



A2-73XX  
Operation Manual

# A2-73XX Series Audio Expansion Units Operation Manual

## A2-73XX Series Audio Expansion Units Operation Manual

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## 1 DISCLAIMER

This product is intended for professional and/or home use. This product is not intended for use in a medical environment and does not have the required certifications for such use. Similarly, use aboard any aircraft or spacecraft while in flight or as an adjunct to any surface, airborne or marine navigation system or any offshore marine activity, including control of any watercraft, or any use similar to those specifically herein mentioned is prohibited. Use in the aforementioned circumstances would require additional testing and certification.

You have not become the owner of any software - you have merely purchased the right to use the software. You may make one copy of the software for your own use. Other copies will be deemed a breach of copyright.

No warranty is made either expressed or implied including but not limited to any implied warranties of merchantability or fitness for a particular purpose. In no event shall the supplier or manufacturer of this product be liable for errors found within, or be liable for any direct, indirect or consequential damages or loss in connection with the purchase or use of this hardware software or manual. The sole and exclusive liability to the supplier and manufacturer regardless of the form of action shall not exceed the replacement cost of the materials described herein.

By using this equipment you have indicated that you have agreed to the terms listed above. If you do not wish to agree or the above terms are contrary to your conditions of purchase you may return the equipment, unused, to your supplier. All trademarks and copyrights are acknowledged. E&OE.

### 1.1 Regulatory Agency Acceptance

#### European 'CE' Mark Statement

Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use.

Emissions: BS EN 51003-1

Immunity: BS EN 51003-2

### 1.2 FCC Statement

Class A Device: 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 a 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 his own expense.

Caution: This equipment is intended for use in the manner prescribed in the Instruction Manual. Any user changes or modifications not expressly approved by TV

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One Multimedia Solutions could void the user's authority to operate the equipment. Connecting this equipment to external devices requires no specially shielded cabling for FCC compliance. The Instruction Manual shows or describes the proper connection of this equipment for operation that insures FCC compliance.

Direct all inquiries regarding FCC compliance to:

TV One Multimedia Solutions  
1350 Jamike Drive  
Erlanger, KY 41018  
859.282.7303  
859.282.8225 (Fax)

### **1.3 Manual Version Information**

Version: 1.3  
Release Date: May, 2009

### **1.4 Manual Copyright Notice**

This Operation Manual is the intellectual property of TV One, ©2008. No portion of this manual may be copied or reproduced in any manner or by any means, including, but not limited to electronic and electro-mechanical, without the express written permission of TV One.

## **2 IMPORTANT SAFETY INSTRUCTION**

To insure the best from this product, please read this manual carefully. Keep it in a safe place for future reference.

To reduce the risk of electric shock, do not remove the cover from the unit. No user serviceable parts inside. Refer servicing to qualified personnel.

### **2.1 Power and connections**

This unit is not disconnected from the AC power source as long as it is connected to the wall outlet via an adapter. The off state for this unit is called standby mode. In standby mode the unit is designed to consume a reduced quantity of power compared to normal operating modes.

When not using the unit for a long period of time, ensure that the AC power adapter is disconnected from the wall outlet.

The AC wall outlet should be installed near to the unit and be easily accessible.

Do not plug in or attempt to operate an obviously damaged unit.

### **2.2 Water and moisture**

To reduce the risk of fire and personal injury, operation of this device outdoors and/or exposure to rain, water or excessive moisture is expressly prohibited.

The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

### **2.3 General care**

Do not force switches or external connections.

When moving the unit, disconnect the power cable and then the interconnecting cables to other devices.

Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Use a clean dry cloth.

### **2.4 Location**

Installation of this unit should be in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold.

### **2.5 Ventilation**

Slots and openings in the sides of the unit are provided for ventilation. To ensure reliable operation, avoid obstruction of these openings and ensure the unit is installed in a well-ventilated area.

### **2.6 Intellectual property**

Some IC chips in this product include confidential and/or trade secret property. Therefore you may not copy, modify, adapt, translate, distribute, reverse engineer, reverse assemble or decompile the contents thereof.



## **2 IMPORTANT: CONSIGNES DE SECURITE**

Afin de tirer le meilleur de ce produit, merci de lire attentivement ce manuel. Gardez-le dans un endroit sûr pour pouvoir le consulter à nouveau.

Afin de réduire le risque de choc électrique, ne retirez pas l'unité de sa protection.

Aucune pièce réparable par l'utilisateur à l'intérieur. Référez-vous à des personnes qualifiées.

### **2.1 Alimentation électrique et connexions**

Cette unité n'est pas déconnectée de la source de courant électrique tant qu'elle est connectée à la prise murale. Le mode éteint de cette unité est appelé mode de veille. En mode de veille, cette unité est conçue pour consommer une quantité réduite de courant par rapport aux modes normaux d'utilisation.

Lorsque vous n'utilisez pas l'unité pendant une longue période, assurez-vous que le câble d'alimentation électrique est déconnecté de la prise murale.

La prise murale de courant doit être installée près de l'unité et aisément accessible.

Ne branchez pas et n'essayez pas d'utiliser une unité visiblement endommagée.

### **2.2 Eau et humidité**

Pour réduire les risques d'incendie et de dommages corporels, l'utilisation de cet appareil à l'extérieur et/ou son exposition à la pluie, l'eau ou une humidité excessive est expressément interdite.

L'appareil ne doit pas être exposé aux gouttes ou aux éclaboussures et aucun objet contenant de l'eau, comme par exemple un vase, ne doit être posé sur l'appareil.

### **2.3 Entretien général**

Ne forcez pas les boutons ou connexions externes.

Lorsque vous déplacez l'unité, déconnectez d'abord les connexions de ports en série puis le câble d'alimentation et enfin les câbles de connexion avec d'autres appareils.

N'essayez pas de nettoyer l'unité avec des dissolvants chimiques ou des produits nettoyants en aérosol, car cela peut endommager l'unité. Utilisez un chiffon propre et sec.

