

CMA Series
Commercial Mixer/Amplifiers
Operation Manual

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INTRODUCTION

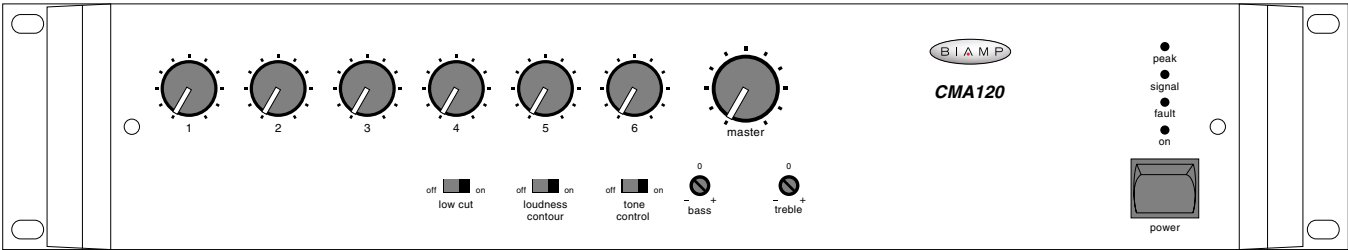
The **CMA Series** of commercial mixer/amplifiers combines a versatile 6-input mic/line mixer with either 30, 60, 120, or 350 Watt amplification. Mixing functions include mic/line/telephone inputs, selectable automatic & manual channel muting, channel priority assignment, remote level control, tone control, a built-in compressor, an internal chime, phantom power, and extensive output patching. The amplifier includes an output transformer, and provides rated power into direct or distributed speaker systems. The CMA Series carries a five-year warranty.

CMA Series features include:

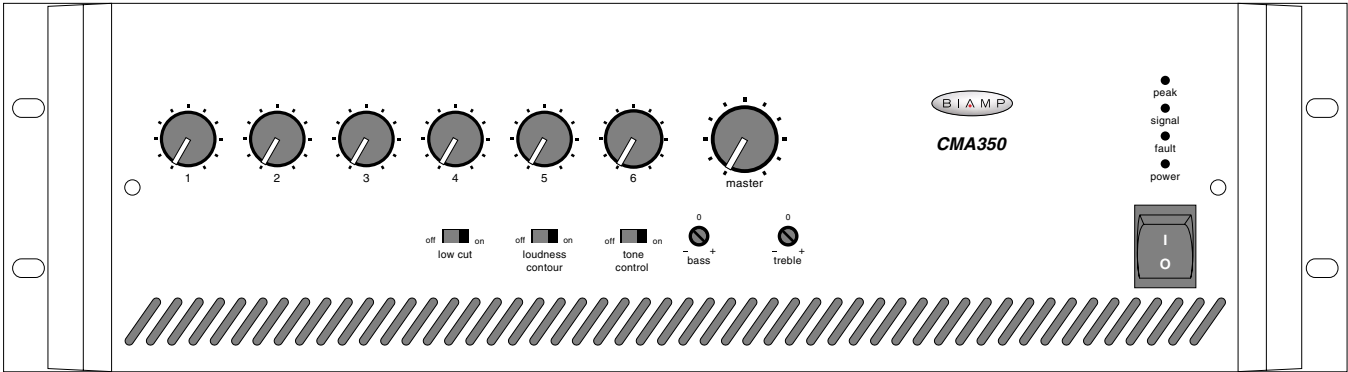
- ◆ integrated mixer, power amplifier, and output transformer
- ◆ five electronically balanced microphone/line input channels
- ◆ one transformer balanced microphone/line/tel input channel
- ◆ rear panel trim control & pad switch on each input channel
- ◆ +24 Volt phantom power selectable on each input channel
- ◆ input transformer option on mic/line inputs (except CMA350)
- ◆ automatic muting of selected channels (-10, -20, or -40dB)
- ◆ automatic muting triggered by selected "priority" channels
- ◆ manual muting of selected channels (-10, -20, or -40dB)
- ◆ manual muting triggered from remote contact closures
- ◆ remote control of master level via rear panel terminals
- ◆ integral output compressor with rear panel threshold control
- ◆ recessed treble & bass controls plus "loudness" & "low-cut"
- ◆ two insert points for signal processing and remote control
- ◆ two line-outs and one stack-in for system interconnections
- ◆ 30, 60, 120, or 350 Watts into direct or distributed systems
- ◆ front panel indicators for power, fault, signal, and peak
- ◆ internal 'pre-announcement' chime tone with level control
- ◆ input/output connections provided on barrier strip terminals
- ◆ integral security cover and removable rack-wing/handles
- ◆ covered by Biamp Systems' five-year warranty
- ◆ CEE marked, **UL** and **C-UL** (UL Canada) listed

FRONT PANEL FEATURES

CMA30, CMA60, & CMA120 Front Panels



CMA350 Front Panel



FRONT PANEL FEATURES

Level (Channels 1-6): These controls adjust the amount of signal sent from the individual input channels to the mixer output. Optimum Level setting is near the 12 o'clock position (unity gain).

Level (Master): This control adjusts the amount of signal sent from the mixer output to the amplifier input. The Master Level control is used to adjust the overall volume of the system.

Low Cut: This switch inserts a low cut filter (6dB/octave @ 120Hz) at the amplifier input. **CAUTION:** *To avoid output fault conditions, Low Cut must be used when driving 25/50/70/100 Volt speaker systems (see Output Selector & Output Terminals on pg. 4). Also, any other system equalization affecting frequencies below 120Hz should remain flat or be used as cut-only. This precludes the use of Loudness Contour or boosting of the Bass control (see below) in these applications.*

Loudness Contour: This switch inserts a loudness filter at the mixer output (+6dB @ 100Hz & +4dB @ 10kHz). The Loudness filter provides tonal compensation when operating with low-level music signals.

Tone Control: This switch enables the Bass & Treble controls.

Bass: This screwdriver control adjusts the low-frequencies ("Bass") at the mixer output ($\pm 10\text{dB}$ @ 100Hz).

Treble: This screwdriver control adjusts the high-frequencies ("Treble") at the mixer output ($\pm 10\text{dB}$ @ 10kHz).

Peak Indicator: This red LED flashes when signal levels at the amplifier output have reached maximum. Occasional flashes of the Peak Indicator are acceptable, however, a continuously lit LED may indicate an excessive level setting.

Signal Indicator: This yellow LED remains lit when signal is present at the amplifier output.

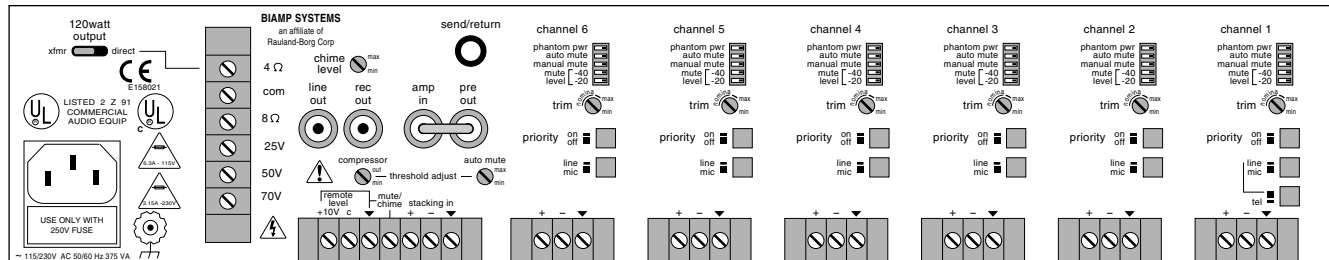
Fault Indicator: This red LED lights to indicate fault conditions due to overheating, DC offset voltage, or failure of low-voltage power. The Fault Indicator will light for 3-5 seconds at turn-on, and then go off if no fault is detected. Some faults (such as overheating) will correct themselves when the unit has been turned off awhile. If the Fault Indicator remains lit when the unit is turned back on, contact your local Biamp Systems dealer.

On Indicator: This green LED remains lit when AC power is applied to the unit.

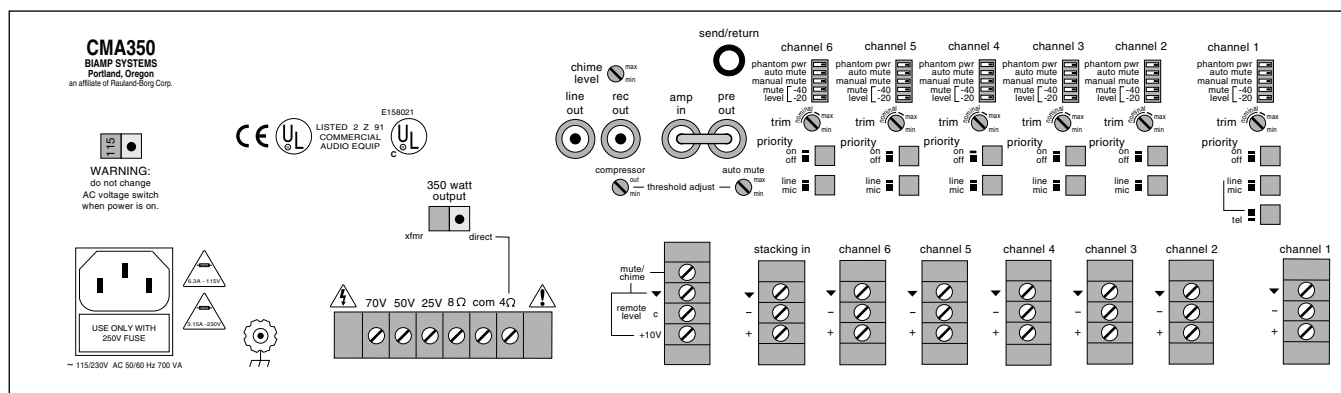
Power Switch: This switch applies AC power to the unit.

REAR PANEL FEATURES

CMA30, CMA60, & CMA120 Rear Panels



CMA350 Rear Panel



Power Entrance: This receptacle accepts a 3-prong AC power cord. **WARNING: DO NOT REMOVE OR DEFEAT THE GROUND PRONG, AS THIS CONSTITUTES A SHOCK HAZARD.** The removable lower portion of the receptacle holds the AC fuse. **NOTE:** See AC Fuse on page 7 for replacement by qualified personnel. A chassis ground post is provided (next to the receptacle) for system grounding.

Power Selector Switch (model CMA350 only): This switch selects either 115 Volt or 230 Volt AC operation for model CMA350 (see Modifications on pg. 7). Power Selector Switches for other models are on the underside of the chassis.

