

Fostex[®]

PM841

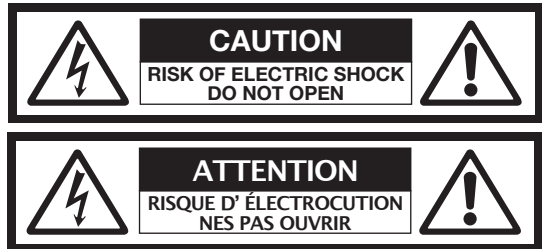
PM641

- Reference Manual -

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Warnings and Precautions

- **CAUTION:** TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.
ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES, APAR DE LA FENTE LARGE, FOND.
- **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
AVIS: Pour réduire le risque d'incendie ou de choc électrique, ne pas exposer cet appareil sous la pluie et l'humidité.
- **CAUTION:** Use of any controls or adjustments or performance of procedures other than those herein specified may result in hazardous radiation exposure.
ATTENTION: L'utilisation de tout contrôle ou de réglages ou de procédures autres que celles indiquées ci-après peut entraîner une exposition à des radiations dangereuses.
- **WARNING:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
AVIS: Les changements ou modifications à cette unité n'étant pas expressément approuvé par la partie responsable de la conformité pourrait annuler l'autorité de l'utilisateur de faire fonctionner l'équipement.
- **WARNING:** Do not place the unit on top of any soft, porous, or sensitive surfaces to avoid damaging the surface. Use a protective barrier between the unit and surface to protect the surface.
AVIS: Ne placez pas l'appareil au-dessus de toutes les surfaces souples, poreux, ou sensibles pour éviter d'endommager la surface. Utilisez une barrière de protection entre l'unité et la surface à protéger la surface.
- **WARNING:** Use of this unit near fluorescent lighting may cause interference regarding use of the remote. If the unit is displaying erratic behavior move away from any fluorescent lighting, as it may be the cause.
AVIS: L'utilisation de cet appareil à proximité d'éclairage fluorescent peut provoquer des interférences sur l'utilisation de la télécommande. Si l'appareil affiche un comportement erratique s'éloigner de tout éclairage fluorescent, telle qu'elle peut être la cause.
- **CAUTION:** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
ATTENTION: Danger d'explosion si les piles sont remplacées de façon incorrect. Remplacer les piles seulement par le même type de pile ou l'équivalent.
- **WARNING:** Do not install this equipment in a confined space such as a book case or similar unit.
AVIS: Ne pas installer cet équipement dans un espace confiné comme une bibliothèque ou une unité similaire.
- **WARNING:** Mains plug is used as disconnect device and it should remain readily operable during intended use. In order to disconnect the apparatus from the mains completely, the mains plug should be disconnected from the mains socket outlet completely.
AVIS: La prise du secteur est utilisé pour déconnecter le système. La prise du secteur ne doit pas être obstruée ou doit être facilement accessible pendant son utilisation. Pour être complètement déconnecté de l'alimentation d'entrée, la prise doit être débranchée du secteur.



WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).
AVERTISSEMENT: POUR RÉDUIRE LE RISQUE DE CHOC ÉLECTRIQUE, NE PAS ENLEVER LE COUVERCLE (NI LE DOS).

NO USERSERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
AUCUNE PIÈCE À L'INTÉRIEUR. ENTRETIEN DE PERSONNEL-QUALIFIE.



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

Le symbole de l'éclair fléché dans un triangle équilatéral, est destiné à alerter l'utilisateur de la présence d'une "tension dangereuse" dans le boîtier du produit qui peuvent être des ampleur suffisante pour constituer un risque d'électrocution aux personnes.




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

Le point d'exclamation à l'intérieur d'un triangle équilatéral est destiné à attirer l'attention de l'utilisateur sur la présence d'instructions importantes sur l'em ploi ou de la maintenance (réparation) de l'appareil dans la documentation fournie.

