



MESURE ET ENREGISTREMENT DES GRANDEURS PHYSIQUES

Manuel d'utilisation
User manual

SPY^{RF} Tc

06252 A



JULES RICHARD INSTRUMENTS

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I. INTRODUCTION

Congratulations, you own a SPY RF Tc. This device is equipped with 1 or 2 thermocouple inputs. It enables you to record 1 or 2 temperature (depending on the model) and to transfer wirelessly the recorded data by radio frequency to a PC.

a) Equipment

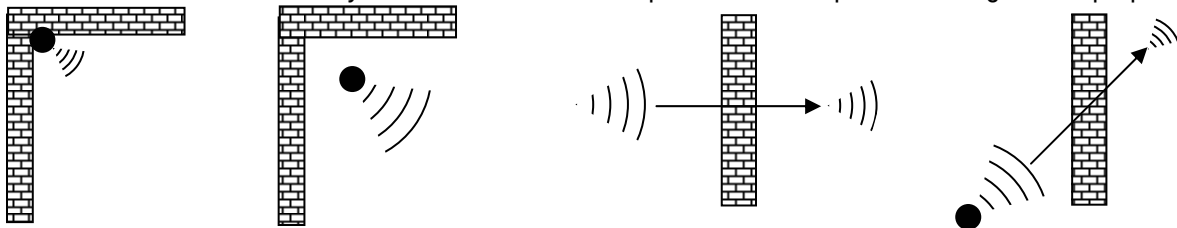
- 1 SPY RF Tc
- 1 wall-mounting bracket
- 1 adhesive plaster
- 1 connector protection
- 1 user manual

II. INSTALLATION RECOMMANDATIONS

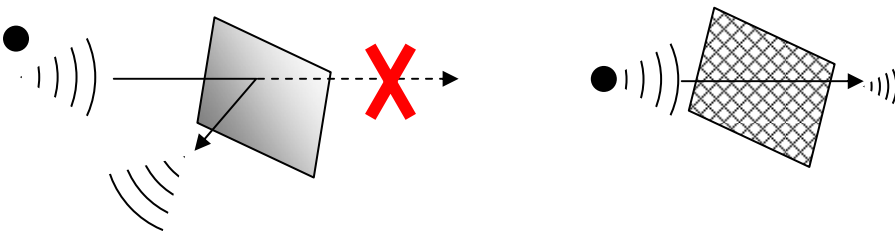
The Spy RF is a recorder of physical parameters able to communicate wirelessly with the operating software SIRIUS. The wireless communication is based on radio frequency. As we are daily in contact with it (radio, TV...) it is easy to think that it always works. These true if basic rules on recorders positioning are respected concerning because wireless communication is subject to perturbations.

a) Perturbations sources

- Presence of obstacles in the way of the waves between the Spy RF ModeM and the Spy Rf (wall, ceiling, person, furniture...) or close to the antenna.
- Obstacles thickness in the way of the waves. The absorption is more important in diagonal as perpendicularly



