/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE

USER MANUAL

Additional Manual for TEX-TFT series

BROADCAST EQUIPMENT

Manufactured by R.V.R ELETTRONICA S.p.A. Italy

CE

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/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE - User Manual
Version 1.0

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1. /TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE Option

1.1 Preparation

1.1.1 Preliminary checks

Provide for the following (applicable to operating tests and putting into service):

√ Connection cable kit including:

- Ethernet cable (cable with RJ45 connector, not included) for connection to ADSL router or LAN network;

or

- Crossover Ethernet cable (cable with RJ45 connector, not included) for direct connection to PC.

1.1.2 Connection

- Connect the **LAN** output of **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** option to the appropriate input of your ADSL router or LAN network. If the connecting device is different, identify an equivalent.

Note: *If you intend to connect it directly to a PC, it is necessary to use a crossover ethernet cable. This is a basic prerequisite to ensure equipment correct operation.*

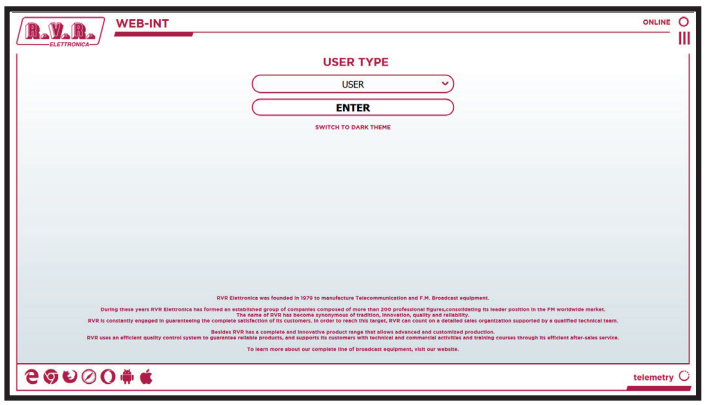
1.2 First Power-On and Set-Up

Perform this procedure upon first power-up and each time you make changes to the configuration this component is integrated into.

Once all connections previously described are performed, the equipment is ready for commissioning.

Follow the procedure below to open the **WUI** (Web User Interface):

1) Open your web browser on your PC, and connect to ***http://192.168.0.244*** address to connect to the **WUI** (if LAN IP address was previously modified, it is necessary to use the new one). At this point the following page opens:



Menu 1

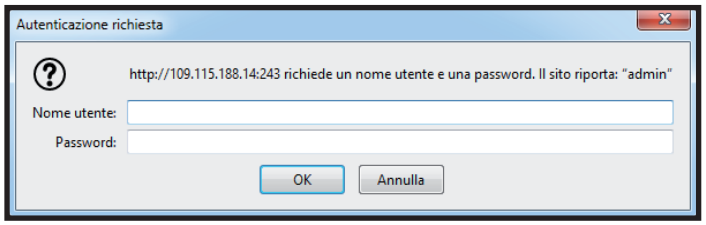
By factory the RVR uses the following adjustments:

- IP address: **192.168.0.244**
- Netmask address: **255.255.255.0**
- Gateway address: **192.168.0.1**

Note : *If address* ***http://192.168.0.244*** *does not work, check and set IP address as* ***192.168.0.XXX*** *(where XXX is a figure between 0 and 255, excluding 244 that is* **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** *option default address). To change the IP address, follow the instructions in the manual or in the online guide and technical help, specific for the Operating System you use.*

2) If you have changed the access mode , enter the **User Name** and **Password** previously saved. Enter your credentials to log on as administrator, or maintenance, and then click **OK** on the item.

Note : *The username to log in as a user is* ***user****, that one to enter as operator is* ***operator****, while the username to log in as administrator is* ***admin****.*
The user names are not modifiable by the user.



Menu 2

Note: *Login as user enables read-only mode through the menus. If the administrator password is not set, it can not be enabled for user or operator.*

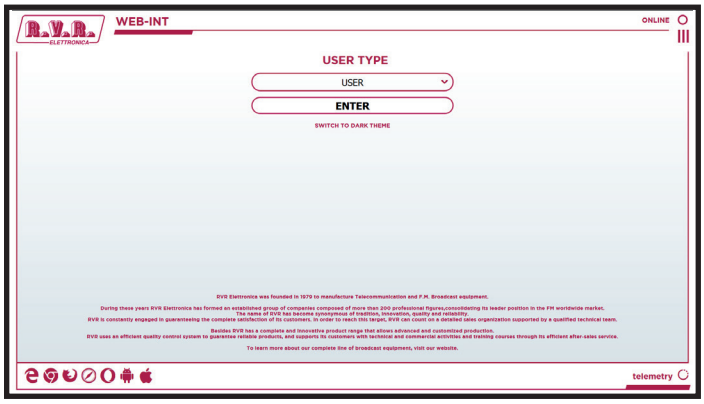
3) Modify the parameters in accordance with the own needs.

4) Now interface is ready to remotely read data and modify the various settings of the equipment.

1.3 Web User Interface (WUI)

The **WUI** (Web User Interface) allows you to adjust, modify or display the configuration variables and the operation data.

After access is made, the **Main Menu** opens and shows possible viewing options. This picture shows the **Main Menu** after access:



Menu 3

To enter in one of the sub-menus, select the name and then click on item to enter.

To go back to **Main Menu**, just press the F5 key on your computer's keyboard to force the WEB page reload.

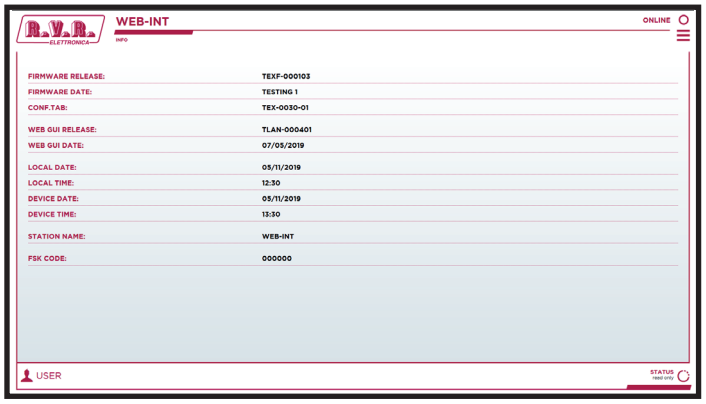
The page that appears is divided into three frames:

1) **Title**: it has the RVR logo and an identification of the current page displayed. It also displays the status of the machine, whether online or not. It is located on the top of the page.
2) **Navigation menu**: it allows you to select the page to display.
   To enter into a submenu, select the name and then click on the item to enter.
   It is located at the top right, which can be activated via the hamburger icon.
3) **Body**: area where the page displays information about the selected menu. Through the Main Screen it is possible to select the type of user between: user (User), operator (Operator) and administrator (Admin); as well as selecting the type of WEB page display, selectable between normal vision or dark mode.

1.3.1 Info Menu - User

Values found here are “live readings”, and as such they can not be modified. To change the settings, use the **operator** or **administrator** “**Command**” menu.

This page shows the user the information of the exciter connected to the **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** interface:



Menu 4

`Firmware Release`
: Shows the firmware release of TEX-TFT.

`Firmware Date`
: Shows the firmware date of issue of TEX-TFT.

`Conf. Tab`
: Shows the Configuration Table loaded on TEX-TFT.

`WEB Software Release`
: Shows the release of WEB firmware.

`WEB Software Date`
: Shows the date of issue of WEB firmware.

`Local Date`
: Shows the set date of the internet navigation device.

`Local Time`
: Shows the set time of the internet navigation device.

`Device Date`
: Shows the date set on the TEX-TFT machine.

`Device Time`
: Shows the time set on the TEX-TFT machine.

