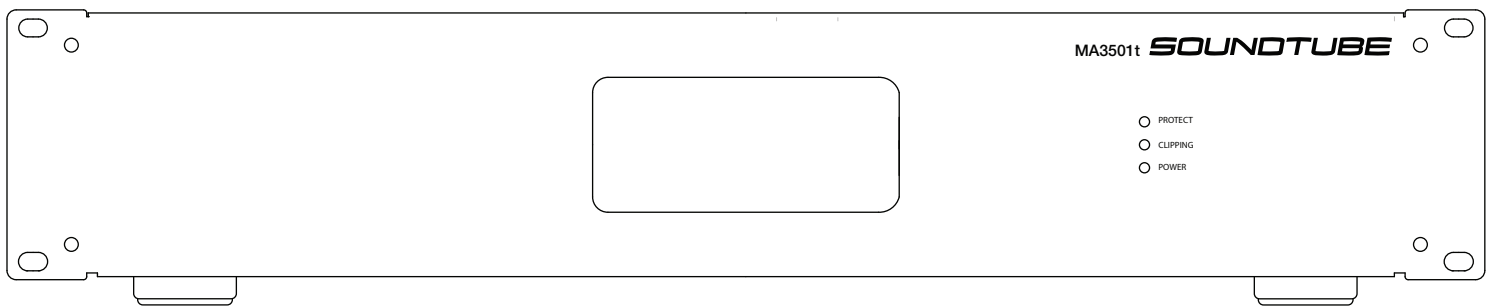




MA3501t

Install Instructions For:
MA3501t

MA3501t, AUDIO DISTRIBUTION AMPLIFIER INSTALLATION MANUAL



FEATURES:

- 350W at 4 ohms direct or 25V, 70V, 100V isolated outputs
- Efficient Class G high current mono-block amplifier
- Large Toroidal power transformer and audio output transformer
- Selectable high pass/subsonic filter
- Euro block balanced and dual unbalanced RCA inputs
- Selectable 12V and auto signal sense remote turn on and stand by options
- Selectable peak/clipping limiter
- High current euro block output connectors
- Dual 115VAC/230VAC operation
- Wind tunnel flow through cooling with variable speed thermostatically controlled fan
- Overload, short circuit and thermal protection circuits
- Power/standby, clipping and protection LED indicators
- Compact 2U Rack space chassis

DESCRIPTION:

The **SOUNDTUBE MA3501t** audio distribution amplifier is a high performance audio amplifier that is designed for continuous use in commercial applications. The high efficiency Class “G” amplifier design offers high performance in a compact design and utilizes 2 large and efficient toroidal transformers in the amplifier power and audio output sections. The power transformer is a very high current design for sustained high power output and can operate with multiple input mains voltage and is thermally protected.

The audio output transformer is a very low distortion design that provides very clean audio output at high power levels for 25V, 70V or 100V audio distribution systems.

The **MA3501t** amplifier also has a direct speaker output option that bypasses the transformer for those applications where it is necessary to operate 4-16 ohm speaker systems. All of this

performance is in an amplifier that is only 2RU in height.

Other application and performance features of the **SOUNDTUBE MA3501t** amplifier are flexible audio inputs connections for both balanced and unbalanced audio signals. The balanced input features a Euro Block, Phoenix style connector and the unbalanced inputs are 2 RCA style jacks that will allow the mix down of a stereo input signal to a summed mono output.

The amplifier offers a switchable peak limit anti-clipping circuit to help keep the audio clean and undistorted at high output levels and also a switchable high pass filter to avoid over driven bass distortion and speaker line transformer saturation from low frequencies. The **MA3501t** also provides the installer with remote turn on and off provisions that can either be switched by an external 12VDC source with loop through provisions or set to a program input sensing position that provides turn on and standby operations in the presents or absents of an audio signal. Both of the remote features mute the amplifier audio output when no signal is present to avoid any stray hum or noise being reproduced in the standby mode.

The **SOUNDTUBE MA3501t** amplifier is designed to provide long term reliability of operation and includes several features to insure many years of trouble free operation. Besides the oversized toroidal power and audio transformers the amplifier features a thermostatically controlled cooling fan with ducted heat sink cooling for the power stage. The protection circuitry includes thermal shut down over temperature protection for the power transformer and the power amplifier, input power overload protection, short circuit, DC output and over load protection and low impedance protection with relay switching to kill the speaker output and provide protection for speakers systems connected to the amplifier.