Important Safety Instructions

1. Read these Instructions.
Lisez ces instructions.
2. Keep these Instructions.
Conservez ces instructions.
3. Heed all Warnings.
Respectez tous les avertissements.
4. Follow all instructions.
Suivez toutes les instructions.
5. Do not use this apparatus near water.
Ne pas utiliser cet appareil près de l'eau.
6. Clean only with a dry cloth.
Nettoyer uniquement avec un chiffon sec.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
Ne pas bloquer les ouvertures de ventilation. Installer conformément aux instructions du fabricant.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
Ne pas installer près de sources de chaleur telles que radiateurs, registres de chaleur, poêles ou autres appareils (y compris les amplificateurs) produisant de la chaleur.
9. Do not defeat the safety purpose of the polarized or grounding - type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
Ne détruisez pas la sécurité de la terre ou polarisées - fiche. Une fiche polarisée possède deux lames dont une est plus large que l'autre. Une prise de terre possède deux lames et une broche de terre. La lame large ou la troisième broche sont prévues pour votre sécurité. Si la fiche fournie ne rentre pas dans votre prise, consultez un électricien pour remplacer la prise obsolète.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
Protégez le cordon d'alimentation d'être piétiné ou pincé, particulièrement au niveau des fiches, des prises, et le point où ils sortent de l'appareil.
11. Only use attachments/accessories specified by the manufacturer.
N'utilisez que des accessoires spécifiés par le fabricant.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 
- Utilisez seulement avec la charrette, position, trépied, support ou table spécifiée par le fabricant, ou a vendu avec l'appareil. Lorsqu'une charrette est utilisée, utilisez la prudence quand déplacer la combinaison de charrette / appareil pour éviter la blessure de pointe-sur.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
Débranchez cet appareil pendant les orages ou lorsqu'il n'est pas utilisé pendant de longues périodes de temps.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
Confiez toute réparation à un personnel qualifié. Une réparation est nécessaire lorsque l'appareil a été endommagé de quelque façon que ce cordon d'alimentation ou la fiche est endommagé, liquide a été renversé ou des objets sont tombés dans l'appareil, l'appareil a été exposé à la pluie ou à l'humidité, ne fonctionne pas normalement, ou s'il est tombé.
15. The apparatus shall be used in an open area.
Cet appareil doit être utilisé dans un endroit a aire ouverte.
16. Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on apparatus.
L'appareil ne doit pas élaboussures et aucun objet ne contenant de liquide, tel qu'un vase, ne doit être placé sur objet.
17. Mains plug is used as disconnect device. It shall remain readily operable and should not be obstructed during intended use. To completely disconnect the apparatus from supply mains, the main plug of the apparatus shall be disconnected from the mains socket outlet completely.
La prise du secteur et utilisé pou déconnecter le système. La prise du secteur ne doit pas être obstruée ou doit être facilement accessible pendant son utilisation. Pour être complètement déconnecté de l'alimentation d'entrée, la prise doit être débranchée du secteur.

FCC (U.S.A.) & ICES-003 (Canada) Information

1. IMPORTANT NOTICE

This product, when installed as indicated in the instructions contained in this manual, meets FCC and ICES-003 requirements. Changes or modifications not expressly approved by Fostex Company for compliance could void the user's authority to operate the equipment. DO NOT MODIFY THIS PRODUCT.

2. IMPORTANT

In order to comply with FCC and ICES-003 requirements, use high quality shielded cables for connection to accessories and / or another products. If any cables are supplied with this product, they MUST be used. Follow all installation instructions. Failure to do so could void your FCC / ICES-003 authorization to use this product in the USA / Canada.

3. NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

4. Compliance with Part 15 of FCC Rules and Canadian ICES-003.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

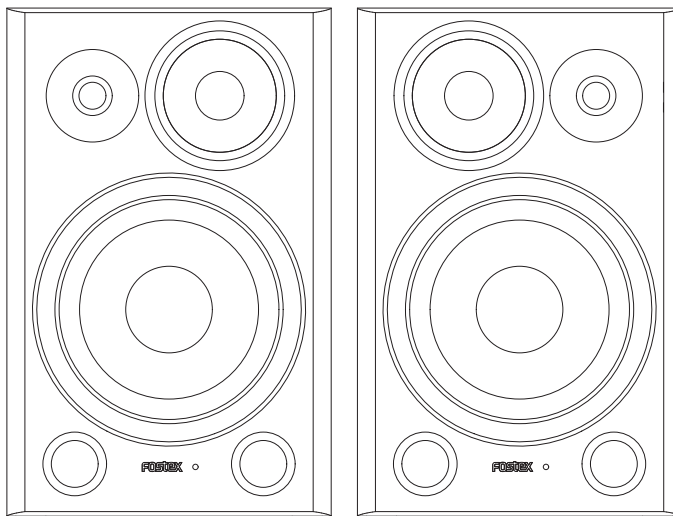
This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Introduction

Thank you for purchasing the Fostex PM841 / PM641 Professional Studio Monitor. As with all Fostex products, the PM841 / PM641 has been designed to provide superlative performance, unquestioned reliability and exceptionally high value.

- Dedicated 60W (50W: PM641) power amplifier for 8" (6 1/2": PM641) woofer, 18W for 4" midrange and 18W for 3/4" tweeter are individually built-in for high efficiency and low distortion playback.
- The built-in channel divider provides ideally overlapped frequency crossovers for smooth connections between the drivers.



- The midrange and tweeter drivers are positioned symmetrically on the Left and Right to minimize the physical height of the enclosure boxes as well as to minimize the affect of diffraction.
- The woofer and the midrange drivers are housed in an individual chamber respectively. The woofer driver delivers rich and speedy lows in the two-ported bass-reflex chamber. The midrange driver delivers quality middles in the closed chamber. As the tweeter driver is also sealed structure itself, there is little interference among the drivers for ideal driving environment.
- 3-step level adjustments are provided for HIGH FREQ at +1/0/-1 dB and LOW FREQ at +3/0/-3 dB.
- The diaphragm for the woofer and midrange is highly rigid with moderate internal loss being made of highly elastic Kevlar papered by Fostex's original engineering to perfectly reproduce pulsing music to sensitive one.
- The tweeter diaphragm is UFLC (Urethane Film Laminated Cloth) soft dome type to reproduce various types of highs keeping its own transparency.
- The PM841 / PM641 conforms to ErP directive and pursues energy efficiency. Thus, when no-signal condition continues for about 25 minutes, it will automatically go into the stand-by mode and its power withdrawal will become less than 0.5W. During this mode, the power LED color will change from Blue to Red.

Please take the time to thoroughly read this manual so that you may take full advantage of all the benefits of the Fostex PM841 / PM641 Professional Studio Monitor.

Unpacking

Prior to unpacking your Fostex PM841 / PM641 Studio Monitor, carefully inspect the packing material for excessive damage. Once it has been determined that the packing material has not been compromised, carefully unpack the PM841 / PM641 Studio Monitor and inspect it carefully for obvious damage. Fostex takes great care in designing packing materials that will survive most expected impacts during shipping. If any damage is discovered during the inspection process, contact your Fostex dealer so that this issue can immediately be addressed.

Setup Instructions

Monitoring Distance = 1 to 2 meters

After carefully unpacking the PM841 / PM641 Professional Studio Monitor, it is now time to set up the monitors for the best acoustic performance in your studio. The PM841 / PM641 was designed to be used at a monitoring distance of 1 to 2 meters, typically referred to as the near-field.

