

# S.5



active studio monitor

**owner's manual**



**TAPCO**<sup>®</sup>  
by **MACKIE**<sup>®</sup>

**CAUTION AVIS**



RISK OF ELECTRIC SHOCK  
DO NOT OPEN  
RISQUE DE CHOC ELECTRIQUE  
NE PAS OUVRIR



**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK  
DO NOT REMOVE COVER (OR BACK)  
NO USER-SERVICEABLE PARTS INSIDE  
REFER SERVICING TO QUALIFIED PERSONNEL**

ATTENTION: POUR EVITER LES RISQUES DE CHOC  
ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE. AUCUN  
ENTRETIEN DE PIECES INTERIEURES PAR L'USAGER. CONFIER  
L'ENTRETIEN AU PERSONNEL QUALIFIE.  
AVIS: POUR EVITER LES RISQUES D'INCENDIE OU  
D'ELECTROCUTION, N'EXPOSEZ PAS CET ARTICLE  
A LA PLUIE OU A L'HUMIDITE



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

Le symbole éclair avec point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de "voltage dangereux" non isolé d'ampleur suffisante pour constituer un risque d'électrocution.



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

Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter les utilisateurs de la présence d'instructions importantes pour le fonctionnement et l'entretien (service) dans le livret d'instruction accompagnant l'appareil.

## SAFETY INSTRUCTIONS

1. Read Instructions — All the safety and operation instructions should be read before this product is operated.
2. Retain Instructions — The safety and operating instructions should be kept for future reference.
3. Heed Warnings — All warnings on this product and in these operating instructions should be followed.
4. Follow Instructions — All operating and other instructions should be followed.
5. Water and Moisture — This product should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, near a swimming pool, etc.
6. Cleaning — Clean only with a dry cloth.
7. Ventilation — This product should be situated so that its location or position does not interfere with its proper ventilation. For example, the Component should not be situated on a bed, sofa, rug, or similar surface that may block any ventilation openings, or placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through ventilation openings.
8. Heat — This product should be situated away from heat sources such as radiators, or other devices which produce heat.
9. Power Sources — This product should be connected to a power supply only of the type described in these operation instructions or as marked on this product.
10. Power Cord Protection — Power supply cords should be routed so that they are not likely to be walked upon or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit this product.
11. Object and Liquid Entry — Care should be taken so that objects do not fall on, and liquids are not spilled into, this product.

12. Damage Requiring Service — This product should be serviced only by qualified service personnel when:
    - A. The power-supply cord or the plug has been damaged; or
    - B. Objects have fallen, or liquid has spilled into this product; or
    - C. This product has been exposed to rain; or
    - D. This product does not appear to operate normally or exhibits a marked change in performance; or
    - E. This product has been dropped, or its chassis damaged.
  13. Servicing — The user should not attempt to service this product beyond those means described in this operating manual. All other servicing should be referred to the Tapco Service Department.
  14. To prevent electric shock, do not use this polarized plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.
- Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans laisser aucune partie à découvert.
15. Grounding or Polarization — Precautions should be taken so that the grounding or polarization means of this product is not defeated.
  16. Power Precaution — Unplug this product during lightning storms or when unused for long periods of time.
  17. This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

ATTENTION —Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par le ministère des communications du Canada.

18. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the following chart.

According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels use hearing protectors while the equipment is in operation. Ear plugs or protectors in the ear canals or over the ears must be worn when operating the equipment in order to prevent permanent hearing loss if exposure is in excess of the limits set forth here.

| Duration Per Day<br>In Hours | Sound Level dBA,<br>Slow Response | Typical<br>Example                     |
|------------------------------|-----------------------------------|--|
| 8                            | 90                                | Packed garage concert                  |
| 6                            | 92                                |  |
| 4                            | 95                                | VW Bus Peace Train                     |
| 3                            | 97                                |  |
| 2                            | 100                               | Cranked psychedelic tunes              |
| 1.5                          | 102                               |  |
| 1                            | 105                               | High speed chase on C.H.I.P.s          |
| 0.5                          | 110                               |  |
| 0.25 or less                 | 115                               | Loudest parts at a Heavy Metal concert |

**WARNING — To reduce the risk of fire or electric shock,  
do not expose this appliance to rain or moisture.**

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Don't forget to visit our website at [www.tapcogear.com](http://www.tapcogear.com) for more information about this and other TAPCO products.

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## What me, read a manual?

Before you begin, please make sure you read the Safety Instructions on page 2 and Getting Started on page 4.

Your new TAPCO® S•5 monitors are designed to set up quickly and operate easily. We know it's often seen as a sign of weakness to read a manual, along with asking for directions when lost, but we hope you will read the rest of the manual, at least while nobody is looking.

It is important to keep your receipt in a safe place, and not a bad idea to write your product information here for future reference (i.e., insurance claims, tech support, return authorization, etc.).

**Product Serial #:**

Speaker 1

Speaker 2

**Purchased at:**

**Date of purchase:**

# Getting Started



The following steps will help you set up your monitor speakers quickly. Follow these steps for all the S•5 studio monitors in your system.

## INITIAL SETTINGS:

1. Turn the INPUT LEVEL control on the rear panel all the way down.
2. Set the HIGH FREQ and LOW FREQ switches to "0 (NORMAL)."
3. Turn the POWER switch OFF.

