

miniDiSC application note #2: Warnings on the instrument display

This document lists the different warnings that the miniDiSC can produce, it tells you what they mean, and what you can or should do about it. None of these warnings is really critical, i.e. you can still continue to measure despite the warnings.

Corona voltage out of range

This warning means that the high voltage in the unipolar corona charger is higher or lower than we expected it to be when we wrote the instrument firmware. It does not necessarily mean that the instrument is not operating properly, but it might be. If you see this warning, you need to check the corona voltage in the advanced menu:

If it is larger or equal to 5 kV, and remains so constantly, then it is appropriate to clean the corona wire. If it is between 2-3kV, this could be normal operation at low ambient pressure (i.e. you are at an alpine site or doing airborne measurements). If it is between 2-3kV and you are at or close to sea level, then it could be due to dirt on the counterelectrode of the charger.

In either case, you should check the display of the charging current, both with the charger on, and with the charger off. It should be 0nA with the charger off, and 10 ± 1 nA with the charger on. If it is not 0nA with the charger off, this means there is either dirt on the counterelectrode, or that you are operating the instrument at condensing conditions (too high relative humidity RH) and that a film of water has formed on the counterelectrode insulation. If you think the RH could have been too high, keep the charger turned off, and continue to run the instrument in an environment with low RH. The charging current should then go back to 0. If it does not, you have to clean the counterelectrode.

If the charging current is below 9nA with the charger on, and the corona voltage is ≥ 5 kV, then you must clean the corona wire. See separate instructions on how to clean the corona wire and the counterelectrode.

Dirt on counterelectrode

This warning appears if the charging current is nonzero when the corona charger is turned off. Follow the instructions in the section on corona voltage out of range for too low corona voltages.

No or bad SD-card inserted

This warning appears if you try to start recording when no SD-card is inserted in the instrument, or if the SD-card is not formatted properly. If this warning appears despite that there is an SD-card in the instrument, then you should reformat it.

File system error

If this error occurs, you should reformat your SD-card

Card full

This error occurs when your SD-card has no more space to write data. You should remove it, save all data on it, and reformat it. Note that the 2GB card can store over 1 year of continuous 24/7 data.

General error

Contact instrument manufacturer