

DAX-602/802

Digital to Analog Converter

INSTRUCTION MANUAL



Precision Sound • Light • Color

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Revision History:

2/1/2009 - Original Version

9/1/2012 - Compliance Information Added; HI/VI-N Connector Changed.

5/7/2013 - Editorial updates, new rear panel for Rev. "D" depicted.

Other Editorial Updates

One Year Limited Warranty

USL, Inc. warrants that each product manufactured by it will be free from defects in material and workmanship under normal usage for a period of one (1) year after its purchase new from an authorized dealer. Our obligation under this warranty is limited to repairing or replacing any product or component which we are satisfied does not conform with the foregoing warranty and which is returned to our factory, freight paid, or serviced by one of our authorized contractors. The foregoing warranty is exclusive and in lieu of all other warranties, whether expressed or implied. Such warranty shall not apply to any product or component (A) repaired or altered by anyone other than USL, Inc. or an authorized service contractor; (B) tampered with or altered in any way or subjected to misuse, negligence or accident or (C) which has been improperly connected installed or adjusted other than in accordance with USL, Inc.'s instruction.

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Safety Notices

Review the following safety precautions to avoid injury and prevent damage to this product. To avoid potential risk, use this product only as specified and only for the purpose described in the instruction manual.

To Avoid Fire and Personal Injury:

- **Use correct power supply.** Use only the power supply provided. Ensure that the AC power outlet is located near the product and is easily accessible.
- **Observe source ratings.** To avoid risk of fire or electric shock, the power source must be 100 – 240 VAC, 50 – 60 Hz.
- **Do not operate with suspected failures.** If you suspect there is damage or a malfunction with this product, call the factory.
- **Do not attempt repair.** Only a trained factory service person is authorized to repair this product.
- **Do not operate this product near heat sources.** This product should not be located near heat sources such as radiators, heat registers, or stoves.
- **Provide proper ventilation.** The operating temperature range is between 0° C and 40° C. The humidity range is between 20% and 80%, non-condensing. The cooling method is convection.
- **Keep product surfaces clean and dry.** Disconnect the power cable from the power source before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- **Do not push objects into openings of this product.** Never insert objects into the product through openings.
- **Do not operate in wet or damp conditions.**
- **Do not operate in an explosive atmosphere.**
- **Inspect the power cable and all cables prior to use.** Confirm that the power cable and other interconnecting cables are free from damage.

DAX-602 Firmware Update Page

[Status Page](#) | [Configuration Page](#)

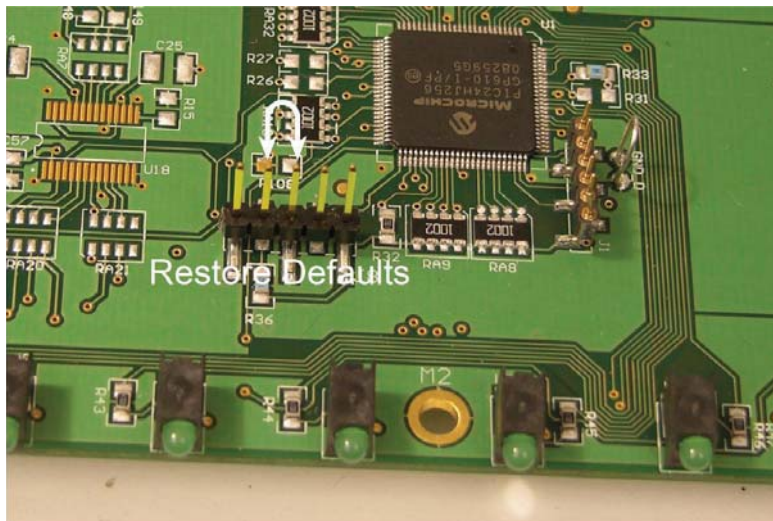
Select the file supplied by USL to update the system. After the file uploads successfully, you should see the front panel LEDs flash, then the DAX-602 should reboot with the new firmware.