Output Selector: This switch selects either direct output or transformer coupled output from the amplifier. On models CMA60, CMA120, & CMA350 direct output is from the 4Ω terminal. On model CMA30, direct output is from the 8Ω terminal. **NOTE:** Model CMA350 can be used in 25V 'balanced' output applications only with an optional external transformer DT-4 (#909-0031-00) connected at the 4 ohm (direct) output.

Output Terminals: These screw terminals provide connection for speaker loads (4Ω, 8Ω, 25V, 50V, 70V, or 100V) at the amplifier output (see Output Selector above). **NOTE:** 100V output is an export model option only. **WARNING: THE LOUDSPEAKER OUTPUTS POSE A RISK OF HAZARDOUS ENERGY. LOUDSPEAKER CONNECTIONS MUST BE MADE PROPERLY. THE OUTPUT TERMINAL COVER MUST BE INSTALLED WHEN THE DEVICE IS ENERGIZED.**

Chime Level: This control adjusts the volume level of the chime tone (see Mute/Chime on next page). To turn the chime tone off completely, set this control to the fully counter-clockwise position.

Send/Return: This 3-conductor TRS 1/4" Phone jack provides an insert point for signal processing or remote control devices. It is wired with Tip as send, Ring as return, and Sleeve as ground. Send/Return is after Stacking In, Loudness, & Tone, but before Compressor, Master Level, & Low Cut. Send/Return is a switching jack, which interrupts the signal flow only when a plug is inserted.

REAR PANEL FEATURES

Line Out: This RCA phono jack provides an unbalanced line-level output from the mixer. Line Out is after Stacking In, Loudness, Tone, Compressor, & Master Level, but before Low Cut.

Rec Out: This RCA phono jack provides an unbalanced line-level output from the mixer. Rec Out is after Stacking In, but before Loudness, Tone, Compressor, Master Level, & Low Cut.

Pre Out: This RCA phono jack provides an unbalanced line-level output from the mixer. Pre Out is after Stacking In, Loudness, & Tone, but before Compressor, Master Level, & Low Cut. Pre Out and Amp In may be used together as an insert point for signal processing or remote control devices. Remove jumper before connecting devices. To connect Pre Out to both Amp In and an external device, a parallel ('Y') cable must be used.

Amp In: This RCA phono jack provides an unbalanced line-level input to the amplifier. Amp In is after Stacking In, Loudness, & Tone, but before Compressor, Master Level, & Low Cut. Pre Out and Amp In may be used together as an insert point for signal processing or remote control devices. Remove jumper before connecting devices.

Compressor: This control adjusts the threshold level at which the internal compressor circuit is activated. The internal compressor has a fixed compression ratio of 4:1, and is used to reduce peaks in output signal level, as well as to moderate volume differences between loud and soft signals.

Auto Mute: This control adjusts the threshold level at which signals from "priority" channels will automatically trigger muting of selected non-priority channels (see Assignment & Priority below).

Remote Level: These two screw terminals (plus "▼") provide remote volume control of the master level. An internal voltage controlled amplifier (VCA) allows remote control from up to 2000 feet away, using any 5k~50k Ω linear taper potentiometer and/or switch to provide adjustment and/or muting of the master level. Potentiometers are wired with high-side to "+10V", low-side to "▼", and wiper to "C". Switches simply connect (or disconnect) "+10V" to "C", and do not require a ground ('▼') connection. **NOTE:** *The factory installed jumper (between "+10V" & "C") must be in place when a remote control is not being used.*

Mute/Chime: This screw terminal (plus "▼") allows manual muting of any selected channels, via an external switch or contact closure (see Assignment & Priority below). When the Chime Level control is turned up (on), a pre-announcement chime tone will also be activated by the switch or contact closure.

Stacking In: These screw terminals provide a balanced line-level input to the mix bus, for input expansion. Stacking In is before Loudness, Tone, Compressor, Master Level, & Low Cut. For unbalanced input, wire high to (+) and ground to both (-) & (▼).

Assignment: These five DIP switches are used to assign specific functions to the individual channels. To assign a function, move the respective switch to the left. Phantom Pwr assigns +24 Volts DC phantom power to the channel input, for powering condenser microphones. **CAUTION: TO AVOID DAMAGE TO EQUIPMENT, ASSIGN PHANTOM POWER ONLY ON CHANNELS WHICH ARE SELECTED FOR 'MIC' INPUT AND WHICH REQUIRE PHANTOM POWER.** Auto Mute assigns a (non-priority) channel to be muted whenever signal is present in any "priority" channel. Manual Mute assigns a channel to be muted whenever the Mute/Chime terminals are shorted together via a switch or contact closure. Mute Level assigns the amount of muting (-10dB, -20dB, or -40dB) which is applied to a channel, when triggered by either Auto Mute or Manual Mute. **NOTE:** *-10dB muting will occur when both switches are to the right. -40dB muting will occur when both switches are to the left.*

Trim: This control adjusts the input gain of the channel, to compensate for various input signal levels. Once the Line/Mic switch has been set to the proper position (see Line/Mic below), the Trim control should be adjusted so that peaks in signal level do not cause distortion at the channel input.

Priority: This switch assigns a channel to "priority". When signal is present in a "priority" channel, any (non-priority) channels which are assigned to Auto Mute will be muted by their selected amount. **NOTE:** *A "priority" channel cannot be auto muted by another "priority" channel, but a "priority" channel can be manual muted.*

Line/Mic: This switch selects the proper impedance and gain for either microphone or line-level input signals. Depress the switch for line-level input. Release the switch for microphone input. On Channel 1, the Tel switch (see Tel below) must be released for the Line/Mic switch to operate.

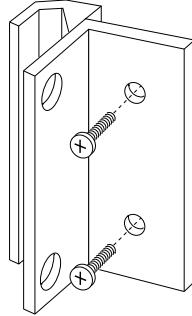
Tel (Channel 1 only): This switch selects the proper impedance and gain for input from 600 ohm sources. The input for Channel 1 includes an isolation transformer, which allows connection to most telephone system audio ports.

Inputs: These screw terminals provide a balanced input connection for the channel. For unbalanced input, wire high to (+) and ground to both (-) & (▼). The input for Channel 1 includes an isolation transformer. Input isolation transformers are optional on the other channels (2~6) of all models, except for the CMA350 (Biamp #908-0040-00).

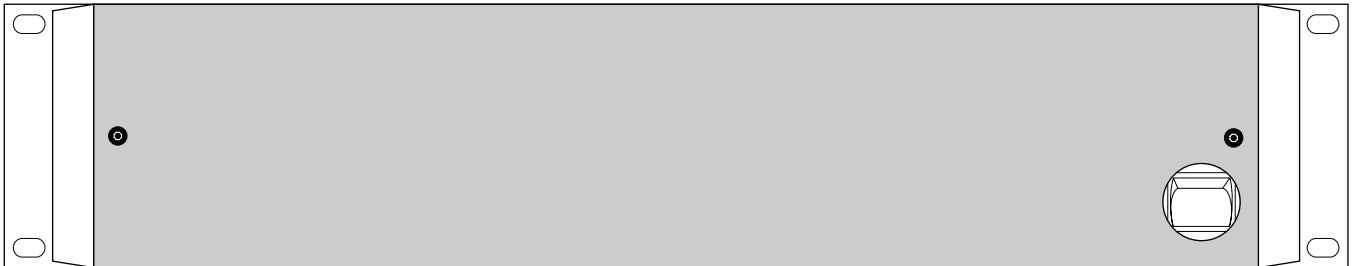
MODIFICATIONS

CAUTION: THE FOLLOWING INFORMATION IS FOR USE BY QUALIFIED INSTALLATION/SERVICE PERSONNEL.

Removable Rack-Handles: The CMA Series have removable rack-handles. To remove the rack-handles: 1) Remove the two screws from the side of each rack-handle. 2) Remove the rack-handles. 3) Replace the mounting screws in the sides of the chassis.



Security Cover: The CMA Series includes a removable front panel security cover. A hole in the security cover provides access only to the power switch. To remove the security cover: 1) Using a 3mm hex wrench, loosen the two captive security cover mounting screws. 2) Remove the security cover.

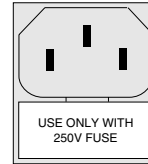


MODIFICATIONS

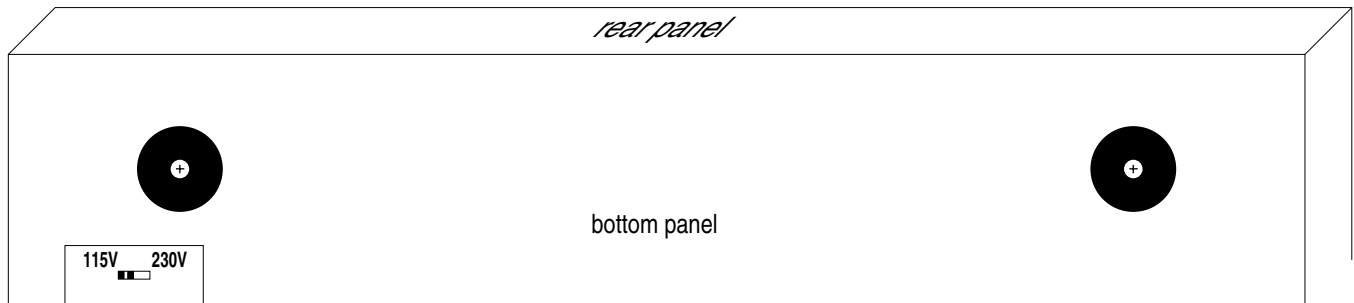
WARNING: TO REDUCE THE RISK OF SHOCK, DISCONNECT ALL POWER FROM THE UNIT BEFORE MAKING ANY INTERNAL MODIFICATIONS OR EXTERNAL FIELD WIRING CONNECTIONS.

115V/230V AC Operation: The CMA Series may be converted to 230V operation for use in other countries. To convert to 230V operation: 1) Remove the fuse holder compartment from the lower portion of the rear panel AC Power Cord receptacle. 2) Replace the fuse in the fuse clip with the same type and appropriate value fuse (see table below). 3) Replace the fuse holder compartment.

230V fuse values
CMA30 - 1A NB 250V
CMA60 - 2A NB 250V
CMA120 - 3A NB 250V
CMA350 - 3.15A SB 250V



4) Select the 230V position on the Power Selector Switch. The Power Selector Switch for models CMA30, CMA60, & CMA120 is recessed into the underside of the chassis, near the AC Power Cord receptacle. The Power Selector Switch for model CMA350 is instead located on the left side of the rear panel, above the AC Power Cord receptacle.



