



Blue Sky International

70 Sea Lane

Farmingdale, NY 11735

www.abluesky.com

MediaDesk MKII 2.1 and 5.1 System



Owner's Manual

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Safety Instructions



WARNING: To reduce the risk of fire or electrical shock, do not expose this equipment to rain or moisture. Do not remove cover. No user serviceable parts inside. Refer servicing to qualified personnel.

1. **READ INSTRUCTIONS** - Read all safety and operating instructions before operating this product.
2. **RETAIN INSTRUCTIONS** - Retain these safety and operating instructions for future reference.
3. **HEED WARNINGS** - Follow all warnings on this product and in the operating instructions.
4. **FOLLOW INSTRUCTIONS** - Follow all operating and use instructions.
5. **ATTACHMENTS** - Do not use attachments not recommended by the product manufacturer as they may cause hazards.
6. **WATER AND MOISTURE** - Do not use this product near water - for example, near a bathtub, washbowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.
7. **ACCESSORIES** - Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with accessories recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer.
8. **POWER SOURCE** - This product should be operated only from the type of power source indicated on the marking label on the back of the product. It is **IMPORTANT** to confirm that the voltage selector switch on the back of the subwoofer is set to the proper voltage setting. If you are unsure of the type of power that is supplied to your home, consult your product dealer or local power company.
9. **LIGHTNING** - For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power-line surges.
10. **OVERLOADING** - Do not overload wall outlets or extension cords as this can result in a risk of fire or electric shock.
11. **LIQUID ENTRY** - Never spill any liquid of any kind on the product.
12. **SERVICING** - Do not attempt to service this product yourself. Opening or removing covers, including any over bottom or side speaker drivers, may expose you to dangerous voltage or other hazards. Refer all service to qualified service personnel.
13. **DAMAGE REQUIRING SERVICE** - Unplug this product from the wall outlet and refer servicing to qualified personnel under the following conditions:
 - a. When the power-supply cord or plug is damaged.
 - b. If liquid has been spilled, or objects have fallen into this product.
 - c. If the product does not operate normally by following the operating instructions. Adjust only controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
 - d. If the product has been dropped or damaged in any way.
 - e. When the product exhibits a distinct change in performance - this indicates a need for service.
14. **REPLACEMENT PARTS** - When replacement parts are required be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in risk of fire, electric shock, or other hazard.
15. **SAFETY CHECK** - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
16. **HEAT** - This product should be situated away from heat sources such as radiators, heat registers, stoves, or other products that produce heat.

1. MediaDesk MKII Introduction

The MediaDesk MKII is an improved version of the acclaimed MediaDesk speaker system. Like the original, the MediaDesk MKII is a full-range monitoring system with integrated subwoofer, that is optimized for desktop audio production, computer-driven audio recording, etc.

MediaDesk MKII is available in two versions: a 2.1 system and 5.1 system. MediaDesk MKII 2.1 incorporates two compact 2-way satellite speakers, each featuring a high-quality 4" driver and 1" ring radiator tweeter, along with a dedicated 8" powered subwoofer with integrated bass-management. MediaDesk MKII 5.1 includes 5 compact satellite speakers, a dedicated 8" subwoofer with bass-management, and a wired remote control with individual channel level adjustments and 6-channel master volume control.

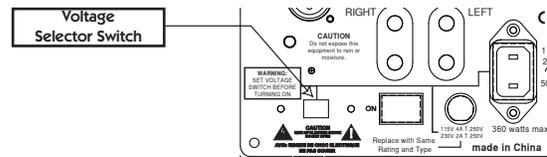
We hope that this systems brings you years of accurate and problem free operation. We ask that you take the time to read this manual, register the product and visit our website for any updated information regarding this product. If you have any questions please don't hesitate to contact us.

Thank you for choosing Blue Sky!

2. Important notes about MediaDesk and this Owner's Manual

Voltage Selector Switch:

Prior to powering this unit, please confirm that the voltage selector switch, located on the back of the subwoofer, has been set to the correct voltage setting. If you are unsure of the type of power that is supplied to your home, consult your product dealer or local power company.



The Owner's Manual:

This manual includes separate instructions for the 2.1 and 5.1 versions of the MediaDesk MKII system. Please read this owner's manual carefully and contact Blue Sky International if you have any comments or questions. Contact information can be found on page 21 or you can visit www.abluesky.com.

3. MediaDesk 2.1, what is included ?

MediaDesk MKII 2.1 includes the items listed below. Please carefully unpack each item and inspect the components for damage. If any part of the system has been damaged, please contact the dealer thee supplied the product or Blue Sky directly.

MediaDesk MKII System Inventory

- 2 MediaDesk Satellite Speakers (SAT)
- 1 MediaDesk 2.1 subwoofer
- 2 10 foot lengths of copper speaker cable
- 1 Power cable
- 1 Owner's manual
- 1 Warranty card



4. Quick Setup

1. If you haven't already done so, carefully remove all items from the packaging and confirm that everything that is listed on page 4 is included. [2.1 System - What is included?].
2. MediaDesk systems leave the Blue Sky factory fully calibrated. With the 2.1 gain control set to the reference mark (which is at 12 o'clock on the gain control) and the input attenuator set to +14dBu, a 200mV (-11.7dBu) pink noise signal, with a bandwidth of 500 to 2kHz, will yield 90dB SPL at 1 meter for the satellite. Because most small monitoring rooms have some gain at low frequencies a good starting point for the subwoofer level is -3dB from the reference position. For more information with regard to controls, see page 7 [A Tour of the 2.1 MediaDesk amplifier and I/O].
3. MediaDesk is compatible with XLR and RCA input connections. If you need to connect MediaDesk to a sound card or need more information on connecting your system please see page 6. You will need a total of two (2) XLR or RCA inputs cables for a stereo monitoring configuration (not supplied). For more information on connecting your system, please see page 6 [2.1 System Signal Connection and Level Settings].
4. The first step in the installation process is to position the active subwoofer. Although you have great flexibility with regard to where the active subwoofer can be placed, a good starting point is centered between the left and right satellite speakers. This could be under a console / desk, behind the console / desk, etc. For an expanded subwoofer placement guide, please see page 16 [Subwoofer Placement Guide].
5. Once the subwoofer is in position, connect the two input cables from the left and right analog outputs from the mixing console, digital workstation or other source, to the left and right inputs on the subwoofer. For more information on connecting your system, please see page 15 [2.1 System Signal Connection and Level Settings].
6. Next, place the MediaDesk SATs into position. The recommended position for the monitors is based on an ITU standard and sets the speakers at 60 degrees from the listener, forming an equilateral triangle (a triangle with equal sides) - **See Figure 1**. Fortunately, this setup eliminates most of the math and is easily simplified to the following guidelines: If you want to sit 1 meter (39.37 inches) from the speakers, place the speakers 1 meter apart. If you want to sit 2 ft from the speakers, place the speakers 2 ft apart. Etc. The monitors can be positioned on a console, desk, on stands, etc. Ideally the MediaDesk SAT should be at seated ear height. If this is not possible, tilting the cabinet at the listening area can improve high-frequency coverage. For more information about placement see page 15 [MediaDesk SAT mounting and placement options].
7. Once all the SATs are properly placed, connect the speaker wire from the left high-level outputs on the back of the sub, to the input on the left SAT. Now do the same for the right channel, connecting

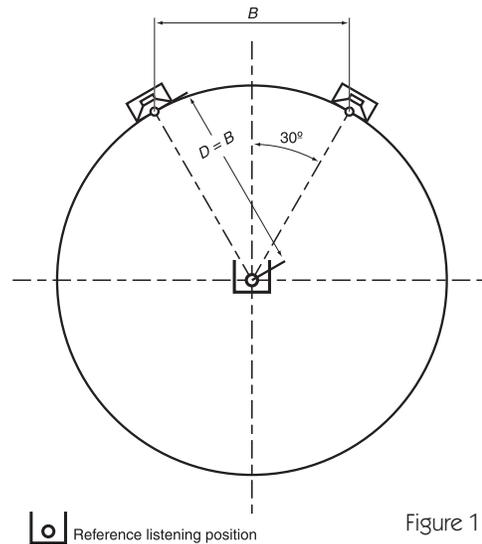


Figure 1

the right output to the right SAT. Please make sure that you connect positive to positive and negative to negative, so that both SATs are in-phase. Lastly, please plug in the power cord to the IEC connector on the subwoofer. Prior to proceeding confirm that the system is wired correctly, as shown on page 6 [2.1 System Signal Connection and Level Settings].

8. At this point the Blue Sky monitoring system is correctly configured, and ready for the final step in the installation. Prior to plugging the system into the wall outlet, and powering up the system, do a final quick check of all connections and level settings.
9. If everything is correct, plug the power cord into the wall outlet. **Do not turn on the power switches, yet!** Some mixers and out-board equipment such as D-to-A converters and equalizers generate loud rail-to-rail pops when they initially turn-on. Depending on the level and the gain setting of the monitoring system, these pops could damage the monitors. To avoid this, always turn on equipment in the following sequence: All sources and mixer first, and then the MediaDesk monitoring system.
10. At this point the Blue Sky monitoring system is fully operational, and ready for use. Begin by playing familiar pieces of music, which can assist you in the fine-tuning and exact positioning of both the SATs and the active subwoofer. It is important to remember that the positioning of the subwoofer in the room will impact the subwoofer level. You may find it necessary to increase or decrease the level from the reference position. This is OK, and is anticipated.
11. If a more exacting setup is required, using test signals and a SPL meter, please see Page 8 [Expanded 2.1 Calibration Guide].
12. Just remember - Use your ears, they are the best audio tool you have and you will be amazed how accurate the setup can be if you use familiar audio material during the setup of the system.
13. Congratulations! You have now completed the set up of one of the world's finest monitoring systems. If you have any questions, please do not hesitate to contact us directly with your questions. (516) 249-1399 (9:00am to 5:30pm EST)

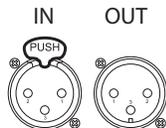
5. 2.1 System Signal Connection and Level Settings

Below are some basic outlines of ways someone may interface MediaDesk with their audio system. These may or may not apply to your specific application, but they should be able to show the basic concept for most applications.

