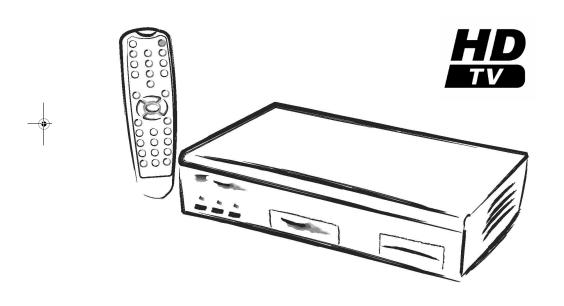




DIGITAL TERMINAL ITD81

TERRESTRIAL RECEPTION MPEG2 – MPEG4



HD TV USER MANUAL









CONGRATULATIONS!

This is a new generation of Sagem Communication receiver dedicated to Digital Terrestrial Television.

Once you have connected your receiver, you will be able to enjoy all the services.

You can update your receiver if new functions or services become available.

The Sagem Communication Receiver follows a continuous development strategy. Therefore, we reserve the right to make changes and improvements to the product described in this user manual without any prior notice.

This product complies with EMC directive 89/336/EEC.

CE marking:

The CE marking certifies that the product complies with the essential requirements of the Directive 1999/5/CE of the European Parliament and Council concerning radio equipment and telecommunication equipment for the health and safety of users and concerning magnetic interference.

The CE declaration of conformity can be viewed in the support section of the Sagem Communication site **www.sagem.com**, or it can be obtained from the following address:

Sagem Communication - Customer relations department 4 rue du Petit Albi 95800 Cergy Saint-Christophe - France

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All rights reserved

Your Set Top Box is supplied with default code 1234.















DIGITAL TERMINAL USER MANUAL

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1. DESCRIPTION

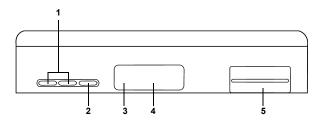
Using the high definition digital terminal, you can receive the free DTT (Digital Terrestrial Television) channels (HD and SD).

The free DTT (Digital Terrestrial Television) channels.

THE PACKAGE CONTAINING YOUR TERMINAL ALSO CONTAINS:

- 1 remote control and 2 batteries.
- 1 mains unit.
- 1 Scart cable.

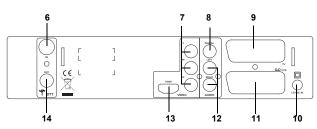
1.1. Front panel





- 1. P+/P-
 - · Change channel.
- **2**. ®
 - Wake up the terminal (press and release)
 - Reinitialize terminal (press and hold for 5 sec.).
- 3. TERMINAL STATUS INDICATOR
- 4. DISPLAY DIAL
 - The current time when the terminal is on standby.
 - The programme number when it is turned on.
- 5. SUBSCRIBER CARD READER

1.2. Rear panel



- 6. DTT AERIAL INPUT
- 7. ANALOGUE VIDEO CONNECTORS Y Pb Pr
- 8. DIGITAL AUDIO CONNECTOR
- 9. SCART CONNECTOR (to TV)
- 10. MAINS SUPPLY UNIT CONNECTOR
- 11. SCART CONNECTOR (to VCR or DVD writer)
- 12. ANALOG AUDIO CONNECTORS (to hi-fi unit)
- 13. HDMI DIGITAL AUDIO VIDEO CONNECTOR
- 14. DTT AERIAL OUTPUT





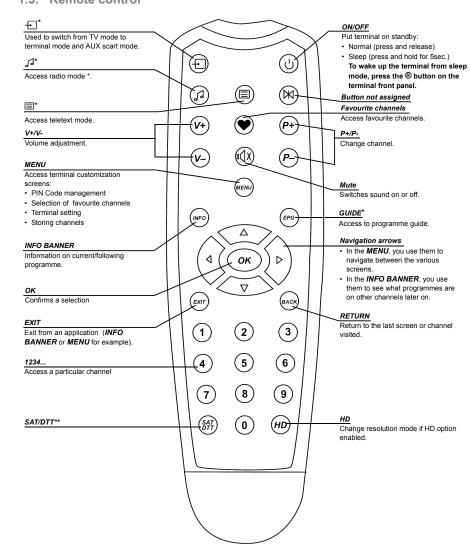






1.3. Remote control

DIGITAL TERMINAL USER MANUAL





^{**} not available: DTT receiver only











2. RECOMMENDATIONS

♦ WHERE TO PUT YOUR TERMINAL?

