DESCRIPTION

ODM808 features all the necessary devices for supervision of remote broadcasting sites. A tuner option allows to check the audio presence on FM. ODM 808 is a 19" 1 U unit.

ODM808 features :

⇨ 8 digital inputs (opto coupleur). They can be used as loop input or voltage input (3 to 24V).

⇨ 8 analog inputs (voltage input 0Vdc to 10Vdc)

⇨ 8 digital outputs (mos opto coupler). They can be used as loop or voltage output. This very recent device features all the dry loop benefit, avoiding mechanical wear.

⇨ 1 front panel USB port allowing to reload default IP adress (192.168.0.80) or equipment update.

An optional cellular modem, is used to send alarms to pre recorded numbers. Alarms can be routed to specific numbers according to their origin. The modem allows to receive remote control for external devices. The remote control can be used only by authorized telephone numbers. The remote control access can be defined for each calling numbers.

ODM808 status, can be verified by SMS. On request it sends a SMS including its status.

ODM808 features a one hour backup, using a battery, refilled during transmit or receive. This is very useful in case of power supply fail on the site. The power fail activates instantaneous SMS transmission. An other SMS is sent on power recovery.

ODM808 features an ethernet port to connect a local area network. All settings use the embedded web server. Therefore OMD 808 can be set using a PC whatever operating system. Input status can be displayed using the web browser, and it is also possible to switch the outputs.

ODM808T features an optional FM tuner, to monitor audio channels, left, right, left + right, or left and right.

Audio balanced output is available on a rear panel Sub D. Audio is also monitored using a cellular phone.

Audio signal loss threshold and duration are SMS remotely controlled. This is very useful when the equipment is distant.

When ODM808T is far from the transmitter, the battery back up allows to send a SMS because of power fail, inevitably followed by the signal reception on the tuner, after battery discharge.

INFORMATION

Warning !!!

ODM808 mains connector has three wires (2 poles + earth). Earth should imperatively be connected to mains earth.

⇨ Never use this equipement without proper grounding.
⇨ Check quality of grounding.
⇨ Never open the case without disconnecting mains
⇨ Avoid high temperature exposure.
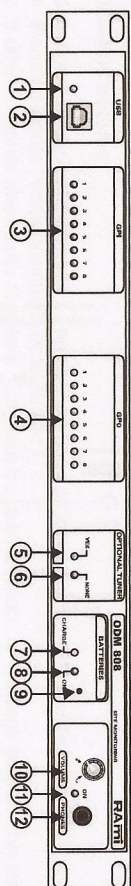⇨ Never expose the equipment to rain, snow or moisture.

ODM808 complies with : EN60065, EN55013, EN55020, EN60555-2, and EN60555-3, according to 73/23/EEC, 89/336/EEC and 93/68/EEC.