In the unlikely event the update fails and you are unable to access the system, you can restore the factory firmware and settings by shorting pin 3 to pin 4 on J8, then applying power to the system. The front panel LEDs should flash as the firmware is loaded. When they stop flashing, remove power, remove the short on J8, then apply power again.

Select the update file provided by USL, then click on “Update DAX.” The update process will take several minutes. When it is almost complete, you will see the LEDs on the front of the DAX flash. The web browser will then show an empty screen. You can then type the IP address or host name in the browser address field to re-establish communications with the unit.

Restore Factory Defaults

You can restore the original factory software, network settings, and configuration password by disconnecting the power to the DAX, removing the cover, shorting J8 pins 3 and 4, then connecting the power. During the restore, the LEDs will flash. When they stop flashing, remove power, remove the short, then apply power again. The original software and configuration have returned.



REGULATORY COMPLIANCE

EN 60950-1

The EN 60950-1 standard specifies the safety design requirements that reduce or eliminate the risk of personal injury to both the product user and service personnel. This product is designed and tested to meet the standards of the International Electrotechnical Commission (IEC) European Norm EN 60950-1, IEC 60950-1 (the standard for information technology equipment including electrical business equipment).

Le Résumé de la Sécurité general Européen

Examinez les précautions de la sécurité suivantes éviter la blessure et prévenir le dégât à ce produit. Éviter le risque potentiel, utilisez ce produit seulement comme a spécifié et seulement car le but a décrit dans le manuel d'instructions.

Éviter Feu et Blessure Personnelle

Utilisez le Câble du Pouvoir Correct. Utilisez seulement le câble du pouvoir fourni. Assurez que les AC font fonctionner le débouché est localisé près le produit et est accessible facilement.

Utilisez une Source du Pouvoir Correctement Fondée.

La terre du monde de la Provision du Pouvoir est établie à travers le conducteur moulu dans le câble du pouvoir. Éviter le potentiel de choc électrique, le conducteur moulu doit être correct.

Observez des Estimations de la Source. Pour éviter risque de feu ou choc électrique, la source du pouvoir doit être 220-240 VAC 50 Hz.

N'opérez pas ce Produit avec Toutes Clôtures Ouvertes ou Enlevez.

Évitez l'Ensemble de circuits Exposé. N'entreprenez pas ouvrir la Provision du Pouvoir parce que sa certification de la sécurité serait invalidée. La Provision du Pouvoir est un appareil scellé non-réparable.

- N'opérez pas avec les Échecs Suspects. Si vous suspectez il y a le dégât ou mal fonctionner avec ce produit, appelez l'usine.
- N'entreprenez pas Réparation. Seulement une personne du service de l'usine compétente est autorisée pour réparer ce produit.
- N'opérez pas ce Produit Sources de la Chaleur Proches. Ce produit ne devrait pas être localisé des sources de la chaleur proches tel que radiateurs, registres de la chaleur, poêles, ou amplificateurs.

- Fournissez Ventilation Adéquate. La température du fonctionnement devrait être entre 0° C et 40° C.
- L'humidité devrait être 20% et 80%. La méthode refroidissante est par convection et un ventilateur interne.
- Gardez les Surfaces du Produit Nettoies et Secs.
- Déconnectez le câble du pouvoir de la source du pouvoir avant de nettoyer. N'utilisez pas de nettoyeurs liquides ou de nettoyeurs de l'aérosol Utilisez un tissu humide pour nettoyer.
- Ne poussez pas d'Objets Dans Ouvrir de ce Produit.
- Jamais objets de l'encart dans le produit à travers ouvertures.
- N'opérez pas Dans les Conditions Mouillées ou humides.
- N'opérez pas Dans une Atmosphère Explosive.
- Prévenez le Répandre des Liquides sur les Composants du Système.
- Inspectez le câble du pouvoir et tous les câbles antérieur à usage. Confirmez que le câble du pouvoir et autres interconnectant câbles sont libres de dégât.

Le Niveau de la sécurité

L'EN 60065 niveau spécifie exigences du dessin de la sécurité qui réduisent ou éliminent le risque de blessure personnelle à l'utilisateur du produit et personnel du service. Ce produit est conçu et est testé pour satisfaire aux niveaux de l'Electrotechnical Commission International (IEC) Norm Européen (EN) 60065 (Le Niveau pour Matériel de la Technologie de l'Information qui Inclut le Matériel de l'Affaire Électrique).

