ST-SERIE

170.341 / 170.344 / 170.347

NEAR FIELD POWERED STUDIO MONITOR

OWNER'S MANUAL

CITRONIC®

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

Warning: To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture.


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


Do not place this unit on an unstable cart, stand or tripod, bracket or table. The unit may fall, causing serious injury to a child or adult and serious damage to the unit. Use only with a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the unit. Any mounting of the device on a wall or ceiling should follow the manufacturer instructions and should use a mounting accessory recommended by the manufacturer.
An appliance and cart combination should be moved with care. Quick stops, excessive force and uneven surfaces may cause the appliance and cart combination to overturn.
Read and follow all the safety and operating instructions before connecting or using this unit.
Retain this notice and the owners manual for future reference.
All warnings on the unit and in its operating instructions should be adhered to.
Do not use this unit near water; for example, near a bath tub, washbowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool.

The unit should be installed so that its location or position does not interfere with its proper ventilation. For example, it should not be situated on a bed, sofa, rug or similar surface that may block the ventilation openings; or placed in a built-in installation, such as a bookcase or cabinet, that may impede the flow of air through its ventilation openings.
The unit should be situated from heat sources such as radiators, heat registers, stoves or other devices (including amplifiers) that produce heat.
The unit should be connected to a power supply outlet only of the voltage and frequency marked on its rear panel.
The power supply cord should be routed so that it is not likely to be walked on or pinched, especially near the plug, convenience receptacles, or where the cord exits from the unit.
Unplug the unit from the wall outlet before cleaning. Never use benzine, thinner or other solvents for cleaning. Use only a soft damp cloth.
The power supply cord of the unit should be unplugged from the wall outlet when it is to be unused for a long period of time.
Care should be taken so that objects do not fall, and liquids are not spilled into the enclosure through any openings.
This unit should be serviced by qualified service personnel when: The power cord or the plug has been damaged; Objects have fallen, or liquid has been spilled into the unit; The unit has been exposed to rain or liquids of any kind; The unit does not appear to operate normally or exhibits a marked change in performance; The device has been dropped or the enclosure damaged.

DO NOT ATTEMPT SERVICING OF THIS UNIT YOURSELF. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

Upon completion of any servicing or repairs, request the service shops assurance that only Factory Authorized Replacement Parts with the same characteristics as the original parts have been used and that the routine safety checks have been performed to guarantee that the equipment is in safe operating condition.
REPLACEMENT WITH UNAUTHORIZED PARTS MAY RESULT IN FIRE

Introduction

Congratulations on your Citronic purchase! Welcome to the growing family of Citronic owners.
Growing demands on music recording industry professionals have created the need for better monitor performance at more affordable prices. The 170.341/344/347 Series class of Powered Studio Monitors was created to address these needs. Please take a few moments to review the information in this guide.

Safety

For your safety and to ensure correct operation of this product, please take a moment to read the safety precautions opposite this page.

Caution

Never remove the rear panel of these powered monitors. To do so could result in electric shock. A qualified technician should preform any repair or service to the electronics.
This product is capable of producing sounds at a volume that could be damaging to hearing and result in permanent hearing loss over an extended period of time.

Unpacking and Visual Inspection

It is rare that a unit is damaged during shipping. However, if this does happen, contact shipping company immediately. Keep the original carton and packing material for future shipping, and to preserve your warranty!

Systems Control

SYSTEM VOLUME

The input sensitivity is adjusted (counterclockwise reduces sensitivity) with the rear panel mounted System Gain control. Adjustment range is from -30dB to +6dB. Factory preset gain is +6dB, which should suffice for most conditions. Normally adjustments would only be made if you're using your monitor in a surround system and need to balance levels or if your monitor send is too hot and not adjustable.

HF ADJUSTMENT

High Frequency Adjustment is through a rear panel mounted 4-position rotary switch. Range of control is +1dB, Flat, -1dB ,or -2dB shelving above 2 kHz.
Factory setting for your is flat (switch is in 0dB position). Room acoustics may dictate which type of adjustment you need to make to retain a flat frequency response from the monitor. (See additional information in Installing Your Monitors section on page 4.)

Connecting Your System

POWERING ON

All connections should be made, all faders and controls should be set at their minimum levels, and all other equipment should be powered on prior to powering on your 170.341/344/347 monitors.

The power On/Off switch is located on the rear panel and is internationally marked to indicate the operational status. (1) = ON and (O) = OFF. A blue LED illuminates on the front baffle when power is applied.

CHANGING FUSES

Under normal operation the fuses should not blow. A blown fuse usually indicates an overload or fault condition. To change the fuse, remove the power cord, pry off the fuse block with a small flathead screwdriver and change the blown fuses.
Refer to specifications page for fuse current ratings.
If the fuses blow immediately upon power up, this indicates a fault condition and the monitor should be returned to Citronic dealer for repair.