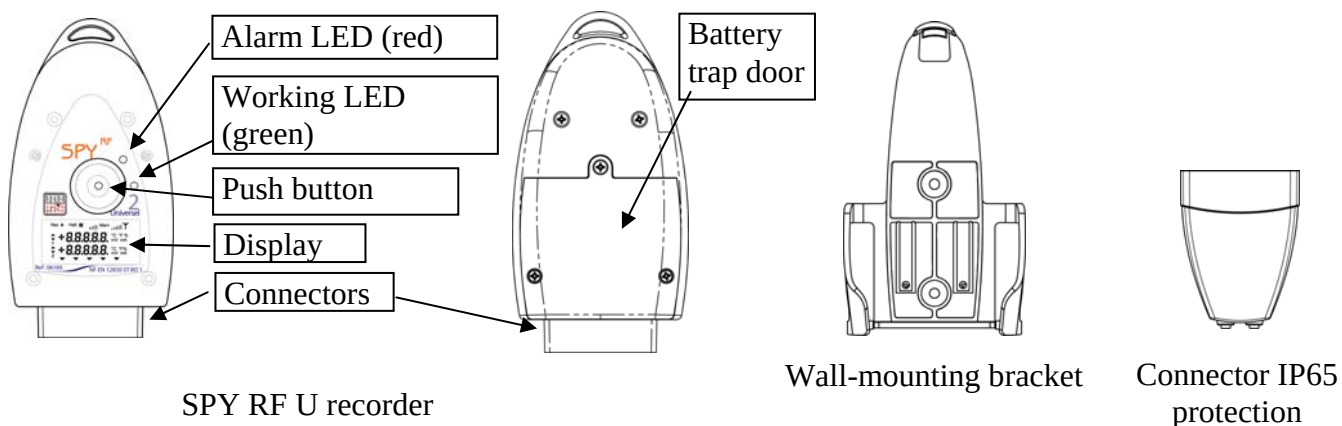
- Waves cannot pass through full metallic walls. On the other hand, a perforated wall allows the waves passing with attenuation



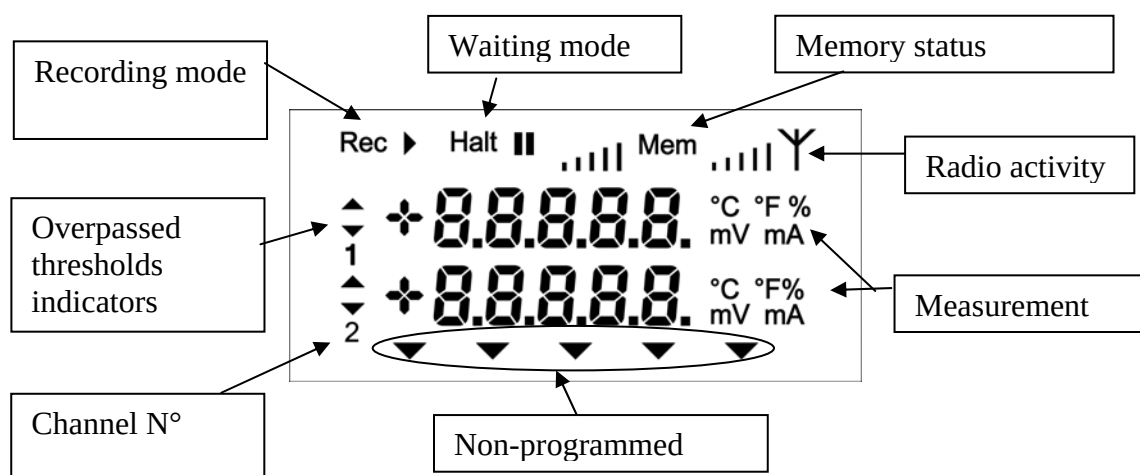
b) installation recommendations

- Place the devices at ~2m high and around 30 to 40cm from the ceiling to avoid obstacles and moving persons.
- If possible, place the Spy RF in central position regarding the Spy RF recorders.
- Try to place them preferably at sight of each other .
- On the wall, it is preferable to them aside by using the special bracket (ref 08512) of the catalog.
- Place the antenna above the top the monitored unit (fridge, incubator, oven, cold rooms...),.
- Never place the Spy RF horizontally.
- If some difficulties persist, it is possible to use Spy Rf RelaY (repeaters) or to connect another Spy RF ModeM to the Ethernet network (LAN).

