

# OPERATION MANUAL



**IN3262D High Resolution VGA Distribution Amplifier**

**IN3262DS High Resolution VGA &  
Stereo Audio Distribution Amplifier**





## Installation and Safety Instructions

### *For Models without a Power Switch:*

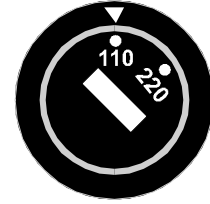
The socket outlet shall be installed near the equipment and shall be accessible.

### *For Models with 110 / 220V Power Selector:*

**Caution:** Before applying power to this unit, the voltage selector must be set to the appropriate setting to match local A/C line voltage. Improper setting of the voltage selector may cause damage to the unit and create a potential fire hazard.

The voltage selector is a round switch located next to the A/C power input connector which looks like this:

Using a straight slot screwdriver or small coin, rotate the selector to the correct position so that the arrow lines up with 110 or 220 as appropriate for local power line voltage as indicated in the chart below:



Local A/C Voltage	Voltage Selector Setting
110 ~ 120 VAC	110
220 ~ 240 VAC	220

### *For all Models:*

No serviceable parts inside the unit. Refer service to a qualified technician.

### *For Models with Internal or External Fuses:*

For continued protection against fire hazard, replace only with same type and rating of fuse.

### *For IN2001 / IN3234 / IN3236 / IN3502 / IN3504 / IN3506 / IN3562 / IN3564 / IN3566 / IN3572 / IN3574 / IN3576:*

**Caution:** Double pole / neutral fusing.

### *For all Models with Integral Lithium Battery:*

**Caution:** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.



## Instructions d'installation et de sécurité

### *Pour les modèles sans interrupteur de courant:*

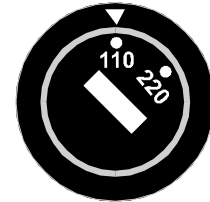
La prise de courant d'alimentation sera installé près de l'équipement et sera accessible.

### *Pour les modèles avec un sélecteur d'alimentation 110V/220V:*

**Attention:** Avant de connecter l'appareil au circuit d'alimentation, le sélecteur de courant doit être positionné sur la sélection appropriée correspondant au voltage du circuit de courant alternatif local. Une mauvaise sélection peut engendrer des dommages à l'appareil et créer un danger d'incendie.

Le sélecteur d'alimentation est un commutateur rond positionné près du connecteur d'alimentation. Il se représente comme suit:

A l'aide d'un tourne-vis plat ou d'une pièce de monnaie, le sélecteur peut être tourné dans la position adéquate en veillant que la flèche corresponde avec 110 ou 220, en fonction de la valeur du circuit de courant local. (Voir tableau ci-dessous)



Circuit local AC	Position Sélecteur
110 ~ 120 VAC	110
220 ~ 240 VAC	220

### *Pour tout les modèles:*

Pas de composants à entretenir à l'intérieur. Confiez toute réparation à un technicien qualifié.

### *Pour les modèles équipés de fusibles internes ou externes:*

Afin d'éviter tout danger d'incendie, ne remplacer qu'avec le même type et la même valeur de fusible.

### *Pour IN2001 / IN3234 / IN3236 / IN3502 / IN3504 / IN3506 / IN3562 / IN3564 / IN3566 / IN3572 / IN3574 / IN3576:*

**Attention:** Double pôle / fusible au neutre.

### *Pour tout les modèles avec une batterie au lithium interne:*

**Attention:** Danger d'explosion si la batterie est incorrectement remplacée. Ne remplacez la batterie qu'avec le même modèle, ou avec un modèle recommandé par le constructeur. Traitez les batteries usagées selon les instructions du fabricant, ou selon les normes écologiques en vigueur.



## Installations und Sicherheitshinweise

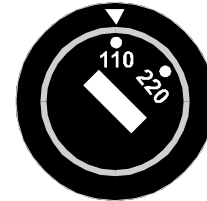
### Für Geräte ohne Netzschalter:

Die Netzsteckdose soll in der Nähe des Gerätes installiert und frei zugänglich sein.

