## JDSU 6000A V2 Platform

Compact Network Test Platform for installation, commissioning, maintenance and troubleshooting of fiber networks

User Manual



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> This product should not be disposed of as unsorted municipal waste and should be collected separately and disposed of according to your national regulations. In the European Union, all equipment purchased from JDSU after 2005-08-13 can be returned for disposal at the end of its useful life. JDSU will ensure that all waste equipment returned is reused, recycled, or disposed of in an environmentally friendly manner. and in compliance with all applicable national and international waste legislation.

It is the responsibility of the equipment owner to return the equipment to JDSU for appropriate disposal. If the equipment was imported by a reseller whose name or logo is marked on the equipment, then the owner should return the equipment directly to the reseller.

Instructions for returning waste equipment to JDSU can be found in the Environmental section of JDSU's web site at <a href="https://www.jdsu.com">www.jdsu.com</a>. If you have questions concerning disposal of your equipment, contact JDSU's WEEE Program Management team at <a href="https://www.weee.gov.new.gov.

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## **About This Guide**

The 6000A V2 Platform of JDSU provides a handhled modular platform designed for the construction, turn-up and maintenance of fiber networks.

The topics discussed in this chapter are as follows:

- "Purpose and scope" on page xviii
- "Assumptions" on page xviii
- "Technical assistance" on page xviii
- "Conventions" on page xix

#### Purpose and scope

The purpose of this guide is to help you successfully use the 6000A V2 Platform features and capabilities. This guide includes task-based instructions that describe how to install, configure, use, and troubleshoot the 6000A V2 Platform.

Additionally, this guide provides a complete description of JDSU's warranty, services, and repair information, including terms and conditions of the licensing agreement.

## **Assumptions**

This guide is intended for novice, intermediate, and experienced users who want to use the 6000A V2 Platform effectively and efficiently. We are assuming that you have basic computer and mouse/track ball experience and are familiar with basic telecommunication concepts and terminology.

#### Technical assistance

If you need assistance or have questions related to the use of this product, call or e-mail JDSU's Technical Assistance Center for customer support.

**Table 1** Technical assistance centers

Region	Phone Number	
Americas Telecom Products	866 228 3762 World Wide: 301 353 1550	tac@jdsu.com TAC.LA@jdsu.com (Latin America)
Europe, Africa, and Mid-East	+49 (0) 7121 86 1345 (Europe)	hotline.europe@jdsu.com
	+33 (0) 1 30 81 50 60 (JDSU France)	support.france@jdsu.com
Asia and the Pacific Southeast Asia, Aus- tralia, and New Zea- land	+852 2892 0990 (Hong Kong)	TAC.LA@jdsu.com
	+86 10 6833 7477 (Beijing-China)	1710.121\@jusu.100111
All others	866 228 3762	tac@jdsu.com

During off-hours, you can request assistance by doing one of the following:

- leave a voice mail message at the Technical Assistance number in your region
- e-mail North American Technical Assistance Center, tac@jdsu.com, or European Technical Assistance Center, support.uk@jdsu.com
- submit your question using our online Technical Assistance Request form at www.jdsu.com.

#### Conventions

This guide uses naming conventions and symbols, as described in the following tables.

 Table 2
 Typographical conventions

Description	Example
User interface actions appear in this <b>typeface</b> .	On the Status bar, click <b>Start</b> .
Buttons or switches that you press on a unit appear in this <b>TYPEFACE</b> .	Press the <b>On</b> switch.
Code and output messages appear in this typeface.	All results okay
Text you must type exactly as shown appears in this type-face.	Type: a:\set.exe in the dialog box
Variables appear in this <i>type-face</i> .	Type the new <i>hostname</i>
Book references appear in this <i>typeface</i> .	Refer to <b>Newton's Telecom</b> <b>Dictionary</b>
A vertical bar   means "or": only one option can appear in a single command.	platform [a b e]
Square brackets [] indicate an optional argument.	login [platform name]
Slanted brackets < > group required arguments.	<pre><password></password></pre>

**Table 3** Keyboard and menu conventions

Description	Example
A plus sign + indicates simultaneous keystrokes.	Press Ctrl+s
A comma indicates consecutive key strokes.	Press Alt+f,s
A slanted bracket indicates choosing a submenu from menu.	On the menu bar, click Start > Program Files.

**Table 4** Symbol conventions



This symbol represents a general hazard.



This symbol represents a risk of electrical shock.



This symbol represents a Note indicating related information or tip.

This symbol, located on the equipment or its packaging indicates that the equipment must not be disposed of in a land-fill site or as municipal waste, and should be disposed of according to your national regulations.

**Table 5** Safety definitions



#### WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



#### **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

## 6000A V2 Platform Overview

1

This chapter provides a general description of the 6000A V2 Platform.

Topics discussed in this chapter include the following:

- "About the 6000A V2 Platform" on page 2
- "Main features" on page 3
- "Hard keys and indicators" on page 5

#### About the 6000A V2 Platform

The MTS/T-BERD 6000A V2 is a multiple layer test platform. It allows to manage Fiber Optics Modules, but also Multiple Services Application Modules (SDH/SONET, Ethernet and Triple Play).

The MTS/T-BERD 6000A is equipped with:

- a base pack
- a Single Fber Optic module carrier (E6100)
   or a FiberOptic and Transport module carrier (E6200)
- a touchscreen
- a memory extension on option

Moreover, the MTS/T-BERD 6000A V2 is equipped with additional fans if a battery/MSAM pack is installed.

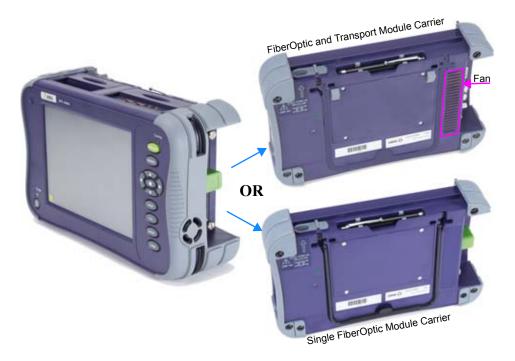


Fig. 1 MTS/T-BERD 6000A V2 with Module carrier

#### Main features

The 6000A V2 Platform is equipped with the following elements:

- One protection cover
- 8 inch TFT color touchscreen, high visibility (optimized for outdoor use),
- RJ45 plug for Ethernet interface
- Two USB 2.0 host connectors for Microscope, USB memory stick, mouse, keyboard...
- An audio jack to connect a headset
- A connection socket for the mains adapter providing the 19 V power supply and used to charge the battery.
- LED indicators for Charge, On status and Testing
- One Li-Ion battery (option)
- One high power Li-Ion battery in option (mandatory with Transport applications)
- a module, interchangeable in the field: OTDR, OLP, OSA...
- Built-in Power Meter, VFL and/or Talkset (options)
- A hard disk (option)



Fig. 2 MTS/T-BERD 6000A V2 with(out) protection cover

With the 6000A V2 Platform, the user can:

Open and/or transfer files to a PC via a USB memory stick, Bluetooth (option) or WIFI (option)

Main features

- Generate pdf reports
- Open all user documentations included into the 6000A V2 Platform
- Update the 6000A V2 Platform firmware
- Remote the screen of the 6000A V2 Platform onto a PC and issue commands from the keyboard of the PC

- ...



Fig. 3 6000A V2 Platform - Front Panel description

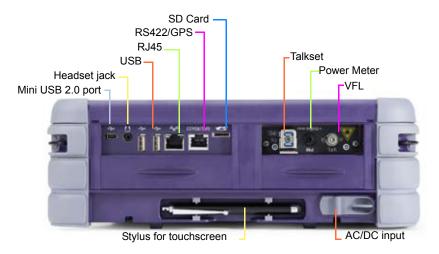


Fig. 4 6000A V2 Platform Connectors - Upper view

#### Hard keys and indicators

# Front panel hard keys

#### Table 6 Hard keys description

#### Hardkeys Function



Main on/off switch



Starts and stops the measurement



This button calls up the results page (e.g. with OTDR module: reflectometry trace and table of results).



This button calls up the measurement configuration menu. This menu depends on the function in use.

This button calls up the file explorer. It allows to:



- choose the storage medium: internal memory, USB memory key...
- manage files; with facilities for classifying them in directories and sub-directories.



This button is used to print a measurement report or a screenshot from a results page in jpg, png or pdf format

Gives access to:



- selection of the different measurement or functions
- the settings of the instrument
- the help page

#### NOTE

All these functions, except **HOME**, depend on the modules used and the measurements made: refer to the user manuals of the corresponding modules of the 6000A V2 Platform.

The direction keys have two principal functions:



- on the Results page, they are used to move the cursors or modify the zoom factor.
- on the set-up pages, they are used to scroll through the menus, the central button serving to select or confirm the parameter chosen.

## indicators

Front panel The 6000A V2 Platform is equipped with three indicators, lit into a different color according to the status of the equipment.

Table 7 **Indicators Status** 

On indicator		
Solid green	The instrument is operating, either on battery or on an external power supply.	
Blinking green	The instrument is switched off but connected to an external power source.	
Charge indicator		
Solid red	The unit is connected to an external power source and the battery charge is in progress.	
Testing indicator		
Solid red	At least one function is in measurement phase (for example, the laser emission pilot for an OTDR measurement)	

# Safety information

2

This chapter gives the main information on the safety conditions when using the 6000A V2 Platform:

- "Battery and AC/DC safety information" on page 8
- "Precautions relating to optical connections" on page 8
- "Laser Safety instructions" on page 9

#### Battery and AC/DC safety information

The Li-lon battery is designed for maximum safety.

In particular, each cell is provided with a safety valve to prevent excessive internal pressure in the event of overcharging or exposure to very high temperatures.

Battery supplied by JDSU incorporate protection means.

Do not use any mains adaptor, power cord or battery other than those supplied with the instrument, or supplied by JDSU as an option for this instrument.

If another adapter, cord or battery is used, it may damage the 6000A V2 Platform itself.

Using the 6000A V2 Platform with a battery other than the one supplied by the manufacturer of the 6000A V2 Platform may entail risks of fire or explosion.

The battery may explode, leak or catch fire:

- if it is exposed to high temperature or fire
- if it is opened or dismantled.

#### Other basic safety precautions are as follows:

- Do not use AC/Adapter/Charger outdoors or in wet or damp locations
- Connect the AC/Adapter/Charger to the correct mains voltage, as indicated on the ratings label.
- Do not allow anything to rest on the power cord, and do not locate the product where people can walk on the power cord.
- Avoid using this product during an electrical storm. There may be a remote risk of electric chock from lightning.
- Do not use this product in the vicinity of a gas leak or in any explosive environment.
- Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous, high voltage points and other hazards. Contact qualified service personal for all service.

### Precautions relating to optical connections

 The normal operating life of an optical connector is usually of the order of a few hundred manipulations. It is then advisable to manipulate the optical connections of the Platform as rarely as possible.

- The proper operation of the instrument and its accuracy of measurement are dependent on the cleanliness of the environment and the optical connectors as well as the care taken in its manipulation.
- The optical connectors must therefore be clean and dust-free. If the optical connection is not being used, protect the connections of 6000A V2 Platform using the protective caps.

## **Laser Safety instructions**

The provisions contained in two standards define the safety procedures to be observed both by users and by manufacturers when utilizing laser products:

- EN 60825-1: 2001 Safety of laser products Part 1: Classification of products, requirements and user guidelines.
- FDA 21 CFR § 1040.10 Performance standards for light-emitting products - Laser products.

Due to the range of possible wavelengths, power values and injection characteristics of a laser beam, the risks inherent in its usage vary. The laser classes form groups representing different safety thresholds.

Laser classes Standards EN 60825-1, Edition 1.2, 2001-08 and FDA21CFR§1040.10:

Talkset option: Class 1 VFL option: Class 2.

## Warning labels classes

Due to the reduced dimensions of the optical modules, it is not possible for the laser to attach the required warning labels to them. In line with the provisions of Article 5.1 of the EN 60825-1 standard, the laser class identification labels are shown below:

Ref. standard	EN 60825-1, Edition 1.2, 2001-08	FDA21CFR§1040.10
Class 1	CLASS 1 LASER PRODUCT	
Class 2	LASER RADIATION DO NOT STARE INTO BEAM CLASS 2 LASER PRODUCT	CAUTION LASER RADIATION - DO NOT STARE INTO BEAM CLASS II LASER PRODUCT

The user must take the necessary precautions concerning the optical output of the instrument and follow the manufacturer's instructions.



Measurements on optical fibers are difficult to execute and the precision of the results obtained depends largely on the precautions taken by the user.

## Starting up

3

This chapter describes the first steps to perform when using the 6000A V2 Platform.

The topics discussed in this chapter are as follows:

- "Unpacking the instrument" on page 12
- "Installing and removing a plug-in unit in the 6000A V2 Platform" on page 12
- "Choosing the position of the instrument on the work surface" on page 13
- "Charging the battery" on page 14
- "Switching the 6000A V2 Platform on and off" on page 15

#### Unpacking the instrument

- 1 Remove the 6000A V2 Platform and its accessories from the packing case.
- 2 Check that the module and accessories ordered are all there.
  If any part is missing or damaged please contact your local JDSU agent.

At the equipment delivery, the following elements are available:

- the 6000A V2 Platform is assembled: module/battery pack is mounted onto the base pack
- the options ordered (hard disk, optical options, wifi...) are mounted into the equipment
- a mains adapter used for mains operation of the instrument and battery charging is delivered on standard.



See "Installing the options" on page 139 if some options are ordered after the delivery of the Platform and must be mounted by customer.

#### Installing and removing a plug-in unit in the 6000A V2 Platform



The 6000A V2 Platform must be switched off and, if it is operating on the mains, its supply cable must be unplugged.

# Inserting a 1 plug-in unit into 2 the 6000A V2 Platform M

1 Slide the plug-in into its slot.

2 When the plug-in is fully home, press firmly on the screen-printed face of the plug-in while tightening the clamping screws.

Make sure that the two large captive screws of the plug-in are screwed fully home.



Fig. 5 OTDR Module installed into the 6000A V2 Platform

# Removing a 1 plug-in

- 1 Unscrew the two captive fixing screws of the plug-in completely (up to the stop).
- 2 Carefully slide the plug-in out of its slot.

#### Choosing the position of the instrument on the work surface

Depending on the conditions of use of the 6000A V2 Platform, the instrument may be placed on a flat surface or held in the hand.

When used on a work surface, the 6000A V2 Platform should be supported on its stay, which can be set in either of two positions, depending on whether the user is standing or sitting.



The stay is available exclusively on the Single FO Module carrier (reference E6100).

To change the stay from "seated user" position to "standing user" position, press both sides to slide the stay towards the upper end of its groove, as shown in the drawings below.



Fig. 6 Stay in positions for seated user and standing user



The most stable position for using the 6000A V2 Platform is the «standing» user position.

### Charging the battery

## Connecting the 1 mains adapter

- At the top of the 6000A V2 Platform (upper left-hand corner), lift up the power supply socket protector and plug in the mains adapter.
- Connect the adapter to the mains. The **On/Off** indicator starts to blink in green.



Use only the mains adapter supplied with the 6000A V2 Platform. The adapter for some other electronic device may appear to be identical, but entails a risk of damage to the 6000A V2 Platform.

## battery

**Charging the** On connection to the mains:

- if the user does not press **ON**, the battery will start the charge.
- when the user presses the ON key, the instrument starts up and the battery will charge during use.

The **Charge** indicator is lit in solid red during charge.

Once the battery is fully charged, the **Charge** indicator is lit in solid green on the front panel.

When the **Charge** indicator on the front panel is blinking red, this mean the power supply is not compatible with the battery used. Charge is disabled.



It is essential to wait until charging is complete to ensure maximum independent operating time, which may otherwise be considerably reduced.

# level display

**Battery charge** When the battery is installed in the instrument, a battery icon is displayed in the top right-hand corner of the screen. Example 100%

Icon	Battery charge level	
100%	From 100% to 70%	

lcon	Battery charge level
73%	From 70% to 40%
34% 🥌	From 40% to 10%
25% 🞏	From 10% to 0%

- When the level becomes too low, the instrument emits a beep to inform the user until it switches off automatically after saving the current configuration and measurement.
- The icon so is displayed on the upper banner to indicate the Platform is connected to mains and battery is fully charged (100%).
- If the icon is displayed , this mean the Platform is connected to mains but battery charge is inferior to 100%.

#### Switching the 6000A V2 Platform on and off

## Switching on the 6000A V2 Platform

Switching on 1 Press the On/OFF key.

If the Platform is powered to mains, the battery will charge.

The **On** indicator pass from blinking to solid green.

The JDSU logo appears on the screen briefly, then an autotest is carried out.

The equipment is ready to be used once all the applications are installed.



#### NOTE

It is possible to switch over from battery to mains operation, or vice versa, without loss of data.



The module cannot be swapped when the unit is ON or AC powered



In the event of an unexpected mains power cut, if there is no battery, the current results and configuration will not be saved. Next time the instrument is switched on, it will return to its initial configuration.

# the 6000A V2

**Switching off** While the 6000A V2 Platform is operating, press the **On/OFF** button to switch it off.

## **Platform**

#### NOTE

When the instrument is switched off using the On/OFF button, current results and configuration are saved. Next time the On/OFF key is pressed, they are recalled.

## 6000A V2 **Platform**

**Resetting the** If the 6000A V2 Platform freezes, prolonged pressure (about 4 s.) on the ON/OFF key will reset the instrument

# Configuring the 6000A V2 Platform

4

This chapter describes the operations for configuring the instrument.

The topics discussed in this chapter are as follows:

- "Displaying the System Settings screen" on page 18
- "Defining the regional settings of the system" on page 19
- "Defining the screen parameters of the 6000A V2 Platform" on page 20
- "Defining the Automatic shutdown of the 6000A V2 Platform" on page 22

#### Displaying the System Settings screen

To display the **System Settings** screen, you must:

1 Press the **Home** hard key to reach the **Home** page.



Fig. 7 Home page

2 Press the menu key System Settings
Settings screen.



Fig. 8 System Settings page

#### Defining the regional settings of the system

When the 6000A V2 Platform is delivered, it is automatically configured with the System Settings set by default in factory, especially the language and date/time (Language: English / Date format: dd/mm/yyy / Time format: 24 hours clock).

To modify the regional parameters in the **System Settings** page:

- Click on Language and select the language to be used for the equipment.
- 2 Click on Date and enter the current date, using the numeric keypad displayed with the menu key Edit Number.
- 3 Click on Time and enter the current time, using the numeric keypad displayed with the menu key Edit Number.

The date and time are displayed on the upper right side of the screen.

or

Select Net Time parameter and configure date and time according to a network (see "Net Time Synchronization" on page 19).

- 4 Click on **Date Time Format** and configure the following parameters:
  - Date format: select one of the option dd/mm/yy or mm/dd/yy.
  - Time format: select one of the option 24 hour clock or 12 hour clock.
- 5 Once all parameters have been defined, press Exit menu key to exit the System Settings page.

#### **Net Time Synchronization**

This parameter allows to configure the date and time of the Platform according to a network.

- Dynamic Mode: the time is synchronized according to the local network.
  - The two lines **Server Name** are displayed but cannot be modified.
- Static Mode: in this case, the time is synchronized to the network server which is defined in the two following parameters.
  - On the parameter **Address Type**, select if the address of the server which will be used for synchronisation is entered via its **IP Address** or via the **Server Name**.