BLOCK DIAGRAM
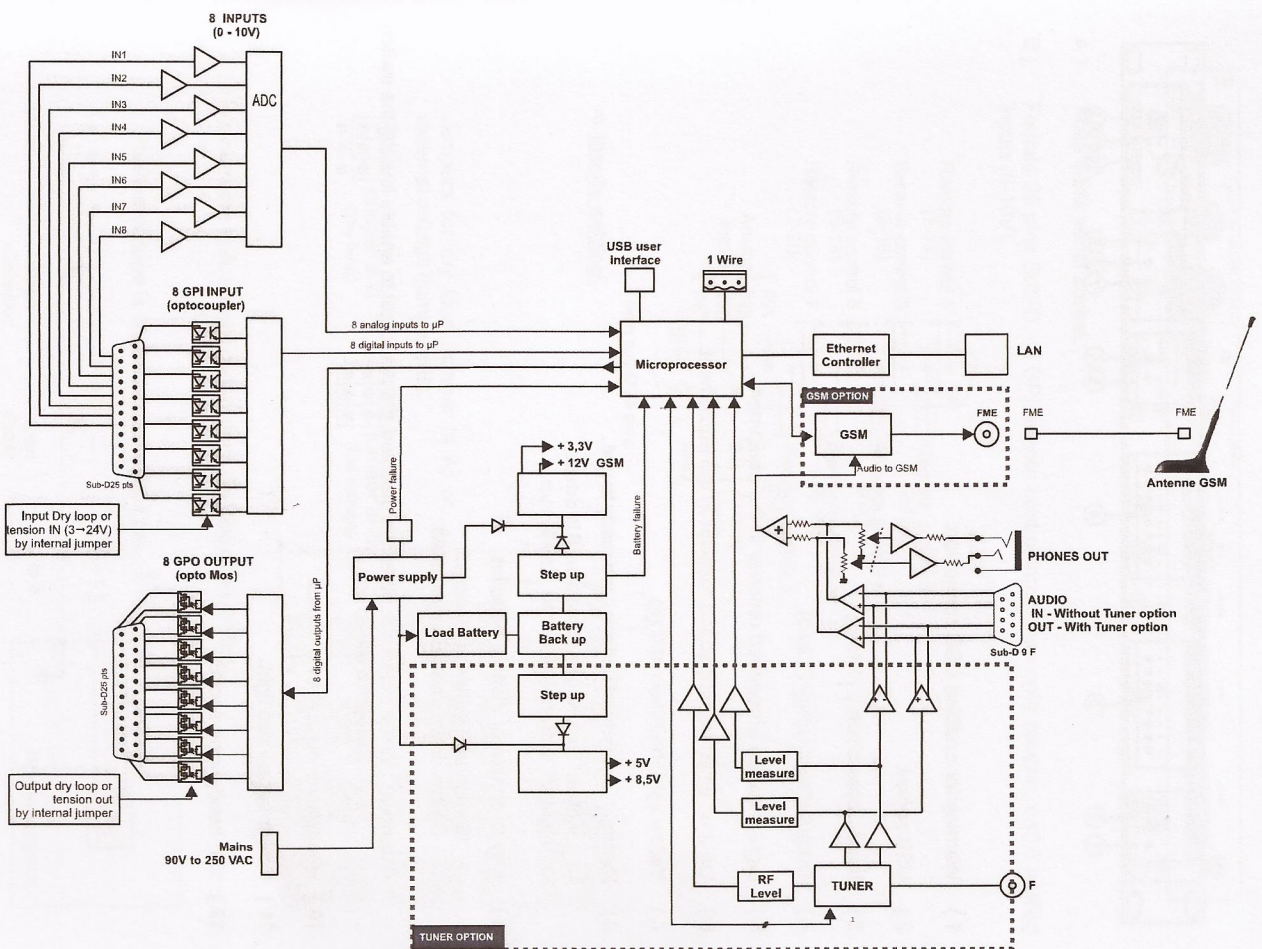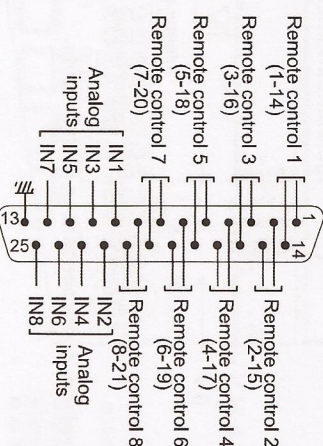
1) Warning for enabled USB connexion.

2) USB socket.

3) Inputs state display (1 to 8).

4) Output state display (1 to 8).

5) Light on when embedded receiver in the equipment.

6) Light on when no embedded receiver in the equipment.

7) Yellow light, batteries refilling.

8) Red light, embedded batteries are ready to use.

   ↳ Light on: batteries enabled. Key 9 is down.

   ↳ Light off: batteries disabled. Key 9 is up.

9) Key to enable or disable batteries.

   ↳ Switch up : batteries disabled.

   ↳ Switch down : batteries enabled.

Attention : When delivered, battery is disabled. Do not forget to enable it using the switch. The light 8 will be on.

10) Headphone output level control.

11) Power supply red light.

12) 1/4" headphone socket.
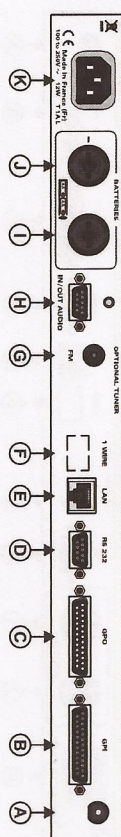
A) Male GSM aerial socket.

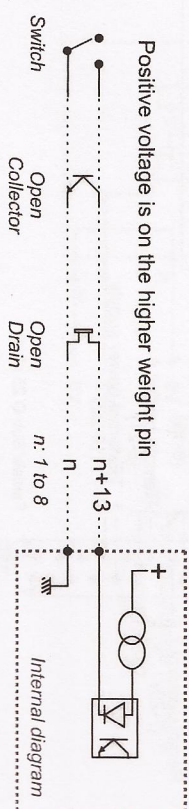B) Female 25 pins Sub-D. 8 GPI remote control inputs use opto coupler, and 8 analog inputs (0-10V).

↳ **Inputs setting**

male sub-D 25 plug

Remote control 1 (1-14)
Remote control 3 (3-16)
Remote control 5 (5-18)
Remote control 7 (7-20)
Analog inputs
IN1
IN3
IN5
IN7

13
25
1
14

Remote control 2 (2-15)
Remote control 4 (4-17)
Remote control 6 (6-19)
Remote control 8 (8-21)
Analog inputs
IN2
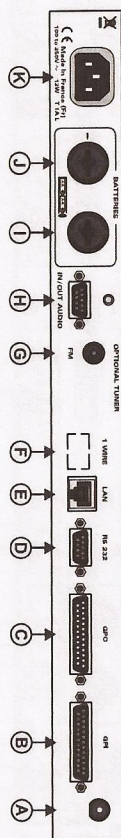IN4
IN6
IN8

jumper in A (Dry loop)

jumper in B (Ext voltage)

Jumpers for dry loop (jumper in A) or external voltage (jumper in B).