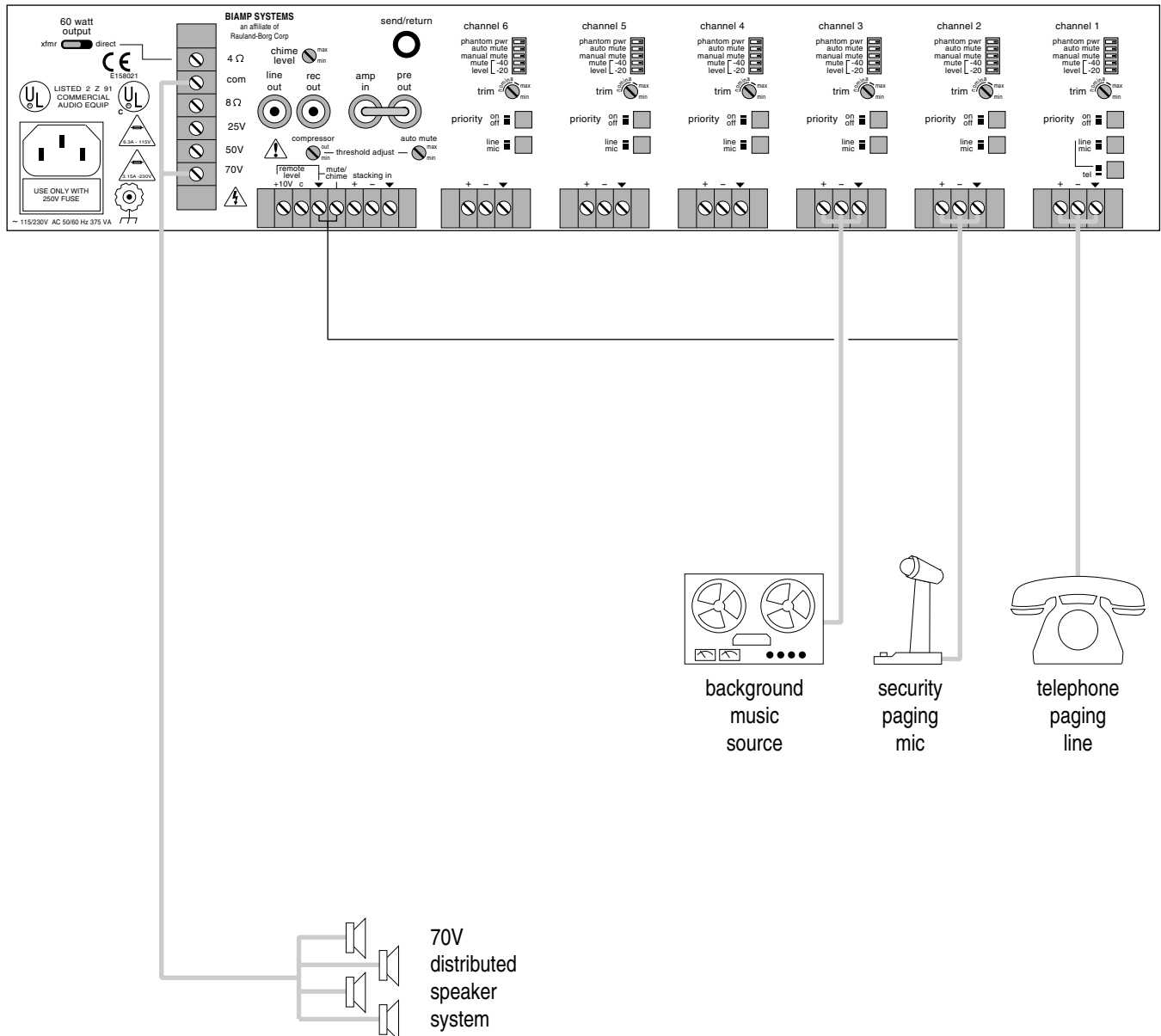
AC Fuse: The AC Fuse is in the lower portion of the AC Power Cord receptacle. If the AC fuse should require replacement, see table below for proper value. **WARNING: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME VALUE AND TYPE FUSE.**

<u>MODEL</u>	<u>115 VAC</u>	<u>230 VAC</u>
CMA30	2A NB	1A NB
CMA60	4A NB	2A NB
CMA120	6A NB	3A NB
CMA350	6.3A SB	3.15A SB

APPLICATIONS

Commercial/Industrial Paging System

CMA60



This application shows a CMA60 being used in a commercial/industrial paging system. Channel #1 is set for input from the telephone paging line, and is assigned both as a priority channel and manual muting of -20dB. Channel #2 is set for input from the security paging microphone, which also has a push-to-talk switch wired to the Mute/Chime terminals of the CMA60. Channel #3 is set for input from the line-level background music source, and is assigned manual and auto muting of -20dB. Therefore, telephone paging will automatically mute only the background music, whereas, security paging will manually mute both the background music and the telephone paging. The CMA60 is set for 'xfmr' output and is connected to a 70V distributed speaker system. ***WARNING: THE ABOVE DIAGRAM SHOWS THE OUTPUT TERMINAL COVER REMOVED FOR CLARITY ONLY. THE COVER MUST BE INSTALLED WHEN THE UNIT IS ENERGIZED.***

