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R V R ELETTRONICA TLW-TEX-E-2HE Fm Transmitters User Manual

/TLW-TEX-E-2HE & /TLW-TEX-E-3HE
USER MANUAL

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TLW-TEX-E-2HE Fm Transmitters

Supplementary Manual for TEX-LCD family and TEX-LIGHT family
Manufactured by R.V.R. ELETTRONICA Italia

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/TLW-TEX-E-2HE & /TLW-TEX-E-3HE – User Manual Version 1.2
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Option /TLW-TEX-E-2HE & /TLW-TEX-E-3HE

1.1 Preparation

1.1.1 Preliminary checks

Perform setup as follows (valid for both operating tests and final commissioning):
√ Connection cable kit including:

- Ethernet cable (not included) for connection to ADSL router or LAN network; or
- Crossover Ethernet cable (not included) for direct connection to PC.

1.1.2 Connections

- Connect the LAN output of option /TLW-TEX-E-2HE & /TLW-TEX-E-3HE to the appropriate input of your ADSL router or LAN network. If the connecting device is different, identify an equivalent output.
  ☞ **Note: 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 correct operation of the equipment.

1.2 Initial start-up and setup

Follow the instructions below in case of initial power up or after making a change to the configuration in which this component is integrated.
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 the address http://192.168.0.244 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

The RVR has the following default settings:

• **IP address**: 192.168.0.244

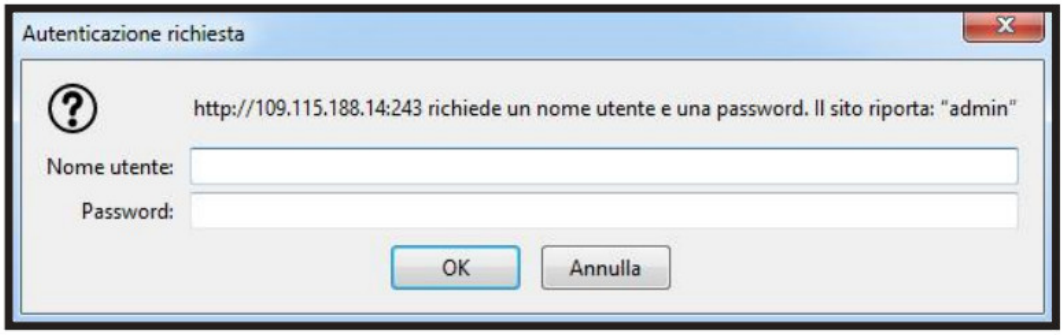
• **Netmask address**: 255.255.255.0

• **Gateway address:** 192.168.0.1

☞ **Note:** If address **http://192.168.0.244** does not work, check and set the IP address as 192.168.0.XXX (where XXX is a figure between 0 and 255, excluding 244 that is /TLW-TEX-E-2HE & /TLW-TEX-E-3HE option default address). To change the P ddress, 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 usernames are not modifiable by the user.



Menu 2

☞ **Note:** Login as user enables read-only mode on the WUI. If the administrator password is not set, it cannot be enabled for the user or operator.

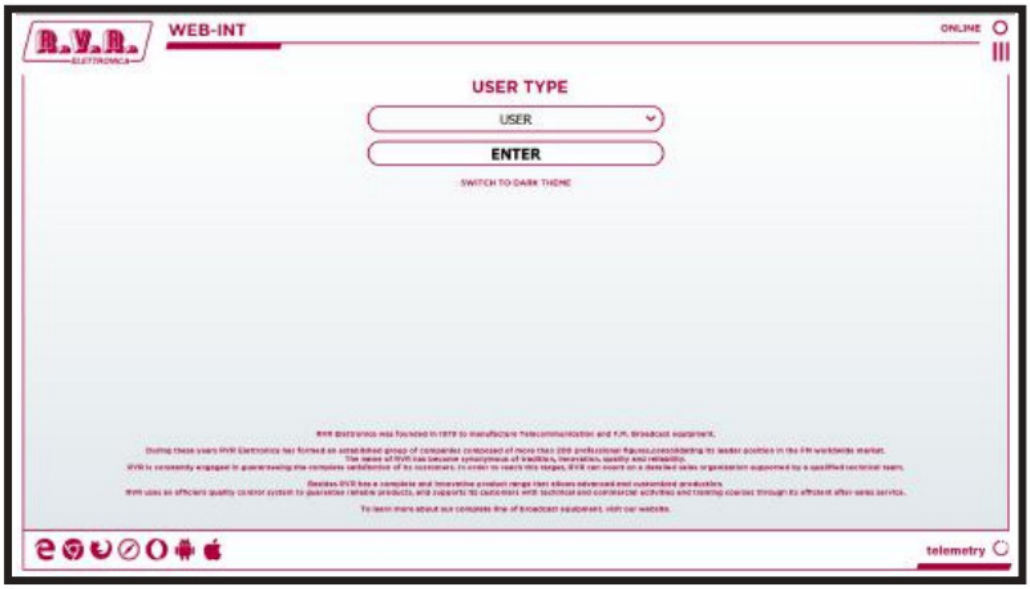
3. Change the parameters according to your needs.
4. The interface is now ready to remotely read data and modify the various settings of the device.

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:



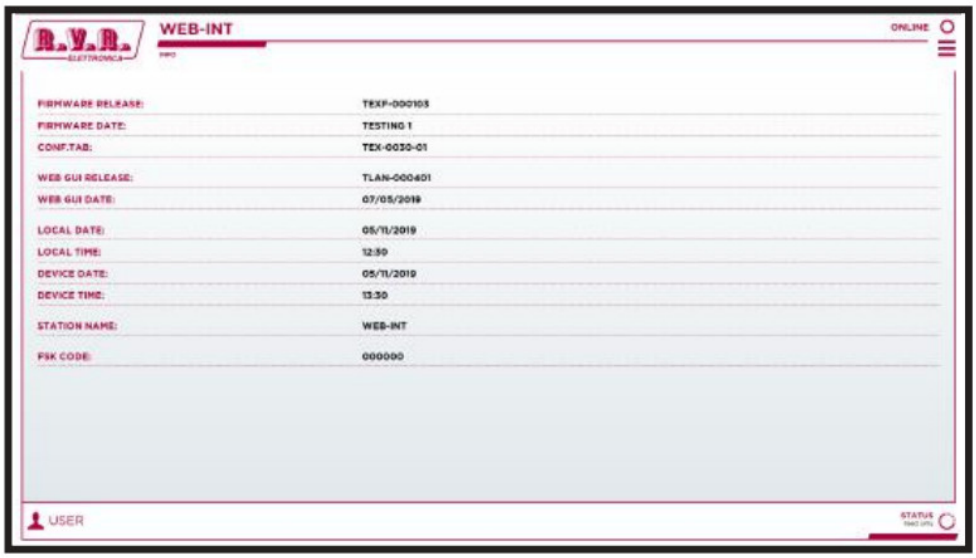
Menu 3

To enter in one of the sub-menus, select the name and then click on the 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 device, whether online or not. It is located at the top of the page.
2. **Navigation menu**: it allows you to select the page to display. To enter in one of the sub-menus, select the name and then click on the item to enter. It is located at the top right and can be activated by pressing the hamburger icon.
3. **Body:** area where the page displays information about the selected menu.
   From the Main Screen it is possible to select the type of user between:
   User, Operator) and Admin; and to select the type of display of the WEB page, which can be normal view or dark mode.

