



ACTPRO
PROFESSIONAL ACTIVE SYSTEMS

ACTPRO12M

12" Two-Way Active Loudspeaker

ACTPRO15

15" Two-Way Active Loudspeaker

ACTPRO1515

Dual 15" Two-Way Active Loudspeaker

ACTPRO18S

18" Active Subwoofer

INSTRUCTION MANUAL



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SAFETY AT A GLANCE

- 1)** Read and keep these instructions for reference.
- 2)** Follow all instructions.
- 3)** Heed all warnings.
- 4)** DO NOT turn on the ACTPRO amplifier before connecting all other external devices.
- 5)** Do not use the speaker system near water. Be extra cautious when moving the speaker system during rainstorms or while transporting it over wet surfaces, as water may splash onto the speaker system.
- 6)** Clean only with dry cloth.
- 7)** Do not block any ventilation openings and operate in accordance with manufacturer's instructions.
- 8)** Do not install near heat sources such as radiators, stoves or other devices that may produce heat.
- 9)** Do not defeat the safety purpose of the polarization or grounding-type plug. A polarized plug has two blades, one blade wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade, or the third prong, is provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.
- 10)** Protect the power cord from being walked on or pinched, particularly at the plug, and the point where it exits the amplifier.
- 11)** Only use attachments / accessories specified by B-52 Professional.
- 12)** Unplug the amplifier before lightning storms and when not in use.
- 13)** Refer all servicing to qualified personnel. Servicing may be required when the speaker system has been damaged in any way such as: when power-cord or plug is damaged, liquid has been spilled into the speaker system, the speaker system has been exposed to moisture or rain, does not operate normally, or has been dropped.
- 14)** Moisture can damage the ACTPRO amplifier and cause corrosion of electrical contacts.
- 15)** Keep the speaker system out of extended or intense direct sun light. Containers filled with any type of liquid should not be placed on or near the speaker system.
- 16)** Do not remove rear amplifier panel. There are no user serviceable parts inside.



WELCOME TO THE B-52 FAMILY

CONGRATULATIONS ON YOUR PURCHASE OF THE ACTPRO SPEAKER SYSTEM.

Please review all the information provided in this manual, to ensure that you attain the best possible sound quality out of your system.

The ACTPRO Series full-range powered loudspeakers are capable of producing rich, clear sound at extreme SPLs. The amplifiers used in ACTPRO powered loudspeakers employ sophisticated circuitry including acoustically tuned 4th order crossovers, four stages of equalization, a built-in compressor/limiter and short circuit/over-current protection. ACTPRO Series amplifiers have an extra high current output stage, which sets it apart from the competition, allowing for uninterrupted extended play. All ACTPRO amplifiers are Bi-Amps with fully discrete output stages; low frequency amplifiers employ our proprietary class G topology for high efficiency and low power consumption.

Our new ACTPRO18S subwoofer is the ultimate solution for low frequency sound reinforcement. These innovative active subs deliver deep, rich, chest pounding bass. At the heart of the ACTPRO subwoofer is our proprietary class G amplifier.

ACTPRO speakers feature a rugged birch plywood construction and durable, black Warnecke™ paint finish that ensures that the cabinets look as great as they sound. The ACTPRO amplifiers provide LED indicators for power, signal presence, limiter activation and protection mode. In addition to rear indicators a blue LED power indicator is provided on the front grille of the cabinet.

HEARING DAMAGE AND PROLONGED EXPOSURE TO EXCESSIVE SPLs

B-52 speakers can produce sound levels high enough to cause permanent hearing damage to performers, production crews or people in the audience. Hearing protection devices are recommended for use where long-term exposure to high SPLs is not avoidable. Remember, if it hurts, it is definitely too loud! Long exposures to high SPLs cause first temporary threshold shifts, limiting your ability to hear the actual loudness and exercise good judgment. Repeated long term exposure to high SPLs can and WILL CAUSE PERMANENT HEARING LOSSES!

Please note the recommended exposure limits (right) in Table G-16. More information about these limits is available on the US Government Occupational Safety and Health (OSHA) website at: www.osha.gov

TABLE G-16 PERMISSIBLE NOISE EXPOSURES (1)	
Duration per day, hours	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25 or less	115



IMPORTANT SAFETY PRECAUTIONS

1. READ INSTRUCTIONS – All the safety and operating instructions should be read before this product is operated.

2. RETAIN INSTRUCTIONS – The safety and operating instructions should be retained for future reference.

3. HEED WARNINGS – All warnings on the amplifier and in the operating instructions should be adhered to.

4. FOLLOW INSTRUCTIONS – All operating and use instructions should be followed.

5. WATER AND MOISTURE – The speaker system should not be used near water - for example, a bathtub, washbowl, kitchen sink, laundry tub, wet basement, or near a swimming pool, and the like.

6. CARTS AND STANDS – The speaker system should be used only with a cart or stand that is recommended by the manufacturer.

A speaker and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the speaker and cart combination to overturn.



7. WALL OR CEILING MOUNTING – The product should never be mounted to a wall or ceiling.

8. HEAT – The amplifier on the back of the ACTPRO system should be situated away from heat sources such as radiators, heat registers, stoves, or other sources (including amplifiers) that produce heat.

9. POWER SOURCES – This product should be operated only from the type of power source indicated on the rating label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.

10. GROUNDING OR POLARIZATION – This product may be equipped with a polarized alternation-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

11. POWER-CORD PROTECTION – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to the cord in correspondence of plugs, convenience receptacles, and the point where they exit from the amplifier.

12. CLEANING – The speaker and amplifier should be cleaned only as recommended by the manufacturer. Clean by wiping with a cloth slightly damp with water. Avoid getting water inside the speaker or amplifier.

14. NON-USE PERIODS – The power cord of the amplifier should be unplugged from the outlet when left unused for a long period of time.

15. OBJECT AND LIQUID ENTRY – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

16. DAMAGE REQUIRING SERVICE – The amplifier should be serviced by qualified service personnel when:

- A. The power-supply cord or the plug has been damaged; or
- B. Objects have fallen, or liquid has been spilled into the amplifier; or
- C. The amplifier has been exposed to rain; or
- D. The amplifier does not appear to operate normally or exhibits a marked change in performance; or
- E. The amplifier has been dropped, or the enclosure damaged.

17. SERVICING – The user should not attempt any service to the speaker and/or amplifier beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

18. VENTILATION – Slots and openings in the amplifier are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack.

19. ATTACHMENTS – Do not use attachments not recommended by the product manufacturer as they may cause hazards.

20. 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 a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product.

21. LIGHTNING – For added protection for this product before 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.

22. 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 fire, electric shock, or other hazards.

23. 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.

24. FUSES – Always use the correct rating and type of fuse as indicated on the rear panel of the amplifier. Note the proper rating fuse is determined by the AC line voltage in the country this speaker system is being operated. **COMPLETELY DISCONNECT POWER CORD FROM AMPLIFIER BEFORE ATTEMPTING TO REPLACE FUSE!**

25. AC SELECT SWITCH: This switch must be set to match the AC line voltage in the country this speaker system is being operated. To change the setting, loosen (do not remove) the two screws above and below the slide switch. Temporarily move the protective cover strip and slide the actuator to match the voltage in your country. Place the protective cover strip back over the switch and tighten the two screws. **COMPLETELY DISCONNECT POWER CORD FROM AMPLIFIER BEFORE ATTEMPTING TO CHANGE AC VOLTAGE SETTINGS!**



CAUTION
DO NOT OPEN
RISK OF ELECTRIC SHOCK



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



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



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

CAUTION

To prevent electric shock, do not use a polarized plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.



