

Cat. No. 15-1170

**OWNER'S MANUAL**



Please read before using this equipment

**Satellite/TV/FM In-Line  
Signal Amplifier**



**RadioShack®**

**WARNING:** To reduce the risk of fire or shock hazard, do not expose this product to rain or moisture.

	<b>RISK OF ELECTRIC SHOCK. DO NOT OPEN.</b>	
<b>CAUTION:</b> TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.		



This symbol is intended to alert you to the presence of uninsulated dangerous voltage within the product's enclosure that might be of sufficient magnitude to constitute a risk of electric shock. Do not open the product's case.



This symbol is intended to inform you that important operating and maintenance instructions are included in the literature accompanying this product.

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## INTRODUCTION

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The RadioShack Satellite/TV/FM In-Line Signal Amplifier brings to your home video system the same technology that is used in commercial cable systems: a single, standard coaxial cable carries the satellite, TV, radio signal and the power necessary for the In-Line Signal Amplifier.

The In-Line Signal Amplifier reduces or eliminates the signal losses caused by signal transformers, signal splitters, other in-line devices or extremely long cable runs between the antenna and receiver system. The In-Line Signal Amplifier will amplify virtually any satellite, TV, or radio signal, from 50 MHz to 2,200 MHz.

The compact, in-line design of the amplifier simplifies installation at the "head end" of an antenna system (the end nearest the antenna, where amplification will do the most good).

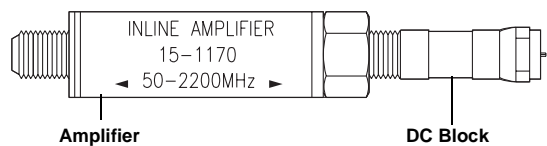
The In-Line Signal Amplifier can be used with antenna systems for:

- direct-to-home satellite
- standard VHF/UHF/cable TV
- amateur TV systems
- scanners
- FM stereo radio

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**Caution:** Because the In-Line Signal Amplifier uses coaxial cable to carry the satellite/TV/radio signal from the DC power supply, proper connections are crucial. Failure to follow exactly the connection instructions in this manual can result in damage to your amplifier or your satellite/TV/radio receiver.

**Note:** You cannot insert splitters in the coax lead-in from the antenna to the power injector.



## ONE ANTENNA/ONE RECEIVER SYSTEM

If you are using a single antenna with a single receiver, "Installation A" shows the proper connections.

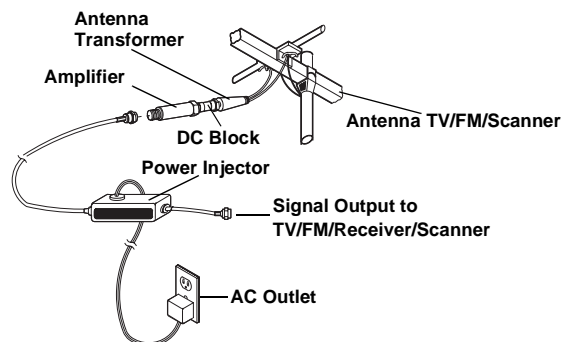
**Caution:** To avoid damage to your receiver and/or the amplifier power injector, carefully check all the points listed below.

- Do not separate the amplifier from the DC block. The DC block must be between the amplifier and the 300-to-75 ohm transformer at the antenna.
- Remove the DC block and the plastic tube that connects the DC block and the amplifier when using with a satellite or powered antenna.
- Follow the connection labeling on the amplifier/DC block unit: **TO ANT, TO POWER INJECTOR**. The amplifier will not receive power if they are reversed.
- Follow the connection labeling on the power injector: **TO TV, TO AMPLIFIER**. Your TV/radio receiver will be damaged if they are reversed.

**Note:** The In-Line Signal Amplifier is designed for use with F-type connectors. For some antenna systems (such as scanners, for example), you will have to use connection adapters or make a special cable.

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## Installation A



**Caution:** To avoid damage to the amplifier, power injector or other connected equipment, do not plug in the power injector until all connections have been double-checked.

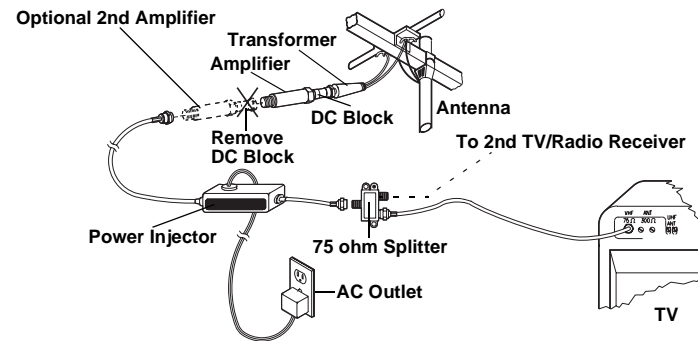
**Note:** An antenna transformer might not be included with your antenna and might not be needed. Check your antenna's owner's manual.

## ONE ANTENNA/TWO RECEIVER SYSTEMS

If you are using a single antenna with two TV/radio receivers, "Installation B" shows the proper connections. To avoid damage to your satellite/TV/radio receivers and/or the amplifier power injector, carefully check all the points listed below.

**Note:** Make sure the power injector is between the amplifier and the splitter (before the signal is split).

### Installation B





## **ONE SATELLITE DISH/RECEIVER SYSTEM**

Your In-Line Signal Amplifier can be used in a one-wire solution that allows you to combine the direct-to-home signal from your satellite dish and the VHF/UHF signal from your TV antenna by using a satellite signal splitter/combiner (not supplied) or a TV/satellite diplexer (not supplied). See the connection in "Installation C."