### **2.4 Emplacement**

L'installation de cette unité doit se faire dans un endroit frais et sec, éloigné de sources excessives de chaleur, de vibrations, de poussière, d'humidité et de froid.

### **2.5 Aération**

Les rainures et les ouvertures sur les cotés de l'unité servent à l'aérer. Pour permettre une utilisation sûre, évitez d'obstruer ces ouvertures et assurez-vous que l'unité est installée dans un endroit bien aéré.

### **2.6 Propriété intellectuelle**

Certaines puces IC dans ce produit contiennent des éléments propriétaires confidentiels et/ou des secrets commerciaux. Vous ne devez donc pas copier, modifier, adapter, traduire, distribuer, démonter, désassembler, ou décomposer leur contenu.

## 2 INSTRUCCIONES IMPORTANTES DE SEGURIDAD

Para sacar el mejor provecho de este producto, léase este manual con detenimiento. Guárdelo en un lugar seguro para poder hacerle referencia en el futuro.

Para reducir el riesgo de calambre, no quite la cubierta del aparato.

No hay piezas utilizables dentro. Remítase todo mantenimiento a personal cualificado.

### 2.1 Corriente y conexiones

Mientras esté conectada a una toma de electricidad, el aparato seguirá conectado a la fuente de corriente CA. A la posición de «off» de este aparato se le denomina posición de espera. En la posición de espera, el aparato está diseñado a consumir una cantidad reducida de electricidad en comparación con los modos de operación normales.

Asegúrese de desconectar el cable de corriente CA de la toma de la pared cuando no va a utilizar el aparato por un periodo largo de tiempo.

La toma CA de la pared ha de estar instalada cerca del aparato y debe ser fácilmente accesible.

No enchufe ni intente operar un aparato que esté evidentemente dañado.

### 2.2 Agua y humedad

Para reducir el riesgo de fuego o de daños personales, se prohíbe la utilización de este aparato en el exterior y/o su exposición a la lluvia, al agua o a atmósferas de excesiva humedad.

El aparato no debe situarse cerca de zonas en las que haya riesgo de goteo o salpicaduras. Tampoco deben colocarse objetos que contengan agua (jarrones, por ejemplo) en el mismo.

### 2.3 Cuidado general

No forzar interruptores o conexiones externas.

Al mover el aparato, desconecte las conexiones del puerto en serie primero, luego el cable de electricidad y finalmente los cables interconectados a otros aparatos. No intente limpiar el aparato con disolventes químicos o productos de limpieza aerosol, ya que podrían dañar el aparato. Utiliza un paño limpio y seco.

### **2.4 Ubicación**

Este aparato se debe instalar en un lugar seco y fresco, lejos de fuentes de calor excesivas, la vibración, el polvo, la humedad y el frío.

### **2.5 Ventilación**

El aparato viene provisto de ranuras y agujeros en los lados para la ventilación.

Para asegurar una operación eficaz, se debe evitar la obstrucción de estos agujeros y también asegurar que el aparato se instale en una zona con adecuada ventilación.

### **2.6 Propiedad intelectual**

Algunos chips con circuito integrado de este producto incluyen propiedad confidencial y/o propiedad de secreto comercial. Por lo tanto queda prohibido copiar, modificar, adaptar, traducir, distribuir, usar técnicas retroactivas, desmontar, o recopilar los contenidos del mismo.

## **2 WICHTIGE SICHERHEITSVORSCHRIFTEN**

Lesen Sie diese Bedienungsanleitung bitte sorgfältig, um Ihr Produkt optimal nützen zu können, und bewahren Sie sie zum späteren Nachschlagen an einem sicheren Ort auf.

Entfernen Sie bitte keinesfalls die Abdeckung, um der Gefahr eines Stromschlags vorzubeugen.

Im Inneren des Geräts befinden sich keine Teile, die vom Benutzer gewartet werden können. Lassen Sie Wartungsarbeiten nur von Fachpersonal durchführen.

### **2.1 Stromversorgung und anschlüsse**

Solange das Gerät mit einer Steckdose verbunden ist, bleibt die Stromversorgung aufrecht. Der Ausschaltzustand des Geräts wird als Standbymodus bezeichnet. Im Standbymodus verbraucht das Gerät weniger Strom als in den üblichen Betriebsarten.

Wird das Gerät über einen längeren Zeitraum hinweg nicht verwendet, ziehen Sie bitte das Stromkabel aus der Steckdose.

Die Steckdose sollte sich in der Nähe des Geräts befinden und leicht zugänglich sein.

Verbinden Sie ein offensichtlich beschädigtes Gerät keinesfalls mit einer Steckdose und versuchen Sie auch nicht, es zu bedienen.

### **2.2 Wasser und feuchtigkeit**

Um die Gefahr eines Brandes oder einer Körperverletzung zu verringern, ist es ausdrücklich verboten, dieses Gerät im Freien in Betrieb zu nehmen und/oder es Regen, Wasser oder hoher Feuchtigkeit auszusetzen.

Das Gerät darf keinen Tropfen oder Spritzern ausgesetzt werden und es dürfen keine mit Flüssigkeiten gefüllte Behälter, wie Vasen, auf das Gerät gestellt werden.

### **2.3 Allgemeine pflege**

Wenden Sie bei der Handhabung von Schaltern und Anschlüssen keine Gewalt an.

Beim Umstellen des Geräts entfernen Sie zuerst die seriellen Anschlüsse, dann das Stromkabel und zum Schluss die Verbindungskabel zu anderen Geräten.

Versuchen Sie keinesfalls, das Gerät mit chemischen Lösungsmitteln oder Sprayreinigern zu reinigen, da dies das Gerät beschädigen könnte. Verwenden Sie ein sauberes, trockenes Tuch.