Monitoring Height = the acoustic center aimed at seated ear height

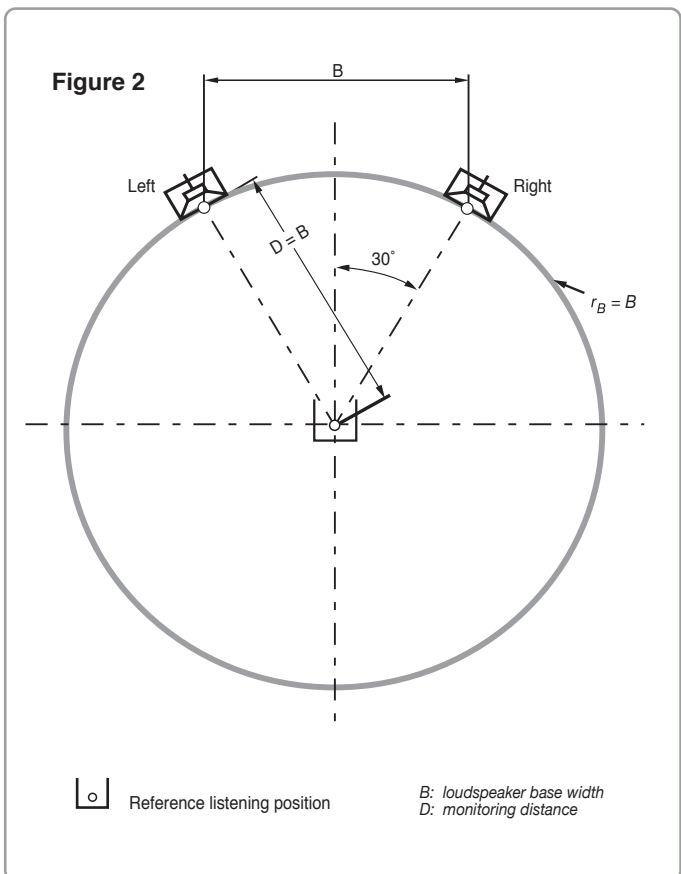
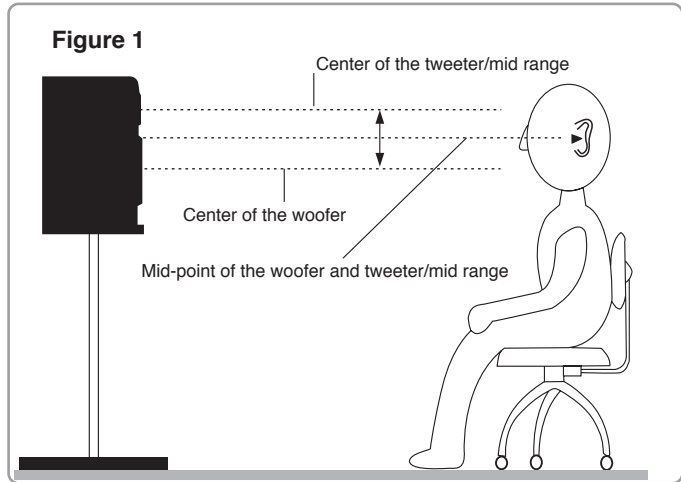
It is recommended that the PM841 / PM641 be located in such a way that the acoustic center is located at, or about, seated ear height (see Figure 1). If this is not possible, it may be necessary to tilt/aim the monitor at the listeners ears.

Monitoring Angle = 60 Degrees

The monitoring angle between the left and right monitors and the listening position should equal 60 degrees. The easiest way to determine this is to place the speakers in such a way that the distance between the left and right monitor is equal to the monitoring distance / listening position (see Figure 2). It is also recommended that both speakers be "toed-in" towards the listening position.

Additional Information

The PM841 / PM641 was designed to be mounted vertically. This provides for the most accurate frequency response, reduces acoustic boundary interference and provides optimum cooling performance for the heat sink that is located on the back of the studio monitor.