III. PRESENTATION



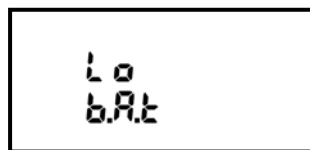
a) Display



b) Complementary information



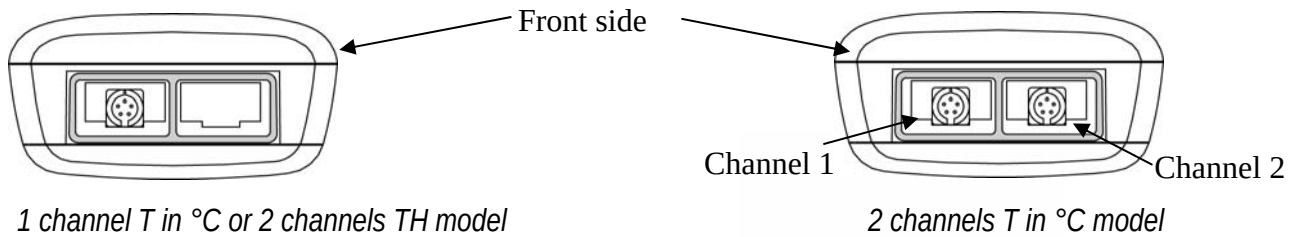
Full memory. You must transfer the data to your PC.



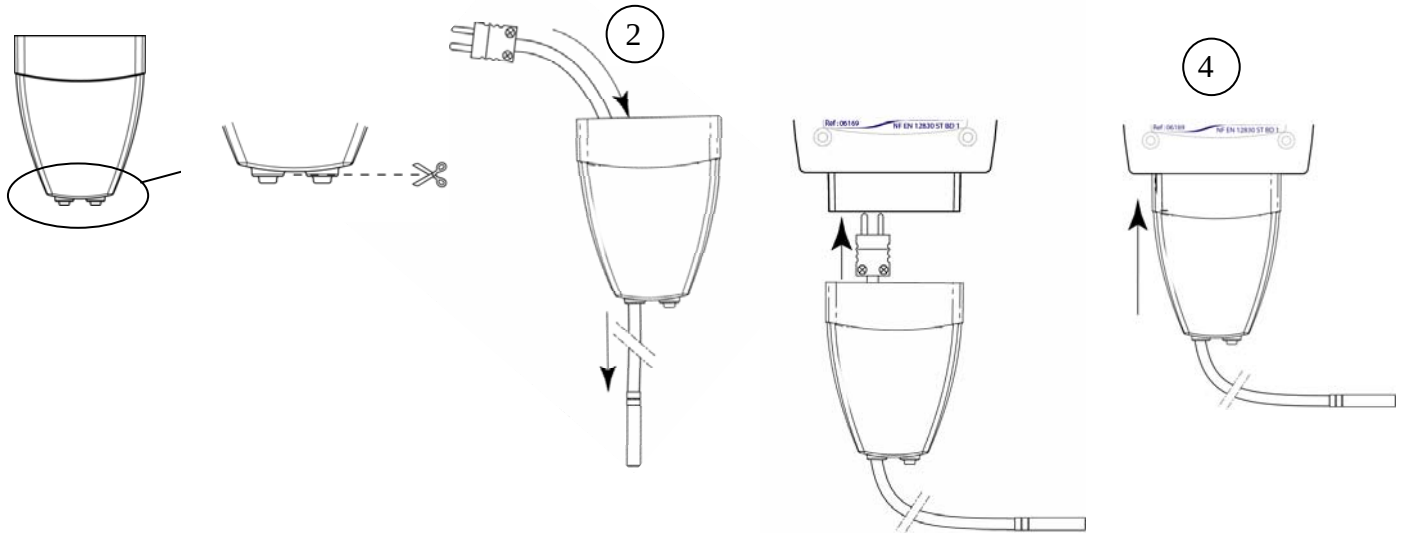
Low battery. You must change the battery.

c) Connector

The SPY RF U is equipped with rapid connectors which make the installation of different type of probes very easy. The probes can otherwise be disconnected from the recorder to be changed or to change the recorder itself.