Allgemeine Sicherheit-Zusammenfassung Europäisch

Überprüfen Sie die folgend Sicherheit-Vorkehrungen, Verletzung zu vermeiden und Schaden zu diesem Produkt zu verhindern. Um potentielles Risiko zu vermeiden, benutzen Sie dieses Produkt nur als vorgeschrieben hat und nur denn der Zweck beschrieb in der Bedienungsanleitung.

Um Feuer und Persönliche Verletzung zu vermeiden:

- Benutzen Sie Korrektes Macht-Kabel. Benutzen Sie nur das Macht-Kabel, das bereitgestellt wurde. Stellen Sie sicher, daß der WECHSELSTROM-Macht-Abfluß in der Nähe vom Produkt gefunden wird und leicht zugänglich ist.
- Benutzen Sie eine Korrekt geerdet Macht-Quelle. Der Macht Versorgung Erde Boden wird durch den Boden-Schaffner im Macht-Kabel gegründet. Das Po-

On the Configuration Page, you can change the Host Name (NETBIOS name) the device responds to. If you disable DHCP, you can set a static IP address, gateway, subnet mask, and DNS servers. DNS servers need not be specified. Once these are set, click on "Save IP Config and Reboot." The DAX will restart with the new configuration. You will need to key the new IP address in to the address field of your web browser to re-establish contact.

Changing Surround Delay

The surround delay can be changed on the Configuration Page. The delay can be set between 0 and 150ms, inclusive, with a resolution of 1ms. Select the desired delay from the drop down menu.

The DAX allows the surround delay to be set either on the unit itself (rear panel rotary switch) or through the web browser. The rear panel switch can be enabled or disabled with the Local Delay Switch drop down menu. If the local delay switch is disabled, switch adjustments will not affect the actual surround delay. If the local delay switch is enabled, the surround delay can be adjusted from either the web browser or the local delay switch. Whichever was adjusted last sets the delay. The rear panel LED is lit if the local delay switch indicates the current surround delay, whether the switch itself is enabled or not.

Output Level Adjust

The level of each DAX output may be reduced from the nominal 300mV at -20dBFS, if desired. Use the drop down menus to set the level between 0dB and -63dB in 0.5dB steps. Each menu also allows a particular channel to be muted. Outputs may be summed for monaural operation by setting jumpers within the unit. If the unit is set for monaural operation, the outputs should be set as shown on page 14 to prevent output overload.

Auditorium Data

Users can specify various pieces of auditorium data. Each field accepts up to 20 characters. The theater name and screen number are shown at the top of the status page so users can quickly identify which system they are viewing.

Change Password

To change the password required to reach the configuration screen, type the new password in the two fields. The two values must match for the new password to be accepted. Passwords are limited to 10 characters. Passwords are case sensitive. Should you lose the password, a system restore (described on pg. 20) will be required to restore the default password.

Updating Firmware

The Configuration Page has a link to the Update Firmware page.

Using IP Autoconfiguration and NETBIOS

If no network with a DHCP server is available, connect a computer to the DAX using a network “crossover” cable. Some recent computers can use a standard “straight through” cable, but a crossover cable will always work.

Many computers support “IP Autoconfiguration” where the computer chooses an IP address in the 169.254.x.y range. With such computers, once again, opening a web browser and typing “DAX” in the address field will connect you to the DAX unit and show the status screen.

Using Default IP Address

If your computer does not support IP Autoconfiguration or NETBIOS, you should configure your network connection to be in the same subnet as the DAX, and set its IP address to something other than that of the DAX. For example, you may set your computer to have an IP address of 169.254.1.123 and a subnet mask of 255.255.0.0 . Then, type the default DAX IP address (169.254.1.1) in the address field of your web browser. You should see the status page.

Configuring the DAX Network

Once the status page is visible, you can select the configuration page (link at top of status page). The system will ask for a username and password. The username is “admin” and the default password is “ultra” (both lower case). You can change the password on the configuration page.

tential elektrischen Schocks zu vermeiden muß der Boden-Schaffner korrekt sein.

