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SPECIFICATIONS

MODEL / SKU#	Signal N320RT / 28062	Signal N340RT / 28063
Optical characteristics	-	
Magnification	4.5x / 9x	4.5x / 9x
Digital zoom	2x	2x
Objective lens	1:1.05	1:1.05
Max. observation range of an animal 1.7 m tal (built-in IR on), m / y, approx	350 / 380	300 / 330
Field of view, degrees/m at 100 m	7.7 / 13.4	7.7 / 13.4
Close-up range, m	5	5
Eyepiece dioptre adjustment, D	±5	±5
Eye relief, mm	14	14
Electronic characteristics		
Display type / Resolution, pixel	LCD / 640x480	LCD / 640x480
Sensor type / Resolution, pixel	CMOS / 640x480	CMOS / 640x480
Operational characteristics		
Operating voltage, V / Battery	4 - 6.5 (6xAA)	4 - 6.5 (6xAA)
External power supply	5V (power bank / USB)	5V (power bank / USB)
Max. operating time on a set of batteries (at t=22°C)		
- IR off, Wi-Fi on, hour	5	5
 IR on, Wi-Fi on, rec mode on, hour 	3	3
Tripod mount thread	1/4"	1/4"
Operating temperature	-15 °C+50 °C / 5 °F 122 °F	-15 °C+50 °C / 5 °F 122 °I
Dimensions (LxWxH), mm / inch	168x111x56 / 6.6x4.4x2.2	168x111x56 / 6.6x4.4x2.2
Weight (w/o batteries), kg / oz	0.35 / 12.4	0.35 / 12.4
Video recorder		
Video resolution, pixels	320x240; 640x480	320x240; 640x480
Photo resolution, pixels	320x240; 640x480; 1280x960	320x240; 640x480; 1280x960
Video / Photo format	avi / jpg	avi / jpg
Built-in memory	8Gb	8Gb
Memory capacity	1Gb / 40 min*	1Gb / 40 min*
Built-in IR LED Illuminator		
Wavelength, nm	850 (visible)	940 (invisible)
Wi-Fi channel		
Frequency	2.4GHz	2.4GHz
Standard	802.11 b/g/n	802.11 b/g/n
Line-of-sight reception range, m	15	15

* Actual capacity may differ.

PACKAGE CONTENTS

0	Signal RT	Micro USB cable
	Digital Night Vision Monocular	User manual
•	Carrying case	Lens cloth
0	Neck strap	Warranty card

The design of this product is subject to change for development purposes.

The device's firmware is subject to change without prior notice. Please visit <u>www.yukonopticsglobal.com</u> to download the latest version of the user manual.

FEATURES

- 2x digital zoom
- Viewing range up to 350 m
- Long range IR Illuminator (850nm/940nm)
- Wide field of view
- Wi-Fi remote review and operation using smartphone
- Youtube. Recording and live YouTube streaming

- Onboard video/sound recording
- Suitable for day use
- Charging with Power Bank
- Updatable firmware
- Stream Vision compatible
- Tripod mount for installation of accessories

Your digital night vision monocular is perfectly suited to a wide range of applications including:

- Outdoor observation
- Search and rescue Hunting & camping

- Video recording and image capture
- Sports and night navigation/observation
- Equipment maintenance

INSTALLATION OF BATTERIES

Slide and open the battery cover (12).

Insert batteries (or rechargeable batteries) into the battery container observing polarity on the battery cover.

Slide back the battery cover to its original position.

Attention! Do not use batteries of different types or batteries with various charge level because this may significantly decrease operating time.

EXTERNAL POWER SUPPLY

The unit can operate on an external battery such as Power Bank (5V) or a computer (laptop).

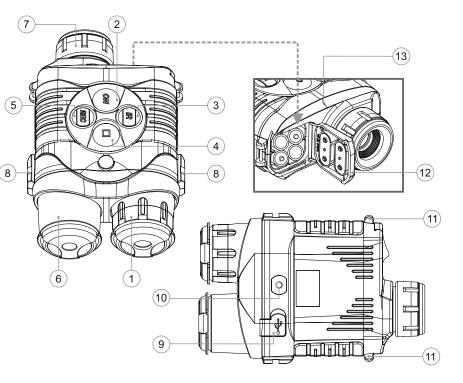
- Connect the plug of the USB cable to the unit's USB port (9).
- Connect the other plug of the USB cable to a Power bank or a computer.
- Upon connection of an external power supply the unit stops operating on batteries.
- Operation on external power supply is shown with an icon
- More about powering from Power Bank and computer in section 13.

