

Your warranty will be in effect when you send in your warranty card

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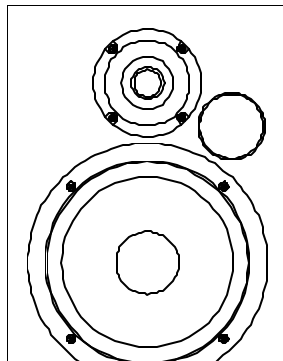
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SYSTEM SUBWOOFER



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REFERENCE MANUAL

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INTRODUCTION Thank you for choosing the Event Electronics™ 20/20/15 System Subwoofer. Before you proceed, please take a minute to read this manual and familiarize yourself with the product's features, set-up and use.

Everyone wants more bottom end and the 20/20/15 System Subwoofer is the foundation of an extended bandwidth monitoring system. With *five* balanced inputs and pass-throughs for active monitors, the 20/20/15 provides low

frequency bandwidth and power extension to all channels in mono, stereo and 5.1 surround monitoring systems. A *sixth* balanced input is available for monitoring the separate LFE “.1” signal, along with it’s own pass-through for feeding multiple subs when room size or program material demands more acoustic output.

The 20/20/15 Subwoofer’s variable crossover tunes to your active monitor’s natural low-end response. This intentionally produces the lowest possible sub-to-monitor crossover frequency which results in more accurate monitor system performance, and more options for placing the subwoofer in the studio. Other systems only pass the front channels through a *fixed* 80Hz crossover which changes the low frequency sonic character of the monitors and unnaturally redirects more audible acoustic energy through a single low frequency channel.

Event’s versatile Bass Management System includes the five monitor inputs and a monitor group level control. This feeds the active variable crossover, a continuously variable 0-180° phase delay control, and a polarity invert switch. There’s even a monitor input disable switch for instant in/out selection. The separate LFE input has its own level control and a fixed 120Hz crossover. Everything works together as a system—the 20/20/15 System Subwoofer.

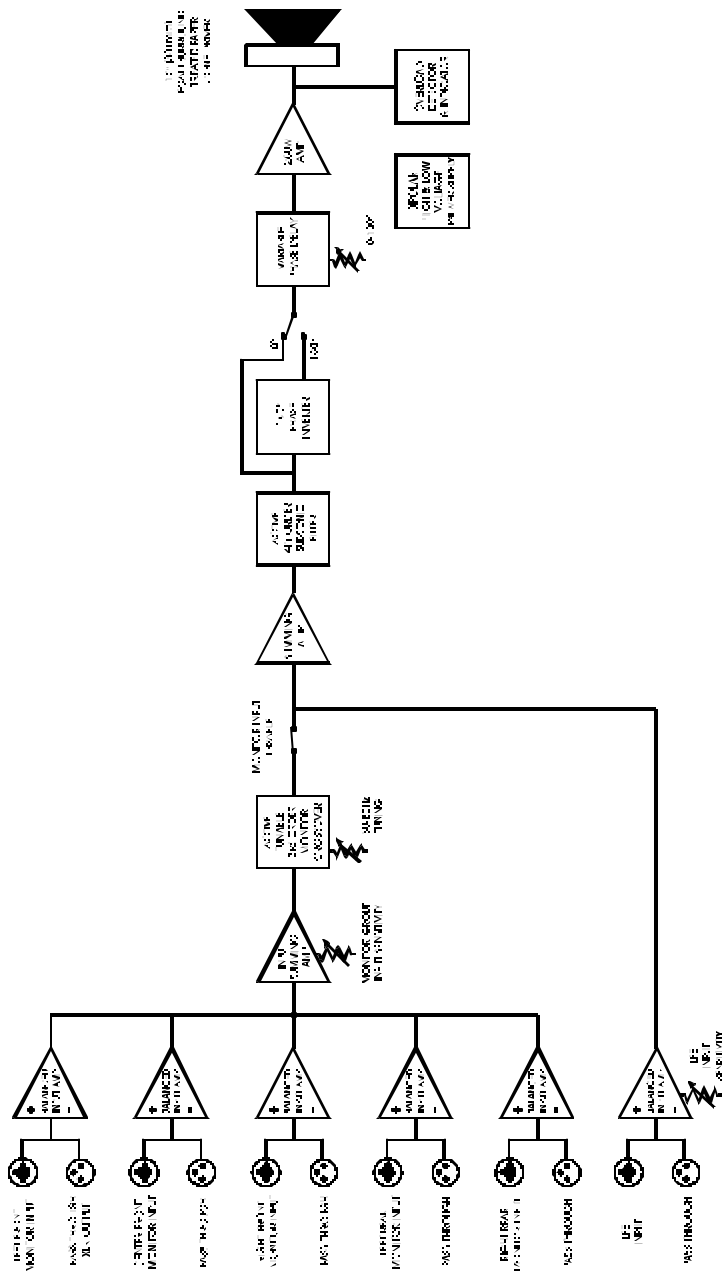
Crossover, Phase and Polarity settings for Event Direct Field Monitors are included in this booklet. Set-up information for newer models and other monitors can be found on the Event website at www.event1.com.

