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MANUAL PART NUMBER: 400-0377-004

## DA1957CT

# 1-IN, 4-OUT TWISTED PAIR DISTRIBUTION AMPLIFIER USER'S GUIDE

**ALTIMEX**<sup>®</sup>

SIGNAL  
MANAGEMENT  
SOLUTIONS<sup>®</sup>

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# DISTRIBUTION AMPLIFIERS

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## PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **DA1957CT**. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **DA1957CT** and to prevent fire and shock hazards. Please read them carefully and heed all warnings.

### 1.1 GENERAL

- Qualified ALTINEX service personnel or their authorized representatives must perform all service.

### 1.2 INSTALLATION

- Place the **DA1957CT** on a flat, level surface in a dry area away from dust and moisture.
- To prevent fire or shock, do not expose this unit to water or moisture. Do not place the **DA1957CT** in direct sunlight, near heaters or heat-radiating appliances, or near any liquid. Exposure to direct sunlight, smoke, or steam can harm internal components.
- Handle the **DA1957CT** carefully. Dropping or jarring can damage internal components.
- To turn off the main power, be sure to remove the adapter from the wall. The power outlet socket should be installed as near to the equipment as possible, and should be easily accessible.
- Do not pull the adapter or any cable that is attached to the **DA1957CT**.
- If the **DA1957CT** is not used for an extended period, disconnect the adapter from the wall to avoid fire, shock, and loss of power.

### 1.3 CLEANING

- Unplug the **DA1957CT** power adapter before cleaning. Clean surfaces with a dry cloth. Never use strong detergents or solvents, such as alcohol or thinner. Do not use a wet cloth or water to clean the unit.

### 1.4 FCC NOTICE

- 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 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 instructions found herein, 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.
- Any changes or modifications to the unit not expressly approved by ALTINEX, Inc. could void the user's authority to operate the equipment.

## ABOUT YOUR DA1957CT

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### DA1957CT

#### 1-In, 4-Out Twisted Pair Distribution Amplifier

The **DA1957CT** is a 1-In, 4-Out Twisted Pair distribution amplifier designed to connect a single ALTINEX Twisted Pair transmitter to as many as 4 ALTINEX Twisted Pair receivers. The **DA1957CT** will pass computer video and audio signals from the transmitter over Twisted Pair-type (CAT-5) cable.

A typical setup allows a single computer's video and audio sources to be connected to as many as 4 Twisted Pair receivers. In turn, each receiver connects to a video monitor, projector etc. and/or an audio device such as a speaker or amplifier.

ALTINEX compatible transmitters and receivers include the DA1930CT Video+Audio Twisted Pair Transmitter and the DA1931CT Video+Audio Twisted Pair Receiver.

The **DA1957CT** is capable of equalizing the attenuation effects of very long cable runs depending upon the type and quality of cable being used. Additionally, there is a Signal Detect feature which shows when an input signal is present.

The latest generation of Twisted Pair devices uses an innovative, patented technology\* developed by ALTINEX. The new signal processing technology allows transmitting and receiving fully equalized computer video signals, stereo, and audio signals over long distances.

\* US Patent 7,065,190

## TECHNICAL SPECIFICATIONS

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FEATURES/ DESCRIPTION	DA1957CT
<b>GENERAL</b>	
<b>Inputs</b>	
Input Connector	RJ-45 female (1)
<b>Outputs</b>	
Output Connectors	RJ-45 female (4)
<b>Compatibility</b>	
Signal Types	ALTINEX Standard for Twisted Pair
Video Signal Resolutions	VGA through UXGA 480p through 1080i
Recommended Max. Cable Lengths <i>Note: Measurements made using ALTINEX low-skew cable, CB3150PV.</i>	VGA: 640x480@60Hz 900 ft (274 m) XGA: 1024x768@60Hz 700 ft (213 m) SXGA: 1280x1024@60Hz 650 ft (198 m) UXGA: 1600x1200@60Hz 600 ft (183 m)
<b>Accessories Included</b>	
Power Adapter	+9 VDC, 1.1 A

