tween output voltage (0-16 V) and current (0-32 A). Low-current dc connections are provided by a cigarette lighter socket rated for 10 A maximum and a set of spring-loaded terminals rated for 3 A on the front panel. The high current output is via binding posts on the rear panel. The rear panel cooling fan draws air through slots in the front panel.

The most significant difference between the QJE and Jetstream supplies is the addition of a NOISE OFFSET control on the front panel. This feature increases/decreases the switching rate of the power supply and can be used to shift the frequency of any power supply noise that's heard in the receiver. In the Lab, some signals from the power supply were evident at 500 kHz. Increasing the NOISE OFFSET control from full counter-clockwise to full clockwise, the noise pulses changed from 29.7 kHz spacing to 33.3 kHz spacing. Switch mode power supplies can generate noise, and this one gives you an option to move the noise off of a frequency of interest.

Documentation is two 8.5 × 11 inch sheets folded in half. It includes information and cautions on using the supply, specifications, and descriptions of each control or connection on the front and rear panels. The last four pages are devoted to "For Your Safety" with Warning, Danger and Caution sections. No schematics or warranty information are included.

Manufacturer: Beijing Liontronics Technology Co, Beijing, China; **www.ftdbjb.com**. Available from a number of Amateur Radio dealers in the US.

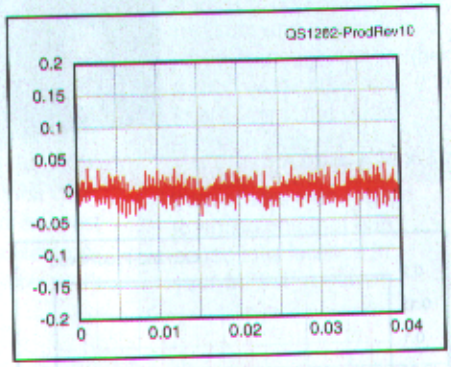

Figure 10 — An oscilloscope trace of the dc output of the QJE DX PS30SWII under 20 A load. The vertical scale is 50 mV/div and the horizontal scale is 5 ms/div. The level of the dc ripple is approximately 40 mV p-p. Spikes due to switching measure about 80 mV p-p.

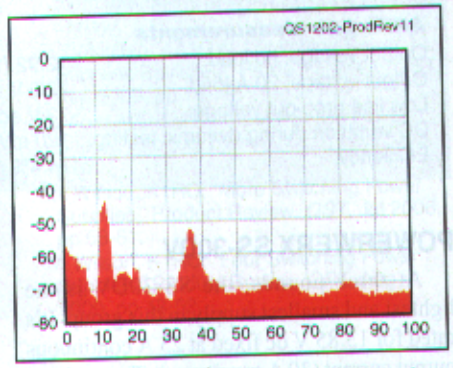

Figure 11 — Spectral plot (0-100 MHz) of the output of the QJE DX PS30SWII under 20 A load. The reference level is 0 dBm and the vertical scale is 10 dB/div.

TEN-TEC MODEL 941

Ten-Tec's Model 941 is a low profile 13.8 V, 25 A power supply intended for powering 100 W class HF transceivers. It uses a sturdy metal case with the cooling fan and air intake slots on the top panel. According to the instructions, the 941 needs at least 2 inches of clearance for the fan. The fan rarely ran, finally starting up after 10 minutes of testing with a 20 A load. When it ran, it was the loudest of the bunch. The supply can be mounted horizontally or vertically, and stick-on rubber feet may be attached to the bottom or side panel.

Controls and connections couldn't be simpler. There's an illuminated POWER switch on the front panel and a pair of binding posts on the rear panel for dc output. The

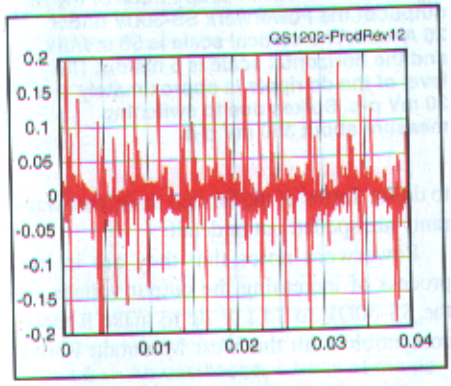

Figure 12 — An oscilloscope trace of the dc output of the Ten-Tec 941 under 20 A load. The vertical scale is 50 mV/div and the horizontal scale is 5 ms/div. The level of the dc ripple is approximately 70 mV p-p. Spikes due to switching measure >400 mV p-p.

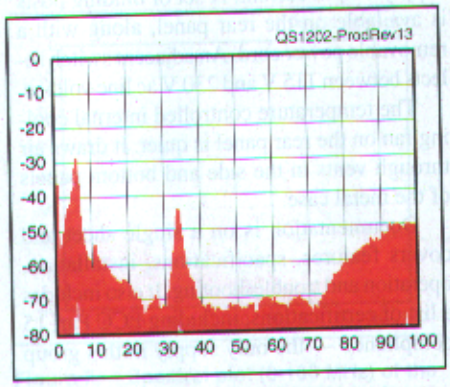

Figure 13 — Spectral plot (0-100 MHz) of the output of the Ten-Tec 941 under 20 A load. The reference level is 0 dBm and the vertical scale is 10 dB/div. See text for Ten-Tec's response.

Table 5
Ten-Tec 941, serial no. n/a

Manufacturer's Specifications

Power requirement:	90-132 or 180-264 V ac, 50/60 Hz.
Output voltage:	13.8 V dc.
Output current:	25 A (full load).

Size (HWD): 2.1 × 7.3 × 10.6 inches; weight, 4.6 pounds.
Price: $169.

Lab Measurements

Output voltage, no load:	13.84 V dc (fixed).
Output voltage, 20 A load:	13.35 V dc.
Low line drop out voltage:	72 V ac.
DC variation during dynamic testing:	490 mV.
Efficiency:	80% at 7 A; 81.9% at 20 A.