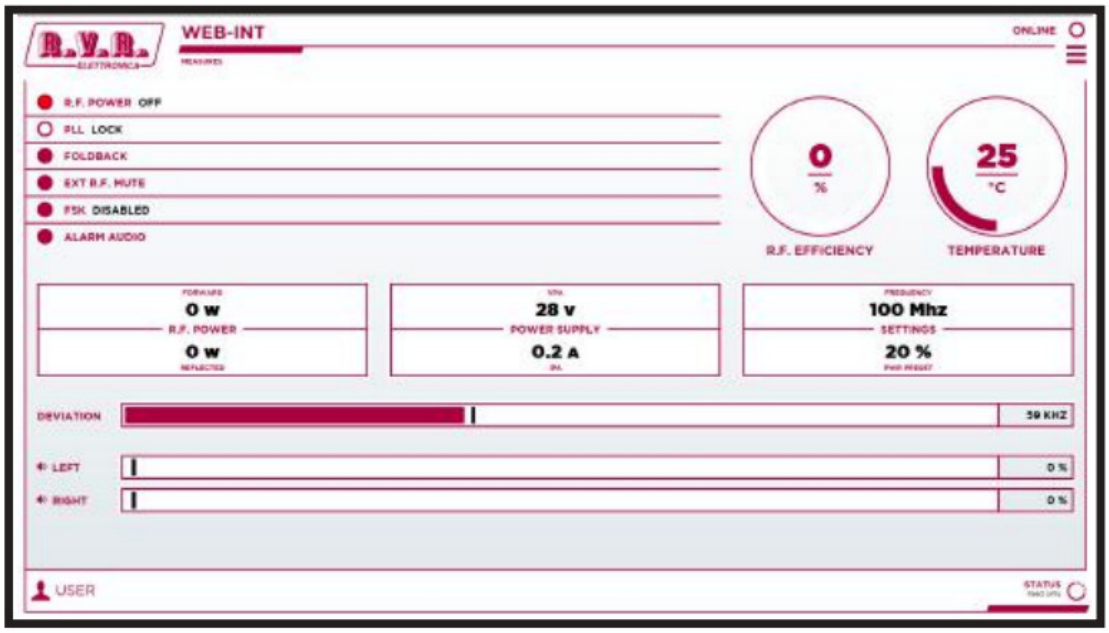
1.3.1 Info Menu – User

Values found here are "live readings", and as such they cannot be modified.
To change the settings, use the operator or administrator menu.
This page shows the user the data of the exciter to which the /TLW-TEX-E- 2HE & /TLW-TEX-E-3HE interface is connected



Menu 4

Firmware Release
Shows the firmware release of TEX-LCD or TEX-LIGHT.
Firmware Date
Shows the firmware release date of TEX-LCD or TEX-LIGHT.
Conf. Tab
Shows the Configuration Table loaded on TEX-LCD or TEX-LIGHT.
WEB GUI Release
Shows the release of the WEB firmware.
WEB GUI Date
Shows the release date of the WEB firmware.
Local Date
Displays the set date of the internet navigation device.
Local Time
Displays the set time of the internet navigation device.
Device Date
Displays the date set on the TEX-LCD or TEX-LIGHT device.
Device Time
Displays the time set on the TEX-LCD or TEX-LIGHT device.
Station Name
Shows the ID name of the transmitting station.
Code FSK
Shows the FSK code of the transmitting station.
1.3.2 Measures Menu – User
Values found here are “live readings”, and as such they cannot be modified.
To change the settings, use the operator or administrator menu.
This page shows the user the data of the exciter connected to the /TLW-TEX-E- 2HE & /TLW-TEX-E-3HE interface:



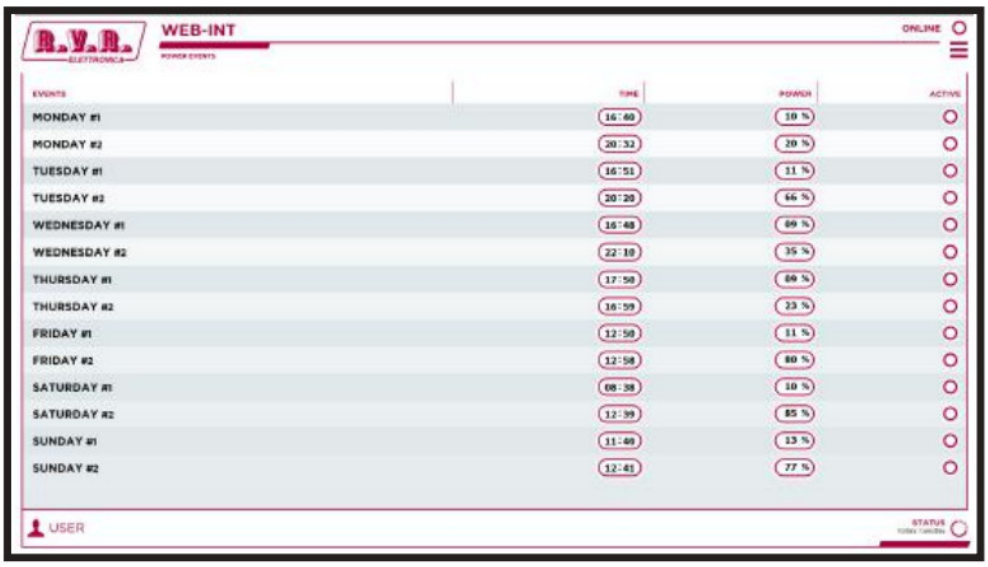
Menu 5

RF Power
Shows the power status of the exciter.
PLL
Shows the lock status at frequency set by the 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 the exciter.
Audio Alarm
Shows the status of an impasse due to excessive SWR.
RF Efficiency
Shows efficiency of the exciter expressed in %.
Temperature
Shows the internal temperature reading of the device expressed in °C.
Forward R.F. Power
Shows the forward power of the exciter expressed in W.
Reflected R.F. Power
Shows the reflected power of the exciter expressed in W.
VPA Power Supply
Shows the amplifier module voltage of the exciter expressed in V.
IPA Power Supply
Shows the amplifier module current of the exciter expressed in A.
Frequency Settings
Shows the operating frequency of the exciter expressed in MHz.
PWR Preset Settings
Shows the power percentage of the exciter expressed in %.
Deviation
Shows deviation of the exciter expressed in kHz.
Left Shows modulation on the left channel of the exciter expressed in kHz.
Right
Shows modulation on the right channel of the exciter expressed in kHz.

1.3.3 Power Events Menu – User

☞ **Note:** Access to this menu, and any modification of the parameters, is possible only if the device supports the clock function (RTC) inside it.
Values found here are “live readings”, and as such they cannot be modified.
To change the settings, use the operator or administrator menu.

This page shows the user the time and date of the device connected to the /TLW-TEX-E- 2HE & /TLW-TEX-E-3HE interface:

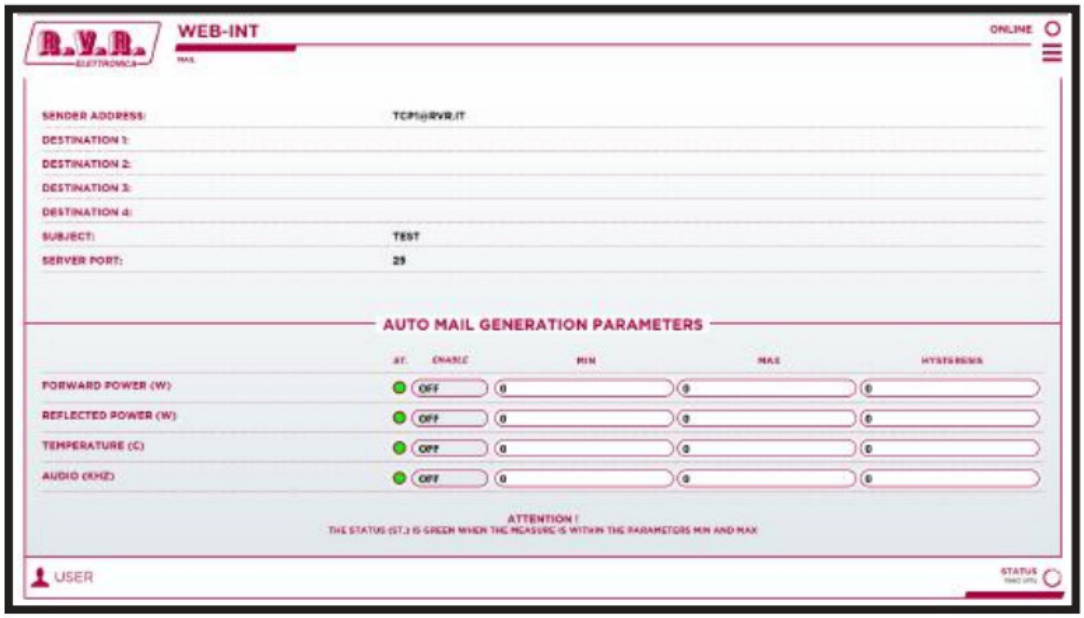


Menu 6

Monday #1
Display of the first event on Monday when the power variation set as a percentage occurs.
Monday #2
Display of the second event on Monday when the power variation set as a percentage occurs.
Tuesday #1
Display of the first event on Tuesday when the power variation set as a percentage occurs.
Tuesday #2
Display of the second event on Tuesday when the power variation set as a percentage occurs.
Wednesday #1
Display of the first event on Wednesday when the power variation set as a percentage occurs.
Wednesday #2
Display of the second event on Wednesday when the power variation set as a percentage occurs.
Thursday #1
Display of the first event on Thursday when the power variation set as a percentage occurs.
Thursday #2
Display of the second event on Thursday when the power variation set as a percentage occurs.
Friday #1
Display of the first event on Friday when the power variation set as a percentage occurs.
Friday #2
Display of the second event on Friday when the power variation set as a percentage occurs.
Saturday #1
Display of the first event on Saturday when the power variation set as a percentage occurs.
Saturday #2
Display of the second event on Saturday when the power variation set as a percentage occurs.
Sunday #1
Display of the first event on Sunday when the power variation set as a percentage occurs.
Sunday #2
Display of the second event on Sunday when the power variation set as a percentage occurs.

1.3.4 Mail Menu – User

Values found here are “live readings”, and as such they cannot be modified.
To change the settings, use the operator or administrator menu.
This page shows the user the time and date of the device connected to the /TLW-TEX-E- 2HE & /TLW-TEX-E-3HE interface:

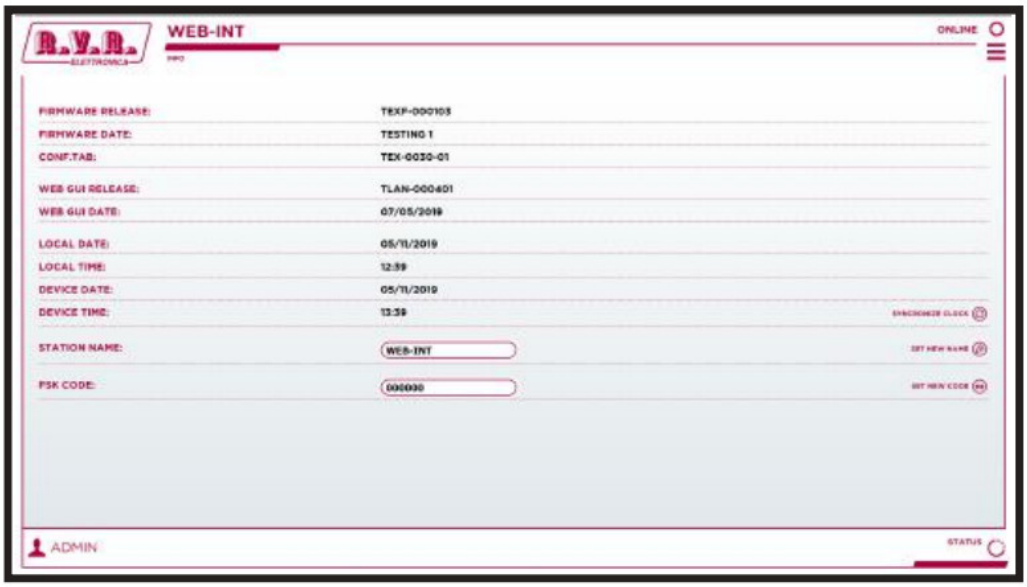


Menu 6

Sender Address
Display of the sender's address used to send messages.
Destination 1
Display of the first destination address used to send messages in case of alarms.
Destination 2
Display of the second destination address used to send messages in case of alarms.
Destination 3
Display of the third destination address used to send messages in case of alarms.
Destination 4
Display of the fourth destination address used to send messages in case of alarms.
Subject
Customised subject of the email used to send alarm messages.
Server Port
Display of the port used by the TCP transmission protocol.
Auto Mail Generation Parameters
Display of the parameters configured for 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 shows the user the alarms relating to the exciter connected to the /TLW-TEX-E-2HE & /TLW- TEX-E-3HE interface and allows the setting of various parameters.
Press the Update button at the end of the line to confirm selection; if instead you wait for the timer to elapse, the parameter will remain as it was set previously.
Below is a description of the items that allow modification of the parameter.
Press the buttons to confirm your choice, or wait for the timer to elapse, and the parameter will remain as set previously:

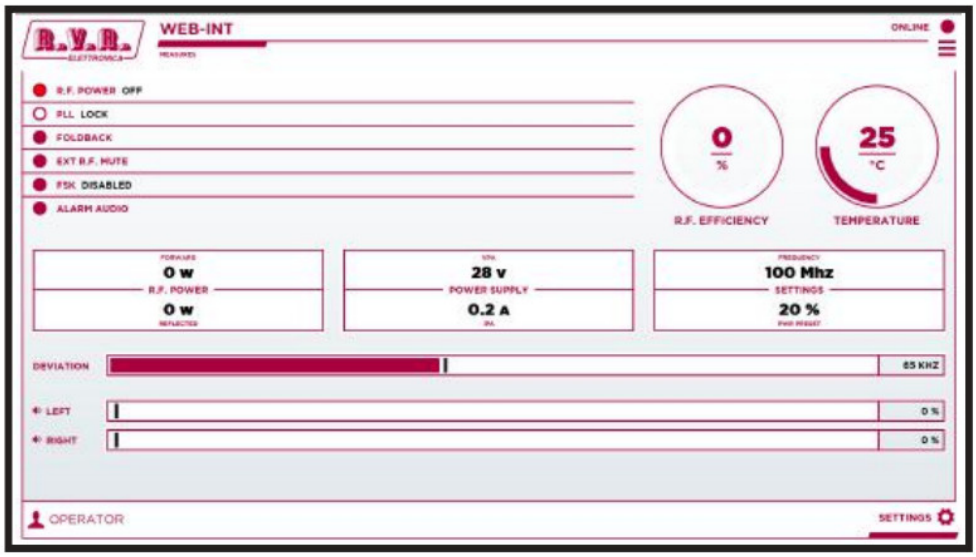


Menu 7

Firmware Release
Shows the firmware release of TEX-LCD or TEX-LIGHT.
Firmware Date
Shows the firmware release date of TEX-LCD or TEX-LIGHT.
Conf. Tab
Shows the Configuration Table loaded on TEX-LCD or TEX-LIGHT.
WEB GUI Release
Shows the release of the WEB firmware.
WEB GUI Date
Shows the release date of the WEB firmware.
Local Date
Displays the set date of the internet navigation device.
Local Time
Displays the set time of the internet navigation device.
Device Date
Displays the date set on the TEX-LCD or TEX-LIGHT device.
Device Time
Displays the time set on the TEX-LCD or TEX-LIGHT device.
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 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 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 shows the user the information about the exciter connected to the /TLW-TEX-E-2HE & /TLW-TEX-E-3HE interface and allows the setting of various parameters.
Below is a description of the items that allow modification of the parameter.
Press the buttons to confirm your choice, or wait for the timer to elapse, and the parameter will remain as set previously:



Menu 7

RF Power
Shows the power status of the exciter.
PLL
Shows the lock status at frequency set by the 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 the exciter.
Audio Alarm
Shows the status of an impasse due to excessive SWR.
RF Efficiency
Shows efficiency of the exciter expressed in %.
Temperature
Shows the internal temperature reading of the device expressed in °C.
Forward R.F. Power
Shows the forward power of the exciter expressed in W.
Reflected R.F. Power
Shows the reflected power of the exciter expressed in W.
VPA Power Supply
Shows the amplifier module voltage of the exciter expressed in V.
IPA Power Supply
Shows the amplifier module current of the exciter expressed in A.
Frequency Settings
Shows the operating frequency of the exciter expressed in MHz.
PWR Preset Settings
Shows the power percentage of the exciter expressed in %.
Deviation
Shows deviation of the exciter expressed in kHz.
Left
Shows modulation on the left channel of the exciter expressed in kHz.
Right
Shows modulation on the right channel of the exciter expressed in kHz.
Press SETTINGS, located at the bottom right of the page, to access the parameter modification menu:

Menu 8

PWR Preset

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

RF Power

Press Set to change the logical state of the data.