Table 1. **DA1957CT** General

# DISTRIBUTION AMPLIFIERS

MECHANICAL	DA1957CT
Material	0.1" Al
Finish	Gray
Top Panel	Lexan
Height	1.0 in (25 mm)
Width	4.3 in (109 mm)
Depth	3.0 in (76 mm)
Weight	0.42 lb (0.19 kg)
Ship Weight	0.84 lb (0.38 kg)
T° Operating	10°C-35°C
T° Maximum	50°C
Humidity	90% non-condensing
MTBF (calculations)	40,000 hrs

Table 2. DA1957CT Mechanical

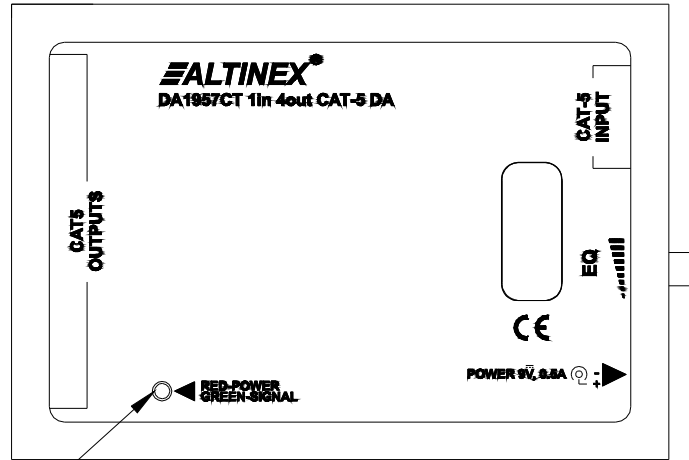
ELECTRICAL	DA1957CT
<b>Input Video Signal</b>	
CAT-5/6 Twisted Pair	Video/Sync/Audio Signals ALTINEX Standard
Impedance	50 ohms
<b>Output Video Signals</b>	
CAT-5/6 Twisted Pair	Video/Sync/Audio Signals ALTINEX Standard
Impedance	50 ohms
<b>Power Consumption</b>	
External Adapter: 9 VDC	670 mA (6.0 W)

