KUSTOM

Profile System One

Owner's Manual

Congratulations, you now own Kustom's Profile System One, a 24-bit digital, portable, and powerful 100-watt P.A. system.

With Line Array Technology, we are able to produce a focused audio dispersion pattern that will reach deeper into the audience than conventional designs.

The Profile System One is easy to operate and easy to understand. Before operating your Profile System One, please read all Setup Instructions.

ENGLISH

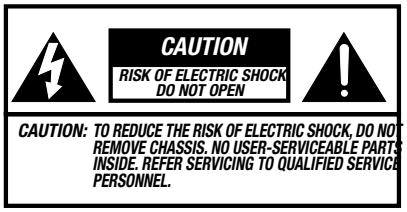
Danger

Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably to noise induced hearing loss but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time.

The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures:

DURATION PER DAY (HOURS)	8	6	4	3	2	1
SOUND LEVEL (dB)	90	93	95	97	100	103

According to OSHA, any exposure in the above permissible limits could result in some hearing loss. Ear plugs or protectors in the ear canal or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss. If exposure in excess of the limits as put forth above, to insure against potentially harmful exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of inducing high sound pressure levels, such as this amplification system, be protected by hearing protectors while this unit is in operation.



AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR.

THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF NON-INSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.

THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE UNIT.

IMPORTANT

1. Read all safety and operating instructions before using this product.
2. All safety and operating instructions should be kept for future reference.
3. This product should not be used near water i.e. bathtub, sink, swimming pool, wet basement, etc.
4. This product should be located so that its position does not interfere with proper ventilation. It should not be placed flat against a wall or placed in a built-in enclosure that will impede the flow of cooling air.
5. This product should not be placed near a source of heat, such as a stove, radiator, or another heat producing amplifier.
6. Connect only to a power supply of the type indicated on the back of the amplifier near the power supply cord.
7. Do not break off the ground pin of the power supply cord.
8. Power supply cords should always handled carefully. Never walk or place equipment on power supply cords.
9. The power supply cord should be unplugged when the unit is unused for long periods of time.
10. Care should be taken so that objects do not fall and liquids are not spilled into the unit through the ventilation ports or any other openings.

FRENCH

Danger

L'exposition a des niveaux eleves de bruit peut provoquer une perte permanente de l'audition. Chaque organisme humain reagit differemment quant a la perte de l'audition, mais quasiment tout le monde subit une diminution de l'acuite auditive lors d'une exposition suffisamment longue au bruit intense. Les autorites competentes en reglementation de bruit ont defini les expositions tolerees aux niveaux de bruits:

DURE EN HEURES PAR JOUR	8	6	4	3	2	1
NIVEAU SONORE CONTINU EN dB	90	93	95	97	100	103

Selon les autorites, toute exposition dans les limites citees ci-dessus, peuvent provoquer certaines pertes d'audition. Des bouchons ou protections dans l'appareil auditif ou sur l'oreille doivent etre portes lors de l'utilisation de ce systeme d'amplification afin de prevenir le risque de perte permanente de l'audition. Dans le cas d'expositions superieures aux limites precitees il est recommande, afin de se premunir contre les expositions aux pressions acoustiques elevees potentiellement dangeureuses, aux personnes exposees aux equipements capables de delivrer de telles puissances, tels ce systeme d'amplification en fonctionnement, de proteger l'appareil auditif.