### Für Geräte mit 110 / 220V Spannungswähler:

**Achtung:** Bevor Sie dem Gerät Spannung zuführen, muß der Spannungswähler entsprechend der Spannung des lokalen Wechselspannungsnetzes eingestellt werden. Die falsche Stellung des Spannungswählers kann eine Beschädigung des Gerätes und möglicherweise ein Feuer verursachen.

Der Spannungswähler ist ein runder Schalter in der Nähe der Netzeingangsbuchse mit folgendem Aussehen:



Drehen Sie den Wähler mit einem normalen Schraubenzieher oder einer kleinen Münze so, daß der Pfeil auf die 110 oder 220 zeigt, entsprechend der Spannung Ihres lokalen Netzes wie hier angezeigt:

Lokale Netzwechselspannung	Stellung des Spannungswählers
110 ~ 120 V	110
220 ~ 240 V	220

### Für alle Geräte:

Keine Wartung innerhalb des Gerätes notwendig. Reparaturen nur durch einen Fachmann!

### Für Geräte mit interner oder externer Sicherung:

Für dauernden Schutz gegen Feuergefahr darf die Sicherung nur gegen eine andere gleichen Typs und gleicher Nennleistung ausgewechselt werden.

### Für IN2001 / IN3234 / IN3236 / IN3502 / IN3504 / IN3506 / IN3562 / IN3564 / IN3566 / IN3572 / IN3574 / IN3576:

**Achtung:** Allpolige Absicherung

### Für alle Geräte mit eingebauter Lithium Batterie:

**Achtung:** Explosionsgefahr bei falschem Batterieeinsatz. Batterie nur ersetzen durch den gleichen oder entsprechenden Typ wie vom Hersteller empfohlen. Entsorgung verbrauchter Batterien nur nach den Anweisungen des Herstellers.



## Instalacion E Instrucciones de Seguridad

### Modelos Sin Interruptor:

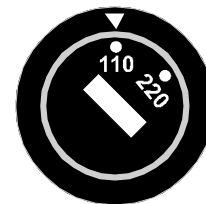
La conexión debe ser instalada cerca del equipo y debe ser accesible.

### Modelos con Selector de Voltaje de 110/220V:

**Precaución:** Antes de operar esta unidad, el selector de voltaje debe instalarse de forma que corresponda a la línea de voltaje local. Instalación inadecuada del selector de voltaje puede causar daño a la unidad y originar un incendio.

El selector de voltaje es un cambio vía redondo localizado cerca de la conexión eléctrica, como se ve en el dibujo:

Use un destornillador común o una moneda pequeña, mueva el selector a la posición correcta, de forma que las flechas indiquen 110 o 220 de acuerdo con el voltaje local, como está indicado a continuación.



Voltaje Local A/C	Selector de Voltaje
110 ~ 120 VAC	110
220 ~ 240 VAC	220

### Para Todos Los Modelos:

Dentro de la unidad, no hay partes para reparar. Llame un técnico calificado.

### Modelos con Fusibles Internos o Externos:

Para prevenir un incendio, reemplace solo con el mismo tipo de fusible.

### Modelos IN2001 / IN3234 / IN3236 / IN3502 / IN3504 / IN3506 / IN3562 / IN3564 / IN3566 / IN3572 / IN3574 / IN3576:

**Precaución:** Double Polo / Fusible Neutral.

### Modelos con Batería de Lithium Interna:

**Precaución:** Peligro de explosión si la batería es reemplazada incorrectamente. Reemplace solamente con la misma clase de batería, o una equivalente recomendada por el fabricante. Deseche las baterías usadas de acuerdo con las instrucciones del fabricante.

**CE COMPLIANCE**

All products exported to Europe by Inline, Inc. after January 1, 1997 have been tested and found to comply with EU Council Directive 89/336/EEC. These devices conform to the following standards:

EN50081-1 (1991), EN55022 (1987)

EN50082-1 (1992 and 1994), EN60950-92

**Shielded interconnect cables must be employed with this equipment to ensure compliance with the pertinent Electromagnetic Interference (EMI) and Electromagnetic Compatibility (EMC) standards governing this device.**

**FCC COMPLIANCE**

This device 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 against harmful interference when 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 equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at their own expense.