## CONNECTIONS:

1. Connect the line-level monitor signal from your mixer (or other signal source) to the INPUT jack on the S•5 Studio Monitor (XLR, 1/4-inch TRS, or RCA).
2. Set the AC SELECT switch to the correct position for your country (115 VAC or 230 VAC).
3. Connect the supplied AC power cord to the IEC socket on the back of the monitor. Plug the other end into an AC outlet properly configured with the correct voltage for the AC SELECT switch setting you have selected.

## TURN IT ON:

1. Turn the POWER switch ON.
2. Start your signal source (tape deck, CD, DAW, or whatever), but leave the master level control on your mixer down.
3. Slowly turn up the INPUT LEVEL control on the S•5 to MAX (fully clockwise).
4. Adjust the master volume on your mixer to a comfortably loud listening level. If the volume from the speakers gets really loud, really fast, try turning down the INPUT LEVEL control on the S•5s a bit to achieve a good balance of master volume control and loudness from the speaker.

Now that you have your monitors working, it's time to hunker down and read the rest of this manual...especially the following:

# Placement



An Extremely Important Note on S•5 Bass Response and Your Control Room

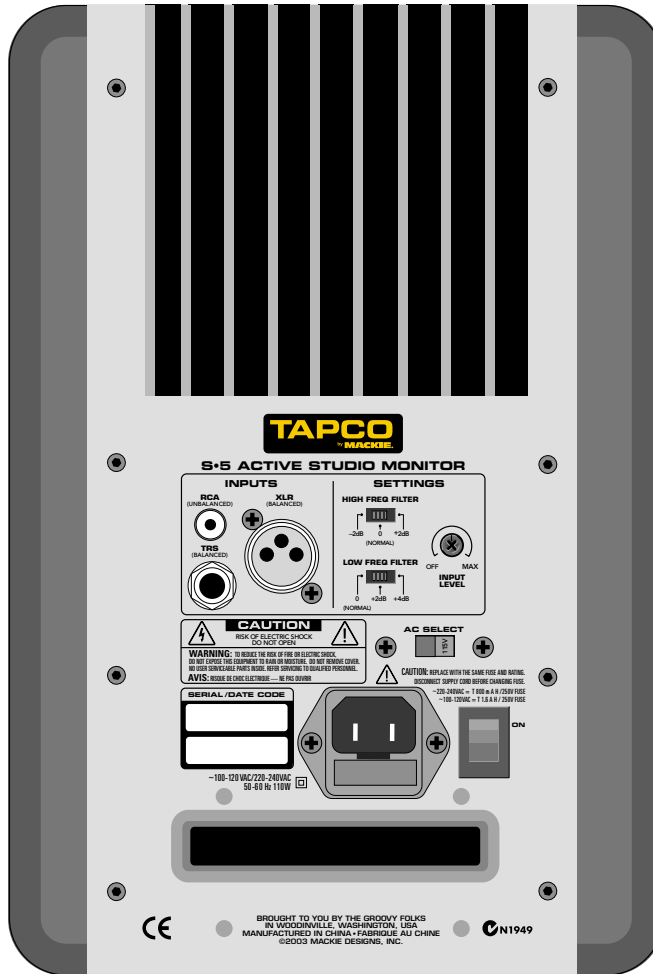
Your new S•5s achieve their best bass response in a room that's optimized for bass reproduction. A lot of factors can conspire to thwart the S•5s' extended low frequency, including room shape, room volume, and acoustical treatment.

This is not a cop-out or an apology. It's plain old physics in action. Luckily, we've armed you with some compensating controls that you can use to optimize the frequency response of the speakers in your particular room. Consider the following:

## Low-Frequency Response

When you put your S•5s in a corner or up against a wall, their bass characteristics change. The apparent loudness of the low frequencies increases when the monitors are placed close to a wall, and even more so when they are placed in a corner.

If you have placed the speakers away from the walls and corners and you would like to hear a little more bass, try setting the LOW FREQ equalization switch to the +2 dB position to provide a gentle boost to the low frequencies (below 100 Hz). If it's still not enough bass, try the +4 dB position to provide a little more bass boost.



## High-Frequency Response

The S•5s are designed to provide a smooth frequency response throughout the mid and high range. Nevertheless, you may decide that you need a little more or a little less high frequencies in your monitors while you're mixing. The HIGH FREQ equalization switch provides a gentle boost or cut in the frequencies above 5 kHz. Remember that boosting the high frequencies in the monitors can result in a duller mix, while reducing the high frequencies can result in a brighter overall mix.

## ADDITIONAL TIDBITS OF WISDOM:

- Never listen to loud music for prolonged periods. Please see the Safety Instructions on page 2 for information on hearing protection.
- When you shut down your equipment, turn off the S•5 studio monitors first to prevent thumps and other noises generated by any upstream equipment from coming out the speakers. When powering up, turn on the monitors last.
- Save the shipping boxes and packing materials! You may need them someday. Besides, your cat will love playing in them and jumping out at you unexpectedly. Remember to pretend like you are surprised!
- Save your sales receipt in a safe place.
- Also record both S•5 serial numbers in the space provided on the inside front cover, along with where and when you bought them.

