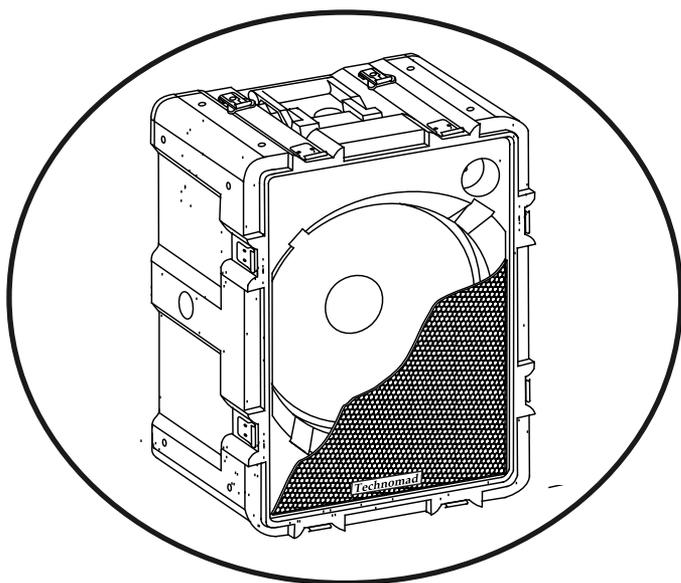


**Owner's manual
and operation guide for
Technomad turnkey
systems**



Technomad[®]

THE TOUGHEST LOUDSPEAKERS IN THE WORLD[™]

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Intro

Thank you for purchasing a Technomad turnkey PA system. Our systems provide high quality sound reinforcement in even the toughest conditions. To ensure optimum performance, be sure you understand all aspects of system installation and operation before use.

System Overview

There are a variety of turnkey systems available. The MPA systems are meant for mobile applications and feature Tour Model loudspeakers and speaker stands. The IPA systems are intended for permanent installations and feature wallmount brackets and Install Model loudspeakers. All systems include speaker cables and a prewired Control Rack which contains an amplifier, mixer, and microphone. All systems feature additional mixer input channels allowing you to expand your system by plugging in additional microphones, MP3 players, etc...

Each turnkey system is based on Technomad's high quality, weatherproof loudspeakers. Technomad loudspeakers deliver unparalleled full-range audio in a tough, Military specification package. With features like the WeatherTech grill system, self-draining polyethylene cabinets, and stainless steel hardware, Technomad loudspeakers provide years of operation indoors or out when properly installed. Technomad's weatherproofing design does not compromise the sound quality of our loudspeakers- in fact Technomad loudspeakers offer a level of performance equal to that of the finest indoor-use concert systems.

All components of our turnkey system have been chosen for their quality and system compatibility.

Unpacking

All Technomad systems are shipped tested and fully operational. When you first receive the shipment, you should inspect each package for any sign of damage. **In the event that there is any damage, please notify the carrier immediately to file a claim.** While we will help in any way possible, **it is the responsibility of the receiving party to file the shipping claim.** If any parts are missing from the shipment, contact Technomad at 800.464.7757 and we will help you locate the missing products.

If any products need to be returned to Technomad for repair, contact Technomad for a RMA number. Items returned without a RMA # will be refused.

Turnkey PA System Setup & Operation

1. After moving the rack case to the desired location, remove the front and rear lids. Plug the power cord from the power strip into a clean source of 110V grounded AC power. To prevent overheating, the lids must be off of the Control Rack while the system is operating. The rack is weather-resistant when in transport mode, but the amplifier and mixer should be protected from water or rain when operating. Be sure that the Control Rack is in a sheltered location when deployed.

2. Put the loudspeakers in the desired locations and plug them in using the provided speaker cabling. Any of the connectors on the loudspeaker can be used. The cable connector should be fully inserted into the loudspeaker connector and then turned clock-wise. You will feel the connector click into the proper position when properly seated. To verify proper contact, gently pull on the cable connector- it should not come out of the loudspeaker.