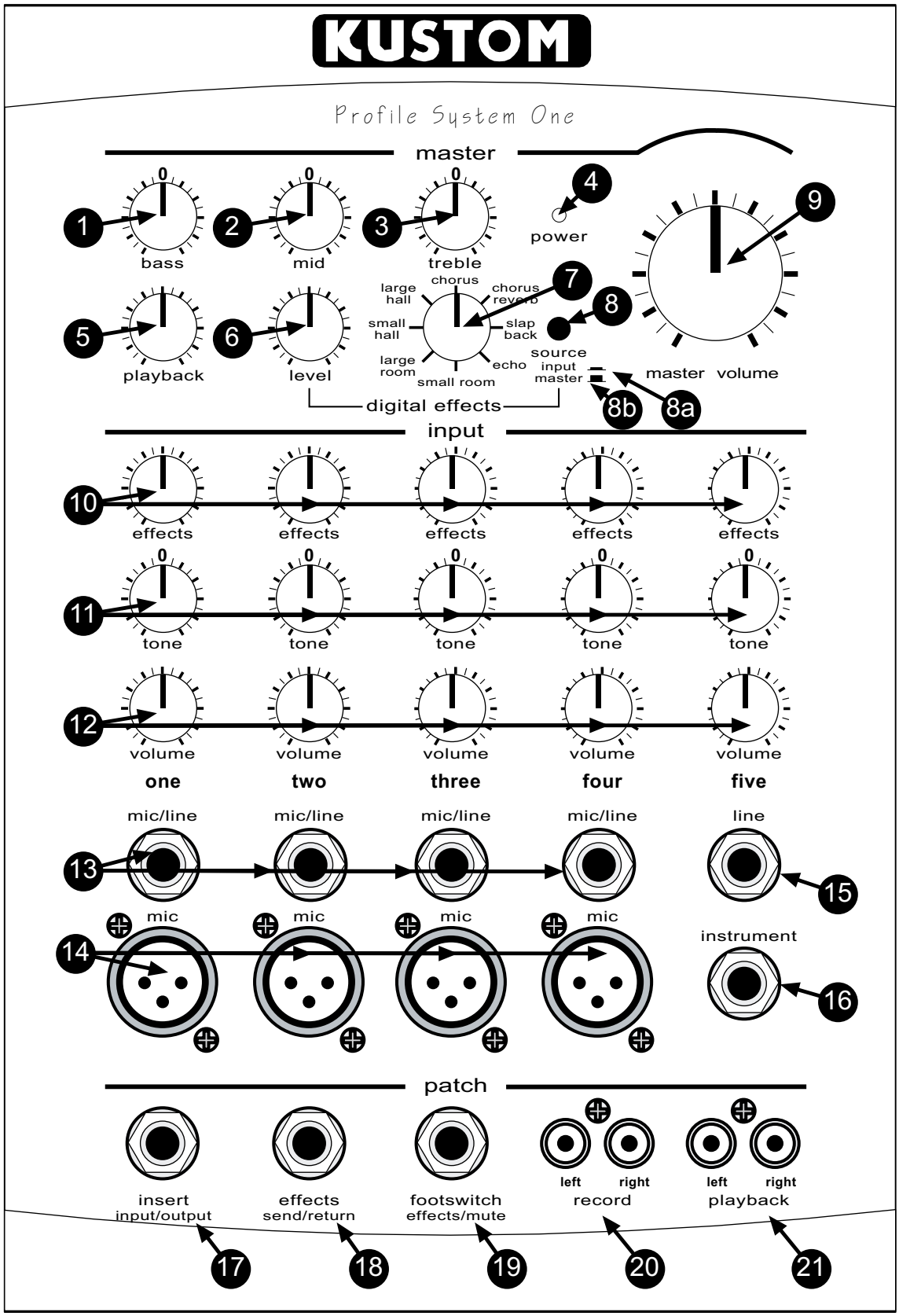
CE SYMBOLE A POUR BUT D'AVERTIR L'UTILISATEUR DE LA PRESENCE DE VOLTAGE DANGEREUX NON-ISOLE A L'INTERIEUR DE CE PRODUIT QUI PEUT ETRE DE PUISSANCE SUFFISAMMENT IMPORTANTE POUR PROVOQUER UN CHOC ELECTRIQUE AUX PERSONNES.

CE SYMBOLE A POUR BUT D'AVERTIR L'UTILISATEUR DE LA PRESENCE D'INSTRUCTIONS D'UTILISATION ET DE MAINTENANCE DANS LES DOCUMENTS FOURNIS AVEC CE PRODUIT.