# Introduction

Thank you for choosing TAPCO S•5 Studio Monitors by Mackie Designs. The TAPCO product line hails back to the days of TAPCO Corporation, Greg Mackie's first company. TAPCO revolutionized the audio industry back in 1969 with the very first 6-channel mixer specifically designed for keyboards and rock 'n' roll.

In essence, TAPCO redefined the price/performance ratio and made high-quality professional audio equipment accessible to virtually anyone. Today, TAPCO is reborn with the same ideals and is backed by the world-class engineering and manufacturing horsepower of Mackie Designs. The TAPCO S•5 is the first active studio monitor in the TAPCO by Mackie® family.



TAPCO version of Greg Mackie®

These versatile compact "mini-monitors" can be used in a variety of applications, including small project studios, surround sound editing, home theater playback, and desktop audio workstations (DAWs).

The S•5 active studio monitors may be small, but they are packed with features and designed to produce transparent and uncolored sound for monitoring multitrack recordings and mixdowns. The two-way bass reflex (ported) design provides an amazingly flat frequency response from 64 Hz to 20 kHz.

There are many benefits to integrating an active crossover, power amplifiers, and drivers into a single cabinet, and we've taken full advantage of these benefits in the design of the S•5.

- The crossover point is designed so that the high and low frequency drivers are fed only the frequencies that they are best able to reproduce.
- The amplifiers are designed to provide maximum acoustic output from the speakers, yet minimize the danger of speaker damage due to overdriving.
- The connecting wire between the amplifier outputs and the drivers are kept to an absolute minimum so the damping factor of the amplifier isn't compromised by the resistance of long speaker cables.
- The acoustic sum of the outputs from the two drivers are optimized electronically, as well as physically, so the amplitude response is unity and the phase difference is minimal.

In short, all the complex interconnected components in the system are designed to work in harmony with each other to produce the best possible sound.

Here's a quick look at all the features packed into the S•5 Studio Monitors:

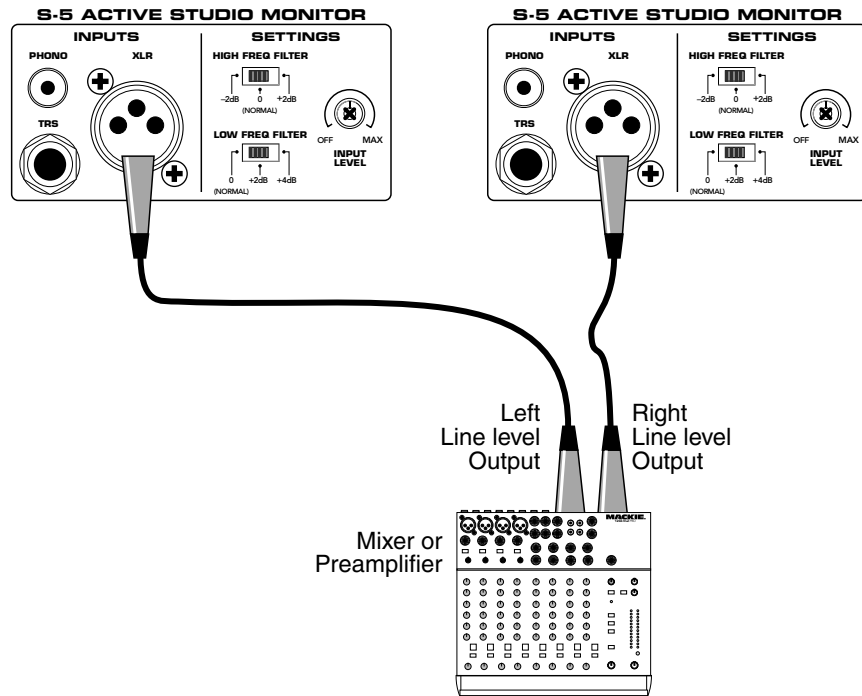
- Flat frequency response ( $\pm 3$  dB, 64 Hz to 20 kHz)
- 1" silk dome tweeter, fully magnetically shielded
- 5.25" polypropylene cone woofer, fully magnetically shielded
- Small footprint, perfect for desktop applications
- Ported, bass reflex design for enhanced bass performance
- 60 watt HF and 60 watt LF power amplifiers
- Low-frequency over-excursion protection
- Front panel clipping indicator
- High-strength cabinet constructed of with 5/8" MDF composite and 3/4" front board with radiused edges
- High-density adiabatic foam absorbs internal reflections
- Full magnetic shielding allows placement near computer monitors
- Balanced XLR and 1/4" TRS, and unbalanced RCA input connectors
- 24 dB/octave crossover at 4 kHz
- Adjustable sensitivity control
- LF equalization provides +2 dB or +4 dB at 65 Hz
- HF equalization provides  $\pm 2$  dB at 5 kHz and above
- Rear panel power switch with front panel indicating LED