- The terminal must be connected to an easily-accessible mains socket.
- Choose a location away from radiators or other heat sources.
- Leave free space around the terminal for ventilation and ensure that curtains, other appliances or cupboards cannot prevent air circulating around the ventilation slots.
- · Avoid exposing the terminal to very strong light (sun, spotlights, etc.).

♦ INSERTING BATTERIES INTO THE REMOTE CONTROL

 Remove the cover on the back of the remote control. Insert the two round AAA 1.5 batteries supplied (press and raise the cover using a coin for example).

♦ SAFETY INSTRUCTIONS

- To avoid short-circuits (fire or electrocution hazard) do not expose your terminal to dampness. Do not place
 any object containing liquid (vase for example) on the appliance. The terminal must not be splashed with
 liquid. If necessary, disconnect your terminal and consult your supplier.
- Avoid reconnecting the terminal after it has been subjected to large changes in temperature.

♦ WARNING

DANGEROUS VOLTAGE INSIDE - DO NOT OPEN THE TERMINAL!

- Any attempt to open the terminal may render you liable to legal action.
- Take care not to allow liquids or metal objects to enter the terminal through the ventilation slots. You will be liable for any repair or replacement costs.
- If liquid is upset onto the terminal, unplug it immediately from the mains.
- ◆ This "HD TV" Television Receiver complies with the "HD TV" Minimum Requirements. The "HD TV" Logo is a trademark of EICTA.













3. ENVIRONNEMENT AND SAFETY

♦ EUROPEAN DIRECTIVE ON WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

In the context of sustainable development, the reduction of wastes to be eliminated by reusing, recycling, composting and energy recovery is strongly advised.

In order to comply with this directive which is applicable to EEEs sold after 13/08/2005, your receiver will be taken back free of charge and recycled by the distributor of the EEE within the limits of the quantity and types of equipment bought from them. These appliances which contain substances potentially dangerous to human health and the environment will be recycled.

◆ DIRECTIVE ON THE RESTRICTION OF USE OF CERTAIN HAZARDOUS SUBSTANCES IN ELECTRONIC EQUIPMENT (RoHS)

Your receiver along with the batteries supplied comply with the directive relating to the RoHS – dangerous materials such as lead, mercury or cadmium are not used. This avoids environmental hazards and any risks to the health of personnel at the recycling centres. The batteries of the remote control can be removed simply.

Note: When the batteries of the remote control are worn out, please dispose of them at a collection point and not with household waste.

◆ MEANING OF LOGOS PRESENT ON THE PRODUCT OR ITS PACKAGING



The deleted dustbin sign means that at the end of its life, the product is subject to selective collection and must not be thrown away in unsorted general household waste.



The looped arrow sign means that the packaging may be recycled and must not be disposed of with household waste.



The green logo means that a financial contribution has been made to the national association for the retrieval and recycling of packaging (Eco emballage in France).



The logo with three arrows shown on the plastic parts means that they may be recycled and that they must not be disposed of with household waste.



REMINDER FOR TERMINAL CONNECTIONS (PAGE 2 OF THIS MANUAL) Connectors coded 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16: Very low safety voltage

♦ ELECTRICAL CONSUMPTION OF THE TERMINAL

To reduce the consumption of your terminal, you are recommended to place it in standby mode when not in use. We recommend you to turn off the terminal or unplug it from the mains if you will not be using it for a prolonged period of time.







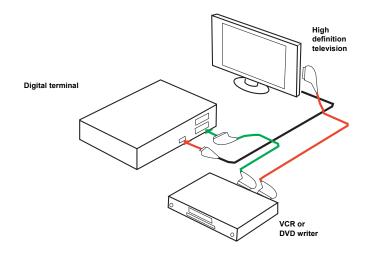




4. CONNECTIONS

4.1. Connection to a high-definition television

To take advantage of HD high-quality definition, you must connect the HDMI connection of your digital terminal to the HDMI or DVI connector (protected by HDCP) on your television (cable not supplied).