5

EXTERNAL VIEW AND CONTROLS

Objective lens
 Button ON
 Button IR
 Button ZOOM
 Button REC
 IR Illuminator

- ⑦ Eyepiece diopter adjustment ring
 ⑧ Weaver rail
 - e vveaver rail
- Micro USB port
- 1 Tripod mount
- 1 Neck strap lugs
- ¹Battery container cover
- 13 Microphone



DESCRIPTION OF CONTROLS

Button	Operating mode	1 st short press	2 nd short press	Long press
ON	The unit is off	Turns the unit on	Turns the Wi-Fi on	Turns the display off
	Display off mode	Turns the display on	Turns the Wi-Fi on/off	(hold longer than 1 sec)
	The unit is in Video / Photo mode	Turns the Wi-Fi on	Turns the Wi-Fi off	Turns the unit off
	The unit is in Review mode	File deletion prompt	See description of Review Mode	(hold longer than 3 sec)
ZOOM	Video	Digital zoom activation		Enter / Exit the menu
	Photo			
	Review	Switch between files – rightwards navigation Return to the beginning of file under review		-
REC	Video	Start video recording	Stop video recording	Switch to Photo Mode
	Photo	Image capture	Image capture	Switch to Review Mode
	Review	Recorded video review	Pause video review	Switch to Video Mode
IR	Video	Switch between IR Illuminator modes		Turns the IR Illuminator off
	Photo			
	Review	Switch between files - leftwards navigation.		
		Return to file currently viewed		-

OPERATION

- Remove the lens cover from the objective lens (1).
- Turn the unit on by briefly pressing the ON (2) button. The display shows the battery charge icon Im.
- To turn the display off during operation, press and hold down the **ON** button for more than one second. The display will show a "**Display off**" message.

- To turn the display on, press briefly the ON button.
- To turn the unit off, press and hold down the ON button for more than three second. The display shows message "Switch off", countdown will start from 3 to 1 seconds, and the unit turns off.
- Achieve a crisp image of the icons on the display by rotating the eyepiece diopter adjustment ring (7).
- Locate an object at a certain distance, achive a crisp image of the object by rotating the objective lens (1).
- To adjust display brightness, hold down the **ZOOM (4)** button. Use the navigation buttons (IR; REC) to select icon $\dot{\Omega}$, enter the submenu with a brief press of the ZOOM button.
- Adjust the image brightness with navigation buttons **REC (5)** µ **IR (3)** (adjustment range is 0 to 20).
- When changing the viewing distance, achieve a sharp image by rotating the objective lens (1). There is no need to rotate the eyepiece you have already made the necessary individual adjustment.
- When the device starts, the built-in IR Illuminator (6) switches on automatically (first level). Press the IR
 (3) button successively to change power level (3 levels are available). The corresponding icon will appear in the upper part of the display IR. IR: IR:
- To turn the IR Illuminator off, press and hold down the IR button for two seconds. The IR icon will disappear.
- To activate the digital zoom, briefly press the ZOOM (4) button. Full magnification is constantly shown in the upper part of the display, for example "4.5x".
- Press the ZOOM button again to return to the initial magnification.
- To start video recording, press briefly the **REC (5)** button.

• OPERATING MODES

The operating modes are as follows:

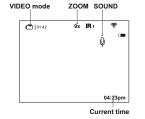
- Video (video recording)
- Photo (image capture)
- Review (video and image review)

When first switched on, the unit is in Video mode. Switch between operating modes by a long press of the **REC (5)** button. This enables you to cycle between modes (Video->Photo->Review->Video...)

VIDEO MODE

Video recording mode is the default mode.

- Video recording mode is shown by the 🗂 icon on the display.
- **Sound recording** is shown by the ψ icon on the display.
- Full magnification is shown with by special icon (i.e. 9x) on the display.

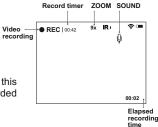


- To start or stop video recording, briefly press the REC (5) button.
- Video clips are saved in the internal Flash memory when video recording is stopped or the unit is turned off.

Video recording indication on the display:

- The REC (5) icon appears in place of the "VIDEO" icon.
- Display icons are not recorded.
- You can enter and navigate the menu during video recording.
 Note! You can stop recording video only after exiting the menu.