CABLE WIRING SPECIFICATIONS

Most users of the MediaDesk system will be using ready made cables, however if you need to wire your own cables, follow the wiring specifications below.

	XLR	TRS	RCA
HOT (+)	Pin 2	Tip	Tip
COLD (-)	Pin 3	Ring	
SHIELD (GROUND)	Pin 1	Shield	Shield



XLR INPUTS (ELECTRONICALLY BALANCED)

Figure 2: shows the XLR inputs being fed the output of a standard pro audio mixer. The MediaDesk XLR inputs can handle up to +24dBu of signal level at the input and are compatible with most, if not all professional gear. If your mixer has TRS outputs, you should purchase TRS to XLR cables (found at most pro audio retailers) and feed the XLR input. We recommend this because, TRS outputs are also balanced signals and you should use them with the XLR input (as apposed to the RCA input) for the best performance.

INPUT ATTENUATOR SWITCH (XLR INPUTS ONLY)

Figure 4: Certain professional audio devices have a great deal of electrical output and gain (up to +24dBu) and under certain conditions it may not be advantages to reduce the output gain from your source (such as with a D to A converter). Under these conditions we recommend that you switch the input switch to the **+24dBu setting**. However, if you are not running the signal into the XLR input at a high level and you are interested in more gain from the monitoring system or you want to match the voltage sensitivity of our other products, then set the switch to the +14dBu position.

RCA INPUTS

Figure 3: The RCA inputs on MediaDesk are compatible with a myriad of consumer and computer audio gear, such mixers, CD players, Hi-Fi pre-amps etc. Figure 3 shows another common application, the RCA inputs on MediaDesk being fed by the output of a standard computer sound card. This requires the use of an optional adaptor cable, to go from the 3.5mm stereo jack to two RCA outputs. These cables are available from most electronic retailers, computer stores and pro audio dealers. Consult the manual or help files that came with your sound card for specific setup information. Please confirm that the software setting are not constraining or limiting the response of the system in any way (often an issue with laptop computer audio settings).

Speaker Level Outputs / SAT speaker level inputs

Figure 5: This drawing shows the proper way to insert bare wire into the binding posts which are the subwoofer outputs and SAT inputs. When inserting bare wire, please make sure that there are no strands protruding out that may create a short-circuit. These binding posts are compatible with wire gauges up to approximately 10 gauge.

Figure 2

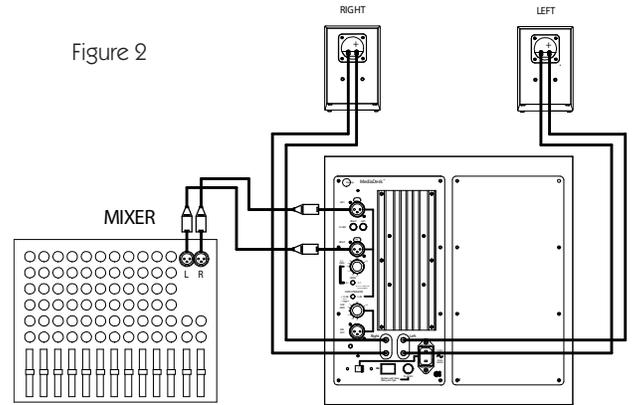


Figure 3

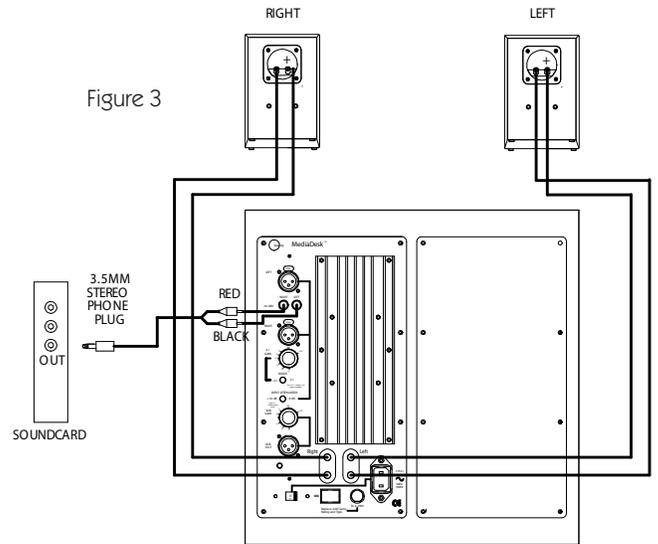


Figure 4

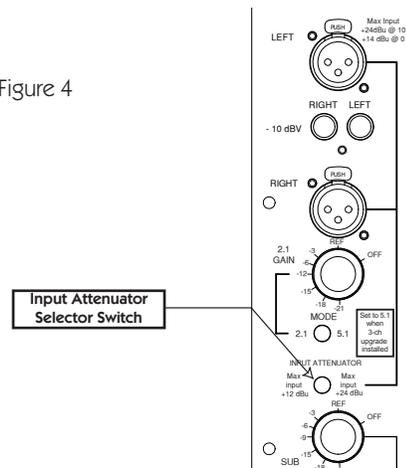
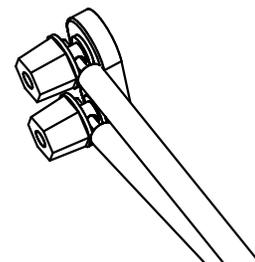
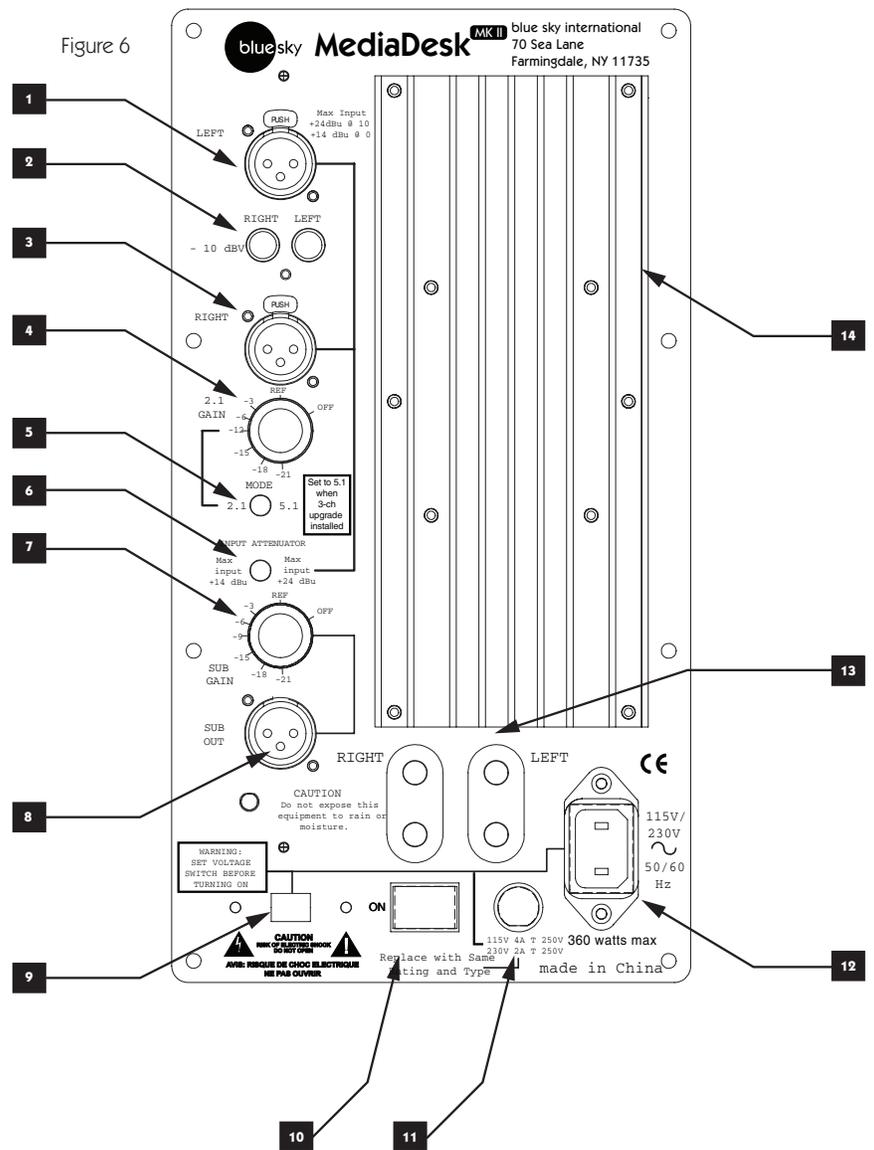