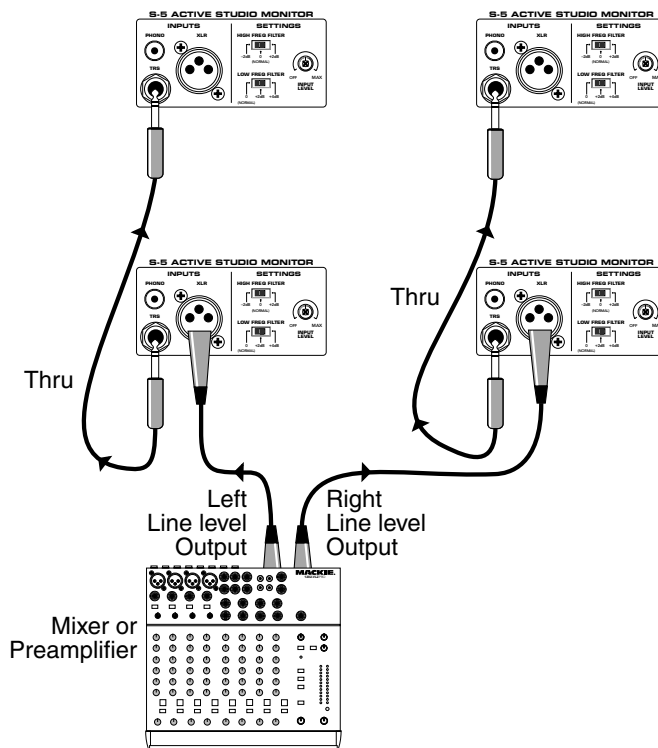
TAPCO van (a.k.a. micro bus)

# Hookup Diagrams

## Stereo Speaker Hookup



## Daisy-Chaining Two Speakers Per Side



Note: Use stereo 1/4" TRS plugs for the "Thru" connections. If you use mono 1/4" TS plugs, you will unbalance the XLR connections and suffer a drop in signal level of 6 dB.

# TAPCO S•5 Features

## REAR PANEL DESCRIPTION

This is where you connect your signal to the monitor and make adjustments to the frequency response of the speakers to match the monitor's location and your room's environment.

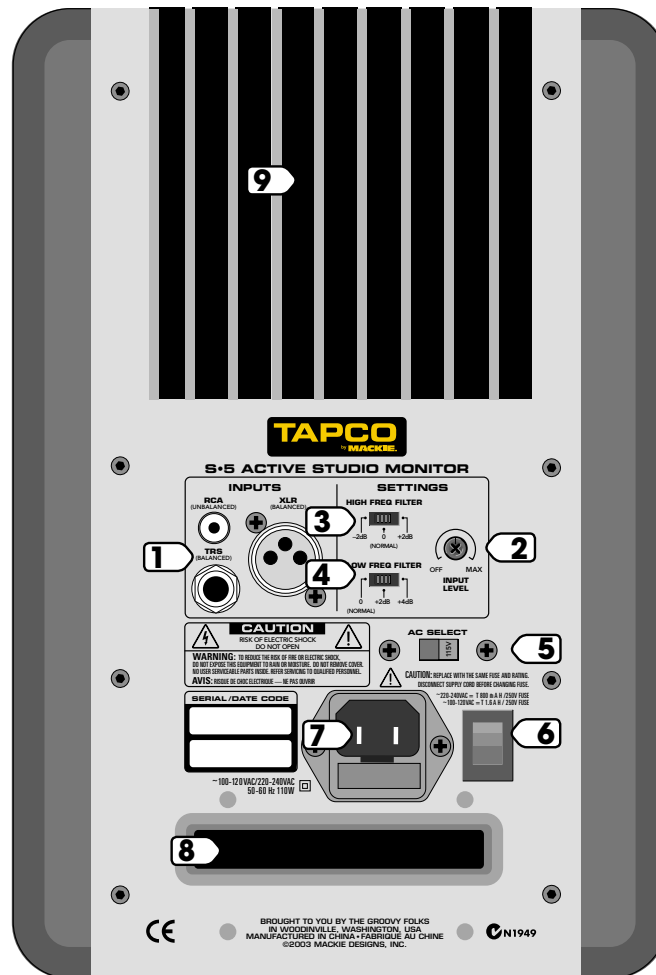
### 1. INPUTS

- Since all three of them are connected together electrically, do not connect more than one signal at a time to the jacks.
- You can use the remaining jacks as "Thru" jacks for daisy-chaining the signal to another monitor or to another amplifier. If you do this, be aware that unbalancing the signal anywhere along the chain does so for all devices connected to the chain. This negates the benefits associated with balanced lines and inputs.
- Unbalanced TS (Tip-Sleeve) lines can be accommodated via the TRS jack. See "Appendix B: Connections" for more information.
- When using a TS or TRS plug, make sure it is pushed all the way into the jack. Partially inserting the plug into the jack could result in a drop in signal level (by 6 dB).
- The S•5s can be used with a home receiver even if the receiver lacks a preamp output by using a speaker-level to line-level attenuator. (See "Input Signal Wiring" on page 10 for more information.)

### 2. INPUT LEVEL

The S•5 expects a line-level signal at its input. Use this control to adjust the sensitivity of the input section according to the signal strength at its input.

- The S•5 is designed to operate with a +4 dBu signal when the INPUT LEVEL control is at the MAX position.



- The S•5 can accept up to a +20 dBu signal by turning down the INPUT LEVEL control accordingly.

- NEVER connect the output of an amplifier directly to the input of the S•5. This could damage the input circuitry of the studio monitor.

