



## INSTALLATION MANUAL

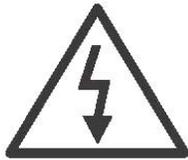
### CTA-30-870AR

### 2-Way Wall Mount Distribution Amplifier

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#### ***IMPORTANT INFORMATION***

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



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

**WARNING :** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DO NOT OPEN THE CABINET, REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

# PACKAGE CONTENTS

This package contains:

- One CTA-30-870AR Wall Mount Distribution Amplifier
- One wall power supply
- One CTA-30-870AR Installation Manual

# PRODUCT DESCRIPTION

The CTA-30-870AR distribution amplifier is a high quality push-pull amplifier producing signals with extremely low distortion and harmonic content. The forward bandwidth makes possible 135-channel operation while the two-way configuration allows the amplifier to be used in systems that utilize remote signal sources on the return path.

# SPECIFICATIONS

## CTA-30-870AR

Two-Way Wall Mount Distribution Amplifier Specifications (Typical)

<b>RF</b>	
<b>Forward Path</b>	
1. Bandwidth	54-870 MHz (forward path)
2. Forward Gain	30 dB
3. Gain Adjust Range	0 – 10 dB variable
4. Flatness	±1 dB maximum (54-870MHz)
5. Tilt Control Range	10 dB
6. Noise Figure	6 dB (54-550MHz), 4 dB (550-870 MHz)
7. Return Loss	-14 dB (54-550 MHz), -12 dB (550-870 MHz)
8. Input Level	45 dBmV@ 67.25 MHz
9. Impedance – Input/Output	75Ω
<b>Return Path</b>	
10. Bandwidth	5-42 MHz
11. Gain	20 dB
12. Flatness	±0.5 dB
13. Gain Control Range	10 dB
14. Return Loss	-15 dB
15. Input Level	55 dBmV@ 36 MHz
<b>GENERAL</b>	
1.Power Requirements	Input 100-240 VAC, 50-60Hz, Output 24 VDC, 1A
2.Operating Temperature	32 °F ~ 122 °F
3.Connectors	All "F" Type
<b>MECHANICAL</b>	
1.Dimensions	9" (W) x 5.4" (H) x 2" (D)
2.Weight	3 lbs



1	<b>Forward Gain Adjust</b>	For RF forward path gain adjustment
2	<b>Tilt Adjust</b>	For forward path lope adjustment over the entire bandwidth
3	<b>Input</b>	Input RF signal
4	<b>Output</b>	Amplified RF signal available for output
5	<b>Reverse Gain Adjust</b>	For RF reverse path gain adjustment
6	<b>DC Power Jack</b>	Plug from wall power adaptor supplies 24VDC

#### 4. HARDWARE CONNECTIONS

- a. Mount the CTA-30-870AR securely onto a wall or equipment rack using screws or bolts through the mounting tabs.
- b. Connect a 75ohm coaxial cable with F-connectors from the RF source output to CTA-30-870AR's Input port.
- c. Connect a 75ohm coaxial cable with F-connectors from the CTA-30-870AR's Output port to the RF distribution network.
- d. Plug in the power adaptor to the appropriate AC wall outlet. Connect the power adaptor to the CTA-30-870AR's DC power jack. Be certain that power source is capable of handling the load if the CTA-30-870AR and other equipment are being powered by it.

#### 5. ADJUSTMENT

The chart below shows the proper operation levels for the CTA-30-870AR. Note the listed performance criteria are for specific numbers of channels, and must be de-rated accordingly when inserting additional channels. However, the amplifier's gain does not change. Therefore, as the number of channels increases from seven (7) channels, the input level and the output level must be reduced. Exceeding the input levels listed below will product intermodulation and picture distortion.

<b>Number Of Channels</b>	<b>Maximum Level Input (dB)</b>	<b>Maximum Level Output (dBmV)</b>
7	36	65
12	33	57
36	25	50
54	16	46
77	13	44
135	10	41

Turn the CTA-30-870AR's Gain Adjust control to achieve the input and output levels identified above. Additional attenuators may be needed to further reduce the input level.

The CTA-30-870AR's Tilt Adjust control should be used to set the appropriate slope per system specifications. Note that the Tilt Adjust allows the adjustment of the gain-to-frequency characteristic of the amplifier.

When making adjustments always apply the following principles:

- ✓ Input signal levels should ALWAYS exceed the noise figure of the amplifier by 3 to 6 dB.
- ✓ The primary purpose of tilt (equalization) in a cable TV plant is to compensate for the slope generated in coaxial cable between the high and low TV frequencies. When various TV channels, with respect to frequency, are transmitted through coaxial cable they are subjected to increasing attenuation (loss). Simply put, as the frequencies of the TV carriers are increased, attenuation loss (dB) increases. A variable tilt control is installed in this amplifier to compensate for this slope in cable resulting in a flat frequency response at the output

## **8. TROUBLESHOOTING**

- a. Ensure you are using quality multiple shielded cables with quality radial or compression F-connectors.
- b. Ensure the F-connector's center conductor is making solid contact with the CTA-30-870AR's Input and Output ports, and the appropriate RF source and RF distribution network connectors.
- c. When taking measurements it is always best to use an RF spectrum analyzer or quality signal level meter. Initially, level measurements should be taken from the CTA-30-870AR's Output port.

This is a notice to inform you that content passing thru this device may contain strong language or depictions of violence, sex or substance abuse. This unit contains no parental control features. Parental discretion is advised.