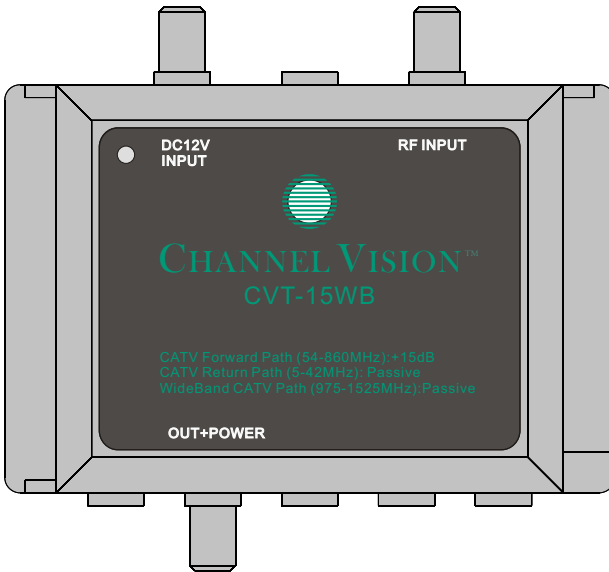


# INSTRUCTIONS



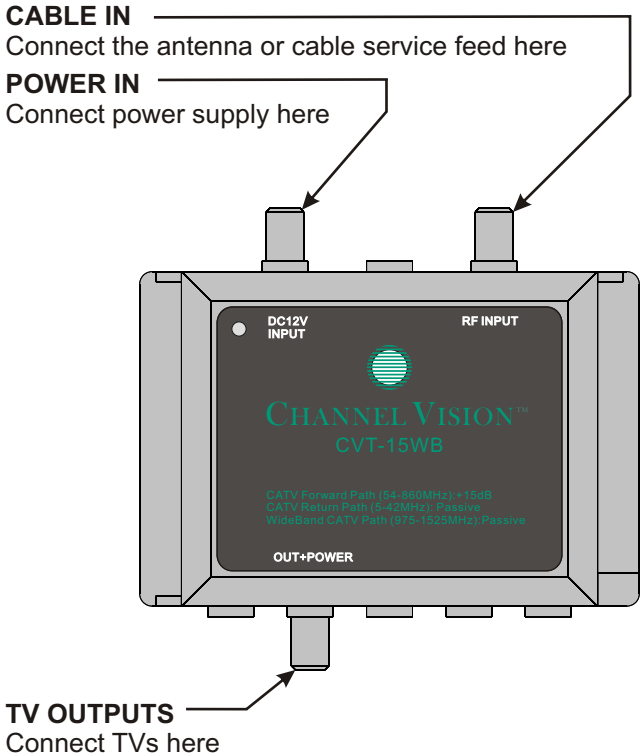
## **CVT-15WB**

### **15dB Amplifier for Standard & Wide-Band CATV Systems**

The **CVT-15WB** is a 15dB Amplifier for standard and advanced digital CATV systems. The wide bandwidth design allows 2-way communications in the RF spectrum from 975-1525MHz which is required by some newer digital cable boxes.

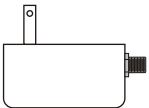
**Features:**

- 15dB Amplifier
- Passive return path from 5-42MHz
- Compatible with Advanced Wide-Bandwidth Digital CATV systems
- Built-in 6KV surge protection for superior durability
- Phantom powered using model CVT-PI
- Easy installation
- Dimensions: 4.70" x 4.35" x 1.06"



**Accessories Included:**

**Power Supply**



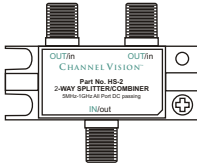
12VDC, 500mA

## Accessories & Complementary Products (sold separately)

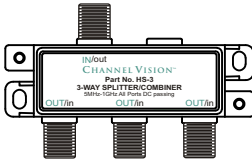
RF distribution systems require splitters and other accessories to deliver the amplified signals to the TV.