UNPACKING Check your subwoofer cabinet carefully. The packaging was designed to protect it during transit so immediately report any damage to your dealer or to the company that delivered it to you. The Subwoofer’s packing material is reusable. Please complete and return your warranty card to activate your warranty and to help us keep in touch with you. And tell us what you think of your new Subwoofer and of your Event dealer.

Place the Subwoofer cabinet upside down on a soft surface so that the four cabinet legs can be attached. The legs are shipped nested inside the four port tube openings alongside the woofer. Remove the packing material holding them in and attach the legs to the cabinet bottom using a large screwdriver and the screws provided. Tighten the screws until the legs won’t turn.

LF Driver:	Long-throw 15" coated paper cone with foam surround and high-temperature voice coil
Frequency Response:	28Hz - 120Hz, -3dB
LFE Crossover:	-3dB at 120Hz, 3rd order
Monitor Blend Crossover:	-3dB, variable 30Hz - 80Hz, third order
Amplifier Power:	250W, Linear
Noise:	>100dB below full output, 1kHz BW
Max SPL:	117dB peak @ 1 meter
Inputs:	One LFE channel, five mains monitor channels All inputs 40k ohm balanced via gold combination XLR-1/4" connectors
Monitor Input Sensitivity:	1.1V at any Monitor Input produces full output with Monitor Group Input Sensitivity control at maximum
LFE Input Sensitivity:	0.35V at any LFE Input produces full output with LFE Input Sensitivity control at maximum
Pass-Through Outputs:	One LFE channel pass-through, five mains monitor channel pass-throughs, all via male XLR connectors
Controls/Indicators:	LFE Input Sensitivity, Polarity Invert, Phase Delay, Monitor Group Input Sensitivity, Monitor Input Disable, Monitor-Sub Crossover Tuning, Mains Power, Power/Clip Indicator
Protection:	RF interference, output current limiting, over temperature, turn-on/off transient, subsonic filter, resettable mains circuit breaker
Power Requirements:	300VA, factory programmed for either 120V~ 60Hz, 220-240V~ 50-60Hz or 100V~ 50-60Hz mains
Linecord:	3 conductors, 18 gauge wire, 2 meters long Type SVT 105°C
Polarity:	Positive signal at any + input produces outward LF cone displacement (with Polarity Invert off)
Cabinet:	Vented, 5/8" vinyl-laminated lock-mitered MDF, internally braced and insulated
Dimensions:	17-1/2" W x 21-1/2" D x 29" H (includes 3" feet) 3.8 cubic feet
Weight:	100 lbs.

Specifications are subject to change without notice



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SETUP The monitoring format and room size generally dictate subwoofer set-up. The 20/20/15 System Subwoofer supports Mono, Stereo and 5.1 channel formats, plus most anything in between.

If you are confused about integrating a subwoofer into your stereo monitoring system—or about how to set up your surround speakers with a subwoofer—read this. The good news is that if you’ve got an accurate set of active nearfield monitors up and running now—properly placed in front of you in a reasonable acoustic environment—then you are probably ready to place, connect and use the subwoofer. And, if your control room is large enough, with some space behind the listening position, add three more of the same monitors mounted at the same height and you are probably ready for 5.1 surround monitoring.

The truth is that the same acoustic principals apply whether you have two speakers or six. You cannot go wrong by following a few guidelines.