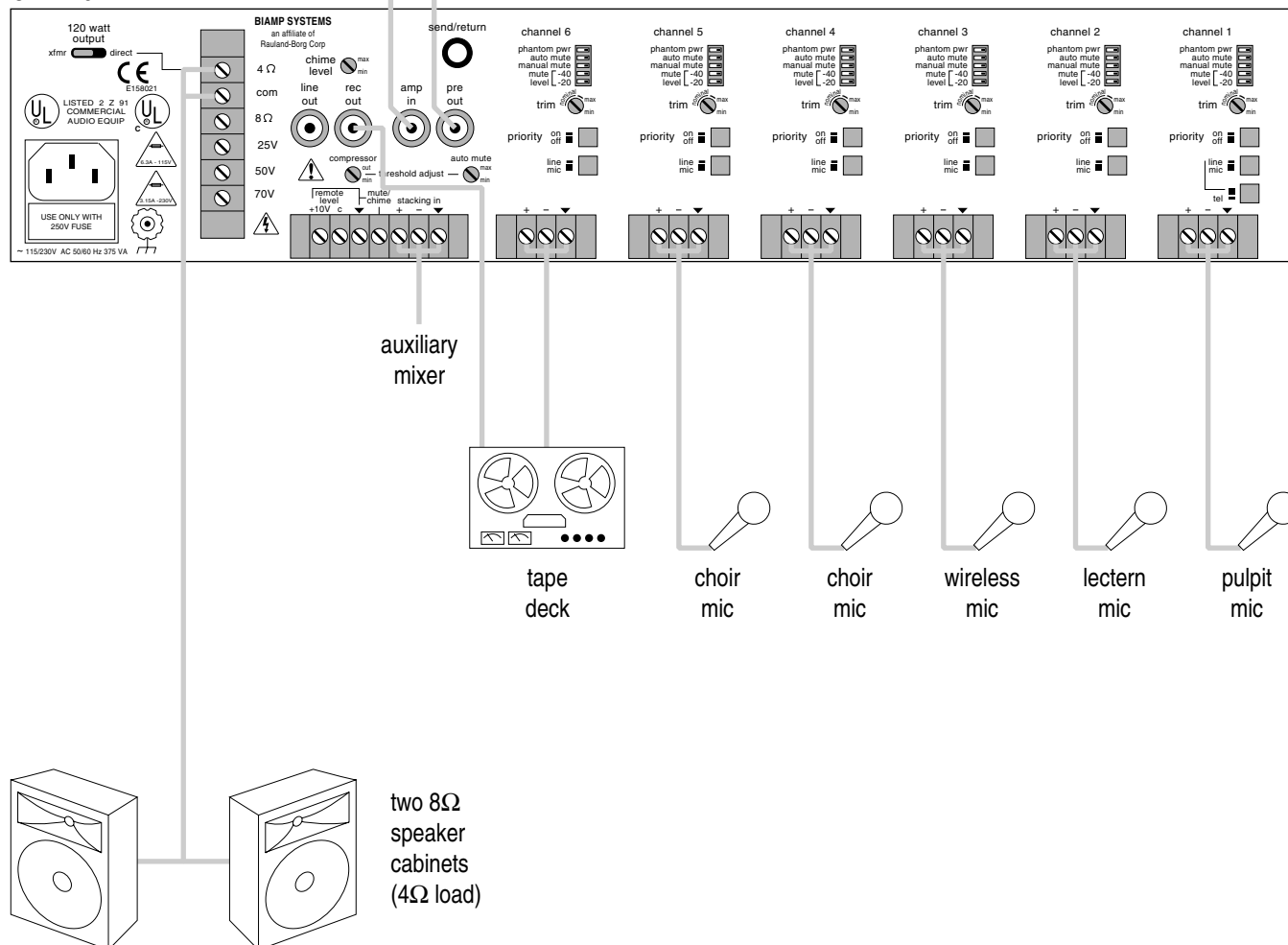
APPLICATIONS

House of Worship Sound Reinforcement System

MSP11



CMA120

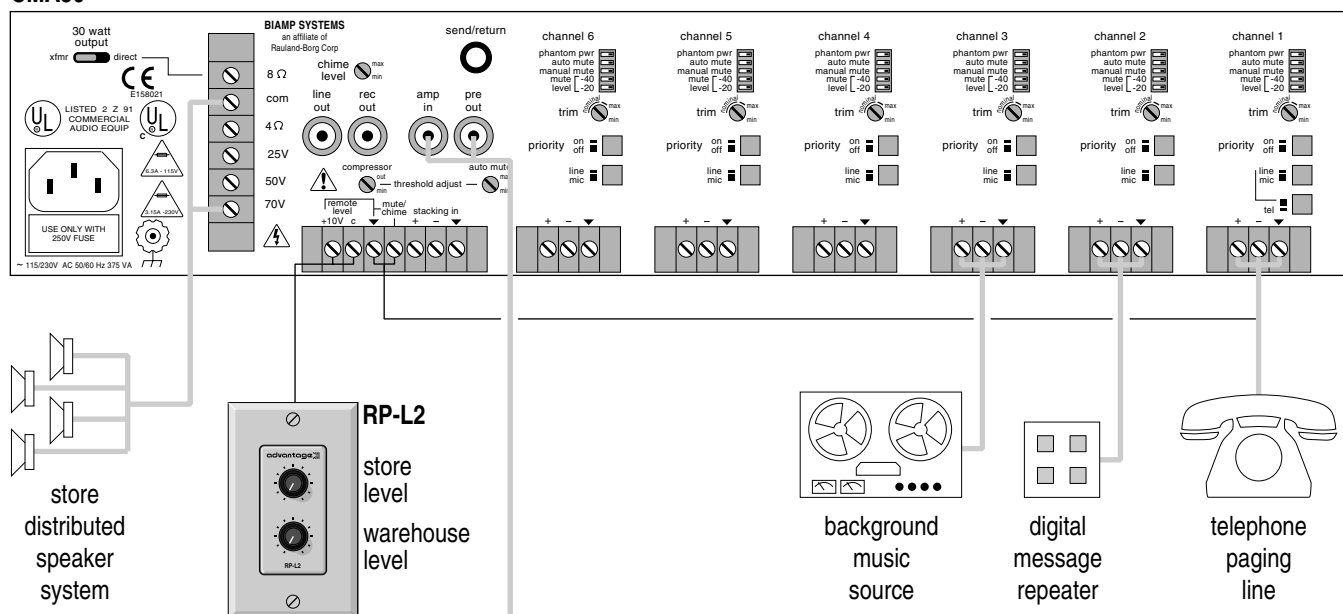


This application shows a CMA120 being used in a house of worship sound reinforcement system. Channels #1~5 are set for input from the various microphones. Channel #6 is set for input from the tape deck (playback), which is also connected to Rec Out of the CMA120 (recording). A BIAMP MSP11 is inserted between Pre Out & Amp In of the CMA120, providing equalization to compensate for room acoustics, and automatic gain control for consistent output levels. If additional inputs are required, an auxiliary mixer (such as a BIAMP 601) may be connected to the Stacking In terminals of the CMA120. The CMA120 is set for 'direct' (4Ω) output and is connected (in parallel) to the two 8Ω speaker cabinets. **WARNING: THE ABOVE DIAGRAM SHOWS THE OUTPUT TERMINAL COVER REMOVED FOR CLARITY ONLY. THE COVER MUST BE INSTALLED WHEN THE UNIT IS ENERGIZED.**

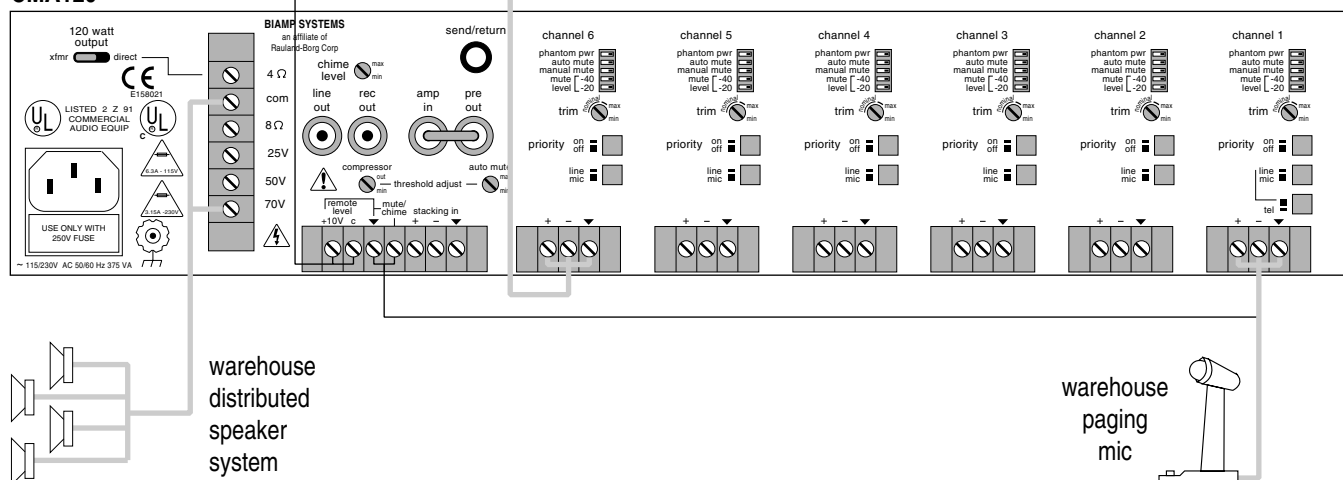
APPLICATIONS

Retail Store Paging System

CMA30



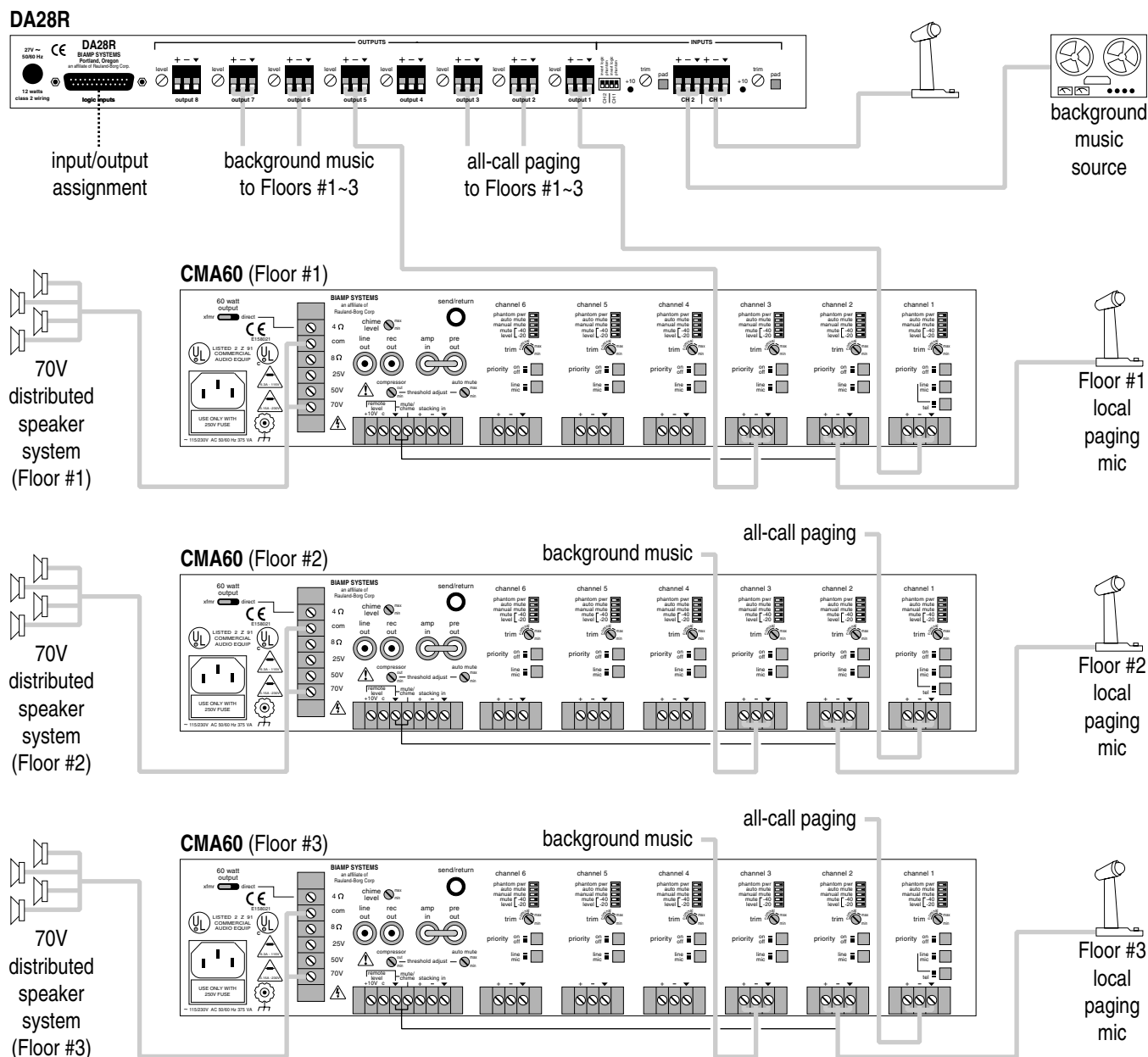
CMA120



This application shows a CMA30 and a CMA120 being used in a retail store paging system. Channel #1 of the CMA30 is set for input from the telephone paging line. The telephone system also provides a paging contact closure which is wired to the Mute/Chime terminals of the CMA30. Channel #2 of the CMA30 is set for input from the line-level digital message repeater, and is assigned both as a priority channel and manual muting of -20dB. Channel #3 of the CMA30 is set for input from the line-level background music source, and is assigned manual and auto muting of -10dB. Channel #1 of the CMA120 is set for input from the warehouse paging microphone, which also has a push-to-talk switch wired to the Mute/Chime terminals of the CMA120. Channel #6 of the CMA120 is set for input from the line-level Pre Out of the CMA30, and is assigned manual muting of -40dB. Therefore, the digital message repeater will automatically mute only the background music (-10dB), whereas, telephone paging will manually mute both the background music (-10dB) and the digital message repeater (-20dB). These combined signals from the CMA30 are then fed to the CMA120 in the warehouse, where they are manually muted by any warehouse paging (-40dB). RP-L2 potentiometers are wired to the Remote Level terminals of both the CMA30 and CMA120, providing remote control of store and warehouse levels. The CMA30 and CMA120 are set for 'xmr' output and are connected to 70V distributed speaker systems. **WARNING: THE ABOVE DIAGRAM SHOWS THE OUTPUT TERMINAL COVER REMOVED FOR CLARITY ONLY. THE COVER MUST BE INSTALLED WHEN THE UNIT IS ENERGIZED.**

APPLICATIONS

Multi-Floor Office/Hospital Paging System



This application shows three CMA60s being used in a multi-floor office/hospital paging system. An all-call paging microphone and a background music source are connected to a BIAMP DA28R, which distributes those signals independently to the three CMA60s. Channel #1 of each CMA60 is set for input from line-level all-call paging, and is assigned as a priority channel. Channel #2 of each CMA60 is set for input from the respective floor paging microphone, and is assigned auto muting of -40dB. The push-to-talk switch of each floor paging microphone is wired to the Mute/Chime terminals of the respective CMA60. Channel #3 of each CMA60 is set for input from line-level background music, and is assigned manual and auto muting of -20dB. Therefore, local paging will manually mute the background music only on that floor (-20dB), whereas, all-call paging will automatically mute background music (-20dB) and local paging (-40dB) on all floors. The CMA60s are set for 'xfrm' output and are connected to 70V distributed speaker systems for each floor. **WARNING: THE ABOVE DIAGRAM SHOWS THE OUTPUT TERMINAL COVER REMOVED FOR CLARITY ONLY. THE COVER MUST BE INSTALLED WHEN THE UNIT IS ENERGIZED.**