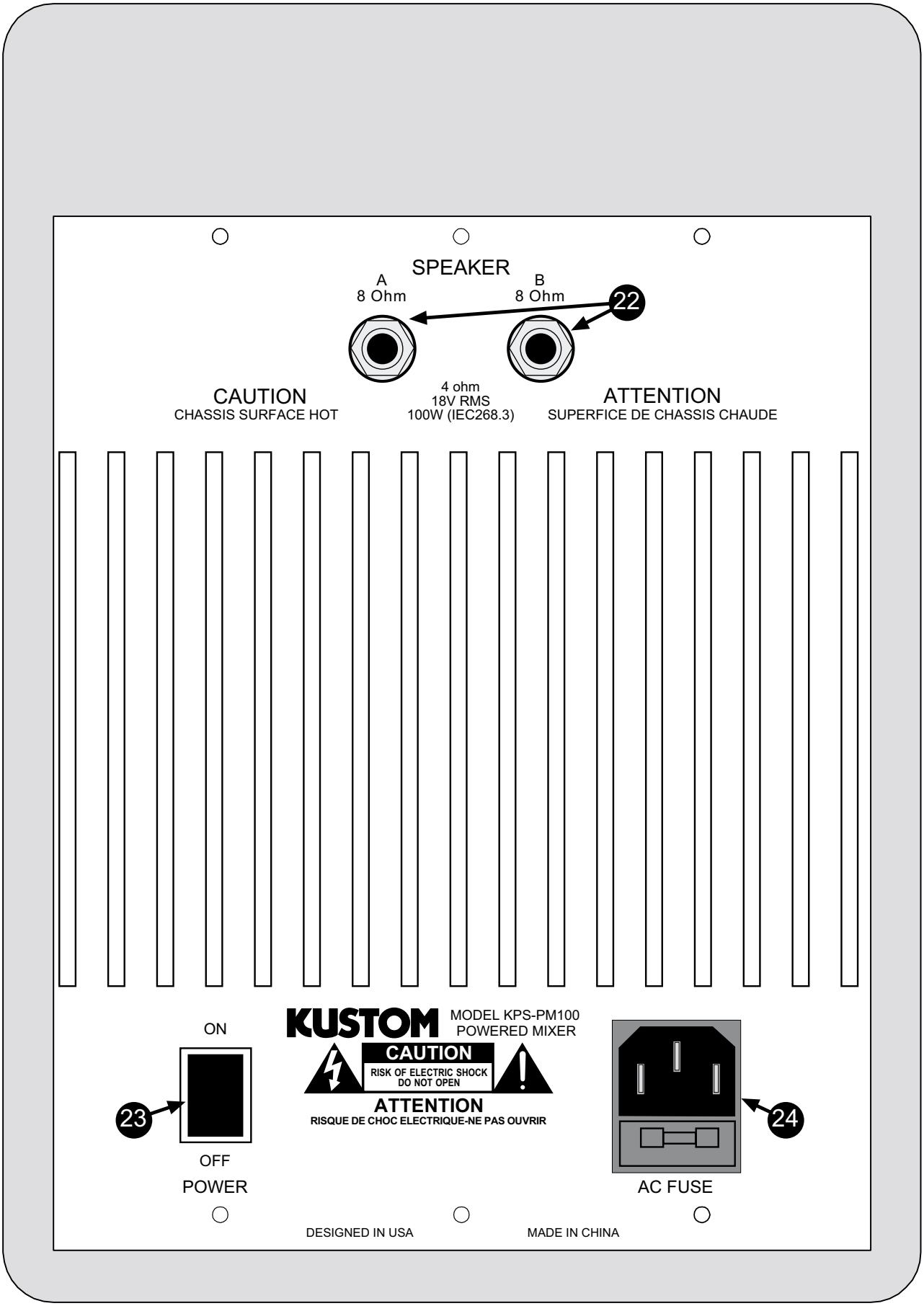
IMPORTANT

1. Lisez toutes les instructions d'utilisation et de sécurité avant d'utiliser ce produit.
2. Toutes les instructions d'utilisation et de sécurité doivent être conservées afin de pouvoir s'y référer à tout moment.
3. Cet appareil ne doit pas être utilisé à proximité d'eau ou baignoire, évier, piscine, sous-sol humide, etc.
4. Cet appareil doit être placé de telle sorte que sa position ne l'empêche pas d'être ventilé. Il ne doit pas être placé à plat contre un mur ou dans un espace encastré qui empêcherait la ventilation.
5. Cet appareil ne doit pas être place près d'une source de chaleur tel un forneau, radiateur ou tout autre appareil produisant de la chaleur.
6. Branchez uniquement une alimentation électrique du type indiqué sur l'arrière de l'amplificateur, près du cordon d'alimentation électrique.
7. Ne coupez pas la borne de terre du cordon d'alimentation électrique.
8. Les cordons d'alimention électrique doivent toujours être manipulés avec précaution. Ne jamais marcher ni poser un équipement sur des cordons d'alimentation électrique.
9. Le cordon d'alimentation électrique doit être débranché en cas de période de non-utilisation prolongée.
10. Il faut prendre les précautions nécessaires afin de ne pas faire tomber d'objet ni renverser du liquide dans l'appareil par les trous d'aération ou toute autre ouvertune.

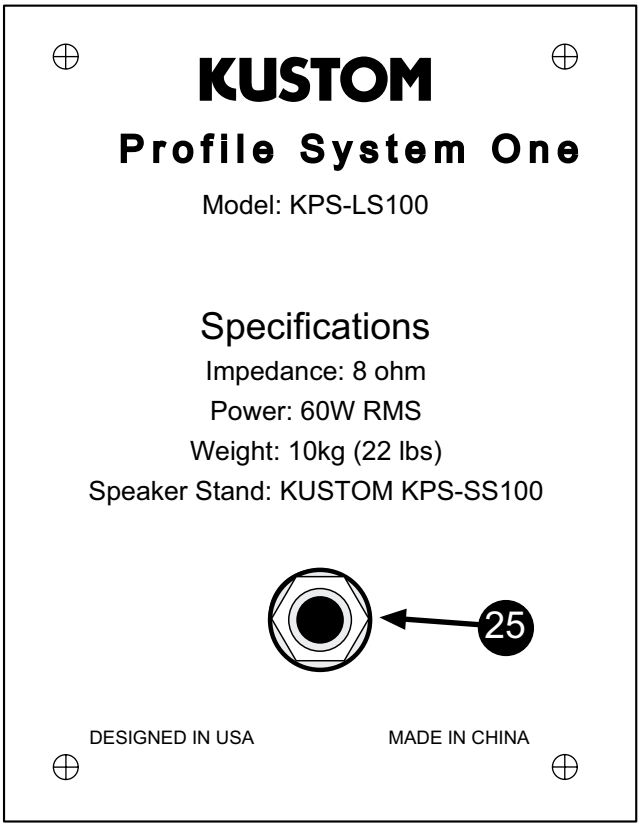
SETUP DIAGRAM A
MIXER-FRONT



SETUP DIAGRAM B
MIXER-BACK



SETUP DIAGRAM C
SPEAKER BACK



Setup Instructions

MAKING CONNECTIONS

- Using the Profile speaker cables, or a set of your own, connect an end of each cable into the speaker outputs of the mixer (22), then connect the cable's opposite end to each speaker's input jack (25).
- Be sure the power switch (23) is in the “off” position and attach the AC. cable to the A.C. input (24) of the mixer.
- Plug in the microphones and instruments you plan to use into the microphone (14) and line/mic (13) inputs. If you are using a passive acoustic instrument, you should use the instrument jack (16).

