R&S®RTB2000 Oscilloscope Getting Started

1333160502
Version 08

ROHDE&SCHWARZ
Make ideas real

This manual describes the following R&S®RTB2000 models:

- R&S®RTB2002 (1333.1005K02)
- R&S®RTB2004 (1333.1005K04)

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1333.1605.02 | Version 08 | R&S®RTB2000

Throughout this manual, products from Rohde & Schwarz are indicated without the ® symbol, e.g. R&S®RTB2000 is indicated as R&S RTB2000.

Contents

1 Safety and regulatory information

The product documentation helps you to use the product safely and efficiently. Follow the instructions provided here and in the Chapter 1.1, "Safety instructions", on page 5.

Intended use

The R&S RTB2000 oscilloscope is designed for measurements on circuits that are only indirectly connected to the mains or not connected at all. It is not rated for any measurement category.

The product is intended for the development, production and verification of electronic components and devices in industrial, administrative, and laboratory environments. Use the product only for its designated purpose. Observe the operating conditions and performance limits stated in the data sheet.

Where do I find safety information?

Safety information is part of the product documentation. It warns you of potential dangers and gives instructions on how to prevent personal injury or damage caused by dangerous situations. Safety information is provided as follows:

- In Chapter 1.1, "Safety instructions", on page 5. The same information is provided in many languages as printed "Safety Instructions". The printed "Safety Instructions" are delivered with the product.
- Throughout the documentation, safety instructions are provided when you need to take care during setup or operation.

1.1 Safety instructions

Products from the Rohde & Schwarz group of companies are manufactured according to the highest technical standards. To use the products safely, follow the instructions provided here and in the product documentation. Keep the product documentation nearby and offer it to other users.

Use the product only for its intended use and within its performance limits. Intended use and limits are described in the product documentation such as the data sheet, manuals and the printed "Safety Instructions". If you are unsure about the appropriate use, contact Rohde & Schwarz customer service.

Using the product requires specialists or specially trained personnel. These users also need sound knowledge of at least one of the languages in which the user interfaces and the product documentation are available.

Never open the casing of the product. Only service personnel authorized by Rohde & Schwarz are allowed to repair the product. If any part of the product is damaged or broken, stop using the product. Contact Rohde & Schwarz customer service at http://www.customersupport.rohde-schwarz.com.

In these safety instructions, the term "product" covers instruments (oscilloscopes), probes and their accessories.

Lifting and carrying the instrument

Check the data sheet for the maximum weight of the instrument. A single person can only carry a maximum of 18 kg safely depending on age, gender and physical condition. If your instrument is heavier than 18 kg, do not move or carry it by yourself.

Use the instrument handles to move or carry the instrument. Do not use the mounted accessories instead of the handles. Accessories are not designed to carry the weight of the instrument.

To move the instrument safely, you can use lifting or transporting equipment such as lift trucks and forklifts. Follow the instructions provided by the equipment manufacturer.

Choosing the operating site

Only use the product indoors. The product casing is not waterproof. Water that enters can electrically connect the casing with live parts, which can lead to electric shock, serious personal injury or death if you touch the casing. If Rohde & Schwarz provides accessories designed for your product, e.g. a carrying bag, you can use the product outdoors.

You can operate the product up to the altitude specified in the data sheet. The lowest specified altitude for a product of the measurement setup defines the altitude for the complete setup.

The product is suitable for pollution degree 2 environments where nonconductive contamination can occur. For more information on environmental conditions such as ambient temperature and humidity, see the data sheet.

Setting up the product

Always place the product on a stable, flat and level surface with the bottom of the product facing down. If the product is designed for different positions, secure the product so that it cannot fall over.

If the product has foldable feet, always fold the feet completely in or out to ensure stability. The feet can collapse if they are not folded out completely or if the product is moved without lifting it. The foldable feet are designed to carry the weight of the product, but not an extra load.

If stacking is possible, keep in mind that a stack of products can fall over and cause injury.

If you mount products in a rack, ensure that the rack has sufficient load capacity and stability. Observe the specifications of the rack manufacturer. Always install the products from the bottom shelf to the top shelf so that the rack stands securely. Secure the product so that it cannot fall off the rack.

Connecting to power and grounding

The mains power supply input of the instrument complies with overvoltage category II. It has to be connected to a fixed installation used to supply energy-consuming equipment such as household appliances and similar loads. Be aware that electrically powered products have risks, such as electric shock, fire, personal injury or even death.