POWERED LOUDSPEAKER FEATURES

AMPLIFIER FEATURES

- Bi-amp design with discrete output stage for both the woofer and compression driver
- 4th order electronic X-over and multi-stage custom equalization
- Proprietary efficient class-G amplification on low frequency channel
- Subsonic filter: 12dB/octave
- Built-in compressor/limiter
- Balanced XLR input (Left and Right on ACTPRO18S Sub)
- Balanced XLR full-range output (Left and Right on ACTPRO18S Sub)
- Left and Right balanced XLR high-pass outputs on ACTPRO18S Sub
- 0-180° Phase switch on ACTPRO18S Sub
- 100Hz 18dB/octave low cut switch on Full Range models
- 3rd order electronic crossover on ACTPRO18S
- Ground lift switch
- Full thermal & short circuit protection
- Large heatsink with convection cooling
- Oversized toroidal transformer
- LEDs for Power, Protect, Limit and Signal
- 115V/230V 60Hz/50Hz selector switch

PETP-FILM DIAPHRAGM COMPRESSION DRIVER

- Sophisticated computer modeling was used to optimize the magnetic and acoustic design of these ferrite magnet compression drivers to achieve outstanding performance and reliability.
- A matched wave front phase corrector produces a perfectly coherent sound wave at the horn throat, for a detailed and dynamic mid and high frequency performance.
- The polyimide-insulated, copper-clad aluminum voice coil is edge-wound on a glass fiber former resulting in a lower distortion and superior power to weight ratio.
- A one-piece, PETP film diaphragm and surround optimizes energy transfer for greater efficiency
- The unique patented clamping system contributes directly to a low distortion performance while improving the lower mid-band response.

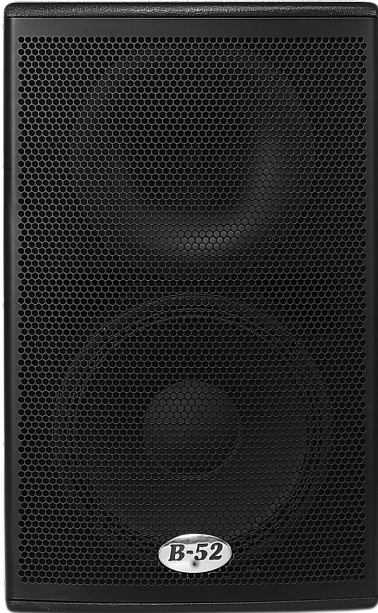
COMPONENTS

- **Compression Driver:**
 - Celestion 1"-exit with PETP film diaphragm
- **Horns:**
 - 90° x 40° constant directivity horn (ACTPRO15 & ACTPRO1515)
 - Conical wave guide (ACTPRO12M)
- **LF Transducers:**
 - Vented magnet assemblies for advanced cooling
 - High temperature copper voice coil wound on polyamide former for increased reliability
 - Celestion SP-1200 (ACTPRO12M)
 - Celestion SP-1500 (ACTPRO15 & ACTPRO1515)
 - Proprietary SP-1804 cast frame subwoofer (ACTPRO18S)

CABINET FEATURES

- Made in U.S.A. using advanced CNC routers
- 5/8" birch plywood construction (ACTPRO12M, ACTPRO15, ACTPRO1515)
- 3/4" birch plywood construction (ACTPRO18S)
- Main & monitor sitting positions (ACTPRO12M)
- Reinforced internal bracings
- Environmentally friendly Warnecke™ scratch resistant black paint finish
- 16 gauge wrap around steel grilles
- Metal handles and rubber feet
- Rubber strips (ACTPRO12M)
- Metal pole mounting cup (ACTPRO1515 excluded)
- Front logo illuminated with blue LED

HOW THEY SHOULD BE USED



ACTPRO12M

The ACTPRO12M was designed to sit on the floor as a stage monitor, to be pole-mounted on a 38mm diameter speaker stand or mounted above the ACTPRO18S subwoofer using or a pole inserted into the pole cup of the ACTPRO18S.

IMPORTANT:

Do not exceed a pole length longer than 31" (787mm) when supported atop an ACT PRO18S subwoofer.

ACTPRO15

The ACTPRO15 was designed to sit on the floor, on stage, on a subwoofer enclosure, or pole mounted on a 38mm diameter loudspeaker support pole. The pole can be part of a loudspeaker stand or a pole inserted into the pole-mounting cup of the ACTPRO18S.

IMPORTANT

When used in conjunction with the ACTPRO18S, the mounting pole length must not exceed 26" (660mm) in length.





ACTPRO1515

The ACTPRO1515 was designed to sit on the floor, onstage, or placed on top of the ACTPRO18S subwoofer enclosure.

IMPORTANT

Do not attempt to pole-mount this loudspeaker atop the ACTPRO18S subwoofer cabinet.

ACTPRO18S

The ACTPRO18S was designed to sit on the floor or onstage. A pole cup built into the top of the enclosure accepts 38mm loudspeaker mounting poles. For best quality sound, detach the supplied casters while the subwoofer is in operation.

IMPORTANT

Do not pole-mount or stack more than one full-range ACTPRO enclosure on top of the ACTPRO18S.





INSTALLATION

Prior to operation, ensure the amplifier located on the rear of the enclosure has adequate space behind it for proper ventilation. Ensure that all safety precautions regarding the operation of loudspeakers and related electronic equipment are understood and adhered to. Consult a licensed, Professional Engineer regarding physical equipment installation.

Do not modify the cabinet construction of any ACTPRO Series cabinet to suspend the loudspeaker. Do not attempt to suspend any ACTPRO Series cabinet by the handles. Any attempt to suspend an ACTPRO Series cabinet could result in injury or death.

COOLING

The ACTPRO loudspeakers use a power amplifier that produces heat. Provide a minimum of 8" (203mm) clearance from the back of the cabinet to any wall for the convection cooling to be efficient. Keep all objects that may restrict airflow away from the rear of the enclosure (i.e boxes, draperies, fabric, etc...).

Do not operate any ACTPRO models, *except ACTPRO12M*, when oriented in a horizontal position. Operating an ACTPRO Series cabinet in the horizontal position can cause overheating and thermal limiting. The cooling fins on the amplifier module must be vertical, in order to disperse the heat generated by the amplifier efficiently.

ACTPRO12M is designed to be used as a floor monitor. When in horizontal position it can operate long-term without overheating if not pushed to the limit. Observe proper signal level to prevent overheating the ACTPRO12M in a floor monitor application.