MASTER SECTION

- Turn the master volume (9), and playback knob (5) counter-clockwise (O).
- Turn the bass (1), mid (2), treble (3), and level (6) knobs in the master section to the 12 o'clock position (O).
- Push the source button (8) inward to the input position (8a).
- The 8 position digital effect knob can be set to any position.

INPUT SECTION

- Turn all volume (12) and effect (10) knobs in the input section counter-clockwise (O)
- Turn all tone knobs (11) to the 12 o’clock position.(O)

PLAYING

- Press the power switch (23) to the ON position.
- Turn the master volume (9) to the 9 o’clock position (O) and begin adjusting the volume knob (12) of the individual channels you are using to at least the 12 o'clock position (O). After you are happy with the basic level, you will use the master volume (9) to increase or decrease the overall amount of volume.
- Adjust the tone (11) on the individual channels, and the bass (1), mid (2), and treble on the master EQ (3) knobs to shape and contour your sound.
- Adjust the individual effect knob (10) on each channel to add amounts of digital effect. Also use the master digital effects level knob (6) to adjust the overall amount of effect on all channels.
- If you are using your Profile system to amplify audio from a CD player or computer, connect the output of the audio source to the playback jacks. (21) Use the playback knob (5) to adjust the volume. The playback knob is the only knob that affects the signal of the playback jacks (21).

CAUTION: Disconnect supply cord before changing fuse. Replace with same type
T1.6A (100-120v), T800mA (220-240V)

ATTENTION: Débrancher avant de remplacer le fusible. Utiliser un fusible de rechange de même type
T1.6A (100-120v), T800mA (220-240v)

About the Master Section

The master section gives you final control over the sum of what is happening in the input section. In other words, the moves you make in this section will affect all channels evenly, except the playback input (21).

BASS (1**)**
This master control adds low end to your final mix. Bass can make people dance. Too much can kill a mix. Use sparingly to eliminate feedback.

MID (2**)**
This master control punctuates mid frequencies - the frequencies humans hear the most. This is the sweet spot of the mix. Use this control to warm vocal and guitar sounds.

TREBLE (3**)**
This master control will accent the high-end frequencies and complete your mix. Too much will create hiss. Use sparingly to eliminate feedback.

PLAYBACK (5**)**
This controls the volume of the playback jacks (21). NOTE: The playback control will allow audio from playback input jacks (21) to be heard even when the master volume (9) is turned down.

TIP
There are really 6 channels on the profile. You can connect a drum machine, sequencer or any audio signal to the playback jacks (21).

LEVEL (6**)**
This controls the total volume level of the internal digital effects.

MASTER VOLUME (9**)**
This controls the total volume level of the entire system, except playback (5)

DIGITAL EFFECTS (7**)**
Profile's 24-bit effects offer you 4 stage environments and 4 studio effects.

Stage Effects	Studio Effects
• Large room	• Chorus
• Small room	• Chorus/reverb
• Small hall	• Slapback echo
• Large hall	• Echo

SOURCE BUTTON (8**)**
The source button (8) determines how you will control the internal effects as well as what signal the effect knobs (10) will control.

Typical setting when internal effect is used.
- Pressing the button to the input position (8a) will route the internal digital effects (7) from each channel's effect knobs (10) The master level control (6) will determine the total volume of the effects.

Typical setting when external effect is used.
- Pressing the button to the master position (8b) will route the digital effects to the master level control (6) only. As the level control (6) is turned, channels 1-5 will receive the same amount of internal effect. The effect knobs (10) will now control the signal to an external effects input (18).

MASTER VOLUME (9**)**
Controls the overall volume of all inputs, except the playback inputs (21), which are controlled by the Playback control (5).

POWER LIGHT (4**)**
When it's lit the system is on. When it's not lit the system is off.

INPUT SECTION PICTURE

About the Input Section

This is where you will plug in your microphones, guitars, drum machines, keyboards and other audio sources.

WARNING. Do not connect the output of a speaker out jack into the input section.

Inputs 1,2,3 & 4 are equipped for either 1/4" jacks or phantom powered XLR jacks. Input 5 is equipped with an additional line input and an instrument jack, a unique Profile feature.

EFFECTS (10**)**
Clockwise rotation of these knobs will increase the level of digital effect (7) that channel will receive.

TIP
The simplest way to have the same amount of effect on all 5 channels is to press source button (8) to the master position (8b). This deactivates the individual effect controls (10). The level knob (6) will now evenly adjust the amount of effect that all 5 channels will receive.

TONE (11**)**
This will greatly shape the sound of an individual channel. This single knob is an active E.Q. and can achieve nearly all frequency combinations. The middle is the sweet spot, further to left will add bass and remove proper amounts of mid and treble. A turn to the right will add more treble and remove proper amounts of mid and bass.