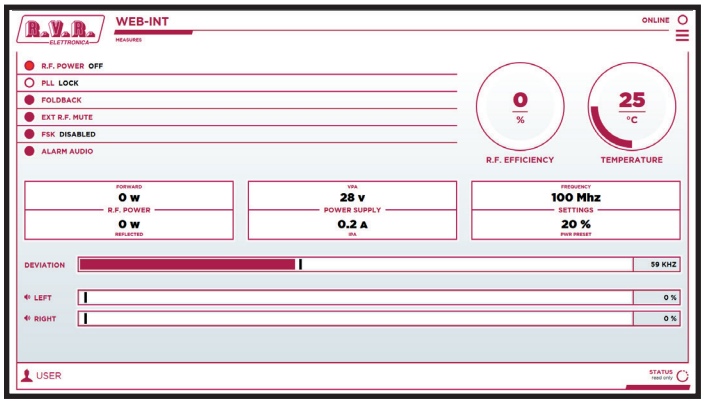
`Station Name`
: Shows the ID name of transmitting station.

`Code FSK`
: Shows the FSK code of transmitting station.

1.3.2 Readings Menu - User

Values found here are “live readings”, and as such they can not be modified. To change the settings, use the **operator** or **administrator** “**Command**” menu.

This page shows the user the information of the exciter connected to the **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** interface:



Menu 5

`RF Power`
: Shows the power status of exciter.

`PLL`
: Shows the lock status at frequency set by PLL.

`Foldback`
: Shows the triggered status of the foldback function (automatic reduction of output power).

`Ext R.F. Mute`
: Shows the status of power inhibition by an interlock signal.

`FSK`
: Shows the activation of status of FSK code transmission of exciter.

`Audio Alarm`
: Shows the status of an impasse due to excessive SWR.

`RF Efficiency`
: Shows efficiency of exciter expressed in %.

`Temperature`
: Shows equipment internal temperature reading expressed in °C.

`Forward Pwr`
: Shows exciter forward power expressed in W.

`Reflected R.F. Pwr`
: Shows exciter reflected power expressed in W.

`VPA Power Supply`
: Shows amplifier module voltage of exciter expressed in V.

`IPA Power Supply`
: Shows amplifier module current of exciter expressed in A.

`Frequency Settings`
: Shows operating frequency of exciter expressed in MHz.

`PWR Preset Settings`
: Shows the power percentage of exciter expressed in %.

`Deviation`
: Shows exciter deviation expressed in kHz.

`Left`
: Shows modulation on left channel of exciter expressed in kHz.

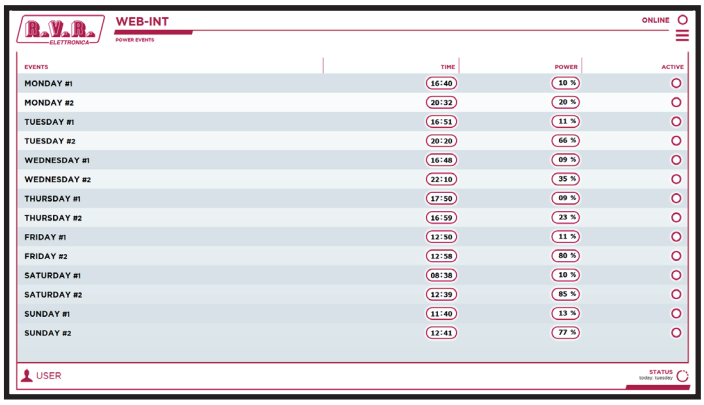
`Right`
: Shows modulation on right channel of exciter expressed in kHz.

1.3.3 Power Events Menu - User

Note : *the access to this menu, and any parameter changes, is possible only if the machine supports the clock function (RTC) inside it.*

Values found here are “live readings”, and as such they can not be modified. To change the settings, use the **operator** or **administrator** “**Command**” menu.

This page shows the user the information of the exciter connected to the **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** interface:



Menu 6

`Monday #1`
Shows of the first Monday event in which the power variation set as a percentage occurs.

`Monday #2`
Shows of the sedond Monday event in which the power variation set as a percentage occurs.

`Tuesday #1`
Shows of the first Tuesday event in which the power variation set as a percentage occurs.

`Tuesday #2`
Shows of the sedond Tuesday event in which the power variation set as a percentage occurs.

`Wednesday #1`
Shows of the first Wednesday event in which the power variation set as a percentage occurs.

`Wednesday #2`
Shows of the sedond Wednesday event in which the power variation set as a percentage occurs.

`Thursday #1`
Shows of the first Thursday event in which the power variation set as a percentage occurs.

`Thursday #2`

Shows of the second Thursday event in which the power variation set as a percentage occurs.

`Friday #1`

Shows of the first Friday event in which the power variation set as a percentage occurs.

`Friday #2`

Shows of the second Friday event in which the power variation set as a percentage occurs.

`Saturday #1`

Shows of the first Saturday event in which the power variation set as a percentage occurs.

`Saturday #2`

Shows of the second Satursday event in which the power variation set as a percentage occurs.

`Sunday #1`

Shows of the first Sunday event in which the power variation set as a percentage occurs.

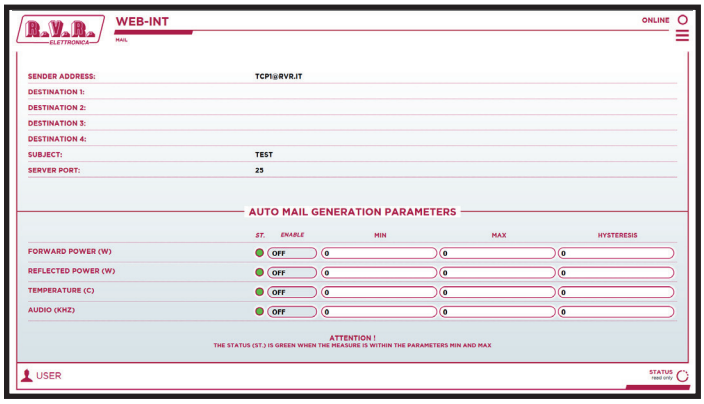
`Sunday #2`

Shows of the second Saturday event in which the power variation set as a percentage occurs.

1.3.4 Mail Menu - User

Values found here are “live readings”, and as such they can not be modified. To change the settings, use the **operator** or **administrator** “**Command**” menu.

This page shows the user the information of the exciter connected to the **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** interface:



Menu 6

`Sender Address`
Shows of the transmission address used in sending messages.

`Destination 1`
Shows of the first destination address used in sending messages in case of alarms.

`Destination 2`
Shows of the second destination address used in sending messages in case of alarms.

`Destination 3`
Shows of the third destination address used in sending messages in case of alarms.

`Destination 4`
Shows of the fourth destination address used in sending messages in case of alarms.

`Subject`
Shows of the personalization in the subject field of the email in case of sending alarm messages.

`Server Port`
Shows of the port used by the TCP transmission protocol.

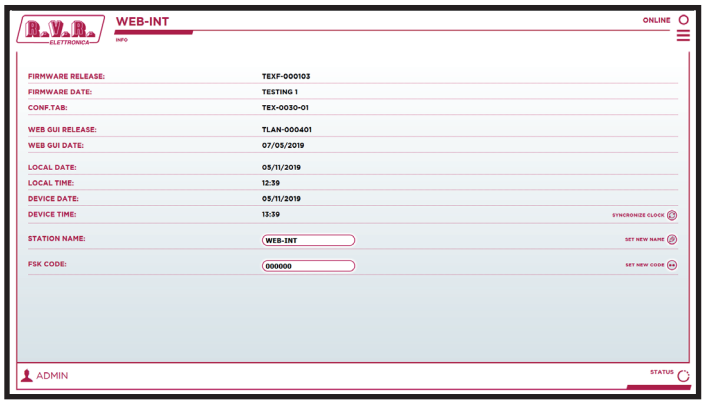
`Auto Mail Generation Parameters`
Shows of the configured parameters that lead to the transmission of the alarm message.