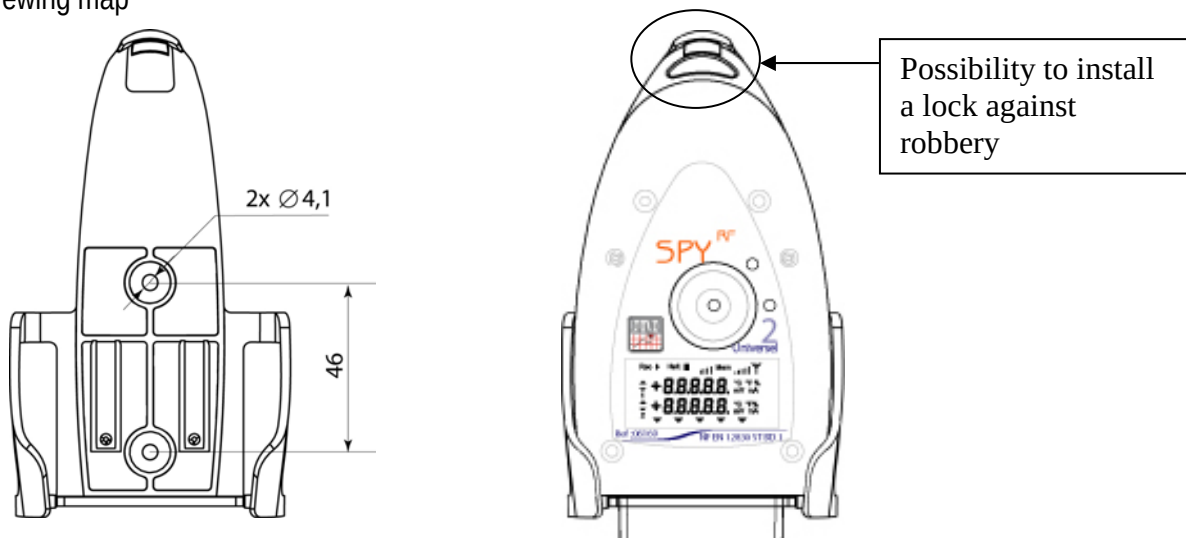
d) Connecting probes



IV. INSTALLATION OF WALL-MOUNTING BRACKET

The bracket can be fixed thanks to its adhesive plaster or it can be screwed.

Screwing map

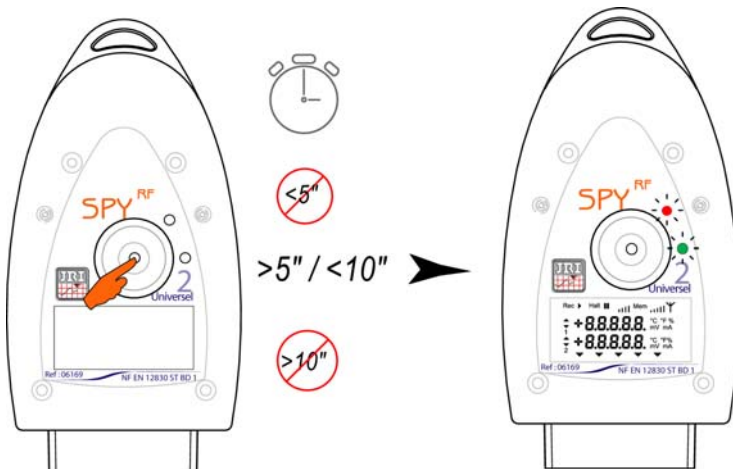


V. USE

a) Stop

When you receive it, your SPY RF is stopped. Only the time clock is active. It can neither emit nor receive anything.

b) Start



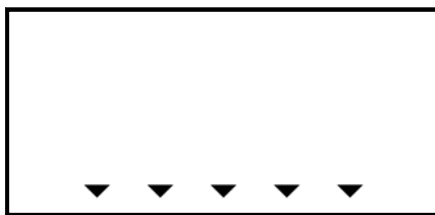
To start your SPY RF, please press between 5 and 10" on the button:

- the 2 LEDs are on and flash at the same time
- all the display segments are also on
- SPY RF is now in waiting mode

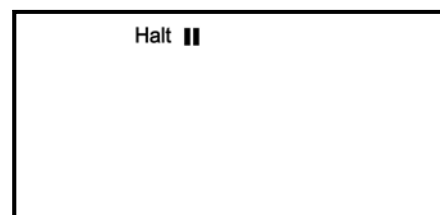
Remark: If you press >10" => no effect => remains off

c) Waiting mode

The SPY RF is ready to receive a configuration or to start a new recording session.