VOLUME (12**)**
With the master volume (9) set to an audible level, begin increasing the volume knob (12) of each channel you are using.

MIC / LINE INPUTS (13**)**
These 1/4” inputs are designed to receive instruments and devices such as a drum machine, keyboard, or hi-impedance mic.

INSTRUMENT JACK (16**)**
If you are using a string instrument, such as an acoustic guitar that has a passive pickup (non-battery powered) or an electric guitar without an amp, then the instrument jack is where you should connect. The E.Q. of this input has been contoured to bring out the sweet frequencies of any string instrument, such as acoustic and electric guitar, mandolin, cello, violin, or whatever else you have.

XLR INPUTS (14**)**
These inputs are designed for low-impedance microphones or equipment that has a mic-level, balanced output (often called a direct out).

Also, these XLR inputs are phantom powered. Phantom power is a small amount of power that is necessary when using most condenser microphones.

TIP
Most microphones are dynamic mics. They are very popular and used 90% of the time in studios, on stages and in everyday applications.

Another style of microphone is called a condenser. Most condenser mics require a small amount of power to operate, which can be created by either an internal battery or an expensive adapter. Condenser mics allow you to capture frequencies that are not achievable by most dynamic mics. The Profile System One mixer provides 15-volts of power to the XLR jacks.

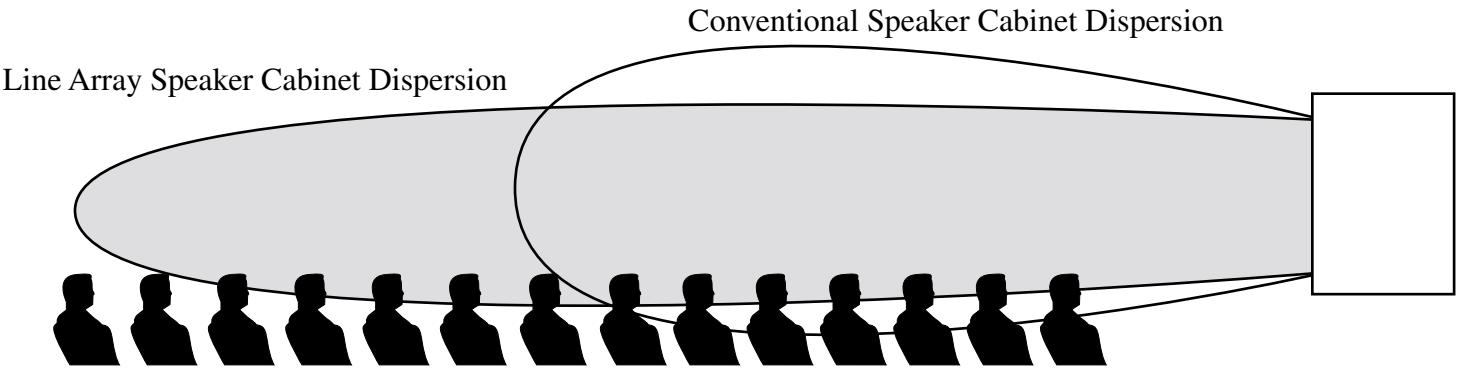
Phantom power will not cause damage to any dynamic or non-condenser mic.

Line Array: Two speakers are better than one

Line array technology is the reason why the Profile is able to deliver great sound with deeper penetration into the listening audience than conventional speaker systems.

Line array technology focuses sound energy where it is needed

Additionally, the use of two speakers in a line array results in a 6db increase in SPL (sound pressure level) or greater volume.

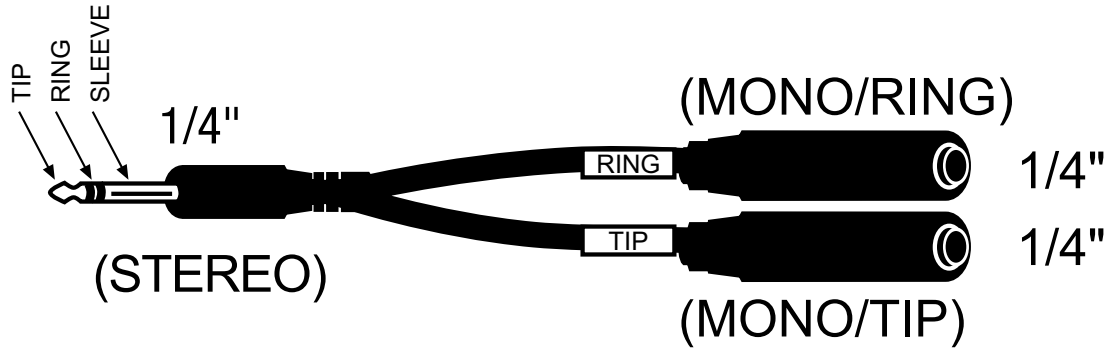


Conventional Speaker Cabinet Dispersion travels in a circular pattern, wasting Sound Pressure Level on the ceiling & floor.