↳ **Jumpers in A :** remote control uses dry loop or equivalent.

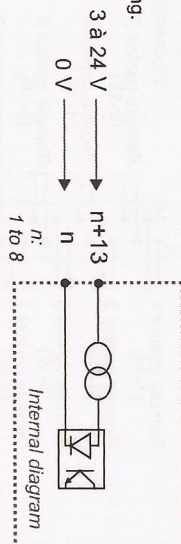Input1 Input2 Input3 Input4 Input5 Input6 Input7 Input8

Positive voltage is on the higher weight pin

n+13
n: 1 to 8
n

Switch

Open Collector

Open Drain

+

Internal diagram

⇨ **Jumpers in B**: remote control uses external voltage.

The external voltage is floating.

Note

in B
(External voltage)

3 à 24 V
0 V

n+13
n

n: 1 to 8

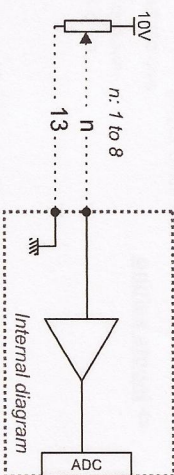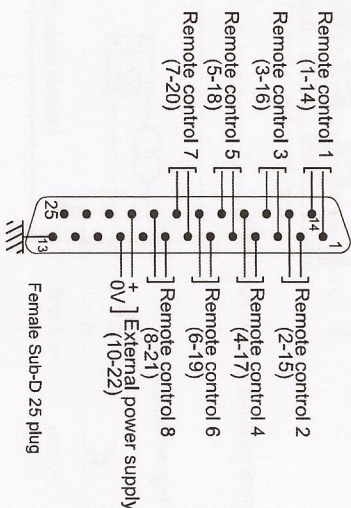*Internal diagram*

Positive voltage is on the higher weight pin

Note: choice of dry loop or voltage is independent on each 8 inputs.

⇨ **Analog Inputs**

10V

n: 1 to 8

13 ... n ...

Internal diagram
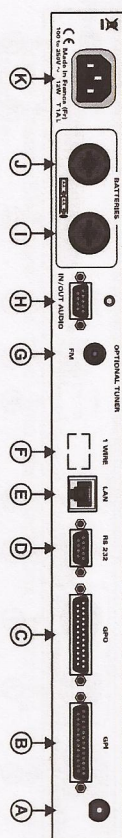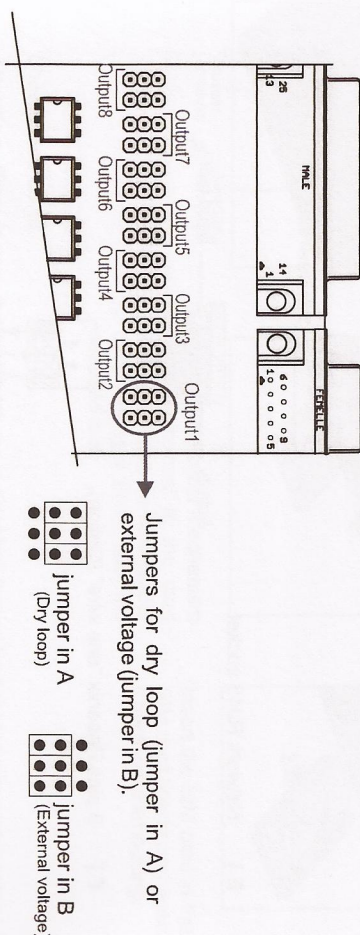
ADC

c) Male 25 pins Sub-D 25 pts . GPO remote control output. The 8 outputs uses opto mos coupler.

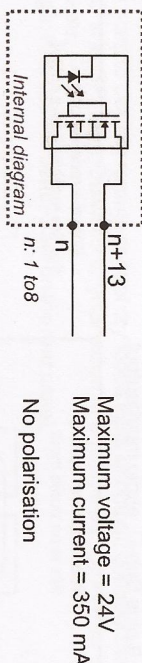**Opto mos benefit:**
- no polarisation.
- no mechanical problems.
- no residual voltage like standard optocoupleur.

Remote control 1
(1-14)
Remote control 3
(3-16)
Remote control 5
(5-18)
Remote control 7
(7-20)

Remote control 2
(2-15)
Remote control 4
(4-17)
Remote control 6
(6-19)
Remote control 8
(8-21)

+
0V } External power supply
(10-22)

Female Sub-D 25 plug

⇨ **Outputs setting**

Output8
Output7
Output6
Output5
Output4
Output3
Output2
Output1

MALE

FEMALE

Jumpers for dry loop (jumper in A) or external voltage (jumper in B).

jumper in A
(Dry loop)

jumper in B
(External voltage)

⇨ **Jumpers in A**: remote control uses dry loop.

