth-enabled cellphones operate differently, please read your cellphone's instructions manual before using your cellphone with the IMS.

Bluetooth Pairing

The exact connection procedure may vary somewhat among different Bluetooth-enabled phones. When attempting to pair the IMS to a cellphone for the first time, be sure to follow any screen prompts on Bluetooth-enabled phone.

1. Put the cellphone in pairing mode. Note: The Bluetooth pairing code for the IMS is 0-0-0-0.
2. Press the Select button on the IMS. The main menu will appear. (See *Figure 10*, on page 8.)
3. Use the Volume Knob to highlight *BT Pairing* and press the Select button. The IMS will enter the pairing mode. The display will read *IMS Pairing*, and the word *Pairing* will flash. see *Figure 14*.

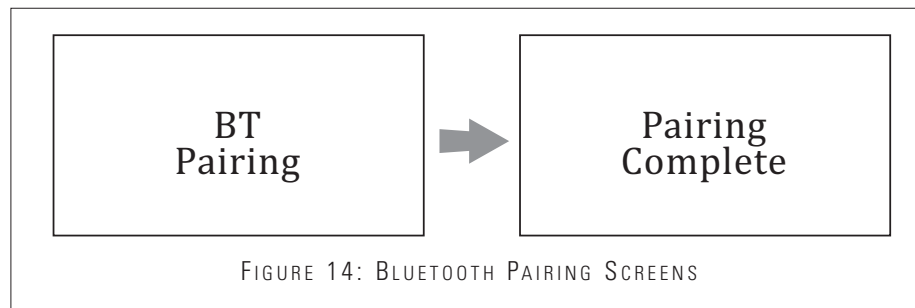


FIGURE 14: BLUETOOTH PAIRING SCREENS

4. Once pairing has been completed the screen will change to Pairing Complete (see *Figure 14*). The *Bluetooth Operation* and *Paired Bluetooth Phone* icons will appear on the normal operation screen (see *Figure 9*, on page 7).

Placing Voice-Dialed Calls

1. Press the Press-To-Talk button (see *Figure 7*, on page 7).
2. The IMS will automatically switch to Input 2 and you will hear your phone's voice-dial prompts through the audio system.
3. Follow the prompts to complete dialing the call.
4. You will hear the other party's voice through the audio system's speakers and the IMS' Hands-Free Microphone will pick-up your voice.
5. When the call is completed, press the Hang-Up/Skip Ahead button (see *Figure 7*, on page 7).

Placing Numerically-Dialed Calls

1. Switch the IMS to Input 2.
2. Dial the call directly through your cellphone.
3. You will hear the other party's voice through the audio system's speakers and the IMS' Hands-Free Microphone will pick-up your voice.
4. When the call is completed, press the Hang-Up/Skip Ahead button (see *Figure 7*, on page 7).

Answering Incoming Calls

1. When you receive a call the IMS will automatically switch to Input 2 and play a ring tone through the audio system's speakers.
2. Press the Answer Call/Skip Back button (see *Figure 7*, on page 7).
3. You will hear the other party's voice through the audio system's speakers and the IMS' Hands-Free Microphone will pick-up your voice.
4. When the call is completed, press the Hang-Up/Skip Ahead button (see *Figure 7*, on page 7).

Controlling Cellphone Music Play Functions

Since different cellphones operate differently, please read your cellphone's instruction manual before using your cellphone's music play features with the IMS.

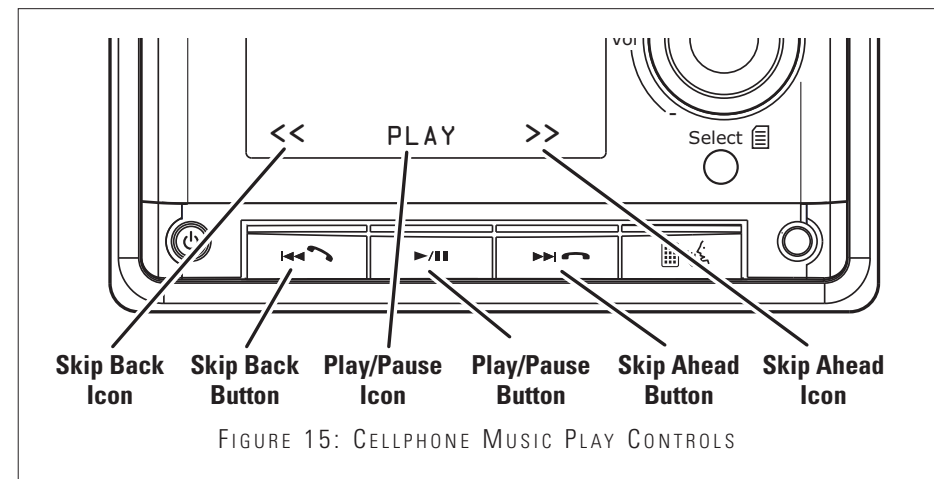


FIGURE 15: CELLPHONE MUSIC PLAY CONTROLS

1. Place your cellphone in its music play mode.
2. Press the IMS' Play/Pause button to play and pause the currently-playing song. An icon will appear on the LCD display (see *Figure 15*).
3. Press the IMS' Skip Ahead button to skip to the next song in the queue. An icon will appear on the LCD display (see *Figure 15*).
4. Press the IMS' Skip Back button once to skip to the beginning of the currently-playing song. Press the Skip Back button multiple times to skip to previous songs in the queue. An icon will appear on the LCD display (see *Figure 15*).