### 3. HIGH FREQ Switch

The HIGH FREQ switch tailors the overall high-frequency response by  $\pm 2$  dB at 5 kHz and above. Leave this switch in the "0 (NORMAL)" position unless:

- You want to subtly brighten or darken the sound of the speakers.
  - Perhaps you have hearing loss caused by too many nights in front of a double Marshall stack.
  - You just like to mix on the bright side or dull side.
- If your mixes consistently sound dull or dark when you listen elsewhere, this usually indicates that your monitors are too bright, relative to your normal hearing. A bit less high-frequency energy usually fixes this, and you can force the mix in this direction by reducing the high-frequency output of the monitors by using the  $-2$  dB position of the switch.
- Conversely, if your mixes are consistently too bright, then adding some additional high-frequency energy in the monitors satisfies your ears, and the resultant mix has less HF content.
- It's a real rush to mix really loud. But remember that the resulting mix only sounds good when you play it at least that loud. However strange it may sound, mixes made at lower levels sound even better when played loud, perhaps even a bit bigger than life.



Get that sound level meter out. Decide what level you're going to mix at and use the meter to help keep you mixing at that level. Your ears will thank you, and your mixes will be better for it.

#### 4. LOW FREQ Switch

The LOW FREQ switch tailors the overall low-frequency response by +2 dB or +4 dB at 65 Hz.

- For most applications, use the "0 (NORMAL)" setting. This takes the equalization circuit out of the signal path.
- If you want or need just a little extra low-frequency output, use the +2 dB setting.
- If you want or need more low-frequency output, use the +4 dB setting. Remember how things work in reverse, so boosting the deep bass content on playback may actually decrease it in the final mix.

#### 5. AC SELECT

Set this switch to the correct voltage setting for the country you are in, 115 VAC or 230 VAC.

**Note:** The S•5s are shipped with the AC SELECT switch set to the 230 VAC position. If you are in a country that uses 100-120 VAC, set the switch to the 115 VAC position and replace the fuse (located in the IEC socket) with the 1.6 A fuse included in the accessory bag. See the "Troubleshooting" section on page 11 for instructions on replacing the fuse.

#### 6. POWER

Use this switch to turn the active monitors on and off.

#### 7. Line Cord Socket and Fuse

Connect the line cord to this IEC socket securely, and plug the other end into your AC outlet. Make sure the AC SELECT switch is set to the correct AC voltage.

The fuse is located behind the fuse cover, at the bottom of the IEC socket. See the "Troubleshooting" section on page 11 for information about replacing the fuse.



#### 8. Bass Reflex Port

A bass reflex system uses the radiation from the rear of the woofer cone to extend the low-frequency response of the speaker. The size of the port is carefully designed with respect to the volume of the cabinet and the characteristics of the woofer to produce low-frequency extension.

#### 9. Heatsink

The heatsink is designed to dissipate the heat generated by the built-in power amplifiers. The cooler the amplifiers operate, the longer their life-expectancy. The S•5 uses convection cooling, where cool air

flows through the fins of the heatsink and carries the heat away. Make sure there is at least six inches clearance between the back of the S•5 monitors and the wall.

### FRONT PANEL DESCRIPTION

#### 10. Power LED

This illuminates when the POWER switch is turned on and AC power is available at the line cord socket.

#### 11. Clip LED

This LED illuminates just before the low-frequency amplifier reaches its maximum output and begins to clip.

- Occasional blinking of the Clip LED indicates that the loudest transients are reaching the maximum output capability of the amplifier. This is okay.
- Frequent or continuous blinking of the Clip LED indicates that you have exceeded the maximum output capability of the amplifier and that the amplifier is clipping. You should reduce the level from your signal source until the Clip LED blinks occasionally or not at all.

## Protection Circuits

There are several protection mechanisms designed into the S•5 to safeguard the loudspeakers and amplifiers from inadvertent damage.



**CAUTION:** The protection circuits are designed to protect the loudspeakers under reasonable and sensible conditions. Should you choose to ignore the warning signs (i.e., frequent Clip LED indications, excessive distortion), you can still damage the speakers in the S•5 by overdriving them past the point of amplifier clipping. Such damage is beyond the scope of the warranty.

### Overexcursion Protection

A 12 dB/octave high-pass filter at 60 Hz just prior to the low-frequency amplifier prevents very low frequencies from being amplified. Excessive low-frequency energy below 60 Hz can damage the woofer by causing it to “bottom out,” also known as overexcursion, which is equivalent to a mechanical form of clipping.

### Thermal Protection

All amplifiers produce heat. The S•5 is designed to be efficient both electrically and thermally.

- If for some reason the heatsink gets too hot, a thermal switch activates and turns off the amplifier. This protection operates independently for the low-frequency and high-frequency amplifiers. Therefore, it is possible for only the low frequency or high frequency amplifier to shut down while the other remains on.
- When the heatsink cools down to a safe temperature, the thermal switch resets and normal operation resumes.
- If the heatsink temperature again gets too hot, the shutdown process repeats. Should this happen, make sure that airflow to the rear of the cabinet is not restricted. If the ambient air temperature is very warm, try pointing a small fan toward the heatsink to increase the airflow through the fins.