Note: If your television is fitted with a DVI connector (protected by HDCP), refer to page 9 of this manual to carry out the audio connections.











4.2. Aerial connections

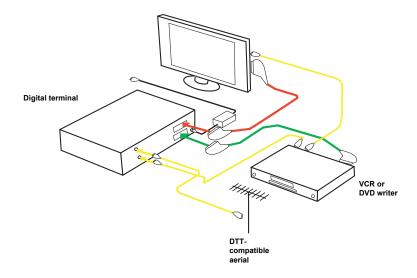
To make sure that your terminal can receive all the free DTT channels, you must check first of all that your house is covered by DTT and that your wireless installation is compatible.

TO FIND OUT IF YOU ARE COVERED BY DTT: contact your distributor.

4.2.1. DTT-compatible wireless aerial

- Connect your aerial by plugging in the terrestrial aerial cable to the DTT INPUT connector. Afterwards, connect the DTT OUTPUT connector to the aerial input of your VCR/DVD writer.
- Then connect the mains unit between the 12V connector of the terminal and a mains socket near to the appliance and easily accessible.
- · Finally, connect your other appliances as indicated below.

 $\textbf{Note:} \ \textit{If your VCR/DVD writer has multiple scart connectors, choose the TV or EXT1 connector.}$













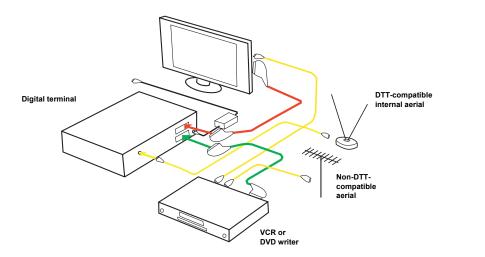
4.2.2. Non-DTT-compatible wireless aerial

If your wireless aerial is not compatible and you live near a transmitter, you can buy a "FULL BAND" internal aerial from a specialist shop, local audiovisual shop or superstore.

If you live a long way from a transmitter, you will need a new external aerial which may be installed by an installer.

- Connect your aerial by plugging in your internal aerial cable to the DTT INPUT connector. You do not change your current aerial connection which stays connected to your TV.
- Then connect the mains unit between the 12V connector of the terminal and a mains socket near to the
 appliance and easily accessible.
- Finally, connect your other appliances as indicated below.

Note: If your VCR/DVD writer has multiple scart connectors, choose the TV or EXT1 connector.









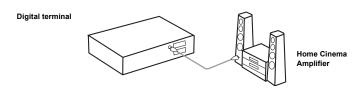




4.3. Connection to a home cinema amplifier

To take advantage of quality DOLBY DIGITAL sound available on some channels, we advise you to connect your terminal to your HOME CINEMA amplifier fitted with a coaxial input.

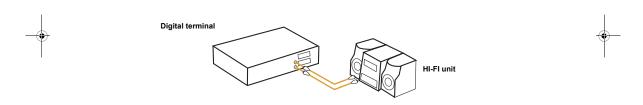
Connect the DIGITAL AUDIO output to the input of your HOME CINEMA amplifier (coaxial cable not supplied).



4.4. Connection to a hi-fi unit

To take advantage of the terminal's laser quality sound, just connect the right and left audio outputs of the terminal to the auxiliary input of your hi-fi system (cable not supplied).

Tip: Connected this way, you can listen to radio channels with the TV turned off.













5. FIRST INSTALLATION

- · Switch on your TV.
- The welcome screen appears. If it has still not appeared after 30 seconds, switch your TV to the auxiliary
 inputs (HDMI, YUV, Scart) until the welcome screen does appear.

5.1. Choice of menu language and Country



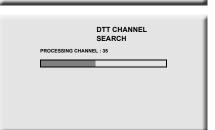
- · Choose your menu language.
- Choose the country in which the terminal is to be used

5.2. Installation of DTT channels



If you want to install the free DTT channels straight away, select "TO INSTALL DTT", otherwise select "TO NOT INSTALL DTT".

Note: If you are unable to receive the DTT signal, choose "Cancel" to cancel the DTT channels installation procedure and refer to section 7.2 to adjust your antenna and carry out another memorisation operation.



Your terminal is now ready to work.