Table 3. DA1957CT Electrical

# DISTRIBUTION AMPLIFIERS

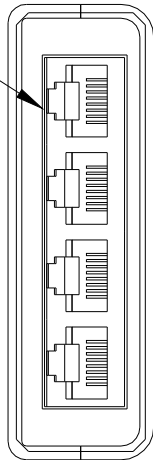
## PRODUCT DESCRIPTION

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POWER/SIGNAL  
PRESENT LED

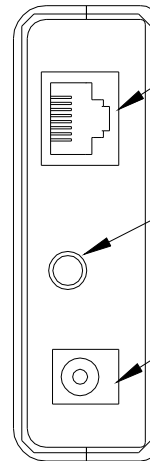
TP OUTPUTS



TP INPUT

VIDEO  
EQUALIZATION

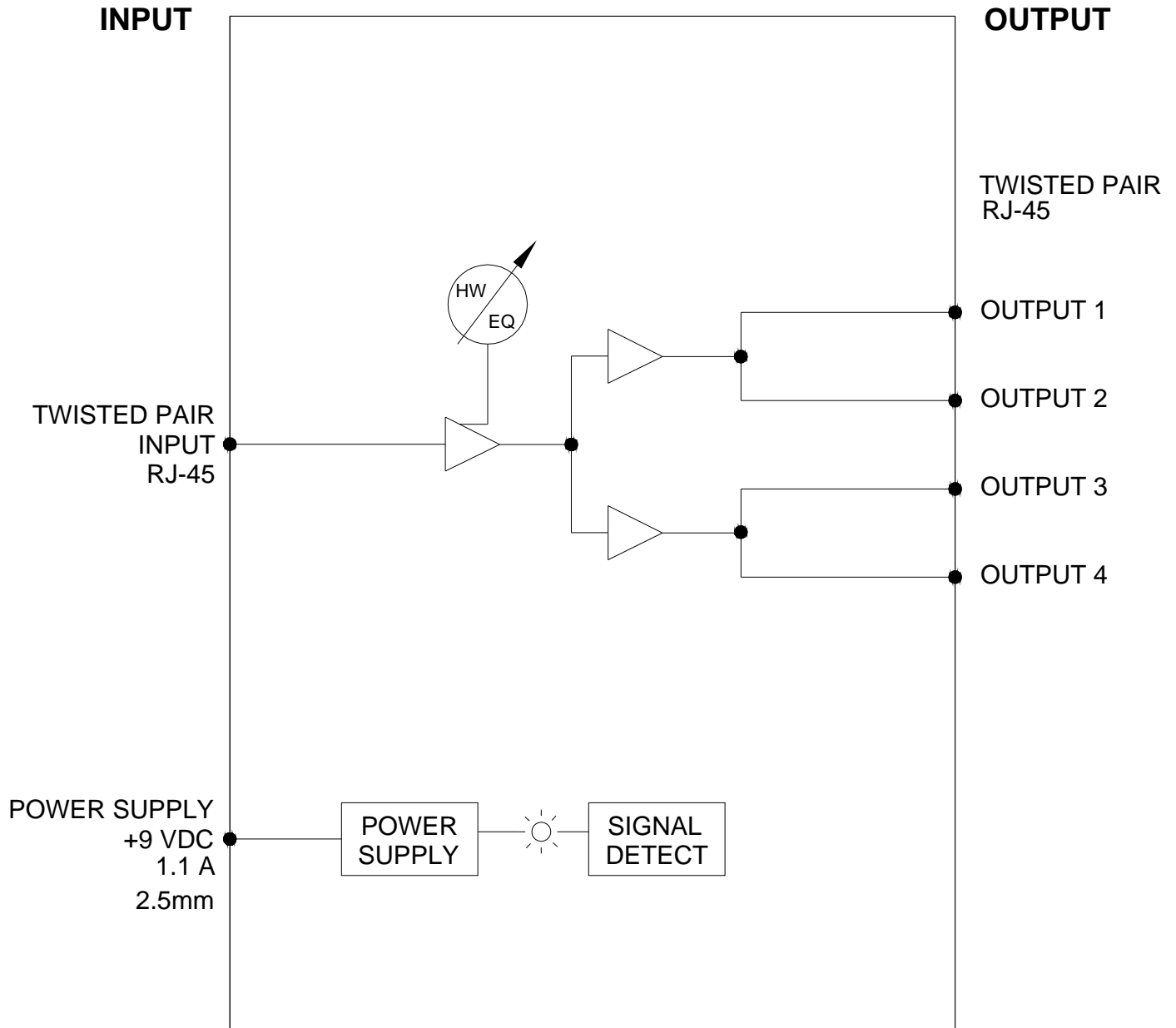
POWER





# DISTRIBUTION AMPLIFIERS

**DIAGRAM 2: INTERNAL VIEW**





## INSTALLING YOUR DA1957CT 6

- Step 1.** Determine the best location for the **DA1957CT**. There is an equalization adjustment on the **DA1957CT** that will affect all the distributed signals. Therefore, place the **DA1957CT** as equidistant to all receivers as possible.
- Step 2.** Connect the power adapter to the **DA1957CT** and plug it into the power outlet. The power indicator LED on the front panel will light red. This indicates that the unit is operational.
- Step 3.** Connect a cable from the Twisted Pair transmitter to the Input connector on the **DA1957CT**. The LED should turn green indicating a signal is present.
- Step 4.** Connect 1 to 4 of the **DA1957CT** outputs to Twisted Pair receivers. The unused outputs (if any) do not need to be terminated.
- Step 5.** Connect the receiving devices (monitors, projectors, speaker, etc.) to Twisted Pair receivers per the instructions found in their manuals.
- Step 6.** Adjust the equalization setting for the best image quality. This normally requires 2 people; one at the transmitter and one at the receiver to adjust the receiver and view the image.