### **2.3 Aufstellung**

Das Gerät sollte an einem kühlen, trockenen Ort aufgestellt werden, fern von übermäßiger Wärme, Vibrationen, Staub, Feuchtigkeit und Kälte.

### **2.5 Belüftung**

Seitliche Schlitze und Öffnungen sorgen für die Belüftung des Geräts. Um die ordnungsgemäße Belüftung zu gewährleisten, dürfen diese Öffnungen nicht verdeckt werden. Sorgen Sie außerdem dafür, dass das Gerät an einem gut belüfteten Ort aufgestellt wird.

### **2.6 Gewerbliches eigentum**

Einige integrierte Schaltkreise in diesem Produkt enthalten vertrauliche

Informationen und/oder Betriebsgeheimnisse. Sie dürfen daher diese Inhalte nicht kopieren, modifizieren, adaptieren, übersetzen, verteilen, rückentwickeln, rückassemblieren oder dekompilieren.

## **2 BELANGRIJKE VEILIGHEIDSINSTRUCTIES**

Lees deze handleiding zorgvuldig door om het beste uit uw product te halen. Bewaar het op een veilige plek voor raadpleging in de toekomst.

Haal nooit het omhulsel van de eenheid af, dit om de kans op een elektrische schok te verminderen. Maak het apparaat nooit open: er bevinden zich geen door de gebruiker in te stellen onderdelen in het apparaat. Laat service en onderhoud over aan een gekwalificeerde technicus.

### **2.1 Elektriciteit en aansluiting**

Deze eenheid is niet van de wisselstroom voedingsbron gescheiden wanneer de stekker nog in het stopcontact zit. Wanneer de eenheid uitstaat, staat deze nog in de stand-by modus. In de stand-by modus vergt de eenheid minder stroom dan in de normale "aan" modus.

Wanneer u de eenheid voor langere tijd niet gebruikt, zorg er dan voor dat de stekker van het wisselstromsnoer uit het stopcontact is getrokken.

Het wisselstroom stopcontact moet dichtbij de eenheid geïnstalleerd worden en makkelijk toegankelijk zijn.

Als de eenheid duidelijk beschadigd is moet u deze nooit op het lichtnet aansluiten of bedienen.

### **2.2 Water en vocht**

Om het risico op brand en persoonlijk letsel te beperken is het gebruik van dit apparaat buiten en/of blootstelling aan regen, water of overdadige hoeveelheden vocht uitdrukkelijk verboden.

Het apparaat mag niet worden blootgesteld aan druppels of bespatting en er mogen geen objecten die gevuld zijn met vloeistoffen, zoals vazen, op het apparaat geplaatst worden.

### **2.3 Algemeen onderhoud**

Forceer schakelaars of externe aansluitingen nooit.

Bij verplaatsing van de eenheid, de seriële poortaansluitingen eerst loskoppelen, dan de voedingskabel en als laatste de snoeren naar andere apparaten.

Probeer de eenheid nooit met chemische oplosmiddelen of schoonmaakmiddelen in een spuitbus schoon te maken, omdat dit de eenheid kan beschadigen. Gebruik een schone droge doek.

### **2.4 Plaatsing**

Deze eenheid moet geïnstalleerd worden op een koele droge plaats, uit de buurt van bronnen van extreme hitte, vibraties, stof, vocht en kou.

### **2.5 Ventilatie**

De sleuven en openingen aan de zijkant van de eenheid zijn voor ventilatie. Zorg er voor dat de eenheid op een goed geventileerde plek geïnstalleerd wordt zodat deze betrouwbaar werkt.

### **2.6 Intellectueel eigendom**

Sommige IC chips in dit product bevatten vertrouwelijke informatie en/of fabrieksgeheimen. U mag daarom de inhoud hiervan niet kopiëren, wijzigen, aanpassen, vertalen, verspreiden, nabouwen, of decompileren



### 3 DEVICE SUMMARY

#### 3.1 Device Capabilities

**A2-7300 Series** units are high quality audio format converters designed primarily to provide maximum format flexibility for the C2-7310 HD Audio/Video Processor's audio inputs and outputs. The C2-7310 provides AES3-id audio I/O via two HD-44 Connectors. Any two of the A2-7300 models, or two of the same model, can connect to these connectors to bring the AES3-id signals out to BNC connectors or to change the audio format completely. All of the AES audio channels can be synchronized to a DARS reference when connected to the C2-7310 via any of the A2-7300 units. Additionally, the A2-7300 units may be used in conjunction with one another, without the C2-7310, to provide bi-directional analog/digital or AES3/AES3-id conversion.

#### 3.2 Device Features

**A2-7302** provides an HD-44 interface to 16 AES (8-in/8-out) on XLR connectors and a DARS reference input on a BNC connector. This unit contains eight balanced AES to AES3-id converters, plus eight AES3-id to balanced AES converters to provide AES I/O.

**A2-7312** provides an HD-44 interface to 16 AES3-id (8-in/8-out) and a DARS reference input on BNCs mounted on a 1RU panel via a 1.5 meter (4.5') interconnect cable. The connectors may be separated from the panel if system wiring requirements dictate.

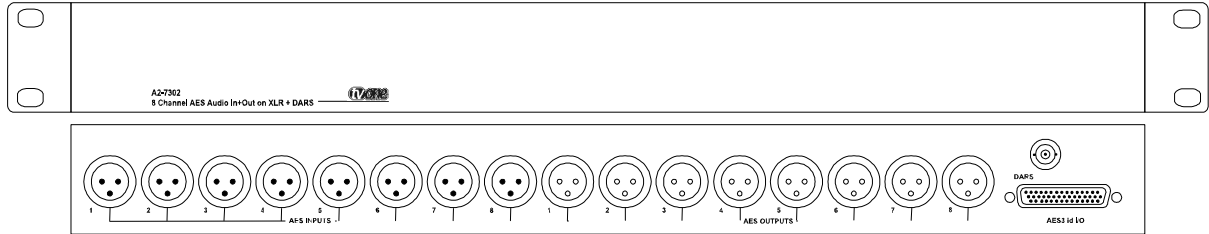
**A2-7322** provides an HD-44 to 16 Analog Stereo (8-in/8-out), balanced or unbalanced, on terminals and a DARS reference input on a BNC connector. This unit contains eight high quality stereo analog to AES3-id converters, plus eight high quality AES3-id to stereo analog converters. The audio sample rate is user adjustable in stand alone mode using DIP switches or selectable from the C2-7310 menu when connected.