Note: maximum duration of a recorded file is seven minutes. After this time expires a video is recorded into a new file. The number of recorded files is limited by the capacity of unit's internal memory.



IR Illuminator and brightness. In VIDEO mode the display shows the following information:

IR Illuminator power level – shown by the corresponding icon -IR. IR: IR: . If the IR Illuminator is off, the icon is not displayed.

Wi-Fi

Wi-Fi connection is shown in the top right corner of the display.

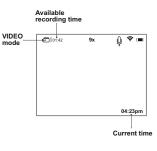


PHOTO MODE Photo Mode is shown by () icon on the display.

* The counter of available photos is displayed when the number of photos is 999 or less.

Photos are saved into the internal Flash memory. The following functions are displayed in **PHOTO** Mode:

- IR Illuminator
- Brightness
- Full magnification
- Wi-Fi

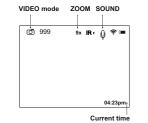
Note: sound is not recorded in Photo Mode.

REVIEW MODE is designed to review photo and video files (saved in the internal Flash memory) on the display.

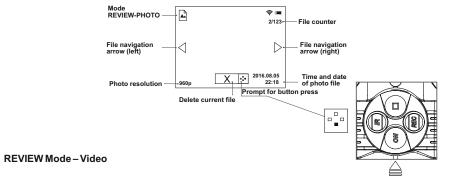
File display order. Upon activation of Review Mode, the display always shows the last recorded file. **Mode indication on the display.** Along with the image itself the display shows the following information:

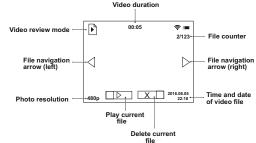
File type icon: photo A or video

- Video clip length shown as mm:ss. File counter shown as x/y (common for photo and video files) –
- x number of running file.
- x-number of running me
- y total number of files.
- Page navigation (left-right).
- Resolution of current (displayed) file.
- "PLAY" and "PAUSE" indicators for video clip
- File deletion indicator
- Date and time of file recording



REVIEW Mode – Photo





File navigation:

- Leftwards brief press of the ZOOM (4) button.
- Rightwards brief press of the IR (3) button.

Briefly press the REC (5) button to start reviewing a video.

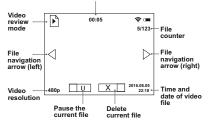
Video review indication:

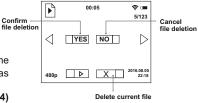
- The video length countdown timer starts.
- The PAUSE indicator appears in place of PLAY.

To pause the video – briefly press the REC (5) button. Video pause indication:

- The video length countdown timer stops.
- The PLAY indicator appears in place of PAUSE.
- With another short press of the REC button you can resume reviewing a file from the place where the video review was stopped.
- Return to start of current file briefly press the ZOOM (4) button.
- Review next file briefly press the IR (3) button.
- File deletion with confirmation. A brief press of the **ON (2)** button shows the file deletion prompt on the display.
- To select "YES" briefly press the ZOOM button.
- To select "NO" briefly press the ON button.







When reviewing files, some control functions are not available:

- Enter menu
- ZOOM control
- IR Illuminator control

If the IR Illuminator was on, it turns off when entering the **REVIEW** mode. The IR Illuminator power level is saved. On exiting **REVIEW** mode, the IR Illuminator will be switched on with the previously saved power level.

MENU

Menu navigation: ZOOM (4) button:

- Long press enter the main menu;
- Brief press enter the submenu;
- Brief press confirmation of selection in submenu, with simultaneous exit to the main menu;
- Long press exit submenu without confirmation of selection (in some cases with confirmation, specified separately in the description of menu sub-items);
- Long press exit main menu.

IR button (3) - menu navigation - downwards or rightwards;

REC button (5) - menu navigation - upwards or leftwards;

Automatic exit – after 10 seconds of inactivity in the menu (or submenu) exit to the main screen takes place automatically. In some submenus automatic exit is not possible.

Menu contents

- Brightness setup 🚫
- Wi-Fisetup 🔶

Video/photo resolution selection

▶ Brightness setup ⊘

- Hold down the ZOOM (4) button to enter the main menu.
- Use the IR (3) and REC (5) buttons to select submenu "Brightness setup".
- Enter the submenu with a short press of the **ZOOM (4)** button.
- Use the IR and REC buttons to set display brightness level from 0 to 20.

🕨 Wi-Fi Setup

This menu item allows you to set a password for the access point. This password is used to connect an external device (such as a smartphone, for example) to your unit.