Figure 5



6. A Tour of the 2.1 MediaDesk Amplifier and I/O

1. **LEFT XLR IN** - This XLR input should be connected to the left output of your console or digital workstation. The inputs are electronically balanced. Do not connect more than one source to these inputs. Refer to page 6 for more information [2.1 System Signal Connection and Level Setting].
2. **LEFT and RIGHT RCA IN** - These are unbalanced RCA type inputs that are designed to work with -10 dBV sources, such as consumer sound cards, CD players, some mixers, etc. Refer to page 6 for more information [2.1 System Signal Connection and Level Setting].
3. **Right XLR IN** - This XLR input should be connected to the right output of your console or digital workstation. The inputs are electronically balanced. Do not connect more than one source to these inputs. Refer to page 6 for more information [2.1 System Signal Connection and Level Setting].
4. **2.1 Gain** - This knob controls the overall system gain. The subwoofer gain knob [7 detailed below], tracks this setting. The gain should be adjusted for best signal to noise performance.
5. **Mode Selector Switch** - The switch should be set to the mode that corresponds to the system configuration. If you set the switch to 5.1 mode, the system will not pass any audio.
6. **Input Attenuator Switch** - The input attenuator switch only works on the XLR inputs and is designed to allow MediaDesk to interface with various types of professional audio equipment. Refer to page 6 for more information [2.1 System Signal Connection and Level Setting].
7. **Subwoofer Gain** - This knob controls the relative subwoofer level as compared to the overall system output. This setting tracks the overall system level. For more information on setting subwoofer level, please refer to page 5 [Quick Setup] and page 9 [Expanded 2.1 Calibration Guide].
8. **Subwoofer Out** - This balanced XLR output can feed additional subwoofers for increased bass performance.
9. **Voltage Selector Switch** - This switch can be set to either 115 Volts or 230 volts. Prior to powering this unit, please confirm that the Voltage selector switch, located on the back of the subwoofer, has been set to the correct voltage setting. If you are unsure of the type of power that is supplied to your home, consult your product dealer or local power company. If your changing the Voltage, please also confirm the proper fuse is installed [see number 11].
10. **Power Switch** - Controls the power to all the three amplifiers and all internal electronics.
11. **FUSE** - Replace with same rating and type for your local voltage rating. For 115V applications use a 4 Amp T 250V and for 230 Volt



12. **IEC 320 RECEPTACLE** - Check voltage selector before connecting power. Connect to 115 Volt AC / 60Hz power source, rated for 360 WATTS or 230 Volt / 50Hz rated for 360 WATTS. MediaDesk is a class II device that does not require a safety ground. Only use the supplied power cord or an IEC approved power cord without a safety ground pin.
13. **Speaker Outputs** - These connectors are high quality binding post that are compatible with both bare speaker wire and other speaker connectors (such as spades and banana plugs). Please always maintain proper phase and be careful to avoid short-circuits between output terminals.
14. **Amplifier Heatsink** - The heatsink provides essential cooling to the amplifiers inside MediaDesk. Please ensure that proper air circulation is available for proper cooling.

7. Expanded 2.1 Calibration Guide

Instructions for electroacoustic calibration of a 2.1 audio system using a SPL meter and Blue Sky's test files.

Before starting this procedure you will need to download BlueSkyTestFiles.zip (an 18 MB zip file) by going to www.abluesky.com/calibration. To download the test file, "Right Click" and select "Save Target As". The file will begin downloading once a location has been selected.

Once downloaded, either burn the test files to a CD or import them into your DAW and follow the instructions below.

ADDITIONAL REQUIRED ITEMS

1. 2.1 Monitoring System
2. SPL Meter - such as the SPL meter sold by RadioShack in the U.S.

BlueSkyTestFiles.zip Includes 4 files:

- 1000Hz SINEWAVE -20dBFS.wav – a 1kHz file recorded at -20dBFS for electrical calibration
- 40-80Hz PINK NOISE -20dBFS.wav – a 40Hz to 80Hz bandwidth limited pink-noise file recorded at -20dBFS
- 500-2.5kHz PINK NOISE -20dBFS.wav – a 500Hz to 2.5Hz bandwidth limited pink-noise file recorded at 20dBFS
- Pink Noise full bw -20dBFS.wav – a full-bandwidth pink-noise file recorded at -20dBFS

These test files are all mono files. Please make sure you hard assign them to the left and then the right, not both channels at the same time. If you are using a CD player use only one channel of the CD player.

THEORY

The purpose of calibration is to adjust the overall electroacoustics system gain so that 0dBVU of electrical signal level equals a certain acoustic level at the listening position. Since most recording media is now digital, the reference electrical signal level is usually -20dBFS with 20dB of headroom. The reference SPL level however can vary based on the delivery media and speaker type.

Please note that the bandwidth limited signals that have been provided, limit many of the room interaction affects often associated with measuring SPL and broadband pink noise.

All test signals are recorded at -20dBFS including the 1 kHz sine wave tone. The sine wave tone is used to set the electrical output level throughout the signal path, right up to the point you get to the speakers, while the various pink noise signals are used for acoustic measurements and calibration.

The following procedure assumes you are calibrating the system to 85dBc SPL.

Step 1 TURN OFF THE MONITORING SYSTEM (until step 4)

Step 2 Remove all eq and dynamics from the signal path and set all controls to zero / unity gain. Play the 1kHz Sine Wave, hard assign it to the left channel only, and adjust the output fader so the output meter reads -20dBFS. If you are using an analog console, set the output level to 0 VU. Then hard pan the signal to the right channel output and repeat for the right channel. **Once calibrated do not**

move the output faders.

Step 3 Mute everything and make sure the 1kHz tone is OFF .

Step 4 Now that the system has been electrically calibrated turn ON the MediaDesk 2.1 System.

Step 5 Assign the 500-2.5kHz pink noise signal to the left channel only. Make sure there is nothing coming from the right channel (or any other channels). Because this signal is bandwidth limited, you don't have to worry about turning the sub off. There are two methods of setting the levels.

A. If you have a master monitor level control, you can set the sat gain control at reference and then adjust the monitor gain control for 85 dBc. Then mark the monitor level as your reference position.

B. The other method is to set master monitor level to the position you want as a reference level and then use the volume controls to set 85 dBc. If you use this method you should mark the knob position with a grease pencil so you can always go back to reference level if the knob gets moved.

For either method:

SPL should be measured at the mix position, with the SPL meter at arms length, with the microphone at seated ear height, angled at approximately 45 degrees, and pointed at the center point between the left and right speakers.

Once the left channel is set to 85dBc, repeat this step for the right channel

Step 6 Feed 40-80Hz pink noise signal to the left channel only. Adjust the subwoofer level control until the subwoofer reads 85dBc (slow) at the mix position. The meter will bounce around a little, so you will need to do a mental average (I tend to filter out the peaks in my mind, so I don't set the sub too hot). The right channel should measure about the same and no additional adjustments need to be made.

Step 7 You can play the full-bandwidth pink noise, assigning it to the left and then the right channel (not at the same time). You should measure about 85dBc. It may be a little higher, because below 30Hz the room may have a little extra gain. No adjustments should be made with Full Bandwidth pink noise, unless you have an RTA (real time analyzer).

Step 8 You are finished and the calibration process has been completed – enjoy!

8. MediaDesk 5.1 System Introduction

The MediaDesk MKII 5.1 system is an improved version of the acclaimed MediaDesk speaker system. Like the original, the MediaDesk MKII is a full-range monitoring system with integrated subwoofer, that is optimized for desktop audio production, computer-driven audio recording, etc.

MediaDesk MKII 5.1 includes 5 compact satellite speakers, a dedicated 8" subwoofer with bass-management, and a wired remote control with individual channel level adjustments and 6-channel master volume control.

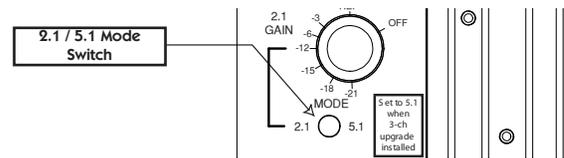
We hope that this systems brings you years of accurate and problem free operation. We ask that you take the time to read this manual, register the product and visit our website for any updated information regarding this product. If you have any questions please don't hesitate to contact us.

Thank you for choosing Blue Sky!

9. Important notes about the MediaDesk 5.1 System and this Owner's Manual

2.1 / 5.1 Mode Switch:

IMPORTANT NOTE: The 2.1 / 5.1 mode switch must be to 5.1 for the 5.1 system to operate correctly. This switch can be found on the Left /Right amplifier.

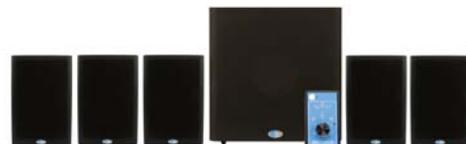


10. MediaDesk 5.1 System what is included?

A MediaDesk 5.1 system is shipped in two boxes and includes the items listed below. Please carefully unpack each item and inspect the components for damage. If any part of the system has been damaged, please contact the dealer that supplied the product or Blue Sky directly.