- Beobachten Sie Quelle-Klassen. Risiko von Feuer oder elektrischem Schock zu vermeiden muß die Macht-Quelle 100 sein-240 VAC 50-60 Hz.
- Operieren Sie dieses Produkt mit Irgendwelchen Gehegen nicht, die geöffnet wurden, oder entfernen Sie.
- Vermeiden Sie Ungeschützten Schaltkreise. Versuchen Sie, die Macht-Versorgung zu öffnen nicht, weil seine Sicherheit-Zulassung ungültig gemacht werden würde. Die Macht-Versorgung ist ein nicht-reparierbares luftdicht verschlossene Gerät.
- Operieren Sie mit verdächtig Mißerfolgen nicht. Wenn Sie verdächtigen, gibt es Schaden oder Funktionsstörung mit diesem Produkt, rufen Sie die Fabrik.
- Versuchen Sie keine Reparatur. Nur eine erzogen Fabrik-Dienst-Person wird ermächtigt, dieses Produkt zu reparieren.
- Operieren Sie dieses Produkt Nahe Hitze-Quellen nicht. Dieses Produkt sollte keine nahe Hitze-Quellen wie Heizkörper, Hitze-Register, Herde, oder Verstärker gefunden werden.
- Stellen Sie Richtige Belüftung bereit. Die operierend Temperatur sollte zwischen 0° C und 40° C. Die Luftfeuchtigkeit sollte sein 20% und 80%. Die erfrischend Methode ist durch Konvektion und einen innereren Fächer.
- Bleiben Sie, Produkt-Oberflächen reinigen und Trocken. Trennen Sie das Macht-Kabel von der Macht-Quelle vor dem Reinigen. Benutzen Sie keine flüssige Reiniger oder Aerosol-Reiniger. Benutzen Sie einen klammern Stoff für das Reinigen.
- Schieben Sie keine Gegenstände Ins Öffnen von diesem Produkt. Nie Beifügung-Gegenstände ins Produkt durch Öffnungen.
- Operieren Sie In Nassen oder Klammern Zuständen nicht.
- Operieren Sie In einer Explosiven Atmosphäre nicht.
- Verhindern Sie das Verschütten von Flüssigkeiten auf die System-Bestandteile.
- Inspizieren Sie das Macht-Kabel und alle Kabel vorausgehend zu Verwendung. Bestätigen Sie, daß das Macht-Kabel und andere verbindend Kabel frei von Schaden sind.

Sicherheit-Standard

Der EN 60065 Standard schreibt Sicherheit-Entwurf-Anforderungsvor, der reduzieren oder das Risiko persönlicher Verletzung zu sowohl dem Produkt-Benutzer als auch Dienst-Personal ausschließen. Dieses Produkt wird entworfen und wird geprüft, um den Standards vom Internationalen Electrotechnical Commission zu entsprechen (IEC) europäischer Norm (EN) 60065 (Der Standard für Informationen-Technologie-Ausrüstung, die Elektrische Unternehmen-Ausrüstung einschließt).

Declaration of Conformity

The DAX-602 and DAX-802 meet the intent of Directive 89/336/EEC for Electromagnetic Compatibility and Low Voltage Directive 73/23/EEC for Product Safety. Compliance was demonstrated to the following specifications as listed in the Official Journal of the European Communities:

EN 55022: 2006 Conducted and Radiated Emissions

- Conducted Emissions
- Radiated Emissions, Class A Limits

EN 55024: 1998 + A1: 2001 & A2: 2003 Immunity

- Electrostatic Discharge Immunity
- RF Electromagnetic Field Immunity
- Power Line Surge Immunity
- Conducted RF immunity
- Power Frequency Magnetic Field Susceptibility
- Voltage Dips, Short Interruptions and Variations
- EN 61000-3-3: 1995 +A1: 2001 & A2: 2005 Voltage Fluctuation and Flicker

FCC Part 15, Subpart B

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at user's own expense.

