

Some hints on using controllers.

1, Power Supplies

- Running locomotives at a voltage significantly higher than their nominal value may result in overheating or even permanent damage. The same may happen to decoders in digital systems, under similar conditions. It is therefore **very important to select the correct power supply** and ensure it is configured properly. The recommended adapter DC output voltages are: 9V for Z scale, 12V for N scale, 12V-14V for TT scale, 14V-16V for H0 scale, 16V-22V for G scale locomotives, but first of all always follow the manufacturer's recommendation.

At lower loads, the output voltage of unregulated adapters can be much higher than their nominal voltage. When an adapter is used for the first time, check the temperature of the engines more frequently. When using an unregulated variable output adapter, set the output voltage to 7.5V for Z scale, 9V for N or TT scale, and 12V for H0 (TT) scale.

- There are two very similar sized connectors found on different types of wall adapters: 5.5/2.1mm and 5.5/2.5mm. The right connector for "Medvend" controllers is the 5.5/2.1mm. The other one also can be plugged in but it is the wrong size and the electrical contact could be uncertain.

- Do not use an adaptor, that is less powerful than needed, because the adapter may burn out.

-Do not use an adaptor, that is more powerful than needed, because extremely high short-circuit currents may cause damage to the controller.

- Do not leave running trains unattended. Always switch off or unplug the wall adapter from the outlet after use.