BTECH RPS-30M

BTECH RPS-30M 30 Amp Regulated Bench Power Supply User Manual

1. INTRODUCTION

This manual provides detailed instructions for the safe and efficient operation of your BTECH RPS-30M 30 Amp Regulated Bench Power Supply. The RPS-30M is designed to convert standard AC household current to a stable 13.8V DC output, suitable for powering various DC devices such as CB, Ham, GMRS, and LMR radios.

Figure 1: Front view of the BTECH RPS-30M Power Supply.

2. SAFETY INFORMATION

To ensure safe operation and prevent damage to the unit or connected devices, please observe the following safety precautions:

- **Ventilation:** Ensure adequate ventilation around the power supply. Do not block ventilation openings.
- **Power Source:** Connect the unit only to a 110V AC, 60Hz power outlet.

- **Protection Features:** The RPS-30M includes built-in overheat, short circuit, and amperage surge protection. However, avoid intentionally short-circuiting the output terminals.
- **Moisture:** Do not expose the unit to rain, moisture, or excessive humidity.
- **Overload:** Do not exceed the maximum cumulative current of 30 Amps.
- **Servicing:** Refer all servicing to qualified personnel. Do not attempt to open or repair the unit yourself.

3. PRODUCT OVERVIEW

Familiarize yourself with the components and controls of your BTECH RPS-30M power supply.

Figure 2: Labeled front and rear panels of the BTECH RPS-30M Power Supply.

Front Panel Components:

- **Cigarette Plug Terminal (DC Power Outlet 10A):** Provides up to 10 Amps of DC power via a standard cigarette lighter socket.
- **DC Output On Indicator:** A green LED that illuminates when the power supply is active and providing DC output.
- **Power Switch:** Toggles the power supply ON or OFF.

Rear Panel Components:

- **Input Power Cable Socket:** Connects the power supply to an AC wall outlet using the provided power cable.
- **Fuse Holder:** Contains the replaceable 8A fuse for overcurrent protection.
- **Cooling Fan:** Automatically activates to dissipate heat during operation, ensuring optimal performance and longevity.
- **Output Terminals (DC Output 13.8V):** Red (+) and Black (-) screw-type terminals for direct connection of DC devices requiring up to 30 Amps cumulative current.

4. SPECIFICATIONS

The following table details the technical specifications of the BTECH RPS-30M power supply:

SPECS

INPUT VOLTAGE: 110V/60HZ
OUTPUT VOLTAGE: FIXED 13.8VDC±0.5V
DUAL POWER OUTPUT: CIGARETTE PORT/POLE TERMINALS
OUTPUT VOLTAGE REGULATION: LESS THAN 2%
OUTPUT CURRENT: 30A (MAX), 25A (CONTINUOUS)
RIPPLE & NOISE: LESS THAN 100MVP-P
FUSE: 110V 8A

Figure 3: BTECH RPS-30M Power Supply technical specifications.

Feature	Specification
Input Voltage	110V AC / 60Hz
Output Voltage	Fixed 13.8V DC ±0.5V
Dual Power Output	Cigarette Port / Pole Terminals
Output Voltage Regulation	Less than 2%
Output Current	30A (Maximum), 25A (Continuous)
Ripple & Noise	Less than 100mVp-p
Fuse	110V 8A
Product Dimensions (L x W x H)	7.5 x 5.7 x 1.85 inches
Item Weight	2.25 pounds

5. SETUP

Follow these steps to set up your BTECH RPS-30M power supply:

1. **Placement:** Place the power supply on a stable, flat surface. Ensure there is sufficient space around the unit for proper ventilation, especially around the cooling fan on the rear panel.

2. **AC Power Connection:** Connect the provided AC power cable to the input power cable socket on the rear panel of the power supply. Plug the other end into a standard 110V AC, 60Hz wall outlet.

3. **DC Device Connection:**
   - **For Screw Terminals:** Connect your DC device's positive (+) wire to the red terminal and the negative (-) wire to the black terminal on the rear panel. Ensure connections are secure to prevent arcing or poor contact.
   - **For Cigarette Plug:** Insert your DC device's cigarette lighter plug into the cigarette plug terminal on the front panel. This output supports up to 10 Amps.

Figure 4: Example setup with the BTECH RPS-30M powering a mobile radio.