Internal diagram

n: 1 to8

n
n+13

No polarisation
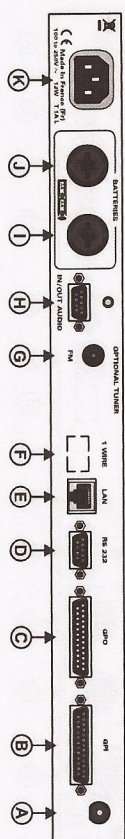
Maximum voltage = 24V
Maximum current = 350 mA

⇨ **Jumpers in B**: output remote controls use switched voltage. The external voltage comes on pins 10 and 22.

Internal diagram

n: 1 to 8

n+13
+V
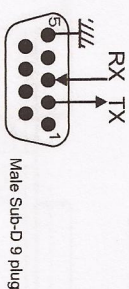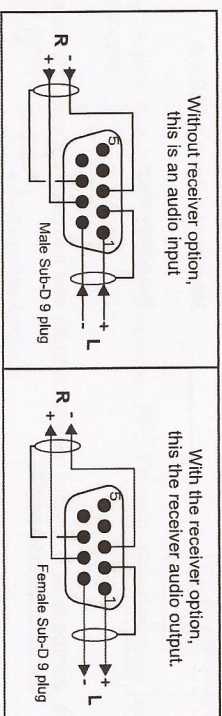0V

10
22

+V
0V

Positive voltage is on the higher weight pin
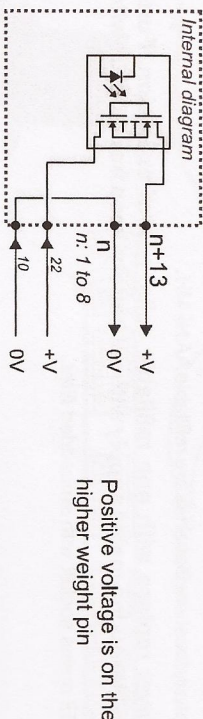
Next

D) RS232 female 9 points .

E) Network RJ45 socket

F) 3 pins Phoenix "one wire" (Option).

Activity

Baud rate

RX
TX

Male Sub-D 9 plug

ground
Data
+V
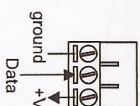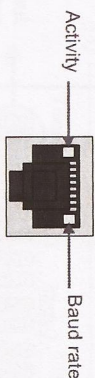
G) FM aerial F socket (receiver option)

H) Female 9 pins Sub-D, audio input/output.

Without receiver option,
this is an audio input

Male Sub-D 9 plug

With the receiver option,
this the receiver audio output.

Female Sub-D 9 plug

I-J) Battery location. Batteries are refillable AA Ni-MH.

Never replace with non refillable cells, risk of explosion. Furthermore when using mains supply without battery, keep front panel switch 9 up.

K) CEI mains socket with embedded filter.

It is good practice to connect all equipments before to switch on.
A/ Wiring :

⇨ Do not forget to install the SIM card before use. Switch off the equipment, remove the top cover. Insert SIM card (3V type) into the black box, according to the following procedure:

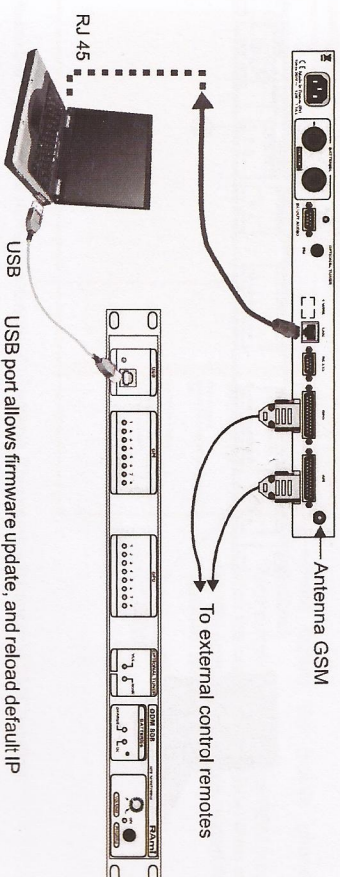LED display

Handset connector

Mini-SIM card holder
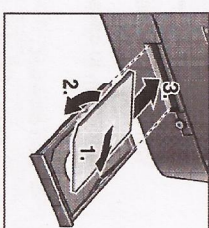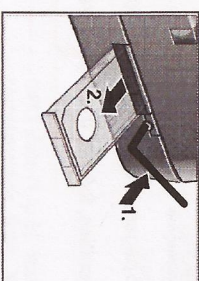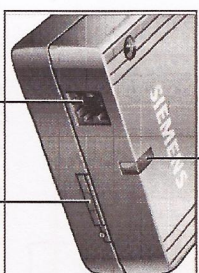
Operate the eject mechanism (yellow pin next to the card holder) to open the card holder by pressing it down with the supplied tool

Insert the SIM card in the SIM card holder and push it back into the housing.