MediaDesk 5.1 System Inventory:

- 5 MediaDesk Satellite Speakers (SATs)
- 1 MediaDesk 5.1 subwoofer
- 5 10 Foot length of copper speaker cable
- 1 MediaDesk 5.1 Remote (with cable)
- 1 Owner's Manual
- 1 Warranty Card



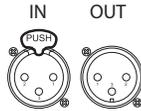
11. 5.1 System Signal Connections

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CABLE WIRING SPECIFICATIONS

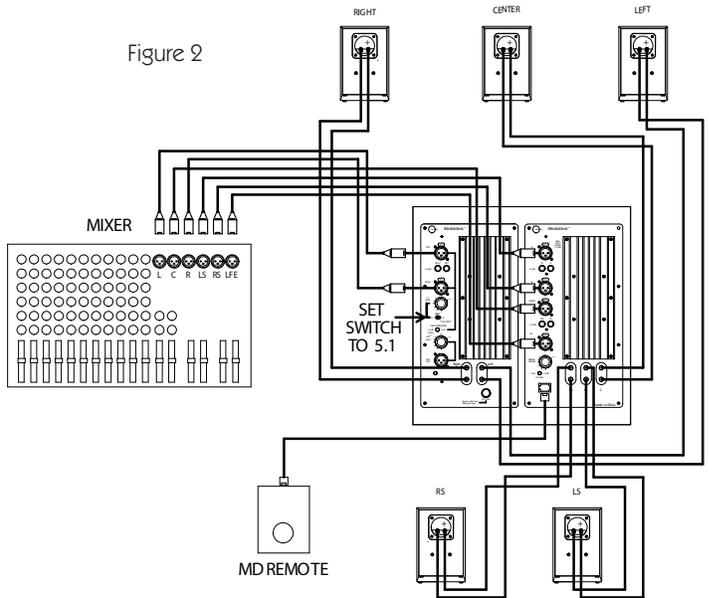
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	XLR	TRS	RCA
HOT (+)	Pin 2	Tip	Tip
COLD (-)	Pin 3	Ring	Shield
SHIELD (GROUND)	Pin 1	Shield	Shield



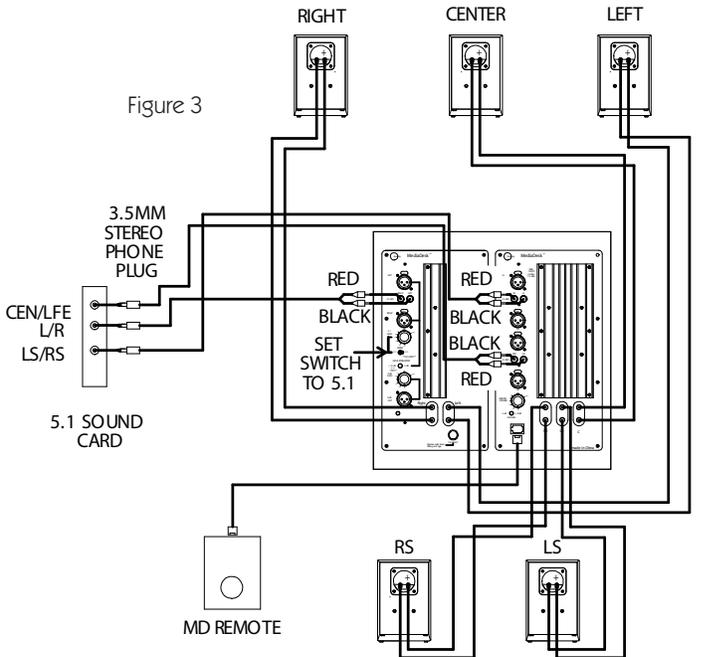
XLR INPUTS (ELECTRONICALLY BALANCED)

Figure 2: shows the XLR inputs being fed from the output of a standard pro audio mixer. The XLR inputs can handle up to +24dBu of signal level at the input and are compatible with most, if not all professional gear. If your mixer has TRS outputs, you should purchase TRS to XLR cables (found at most pro audio retailers) and feed the XLR input. We recommend this because TRS outputs are also balanced signals and you should use them with the XLR input (as opposed to the RCA input) for the best performance.



RCA INPUTS

Figure 3: The RCA inputs on MediaDesk are compatible with a myriad of consumer and computer audio gear, such as mixers, CD players, audio pre-amps, surround pre-amps etc. Figure 3 shows another common application, the RCA inputs on MediaDesk being fed by the output of a standard computer sound card. This requires the use of an optional adaptor cable, to go from the 1/8" stereo jack to two RCA outputs. These cables are available from most electronic retailers, computer stores and pro audio dealers. Consult the manual or help files that came with your sound card for specific setup information. Please confirm that the software settings are not constraining or limiting the response of the system in any way (often an issue with laptop computer audio settings).



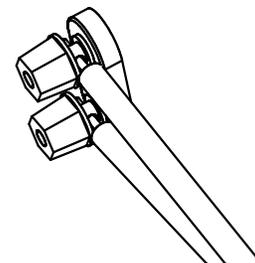
Speaker Level Outputs / SAT speaker level inputs

Figure 4: This drawing shows the proper way to insert bare wire into the binding posts which are on the subwoofer outputs and SAT inputs. When inserting bare wire, please make sure that there are no strands protruding out that may create a short-circuit. These binding posts are compatible with wire gauges up to approximately 12 gauge.

A note about the LFE Channel / LFE Input

The LFE Channel was originally designed for film applications as a way to extend the low frequency "head-room" (not frequency response) of the playback system. This additional headroom was created by adding +10dB of in-band gain to the LFE channel. This channel is designed to be used when no additional LF headroom is available in the other channels. As an example, you may use the LFE channel to increase the dynamic low frequency content of a movie that has many large explosions. It is important to note that no "significant" audio should be sent exclusively to the LFE channel. The reason for this is that if a Dolby Digital audio track is folded down to 2-channels, the LFE channel will not be added to the fold-down mix (all other channels will be added to the fold-down).

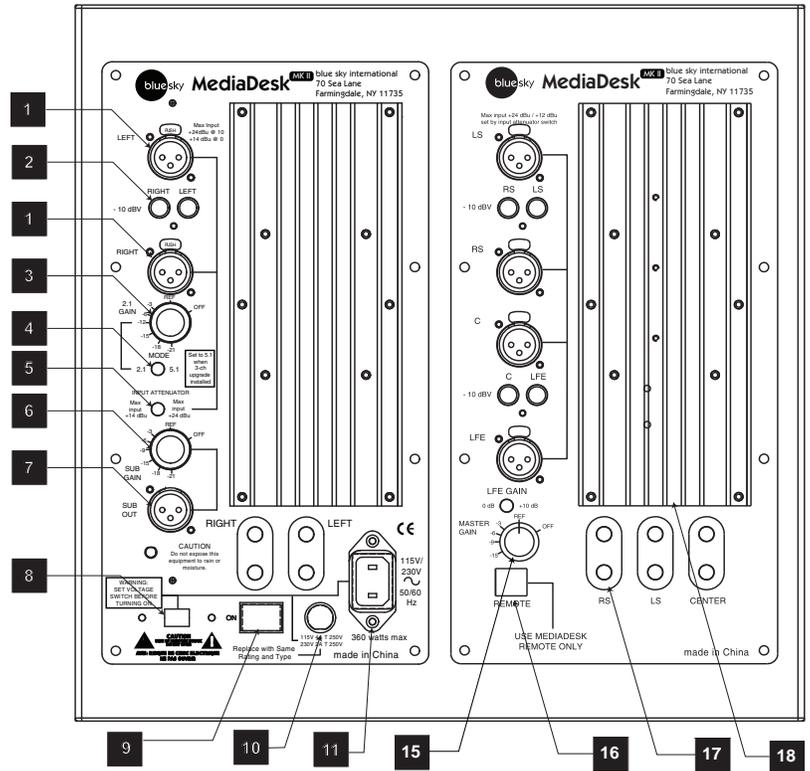
Figure 4



12. A Tour of the 5.1 MediaDesk Amplifier and I/O

Warning: Do not connect more than one source to any input on Mediadesk .