Take the following measures for your safety:

- Do not use an isolating transformer to connect the instrument to the mains power supply.
- Before switching on the product, ensure that the voltage and frequency indicated on the product match the available power source. If the power adapter does not adjust automatically, set the correct value and check the rating of the fuse.
- Only use the power cable delivered with the product. It complies with country-specific safety requirements. Only insert the plug into an outlet with protective conductor terminal.
- If a product has an exchangeable fuse, its type and characteristics are indicated next to the fuse holder. Before changing the fuse, switch off the instrument and disconnect it from the power source. How to change the fuse is described in the product documentation.

- Only use intact cables and route them carefully so that they cannot be damaged. Check the power cables regularly to ensure that they are undamaged. Also ensure that nobody can trip over loose cables.
- If the product needs an external power supply, use the power supply that is delivered with the product or that is recommended in the product documentation or a power supply that conforms to the country-specific regulations.
- Ensure that you can disconnect the product from the power source at any time. Pull the power plug to disconnect the product. The power plug must be easily accessible. If the product is integrated into a system that does not meet these requirements, provide an easily accessible circuit breaker at the system level.

Performing measurements

Take the following measures for your safety:

- To ascertain voltage-free state, use an appropriate voltage tester. Any measurement setup including an oscilloscope is not suitable for this purpose.
- The maximum input voltage on channel inputs and the external trigger input must not exceed the value specified in the data sheet.
- Observe all voltage and current ratings of the instrument, the probes, and the accessories. Limits and ratings are marked on the products and listed in the data sheets.
  Consider that the rated voltage depends on the frequency. The voltage limitation curves or values are provided in the data sheet. Do not exceed the maximum measurement voltage from the probe tip to the probe reference lead.
- Never cause any short circuits when measuring sources with high output currents.
- Use only probes and accessories that comply with the measurement category (CAT) of your measurement task. The measurement category of the products is defined in the data sheet. If you use other than Rohde & Schwarz accessories, make sure that they are suitable for the instrument and the measurement task.
- Set the correct attenuation factor on the instrument according to the probe being used. Otherwise, the measurement results do not reflect the actual voltage level, and you might misjudge the actual risk.
- When working with high voltages and current probes, observe the additional operating conditions specified in this safety instructions.
- The probe pins are extremely pointed and can easily penetrate clothes and the skin. Handle the probe pins with great care. To exchange a probe pin, use

tweezers or pliers to avoid injuries. When transporting the accessories, always use the box supplied with the probe.

- Prevent the probe from receiving mechanical shock. Avoid putting excessive strain on the probe cable or exposing it to sharp bends. Touching a broken cable during measurements can cause injuries.
- Set up all probe connections to the instrument before applying power.

Working with hazardous voltages

Voltages higher than 30 V RMS, or 42 V peak, or 60 V DC are regarded as hazardous contact voltages. Direct contact with them can cause serious injuries.

Make sure that only electrically skilled persons use the products for measurements on hazardous contact voltages. These working conditions require special education and experience to perceive risks and to avoid hazards which electricity can create.

When working with hazardous contact voltages, use protective measures to preclude direct contact with the measurement setup:

- Do not touch exposed connections and components when power is applied.
- Switch off the test circuit while connecting and disconnecting probe leads.
- Use only insulated voltage probes, test leads and adapters.
- Make sure that the input leads fulfill the safety requirements for your measurement.
  The delivered input leads might have a jacket wear indicator that indicates a worn jacket by different jacket color. In this case, do not use the input lead. Replace it with a new one.
- Do not use 4 mm banana plugs without protection against contact.

Working with current probes

When working with current probes, you can measure high-frequency currents or currents that contain high-frequency components.