- · Hold down the ZOOM (4) button to enter the main menu.
- Use the IR (3) and REC (5) buttons to select submenu "Wi-Fi Setup"
- Enter the submenu 🔒 with a short press of the **ZOOM (4)** button.
- A password appears on the display by default "12345".
- Use the navigation buttons to set your desired password

(REC (5) button to increase the value; IR (3) button to decrease the value). To switch between digits, briefly press the ZOOM button.

• To save the password and exit the submenu hold down the ZOOM button for longer than one second.

Wi-Fi indication on the display:

- Icon î glows Wi-Fi is on;
- Icon 🛜 blinks connection is established.

Setting Wi-Fi access levels

This option 📋 allows you to set required access level of the Stream Vision application to your device.

- Hold down the **ZOOM (4)** button to enter the main menu.
- Use the IR (3) and REC (5) buttons to select submenu "Wi-Fi Setup".
- Enter the submenu with a short press of the ZOOM (4) button.
- Enter the submenu "Setting Wi-Fi access levels" with a short press of the ZOOM button. button.
- Access level **Owner** \bigcap . Stream Vision user has the complete access to all device's functions.
- Access level Guest $[\![]$. Stream Vision user has the access only to the video stream from the device.

Stream Vision Technology

With the help of Stream Vision technology you can stream images from the display of your **Signal RT** unit via Wi-Fi to a smartphone or PC tablet. You can find further guidelines on Stream Vision in an individual booklet or on our web site www.yukonopticsglobal.com

▶ Video/photo resolution selection 🗔

This menu item allows you to select the resolution of a video recording or photo shot, depending on the active mode.

- Hold down the **ZOOM (4)** button to enter the main menu.
- Use the IR (3) and REC (5) buttons to select submenu "Video/photo resolution selection".
- Enter the submenu with a short press of the **ZOOM (4)** button.
- Use the **IR** and **REC** buttons to select one of the video recording resolution (pixels): 240p (320x240) or 480p (640x480) (if the unit is in the Video mode)
- Use the IR and REC buttons to select one of the photo resolution (pixels): 240p (320x240); 480p (640x480) or 960p (1280x960) (if the unit is in the Photo mode).
 Note:
- Resolution is displayed only in the REVIEW mode.
- The selected value is saved.
- When the unit is next switched on, the display will show the lastest saved value.

▶ Date and time setup ()

This menu option allows you to set the current date and time, and time format.

Date setup

- Hold down the ZOOM (4) button to enter the main menu.
- Use the IR (3) and REC (5) buttons to select submenu "Video/photo resolution selection".
- Enter the submenu with a short press of the **ZOOM** button.
- Date format is displayed as: yyyy/mm/dd (2017/04/12)
- Use the navigation buttons to select desired value (REC (5) button to increase value; IR (3) button to decrease value). To move from one digit to another briefly press the ZOOM (4) button.
- To save the date and go to time setup, press and hold down the ZOOM button for more than one second.

Time setup

- Enter the submenu with a brief press of the **ZOOM (14)** button.
- Time format is displayed as: "format mm/hh" (2406:51)
- Use the navigation buttons IR (3) / REC (5) to select the required time format 24/AM/PM. To set the hour value, briefly press the ZOOM button.
- Use the navigation buttons to select the hour value (**REC** button to increase the value; **IR** button to decrease the value).
- To set the minute value, briefly press the **ZOOM** button.
- Use the navigation buttons to select the minute value (REC button to increase the value; IR button to decrease the value).
- To save the time settings and to exit the submenu, press and hold down the **ZOOM** button for more than one second.
- Current time in the format selected is shown on the display.
- The set value is saved.
- When the unit is next switched on, the display shows the latest saved value.

▶ Sound recording

- This menu option allows you to activate/deactivate sound recording only during video recording.
- Hold down the **ZOOM (4)** button to enter the main menu.
- Use the IR (3) and REC (5) buttons to select submenu "Sound recording".
- Enter the submenu with a short press of the **ZOOM** button.

Use the IR and REC buttons to select one of the options:

- Yes to activate sound recording.
- No to deactivate sound recording.
- Confirm your selection with a short press of the ZOOM button.
- When activating sound recording, the ♀ icon appears on the display. Icon ⋪ is shown when sound is deactivated.
- The sound record icon is shown on the display in the VIDEO and PHOTO modes. The set value is saved.
- · When the unit is next switched on, the display shows the latest saved value.