### Integrated Magnetic Shielding

The S•5 contains drivers with large magnetic structures. The drivers’ magnets are shielded to help prevent the magnetic field from radiating out into the environment and playing havoc with computer monitors or TV screens. Unshielded speakers can cause distortion in both the shape and color of the picture if placed too close to a CRT (cathode ray tube). If you have a particularly sensitive computer monitor or TV screen, it may be necessary to move the speakers a few inches away.

## Input Signal Wiring

You should use high-quality, shielded cable to connect the signal source to the INPUT jack on the S•5.

- Foil shielded cables, such as Belden 8451, 8761, or 9501 are commonly used for studio wiring.
- Microphone cables work well.
- The better the shield, the better the immunity from externally induced noise (like EMI and RFI). Route the cable away from AC power cords and outlets. These are common sources for hum in an audio signal. You can purchase quality cables from your Mackie dealer.
- In certain home theater applications, it may be necessary to connect the speaker outputs from a stereo receiver to the inputs of the S•5s, if the receiver doesn’t have preamp outputs or other line-level output connections.



**CAUTION:** Do not attempt to connect a speaker output directly to the input of the S•5! Speaker levels are much higher than line levels and can damage the input circuitry in the S•5.

You can, however, insert a speaker-level-to-line-level signal attenuator between the receiver’s speaker output and the S•5’s input. Your Mackie dealer may be able to help you find one, or if you enjoy do-it-yourself projects, you can build your own. Contact our tech support department for more information.

# Appendix A: Service Information

## Warranty Service

Details concerning Warranty Service are spelled out in the Warranty section on page 15.

If you think your TAPCO S•5 has a problem, please do everything you can to confirm it before calling for service. Doing so might save you from the deprivation of your monitor and the associated suffering.

These may sound obvious to you, but here are some things you can check. Read on.

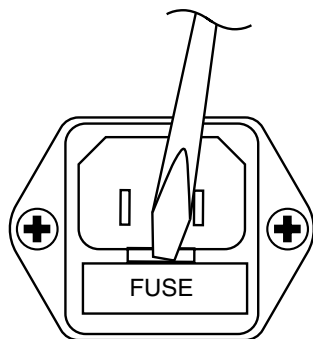
## Troubleshooting

### No Power

- Our favorite question: Is it plugged in?
- Make sure line cord is securely seated in the line cord socket and plugged all the way into the AC outlet.
- Make sure the AC outlet is live (check with a tester or lamp).
- Is the POWER switch in the ON position?
- Is the power LED on the front panel illuminated? If not, make sure the AC outlet is live. If so, refer to "No Sound" below.
- If the power LED is not illuminated, and you are certain that the AC outlet is live, it is possible the fuse has blown.

#### To remove and replace the fuse:

1. Disconnect the power cord from the IEC socket.
2. Remove the fuse drawer by prying it open with a small screwdriver. It will slide all the way out.



3. Remove the fuse and replace it with an equivalent-type fuse.  
115 VAC unit: 1.6 amp slo-blo (T 1.6 A H/250 V)  
230 VAC unit: 800 milliamp slo-blo (T 800 mA H/250 V)
4. Replace the fuse drawer by pushing it all the way back into the IEC socket.

If two fuses blow in a row, then something is very wrong. See the "Repair" section on the next page to find out what to do.

### No Sound

- Is the power LED on the front panel illuminated?
- Is the INPUT LEVEL control turned up?
- Is the signal source turned up? Make sure the signal level from the mixing console (or whatever device immediately precedes the studio monitor) is high enough to produce sound.
- If it's a stereo pair, try switching them around. For example, if a left output is presumed dead, switch the left and right cords at the monitor end. If the problem switches sides, it's not the monitor. It could be a bad cable, or no signal from the mixer.

### Bad Sound

- Is the input connector plugged completely into the jack? If using a 1/4" TS or TRS plug, make sure it is plugged all the way in.
- Is it loud and distorted? Reduce the signal level at the mixer.
- If possible, listen to the signal source with headphones plugged into the preamp stage. If it sounds bad there, it's not the monitor.
- Too much bass or not enough bass? Move around the room and see if the bass response changes. It's possible your listening position coincides with a room mode where the low frequencies either become exaggerated or nulled. If so, try moving the monitors to a different position, or moving your listening position.

### Noise/Hum

- Check the signal cable between the mixer and the monitor. Make sure all connections are secure. These problems usually produce crackling noises or hum.
- If connecting an unbalanced output to the S•5 balanced input, make sure the shield is connected to the unbalanced ground and to pin 1 of the XLR (or the sleeve of the TRS jack).
- If a CATV cable is connected to the system, try disconnecting it. If the hum goes away, call your cable carrier to check for proper grounding of the cable.

## Repair

Service for TAPCO products is available at our factory, located in sunny Woodinville, Washington. Service for TAPCO products living outside the United States can be obtained through local dealers or distributors.

If your monitor needs service, follow these instructions:

1. Review the preceding troubleshooting suggestions. Please.
2. Call Tech Support at 1-800-258-6883, 7 am to 5 pm PST, to explain the problem and request an RA (Return Authorization) number. Have your monitor's serial number ready. You must have an RA number before you can obtain service at the factory.
3. Keep this owner's manual. We don't need it to repair the monitor.
4. Pack the monitor in its original package, including endcaps and box. This is very important. When you call for the RA number, please let Tech Support know if you need new packaging. Mackie is not responsible for any damage that occurs due to non-factory packaging.