Plugging two cables from the amplifier into the same speaker will cause damage to the system and is not covered by the warranty. The only time more than one cable should be plugged into a loudspeaker is if the second cable is going to another loudspeaker which is not connected to the amplifier in any way.

3. If you plan to use an audio line source such as a CD player, musical instrument or hard disk playback device, connect the output of the source to one of the RCA inputs on the rear of the mixer. The mixer can accommodate four different line sources.

If you plan to use a microphone with the system, connect the microphone cable to the XLR input jack on the front of the mixer. Up to two microphones can be used with the system. The second microphone can be connected to the second mic input jack on the rear of the rack.

4. Turn the two control knobs on the front of the amplifier all the way counter-clockwise. Turn the level controls on the mixer all the way counter-clockwise.

Turn on the mixer and any other equipment (CD player, etc...) and then turn on the amplifier. The amplifier should be **always** turned on last.

Turnkey PA System Setup & Operation

5. Turn the control knobs on the amplifier to 12 o'clock.
6. Now it is time to set the levels of the inputs to the mixer. Turn up the mixer control knob of the source you want to hear slowly. Do not turn any control knob on the mixer up past the 2 o'clock position. If you are using more than one source, for example both a CD player and microphone, adjust the controls for the respective inputs to get the mix you want. When speaking into the mic., do not point the microphone towards the speakers to prevent feedback. Any line source (CD, tape, etc...) should be playing when you set the level for that input.
7. Once you can clearly hear the sources through the loudspeakers and have adjusted the mix to your liking, turn the amplifier control knobs to '0' (all the way clock-wise.)
8. To adjust the volume of the the system, turn the mixer level controls up or down. When turning up a channel, watch the 'Clip' light on the front of the amplifier. If this light goes on, turn down the control until the light is off. The amplifiers used in our turnkey systems have built-in protection against clipping and if the amp input is overdriven, the amp will shut itself off for 5 seconds.
10. When shutting down the system, first turn down the level controls of the mixer all the way down and then shut off the amplifier. After the amplifier is off, the rest of the equipment can be shut down. It is important to shut the amplifier off first as otherwise the 'pop' of the other gear switching off can damage the speakers.

The best indicator that the system is being improperly operated is distortion. Listen to the system! A common cause of distortion is having the amplifier gain controls turned down and having the mixer master volume control turned up too far to compensate. Always operate the amplifier at or near maximum output and control the system volume with the mixer master control. If the speakers do sound distorted, you should turn down the system and investigate what is causing the distortion. It is possible to damage the speakers even while operating them at less than the rated power if they are not given clean signal from the amplifier.

Deployment

Technomad AS Series loudspeakers can be set up quickly and efficiently in many configurations. The AS Series includes the Noho, Berlin, Cairo full-range loudspeakers and Soho and Chicago subwoofers.

Stand Mounting

All Technomad AS Series loudspeakers feature four 1.5" diameter stand mounting sockets - one per side - molded directly into the cabinet wall. Technomad's stand mounting sockets are flush with the surface of the loudspeaker cabinet to allow for quick and easy set-up, break-down, and storage. The Vienna and Paris loudspeakers can be standmounted by using the optional Stand Mount Adaptor accessory which bolts onto the bottom of the loudspeaker cabinet. When tripod mounting loudspeakers, be sure that they are stable and secured from falling over. **Failure to follow these precautions may result in damage to the equipment, personal injury or death.**

Flying

WARNING: Suspending any object is a potentially dangerous and should only be attempted by qualified individuals. The user assumes all liabilities for proper design, installation and use of rigging systems. Failure to undertake proper design and installation of a rigging system may result in damage to equipment, personal injury or death.

Do not suspend the loudspeaker from fewer than four suspension points. Do not hang the loudspeaker from the handle.