Certifications

- Low Voltage Directive 73/23/EEC.
- EN 60950 Information Technology, Video, and similar Electronic Apparatus.
- IEC 60950 Safety Requirements.
- CE, UL, cUL Safety and Overall Compliance.
- Pollution: Not intended for environments where conductive pollutants may be present.

Web Interface

The Ethernet interface on the DAX series allows remote monitoring and control of the device through a web interface. In addition, firmware upgrades are accomplished through the same web interface



Obispo - Screen 1

DAX-602 Status Page

[Configuration Page](#)

Channel Levels							
+10							+10
0							0
-10							-10
-15							-15
L	C	R	LS	RS	SW	HI	VI-N
Output Level Settings (0dB = 300mV at -20dBFS)							
L	C	R	LS	RS	SW	HI	VI-N
-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	0.0	0.0
Surround Delay - 40ms							
Local Delay Switch: Enabled							

Auditorium Info		Network Info	
MAC Address	00:23:FC:00:FF:FF	Host Name	DAX
Theater Name	Obispo	DHCP	Enabled
Theater Number 1		IP Address	192.168.1.14
Screen Number 1		Gateway	192.168.1.1
AES Source		Subnet Mask	255.255.255.0
Processor Type		Primary DNS	24.205.224.35
HI System		Secondary DNS	66.214.48.27
VI-N System		Model Number	DAX-602
Comments	UltraStereo	Firmware Version	090130

Done

Initial Configuration

The DAX units are shipped with a Dynamic Host Configuration Protocol client enabled. Further, the DAX supports the use of NETBIOS, so it is possible to connect to the device by name instead of by IP address.

Using DHCP and NETBIOS

If you have a network with a DHCP server, you should be able to plug the DAX in to the network. Then, open a web browser and type "DAX" in the address field. You should see the status page, similar to that shown above.

Analog Output Connector: (25 pin D sub Male) (Balanced or Unbalanced Line)

Note: In Unbalanced mode the negative signal MUST be connected to ground. To minimize ground loop hum, the negative side of the output should be connected to ground at the signal destination instead of at the DAX. Twisted pair shielded cable should be used.

Pin Number	Function	Pin Number	Function
1	Left -	14	Left +
2	Right Surr. +	15	Left Surr. +
3	Right Surr. -	16	
4	Left Surr. -	17	Right +
5		18	
6	Right -	19	Chassis Gnd
7		20	Center +
8	Center -	21	
9	Gnd	22	Gnd
10	Gnd	23	Gnd
11	Gnd	24	Subwoofer +
12	Subwoofer -	25	
13	Gnd		

HI/VI-N Output Terminals: Hearing impaired audio and visually impaired narration audio are available on a terminal strip on the rear panel of the DAX. These outputs can drive balanced or unbalanced loads. When driving unbalanced loads, connect the negative output of the DAX to ground at the destination end of the cable to minimize ground loop hum. Use twisted pair shielded cable to carry the HI/VI-N audio to the transmission equipment (such as the USL IRC-28(C)).

Equipment Class

Type A: Equipment that is intended for connection to the building power supply wiring via nonindustrial plugs and sockets or via appliance couplers, or both.

Disposal and Recycling**Wheelie-Bin Symbol**

The Wheelie-Bin symbol is attached to this product in compliance with the EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE). Its purpose is to deter the improper disposal of this product and to promote reuse and recycling.

Proper Disposal

In conformance with the Directive, at end of life this product should be either sent to an appropriate recycling facility for disassembly and recycling or returned to the supplier. Under no circumstances should this product be deposited in a landfill for disposal.

Hazards of Noncompliance

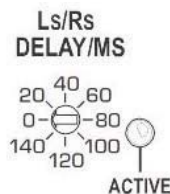
Electrical and electronic products may contain chemicals which can leach into the groundwater and cause health concerns through contaminated drinking water. Failure to dispose of this product in compliance with the WEEE Directive may result in penalties as determined by local ordinance.