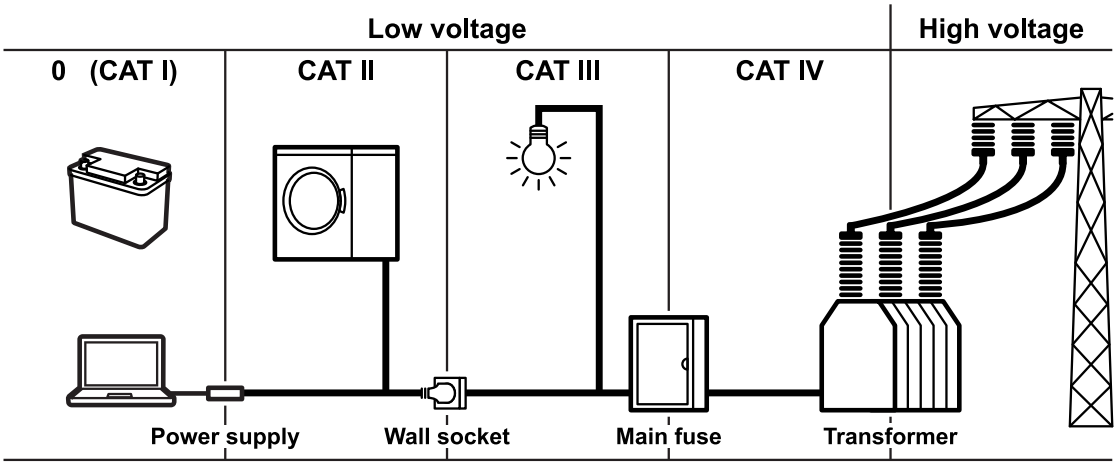
- Switch off the test circuit while connecting the probe.
- Do not attach the clamp to bare unisolated conductors. To avoid injury from a short circuit, measure at a location on an insulated wire where the insulation is sufficient for the circuit voltage.
- Connect the probe only to the secondary side of a breaker. With this measure, you avoid injury, if a short circuit occurs.

- The following effects can cause burns and fire or damage to the measurement site:
  - Eddy current loss can cause heating of the sensor head.
  - Dielectric heating can cause heating of cord insulation and other materials.

Measurement categories

IEC 61010-2-030 defines measurement categories that rate instruments on their ability to resist short transient overvoltages that occur in addition to the working voltage. Use the measurement setup only in electrical environments for which they are rated.

- 0 - Instruments without rated measurement category
  For measurements performed on circuits not directly connected to mains, for example, electronics, circuits powered by batteries, and specially protected secondary circuits. This measurement category is also known as CAT I.
- CAT II:
  For measurements performed on circuits directly connected to the low-voltage installation by a standard socket outlet, for example, household appliances and portable tools.
- CAT III:
  For measurements performed in the building installation, such as junction boxes, circuit breakers, distribution boards, and equipment with permanent connection to the fixed installation.
- CAT IV:
  For measurements performed at the source of the low-voltage installation, such as electricity meters and primary overcurrent protection devices.



Cleaning the product

Use a dry, lint-free cloth to clean the product. When cleaning, keep in mind that the casing is not waterproof. Do not use liquid cleaning agents.

Meaning of safety labels

Safety labels on the product warn against potential hazards.

	Potential hazard Read the product documentation to avoid personal injury or product damage.
	Electrical hazard Indicates live parts. Risk of electric shock, fire, personal injury or even death.
	Protective conductor terminal Connect this terminal to a grounded external conductor or to protective ground. This protects you against electric shock should an electric problem occur.

1.2 Labels on the product

Labels on the casing inform about:

- Personal safety, see "Meaning of safety labels" on page 11
- Product and environment safety, see Table 1-1
- Identification of the product

Table 1-1: Labels regarding product and environment safety

	Chassis grounding terminal
	Take care when handling electrostatic sensitive devices.
	Labeling in line with EN 50419 for disposal of electrical and electronic equipment after the product has come to the end of its service life. For more information, see the product user manual, chapter "Disposal".

1.3 Warning messages in the documentation

A warning message points out a risk or danger that you need to be aware of. The signal word indicates the severity of the safety hazard and how likely it will occur if you do not follow the safety precautions.

WARNING

Potentially hazardous situation. Could result in death or serious injury if not avoided.

CAUTION

Potentially hazardous situation. Could result in minor or moderate injury if not avoided.

NOTICE

Potential risks of damage. Could result in damage to the supported product or to other property.

1.4 CE declaration of conformity

ROHDE&SCHWARZ

CE

Declaration of Conformity

This is to certify that:

Equipment type	Stock No.	Designation
RTB2002	1333.1005x02	OSCILLOSCOPE 2 CHANNELS
RTB2004	1333.1005x04 x = "." or "K"	OSCILLOSCOPE 4 CHANNELS

complies with the provisions of the Directive of the Council of the European Union on the approximation of the laws of the Member States

- relating to electrical equipment for use within defined voltage limits (2014/35/EU) [LVD]
- relating to electromagnetic compatibility (2014/30/EU) [EMCD]
- relating to restriction of the use of hazardous substances in electrical and electronic equipment (2011/65/EU) [RoHS]

Conformity is proven by compliance with the following standards

EN 61010-1: 2010/A12019
EN 61010-2-030: 2010
EN 61326-1: 2013
EN 61326-2-1: 2013
EN 55011: 2016/A1:2017; Group I, Class A equipment
EN IEC 63000: 2018

For the assessment of electromagnetic compatibility, the limits of radio interference for Class A equipment as well as the immunity to interference for operation in industry have been used as a basis.