1. Start with the great monitors. If you have two trusted nearfield monitors, get three more of the identical kind for your surround monitoring system. Great stereo monitors make great surround monitors.
2. It seems obvious to place both speakers in a stereo pair equal distance away from the listening position. We do this instinctively to maintain stereo balance. The same rule applies to surround monitoring where ALL the speakers (fronts, rears and sub) are placed at equal distance to the listening position. After placing all the speakers on the diameter of a circle like this, with the listening position in the center, distance related amplitude and time offsets will be minimal.
3. The final element, positioning on the circle, is determined by your format. In the case of a **mono** system, both the single monitor and subwoofer are placed directly in front of the listening position, the monitor at ear level, usually directly above the sub.
4. In a **stereo** system, the two nearfield monitors typically sit 60° apart, or 30° either side of straight ahead, again positioned close to ear level. If you are using one subwoofer, place it *on the circle* between the two speakers. If you have two subs, one for each channel, place them directly under each monitor, keeping everything on the circle.
5. Finally, **surround** formats with front, center and rear speakers fill in additional angles on the circle. The center channel is obviously located front and center, with the two remaining front speakers at least 30° either side of center, or 60° from each other. The two rear surround monitors are often spaced wider apart than the front left and right speakers. This angle sometime approaches 120°.

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CONNECTIONS AND OPERATION Connections are straightforward. You may find it helpful to refer to the block diagram.

1. **LFE monitoring only.** Feed the LFE signal via the LFE input connector and set the subwoofer level with the LFE INPUT SENSITIVITY control. If you are using anything other than Event Direct Field Monitors, start with the POLARITY INVERT switch out (off) and set the PHASE DELAY control to 0°. These controls may need adjustment if your LFE program material must have a specific phase relationship with the main program material. If you are using Event Direct Field Monitors, we recommend the settings found in the table on the opposite page.

2. **Extending the low frequency response of your active monitoring system.** This works for mono, stereo and 5.1. Pass the feeds now going to your active monitors, through the 20/20/15 amplifier. The five monitor channels are marked on the amplifier panel for convenience during wiring, but all of the five inputs are summed equally. If you are using anything other than Event Direct Field Monitors, start with the POLARITY INVERT switch out (off) and set the PHASE DELAY control to 0°. If you are using Event Direct Field Monitors, we recommend the settings found in the table.

Any signals coming via the five monitor inputs are muted with the MONITOR DISABLE button. This mutes the Subwoofer if there's no LFE input.

3. **Putting it all together.** The 20/20/15 System Subwoofer is in full form in a 5.1 surround system where all five monitor inputs are used along with the LFE input. If you are using anything other than Event Direct Field Monitors, start with the POLARITY INVERT switch out (off) and set the PHASE DELAY control to 0°. These controls may need adjustment if your LFE program material must have a specific phase relationship with the main program material. If you are using Event Direct Field Monitors, we recommend the settings found in the table.

the OFFSET column below. Refer to it when the subwoofer must sit outside the circle.

EVENT MONITOR	SUB OFFSET OUTSIDE CIRCLE	MONITOR-SUB CROSSOVER FREQUENCY	POLARITY	PHASE DELAY
20/20 <i>bas</i> PS 8	0'	35 Hz.	INVERT	0°
	+3'	35 Hz.	NORMAL	120°
	+6'	35 Hz.	NORMAL	80°
	+9'	30 Hz.	NORMAL	20°
PS6	0'	40Hz.	INVERT	100°
	3'	40 Hz.	INVERT	60°
	6'	40 Hz.	INVERT	0°
PS5	0'	50 Hz.	INVERT	70°
	3'	50 Hz.	INVERT	100°
	6'	50 Hz.	INVERT	60°

CARE AND MAINTENANCE Your Event Subwoofer will not require any special care or maintenance if properly used. The cabinet is finished with a durable vinyl laminate that can be cleaned with a soft damp cloth. Avoid touching the exposed speaker elements. Do not expose the controls, connectors, or the speaker elements to moisture or chemicals.

This unit has not been evaluated for use in tropical a tropical environment. Do not expose this unit to dripping or splashing liquids, and liquid filled objects should not be placed on the unit. When the power switch is off, internal components are still connected to the mains. Use the linecord provided with your subwoofer or an equivalent. See the specifications for linecord requirements.

Mix at reasonable levels to protect your speakers and your hearing. Refer service to qualified personnel.