SPECIFICATIONS

CMA30, CMA60, & CMA120

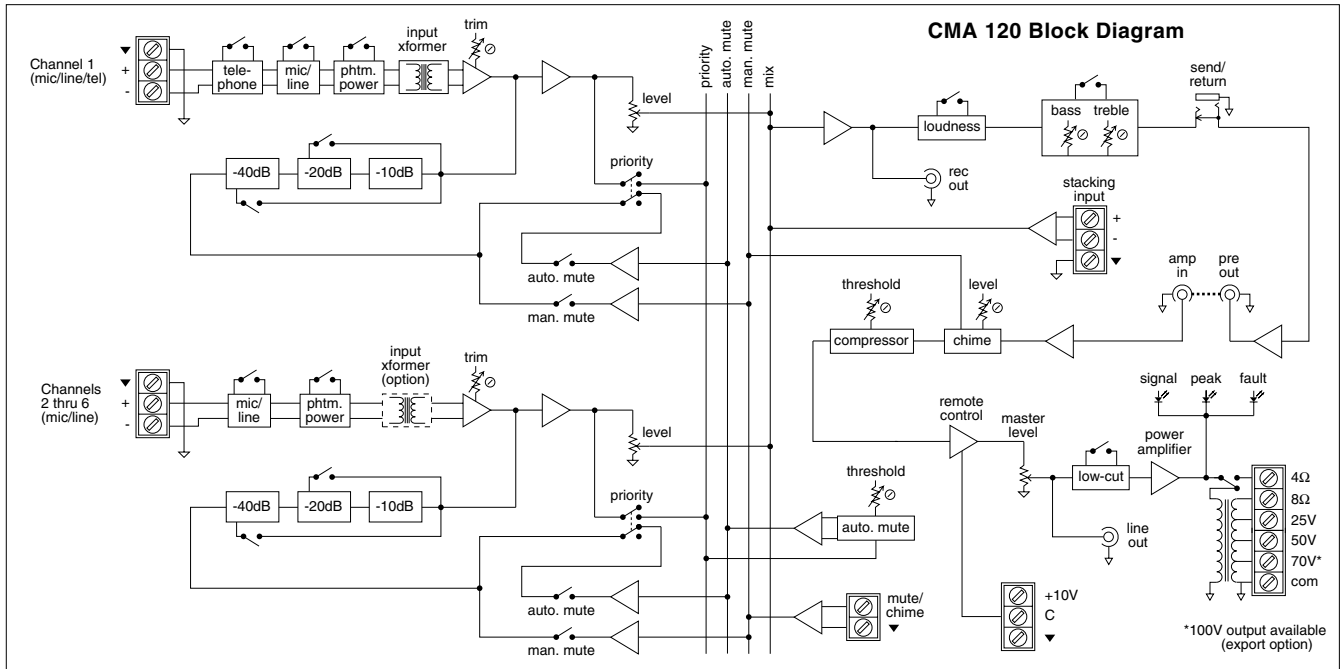
Output Power:		Input Impedance / Sensitivity		
CMA 30	30 Watts	mic inputs	6kΩ / -77dBu (110μV)	
CMA 60	60 Watts	line inputs	15kΩ / -37dBu (14mV)	
CMA 120	120 Watts	telephone inputs	600Ω / -60dBu (775μV)	
Power Bandwidth (THD < 0.4%):		amplifier input	10kΩ / +4dBu (1.2V)	
direct output	20Hz~20kHz	stacking input	20kΩ / -8dBu (300mV)	
transformer output	50Hz~20kHz	patch/return input	10kΩ / -8dBu (300mV)	
Frequency Response (+0/-1.5dB):		Output Impedance / Level:		
direct output	20Hz~20kHz	preamp output & line output	200Ω / +4dBu (1.2V)	
transformer output	50Hz~20kHz	record output	200Ω / +4dBu (1.2V)	
Total Harmonic Distortion (1kHz @ rated power):		patch/send output	50Ω / -8dBu (300mV)	
Output Regulation (no load to full load)		Amplifier Output Impedance / Level:		
Equivalent Input Noise (mic in, 150Ω termination):		<u>CMA 30</u>	<u>CMA 60</u>	<u>CMA 120</u>
Signal-to-Noise Ratio (20Hz-20kHz @ rated power):		4Ω / 11V	4Ω / 16V	4Ω / 22V
line inputs	78dB	8Ω / 16V	8Ω / 22V	8Ω / 31V
telephone inputs	78dB	20.8Ω / 25V	10.4Ω / 25V	5.2Ω / 25V
master level off	98dB	83.3Ω / 50V	41.7Ω / 50V	20.8Ω / 50V
Compressor:		163.3Ω / 70V	81.7Ω / 70V	40.8Ω / 70V
attack time	< 1mSecond	333.3Ω / 100V (export)	166.7Ω / 100V (export)	83.3Ω / 100V (export)
release time	> 1 Second	Power Consumption (120VAC 60Hz / 240VAC 50Hz):		
compression ratio	4 : 1	<u>CMA 30</u>	<u>CMA 60</u>	<u>CMA 120</u>
threshold adjust range	15dB	< 90W	< 220W	< 375W
Dimensions (all models; includes rack/handles & feet):		Weight:		
height (two rack spaces)	3.68" (93.5mm)	CMA 30	17.64 lbs. (8kg)	
width	19" (482mm)	CMA 60	22 lbs. (10kg)	
depth	14.33" (364mm)	CMA 120	26.45 lbs. (12kg)	

CMA350

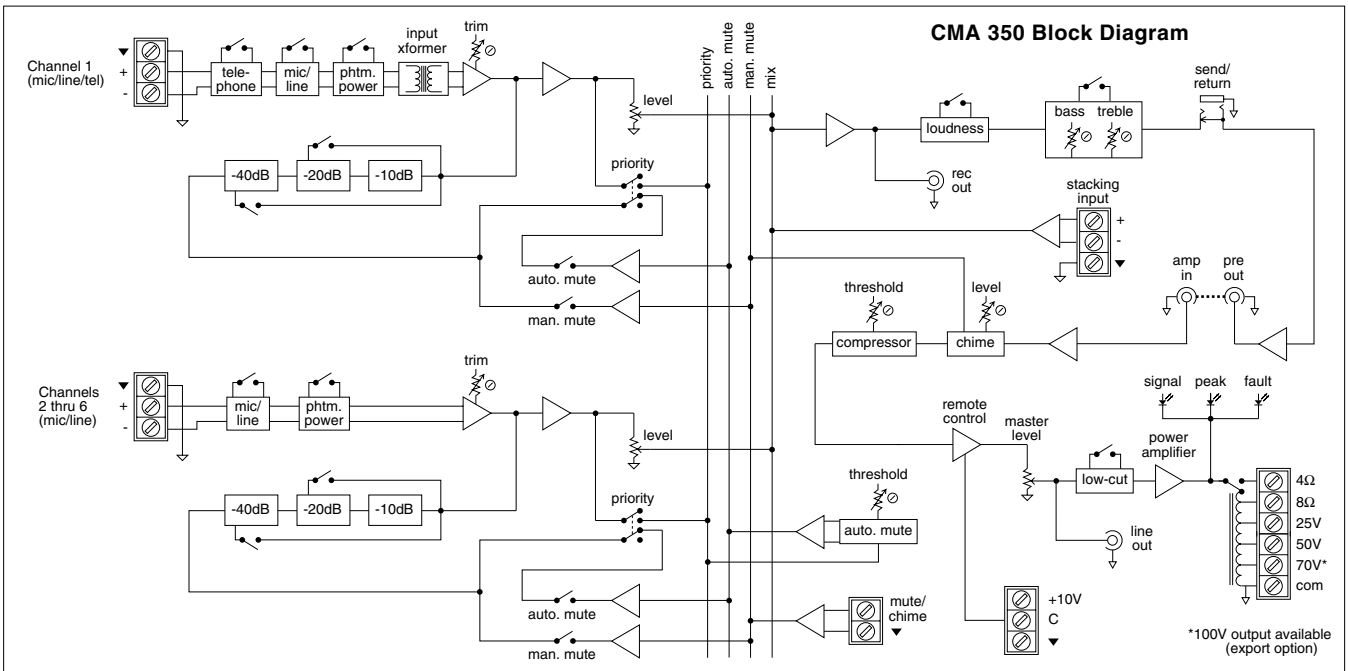
Output Power:		350 Watts	Output Impedance / Level:	
Power Bandwidth (THD < 0.5%):			record output, preamp output, & line output	200 Ω / +4dBu (1.2V)
direct output	20Hz-20kHz		patch/send output	50 Ω / -8dBu (300mV)
transformer output	50Hz-20kHz		Amplifier Output Impedance / Level:	
Frequency Response (+0/-1.5dB):			4 Ω / 37.4V	
direct output	20Hz-20kHz		8 Ω / 53V	
transformer output	50Hz-20kHz		1.8 Ω / 25V	
THD + Noise (1kHz @ rated power):		< 0.25%	7.1 Ω / 50V	
Output Regulation (no load to full load)		< 0.5dB	14 Ω / 70V (28.6 Ω / 100V export)	
Equivalent Input Noise (mic in, 150 Ω termination):		-123dBu	Compressor:	
Signal-to-Noise Ratio (20Hz-20kHz @ rated power):			attack time	< 1mSecond
line inputs & telephone input	78dB		release time	> 1 Second
master level off	98dB		compression ratio	4 : 1
Input Impedance / Sensitivity			threshold adjust range	15dB
mic inputs	6k Ω / -77dBu (110 μ V)		Power Consumption (120/240VAC 60/50Hz):	
line inputs	15k Ω / -37dBu (14mV)		< 760 Watts	
telephone inputs	600 Ω / -60dBu (775 μ V)		Dimensions (includes rack/handles & feet):	
amplifier input	10k Ω / +4dBu (1.2V)		height (three rack spaces)	5.24" (133mm)
stacking input	20k Ω / -8dBu (300mV)		width	19" (483mm)
patch/return input	10k Ω / -8dBu (300mV)		depth	14" (356mm)
			Weight:	51 lbs. (23.13kg)

BLOCK DIAGRAM

CMA30, CMA60, CMA120



CMA350



WARRANTY

BIAMP SYSTEMS IS PLEASED TO EXTEND THE FOLLOWING 5-YEAR LIMITED WARRANTY TO THE ORIGINAL PURCHASER OF THE PROFESSIONAL SOUND EQUIPMENT DESCRIBED IN THIS MANUAL.