Please contact your dealer or USL, Inc., with questions regarding the proper disposal of this or any other USL product. USL, Inc. contact information: USL, Inc., 181 Bonetti Drive, San Luis Obispo, CA 93401-7397, USA. Phone: +1 805 549 0161 Fax: +1 805 549 0163 www.uslinc.com

DAX Background

The DAX unit was designed as a simple Digital to Analog Converter which would accept up to 10 AES/EBU conforming signals and convert them into multi-channel analog audio. There are two versions available. The DAX-802 converts 5 screen channels, 2 surrounds and the subwoofer/LFE. The DAX-602 is almost the same but does not convert LC and RC screen channels. Both versions convert the Hearing Impaired/Visually Impaired Narration (HI/VI-N) channels without sacrificing any of the normal cinema channels. The output of the DAX unit may connect to any cinema processor that has a multi-channel analog input.

Additionally, the surround channels may be delayed by up to 150ms to accommodate different size theaters.



Although the DAX unit is designed to be a stand alone type of device, a web browser can be used to monitor and control the device.

AES/EBU Channel Assignments: The Digital Cinema Initiative (DCI) specification defines only channel pairs (1-16) and not audio locations (Left, Right, etc.). Until the relationship is specified, USL will use those established previously in the cinema industry. Two AES/EBU pinouts are commonly used in the industry. The DMA8 pinout is the Dolby® standard. The USL pinout was specified in a SMPTE recommended practice that was never published.

AES Channel Pair	DAX-802	DAX-602	Dolby® DMA8
AES1/2	Left (L)/Right (R)	Left (L)/Right (R)	Left (L)/Right (R)
AES3/4	Center (C)/ Subwoofer (SW/LFE)	Center (C)/ Subwoofer (SW/LFE)	Center (C)/ LFE (SW)
AES5/6	Left Surr. (LS)/ Right Surr. (RS)	Left Surr. (LS)/ Right Surr. (RS)	Left Surr. (LS)/ Right Surr. (RS)
AES7/8	Left Center (LC)/ Right Center (RC)	HI/VI-N	Left Extra (LE)/ Right Extra (RE)
AES9/10	Undefined	Undefined	Undefined
AES11/12	Undefined	Undefined	Undefined
AES13/14	Undefined	Undefined	Undefined
AES15/16	HI/VI-N	Undefined	Undefined

AES/EBU Digital In (DMA8) (top 25 pin D sub Female)

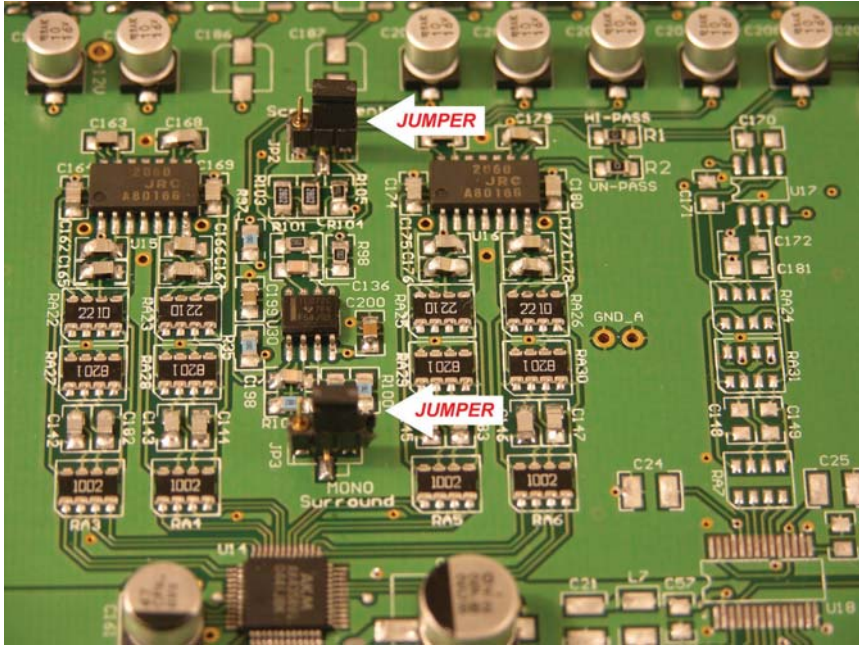
Pin Number	Function	Pin Number	Function
1	Gnd	14	AES1/2+
2	AES1/2-	15	Gnd
3	AES3/4+	16	AES3/4-
4	Gnd	17	AES5/6+
5	AES5/6-	18	Gnd
6	AES7/8+	19	AES7/8-
7	Gnd	20	Gnd
8		21	
9	Gnd	22	
10		23	Gnd
11		24	
12	Gnd	25	
13			