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Warning

SoundTube products must be installed by a professional audio installer/contractor. For safety and for optimum audio performance, installer must follow all directions issued by SoundTube Entertainment.

SAFETY INSTRUCTIONS



Explanation of Graphical Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you 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 to persons.



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

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and other instructions should be followed.
5. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
6. Carts and Stands - The apparatus should be used only with a cart or stand that is recommended by the manufacturer.

PORTABLE CART WARNING



7. Wall or Ceiling Mounting - The apparatus should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation - The apparatus should be situated so that its location or position does not interfere with its proper ventilation. For example, the apparatus 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 the ventilation openings.
9. Heat - The apparatus should be situated away from heat sources such as radiators, stoves, or other appliances that produce heat.
10. Power Source - The apparatus should be connected to a power supply only of the type described in the operating instructions or as marked on the apparatus.
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 up or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the apparatus.
12. Cleaning - The apparatus should be cleaned only as recommended by the manufacturer.
13. Nonuse Periods - The power cord of the apparatus should be unplugged from the outlet when left unused for a long period of time.
14. Object and Liquid Entry - Care should be taken so that neither objects fall nor liquids spill into the inside of the apparatus.
15. Damage Requiring Service - The apparatus should be serviced by qualified service personnel when:
 - a. the power supply cord or the plug has been damaged,
 - b. objects have fallen onto or liquid has been spilled into the apparatus,
 - c. the apparatus has been exposed to rain,
 - d. the apparatus does not appear to operate normally or exhibits a marked change in performance, or
 - e. the apparatus has been dropped or the cabinet damaged,
 - f. **WARNING: The mains plug (apparatus coupler) is used as disconnect device, the disconnect device shall remain readily operable.**
16. Servicing - The user should not attempt to service the apparatus beyond those means described in the operating instructions. All other servicing should be referred to qualified service personnel.
17. Protective earthing terminal. The apparatus should be connected to a mains socket outlet with a protective earthing connection.



CONSIGNES DE SÉCURITÉ

1. Lisez les consignes de sécurité - Toutes les consignes de sécurité et de fonctionnement doivent être lues avant l'utilisation de l'appareil.
2. Conservez ces consignes de sécurité - Les consignes de sécurité et d'utilisation doivent être conservées pour référence ultérieure.
3. Respecter les alertes et avertissements - Toutes les alertes et avertissements de sécurité et de fonctionnement indiquées sur l'appareil et dans la notice d'utilisation doivent être respectées.
4. Suivez les instructions - Toutes les instructions fournies dans la notice d'utilisation et autres instructions doivent être respectées.
5. Eau et humidité - L'appareil ne doit pas être utilisé en présence d'eau ou dans un milieu humide - par exemple, près d'une baignoire, d'un lavabo, d'un évier, d'un bac à lessive, dans un sous-sol humide, près d'une piscine, etc.
6. Chariots de transport et supports - L'appareil doit être utilisé uniquement avec un chariot ou un support recommandé par le fabricant.



AVERTISSEMENT CONCERNANT LE CHARIOT DE TRANSPORT

7. Montage au mur ou au plafond - L'appareil doit être seulement monté au mur ou au plafond selon les consignes recommandées par le fabricant.
8. Ventilation - L'appareil doit être placé de telle sorte que son emplacement ou sa position ne gêne pas une ventilation adéquate. Par exemple, l'appareil ne doit pas être installé ou posé sur un lit, un canapé, un tapis ou une surface similaire qui pourrait bloquer les ouvertures de ventilation ; ou encastré, comme une bibliothèque ou un meuble, ce qui pourrait empêcher le flux d'air au travers des ouvertures de ventilation.
9. Chaleur - L'appareil doit être placé loin des sources de chaleur telles que des radiateurs, poêles ou autres appareils produisant de la chaleur.
10. Source d'alimentation - L'appareil doit être connecté à une source d'alimentation uniquement du type de celle décrite dans la notice d'utilisation de l'appareil ou tel qu'indiqué sur l'appareil.
11. Protection des cordons d'alimentation - Les cordons d'alimentation doivent être disposés de sorte qu'ils ne soient pas susceptibles d'être piétinés, ou écrasés par des objets placés contre ou à côté d'eux. Il est nécessaire d'accorder une attention particulière aux cordons au niveau des prises de courant murales, des réceptacles, et au point de sortie du cordon de l'appareil.
12. Nettoyage - L'appareil doit être nettoyé exclusivement selon les recommandations du fabricant.
13. Périodes de non-utilisation - Le cordon d'alimentation de l'appareil doit être débranché de la prise d'alimentation si l'appareil n'est pas utilisé pendant une longue période de temps.
14. Objets et liquides - Des précautions doivent être prises pour qu'aucun objet ne tombe ou liquide ne se renverse à l'intérieur de l'appareil.
15. Dommages nécessitant réparation - L'appareil doit être réparé par un personnel qualifié lorsque:
 - a. le cordon d'alimentation ou la prise a été endommagé,
 - b. des objets sont tombés sur, ou du liquide a été renversé dans l'appareil,
 - c. l'appareil a été exposé à la pluie,
 - d. l'appareil ne semble pas fonctionner normalement, ou présente un changement marqué dans sa performance, ou
 - e. l'appareil est tombé, ou le boîtier est endommagé.