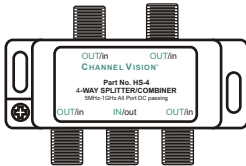
**2120** ... 75ohm RF terminator. Use to terminate unused outputs of splitters.



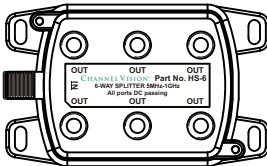
**HS-2** ... 2-way RF splitter for cable TV and antenna signals.



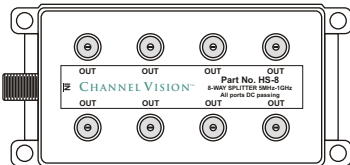
**HS-3** ... 3-way RF splitter for cable TV and antenna signals.



**HS-4** ... 4-way RF splitter for cable TV and antenna signals.



**HS-6** ... 6-way RF splitter for cable TV and antenna signals.



**HS-8** ... 8-way RF splitter for cable TV and antenna signals.

## Basic RF System Design

Knowing how much amplification is needed for a system is essential to designing a successful RF distribution system. This section explains how to calculate the losses in your system. You should provide enough amplification to overcome all of the insertion losses of all the system components. If the signal splits into two branches, each branch must be calculated separately.

System Component	Typical Insertion Loss
100ft. of RG6	~5.0dB
HS-2 (2-way Splitter)	3.5dB
HS-3 (3-way Splitter)	5.5dB
HS-4 (4-way Splitter)	7.5dB
HS-6 (6-way Splitter)	9.0dB
HS-8 (8-way Splitter)	11.0dB
HS-16 (16-way Splitter)	15.5dB

Example: Assume a CATV input signal of 10dBmV. Next, calculate all the gains and losses of the components.

### Primary Branch Calculation:

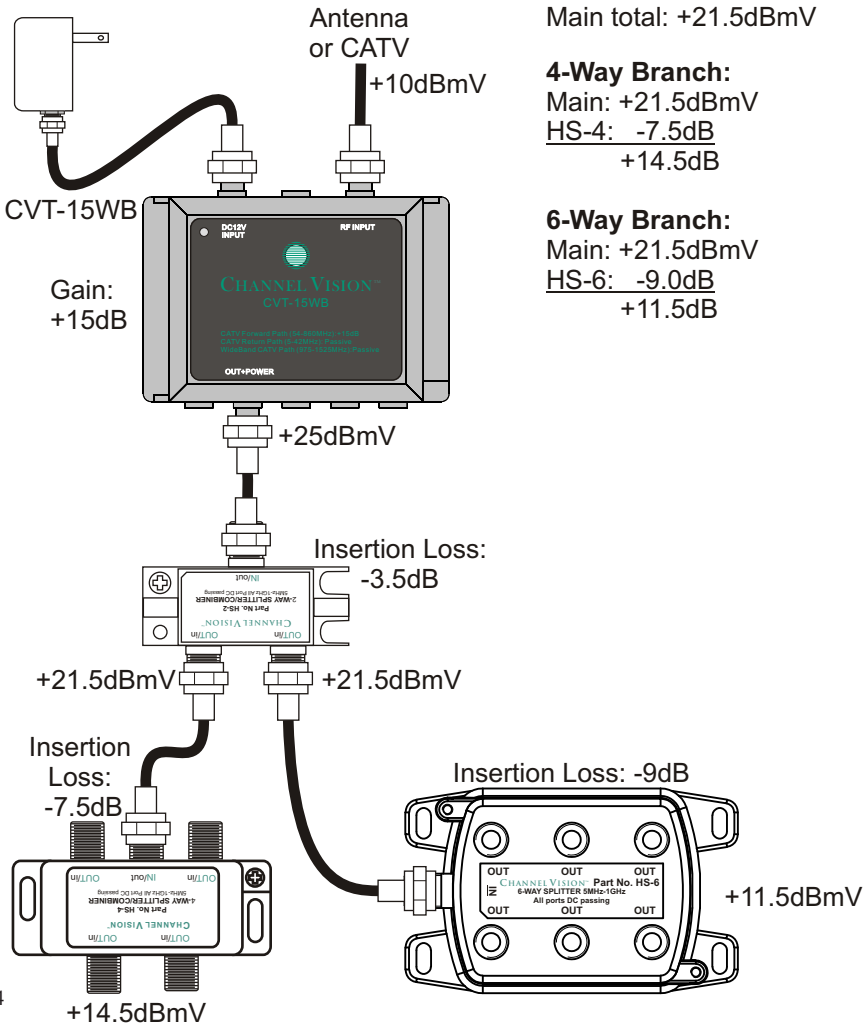
CATV Input: 10dBmV  
 CVT-15WB: +15dB  
 HS-2: -3.5dB  
 Main total: +21.5dBmV