1.3.5 Mail Menu - Operator & Administrator

Note : *Access to this menu and modification of these parameters are only possible after login with operator or administrator rights.*

This page not only shows to the user the alarms related to the exciter connected to **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** interface, but also allows you to set several parameters.

Below will be described only items that allow the modification of the parameter, with respect to the Info menu. Press the buttons to confirm your choice, or wait at the time-out, the parameter will be set to the previous one:



Menu 7

`Firmware Release`
Shows the firmware release of TEX-TFT.

`Firmware Date`
Shows the firmware date of issue of TEX-TFT.

`Conf. Tab`
Shows the Configuration Table loaded on TEX-TFT.

`WEB GUI Release`
Shows the release of WEB firmware.

`WEB GUI Date`
Shows the date of issue of WEB firmware.

`Local Date`
Shows the date set of the internet navigation device.

`Local Time`
Shows the time set of the internet navigation device.

`Device Date`
Shows the date set on the TEX-TFT machine.

`Device Time`

Showss the time set on the TEX-TFT machine. To synchronize the set time, press the **SYNCHRONIZE CLOCK** button to apply the choice.

`Station Name`

Setting of the station name. Write the name in the box that you want to assign, then press the **SET NEW NAME** (Update**)** button to apply the choice.

`Code FSK`

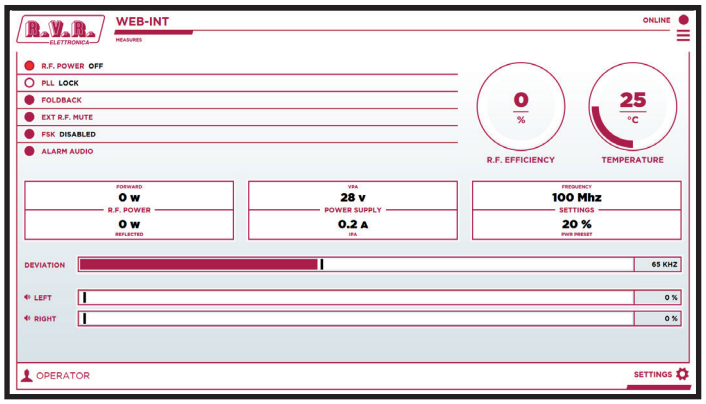
Setting of FSK code of transmitting station. Write the code in the box that you want to assign, then press the **SET NEW CODE** (Update**)** button to apply the choice.

1.3.6 Measures Menu - Operator & Administrator

Note : *Access to this menu and modification of these parameters are only possible after login with operator or administrator rights.*

This page not only shows to the user the alarms related to the exciter connected to **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** interface, but also allows you to set several parameters.

Below will be described only items that allow the modification of the parameter, with respect to the Info menu. Press the buttons to confirm your choice, or wait at the time-out, the parameter will be set to the previous one:



Menu 7

`RF Power`

Shows the power status of exciter.

`PLL`

Shows the lock status at frequency set by PLL.

`Foldback`

Shows the triggered status of the foldback function (automatic reduction of output power).

`Ext R.F. Mute`

Shows the status of power inhibition by an interlock signal.

`FSK`

Shows the activation of status of FSK code transmission of exciter.

`Audio Alarm`

Shows the status of an impasse due to excessive SWR.

`RF Efficiency`

Shows efficiency of exciter expressed in %.

`Temperature`
Shows equipment internal temperature reading expressed in °C.

`Forward Pwr`
Shows exciter forward power expressed in W.

`Reflected R.F. Pwr`
Shows exciter reflected power expressed in W.

`VPA Power Supply`
Shows amplifier module voltage of exciter expressed in V.

`IPA Power Supply`
Shows amplifier module current of exciter expressed in A.

`Frequency Settings`
Shows operating frequency of exciter expressed in MHz.

`PWR Preset Settings`
Shows the power percentage of exciter expressed in %.

`Deviation`
Shows exciter deviation expressed in kHz.

`Left`
Shows modulation on left channel of exciter expressed in kHz.

`Right`
Shows modulation on right channel of exciter expressed in kHz.

Press the **SETTINGS** key, located at the bottom right of the page, to access the parameter modification menu:

Menu 8

`PWR Preset`

Setting of the exciter's working power percentage expressed in %. Select the value you want to assign in the box and then press the ▼ button to apply your choice.

`RF Power`

Press the key to change the logical state of the data.

`Frequency`

Setting the working frequency of the exciter expressed in MHz. Write the value you want to assign in the box and then press the ▼ button to apply the choice.

`FSK`

Press the key to change the logical state of the data.

1.3.7 Power Events Menu - Operator & Administrator

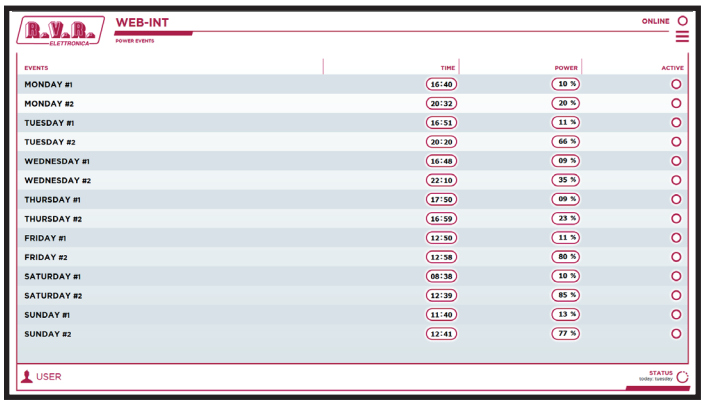
Note : *the access to this menu, and any parameter changes, is possible only if the machine supports the clock function (RTC) inside it.*

Note : *Access to this menu and modification of these parameters are only possible after login with operator or administrator rights.*

This page not only shows to the user the time and date related to the exciter connected to **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** interface, but also allows you to set several parameters.

Press the buttons ▲ to increase or ▼ to decrease the value to be set, or write it directly in the field to change the modification more quickly. Press the ACTIVE key to activate the event to be recorded.

Below will be described only items that allow the modification of the parameter, with respect to the Info menu. Press the buttons to confirm your choice, or wait at the time-out, the parameter will be set to the previous one:



Menu 9

`Monday #1`
Setting of the first Monday event in which the power variation set as a percentage occurs.

`Monday #2`
Setting of the sedond Monday event in which the power variation set as a percentage occurs.

`Tuesday #1`
Setting of the first Tuesday event in which the power variation set as a percentage occurs.

`Tuesday #2`
Setting of the sedond Tuesday event in which the power variation set as a percentage occurs.

`Wednesday #1`
Setting of the first Wednesday event in which the power variation set as a percentage occurs.

Thursday #1

Setting of the first Thursday event in which the power variation set as a percentage occurs.

Thursday #2

Setting of the second Thursday event in which the power variation set as a percentage occurs.

Friday #1

Setting of the first Friday event in which the power variation set as a percentage occurs.

Friday #2

Setting of the second Friday event in which the power variation set as a percentage occurs.

Saturday #1

Setting of the first Saturday event in which the power variation set as a percentage occurs.

Saturday #2

Setting of the second Satursday event in which the power variation set as a percentage occurs.

Sunday #1

Setting of the first Sunday event in which the power variation set as a percentage occurs.

Sunday #2

Setting of the second Saturday event in which the power variation set as a percentage occurs.

NOTE: The correct setting of the events foresees a power between 0 and 105%, and a time between 00:00 and 23:59. If the time set is 24:00, then the event is disabled.

NOTE: The power change set in the event will be maintained until the next set event; in case of remote modifications, the power change will be immediate until the next event.