Setup Instructions - continued

Once the studio monitors have been placed in their final location, it is time to proceed to connecting your PM841 / PM641 studio monitors to the mixing console or digital workstation. Connection to the PM841 can be made using XLR or TRS connectors. The gain control on the back of the monitor allows continuously variable adjustments to match most input types from -10dBV to +4dBu. The input is electronically balanced and is compatible with unbalanced sources, although this may require an adapter. The connection of the PM841 / PM641 to the console/digital workstation should be done in the following order.

Step 1: Make sure that all equipment has been powered down.

Step 2: Confirm that all gain controls on the monitor and the source are set to the minimum.

Step 3: Connect the source to the PM841 / PM641 monitor.

Step 4: Power up all the source equipment and then turn on the PM841 / PM641 last.

Step 5: Set the gain of both monitors at medium setting and slowly bring up the gain of the console.

Step 6: Adjust the gain of both monitors for balance and for best signal to noise ratio.

Once the above steps have been completed, you are ready to use your PM841 / PM641 monitors. It is recommended that you now play some familiar audio material and make any final adjustments, as far as placement or level, to get the optimum performance in your monitoring environment.

Back Panel Overview

1. Continuously variable gain control

This control adjusts the input level to the internal amplifiers.

2. High Frequency Adjustment

Adjusts the high frequency characteristics around 10kHz within a ± 1 dB range.

3. Low Frequency Adjustment

Adjusts the low frequency characteristics around 60Hz within a ± 3 dB range.

4. TRS Balanced Input

5. XLR Balanced Input

These are an electronically balanced inputs and are compatible with both -10dBV and +4dBu signals.

<CAUTION>: These inputs cannot be used simultaneously. The TRS input takes the priority and the XLR input is disabled.

6. Heatsink

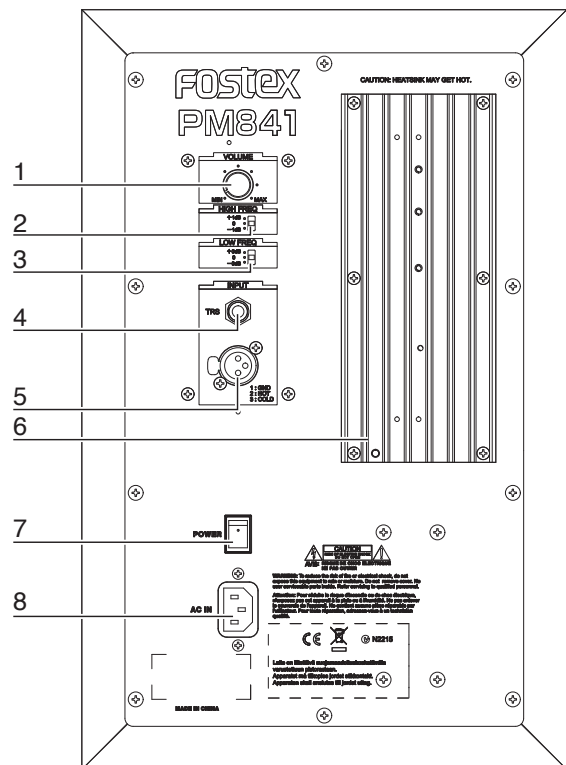
The heatsink dissipates heat from the amplifier. It is important the heatsink receives proper ventilation and is not placed near any sources of heat.

7. Power Switch

Turns power to the amplifier section on or off. On - position is the spot side.

8. Standard IEC Power Input

This power terminal should be used with a properly grounded three pin power cable, such as the one provide with the product.