f. AVERTISSEMENT: La fiche d'alimentation (appareil coupleur) est utilisée comme dispositif de connexion, le dispositif de déconnexion doit rester facilement accessible.

16. Entretien régulier et réparation - L'utilisateur ne doit pas tenter d'intervenir sur l'appareil au-delà des conseils donnés dans la notice d'utilisation. Toute autre intervention doit être effectuée par un réparateur qualifié.

17. Borne de terre de protection. L'appareil doit être connecté à une prise secteur avec une prise de terre.

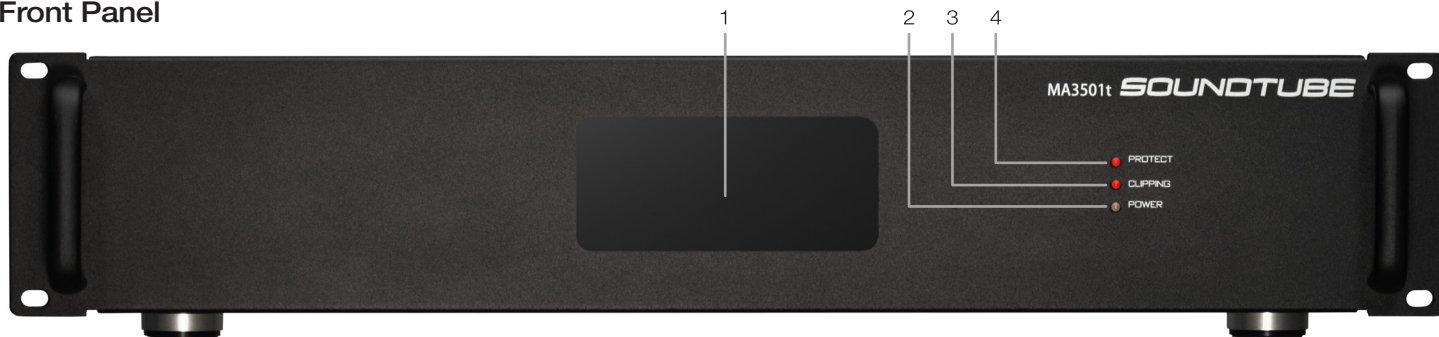


APPLICABLE FOR USA, CANADA OR WHERE APPROVED FOR USAGE

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE PLUG TO WIDE SLOT, INSERT FULLY.

