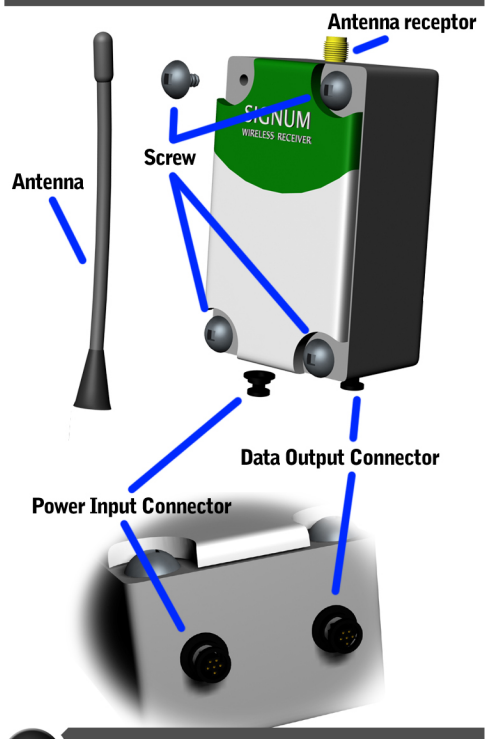
USER'S HANDBOOK

SIGNUM
WIRELESS RECEIVER
TO WIRED DATAPORT

Information to user

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

1 GETTING STARTED



1 GETTING STARTED

Short Range Wireless Communication

The Hortimetre probes are link to the signum receiver through wireless signal. The signum translate the signal into an analog signal that could be use by your PC, Portable PC using Irrolis Software

The following restrictions should be considered prior to put any network in place.

MAXIMUM PROBES PER SIGNUM RECEIVER

The SIGNUM Data Signal Converter could acknowledge the signal from up to 24 probes, using each probe unique serial number to identify the members hooked up to the Signum Receiver.

MAXIMUM DISTANCE BETWEEN PROBES AND SIGNUM RECEIVER

The SIGNUM Data Signal Converter could reach a distance of 500 feet in a normal indoor greenhouse environment. In outdoor condition, the range is 1000 feet.

1 GETTING STARTED

POWER INPUT FOR SIGNUM

In order to be operational, to receive and emit data, the Signum Receiver must be served by a power source from the followings:

12 VOLTS BATTERY PACK

The **SigPack** from Hortau could be used to provide a power source for the Signum Receiver, SigAll Long Range. Using 8 regular D batteries, the **SigPack** will provide power throughout its cable to the Signum RS232 Power Input Connector.

Adaptor for batteries 12 Volts provided by Hortau.

1 GETTING STARTED

ACQUIRING DATA FROM SIGNUM

The Signum Receiver translate signals from its wireless data port(Antenna) to a wired data port(RS232). The data ouputed could be acquired using the following methods :

SIGNUM to Long Range Emitter

If your need is to send the data at a long distance from the SIGNUM, a Long Range Emitter could be used in order to send the data to another receiver placed remotly from the site.

SIGNUM to PC

For a connection between the SIGNUM Receiver and a PC, please use the SigPCKit. The SigPCKit is a cable enabling a connection between a PC and a SIGNUM Receiver. The PC must have a serial port in order to use the SigPCKit. Connect the cable to your PC and to the SIGNUM Data Output Connector. In order to use all the data generated by the Hortimetre probes through the SIGNUM and to display it on your PC, you must use the Irrolis Software provided with every new signum PC by Hortau. Please refer to your distributor or Hortau's web site for complete specifications.

1 GETTING STARTED

If you don't have a serial port, you can plug the signum using a serial to USB converter (Not provided)

SIGNUM to PC using Long Range Wireless Emitter/Receiver For a connection between the SIGNUM Receiver and a portable PC, please use the SigPCKit.

Connect a signal to the signum data port. Disconnect the power from the signum and connect it to the signal. The signal will automatically provide power to the signum.

Connect a second signal to your PC using the adapter provided with every signal. Your PC must have a several port. If it doesn't, you can connect to a USB port using a serial to USB connector (Not provided, available in virtually any electronic or computer store).

In order to use all the data generated by the Hortimetre probes through the SIGNUM and to display it on your PC, you must use the Irrolis Software for PC by Hortau. Please refer to your distributor or Hortau's web site for complete specifications.

2 DISPLAY

The Signum Digital Signal Converter displays key information using the following logos :

Power On
Power is "on" when the light is green.

Data Collision
When the light is flashing, the Signum detects data collision. Please refer to the troubleshooting section.

Signal Quality

Poor signal quality

Acceptable signal quality

Ideal signal quality

2 IMPORTANT NOTICE

Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power(EIRP) is not more than that required for successful communication. This equipment has been tested and found to comply with the limits for Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. This device has been designed to operate with an antenna having a maximum gain of 2.2 dB. Anatenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

5 TROUBLESHOOTING

No Display	a. Verify that the batteries are not dead by replacing them with new ones. b. If the problem continues, use the attached warranty form.
Non-stop "ON" state	a. Cut off the power by disconnecting the Sig power pack for a short period (10 seconds). b. If the problem continues, use the attached warranty form.
No Signal	a. Hortimetre too far away b. Hortimetre out of power

6 PERIPHERIALS

SIGPACK Battery Pack
Power Output: 12 Volts DC
Connector : HR30GR6F
Prod. No.: 012-700-000

SIGNUM Wireless Receiver
Hub for 24 probes
Power Input : HR30GR6F
Data Output : HR30GR6F
Input Voltage : 9-24 DC
Prod. No.: 012-500-000

SIGALL Long Range Wireless RF Emitter/Receiver
Hub for 24 probes
Power Input : HR30GR6F
Input Voltage :12 DC
Prod. No.: 012-600-000

SIGPC Connection Kit for PC
(Provided free with SigAll)
Connector : Serial Port
Wire Lenght : 24 inches
Prod. No.: 012-900-000

6 PERIPHERIALS

Signum Wireless Receiver
The Signum Wireless Receiver is a dedicated device that receives the RF signal from the Hortimetre and that convert it into RS-232 communication protocol.

SigAll
Long Range
Wireless Emitter/Receiver
The SigAll Long Range Wireless Emitter/Receiver enables a non-stop communication over a 25 000 feet distance, from an Hortimetre to your PC.

SigPack
12 Volts DC Battery Pack
Using 8 D batteries, the SigPack provides 12 DC Volts to any Hortimetre peripherial, such as SigAll or Signum. The SigPack provides its power through a HR30GR6F connector.

7 INFORMATIONS

All Models	Specs
Display:	LED & Picto
Power Supply:	2.4 to 3.3 DC 50 mAmp
Data Output :	Analogic
Signal :	0 - 2.5 Volt DC
Connector:	HR30-GR6F
Weight :	1,25 kg
Height:	14cm
Lenght:	6 cm
Frequence :	418 mHz
Communication Protocol:	RS-232

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