PM841 Rear Panel View

Product Specifications

<SPEAKER SECTION>

Enclosure System	3-way system	
Drivers		
Woofer	PM841	200 mm / 8"
	PM641	165 mm / 6 1/2"
Mid range		100 mm / 4"
Tweeter		19 mm / 0.75" soft dome
Impedance		
Woofer	8 Ω	
Mid range	4 Ω	
Tweeter	4 Ω	

<AMPLIFIER SECTION>

Rated Output		
Woofer	PM841	60 W
	PM641	50 W
Mid range	18 W	
Tweeter	18 W	
Inputs		
Connector	ϕ 6 mm TRS phone (balanced)	
	XLR-3-31 (balanced)	
Input level	-10 dBV (TRS phone)	
	+4 dBu (XLR)	
Impedance	20 k Ω or more	

High & Low Adjustments

Low	\pm 3 dB at around 60 Hz
High	\pm 1 dB at around 10 kHz

Power Consumption

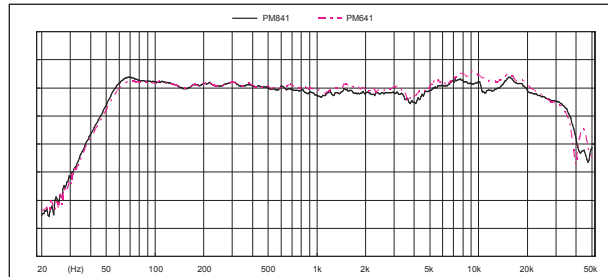
Normal mode	60 W
Stand-by mode	0.5W

Power Requirements

US/CND	120 VAC, 60 Hz
EUR/UK/AUS	230 VAC, 50/60 Hz
CHN	220 VAC, 50 Hz

Frequency Response

PM841	50 Hz ~ 25 kHz
PM641	55 Hz ~ 25 kHz



<GENERAL>

Cabinet Dimensions

PM841	270.0 (W) x 423.0 (H) x 290.1 (D) mm incl. heatsink
	253.5 mm (D) cabinet only
	10.63" (W) x 16.65" (H) x 11.42" (D) incl. heatsink
	9.98" (D) cabinet only
PM641	248.6 (W) x 375.6 (H) x 290.1 (D) mm incl. heatsink
	253.5 mm (D) cabinet only
	9.79" (W) x 14.79" (H) x 11.42" (D) incl. heatsink
	9.98" (D) cabinet only

Net Weight

PM841	13.36 kg, 29.45 lbs.
PM641	11.10 kg, 24.47 lbs.

Product improvement may warrant a change of specifications, newer materials or cosmetics, Changes in specifications and features may be made without notice or obligations.

Cable and Wiring Information

Use high-quality, shielded cables to connect your mixing console, workstation or other source to your monitors. Foil-shielded cables should do quite well. Other high quality cables that incorporate better shielding will yield an overall higher noise rejection, lowering your systems susceptibility to external interference. Another important tip to keep in mind when wiring your system is to route all line level cables away from the AC and other power sources, this will reduce the probability of having AC hum emanating from your studio monitors.

	XLR	TRS
HOT (+)	PIN 2	TIP
COLD (-)	PIN 3	RING
SHIELD (GROUND)	PIN 1	SHIELD

Product Cleaning Instructions

Prior to cleaning the PM841 / PM641 monitor, the power must be disconnected from the PM841 / PM641 monitor. Once the power has been terminated, cleaning can be accomplished using a damp (not wet) cleaning rag. A light common household cleaner can also be used, but care must be taken not to use harsh cleaning fluids. Regular dusting or cleaning with a damp rag will keep your product looking new for years.

Declaration of EC Directive

This equipment is compatible with the EMC Directive (2004/108/EC) - Directive on approximation of member nation's ordinance concerning the electromagnetic compatibility and with the Low Voltage Directive (73/23/EEC) - Directive on approximation of member nation's ordinance concerning electric equipment designed to be used within the specified voltage range.

The Affect of Immunity on This Equipment

The affect of the European Specification EN61000-6-1 (coexistence of electromagnetic waves - common immunity specification) on this equipment are as shown below.

In the electrical fast transient/burst requirements, surge, conducted disturbances by radio-frequency fields, power frequency magnetic field, radiate electromagnetic field requirements and static electricity discharging environment, this could be affected by generation of noise in some cases.

FOSTEX DISTRIBUTORS LIST IN EUROPE

* Including non-EU countries (as of January 2012)

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