AS Series Technomad loudspeakers are equipped with molded in flying points. The Noho and Soho loudspeakers are equipped with 4x 1/4-20 threaded inserts on the top and side. The Berlin, Cairo and Chicago loudspeakers all feature 4x 3/8-16 threaded inserts on all sides. All flypoints are rated at 10:1. All flypoints allow the loudspeaker to be used in either the horizontal or vertical orientation. Only rated forged eyebolts should be used to hang a loudspeaker.

Bracket Mounting

All Technomad loudspeakers can be bracket mounted using the four threaded inserts molded into the rear of the loudspeaker. When mounting the brackets to the loudspeaker be sure that all four bolts are fully and properly threaded.

<i>Model</i>	<i>Bolt size</i>
Berlin, Cairo, Chicago	3/8-16 x 1"
Noho, Soho	5/16-18 x 1"
Paris, Vienna, Vienna	1/4-20 x .5"

Polyethylene Cabinets

Technomad: Not Just Another Plastic Loudspeaker

Several important factors in the Technomad design and manufacturing process distinguish Technomad from the growing field of ordinary plastic loudspeakers.

Design

Technomad loudspeakers deliver higher performance and output than any other plastic loudspeakers. Technomad loudspeakers provide a wider range of features making Technomad loudspeakers the only choice for year-round, indoor, outdoor, permanent, semi-permanent or mobile applications. No other plastic loudspeaker can match Technomad in application, flexibility, fidelity durability, options, price and performance.

Manufacturing

Technomad enclosures are manufactured of military grade polyethylene and molded as an extremely rugged one piece unit. Our manufacturing process produces an incredibly thick .5" with .75" thick corner areas. The cabinet walls of most plastic loudspeakers are 25% to as much as 65% thinner than the cabinet walls of a Technomad loudspeaker. A Technomad loudspeaker cabinet is able to endure greater abuse than any other commercially available loudspeaker - regardless of construction materials and manufacturing methods.

Also, a thicker cabinet wall has better acoustic properties than a thinner loudspeaker cabinet wall. The thicker cabinet wall reduces distortion and/or inefficiency problems due to wall flex. Technomad loudspeakers produce a full, articulate sound, comparable to the performance of a well braced, multi-ply Baltic birch cabinet.

Compliances/Specifications Met

Technomad self-casing loudspeakers are designed to meet and exceed ATA-III, and fully comply with United States Military Specification 810F. No other commercially available plastic or wood loudspeaker can make that claim.

Technomad polyethylene cabinets have many advantages over traditional wooden cabinets. Unlike wood, high quality recycled polyethylene is a renewable resource. Polyethylene is impervious to moisture, virtually all solvents, mold, mildew, and UV radiation. There is no waste in the Technomad cabinet manufacturing process. Because they are cast as one solid piece through a low stress manufacturing process, Technomad cabinets are extremely strong and do not splinter or crack when subjected to abuse.

Wiring

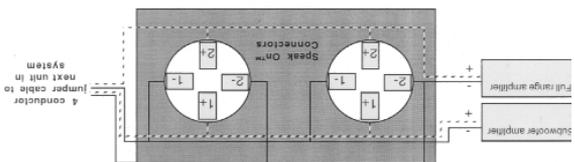
Each AS Series Technomad loudspeaker cabinet features locking, weather-resistant Neutrik Speak-On™ connectors. Neutrik jacks work with 2 conductor and 4 conductor wire. The Neutrik jacks have four internal connection points. One pair is marked “1” and the second pair is marked “2”. When buying or making Neutrik-terminated cables to interface with Technomad speakers, it is important to observe the following:

- Neutrik NL4FC model cable connectors, or compatible connectors must be used with AS Series loudspeakers.
- 1+/- These are the in/out connections for full range units (Berlin, Noho, HF/MF of the Cairo, Paris and Vienna) & the Soho subwoofer. In other subwoofer units, this pair simply passes full range signal through the loudspeaker from one Speak-On™ to the other.
- 2+/- These are the in/out connections for large subwoofer units (Chicago and LF driver of the Cairo) In full range units, this pair simply passes subwoofer signal from one Speak-On™ to the other.