## Product Overview

The **IN3262D / IN3262DS** are video distribution amplifiers designed to work specifically with high-resolution computer graphic signals. Since the units have two buffered outputs, they permit the signal from one computer graphics card to be split out to two display devices. The **IN3262D / IN3262DS** are frequently used to amplify and split the computer's video signal so it may be viewed on the local monitor and a second data display device such as an LCD projector/presenter, data projector or presentation monitor. These units do not alter the video or sync signals, but merely amplify the signals to a level needed to extend the external display(s) as far as 100 feet away. The **IN3262D / IN3262DS** distribution amplifiers are fully automatic, offering easy operation and the following features:

- ◆ Two Buffered Outputs for Maximum Performance and Flexibility - Input and output cables may be extended as needed using High Resolution Coaxial Cables (**IN8000 Series**)
- ◆ Units Maintain Sync Polarities - Ideal for use with LCD, DMA, ILA and Plasma Displays
- ◆ 400 MHz bandwidth for superb performance with video signals at any resolution and refresh rate
- ◆ 6' Detachable High Resolution VGA Input Cable (**IN8006**)

The **IN3262D / IN3262DS** feature 15-pin HD VGA standard input/output connectors allowing for direct interfacing with VGA computer graphics cards and data displays. Both units' output signals feature the same sync format and polarity as the input signal, ensuring excellent operation with a wide range of scan rate compatible CRT, LCD, DMD, ILA, D-ILA and HDLV plasma data and display devices. In addition, both units can be *directly* connect to MAC, SUN, SGI and other high resolution work stations and displays (see list on page 5 for appropriate input and output adapter and extension cables).

## Compatibility

### INPUT

The **IN3262D / IN3262DS** distribution amplifiers operate with specific video signals as detailed below:

**IN3262D** - operates with analog video input from a wide variety of IBM and compatible computer video signal formats including VGA, SVGA and XGA. However, other types of local monitors can be connected using the appropriate adapter/extension output as indicated in the chart on page 2. All sense pins are passed from the input connector to Output #1 to ensure proper sensing of a local monitor.

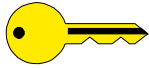
**IN3262DS** - shares the same features as the **IN3262D**, but also includes high quality stereo amplification circuits. This allows the unit to split the stereo audio signal from the computer's sound card so that it can drive two audio inputs simultaneously.

### OUTPUT

The **IN3262D / IN3262DS** offer two buffered video output signals in the same format and use the same connector as the original input signal. This is ideal for use with devices such as LCD projectors and proprietary data monitors which often must see a certain type of connector and sync format in order to recognize and lock up to various frequencies. Since both outputs of the **IN3262D / IN3262DS** are buffered, the data display(s) may be located 100' or more away from the source computer by using high-resolution coaxial extension cables. The maximum distance that signals may be sent depends on the horizontal scan rate of the signal and the bandwidth capability of the cables.

The **IN3262DS**' audio output is compatible with line level stereo audio signals.