If **IP Address** is selected, enter one or two server addresses in the following parameters. During synchronization, the first address will always be used, but if a fail occurs, the second one will be used.

If **Server Name** is selected, enter the name of the server, and if necessary a name for second server. During synchronization, the first server name will always be used, but if a fail occurs, the second one will be used.

If **Dynamic** or **Static** mode is defined, the current **Date** and **Time** cannot be modified (parameters are greyed) and the icon [mail displays on the upper banner, between the hour and the date 14:55 12/09/2013.



If the network configuration is modified, synchronization may be lost.

None: the time is not synchronized according to a server. In this
case, the user can reset date and time himslef, using the fields Date
and Time

### Defining the screen parameters of the 6000A V2 Platform

In the **System Settings** page, the following parameters can be defined:

### Backlight 1 Click on Backlight

- 2 Define the backlight level of the screen, using the left and right direction keys, or clicking on **Edit Number** softkey and using the keypad displayed.
  - Min backlight level: -5
  - Max backlight level: +5



If the 6000A V2 Platform is operating on battery, it is advisable to choose a minimum lighting level, acceptable for the user, to keep endurance as long as possible.

#### Contrast 1 Click on Contrast

- 2 Select the type of environment into which the instrument is used:
  - Indoor: to be selected when the instrument is used inside (see Figure 8 on page 18)
  - Outdoor: to be selected in order to optimize the readability of the screen for an outside use.



Fig. 9 Example of outdoor contrast

Screen Saver Click on Screen Saver if you wish to activate a screen saver to the equipment, to extend the life of the battery, in case the 6000A V2 Platform is not used for some time.

> Instead of the normal screen, a small animated picture of the 6000A V2 Platform is displayed on the blackened screen.

To configure the screen saver:

Click on **Delay** and select the time of inactivity before the screen saver starts: 60s. 3 min. 5 min. The parameter No deactivates the screen saver function.



### Defining the Audio parameters of the 6000A V2 Platform

In the Audio box of the System Settings screen, you can configure the audio parameters according you are using a headset with the 6000A V2 Platform.

- Adjust the volume on the line **Hands-free Volume** using the left and right direction keys, or the Numeric keypad (displayed with the softkey Edit Number)
  - Min volume for Hands-free function: 0
  - Max volume for Hands-free function: 100

- 2 If a headset is used, adjust the volume on the line Headset Volume, using the left and right direction keys, or the Numeric keypad (displayed with the softkey Edit Number):
  - Min volume for Headset function: 0
  - Max volume for Headset function: 100

#### Defining the Automatic shutdown of the 6000A V2 Platform

The automatic shutdown function switches off the 6000A V2 Platform automatically if no operation has been performed and no key actuated for a period selected from this menu. Work in progress is automatically saved.



The function for automatically switching off the 6000A V2 Platform is available only on battery operation, to save the battery.

- 1 In the Utility box, click on Auto off parameter.
- 2 Choose a time after which the 6000A V2 Platform will be switched off automatically, if no action has been done for that period: 5, 10 or 30 minutes.

Select **No** if the 6000A V2 Platform must not be switched off, even if there is inactivity on the equipment.

# Power meter, VFL (Visual Fault Locator) & Talkset

5

A variety of built-in optical options are available when ordering. See references in Chapter 15 "Options and accessories" page 131, for details.

The topics discussed in this chapter are as follows:

- "Connection to the power meter, VFL and Talkset" on page 24
- "Using the Power meter" on page 24
- "VFL Function" on page 29
- "Storing and reloading results" on page 30
- "Talkset/Datalink Function" on page 31
- "Remote screen function via Talkset" on page 33

#### Connection to the power meter, VFL and Talkset



Fig. 10 Optical connectors

The type of optical connector used for the power meter is UPP (Universal Push Pull), which is compatible with all diameter 2.5 mm connectors (FC, SC, ST, DIN, E2000, etc.)



#### **Accuracy of measurements**

A high degree of accuracy is often required. It is then necessary to perform a preliminary calibration without the fiber under test to eliminate the losses due to connections as far as this is possible. To do this, use the «Reference Value» function.

### Using the Power meter

The power meter function is an option chosen at the time of order and incorporated into the 6000A V2 Platform in the factory.

To activate the function:

1 Press the **Home** button



2 Activate the power meter icon of the Platform Powermeter.
The effect of this action will to be to bring the power meter into use and to display the Results page for Power Meter.

### Configuring the power meter

Configuring measurement parameters

**Configuring** The measurement parameters can be accessed with the **SETUP** key.



Fig. 11 Configuration of power measurement

	Wavelength	Selecting wavelength
--	------------	----------------------

- Auto: the wavelength of the input signal will be automatically detected and selected to perform

the measurement:

850, 980, 1300, 1310, 1420, 1450, 1480, 1490, 1510, 1550, 1625 or 1650 nm: measurement

performed at specified wavelength.

- User: choice of wavelength on the next line

User choice (if the User option was selected in the Lambda

line) enter the wavelength between 800 and 1650 nm, using the numeric keypad, displayed

via the Edit Value key ...

Beep on Modulation Select if a sound must be heard when a

modulation occurs (Yes / No)

**Unit** Unit of power displayed:

- Watts, dBm for displaying absolute power

- dB for displaying a result relative to a reference

(link loss)

Reference level Select the reference value for the wavelength

selected. First select the wavelength, then press the > key to access choice of the value

(+XXX.XX).

This reference is also automatically available, in the **Results** page, using the **Set as Reference** 

key.

#### Attenuator compensation

Choice of level to be applied to the wavelength chosen for measurement to compensate for the loss due to the external attenuator (+XX.XX dB). First use the direction keys to choose the wavelength, then press > to access choice of value.

#### NOTE

To copy a Reference Level or a Attenuator Compensator on all wavelengths, select the reference wavelength and click on Update for All Wavel..

#### Configuring the Alarm alarm parameters of the power meter

Activation of the Alarm function: any result below the lower threshold or above the upper threshold will be displayed in red on the **Results** page.

Min and max thresholds

Choice of lower and upper thresholds for each available wavelength, from -60 to +40 dBm.

#### NOTE

To copy one value of the Lower or/and Upper threshold for all wavelengths, select the reference value and click on Update for All Wavel..

#### NOTE

A continuous push on direction keys increments the value by 10 dBm.

### Display of results and commands

The results page called up by the **RESULTS** button, gives the information relating to the measurement in progress, results previously saved and the commands available for measurement and saving.

## progress

Result of the The power measured by the power meter is displayed in large characmeasurement in ters, in the units selected in the SETUP menu, together with:

- the mode of transmission of the signal measured: continuous (CW) or modulated to a frequency of 270Hz, 330Hz, 1KHz, or 2KHz.
- the wavelength of the signal measured.
- the reference level expressed in dB.
- the level of Attenuation Compensation.

**Table of results** For one and the same fiber, the power meter displays a table of 9 results corresponding to the different possible wavelengths. The first 4 results are displayed on the screen; to scroll through the other results, use the direction key . The table shows the power measured in dBm, the relative power (in dB) and the reference level in dBm (if units = dB), together with the mode.

- A measurement result is displayed in the table when the **Keep** Result softkey is pressed.
- The Clear Table softkey orders deletion of all the results displayed in the table
- If the **Alarm** function has been activated, any result that exceeds the selected thresholds appears in red in the table. Otherwise, results are shown in the table in green.
- When the instrument is switched off, results present in the table are saved.



Fig. 12 Results and commands of the power meter

### power meter parameters

Commands of the When the Powermeter function is selected, the following softkeys are available on the results page:

The different configuration buttons are displayed:

Wavelength selection of the wavelength

Unit choice of the unit

Zero Adjustment of the Zero value when the power meter's

optical input is closed with a plug (a validation is

required).

On the results page, the following actions are available:

Standard Reference Selects the current result as reference value

to measure the attenuation of a link. This reference is displayed under the measurement result until a new reference value is

chosen.

Keep Result Saves the result on the corresponding line

of the table.

Clear Table Deletes all the results recorded in the table.

If the Source function is selected (on an OTDR module, either on this Platform or on another one), the Power meter results page is different:

- The Wavelength, Unit and Zero menu keys are accessible via the menu key Power Config.
- The Power Ref. menu key allows to reach the Standard Ref menu key. It also allows to reach the Jumper Ref menu key if Power meter function is associated with OTDR Source function onto another unit (see 8100 Module User Manual).

## measurement

**Performing a** The power meter is started up as soon as the function vated in the **Home** menu.





Power measurement is automatically updated in consequence. The value <<-60 dB» is displayed when the laser is switched off and if the source output is looped on to the power meter input.

#### Power 1 measurement

- Connect the light source to be tested to the rear connector (see "Connection to the power meter, VFL and Talkset" page 24).
- In the **SETUP** menu, choose the units dBm, dB or Watts.
- 3 Press the **START/STOP** key to start the measurement. The result will appear in the results page and can be memorized in the table (see "Table of results" page 27).
- Press the **START/STOP** key to stop the measurement.

#### Optical link loss Setting the zero value of the power meter



It is important to set the zero of the power meter before making any measurements where accuracy is required, as the noise from the germanium photodiode fluctuates over time and with variations in temperature.

- 1 Fix the plug over the optical input of the power meter so that no light can reach the photodiode of the power meter. If the zero adjustment is made without this plug, an error message may be displayed, as the photodiode will detect too much light.
- 2 In the Results page, press the (Powermeter Config. >) Zero soft key and validate.

#### Carrying out the reference measurement

- Fix the adapter corresponding to the jumper to the optical connector of the power meter.
- 2 Connect the jumper between the input of the power meter and the output of the source.
- 3 Configure the same wavelength on the source and the power meter. The power measured is displayed in the results page of the power meter.
- 4 Press the (Pow Reference >) Standard Ref soft keys to save the result displayed as reference value.

#### Measurements on the fiber under test

After defining the reference value, proceed as follows to make the measurement:

- Fix the jumpers and connectors needed to connect the fiber to be tested between the source output and the power meter input.
- In the set-up menu, select dB units.
- The power displayed in the Power Meter window corresponds to the optical loss of the link tested. It can be displayed in the table (see "Table of results" page 27).

#### **VFL Function**

**VFL connector** The type of optical connector used for the VFL source is UPP (Universal Push Pull), which is compatible with all diameter 2.5 mm connectors (FC, SC, ST, DIN, E2000, etc.).

See Figure 10 on page 24 to visualize the VFL connector.

### Locator function (VFL)

Visual Fault This function is used to emit a red light signal of frequency 1 Hz or in continuous mode into a fiber to detect any defects in the dead zone of the reflectometer, or to identify it.

This function is suitable for short fibers (length < 5 km) or the first few metres of a long fiber.

#### NOTE

Identification is facilitated by the blinking of light in the fiber.

To emit a light signal into a fiber:

- 1 Connect the fiber to the VFL port on the connectors panel.
- 2 Press the **Home** key and activate the VFL

The signal mode (1Hz or CW) of the VFL can be modified in the System Settings page, in Utility > VFL Mode parameter.

### Storing and reloading results

File Setup Click on the button FILE to access the File setup. See the chapter «File management» in the user manual «8100 modules series» for a complete description of all parameters, options and description of the explorer.

**Storing results** In order to save the results of a measurement, click on **FILE** and select Store trace. Two files are being saved:

- The first file is used with the 6000A V2 Platform and allows to retrieve all measurement results. It is saved with the extension «.Lts».
- The second file is a ASCII file using tabulations to separate values. It is saved with the extension «.txt» and can be opened by the 6000A V2 Platform. It has been designed to be used with a spreadsheet program on a PC where it allows to retrieve all measurement results and format them in a nice customized table.

Loading results In order to load the results of a measurement, select a file sign with the extension «.Lts» in the file explorer (see the chapter «File management» in the user manual for «8100 modules series»), click on Load. The LTS tab is displayed with the loaded results in the table

#### Talkset/Datalink Function

The option enables two operators at opposite ends of an optical link:

- To communicate along the fiber.
- To transfer data along the fiber.

Each end of the optical link must be provided with a 6000A V2 Platform equipped with the Talkset option.

#### NOTE

It is possible to use the talkset of the 6000A V2 Platform and to carry out measurements at the same time, on a different fiber.

#### NOTE

It is possible to use the Data transfer feature while using the optical telephone of the 6000A V2 Platform. Nevertheless, the data transfer speed will be slightly decreased.

## Talkset configuration

**Talkset** The talkset configuration is set in the **System Settings** screen, in the **Audio** box (see "Adjusting volume level" page 32)

#### Connections At each end of the fiber.

1 Connect the fiber to the Talkset port of the 6000A V2 Platform, either directly or through jumpers.

The Talkset connector is set with a FC adapter by default.



Fig. 13 Installation for Talkset use

2 A headset (with earphones and a microphone) supplied with the option may also be plugged into the 6000A V2 Audio jack.

#### NOTE

Data transfer uses the same fiber as the optical telephone

## Establishing communication

On the caller 6000A V2 Platform, press the **Home** button, then validate the **desired function**:

- Talkset Optical Telephone): used to communicate via the fiber.
- Datalink optical is used to transfer data along the fiber.

If the remote instrument is ready to receive (on standby), the Talkset icon turns yellow, beeps are emitted, and

- the icon appears at the top of the screen: data transfer can now take place.

If the remote instrument is not ready to receive, the Talkset icon does not change color and a message is emitted.

#### NOTE

The talkset icon is displayed on the top banner as long as communication remains established, letting the user know that the connection is working.

When communication is established, the headset is automatically enabled if plugged in. However, the loud speaker must be correctly configured in the setup menu to work accordingly

#### NOTE

Data transfer varies according to the type of application you use. For Fiber Optics for example, you can use the explorer. The distant 6000A V2 Platform will be shown just like a disk and all file and directory features can be used from and to that disk.

## Adjusting volume level

The sound is transmitted to the earphones of the headset and, if this function has been activated, to the speaker in the 6000A V2 Platform base. To activate the base loudspeaker and adjust the volume:

- 1 Press the Home key.
- 2 Press System Settings key to reach the System Settings page.
- 3 In the Audio box, select Channele and define the communication settings: Hands-free / Headset / Auto.

4 According to previous configuration, adjust Hands-free Volume and/or Headset Volume (from 0 to 100).

**Disconnection** When communication is over, deactivate the **Talkset/Datalink** function on one of the 6000A V2 Platform. This deactivation can be done by either 6000A V2 Platform.

Then, the fiber used for Talkset can be disconnected safely.

#### Remote screen function via Talkset

This enables an operator at one end of an optical link to take control over another 6000A V2 Platform connected at the other end, using the fiber.



Each end of the optical link must be provided with a 6000A V2 Platform equipped with the Talkset option.

#### VNC configuration

Before it can be remote-controlled, the 6000A V2 Platform must be configured as explained in "Remote Screen" on page 64.

#### Connections

At each end of the fiber (see Figure 13 on page 31): connect the fiber to the Talkset port of the 6000A V2 Platform, either directly or through jumpers.

Remote screen via VNC is done via the data transfer feature, and on the same fiber as the optical telephone.

#### Establishing communication

On the caller 6000A V2 Platform, press the **Home** button, then select and confirm the Talkset option:

- If the remote instrument is ready to receive (on standby), the Data icon turns orange, beeps are emitted, and the icon appears at the top of the screen: data transfer can now take place.
  - If the remote instrument is not ready to receive, the Data icon does not change color and a message is emitted.
- 2 Click next on Expert tools, Remote Display, and on Switch to remote screen.

Your screen is now fully replaced by the distant screen, and everything you do on your 6000A V2 Platform is in fact done on the distant 6000A V2 Platform.

An icon appears in the top banner of the 6000A V2 Platform.



A slight normal color degradation may be seen on the 6000A V2 Platform controlling a distant instrument.

#### End of a VNC session

In order to end a VNC session, you can:

1 Return to the menu Expert tools > Remote Display and click on Return to local screen. (Recommended solution)

or

Deactivate the data function on either 6000A V2 Platform connected.

or

Set Remote screen to off (see "Remote Screen" on page 64)

2 Disconnect the fiber

#### NOTE

The VNC icon in the top banner of the screen lets you know at all times whether you are in a VNC session or not.

## Scope

6

The scope function is a hot-plug feature enabled directly when inserting a JDSU scope supplied as an accessory (see "References of accessories" page 134).

The topics discussed in this chapter are as follows:

- "Scope feature" page 36
- "Installation of tips" page 36
- "Configuring the P5000i Scope" page 37
- "Starting up with the scope" page 41
- "Launching a test of the connector and fiber end-face" page 42
- "File menu" page 46

#### Scope feature

**Overview** This feature enables you to verify that your optical connectors are in perfect shape and very clean condition.

> The P5000i Digital Probe Microscope is a portable handheld microscope used to view and inspect both the bulkhead (female) and patch cord (male) sides of fiber connectors as well as other optical devices, such as transceivers.

The P5000i requires an FBPT inspection tip and is connected to the 6000A V2 Platform with a USB 2.0 connector.



Fig. 14 P5000i Probe components



Before using the P5000/P5000i scope, make sure the Bluetooth option has not been activated, even once, after the start of the MTS/ T-BERD 6000A V2. If it has been activated, stop and restart the equipment before using the P5000/P5000i Scope.

### Installation of tips

The Pass/Fail analysis function on the 6000A V2 Platform can only be used with certain inspection tips mounted on the P5000i.

Seven tips, patchcords and bulkheads types, are delivered with the Videoscope Kit (EDFSCOPE5KI) but many others can be used.

#### Configuring the P5000i Scope

3

## Scope 1 connection

- 1 Plug in your JDSU scope into a USB port from the 6000A V2 Platform.
- 2 Push the button SYSTEM
  - Validate the Scope function
- 4 Connect probe with the fiber being inspected.

You may select this option while others are selected (e.g. OTDR).

## Configuring the 1 Scope

1 Press **SETUP** key to configure the test.

The following screen displays:



Fig. 15 P5000i Scope Setup

#### Test Profile

On the line **Profile**, select the Profile which will be used for the test of fiber connector:

- SM\_UPC: Pass/Fail criteria for single-mode UPC connectors from IEC 61300-3-35 standard.
- SM\_APC: Pass/Fail criteria for single-mode APC connectors from IEC 61300-3-35 standard.
- SM\_PC: Pass/Fail criteria for single-mode PC connectors from IEC 61300-3-35 standard.
- MM\_: Pass/Fail criteria for multimode connectors from IEC 61300-3-35 standard.

Profiles contain the analysis parameters by which Pass/Fail criteria are determined.

Once the line is selected, you can also add a new profile, clicking on the **Add** Button (see "Adding a new profile" page 40).

#### Tip

On the line **Tip**, select the tip set onto the scope to connect fiber for inspection.

#### Capture button (only with P5000i)

This parameter allows to select the action of the Quick Capture button onto the Scope (see Figure 14 on page 36):

Freeze & Test pressing the button will automatically perform a

test of fiber and freeze the result

Freeze image pressing the button onto the Scope will

automatically freeze the live image.

#### Auto Center (only with P5000i)

This parameter allows to select if the scope image must be centered on screen (select **Yes**) or not (select **No**).

#### **File parameters** The **File** menu allows to enter a file name for saving scope test results.

On the line **Filenaming**, use the edition keypad, which will display by clicking on the right arrow key, to enter a specific name for the file. You can enter manually a name and/or use pre-defined parameters (Fiber Id, Cable Id, Locations...).