Line Array Cabinet Dispersion travels in a narrow, flattened pattern, focusing Sound Pressure Level on the audience.

About the Patch Section

The patch section of the Profile is where you can easily insert external devices and enhance the Profile's performance. The Profile uses a tip/ring/sleeve-wiring plan on its insert (17) and effects (18) jacks. To use these jacks you will need a tip/ring/sleeve Y-cable.



INSERT - INPUT/OUTPUT JACK

Using a tip/ring/sleeve cable, connect the input of an external equalizer or compressor to the end of the Y-cable marked "ring", and the output of your external device to the end of the Y-cable marked "tip." *The ground or shield is common.*

TIP

Inserting a mono guitar cable halfway or until the first "click" will allow you to send a signal to another Profile or any powered speakers.

EFFECTS – SEND/RETURN JACK
Using a tip/ring/sleeve cable, connect the input of a single or multi-effects unit to the end of the Y-cable marked “ring”, and the output of your external device to the end of the Y-cable marked “tip.”

TIP
When the source button (8) is set the master position (8b), the signal to the effects input jack (18) is sent from the effect knobs (10). You now have control over the amount of signal each channel will send to your external echo, reverb or looping device. You will still have use of the Profile's internal effects (7) on the entire mix by adjusting the level knob (6).

FOOTSWITCH – EFFECTS/MUTE JACK
Allows you to mute the digital effect (6) and master volume (9).

Using a stereo cable, connect a dual-latching foot switch into the footswitch jack (19).

This feature allows you to play your break music, mute your equipment and return with the exact same settings when you return by simply pressing the right switch a second time.

Using a single button footswitch will allow you to turn the internal effects on and off.

RECORD (20**) /PLAYBACK (**21**) RCA JACKS**
Primarily designed to be the record and playback of a recording device such as a cassette deck.

You can record the signals from all input channels by connecting the input of the recording device to the record jacks (20), and then listen to the recording later by connecting the output of the recording device to the playback jacks (21).

Turn the playback volume (5) clockwise to hear the signal form the playback jacks (21).

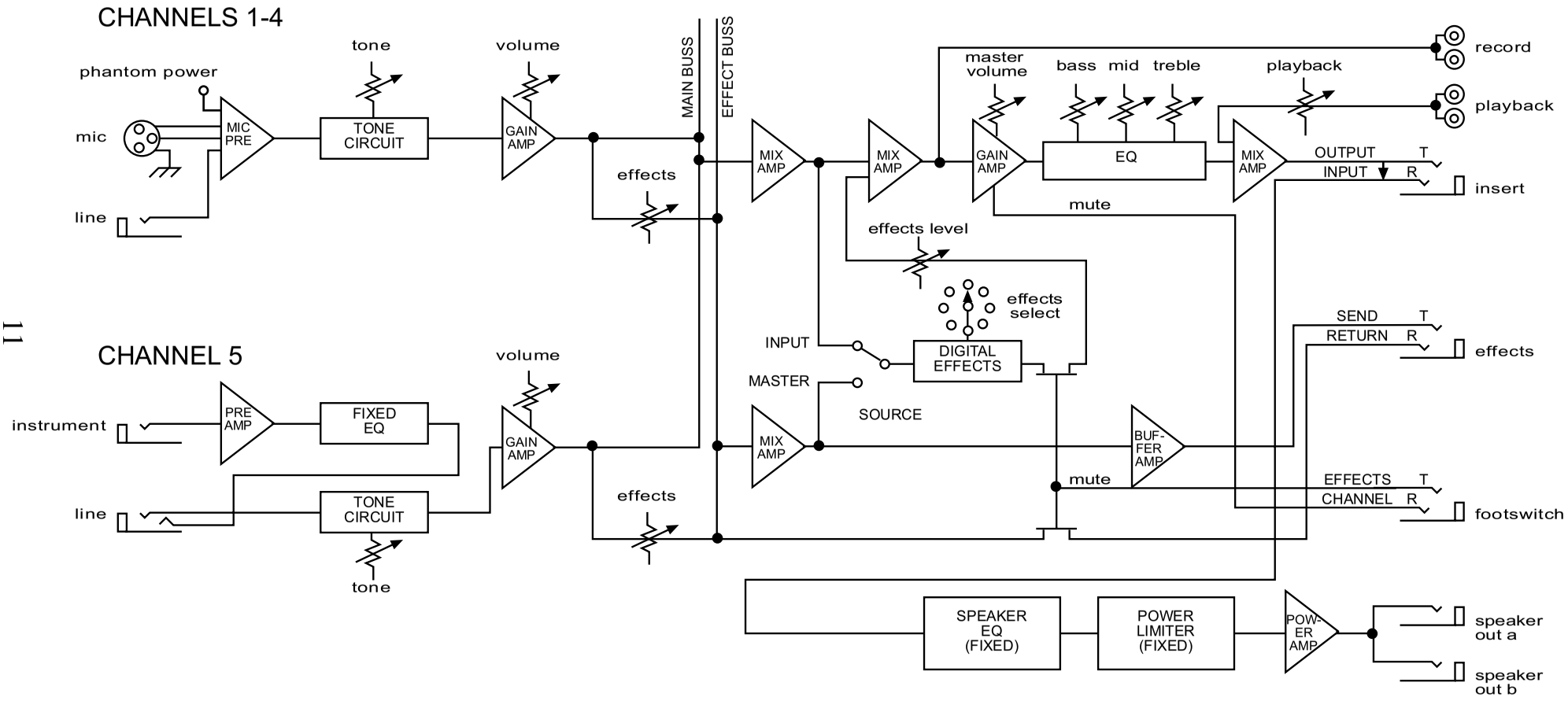
You can also plug in break music, a backing track, a DJ, or a computer into the playback jacks (21).