1.3.8 Mail Menu - Operatore (Operator) & Amministratore (Administrator)

Note : *Access to this menu and modification of these parameters are only possible after login with operator or administrator rights.*

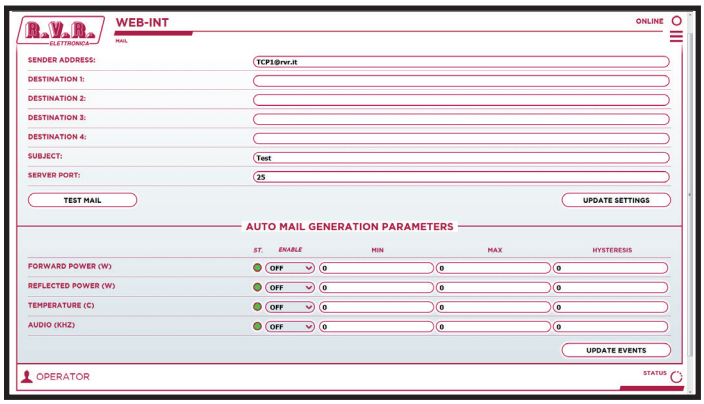
This page not only shows to the user the sending massages related to the exciter connected to **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** interface, but also allows you to set several parameters.

Press the **UPDATE SETTINGS** or **UPDATE EVENTS** button at the end of the line to confirm the choice; leaving the timeout to elapse, the parameter will remain set to the previous one.

Note : *the e-mails can only be forwarded via an MX record, that is a DNS record that identifies the e-mail server associated with a domain. Changing the MX records can be useful if you want to use your own mail server and it is absolutely necessary that the DNS domain used supports this function for its correct functioning.*

Note : *for the changes that can be made within these submenus, in-depth technical knowledge of network management is required. Modification is therefore recommended by trained or qualified personnel.*

Below will be described only items that allow the modification of the parameter, with respect to the Info menu. Press the buttons to confirm your choice, or wait at the time-out, the parameter will be set to the previous one:



Menu 10

`Sender Address`

Setting of the transmission address used in sending messages.

`Destination 1`

Setting of the first destination address used in sending messages in case of alarms.

Destination 2

Setting of the second destination address used in sending messages in case of alarms.

Destination 3

Setting of the third destination address used in sending messages in case of alarms.

Destination 4

Setting of the fourth destination address used in sending messages in case of alarms.

Subject

Setting of the personalization in the subject field of the email in case of sending alarm messages

Server Port

Setting of the port used by the TCP transmission protocol.

Auto Mail Generation Parameters

Setting of the configured parameters that lead to the transmission of the alarm message. .
It is possible to change the status of the automatic generation of emails between active or inactive; moreover it is possible to vary the value of the forward power (in W), reflected power (in W), temperature (in ° C) and audio (in kHz), by writing directly in the field the value to be varied between minimum, maximum and hysteresis.

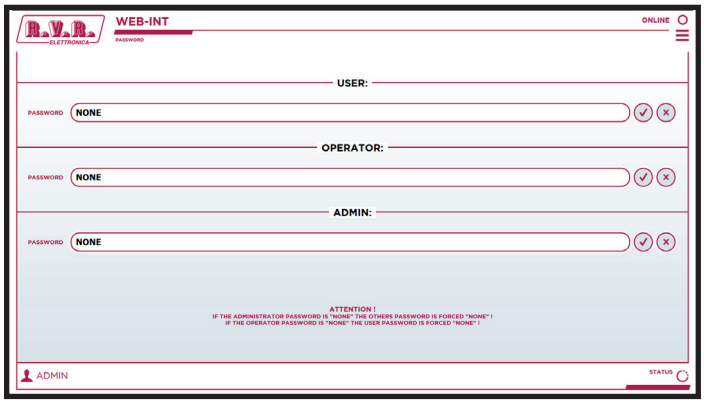
1.3.9 Password Menu - Amministratore (Administrator)

Note : *Access to this menu and modification of these parameters are only possible after login with operator or administrator rights.*

Note : *If the administrator password is not set, the user or operator password cannot be enabled.*

Press the **V** button to confirm the choice; by letting the timeout pass, or by pressing **X**, the parameter will remain set to the previous one.

This page allows the configuration of access as operator or maintenance to the interface **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** via WUI:



Menu 11

`User Password`

Impostazione della password per funzioni di utente (abilitazione sola lettura dei parametri).

`Operator Password`

Impostazione della password per funzioni di operatore (abilitazione alla lettura e parziale modifica dei parametri).

`Admin Password`

Impostazione della password per funzioni di amministratore (abilitazione alla lettura e completa modifica dei parametri).

1.3.10 Network Menu - Administrator

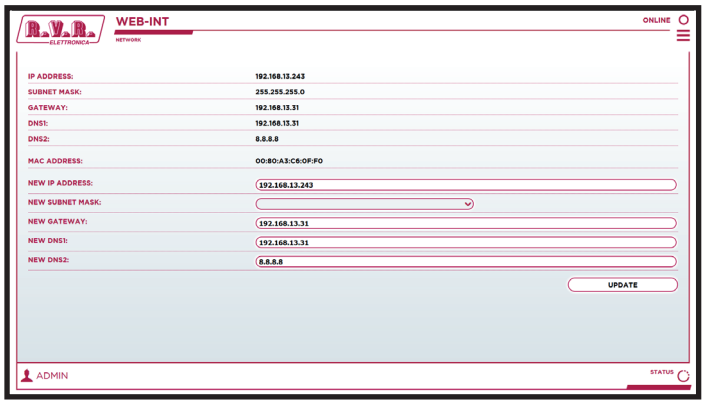
Note : *Access to this menu and modification of these parameters are only possible after login with operator or administrator rights.*

This screen, in addition to showing the user the information relating to the network connection of the interface **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE**, allows the adjustment of the parameters.

Press the **Update** button to confirm your choice; leaving the timeout to elapse, the parameter will remain set to the previous one.

Note : *for the changes that can be made within these sub-menus, in-depth technical knowledge of network management is required. Modification is therefore recommended by trained or qualified personnel.*

Note : *The IP address must be set static and does not have the ability to acquire one from a DHCP server on the network.*



Menu 11

`IP address`

Shows the number that unequivocally identifies, within a single network, the devices connected to an IT network that uses the IP standard (Internet Protocol).

`Subnet Mask`

Shows the subnet mask, necessary for the computer that must communicate with another IP address to know if it should route packages toward the gateway of its local network or use the address of the receiver local network.

`Gateway`

Shows gateway address. In simpler networks, there is only one gateway internet network all the outbound traffic. In more complicated networks where many subnets are available, each of them refers to a gateway that will route data traffic towards the other subnets or forward it to other gateways.

`DNS1` Shows the first DNS server address (Domain Name System); in case the server should change the server hosting a service, or it is necessary to change its IP address, it is enough to change the DNS record, without changing client settings.

`DNS2` Shows the second DNS server address (Domain Name System); in case the server should change the server hosting a service, or it is necessary to change its IP address, it is enough to change the DNS record, without changing client settings.

`MAC Address`
Shows the MAC (Media Access Control) address; this address is uniquely assigned to the ethernet network card present on exciter. It can be useful if you want to add in your router, or firewall, a list of MAC addresses of network cards authorized to connect to the network.

`New IP address`
Set the new IP (Internet Protocol) number.

`New Subnet Mask`
Set the new subnet mask.

`New Gateway`
Set the new gateway address.

`New DNS1`
Set the new first DNS server address (Domain Name System).

`New DNS2`
Set the new second DNS server address (Domain Name System).