5. 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 we can duplicate it.
6. Write the RA number in **BIG PRINT** on top of the box. Units sent to us without the RA number will be refused.
7. Ship the monitor to us. We suggest insurance for all forms of cartage. Ship to this address:

TAPCO  
SERVICE DEPARTMENT  
16220 Wood-Red Road NE  
Woodinville, WA 98072

8. We'll try to fix the monitor within three to five business days. Ask Tech Support for the latest turn-around times when you call for your RA number. The monitor must be packaged in its original packing box, and must have the RA number on the box. Once it's repaired, we'll ship it back the same way in which it was received. This paragraph does not necessarily apply to non-warranty repair.

### Lonely? Looking for that special someone? Do you have a question about your TAPCO Monitor?

Please call our Technical Support chaps at **1-800-258-6883**, Monday to Friday, from 7 am to 5 pm PST. After hours, visit [www.tapcogear.com](http://www.tapcogear.com) and look under **Support**, or e-mail us at [techmail@tapcogear.com](mailto:techmail@tapcogear.com)

### Flash From The Past

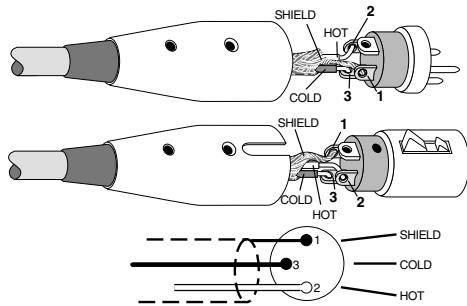
"You bet your sweet bippy it is!"  
"Bippy? What's a bippy?"  
"A baby bip!"  
"Then what's a bip?"  
"A big bippy!"  
— Rowan & Martin's Laugh-In, circa 1969



# Appendix B: Connections

## XLR Connectors

XLR connectors are used to make balanced connections to the S•5. They are wired as follows, according to standards specified by the AES (Audio Engineering Society).



XLR Balanced Wiring

Pin 1 = Shield

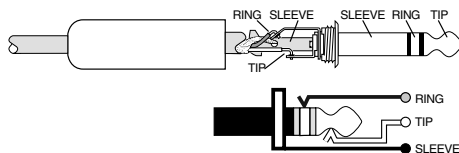
Pin 2 = Hot (+)

Pin 3 = Cold (-)

## 1/4" TRS Phone Plugs and Jacks

"TRS" stands for Tip-Ring-Sleeve, the three connections available on a stereo 1/4" or balanced phone jack or plug. TRS jacks and plugs are used to make balanced connections to the S•5:

### Balanced Mono



1/4" TRS Balanced Mono wiring:

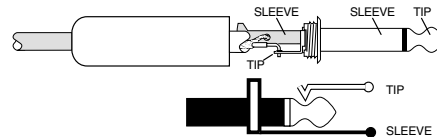
Sleeve = Shield

Tip = Hot (+)

Ring = Cold (-)

## 1/4" TS Phone Plugs and Jacks

"TS" stands for Tip-Sleeve, the two connections available on a mono 1/4" phone jack or plug. They are used for unbalanced signals.



1/4" TS Unbalanced Wiring:

Sleeve = Shield

Tip = Hot (+)

## RCA Plugs and Jacks

RCA-type plugs (also known as phono plugs) and jacks are often used in home stereo and video equipment and in many other applications. They are unbalanced and electrically equivalent to a 1/4" TS phone plug.



RCA Unbalanced Wiring:

Sleeve = Shield

Tip = Hot

# Appendix C: S•5 Specifications

## Acoustic Performance

Free Field Frequency Response: 64 Hz – 20 kHz ( $\pm 3$  dB)  
 Lower Cutoff Frequency: -3 dB @ 64 Hz  
 Upper Cutoff Frequency: -3 dB @ 22 kHz  
 Sound Pressure Level @ 1 meter, 7.5 dBu into  
 Balanced Input: 100 dB SPL @ 1m  
 Maximum SPL Per Pair: 113 dB SPL @ 1m

## Transducers

Low Frequency: 5.25 in/133 mm with steel frame, polypropylene cone woofer  
 High Frequency: Wave guide loaded 1 in/25 mm silk dome tweeter

## Amplifiers

Low Frequency Power: 60 watts, 4 ohm load, 100 watts peak  
 High Frequency Power: 60 watts, 4 ohm load, 100 watts peak  
 Slew Rate: > 15 V/ $\mu$ s  
 Distortion (THD, SMPTE IMD, DIM 100): < 0.035%  
 Signal-to-Noise Ratio:  
 Low Frequency: > 101 dB, 20 Hz to 20 kHz, unweighted, referenced to 60 watts into 4 ohms  
 High Frequency: > 93 dB, 20 Hz to 20 kHz, unweighted, referenced to 60 watts into 4 ohms  
 Type: Monolithic IC, Class AB

## Electronic Crossover

Crossover Type: 24 dB/octave  
 Crossover Frequency: 4 kHz  
 Sensitivity: +4 dBu at 300 Hz for full output  
 Input Impedance: 20 k $\Omega$ , balanced bridging; 10 k $\Omega$  unbalanced