Frequency

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

FSK

Press Set to change the logical state of the data.

1.3.7 Power Events Menu – Operator & Administrator

☞ **Note:** Access to this menu, and any parameter modification, is possible only if the device supports the clock function (RTC) inside it.

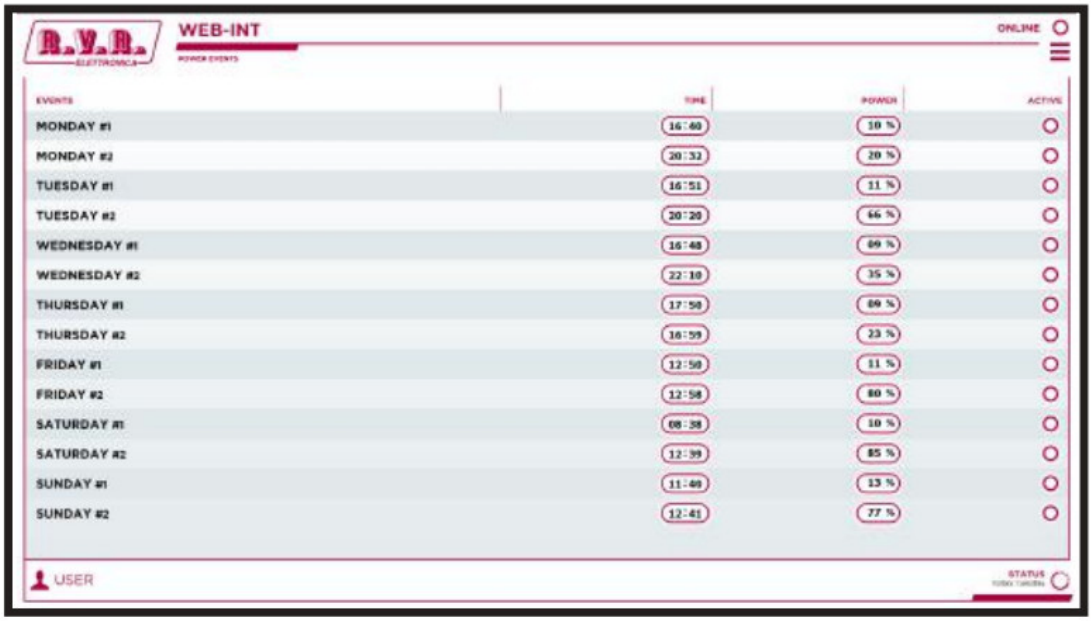
☞ **Note:** Access to this menu and modification of these parameters are only possible after login with operator or administrator rights.

This page shows the user the date and time of the device with the /TLW-TEX-E2HE & /TLW- TEX-E-3HE interface and allows the setting of various parameters.

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

Below is a description of the items that allow modification of the parameter.

Press the buttons to confirm your choice, or wait for the timer to elapse, and the parameter will remain as set previously



Menu 9

Monday #1
Setting of the first event on Monday when the power variation set as a percentage occurs.
Monday #2
Setting of the second event on Monday when the power variation set as a percentage occurs.
Tuesday #1
Setting of the first event on Tuesday when the power variation set as a percentage occurs.
Tuesday #2
Setting of the second event on Tuesday when the power variation set as a percentage occurs.
Wednesday #1
Setting of the first event on Wednesday when the power variation set as a percentage occurs.
Wednesday #2
Setting of the second event on Wednesday when the power variation set as a percentage occurs.
Thursday #1
Setting of the first event on Thursday when the power variation set as a percentage occurs.
Thursday #2
Setting of the second Thursday event when the power variation set as a percentage occurs.
Friday #1
Setting of the first event on Friday when the power variation set as a percentage occurs.
Friday #2
Setting of the second event on Friday when the power variation set as a percentage occurs.
Saturday #1
Setting of the first event on Saturday when the power variation set as a percentage occurs.
Saturday #2
Setting of the second event on Saturday when the power variation set as a percentage occurs.
Sunday #1
Setting of the first event on Sunday when the power variation set as a percentage occurs.
Sunday #2
Setting of the second event on Sunday when the power variation set as a percentage occurs.
☞ **NOTE:** For the events to be set correctly, the power must be between 0 and 105%, and the time between 00:00 and 23:59.
If the time is set at 24:00, the event is disabled.
☞ **NOTE:** The power change set in the event will be maintained until the next event set; in case of remote modifications, the power change will be immediate until the next event.

1.3.8 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 screen shows information on sending messages via the interface network /TLW-TEX-E-2HE & / TLW-TEX-E-3HE and also allows the user to set various parameters.

Press the UPDATE SETTINGS or UPDATE EVENTS button at the end of the line to confirm selection; if instead you wait for the timer to elapse, the parameter will remain as it was set previously.

☞ **Note:** e-mails can only be forwarded via an MX record, i.e. 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 operation.

☞ **Note:** to make changes within these sub-menus you need to have thorough technical knowledge of network management. It is recommended to entrust modifications to trained or qualified personnel.

Below is a description of the items that allow modification of the parameter.

Press the buttons to confirm your choice, or wait for the timer to elapse, and the parameter will remain as set previously:

Menu 10

Sender Address

Setting of the sender's address used to send messages.

Destination 1

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

Destination 2

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

Destination 3

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

Destination 4

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

Subject

Setting of the customised subject of the email used to send alarm messages.

Server Port

Setting of the port used by the TCP transmission protocol.

Auto Mail Generation Parameters

Setting of the parameters configured for transmission of the alarm message.

The status of the automatic generation of emails can be set at active or inactive; it is also possible to change the value of direct power (in W), reflected power (in W), temperature (in °C) and audio (in kHz), by writing a value directly in the field between the minimum, maximum and hysteresis.

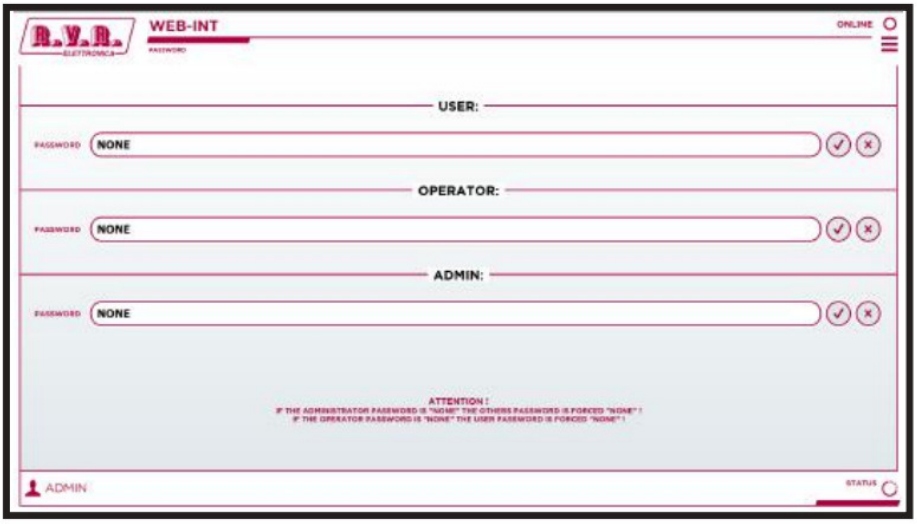
1.3.9 Password Menu – Administrator

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

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

Press the V button to confirm selection; if instead you wait for the timer to elapse, or press X, the parameter will remain as it was set previously.