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1.5 UKCA declaration of conformity

ROHDE&SCHWARZ

UK CA
Declaration of Conformity

This is to certify that:

Equipment type	Stock No.	Designation
RTB2002	1333.1005x02	OSCILLOSCOPE 2 CHANNELS
RTB2004	1333.1005x04 x = "." or "K"	OSCILLOSCOPE 4 CHANNELS

The object of the declaration described above is in conformity with the relevant UK Statutory Instruments (and their amendments):

- Electrical Equipment (Safety) Regulations 2016 (S.I. 2016/1101)
- Electromagnetic Compatibility Regulations 2016 (S.I. 2016/1091)
- Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (S.I. 2012/3032)

Conformity is proven by compliance with the following standards:

EN 61010-1: 2010/A12019
EN 61010-2-030: 2010
EN 61326-1: 2013
EN 61326-2-1: 2013
EN 55011: 2016/A1:2017; Group I, Class A equipment
EN IEC 63000: 2018

For the assessment of electromagnetic compatibility, the limits of radio interference for Class A equipment as well as the immunity to interference for operation in industry have been used as a basis.

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1.6 Korea certification class A

이 기기는 업무용(A급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.

2 Documentation overview

This section provides an overview of the R&S RTB2000 user documentation.

2.1 Manuals and instrument help

You find the manuals on the product page at:

www.rohde-schwarz.com/manual/rtb2000

Getting started manual

Introduces the R&S RTB2000 and describes how to set up the product. A printed English version is included in the delivery.

User manual

Contains the description of all instrument modes and functions. It also provides an introduction to remote control, a complete description of the remote control commands with programming examples, and information on maintenance and instrument interfaces. Includes the contents of the getting started manual.

The *online version* of the user manual provides the complete contents for immediate display on the internet.

Instrument help

The help offers quick, context-sensitive access to the functional description directly on the instrument.

Safety instructions

Provides safety information in many languages. The printed document is delivered with the product.

Instrument security procedures manual

Deals with security issues when working with the R&S RTB2000 in secure areas.

Service manual

Describes the performance test for checking the rated specifications, module replacement and repair, firmware update, troubleshooting and fault elimination, and contains mechanical drawings and spare part lists. The service manual is available for registered users on the global Rohde & Schwarz information system (GLORIS, https://gloris.rohde-schwarz.com).

2.2 Data sheet and brochure

The data sheet contains the technical specifications of the R&S RTB2000. It also lists the options with their order numbers and optional accessories. The brochure provides an overview of the instrument and deals with the specific characteristics.

See www.rohde-schwarz.com/brochure-datasheet/rtb2000

2.3 Calibration certificate

The document is available on https://gloris.rohde-schwarz.com/calcert. You need the device ID of your instrument, which you can find on a label on the rear panel.

2.4 Release notes and open source acknowledgment

The release notes list new features, improvements and known issues of the current firmware version, and describe the firmware installation. The open source acknowledgment document provides verbatim license texts of the used open source software.

See www.rohde-schwarz.com/firmware/rtb2000. The open source acknowledgment documant can also be read directly on the instrument.

3 Preparing for use

Here, you can find basic information about setting up the instrument for the first time or when changing the operating site.

3.1 Lifting and carrying

See: "Lifting and carrying the instrument" on page 6.

3.2 Unpacking and checking

1. Unpack the product carefully.
2. Retain the original packing material. Use it when transporting or shipping the product later.
3. Using the delivery notes, check the equipment for completeness.
4. Check the equipment for damage.

   If the delivery is incomplete or equipment is damaged, contact Rohde & Schwarz.

Delivery contents

The delivery package contains the following items:

- R&S RTB2000 oscilloscope
- R&S RT-ZP03 probes (2x for R&S RTB2002; 4x for R&S RTB2004)
- Country-specific power cable
- Printed "Getting Started" manual
- Printed Rohde & Schwarz Oscilloscopes and Accessories Safety Instructions (Multilingual) brochure

3.3 Choosing the operating site

Specific operating conditions ensure proper operation and avoid damage to the product and connected devices. For information on environmental conditions such as ambient temperature and humidity, see the data sheet.

See also "Choosing the operating site" on page 6.

Electromagnetic compatibility classes

The electromagnetic compatibility (EMC) class indicates where you can operate the product. The EMC class of the product is given in the data sheet under "General data".