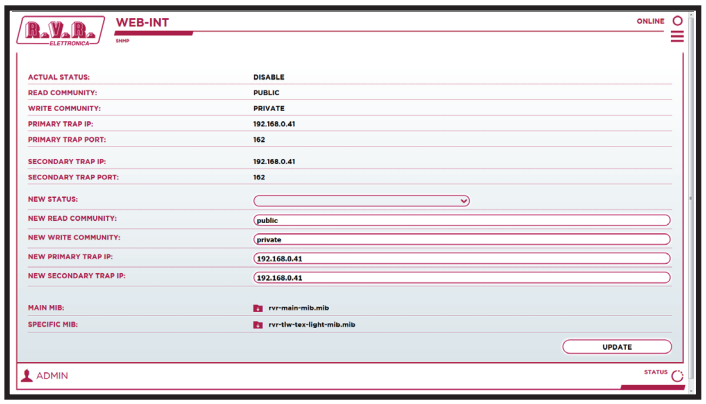
1.3.11 Menu SNMP - Administrator

Note : *Access to this menu and modification of these parameters are only possible after login with operator or administrator rights.*

This screen, in addition to showing the user information relating to the management and supervision of devices connected to the network via SNMP (Simple Network Management Protocol) of the interface **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & / TLW-TFT-E-4HE**, allows the adjustment of various parameters.

Press the **Update** button to confirm your choice; leaving the timeout to elapse, the parameter will remain set to the previous one.

Note: *for the changes that can be made within these sub-menus, in-depth technical knowledge of network management is required. Modification is therefore recommended by trained or qualified personnel.*



Menu 12

`Actual Status`

Visualizzazione dello stato di abilitazione del servizio SNMP (Simple Network Management Protocol).

`Read Community`

Shows the set string for Read command that allows you to monitor the different variables of the system managed.

`Write Community`

Shows the set string for Write command that allows you to monitor the different variables of the system managed.

`Primary Trap IP`

Shows the first identification number of the IP address set to send the TRAP signaling that configures the agent to send a special message to the occurrence of certain events..

`Primary Trap Port`

Shows the first port number set by the TCP transmission protocol for the TRAP signaling that configures the agent to send a special message to the occurrence of certain events. The port can not be changed.

`Secondary Trap IP`

Shows the second identification number of the IP address set to send the TRAP signaling that configures the agent to send a special message to the occurrence of certain events.

`Secondary Trap Port`

Shows the second port number set by the TCP transmission protocol for the TRAP signaling that configures the agent to send a special message to the occurrence of certain events. The port can not be changed.

`New Status`

Set the status of SNMP (Simple Network Management Protocol) service.

`New Read Community`

Set the string for Read command.

`New Write Community`

Set the string for Write command.

`New Primary Trap IP`

Set the first identification number of the IP address set to send the TRAP signaling.

`New Secondary Trap IP`

Set the second identification number of the IP address set to send the TRAP signaling.

`Main Mib`

By pressing the MIB (Management Information Base) highlighted you can download onto your PC, or browser device, the general database for the management of devices in communications networks..

`Specific Mib`

By pressing the MIB (Management Information Base) highlighted you can download onto your PC, or browser device, the specific database for the management of devices in communications networks.

2. SNMP Telemetry

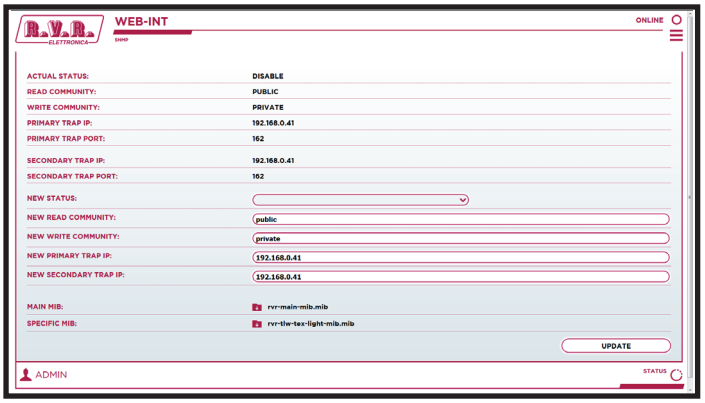
SNMP (Simple Network Management Protocol) is a worlwide protocol that allows the management and supervision of the equipment connected to the network.

Measurements and commands are described by a MIB (Management Information Base), which is a list of OID (Object Identifi er). Each OID is a variable that can be written (SET) or read (GET) through a NMS (Network Management System) compatible with SNMP.

The MIB is a text file written in ASN.1 and it is imported from the NMS in order to know what OID can be expected by the AGENT (proxy card) and how to interpret the information received.

Note : *The user can not freely distribute the MIB, unless written authorization issued by the manufacturer. The MIB is property of the manufacturer.*

The SNMP version used in this application is the v2, and is compatible with all NMS systems.



Menu 1

Note : *Use a MIB BROWSER (not included) to use the MIB of RVR equipments. These are usually provided in an accompanying CD with the system in which the* ***/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE*** *is installed.*

2.1 MAIN MIB Description

The MAIN MIB reads and manages the main parameters of **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** and provides general information related to manufacturer.

Through this MIB you can read, and in some cases set, parameters such as IP address, Netmask, Gateway and DNS address.

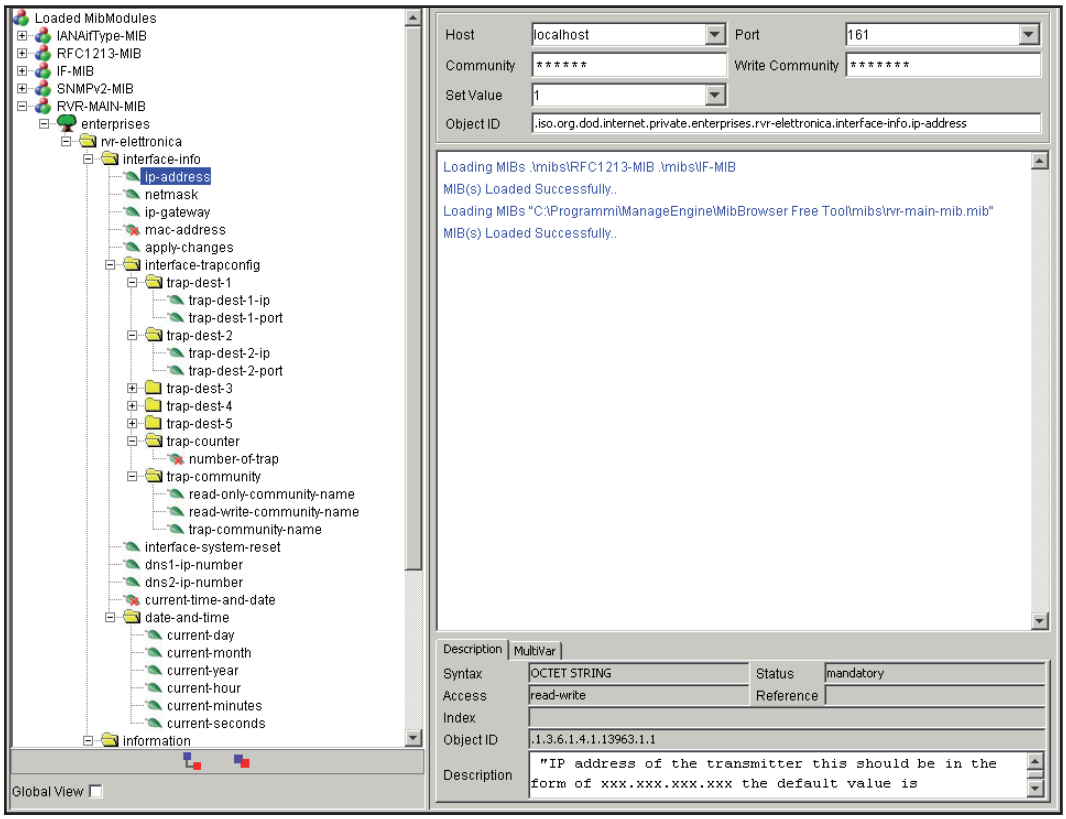
It is also possible to manage IP address, time and date stored within the telemetry system.