This page allows the configuration of login as an administrator and maintenance technician for the /TLW-TEX-E-2HE & /TLW-TEX-E-3HE interface via WUI:



Menu 11

User Password

Setting of the password for user functions (parameter read-only enabling).

Operator Password

Setting of the password for operator functions (parameter reading and partial change enabling).

Admin Password

Setting of the password for administrator functions (parameter reading and full change enabling).

1.3.10 Network Menu – Administrator

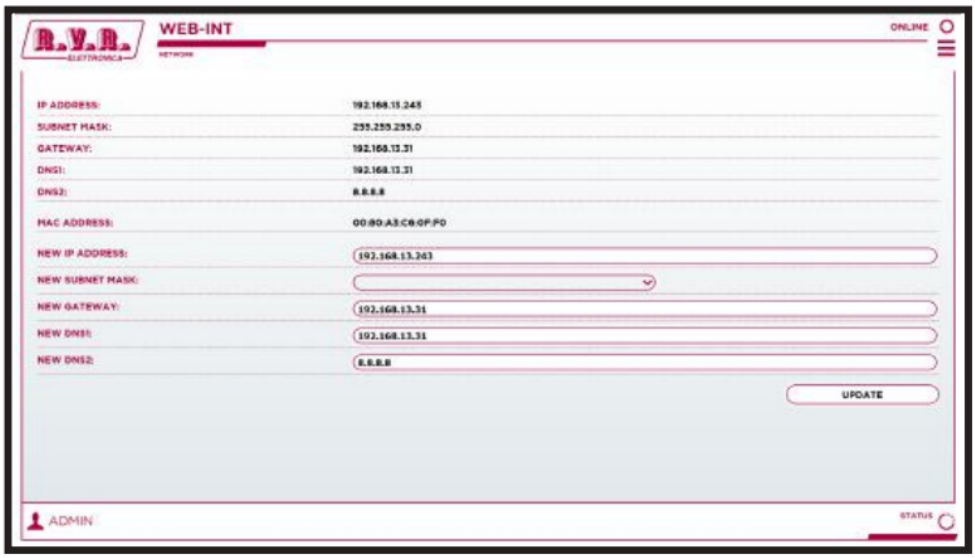
☞ **Note:** Access to this menu and modification of these parameters are only possible after login with administrator rights.

This page shows information on internet connection of the /TLW-TEX-E-2HE & / TLW-TEX- E-3HE interface and allows the user to set the parameters.

Press the Update button to confirm selection; if instead you wait until the timer elapses, the parameter will remain as it was set previously.

☞ **Note:** to make changes within these sub-menus you need to have thorough technical knowledge of network management. It is recommended to entrust modifications to trained or qualified personnel.

☞ **Note:** The IP address must be set to static and it is not possible to acquire an address from the 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

Display of the subnet mask, necessary for the computer that must communicate with another IP address to know if it should route packages towards the gateway of its local network or use the address of the recipient's local

network.

Gateway

Shows the gateway address. In simpler networks, there is only one gateway that forwards all the outbound traffic to the internet network. 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 Display of the address of the first DNS (Domain Name System) server; 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 Display of the address of the second DNS (Domain Name System) server; 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

Display of the MAC (Media Access Control) address; this address is uniquely assigned to the ethernet network card present in the 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 address of the first DNS (Domain Name System) server.

New DNS2

Set the new address of the second DNS (Domain Name System) server.

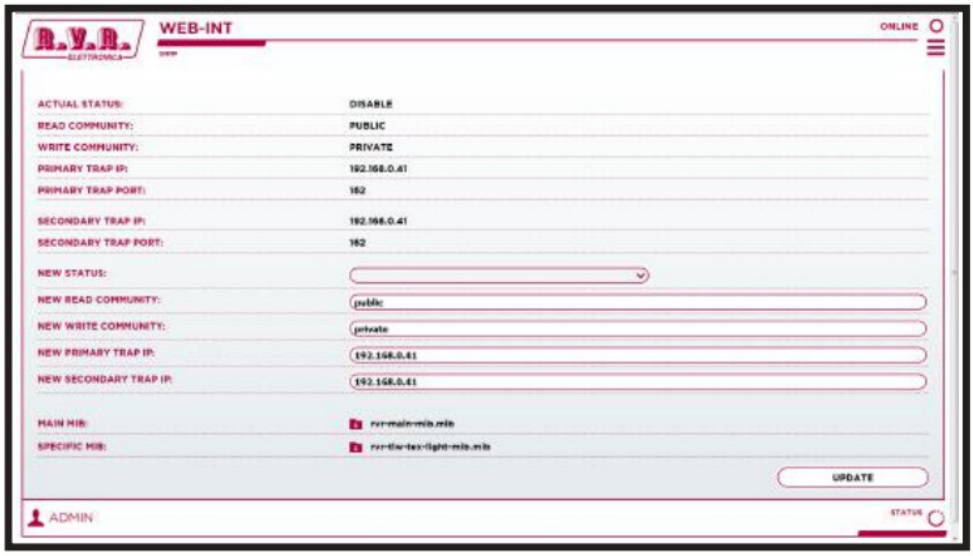
1.3.11 SNMP Menu – Administrator

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

This page shows the user the information about the management and supervision of the devices connected to the network via SNMP (Simple Network Management Protocol) of the /TLW-TEX-E-2HE & /TLW-TEX-E-3HE interface and allows the user to set various parameters.

Press the Update button to confirm selection; if instead you wait until the timer elapses, the parameter will remain as it was set previously.

☞ **Note:** to make changes within these sub-menus you need to have thorough technical knowledge of network management. It is recommended to entrust modifications to trained or qualified personnel.



Menu 12

Actual Status

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

Read Community

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

managed.

Write Community

Shows the set string for the 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 command that configures the agents to send a specific message when certain events occur.

Primary Trap Port

Shows the first port number set by the TCP transmission protocol for the TRAP command that configures the agents to send a specific message when certain events occur. The port cannot be changed.

Secondary Trap IP

Shows the second identification number of the IP address set to send the TRAP command that configures the agents to send a specific message when certain events occur.

Secondary Trap Port

Shows the second port number set by the TCP transmission protocol for the TRAP command that configures the agents to send a specific message when certain events occur. The port cannot be changed.

New Status

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

New Read Community

Set the string for the Read command.

New Write Community

Set the string for the Write command.

New Primary Trap IP

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

New Secondary Trap IP

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

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.

