

THE DOC'S BATTERY & CHARGER REVIEWS

# VANSON SPEEDY BOX REVIEW

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JANUARY 2005

# REPORT

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## WHAT IS IN THE BOX?

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Out of the box comes the charging unit (a rather imposing black box), the separate AC power adapter and the instructions. The charging unit has 6 slots. Slots 1 to 4 are used to charge AAA, AA, C and D batteries. Slots 5 and 6 charge either one or two 9 volt batteries. Slots 5 and 6 can be seen on the top right hand side of the first picture. Slots 1 to 4 are visible in the second picture (together with the AC power Adapter).



Slots 1 to 4 have four contact positions (clearly visible in the second picture). Broadly speaking, the bottom contact is used by AAA batteries, the middle by AA and the upper two are used by C and D batteries.

On the reverse side of the unit there is technical data about the charger if you lose the instructions.

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## USER INSTRUCTIONS

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While the instructions have been improved over the last 12 months, they are still limited. This does not matter a great deal with this charger, because most functions are automated and it has extensive safety features. The documentation is **Satisfactory**.

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## CHARGER TYPE (UNIVERSAL OR MINI)

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The Vanson Speedy Box is a Universal style charger. While not as versatile as the Rezap Battery Doctor nor as fast as the Powerbase C-T3, it represents a great combination of speed and versatility.

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## BATTERY SIZES CATERED FOR

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The Vanson Speedy Box can charge a reasonable range of different battery sizes up to 4 at a time, including:

- ➔ AAA;
- ➔ AA;
- ➔ C;
- ➔ D;
- ➔ 9 volt (one or two can be charged at a time).

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## BATTERY TYPES CHARGED

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The Vanson Speedy Box can charge:

- ➔ NiMH; and
- ➔ NiCd.

You can charge a combination of NiCd and NiMH batteries at the same time. That is, you can mix battery chemistries, unlike many other chargers. You can also mix battery sizes because each slot is charged independently.

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## FEATURE SET

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Some of the major features of the charger are:

- ➔ Microprocessor controlled. The Vanson Speedy Box uses a high performance microprocessor to control the charging process;

- ➔ The Vanson Speedy Box uses a constant current pulse charge, which reduces to 1/10 when it trickle charges;
- ➔ Can charge up to 4 batteries at once in any combination. That is, 1, 2, 3 or 4 batteries. You cannot charge 9 volt batteries if you are using slots 1 to 4 (The Doc has not verified this, but that appears to be the case when reading the instructions);
- ➔ Automatic identification of defective batteries. The charger will not charge defective batteries. The LED on the relevant slot will go out or blink signalling a defective battery (this feature does not work with 9 volt batteries which use slots 5 and 6);
- ➔ Automatic detection of battery size and type;
- ➔ The user is able to mix battery size and type;
- ➔ Reasonable range of battery types and sizes taken (see above).
- ➔ 12 month warranty.

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## SAFETY FEATURES

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The Vanson Speedy Box uses a combination of hardware and software controls for safety, including:

- ➔ Faulty battery detection and rejection (**Warning:** does not work with 9 volt batteries);
- ➔ Overcharge protection;
- ➔ Short circuit protection;
- ➔ Wrong polarity protection. Which occurs when the user put the batteries in the wrong way;
- ➔ Negative delta protection; and
- ➔ Timer protection (AAA size 3.5 hours, AA size 5 hours, C size 6 hours and size D 11.5 hours—approx).

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## EASE OF USE

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Chargers do not come much easier, especially with so many safety features. Only the Rezap Battery Doctor is better. Put the batteries in and the Vanson Speedy Box does the rest. The safety features will protect the batteries from being over charged even if you forget to remove them. Even defective batteries will be identified and not charged (except 9 volts batteries).

One of the most idiot-proof chargers the Doc has ever used. The only real danger will come if you insert the wrong battery type, for example Carbon Zinc (often called heavy duty batteries) or Lithium ion batteries.

One added feature of this charger is the discharge function, very useful for NiCd batteries. After you insert the batteries into the charging slots, if you press the red button on the top of the Vanson Speedy Box within 30 seconds, the charger will discharge each battery before charging. When discharging the LED lights above each slot blink red.

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## PERFORMANCE

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The Vanson Speedy Box uses a three step charging process. First, the analysing stage. “In the analysing stage, each battery is subjected to a series of tests to determine the size and category they belong to (that is NiCd or NiMH). In the second stage the appropriate charging technique is used, depending on the information gained in stage 1. Once the batteries are charged the Vanson Speedy Box goes into the third stage which applies a trickle charge to the batteries. With 9 volt batteries, the only safeguard is a charge rate of 20mA for a maximum of 11.5 hours.

The constant pulse current charge for each battery size is:

- ➔ AAA – 300 mAh;
- ➔ AA – 500 mAh; and
- ➔ C, D – 700 mAh.

The discharge current is:

- ➔ AA, C and D – 350 mA; and
- ➔ AAA – 150mA.

The performance lies somewhere between so called “fast” chargers (2-4 hours for 2100mAh AA batteries) and the older style manual chargers. The Vanson Speedy Box is a relatively cool charger, which means the batteries do not become really warm or hot during charging. This is helped by separating the AV power adapter from the charger (the power source also being a source of heat during the charging process). The Vanson Speedy Box is hotter than the Rezap Battery Doctor and some batteries do get hot, but overall heat is not a major issue.

If you are looking for the fastest recharge rates, this is not the charger for you. But for a combination of speed and versatility it is ideal.

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## THE VANSON SPEEDY BOX IN USE

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The Doc has been using the Vanson Speedy Box for of every year (okay I have been slack in writing this review). It is a good charger, especially for NiCD batteries. A couple of observations:

- ➔ The only charger that comes close to fully charging super high capacity C and D NiMH batteries. With other chargers you need to put the batteries in once or twice to fully charge them. So if these C and D size batteries are what you use (common in the medical profession), this is the charger you need;
- ➔ Make sure the batteries are properly seated within the charger. Otherwise the charger may indicate the battery is defective. It is also a good idea to reset the charger each time you charge a set of batteries;
- ➔ If the charger indicates that a battery is defective, the Doc takes it out and places the battery into another slot and tests it again. If the second test shows the battery to be defective, throw it out.

The lack of comments is evidence of the good design of the Vanson Speedy Box. Now let us rank the charger.

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## DOC'S RATING (RANKED OUT OF 10)

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Feature set	8
Safety Features	10
Ease of use	10
Versatility	8.5
Value for money	7.0
Overall ranking	8.7
Documentation	Satisfactory

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## CONCLUSION

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If you only have NiCd or NiMH batteries and need to charge C and D batteries than the Vanson Speedy Box is the charge for you. It combines both versatility and speed in one charger. The Vanson Speedy Box gets the "Recommended Award".

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