6. OPERATING INSTRUCTIONS

Operating the BTECH RPS-30M is straightforward:

1. **Power On:** After connecting your DC devices, flip the Power Switch on the front panel to the 'ON' position. The DC Output On indicator LED will illuminate, indicating that the unit is providing power.

2. **Power Off:** To turn off the power supply, flip the Power Switch to the 'OFF' position. The DC Output On indicator LED will turn off.

3. **Multiple Devices:** The RPS-30M can power multiple devices simultaneously, provided their combined current draw does not exceed the maximum cumulative current of 30 Amps. Remember that the front cigarette plug output is limited to 10 Amps.

Figure 5: The RPS-30M powering an RF amplifier and a handheld radio.

7. MAINTENANCE

Regular maintenance helps ensure the longevity and reliable performance of your power supply:

- **Cleaning:** Periodically wipe the exterior of the unit with a soft, dry cloth. Do not use liquid cleaners or solvents.

- **Ventilation:** Ensure the cooling fan and ventilation openings on the rear panel remain clear of dust and obstructions. Use compressed air to gently clear any accumulated dust if necessary.

- **Fuse Replacement:** If the unit fails to power on, check the fuse located in the fuse holder on the rear panel. To replace, disconnect the AC power cable, unscrew the fuse holder cap, remove the old fuse, and insert a new 8A, 250V fuse. Replace the cap securely.

8. TROUBLESHOOTING

If you encounter issues with your BTECH RPS-30M, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
Power supply does not turn on (no LED indicator)	No AC power; Blown fuse; Faulty power switch	Check AC power cable connection and wall outlet. Replace fuse (see Maintenance section). If issue persists, contact support.

Connected device does not power on	Incorrect DC connection; Device fault; Overload protection activated	Verify positive and negative connections. Test device with another power source. Reduce total current draw if multiple devices are connected.
Unit overheats and shuts down	Blocked ventilation; Excessive load	Ensure cooling fan and vents are clear. Reduce the load on the power supply. Allow unit to cool down before restarting.

9. WARRANTY AND SUPPORT

BTECH products are designed in the USA and come with local warranty and support. For warranty claims, technical assistance, or further inquiries, please refer to the contact information provided with your purchase or visit the official BTECH website. Keep your proof of purchase for warranty validation.

Related Documents - RPS-30M

	[BTECH BF-F8HP PRO Instruction Manual](#) Comprehensive instruction manual for the BTECH BF-F8HP PRO Amateur Radio, covering operation, features, safety, and troubleshooting for this dual-band, dual-display, dual-watch device.
	[BTECH UV-25X2, UV-25X4, UV-50X2 User Manual](#) Comprehensive user manual for BTECH UV-25X2, UV-25X4, and UV-50X2 multi-band mobile radios. Covers setup, operation, programming, and technical specifications for reliable communication.
	[BTECH BF-F8HP PRO Amateur Radio Instruction Manual](#) Comprehensive instruction manual for the BTECH BF-F8HP PRO dual-band amateur radio. Learn about its features, operation, programming, safety guidelines, and troubleshooting for reliable communication.
	[MEAN WELL RPS-60 Series 60W Medical Power Supply - Technical Specifications](#) Detailed specifications for the MEAN WELL RPS-60 series 60W medical power supply, featuring 2xMOPP safety, low leakage current, and high efficiency. Includes electrical, environmental, and EMC data.

[MEAN WELL Power Supplies Catalog - August 2020](#)
Explore the comprehensive MEAN WELL Power Supplies Catalog for August 2020. This catalog details a wide range of AC/DC and DC/DC power supplies, including industrial, medical, DIN rail, open frame, and adaptor series, with detailed specifications and model information.

[Cisco Access Router Manager Installation Guide Software Release 1.1](#)
This guide provides installation and configuration procedures for Cisco Access Router Manager, enabling network managers to deploy and manage Cisco access routers and integrate with the Cisco Element Management Framework (EMF).

Documents - BTECH – RPS-30M

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BaoFeng And BTECH Radios btechspec uv25x4 v2 new baofengtech 2023 05 |||
BTECH UV-25X4 SECOND GEN. MOBILE TWO-WAY RADIO UV-25X4 Second Generation 25W Mobile Two Way Radio ... 70dB 1 to -3dB .3-3KHz 1 to -3dB .3-2.55KHz 45dB 40dB 5 2W 10 COMPATIBLE ACCESSORIES **RPS-30M** AC-DC Power Converter RPS-30PRO AC-DC Power Converter Mobile and Amp DC Cigarette Cable M...
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