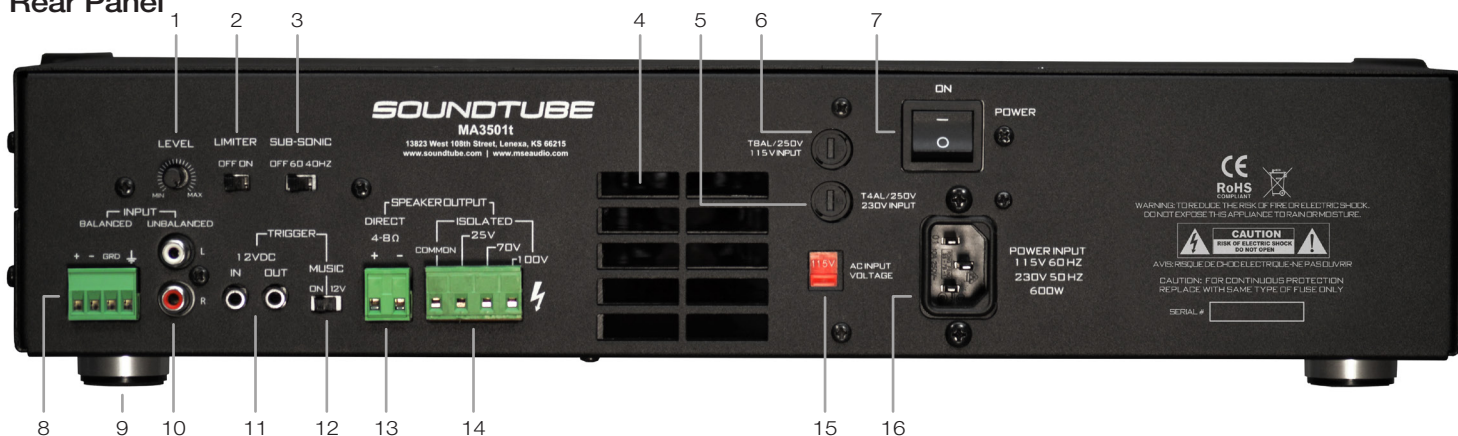
ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRESE ET POUSSER JUSQU'AU FOND.

Front Panel



1. Amplifier ventilation inlet and filter -- the opening has a foam filter material that is installed to prevent dirt, dust and foreign material from entering the amplifier. This filter can be removed for cleaning when necessary and reused. **DO NOT BLOCK THIS INTAKE.**
2. Power indicator LED -- RED is the power ON in the standby mode, GREEN is ON in the operational mode.
3. Amplifier Clipping LED- normally off, flashing RED indicates amplifier clipping.
4. Amplifier Protection LED- normally off, RED indicates either over temperature or speaker output protection mode.

Rear Panel



1. Input Level -- gain adjustment control for setting the amplifier volume.
2. Peak Limiter -- helps prevent signal clipping distortion when the amplifier is used at high output levels.
3. Subsonic Filter – Used to prevent speaker low frequency overload or line transformer saturation distortion due to high power low frequency levels to the speakers.
4. Amplifier Cooling Vent – Exhaust vent for output of internal cooling fan, **DO NOT BLOCK THIS VENT.**
5. 230 Volt AC Line Input fuse – This fuse is used only when the amplifier is used in the 230 volt AC line input mode. **Replace only with the same type and size of fuse.**
6. 115 Volt Line Input Fuse – This fuse is used only when the amplifier is used in the 115 volt AC line input mode. **Replace only with the same type and size of fuse.**
7. Main Power off and on switch.
8. Balance Audio Line Input – This is a removable Euro Block type of connector that is designed for balanced audio input signals and requires the usage of a 2 conductor shielded audio cable with stripped wire ends. A chassis ground is also provided if needed for your installation
9. Chassis Feet -- Used when the amplifier is to be placed on a shelf and required for proper air circulation through the chassis ventilation openings. These feet may be removed for rack mounting applications.
10. High Impedance Stereo Input – Dual stereo RCA style input connections that provide high impedance inputs that are mixed to a mono signal internally in the amplifier.
11. Remote Trigger Input/Output -- This is an input and output loop through 12 volt DC trigger connection for the remote turn on and standby operation of the amplifier. A 1/8" mono mini phone plug is used for this purpose with the positive connection to the tip and the negative connection to the ring. When 9-12V DC is present the amplifier will wake up and when power is removed the amplifier will revert to the standby mode. The main power switch must be on.

12. Auto-On Function Switch – This switch sets the mode of operation for the Auto-On functions of the amplifier.

ON – The amplifier is always on and remote standby is defeated.

Music – The amplifier will turn on automatically when it senses an input audio signal and when the audio is removed the amplifier will revert to the standby mode after about 5 minutes.

12V – This position engages the 12 volt trigger remote operation of the amplifier. When a 12 volt signal is present the amplifier will wake up out of the standby mode. Removing the 12 volt signal returns the amplifier to the standby mode.

13. Direct Speaker Output – This is the amplifier output connection for providing direct drive to a loudspeaker system. Speakers with an impedance of 4 – 16 ohms may be connected to these terminals. Please be certain to check the polarity of your speaker connections. A removable 2 pole Euro Block style connector is provided for the speaker connection and will accept up to a 12 gauge wire. Strip the ends of your wires about ¼” from the end. Loosen the 2 screws in the connector and insert the stripped ends into the respective + and – sides of the terminal block. Tighten the screws down to clamp the wire in place.