**Fig. 16** Edition keypad for naming scope file

To add a logo to a report generated from test results, select **Logo** parameter and press right direction key to display the file explorer page and select the image which will be used as logo on the report page (see "Generating a report" on page 46).

Click on menu key **Load** to validate the selection. The screen returns to configuration page and displays the file path in the **Logo** parameter.

**Fiber** The **Fiber** box allows to configure the fiber plugged to the scope.

On the line **Fiber Id**, enter a name for the fiber using the edition menu displayed via the right direction key.

On the line **Fiber Number**, use the numeric keypad, which will display by clicking on the right arrow key, to enter the fiber number.

On the line Change fiber Nbr, select if the fiber number must be modified after each results saving:

No: the fiber number is not modified at each saving

Increment; the fiber number is automatically incremented at each results saving

**Decrement**: the fiber number is automatically decremented at each results saving.

**Link Description** The information entered in the Link Description window concern the editing and/or the modifications of the cable and fiber parameters.

- **Cable Id**: This parameter allows to enter an identification of the cable, using the Edition menu.
- **Direction**: The direction shows if the acquisition has been made from the origin to the extremity (A->B) or from the extremity to the origin (B->A). Changing direction makes it possible, when different extremities are handled, to see the parameters of the fiber for the other extremity.
- Location A: The name of the Location A of the link may be entered
- **Location B**: The name of the Location B of the link may be entered
- Company: Allows to enter the name of the company carrying out the test.
- Operator: Use the right arrow key to enter the name of the operator carrying out the test.

#### NOTE

All parameters of the Link Description box will appear in the pdf report generated from a test results page. See "Generating a report" page 46.

Press **Exit** to return to the Results screen of the scope.

## profile

**Adding a new** Once the **Setup** screen of the scope is displayed, you can add a specific profile which will be used for the test.

> The profile must be created via FiberChek2<sup>TM</sup>, and stored on one storage media of the MTS/T-BERD 6000A V2 (disk, hard disk or USB memory stick).

- On the **Setup** screen, select **Profile** and press **Add** key.
- On the explorer, select the file which will be used as profile (icon ; extension: .PRO)
- Press Load. Once loaded, the display goes back automatically to Setup screen.
  - Select the profile just loaded.

#### Removing a profile

- In the **Profile** list, select the profile to be deleted.
- 2 Press Remove key., then Exit.

**About page** On the Setup screen, the softkey **About**, on the right of the screen, allows to display information on scope and current test result displayed (in Full Screen mode or mosaic mode - see "Mosaic Mode" on page 44).

Press **About** softkey to display a page as the following one:

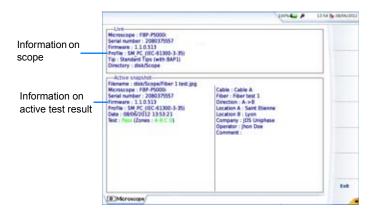


Fig. 17 About page

### Starting up with the scope

Once the FiberScope icon is validated:

1 Press RESULTS hard key

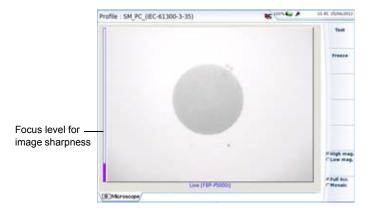


Fig. 18 Example of the result using the P5000i scope

Use the **Focus Control** button onto the P5000i scope (see Figure 14 on page 36) to adjust the image quality and sharpness.

#### NOTE

To switch from Scope page to FO results page and vice-versa, press the **RESULTS** hard key for about 2 seconds (a beep is emitted).

#### Freeze mode

Once the image is acceptable, you may **freeze** the picture. This feature allows to store in memory the resulting picture.



Freezing a scope result does not store the picture in a file (see "File menu" page 46). The result will be lost if the instrument is shut off, or if more than 3 pictures are frozen (see "Mosaic Mode" page 44).

#### NOTE

The button set on the lead, or the QuickCapture™ on the P5000 allows to freeze the picture, and to launch a test (according to configuration in Setup page - see "Configuring the Scope" on page 37).

## Mag.

High Mag. / Low The High Mag./Low Mag. menu key allows to switch the display from High to Low magnification and vice-versa.

> This function is also available pressing the button directly on the P5000i (see Figure 14 on page 36).

Camera mode If you are in Freeze mode, or in Mosaic mode, with a picture selected (see "Mosaic Mode" on page 44), press Camera menu key to return to live camera picture.



Use the focus control to adjust the focus of the image

### Launching a test of the connector and fiber end-face

### test of the connector and To launch the test: fiber end-face

**Launching a** Once the display is correctly adjusted (magnification, sharpness...), a test of fiber connector can be launched.

- Press **Test** key to launch the test of plugged fiber connector. The test is completed:
  - once the Led Testing is no more lit in red
  - once the icon 🌠 is no more displayed on the upper banner
  - once a screen as the following one displays:

#### NOTE

To configure the Pass/Fail critera, refer to "Configuring the Scope" on page 37.

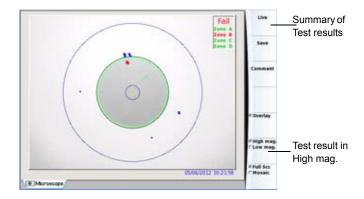
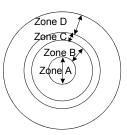


Fig. 19 Test results

A summary of test results is displayed on the right, upper part of the screen.

- Zone A: represents the Core zone: it is the area surrounding the core
- Zone B: represents the Cladding zone. It surrounds the majority of the fiber cladding.
- Zone C: represents the Epoxy ring.
- Zone D: represents the Ferrule/Contact zone: it identifies a portion of the ferrule near and around the fiber



#### NOTE

To return to a Live Camera image, press **Live** key; or press **Full Scr./ Mosaic** key to view both live image and test result.

In **Mosaic** mode (see "Mosaic Mode" page 44), the result of the test only displays Pass or Fail information; the status of each zone is displayed only in full screen mode.

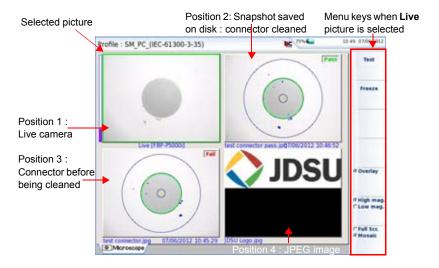
#### Overlay

The **Overlay** key allows, when selected, to display the limits of each zone and to display with colors the defaults on the image.

When the key is unselected, the zones and defaults are not graphically identified

This function is also available in Mosaic Mode (see "Mosaic Mode" on page 44).

**Mosaic Mode** It is possible to display only one picture in full screen (640 \* 390 pixels) or up to four pictures (320\*180 pixels each, including the live camera picture) in mosaic mode. Use the key Full scr./Mosaic to switch from one mode to another.



Mosaic mode Fig. 20

You may select one of the pictures by clicking on it. The selected picture is framed in green.

The toolbar on the right varies according to which picture is selected (camera, or static scope picture):

Pic	ture	se	leci	ted	l:	Live
-----	------	----	------	-----	----	------

Test Allows to launch a (new) test of the connector

(see "Launching a test of the connector and fiber

end-face" on page 42)

Freeze Allows to freeze the live image and to save it later

on the disk. Once this key is pressed, the freeze

image is automatically set on Position 2.

Overlay Allows to display/hide the limits of each zone and

the detected defaults on image from a scope test

result (see "Overlay" on page 43).



If all positions were taken, the picture that was once at the fourth position is unloaded from memory. Frozen pictures are lost, unless they were saved on the internal memory.

High mag./Low mag. Allows to switch all the images from high to low magnification and vice-versa. This key is not available with jpg files other than those resulting from scope application.

Picture selected: Image

Save Allows to save the selected picture in

> the directory Scope, in the disk of the Platofrm. Press Save key, enter a name for the jpg file and validate. This key is not available with jpg files other than those resulting from scope

application.

Comment Allows to add a comment to the

selected picture (see "High Mag. / Low

Mag." on page 42)

Overlay Allows to display or hide the limits of

each zone and the defaults on image from a test result (see "Overlay" on page 43). This key does not work on ipg image which do not result from

scope application.

High mag./Low mag. Allows to switch all the images from high to low

magnification and vice-versa. This key is not available with jpg files other than those resulting

from scope application.

#### Adding a comment

A key **Comment** allows you to enter/modify a comment to your picture if necessary. This comment appears at the bottom left of the picture.

The right bottom of the frozen picture also contains the date of the acquisition (where the picture was frozen).

#### NOTE

Both the comment and the date will be saved with the picture.

### picture

**Loading a** It is possible to retrieve and load a picture stored in the Scope directory and display it in the Scope page.

- 1 Press the FILE button.
- Select Explorer.
- Select the JPEG file to be loaded via the Explorer

#### Click on Load

Recognized pictures are images resulting from the Scope option and saved on disk via the 6000A V2 Platform.



Some pictures resulting from the Scope option may appear nevertheless unrecognized, if they have been stored with a different Scope application, or if the JPG file has been opened and modified under another JPG editor.

Even though the JPG editor of the Scope function has been designed to display Scope pictures in black & white, it is also possible to open any JPG valid file and display in color the corresponding picture. That picture is enlarged or shrunk to the size of the display (full screen or mosaic, see "Mosaic Mode" page 44).

#### File menu

## result in a ipq

**Saving the test** Once the test has been performed, and the result is displayed on the 6000A V2 Platform screen:

- file 1 Press FILE key
  - 2 Click on Save key to save a jpg file of the test result on the disk of the 6000A V2 Platform.
  - 3 On the edition keypad, enter the name of the jpg file
  - 4 Press Enter to validate.

The file is automatically saved on the disk, in the directory Scope (icon 6 ).

### Generating a 1 report

- Check the correct test result is selected (framed in green in mosaic mode).
- 2 Press the FILE button, then the Report key
- 3 On the edition keypad, enter the name of the pdf file and press ENTER.

The report generation is completed once the icon  $\overline{\mathbb{Z}}$  is no more displayed on the upper banner.

#### NOTE

The pdf report will be saved on the disk, in the directory **Scope**.

#### Display of the report

Once the report has been generated:

- Press FILE hard key
- 2 On the right menu keys, press Load soft key.
- 3 In the File Explorer, select the pdf report just created.
- Press Load.

tion" on page 39)

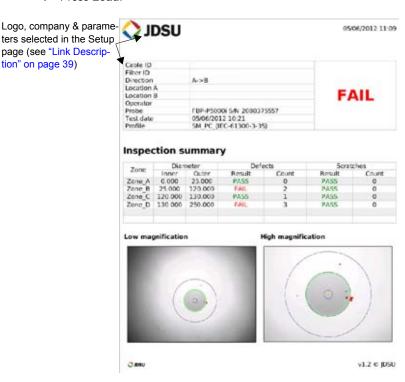


Fig. 21 PDF report

### Chapter 6 Scope File menu

## **Applications**

7

Several desktop applications are provided to you, thanks to the integration of free software released under the free licences (GPL, LGPL, BSB or other). Their purpose is to bring more functionality to the 6000A V2 Platform. JDSU <u>doesn't provide any warranty or support regarding these free software.</u>

To access desktop applications, press the button  $\ensuremath{\textbf{SYSTEM}},$  and the soft key  $\ensuremath{\textbf{App's}}.$ 

The topics discussed in this chapter are as follows:

- "PDF viewer" page 50
- "Text Editor" page 51
- "Web browser" page 53
- "Calculator" page 57
- "File Explorer" page 57

#### PDF viewer

#### Opening a PDF document

The simplest way to open a pdf file is to press FILE. Select Explorer, look for your file and then select Load >Confirm Load to load the corresponding file. The file opens automatically in the PDF viewer.

Another way used to open a pdf document is to press System > App's and select the PDF Reader icon.

The PDF Reader opens but without document. To open a PDF document, click on the icon hand, or press FILE hard key, and select a document in the file explorer dialog box.

## document

**Interacting with** Once your document is open, you may browse through different pages very quickly, zoom to a particular level, rotate the page... All these features are available via buttons on the screen.

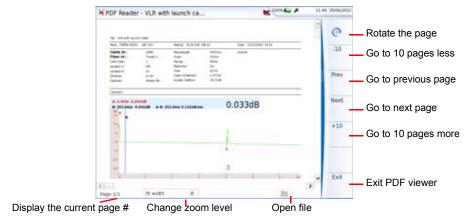


Fig. 22 PDF Viewer Graphical User Interface

#### NOTE

You may scroll in all directions using the direction keys of the 6000A V2 Platform or of an external keyboard, or by dragging the scroll bars with touchscreen or mouse.

#### **Text Editor**

The Text Editor application allows to enter text on the 6000A V2 Platform and save it into a txt file

### **Text Editor** To open the Text editor:

#### page

- 1 In the **Home** page, press the **App's** key
- 2 In the Application screen, select the icon Text Editor.
  The Text Editor page opens



Fig. 23 Text Editor application

Once the text editor is open, enter text using the method you wish:

 Enter text using an external keyboard which is connected to the 6000A V2 Platform via the USB port or using an external keyboard of a PC connected to the Platform.

or

- Enter text using the keyboard of the Application
  - a Select **Keyboard** on the key

    A keyboard is displayed on the lower part of the screen



Fig. 24 Keyboard of the Text Editor

- Use the arrow keys or the touchscreen to enter the text. or
- Enter manually the text using touch screen.
  - Select Writing on the key
  - Write the letter manually, using the stylus for touch screen You can click on **Train**. in order to draw each character on its cell. This allow to store the characters with your writing characteristics, in order to get the good letters when writing with the stylus.=

## in a file

Saving the text Once the text is entered, you can save it in a file onto the 6000A V2 Platform.

- Click on File > Save or Save as...
- 2 In the dialog box, select the folder in which the file must be saved
- Enter a name for the file with the file extension (.txt or .csv if it must be opened with the 6000A V2 Platform).



Fig. 25 Save file

- 4 Click on Ok to validate
- The file is saved and still opened
- You can modify it and click on Save at any time
- If you modify the file and click on Save as....you can choose another folder and/or another name

to exit the text editor and go back to the **Applications** page. Press

Press **Home** to go back to the **Home** page, and keep the application active.

#### Web browser

# Web access

**Configuring the** Before using the Web Browser onto the 6000A V2 Platform, check/ modify the proxy configuration in the System Settings page:

- On the Home page, press System Settings menu key 1
- Select **Use proxy** parameter in the **I/O Interfaces** box
- If Manual is selected, enter the Proxy Address using the edition keypad
- If **Auto** is selected, enter the **Pac Address** using the edition keypad.

# web browser

**Starting the** To access this application, on the **Home** page click on the soft key **App's**.

In the Application screen, activate Web Browser icon

The web browser is launched.

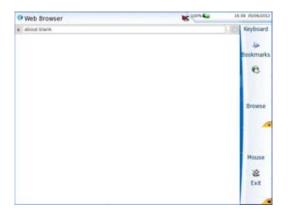


Fig. 26 Web Browser page

## **Opening an** Once the Web Browser is displayed, you must enter the internet address. internet page

- Set the cursor in the address bar:
  - Use the mouse connected via USB port on the 6000A V2 Platform or the mouse of the PC if the screen is deported via VNC application on the PC.
  - **b** Click on the softkey **Mouse** so that it becomes 🗼 . This allows to move the cursor toward the address bar, and to turn to cursor.
- 2 Once the cursor set onto the address bar, enter the address:
  - Using a keyboard connected to the 6000A V2 Platform USB port or the keyboard of the PC with a deport of the screen via VNC. enter the entire address of the site to be opened.
  - b If none keyboard is available, click on Keyboard the virtual keyboard and enter the address using touchscreen.
- 3 Push **Enter** to validate.

The page opens

If an error message is displayed in place of the internet page, verify the address you typed, or check the Web configuration (see "Configuring the Web access" page 53).



Fig. 27 Internet page opened with the Web Browser

# Browser

**Navigation into** Once the Web Browser is open, push the key to display on the the Web right of the screen, the buttons used to navigate.

Icon	Definition
Back Next	Go to the previous or next page loaded
Reload	Refresh the actual page
Return	Exit the Navigation menu

# bookmarks

Using the Once a page is opened, you can apply it a bookmark, in order to get a shortcut toward this page.

## bookmarks

**Creating** Once the internet page for which a bookmark must be created is opened:

to open the dialog box for bookmarks creation. Click on

New toolbar is available on the right of the screen.

- 2 Click on the menu key Add to add a bookmark for the page displayed
- 3 Click on the menu key Edit w to edit the bookmark, and modify if necessary the name of the bookmark. Click on **Ok** to confirm the modification or Cancel to cancel the modifications.



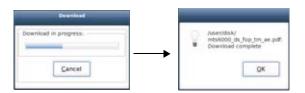
Fig. 28 Bookmark edition

- Click on to open the page of the bookmark selected in the list
- Click on to delete the selected bookmark from the list
- Click on to exit the bookmark menu and go back to the Web Browser page.

## Opening a PDF document

PDF documents may be opened and read within the Web browser.

- When you click on a link toward a PDF file, a dialog box during loading is displayed.
- Once loading is completed, click on **Ok** to open the pdf file.



Downloading a pdf file Fig. 29

#### NOTE

The web browser will open a PDF document, not a URL including a PDF file.

The PDF is also automatically saved on the disk of the 6000A V2 Platform.

# web browser

**Leaving the** Depending on how long you want to leave the web browser and on your connection mode, you may:

> Leave the web browser running and switch to another task. To do this, click on the **HOME** button.

To go back, you must select again the **Web Browser** in the **App's** menu:

- The icon is valid
- The application will reopen much faster, and all your environment will be the same (last current page, possibilities to go back...)
- Quit the application using the Web browser application menu: click on the key

#### Calculator

A calculator can be displayed and used onto the 6000A V2 Platform.

- 1 In the **Home** page, press the **App's** key
- 2 In the Application screen, select the icon Calculator.
  The Calculator opens



Fig. 30 Calculator

Press to exit the Calculator and go back to the Application page.

Press **Home** button to go back to the **Home** page, and keep the **Calculator** application active.

## File Explorer

This key allows to directly open the 6000A V2 Platform explorer, where all the files are stored (traces, pdf files ...).

The explanation about the explorer are available in "File management" on page 71.

# **Chapter 7** Applications *File Explorer*

# Stratasync

8

This chapter describes how to synchronize your 6000A V2 Platform to the Stratasync application.

The topics discussed in this chapter are as follows:

- "Principle and prerequisites of the Stratasync" page 60
- "Configuring and synchronizing the 6000A V2 Platform" page 61

### Principle and prerequisites of the Stratasync

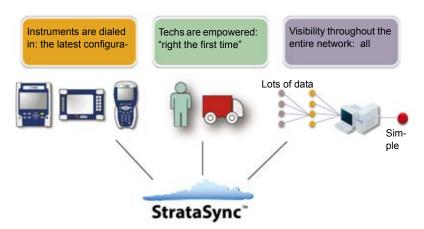
Stratasync is a new solution that provides network operators with an agile and centralized way to manage and analyze data from thousands of deployed JDSU test instruments directly from the cloud.

StrataSync is a hosted, cloud-based software application that provides JDSU instrument asset, configuration, and test-date management.

StrataSync improves technician and instrument efficiency.

#### StrataSync allows to:

- Manages and tracks test instruments
- Collects and analyzes results from the entire network
- Informs and trains the workforce



**Fig. 31** Principle of the Stratasync application

### Pre-requisites for using the Stratasync with the 6000A V2 Platform

The user must have subscribed to Stratasync, and by consequence, he must have acquired an **account Identifier** and a **password**.