Shut the top cover.

Attention : From factory, the mobile phone is disabled. It must be enabled when accessing web pages

⇨ The first time, connect ODM808 to your computer using RJ45 port (LAN on the rear panel) Use a crossed wire.

⇨ You want to use the remote control dry loops input or output, connect the 25 pins sockets GPO and GPI from ODM808 to your external equipments. Otherwise do not use these sockets.

⇨ Plug in the supplied aerial GSM on the rear panel.

RJ 45

USB

Antenna GSM

To external control remotes

USB port allows firmware update, and reload default IP

B/ Starting:

→ **Stand alone:**

ODM808 features a web server allowing control from you favorite web browser. Open your browser, enter ODM IP address into the address window. Default factory IP address is **192.168.0.80**

http:// 192.168.0.80

You can now access Web pages, to configure the equipment, which network settings

Attention, in case of difficulties, follows the procedure in "technical tools" annex.

→ **Use on a net:**

Connect ODM to the net using the RJ45 connector. To work properly the ODM IP address should be unique on the network, and in the available IP range. Should the PC or routeur net differ from ODM808, first modify PC or routeur to the same net as ODM808, then set ODM IP address as described in **"technical tools" annex.**

## C/ Procedure to modify default IP address:

It is possible at any time to modify the default IP address. To do this connect a computer to the front panel USB port.

Disable the front panel "Ok battery" light, using the switch located on the right hand side of this light. (cf user manual page 28 number **9**).
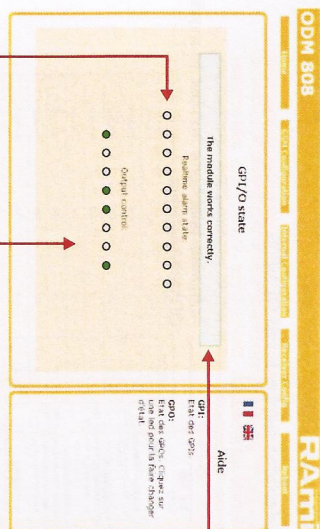
Then disconnect mains cord. ODM is now off.

Now plug again in mains, ODM808 starts in **BootLoader** mode. Just disconnect USB wire, ODM 808 restart in normal mode with default IP address **192.168.0.80.**

→ **note:** Do not forget to push again the switch on the right hand side of light "ok battery" (**9**) to use the battery back up, in case of power fail.

USB
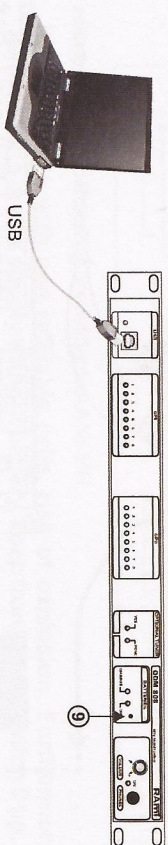
WEB INTERFACE

A / / Home page.

ODM 808

Mobile phone state display. Available displays:
- ✓ Module works properly
- ✓ No Sim card
- ✓ Erroneous pin code
- ✓ PUK code requested
- ✓ Mobile phone disabled

Real time alarm state. They correspond to inputs GPI 1 to 8 alarms, mains or battery default. You can name every input. See "Output names".
Example:

Note: Without alarms, lights are off. When an alarm occurs, its light bright red.

8 GPI inputs alarms
GPI/1   GPI/8
mains default
battery default

GPO state (1 to 8). You can modify an output by clicking the corresponding light. You can name every output. Use "Message d'alarme" menu
Example:
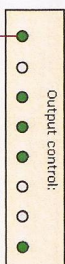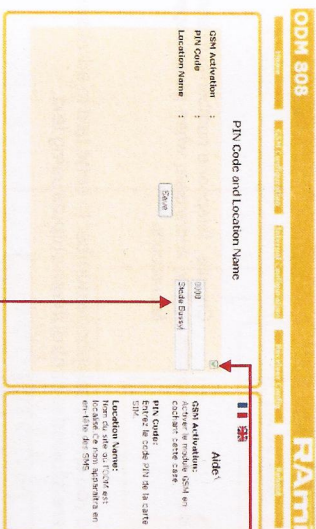
Light for GPO/1.
Green light → output enabled, output at 1 (closed loop)
Light off → output disabled, output at 0 (open loop)
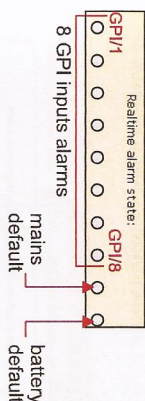
B / GSM configuration

→ **PIN code and site name.**

ODM 808

From factory the mobile phone is disabled.
Prior to first use, enable the GSM module (stick the corresponding box) then enter the PIN code, **validate and restart from "Reboot" menu.**

Please the ODM808 site name (maximum of 15 letters). This name will appear in SMS heading.