The Soho is a subwoofer, but it is wired to the “1” pair for ease of use. Featuring an internal passive crossover, the Soho can be run from the same signal as the Noho, reducing the number of cables & amp channels needed.

The signal pass-through feature allows multiple speakers to be driven by one amplifier. Each speaker can be daisy-chained from the previous unit, simplifying the cabling required for any multiple unit system. Using a 4 conductor cable, two separate signals can be sent to the system from two separate amplifier channels. This feature allows the operator to use a single cable to power both the full range and subwoofer speakers in an array. Because both signals are passed to each connector, subwoofer units and full range units can be run from the same cabling. As long as the proper connections are made to the appropriate amplifier channels (+1/-1 to the full range amplifier, +2/-2 to the subwoofer amplifier), cabling is quick and easy to set up.

Caution should be used when daisy-chaining multiple loudspeakers from a single amplifier. If the minimum load impedance for the amp is 4 ohms, a maximum of 1 subwoofer or 2 full-range loudspeakers should be connected in series. Remember, using four conductor wiring to connect two separate amplifiers to a full-range and subwoofer combination does not drop the load on the amplifiers - each amp is still seeing 8 or 4 ohms respectively. Only if speakers of the same type (full-range or subwoofer) are daisy-chained from the same amp is the load on the amp reduced. If a cable is over 20' long, 12 gauge wire is highly recommend to prevent signal degradation.



Cabinet Maintenance

Maintenance of Speaker Body

The Technomad polyethylene loudspeaker cabinet is a manufacturing breakthrough. The one-piece Technomad speaker cabinet provides a very rugged, watertight and scratch-resistant enclosure for transporting the high-quality sound reproduction electronics. Your Technomad speaker will need very little maintenance. If, after some time, you want to eliminate scratches that develop, follow these simple instructions:

Technomad Cabinet Refurbishment:

1. Thoroughly clean the surface of the speaker using warm water, a soft brush, and mild non-detergent soap.
2. Dry the loudspeaker.
3. Using a propane blowtorch, slowly fan the flame over the scratches you need to repair. In a few seconds you will see the scratches disappear and the surface will become shiny as a thin film of plastic liquifies. Deep scratches may take longer to erase. **IT IS POSSIBLE TO CHAR THE SPEAKER** if the flame is kept on one area for too long. Constantly keep the flame in motion. Keep the flame away from the loudspeaker cones, compression drivers, foam grill covering, Neutrik jacks and other hardware. **SPECIAL CARE IS NEEDED WHEN FLAME TREATING PARIS, and VIENNA LOUDSPEAKERS.**
4. Allow the surface to completely cool for 15 or more minutes or until the treated area is cool and hard to the touch.
5. Buff the surface with a 3M™ Scotch-Brite pad, fine steel wool or other mild abrasive. This will bring the treated surface area back to the original factory finish.



Before



After

Troubleshooting

1. No sound from speaker:

A) Make sure that the cabling you are using is wired correctly. The signal for the full range units must be wired to the “1” pair of contacts on the cable-mounted Neutrik Speak-On™. For the low frequency units, the Chicago and the 15” LF driver of the Cairo 15/C, the signal must be connected to the “2” pair of contacts on the Speak-On. See page 7 for details. Be certain that the Speak-On connector is not just fully inserted into the speaker mounted connector, but also turned to the locked position (See page 3 for details.)

B) Technomad loudspeakers are equipped with fuses for component protection. Check the fuses to ensure that they are still intact. The fuse holders are located on the bottom of the loudspeaker in the handle well on AS Series loudspeakers and on the back of the loudspeakers near the connectors on MP Series loudspeakers. See the separate fuse sheet included with this manual for proper fuse values.