The Ethernet and Proxy parameters must have been correctly configured in the System Settings page of the 6000A V2 Platform (see "Ethernet > Mode" on page 65 and "Proxy > Use proxy" on page 66).

### Configuring and synchronizing the 6000A V2 Platform

The 6000A V2 Platform can be configured to be synchronized with the Stratasync.

- 1 Press **Settings** in the **Home** page
- 2 Check the configuration of the Ethernet and Proxy parameters.
- 3 Configure the Stratasync parameters:
  - a In the Server Type parameter, the JDSU Server is selected by default and it is recommended to keep this parameter. However, the user can select if necessary the Server Name parameter and enter the name in the following parameter.
  - **b** In the **Account ID** parameter, enter the same identifier as the one used to access to Stratasync.
  - c The Technician ID parameter is automatically fulfilled after synchronization (if it has been defined by the administrator of the Stratasync)
  - d To upload the files from a directory onto the 6000A V2 Platform toward Stratasync, select the parameter Upload from and press right arrow key to enter the directory path (example: disk/ Stratasync). The directory Stratasync is defined by default.



Fig. 32 System Settings - Stratasync

# Connecting the One 6000A V2 1 Platform to 2 Stratasync

**Connecting the** Once 6000A V2 Platform is configured in the **System Settings** page:

- Press Expert Tools > Upgrades menu keys.
- 2 Press Stratasync menu key

The synchronization with Stratasync starts

The icon Transparent during synchronization.

Once the icon is no more displayed, this mean that the synchronization is completed.

3 For the first synchronization only, a message displays on the Platform to indicate the addition of the equipment in Stratasync.



Fig. 33 First synchronization - Message on 6000A V2 Platform

The 6000A V2 Platform is now available in Stratasync.

# Transferring the 6000A V2 Platform Interface

9

The 6000A V2 Platform can be used in combination with a PC in order to transfer the Platform Interface onto a PC, or to access the internal memory or USB memory stick contents on the PC.

Topics described in this chapter are as follows:

- "Establishing connection" on page 64
- "Transferring the Interface" on page 67
- "Virtual control buttons bar" on page 68
- "Equivalence between the keyboard and 6000A V2 Platform" on page 68



For an intensive use of the deport screen or when it is used via a WAN network, it is strongly recommended to use a dedicated VNC client. The VNC clients recommended are Tight VNC (V 1.2.9 or later) and Real VNC (V 4.1.1 or later).

### **Establishing connection**

The connection between 6000A V2 Platform and the PC can be done directly, or via a local network.

The transfer of the interface can be done using a VNC window on PC.

## Connecting the 1 6000A V2 Platform and the PC

1 Connect the 6000A V2 Platform to the PC via an Ethernet cable, using the RJ45 connectors set on both equipments.



Fig. 34 Connection 6000A V2 Platform and PC

2 Check the network connection on the PC is set in **Dynamic** mode.

#### NOTE

The transfer of interface can be done via WIFI, using the IP address once WIFI connection is established (see Chapter 12 "WIFI Option" page 109).

It can also be transferred via Bluetooth, on a laptop PC equipped with Bluetooth (see Chapter 13 "Bluetooth option" page 117).

## Configuring the 1 6000A V2 2 Platform

- In the **Home** page, press **System Settings** menu key.
- 2 In the System Settings page, in the I/O Interfaces box, configure the following parameters:

#### Remote Screen

Remote screen = Session or Permanent must be confirmed in both cases, in the Interface E/S window.

**No** the screen cannot be remote on to a PC or on to

another 6000A V2 Platform.

Session Mode the Remote screen function is inactive once the

6000A V2 Platform is switched off.

Permanent Mode

the Remote screen function is still active when the 6000A V2 Platform is switched off and

restarted.

Permanent with password same function as the Permanent mode,

with an access to the equipment via VNC protected by a password: 42000

static mode enabling input of the configuration of

The password to access VNC can be modified:

Click on the menu key Change password.

- Enter the current password in the Edition keypad and press **Enter** to validate.
- Enter the new password and press Enter to validate.

#### Ethernet > Mode

Config 1 to 4

Parameters of the local Ethernet network to which the 6000A V2 Platform is connected:

•	4 sites. If this parameter is selected, the following parameters must be entered:
– Site Name	the user can enter the name of the site in the Edit menu.
<ul><li>IP Address</li></ul>	IP address of the 6000A V2 Platform
<ul><li>IP Mask</li></ul>	address of the mask of the sub-network
<ul><li>IP Gateway</li></ul>	IP address of the machine enabling access outside the sub-network.
– DNS <sup>1</sup>	IP address of the machine providing the IP address on the basis of the name
<ul> <li>Domain name</li> </ul>	name of the local network to which the 6000A V2 Platform is connected.

#### Dynamic

in this mode, which requires a DHCP server, the 6000A V2 Platform requests an IP address from this server which will be allocated dynamically if dynamic host configuration is activated on the local network.

After selecting this mode or after power-on, the 6000A V2 Platform tries to establish a connection to obtain an address from a DHCP server. If for any reason, this process fails, the 6000A V2 Platform reverses to static IP address mode with User1 IP address.

<sup>1.</sup>Domain Name Server

#### NOTE

Once the 6000A V2 Platform is connected to the network, the icon displays for few seconds and indicates the connection is working.

#### Ethernet IPv6 > Mode

The Ethernet IPV6 parameters must be configured to get Ethernet access in accordance with the IPV6 standards.

Config 1 to 4	static mode enabling input of the configuration of 4 sites. If this parameter is selected, the following parameters must be entered:
<ul><li>Site Name</li></ul>	the user can enter the name of the site in the Edit menu.
– Link:	automatically displays the address of the link (cannot be modified)
– IP	IP address of the 6000A V2 Platform
– GW	IP address of the machine enabling access outside the sub-network.
– DNS	IP address of the machine providing the IP

address on the basis of the name

in this mode, the 6000A V2 Platform requests an

IP address from the server which will be

allocated automatically.

If Auto is selected, the parameters Link, IP, GW and DNS are automatically defined and cannot be modified.

Off The Ethernet IPV6 connection is not activated.

#### Proxy > Use proxy

Auto

1 Select No if no proxy is used.

If Manual has been selected, enter the Proxy Address.

If Auto has been selected, enter the Pac Address.



Fig. 35 Example of proxy configuration

2 Note the IP Address displayed in the System Settings page.



Fig. 36 Example of configuration for Ethernet

3 Wait about 10 seconds the connection is established.

The 6000A V2 Platform Interface can now be transferred onto the PC, or the internal memory/USB key contents can be transferred on PC.

## **Transferring the Interface**

Once the connection is established between the 6000A V2 Platform and the PC, proceed as follow:

- 1 Open Internet Explorer on the PC.
- 2 Considering 10.33.17.113 is the IP Address of the 6000A V2 Platform (as shown Figure 36 on page 67), enter the following address in the Internet Explorer window:

http://10.33.17.113:5800

3 Press Enter to validate.

The screen of the 6000A V2 Platform appears offset on your PC.



Click to install TightVNC software on your PC (not mandatory)

Fig. 37 VNC window

You can use keyboard mouse of the PC to control the 6000A V2 Platform (see "Equivalence between the keyboard and 6000A V2 Platform" on page 68).

#### **NOTE**

Once Remote screen is accessbile via VNC, the icon displays on the upper banner of the screen until the connection is cut or the 6000A V2 Platform is switched off.

When two or more users are using remote screen function onto the same Platform, the icon is \*\*c.

#### Virtual control buttons bar

It is possible to emulate hard keys with Virtual Control buttons. This virtual control buttons bar is especially useful when the 6000A V2 Platform screen is exported on a remote PC.

To display those buttons, click once on the top of the screen in the status bar, at the same height than the date and time.



Fig. 38 Virtual control buttons bar

The virtual control buttons bar is displayed during a few seconds. You may click on any of these buttons to obtain exactly the same results than using the hard keys on the front panel of the 6000A V2 Platform.

#### Equivalence between the keyboard and 6000A V2 Platform

The PC keyboard can replaced all the buttons and keys of the 6000A V2 Platform except the **On/OFF** button:

- The menu keys to the right of the screen are replaced by the function keys F1 to F7.
- The buttons below the screen are equivalent to Ctrl + a letter (see table below).
- The direction keys have the same function on the external keyboard and on the 6000A V2 Platform.

Function on the 6000A V2 Platform	External keyboard
HOME	Ctrl + H
SYSTEM SETTINGS	F12
SET-UP	Ctrl + U
FILE	Ctrl + F
RESULTS	Ctrl + R
START/STOP	Ctrl + S
EXPORT <sup>a</sup>	Ctrl + P
<b>← → →</b>	¬ - ® ¯
Menu keys 1 to 7 (from top to bottom)	F1 → F7
ABOUT	F11
Save and quit (Exit)	Entrée/Enter
Quit without saving (Abort)	Escape/Echap.

a. The Export function is available onto the Platform pressing simultaneously the left and right arrow keys.

#### NOTE

Those equivalences are also valid with a keyboard directly connected to the 6000A V2 Platform via one USB port.

**Chapter 9** Transferring the 6000A V2 Platform Interface Equivalence between the keyboard and 6000A V2 Platform

# File management

10

The files management with the 6000A V2 Platform can be performed, wether a module is set onto the equipment or not.

The topics discussed in this chapter are as follows:

- "File Explorer Overview" on page 72
- "Directories and Files selections" on page 72
- "Directories & Files editing functions" on page 73
- "Working with directories and files from the explorer" on page 74
- "Creating a screenshot" on page 83
- "Creating a report" on page 85
- "Merging pdf or txt files" on page 87
- "Storage media" on page 88

### File Explorer Overview

To reach the File Explorer page

- 1 On the Home page, press App's softkey.
- Validate the File Explorer icon. 2

The File Explorer page appears.

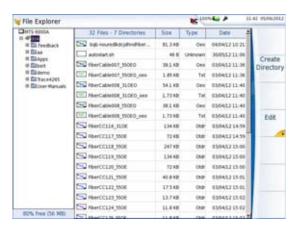


Fig. 39 File Explorer page

#### **Directories and Files selections**

# selection

**Directory** To select a directory from the explorer page:

Press on the directory that must be selected on the left of the screen.

The list of files the directory contains displays on the right side The selected directory is underlined in blue

Press validation hard key , to display the sub-directories if any.



Fig. 40 Directory selection

## Files selection To select one or several files from the explorer page:

Press on files that must be selected.

or

To select a list of files using the keys of the Platform:

- a Select and validate the first file of the list (underlined in red)
- **b** Set the cursor on the last file of the list (underlined in blue)
- Maintain the right direction key pushed until all the files are selected.

or

Click on Select all menu key to select all files into the directory.

#### NOTE

The last selected file is underlined in red and the previous one(s) selected is/are underlined in blue.

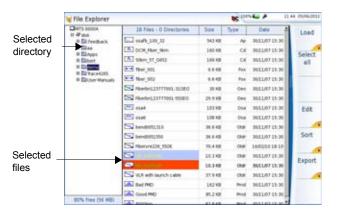


Fig. 41 Example of files selection

## **Directories & Files editing functions**

# Copy/Cut & Paste files/

To copy (cut) one or several files, or one directory, and paste them in another place:

## directories 1

- 1 Select the directory / the file(s) (see "Directories and Files selections" on page 72).
- 2 Press Edit menu key

3 Press Copy to keep the directory / file(s) to their initial location.
or

Press Cut to delete the directory / file(s) from their initial location

- 4 On the left of the screen, select the directory; or select the new storage media.
- 5 Click on Paste menu key.

# Renaming a 1 directory / file

- 1 Select the directory / file to be renamed (see "Directories and Files selections" on page 72).
- 2 Press Edit > Rename Directory or Rename File.
  The Edition keypad displays.



Fig. 42 Edition keypad for renaming file

- 3 Press Clear if you wish to delete the entire name
- 4 Enter a new name for the directory / file.
- 5 Click on **Enter** to validate the new name.

# Deleting a 1 directory / file

- 1 Select the directory or file(s) to be deleted (see "Directories and Files selections" on page 72).
- 2 Press Edit > Delete.

A confirmation dialog box displays.

3 Press Yes to delete the selected directory or file(s).
Press No to cancel the deletion.

## Working with directories and files from the explorer

**Creating a** To create a new directory from the explorer page:

directory

1 Check the cursor is set on the left of the screen

- 2 Select the storage media into which the directory must be created
- 3 If you want to create a sub-directory, select the directory into which it must be created.
- 4 Press the right menu key Create Directory.
  The edition keypad displays
- 5 Enter a name for this directory
- 6 Press Enter key to validate the new directory

#### **Opening files** Once a file is selected, press Load, then Confirm Load menu keys.



Several FO files of the same type (example: all otdr) cannot be opened at the same time using the Explorer function of the Application page; only the last one selected will open. It can be opened exclusively if the corresponding module is set and activated and if File explorer is opened using the FILE button of the Platform).

Other type of files (PDF, TXT...) must be open one by one.

If different types of files have been selected in the Explorer, only the last one selected will open.

## **File Types** For files recognized by the 6000A V2 Platform, the types are symbolized by icons. E.g.

Icon	Type of FO file
man _	OTDR file (.SOR extension)
***	Multi OTDR file (.MSOR extension)
كيدوك	OEO file (.OEO extension)
M	OSA file (.OSA extension)
علللليد	PMD file (.PMD extension)
A	CD OTDR file (.CD extension)
W	AP file (.AP extension
	ODM file (.OCD extension)
.5dB	Power Meter file (.LTS extension)

Icon	Type of file
pdf	PDF File (.PDF extension)
PNG	PNG file (.PNG extension)
XML	XML file (.XML extension)
JPG	JPEG / JPG file (.JPEG extension)
•	HTML file (.HTML extension)
TXT	Text file (.TXT extension)
LIC	License file (.LIC extension)
CSV	CSV file (.CSV extension)



With the 6000A V2 Platform, you can open and load any kind of Fiber Optic files (OTDR, OSA, PON...) even if the corresponding module is not installed.

Sorting files If at least one file is selected, the key Sort allows to access to a submenu allowing to sort the files according to pre-defined parameters:

- **Sort by name**: the files display in an ascending order (from A to Z). If you click once again on the key, the files display in a descending order (from Z to A).
- Sort by size: by clicking once on this key, the files display from the smallest to the heaviest one. Clicking a second time allows to sort the files in opposite order.
- **Sort by type**: clicking once on this key; the 6000A V2 Platform displays files in an ascending order (the file type A to file type W). By clicking again, the 6000A V2 Platform displays the files in opposite order.
- Sort by date: clicking once on this key; the 6000A V2 Platform displays files from the more recent to the less one. By clicking again on key, the Platform displays files from the older to the more recent one.

#### NOTE

You can also sort files clicking on the column titles in the files list

files to a PC with the USB cable

**Transferring** If some Results traces or other kinds of file need to be transferred to the PC, this can be easily done using the USB cable delivered on standard with the 6000A V2 Platform.

Establishing 1 connection 6000A V2 Platform <-> PC

Connect the 6000A V2 Platform to a PC, plugging the USB cable on the mini USB port of the Platform toward a USB port on the PC.

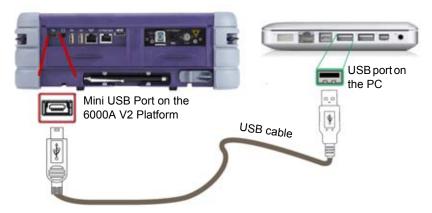
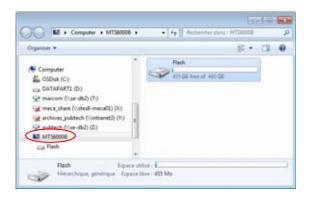


Fig. 43 Direct connection 6000A V2 Platform <-> PC

2 Once connection is established, a window opens automatically with the Flash driver:



Double click on the Flash driver. The disk content of the Platform opens onto the PC.

## Transferring files 1 onto the PC

1 Select the file(s) from the 6000A V2 Platform to be transferred onto the PC



Fig. 44 Files selection from the 6000A V2 Platform

- 2 Press Ctrl + C, or right click and select Copy.
- 3 On the PC, select the directory in which file(s) will be transferred.
- 4 Press Ctrl + V, or right click and select Paste.

## Cancelling the connection

Once all desired files have been transfer onto the PC, connection between 6000A V2 Platform and PC can be removed:

- On the PC, use the appropriate method to safely remove the USB cable from the USB port.
  - The screen displays the results trace of the active function, or returns to the **Home** page if no function is active.
- 2 Remove the mini USB plug from the 6000A V2 Platform USB port.

# Transferring files to/from a PC with a FTP server

Il is possible, from a PC, to access the internal memory of the 6000A V2 Platform or to the USB memory stick connected to the Platform by means of the FTP server of the 6000A V2 Platform.

#### Direct connection 1

Connect directly the 6000A V2 Platform to the PC with an Ethernet cable, using the RJ45 connectors on each equipment.

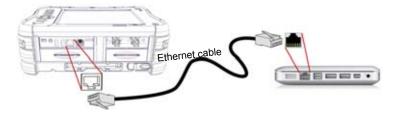


Fig. 45 Ethernet Connection 6000A V2 Platform <-> PC

- 2 Make sure the network configuration onto the PC is set to the Dynamic mode:
  - a Click on Start > Control Panel.
  - b Double click on Network Connection.
  - c Double click on Local Area Connection.
  - d In the dialog box, click on Properties.
  - e Check the parameter Internet Protocol (TCP/IP) is selected (ⓐ) and click once on it (underlined in blue)
  - f Click on Properties button.
  - g On the tab **General**, check the parameter **Obtain an IP address** automatically is selected (♠); if not, click to select it.

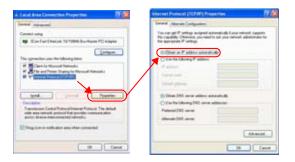


Fig. 46 Internet Protocol

- h Click on **Ok** and close all the dialog boxes opened onto the PC.
- 3 On the 6000A V2 Platform, in the System Setup page, under I/O interface > Ethernet, select Dynamic.



Fig. 47 System Setup > Ethernet: Dynamic mode

 Note the IP Address and wait for about ten seconds while the connection is established

## Connection via a 1 local network

- 1 On the PC: find the IP address and the mask of the PC's subnetwork:
- With Windows 98 or Millenium: Select Start > Execute, then enter winipefg and click on OK.
- With Windows NT, 2000, XP or Vista: select Start > Programs > Accessories > Dos Prompt, type ipconfig", then Enter.
   Note the IP address and the mask of the PC's sub-network.
- 2 Plug the RJ 45 connector of the 6000A V2 Platform into a hub or Ethernet switch with an Ethernet cable (see Figure 45 on page 79).
- 3 On the 6000A V2 Platform:

In the system set-up menu, under I/O interfaces > Ethernet, select Config 1 (or 2 / 3 / 4) on the line Mode, then enter the IP address, the IP mask of the PC and the IP gateway previously noted (step 1).

or

use **Dynamic** attribution mode (DHCP). In this case, the address of the 6000A V2 Platform (10.33.17.113 in the example) is displayed but cannot be modified.

- 4 Wait for about ten seconds while the connection is established.
- 5 On the PC, make sure that the connection is operational by selecting Start > Execute... and typing ping followed by the address of the 6000A V2 Platform.