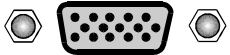
KEY CONCEPT



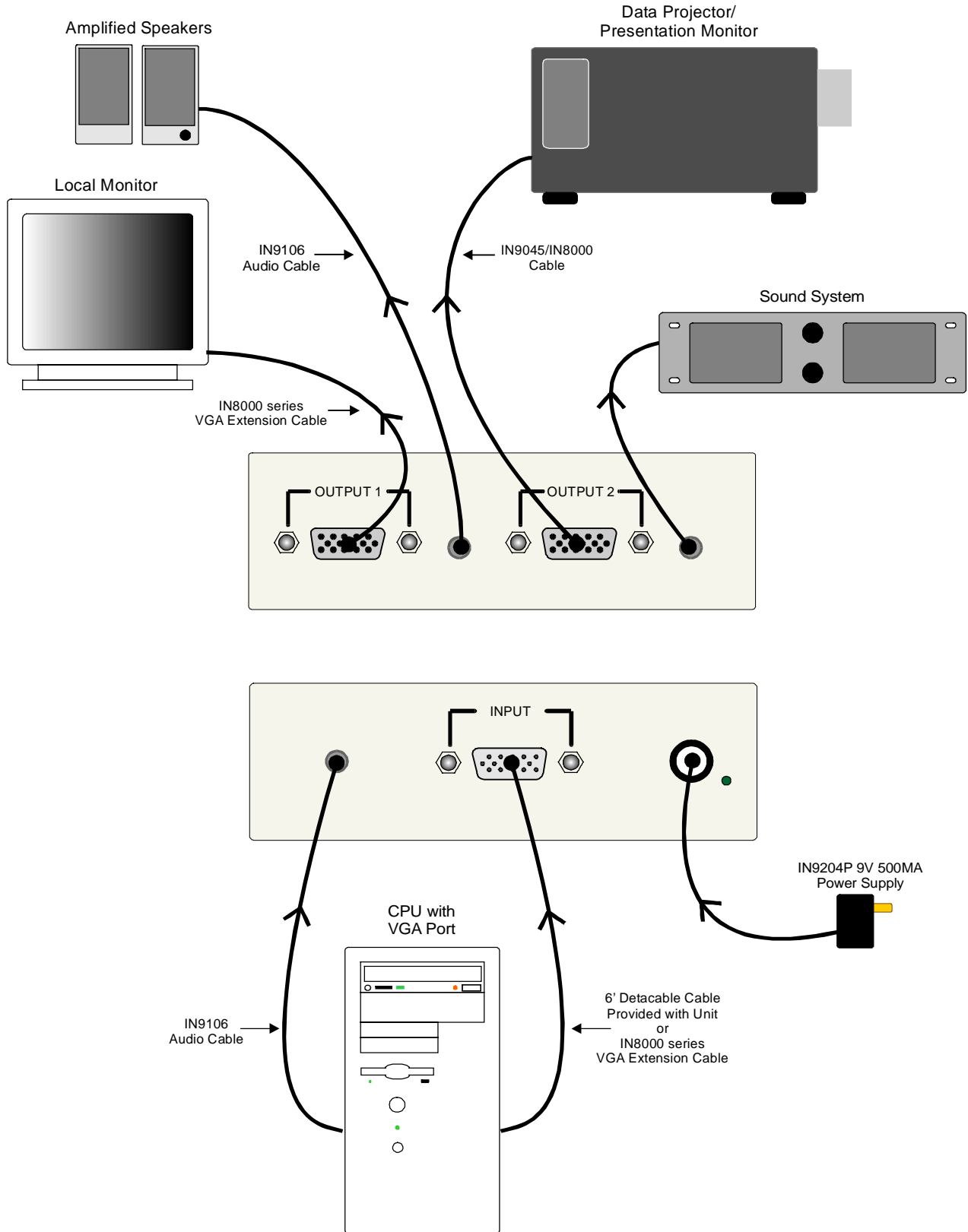
*VGA, SVGA, XGA, SUN, SGI and other workstation video cards operate in several different modes encompassing a wide range of resolutions and horizontal scan rates and vertical refresh rates. The IN3262D / IN3262DS are not scan converters and the data projector or monitor must be compatible with the horizontal scan rate put out by the computer video card. Please check the documentation for both the computer video card and the data projection device in order to ensure compatibility.*

## Installation

This section offers step-by-step instructions for installing the **IN3262D / IN3262DS**. A detailed application drawing showing all equipment connections is included on the next page.

1. Turn the computer and computer monitor off. Disconnect the computer monitor (if present) from the video output port on the computer.
2. Connect the **IN3262D / IN3262DS** video input cable to the computer's video output port. On PC compatible computers with VGA, SVGA or XGA output, the video output port is a 15-Pin HD connector, which looks like this:
 
3. Connect the local computer monitor (if present) to Output #1 on the **IN3262D / IN3262DS** distribution amplifier. VGA local monitors can be connected directly to the output. If no local monitor is connected to Output #1, a termination plug is required. Using an **IN9031** 15-pin HD VGA terminator plug will emulate a color VGA monitor.
4. Connect a second compatible data display to Output #2 using an **IN8000 Series** VGA Extension Cable, available in lengths from 3' to 100'.
5. For the **IN3262DS**, connect the audio stereo input cable (**IN9106**) to the computer's audio output port. The unit's audio outputs might be connected to a presentation monitor with built-in speakers, powered column speakers, a sound system, a VCR or audio recorder, or a video conferencing system.
6. Connect the round connector on the **IN9204** 9VDC, 500mA power supply to the POWER input jack (located on the end panel of the distribution amp, on the same end as the monitor loop cable). Connect the power adapter box side of the power supply to the A/C power source.
7. Complete the installation by turning the computer and computer monitor on.