In cases where the parameter is a read-only, and you can not change it, it will be indicated by a red X over the icon reference. In some cases to apply a particular change, it is necessary to click on the OID item “Apply Changes”.

Note : *In the following examples is used a MIB browser of ManageEngine, but any MIB Browser can be used.*

2.1.1 Reading and Settings of parameters

The description of each variable is specified inside MIB, which are subsequently reported in the description box (Description) at the end.



Menu 2

The telemetry system is capable to sending Trap up to two different addresses. Different addresses can be set using the OID in major MIB, in this case:

- IP address for the destination of the Trap.

2.2 SPECIFIC MIB Description

The SPECIFIC MIB reads and manages the parameters administrated by **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** included in transmitter station.

Through this MIB you can read powers (forward, reflected or unbalanced), temperature, voltages and currents on modules of possible amplifiers, exciters and changeovers connected to **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE.**

Note: *In MIB browser will always display the maximum configuration of amplifiers, exciters and changeover available. The machines not present, will report zero readings.*

It is also possible to manage to control the switching on or off of transmitter, the alarm reset, automatic or manual changeover.

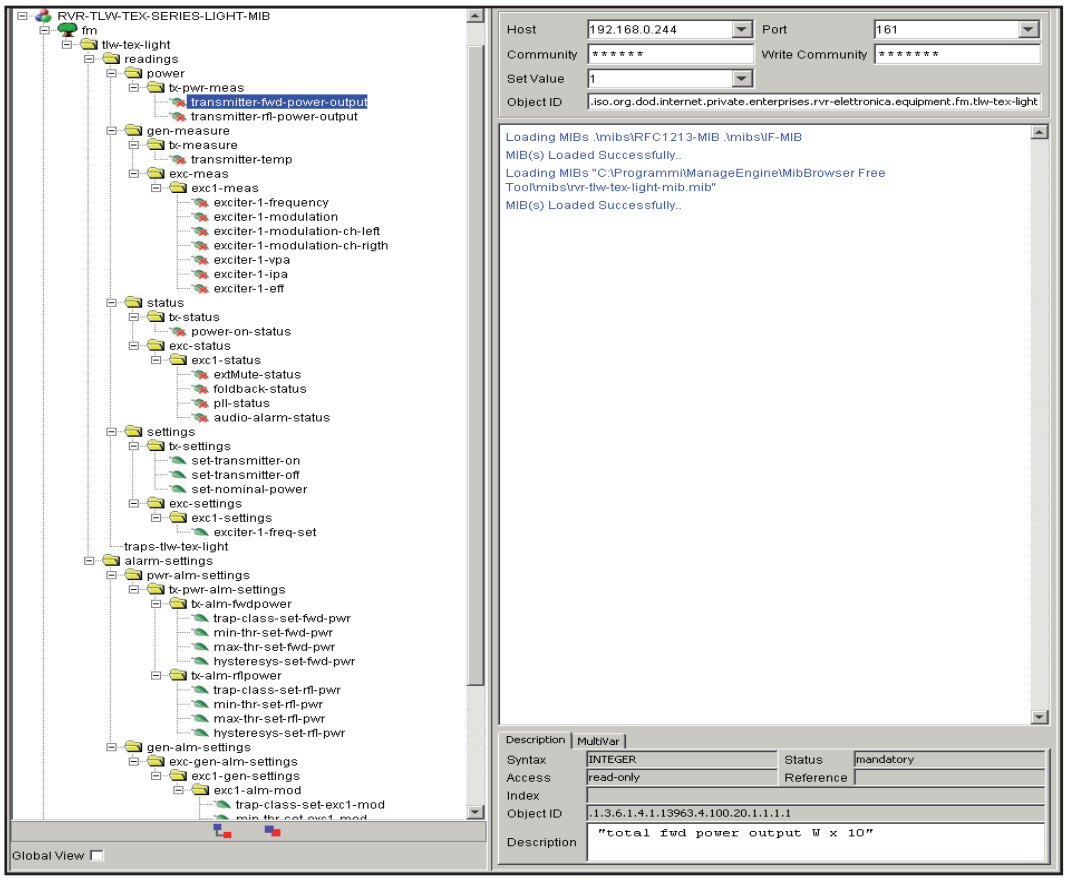
In cases where the parameter is a read-only, and you can not change it, it will be indicated by a red X over the icon reference. In some cases to apply a particular change, it is necessary to click on the OID item “Apply Changes”.

Note: *In the following examples is used a MIB browser of ManageEngine, but any MIB Browser can be used..*

2.2.1 Reading of Measurement

Each transmitter has a range of measures that can be read.

The description of each variable is specified inside MIB, which are subsequently reported in the description box (Description) at the end.

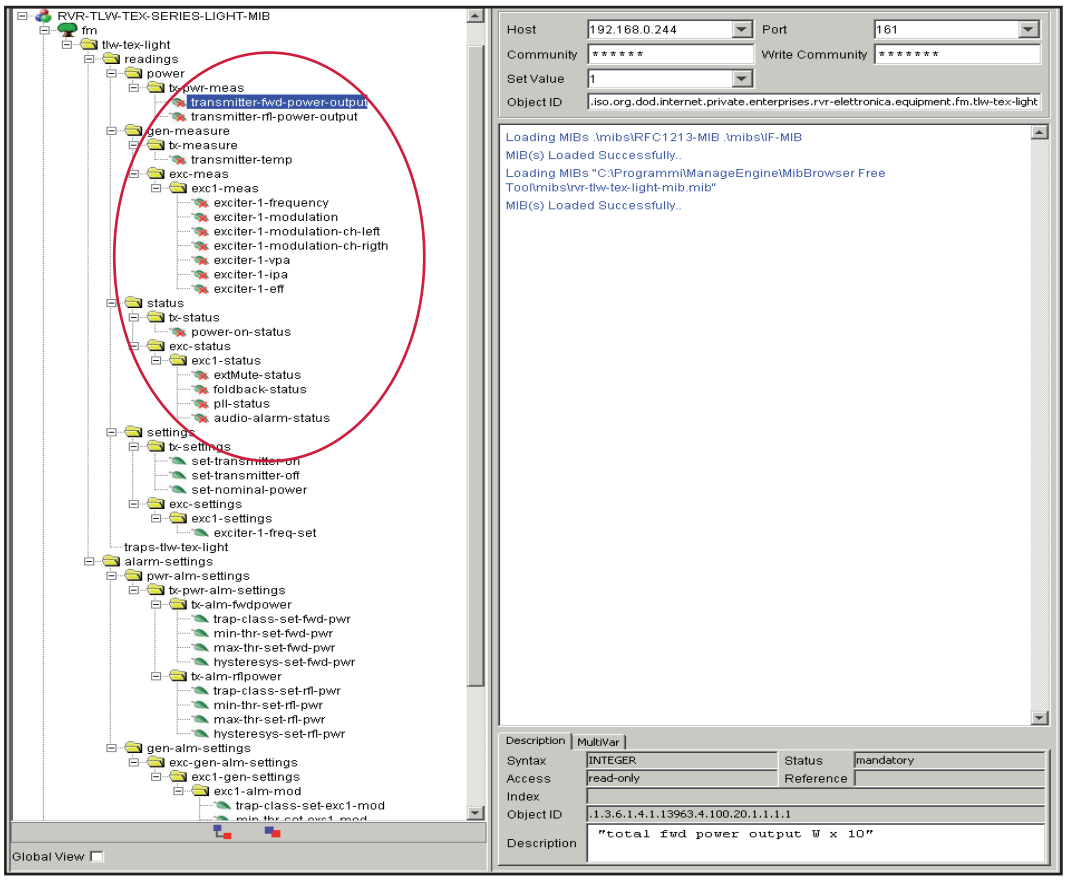


Menu 3

2.2.1 Reading of Status

Similarly to measurements, each transmitter has a range of states that can be read.