### 4-Way Branch:

Main: +21.5dBmV  
 HS-4: -7.5dB  
 +14.5dB

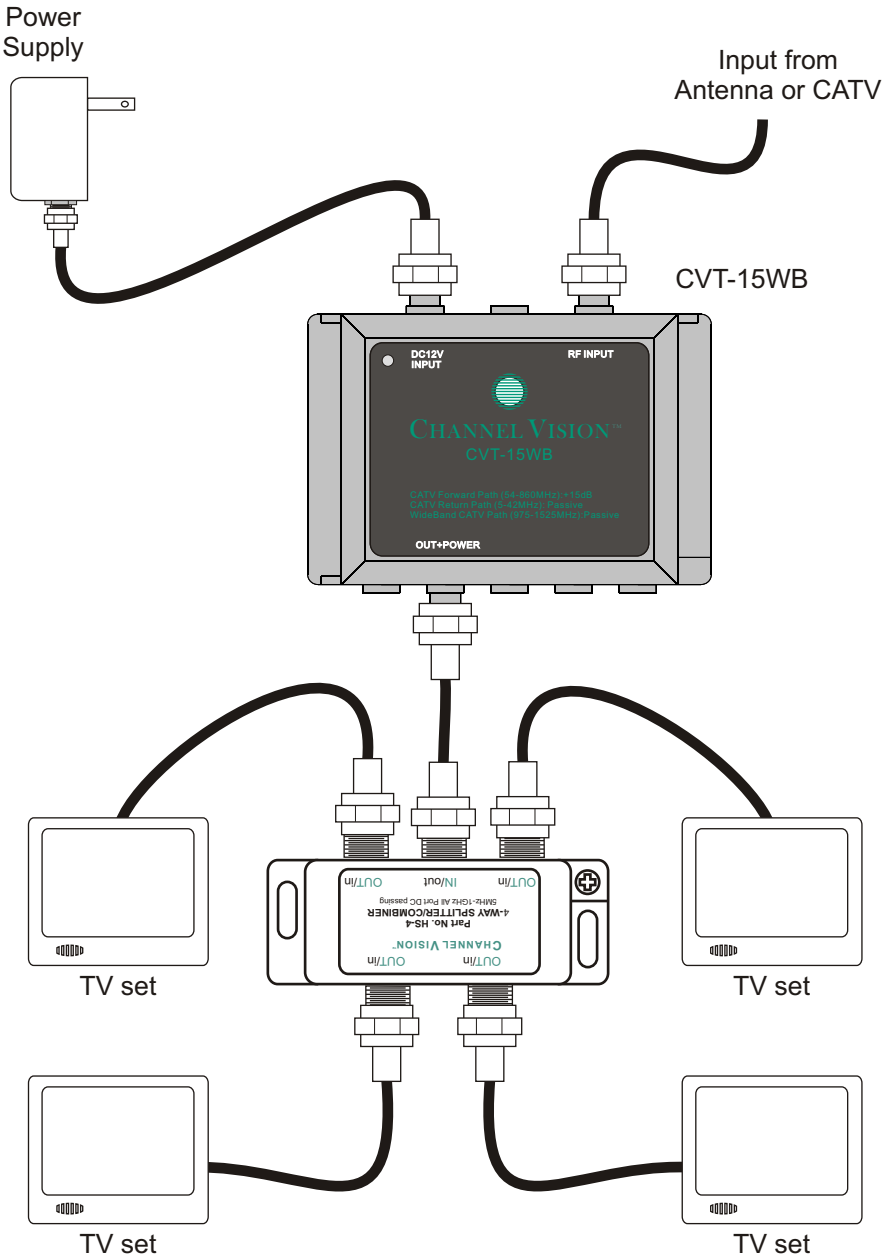
### 6-Way Branch:

Main: +21.5dBmV  
 HS-6: -9.0dB  
 +11.5dB



## Basic Amplified Splitter Application

Connect the CVT-15WB as shown and locate it at the main distribution point in the house. The CVT-15WB will supply the amplified TV signal to the splitter which may be conned to several TV locations.



## Basic RF System Design

Knowing how much amplification is needed for a system is essential to designing a successful RF distribution system. This section explains how to calculate the losses in your system. You should provide enough amplification to overcome all of the insertion losses of all the system components. If the signal splits into two branches, each branch must be calculated separately.

System Component	Typical Insertion Loss
100ft. of RG6	~5.0dB
HS-2 (2-way Splitter)	3.5dB
HS-3 (3-way Splitter)	5.5dB
HS-4 (4-way Splitter)	7.5dB
HS-6 (6-way Splitter)	9.0dB
HS-8 (8-way Splitter)	11.0dB
HS-16 (16-way Splitter)	15.5dB

Example: Assume a CATV input signal of 10dBmV. Next, calculate all the gains and losses of the components.

### Primary Branch Calculation:

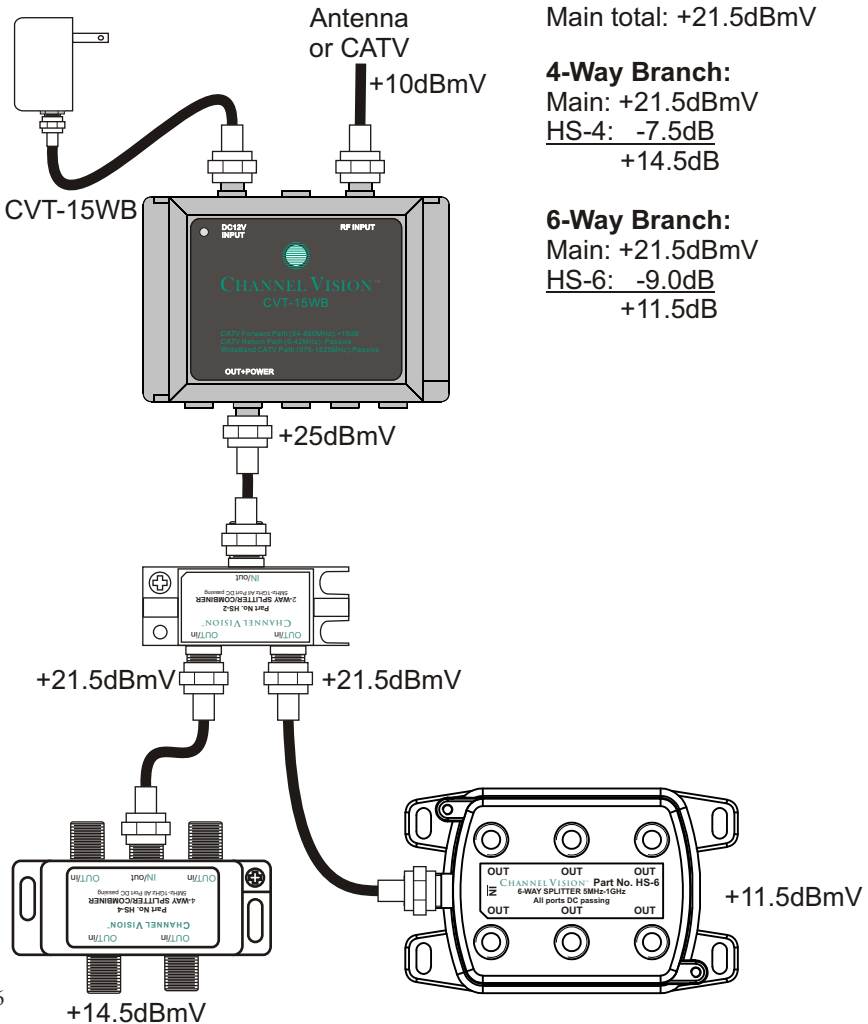
CATV Input: 10dBmV  
 CVT-15WB: +15dB  
 HS-2: -3.5dB  
 Main total: +21.5dBmV

