ADCON TELEMETRY

TECH • INFO

General Field Station Maintenance

One of the keys to promoting both accurate data collection and long hardware life from your A733 system/sensors is conducting simple and regular field maintenance. The A733 field hardware is designed to help minimize both the training and tools necessary to conduct standard field maintenance. If you do not already have them, most standard maintenance can be conducted with tools and products found at a local hardware store such as a soft cloth, water, screwdrivers, spirit levels, etc.

The frequency of maintenance may depend upon the site and the local environmental conditions. In general it is recommended to visit each field station four times per year to conduct standard maintenance (see table on following page). At a minimum, maintenance should be conducted twice per year. Extreme conditions caused by high winds, dust, moisture, or exposure to caustic chemicals may necessitate more frequent maintenance.

There can be a wide range of effects from neglecting standard periodic maintenance. In some cases, depending upon environmental conditions, there may be neglible effects on sensor readings or equipment life. For example, in the case of some permanent crops such as orchards or vineyards, a light coating of dust on WIN, SEN-R, WET, or RG sensors generally will not significantly effect sensor values or equipment longevity.

Solar panels, however, can be effected by: a) bird droppings, or b) dust or mud that can accumulate especially near row crop plantings. Neglecting to properly clean the solar panel can reduce the recharge rate of the internal backup battery and possibly cause data delivery to fail. If the battery charging cycle is not corrected, it can also reduce the effective life of the internal backup battery.

RTUs and sensors are deployed where they come in contact with caustic chemicals (pesticides, fungicides, fertilizers, etc). In some cases, these chemicals can attack sensor elements, connectors, or the RTU casings. In such cases, the chemicals should be washed off regularly with clean water (typically during recommended maintenance intervals) so that most negative effects will be limited.

Documenting the regular field maintenance conducted on your field hardware is highly recommended. These records can help Adcon support staff troubleshoot unusual readings in the case that they occur. If you have any additional questions, please contact your local Adcon distributor or you can e-mail the Adcon Telemetry support staff at support@adcon.at (Europe, Africa, Asia and Australia) or support@adcon.com (North and South America).

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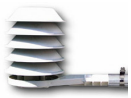
Hardware		General Maintenance Actions
	A733 RG (rain gauge)	• Clean at standard maintenance interval (2-4 times per year). • Clean RG funnel with water. • Gently clean spoon with water and clean soft cloth. • Ensure all debris is removed from inside and outside of the device. • Check to ensure final installation is level.
	SEN-R (temperature & relative humidity)	• Clean at standard maintenance interval (2-4 times per year). • Clean any dirt/debris from radiation shield. • Remove radiation shield and check Humicap for dirt buildup. • Replace Humicap once per year.
	WET (leafwetness)	• Clean at standard maintenance interval (2-4 times per year). • Clean the sensor with a clean cloth moistened with water.
	WIN (windspeed & direction)	• Clean at standard maintenance interval (2-4 times per year). • Very carefully clean the black cups and direction pieces with a clean cloth moistened with water.
	SR (global radiation)	• Clean at standard maintenance interval (2-4 times per year). • IMPORTANT: clean dome with soft DRY brush to avoid scratching the dome. Finish cleaning by GENTLY wiping dome with clean water and soft, clean cotton cloth. • Check to ensure that final installation is level.
	solar panels	• Clean at standard maintenance interval (2-4 times per year). • Clean panel with clean water and soft cloth or squeegee.

	RTUs	• Clean at standard maintenance interval (2-4 times per year).
		• Check antenna and connector.
		• Clean birding droppings and dirt from casing and around antenna and I./O port connectors.
		• Open RTU once every 2 seasons.
		  o Replace internal seal.
		  o Replace with fresh, bright blue silica gel bag.
		  o Check for signs of corrosion.
		  o Replace internal battery every 3-4 seasons.

	sensor cables & connectors	• Clean at standard maintenance interval (2-4 times per year). • Check entire length of cable for signs of cuts or damage. • Check binder connectors to make sure they are clean and corrosion free.