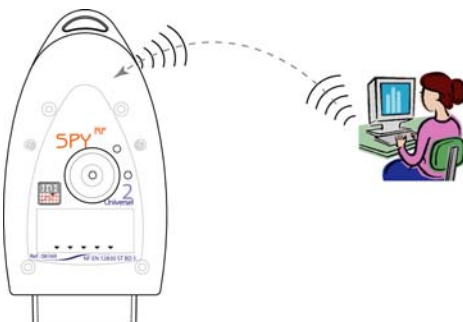


The triangles are on: there is no configuration.



The symbol "**Halt**" is on:
- the SPY RF is configured
- possibility to restart it depending on configuration

d) Configuration



SPY RF configuration is done from the Sirius software and then transferred into your SPY RF by radio frequency.

e) Measurement start

The SPY RF has 2 starting mode:

- automatic start
- manual start

f) Automatic start

Your SPY RF starts recording:

- automatically when the configuration is transferred,



+



Working LED (green):
2" => starting measurements
then flashes every 1 minute

It displays the temperature in °C degrees, channel number, measurement unit and memory status.

The green LED flashes every minute.

The temperature, threshold indicator, channel number and a red LED flashes every 15 sec in case the threshold limit is overpassed.

- at a programmed date and time:



dd / mm / yy
hh / mm / ss



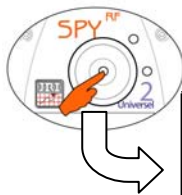
+



Working LED (green):
2" => starting measurements
then flashes every 1 minute

g) Manual start

- Press shortly on the pushbutton



+



Working LED (green):
2" => starting measurements
then flashes every 1 minute

It displays the temperature in °C degrees, channel number, measurement unit and memory status.

The green LED flashes every minute.

h) Alarm visualisation

The SPY RF is equipped with different alarm indicators, when a threshold limit is overpassed.

➤ Pre alarm



➤ Alarm



Threshold indicator
High or low

Value measured
Flashes every 15"

+

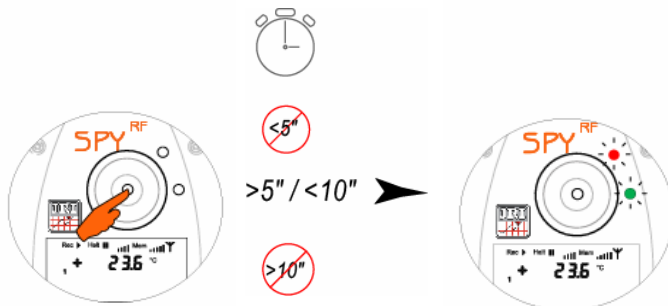


Alarm LED (red):
Flashes every 15".

i) Measurement stop

Depending on the configuration, the SPY RF can stop recording or not. The different options are:

- Rolling memory: once the memory is full, the new values replace the old ones.
- Full memory: the recorder stops when its memory is full.
- With the software: you can put the SPY RF in standby mode with Sirius when you do not use your recorder.
- With the pushbutton: this option is valid only if the SPY RF is configured in transport mode with a start by pushbutton.