POLE AND SPEAKER MOUNTS
The Profile mixer is equipped with internal 5/8 threads for mounting on the optional Profile KPS-SS100 stand or with a trifold microphone stand.

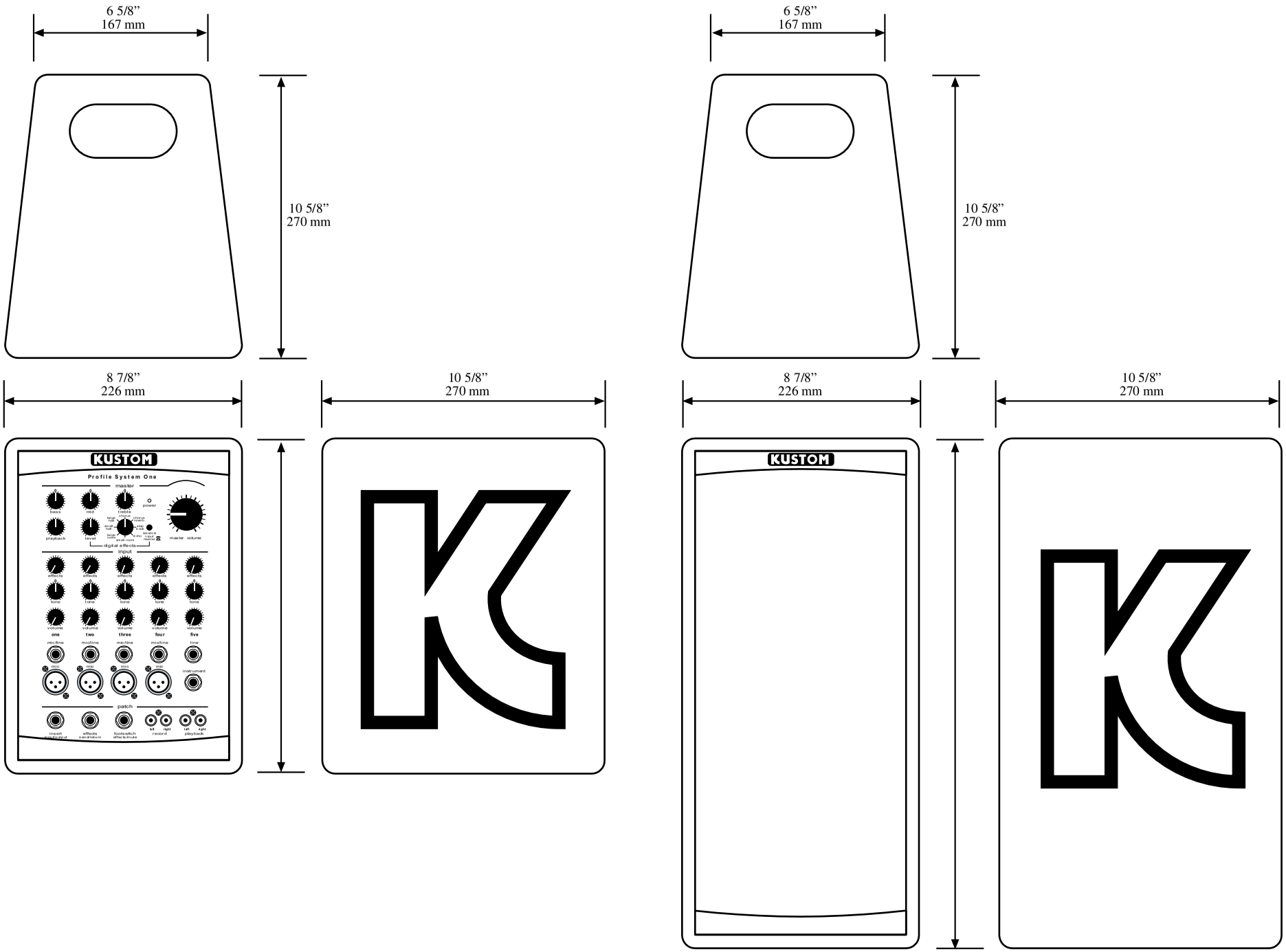
We strongly suggest for the most support and stability, that you do not extend a microphone stand higher than 4 feet. Please be sure the microphone stand you are using is balanced on the floor and can support the weight of the Profile System One.

The Profile System One cabinets are equipped with an internal 1” (25 mm) pole mount cup for use on 1” pole speaker stands.

