Fracarro 223392

Fracarro 223392 4-Input 30dB Amplifier Instruction Manual

Model: 223392 | Brand: Fracarro

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the Fracarro 223392 4-Input 30dB Amplifier. This device is designed to amplify Digital Terrestrial Television (DTT) signals, ensuring optimal reception quality. It features four inputs for various frequency bands and offers separate amplification for VHF and UHF signals, with internal adjustments to prevent accidental tampering. Please read this manual thoroughly before installation and use.

2. Safety Information

Always observe the following safety precautions to prevent injury and damage to the device:

- Ensure the power supply is disconnected before making any connections or adjustments.
- Do not expose the amplifier to moisture or extreme temperatures outside its specified operating range.
- Only use the specified 12VDC power supply.
- Avoid placing the amplifier near heat sources or in direct sunlight.
- Do not attempt to open or repair the device yourself. Refer all servicing to qualified personnel.

3. Product Overview

The Fracarro 223392 is a mast-mounted amplifier designed for enhancing DTT signals. It features a robust, shielded design for reliable performance.



Figure 1: Fracarro 223392 4-Input 30dB Amplifier with its protective cover partially open, revealing four F-type input connectors and corresponding gain adjustment dials. Labels such as 'DVB-T' and '30dB' are visible, indicating its function and capabilities.

Key Features:

- 4 Inputs for various frequency bands.
- Separate amplification for VHF and UHF bands.
- Internal gain adjustments to prevent accidental changes.
- Low noise figure for clear signal reception.
- Fully shielded for interference protection.
- Easy and quick installation with a pole mounting collar.
- Telepowering available on each input (100 mA total).

4. Setup and Installation

Follow these steps for proper installation of your Fracarro 223392 amplifier:

1. **Mounting:** Secure the amplifier to a mast or pole using the provided mounting collar. The collar is

suitable for poles up to 60 mm in diameter. Ensure the amplifier is positioned to minimize cable length to the antenna.

2. **Antenna Connections:** Connect your antennas to the appropriate F-type input connectors on the amplifier. The amplifier has four inputs:
    - Input 1: Band III + DAB (174 ÷ 240 MHz)
    - Input 2: Band IV (470 ÷ 558 MHz)
    - Input 3: Band V (566 ÷ 862 MHz)
    - Input 4: UHF (470 ÷ 862 MHz)
3. **Output Connection:** Connect the amplifier's single output to your TV or distribution system using a high-quality coaxial cable with F-type connectors.
4. **Power Supply:** The amplifier requires a 12VDC power supply. This power is typically supplied via the output coaxial cable (telepowering) from a compatible power inserter or TV. Ensure the power supply provides 12VDC and up to 100mA total for telepowering.
5. **Gain Adjustment:** Once powered, carefully open the amplifier's cover to access the internal gain adjustment dials. Adjust the gain for each input band as needed to achieve optimal signal strength without overdriving the signal. Start with lower gain settings and gradually increase if necessary.

5. Operating Instructions

The Fracarro 223392 amplifier operates automatically once properly installed and powered. Its primary function is to boost weak DTT signals from your antennas. No further user interaction is typically required after initial setup and gain adjustment.

- Ensure all connections are secure and the power supply is active.
- Monitor your TV's signal quality. If signal issues arise, re-check connections and gain settings.

6. Maintenance

The Fracarro 223392 amplifier is designed for minimal maintenance.

- **Cleaning:** Periodically inspect the amplifier for dirt or debris. Clean the exterior with a soft, dry cloth. Do not use liquid cleaners or solvents.
- **Connections:** Annually check all F-type connections to ensure they are tight and free from corrosion. Loose connections can lead to signal loss or interference.
- **Environmental Protection:** Ensure the amplifier's cover is securely closed to maintain its IP20 protection rating against dust and moisture.

7. Troubleshooting

If you experience issues with your amplifier, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
No signal or weak signal	No power to amplifier	Check 12VDC power supply and telepowering connection. Ensure power inserter is active.
No signal or weak signal	Loose or incorrect cable connections	Verify all F-type connectors are securely tightened to the correct inputs/output.

Problem	Possible Cause	Solution
No signal or weak signal	Incorrect gain settings	Adjust the internal gain dials. Avoid setting gain too high, which can cause signal distortion.
Interference or pixelation	Over-amplification (signal too strong)	Reduce the gain settings for the affected input band.
Interference or pixelation	External interference	Ensure all cables are shielded and properly routed away from power lines or other electronic devices.

8. Specifications

Feature	Specification
Model Number	223392
Manufacturer	Fracarro
Number of Inputs	4
Number of Outputs	1
Input 1 (Band III + DAB) Bandwidth	174 ÷ 240 MHz
Input 1 (Band III + DAB) Gain	30 dB
Input 1 (Band III + DAB) Noise Figure	4 dB
Input 2 (Band IV) Bandwidth	470 ÷ 558 MHz
Input 2 (Band IV) Gain	30 dB
Input 2 (Band IV) Noise Figure	8 dB
Input 3 (Band V) Bandwidth	566 ÷ 862 MHz
Input 3 (Band V) Gain	22 dB
Input 3 (Band V) Noise Figure	8 dB
Input 4 (UHF) Bandwidth	470 ÷ 862 MHz
Input 4 (UHF) Gain	22 dB
Input 4 (UHF) Noise Figure	8 dB
Gain Adjustment Range	20 dB
Max Output Level (IM3 -35 dBc, 2 tones, DTT signals)	116 dBuV (Band III+DAB), 121 dBuV (Band IV, V, UHF)
Power Supply	12 VDC
Telepowering	12V, 100 mA max (total)
Connectors	F-female

Feature	Specification
Working Temperature	-10 °C to +55 °C
Protection Rating	IP20
Compliance Standard	EN 50083-2 (89/336/EEC-EMC)

9. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact Fracarro customer service. Keep your proof of purchase for warranty claims.