# Accessing the FTP acce internal memory of the 6000A V2 Platform The Accessing the FTP acce acternal. Make

**Accessing the** FTP access is obtained through the user account «mts6000» (password: rnal memory of acterna).

- Make the 6000A V2 Platform / PC connection as described Figure 45 on page 79 or connect Platform to WIFI (see Chapter 12 "WIFI Option" page 109).
- 2 On the PC, use an FTP client, and access to internal memory via an internet explorer (I.E, Mozilla Firefox...) or Windows Explorer.

3 In the address bar, type the following address (10.33.17.113, being the IP address of the 6000A V2 Platform defined when the connection was configured;

ftp://mts6000:acterna@10.33.17.113/disk/ This allows to access to internal memory.

ftp://mts6000:acterna@10.33.17.113/usbflash/ This allows to access to the contents of the USB memory stick connected to the 6000A V2 Platform.



If you use Internet Explorer 7, the following address must be entered:

ftp://mts6000:acterna@10.33.17.113/acterna/user/disk OF
ftp://mts6000:acterna@10.33.17.113/acterna/user/usbflash

- 4 If an identification is required, enter:
  - User name: mts6000
  - Password: acterna

The PC then displays the contents of the internal memory or of the USB memory stick from the 6000A V2 Platform.



The state of the s

Internal memory open via Internet Explorer

Fig. 48 Internal memory of the 6000A V2 Platform

5 If internal memory of the Platform is accessible via Internet Explorer (or any other explorer), right click on one file and click on Save target as... to transfer file onto the PC.

If internal memory of the Platform is accessible via Windows Explorer, select one / several files and click on **Copy**, then click on **Paste** on PC to transfer file.

# Sending files by mail

The 6000A V2 Platform can send files (traces or others) via e-mail, from the Explorer.

#### Configuring the sending of files by e-mail

**Configuring the** Before sending files by e-mail, the unit must be configured:

- On the **Home** page, press **System Settings** menu key
- 2 In the I/O Interfaces box, select File Export parameter.
- 3 Configure the following parameters;

Send Mail Choose Ethernet if you wish to use the sending

mail function.

Sender Mode Auto or Manual.

In **Auto** mode, you will not have the possibility to

reply to the mail sent.

In **Manual** mode, the reply will be sent to the address entered in the line From.Use the button

▶ to enter into an edition window.



If **Sender Mode** is set to **Auto**, any reply to an e-mail sent by the 6000A V2 Platform will be lost.

#### Relay Mode

#### Auto or Manual.

If the e-mail sending is performed via a SMTP network, select the **Manual** Relay mode and indicate the SMTP server address in the field **Mail Relay**, using the edition window.

In **Auto** mode, the sending of e-mail is performed automatically.

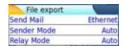


Fig. 49 File Export parameters

## Sending files from 1 the Explorer 2

- Press Home hard key
- 2 Press App's menu key and validate File Explorer icon
- 3 In the **Explorer** page, select the file(s) to be sent.
- 4 Click on Export > Send by mail

  The editor is displayed

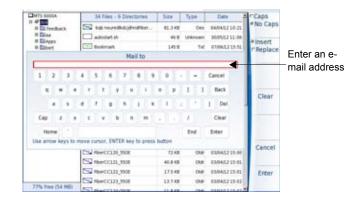


Fig. 50 Enter e-mail address

- 5 You will have to fill in the two following fields:
  - Mail To: in the edition window, enter the name of the recipient and press Enter to validate.
  - Subject: enter the subject of the mail or a comment if necessary. By default, the name of the mail is "Result + sending date".

#### NOTE

If at least one function is selected in the **System** page (yellow icon), this two parameters **«Mail to»** and **«Subject»** can be configured by default in the **Setup** page > **File Export** (see 8100 Module Manual)

#### 6 Click on Enter

Once the mail has been sent, the following message is displayed: Mail Sent. Click on any key to follow.

## Creating a screenshot

You can create captures of what is displayed on the screen, directly from the 6000A V2 Platform.

# Configuring the parameters of screenshots

To configure the screenshot and choose the format of the generated file:

- 1 On the Home page, press System Settings key to reach the System Settings page.
- 2 In the Printer box, on the line Printer, select File (Screen)

Choosing this option, you can save the displayed screen in JPG, PNG or PDF format, exactly as it is displayed on the screen.

Therefore, if you make a zoom on the trace for example, the file will only show the zoom section.

3 On the line File format, select if the exported file will be a JPG, PNG or PDF file.

## raking a screenshot

Once the screenshot parameters are configured:

- 1 Reach the display which will be saved as a screenshot in a file.
- 2 If necessary, make modifications on this display (example: zoom on trace...)
- 3 Press simultaneously left and right direction keys or

Click on the upper banner of the screen, and click on **Print** in the control buttons bar displayed for few seconds.

The icon signal displays until the end of process.

4 Press the FILE key to find the JPG, PNG or PDF file in the Explorer For trace results, the file is saved in the same directory than the file used for screenshot.

For other page open and used for a screenshot, the file is saved in the directory **Stratasync**, into the disk.

### Name of the screenshots files

Name of the The screenshot is saved in a file, which is automatically named as follow:

Print\_date (year/month/day)\_time (hour/minut/second).jpg/png/pdf



Fig. 51 Example of screenshot, open in the Web Browser of the 6000A V2 Platform

### Creating a report

Once the results page of a function is opened (example: OTDR trace.) Power Meter results...), it can be exported in a report, using the 6000A V2 Platform.

# report

**Configuring the** To configure the report and choose the format of the report file:

- On the Home page, press System Settings key to reach the System Settings page.
- 2 In the Printer box, on the line Printer, select File (Formatted). Choosing this option, you can save the open file in a JPG, PNG or PDF file report, exactly as if the file was printed on paper.

Therefore, if the file is too large for one A4 page, several JPG, PNG or PDF files will be created.

- 3 On the line File format, select if the report file will be a JPG, PNG or PDF file.
- 4 To display a Logo on the upper right of the report pages, click on Logo line and select the Logo to be displayed on the upper right of the page:
  - Press be to open the edition keypad
  - **b** Enter the path of the logo file with its extension (example: disk/ jdsu logo.jpg)
  - **c** Press to validate.



Fig. 52 Example of Report configuration

## Creating the 1 report 2

- Open the file to be saved in a report in JPG, PNG or PDF format
- If necessary, make the modifications on the file/trace (see user manual of the 8100 OTDR Modules for OTDR trace files).
- Set the trace view as wished.

#### For OTDR traces

- if the function is set to the Trace mode (Trace is selected on the menu key Trace/Summary), the JPG/PNG/PDF file will contain the header and the trace (in one page).
- If the function is set to **Table** mode, the JPG/PNG/PDF file will contain the header, the trace and the entire results table (several pages may be required)
- If the function is set to Summary mode (Summary is selected on the menu key Trace/Summary), the JPG/PNG/PDF file will contain the header and the summary page, with either the Bend table or the Alarm Table according to the selected item with the menu key.

This view is only available with OTDR traces.

4 Press simultaneously left and right direction keys

or

Click on the upper banner of the screen, and click on **Print** in the control buttons bar displayed for few seconds.

The icon displays until the end of process.

5 Press the FILE key to find the JPG, PNG or PDF file in the Explorer The files are saved in the same directory than the trace file used for report.

# Name of the If a trace has been saved in a report file, the name of the JPG/PNG/PDF report file is as follow:

name of the stored trace\_date (year/month/day)\_time (hour/minute/second).jpg/png/pdf

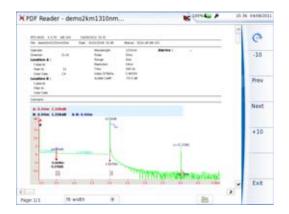


Fig. 53 Example of report (in pdf)

## Merging pdf or txt files

In the Explorer page, two pdf/txt files or more, generated via the results traces can be merged in one pdf file.

- The pdf files that can be merged are those generated via the Fast Report key on trace results page or via the EXPORT hardkey of the 6000A V2 Platform (see "Creating a report" on page 85)
- The txt files that can be merged are those saved with the results trace (see OTDR Modules User Manual: E8100M02).
- 1 In the Explorer, select the two or more pdf/txt files generated
- 2 Press Export menu key
- 3 Press Merge key

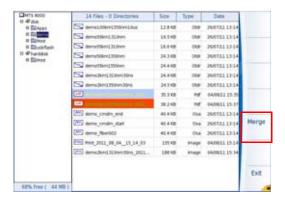


Fig. 54 Files selection and Merge key

The icon 🐝 is displayed during merging process.

After a few seconds, the files are merged in one pdf/txt file, which name by default is: merged\_year\_month\_date\_hour\_min\_sec.pdf

The file is automatically saved in the same directory as the one where files have been selected.

It gathers all results from pdf/txt files selected (and traces for pdf file), in one single pdf file of several pages (1 results screen per page, if the results table does not exceed one page).

#### NOTE

Once merged file is saved, it can be renamed in the Explorer (see "Renaming a directory / file" on page 74).

### Storage media

For saving or recalling data, the 6000A V2 Platform offers a wide choice of media, both built-in and external.

Free space on selected media is clearly displayed at the bottom of the left panel.

Storage media built into the 6000A V2 Platform

The 6000A V2 Platform is delivered with an internal memory, which maximum capacity is of 2 Gbytes (with a minimum of about 128 MB are available for data storage).

The 6000A V2 Platform can also be delivered with a hard disk, available on option, which maximum capacity is of 100GB. It must be used with Transport applications.

## storage media

External USB The 6000A V2 Platform is equipped with 2 USB ports as standard. One of these can be used to connect an external storage medium, in particular a USB memory stick.



Although three USB ports are present, it is not possible to use simultaneously more than one external USB storage medium.

#### USB memory stick 1 connection

Insert the USB memory stick in one of the 6000A V2 Platform's USB

A sound is emitted to confirm the successful insertion and recognition of a USB memory stick.

Then, the icon \( \sum\_{\text{is}} \) is displayed in the upper banner to inform the user the USB stick is ready to be used.



When a file is moved in the explorer of the Platform, the end of the move on the screen does not mean that writing of data into the memory is complete. Some data may still be in a writing process if the storage unit is removed prematurely.

#### USB memory stick 1 disconnection

- Before disconnecting the USB memory stick, always select a storage device different from usbflash (select disk for example) in the explorer.
- Make sure you no longer have any running applications using the usbflash storage media.
- Press the **Eject USB** key, available in **File Explorer**. The icon becomes \int to indicate it can be removed safely. In this state, the USB stick cannot be used anymore

The USB memory stick can then be disconnected from the USB port.

#### NOTE

The USB memory stick can also be removed using the Expert Tools > Media Utilities menu, accessible via the Home page.

See Chapter 16 "Maintenance and Troubleshooting" page 137 if any problem occurs with the USB memory stick

#### **Cloud Storage**

## the Cloud Storage

**Principle and** The Cloud storage defined the outsourcing of data on distant servers, prerequisites of which avoid the data storage on a local workstation.

> The cloud storage onto a 6000A V2 Platform allows to transfer the files from the Platform toward a distant server and vice-versa.

> Before configuring the Cloud Storage on Platform, you must first create an account on a Cloud Platform on internet.

The Cloud storage function onto the 6000A V2 Platform works exclusively with sites using the WebDav technology such as CloudSafe (https://secure.cloudsafe.com/pages/index.html) or Box (https:// www.box.com/pricing/).

Once account is created, with WevDav configuration, you get the following information for connection:

- URL
- Login Name
- Login Password

## connecting to the 6000A V2 Platform

#### Configuring and Configuring the 6000A V2 Platform

Once an account has been created on the Cloud site, configure the Plat-Cloud Storage on form before establishing the connection.



Before configuring the Cloud Storage, make sure the configuration for Ethernet parameters and Proxy parameters are correctly configured. See "Ethernet > Mode" on page 65 and "Proxy > Use proxy" on page 66.

- On the Home page, press Settings to reach the System Settings page
- 2 In the I/O Interfaces windows, press Cloud Storage parameter A new menu opens
- 3 In the Url parameter, enter the URL define for the Cloud server created on internet
- 4 In the **User** parameter, enter your Login created on your account
- In the **Key / Password**, enter the password attributed by the Cloud server

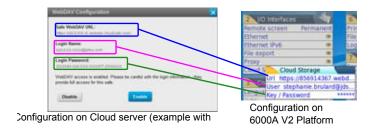


Fig. 55 Example of configuration

#### **Connecting Cloud Storage**

Once configuration has been established on the 6000A V2 Platform, it is ready to be connected with Cloud server:

Select one parameter of the Cloud Storage window on 6000A V2 Platform

Press Connect Cloud Storage menu key
 The connection launches



2 Once connection is established, a message displays in the window



3 Press any key to continue, and start files transfer.

The icon sis displayed on the upper banner as long as the connection is active.

#### Disconnecting from Cloud storage

To disconnect the 6000A V2 Platform from Cloud storage:

- 1 Press Home hard key.
- 2 Press System Settings menu key.
- 3 Select a parameter of the Cloud Storage window.
- 4 Press Disconnect Cloud Storage menu key.

## Storage

Transferring files Once connection between 6000A V2 Platform and cloud storage server using Cloud is successfully established, the files can be transferred from one Platform to the other.

- Press **Home** hard key.
- 2 Press FILE Explorer on the Home page In the Explorer page, a new storage media is available: cloudstorage.



The cloud-storage media is not available when File Explorer is opened from a FO application.

- Transfer the files from the disk or USB memory stick of the 6000A V2 Platform toward the cloud storage or vice-versa:
  - Select the file(s) to be transferred
  - **b** Press the **Edit** > **Copy** or **Cut** menu keys
  - Select the storage media (and directory) into which files must be copied.
  - d Press Paste menu key.

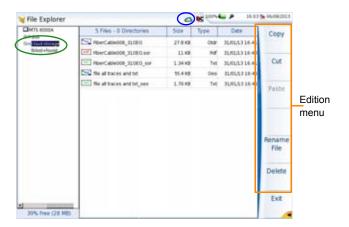


Fig. 56 File Explorer with cloud storage



The cloud storage is automatically disconnected once the Platform is switched off. Reconnect from the System Settings page of the 6000A V2 Platform after the Platform restart.

### for storage are: media

**Abbreviations** The abbreviations used in the explorer for the different storage media

Abbreviation	Storage medium
disk	Internal flash memory
harddisk	Internal harddisk (option)
usbflash	USB memory stick
cloud-storage	Cloud storage media available on PC
bluetooth-inbox	Bluetooth storage media (option) <sup>a</sup>

a. The files stored in bluetooth-inbox are lost when the Platform is switched off.

## **Chapter 10** File management *Storage media*

## **Smart Access Anywhere**

11

The 6000A V2 Platform can be accessible to any network test locations, using a specific function: **Smart Access Anywhere**.

This function allows one distant user, on a PC, to transfer the Platform Interface and work on 6000A V2 Platform or to access the internal memory / USB memory stick contents on the PC and perform files transfer from T-BERD/MTS to PC and vice-versa.

This feature does not need any licence code if the user wants assistance from a JDSU person located within the JDSU network.

This feature requires a licence code into the unit if the user wants any other assistance/support ("company A" willing to be remotely controlled by "company A or B").

Multiple licences are available:

- Licence 1 (reference SAA-6K-L1): for SmartAccessAnywhere using Ethernet or Wifi hotspot connection
- Licence 2 (reference SAA-6K-L2): for SmartAccessAnywhere using Ethernet, wifi hostpot connection, or USB / Wifi connection through 3G smartphone
- "Connection modes" page 96
- "Pre-requisite for using the Smart Access Anywhere Application" page 98
- "Downloading the JDSU application on PC" page 98
- "Launching the SmartAccess Anywhere application" page 99
- "Using Remote screen and File Transfer applications" page 101
- "Connection information and settings" page 105

#### **Connection modes**

Different kinds of connection are available to access to a distant 6000A V2 Platform.

According to the connection type used, specific requirements are mandatory.

#### Ethernet or 1 WIFI connection

Using the Ethernet connection, no specific requirement is needed. The 6000A V2 Platform is directly connected to Internet via an Ethernet Cable.

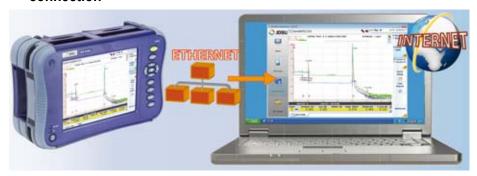


Fig. 57 Ethernet connection

2 The WIFI connection can be used to access to 6000A V2 Platform from any location.

This connection is available exclusively if the WIFI option is installed onto the T-BERD/MTS-6000A V2 which will be seen remotely.



Fig. 58 WIFI connection

### connection through 3G **Smartphone**

**USB/WIFI** To access to a Platform remotely, the connection between the unit and the JDSU application can be established via a USB cable or WIFI, and through a 3G Smartphone, having Internet Sharing capability via USB or WIFI.

> To establish connection between 6000A V2 Platform and Smartphone using USB, connect the USB cable on 6000A V2 Platform and on 3G Smartphone connector.



Fig. 59 USB connection through 3G Smartphone

To establish connection between 6000A V2 Platform and 3G Smartphone using WIFI, the WIFI option must be installed onto the 6000A V2 Platform.



Fig. 60 WIFI connection through 3G Smartphone



The smartphone which have been fully qualified are HTC Desire and Samsung Galaxy Ace models.

#### Pre-requisite for using the Smart Access Anywhere Application

To access to a 6000A V2 Platform from any locations, specific requirements are mandatory:

- a licence installed on Platform which will be accessible from any locations.
- an Ethernet connection (the Platform must have an IP address see "Ethernet > Mode" on page 65) and, if the network uses a proxy, this proxy must be configured (see "Proxy > Use proxy" on page 66).
- the JDSU application, downloaded for free at the address «http:// smartaccess.updatemyunit.net».
- port 22 (SSH) or 443 (HTTS) output opened
- according to connection mode selected:
  - the WIFI option installed on 6000A V2 Platform
  - a USB cable to connect Platform with 3G Smartphone
  - a 3G Smartphone from given list and having appropriate basic subscription for internet connection sharing

#### Downloading the JDSU application on PC

The JDSU application **Smart Access Anywhere** must be downloaded on the PC which will be connected to the 6000A V2 Platform remotely.



It is not necessary to have administrator privileges to install the JDSU application on PC. This application is just saved on PC.

- 1 On PC, open an internet explorer and type the following address: http://smartaccess.updatemyunit.net
- 2 Click on the link SmartAccessAnywhere\_Vxx.xx.xx.zip
- 3 Select Save in the dialog box.
  Once download is completed, the internet explorer can be closed.
- 4 Open the directory into which has been save the zip file and unzip files into a directory
- 5 Open the directory and double click on SmartAccessAnywhere.exe

The Smart Access Anywhere application opens:



Enter Access Code (see step 1 on page 100)

Fig. 61 Smart Access Anywhere: Connection page

If the software version is not the last one available, a message displays, on the upper part of the screen to indicate the latest version available can be downloaded at the address: http://smartaccess.updatemyunit.net.



Fig. 62 Warning message of a new version available

### Launching the SmartAccess Anywhere application

Once connection is configured, the SmartAccess Anywhere application can be launched

- On 6000A V2 1 On the Home page, press Expert Tools
  - Platform 2 Press Access Anywhere menu key

The connection to SmartAccessAnywhere Server is in progress.



Fig. 63 Connection to SmartAccessAnywhere Server in progress

3 Once connection is established with the server, the 6000A V2 Platform displays a message with the code to be used to access to the equipment remotely.