- Class B equipment is suitable for use in:
  - Residential environments
  - Environments that are directly connected to a low-voltage supply network that supplies residential buildings
- Class A equipment is intended for use in industrial environments. It can cause radio disturbances in residential environments due to possible conducted and radiated disturbances. It is therefore not suitable for class B environments.
  If class A equipment causes radio disturbances, take appropriate measures to eliminate them.

3.4 Setting up the product

When setting up the instrument, follow the safety instructions:

- "Setting up the product" on page 7
- "Intended use" on page 5

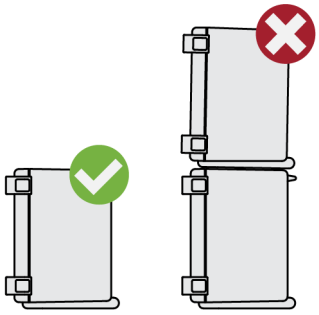
3.4.1 Placing the product on a bench top

For standalone operation, place the instrument on a horizontal bench with even, flat surface. The instrument can be used in horizontal position, standing on its feet, or with the support feet on the bottom extended.

To place the product on a bench top

1. Place the product on a stable, flat and level surface. Ensure that the surface can support the weight of the product. For information on the weight, see the data sheet.
2. **CAUTION!** Foldable feet can collapse. See "Setting up the product" on page 7.

   Always fold the feet completely in or out. With folded-out feet, do not place anything on top or underneath.
3. **CAUTION!** The product can fall over and cause injury. The top surface is too small for stacking. Never stack another product on top of the product.



   As an alternative, you can mount several products in a rack.
4. **NOTICE!** Overheating can damage the product.

   Prevent overheating as follows:
   - Keep a minimum distance of 10 cm between the fan openings of the product and any object in the vicinity.
   - Do not place the product next to heat-generating equipment such as radiators or other products.

3.4.2 Mounting the product in a rack

The instrument can be installed in a rack using a rack adapter kit. The order number is given in the data sheet. The installation instructions are part of the adapter kit.

To prepare the rack

1. Observe the requirements and instructions in "Setting up the product" on page 7.
2. **NOTICE!** Insufficient airflow can cause overheating and damage the product.

Design and implement an efficient ventilation concept for the rack.

To mount the R&S RTB2000 in a rack

1. Use an adapter kit that fits the dimensions of the R&S RTB2000 to prepare the instrument for rack mounting. For information on the dimensions, see data sheet.
   a) Order the rack adapter kit designed for the R&S RTB2000. For the order number, see data sheet.
   b) Mount the adapter kit. Follow the assembly instructions provided with the adapter kit.
2. Push the product onto the shelf until the rack brackets fit closely to the rack.
3. Tighten all screws at the rack brackets with a tightening torque of 1.2 Nm to secure the product at the rack.

To unmount the product from a rack

1. Loosen the screws at the rack brackets.
2. Remove the product from the rack.
3. If placing the product on a bench top again, unmount the adapter kit from the product. Follow the instructions provided with the adapter kit.

3.5 Considerations for test setup

Observe safety instructions, see "Performing measurements" on page 8.

Cable selection and electromagnetic interference (EMI)

Electromagnetic interference (EMI) can affect the measurement results.

To suppress electromagnetic radiation during operation:

- Use high-quality shielded cables, for example, double-shielded RF and LAN cables.
- Always terminate open cable ends.
- Ensure that connected external devices comply with EMC regulations.

Measuring accessories

Use only probes and measuring accessories that comply with IEC 61010-031.

Signal input and output levels

Information on signal levels is provided in the data sheet. Keep the signal levels within the specified ranges to avoid damage to the product and connected devices.

Preventing electrostatic discharge (ESD)

Electrostatic discharge is most likely to occur when you connect or disconnect a DUT.

► **NOTICE!** Risk of electrostatic discharge. Electrostatic discharge can damage the electronic components of the product and the device under test (DUT).

Ground yourself to prevent electrostatic discharge damage:

a) Use a wrist strap and cord to connect yourself to ground.
b) Use a conductive floor mat and heel strap combination.

During operation, if the firmware observes a serious unexpected disturbance (e.g. due to ESD), it resets some hardware components and initiates a new alignment to ensure proper instrument functioning. Then it restores the user settings to the state before the disturbance.

3.6 Connecting to power

For safety information, see "Connecting to power and grounding" on page 7.

The R&S RTB2000 can be used with different AC power voltages and adapts itself automatically to it.

The nominal ranges are:

- 100 V to 240 V AC at 50 Hz to 60 Hz, with maximal 10% voltage fluctuation on line
- 0.95 A to 0.5 A
- max. 60 W

1. Plug the AC power cable into the AC power connector on the rear panel of the product. Only use the AC power cable delivered with the product.
2. Plug the AC power cable into a power outlet with ground contact.