**A2-7342** provides an HD-44 to 8 Analog Stereo (4-in/4-out) on XLR's and a DARS reference input on a BNC connector. This unit contains four high quality stereo analog to AES3-id converters, plus four high quality AES3-id to stereo analog. The audio sample rate is user adjustable in stand alone mode using DIP switches or selected from the C2-7310 menu when connected.

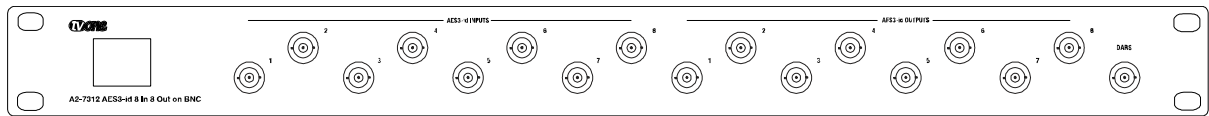
# A2-73XX Series Audio Expansion Units Operation Manual

## 4 PRODUCT IMAGES

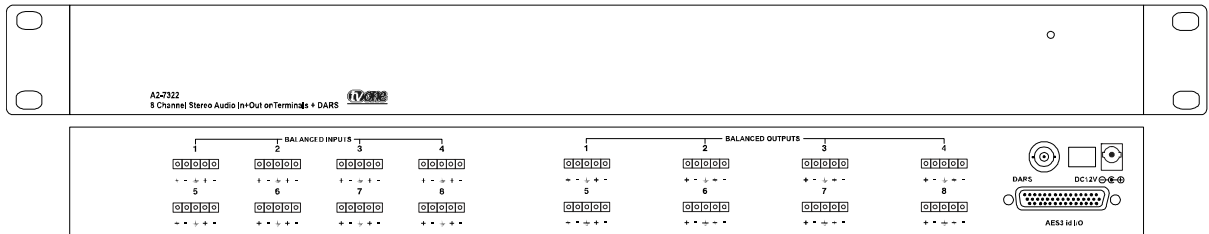
Your A2-73XX unit should look like one of the images below.



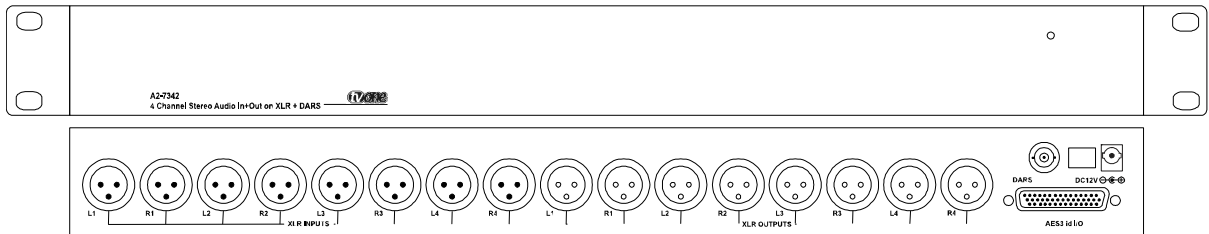
A2-7302 Front and Rear Views



A2-7312 Panel View



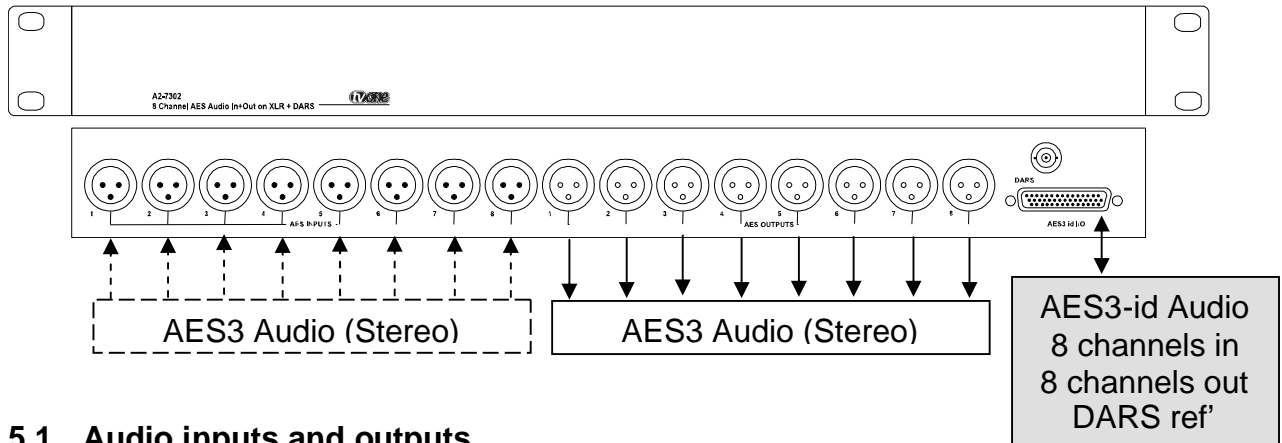
A2-7322 Front and Rear Views



A2-7342 Front and Rear Views

## 5 A2-7302

The A2-7302 provides an HD-44 interface to 16 AES (8-in/8-out) on XLR connectors and a DARS reference input on a BNC connector. This unit contains eight balanced AES to AES3-id converters, plus eight AES3-id to balanced AES converters to provide AES I/O.