BIAMP Systems expressly warrants this product to be free from defects in material and workmanship for a period of 5 YEARS from the date of purchase as a new product from an authorized BIAMP Systems dealer under the following conditions.

1. In the event the warranted BIAMP Systems product requires service during the warranty period, BIAMP Systems will repair or replace, at its option, defective materials, provided you have identified yourself as the original purchaser of the product to any authorized BIAMP Systems Service Center. Transportation and insurance charges to and from an authorized Service Center or the BIAMP Systems factory for warranted products or components thereof to obtain repairs shall be the responsibility of the purchaser.

2. This warranty will be VOIDED if the serial number has been removed or defaced; or if the product has been subjected to accidental damage, abuse, rental usage, alterations, or attempted repair by any person not authorized by BIAMP Systems to make repairs; or if the product has been installed contrary to BIAMP Systems's recommendations.

3. Electro-mechanical fans, electrolytic capacitors, and the normal wear and tear of appearance items such as paint, knobs, handles, and covers are not covered under this warranty.

4. BIAMP SYSTEMS SHALL NOT IN ANY EVENT BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, LOSS OF USE, PROPERTY DAMAGE, INJURY TO GOODWILL, OR OTHER ECONOMIC LOSS OF ANY SORT. EXCEPT AS EXPRESSLY PROVIDED HEREIN, BIAMP SYSTEMS DISCLAIMS ALL OTHER LIABILITY TO PURCHASER OR ANY OTHER PERSONS ARISING OUT OF USE OR PERFORMANCE OF THE PRODUCT, INCLUDING LIABILITY FOR NEGLIGENCE OR STRICT LIABILITY IN TORT.

5. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. BIAMP SYSTEMS EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE REMEDIES SET FORTH HEREIN SHALL BE THE PURCHASER'S SOLE AND EXCLUSIVE REMEDIES WITH RESPECT TO ANY DEFECTIVE PRODUCT. THE AGENTS, EMPLOYEES, DISTRIBUTORS, AND DEALERS OF BIAMP SYSTEMS ARE NOT AUTHORIZED TO MODIFY THIS WARRANTY OR TO MAKE ADDITIONAL WARRANTIES BINDING ON BIAMP SYSTEMS. ACCORDINGLY, ADDITIONAL STATEMENTS SUCH AS DEALER ADVERTISEMENTS OR REPRESENTATIONS DO NOT CONSTITUTE WARRANTIES BY BIAMP SYSTEMS.

6. No action for breach of this warranty may be commenced more than one year after the expiration of this warranty.

Thank you for purchasing BIAMP SYSTEMS...
AMERICAN SOUND CRAFTSMANSHIP

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10074 S.W. Arctic Drive
Beaverton, Oregon 97005
(503) 641-7287

CE Mark (Communaute Europeenne)
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The European Communities conformity mark having "CE" letters has been introduced within the European Union as an indication that products conforms to relevant European Directives. There are currently two Directives covering electrical and electronic products: 1. EMC Directives 89/336/EEC w. e. f. the 1st of January 1996; and 2. Low Voltage Directives 73/23/EEC w. e. f. the 1st of January 1997.

The Low Voltage Directive covers electrical safety for products connected to the domestic electricity supply and is relatively self explanatory. (In our case, it means that this equipment has been designed, manufactured and from 1st January 1997 independently tested for compliance with the electrical safety standard EN 60065.). EN 60065 is identical to the British Standard BS 415 and is similar to the International Standard IEC 65.

The Electromagnetic compatibility (EMC for short) evolving from the European Directive 89/336/EEC requires that the product should not generate electromagnetic interference that would be likely to cause other electrical or electronic apparatus to malfunction, and should not get unduly affected by electromagnetic interference from such apparatus.

Similar regulations covering interference generated by intentional or unintentional radio frequency devices, including digital devices, have existed for several years in the United States. The FCC Telecommunications regulations (part 15) specifically addresses product Emission limits. Currently Immunity is not covered under these regulations.

This product has therefore been tested to recognised EMC standards. The exact standards used are listed in the declaration of conformity. Different types of products may use different standards.

Please note that the Directive requires only what is called an 'adequate' level of immunity. It does not mean that the product will be totally unaffected in all possible situations.

As part of the requirements of the Directive we are obliged to explain the effects that may be observed.

Immunity

Immunity is the ability to maintain a specified performance when the product is subjected to interference signals of specified levels. If the product is operated in environments with unusually high levels of emissions from other apparatus, its performance may be degraded. Due to the large number of variables possible in the usage of this product and its control settings; it is impossible to define the exact degradation that may occur in every possible situation.

For your ready reference we have made some observations of the test results in what we consider to be typical operating situations : Susceptibility/Immunity to 'fast transients' on the a.c. power and signal connections and to electrostatic discharge may result in momentary noises from the product such as beeps, chirps, clicks, small plops or sparking type noise. Operation will otherwise remain unaffected.

Since these events are usually infrequently encountered the results should not give cause for concern.

Susceptibility to radio frequency fields (3V/m): Result depends on products and test frequency.

For our product - no audible degradation was observed.

Degradation may occur at specific spot frequencies, so unless the product happens to be located near an apparatus transmitting at exactly that frequency, no degradation will occur. If affected, improvements can be made to minimise the reduction in performance by adopting one or more actions as noted in the following section of the Guidelines To Minimise Interference.

Emissions

Generally, an audio equipment is incapable of generating harmful interference unless it is misused or a fault exists. However, audio products containing microprocessors or other digital circuitry often operate in radio frequency range and may emit some of this energy into the environment.

The product has been tested for compliance with established standards for emissions. These standards consider specific emission levels and distances for usage in "normal" environments for the intended product application. This does not mean the product will not cause interference with other equipment under all circumstances .

If the product is found to cause any interference with another apparatus ; application of one or more of the actions noted in the following section of Guidelines To Minimise Interference may improve the condition.

Guidelines To Minimise Interference

If the product is used as intended, we are confident that in practice, you are unlikely to encounter any problems in normal everyday use.

In order to minimise the possibility of interference from, or in, other apparatus while using this product; we recommend the following :

It is important that high quality screened cables are used for all signal connections. Note that low cost screened cables may have inadequate poor quality screening which does not fully cover the internal wires. Screened cable which relies on conductive plastic screening also has poorer R.F. characteristics. It is advisable to use cable that has full coverage lapped copper screening. Speaker connections can use unscreened cable. XLR style connectors should have the screen connected to the shell of the connector as well as pin 1. Some connector manufacturers provide this ability as a solder lug on the connector body.

Minimise cable lengths when interconnecting equipment . Excessive cable lengths increases an antenna effect. Use balanced connections wherever possible, especially if equipment is located in different racks or locations.

Don't place sensitive equipment directly next to units with large power transformer such as amplifiers, or near digital devices. Computers, monitors and associated peripherals may cause interference, especially older equipment. Locate video monitors a prudent distance from any sensitive signals.

In case of the interference affecting the product, relocation of the product, even to another room can be sufficient. Check the quality of the ground connection to the product. Product designed for earth grounding must be connected to earth ground. Determine the source of the interference by switching off and on other electrical and electronic products in the vicinity. Move any interfering product to a more distant location. Connect apparatus to a different AC Mains power circuit.

Fit a partial or complete R.F. screening (known as a Faraday cage) around the product or to the room in which the product is used.

Typical mains transients may be caused by defective equipment in the surrounding. This may be determined by switching them off and on. Products with Thermostats, such as heating / cooling devices & refrigerators, often can generate transients due to faulty or worn thermostat switch. Additionally mains transients may be generated by apparatus that are external of your facility, such as main feeder wiring or street lighting. In such cases you will need to contact your electrical supply authority to resolve the interference.

Finally if all else fails you may wish to add an external filter which may be obtained from electrical retailers.

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INDIA.**

SAFETY INFORMATION

The words **WARNING** and **CAUTION** throughout the manual, and on the device, call attention to important safety information. These words have the following meanings.

WARNING: The related information alerts you to conditions that could result in serious injury or damage to property if the instructions are not followed properly.

CAUTION: The related information instructs you on how to prevent damage to the equipment or how to avoid conditions that could result in minor injury if proper steps are not followed.

Product labelling and the operation manual may use the internationally recognized symbols defined below to note safety messages.



The lightning flash with arrowhead symbol, enclosed within a triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the apparatus's enclosure or at connection terminals that may be of sufficient magnitude to constitute a risk of electrical shock.



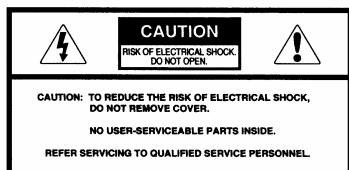
The exclamation point, enclosed within a triangle, is intended to alert the user to important installation, operation, and maintenance (servicing) instructions in the literature accompanying the apparatus.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

CAUTION: Installation of this apparatus should be made by a qualified installation person and should conform to all applicable local codes.



Modification and optional equipment information referenced in this manual is for use by qualified installation and service personnel only.



“INFORMACIÓN DE SEGURIDAD”

Las palabras **PELIGRO** (WARNING) y **PRECAUCIÓN** (CAUTION) a lo largo del manual y en el dispositivo (sistema), llaman la atención acerca de una importante información de seguridad. Estas palabras tienen los siguientes significados :

PELIGRO : la información relata las condiciones en que podría ser dañada seriamente la propiedad si no se siguen adecuadamente las instrucciones.

PRECAUCIÓN : la información que se relata le instruye en cómo prevenir daños al equipo o (CAUTION) como evitar condiciones que podrían resultar en perjuicio menor si los pasos adecuados no son seguidos correctamente.

El etiquetado del producto y el manual de operación pueden hacer uso de los símbolos reconocidos internacionalmente y cuyos mensajes estan definidos a continuación para modificar mensajes de seguridad:



El símbolo del rayo encerrado en un triángulo pretende alertar al usuario de la presencia de un peligroso voltaje no aislado ,dentro de la caja del aparato o a un terminal de conexión y que podría ser de suficiente magnitud como para constituir un grave riesgo de descarga eléctrica.



El punto de exclamación dentro de un triángulo pretende alertar al usuario de la importancia de las instrucciones de instalación, operación y mantenimiento (servicio) que acompañan al aparato.

PELIGRO : para reducir el riesgo de fuego o una descarga eléctrica, no exponer este (WARNING) aparato a la lluvia o la humedad.

PRECAUCIÓN : la instalación de este aparato debería hacerse por una persona cualificada (CAUTION) en la instalación, y debería conformar todos los códigos locales aplicables.



La modificación y la información opcional del equipo referenciada en este manual es para ser utilizada únicamente por personal cualificado en instalación y servicio.