   The required ratings are listed next to the AC power connector and in the data sheet.

3.7 Switching on or off

The instrument is switched on or off with the power switch and the [Standby] key.

Table 3-1: Overview of power states

Status	LED	Power switch
Off	(unlighted)	[0] (off)
Standby	yellow	[I] (on)
Ready	green	[I] (on)

To switch on the product

The product is off but connected to power.

1. Set the switch on the power supply at the rear panel of the instrument to position [I].

   The power key lights up. The key is located in the bottom left corner of the front panel.
2. Press the [Standby] key.

   The instrument performs a system check and then starts the firmware.
   The [Standby] key turns green and the illuminated keys on the front panel light up. If the previous session was terminated regularly, the oscilloscope uses the last settings.

Before you start measurements, be sure to comply with the warm-up phase specified in the data sheet.

To shut down the product

The product is in the ready state.

► Press the [Standby] key.

All current settings are saved, and the software shuts down. The [Standby] key turns yellow. The standby power supplies only the power switch circuits.

To disconnect from power

The product is in the standby state.

1. **NOTICE!** Risk of data loss. If you disconnect the product from power when it is in the ready state, you can lose settings and data. Shut it down first.

   Set the switch on the power supply to position [0].

   The LED of the [Standby] key is switched off.

2. Disconnect the product from the power source.

3.8 Changing fuses

If the product does not start, it is possible that a blown fuse is the cause.

The product is protected by a fuse of type Size 5x20 mm, 250V~, T2.5H (slow-blow), IEC60127-2/5.

1. **WARNING!** The fuse is part of the main power supply. Handling the fuse while the power is on can lead to electric shock.

   Before changing the fuse:

   a) Set the switch on the power supply to position [0].
   b) Disconnect the product from the power source.

2. The fuse slot is on the rear panel between the main power switch and AC power supply connector.
   Pull out the fuse holder out of its slot.

3. Check the condition of the fuse.

4. Replace the blown fuse. Only use a fuse of the specified type.

5. Insert the fuse holder into its slot until it latches.

4 Instrument tour

4.1 Front panel

Figure 4-1 shows the front panel of the R&S RTB2000. The function keys are grouped in functional blocks to the right of the display.

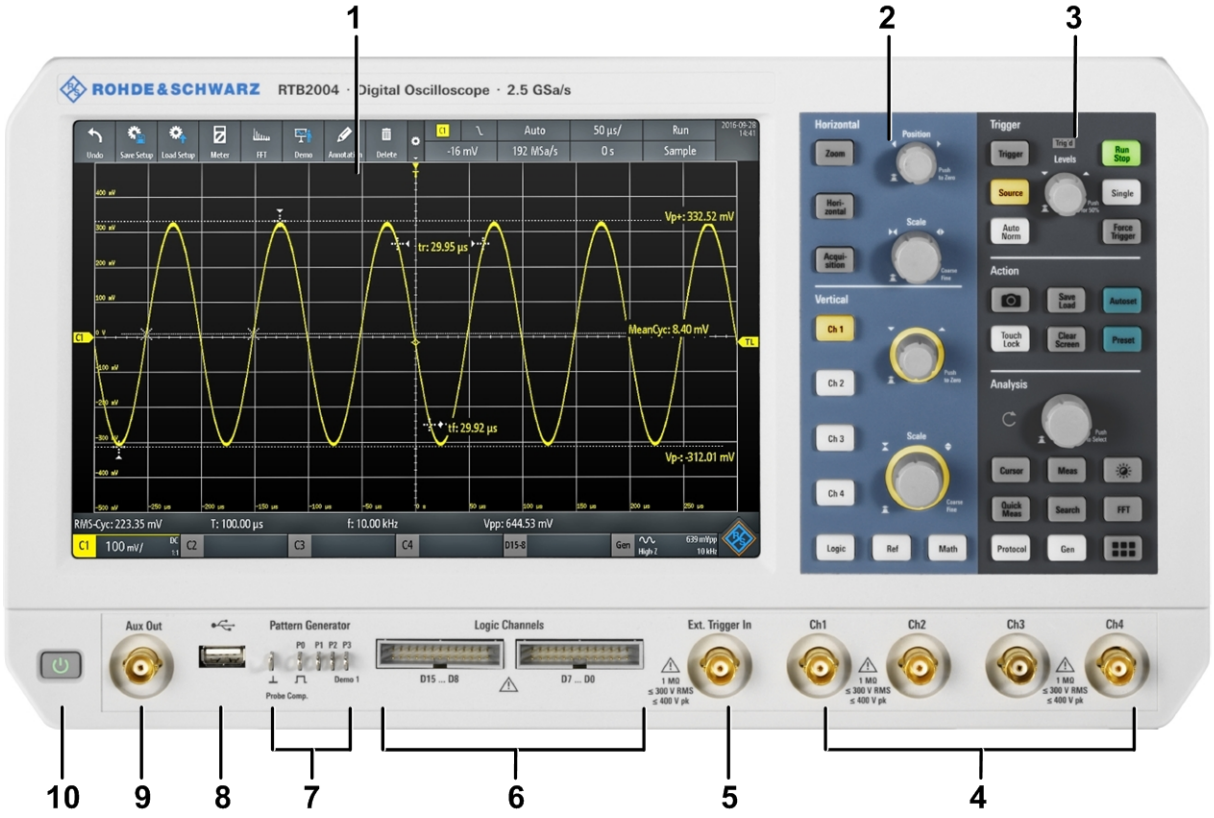
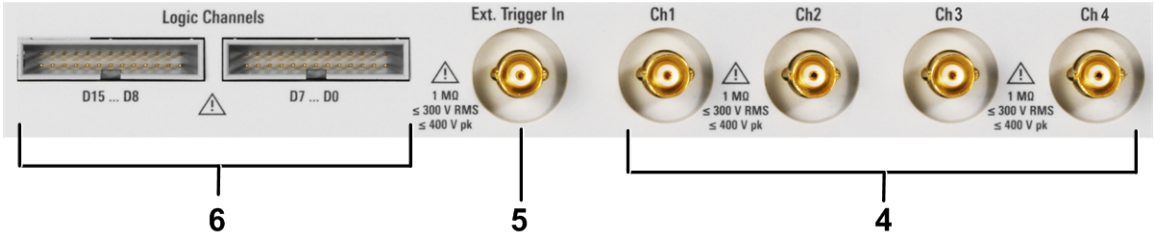