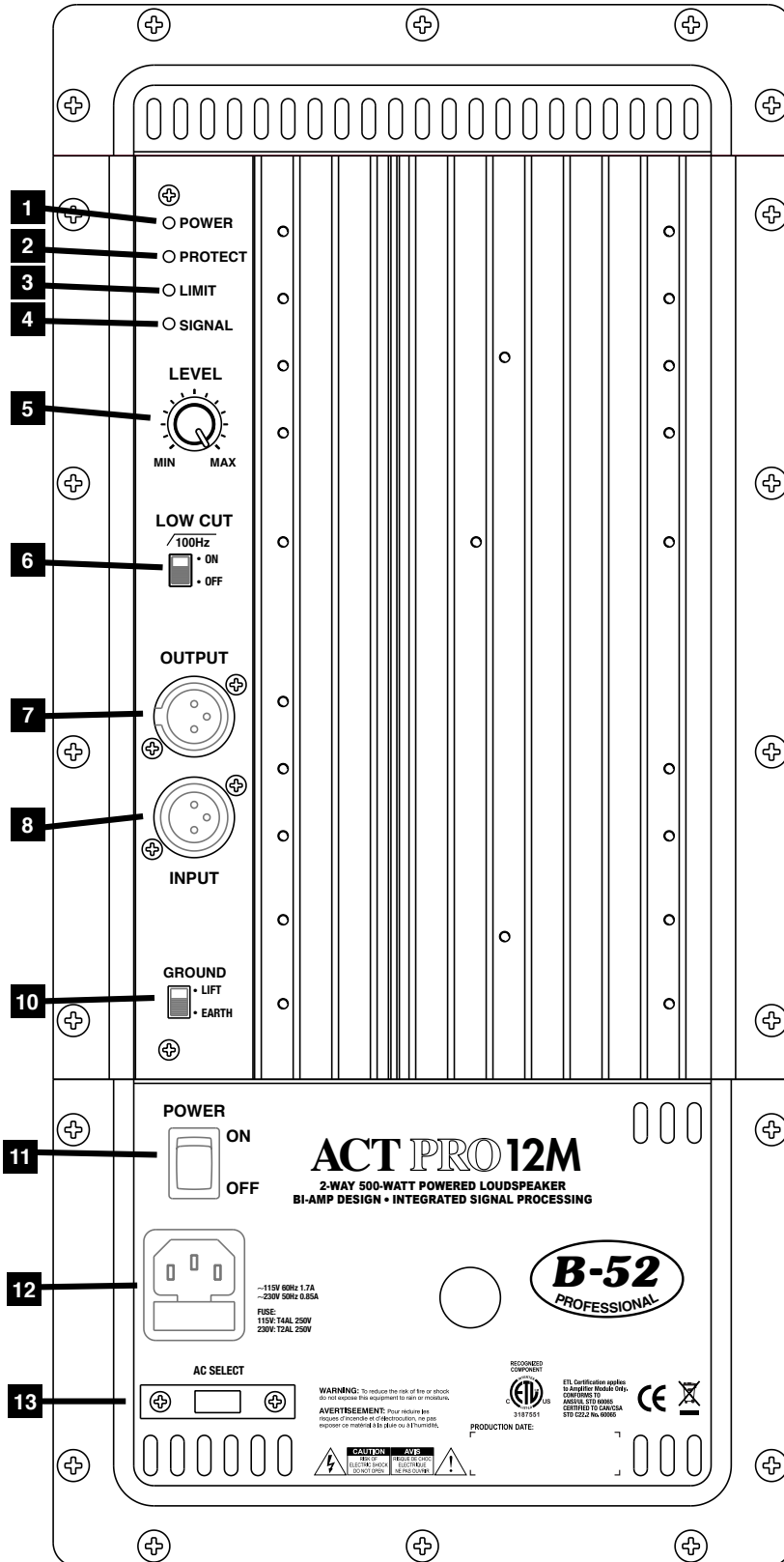
During operation, or permanent installation of enclosures, do not position any ACTPRO loudspeaker with its rear panel exposed to direct sunlight. Direct sunlight heats the amplifier module and will limit its ability to produce full output long-term.

Do not install enclosures where rain or other water sources can contact the cabinet or amplifier. Although durable, the ACTPRO Series enclosure is not weatherproof. Installation in outdoor locations must provide protection from the elements.



ACTPRO AMPLIFIER REAR CONTROLS

ACTPRO12M, ACTPRO15, ACTPRO1515



1. LED POWER INDICATOR

The green LED POWER indicator, located on the back of the amplifier, will illuminate when the AC Power switch is in the "ON" position. The LED POWER indicator will dim and turn off when the AC Power switch is in the "OFF" position or AC mains power has been disconnected from the loudspeaker.

If the POWER indicator does not illuminate when the loudspeaker is powered on, verify the AC mains line cord is properly connected to the loudspeaker and inserted into the AC outlet. Verify the AC outlet at the venue of operation is functioning properly. In the event of the AC mains outlet functioning properly, but the loudspeaker fails to operate, the loudspeaker may require servicing. Please contact B-52's Technical Support and Customer Service Department.

2. PROTECT LED INDICATOR

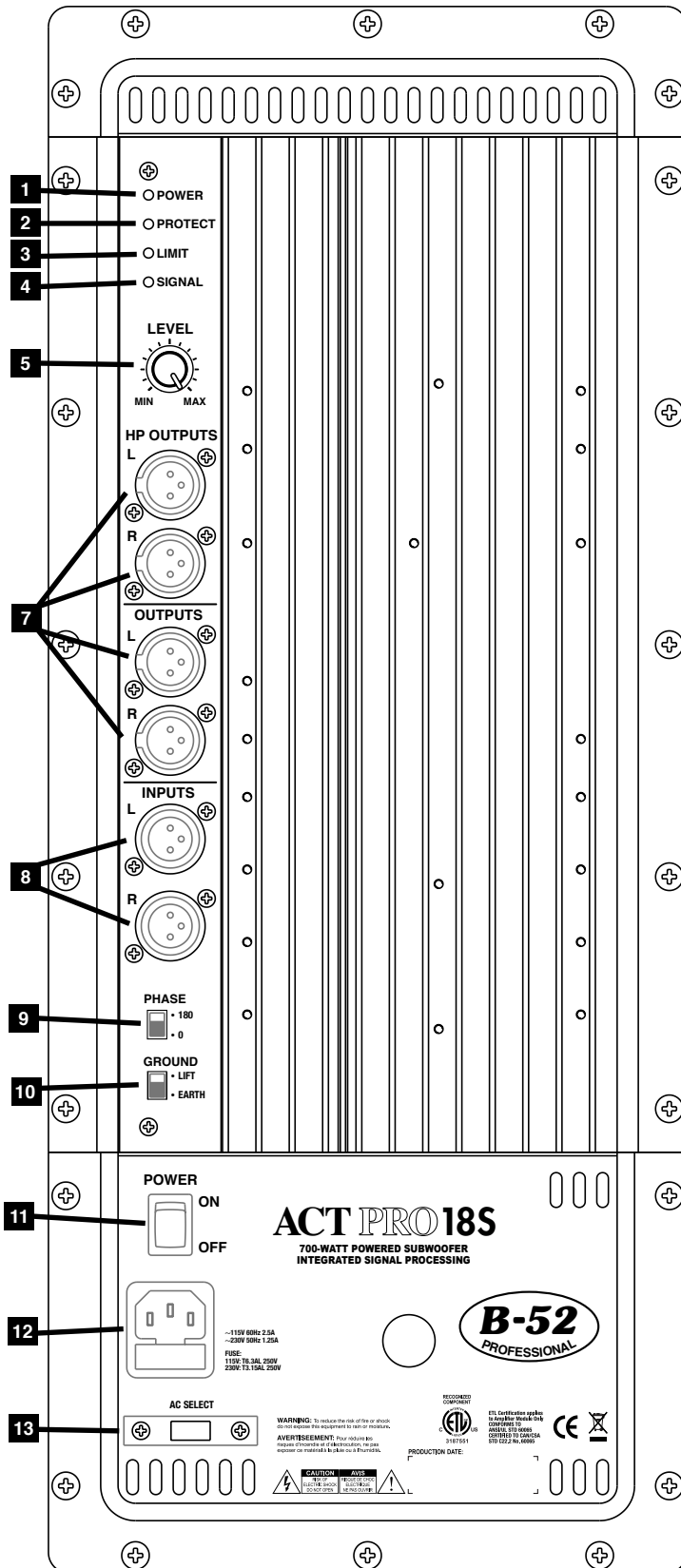
If the power module overheats, the amplifier will go into "protection mode" to limit further temperature rise. The amplifier will take about 30 seconds to several minutes for the temperature to drop and resume operation. When this occurs, the exposed heat sink will feel hot to the touch.

Overheating is usually caused by excessive ambient temperature, direct sunlight for a prolonged period of time during operation, or playing the loudspeaker past its operational limits.

If thermal overheating occurs, reduce signal level to avoid constant illumination of the LIMIT LED INDICATOR. In some circumstances, when ambient temperature is too high, you may need to set a fan behind the speaker to improve ventilation at heatsink.



ACTPRO AMPLIFIER REAR CONTROLS



3. LIMIT LED INDICATOR

The red LIMIT indicator alerts the user that the amplifier output signal is clipping and therefore is being compressed by the built-in clip-limiter.

Momentary Bright Red Flashes

Indicates that the amplifier is clipping briefly causing overdrive distortion and the internal limiter is reducing gain.