About device (i)

This menu option shows the following service information about your device:

- Hold down the ZOOM (4) button to enter the main menu.
- Use the IR (3) and REC (5) buttons to select submenu "About device".

• Enter the submenu with a short press of the **ZOOM** button.

Name: Signal N320RT (name of the unit) SKU: 28062 (model number) Serial: 20119307 (serial number) FW: 12.34.567 (software version) HW: MNV001 (hardware version)

DIGITAL ZOOM FUNCTION

This function allows you to control the unit's **ZOOM** mode. The display shows the full magnification value which is the product of the optical and digital magnification.

- You can use the **ZOOM** function only in **VIDEO** and **PHOTO** modes.
- To activate the zoom, briefly press the **ZOOM (4)** button.
- Cycle through the available full magnification options by briefly pressing the **ZOOM** button: 4.5x>9x>4.5x
- The digital zoom value is retained only during the current session.
- When the unit is next switched on, the full magnification value reverts to 4.5x.

DISPLAY OFF FUNCTION

This function deactivates the display, which allows you to eliminate light exposure caused by the glowing display.

- You can operate the **DISPLAY OFF** function in two modes: **VIDEO** and **PHOTO**.
- To turn the display off, press and hold down the **ON (2)** button for more than a second.
- The message **Display off** appears on the black display.
- To activate the display, press briefly the ON button.

When the DISPLAY OFF function is activated:

- All controls are inactive (except for the ON button).
- Video recording continues (if video was recording before activating the DISPLAY OFF function).
- The Wi-Fi function keeps running.

The DISPLAY OFF function deactivates when:

- The ON (2) button is briefly pressed.
- The unit is connected to a PC via the USB port (selection of operating modes appears "power" or "USB Mass Storage Device").



USB CONNECTION

The unit can be connected to a PC via the USB port (9). The PC will detect the unit automatically, no driver installation is necessary.

Connection options.

When the activated unit is connected to a PC via the USB port, one of the following connection options is selected.

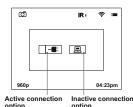
USB Mass storage device

- If this option is selected, the unit is detected by the PC as a flash card. The unit switches to USB power.
- This option is designed for use when working with files saved in the unit's memory. In this mode the unit's functions are not available and the unit is "off"

Power

When this option is selected, the PC is used by the unit as an external power supply. The external power icon appears on the display in place of the battery charge icon.

- The unit continues to operate, all functions are available.
- Press the navigation buttons to cycle between connection options (USB-> Power-> USB...).
- To confirm the selection, briefly press the **ZOOM (4)** button.



Connection in various operating modes

Connection option	Operating mode	Status of the unit
USB	Video/Photo	The unit is "off". If video recording is on when the connection is made, the recording is stopped and saved automatically.
	Review	The unit is "off". If a video is being reviewed when the connection is made, the review stops.
Power	Video/ Photo/Review	The unit continues to function.

USB disconnection.

In USB Mass storage device connection mode.

On disconnection the unit remains "off". The unit must be switched on to continue operation.

In Power connection mode

- Once disconnected from PC, the unit switches off. Once the unit is disconnected from a power bank or AC power adapter, the unit will automatically switch to internal batteries, provided the batteries are fitted and have sufficient charge.
- If the unit is switched off on connection to a PC, the display does not show anything. The unit will not be detected by the PC until it is switched on (brief press of the ON button).



TRIPOD MOUNT

The standard ¼" tripod mount (10) in the lower part of the monocular is designed to install the unit on a tripod.

• OPERATING HINTS

- When using the unit in the daytime at elevated illumination level, we suggest that you do not remove the lens cover. The light filter built in the cover reduces image brightness thus enhancing the comfort of observation.
- When the unit is brought into a warm place after use in cold conditions, leave it in the carry case for 2-3 hours this will help prevent condensation on the optics.
- Do not leave the unit in direct sunlight.
- Avoid exposing the unit to severe impact, thermal shock, aggressive liquids or other effects that are liable to cause damage.
- The unit is not water-resistant.

MAINTENANCE AND STORAGE

- The optics should only be cleaned when it is necessary to do so. Use a soft cotton cloth and special multicoated lens cleaners.
- Wipe plastic and metal surfaces with a soft cloth moistened with a synthetic cleaning agent.
- Store the unit in its carrying case in a dry well-ventilated area. Remove the batteries when storing the unit for an extended period.