Once setup is finished, **do not forget to validate.**

⇨ Telephone numbers.

In this menu input the 8 telephone numbers that ODM808 will use.

Authorise telephone number to call ODM808.

Authorise telephone number to modify ODM808 settings.

Sticking this case, telephone number filtering is disabled. In that case any number will be allow to call ODM808

C / Internal configuration.

⇨ Alarm message.

Note :
- Alarm message 1 correspond to GPI/1 input.
- Alarm message 2 correspond to GPI/2 input...

Choose telephone number(s) to send text to addressee, when power supply fails occurs.

In this menu you set the alarm name and you choose telephone number to send text to adressee. Attention only the 8 recorded numbers are allowed to control these outputs using text.

Example : [Alarm message 1 : MP3]

When MP3 happens, a text is sent to numbers A et E, as define earlier. Should a mains default occur, a text is sent to number D. The same for battery alarm.

⇨ Analog input level.

Input level
The desired meter reading after the multiplication

⇨ Analog input configuration.

This message explains the alarm.
This message should no contain space (alarm message 1 corresponds to input 1 etc...)

Addressee choice, that will receive text.

Units:
V = Volts, A = Amps, W = Watts, etc..

Enter the value of the desired meter reading.

This option specifies the High alarm set point. The checkbox enables this point.
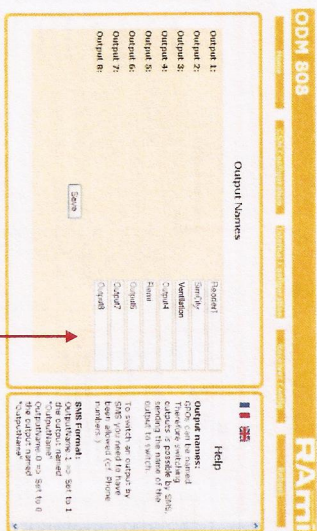
This option specifies the Low alarm set point. The checkbox enables this point.

This option specifies the waiting time before an alarm is actived.

Hysteresis is in percents (0 to 99). This option specifies the histerese applied to high and low threshold.

Green led verte: the input is not in alarm
Red led: the input is in alarm

Level:
the input Level in volts
Values:
the desired meter reading after the multiplication
Status:

⇨ Outputs settings.

In this menu you set the GPO outputs. Attention only the 8 recorded numbers are allowed to control these outputs using text.

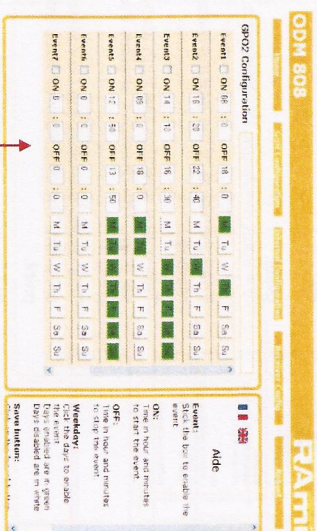⇨ Output name.0 to disable output
⇨ Output name.1 to enable output

Note : If you do not label the outputs use the default message : Out1.1 or Out1.0 and so on.

Example   Output 1:   Reader1

To enable output Reader1 send the following text: Reader1.1 (output switches to 1)
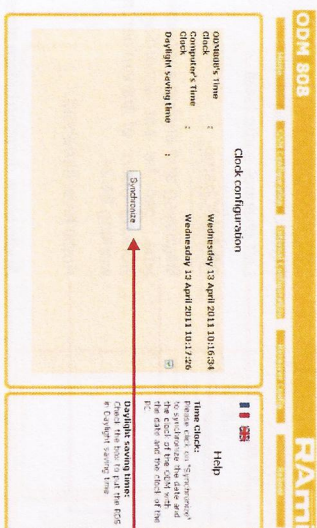Text Reader1.0 (output switches to 0).

⇨ Setting GPO/2 and or GPO/3 as timer.

It is possible to automatically start 8 events, at a given date on output GPO/2.
To start an event, stick the box, then input event beginning and end time, then the required day(s).
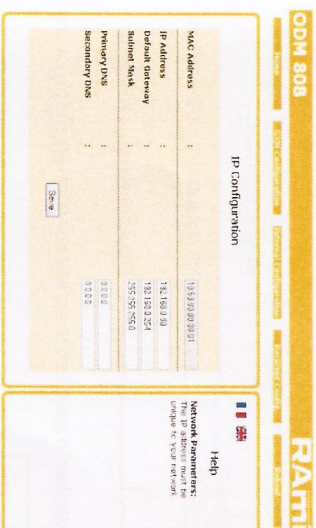⇨ Enabled days are green, others are white.

The same procedure applies to outputs GPO/3.

⇨ Date and time setting.

Click **synchronize** to synchronize ODM808 with the computer time and date.