Warning: Do not use any Isolated Speaker Output when using Direct Speaker Output. Make sure the combined speaker impedance connected is not lower than the rated specification (see last page). Failure to do so may result in over-heating of the amplifier.

14. Isolated Speaker Connection – This is an isolated speaker output that is provided for distributed audio applications. Outputs are provided for 25 V, 70V and 100V audio installations and are driven by a high quality toroidal audio isolation transformer. A removable 4 pole Euro Block style connector is provided for the speaker connection and will accept up to a 12 gauge wire. Strip the ends of your speaker wires about ¼” from the end. Loosen 2 of the screws in the connector and insert the stripped ends into the respective common and the appropriate high side of the terminal block. Tighten the screws down to clamp the wire in place.

Warning: Do not use the Direct Speaker Output when using Isolated Speaker Output. Use only one Isolated Output at a time with combined speaker impedance not lower than the rated specification (see last page). Failure to do so may result in over-heating of the amplifier.

Caution: Terminals are live and present an electrical shock hazard, speaker installation should be done by a qualified person and use approved connection leads. ⚡

15. Line Voltage Selector Switch – This switch is used to select the proper AC line voltage input to the amplifier for the country of operation. Selection is for either 115 VAC or 230 VAC and may be selected by using a small flat blade screw driver to slide the switch to select the correct setting.

Warning: Failure to have this switch set to the correct position will damage the amplifier.

16. Line Cord Power Socket – This is a standard IEC style 3 pin power connector socket to connect the approved provided power cord from the amplifier to the wall outlet. Use only the correct power cord for the country in which the amplifier is to be used or damage to the amplifier may occur.

Avertissement: Ne pas utiliser de sortie isolée lors de l'utilisation directe de l'enceinte de sortie. Assurez-vous que l'impédance des enceintes combinées connectées ne soit pas inférieure à la spécification nominale (voir dernière page). À défaut de le faire, l'amplificateur pourrait surchauffer.

14. Connexion de l'enceinte isolée - Ceci est une sortie d'enceinte isolée qui est prévue pour les applications audio distribuées. Les sorties sont prévues pour 25 V, 70 V et les installations audio 100V et sont entraînées par un transformateur d'isolement audio toroïdal de haute qualité. Un connecteur A 4 amovible de style Euro Block est prévu pour la connexion des haut-parleurs et accepte un filage jusqu'à un de calibre 12. Dénuder les extrémités de vos câbles d'enceintes à environ .5 mm de la fin. Desserrer 2 des vis dans le connecteur et insérer les extrémités dénudées dans la commune respective à la hauteur appropriée du bloc de connexion. Serrer les vis en bas pour tenir le fil en place.

Avertissement: Ne pas utiliser la sortie directe de l'enceinte lorsque vous utilisez la sortie de l'enceinte isolée. Utilisez seulement une sortie isolée à la fois avec l'impédance des enceintes combinées et non inférieure à la spécification nominale (voir dernière page) . À défaut de le faire, l'amplificateur pourrait surchauffer.

Mise en garde: Les bornes sont sous tension et présentent un risque de choc électrique. L'installation de haut-parleurs doit être effectuée par une personne qualifiée en utilisant que des fils de connexion approuvés. ⚡

15. Sélecteur de ligne de tension - Ce commutateur permet de sélectionner la tension d'entrée correcte de la ligne d'alimentation à l'amplificateur pour le pays d'opération. La sélection est soit pour 115 VAC ou 230 VAC et peut être sélectionnée en utilisant un petit tournevis à lame plate pour glisser le bouton afin de sélectionner le réglage approprié.

Avertissement: À défaut de régler ce commutateur sur la position correcte, l'amplificateur pourrait être endommagé.

16. Cordon Prise d'alimentation - Ceci est un prise de connecteur d'alimentation de broches standard CEI 3 pour connecter le cordon d'alimentation fourni approuvé de l'amplificateur à la prise murale. N'utilisez uniquement que le cordon d'alimentation approprié pour le pays dans lequel l'amplificateur doit être utilisé sinon des dommages à l'amplificateur pourraient se produire.