ACTPRO amplifiers employ a sophisticated compressor-limiter circuitry, which is nearly inaudible at moderate overdrive conditions. It is normal to see the occasional flashing of the red LIMIT LED.

Continuous Bright Red Light

Indicates continuous and gross overloading of the amplifier. Such overloads are audible and may lead to overheating of the amplifier and shortening the life of the speaker components. If the amplifier is grossly overloaded and the red LIMIT LED is on the most of the time, the operator should reduce the signal level so that LIMIT LED only flashes occasionally.

4. SIGNAL LED INDICATOR

The green SIGNAL indicator alerts the operator to the presence of an input signal at the loud-speaker amplifier.

If there is no indication, check the gain settings on the amplifier and increase the gain if necessary. Check input connections and audio source for signal. If no output persists, try a different signal cable from your mixer to the ACTPRO Series loudspeaker. If the green SIGNAL LED remains illuminated without a source connected, the amp may need servicing.

5. LEVEL CONTROL

Turn the LEVEL control clockwise to increase gain and counter clockwise to decrease gain. When operating with the GAIN set at 1/3 volume or below, it may be possible to exceed the head-room of input circuitry on your ACTPRO loud-



ACTPRO AMPLIFIER REAR CONTROLS

speaker. If this is the case, reduce the input signal strength and increase the gain of the loudspeaker amplifier.

Always observe the red LIMIT LED on the amplifier panel. This LED illuminates when signal is clipping and compressor-limiter is activated. All ACTPRO amplifiers employ sophisticated limiter circuitry, which monitors signal condition at both LF and HF amplifiers (LF only on ACTPRO18S) and compresses output signal when necessary to protect woofer and compression driver from damages. Limiter circuitry works very unobtrusively, you may not even notice when it activates. It may prompt you to push input signal more, it is good practice for the red LIMIT LEDs to blink occasionally but not constantly. Constant illumination of the LIMIT LED indicates a gross overloading condition and should be avoided. Reduce the signal level if LIMIT LED lights constantly or blinks constantly!

Note that LEVEL Control has a range of 30dB. It does not attenuate output signal to zero. LEVEL control on ACTPRO loudspeakers is used to set optimal maximum level for performance, not for constant control of sound volume. Your mixer's master volume control should be used for this purpose.

NOTE that LEVEL control provides about 12dB attenuation in middle position. You will find that in most cases the best sound (lowest distortions and lowest noise) will be achieved when LEVEL Control is set somewhere between middle and FCW position.

6. LOW CUT SWITCH (ACTPRO12M, ACTPRO15, ACTPRO1515)

Found beneath the LEVEL control, this small slider switch engages or disengages the 100Hz 18db/Octave Low Cut filter. Switch the filter OFF when not using subwoofers in the system. Switch the filter ON when you are connecting subwoofers. This will enable your subwoofer-equipped system to operate properly and allow the full range loudspeakers to provide improved clarity in the mid and high-range frequencies. NOTE that when you connect ACTPRO full-range

active loudspeaker to HP outputs of ACTPRO18S subwoofer, DO NOT engage LOW-CUT switch on full-range loudspeaker. Input signal for your full-range loudspeaker has already been processed by ACTPRO18S's circuitry.

ACTPRO12M: We recommend switching the filter ON for the best sound clarity. If using as a floor monitor, turn the filter ON for improved vocal range clarity and to reduce low frequency build-up on stage.

7. OUTPUT CONNECTIONS

All Full-range models have one XLR output connector marked OUTPUT. The output connector is wired in parallel with the input, allowing connection of multiple enclosures in a "daisy-chain" fashion. The ACTPRO18S0 has two sets of output connectors, one set (left and right) for full-range outputs (wired in parallel with inputs) and one set (left and right) for high-pass outputs.

ACTPRO12M, ACTPRO15, ACTPRO1515

Insert the XLR connector into the jack marked OUTPUT. Connect the other end of the cable to the input of the next audio device, such as another ACTPRO full range active loudspeaker.

ACTPRO-18S OUTPUT (Full Range)

Use the outputs marked OUTPUT (Full Range) (left and/or Right) when you are connecting to other ACTPRO speakers and/or to other powered loudspeakers that enable full-range audio or if they feature their own low frequency filtering.

HP OUTPUTS: Use the outputs marked HP OUTPUT (Left and/or Right) when you are connecting other ACTPRO and/or other powered loudspeakers that DO NOT feature low frequency filtering or when the low frequency roll off is desired. DO NOT use the HP OUTPUT connectors for connecting other powered subwoofer loudspeakers - use the OUTPUT (Full Range) line outs instead. Make sure to power OFF any ACTPRO and/or other powered loudspeaker connected to the HP OUTPUT before turning off the ACTPRO subwoofer power. If done correctly, this will



REAR PANEL CONTROLS (cont.)

prevent any unwanted transients (thuds, low-pops) from coming out of the connected loudspeakers. **IMPORTANT!** When you connect ACTPRO full-range active loudspeaker to HP outputs of ACTPRO-18S subwoofer, DO NOT engage LOW-CUT switch on full-range loudspeaker. Input signal for your full-range loudspeaker has already been processed by ACTPRO18S's circuitry.

IMPORTANT! If using full range loudspeakers from another manufacturer, we recommend that they be connected to the HP OUTPUT. This will ensure proper phasing of the full range loudspeaker with respect to the ACTPRO18S subwoofer.

8. INPUT CONNECTIONS

All Full-range models have one female XLR line-level input marked INPUT. The ACTPRO18S has a second connector (two input connectors total), one for the left channel's audio input and one for the right channel's audio input. Balanced connections should be used as much as possible to reduce AC hum and interference. On all ACTPRO amplifiers, the input impedance is 20k ohm for balanced connections.

ACTPRO12M, ACTPRO15 AND ACTPRO1515

Insert the male XLR connector into the jack marked INPUT. Ensure the connector is fully seated.

ACTPRO18S - For Stereo Operation With Full-Range Cabinets: From your mixer, insert the left channel's XLR connector into the left channel's (L) INPUT connector. Connect the right channel of your mixer by inserting the XLR connector into the right channel's (R) INPUT connector on the amplifier. If a single input signal is used, (for mono operation) plug into the L (left) channel's input. When two input signals are supplied to the amplifier, the subwoofer's gain is automatically increased by 6dB.

9. PHASE SWITCH (ACTPRO18S)

When all of the loudspeakers in a system are operating with the same polarity, a positive polarity

signal causes the excursion (the forward motion) of all loudspeaker cones. In turn, this sets up a positive reinforcement of the sound wave (each loudspeaker reinforces the output of the other loudspeakers). This effect refers to the speakers being "in phase" The effect of proper "phasing" is most noticeable in low (bass) frequencies. If a loudspeaker's phase is incorrect, its cone moves inward while the properly phased loudspeaker's cones move outward. The inward movement, of the improperly phased loudspeaker, will effectively cancel the bass response of a similarly-sized driver in the system. This results in a reduction of the bass output.

It is important to maintain correct phasing in a loudspeaker system, in order to operate at maximum performance. Incorrect polarity can be caused by incorrectly wired cables, interconnecting cables, and mixer functions set incorrectly.

Phasing is also influenced by the mutual positioning and orientation of the loudspeakers in a system. It is possible to have proper polarization (of all cables and equipment) and still achieve better bass response by having the subwoofer set to reverse polarity, or having several subwoofers set at different polarities. Bass response also will change with the listener's position in the room. During testing, monitor the bass response from several different locations in venue. Since proper phase is crucial to a subwoofer, the ACTPRO18S has a polarity switch labeled PHASE. When the PHASE switch is set to 0°, the polarity is such that a positive input will cause the cone to push outward. When set to 180°, the input signal's polarity is reversed and a positive going input will cause the loudspeaker's cone to pull inward.