Figure 4-1: Front panel of R&S RTB2004 with 4 input channels

1 = Display
2 = Horizontal and vertical setup controls
3 = Trigger settings, action and analysis controls
4 = Analog input channels (2 channels at R&S RTB2002, 4 channels at R&S RTB2004)
5 = External trigger input
6 = Logic probe connectors (option R&S RTB-B1)
7 = Connectors for probe compensation and optional pattern generator (R&S RTB-B6)
8 = USB connector
9 = Aux Out connector
10 = [Standby] key

4.1.1 Input connectors



BNC inputs (4 and 5)

The R&S RTB2000 has two or four channel inputs (4) to connect the input signals. The external trigger input (5) is used to control the measurement by an external signal. The trigger level can be set from -5 V to 5 V.

The input impedance of all BNC inputs is 1 MΩ. For probes that require 50 Ω input impedance, use the 50 Ω feedthrough termination adapter R&S HZ22.

Follow the safety instructions:

- "Performing measurements" on page 8
- "Working with hazardous voltages" on page 9

The maximum input voltage on *channel inputs* must not exceed 400 V (peak) and 300 V (RMS).

For the *external trigger input*, the maximum input voltage is 400 V (peak) and 300 V (RMS).

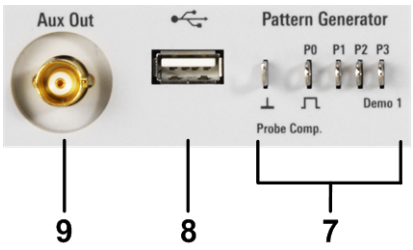
Transient overvoltages must not exceed 400 V (peak).

Logic probe (6)

The connectors for logic channels can be used if the Mixed Signal Option R&S RTB-B1 is installed. The option provides connectors for two logical probes with 8 digital channels each (D0 to D7 and D8 to D15).

The maximum input voltage is 40 V (peak) at 100 kΩ input impedance. The maximum input frequency for a signal with the minimum input voltage swing and medium hysteresis of 800 mV (Vpp) is 300 MHz.

4.1.2 Other connectors on the front panel



[Pattern Generator] (7)
Connectors for the pattern generator P0, P1, P2, P3.

The "Demo 1" signal is intended for demonstration purposes.

[Probe Comp.] (7)
Probe compensation terminal to support adjustment of passive probes to the oscilloscope channel.

⎍ Square wave signal for probe compensation.

⊥ Ground connector for probes.