INFORMATION CONCERNANT VOTRE SECURITE

Les mots **WARNING** et **CAUTION** dans le manuel d'utilisation et sur les appareils attirent votre attention sur les plus importantes informations concernant votre sécurité. Ces mots ont la signification suivante:

WARNING: Ce mot vous indique les circonstances dans lesquelles vous pourriez être blessé ou endommager votre équipement si les instructions ne sont pas suivies correctement.

CAUTION: Ce mot vous indique comment éviter d'endommager votre matériel et comment éviter de vous blesser si vous ne suivez pas les instructions.

Vous trouverez peut-être les symboles suivants sur votre appareil ou dans le manuel d'utilisation.



L'éclair se terminant en flèche dans un triangle permet de prévenir l'utilisateur d'un voltage dangereux non isolé dans l'appareil ou d'une connexion d'une amplitude suffisante pour constituer un risque de choc électrique.



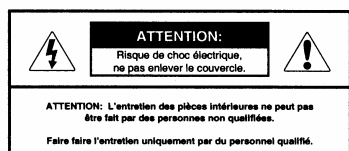
Le point d'exclamation dans un triangle permet de prévenir l'utilisateur des points importants concernant l'installation, le fonctionnement et l'entretien de l'appareil figurant dans le manuel d'utilisation.

WARNING: POUR REDUIRE LES RISQUES DE FEU OU DE CHOC ELECTRIQUE, NE PAS METTRE L'APPAREIL SOUS LA PLUIE OU DANS L'HUMIDITE.

CAUTION: L'installation de cet appareil doit être faite par un installateur qualifié et doit être en conformité avec toutes les lois locales en application.



Les informations concernant une modification ou un équipement en option dans le manuel doivent être effectué par du personnel qualifié.



INFORMAZIONI PER LA SICUREZZA

Le parole **AVVERTENZA** (WARNING) e **PRUDENZA** (CAUTION) poste sul manuale d'uso e sul apparato richiamano la vostra attenzione sulle delle importanti informazioni per la vostra sicurezza. Queste parole hanno il seguente significato.

AVVERTENZA: La suddetta indicazione vi avvisa sul rischio di incorrere in danni a cose o a (WARNING) persone, se le procedure d'uso e installazione non saranno seguite propriamente.

PRUDENZA: La suddetta indicazione vi instruisce su come prevenire e ridurre al minimo, il rischio (CAUTION) di danni agli apparati e alle persone se le istruzioni saranno seguite propriamente.

Le apparecchiature e i manuali di istruzioni riporteranno la simbologia standard raffigurata qui sotto, accompagnate dalle relative informazioni per la sicurezza.



La simbologia con il fulmine all'interno di un triangolo, intende avvisare l'utente della presenza di alto voltaggio all'interno del apparecchio in questione, e che il suddetto apparecchio si alimenta attraverso una tensione di rete ad alto voltaggio e che dunque si potrebbe incorrere sul rischio di una possibile scossa elettrica.



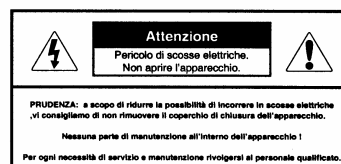
La simbologia con il punto esclamativo all'interno di un triangolo, intende avvisare l'utente di una serie di istruzioni contenute nel manuale d'uso riguardanti : operato, manutenzione e assistenza. Il suddetto manuale sarà a corredo dell'apparecchio.

AVVERTENZA: PER RIDURRE IL RISCHIO DI POSSIBILI INCENDI O SCOSSE (WARNING) ELETTRICHE, SCONSIGLIAMO DI ESPORRE L'APPARECCHIO ALLA PIOGGIA O ALL'UMIDITA'.

PRUDENZA: l'installazione di questo apparecchio dovrà essere effettuata solo da personale (CAUTION) qualificato e il tipo di installazione dovrà essere in regola con le norme vigenti locali..



Modifiche e ulteriori informazioni specificate in questo manuale sono solamente riservate al personale qualificato all'installazione.



Sicherheitshinweise

Die Begriffe **WARNUNG** (engl. WARNING) und **ACHTUNG** (engl. CAUTION) in der Bedienungsanleitung und auf den Geräten machen auf wichtige Sicherheitsinformationen aufmerksam. Diese Begriffe haben die folgende Bedeutung:

WARNUNG: Der folgende Text warnt Sie vor ernsthaften Verletzungen oder Beschädigungen, die aus einer fehlerhaften Bedienung bzw. Handhabung des Gerätes resultieren können.

ACHTUNG: Der folgende Text informiert Sie über Bedienungshinweise zum Schutz Ihres Gerätes oder weist auf mögliche Schäden hin, wenn die Bedienungshinweise nicht beachtet werden.

Die Beschriftung der Geräte und die Bedienungsanleitungen weisen unter Umständen international bekannte Symbole auf, die die folgende Bedeutung haben:



Das Blitzsymbol im Dreieck warnt vor anliegender, nicht isolierter „gefährlicher Spannung“ im Inneren oder an den Anschlüssen des Gerätes. Die Berührung der unter Spannung stehenden Teile kann zu einem elektrischen Schock führen.



Das Rufzeichen im Dreieck macht auf wichtige Installations-, Bedienungs- und Servicehinweise in der zugehörigen Bedienungsanleitung aufmerksam.

WARNUNG: Zur Minderung des Risikos von Feuer und elektrischem Schock schützen Sie das Gerät vor Regen und Feuchtigkeit.

ACHTUNG: Die Installation des Gerätes sollte nur durch qualifiziertes Personal durchgeführt werden und muß den jeweiligen Bestimmungen entsprechen.



Die Modifikationen und die Informationen zu den optionalen Erweiterungen in der Bedienungsanleitung sind nur für qualifiziertes Personal bestimmt.

	ACHTUNG Risiko von elektrischem Schock Gerät nicht öffnen	
Achtung: Zur Minderung des Risikos von elektrischem Schock das Gerät nicht öffnen		
Keine Bedienungselemente im Inneren des Gerätes		
Service nur durch qualifiziertes Personal durchführen lassen		

Sikkerhedsinformation

Ordene **ADVARSEL** (WARNING) og **FORSIGTIG** (CAUTION), brugt i henholdsvis brugervejledning og på selve produktet, indikerer, at vigtig information omkring sikkerhed følger. Ordene betyder følgende:

ADVARSEL: Den efterfølgende information advarer Dem om forhold, der kan føre til alvorlige ulykker og ejendomsskader, hvis ikke vejledningen følges.

FORSIGTIG: Den efterfølgende information vejleder Dem i, hvordan De undgår skade på produktet, samt undgår forhold der kan føre til mindre ulykker og ejendomsskader, hvis ikke vejledningen følges.

Produktetiketter og brugervejledning kan indeholde de internationalt anerkendte symboler der er vist nedenfor:



Trekanten med et lyn i midten har til hensigt at advare brugeren om, at produktet indeholder "farlig spænding", og at det derfor er forbundet med fare for elektrisk stød at åbne produktet.



Trekanten med udråbstegn har til hensigt at advare brugeren om, at vigtig information omkring installation, brug, service og vedligeholdelse af produktet er indeholdt i den medfølgende brugervejledning.

ADVARSEL: Med henblik på at reducere risikoen for brand eller elektrisk stød, må produktet ikke udsættes for regn eller fugt.

FORSIGTIG: Installation af dette produkt skal foretages af en autoriseret installatør og skal være i overensstemmelse med alle anvendelige lokale retningslinier.



Modifikationer samt alternativt udstyr beskrevet i denne brugervejledning er kun henvendt til kvalificerede installatører og servicepersonale.

	FORSIGTIG Fare for elektrisk stød - må ikke åbnes.	
FORSIGTIG: Med henblik på at reducere risikoen for elektrisk stød, må svæbs ikke fjernes.		
Indeholder ingen komponenter relevante for brugeren.		
Anvend autoriseret servicepersonale ved alle servicetiltag.		

VEILIGHEIDSINFORMATIE

De woorden **WAARSCHUWING** (WARNING) en **VOORZICHTIG** (CAUTION) welke in de handleiding en op het apparaat voorkomen, waarschuwen U voor belangrijke veiligheidsinformatie. Zij hebben de volgende betekenis:

WAARSCHUWING: De betreffende informatie waarschuwt U voor omstandigheden die kunnen leiden tot defecten of beschadigingen aan apparaten als de instructies niet volledig worden opgevolgd.

VOORZICHTIG: De betreffende informatie instrueert U hoe U defecten aan apparatuur kunt voorkomen of hoe U omstandigheden kunt vermijden die kunnen resulteren in schade als de juiste stappen niet worden opgevolgd.

Produkt informatie en handleiding hanteren onderstaande internationaal erkende symbolen om veiligheidsinstructies aan te geven.



De bliksemschicht in een driehoek wordt gebruikt om de gebruiker te attenderen op ongeïsoleerde "gevaarlijke spanning" in het apparaat of bij de aansluitklemmen, die het risico van een elektrische schok kunnen geven.



Het uitroepteken in een driehoek wordt gebruikt om de gebruiker te attenderen op belangrijke installatie, gebruiks- en onderhoudsinstructies in de beschrijving die bij het apparaat hoort.

WAARSCHUWING: OM HET RISICO VAN BRAND OF EEN ELECTRICHE SCHOK TE VERMIJDEN DIENT U HET APPARAAT NIET AAN VOCHT BLOOT TE STELLEN.

VOORZICHTIG: Installatie van dit apparaat dient te geschieden door gekwalificeerd personeel en dient te geschieden conform de plaatselijke voorschriften.



Modificaties en aanvullende informatie waar in de handleiding naar wordt verwezen, dient alleen voor gebruik door gekwalificeerd personeel.

	VOORZICHTIG. Risiko van elektrische schok. Niet openen.	
Waarschuwing: Om het risico van een elektrische schok te verminderen het apparaat niet openen.		
Er zijn geen, door gebruiker, vervangbare onderdelen in dit apparaat.		
Service overlaten aan gekwalificeerd service personeel.		

TURVALLISUUSTIEDOTE

Sanat **VAROITUS** (WARNING) ja **HUOMIO** (CAUTION), jotka esiintyvät manuaalissa ja itse laitteessa, ilmoittavat tärkeästä turvallisuusinformaatiosta. Näillä sanoilla on seuraava merkitys:

VAROITUS: Yhteydessä oleva informaatio varoittaa olosuhteista, jotka saattavat johtaa vakaviin vammoihin tai laitteen vaurioitumiseen, mikäli ohjeita ei täysin noudateta.