1. **XLR inputs** - Connect these inputs to the left output of your console or digital workstation. The inputs are electronically balanced. Refer to page 10 for more information [5.1 System Signal Connection and Level Setting].
2. **RCA Inputs** - These inputs are designed to work with -10 dBV sources, such as consumer sound cards, CD players, some mixers, etc. Refer to page 10 for more information [5.1 System Signal Connection and Level Setting].
3. **2.1 Gain** - This knob does not do anything in 5.1 mode.
4. **Mode Selector Switch** - Set this switch to 5.1 **If you set this switch to 2.1, the remote will not control the left and right channels.**
5. **Input Attenuator Switch** - This switch control the input sensitivity of all the XLR inputs. To match typical powered monitors set this switch to +14dBu. If your monitoring buss is set to +24dBu, set to +24 dBu to prevent overloading these inputs. Refer to page 10 for more information [5.1 System Signal Connection and Level Setting].
6. **Subwoofer Gain** - Turn this knob to set the gain of the nominal gain of the subwoofer This setting tracks the overall system level. For more information on setting subwoofer level, please refer to page 5 [Quick Setup] and page 14 [Expanded 5.1 Calibration Guide].
7. **Subwoofer Out** - This balanced XLR output can feed additional subwoofers for increased bass performance.
8. **Voltage Selector Switch** - This switch can be set to either 115 Volts or 230 volts. Before powering this unit, verify this switch is set to the correct voltage for your area. If you are unsure whether 115V or 230V is supplies to your location, consult your product dealer or local power company. If you are changing the voltage, please also confirm the proper fuse is installed [see number 10].
9. **Power Switch** - Controls the power to all the three amplifiers and all internal electronics.
10. **FUSE** - Replace with same rating and type for your local voltage rating. For 115V applications use a 4 Amp T 250V and for 230 Volt applications use a 2 Amp T 250V fuse.
11. **IEC 320 RECEPTACLE** - Check voltage selector switch before connecting power. Connect to 115 Volt AC / 60Hz power source, rated for 360 WATTS or 230 Volt / 50Hz rated for 360 WATTS. Mediadesk is a class II device that does not require a safety ground. Only use the supplied power cord or an IEC approved power cord without a safety ground pin.
12. **Speaker Outputs** - These connectors are high quality binding post that are compatible with both bare speaker wire and other speaker connectors (such spades and banana plugs). Please always maintain proper phase and be careful to avoid short-circuits between output terminals.
13. **Amplifier Heatsink** - The heatsink provides essential cooling to the amplifiers inside Mediadesk. Please ensure that proper air circulation is available for proper cooling.
14. **LFE Gain Switch 0dB / + 10dB** - Generally this should be set to the +10dB setting, as recommend by Dolby (www.dolby.com). Refer to page 10 for more information [5.1 System Signal Connection - A note about the LFE Channel / LFE Input].
15. **Master Gain** - This controls the overall system gain when the remote is not connected. Make sure to not set this level too high, in case the remote accidentally gets disconnected. The 2.1 Gain control, located on the main Mediadesk panel doesn't function in the 5.1 mode. However, the subwoofer gain control functions as described in the 2.1 manual.
16. **Remote Control RJ-11 Connector** - This standard six conductor RJ-11 jack is used to connect the Mediadesk 5.1 Amplifier to the Mediadesk 5.1 Remote, using the provided 6 conductor cable. The remote control cable length should not exceed 100 Feet. Refer to page 13 for more information [A tour of the Mediadesk 5.1 Remote].



13. 5.1 Speaker Placement

Satellite Speaker Placement - MUSIC

The recommended monitoring angle for proper stereo imaging with music is 60 degrees between the left and right speakers. The center channel speaker should be located on axis with the reference monitoring position and both the left and right surround channel speakers should be at an angle of 110 degrees from the centerline. In most applications, surrounds used for music are placed at the same height as the front speakers for a direct sound field. See [Figure 5](#)

Satellite Speaker Placement - FILM / POST PRODUCTION

Although the above recommendations should work equally well for both film and music production, there may be situations where a more "film" optimized setup is desirable. To correctly relate audio to picture, the recommended angle between left and right speakers is 45 degrees. This narrower monitoring angle should still yield a very satisfactory stereo image. As with the "music" setup, the center channel speaker, should still be located on axis with the reference monitoring position. Unlike music surrounds, which tend to be direct in nature, film surrounds are usually positioned for a more diffused sound field to simulate the effect of an array of surround speakers used in a theater. For a single pair of surrounds, this can be accomplished by placing them two feet above seated ear height, to the side of the monitoring position and slightly behind the mix position.

Satellite Speaker Monitoring Height Recommendations

It is recommended that all of the satellite speakers be placed at or about seated ear height, as shown in [Figure 2](#). If it is not possible to place the speakers at or about seated ear height, please aim the speakers at the monitoring position.

Subwoofer Placement

Please see page 16 [Subwoofer Placement Guide].

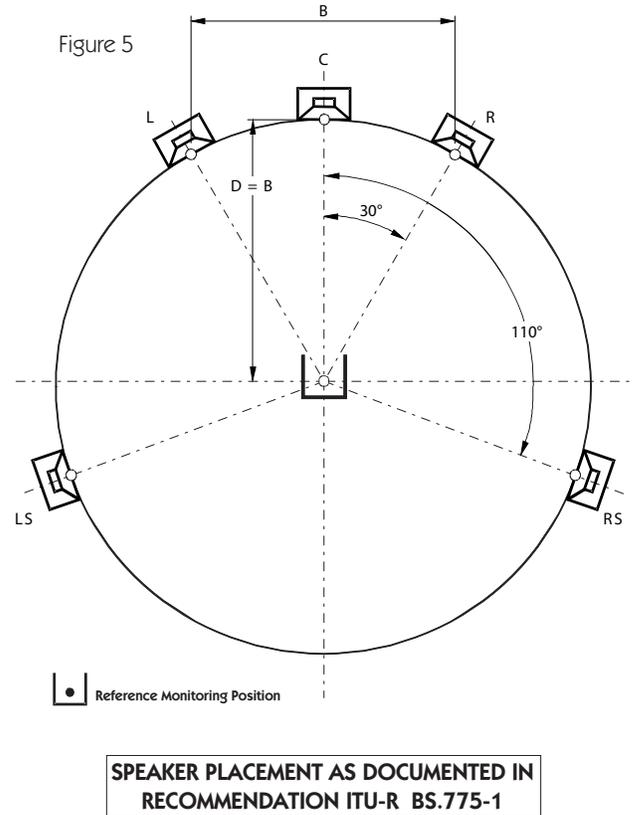
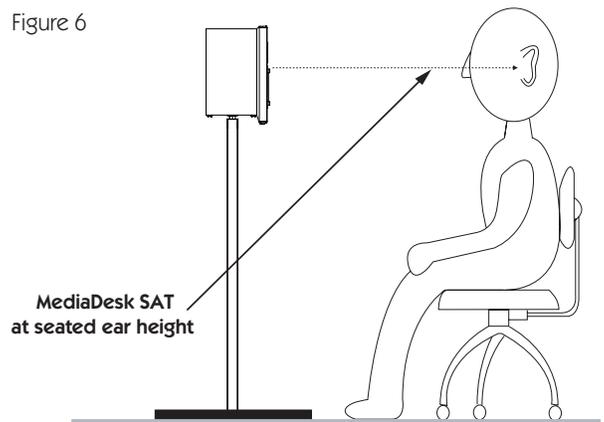


Figure 6



14. A Tour of the MediaDesk 5.1 Remote

1. **Remote Control RJ-11 Connector** - This standard six conductor RJ-11 jack is used to connect the 5.1 Remote to the MediaDesk Right Amplifier, using the provided 6 conductor cable. The remote control cable length should not exceed 100 Feet. Refer to page 13 for more information [MediaDesk 5.1 Remote].
2. **Individual Output Channel Trims** - Each of the following recessed channel trim pots has a range of plus or minus 6dB, in 1dB increments. Please note that these are output level trims and not input level trims. For calibration instructions see page 14 [Expanded 5.1 Calibration Guide].
3. **5.1 Master Gain Control** - This knob controls the overall system level. When the remote is connected, the 5.1 Master Gain control on the back of the subwoofer is defeated.
4. **Power Indicator LED** - If this LED is lit, the system is powered and the remote is properly connected to the MediaDesk 5.1 Monitoring System.

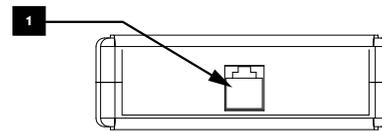
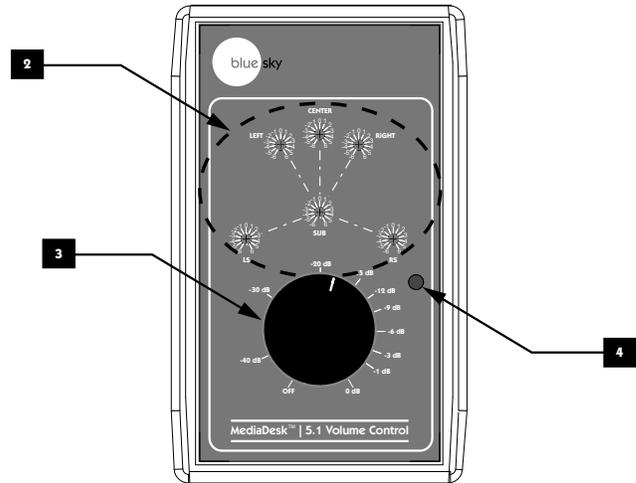


Figure 8



15. System Logic Outline

Unlike the a MediaDesk 2.1 System, a complete MediaDesk 5.1 System uses a simple microprocessor to adjust the individual levels and overall 5.1 system gain (digitally controlled analog). Because how the system is configured effects how the system operates, it is important to understand what happens under specific operating conditions. Below is a simple outline detailing how the system operates.

1. **5.1 MediaDesk System, on power-up, no remote connected:**
The master 5.1 volume control on the back of the subwoofer controls volume (see page 11, item 15 for more information). The individual channel level adjustment are set to their default setting, which is +/- 0dB.
2. **5.1 MediaDesk System, on power-up, remote connected:**
The remote volume control takes over. The trim pots' position determines the relative volume level for each channel (+/-6dB in 1dB increments). The 5.1 Master Gain control on the back of the subwoofer is defeated.
3. **5.1 MediaDesk System, remote unplugged during operation:**
Reverts to the state describe above in item #1.
4. **5.1 MediaDesk System, connect remote during operation:**
Reverts to the state described above in item #2.