How To Use The Phase Switch

Start all subwoofers in the system with PHASE switches in the 0° position. This is the same for systems with one subwoofer as well. Next, with your system playing at or near expected operating level, change the polarity of each subwoofer, ONE AT A TIME. Walk around the venue and critique the overall bass response. Select the phase setting that produces in the

REAR PANEL CONTROLS (cont.)

best overall bass response.

10. GROUND LIFT SWITCH

All ACTPRO active loudspeakers' amplifiers are equipped with a GROUND LIFT switch. Powered loudspeakers are often fed by long run signal cables, and connected to power outlets different from power outlets for audio sources. It may create an audible hum or buzz due to ground loops or other connection problems. GROUND LIFT switch will help you to avoid it. It is a good practice to keep the GROUND LIFT switch in EARTH position unless you have hum or buzz coming from your speakers. If you do hear hum or buzz, try to toggle switch into LIFT position.

WARNING: NEVER BREAK EARTH CONNECTION IN YOUR AC PLUG. IT MAY CAUSE PERMANENT DAMAGE TO THE AMPLIFIER AND MAY CAUSE DANGER OF ELECTRICAL SHOCK TO YOU AND OTHERS.

11. POWER SWITCH

Push in the top of the power switch to apply AC power to the powered loudspeaker's amplifier. Push in the bottom of the power switch to turn the loudspeaker amplifier off. When turned on, the blue POWER indicator LED on the front grille will illuminate, along with the POWER and PROTECT LED on the amplifier; after a few seconds the yellow PROTECT LED indicator will dim and turn off.

NOTE that System Power Sequencing prevents unexpected sounds from your system (pops, clicks, thumps), make sure to power ON your ACTPRO series loudspeakers in the proper order. Improper sequencing while powering ON your equipment can damage the loudspeakers. Power the loudspeaker system ON and OFF in the proper order to avoid unexpected sounds and damage to your loudspeakers.

Power On Sequence: Turn ON all source devices (CD players, mixers), turn ON the subwoofer, then turn ON all Full-range loudspeakers.

Power OFF Sequence: Turn OFF all Full-range loudspeakers and then subwoofers. Lastly, power down all source devices.

12. AC MAINS

Connect IEC connector of the AC power cord to the IEC socket on the back of the amplifier by inserting the IEC power cord fully into the IEC inlet on the power amplifier module.

NOTE: Turn off the power switch on the ACTPRO before connecting the AC power cord. The correct AC line voltage should be selected on the rear panel. For operation in the United States, leave the voltage selector on the amplifier set to 115V. Connecting to the wrong line voltage will damage the amplifier and may create the risk of electric shock.

AC Mains Disconnection: Turn the AC power switch to the off position. To remove the AC power cord, grasp the IEC connector's plastic body and gently remove the IEC connector from the socket by pulling it straight toward you.

13. AC SELECT SWITCH

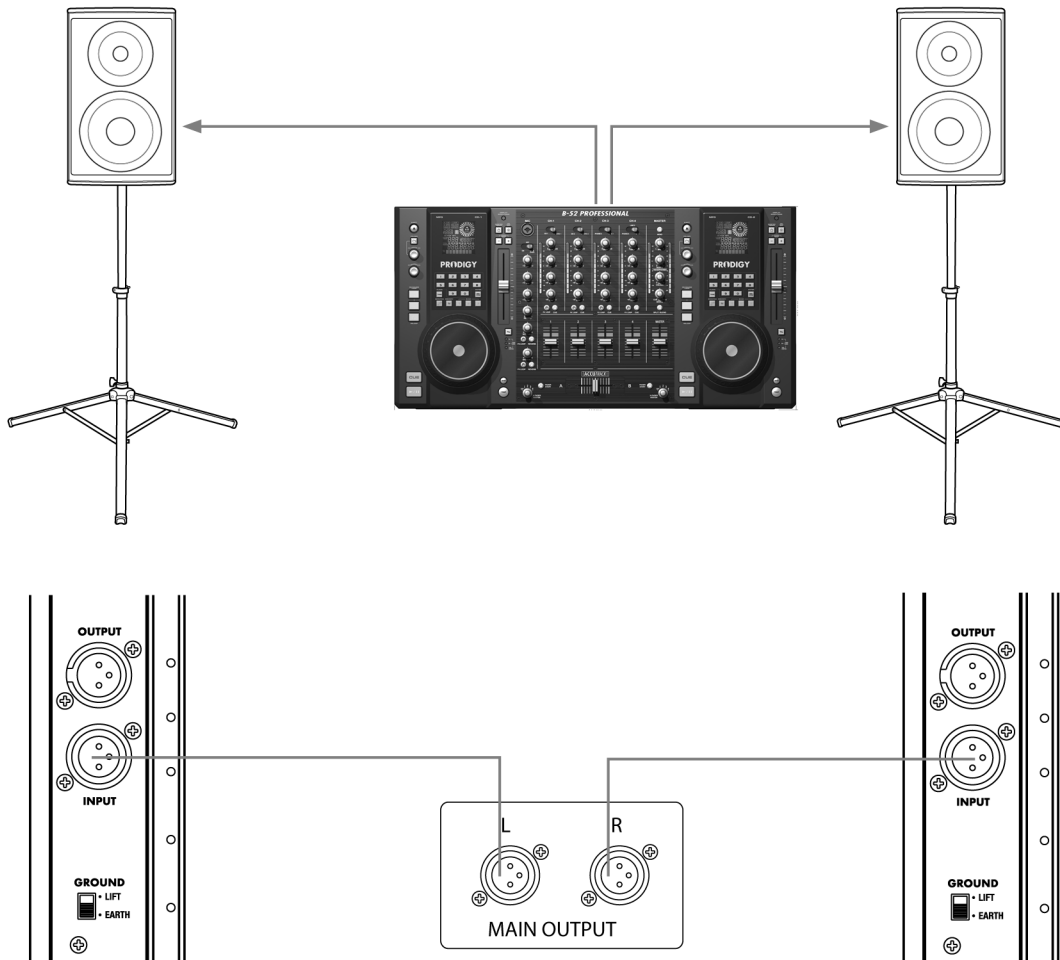
Make sure the AC Select Switch is set to the voltage appropriate to the country it is being used in.

NOTE: If the voltage switch is set incorrectly and does not match the appropriate voltage the amplifier may become damaged and it may create a risk of electrical shock.

CONNECTIONS

EXAMPLE #1

This example shows a two-channel (stereo) setup utilizing two Full-range loudspeakers (ACTPRO12M, ACTPRO15, ACTPRO1515). Audio signals for the Left and Right channels are supplied by the mixer console, in this example, a Prodigy FX. The left channel output from the mixer is connected to the INPUT connector on the left full-range ACTPRO loudspeaker. The right channel output from the mixer is then connected to the INPUT connector on the right Full-range ACTPRO loudspeaker. Turn OFF the 100 Hz LOW-CUT FILTER. This will ensure that both speakers are outputting the most bass possible, to compensate for a subwoofer not being used.



