

Troubleshooting

1. The **CardPro™ 2000** SRAM Battery Charger is current limited on its voltage output to the cards, and monitors these currents as well as the card battery monitor connections to produce the three colour light display.
2. The red light is only active if the battery is in a low state of charge and/or the current into the card exceeds normal limits. This can happen when a card is inserted as the capacitors charge, but this should only last for 1-2 seconds. If the red light remains on longer, either the battery is very discharged, or there is a problem with the card. If the yellow light appears, the battery is very low in voltage and must remain on charge to retain data integrity until the light changes green.
3. The intensity of the light is relative to the charging current. The intensity will reduce and the red light will change to green as the charging current reduces. This will normally reduce over a period of several hours (depending on the state of charge of the battery) to a much lower level. If the green light level does not reduce to the same level as other cards, then the card may well still be within specification, but very discharged. Leave it in the charger for 40hrs to see if the intensity of the green light falls. If there is no improvement, while the card may function correctly, the capacity of the battery may be substandard or there may be higher than normal static current flow in the logic circuits within the card.

Specification

1. **CardPro™ 2000** SRAM Battery Chargers, Part No: CP63000 and CP63002 are designed to run on 14 to 25 Volts DC unregulated, (500ma max) from an approved wall socket supply.
2. The charge, currents and voltages to the SRAM Cards are all controlled and limited. It is not possible to overcharge a battery if it is left in the charger for very extended periods
3. The standard unit is designed for use with **CardPro™ 2000** and Centennial/Smart Modular SRAM Recharge Cards. Modified versions are available to special order for use with other makes of rechargeable SRAM Cards.
4. The unit is designed for use in office and light Industrial environments.
5. This equipment conforms to EMC Directive 89/336EE, Section EN55022 and relevant sections of EN6100



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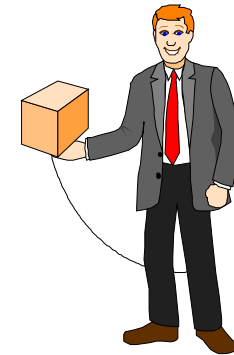
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CardPro™ International

CardPro™ 2000 SRAM BATTERY CHARGER



Purpose

The **CardPro™ 2000** SRAM Battery Charger is designed to recharge the data back-up battery in **CardPro™ 2000** and Centennial/Smart Modular SRAM recharge PCMCIA PC Cards. These cards have a non-removable Manganese Dioxide Lithium Secondary Battery that maintains data integrity while the card is not powered by the host computer. This battery is recharged when the card is in use in a host system and may need to be recharged occasionally, to maintain data integrity. This requires a 5V supply to be applied to the card for up to 40 hours, depending on the level of discharge. A computer or other host system may only apply voltage to the card when the data in the card is being accessed. Therefore, if the card is left in place with the system under power, but the card not being accessed, there is no guarantee that the data back-up battery is being recharged. The **CardPro™ 2000** SRAM Battery Charger will ensure that the battery state of charge is correctly monitored and maintained, with the added feature that the address, data and control lines to the card are properly conditioned, to ensure that any data held within the card is not corrupted during the charging process.

The basic charger module CP63000 can recharge and monitor up to four cards independently and does not use any computer resource. It only requires a mains power outlet. The CP63002 has three modules and accommodates up to twelve cards.

Installation

1. The **CardPro™ 2000** SRAM Battery Charger is powered by a Plug Top Wall Socket Power Supply that is normally supplied with the charger unit. The type of plug and input voltage is dependant on the country where the unit will finally be used. If the power unit is included, skip to 4.
2. In the case where the power unit is not included, please obtain a unit locally to conform with requirements of the country you are in. If you have problems locating a suitable unit, try asking for universal calculator mains adaptor.
3. The unit requires an unregulated DC supply in the range 14 to 25 volts at a maximum current of 500 mA. The power connection is via a 5.5mm female jack plug, with the positive to the 2.5mm centre pole and negative to the sleeve
4. The jack plug on the end of the power supply cable is plugged into the PC Card Charger by the socket on the left hand side of the front panel.
5. The **CardPro™ 2000** SRAM Battery Charger is now ready for operation.

IMPORTANT NOTES:

Please note that the standard model charger is designed for correct operation only with **CardPro™ 2000** and Centennial/Smart Modular SRAM Recharge Cards. Modified units are required for use with other makes of SRAM Recharge Cards, which have a higher static current consumption and give false readings. It is not possible to recharge any card which uses removable Primary Batteries.

The period of safe data retention is dependent on the type of card and memory size. Consult CardPro International for this information.

Application

1. To commence charge insert up to four SRAM cards into the slots in the front panel. Make sure that the cards are fully inserted.
2. The slots are independently controlled and the instructions apply equally to all four slots.
3. When the card is inserted, the three colour LED indicator beside the card slot may flash Red or Green momentarily and then settle to a colour. If the LED is Red the battery is discharged or, rarely, there is a fault in the card. It may take several hours for the light to pass through Amber to Green as the battery is recharged.
4. Once the intensity of the green light has reduced to a level where it is only just visible, the card is in a stable low current trickle charge state.
5. Leaving the cards in the charger after the intensity of the green light has become only just visible will not harm the card.
6. As there is no definitive point at which it can be shown that the card is fully recharged, it is recommended that cards which start Red should be left in the charger for 40 hours to ensure maximum charge of the battery. A card which starts bright Green should be left for 24 hours.