The description of each variable is specified inside MIB, which are subsequently reported in the description box (Description) at the end.



Menu 4

The indications on the states can be of three types:

- **0** Indication of absence of the transmitter system component.
- **1** Indication of ON state, presence or activation of parameter.
- **2** Indication of OFF state, absence or deactivation of parameter.

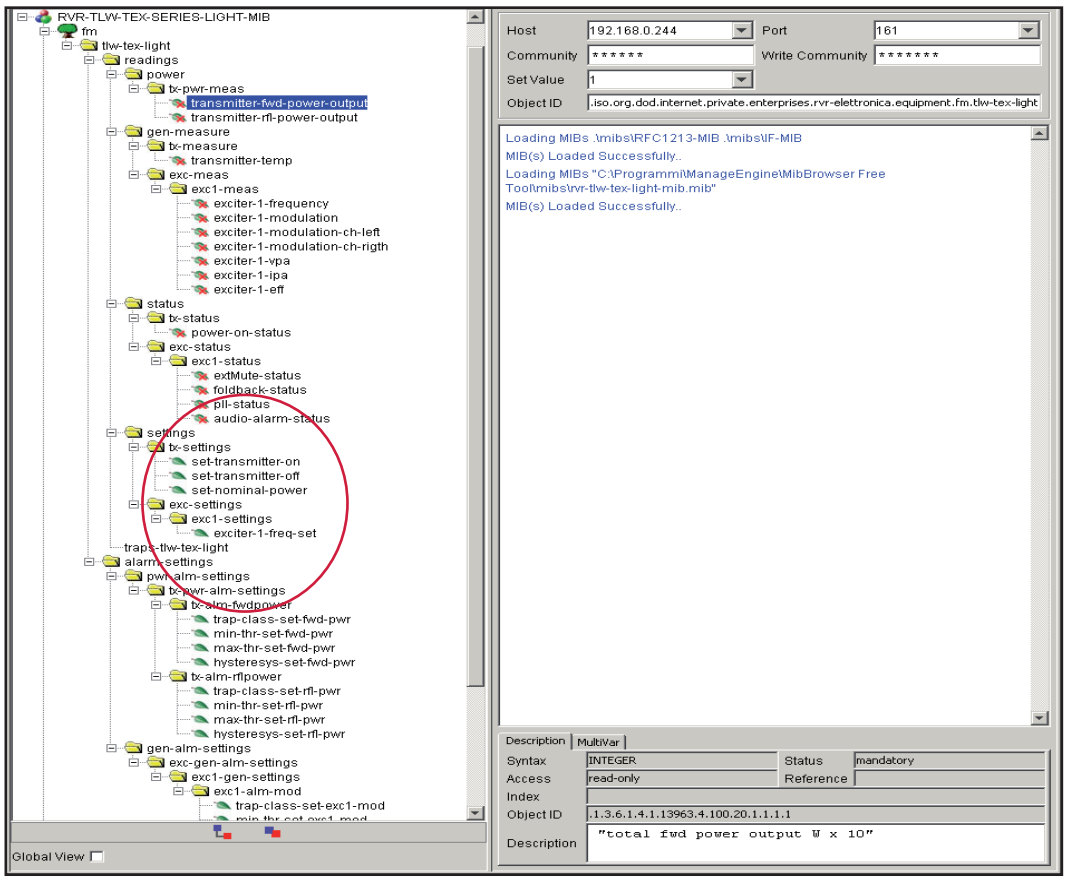
2.2.2 Comand sending

Similarly to measurements, the commands have a number of OID that are only in write mode. For each transmitter, the MIB export a specific set of OID.

The commands set are of two types: bistable (ON / OFF) or impulsive type.

- **Bistable control**: in order to activate (ON), the user must send a “2” as value; in order to disable (OFF), the user must send a “1” as value. No other value is accepted like a command.

- **Impulsive control**: tipically the commands are impulsive type. In other words, if you put the transmitter “ON” (“2” value), the next command is “OFF” (“2” value) and not a disable for “ON” command (“1” value).



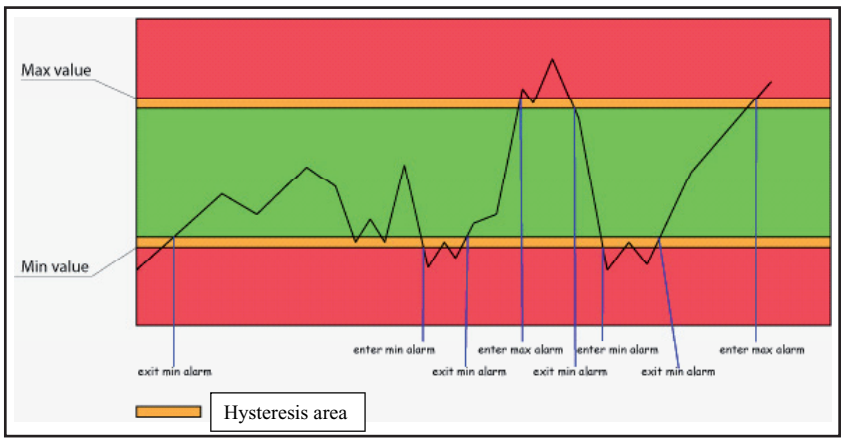
Menu 5

Note: *In the example above, all controls are impulsive type.*

2.2.3 Reading and Settings of Trap

For each Trap related to measurement can be set:

- Enabler Trap command on a power measure.
- The minimum value (MIN) is the fixed point below which is sent a Trap.
- The maximum value (MAX) is the fixed point beyond which is sent a Trap.
- The hysteresis value is a nominal value that the system adds (or subtracts) to real value in order to exit from alarm condition. In other words, it is helpful to avoid situations of continuous alarm, if readout is very close to the set point alarm.