To stop your SPY RF, press between 5 and 10" on the button:

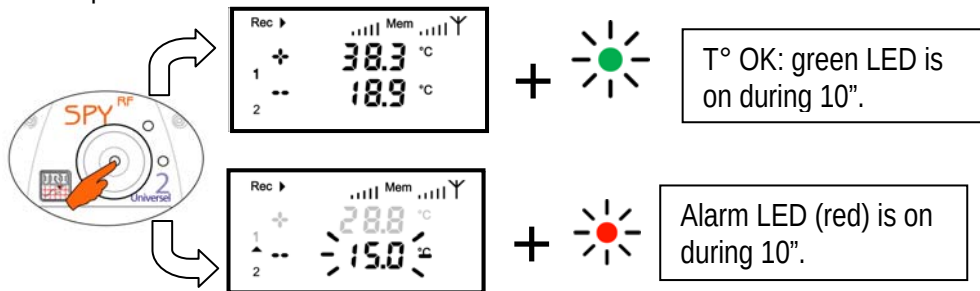
- The 2 LEDs are on and then flash alternatively.
- The screen goes off, Halt goes on.

j) Auto control or top zone

The type of action depends on the SPY RF configuration.

TOP ZONE = Transport mode and AUTO CONTROL = Storage mode

This function enables you to customise an action of measurement check-up. You just have to press shortly on the pushbutton.



The action is recorded and will appear on the curve when you process the data with your software Sirius.

k) Leds and pushbutton actions fonctionning

The green led is on 2" when the measurement starts and then flash each 1' in recording mode.

Specials fonctionning regarding the recorder using mode

Device set up in storage mode

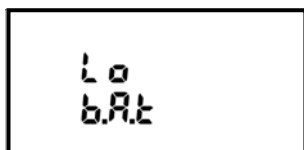
Mode \ Pushbutton pressing	< 5"	5"> pressing <10"
OFF	-	The 2 leds are on and flash at the same time.
Waiting setup	Red led 2"	-
Starting measurements		
Pushbutton	Green led 2" = begining of measurements	-
Delayed (date & time)	-	-
Immediatly	-	-
Mesure	Green led 10" = auto control	-

Device set up in transportation mode

Mode \ Pushbutton pressing	< 5"	5"<appui>10"
Off	-	The 2 leds are on and flash at the same time.
Waiting setup	Red led 2"	-
Starting measurements		
Pushbutton	Green led 2" = begining of measurements	-
Delayed (date & time)		The 2 leds are on and flash at the same time = Waiting for starting measurements
Immediatly	-	The 2 LEDs are on and then flash alternatively = ending measurements
Mesure	Green led 10" = Top zone	The 2 LEDs are on and then flash alternatively = ending measurements

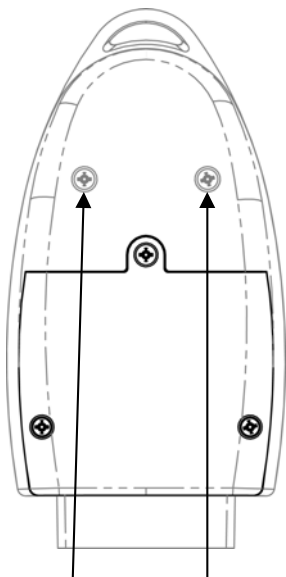
VI. BATTERY CHANGE

When the SPY RF battery has to be replaced, the LCD screen displays the following message:

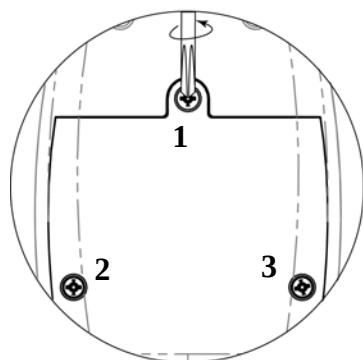


DOWNLOAD THE MEMORY BEFORE CHANGING THE BATTERY. NEVER WAIT UNTIL THE BATTERY IS EMPTY OR THE DATA WILL BE DELETED.

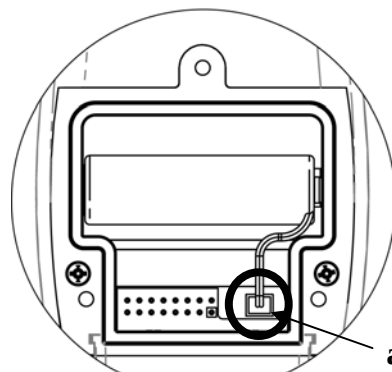
To replace the battery, follow the instructions below:



Never unscrew.
this can cancel
the guaranty



Open the battery cover



Pull up the connector "a"
Shunt the 2 pins on the board
Plug the new battery
Change the seal
Close the battery cover

Beware



Keep the battery far from fire. Don't
try to reload it or to short-circuit it.