⇨ IP Configuration.

Choose an IP for ODM808. It should be under the same net as your routeur.
Example1 :
if routeur IP is 192.168.1.1 then IP ODM808 will be : 192.168.1.xxx
(xxx between 2 and254)
Example2:
if routeur IP is 192.168.0.1 then IP ODM 808 will be : 192.168.0.xxx
(xxx between 2 and 254)

Attention : - Address should be **unique** in the net.
- After IP modification, enter new IP address in your browser address window and validate.

http:// 192.168.x.xxx

D / Tuner configuration.

- Right channel audio level.
- Left channel audio level.
- RF fieldChamp
- Beginning and ending supervision time, can be set according to working hours of transmitter not working 24/24.
- Audio level threshold.
- Audio blank duration before alarm.
- Output enslaved to audio alarm.
- HF level threshold.
- HF blank duration before alarm.
- Output enslaved to HF alarm.

In this menu you choose telephone number to send text to adressee, when an alarm occurs.
Example :

Receiver Alarm:
A B C D E F G H

When a alarm happens, a text is sent to numbers A et E, as define earlier.

In receiver mode ODM808 monitors left and right audio, and the RF carrier.
To modify the tuner frequency, send : Freq.xxx.x to tune to frequency xxx.x

Example : Freq.105.5 to tune to frequency 105.5 MHz
Freq.96.5 to tune to frequency 96.5 MHz

Also, to change:
- Audio level threshold. Label is thres.aud.-xx where xx is the dBr level.
- Audio blank duration. Label is blank.aud.xx where xx is the duration in minutes.
- HF level threshold. Label is thres.hf.xx where xx is the dBµV level.
- HF blank duration. Label is blank.hf.xx where xx is the blank duration in minutes.

E / Reboot menu.

This menu reboots ODM808. Click "Restart" to open this window:

Please wait a few moments...

F / SMS parameter recall

Sending text **help** will be answered the commands full list. This allow to see the inputs GPI and outputs GPO state.

Possible Commands :

Outputname.x
x=1 or x=0

gpostate
gpistate
time
freq.xxx.x
blank.aud.xx
blank.hf.xx
thres.aud.-xx
thres.hf.xx

More infos
help.**command**

Example : Ventilation.1 will enable the ventilation output

Example:
help.blank.aud
help.thres.hf

| Help	Possible commands list
OutputNames.x	To enable or disable the output (x=1 ou 0)
gpostate	GPO state
gpistate	GPI state
time	ODM time clock.
Freq	To change the tuner frequency(MHz)
blank.aud	To change the audio blank duration before alarm (mn)
blank.hf	To change the HF blank duration before alarm (mn)
thres.aud	To change the audio level threshold (dBr)
thres.hf	To change the HF level threshold (dBµv)

To work properly, the ODM IP address should be unique in the net, and belong to the available IP range.
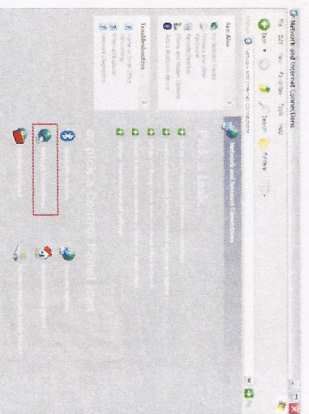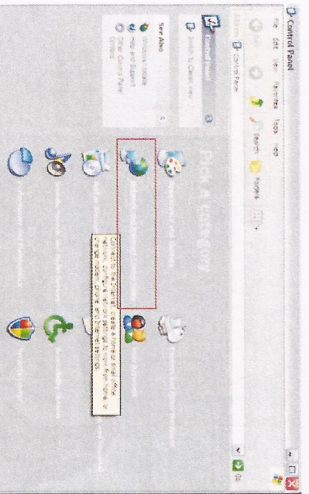
Installation procedure:

If the computer or the routeur is not in the same net (ex : 192.168.1.14 and net mask 255.255.255.0) the computer should be in the same net, then modify the ODM address:
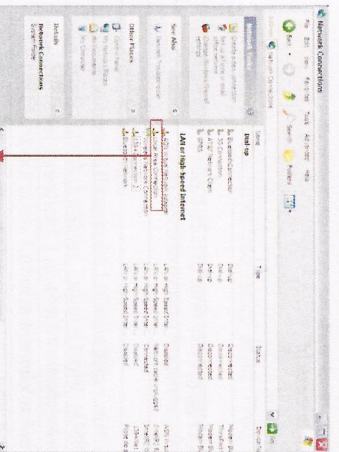
WINDOWS XP