SNMP Telemetry

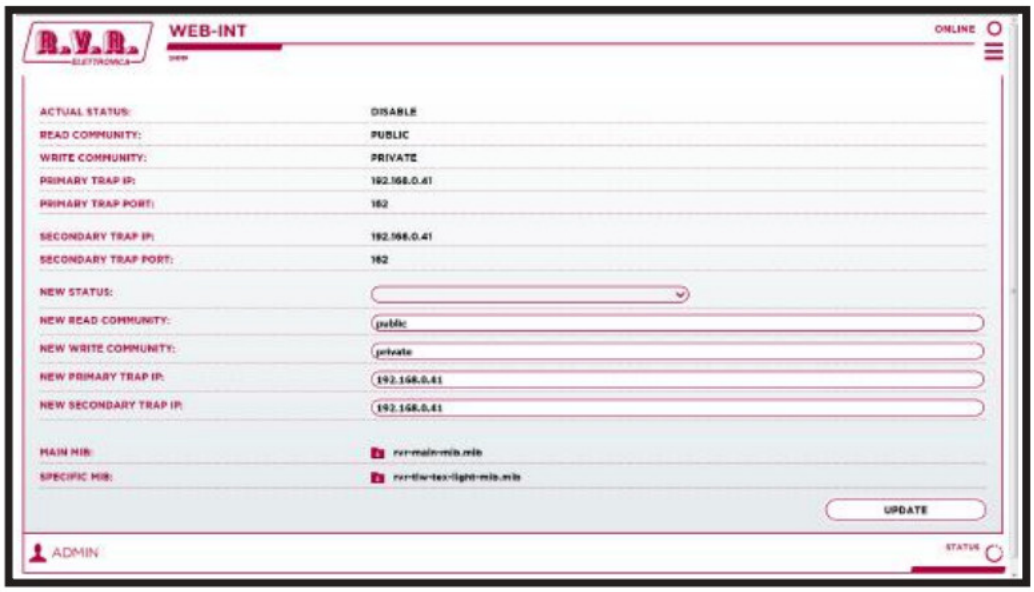
SNMP (Simple Network Management Protocol) is a worldwide protocol that allows the management and supervision of the equipment connected to the network.

Measurements and commands are described by a MIB (Management Information Base), which is a list of OIDs (Object Identifiers). 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 cannot freely distribute the MIB without written authorization issued by the manufacturer. The MIB is the property of the manufacturer.

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



Menu 1

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

2.1 MAIN MIB Description

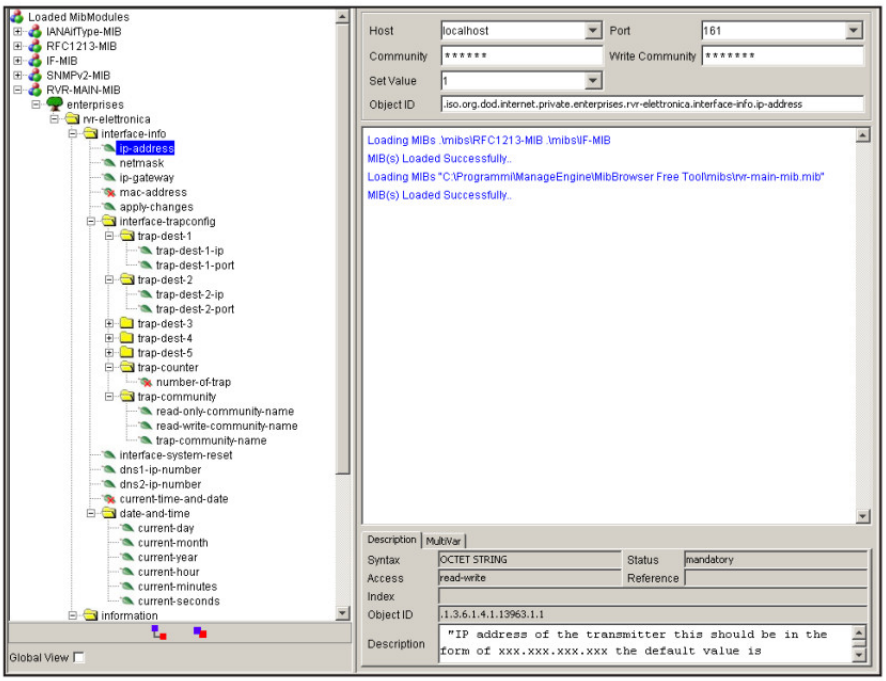
The MAIN MIB reads and manages the main parameters of /TLW-TEX-E-2HE & /TLW-TEX-E-3HE and provides general information related to the manufacturer.
Through this MIB you can read, and in some cases set, parameters such as the IP address, Netmask, Gateway and DNS address.
It is also possible to manage the IP address, time and date stored in the telemetry system.

☞ **Note:** Use a MIB BROWSER (not included) to use the MIBs of RVR devices.
These are usually provided in an accompanying CD with the system in which the /TLW-TEX-E-2HE & /TLW-TEX-E-3HE is installed.
In cases where the parameter is read-only, and cannot be edited, there is a red X over the icon of reference. In some cases to apply a particular change, it is necessary to click on the OID item “Apply Changes”.

☞ **Note:** A MIB browser of ManageEngine is used in the following examples, but any MIB Browser can be used.

2.1.1 Reading and Settings of parameters

The description of each variable is specified in the MIB, and given in the Description box at the end.



Menu 2

The telemetry system can send Traps to two different addresses. Different addresses can be set using the OIDs in the MIB, in this case:

- IP address for the destination of the Traps.

2.2 SPECIFIC MIB Description

The SPECIFIC MIB reads and manages the parameters managed by the /TLW- TEX-E-2HE & /TLW-TEX-E-3HE in the transmitter station.

This MIB can be used to read powers (forward, reflected or unbalanced), temperatures, voltages and currents on modules of all amplifiers, exciters and changeovers connected to the /TLW-TEX-E-2HE & /TLW-TEX-E-3HE.

☞ **Note:** The maximum configuration of amplifiers, exciters and changeovers available will always be displayed in the MIB browser. The devices not present will report zero readings.

It is also possible to manage the switching on or off of the transmitter, the resetting of alarms and automatic or manual changeover.

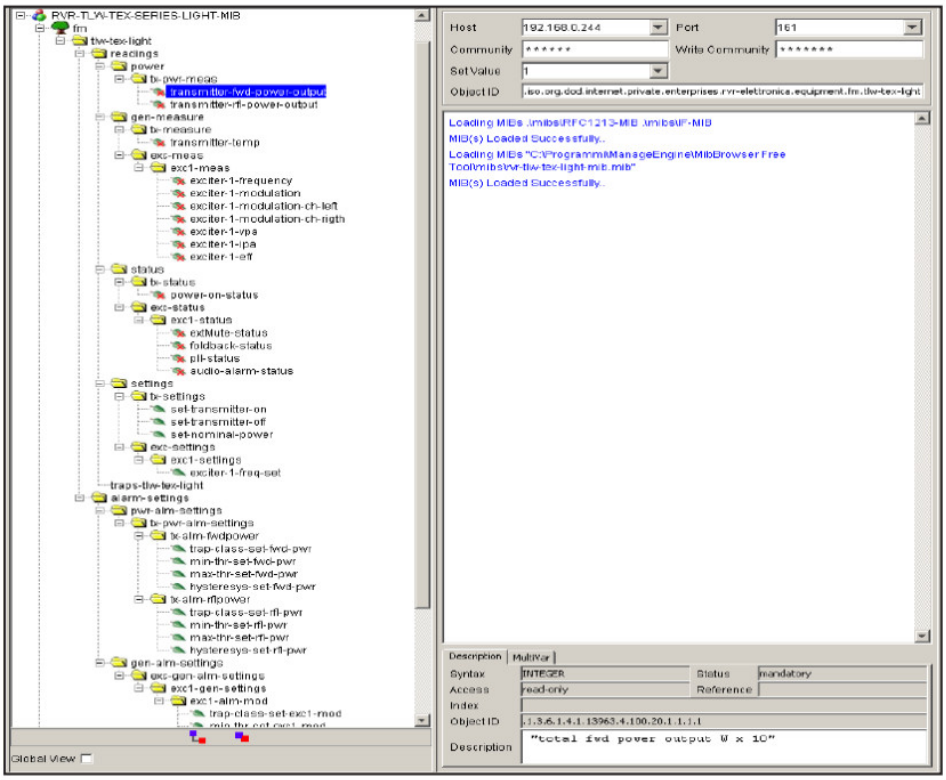
In cases where the parameter is read-only, and cannot be edited, there is a red X over the icon of reference. In some cases to apply a particular change, it is necessary to click on the OID item “Apply Changes”.