Fig. 64 Access code displayed

- 4 Note this access code and transfer it to the distant user, who will access the unit remotely.
- 5 Press **OK** to hide the message.

## On the distant 1

On the PC of the distant user, once the application is launched, enter the Access Number on the upper part of the screen.

2 Click on Connect to validate The following screen displays:



Fig. 65 Smart Access Anywhere: Home page



After remote upgrade or reboot, please wait for more than 2 minutes before re-starting the link between the PC and the unit with SmartAccessAnywhere.

#### Using Remote screen and File Transfer applications

Once the Introduction page is displayed, the user can work on distant 6000A V2 Platform:

- transfer the interface to work on the unit (perform acquisition, configure the equipment...)
- transfer files from the equipment toward the PC, and vice-versa.

# Transferring the interface onto the PC

To display the remote 6000A V2 Platform onto the PC:

1 On the Introduction page, click on or



On the left menu, click on

The current screen of the 6000A V2 Platform displays:

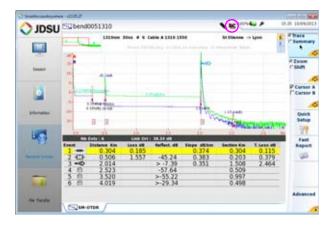


Fig. 66 Smart Access Anywhere: Remote screen

The VNC icon on the upper banner of the unit indicates the remote screen is active.

2 Click on the upper banner of the 6000A V2 Platform screen to access to the virtual control buttons bar, which allows to emulate hard keys.



You may click on any of these buttons to obtain exactly the same results than using the hard keys on the front panel of the 6000A V2 Platform.

3 You can use keyboard mouse of the PC to control the 6000A V2 Platform.

#### Equivalence between the keyboard and 6000A V2 Platform

The PC keyboard can replaced all the buttons and keys of the 6000A V2 Platform except the **ON/OFF** button:

- The menu keys to the right of the screen are replaced by the function keys F1 to F7.
- The buttons below the screen are equivalent to Ctrl + a letter (see table below).
- The direction keys have the same function on the external keyboard and on the 6000A V2 Platform.

Function on the 6000A V2 Platform	External keyboard		
HOME	Ctrl + H		

Function on the 6000A V2 Platform	External keyboard		
SYSTEM SETTINGS	F12		
SET-UP	Ctrl + U		
FILE	Ctrl + F		
RESULTS	Ctrl + R		
START/STOP	Ctrl + S		
EXPORT	Ctrl + P <sup>a</sup>		
<b>◀▲▶▼</b>	$\leftarrow \uparrow \rightarrow \downarrow$		
Menu keys 1 to 7 (from top to bottom)	F1 → F7		
ABOUT	F11		
Save and quit (Exit)	Enter		
Quit without saving (Abort)	Escape		

a. The Export function is available directly on the 6000A V2 Platform pushing simultaneously the left and right arrow keys.

#### **Transferring** files

To work on files (onto PC and onto unit):

On the Introduction page, click on

or

On the left menu, click on

The file Explorer on PC and the one of the Platform displays:

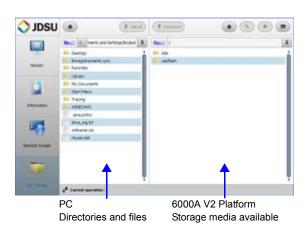
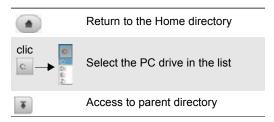


Fig. 67 File Transfer page

2 Double-click on one directory/storage media to display the contents (directories / sub-directories / files)

#### **Navigation buttons**

on file transfer:



#### Transferring files 1 from PC to 6000A V2 Platform 2

- On the Platform explorer, select the storage media, and if wished the (sub-)directory into which file will be transferred.
- 2 On the PC file explorer, select the file to be transferred
- 3 Click on the button **Upload** Upload .

  At the bottom of the screen, a new banner displays with information

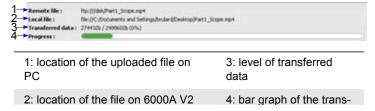


Fig. 68 Information on file transfer

#### NOTE

Only one file can be uploaded from PC to Platform at the same time.

Once transfer is completed, the banner disappears and the transferred file is underlined in blue on Platform explorer.

#### Transferring files 1 from 6000A V2 Platform to PC 2

- On the PC explorer, select the storage media, and if wished the (sub-)directory into which file will be transferred.
- 2 On the file explorer of the Platform, select the file to be transferred.

- 4 Select the directory into which file will be saved.
- 5 Press Save to start the transfer Under both file explorers, a new banner displays with information on file transfer (see Figure 68 on page 104).

Once transfer is completed, the banner disappears and the transferred file is underlined in blue on PC explorer.

#### Working with Renaming file or directory

### files and 1 directories on 6000A V2 <sup>2</sup> Platform

- Select a file/directory stored on the 6000A V2 Platform hard disk or USB key.
- Click on (
- In the new dialog box opened, enter a new name for the file/directory, keeping the file extension.
- 4 Press OK to validate.



#### **Deleting file**

- Select a file stored on the Platform hard disk or USB key.
- Click on
- 3 In the new dialog box opened, press **Yes** to confirm the deletion (or No to keep the file).



#### Creating a new directory

- Select the storage and, if wished, the directory into which the new directory will be stored.
- 2 Click on 🕞
- In the new dialog box opened, enter a name for the new directory (newdir is given by default).
- 4 Press OK to validate.

The new directory is automatically created at the location selected.



#### **Connection information and settings**

## session

**Displaying** At any time during application use, the information about the session in progress can be displayed.

#### information 1

- Press **Session** menu key on left of the screen
- A screen as the following one displays:



Fig. 69 Session page

This page gives information on connection «in real time».

# Modifying connection settings

To modify the settings for connection to internet:



- 1 Press Session menu key on left of the screen
- 2 Disconnect from application pressing Disconnect
- On the session screen (see Figure 69 on page 106), press button

The following screen displays:

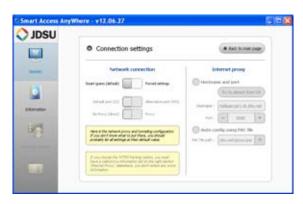


Fig. 70 Connection settings

By default, the connection is defined to Smart-guess (default).



4 To modify the current parameters, select **Forced settings**.



The parameters for Port and HTTPS configurations turn automatically active.

5 Modify, if necessary, the parameters for SSI tunnel port and/or Internet proxy.

The Internet proxy configuration is available exclusively if the port selected is Alternative port (443) and if the HTTPS packing is selected



It is recommended to configure parameters of connection with your local network administrator, if the default parameters need to be modified.

6 Once configuration is completed, press (\*\*December 101).
The Home page displays (see Figure 65 on page 101).

## Testing connection

Before entering the Access code to activate the application, the connection to internet can be tested from displayed screen.

- 1 Open the Smart Access Anywhere application on PC
- 2 Press button
  The test is automatically launched
- 3 Press to display logs in real time
  Once completed, the results for connection display:



Fig. 71 Test results

## **Chapter 11** Smart Access Anywhere Connection information and settings

The screen displays, in two different tables:

- the Upload and Download speed (in Kbyte/s) from Device to server.
- the Latency between Device and server (in ms).
- 1 Press of the current table, and retest connection if wished.
- 2 If connection is valid, enter the access code and establish connection (see "Launching the SmartAccess Anywhere application" "On the distant PC" on page 100).

## WIFI Option

12

The WIFI application is available on option with the 6000A V2 Platform, and installed in factory, except if it has been ordered after the Platform delivery, in which case the customer must install himself the option (see "Installing the WIFI or Bluetooth option" on page 140).

The topics discussed in this chapter are as follows:

- "Configuration of the WIFI option" page 110
- "Connection to SSID" page 111
- "Configuring the WIFI mode to which the Platform is connected" page 112
- "Transferring the 6000A V2 Platform interface via WIFI on a PC" page 114
- "Transferring files to/from a PC via WIFI" page 115

#### Configuration of the WIFI option

The WIFI option is delivered on a USB key installed into the Platform.

A new icon displays on the upper banner once installation of the option is performed and Platform is re started.

To display the Wifi configuration screen:

- 1 Press **Home** hard key to reach the **Home** page.

  A new menu key is displayed on the right of the screen
- 2 Press the menu key to display the WIFI **Setup** screen.

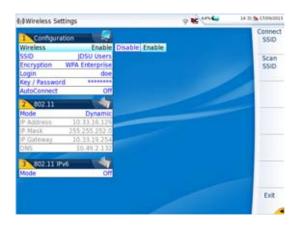


Fig. 72 WIFI Setup screen

## Configuring the WIFI access

Once the Setup screen is displayed, configure the WIFI connection:

In the Configuration box, check the parameter **802.11** is set to **Enable**.

If the parameter is defined to **Disable**, the WIFI application is deactivated, and the icon is no more displayed on the upper banner.

- 2 Press Scan SSID menu key to scan for Service Set Identifiers (SSIDs) in the area.
- 3 Wait for the list of SSIDs to be displayed.

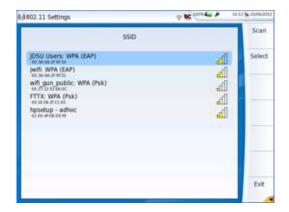


Fig. 73 List of SSIDs found

- 4 Select the desired network to connect to.
- 5 Press Select menu key to validated the connection.
  The display goes back to Setup screen.
  - The **SSID** parameter is automatically configured with the one selected.
- 6 In Encryption parameter, select the type of encryption wished: None, WEP Static, WPA Personal, WPA Enterprise.
- 7 According to encryption type selected, enter Login (if any needed) and Key/Password.

#### NOTE

Login and Password are kept in memory, even if the WIFI is deactivated or the 6000A V2 Platform switch off and restarted.e

8 In the AutoConnect parameter, select if the connection to SSID selected must be done automatically (On) or not (Off).

#### **Connection to SSID**

Once configuration is valid, connect the 6000A V2 Platform to the Wireless network:

In the Setup screen, press Connect SSID menu key.
 or

If **AutoConnect** is defined to **On**, the connection is launched automatically.

Once association of Platform with SSID is established, the icon becomes to indicate the connection is active.



#### Configuring the WIFI mode to which the Platform is connected

To work on WIFI with the Platform, configure the 802.11 or 802.11 IPV6 parameters on the Setup screen.

If **802.11** box is chosen, select the mode of connection:

Config 1 to 4	static mode	enabling i	input of	the confi	guration	of

4 sites. If this parameter is selected, the following

parameters must be entered:

 Site Name the user can enter the name of the site in the Edit

menu

 IP Address IP address of the 6000A V2 Platform IP Mask address of the mask of the sub-network - IP Gateway IP address of the machine enabling access

outside the sub-network.

DNS (Domain Name Server) IP address of the

machine providing the IP address on the basis of

the name

 Domain name name of the local network to which the 6000A V2

Platform is connected.

**Dvnamic** in this mode, which requires a DHCP server, the

6000A V2 Platform requests an IP address from this server which will be allocated dynamically if dynamic host configuration is activated on the

local network.

After selecting this mode or after power-on, the 6000A V2 Platform tries to establish a connection to obtain an address from a DHCP server. If for any reason, this process fails, the 6000A V2 Platform reverses to static IP address mode with

User1 IP address.

Note the IP address of the Platform, to be able to remote screen on PC or to transfer files.



Fig. 74 WIFI connection in Dynamic mode

static mode enabling input of the configuration of

In 802.11 IPv6 mode, the following parameters (Link, IP, GW and DNS) are automatically defined and cannot be modified

1 The 802.11 IPv6 box is to be used if connection must be in conformance with the IPv6 standards. Select the mode of connection:

Config 1 to 4

Joining 1 to 1	4 sites. If this parameter is selected, the following parameters are available:
<ul><li>Site Name</li></ul>	the user can enter the name of the site in the Edit menu.
– Link	automatically displays the link name (cannot be modified)
– IP	IP address of the Platform
– GW	IP address of the machine enabling access outside the sub-network.
- DNS	IP address of the machine providing the IP address on the basis of the name
Dynamic	in this mode, which requires a DHCP server, the 6000A V2 Platform requests an IP address from this server which will be allocated dynamically if

local network.

After selecting this mode or after power-on, the tries to establish a connection to obtain an address from a DHCP server. If for any reason, this process fails, the 6000A V2 Platform reverses to static IP address mode with User1 IP

dynamic host configuration is activated on the

address.

If **Dynamic** mode is selected, then the following parameters (**Link / IP / GW / DNS**) are automatically configured and cannot be modified (greyed).

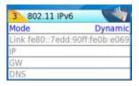


Fig. 75 WIFI connection in Dynamic mode with IPV6

#### Transferring the 6000A V2 Platform interface via WIFI on a PC

Once the IP address is displayed in the configuration screen.

- On the PC connected to WIFI with the Platform, open Internet Explorer.
- 2 Considering 10.33.16.229 is the IP Address of the 6000A V2 Platform (as shown Figure 74 on page 112), enter the following address in the Internet Explorer window:

http://10.33.16.229:5800

3 Press Enter to validate.

The screen of the 6000A V2 Platform appears offset on your PC.



Click to install TightVNC software on your PC (not mandatory)

Fig. 76 VNC window

See "Virtual control buttons bar" on page 68 and "Equivalence between the keyboard and 6000A V2 Platform" on page 68 to get information on the deported screen use.

#### Transferring files to/from a PC via WIFI

Once connection is established between the Platform and the PC:

- 1 On the PC, use an FTP client, and access to internal memory via an internet explorer (I.E. Mozilla Firefox...) or Windows Explorer.
- 2 In the address bar, type the following address (10.33.16.229 being the IP address of the 6000A V2 Platform defined when the connection was configured):

ftp://mts6000:acterna@10.33.16.229/disk/ This allows to access to internal memory.

ftp://mts6000:acterna@10.33.16.229/usbflash/ This allows to access to the contents of the USB memory stick connected to the 6000A V2 Platform.



If you use Internet Explorer 7, the following address must be entered:

ftp://mts6000:acterna@10.33.16.229/acterna/user/disk OF ftp://mts6000:acterna@10.33.16.229/acterna/user/usbflash

- 3 If an identification is required, enter:
  - User name: mts6000
  - Password: acterna

The PC then displays the contents of the internal memory or of the USB memory stick from the 6000A V2 Platform.



Internal memory open via Windows Explorer

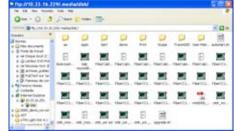


Fig. 77 Internal memory of the 6000A V2 Platform

4 If internal memory of the Platform is accessible via Internet Explorer (or any other explorer), right click on one file and click on Save target as... to transfer file onto the PC.

If internal memory of the Platform is accessible via Windows Explorer, select one / several files and click on **Copy**, then click on **Paste** on PC to transfer file

Chapter 12 WIFI Option
Transferring files to/from a PC via WIFI

## Bluetooth option

13

The Bluetooth application is available on option with the 6000A V2 Platform, and installed in factory, except if it has been ordered after the Platform delivery, in which case the customer must install himself the option (see "Installing the WIFI or Bluetooth option" on page 140).

The topics discussed in this chapter are as follows:

- "Setting up a Bluetooth connection" page 118
- "Transferring files via Bluetooth" page 121
- "Transferring the Platform interface on a laptop PC via Bluetooth" page 122
- "Removing the Pairing" page 124



The product is approved in accordance to R&TTE directive concerning transmitter module marked by CE0678. It is manufactured by MITSUMI and it is an OEM product.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. This device contains FCC-ID: POOWML-C40.

#### Setting up a Bluetooth connection

The Bluetooth option allows file transfers between the 6000A V2 Platform and another device

- 1 On the Home page, press System Settings key
- 2 Under I/O interfaces, select Bluetooth > Enable
  The icon ★ is displayed on the upper banner of the screen
- 3 Push the **Bluetooth Pairing** key

  The Paired Bluetooth screen appears
- 4 Press the Become Pairable soft key to wait for another device to initiate the connection to the 6000A V2 Platform.

A screen as the following one displays:



Fig. 78 Waiting for pairing

- 5 Activate Bluetooth on the equipment which need to be paired with the Platform
- **6** If you are asked to, enter a pairing code on the equipment.
- 7 In this case, once the pairing code is validated on the equipment, enter the same pairing code on the Platform to validate the connection:



Fig. 79 Enter Pairing code

8 Press Enter to validate.Both equipment are now paired:



Fig. 80 Platform paired with one equipment

The icon has a blue background when paired with a device  $\S$ , versus no background when not paired \$.

If the desired device is not displayed on the screen, or if no devices are detected, press the **Search Devices** soft key.

The 6000A V2 Platform is searching for the devices which could be used via Bluetooth with the equipment.



#### REMINDER

You may need to activate bluetooth on the other device to allow pairing.

A baragraph is displayed during research



Once the research is completed, a list of the available devices is displayed, with the level of detection of the 6000A V2 Platform

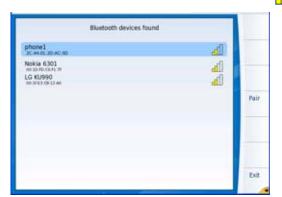


Fig. 81 List of devices found

- Using the direction keys ▲ and ▼ or touchscreen, select the device to be paired with the Platform
  - It will be underlined in blue
- **b** Push the **Pair** key to connect the device to the Platform
- 1 If prompted, enter a pairing code. The code must be identical on the 6000 and the device.
- 2 Once the bluetooth device and the Platform are paired, a screen is displayed with the description of the device (see Figure 80 on page 119).

The icon has a blue background when paired with a device \( \overline{N} \), versus no background when not paired \*.



You can now go to the file explorer and transfer files from the 6000A V2 Platform toward the bluetooth device and vice versa (see "Transferring" files via Bluetooth" on page 121) or transfer the Platform interface on VNC via Bluetooth (see "Transferring the Platform interface on a laptop PC via Bluetooth" on page 122).

#### Transferring files via Bluetooth

Once the connection has been established with a bluetooth device:

- 1 Press the **Home** key and then press the **System Settings** soft key.
- 2 Use the down arrow or touchscreen to move to the I/O Interfaces settings and then to File export.
- 3 In the Send Mail parameter, select Bluetooth and then exit the menu.



Fig. 82 Configuration of files sending by Bluetooth

- 4 On the **Home** page, press **App's** menu key and select **File Explorer** icon to go in the File Explorer.
- 5 Select the file(s) to be transferred from the Platform to ward the PC.
- 6 Push Export > Send by Bluetooth menu keys

  A confirmation message displays once the transfer is completed.



Fig. 83 Confirmation of files sending

You can also transfer file(s) from the bluetooth device toward the Platform.

In this case, the files received will be stored in a storage media created automatically on the Platform: *bluetooth-inbox*.



Fig. 84 Confirmation of file receiving



#### WARNING

The files stored in bluetooth-inbox will be lost once the 6000A V2 Platform is switched off. Copy/Paste the files to keep toward another storage media (disk, usb key...).

#### Transferring the Platform interface on a laptop PC via Bluetooth

If the 6000A V2 Platform is paired with a laptop equipped with Bluetooth, the interface can be transferred on this PC in order to work on the unit from the laptop PC.