### **Combining the Outdoor Signal**

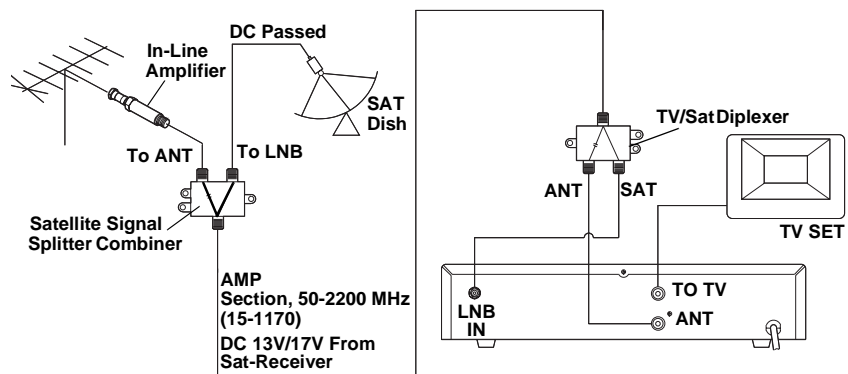
Use a satellite signal splitter/combiner to combine the output of the In-Line Signal Amplifier's signal and the direct-to-home satellite signal in a single coaxial output lead. The satellite/receiver transfers power to the In-Line Signal Amplifier and the satellite dish's LNB (Low Noise Block) unit. See the connection in "Installation C."

### **Splitting the Indoor Signal**

Use a TV/satellite diplexer to separate the In-Line Signal Amplifier antenna signal and the direct-to-home signal, then route them to the TV's antenna input and the direct-to-home receiver's input. See the connection in "Installation C."

**Note:** Normally, the direct-to-home receiver supplies power to both the antenna amplifier and the LNB converter.

### Installation C



## AMPLIFIED ANTENNAS

You can use the In-Line Signal Amplifier with amplified antenna systems, as shown in "Installation D."

If the power supply provided with your amplified antenna provides a center-positive power supply, it can be used to power the In-Line Signal Amplifier as well; you do not need the amplifier's power injector.

**Caution:** The In-Line Signal Amplifier cannot be used if the amplified antenna power supply is center negative.

In this case only, you should remove the DC block from the amplifier and connect the amplifier directly to the F-type connector on the antenna. Remove the plastic tube that holds the amplifier and DC block together and unscrew the two pieces.

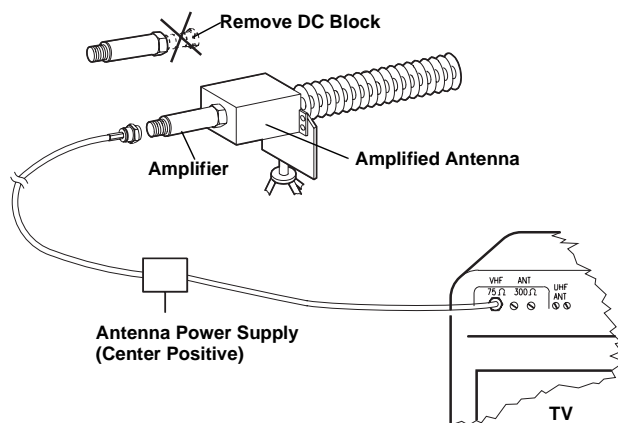
If the antenna is used with more than one TV receiver, you must follow all connection procedures for "One Antenna/Two Receiver Systems" on Page 8, except that the DC block between the antenna and the amplifier will be removed, as described above.

**Note:** The In-Line Signal Amplifier is designed for use with F-type connectors. For some antenna systems (such as scanners, for example), you will have to use connection adapters or make a special cable.

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## Installation D



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### Additional Amplification

If additional amplification is needed, you can connect another amplifier in the line with the first amplifier. Remove the DC block from the optional second amplifier.

**Notes:**

- The In-Line Signal Amplifier can only be purchased as a kit, with the Power Injector and DC Block. If you want to use a second amplifier in your system, retain the extra parts for future additions to your system or as replacements if other parts are damaged or lost.
- If you connect another amplifier in the line with the first amplifier, make sure there is at least 100 feet between each In-Line Signal Amplifier.

## **PROBLEM SOLVING**

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If the satellite/TV/radio receiver does not operate correctly after you install the In-Line Signal Amplifier:

- Immediately unplug the power injector.
- Check all connections and compare them with the appropriate installation drawing(s) in this manual.

**If no problems are found in the connections:** Plug in the power injector and try the satellite/TV/radio receiver again. If possible, try a different satellite/TV/radio receiver with the system or try the satellite/TV/radio receiver with a different antenna system.

**If the above procedures do not resolve the problem:** Take the unit to your local RadioShack store for assistance.

## SPECIFICATIONS

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### Amplifier

Frequency .....	50–2,220 MHz
Gain .....	50–2,200 MHz @10 dB MIN
Input Capability .....	83dB $\mu$ V MIN ( <b>7 CHANNEL INPUTS</b> )
Maximum Input for –60dB Third Order Distortion .....	84 dB $\mu$ V MIN (Tested VHF) 73 dB $\mu$ V MIN (Tested UHF)
Noise Figure .....	50–900 MHz. @ 7.5 dB MAX 900–2200 MHz @ 9.8 dB MAX

### Power Injector

Input .....	120V AC 60Hz
Output Voltage .....	DC 12 $\pm$ 1 V
Maximum Output .....	200 mA
Insertion Loss .....	50–950 MHz @1.5 dB MAX 951–1,750 MHz @ 2.5 dB MAX 1,751–2,200 MHz @ 4 dB MAX

### Limited Ninety-Day Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for ninety (90) days from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the limitations on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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