### 5.1 Audio inputs and outputs

Visible in the images, the units have:

- 8 x AES3 Inputs on XLR sockets
- 8 x AES3 Outputs on XLR plugs
- DARS reference input on BNC (75 Ohms)

### 5.2 HD44 Interface

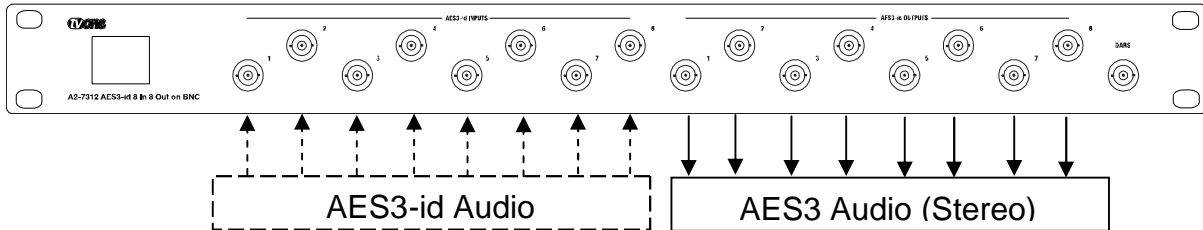
The unit connects to the C2-7310 (or other A2-73XX units) via a 44 pin D-type connector, via a dedicated cable supplied with unit, connecting 8 AES3-id input channels, 8 AES3-id output channels and the DARS reference.

### 5.3 Power Supply

The A2-7302 does not have a separate dedicated power supply, as it is essentially a passive buffer.

## 6 A2-7312

The A2-7312 provides an HD-44 interface to 16 AES3-id (8-in/8-out) and a DARS reference input on BNC's mounted on a 1RU panel via a 1.5 meter (4.5') interconnect cable. The connectors may be separated from the panel if system wiring requirements dictate.



### 6.1 Audio inputs and outputs

Visible in the images, the units have:

- 8 x input channels AES3-id on BNC
- 8 x output channels AES3-id on BNC
- DARS reference on BNC

### 6.2 HD44 Interface

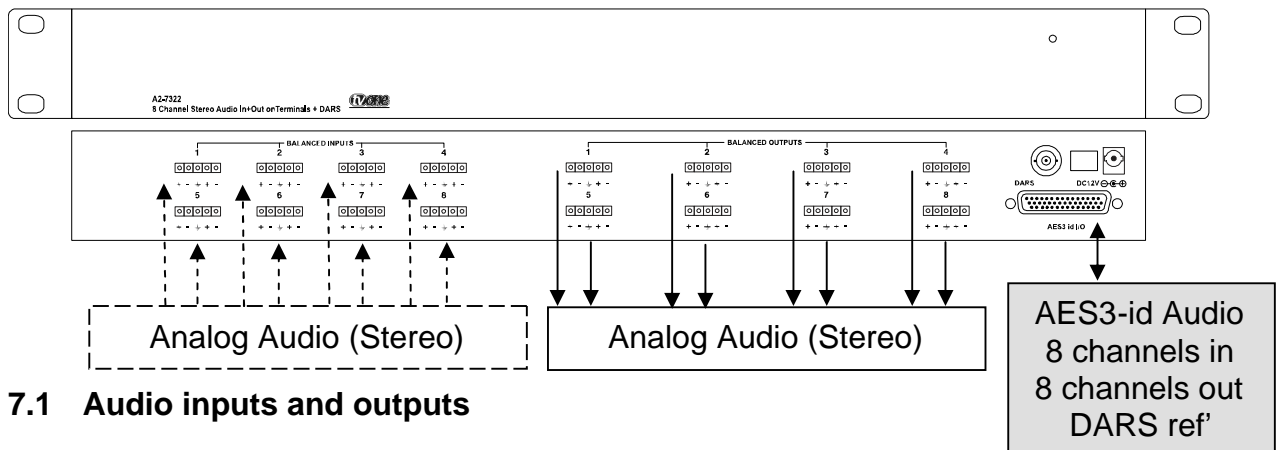
The unit connects directly to the C2-7310 (or other A2-73XX units) via a 44 pin D-type connector, with 8 AES3-id input channels, 8 AES3-id output channels and the DARS reference.

### 6.3 Power Supply

The A2-7312 does not require any power supply, as it is breakout cable.

## 7 A2-7322

The A2-7322 provides an HD-44 to 16 Analog Stereo (8-in/8-out), balanced or unbalanced, on terminals and a DARS reference input on a BNC connector. This unit contains eight high quality stereo analog to AES3-id converters, plus eight high quality AES3-id to stereo analog converters. The audio sample rate is user adjustable in stand alone mode using.



### 7.1 Audio inputs and outputs

Visible in the images, the units have:

- 8 x input channels (8 stereo pairs) analog audio on XLR
- 8 x output channels (8 stereo pairs) analog audio on XLR
- DARS reference on BNC

### 7.2 Switchable Sampling Rates

The A2-7322 has a dip switch setting on the rear of the unit which allows the sampling frequency to be set at the following rates: 48, 44.1, 32 and 96 kHz. For the required position settings see section 9.