TROUBLESHOOTING

The table below lists some potential problems that may occur when using the unit. If the problem experienced with the unit is not listed, or if the suggested action does not resolve the problem, returned it for repair.

Problem	Check	Corrective action
The unit will not turn on.	Check that the batteries are correctly fitted in the battery compartment.	Replace the batteries or fit the batteries correctly.
	Check battery operation.	
	Oxidized contacts in the battery compartment due to "leaky" batteries or contacts have been exposed to	Clean the battery compartment, clean the contacts.
	a chemically active liquid.	
The unit does not operate on external power supply.	Make sure your power supply Is providing output voltage.	Charge the external power supply (if required). Check that the USB cable is intact.
Poor image quality.	Check that the eyepiece and lens are adjusted in accordance with the user manual.	Adjust the unit according in accordance with the user manual.
	Make sure the lenses are not misted or soiled.	Clean the lenses with a cloth moistened with alcohol.

Problem	Check	Corrective action
No Wi-Fi signal or erratic	The unit is beyond reliable Wi-Fi range.	Place the unit in line-of-sight of the Wi-Fi signal
signal.	There are obstacles between the unit and the signal receiver (concrete walls for example).	
	There are too many Wi-Fi networks in the area where the device is located which may cause.	To ensure stable Wi-Fi performance, move the device to an area with few or no Wi-Fi network:
The unit is not operating properly due to firmware	Please restore the original firmware version.	1) Connect an external power supply or insert batteries into the device.
update.		 Hold down simultaneously the IR and ZOOM buttons.
		 Start the device with a brief press of the ON button. Display will blink twice.
		 Return to the original firmware is in process which may take approx. 1 minute. Release the buttons.
		After successful firmware installation display w blink uniformly. 5) Disconnect the device from the power suppl
		(remove the batteries or disconnect an externa power supply). The device will not turn off with ON button.
		6) The device is ready to operate.



GB

- Environment protection first! Your appliance contains valuable materials which can be recovered or recycled.
- Leave it at a local civic waste collection point.

NL

- Samen het milieu beschermen! Uw toestel bevat meerdere recycleerbare materialen.
- Breng deze naar een containerpark of naar een erkend service center, bevoegd voor de recyclage.

GR

- Ας συμβάλλουμε κι εμείς στην προστασία του περιβάλλοντος! Η συσκευή σας περιέχει πολλά αξιοποιήσιμα ή ανακυκλώσιμα υλικά.
- Παραδώστε τη παλιά συσκευή σας σε κέντρο διαλογής ή ελλείψει τέτοιου κέντρου σε εξουσιοδοτημένο κέντρο σέρβις το οποίο θα αναλάβει την επεξεργασία της.

FR BE

- Participons à la protection de l'enviroment! Votre appareil contient de nombreux matériaux valorisables ou recyclables.
- Confiez celui-ci dans un point de collecte ou à défaut dans un centre service agréé pour que son traitementsoit effectué.

ES

IT

- iParticipe en la conservación del medio ambiente! Su electrodoméstico contiene materiales recuperables y/o reciclables.
- Entréguelo al final de su vida útil, en un Centro de Recogida Específico o en uno de nuestros Servicios Oficiales Post Venta donde será tratado de forma adecuada.

DK

- Vi skal alle være med til at beskytte miljøet!
- Apparatet indeholder mange materialer, der kan genvindes eller genbruges.
- ➡ Bring det til et specialiseret indsamlingssted for genbrug eller et autoriseret serviceværksted, når det ikke skal bruges mere.

DE AU

- i Schützen Sie die Umwelt!
- Ihr Gerät enthält mehrere unterschiedliche, wiederverwertbare Wertstoffe.
- ➡ Bitte geben Sie Ihr Gerät zum Entsorgen nicht in den Hausmüll, sondern bringen Sie es zu einer speziellen Entsorgungsstelle für Elektrokleingeräte (Wertstoffhof).

- Protezione dell'ambiente!
- Il vostro apparecchio contiene materiale che può essere recuperato o riciclato.
- Portarlo ad un punto di raccolta autorizzato.

SF

- Huolehtikaamme ympäristöstä!
- i Laitteesi on varustettu monilla arvokkailla ja kierrätettävillä materiaaleilla.
- Toimita laitteesi keräyspisteeseen tai sellaisen puuttuessa vaikka valtuutettuun huoltokeskukseen, jotta laitteen osat varmasti kierrätetään.