### 4-Way Branch:

Main: +21.5dBmV  
 HS-4: -7.5dB  
 +14.5dB

### 6-Way Branch:

Main: +21.5dBmV  
 HS-6: -9.0dB  
 +11.5dB



**Specifications:** (typical @25° C)

ITEM	MIN.	TYP.	MAX.	
<b>CATV FORWARD PATH</b>				
54-1525MHz				
Gain	54-60MHz	+14.0dB	+15.0dB	+16.0dB
	60-860MHz	+14.0dB	+15.5dB	+16.0dB
	(Passive) 975-1525MHz	-4.0dB	-2.5dB	-1.5dB
Flatness		+1.0dB		
Return Loss (I/O)		>15dB		
Noise Figure@70 degrees F		3.0dB		
Group Delay (54 to 66MHz)		60ns		
Group Delay (66 to 88MHz)		22ns		
Group Delay (88 to 1000MHz)		12ns		
Composite Second Order Distortions		60dBC		
Composite Triple Beat Distortions		60dBC		
Cross Modulation Distortions		60dBC		
Second Hum Modulation		70dBC		
Rated Output Level @160 channels, 6MHz each		+23.0dBmV		
Power Consumption		150mA		
<b>CATV RETURN PATH</b>				
Frequency Range		5-42 + 975-1525MHz		
	5-42MHz	-3.0dB	-2.0dB	-1.0dB
	975-1000MHz	-5.0dB	-4.0dB	-3.0dB
	1000-1525MHz	-3.5dB	-2.5dB	-1.5dB
Flatness		+1.0dB		
Return Loss (I/O)		>15dB		
<b>GENERAL SPEC</b>				
RFI Shielding		>110dB		
Nominal Impedance	"F" Female	75 ohm		
Supply Voltage (DC)		12-15VDC		

Specifications subject to change without notice.



## **1 Year Limited Warranty**

Channel Vision Technology will repair or replace any defect in material or workmanship which occurs during normal use of this product with new or rebuilt parts, free of charge in the USA, for one year from the date of original purchase. This is a no hassle warranty with no mail in warranty card needed. This warranty does not cover damages in shipment, failures caused by other products not supplied by Channel Vision Technology, or failures due to accident, misuse, abuse, or alteration of the equipment. This warranty is extended only to the original purchaser, and a purchase receipt, invoice, or other proof of original purchase date will be required before warranty repairs are provided.

Mail in service can be obtained during the warranty period by calling (800) 840-0288 toll free. A Return Authorization number must be obtained in advance and can be marked on the outside of the shipping carton.

This warranty gives you specific legal rights and you may have other rights (which vary from state to state). If a problem with this product develops during or after the warranty period, please contact Channel Vision Technology, your dealer or any factory-authorized service center.

Channel Vision products are not intended for use in medical, lifesaving, life sustaining or critical environment applications. Channel Vision customers using or selling Channel Vision products for use in such applications do so at their own risk and agree to fully indemnify Channel Vision for any damages resulting from such improper use or sale.



234 Fischer Avenue, Costa Mesa, California 92626 USA  
(714)424-6500 • (800)840-0288 • (714)424-6510 fax  
email: techsupport@channelvision.com