## Equalization

Low Frequency EQ: +2 dB/+4 dB @ 65 Hz, peaking  
 High Frequency EQ:  $\pm 2$  dB @ 5 kHz, shelving

## AC Power Requirements

US: 120 VAC, 60 Hz  
 Europe: 240 VAC, 50 Hz  
 Korea (AC Power Select at 240 V): 220 VAC, 60 Hz  
 Japan (AC Power Select at 120 V): 100 VAC, 50/60 Hz  
 AC Connector: 2-pin IEC 250 VAC, 16 A male  
 Fuse: 115 VAC: T 1.6 A H/250 V  
 230 VAC: T 800 mA H/250 V  
 Power Consumption: 80 watts with music, loud mix  
 20 watts quiescent (idle)

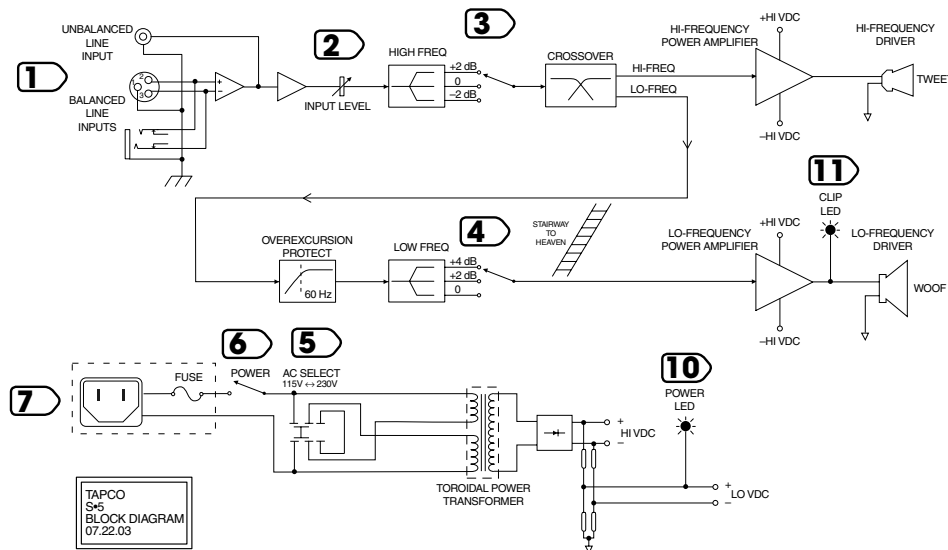
## Physical Dimensions and Weight

Enclosure: 0.625 in/16 mm thick MDF with 0.750 in/19 mm MDF front panel  
 Damping: Adiabatic foam  
 Dimensions:  
 Height: 11.3 in/286 mm  
 Width: 7.6 in/194 mm  
 Depth: 9.1 in/232 mm  
 Weight: 17.0 lb/7.7 kg

## Disclaimer

Since we are always striving to make our products better by incorporating new and improved materials, components, and manufacturing methods, we reserve the right to change these specifications at any time without notice.

## S•5 Block Diagram



# TAPCO LIMITED WARRANTY

- A.** LOUD Technologies Inc. warrants all materials, workmanship and proper operation of this TAPCO product for a period of **one year** from the original date of purchase. If any defects are found in the materials or workmanship, or if the product fails to function properly during the applicable warranty period, LOUD Technologies, at its option, will repair or replace the product. **This warranty applies only to equipment sold and delivered within the U.S. by LOUD Technologies or its authorized dealers.**
- B.** Service and repairs of TAPCO products are to be performed only at the factory, or a factory-authorized service center. Unauthorized service, repairs, or modification will void this warranty.
- C.** To obtain factory service, please follow the instructions found on pages 11 and 12.
- D.** LOUD Technologies Inc. reserves the right to inspect any products that may be the subject of any warranty claims before repair or replacement is carried out. LOUD Technologies may, at their option, require proof of the original date of purchase in the form of a dated copy of the original dealer's invoice or sales receipt. Final determination of warranty coverage lies solely with LOUD Technologies Inc.
- E.** TAPCO products returned to LOUD Technologies Inc. and deemed eligible for repair or replacement under the terms of this warranty will be repaired or replaced within thirty days of receipt by LOUD Technologies at our rainforest factory complex. LOUD Technologies may use refurbished parts for repair or replacement of any product. Products returned to LOUD Technologies that do not meet the terms of this Warranty will be repaired and returned C.O.D. with billing for labor, materials, return freight, and insurance. Products repaired under warranty at the factory will be returned freight prepaid by LOUD Technologies to any location within the boundaries of the USA.
- F.** LOUD Technologies warrants all repairs performed for 90 days or for the remainder of the original warranty period. LOUD Technologies assumes no responsibility for the quality or timeliness of repairs performed by Authorized TAPCO Service Centers.
- G.** This warranty is extended to the original purchaser and to anyone who may subsequently purchase this product within the applicable warranty period.
- H.** This is your sole warranty. LOUD Technologies Inc. does not authorize any third party, including any dealer or sales representative, to assume any liability on behalf of LOUD Technologies or to make any warranty for LOUD Technologies.
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