SERVICING
If your Profile System One is ever in need of service, please contact us at 513 451 5000 (ext. 504) or email us at service@kustom.com. You can also visit our web site to search for the nearest authorized service center.



SIGNAL FLOW DIAGRAM


6 5/8”
167 mm
10 5/8”
270 mm
8 7/8”
226 mm
10 5/8”
270 mm
KUSTOM
Profile System One
master
bass
mid
treble
power
playback
level
master volume
digital effects
input
volume
one
two
three
four
five
mic/line
line
instrument
patch
6 5/8”
167 mm
10 5/8”
270 mm
8 7/8”
226 mm
10 5/8”
270 mm
KUSTOM

Profile System One
Specifications

Model	KPS-PM100	Profile System One Powered Mixer
Output Power	100W	4 ohms @ 10% THD
	80W	4 ohms @ 0.4% THD
Frequency Response	20Hz-20kHz	Actual response is tailored to speaker cabinet for accurate acoustical response.
Total Harmonic Distortion	less than 0.4%	Measured at 1VRMS (0dBv) at record output, effects send, or insert output
Hum & Noise	-115dB	Mic Input, Rs=150 ohm, 20-20kHz
	-52dB	Residual Noise, all level controls 0% (minimum)
	-50dB	Nominal System Noise, all level controls at 50%
System Gain	All measurements made at 1kHz	
	77dB	Mic to Power Amp Out (Ch 1 - Ch 4)
	57dB	Line to Power Amp Out (Ch 1 - Ch 5)
	53dB	Instrument to Power Amp (Ch 5)
	32dB	Playback to Power Amp
	57dB	Mic to Record Output
	44dB	Mic to Effects Send
	52dB	Mic to Insert Output
	25dB	Insert Input to Power Amp Output
Crosstalk	80dB	Channel to channel, 1kHz
Input Channel Equalization	Special curve that adjusts bass, mid, and treble frequencies	
Master Equalization	100Hz (Bass), 1kHz (Mid), 10kHz (Treble) all ±12dB	
Digital Effects	24 bit DSP, 8 effects; small room, large room, small hall, large hall, chorus, chorus reverb, slap back (delay), echo	
Phantom Power	+15V	Applied to all Mic Inputs thru 3.3K resistors
Footswitch	Digital effects ON/OFF and Channel ON/OFF (playback remains active)	
Power Requirements	USA/Canada	120VAC/60Hz, 100W nominal
	Europe	230VAC/50Hz, 100W nominal
	UK	230VAC/50Hz, 100W nominal
	Australia	240VAC/50Hz, 100W nominal
	Japan	100VAC/50-60Hz, 100W nominal
Dimensions	mm/kg	326 (Height) x 226 (Width) x 270 (Depth), 8.2 kg
	inches/pounds	12 7/8 (Height) x 8 7/8 (Width) x 10 5/8 (Depth), 18.0 lbs

Model	KPS-LS100	Profile System One Loudspeaker System
Speaker Complement	Low	6.5" Wide-range cone speaker (2)
	High	Horn Piezo Tweeter, 2" x 6"
Power Capacity	50W	Noise per EIA RS-426
	100W	Program power (music power)
Frequency Response	80Hz - 20kHz	+/- 3dB when used with KPS-PM100 Amplifier
Crossover Frequency	5kHz	Cone speaker operated full-range
Nominal Impedance	8 Ohms	Accurate acoustical response
Sensitivity	94dB	Measured 1Watt @ 1 meter
Dimensions	mm/kg	485 (Height) x 226 (Width) x 270 (Depth), 8.2 kg
	inches/pounds	19 1/8 (Height) x 8 7/8 (Width) x 10 5/8 (Depth), 18.0 lbs

EC Declaration of Conformity

We:	Kustom Musical Amplification Inc. 4940 Delhi Pike Cincinnati, OH 45238 Tel: 1-513-451-5000 Fax: 1-513-347-2298 www.kustom.com

Declare that the product

Product name:	Kustom
Product model number:	Profile System One, Contains one KPS-PM100 and two KPS-LS100

to which this declaration relates is in conformity with the following standards;

EN55013 (A12) : 1995	Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment.
EN55020: 1995	Electromagnetic immunity of broadcast receivers and associated equipment.
EN61000-3-2: 1995	Limits for harmonic current emissions (equipment input current $\leq$ 16A per phase).
EN61000-3-3: 1995	Limitation of voltage fluctuations and flicker in low voltage supply systems for equipment with rated currents $\leq$ 16A.
EN55103-1: 1995	Electromagnetic Compatibility - Product family standard for Audio, Video Audio-visual and entertainment Lighting Control Apparatus.
EN60065: 1994	Safety requirements for main operated electronic and related apparatus for household and similar general use.

Following the provisions of EU Council Directive(s): 72/73 EEC and 89/336/EEC.

We the undersigned, hereby declare that the equipment specified above conforms to the aforementioned directive(s).

Name of authorized person: Rick Kukulies, VP Engineering

Signature: Rick Kukulies Date: 05 June 2001

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