However, you should refer to chapter 7 "Terminal settings" for a configuration better suited to your needs, and to chapter 8 "User settings", depending on your preferences.









6. CHOICE OF LANGUAGES AND COUNTRIES



Press the MENU key to access the settings. Select the "Languages/country" line.



Choose your preferred settings.

Note: your choice of audio language and subtitles will be applied at each channel change, provided that they are broadcast.













7. TERMINAL SETTINGS

7.1. DTT channel search

7.1.1. Memorisation of DTT channels



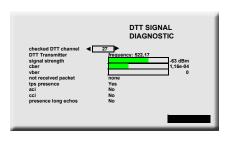
Select the "DTT channel search" line by OK.



The search begins automatically.

If no channel is found, adjust your dish using the following level control screen.

7.1.2. Reception level indication



The "diagnostic" screens can help you adjust your dish more accurately.









DIGITAL TERMINAL USER MANUAL

7.2. Picture adjustment

7.2.1. HD outputs

If you have connected your terminal to an "HD ready" flat screen with a YUV, HDMI or DVI input, you should set "HD outputs activation" to "Yes".



- Select the required resolution: 1080i or 720p.
- "Make sure that the chosen screen format is 16/9.
- Choose the AUX scart video standard (PAL or S-Video).
- Note that the video output on the AUX scart is not in HD quality but in SD and the 16/9 format of the HD video will be delivered in 4/3 letter box format.
- "If the terminal's HD outputs are used (YUV or HDMI) the TV scart only outputs PAL video (RGB cut).

7.2.2. SD output

If you have not connected your terminal to an "HD ready" flat screen, but to a standard 16/9 or 4/3 television, you should set the "HD outputs activation" option to "No".

The YUV and HDMI outputs on your terminal will then output no video signal.



- Choose the format of your standard TV: 4/3 or 16/9.
- If you have a 4/3 TV, select the "Letter box" option in other words a 16/9 picture in a 4/3 screen, or the "pan and scan" option, in other words the centre of a 16/9 image in a 4/3 screen
- Choose the TV scart video: PAL or RGB (better quality).
- Choose the AUX scart video: PAL or S-video (better quality).

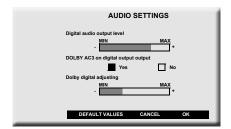






7.3. Audio settings

Access this screen from the \emph{MENU} key, then "Terminal settings" and "Audio settings".



- To adjust the terminal's volume setting, position the cursor on "-" or "+" to lower or raise the volume and press the OK key.
- If you have HOME CINEMA equipment, set "Dolby AC3" to "Yes".
- If you are using the HDMI or DIGITAL AUDIO connector, set "Dolby AC3" to "YES".
- You can memorise the settings by pressing the "OK" button.

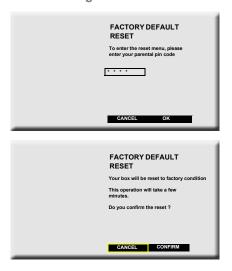








7.4. Default settings



In Terminal Settings, choose FACTORY DEFAULT RESET.



As mentioned on the screen opposite, all the channels and settings will be lost if you confirm this choice.

You must enter the parental pin code in order to set this configuration.











8. USER SETTINGS

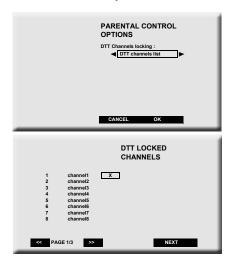
8.1. Changing the parental pin code



Press *MENU* to access the various configurations. Select "User settings" then "Parental pin code". Enter your code to access the menu opposite then type in and reconfirm your new code.

Note: The decoder is delivered with default pin code 1234.

8.2. Parental control options



You can lock access to the wished DTT channels. Select the type of channel.

Then check the channels you want to lock. You will be asked for your parental code when you reach the locked channel.

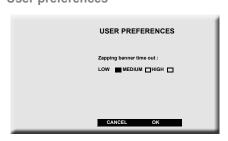








8.3. User preferences

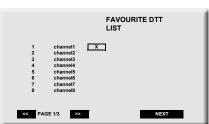


On this screen you can choose the zapping banner display time.

8.4. User List



With this screen you can create a list of DTT favourites.
Set "User list" to YES.
Select the type of list (DTT).