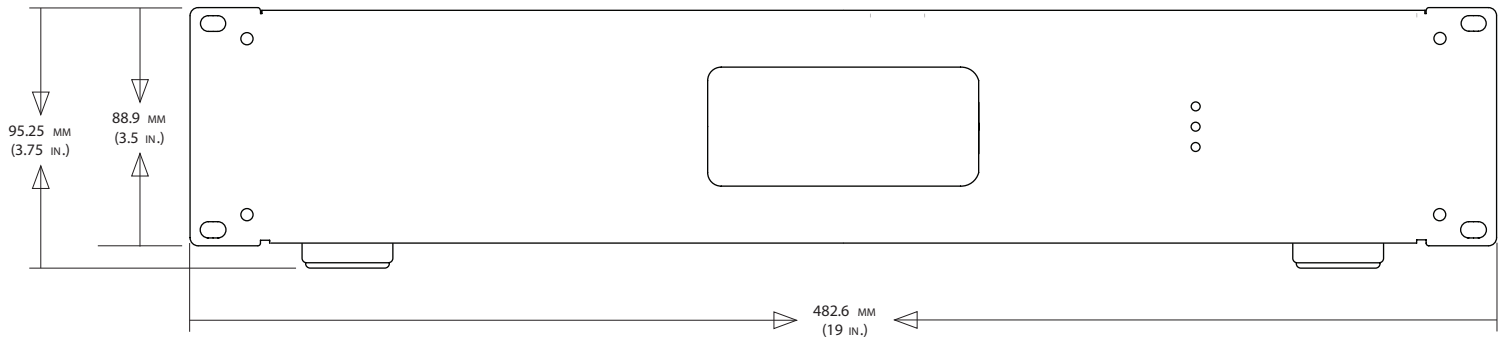
SPECIFICATIONS

Description	MA3501T Class-G high current commercial audio distribution amplifier
Amplifier Power	350 Watts RMS < .1% THD @ 4 Ohms, 700 Watts peak , Direct Output 225 Watts RMS < .1% THD @ 8 Ohms, 400 Watts peak , Direct Output 350W - 25V/70V/100V < .1% THD Transformer Output
Minimum Load Impedance	Direct Output- 4 ohms Isolated Outputs- 2 ohms/25V, 16 ohms/70V 32 ohms/100V
HP Filter – Switchable	40Hz – 60 Hz
Overall Response	20 – 100 kHz Hz +/- 3 dB Direct, 30 Hz – 35kHz +/- .5 dB
Power Band Width Response	30 Hz - 65 kHz +0, -3 dB Direct 30 Hz – 50 kHz +0, -3 dB Transformer
Inputs	Dual RCA Unbalanced/Single Euro Block Balanced
Maximum Input Sensitivity	175 mV for full output unbalanced /balanced/Variable
THD+ Noise	<.05% 20-20kHz below rated output power
S/N	>85 dB un-weighted
Damping Factor	>200
Input Impedance	20K unbalanced, 10K balanced
Protection Features	Soft Clipping Limiter (Switchable) , Short Circuit/Overload, DC offset protection, Thermostatic variable speed fan cooling, Thermal overload protection, Transformer thermal protection, Over current protection
Front Panel Indicators	Power/Standby, Clipping, Protection LEDs
Current consumption 120V	3A @ 8 ohms, 5.5A @ 4 Ohms Continuous Program
Operating Voltage	Switchable, 115VAC 60HZ @ 9A Max / 230VAC 50 Hz @ 4A Max
Dimensions (Overall)	19" W x 3 3/4" (w/feet) 3 1/2" (chassis) H x 13.3/4" D (2 standard RU)
Weight	29.5 lbs.