### APPLICATION DIAGRAM FOR IN3262D / IN3262DS



## Specifications

	<b>IN3262D</b> VGA Distribution Amplifier	<b>IN3262DS</b> VGA Distribution Amplifier
<b>Input</b>		
Connector Type	15-Pin HD Male	
RGB Signal	Analog Video 1.5V p-p max. / DC Coupled 75 ohm impedance	
Compatible Formats	RGBHV / RGBS / RGsB	
Sync Signals	TTL Compatible	
Horizontal Sync Range	15 to 130 KHz	
Vertical Sync Range	30 to 120 Hz	
Stereo Audio	N/A	3.5mm Stereo Mini Female (line level)
<b>Output</b>		
Connector Type	(2) 15-Pin HD Female	
RGB Signals	Analog Video	
Gain	1.0 (unity)	
Bandwidth	>400 MHz @ -3dB with .7 volt input signal	
Sync Signals	TTL Sync, both units pass sync in the same format as the input signal with sync polarities preserved	
Stereo Audio	N/A	(2) 3.5mm Stereo Mini Female (line level)
Input Termination	Internal Jumpers (Red J-2, Green J-3 & Blue J-4): Jumpers Closed (default): 75 ohm termination Jumpers Open: High Z	
Monitor Emulation	N/A	Internal Jumper (J-26): Jumper Closed: Pin #11 - Grounded Jumper Open: Pin #11 - No Connection
<b>Dimensions</b>		
Power	<b>IN9204:</b> 9 VDC; 500 mA	
Size	1.25" x 4.6" x 4.0" / 3.2 cm. x 11.7 cm. x 10.2 cm.	
Shipping Weight	2 lb. / 1 kg.	
<b>Regulatory Compliance</b>		
Safety	UL 1950. 3 <sup>rd</sup> Ed.: CE: EN 60950-92 CAN/CSA-22.2 No. 950 3 <sup>rd</sup> Ed.	
EMI	FCC class A; CE: EN50081-1, EN550022, EN50082-1	

	<b>IN3262D</b> VGA Distribution Amplifier	<b>IN3262DS</b> VGA Distribution Amplifier
<b>Parts and Accessories</b>		
	<b>IN9204:</b> 9 VDC; 500 mA Power Supply	
	<b>IN8006:</b> 6' High-Resolution VGA Cable	
	Operation Manual	
<b>Optional Accessories</b>		
Input / Output Extension Cables & Adaptors	<b>IN8000 Series High-Resolution VGA Extension Cables with 15-Pin HD Connectors, Lengths from 3' to 100'</b>	
	N/A	<b>IN9106</b> 3.5mm Stereo Mini to 3.5mm Stereo Mini (M-M), 6'
	N/A	<b>IN1907</b> (1) 3.5mm Stereo Mini to (2) RCA (M-M), 6'
	N/A	<b>IN9090</b> 3.5mm Stereo Mini to Left & Right RCA (M-F), 3"
	N/A	<b>IN8700</b> Stereo Audio RCA Extension Cables (lengths varie from 6' to 25')
Mounting Brackets	<b>IN9127</b> Mounting Brackets - "L" brackets attach to sides of the unit for mounting to a flat surface	

## ADAPTER / EXTENTION CABLES FOR INPUT AND LOCAL MONITOR OUTPUT

The **IN3262D / IN3262DS** has 15-Pin HD VGA-type connectors for input and local monitor output. The following input and local monitor output cables are available:

<b>Computer</b>	<b>3'</b>	<b>6'</b>	<b>12'</b>	<b>25'</b>
<b>VGA: 15-Pin HD</b>				
Input Cable		<b>IN8006</b>	<b>IN8012</b>	<b>IN8025</b>
Output Cable (Optional)		<b>IN8006</b>	<b>IN8012</b>	<b>IN8025</b>
<b>MAC with 15-Pin D:</b>				
Input Cable		<b>IN9140</b>		<b>IN9144</b>
Output Cable	<b>IN9141</b>			<b>IN9145</b>
<b>MAC G3, G4 and PowerBook with 15-Pin HD*:</b>				
Input Cable		<b>IN8006</b>	<b>IN8012</b>	<b>IN8025</b>
Output Cable		<b>IN8006</b>	<b>IN8012</b>	<b>IN8025</b>
<b>SUN: 13W3 (may also be used with SGI with RGsB output)</b>				
Input Cable		<b>IN9142</b>		<b>IN9146</b>
Output Cable	<b>IN9143</b>			<b>IN9147</b>
<b>Workstation: 5 BNC / RGBHV</b>				
Input Cable		<b>IN9048</b>	<b>IN9046</b>	<b>IN9045-L25</b>
Output Cable		<b>IN9047</b>	<b>IN9045</b>	<b>IN9045-L25</b>
<b>Workstation: 4 BNC / RGBS</b>				
Input Cable		<b>IN9100</b>		

\*Newer Mac G3 models (with translucent cases) have 15-Pin HD connectors (pins arranged in 3 rows). Older G3 models (with solid white enclosures) incorporate 15-Pin D connectors (pins arranged in 2 rows).

*Note: The input / output cables listed on the previous page can be used with any of the following interfaces, distribution amplifiers and switchers:*

*IN2100   IN2110   IN2111 Series   IN2112   SeriesIN2114   SeriesIN2116  
IN2200   IN3260   IN3262 Series   IN3264   IN3268   IN3600 Series*

## Troubleshooting

**The display device connected to the IN3262D / IN3262DS output has a bad/scrambled image.**

**Solution 1:** The display device connected to the output of the distribution amplifier may not be compatible with the computer output. *Some LCD projectors and presentation monitors will not display signals at resolutions higher than 800 x 600 or 1024 x 768 with horizontal scan rates above 48KHz.* Make sure you know what resolution mode the computer video card is set to output. While basic 640 x 480 VGA at 60 Hz refresh rate runs at 31.5 KHz, SVGA modes can be as high as 48 - 80 KHz with the highest resolution settings such as 1800 x 1400 running at 80 KHz or higher depending on the refresh rate setting. Sun and SGI computers usually operate at 61KHz, 64KHz, or 71KHz at resolutions as high as 1280 x 1024.

**Solution 2:** The output cable may have a bad sync line. Try another cable.

**The output image is missing a color.**

**Solution:** The output cable may be bad. Check both ends of the cable to see if any of the pins are bent or missing. Also inspect the cable to see if the coax may have been pinched or severed internally. Try another cable.

**The computer output is black and white when it should be color.**

**Solution:** There needs to be a termination on output #1. Use a local monitor or the **IN9031** termination plug.

**The output image of the IN3262D / IN3262DS is visible but has poor quality / low definition.**

**Solution:** The output cable may be too long or of poor quality. INLINE offers several high-resolution mini-coax cables for analog signals and a series of shielded twisted pair cables designed specifically for digital video signal transmission. See page 2 for specific recommendations.

**The unit doesn't output any signal and the power light is not turning on.**

**Solution:** The power adapter may have failed. The power adapter should feel warm to the touch after it has been plugged in for a few minutes. If the adapter feels cool it may have failed. Try another **IN9204** 9VDC; 500 mA power adapter.

**(IN3262DS only) The unit doesn't output any audio signal, or the audio signal is low, intermittent, static, or only transmits through one channel.**

**Solution 1:** Make sure the computer's sound card is set for line level output.

**Solution 2:** Make sure the unit's audio input cable is connected to the computer's audio output/line out port.

**Solution 3:** Make sure the unit's audio output cable is connected to the **line level** input port of the desired POWERED audio system.

**Solution 4:** Make sure all connectors are firmly and completely seated in their proper ports.

**Solution 5:** Replace any and all defective or damaged audio cables.

## Warranty

- INLINE warrants the equipment it manufactures to be free from defects in materials and workmanship.
- If equipment fails because of such defects and INLINE is notified within two (2) years from the date of shipment, INLINE will, at its option, repair or replace the equipment at its plant, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications.
- Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of re-shipment to the Buyer.
- **This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.**

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**INLINE, INC. ♦ 22860 SAVI RANCH PARKWAY ♦ YORBA LINDA, CA 92887**  
**800-882-7117 ♦ 714-921-4100 ♦ FAX 714-921-4160 ♦ www.inlineinc.com**