

IMPORTANT !

It has been proven that a development tool can be damaged at a moment when the emulator's debug connector is plugged into the target system when neither the target nor the emulator are powered up.

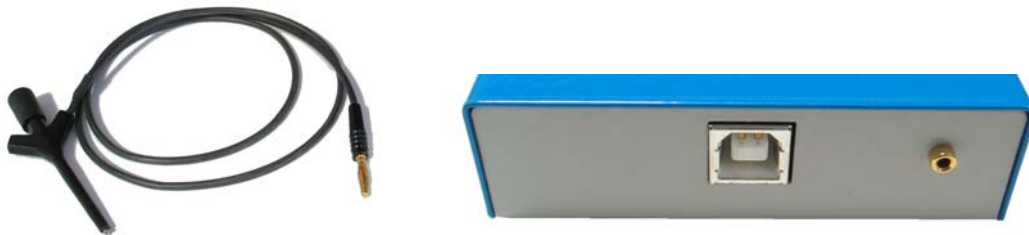
Let's assume that the emulator and the target system are both connected to separate power supplies, which are switched off and connected to power outlets. At that point, the voltage difference between target ground and emulator ground may not be the expected 0V, but can actually reach over 100V in worst cases. As soon as the emulator's debug connector is plugged into the target, this voltage difference produces a current spike in the ground line(s) connecting the emulator and the target. The bigger the voltage difference, the larger the spike and the longer it lasts. This current can easily damage the emulator unit even if no power is applied yet!

If there is a perfect ground connection between all the parts of the »development tool & target« system, the voltage difference is close to 0V, which does not represent significant danger to the development tool.

The voltage difference can be introduced by:

- power supply (target, emulator), which does not have the power outlet ground connected with the power supply ground.
- power outlets which have different ground potentials
- PC, when iONE connects to the PC through the USB port

iSYSTEM delivers a special ground wire with the iONE emulator unit. This ground wire is intended to eliminate the voltage difference between the emulator and the target.



iONE with the ground wire and the ground pin

An iONE user must first connect the ground wire between iONE and the target system before connecting the iONE's debug connector to the target system.

Note: iONE warranty is void when the ground wire is not used!



The ground wire connecting the target and iONE