

# Four 25 A Switch Mode Power Supplies

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QST Product Review Editor

The four switch mode power supplies reviewed here are all rated at 25 A continuous output at 13.8 V dc — a good match for a typical 100 W class HF transceiver and a few station accessories. Past reviews have featured a wide variety of power supplies from many manufacturers, and you can find these articles online.<sup>1-5</sup> The units described here are new since our last roundup in 2009.

Note that the 20 A data, while generally worst case, occurs during transmit not receive. This will be most significant in a multioperator, multitransceiver, environment. The data in Table 6 at 1 and 7 A may be more important for most users.

## Bottom Line

The power supplies in this group are small and light and ready to power transceivers and station accessories. There are some differences in features, and some perform better than others with regard to emissions that can cause interference in your MF/HF receiver.

<sup>1</sup>J. Bottiglieri, AA1GW, "QST Compares: Switching Power Supplies," Product Review, QST, Jan 2000, pp 70-73. QST Product Reviews are available to ARRL members online at [www.arrl.org/product-review](http://www.arrl.org/product-review).

<sup>2</sup>J. Bottiglieri, AA1GW, "Switching Power Supplies Revisited," Product Review, QST, Sep 2000, pp 76-79.

<sup>3</sup>S. Ford, WB8IMY, "ICOM PS-125 Power Supply," Product Review, QST, Sep 2002, p 62.

<sup>4</sup>M. Wilson, K1RO, "More Switching Power Supplies," Product Review, QST, Jul 2006, pp 58-61.

<sup>5</sup>M. Wilson, K1RO, "Four Switching Power Supplies," Product Review, QST, Aug 2009, pp 48-52.

## JETSTREAM JTPS30M

Jetstream's JTPS30M is packaged in a sturdy metal case with heat sink fins on top and four soft rubber feet. A rear panel VOLTAGE switch sets the output to 13.8 V fixed or 9 to 15 V adjustable via the front-panel VOLTAGE ADJUST knob. It's rated for 25 A continuous output and 30 A maximum. The supply is protected against short circuits at the output and current overload.

The illuminated front panel meter is switchable between voltage (0-16 V) and current (0-32 A). The front panel also offers two low current dc connections — a cigarette lighter socket rated for 10 A maximum, and a set of spring loaded terminals rated for 3 A.

The rear panel has binding posts for the high current output and a detachable ac line cord with a fuse holder on the line cord socket. The quiet cooling fan is mounted on the inside rear panel. It draws air through slots on the front.

The four page instruction manual includes illustrations of the front and back

panels with a short description of each feature, a table of specifications and a list of cautions. There are a few minor glitches in the English translation. No warranty information or schematic is included, but the Jetstream website indicates that there is a

1 year warranty on all products and an online warranty registration form is provided.

**Manufacturer:** Jetstream, 44 Hancock Ave, Hamilton, OH 45011; tel 800-524-4889, fax 513-868-6574; [www.jetstream-usa.biz](http://www.jetstream-usa.biz).

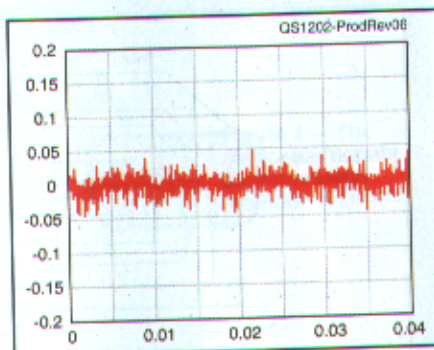


Figure 6 — An oscilloscope trace of the dc output of the Jetstream JTPS30M under 20 A load. The vertical scale is 50 mV/div and the horizontal scale is 5 ms/div. The level of the dc ripple is approximately 40 mV p-p. Spikes due to switching measure about 100 mV p-p.

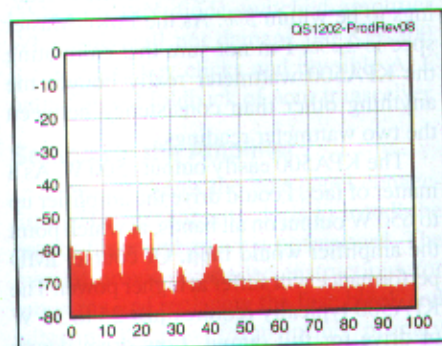


Figure 7 — Spectral plot (0-100 MHz) of the output of the Jetstream JTPS30M under 20 A load. The reference level is 0 dBm and the vertical scale is 10 dB/div.

**Table 2**

### Jetstream JTPS30M, serial no. 006902

#### Manufacturer's Specifications

Power requirement:	115 V ac $\pm$ 10%, 60 Hz.
Output voltage:	13.8 V dc (fixed), or 9-15 V dc (variable).
Output current (continuous):	25 A (30 A max).
Size (HWD):	2.7 x 7.5 x 8.5 inches; weight, 5.1 pounds.
Price:	\$130.

#### ARRL Lab Measurements

Output voltage, no load:	13.8 V dc (fixed), or 7.98-14.96 V dc (variable).
Output voltage, 20 A load:	13.69 V dc.
Low line drop out voltage:	78 V ac.
DC variation during dynamic testing:	110 mV.