## OPERATION 7

The **DA1957CT** will operate successfully as long as cables are attached properly and other technical specifications are followed. The only adjustment on the **DA1957CT** is for video equalization and only needs to be made at the time of installation.

Video equalization is provided to fine-tune the displayed image on the remote display. The equalization knob is a single-turn adjustment. At minimum (fully CCW), the arrow points to the 7 o'clock position and at maximum (fully CW) it points to the 5 o'clock position.

## TROUBLESHOOTING GUIDE 8

We have carefully tested the supplied **DA1957CT** unit and have found no problems; however, we would like to offer the following suggestions:

### 8.1 LED IS NOT RED

The LED should be on and red when power is applied and there is no video signal present. If the LED is on and green, the unit is receiving power and a sync signal.

**Cause 1: There is no AC power.**

*Solution:* Verify the adapter is plugged into a working AC outlet, and that the outlet has power. Only use the ALTINEX-provided power adapter.

**Cause 2: The adapter is not connected.**

*Solution:* Verify the DC power plug coming from the AC adapter is plugged all the way into the **DA1957CT**.

**Cause 3: The DA1957CT has a problem.**

*Solution:* If there is AC power to the adapter and the LED still does not turn on, the **DA1957CT** or the power adapter may require service, call ALTINEX at (714) 990-2300.

## 8.2 LED IS NOT GREEN

**Cause 1: There is no power.**

*Solution:* Disconnect the video input from the **DA1957CT** and verify the LED is on and red indicating power is present. Reconnect the computer's video output. If the LED is still not green, see Cause 2.

**Cause 2: There is no sync signal.**

*Solution 1:* Verify the computer output is operating correctly by connecting it directly to a local monitor. If the display is good, see Solution 2.

*Solution 2:* Verify that the transmitter and receiver are each operating correctly by connecting them directly to each other, bypassing the **DA1957CT**. If the display is good, see Solution 3.

*Solution 3:* Reconnect the **DA1957CT**. If the Power/Signal Present LED is on and red with a signal, call ALTINEX at (714) 990-2300.

## 8.3 NO SOUND

**Cause 1: The source has a problem.**

*Solution:* Check the source and make sure that there is a signal present and all source connections are correct. If the source is working and there is still no sound, see Cause 2.

**Cause 2: The volume is too low.**

*Solution:* Increase the Audio Gain on the transmitter toward maximum. If there is still no sound present, see Cause 3.

**Cause 3: Cable connections are incorrect.**

*Solution:* Make sure that cables are properly connected. Also, make sure that the continuity and wiring are good. If there is still no sound, see Cause 4.

**Cause 4: The receiving device is bad.**

*Solution:* Make sure the receiving device has power and is turned on. If there is still no sound, please call ALTINEX at (714) 990-2300.

## 8.4 NO REMOTE IMAGE

**Cause 1: The source has a problem.**

*Solution:* Check the image on the local monitor and verify the quality is good. If the local image is good, see Cause 2.

**Cause 2: Video equalization is required.**

*Solution:* Adjust the Video Equalization on the **DA1957CT**. Long cable runs may require adjustment. In general, cable runs less than 50 ft (15 m) require little or no video equalization and should be set to minimum. If there is still no image, see Cause 3.

**Cause 3: There is no signal.**

*Solution:* If the Power/Signal Present LED is on and green and there is still no image, call ALTINEX at (714) 990-2300.

## 8.5 REMOTE IMAGE QUALITY IS POOR

**Cause 1: The source has a problem.**

*Solution:* Check the image on a local monitor and verify the quality is good. If the local image is good, see Cause 2.

**Cause 2: Video equalization is required.**

*Solution:* Adjust the Video Equalization on the **DA1957CT**. If the image is still not correct, call ALTINEX at (714) 990-2300.

## ALTINEX POLICIES

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### 9.1 LIMITED WARRANTY/RETURN POLICIES

Please see the ALTINEX website at [www.altinex.com](http://www.altinex.com) for details on warranty and return policies.

### 9.2 CONTACT INFORMATION

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