☞ **Note:** A MIB browser of ManageEngine is used in the following examples, but any MIB Browser can be used.

2.2.1 Reading of Measurements

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

The description of each variable is specified in the MIB, and given in the Description box at the end.

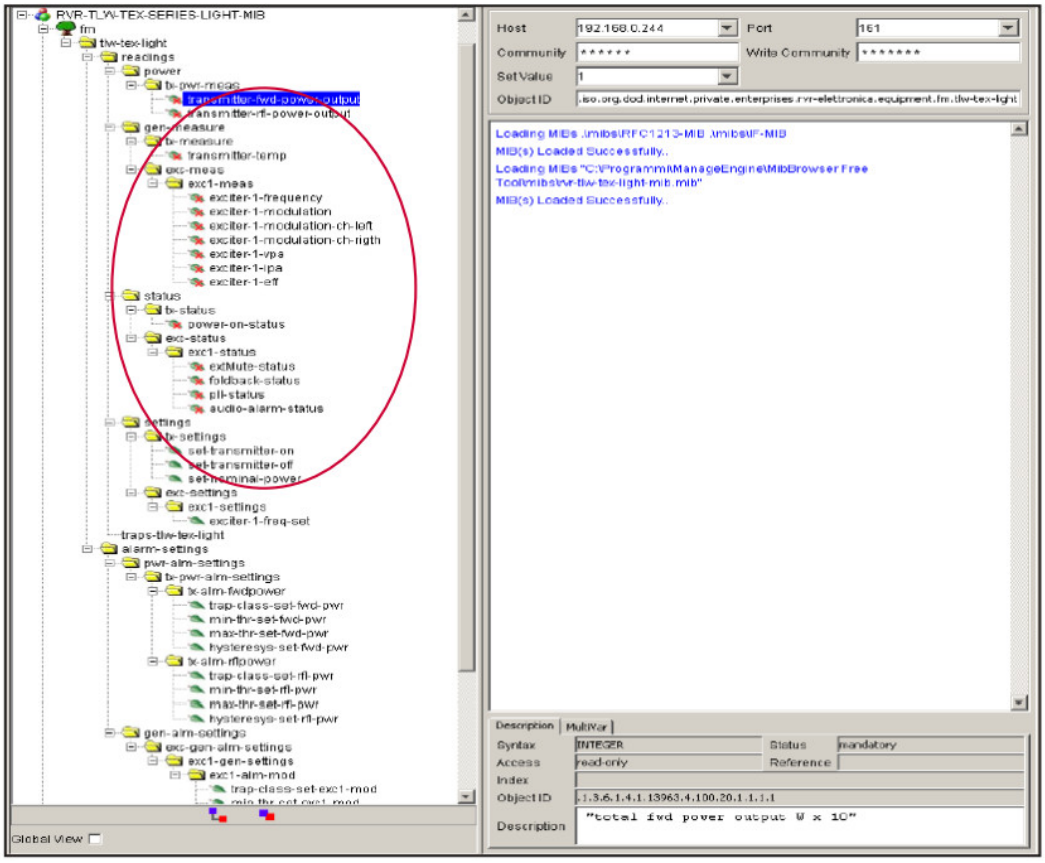


Menu 3

2.2.1 Status readings

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

The description of each variable is specified in the MIB, and given in the Description box at the end.



Menu 4

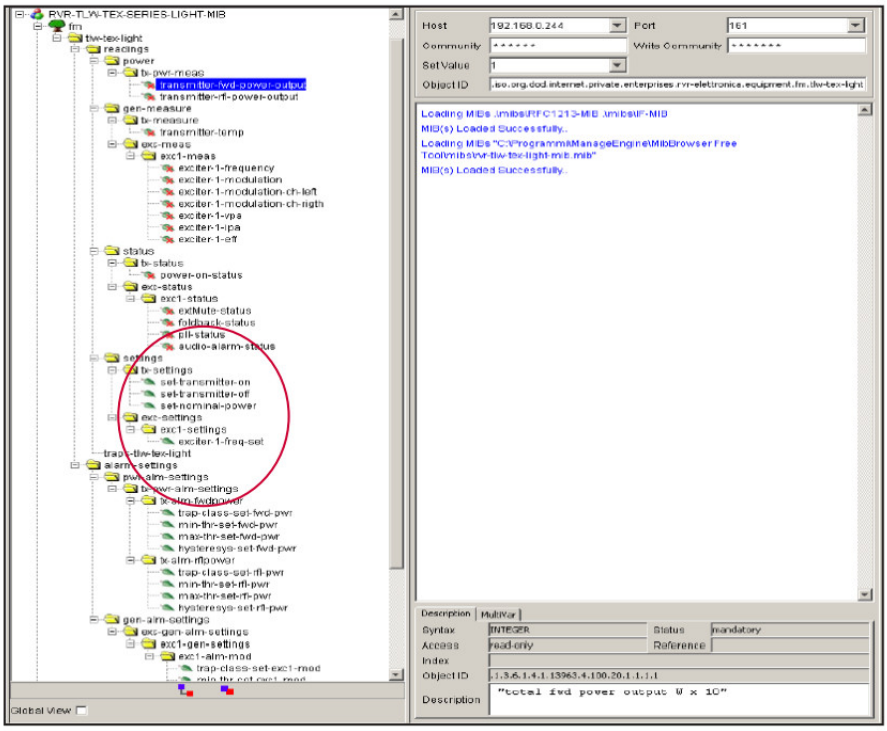
Status indications can be of three types:

- 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 Sending of commands

Similarly to measurements, the commands have a number of OIDs that are only in write mode. For each transmitter, the MIB exports a specific set of OIDs.
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 as a command.
- **Impulsive command:** Typically 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).



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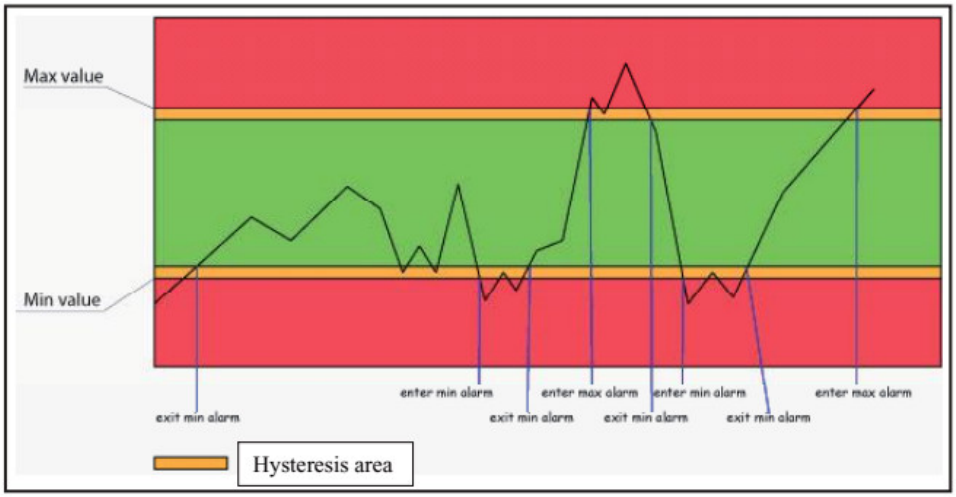
Note: Note: In the example above, all the commands are of the impulsive type.

2.2.3 Reading and Settings of the Traps

For each Trap related to measurement, the following can be set:

- Enabling of the Trap command relating to power measurement.
- The minimum value (MIN) is the fixed point below which a Trap is sent.
- The maximum value (MAX) is the fixed point above which a Trap is sent.
- The hysteresis value is a nominal value that the system adds to (or subtracts from) the real value in order to exit alarm mode.