#### To remote the screen

- 1 Install the JDSU Remote Operation application on the laptop PC:
  - a Download the application
  - b Double click to launch it and follow the instruction for installation
     The application is available on PC, in Start > All Programs > JDSU > Remote Operation.
- 2 Pair the 6000A V2 Platform with laptop PC via Bluetooth (see "Setting up a Bluetooth connection" on page 118).
- 3 Once pairing is active, open the Remote Operation application on laptop PC.
  - A new window opens, and scanning is automatically launched to find the equipment paired with laptop PC.
- 4 Once scanning is completed, the 6000A V2 Platform displays the list of detected equipment.

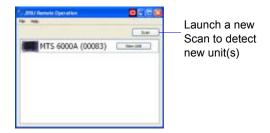


Fig. 85 6000A V2 Platform detected via Bluetooth on PC

1 Click on View Unit button to remote the screen on PC.

The current screen of the 6000A V2 Platform displays on a new window on the PC.

In the small window next to VNC window (see Figure 85 on page 123), the button **View Unit** becomes **Stop Viewing**.

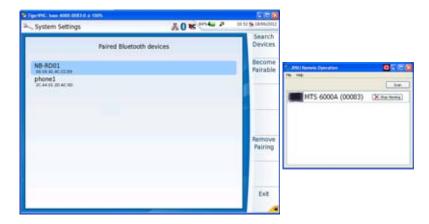


Fig. 86 Remote screen on PC

See "Virtual control buttons bar" on page 68 and "Equivalence between the keyboard and 6000A V2 Platform" on page 68 to get information on use of PC to work on 6000A V2 Platform.

#### Closing the remote screen and the application

To stop using the remote screen on PC:

1 In the small window available with the VNC window (see Figure 86 on page 123) click on Stop Viewing button.

The VNC window closes.

At any time, the remote screen can be displayed back clicking on View Unit button.

2 To close the application, click on File > Exit in the window.

#### Removing the Pairing

- 1 To remove the pairing between the two equipments, in the System Settings page, push the Bluetooth Pairing key
- 2 In the screen displayed, push the **Remove pairing** key

The icon on the upper banner of the screen becomes 3 showing the Platform is no more connected to a bluetooth device, but the Bluetooth option is still active.

To deactivate the bluetooth onto the Platform, go in the **System Settings** page, and under **I/O Interfaces**, select **Disable** on the **Bluetooth** parameter.

## Technical specifications

14

This chapter contains the technical specifications of the 6000A V2 Platform.

The topics discussed in this chapter are as follows:

- "Display" on page 126
- "Memory" on page 126
- "Input/Output" on page 126
- "Power supply" on page 127
- "Dimensions Weight" on page 128
- "Environment" on page 128
- "Characteristics of the options" on page 129

## **Display**

Screen - Back-light color screen

- Size: 8 inches

Resolution: 800 x 600 pixels

Standard high visibility touchscreen

2 options are available:

Resistive touchscreen panel (RTP)

Capacitive touchscreen panel (CTP)

## Memory

- Standard memory: internal memory, minimum capacity 8 Gbytes (of which 128 Mbytes are available for data storage).
- 2 GB Nand Flash (program + storage)
- 64 MB acquisition memory

## Input/Output

- Two USB 2.0 Master ports.
- One mini USB 2.0 device
- One RJ 45 connector for Ethernet interface LAN 10/100/1000 Mbit/s
- One RS422 interface (for future use)
- One micro SD interface
- One Audio jack
- Built-in microphone and loudspeaker
- One optical option board (optional)
- Built-in SATA 2"5 Hard Disk (optional)
- Built-in Bluetooth or built-in WIFI (optional)

## **Power supply**

### **Battery** The instrument is supplied with one Lithium Ion battery:

- a standard Lithium Ion battery with the 6000A V2 Platform and 6100 module box
- a high power Lithium Ion battery with the 6000A V2 Platform and 6200 module box
  - Reference for the MTS/T-BERD 6000A V2 6100: E60LIION/ DC 11.1V / 6.6Ah
  - Reference for the MTS/T-BERD 6000A V2- 6200: E60LIHP1 / DC 10.8V / 7.2Ah 8A max

## Endurance of the 6000A V2 Platform with one standard lithium ion battery (ref E60LIION)

Measurement conditions:

- at +25 °C.
- at nominal capacity (6.6 Ah),
- 6000A V2 Platform equipped with an OTDR plug-in, type 8126B.

### Endurance

Test carried out in accordance with Telcordia GR-196-CORE recommendations: lighter backlight for the screen, (3 acquisitions of 30s per 15 minutes and auto-off): up to 9 hours.

### With continuous acquisition:

up to 4 hours with normal screen lighting.

## **Mains adapters**

	Standard Mains Adapter	
Input	100-240 V, 50-60 Hz	2
Output	19 V continuous,	4.73 A max
Compliance	EN 60950	

## **Dimensions - Weight**

### Dimension

Mainframe with module box type 1 :  $L \times H \times W = 290 \text{mm} \times 188 \text{mm} \times 97$ mm (11.5"x7.4"x3.8")

### Weight

- 2.4 kg (5.3 lbs) without battery nor module.
- 3.4 kg (7.5 lbs) with one module carrier and battery

### **Environment**

- **Temperature** Operation on mains supply, excluding options: -20°C to +50°C.
  - Operation including all options (guaranteed specifications): 0° to +40° C
  - Storage: -20°C to +60°C

**Humidity** – 5 to 95% without condensation

- EMI/ESD CE Class A Compliant
  - FCC 47-1 Part 15 Compliant



Class A product: in a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

**Drop test** In accordance with the Telcordia GR-196-CORE recommendations, the 6000A V2 Platform resists the following test:

> 6 impacts dropped from a height of 76 cm (1 impact on each of its 6 sides, with power off).

## **Shocks** The 6000A V2 Platform resists the following test:

- 3 shocks per axis along each of the 3 axes, with power off.
- Impacts of 15g, 1/2 sine, duration 11 ms, at 10 second intervals.

### **Bumps** The 6000A V2 Platform resists the following test:

- 1,000 jolts per axis along each of the 3 axes, with power off.
- Jolts of 15g, 1/2 sine, duration 6 ms, at 1 second intervals.

## Sinusoidal Non Operational mode

vibration The 6000A V2 Platform resists the following vibration tests:

- Complete test comprising 6 cycles along each of the x, y and z axes.
- 3 mm amplitude displacement test, for the range 5 Hz to 22 Hz.
- 3 cycles of 23 Hz to 500 Hz and back to 23 Hz with a 3g acceleration and a sweep rate of one octave/minute.

### Operational mode

The 6000A V2 Platform resists the following vibration tests:

- Complete test comprising 2 cycles along each of the x, y and z axes.
- 1 mm amplitude displacement test, for the range 5 Hz to 22 Hz.
- 1 cycle of 23 Hz to 500 Hz and back to 23 Hz with a 3g acceleration and a sweep rate of one octave/minute.

Random The EUT shall be operational when subjected to random vibration of a vibration white power spectral density (PSD) of 0.03 g²/Hz, 30 min per axis at frequency range between 10-500 Hz.

Flammability The housing of the 6000A V2 Platform (in ABS, type V0) does not propagate fire.

## Characteristics of the options

**Power meter** Specifications given for 25°C, after 20 minutes stabilization time and after zero setting.

- Wavelength range: 800 to 1650 nm in steps of 1 nm
- Calibrated wavelengths: 850 / 1310 / 1490 / 1550 / 1625 nm
- Accuracy at calibrated wavelengths: ± 0.2 dB (at -30 dBm)
- Input power range: -60 dBm to +10 dBm
- Maximum resolution: 0.01 dB / 0.01nW

### **Chapter 14** Technical specifications *Characteristics of the options*

- Measurement range:+5 to -50 dBm (-45 dBm from 800 to 1250 nm)
- Linearity within the measurement range: ± 0.2 dB

VFL - Wavelength: 650 nm

- Length of fiber: up to 5 km
- Class 2 laser (standards EN60825-1 and FDA21 CFR Part 1040.10).

**Talkset** – Dynamic range: typically 45 dB at 25°C.

Jack socket for headset

 Laser, typical wavelength 1550 nm, class 1 (EN60825 and FDA21 CFR Part 1040.10)

**Bluetooth and** – WIFI: standard IEEE802.11 b/g/n

WIFI - Bluetooth Option

- Class 2

Range: up to 20 meters

Bluetooth V2.1 + EDR

## Options and accessories

15

This chapter shows the references of the options and accessories of the 6000A V2 Platform.

The topics discussed in this chapter are as follows:

- "References of options for the 6000A V2 Platform mainframe" on page 132
- "References of scopes and associated accessories" on page 134
- "References of accessories" on page 134

## References of options for the 6000A V2 Platform mainframe<sup>2</sup>

Platforms	References
6000A V2 Platform with high visibility colour touchscreen	EM6000AV2M /ETB6000AV2M (US)
6000A V2 Platform with colour touchscreen	EM6000AV2S /ETB6000AV2S (US)

Module carriers	References
Single Module Carrier for one FO plug-in, with standard Liion battery and AC/DC adapter/charger (to be configured)	E6100
Single Module Carrier for one FO or Transport plug-in, with High Liion battery and AC/DC adapter/charger (to be configured)	E6200

Memory options	References
Built-in hard disk option for 6000A V2 Platform (100GB SATA) - Required for Transport applications	E60V2HDISK

Adapter/Charger for cigar lighter	References
High Power mains adapter/charger for cigar lighter	E80lighter

Mains options for MTS/T-BERD 6000A <sup>a</sup>	References
Standard additional AC/DC adapter/charger (US)	E90WPWUS
Standard additional AC/DC adapter/charger (Europe)	E90WPWE
Standard additional AC/DC adapter/charger (UK)	E90WPWUK

Power Meter / VFL / Talkset options	References
Talk set option for 6000A V2 Platform	E80ETS
Power meter option for 6000A V2 Platform	E80EPM
Power meter and VFL option for 6000A V2 Platform	E80EPMVFL
Power meter and Talk set for 6000A V2 Platform	E80ETSPM
Powermeter, Talk Set and VFL for 6000A V2 Platform	E80ETSPMVFL

Universal connectors for Talkset <sup>a</sup>	Reference
Universal PC connector with FC adapter	EUNIPCFC

<sup>2.</sup> These options must be ordered together with the instrument.

Universal connectors for Talkset <sup>a</sup>	Reference
Universal PC connector with SC adapter	EUNIPCSC
Universal PC connector with ST adapter	EUNIPCST
Universal PC connector with DIN adapter	EUNIPCDIN
Universal APC connector with FC adapter	EUNIAPCFC
Universal APC connector with SC adapter	EUNIAPCSC
Universal APC connector with ST adapter	EUNIAPCST
Universal APC connector with DIN adapter	EUNIAPCDIN
Extra adapter for Talkset <sup>b</sup>	Reference
Universal FC adapter	EUFCAD
Universal SC adapter	EUSCAD
Universal ST adapter	EUSTAD
Universal DIN adapter	EUDINAD

- a. At least one connector must be chosen
- b. Interchangeable in the field

Connector for VFL and power meter	References
Universal push/pull connector/adapter, 2.5 mm fiber	EUPP2.5

WIFI and Bluetooth options	References
Built-in WIFI option for 6000A V2 Platform	E60V2WIFI
Built-in Bluetooth option for 6000A V2 Platform	E60V2BLUE

Smart Access Anywhere (Software license)	References
Smart Access Anywhere for 6000A V2 Platform - L1: Remote coaching and file transfer for T-BERD/MTS-6000 using Ethernet or WIFI hotspot connection	SAA-6KAV2-L1
Smart Access Anywhere for 6000A Platform - L2: Remote coaching and file transfer for T-BERD/MTS-6000 using Ethernet, WIFI and selected 3g Smartphone (via USB or WIFI)	SAA-6KAV2-L2

SmartFTTA (Software license)	References
SMARTFTTA OTDR function for T-BERD/MTS-6000A V2	ESMARTFTTA-6KV2
SMARTFTTA OTDR upgrade option for T-BERD/MTS6000A V2	ESMARTFTTA6KV2U

SmartLink (Software license)	References
Smartlink OTDR function for T-BERD/MTS-6000A V2	ESMARTLINK-6KV2

SmartLink (Software license)	References
Smartlink OTDR Upgrade for T-BERD/MTS-6000A V2	ESMARTLK6KV2UPG

FTTH SLM (Software license)	Références
FTTH-SLM OTDR option for T-BERD/MTS 6000A V2	ESMARTFTTH-6KV2
FTTH-SLM OTDR Upgrade for T-BERD/MTS-6000A V2	ESMARTFTTH6KV2U

Optipulses (Software license)	Références
Optipulses OTDR option for T-BERD/MTS-6000A V2	EOPTIPLS-6KV2
Optipulses OTDR Upgrade for T-BERD/MTS-6000A V2	EOPTIPLS6KV2UPG

## References of scopes and associated accessories

Scope	Reference
Digital Videoscope kit including FBP-P5000 probe (USB2.0) in a small soft case, and 7 tips in a box (FC, SC, SC-APC, LC, U25M, U25MA & U12M)	EDFSCOPE5K
Digital Videoscope kit including FBP-P5000i probe (USB2.0) in a small soft case, and 7 tips in a box (FC, SC, SC-APC, LC, U25M, U25MA & U12M)	EDFSCOPE5Ki
Carrying case for fiber microscope and accessories	EOCIS-SC1

## References of accessories

Soft and hard carrying cases	Reference
Wrap around carrying case for 6000A V2 Platform	ESCASE6KV2
Wrap around Soft Case	E40SCASE1

User manual for 6000A V2 Platform platform	Reference
User manual for 6000A V2 Platform (French)	E6000AV2M01
User manual for 6000A V2 Platform (English)	E6000AV2M02
User manual for 6000A V2 Platform (German)	E6000AV2M03

### NOTE

The User Manuals for MTS/T-BERD 6000A V2 (Platform & Modules) are available in pdf format, into the unit.

The printed versions of the manuals are available on option, in French, English and German.

**Chapter 15** Options and accessories *References of accessories* 

# Maintenance and Troubleshooting

16

This chapter describes how to maintain your unit and identify and correct problems related to the 6000A V2 Platform.

The topics discussed in this chapter are as follows:

- "Maintenance procedure" on page 138
- "Recycling Information" on page 154
- "Troubleshooting" on page 154
- "General information on warranty" on page 158

## Maintenance procedure

### Maintenance work on this instrument must only be undertaken by qualified personnel using suitable equipment.

In most cases, it is advisable to contact the nearest JDSU Service Centre, which will undertake the appropriate troubleshooting and repair work.

The performance and technical complexity of the 6000A V2 Platform class this instrument in a new generation of equipment, for which JDSU has laid down a maintenance policy based on the principle of standard module replacement.

In implementation of this policy, we have set up powerful card troubleshooting test resources in our factories and a rapid dispatch system operating between our factories and branches.

Only by this procedure can the high quality of the instrument continue to be ensured after repair work. This procedure also has the advantage of reducing repair costs and time.

In the interests of quality and efficiency, we strongly recommend adoption of the following procedure in the event of a fault, before any other steps are taken:

- Verify that the instrument is plugged in.
- Check the connections of any peripheral equipment to the 6000A V2 Platform.
- If a fault is detected, or in case of doubt, it is advisable to contact the nearest JDSU Service Centre, which will undertake the appropriate repair work.

## module carrier

Changing the If the module carrier installed onto the Platform must be changed, proceed as follows:

- Switch off the Platform and disconnect the mains supply.
- 2 Turn the instrument face down on the work surface.
- 3 Unscrew the 4 screws on the 4 extremities of the pack module installed onto the Platform.
- 4 Pull the pack gently to remove it from the Platform.
- Set the new module carrier, making flush the connectors (2a & 2b) on both parts and the 4 screws with the 4 holes provided for those screws (1a -> 1d).
- **6** Fix the module tightening the screws.

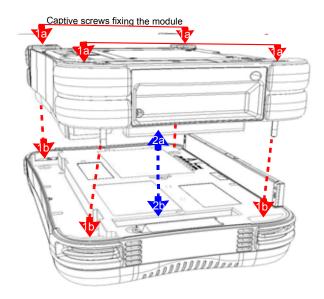


Fig. 87 Installing a module

## Installing the options

If some options have been ordered after the delivery of the T/BERD-MTS 6000A V2, they have to be mounted by the customer.

Installing a Hard If the hard disk is ordered after the delivery of the Platform, it has to be disk inserted into the equipment by the customer.

- 1 Follow step 1 to step 4 to isolate the base unit from the module.
- Remove the hard disk cover
- Insert the hard disk into the location provided for that purpose onto the base pack
- Push gently the hard disk to correctly insert it
- Set back the cover



Fig. 88 Location for the hard disk and WIFI/Bluetooth options

- Set back the module pack onto the base pack
- 7 If necessary plug the equipment to charge the battery
- Switch on the 6000A V2 Platform.
- Press FILE hard key to display the explorer, with the new drive «hard disk» on the left of the screen

If the hard disk has not been detected, turn off the instrument and check the installation of the hard disk into the base.

## option

Installing the WIFI If the option WIFI or Bluetooth is delivered after the platform delivery, the or Bluetooth customer needs to install himself the option into the equipment.

- Proceed as described from step 1 to step 4 in the chapter "Changing the module carrier" to remove the pack Base from the module.
- 2 Open the cover of the optical options (see Figure 88 on page 140).
- Install the option wished, WIFI or Bluetooth, in the connector.





Fig. 89 WIFI / Bluetooth option installation

- Set back the cover, then the module pack onto the base pack
- If necessary plug the equipment to charge the battery
- Switch on the 6000A V2 Platform.
- Press Home hard key to display the Home page and press System Settings menu key to display the WIFI/Bluetooth parameters.. If the options have not been detected, turn off the instrument and check the installation into the base.

## Cleaning

Cleaning plates The front and rear plates and the housings may become tarnished with and housings handling. To clean them, use only a rag moistened with soapy water.

> Never use any product containing acetone, trichloro-ethylene, benzine or alcohol, as these will attack the printed markings.

## screen

**Cleaning the** To clean the screen, use an antistatic product.

## Cleaning the optical cable

Use a non-linting type of paper, such as Joseph paper, soaked in isopropylic alcohol.

### connector -

Pay particular attention to the polished face of the fiber, rubbing it in a direction perpendicular to the axis of the fiber.

### Cleaning the optical

Squirt a highly volatile solvent (such as isopropylic alcohol) into the connector.

### connections of the -6000A V2 Platform

Blow out the connector using a clean dry air supply from an aerosol can fitted with an extension.



### NOTE

If your module has a universal connector, unscrew its adaptor to access the ferule.

## the 6000A V2

**Accessing to** On the 6000A V2 Platform, some screens allows to display information on different elements of the equipment.

## information

**Platform** To display the information on the 6000A V2 Platform

On the **Home** page, press **About** to display the presentation screen of the 6000A V2 Platform.

General page The General page is displayed by default, and displays the presentation screen, with all the information concerning the software versions, the hardware options and the module installed.



Fia. 90 General page

This page shows:

- The software version information
- The product contents: base, optical options, battery type, module installed and date of calibration for options concerned.

The options set into the 6000A V2 Platform are marked with a green tick.

**Software options** This page allows to visualize the software options available on the 6000A V2 Platform. page

### Services Data page

This page allows to display information about the elements inside the 6000A V2 Platform (CPU, Memory, hardware revision, screen reference...).

Once on the About screen, press Services Data menu key to display the list of elements contained on your 6000A V2 Platform.



Fig. 91 Services Data page

## the 6000A V2

Accessing to All documents necessary for the 6000A V2 Platform use are directly available onto the equipment.