BEWARE: ONLY USE BATTERIES SUPPLIED BY JULES RICHARD INSTRUMENTS (REF: 06569)

VII. FEATURES

FEATURES	SPY RF TC
Measurement range	Depending of the sensor used in the limit of -200 +1370°C
Number of channels	1 or 2
Type of input	Thermocouple K
Accuracy	±0,3°C on full range without sensor
Recording interval	1s to 90 min
Memory size	20 000 measurements
Operating conditions	-30 +70°C
Temperature for storage	-40 + 85°C
Radio range (in free field)	1 km
Radio band	868MHz
Battery lifetime	2 years
Dimensions	123x69x30mm
Protection level	IP65
CE ERM conformity	EN 301 489 / EN 61000 / EN 61010 EN 55022 / EN 300 220

VIII. WARRANTY

Jules Richard Instruments products carry a one year warranty and guarantee against defects in their components or workmanship. During this period if any product supplied by the Company proves on inspection to be defective, the Company will at its own option replace the same or refund to the Buyer the price of the product.

In no circumstances will Jules Richard Instruments' liability exceed the price of the product paid by the buyer or the cost of replacement.

Jules Richard Instruments shall not in any event be liable to the Buyer for any indirect or consequential loss or damage costs or expenses whatsoever which might arise out of or in connection with the supply of the product or its consequent use.

Consequently, the products warrantee and guarantee specified above, does not cover damage caused by fair wear and tear, abnormal storage conditions, incorrect use, accidental misuse, abuse, neglect, misapplication or modification, or use with non-Jules Richard Instruments' hardware/software. No warranty of fitness for a particular purpose is offered and the user assumes the entire risk of using the product.

In line with our policy of continuous development, we reserve the right to amend our product specification without prior notice.

IX. MAINTENANCE CONTRACT

Jules Richard Instruments remains at your side...

How to optimize your radio frequency installation?

RF measuring systems communicate by radio frequency. However, there may be several factors that can modify the radio ways already defined, such as moving from a building, adding walls, ... Radio frequency requires thus a periodical follow up performed by specialists.

That's why Jules Richard Instruments has created maintenance contracts. We bring you a global solution which makes your maintenance easier. This overall service offer includes maintenance and also metrological services, which ensure you that your system is fully performant.

You won't worry about your devices maintenance anymore !

With this maintenance contract you will benefit for a minimal period of 2 years from the following advantages:

- material verification once or twice a year
- warranty extension
- telemaintenance
- telephone assistance
- material replacement on site or by return in our manufacture
- metrological certificates: verification of measurement accuracy
- battery change
- access to new software versions and updates
- on-site intervention time within 3 open days after problem identification by our experts

X. NEED OF HELP ?

Our JRI CUSTOMER SERVICE is at your disposal to answer your technical questions at:

+33 (0) 892 680 933 (0,282 € HT/min)

XI. ENVIRONMENT PROTECTION

JRI recommends to our customers to throw away their measuring and recording devices which are unserviceable and/or beyond repair in a way that is appropriate to environment protection. Insofar as the production of waste cannot be avoided, it is best to re-use them by proceeding with adapted recycling depending on the material used and considering the environment protection.

RoHS Directive

The ROHS European Directive rules and limits the presence of hazardous substances in electrical and electronic equipments (EEE). This Directive applies from 1st June 2006.

In the article 2, the scope of this Directive excludes "9. Monitoring and Control Instruments" and our products are part of this category. Therefore, Jules Richard Instruments' products are not concerned by this new directive.

Nevertheless, our company has decided to apply the whole dispositions of this Directive for all our new electronic devices which will comply to this 2002/95/CE Directive, on 1st June 2006 at the latest.