### 7.3 HD44 Interface

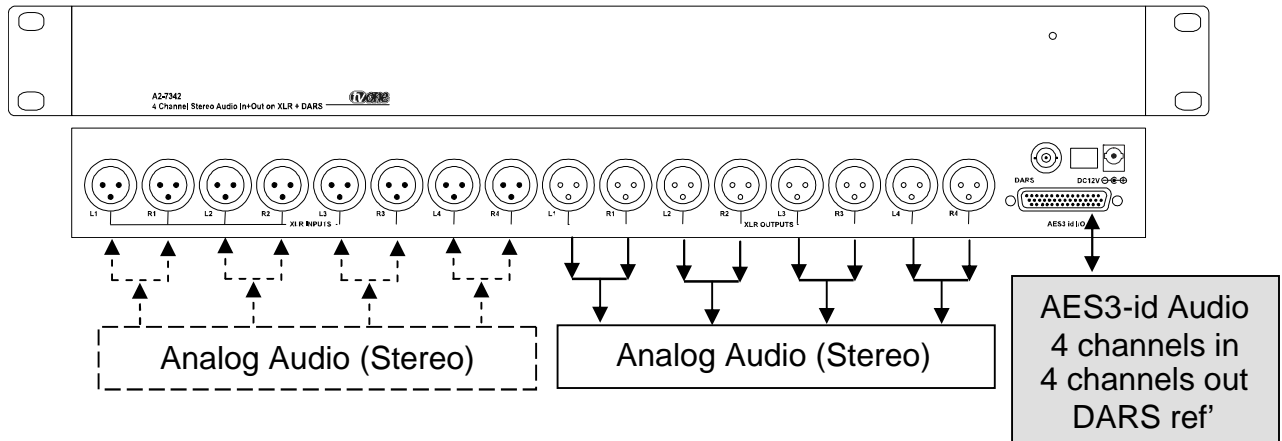
The unit connects to the C2-7310 (or other A2-73XX units) via a 44 pin D-type connector, via a dedicated cable supplied with unit, connecting 8 AES3-id input channels, 8 AES3-id output channels, the DARS reference and communication between the units.

### 7.4 Power Supply

The A2-7322 requires a 12V dc input with at least 3 Amps.

## 8 A2-7342

The A2-7342 provides an HD-44 to 8 Analog Stereo (4-in/4-out) on XLR's and a DARS reference input on a BNC connector. This unit contains four high quality stereo analog to AES3-id converters, plus four high quality AES3-id to stereo analog. The audio sample rate is user adjustable in stand alone mode using DIP.



### 8.1 Audio inputs and outputs

Visible in the images, the units have:

- 8 x input channels (4 stereo pairs) analog audio on XLR
- 8 x output channels (4 stereo pairs) analog audio on XLR
- DARS reference on BNC

### 8.2 Switchable Sampling Rates

The A2-7342 has a dip switch setting on the rear of the unit which allows the sampling frequency to be set at the following rates: 48, 44.1 and 32 kHz. For the required position settings see section 9.

### 8.3 HD44 Interface

The unit connects to the C2-7310 (or other A2-73XX units) via a 44 pin D-type connector, via a dedicated cable supplied with unit, connecting 4 AES3-id input channels, 4 AES3-id output channels, the DARS reference and communication between the units.

### 8.4 Power Supply

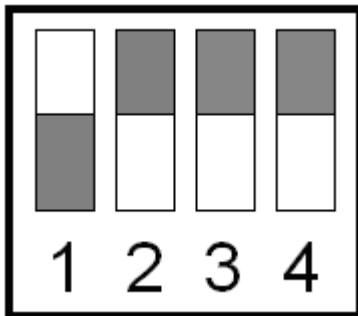
The A2-7342 requires a 12V dc input with at least 3 Amps.

## 9 DIP SWITCH SETTING FOR A2-73XX

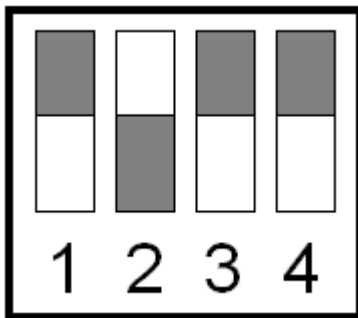
The A2-7322 and A2-7342 can have the sampling frequencies set by the position of dip switches on the rear of the units when operating remotely (i.e. when not connected to a C2-7310).

The currently supported sampling frequencies are: 48, 44.1 and 32 kHz, plus 96 kHz for the A2-7322.

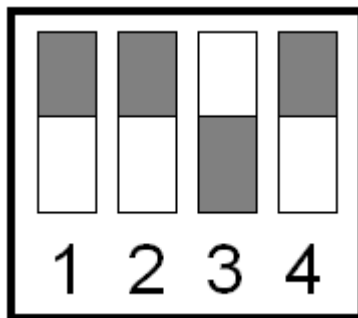
The positions for the dip switches are as follows:



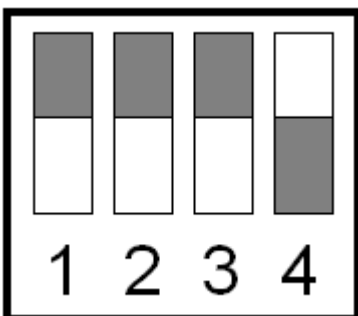
Dip Switch 1 Down  
Only Sets Sampling  
Frequency to: 96 kHz



Dip Switch 2 Down  
Only Sets Sampling  
Frequency to: 48 kHz



Dip Switch 3 Down  
Only Sets Sampling  
Frequency to: 44.1 kHz



Dip Switch 4 Down  
Only Sets Sampling  
Frequency to: 32 kHz

Please note: An invalid dip switch position will blank all outputs.

## 10 HD44 BREAKOUT CABLE

The HD44 to HD44 cable supplied with the A2-73XX unit which links it to the C2-7310 or other A2-73XX units, is a bespoke cable only available from TV One.

Should an additional or replacement cable be required, please contact TV One.

TV One Part Number:       ZA7392-2

Description:                HD44 (M) to HD44(M) Crossover - 2' (0.6m)



## 11 TROUBLESHOOTING AND TECHNICAL SUPPORT

If problems are experienced, please read through the symptom topics below in order to resolve the problem. After doing so, if you still need to, contact Technical Support at <http://www.tvone.com/support>. Please have the following details of the problem handy:

Whether the problem happens only at specific times or has only just started occurring (and what other things have changed at the same time).

If the problem relates to a specific source.