Indicate the required channels. You can switch to the user favourites list by pressing key \P .









DIGITAL TERMINAL USER MANUAL

9. USING THE INFO BANNER



▼ used to look for programmes in progress on another channel without leaving the current channel.

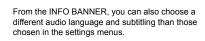
◄► on another channel without leaving the current channel.



More information enables you to:

- · watch the selected channel
- see the summary of the channel selected.







From the INFO BANNER you can also activate or add a channel to your user list.









10. SOFTWARE UPDATE

The decoder software can be updated over the air.

When a new software version is available, the decoder automatically proposes an update.¹



Press "OK" to start the update (recommended). Your decoder will then be unavailable for a few minutes. During this period, the TV screen is black and the front panel display shows a scrolling "00 - -", "01 - - ", "02 - -", "03 - -", "04 - -", indicating that updating is in progress.

If a problem occurs during the update, the decoder stops and displays an error message on the front panel 2 . Pressing any key on the remote control will abort the update process and return the decoder to normal use.





- 1 The update prompt appears when you exit standby. So that you can take advantage of this important function, we recommend that you set your decoder to standby when not in use.
- 2 Refer to appendix A for the list of errors.















11. TECHNICAL CHARACTERISTICS

Transmission standards DVB-T, MPEG-2, MEPG-4

TERRESTRIAL FRONT END

TERRESTRIAL RF INPUT Input freq. range: UHF 470-862 MHz (8 MHz BW) - VHF 174-222 MHz (7/8 MHz

Loop through output frequency Range: 47- 862 MHz COFDM bandwidth: 7MHz & 8MHz RF input level: -90 to -20 dBm RF impedance: 75 Ohm Tuning step: 166.66KHz TERRESTRIAL DEMODULATOR

DVBT COFDM mode: 2k /8k, SFN supported Modulation: QPSK, 16-QAM, 64-QAM

VIDEO DECODER

MPEG2

standard MPEG-2 MP@HL for 50Hz Input rates (max) 80 Mbit/s at ship input MPEG-4 PART 10/H.264 MPEG-4 AVC HP@L4 (HD) for 50Hz Input rates (max): 20 Mbit/s for HP@L4 MPEG-4 AVC HP@L3 (SD) Input rates (max): 10 Mbit/s for HP@L3

AUDIO DECODER

MPEG-1/MPEG2 layer I MPEG-1/MPEG2 Layer II (Musicam Audio)(2.0)

DOLBY AC3 Loop through Audio decoder, sampling rates 32, 44.1 or

OUTPUT RESOLUTION / FORMAT HD: 1280x720 @ 50Hz progressive, or

1920x1080 @ 50Hz interlaced - Aspect ratio 16/9

SD: Aspect Ratio: 4:3 and 16:9 Conversion: Pan and Scan, Letter box Scaling: SD > HD

SD INPUT / OUTPUT

TV SCART RGB out, CVBS, Audio R/L AUX SCART CVBS, S-video, RGB in, Audio R/L

HD OUTPUT

RCA Y, Pb, Pr, audio R/L HDMI with HDCP

AUDIO OUTPUT

HiFi audio output mono stereo in case of MPEG1 laver II.

Electrical S/PDIF two channel PCM in case of MPEG1layerII, Originally received beatstream in case of AC3

CONDITIONAL ACCESS*

1 x ISO/IEC 7816 Smart Card Reader

FRONT PANEL

4 digits amber colour display Indicator: 1 dual colour led IR sensor: 38 KHz 3 buttons 1 smart card reader

REAR PANEL

1 x IEC169-2 female (terrestrial in) 1 x IEC169-2 male (terrestrial out) 2 x SCART (TV, AUX)

1 x HDMI 6 x RCA (YPrPb, Stereo L/R, S/PDIF)

POWER SUPPLY

Mains supply voltage 220-240 V ~50 Hz Power Consumption max: 25W

*not available, free to air DTT only.









APPENDIX A

List of possible error messages when updating the software

Er00: the software currently in the decoder is identical to the software available on the satellite. Decoder updating is not necessary. Select CANCEL on the prompt screen.