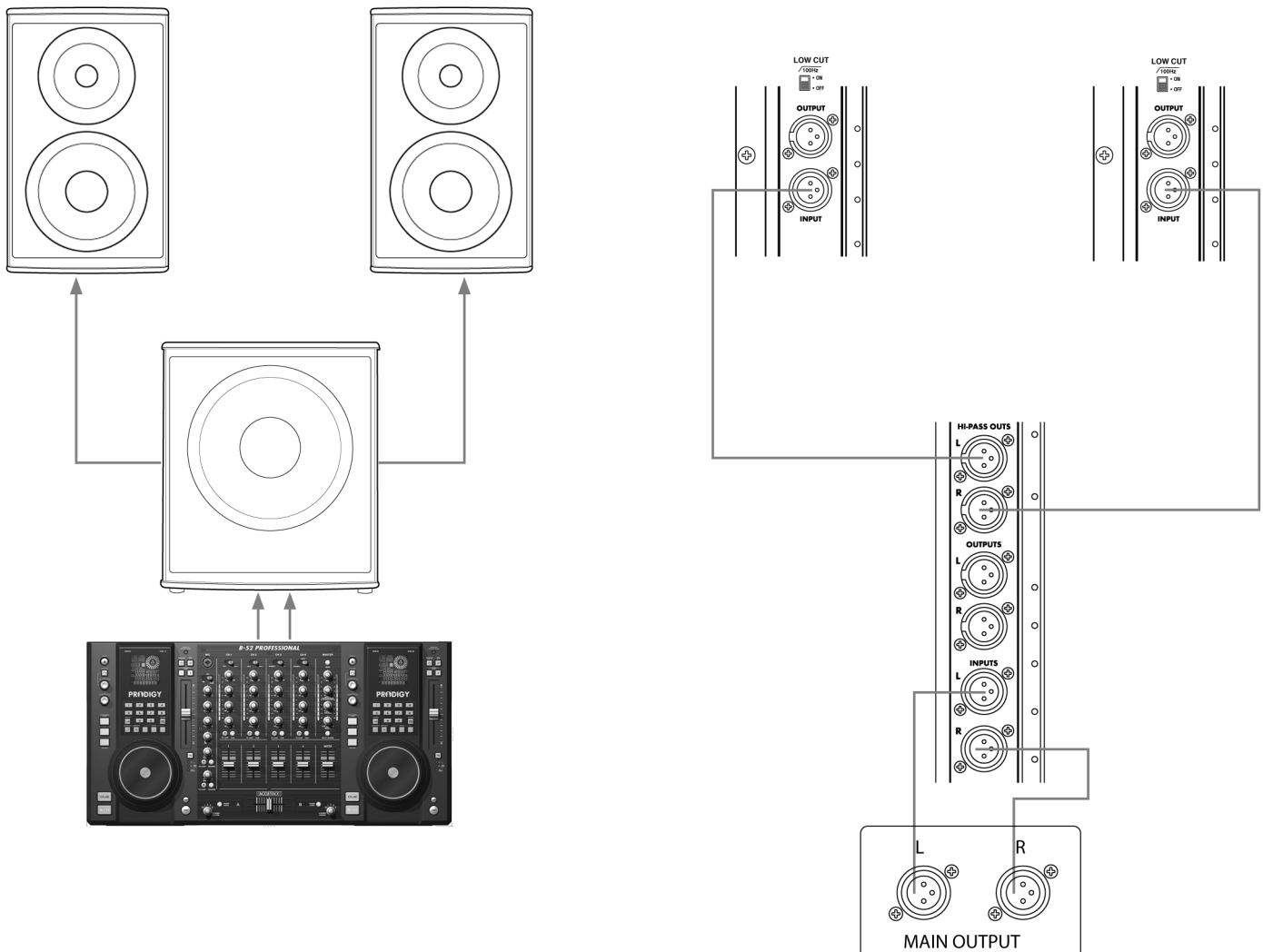


EXAMPLE #2

This example shows a two-channel (stereo) setup utilizing one subwoofer and two full-range cabinets. Audio signals for the Left and Right channels are provided by the mixer. Audio output from the mixer is connected to the L and R INPUTS of the ACTPRO18S. The Left HP OUTPUT from the ACTPRO18S is connected to the INPUT on the left full-range cabinet. Likewise, the Right HP OUTPUT from the ACTPRO18S is connected to the right full-range cabinet.

Note: If you are using a subwoofer other than ACTPRO18S for your setup, and this subwoofer does not have 100Hz High Pass outputs but only Full Range outputs, set the 100 Hz FILTER on you ACTPRO full-range cabinets to the ON position.

Note: If using connection set-up below, set the LOW-CUT switches on the Full-range speakers to the OFF position. The signal is processed by the ACTPRO18S subwoofers.



CONNECTIONS

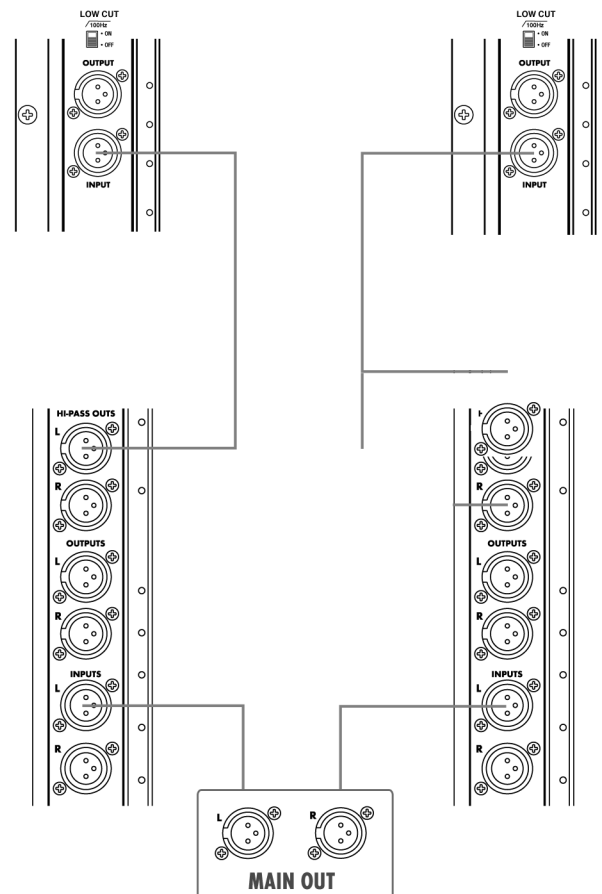
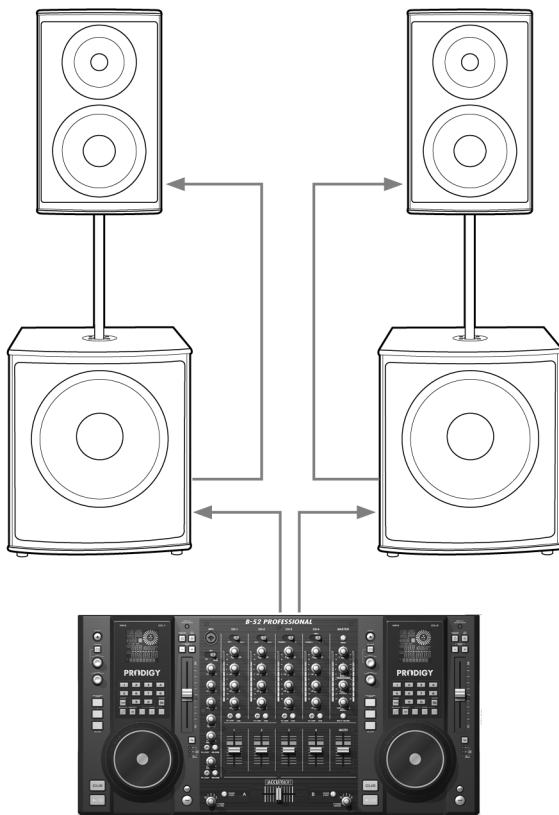
Example #3

This example shows a two-channel (stereo) setup utilizing two full-range cabinets and two subwoofers. The Full-range speakers (ACTPRO12M, ACTPRO15) are pole mounted atop the ACTPRO18S. You may also use a ACTPRO1515 stacked on each ACTPRO18S. Audio signals for the Left and Right channels are supplied by the mixer console, in this example, a ProdigyFX. The left channel output from the mixer is connected to the L INPUT connector on ACTPRO18S subwoofer. The Right channel output from the mixer is connected to the L INPUT connector on another ACTPRO18S subwoofer. The left input is used on both subwoofers.

An XLR cable is then connected from the Left HP OUTPUT from ACTPRO18S, to the INPUT of the full-range loudspeaker on the left side. Likewise, another XLR cable is connected from the Left HP OUTPUT of the ACTPRO18S, to the INPUT on the full-range loudspeaker on the right side.