AES/EBU Digital In (USL) (bottom 25 pin D sub Female)

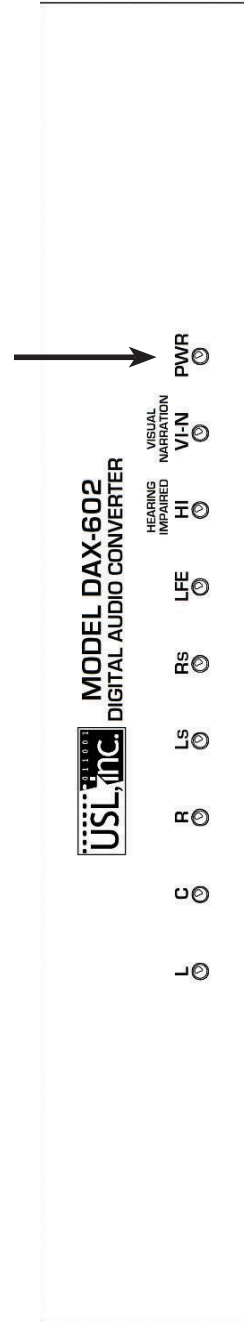
Pin Number	Function	Pin Number	Function
1	AES15/16+	14	AES15/16-
2	Gnd	15	
3		16	Gnd
4		17	
5	Gnd	18	
6		19	Gnd
7	AES7/8+	20	AES7/8-
8	Gnd	21	AES5/6+
9	AES5/6-	22	Gnd
10	AES3/4+	23	AES3/4-
11	Gnd	24	AES1/2+
12	AES1/2-	25	Gnd
13	Gnd		

Setting up the DAX-602 Mono/Surround mode:

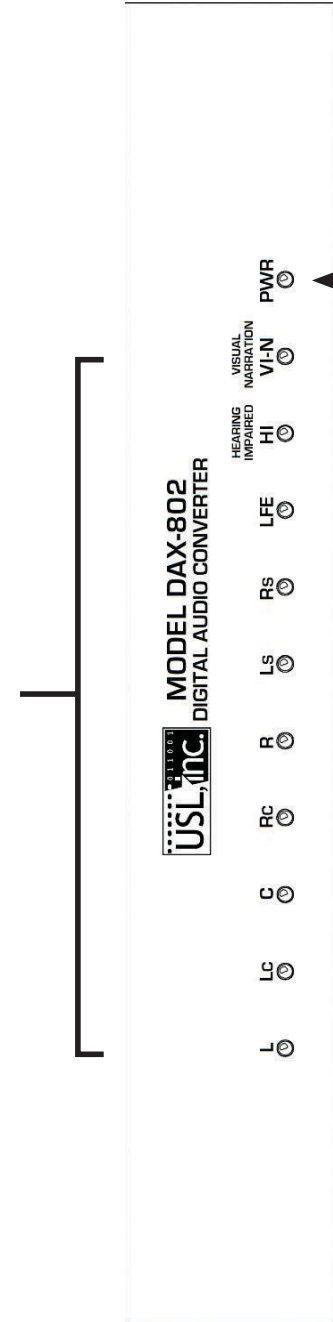
- 1) Remove the four side screws that hold on the cover.
- 2) Place the two jumpers in the position shown in the picture below.
- 3) Replace the cover. (See page 18)
- 4) Adjust output levels Center: -6dB, Left/Right: -3dB, LS/RS: -6dB to prevent output overload.



Power Indicator - Indicates when unit is powered on.