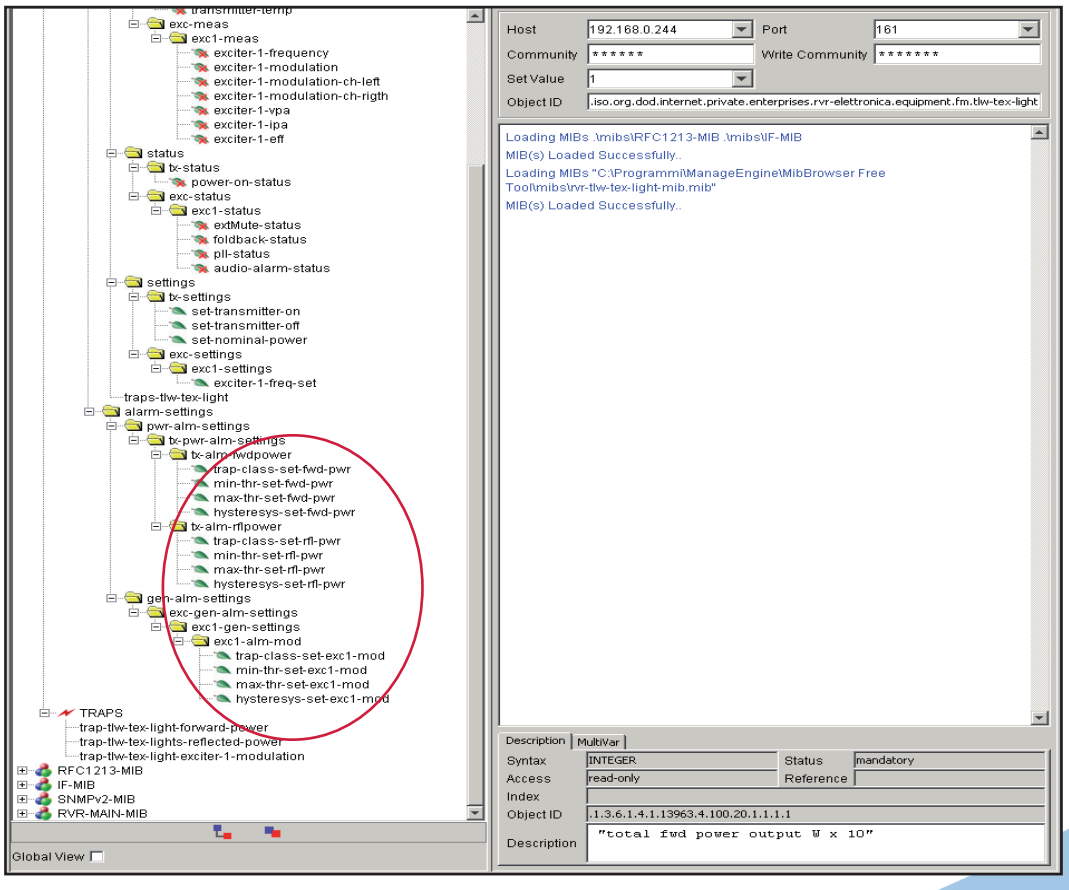


Menu 6

As you can see the hysteresis is a protected area in which the alarm is not sent, when the value exceeds the minimum value (MIN) when there is no alarm or the maximum value (MAX) alarm is active, the minimum value (MIN) alarm is set. To exit the MIN alarm condition, the value should be equal to the MIN value plus the value of hysteresis.

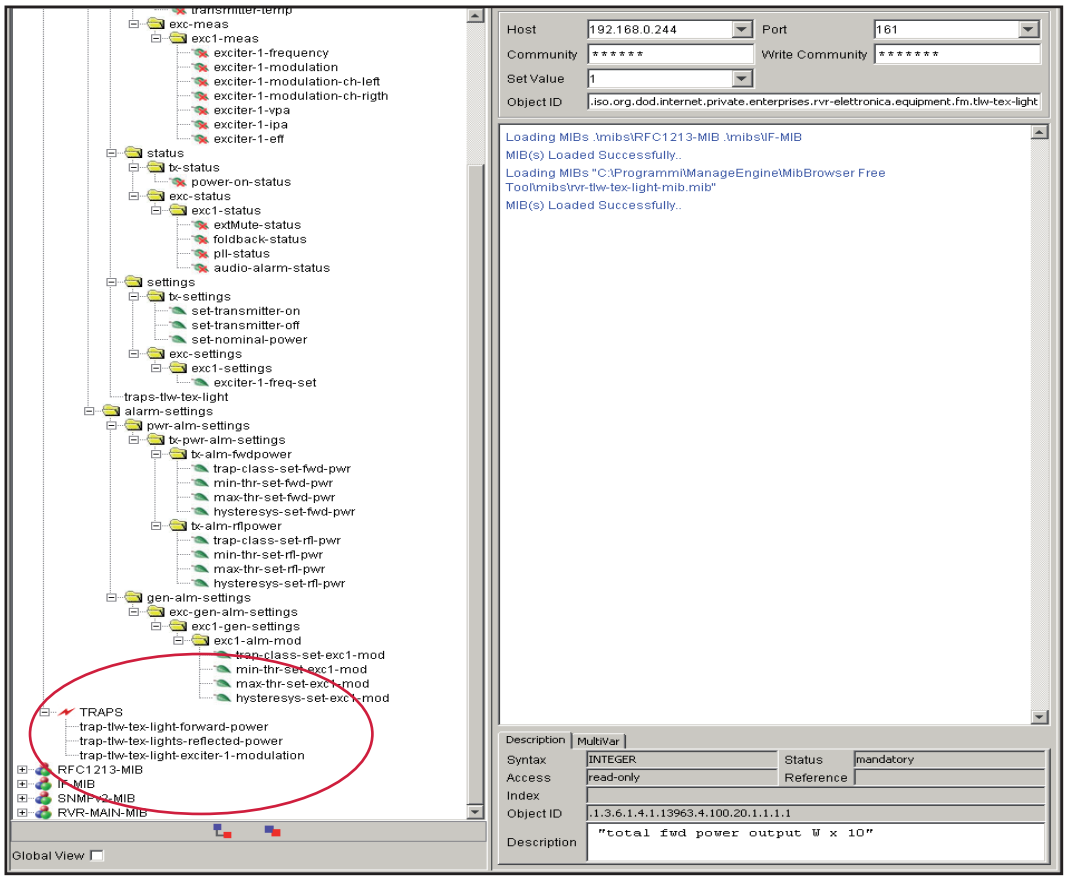
Note : *the hysteresis value must be less than ½ referred to distance between the minimum value (MIN) and maximum value (MAX).*

An example of an analog alarm setting, are included in the following section in the SNMP tree:



Menu 7

Below are shown the OID descriptions of the trap sent by system:



Menu 8

3. Connecting to Internet network

In order to connect the system to the public network **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** you must have an internet connection typically provided through a router with NAT (Network Address Translation), which allows devices connected to the LAN to go out with the number router's public IP and protect any attempts at forcing.

In case you have connecting directly with the public IP address on the LAN socket is advisable to insert a router / firewall to avoid exposing the system **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** directly to the public network but manage only the ports used by **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** for the functions of the web interface and SNMP.

The system uses incoming port 80, can not be changed, such as web interface visible from any Web Browser and port 161 can not be changed, such as SNMP port.

For sending of SNMP Trap **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** uses port 162 that can not be changed.

To ensure that the **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** is visible from the outside is necessary that the router / firewall is set up port forwarding, the function can have different names depending on the brand of your router.

The public port 80 from IP to the IP of **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** for WEB and port 161 of the public interface to the IP of **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** for SNMP data.

To ensure that the unit can send the Trap needs to be able to use the network at its output port 162 for Trap.

The apparatus as said default IP is set to RVR as 192.168.0.244 and will be adjusted on the network configured as your router's LAN port is used for port forwarding.

If you have multiple devices connected to the LAN after the router is necessary to use different ports on the public interface that will be routed to the fixed ports of the devices **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** must have a LAN IP different from each other.

- **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE**#1 IP 192.168.0.244 Port forwarding port 80 > port 80 of 192.168.0.244
- **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE**#1 IP 192.168.0.244 Port forwarding port 161 > port 161 of 192.168.0.244
- **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE**#2 IP 192.168.0.245 Port forwarding port 81 > port 80 of 192.168.0.245
- **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE**#2 IP 192.168.0.245 Port forwarding port 163 > port 161 of 192.168.0.245

With this configuration, the apparatus **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** # 1 will be visible from WEB as http://public.ip and apparatus **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** # 2 will be visible from as http://public.ip:81 WEB, SNMP and how you must use port 161 to see the **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** # 1 and port 163 to see the **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** # 2.

To send the Trap being output there is no problem, as long as there are no restrictions on using port 162 is wanted by the service provider.

To know the public IP of our apparatus is desirable to have a FIXED IP connection service that is provided by the provider, if the service has a dynamic IP you will have to rely on a DNS service that gives a name to our IP and keep updated in the event of a change of IP in order to reach the **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** always writing the same name.

This service is provided by many providers, some free and some paid, and usually some routers include this function that can handle some of the service providers, and in case you need to use this service will need to be programmed into your router by following the instructions in that, given the various methods used to manage this function, we can not include this function in the system **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE**.

In case your nework **/TLW-TFT-E-2HE, /TLW-TFT-E-3HE & /TLW-TFT-E-4HE** has many systems connected to the Internet the safest way to manage and functional systems is to create a VPN between all stations and the headquarters in order to have all the devices in the same network in order to view them directly with their IP without the limitations of different ports for devices in the same location, not all routers have this programming possibilities, limits the output ports and having to manage any dynamic IP with a DNS service.

In this case, the customer will have to rely on a company that specializes in networks to configure your VPN between locations.

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