2. Excessive Rattling

If pronounced rattling occurs during operation of Tour Model units at high volumes, double check that the latches holding the lid onto the rear of the cabinet are fully closed and locked. If they are not, the lid can vibrate against the back of the cabinet. At high volumes, objects nearby can also vibrate, leading to the perception that there is a problem with the loudspeaker.

3. Buzzing or humming sound from speakers

Check all cables to ensure that they are properly inserted into the appropriate connectors. Be sure that all powered equipment, i.e. the amplifier, mixer, etc... are plugged into a source of clean, stable AC power.

4. Mixer channel not working

Check all cables to ensure that they are all fully inserted into the inputs on the back of the mixer and the outputs of the line source which isn't working. These connections can work loose during shipping if exposed to heavy vibration.

5. System cuts out while operating

The amplifier has built in protection against having the inputs overdriven. If the output signal from the mixer is too high, the amplifier will detect this and shut itself off to prevent damage from occurring. If this happens, turn down the mixer 'Master' control knob down all the way and press the reset button on the amplifier. Once the amplifier has restarted, you can then turn up the Master control knob on the mixer. If the 'clip' light on the front face of the amplifier goes on, you have turned up the output control too far and should turn the Master control down until the clip light stays off.

Technical Support

For tech support, call your dealer, call 800.464.7757, fax at 617.451.8999, or send e-mail to info@technomad.com.

General Info/Environmental Concerns

World Wide Web

Visit our Website and get all of the latest info on Technomad loudspeakers .

www.technomad.com

- Product Updates
- Application articles
- Dealer and Rep. listings
- QuickTime Movie clips of Technomad loudspeakers being shot with a shotgun, pummeled with a 20 pound sledge hammer, thrown from a 45 foot bridge into a river and doused with gasoline and set aflame!
- Product Specifications, DXF files, and EASE data
- Press Releases

The Website changes monthly so be sure to always check back for the latest information.

Environmental Concerns

Technomad loudspeaker cabinets are manufactured of recycled materials and meet Military Specification 810F. Our manufacturing and cabinet design advances allow us to utilize 90% post-industrial and 10% post-consumer plastics in the manufacture of our black loudspeaker cabinet moldings and 15%+, post-consumer materials in the manufacture of our custom-colored loudspeaker cabinets. Unlike wood, the materials utilized in the manufacture of Technomad loudspeaker cabinets can be infinitely recycled with little or no breakdown of the material's integrity. Only dyes free of heavy metals are used in coloring Technomad loudspeaker cabinet moldings. Technomad cabinets are completely inert. They will not rust, corrode, rot, chip, crack, fade, warp, or give off any harmful smells, chemical vapors, toxins, paint or adhesive residue, etc.

Technomad also strives to minimize our environmental impact in other ways. We do all printing on recycled paper and we emphasize minimum-impact ways of distributing information, such as the Internet, phone, fax, and email.

At Technomad, we feel it is important for manufacturers to use recycled materials whenever possible to help create demand for these materials and close the recycling loop.



Accessories

Technomad loudspeakers are designed for maximum flexibility and ease of use. Technomad offers several accessories which enhance the day-to-day practicality of our loudspeakers.

The Technomad Dolly-

This four wheel dolly locks onto the back of any large Technomad loudspeaker. Featuring four 5" diameter rubber wheels, the dolly allows the user to easily transport up to 4 large Technomad speakers.

The Noho Dolly-

A smaller version of the Technomad dolly, the Noho Dolly is compatible with the Noho and Soho model loudspeakers. It features 3.5" diameter casters.

The Monitor Tube Set-

This set allows all AS series loudspeakers to be used as floor monitors.

The Paris/Vienna Wall-mount bracket

This multi-position bracket allows Paris and Vienna loudspeakers to be mounted to walls and accurately deployed.

The Stacking Tube Set-

This set allows any two AS Series Tour Model loudspeakers to be securely stacked in either horizontal or vertical orientation.

Technomad T-Shirt-

XL T-shirt, black with the Technomad logo on front.