

Micro Specialties, Inc.

P.O. Box 871077
Wasilla, Alaska 99687-1077
Ph: 907-373-7424
Fax: 907-376-2894
Micro-Specialties.com

Basic Hydra II Probe Tester and Configuration Tool June 21, 2006

This document describes the operation of our simple test and configuration program for Hydra II SDI-12 soil probes. The CR10X program is released today as SDITest.csi, and is intended for use in testing and configuring Hydra II SDI-12 IDs.

The program operates on one Hydra II program at a time. It will:

- Discover a probe's SDI-12 ID
- Modify a probe's SDI-12 ID
- Display a probe's self-calculated parameters, and its raw voltages

The program responds only to CR10X flags 1 through 3 as follows:

- **F1** – Discover the SDI-12 ID of the probe connected to C3. The probe's ID will be displayed in the input location named ID_FOUND.
- **F2** – Modify the SDI-12 ID of the probe connected to C3. The probe's ID will be changed to the ID in the input location named SETID. Upon completion, the value of ID_FOUND should be the same as SETID.
- **F3** – Display the self-calculated parameters and the raw voltages generated by the probe connected to C3.

This program will discover probes with IDs in the range of 0 through 4 only, and will set IDs only in the range of 1 through 4.

Functions Step-By-Step

For all functions, begin by connecting a **single** Hydra II SDI-12 probe as follows:

<u>Wire</u>	<u>CR10X Panel</u>
Red	12V
Blk	G
Blu	C3

Probe ID Discovery (F1)

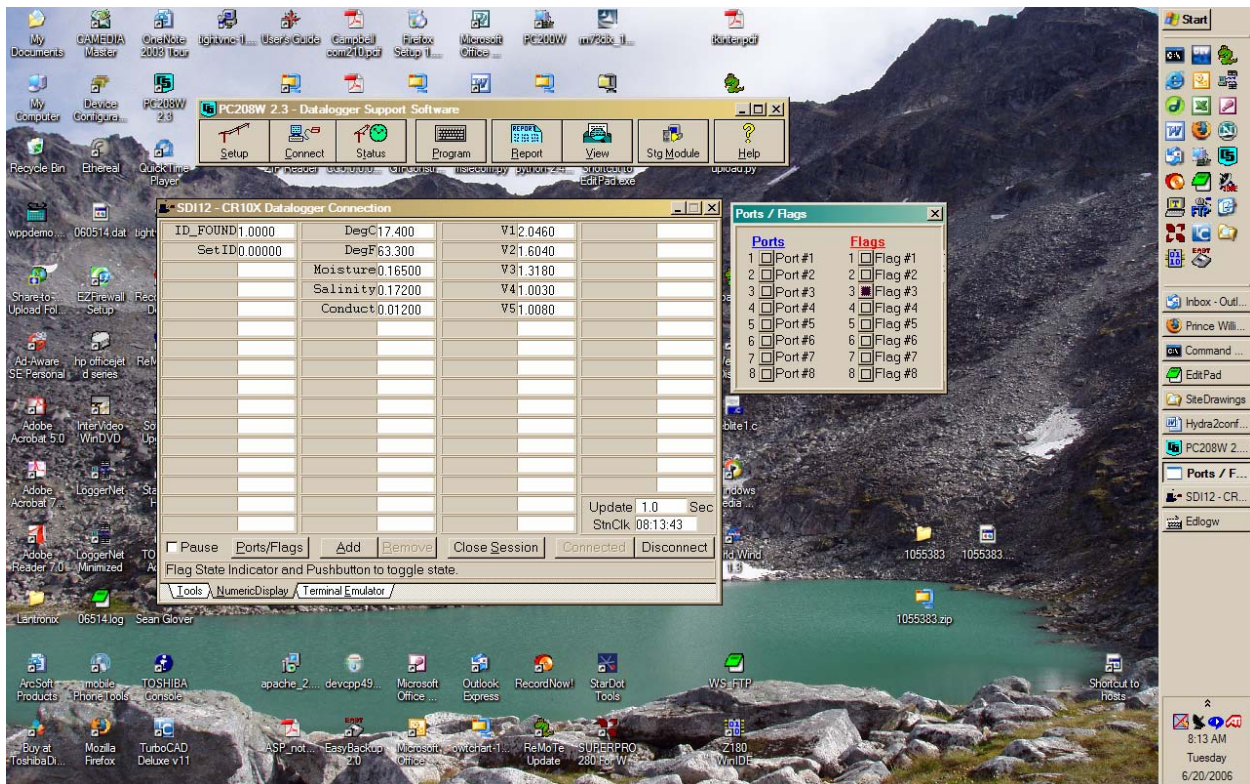
1. Connect the probe as above.
2. Open the Numeric Display.
3. Open the Ports/Flags panel.
4. Click Flag F1.
5. Momentarily, input location named **ID_FOUND** will change to -999.
6. After a few seconds, **ID_FOUND** will change to the probe's SDI-12 ID, and the probe's self-calculated soil parameters will be displayed in the input locations

Modify a Probe's SDI-12 ID (F2)

1. Connect the probe as above.
2. Open the Numeric Display.
3. Open the Ports/Flags panel.
4. Edit the input location named **SETID** to the numeric ID to assign to the probe.
5. Click flag F2
6. After a few seconds, **ID_FOUND** will change to the value you placed in **SetID**, and the probe's self-calculated soil parameters will be displayed in the input locations **degC** through **Conduct**.

Display a Probe's Raw Voltages (F3)

1. Connect the probe as above.
2. Open the Numeric Display.
3. Open the Ports/Flags panel.
4. Click flag F3
5. After a few seconds, **ID_FOUND** will change to the probe's SDI-12 ID, and the probe's self-calculated soil parameters will be displayed in the input locations **degC** through **Conduct**, and the raw voltages will be displayed in the input locations **V1** through **V5**.



CR10X Input Locations:

ID_FOUND SDI-12 Device ID discovered by the program
SetID Edit this location, then press F2 to set a new SDI-12 ID

DegC The sensor temperature in degrees C
DegF The sensor temperature in degrees F
Moisture The sensor calculated soil moisture in fraction form
Salinity The sensor calculated soil salinity
Conduct The sensor calculated soil conductance

V1 .. V5 The sensor raw voltages (F3)