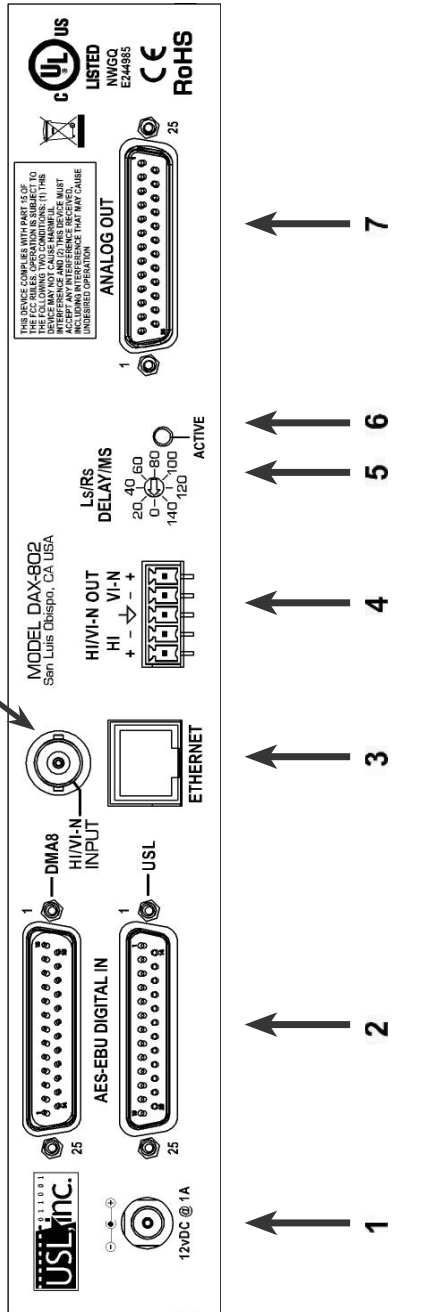


Signal Presence Indicators - indicates when signal exceeds -30dB



Power Indicator - Indicates when unit is powered on.

Note: This connector does not exist on the DAX-602



1. Input Power - 12VDC @ 1A power supply
2. Digital Input - AES/EBU balanced line input. Both USL and DMA8 connector formats are supported.
3. Ethernet Port - For communication with the user interface.
4. Hearing Impaired / Visually Impaired - Narration (HI/VI-N) Output - Balanced or unbalanced line audio output.
5. Surround Delay Select Switch - Allows the surround audio to be delayed.
6. Delay Active LED - Indicates when the delay switch is actual delay setting.
7. Analog Output - Sends balanced or unbalanced line audio outputs to the Cinema Processor.

Setting the Surround Delay

The LS/RS channels may be delayed between 0 and 150ms in 10ms steps. Calculate the surround delay by using the following formula:

$$D = L - (W/2) + 20$$

Where

D = Delay in ms

L = Auditorium length in feet

W = Auditorium width in feet.

Using a small, flat bladed screwdriver, set the LS/RS DELAY control to the value closest to the calculated value.

Differences between the DAX 802 and 602

The DAX 802 is the full featured version, while the 602 provides economy but versatility.

Channel assignments:

DAX 602 Output (Normal*)	USL Input	DMA8 Input
Left (L)/Right (R)	AES1/2	AES1/2
Center(C)/Subwoofer (SW/LFE)	AES3/4	AES3/4
Left Surr. (LS)/Right Surr. (RS)	AES5/6	AES5/6
HI/VI-N	AES7/8	AES7/8

DAX 802 Output	USL Input	DMA8 Input
Left (L)/Right (R)	AES1/2	AES1/2
Center(C)/Subwoofer (SW/LFE)	AES3/4	AES3/4
Left Surr. (LS)/Right Surr. (RS)	AES5/6	AES5/6
Left Center (LC)/ Right Center (RC)	AES7/8	AES7/8
HI/VI-N	AES15/16	Undefined, may be factory jumped as requested

* In the DAX-602 Mono/Surround mode:

(established by internal jumpers and a setting in the software)

The Center output is normally composed of -3dB of the Center, -6dB of the Left and Right and -9dB of the SW but may be adjusted by the software.

The Left Surround output is normally composed of -6dB of the Left and Right Surrounds but may be adjusted by the software.

HI/VN outputs remain as is.