[USB] type A (8)
USB 2.0 type A interface to connect a mouse or a keyboard, or a USB flash drive for storing and reloading instrument settings and measurement data, and to update the firmware.

[Aux Out] (9)
Multi-purpose BNC output that can function as pass/fail and trigger output, output of 10 MHz reference frequency, and as waveform generator (with option R&S RTB-B6).

4.2 Rear panel

Figure 4-2 shows the rear panel of the R&S RTB2000 with its connectors.

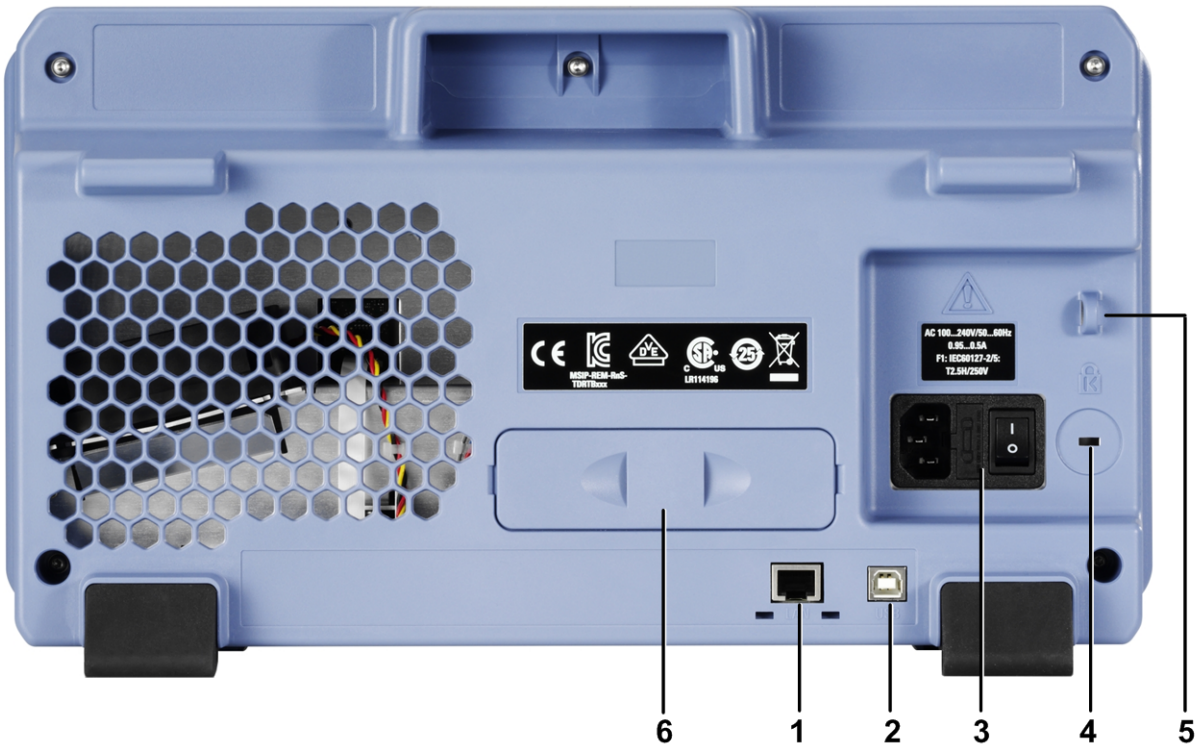


Figure 4-2: Rear panel view of R&S RTB2000

1 = LAN connector
2 = USB connector, type B
3 = AC power supply connector and main power switch
4 = Kensington lock slot to secure the instrument against theft
5 = Loop for lock to secure the instrument against theft
6 = not used

[LAN] (1)
8-pin connector RJ-45 used to connect the instrument to a Local Area Network (LAN). It supports up to 1 Gbit/s.

[USB] type B (2)
USB 2.0 interface of type B (device USB) for remote control of the instrument.

AC supply: mains connector and main power switch (3)
The instrument supports a wide range power supply. It automatically adjusts to the correct range for the applied voltage. There is no line voltage selector.

The AC main power switch disconnects the instrument from the AC power line.

5 Contacting customer support

Technical support – where and when you need it

For quick, expert help with any Rohde & Schwarz product, contact our customer support center. A team of highly qualified engineers provides support and works with you to find a solution to your query on any aspect of the operation, programming or applications of Rohde & Schwarz products.

Contact information

Contact our customer support center at www.rohde-schwarz.com/support, or follow this QR code:

Figure 5-1: QR code to the Rohde & Schwarz support page