HUOMIO: Yhteydessä oleva informaatio neuvoo, miten laitteen vaurioituminen voidaan ehkäistä tai miten voidaan välttää olosuhteet, jotka voivat johtaa lieviin vammoihin, mikäli ohjeita ei noudateta.

Tuotteessa tai käyttöohjeessa voidaan käyttää seuraavia alla määriteltyjä kansainvälisiä symboleja, jotka viittaavat turvallisuusinformaatioon.



Kolmion sisällä olevan nuolipäinen salama varoittaa käyttäjää laitteen sisällä tai liitäntöissä olevasta eristämättömästä vaarallisesta jännitteestä, joka saattaa olla tarpeeksi suuri aiheuttaakseen sähköiskun vaaran.



Kolmion sisällä oleva huutomerkin tarkoituksena on ilmoittaa käyttäjälle tärkeistä asennusta, käyttöä tai huoltoa koskevista ohjeista laitteen mukana seuraavassa kirjallisuudessa.

VAROITUS: ÄLÄ ALTISTA LAITETTA SATEELLE TAI KOSTEUELLE TULIPALON JA SÄHKÖISKUN VAARAN VUOKSI.

HUOMIO: Laitteen asentaminen tulisi jättää ammattitaitoisen henkilön suoritettavaksi ja asennuksessa tulee noudattaa kaikkia paikallisia säännöksiä.



Tässä manuaalissa oleva informaatio, joka koskee muutostöitä ja lisälaitteita, on tarkoitettu vain ammattitaitoisten asennus- ja huoltohenkilöiden käyttöön.

	HUOMIO Sähköiskun vaara, älä avaa.	
HUOMIO: ÄLÄ AVAA KANTTA SÄHKÖISKUN VAARAN VUOKSI		
EI SISÄLLÄ KÄYTTÄJÄN HUOLLETTAVIA OSIA		
JÄTÄ HUOLTO AMMATTITAITOISELLE HENKILÖKUNNALLE		

SIKKERHETS INFORMASJON

Når ordene **ADVARSEL** (WARNING) og **VIKTIG** (CAUTION) blir brukt i manualen og på produktet, gjelder det informasjon som har med brukers sikkerhet å gjøre. Ordene har følgende mening:

ADVARSEL: (WARNING) Tilhørende informasjon viser til forhold som kan resultere i alvorlige skader eller ødeleggelser hvis anvisningene ikke følges nøye.

VIKTIG: (CAUTION) Tilhørende informasjon forteller deg hvordan du skal unngå feil på utstyret, eller unngå situasjoner som kan resultere i mindre skader.

Produkt merkingen og bruksanvisningen bruker internasjonale symboler for å merke punkter som er viktige for brukers sikkerhet.



Lynet i en triangel advarer brukeren om uisolert "farlig spenning" inne i apparatet, eller tilkoblings terminaler som kan gi støt.



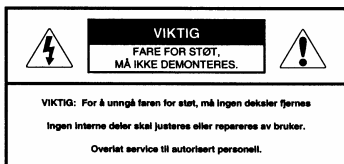
Etter utropsteget i en triangel følger informasjon som er viktig når det gjelder installasjon, bruk og vedlikehold (service) av apparatet.

ADVARSEL: (WARNING) FOR Å REDUSERE FAREN FOR BRANN ELLER STØT MÅ APPARATET IKKE UTSETTES FOR VANN ELLER FUKTIGHET.

VIKTIG: (CAUTION) Installasjon av apparatet skal foretas av autorisert installatør etter gjeldende forskrifter.



Modifikasjoner og tillegg informasjon som følger er kun for kvalifiserte installatører eller service personell.



SÄKERHETS INFORMATION

Orden **VARNING** (WARNING) og **OBSERVERA** (CAUTION) vil bli anvendt i denne manual og på apparaten, er menade att uppmärksamma viktig säkerhets information. Dessa ord har följande betydelse.

VARNING: (WARNING) Information som uppmärksammar på omständigheter som kan resultera i allvarlig personskada eller skada på egendom om instruktionerna ej följs.

OBSERVERA: (CAUTION) Information som uppmärksammar på instruktioner om hur skada på utrustning eller hur situationer där lättare personskador kan uppstå undviks.

Följande internationellt använda ord och symboler används i handboken och på märkningar på produkten för att uppmärksamma användare på viktiga säkerhets instruktioner.



En blix med pil, innesluten i en triangel, menad att uppmärksamma användare på närvaron av isolerade "farliga spänningar" i apparaten eller på anslutnings kontakter vilka har tillräcklig styrka för att medföra risk för elektrisk stöt.



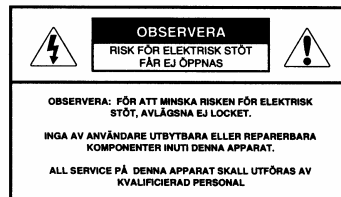
Ett utropstecken, innesluten i en triangel, menad att uppmärksamma användare på viktiga installations, handhavande eller underhålls-instruktioner i medföljande dokumentation.

VARNING: (WARNING) FÖR ATT MINSKA RISKEN FÖR BRAND ELLER ELEKTRISK STÖT, UTSÄTT EJ APPARATEN FÖR FUKT ELLER VÄTSKA.

OBSERVERA: (CAUTION) Installation av denna apparat skall utföras av kvalificerad installatör samt enligt alla gällande lokala bestämmelser.



Eventuella modifierings instruktioner och annan information av teknisk art i denna manual är endast avsedd att användas av kvalificerad installations och service personal.



ΠΛΗΡΟΦΟΡΙΕΣ ΑΣΦΑΛΕΙΑΣ

Οι λέξεις **ΚΙΝΔΥΝΟΣ** (WARNING) και **ΠΡΟΣΟΧΗ** (CAUTION) που αναφέρονται μέσα στο εγχειρίδιο και στη συσκευή, επικεντρώνουν την προσοχή σε σημαντικές πληροφορίες ασφαλείας. Οι λέξεις αυτές έχουν την παρακάτω σημασία.

ΚΙΝΔΥΝΟΣ: (WARNING) Η αναγραφόμενη πληροφορία επιστρά την προσοχή σας σε καταστάσεις που θα μπορούσαν να έχουν σαν αποτέλεσμα σοβαρό τραυματισμό ή καταστροφή της ιδιοκτησίας αν οι οδηγίες δεν ακολουθηθούν κατάλληλα.

ΠΡΟΣΟΧΗ: (CAUTION) Η αναγραφόμενη πληροφορία σας καθοδηγεί πώς να προλάβετε καταστροφή του εξοπλισμού ή πώς να αποφύγετε καταστάσεις που θα μπορούσαν να έχουν ως αποτέλεσμα μικροτραυματισμούς αν δεν ακολουθηθούν τα σωστά βήματα.

Στις επιγραφές των προϊόντων και στο εγχειρίδιο λειτουργίας, χρησιμοποιούνται τα συμβολικά αναγνωρισμένα σύμβολα, των οποίων ο ορισμός δίνεται παρακάτω έτσι ώστε να υπογραμμιστούν τα μηνύματα ασφαλείας.



Η φωτεινή αναλαμπή με σύμβολο το βέλος, μέσα στο τρίγωνο, έχει σκοπό να επιστήσει την προσοχή του χρήστη, στην ύπαρξη μη-μονομηνής « επικίνδυνης ισχύος ρεύματος » στο εσωτερικό της συσκευής ή στις άκρες σύνδεσης οι οποίες μπορεί να έχουν αρκετό μέγεθος ώστε να περιέχουν κίνδυνο ηλεκτροπληξίας.



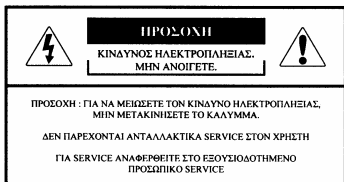
Το επεξηγηματικό σημείο, μέσα στο τρίγωνο, έχει σκοπό να επιστήσει την προσοχή του χρήστη στις σημαντικές οδηγίες εγκατάστασης, λειτουργίας και συντήρησης (service) που περιέχονται στα φυλλάδια που συνοδεύουν την συσκευή.

ΚΙΝΔΥΝΟΣ: (WARNING) Για να αποφύγετε τον κίνδυνο φωτιάς ή ηλεκτροπληξίας, μην εκθέτετε αυτή τη συσκευή σε βροχή ή σε υγρασία.

ΠΡΟΣΟΧΗ: (CAUTION) Η εγκατάσταση αυτής της συσκευής θα πρέπει να γίνει από εξειδικευμένο άτομο και θα πρέπει να προσαρμόζεται σε όλους τους εφαρμοσμένους τοπικούς κώδικες.



Οι τροποποιήσεις και οι προληπτικές πληροφορίες για τον εξοπλισμό, που αναφέρονται σε αυτό το εγχειρίδιο, προορίζονται για χρήση μόνο από εξειδικευμένα στην εγκατάσταση και στο service, άτομα.



INFORMAÇÃO SOBRE SEGURANÇA

As palavras **ADVERTÊNCIA** (WARNING) e **PRECAUÇÃO** (CAUTION) neste manual, e no dispositivo, alertam para importantes informações sobre segurança. Estas palavras significam o seguinte:

ADVERTÊNCIA: Informação relacionada que alerta sobre condições que poderão resultar em lesões sérias ou prejuízo, se as instruções não forem seguidas adequadamente.

PRECAUÇÃO: (CAUTION) Informação relacionada que instrui como prevenir danos no equipamento ou como evitar condições que poderão resultar em lesões leves, se os passos não forem seguidos adequadamente.

As etiquetas do produto e do manual de operações podem usar os símbolos internacionalmente reconhecidos definidos abaixo para advertir mensagens de segurança.



símbolo do relâmpago com uma seta, dentro de um triângulo, tem o fim de alertar o usuário a presença de "voltagem perigosa" sem isolamento dentro da caixa isolamento do aparelho ou nos terminais de ligação que podem ter a magnitude suficiente que constitui um risco de choque elétrico.



ponto de exclamação, dentro de um triângulo, tem o fim de alertar o usuário sobre instruções importantes de instalação, operação e manutenção (serviços) na literatura que acompanha o aparelho.

ADVERTÊNCIA: PARA REDUZIR O RISCO DE INCÊNDIO OU CHOQUE ELÉCTRICO, NÃO EXPONHA ESTE APARELHO A CHUVA OU HUMIDADE.

PRECAUÇÃO: (CAUTION) A instalação deste aparelho deve ser feita por um profissional qualificado e deve obedecer a todos os códigos locais aplicáveis.



Modificação e informação sobre equipamento adicional citados neste manual são para o uso exclusivo do pessoal qualificado de instalação e manutenção.