AUDIO INPUTS

The XLR and TRS are balanced inputs where as the rca input is an unbalanced input.
UNBALANCED

BALANCED

10K OHMS BALANCED; PIN 2 + TIP = HIGH, PIN 3 + RING = LOW, PIN 1 + SLEAVE = GROUND

Installing Your Monitors

The close-field monitor, by definition, reduces room interaction. This can be compared to the conventional stereo configuration or the large monitor arrangement in a recording studio where sounds emanating from the monitor are reflecting off ceilings, walls, and floors greatly affect the sound quality. By shortening the path to the ear, the close-field monitor offers a tremendous amount of flexibility, allowing the sound to become less susceptible to differing room conditions. The ability to adjust the high frequency characteristics is equally important to help compensate for room irregularities and achieve the highest sound accuracy. (See HF Adjustments.)

A room that is heavily dampened would typically require a high frequency boost. Likewise, reducing the high frequencies can alter a reverberant room.
Placing the monitor close to a rear wall, sidewall, or a corner will reinforce the low frequencies. Generally speaking, if you move them two to three feet away from walls and corners, you'll hear less low frequency interaction (excluding any interaction with the mixing console).

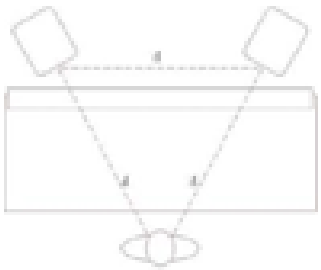
Positioning Your Monitors

Positioning your monitors correctly in the studio is critical to their performance. Typically, they should be placed so that that the listening position is fully "covered" with all monitors resting on the same horizontal plane. A great way to test a monitor for its imaging capability is to play back a CD or DVD recorded acoustically in stereo (or one recorded in surround sound if you have a surround sound set-up). We recommend acoustic music because it represents the spectrum of sound.) You can adjust the angle of each monitor by listening for dead spots. Keep in mind, changing the angle or position of a monitor will change the sound.

2-CHANNEL SET-UP

Close-Field Configuration

In a control room situation, the monitors are often times placed on the meter bridge or in a close-field listening position. Initial placement starts by measuring out a simple equilateral triangle (all three sides equal in length) with the apex at the centre of the listening position (as shown in Figure)
as an "overlay" for the stereo installation. In this configuration, the Left and Right monitors are each placed at a 60º angle Equidistant from the listening position.



Mid-Field Configuration

This configuration is basically the same as the Close-Field set-up. It is normally used with larger monitors or when the monitors are too large or heavy for the meter bridge. This set-up has the potential For a larger sweet spot and better spatial imaging. Make sure that the height of the woofer is above height of the console.

Once the monitors have been placed. You need to adjust the SYSTEM GAIN pots (see page 2) for each monitor so that all channels have exactly the same SPL output at the listening position. This can be done simply by listening to each channel one at a time and adjusting for relative levels we recommend using an SPL meter and filtered noise (pink noise) to test each channel independently. Simply take a reading from each monitor,and then adjust all the monitors to match your lowest SPL reading. Your system levels should now be balanced for multi-channel surround.

The most significant thing to remember is that each room presents its own set of acoustic variables. You'll want to experiment a bit to arrive at the best possible sound for your room.

IMPORTANT NOTE: Your 170.341/344/347 Powered Monitor was originally packaged in a specially designed carton and included special packing materials. Please save these items they should be used when transporting your monitors.

Specifications

	170.341	**170.344**	**170.347**
Frequency Response	53 Hz – 20kHz ±2.0dB	50 Hz – 20kHz ±2.0dB	45 Hz – 20kHz ±2.0dB
High Frequency Driver	1” Soft Dome	1” Soft Dome	1” Soft Dome
Low Frequency Driver	5” Aramid Glass Fiber	6.5” Aramid Glass Fiber	8” Aramid Glass Fiber
Cabinet Dimensions(HxWxD)	280 x 190 x 225mm	320 x 225 x 265mm	380 x 265 x 305mm
Net Weight (each)	7.2Kg	9.4Kg	12.4Kg
Amplifier			
Power Rating (HF/LF)	15 watts/35 watts	15 watts/50 watts	15 watts/75 watts
Signal to Noise (HF/LF)	82dB/90dB	82dB/90dB	82dB/90dB
T.H.D%(HF/LF)	0.05% / 0.02%	0.05% / 0.02%	0.05% / 0.02%
Input Impedance			
Balanced	10K Ohm	10K Ohm	10K Ohm
Unbalanced	10K Ohm	10K Ohm	10K Ohm
Crossover			
Crossover Frequency	3kHz	2.6kHz	2.4kHz
Subsonic Filter	45Hz	40Hz	35Hz
FUSE 5mm x 20mm	0.8A	1A	1.6A