16. Expanded 5.1 Calibration Guide

INSTRUCTIONS FOR ELECTROACOUSTICS CALIBRATION OF A 5.1 AUDIO SYSTEM USING A SPL METER AND BLUE SKY'S TEST FILES

Before starting this procedure you will need to download BlueSkyTestFiles.zip (18MB) by going to www.abluesky.com/calibration. To download the test file, "Right Click" and select "Save Target As" and the file will begin downloading. Once downloaded, either burn the test files to a CD or import them into your DAW and follow the instructions below.

ADDITIONAL REQUIRED ITEMS

1. 5.1 Monitoring System
2. SPL Meter - such as the SPL meter sold by RadioShack in the U.S.
3. Small screw driver for adjusting trim pots

BlueSkyTestFiles.Zip Includes 4 files:

- 1000Hz SINEWAVE -20dBFS.wav – a 1kHz file recorded at -20dBFS for electrical calibration
- 40-80Hz PINK NOISE -20dBFS.wav – a 40Hz to 80Hz bandwidth limited pink-noise file recorded at -20dBFS
- 500-2.5kHz PINK NOISE -20dBFS.wav – a 500Hz to 2.5kHz bandwidth limited pink-noise file recorded at 20dBFS
- Pink Noise full bw -20dBFS.wav – a full-bandwidth pink-noise file recorded at -20dBFS

These test files are all mono files. Please make sure you hard assign them to the left and then the right, not both channels at the same time. If you are using a CD player use only one channel of the CD player.

THEORY

The purpose of calibration is to adjust the overall electroacoustics system gain so that 0dBVU of electrical signal level equals a certain acoustic level at the listening position. Since most recording media is now digital, the reference electrical signal level is usually -20dBFS with 20dB of headroom. The reference SPL level however can vary based on the delivery media and speaker type.

Please note that the bandwidth limited signals that have been provided, limit many of the room interaction affects often associated with measuring SPL and broadband pink noise.

***Also, please note that the LFE channel gain in a 5.1 system varies from 0dB to +10dB, depending on the encoding format that is being used. Since the LFE channel is not calibrated as a separate entity, the LFE gain will not affect system calibration.** For more information about the LFE channel refer to page 10 [System Signal Connection / A note about the LFE Channel / LFE Input].

	L	C	R	LS	RS	SUB*
Movie Theatrical release	85dB	85dB	85dB	82dB	82dB	85dB
Movie DVD release	85dB	85dB	85dB	85dB	85dB	85dB
Broadcast / 85dBc or	78dB	78dB	78dB	78dB	78dB	78dB
Music (Stereo)	85dB		85dB			85dB
Music (5.1)	85dB	85dB	85dB	85dB	85dB	85dB

The common calibration levels

All test signals are recorded at -20dBFS including the 1 kHz sine wave tone. The sine wave tone is used to set the electrical output level throughout the signal path, right up to the point you get to the speakers, while the various pink noise signals are used for acoustic measurements and calibration.

The following procedure assumes you are calibrating the system to 85dB SPL. If you are calibrating to TV, etc. substitute the appropriate level from the chart titled "The common calibration levels" shown above.

Step 1 **TURN OFF THE MONITORING SYSTEM (until step 4)**

Step 2 Remove all eq and dynamics from the signal path and set all controls to zero / unity gain. Play the 1kHz Sine Wave, hard assign it to the left channel only, and adjust the output fader so that the output meter reads -20dBFS. If you are using an analog console, set the output level to 0 VU. Then hard pan the signal to the center channel output and repeat for the center channel (repeat for the each of the remaining channels). **Once calibrated do not move the output faders.**

Step 3 Mute everything and make sure the 1kHz tone is OFF .

Step 4 Now that the system has been electrically calibrated turn ON the MediaDesk 5.1 System.

Step 5 Assign the 500-2.5kHz pink noise signal to the center channel only and set the remote master gain control to a relatively low level. Make sure there is nothing coming from the left or right channels (or any other channels). *Because this signal is bandwidth limited, you don't have to worry about turning the sub level down or off.*

Note: SPL should be measured at the mix position, with the SPL meter at arms length, the microphone at seated ear height, angled at approximately 45 degrees, and pointed at the center point between the left and right speakers.

Now, increase the level of the master gain control (on the remote) until you measure 85dBc. Once you reach 85dBc make a note of where the volume knob is relative the markings around the knob - this is your "reference level" gain setting (do not move the knob). If the level is relatively low and you are using the XLR inputs, you may need to adjust the "input attenuator switch" on the back of the MediaDesk amplifier so that you don't overdrive the inputs and so you achieve the best signal to noise ratio.

Note: If the "reference" level is not perfectly near a marking on the dial, you may choose to adjust the level up or down and use the center channel gain trimpot to compensate.

Step 6 Once the center channel is set to 85dBc, assign the 500-2.5kHz pink noise signal to the left channel and use the trim pots to make the adjustments between the channels. (+/-6dB in 1dB increments). Make sure that the master gain setting has not been changed from the "reference level" setting. Repeat this step for the remaining main channels - Right, Left Surround & Right Surround.

Step 7 Feed 40-80Hz pink noise signal to the center channel only. Adjust the subwoofer level control (on the back of the sub) and the SUB trim pot, until the subwoofer reads 85dBc (slow) at the mix position. The meter will bounce around a little, so you will need to do a mental average (I tend to filter out the peaks in my mind, so I don't set the sub too hot). The other channels should measure about the same and no additional adjustments need to be made.

Step 8 You can play the full-bandwidth pink noise, assigning it to any of the main channels (not at the same time). You should measure about 85dBc. It may be a little higher, because below 30Hz the room may have a little extra gain. **No adjustments should be made with Full Bandwidth pink noise, unless you have an RTA (real time analyzer).**

Step 9 You are finished and the calibration process has been completed – enjoy!

17. MediaDesk Mounting and Placement Options

Monitor mounting and placement is often an afterthought, but in order to get the best imaging and overall performance from MediaDesk, it is important to place the speakers correctly. **Figure 7** shows the ideal placement, with the MediaDesk SAT located perfectly at seated ear height. However, there are many other ways to mount or place MediaDesk, which can work equally as well.

Figure 7

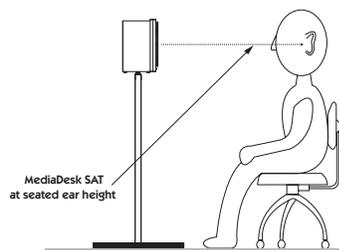


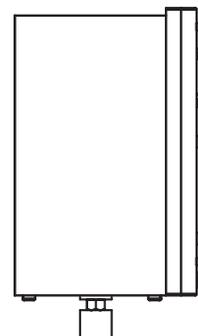
Figure 11: Optional Microphone Stand Adaptor

Although not supplied by Blue Sky International, a standard 5/8" x 27 female to 3/8" x 16 male adapter, allows you to adapt the center insert on the MediaDesk SAT so that it is compatible with a standard mike stand, which typically has a 5/8" x 27 fine male thread.

Wall Mount Options (not shown)

The MediaDesk SAT is compatible with two types of wall mount brackets. The first mounting option is via the 2 1/4 X 20 inserts on the back of the MediaDesk SAT. These inserts are compatible with BT Technologies BT-5 Brackets (www.btech-usa.com). It is also compatible with OmniMounts 10 Series, via the 3/8" X 16 insert in the bottom of the cabinet (www.omnimount.com). For more details on these mounting inserts please see page 18 [Satellite Cabinet Dimensions].

Figure 11



18. Subwoofer Placement Guide

So now that my system uses an integral subwoofer, how do I place it in my studio for the best possible low frequency performance?

The low frequency response and efficiency of a subwoofer are heavily influenced by the acoustics of the playback environment. More specifically, the response is influenced by the room's dimensional ratios, types of construction and location of the subwoofer within that environment. You can significantly improve the subwoofer's in-room response and efficiency by experimenting with various room placements until you find an optimum location.

When placing the subwoofer there are several general guidelines that should be kept in mind. These include:

- Every acoustic space is unique and experimentation is an important key in finding the best possible location in your particular environment.
- A subwoofer becomes more acoustically efficient (has greater output) as you move it closer to a room surface (e.g. wall or floor).
- A subwoofer will give maximum output and maximum acoustic excitement when it is located in a corner.
- Under certain acoustic conditions corner locations are optimum; in others they can excite multiple "room modes", producing "muddy" or "boomy" sound.

The following methods have been found to work successfully under most conditions:

The first method described below doesn't require any special test equipment. It does require a pair of good ears and familiar broad-spectrum music material – recordings with lots of energy across a wide frequency range (from low to high). The recordings should be highly dynamic and be of relatively high quality.

The second subwoofer placement method requires using a real time analyzer – such as those made by Gold Line™ or The Audio Toolbox(TM) by TerraSonde(TM). Although many home audio enthusiasts may not have access to this equipment, if you are having a sound system or home theatre system professionally installed, this information may be useful to the installer.

Method 1

Place the subwoofer at the main listening position and connect and make sure it is properly connected to your receiver. Turn on the CD or music source and make sure that the level of the subwoofer has been raised high enough so that low frequencies are not masked by the background noise in the room. Once you have roughly balanced the level, between the sub and main speakers, move around the room and pay careful attention to where the spectral response is smoothest and has the greatest low frequency extension, pay special attention to the corners and along the walls. Also, make sure to pay attention to where the system has its' greatest impact and definition. You are not just listening for the most boom, but rather where the bass is most accurate and natural sounding. Remember, because the subwoofer is basically omni-directional, the best spot for the subwoofer can be next to, or even behind, the main monitoring area.