Notes About Using a Cellphone with the IMS

- If you turn the IMS OFF during a phone call the call's audio will mute for 3 or 4 seconds before resuming through the phone. The call remains connected during this time.
- If you break pairing while the IMS remains ON (such as walking away while talking on the phone), after the phone is back within pairing range the IMS may take up to 1 minute to re-pair with it. During this time the IMS will automatically switch to Input 2, but you can manually change to a different input.
- Depending on your particular cellphone, if you're listening to the cellphone's music mode through Input 2 when an incoming call is received, the music will mute, but the phone call ringtone may not sound through the audio system's speakers.
- When operating a music player through Input 2 using an A2DP dongle the *Play/Pause* icon on the IMS display may get out of sync if you press the music player's Play/Pause button.
- Input 2 will only work with one music player at a time. If you have a paired phone with music play capability and a music player with an A2DP dongle, the phone will take priority over the music player with the dongle.
- If you want to change from a phone that is currently paired with the IMS to another phone that was *previously* paired with the IMS:
 - a) Turn the currently-paired phone's Bluetooth pairing OFF.
 - b) Turn the IMS OFF.
 - c) Put the previously-paired phone into its Bluetooth pairing mode.
 - d) Turn the IMS back ON.

TROUBLESHOOTING

SPECIFICATIONS

Inputs	#1 Navigation	#2 Bluetooth	#3	#4	#5	#6			#7	
Input Impedance	20k Balanced	N/A	20k Balanced	20k Balanced	20k Balanced	20k Balanced			20k Balanced	
Gain Trim	N/A	N/A	N/A	N/A	N/A	High / Low Swt	Var A	Var B	Var C	N/A
Peak Indicator (red LED)	N/A	N/A	N/A	N/A	N/A	2 Volts			N/A	
Specs apply to both RCA and RJ45 output										
Maximum Input Signal										
V/C at Max Output										
<1%THD+N	1Volts	N/A	1 Volts	1 Volts	2 Volts	4 Volts	13 Volts	13 Volts	13 Volts	1 Volts
Signal to Noise										
Adjust V/C for 100mV output	70	?	70	70	?	?	?	?	?	70
Cross Talk										
Adjust V/C for 100mV output	70	?	70	70	70	70	70	70	70	70
Navigation #1 Spec										
Effect	N/A	Blend	Mute	Mute	Mute	Mute	Mute	Mute	Mute	Mute
Attack Voltage	100mV									
Attack Time	1uSec									
Release Time	1 Second									
Phone #2 Spec										
Incoming Call	Blend (w/ Ring Tone)	Mute BT Music (Ring Tone)	Mute (Ring Tone)	Mute (Ring Tone)	Mute (Ring Tone)	Mute (Ring Tone)	Mute (Ring Tone)	Mute (Ring Tone)	Mute (Ring Tone)	Mute (Ring Tone)
Out Going Call	Blend	Mute BT Music	Mute	Mute	Mute	Mute	Mute	Mute	Mute	Mute
Power										
	Off	Standby (ACC high IMS off)	On (ACC high IMS on)	Operating Voltages						
Battery (yellow)	<100uA	<100uA	<100uA	10 to 16						
Accessory (red)	0	<110mA	<1A	11 to 16						
Remote Output (blue)	0	0	0.3 A	12 to 14						
Output #1										
	Connector	Impedance	Max Output							
Front	RCA	560 ohm	8 Volts							
	(1) stereo pair	single ended								
Rear	RCA	561 ohm	8 Volts							
	(1) stereo pair	single ended								
Sub	RCA	562 ohm	8 Volts							
	(1) Single	single ended								
Output #2										
IMS (RJ45)	Pin	Function	Output							
	Pin 1	Audio Ground	Secondary Ground							
	Pin 2	Protect input	Ground to display "Protect"							
	Pin 3	Remote output	0.3 A							
	Pin 4	Sub Output	8 Volts							
	Pin 5	Lt Rear Output	8 Volts							
	Pin 6	Rt Rear Output	8 Volts							
	Pin 7	Lt Front Output	8 Volts							
	Pin 8	Rt Front Output	8 Volts							



A valid serial number is required for warranty coverage.
Features, specifications and appearance are subject to change without notice.
This product is designed for mobile applications and is not intended for connection to the mains.
Harman Consumer Group, Inc. • 2 route de Tours, 72500 Chateau du Loir, France • www.infinitysystems.com
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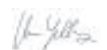
Declaration of Conformity

CE

We, Harman Consumer Group, Inc.
2, route de Tours
72500 Château du Loir
France

declare in own responsibility that the products described in this owner's manual
are in compliance with technical standards:

EN 61000-6-3:2001
EN 61000-6-1:2001


Klaus Lebherz
Harman Consumer Group, Inc.
Château du Loir, France 3/08