Note: If you are using a subwoofer other than ACTPRO18S for your setup, and this subwoofer does not have 100Hz High Pass outputs but only Full Range outputs, set the 100 Hz FILTER on you ACTPRO full-range cabinets to the ON position.

Note: If using connection set-up below, set the LOW-CUT switches on the Full-range speakers to the OFF position. The signal is processed by the ACTPRO18S subwoofers.



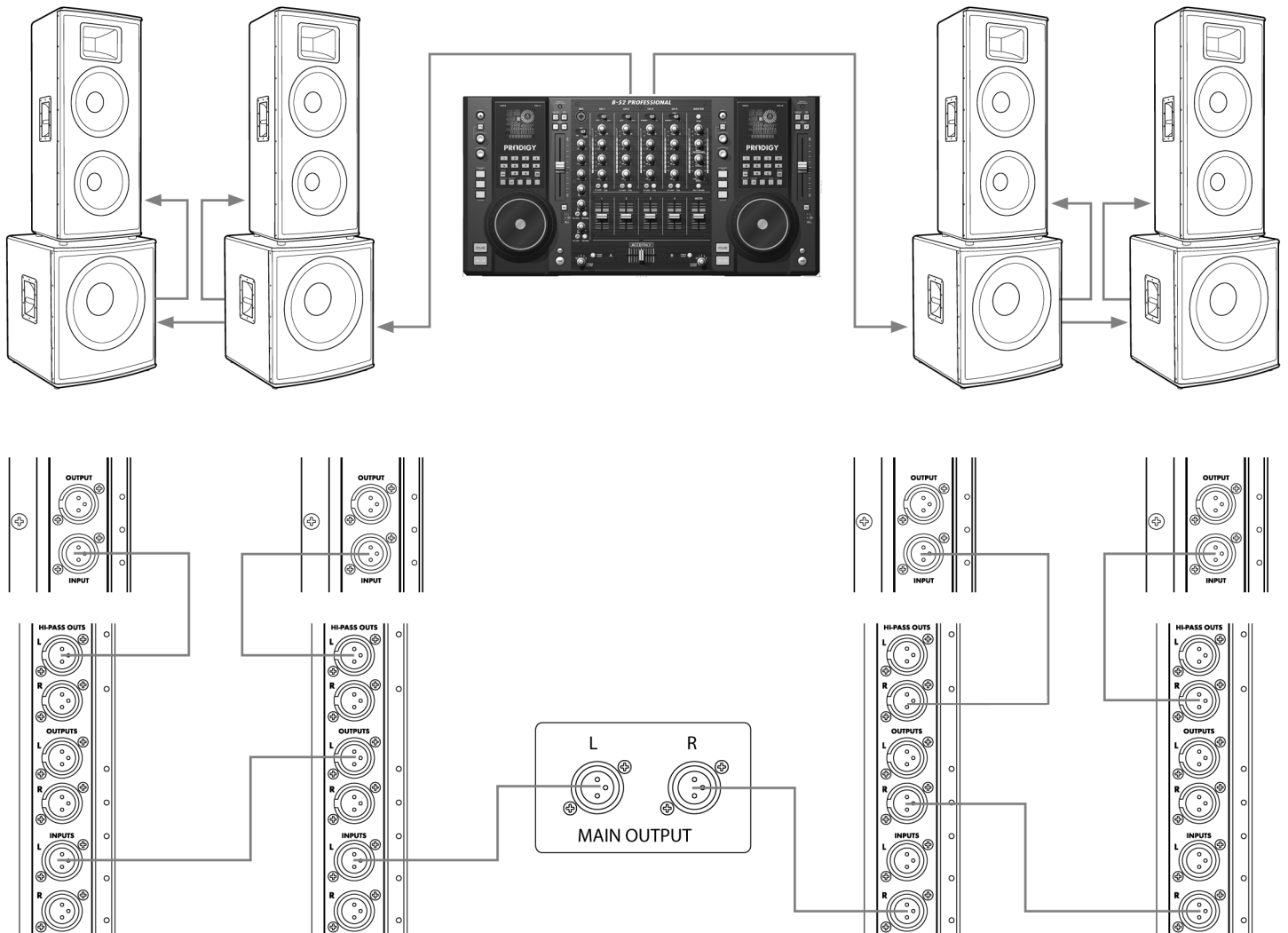


Example #4

This example shows a two-channel (stereo) setup utilizing multiple subwoofers and multiple full-range cabinets. To connect to additional full-range loudspeakers, connect a cable from the last full-range cabinet's OUTPUT to the INPUT connector of next full-range cabinet on the same side. Up to 10 additional speakers can be "daisy-chained" without loss of signal quality.

Note: If you are using subwoofers other than ACTPRO18S for your setup, set the 100 Hz FILTER on your ACTPRO Full-range cabinets to the ON position.

Note: If using connection set-up below, set the LOW-CUT switches on the Full-range speakers to the OFF position. The signal is processed by the ACTPRO18S subwoofers.





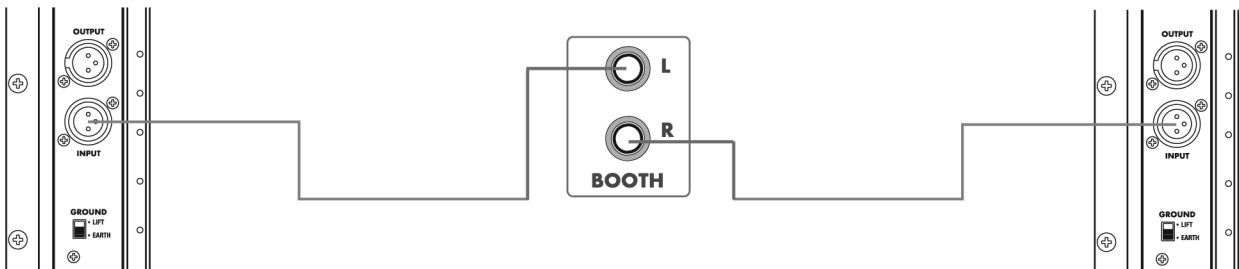
CONNECTIONS

EXAMPLE #5

This example shows the set-up of a pair of ACTPRO12M loudspeakers to be used as stage monitors. The audio signal is provided by a mixer, a ProdigyFX in this example. Some mixers have a mono monitor output but in this case you can daisy-chain a few ACTPRO12M speakers by connecting the INPUT of one to the OUTPUT of another with an XLR cable.

Note: It is recommended to turn the LOW-CUT switch ON for better clarity in guitar and voice ranges and avoid LF build-up on the stage.

Note: You can add the ACTPRO12M as a monitor to any of the previous examples (1 through 4) or to any other set-up.