After finding the spot where the subwoofer has the best response in the room, place the subwoofer in that location. Now, listen from the main position and confirm that the subwoofers response is similar to when the positions were reversed. If it is, then leave the

subwoofer in that location. If not, continue to experiment with the subwoofer location until the most accurate and best response has been achieved.

Method 2

Subwoofer placement using a real time analyzer – Such as those made by Gold Line™ or The Audio Toolbox™ by TerraSonde™.

Place the subwoofer at the main listening position and connect the subwoofer to your pink noise generator. Turn on your pink noise generator and make sure that the level of the subwoofer has been raised high enough so that low frequencies are not masked by the background noise in the room. Now set the analyzer to 1/12 octave resolution (or whichever setting provides the highest resolution on your particular analyzer), real time mode and begin to take measurements around the room. If the analyzer you are using has the ability to do real time averaging, then use this function to better analyze the spectral response.

As you walk around the room, be sure to pay careful attention to where the spectral response is smoothest and has the greatest low frequency extension, pay special attention to the corners and along the walls. Remember, because the subwoofer is basically omni-directional, the best spot for the subwoofer can be next to, or even behind, the main monitoring area.

After analyzing the data and finding the spot where the subwoofer has the best response in the room, place the subwoofer in that location. Now, take some additional measurements from the listening position and confirm that the subwoofers response is similar to when the positions were reversed. If it is, then leave the subwoofer in that location. If not, continue to experiment with the subwoofer location until the smoothest and best response has been achieved.

Additional Notes

It has been found that a subwoofers' in-room response can sometimes be improved by facing the drivers toward a wall. Again, experimentation is the key to finding the best possible location.

Properly designed subwoofers generate tremendous energy, so they may vibrate objects close to them. If you hear buzzing or vibrating objects, make sure to try and dampen those objects. Rattling, buzzing and other sympathetic resonances can make the subwoofer localizable and therefore should be avoided. Using a sine wave generator can be helpful in locating these acoustic anomalies.

19. Technical Information

This next section outlines the components, specifications and performance data that make this product such a uniquely high value.

In order to continually improve all of its products Blue Sky reserves the right to change these specifications without notice.

MediaDesk 2.1 Specifications

General Specifications

Input Impedance (all inputs)	
20k Ohms balanced	Input attenuator =+14 dBu
52k Ohms balanced	Input attenuator =+24 dBu
5k Ohms unbalanced	RCA input
Common Mode Rejection Ratio	
40 dB typical @ 60Hz	(balanced input only)
Maximum Input Level	
+12 / +24 dBu balanced	(Set by input attenuator)
+14 dBu unbalanced	
Subwoofer maximum output	+24 dBu balanced
Subwoofer output impedance	200 ohms balanced

Amplifier power output

Note: Long term power output is limited by the speaker protection circuitry

Short term power output 1 channel driven:	
65 watts x 1 @ <.05% THD into 4 ohms @ 1 kHz	
Short term power output 2 channels driven :	
55 watts x 2 @ <.05% THD into 4 ohms @ 1 kHz	
Subwoofer power output:	
65 watts x 1 @ <.05% THD into 4 ohms @ 50 HZ	
Mains voltages:	
115/230V 50/60 HZ switchable	
Maximum power consumption:	380 watts

5.1 System

Volume Control range	50 dB in 1 dB steps
Channel trim range	+/- 6 dB in 1 dB steps
LFE gain range	0/+10 dB switchable

Satellite

- Lacquer finished baffle
- Low diffraction front baffle design with flush mounted drivers
- Solid 3/4" MDF enclosure with 1" MDF baffle
- Dimensions: Please see page 18
- Weight 5 lbs.
- 1/4"x 20 inserts for attachment of OmniMount
- 3/8" x16 insert for attachment to microphone stand with adapter (adapter not supplied)
- 4" cast frame Neodymium hemispherical woofer
- 1" Dual ring radiator Neodymium tweeter
- Fully video shielded
- Satellite Low frequency crossover 110 Hz
- Tweeter Crossover Frequency 2.0 kHz

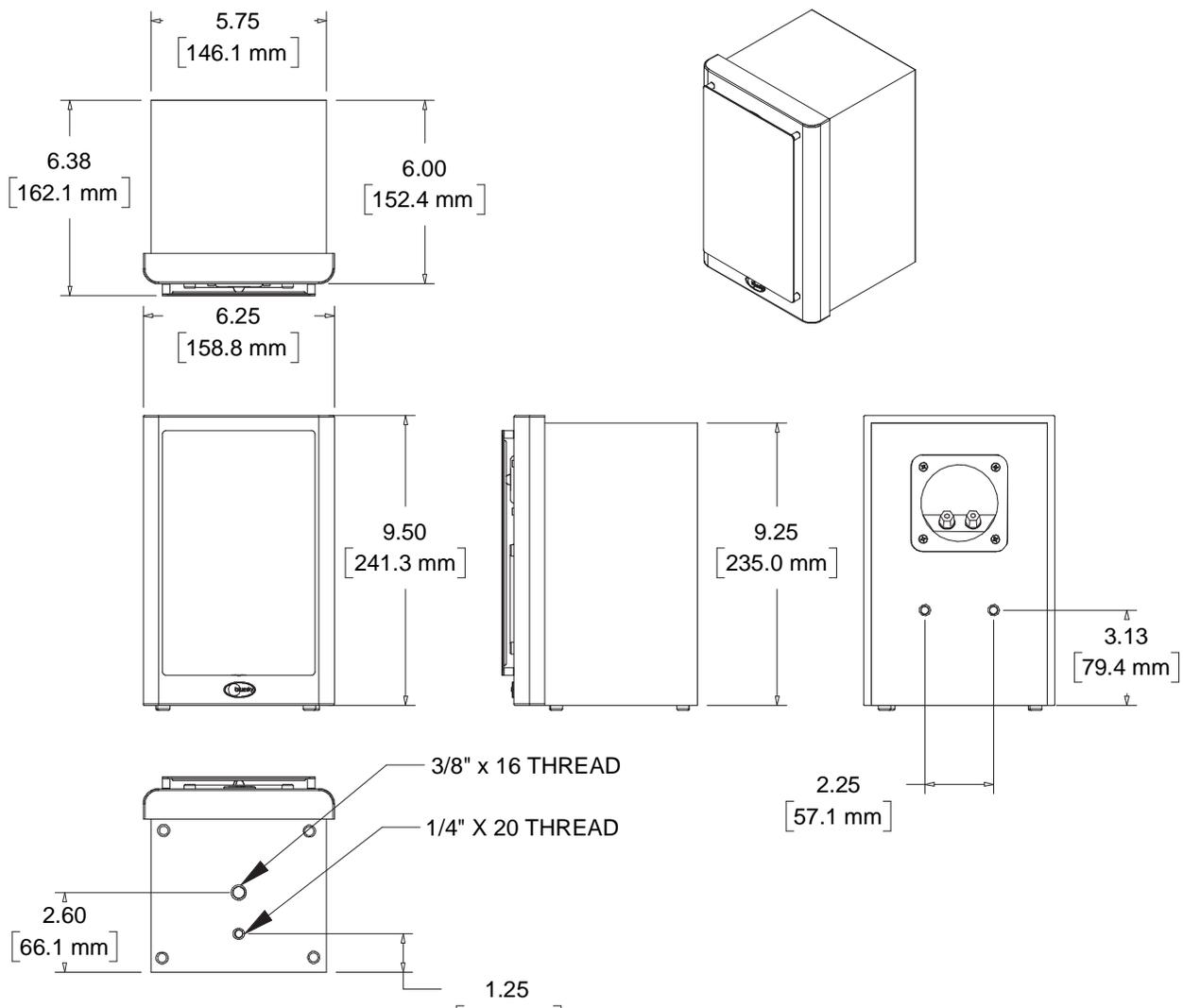
The following specifications are measured using the MediaDesk Amplifier

- Frequency Response Satellite
 - +/- 2.5dB 300 to 10 kHz
 - +/- 3.0dB 110 to 20 kHz
- Voltage Sensitivity (at reference gain)
 - 12 dBu = 90dB SPL @ 1M
 - Balanced Input attenuator set to +12 dBu
 - 1 dBu = 90 dB SPL @ 1M
 - Balanced Input attenuator set to +24 dBu
 - 240 mV = 90 dB SPL @ 1M
 - RCA input 4 ohm nominal impedance