## documentation

**Platform** To display the list of documents available for 6000A V2 Platform use:

- Validate the **Help** icon on the **Home** page.
- 2 In the new page, click one link to display the corresponding document: User manual, Getting Started Manual, Quick Card...



Fig. 92 Help page

## Installing a new version of the software



When a new software version is loaded, there is a risk of re-initialization of the internal memory. Before installing the new software, it is therefore advisable to save the results in the memory, using the Save function called up by the FILE button.



Do not interrupt the installation process, as this could damage the instrument.

To avoid any interruption of the installation procedure, the 6000A V2 Platform must be operating on the mains: if the procedure is started while operating on battery, a message indicates that the instrument must be connected to the mains.

**Downloading from** When the software is obtained from the Internet, it must be saved on a Internet storage medium before the software upgrade of the product can be carried out. To do this:

- Open Internet Explorer
- 2 In Internet Explorer, enter the address: http://www.updatemvunit.net
- 3 Click on the link: «T-BERD®/MTS-6000 and 6000A Platform with SN > 10000»

- 4 According to your region, click on the one of the following icon to download the archive.
  - Download from European server
  - Download from North American server
  - Download from Singapore server
- 5 In the new dialog box displayed, click on **Save** to save the exe file on the PC.
- 6 Once completed, connect the USB memory stick to the PC and follow the instructions chapter "Installation from a USB memory stick" on page 147, from step 2.

Installation from The update can be performed directly onto the equipment, using the JDSU Server JDSU server.

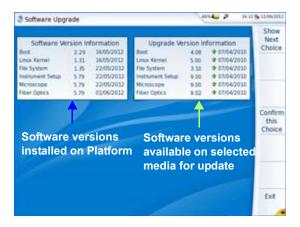
- Connect the 6000A V2 Platform to a PC via an Ethernet link.
- On the Home page, press System Settings key to open the System Settings page.
- In I/O Interfaces, on the line Ethernet, select Mode: Dynamic.
- In the **Upgrade Server** box:
  - On the line Address Type, select JDSU Server The address **6k.updatemyunit.net** is automatically displayed.
- Select if the new release for 6000A V2 Platform must be automatically detected (Enable) or not (Disable). See "Checking new upgrade on JDSU Server" on page 148.



Fig. 93 Configuration of the JDSU Server

- 6 In the I/O Interfaces box:
  - On the line Use proxy, select No, Manual or Auto wether a proxy is used or not.
- Press menu key **Exit** to return to **Home** page.
- Press, in succession the menu keys: Expert Tools > Upgrades > Software Upgrade > Upgrade via Ethernet.
  - The message Verify IP address of PC server appears.
- 9 Click on Continue

The list of the software versions available on the PC is displayed next to the versions installed on the 6000A V2 Platform.



Fia. 94 List of software versions (current and new)

Installation from Before starting the software upgrade via Ethernet, make sure the IP another server address of the PC server.

> The update can be performed directly onto the equipment, using an http address.

- 1 Connect the 6000A V2 Platform to a PC via an Ethernet link.
- 2 On the **Home** page, press **System Settings** key to open the System Settings page.
- In I/O Interfaces, on the line Ethernet, select Mode: Dynamic.
- In the **Upgrade Server** box:
  - On the line Address Type, select Server Name or IP Address.
  - Enter the Server Name (if **Server Name** has been previously selected) or the Server Address (if IP Address has been previously selected)
- In the I/O Interfaces box:
  - On the line Use proxy, select No, Manual or Auto wether a proxy is used or not.
- Press, in succession, Expert Tools > Upgrades > Software Upgrade > Upgrade via Ethernet.
  - The message Verify IP address of PC server appears.
- Click on Continue 7

The list of the software versions available on the PC is displayed next to the versions installed on the 6000A V2 Platform (see Figure 94 on page 146).

## USB memory stick of 128 Mo.

Installation from a You must be equipped with a USB memory stick with a minimum capacity

Before installing the upgrade, you must format the USB memory stick (see "Formatting the USB memory stick onto the 6000A V2 Platform" on page 155).

Once formatted, disconnect the USB memory stick from the 6000A V2 Platform using the key **Eject USB** in the Media Utilities page.



As for any media formatting, please note that all data present on the USB memory stick will be irremediably lost.

- Connect the USB memory stick to the PC
- Unzip the upgrade files on the PC and transfer it to the USB stick:
  - Download and save on your PC the .exe upgrade file that you can get from the web (see "Downloading from Internet" on page 144).
  - **b** Once the transfer is completed, double click on the .exe file: A window will appear. Check that the folder is correct i.e. the USB memory stick driver is appearing in the line at the bottom of the dialog box then press OK. If not, click on the icon [] in order to select the right USB drive.



Fig. 95 List of software update

- c Press OK and wait for the end of loading.
- 4 Then remove the USB memory stick, using the appropriate procedure, from your PC
- Insert the memory stick into one of the USB ports on the Platform.

### NOTE

A bip is emitted each time the USB memory stick is inserted or removed from the USB port.

Press the **Home** hard key, then successively **Expert Tools** > Upgrades > Software Upgrade > Upgrade from USB.

The message Are you sure? is displayed

7 Click on Confirm.

The list of the software versions available on the USB stick is displayed next to the versions installed on the 6000A V2 Platform (see Figure 94 on page 146).

Launching the Whatever is the method selected for upgrade (Server, USB key...) and upgrade once the list of the software versions available is displayed next to the versions installed on the 6000A V2 Platform (see Figure 94 on page 146), follow these instructions to launch the upgrade:

- 1 Click on **Show Prev choice** or **Show Next Choice** to display the previous and next versions available.
- 2 Click on Confirm this Choice to start the upgrade of the selected software(s).

or

Click on **Confirm All Choices** to upgrade all versions.

### NOTE

The software versions list does not always appear (cf previous versions) as well as the Previous / Next Choice buttons and the Confirm/Continue key. In this case, the upgrading starts automatically.

Upgrading begins. The 6000A V2 Platform is automatically rebooted. Upgrading takes several minutes. Finally, the 6000A V2 Platform is automatically restarted.



During the upgrade, the Testing indicator is lit in red. Do not push any button or remove the USB memory stick while the indicator is lit. The USB stick can be removed if necessary once the Testing indicator is off.

Checking new If the JDSU Server is selected for upgrade (see Figure 93 on page 145), upgrade on JDSU the parameter Check new release can be defined to automatically Server inform user of a new upgrade available for Platform.

In the System Settings screen, select Upgrade parameters

- 2 Check the Address Type is set to JDSU Server.
- Define the parameter **Check new release** to **Enable**. If the parameter is set to **Enable**, a message displays, at any time, when one update is available on server.



Fig. 96 Checking new release

Press Ok to display the list of software versions available (see Figure 94 on page 146) and follow instructions "Launching the upgrade" on page 148.

## the boot versions.

Upgrading from This method is used to make a complete reinstallation of the software

- Turn off the 6000A V2 Platform using the **On/OFF** button, keeping the equipment connected to the mains.
- Insert the USB stick onto which the software versions are stored into one of the USB port of the Platform
- Press simultaneously **SETUP + START/STOP** buttons
- Maintaining the two buttons pressed, press **ON** button to start the 6000A V2 Platform.
- 5 A menu is displayed, then the screen allows to select **Upgrade from** from USB

After a few seconds, a new page displays indicating that to continue the reboot, the validation key must be pressed.

Press the hard key

The reboot starts automatically.



The Testing indicator will be lit in red during upgrade. Do not push any key or remove the USB memory stick until the lit turns off.

Once the upgrade is completed, the 6000A V2 Platform will automatically turns on and display the **Home** page.

## Installing licenses

The menu key **Install Option** allows to import the licence to get a software option.

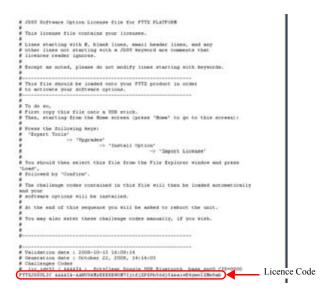


Fig. 97 Example of a License file (.lic)

To import the license, you can either enter manually the licence code, given in the license file, (.lic file) or import this file with a USB memory stick connected to the 6000A V2 Platform.



It is strongly recommended to perform the installation using the importation of Licence via a USB memory stick.

## Enter Manually the 1 Licence code

1 In the Home page, click on Expert Tools > Upgrades > Install Option > Enter Challenge

The edition keypad is displayed

2 Enter the challenge code of the option, set at the bottom of the file (see Figure 97 on page 150),



Fig. 98 Enter the Licence code



The license file can be opened via a word processing software such as Word...

The challenge code must be entered exactly as it is in the .lic file, paying attention to the lower-case and upper-case letters etc.

3 Press the Enter key to validate the code

Your software options will be installed

At the end of this sequence you will be asked to reboot the unit to apply the modifications, pushing the key leboot it. Confirm the reboot to restart the Platform.

## Import the license 1 from the USB memory stick

In the Home page, click on Expert Tools > Upgrades > Install Option > Import License

If the USB memory stick is not already connected to the Platform, a message asking the memory stick insertion is displayed. Confirm it once the stick is connected.

- 2 In the File Explorer, select the USB stick, then the license file (.lic) to be imported,
- 3 Click on Load
- 4 The challenge codes contained in this file will then be loaded automatically and your software options will be installed.

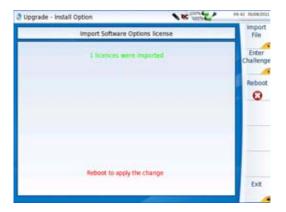


Fig. 99 License imported

- 5 At the end of this sequence you will be asked to reboot the unit to apply the modifications, pushing the key Reboot.
- 6 Confirm the reboot

# Locking the The 6000A V2 1 Platform 2

The 6000A V2 Platform can be locked at any time:

- 1 In the Home page, press Expert Tools > Instrument Lock Out
- 2 Confirm the 6000A V2 Platform locking by clicking on Confirm (or use the Cancel key to cancel the process).
- The numeric keypad is displayed

  3 Enter the password to lock the instrument: **42000**.



Fig. 100 Password

### Click on Enter

The 6000A V2 Platform locking screen is displayed.



Fig. 101 Locking screen

Click on the Notepad Message key to add a message using the text edition.

### Unlocking the 6000A V2 Platform

- Once the locking screen is displayed, click on the key Unlock Instrument
- Press confirm to confirm the Platform must be unlocked.
- Enter the password 42000 using the numeric keypad displayed and validate.

The screen automatically displays the **Home** page.

## instrument

**Returning an** When returning an instrument, it is essential to indicate the following minimum information:

- the type and serial number of the instrument (on the identification label) and the configuration code (under the bar code)
- a description of the fault found on the instrument.

The returned instrument will then be repaired and calibrated.

## conditions

**Guarantee** Any repair operation supervening within the guarantee period of the instrument will be carried out at the expense of JDSU. However, for any sub-assembly upon which work has been carried out otherwise than by JDSU Service Centers, the cost of a replacement sub-assembly will be invoiced.

## **Recycling Information**

JDSU recommends that customers dispose of their instruments and peripherals in an environmentally sound manner. Potential methods include reuse of parts or whole products and recycling of products components, and/or materials.



### Waste Electrical and electronic Equipment (WEEE) Directive

In the European Union, this label indicates that this product should not be disposed of with household waste. Il should be deposited at an appropriate facility to enable recovery and recycling.

## **Troubleshooting**

## Interpreting alarms

alailiis	
Troubleshooting	Solution
Nothing happens when the <b>On/ OFF</b> key is pressed.	- Make sure that the battery is present or charged; or the mains adapter is properly connected (see "Connecting the mains adapter" on page 14).
Nothing happens on screen, whatever is the action done (menu key or hard key pressed)	- The Platform must be rebooted. See "Resetting the 6000A V2 Platform" on page 16.
You are using the 6000A V2 Platform in the ordinary way when it suddenly switches off.	<ul> <li>Check the instrument is not configured to Auto off.</li> <li>See "Defining the Automatic shutdown of the 6000A V2 Platform" on page 22.</li> <li>Check the battery charge level.</li> <li>See "Charging the battery" on page 14.</li> </ul>
The battery refuses to charge (the <b>Battery</b> indicator does not go on when the instrument is connected to the mains and is not operating).	<ul> <li>There is no battery in the instrument.</li> <li>The temperature level of the equipment does not allow the battery charging for safety reasons. Wait the equipment cools down.</li> <li>The battery needs to be changed.</li> <li>See "Changing the battery" on page 156.</li> </ul>
When using the touchscreen, nothing happens	- The touchscreen needs to be calibrate. See "Touchscreen calibration" on page 156

Troubleshooting	Solution
Error message when USB has been disconencted	The USB disconnection has not been done properly (see "USB memory stick disconnection" on page 89)     The data transfer was not completed when USB key was disconnected.
No beep is emitted when the USB memory stick is connected	<ul> <li>- A previous USB memory stick has not been properly disconnected (see "USB memory stick disconnection" on page 89).</li> <li>- The USB memory stick is not detected by the 6000A V2 Platform: use another memory stick, or another storage media; or transfer data via USB cable (see "Transferring files to/from a PC with a FTP server" on page 78).</li> </ul>
Error message when upgrade via Ethernet is confirmed	- Check the Server Name is correctly entered (see "Installation from another server" on page 146)
Error message when upgrade via USB key is confirmed	Check the USB key is correctly connected (see "USB memory stick connection" on page 89)
Error message when unlocking the instrument	- The password is not the correct one (see "Locking the 6000A V2 Platform" on page 152).

# Formatting the USB memory stick onto the 6000A V2

If the USB icon is displayed on the upper banner of the screen, when a USB memory stick is connected to the 6000A V2 Platform, this may means the memory stick must be formatted.

If the stick needs to be formatted, proceed as follows:

## Platform 1

- 1 Insert the memory stick into one of the USB port on the top of the 6000A V2 Platform.
- 2 In the Home page, press successively Expert tools > Media utilities > Usbflash Format.
- 3 Confirm your choice to actually format the USB memory stick.



As for any media formatting, please note that all data present on the USB memory stick will be irremediably lost.

## Erase disk/ harddisk

**Erase disk/** To delete all the disk contents of the 6000A V2 Platform:

- 1 On the Home page, press Expert Tools > Media Utilities,
- 2 Select Erase Disk/Erase Harddisk to delete all the disk contents into the 6000A V2 Platform.
- 3 Confirm the deletion clicking on Confirm

- Enter the password 02468753 and confirm clicking on Enter A window displays during deletion and once the deletion is completed, a message inform you.
- Press any key to continue.

## calibration

**Touchscreen** If you meet problems when using the touchscreen (example: pressing on an icon does not work correctly...) a calibration can be performed on the 6000A V2 Platform touchscreen. To calibrate the touchscreen, proceed as follows:

- In the Home page, press System Settings menu key.
- 2 In the System Settings page, press menu key Touch Screen. A blue slightly smaller screen appears, displaying a little target on the left hand corner.
- 3 Click on this target (preferably with the stylus for touchscreen).
- **4** A new target appears then and again, for a total of 4 times, in order to click on all corners of the screen.

If all the targets are not correctly touched, the touchscreen cannot be used. Otherwise, the touchscreen may be used directly.



Fig. 102 Touchscreen calibration

## Changing the battery

If you meet problems during the Platform functioning, or if the battery does not charge anymore when plugged, this may require the battery to be replaced

## Removing the damaged battery

To access the battery of the 6000A V2 Platform, proceed as follows

- Switch off the 6000A V2 Platform and disconnect the mains supply.
- 2 Turn the instrument face down on the work surface.

- 3 Slacken the two screws located at the bottom of the instrument using a coin, and unscrew them
- 4 Remove the cover of the battery pack.
  The battery can then be removed, taking care not to damage the connectors into which it is plugged.



Fig. 103 Battery seatings

## Setting a new 1 battery

- 1 Set the new battery into the housing provided for that purpose, taking care not to damage the connector.
- 2 Press gently but firmly to make sure it is correctly set.

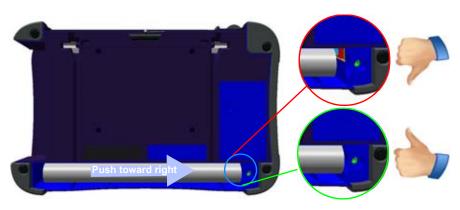


Fig. 104 Battery position

3 Put back the battery cover and lock the screws.



If the battery is not correctly installed, the cover cannot be screwed.

## General information on warranty

The warranties described herein shall apply to all commercially available JDSU products. Any additional or different warranties shall apply only if agreed to by JDSU in writing. These warranties are not transferable without the express written consent of JDSU.

## Hardware Warranty

JDSU warrants that Hardware Product sold to customer shall, under normal use and service, be free from defects in materials and workmanship. Information regarding the specific warranty period for this product can be obtained by contacting your local JDSU Customer Service Representative, or at our web site **www.jdsu.com**. If installation services have been ordered, the warranty period shall begin on the earlier of (1) completion of installation, or (2) thirty (30) days after shipment to customer. If Installation Services have not been ordered, the warranty period shall begin upon shipment to Customer. Hereafter these periods of time shall be collectively referred to as the Initial Warranty Period.

JDSU 's obligation and customer's sole remedy under this Hardware Warranty is limited to the repair or replacement, at Acterna's option, of the defective product. JDSU shall have no obligation to remedy any such defect if it can be shown: (a) that the Product was altered, repaired, or reworked by any party other than JDSU without JDSU's written consent; (b) that such defects were the result of customer's improper storage, mishandling, abuse, or misuse of Product; (c) that such defects were the result of customer's use of Product in conjunction with equipment electronically or mechanically incompatible or of an inferior quality; or (d) that the defect was the result of damage by fire, explosion, power failure, or any act of nature.

JDSU performed repairs shall be warranted from defective material and workmanship for a period of ninety (90) days, or until the end of the Initial Warranty Period, whichever is longer. Risk of loss or damage to Product returned to JDSU for repair or replacement shall be borne by customer until delivery to JDSU.

Upon delivery of such product, JDSU shall assume the risk of loss or damage until that time that the product being repaired or replaced is returned and delivered to customer. Customer shall pay all transportation

costs for equipment or software shipped to JDSU for repair or replacement. JDSU shall pay all transportation costs associated with returning repaired or replaced product to customer.

## disclaimer

Warranty For hardware and/or services furnished by JDSU, the foregoing warranties are in lieu of all other warrantees and conditions, express or implied. JDSU specifically disclaims all other warranties, either express or implied, on any hardware, documentation or services including but not limited to warranties relating to quality, performance, noninfringement, merchantability or fitness for a particular purpose, as well as those arising from any course of dealing, usage or trade practice, under no circumstances will JDSU be liable for any indirect or consequential damages related to breach of this warranty.

**Chapter 16** Maintenance and Troubleshooting *General information on warranty* 

## Calibration Recommended

A

The following appendix provides recommended calibration period for the MTS/T-BERD 6000 and MTS/T-BERD 6000A.

## **Recommended Calibration Period**

Mainframe equipped with Power Meter option	12 months
Mainframe equipped with Laser Source option	12 months
Mainframe used with Reflectometer module	12 months
Mainframe used with Fiber Characterization module (CD / PMD / AP)	12 months
Mainframe used with MSAM module (MTS/T-BERD 6000A only)	36 months

The calibration interval shall be regarded as a recommendation. The real definition of the calibration interval should be made by the user. The type of application and the environmental conditions should be taken into account.

Due date of the calibration certificate shall be calculated accordingly by the user.

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