SPECIFICATIONS

	ACTPRO12M	ACTPRO15	ACTPRO1515	ACTPRO18S
Configuration	12" 2-Way multipurpose powered loudspeaker	15" 2-Way full-range powered loudspeaker	Dual 15" 2-Way full-range powered loudspeaker	18" powered subwoofer
Transducers:				
Low Frequency	SP-1200 - 12" speaker with 2.5" voice coil	SP-1500 - 15" speaker with 2.5" voice coil	SP-1500 - 15" speaker with 2.5" voice coil	SP-1804 - 18" cast-framed subwoofer with 3" voice coil.
High Frequency	COMP-4-CLB - PETP film compression driver with 1.75" voice coil	COMP-4-CLB - PETP film compression driver with 1.75" voice coil	COMP-4-CLB - PETP film compression driver with 1.75" voice coil	N/A
LF Magnet Weight	42 oz	42 oz	42 oz	100 oz
LF Magnet Structure Weight	7 lbs.	7 lbs.	7 lbs.	17 lbs.
Frequency Range	50 Hz - 20 kHz	47 Hz - 20 kHz	42 Hz - 20 kHz	35 Hz - 140 Hz
Frequency Response	58 Hz -18 kHz	56 Hz -18 kHz	52 Hz -18 kHz	46 Hz - 100 Hz
High Frequency Dispersion	75° conical	90° x 40°	90° x 40°	N/A
Power Output	LF: 270Wrms Class G HF: 80Wrms Class AB+B	LF: 270Wrms Class G HF: 80Wrms Class AB+B	LF: 500Wrms Class G HF: 90Wrms Class AB+B	LF: 500Wrms Class G
Maximum total burst power*	500W	500W	850W	700W
Input Impedance	20 kOhm Balanced 10 kOhm Unbalanced	20 kOhm Balanced 10 kOhm Unbalanced	20 kOhm Balanced 10 kOhm Unbalanced	20 kOhm Balanced 10 kOhm Unbalanced
Electronic Crossover	4th order	4th order	4th order	3rd order Butterworth @ 100 Hz
Low Cut Filer (switchable)	3rd order Butterworth @ 100 Hz	3rd order Butterworth @ 100 Hz	3rd order Butterworth @ 100 Hz	
Controls	Level knob Low-cut filter switch Ground lift switch Power switch AC fuse 115/230V switch	Level knob Low-cut filter switch Ground lift switch Power switch AC fuse 115/230V switch	Level knob Low-cut filter switch Ground lift switch Power switch AC fuse 115/230V switch	Level knob Phase switch Ground lift switch Power switch AC fuse 115/230V switch
Indicators	Power Protect Limit Signal	Power Protect Limit Signal	Power Protect Limit Signal	Power Protect Limit Signal
Cooling	Convection	Convection	Convection	Convection
Amplifier Protection	Short circuit Clip-limiter Overheat mute SOA output stage Driver DC protection Subsonic filter Turn-on mute and soft ramp Turn-on inrush current limiting	Short circuit Clip-limiter Overheat mute SOA output stage Driver DC protection Subsonic filter Turn-on mute and soft ramp Turn-on inrush current limiting	Short circuit Clip-limiter Overheat mute SOA output stage Driver DC protection Subsonic filter Turn-on mute and soft ramp Turn-on inrush current limiting	Short circuit Clip-limiter Overheat mute SOA output stage Driver DC protection Subsonic filter Turn-on mute and soft ramp Turn-on inrush current limiting
Current cons. @ 115/230 Vac (1/8 power pink noise)	1.7A / 0.85A	1.7A / 0.85A	3A / 1.5A	2.5A / 1.25A
Connectors	Balanced female XLR input Balanced male XLR link output	Balanced female XLR input Balanced male XLR link output	Balanced female XLR input Balanced male XLR link output	Balanced female XLR L&R inputs Balanced male XLR L&R link outputs Male XLR L&R High-pass outputs
Input Sensitivity **	775mV (0dBu)	775mV (0dBu)	775mV (0dBu)	775mV (0dBu)
Enclosure	Black Warnecke™ painted birch plywood	Black Warnecke™ painted birch plywood	Black Warnecke™ painted birch plywood	Black Warnecke™ painted birch plywood
Hardware	Metal handles Rubber feet / Rubber strips Pole mounting cup	Metal handles Rubber feet Pole mounting cup	Metal handles Rubber feet	Metal handles Rubber feet Pole mounting cup 3" Detachable casters
Grille	Powder coated 16 gauge steel	Powder coated 16 gauge steel	Powder coated 16 gauge steel	Powder coated 16 gauge steel
Dimensions	26.5" H x 16.5" W x 16" D (673mm x 419mm x 406mm)	27" H x 17.5" W x 19" D (686mm x 445mm x 483mm)	44.5" H x 18" W x 19" D (1130mm x 457mm x 483mm)	26.5" H x 23.5" W x 23" D (673mm x 597mm x 584mm)
Weight	56 lbs. / 25.5 kg	62 lbs. / 28.2 kg	89 lbs. / 40.5 kg	97 lbs. / 44.1 kg

* Based on unclipped sine-wave rms voltage

** Level control in fully clockwise position



LIMITED WARRANTY

Thank you for choosing the ACTPRO powered loudspeakers, a product by E.T.I. Sound Systems, Inc. For purposes of this warranty B-52 shall mean E.T.I. Sound Systems, Inc. B-52 manufactures some of the world's best audio products and takes great pride in thoroughly testing each B-52 product prior to shipment.

ACTPRO POWERED LOUDSPEAKER WARRANTY:

B-52 warrants to the original purchaser that this ACTPRO Powered Loudspeaker will be free from defects in material and workmanship for a period of (3) THREE YEARS from the original purchase date. A dated sales receipt will establish coverage under this warranty. This warranty will automatically terminate (3) THREE YEARS after the original sales date. It is the owner's responsibility to establish date and place of purchase by acceptable evidence at the time service is being sought.

This (3) THREE-YEAR warranty does not cover service or parts to repair damage caused by accident, disaster, misuse, abuse, wear and tear, subjecting the unit to power in excess of its published rating, damage due to lightning or power surges, if the serial number has been altered or removed, inadequate packing or shipping procedures and service, repair or modifications to the ACTPRO powered loudspeaker which has not been authorized or approved by B-52 in writing. Parts supplied under warranty may be new or rebuilt at the option of B-52. This warranty is in lieu of all other expressed warranties. If this product is defective in materials or workmanship as warranted above, your sole remedy shall be repair or replacement. This is not a service contract and this warranty does not include maintenance, cleaning or periodic check-up. B-52 reserves the right to make changes in design and/or improvements to its products without any obligation to include these changes in any products manufactured.

INCIDENTAL OR CONSEQUENTIAL DAMAGES:

In no event shall B-52 be liable for any incidental or consequential damages arising out of the use or inability to use any B-52 product, even if B-52 or a B-52 dealer has been advised of the possibility of such damages, or any other claim by any other party. Some States do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you

specific legal rights and you may also have other rights that may vary from State to State.

PURCHASING FROM UNAUTHORIZED DEALERS:

If this product was purchased from an unauthorized dealer there are no warranties, express or implied, including the implied warranty of merchantability and the implied warranty of fitness for a particular purpose and this product is sold "as is" and "with all faults".

RETURN PROCEDURES:

In the event product repair is needed, follow the procedure outlined below. Contact B-52 (1-800-344-4ETI or 1-323-277-4100) from 8am to 4:30pm Pacific Standard Time, for the location of the authorized service center nearest you. Follow the service center's instructions regarding return of the product. In some instances B-52 may request that you return the product directly to B-52 for service or repair.

After speaking with a B-52 representative, you will be issued with a return authorization number (RAN) which you need to clearly label the returned merchandise with. If you are sending the product by common carrier, package it carefully and send it with transportation prepaid by traceable, insured method to B-52, or Authorized Service Center. Package the product using adequate padding material to prevent damage in transit. The original packaging is ideal for this purpose. Include your name, address, RAN #, copy of your receipt and telephone number where you can be reached during business hours.

FOR YOUR PROTECTION:

Please complete and mail the Purchase Information Card within (10) ten days of the date of purchase so that we may contact you directly in the event a safety notification is issued in accordance with the 1972 Consumer Product Safety Act. In addition, we ask that you complete the brief questionnaire so we may analyze your answers and in this way, help us evaluate our customer needs.

CUSTOMER SERVICE:

Our dedicated staff is ready to help you with any B-52 warranty or product questions you may have. Please call 323-277-4100 (9:00AM to 4:00PM Pacific Standard Time, United States).

B-52

B-52 PROFESSIONAL

3383 Gage Avenue, Huntington Park, CA 90255

Internet: www.B-52Pro.com

Ph: 323-277-4100 Fax: 323-277-4108

Toll Free: 800-344-4384

B-52 Professional is dedicated to product excellence and therefore continuously attempts to improve each and every model we manufacture. This ongoing process includes refinements in design, materials and workmanship which may result in products which differ than those described in our literature. All features, specifications, prices and terms are subject to change without notice.