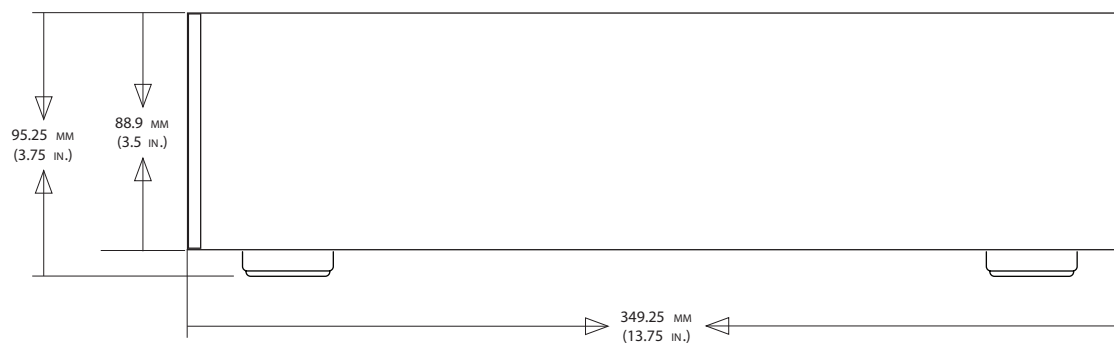
MA3501t

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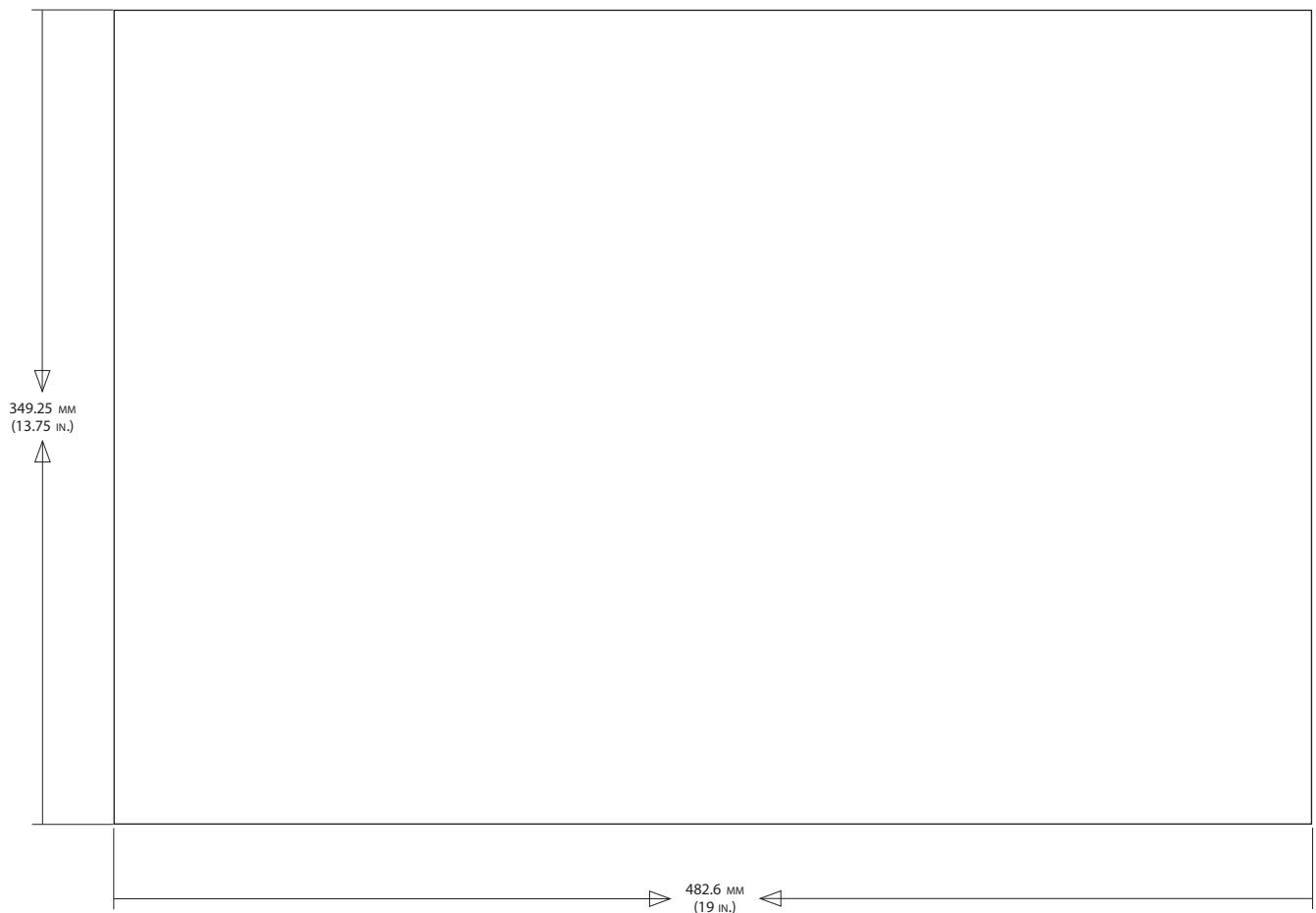
Front



Side



Top





MA3501t

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