### 11.1 Your unit does not power up

When powered, you should see power indicator LED illuminated on the front panel (for A2-7322 and A2-7342 only). If this is not the case, check that the power supply is plugged in and is the correct voltage and polarity.

### 11.2 No Audio Output

For the A2-7342 and A2-7322, an incorrect setting of the DIP switches on the rear panel will blank all audio. Please check that the DIP switches are in the correct position for the required sampling rate (see section 9).

## 12 RETURN PROCEDURE

*Before returning your unit for repair, there are several checks you can make yourself to make sure the problem is actually caused by a failure.*

### 12.1 Are you sure there's a fault?

Many 'faults' are due to incorrect set-up or use so a simple checklist is provided below to help you identify potential problems.

Set the unit up with your equipment as described in this manual and run through the checklist. This will hopefully determine whether or not the unit is actually faulty and prevent units from being returned unnecessarily.

Check the Troubleshooting tips of this manual and check out the various FAQ (Frequently Asked Questions) listings on the support website, <http://www.tvone.com/support>, which shows the latest Hints, Tips and Solutions.

Don't presume it is the unit that is causing the problem. Check that the equipment being used with it is fully working and setup correctly – bypass the unit if possible by connecting the video source directly to the video display.

Check the AC power. Is it present and is the unit turned on? Check that all cables are properly plugged in and are not damaged and then make certain that all equipment connected to the unit is working properly.

Perhaps you have a “frozen” unit and you cannot change an input nor exit from the current task. In that case, a simple 'Factory Reset' of the product may sort the problem out. See earlier section on Front panel buttons to do this. Note that all user-settings will be lost following an engineering reset.

It is also worth ensuring that the latest firmware is installed in the unit – although, again, user settings are lost during a firmware update.

### 12.2 To return a unit for repair

First contact TV One using the <http://www.tvone.com/support> website. Support personnel will determine whether a return to the factory is the appropriate solution. If that's the case, a Return Authorization Number will be issued. You should provide the following information for each unit:

Product type

Serial number of the faulty unit (this is on the underside of the unit)

Full details of fault

Invoice number (if available)

Units should be returned via insured carrier or registered mail (thus allowing a trace to be made if the Processor is lost in transit), with shipping costs and insurance arranged at your own risk and expense. Goods in transit are the responsibility of the sender and the supplier will not be responsible for transit losses.

## A2-73XX Series Audio Expansion Units Operation Manual

Please clearly state the return number on the outside packaging and on any accompanying documentation. This will greatly speed up processing.

***IMPORTANT: DO NOT return a unit for warranty repair without first obtaining a Return Authorization Number. No action will be taken on a unit returned in warranty for repair without a Return Authorization Number.***

## 13 WARRANTY POLICY

LIMITED WARRANTY – With the exceptions noted in the next paragraph, TV One warrants the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of two years from the date of purchase. Should this product, in TV One's opinion, prove defective within this warranty period, TV One, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of TV One. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

Items integrated into TV One products that are made by other manufacturers, notably computer hard drives and liquid crystal display panels, are limited to the term of the warranty offered by the respective manufacturers. Such specific warranties are available upon request to TV One.

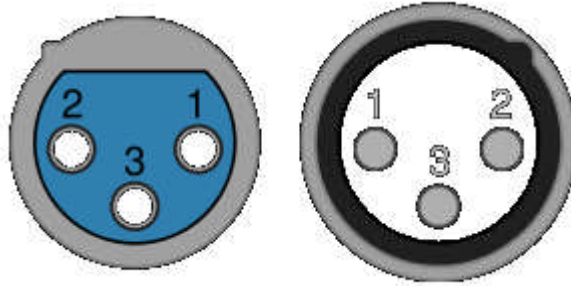
If repairs are necessary under this warranty policy, the original purchaser must obtain a Return Authorization Number from TV One and return the product to a location designated by TV One, freight prepaid. After repairs are complete, the product will be returned, freight prepaid.

**LIMITATIONS** - All products sold are "as is" and the above Limited Warranty is in lieu of all other warranties for this product, expressed or implied, and is strictly limited to two years from the date of purchase. TV One assumes no liability to distributors, resellers or end-users or any third parties for any loss of use, revenue or profit.

TV One makes no other representation of warranty as to fitness for the purpose or merchantability or otherwise in respect of any of the products sold. The liability of TV One with respect to any defective products will be limited to the repair or replacement of such products. In no event shall TV One be responsible or liable for any damage arising from the use of such defective products whether such damages be direct, indirect, consequential or otherwise, and whether such damages are incurred by the reseller, end-user or any third party.

## 14 CONNECTOR PINOUTS

### 14.1 XLR



**Socket**

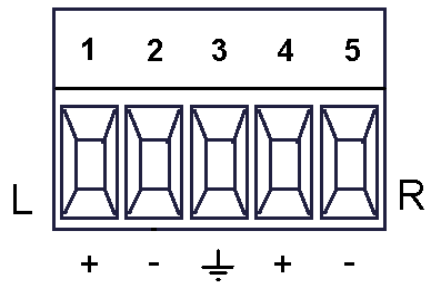
**Plug**

1. Chassis Ground (cable shield)
2. Normal polarity (“hot” signal input)
3. Inverted polarity (“cold” signal input)

### 14.2 HD44 Connection at A2-73XX Unit

PIN#	SIGNAL	PIN#	SIGNAL
1	AES3-id Input Channel 1	23	Ground
2	AES3-id Input Channel 2	24	Ground
3	AES3-id Input Channel 3	25	Ground
4	AES3-id Input Channel 4	26	Ground
5	AES3-id Input Channel 5	27	Ground
6	AES3-id Input Channel 6	28	Ground
7	AES3-id Input Channel 7	29	Reserved
8	AES3-id Input Channel 8	30	Reserved
9	Reserved	31	AES3-id Output Channel 1
10	Reserved	32	AES3-id Output Channel 2
11	Reserved	33	AES3-id Output Channel 3
12	Reserved	34	AES3-id Output Channel 4
13	Reserved	35	AES3-id Output Channel 5
14	Reserved	36	AES3-id Output Channel 6
15	Reserved	37	AES3-id Output Channel 7
16	Ground	38	AES3-id Output Channel 8
17	Ground	39	Reserved
18	Ground	40	Reserved
19	Ground	41	Reserved
20	Ground	42	DARS Reference
21	Ground	43	Reserved
22	Ground	44	Reserved

14.3 Multi-way audio connector (balanced)



1. Left positive signal (hot)
2. Left negative signal (cold)
3. Signal ground (shared with left and right)
4. Right positive signal (hot)
5. Right negative signal (cold)

## 15 SPECIFICATIONS

See product front and rear diagrams for details of product I/O.

