

## DIRECTV PI21

# DIRECTV PI21 Power Inserter User Manual

Model: PI21 (PI21R1-03)

Brand: DIRECTV

## 1. INTRODUCTION

The DIRECTV PI21 Power Inserter is an essential component designed to provide power to DIRECTV Single Wire Multiswitch (SWM) Low Noise Block (LNB) converters. This device ensures proper functionality of your SWM system by delivering the necessary voltage through the coaxial cable, eliminating the need for a separate power supply at the LNB location.

Key features include a frequency range of 2000 kHz to 2150 MHz, minimal signal loss of 2 dB, and compatibility with standard 100-120 V AC input. It features F-type ports for easy integration into your existing satellite setup. The PI21 is compatible with DIRECTV Slim Line Dish Antennas and supports SWM8 and SWM16 multiswitches through a coax connection.

## 2. SAFETY INFORMATION

### 2.1 Important Notice

**This device is designed exclusively for DIRECTV systems. It is NOT compatible with DISH Network or any other cable provider. Attempting to use it with incompatible systems may cause damage to the power inserter or connected equipment.**

### 2.2 General Safety Guidelines

- Ensure the power inserter is connected to a grounded electrical outlet.
- Do not expose the unit to water or excessive moisture.
- Avoid placing the unit in areas with extreme temperatures or poor ventilation.
- Do not attempt to open or service the unit yourself. Refer all servicing to qualified personnel.
- Ensure all coaxial cable connections are tight and secure to prevent signal loss or electrical hazards.

## 3. SETUP AND INSTALLATION

### 3.1 Package Contents

- DIRECTV PI21 Power Inserter Unit

- Attached AC Power Cord

### 3.2 Connection Overview

The PI21 Power Inserter features two F-type coaxial ports: 'SIGNAL TO IRD' and 'POWER TO SWM'. These ports are clearly labeled on the unit for correct connection.



Figure 1: Overview of the DIRECTV PI21 Power Inserter.



Figure 2: Front view detailing the 'SIGNAL TO IRD' and 'POWER TO SWM' coaxial ports.

### 3.3 Installation Steps

1. **Connect to SWM:** Connect a coaxial cable from the 'POWER TO SWM' port on the PI21 to the SWM LNB or SWM multiswitch. This connection delivers power to the SWM system.
2. **Connect to Receiver (IRD):** Connect a coaxial cable from the 'SIGNAL TO IRD' port on the PI21 to your DIRECTV receiver (IRD). This connection carries the satellite signal to your receiver.
3. **Power Connection:** Plug the attached AC power cord of the PI21 into a standard 100-120V AC electrical outlet.
4. **Verify Power:** Check for the indicator light on the PI21 unit to confirm it is receiving power and operating correctly.

The PI21 is suitable for both indoor and outdoor installation with remote power delivery, offering flexible placement options.

### 3.4 Wall Mounting Instructions

The PI21 unit can be wall-mounted for secure placement. Follow these steps:

1. Orient the power inserter with the coaxial connectors facing downwards.
2. Place drywall anchors at the desired mounting hole positions on the wall.

3. Mount the power inserter using #8, 1/4-inch slotted hex head screws, 1 inch long, through the flange mounting holes.
4. Tighten the two screws until the power inserter is firmly mounted to the wall.



Figure 3: Back view of the PI21, illustrating mounting flanges.

## 4. OPERATION

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Once properly connected and powered, the DIRECTV PI21 Power Inserter operates automatically. It continuously supplies the required 21V DC power to the connected SWM LNB or multiswitch, enabling it to function correctly and deliver satellite signals to your DIRECTV receiver(s).

### 4.1 Indicator Light

The unit features a small LED indicator light, typically located on the top surface. This light illuminates when the power inserter is receiving AC power and is actively supplying DC power to the SWM system. A lit indicator confirms normal operation.

## 5. MAINTENANCE

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The DIRECTV PI21 Power Inserter is designed for reliable, low-maintenance operation. To ensure its



longevity and optimal performance, consider the following:

- **Cleaning:** Periodically wipe the unit with a soft, dry cloth to remove dust and debris. Do not use liquid cleaners or solvents.
- **Connections:** Occasionally check all coaxial cable connections to ensure they remain tight and secure. Loose connections can lead to signal degradation.
- **Environment:** Ensure the unit is not exposed to direct sunlight, extreme heat, or freezing temperatures. While suitable for outdoor installation, protect it from direct weather exposure where possible.
- **Ventilation:** Ensure adequate airflow around the unit to prevent overheating.

## 6. TROUBLESHOOTING

If you experience issues with your DIRECTV system that you suspect are related to the PI21 Power Inserter, refer to the following troubleshooting steps:

### 6.1 No Satellite Signal or Intermittent Signal

- **Check Power:** Verify that the PI21's indicator light is illuminated. If not, ensure the power cord is securely plugged into a working electrical outlet.
- **Inspect Connections:** Ensure all coaxial cables are tightly connected to the 'POWER TO SWM' and 'SIGNAL TO IRD' ports on the PI21, as well as to the SWM LNB/multiswitch and the DIRECTV receiver.
- **Correct Port Usage:** Confirm that the cable going to the SWM LNB/multiswitch is connected to the 'POWER TO SWM' port, and the cable going to the receiver is connected to the 'SIGNAL TO IRD' port. Incorrect wiring can prevent the system from functioning.
- **Power Cycle:** Unplug the PI21 from the electrical outlet, wait 10-15 seconds, and then plug it back in. This can reset the unit.
- **System Reset:** If your DIRECTV receiver requires frequent resets, a failing power inserter might be the cause. Consider replacing the unit if other troubleshooting steps fail.

### 6.2 Unit Not Powering On

- **Check Outlet:** Test the electrical outlet with another device to ensure it is functional.
- **Power Cord:** Ensure the power cord is not damaged and is fully inserted into the unit and the wall outlet.

If troubleshooting steps do not resolve the issue, contact DIRECTV customer support or a qualified technician for further assistance.

## 7. TECHNICAL SPECIFICATIONS

Model Number	PI21 (PI21R1-03)
Frequency Range	2000 kHz to 2150 MHz
Signal Loss (Insertion)	2 dB
Input Voltage	100 V AC to 120 V AC
Output Voltage	21 V DC

<b>Output Current</b>	1.2 A max
<b>Max Power Output</b>	25.2 W
<b>Ports</b>	F-type (SIGNAL TO IRD, POWER TO SWM)
<b>Product Dimensions</b>	3 x 6 x 4 inches
<b>Item Weight</b>	11.8 ounces
<b>Manufacturer</b>	DIRECTV
<b>Compatibility</b>	DIRECTV SWM LNBs, SWM8 and SWM16 multiswitches
<b>Certifications</b>	UL Listed

## 8. WARRANTY AND SUPPORT

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For detailed warranty information, product registration, or technical support, please visit the official DIRECTV website or contact their customer service directly. It is recommended to keep your purchase receipt as proof of purchase for any warranty claims.

You can typically find contact information and support resources on the manufacturer's website or within your DIRECTV service documentation.