- Open *Control panel*
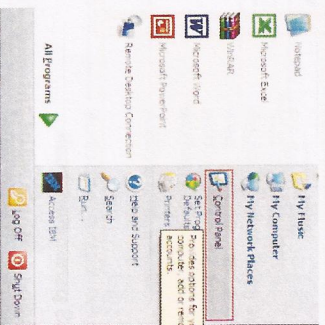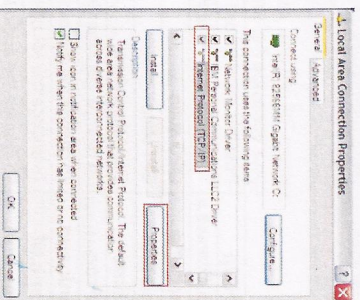

- Click *Network and Internet Connections* , then *Network Connections*

- A windows displays the available network boards

Click **Local Area Connection** then **Properties**. The right window opens:

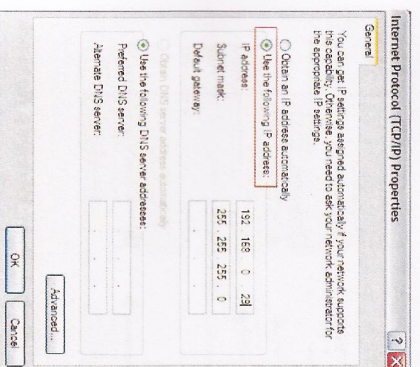Click then *Internet Protocol (TCP/IP)* and *properties*.

- Click *Use the following IP adress:* then fix the IP address in the ODM network (ex 192.168.0.29).
- Click OK then OK.

You now have a fixed IP address.

You can now access ODM808 (default IP address 192.168.0.80) using a web browser (ex : Firefox, Internet explorer).

⇨ If you use ODM808 as stand alone, you can now see the web pages.

http:// 192.168.0.80

⇨ If you use ODM808 in a network you use the following procedure:

In the web server "Configuration IP" menu, set an IP address in the available range in the final network (network where ODM is to be used)

Example:

IP routeur :   192.168.1.1

IP OMD808:   192.168.0.80

If the router net mask is 255.255.255.0, ODM IP will be out of range in this network. Modify ODM IP address to one within the net (ex : 192.168.1.80)

You can now connect ODM808 and destination router.

The computer used for that procedure, is no more in the network. Think to **restore original settings.**

Open your web browser, enter ODM IP address, then validate.

You can now see the web pages, and are able to set the equipment.

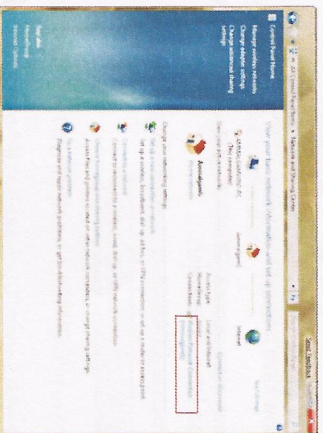## WINDOWS 7

- Open *Control panel*

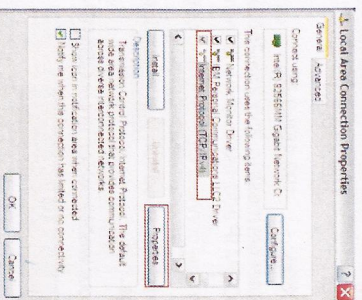- Click *View network status and tasks* in Network and Internet, then *Wireless Network Connections*
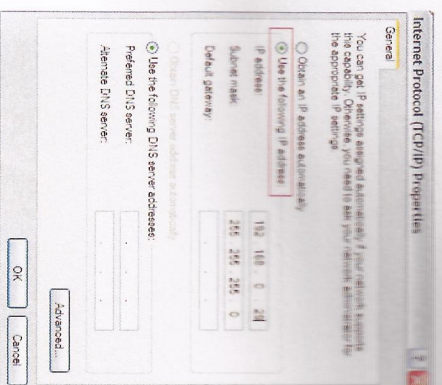
- This window opens:

-Click *properties*.

Click then *Internet Protocol (TCP/IPv4)* and *properties*.

- Click *Use the following IP adress:* then fix the IP address in the ODM network (ex 192.168.0.29).
- Click **OK** then **OK**.

You now have a fixed IP address.

You can now access ODM808 (default IP address 192.168.0.80) using a web browser (ex : Firefox, Internet explorer).

→ If you use ODM808 as stand alone, you can now access web pages, to configure the equipment.

http:// 192.168.0.80

→ If you use ODM808 in a network you use the following procedure:

In the web server "Configuration IP" menu, set an IP address in the available range in the final network (network where ODM is to be used)

Example :

IP routeur :   192.168.1.1

IP OMD808 :   192.168.0.80

If the router net mask is 255.255.255.0, ODM IP will be out of range in this network. Modify ODM IP address to one within the net (ex : 192.168.1.80)

You can now connect ODM808 and destination router.

The computer used for that procedure, is no more in the network. Think to **restore original settings.**

Open your web browser, enter ODM IP address, then validate.

http:// 192.168.1.80

You can now access Web pages, to configure the equipment, which network settings.