Er02, ER05, Er10, Er11: the signal quality does not enable the software to be correctly acquired. Check the signal strength and quality, with the help of the diagnostic screens. If the signal is correct, try updating again. If this fails once more, postpone updating by selecting CANCEL on the prompt screen.

 $INFO\ BANNERFor\ the\ other\ error\ messages,\ contact\ your\ operator\ or\ installation\ contractor.$









12. GUARANTEE

ATTENTION

In order to apply the guarantee, you should contact your dealer or Sagem Communication helpdesk at 08 05 11 18 05.

Proof of purchase will be required. Should any malfunctioning arise, the dealer or Sagem Communication helpdesk will advise you what to do.

If you bought your equipment from Sagem Communication directly, the following shall apply:

 Sagem Communication undertakes to remedy by repair, free of charge for labour and replacement parts, any defects in the equipment during a period of twelve (12) months from the date of original delivery of the equipment, where those defects are a result of faulty workmanship.

During this twelve-month guarantee period, the defective equipment will be repaired free of charge; the customer must however return the defective equipment in its original package with all accessories at his/her own expense, to the address given by Sagem Communication After Sales Department, the phone number of which can be found on the delivery slip. Unless the customer has concluded with Sagem Communication a maintenance contract for the equipment which specifically provides for repairs to be carried out at the customer's residence, the repairs will not be carried out on the equipment at the customer's residence.

The following sentence applies to purchases of equipment for the customer's trade, business or profession.

Except as otherwise expressly provided in this Document and to the extent permitted by law, Sagem Communication makes no representations or warranties, express or implied, statuette or otherwise, and to such extent, all terms and conditions implied by law are hereby excluded.

This guarantee does not affect the Customer's statutory rights.

2) Exclusions from Guarantee

SAGEM shall have no liability under the guarantee in respect of: damage, defects breakdown or malfunction due to:

- failure to properly follow the installation process and instructions for use, or
- an external cause to the equipment (including but not limited to, lightening, fire, shock or water damage of any nature), or
- modifications made without the written approval of Sagem Communication, or
- a failure or neglect to maintain the equipment or inappropriate maintenance, or
- unsuitable operating conditions, particularly of temperature and humidity, or
- repair or maintenance of the equipment by persons not authorised by Sagem Communication, or the removal and/or destruction of the label positioned on the fixation screw of the lower plastic cover,
- wear and tear from normal daily use of the equipment and its accessories, damage due to insufficient or bad packaging of equipment when returned to Sagem Communication, supply of new versions of software, work on any equipment or software modified or added without the prior written consent of Sagem Communication.
- malfunctions not resulting from the Equipment or from software installed in user workstations for the purpose of use of the equipment, communication problems related to an unsuitable environment, including:
- purpose of use of the equipment, communication problems related to an unsultable environment, including problems related to access and/or connection to the Internet such as interruptions by access networks or malfunction of the line used by the subscriber or his correspondent,
- transmission faults (for example poor geographical coverage by radio transmitters, interference or poor line
- the local network fault (wiring, servers, workstations) or the failure of the transmission network, the normal servicing (as defined in the user guide supplied with the equipment) as well as malfunctioning due to servicing not being carried out, servicing costs are in any event always borne by the customer.











13. ENVIRONMENT

Preservation of the environment as part of a sustainable development logic is an essential concern of the manufacturer. The desire of the manufacturer is to operate systems observing the environment and consequently it has decided to integrate environmental performances in the life cycle of its products, from manufacturing to commissioning, use and elimination.

PACKAGING



The presence of the logo (green dot) means that a contribution is paid to an approved national organisation to improve packaging recovery and recycling infrastructures.

To facilitate recycling, please respect the sorting rules set up locally for this kind of waste.

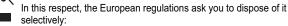
BATTERIES

If your product contains batteries, they must be disposed of at appropriate collection points.

THE PRODUCT



The crossed-out waste bin stuck on the product means that the product belongs to the family of electrical and electronic equipment.



- At sales points in the event of the purchase of similar equipment.
- At the collection points made available to you locally (drop-off centre, selective collection, etc.).

In this way you can participate in the re-use and upgrading of Electrical and Electronic Equipment Waste, which can have an effect on the environment and human health.











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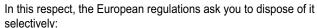
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User manual DATA SUBJECT TO CHANGE WITHOUT NOTICE



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