In other words, it helps to avoid situations of continuous alarm, if the read value is very close to the alarm set point



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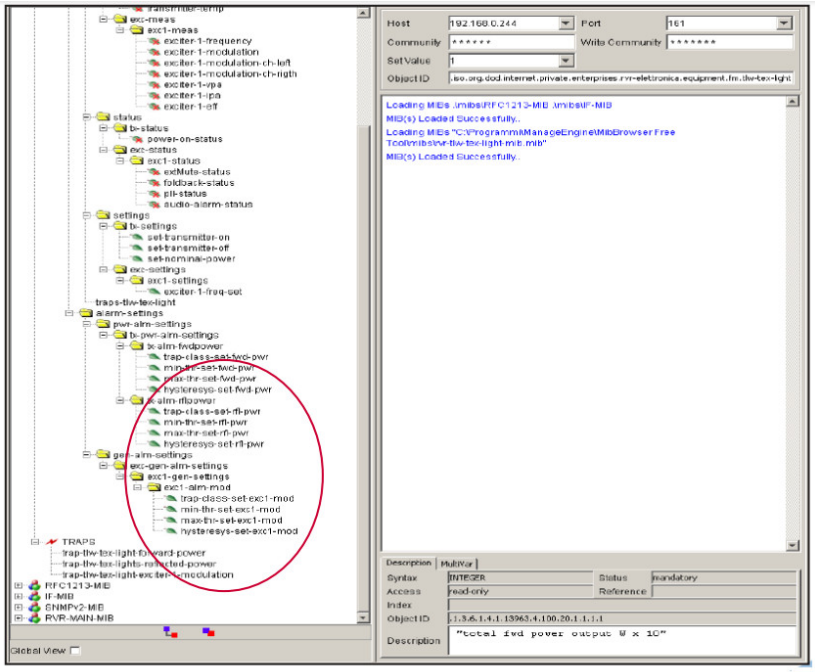
As you can see the hysteresis is a protected area in which the alarm is not sent, when the value exceeds the minimum value (MIN), when there is no alarm or the maximum value (MAX) alarm is active, the minimum value (MIN) alarm is set. To exit the MIN alarm condition, the value should be equal to the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

☞ **Note:** the hysteresis value must be less than ½ the distance between the minimum value (MIN) and

maximum value (MAX).
An example of an analogue alarm set for the measurements is given in the following section of the SNMP tree:



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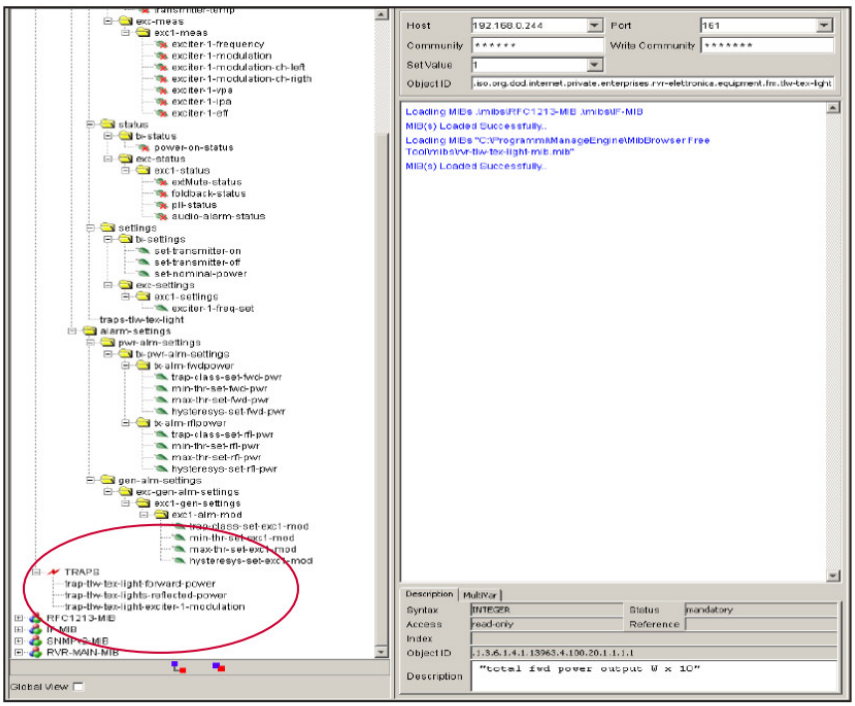
Below are shown the OID descriptions of the Traps sent by the system:



Menu 8

Connecting to Internet network

In order to connect the system to the public network /TLW-TEX-E-2HE & /TLW- TEX-E-3HE 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 router's public IP address and protect against any attempts at forcing.
In the case of a direct connection with a public IP on the LAN socket, it is advisable to insert a router / firewall to avoid exposing the /TLW-TEX-E-2HE & /TLW-TEXE-3HE system directly to the public network but manage only the ports used by the / TLW-TEX-E-2HE & / TLW-TEX-E-3HE for the functions of the WEB interface and SNMP.
The system uses incoming port 80, which cannot be modified, as a web interface visible from any Web Browser, and port 161, which also cannot be modified, as the SNMP port.
For sending of SNMP Traps, the /TLW-TEX-E-2HE & /TLW-TEX-E-3HE uses port 162, which cannot be modified.

To make the / TLW-TEX-E-2HE & / TLW-TEX-E-3HE visible from the outside, port forwarding must be set in the router / firewall. The function can have different names depending on the brand of the router.
Port 80 from the public IP to the IP of the /TLW-TEX-E-2HE & /TLW-TEX-E-3HE for the WEB and port 161 of the public interface to the IP of the / TLW-TEX- E-2HE & /TLW-TEX-E-3HE for SNMP data.
To ensure that the unit can send the Traps, it needs to be able to use the network at its output port 162 for Traps.
The default IP of the device is set by RVR as 192.168.0.244 and must be modified on the network configured as your router's LAN port and used for port forwarding. If you have multiple devices connected to the LAN after the router, it is necessary to use ifferent ports on the public interface that will be routed to the fixed ports of the devices /TLW-TEX-E-2HE & /TLW-TEX-E-3HE which must each have a different LAN IP.

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

With this configuration, the device /TLW-TEX-E-2HE & /TLW-TEX-E-3HE#1 will be visible from WEB as **http://public.ip** and device /TLW-TEX-E-2HE & /TLW-TEXE-3HE#2 will be visible from WEB as **http://public.ip:81**, while port 161 must be used as the
SNMP post to see the /TLW-TEX-E-2HE & /TLW-TEX-E-3HE#1 and port 163 to see the /TLW-TEX-E-2HE & /TLW-TEX-E-3HE#2.
The Traps can be sent easily providing there are no restrictions on use of port 162 set by the service provider.
To know the Public IP of our device it is desirable to have a FIXED IP connection service that is offered 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 keeps it updated in case of change to the IP so that you can reach the / TLW-TEX-E-2HE & / TLW-TEX-E3HE by always writing the same name.
This service is offered by many providers, some for free and others for a fee, and usually some routers include this function that can manage the service of some providers; in case you need to use this service it will have to be programmed on the router following the instructions as, due to the various methods used to manage this function, we cannot include this function in the /TLW-TEX-E-2HE & /TLW-TEX-E-3HE system.
In case your network has many / TLW-TEX-E-2HE & / TLW-TEX-E-3HE systems connected to the internet, the safest and most functional way to manage the systems is to create a VPN between all the workstations and the headquarters in order to have all the devices in the same network and to be able to view them directly with your IP without the limitations of different ports for devices at the same location. Not all routers offer this option, there can be limitations for the output ports, and the management of a dynamic IP with a DNS service may be required.
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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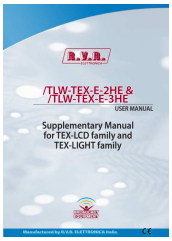
Documents / Resources

	**R V R ELETTRONICA TLW-TEX-E-2HE Fm Transmitters** [pdf] User Manual TLW-TEX-E-2HE Fm Transmitters, TLW-TEX-E-2HE, Fm Transmitters, Transmitters

References

- R.V.R. Elettronica - Broadcast Systems

Manuals+,