### 15.1 A2-7302 Format Converter

Connectors:	HD44 (interconnect interface) XLR sockets: 8 x input XLR plugs: 8 x outputs BNC (75 Ohm DARS Reference)
Analog input/output impedance:	110 Ohm
Formats:	AES3 audio
Voltage Levels:	1V p-p AES3-id input on HD44 equates to 0.5Vp-p out on XLR (or 1.0Vp-p differential) 5Vp-p (differential) AES3 input on XLR equates to 2.0 Vp-p out on HD44.
Dimensions:	44x482x200mm (1.75"x19"x7.9")
Weight:	2.5 Kg

### 15.2 A2-7312 Breakout Unit

Connectors:	HD44 (interconnect interface) BNC: 8 x inputs, 8 x outputs, DARS Reference
Analog input/output impedance:	75 Ohm
Formats:	AES3-id audio
Voltage Level:	1V p-p
Dimensions:	44x482mm (1.75"x19")
Weight:	1.1 Kg

### 15.3 A2-7322 Format Converter

Connectors:	HD44 (interconnect interface) Screw Terminals: 8 x in 8 x out (stereo pairs) BNC (75 Ohm DARS Reference)
Analog input/output impedance:	600 Ohm Balanced
Formats:	AES3 to audio, audio to AES3
Sampling Frequencies:	32, 44.1, 48 kHz
Voltage Level:	6V p-p input maximum (8.75dBu). 0dBFS AES3 input equating to 8.75 dBu analog output
THD + noise:	-97dB (A to D), -93dB (D to A), at 48 kHz
Dimensions:	44x482x200mm (1.75"x19"x7.9")
Weight:	3.0 Kg

### 15.4 A2-7342 Format Converter

Connectors:	HD44 (interconnect interface) XLR sockets: 8 x input (4x stereo pairs) XLR plugs: 8 x outputs (4x stereo pairs) BNC (75 Ohm DARS Reference)
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## A2-73XX Series Audio Expansion Units Operation Manual

Analog input/output impedance:	600 Ohm Balanced
Formats:	AES3 to audio, audio to AES3
Sampling Frequencies:	32, 44.1, 48 kHz
Voltage Level:	0dbFS = 6V p-p (8.75 dBu) AES3 input maximum
THD + noise:	-100dB (A to D), -97dB (D to A), at 48 kHz
Bandwidth:	30 Hz to 22.5 kHz (-3dB)
Dimensions:	44x482x200mm (1.75"x19"x7.9")
Weight:	2.7 Kg

### 15.5 Warranty

Limited warranty: 2 years parts and labor

### 15.6 Regulatory Compliance

Main unit conforms to FCC, CE, RoHS

### 15.7 Environmental

Operating Temperature 0° to +50° C (+32° to +122° F)

Operating Humidity 10% to 85%, Non-condensing

Storage Temperature -10° to +70° C (+14° to +158° F)

Storage Humidity 10% to 85%, Non-condensing

### 15.8 Power Requirement

Actual current consumption varies between units.

Internal over-voltage & over-current protection.

External power supply specification: 12v DC regulated up to 3 Amp PSU, with a 2.5mm locking center-pin positive DC power connector. A non-locking 2.5mm DC power connector will also fit.

### 15.9 Control Methods

The units can be used independently with required sample frequency set by DIP switches on rear (for appropriate units).

### 15.10 Accessories Included

An HD44 link cable is shipped with each A2-73XX unit.

### 15.11 Mechanical

Size (H x W x D): 1.75" x 19" x 7.9" (44 x 482 x 200mm)

Weight (Net): <6.6 lbs (<3 kg) (unit types vary)

### 15.12 Optional Accessories

RM110 Long arm rack ears for 24" to 32" deep racks.



## 16 CONTACT INFORMATION

Should you have any questions or require assistance with this product in areas not covered by this manual, please contact TV One at the appropriate location shown below:

### **TV One USA**

2791 Circleport Drive  
Erlanger, KY 41018  
USA  
Tel 859-282-7303  
Fax 859-282-8225  
sales@tvone.com  
www.tvone.com

### **TV One Asia**

11F, No. 28, Sec. 2  
San-Min Road, Panchiao City  
Taipei Hsien 220  
Taiwan ROC  
Tel +886 2 8951-0674  
Fax +886 2 8951-0675  
sales.asia@tvone.com  
www.tvoneasia.com

### **TV One Latin America**

6991 NW 82 Ave # 8  
Miami, FL 33166  
USA  
Tel 305-396-6275  
Fax 305-418-9306  
sales.latinamerica@tvone.com  
www.tvonela.com

### **TV One Europe**

Continental Approach  
Westwood Industrial Estate  
Margate, Kent CT9 4JG, UK  
Tel +44 (0)1843 873311  
Fax +44 (0)1843 873312  
sales.europe@tvone.com  
www.tvone.eu

### **TV One China**

Room 1007, Golden Peach Building  
No.1900 Shangcheng Road  
Pudong, Shanghai,  
China 200120  
Tel +86 21 5830-2960  
Fax +86 21 5851-7949  
sales.china@tvone.com  
www.tvonechina.com

### **TV One Mercosur**

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