8" Sealed Box Subwoofer

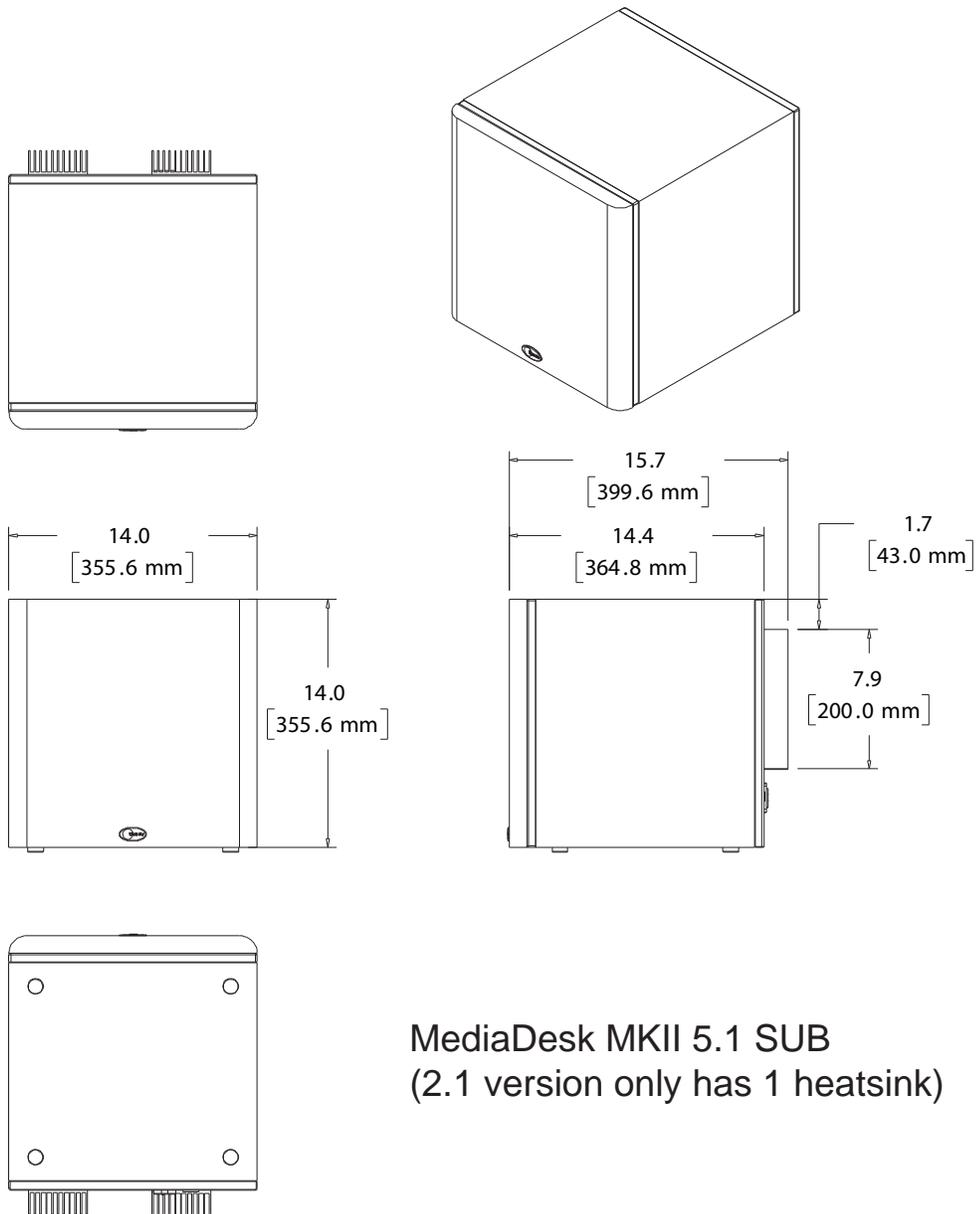
- Fully video shielded.
- High excursion driver with 2" voice coil
- Cast frame Foam surround
- Aluminum cone
- Solid 3/4" MDF construction with 1" MDF baffle
- Flush mounted driver
- Dimensions: See page 19
- Weight 45 lbs.
- Frequency Response Subwoofer
 - Anechoic Response:
 - 35 to 110Hz +/-3dB
 - Typical In-Room Response:
 - 20 to 200Hz (3000 Cubic Feet)

20. Satellite Cabinet Dimensions



**MediaDesk MKII
SAT Dimensions**

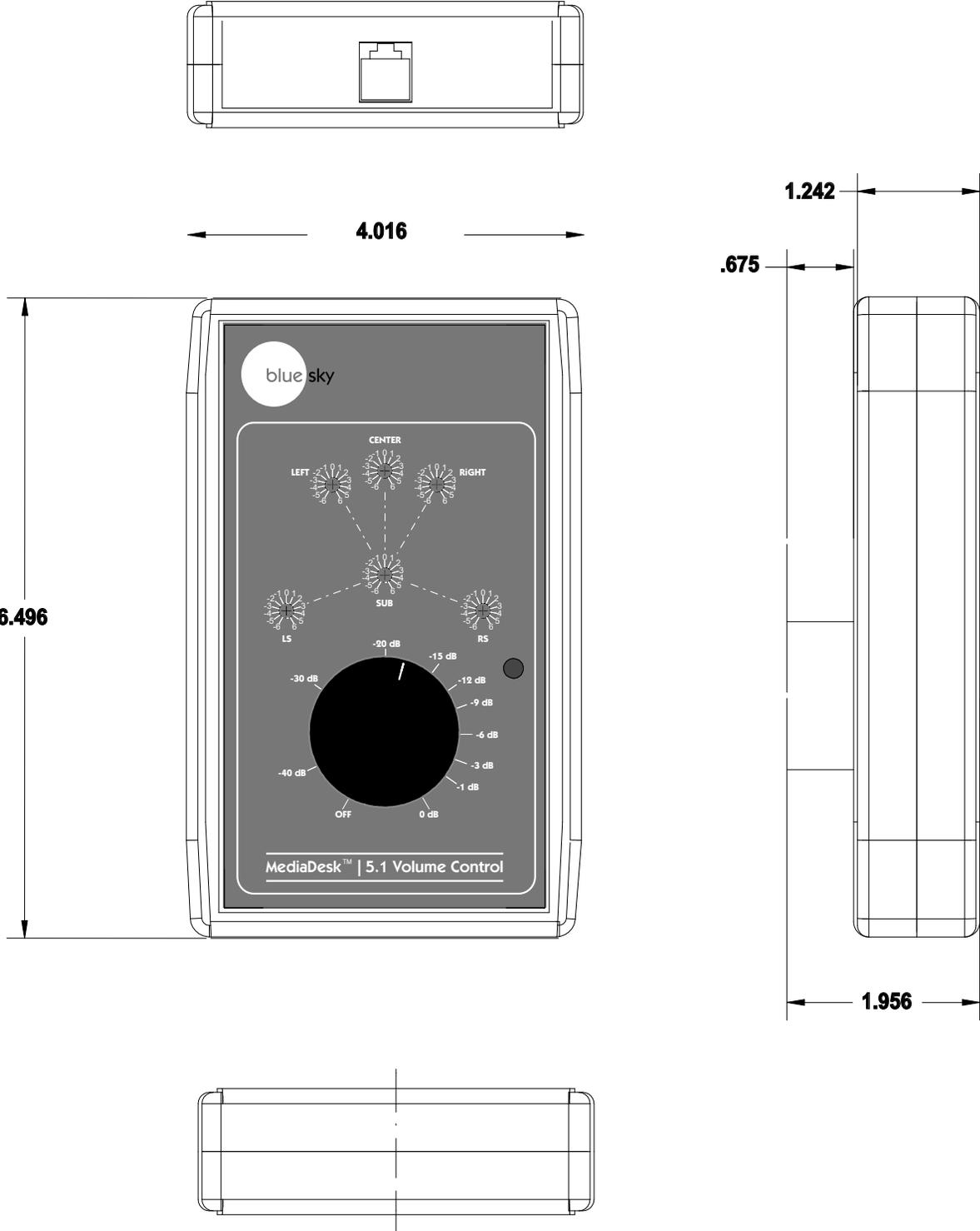
21. Subwoofer Cabinet Dimensions



MediaDesk MKII 5.1 SUB
 (2.1 version only has 1 heatsink)

MediaDesk MKII SUB Dimensions

22. MediaDesk™ 5.1 Remote



**MediaDesk 5.1 Remote
Dimensions in
US/English Standard (inches)**

23. Factory Service Instructions

Service for the U.S. versions of Blue Sky products is available only from our authorized distributor, Group One Ltd., located in Farmingdale, New York. (Service for Blue Sky products outside the United States can be obtained through local dealers or distributors.) If your monitor needs service, follow these instructions:

1. Review the manual and ensure that you have followed all setup and operating instructions.
2. Call (516) 249-1399 9:00am to 5:30pm EST and ask for Customer Service. Explain the problem and request an RA (Return Authorization) number. It is important to have your product serial number available when you call. You must have an RA number before you can obtain service.
3. Pack the product in its original packing material and box (do not return the power cord or the manual). If you don't have the original packing material and/or box, please let Customer Service know when you call for the RA number. Blue Sky is not responsible for any damage that occurs due to non-factory packaging.
4. Include a legible note stating your name, shipping address (no P.O. boxes), daytime phone number, RA number, and a detailed description of the problem, including how it can be duplicated
5. Write the RA number on the top of the carton.
6. Ship the product to the address below. We recommend United Parcel Service (UPS). Please insure the product regardless of shipping method.

Blue Sky International
ATTN: SERVICE DEPT / RA#
70 Sea Lane
Farmingdale, NY 11735
USA

7. Turnaround time is three to five business days depending on the problem. When calling for RA numbers, please ask Customer Service what the turnaround time is. The serviced product will be sent back to you via the same shipping method as received (i.e. if you ship your monitor UPS Ground it will be returned UPS Ground, UPS Red will be returned UPS Red etc...). This only applies to products serviced under the warranty.

24. General Contact Details

For sales and other enquiries, please contact Blue Sky at:

Blue Sky International
70 Sea Lane
Farmingdale, NY 11735
USA

tel: 516 249 1399
fax: 516 249 8870
email info@abluesky.com

To discover the very latest information check out our website at:

www.abluesky.com

