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PRA 25 / PRA 26

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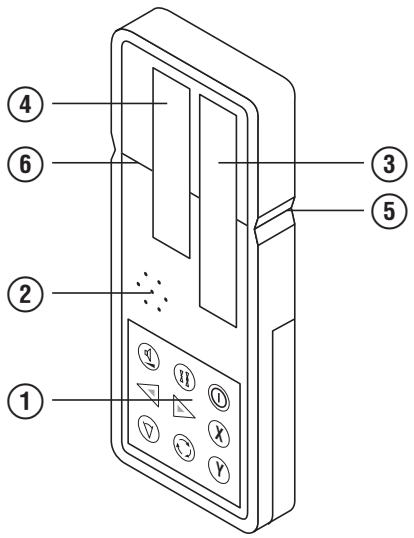

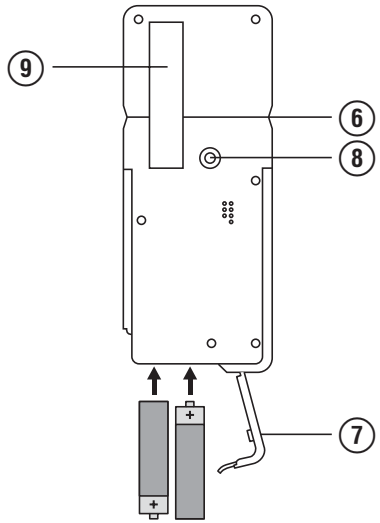

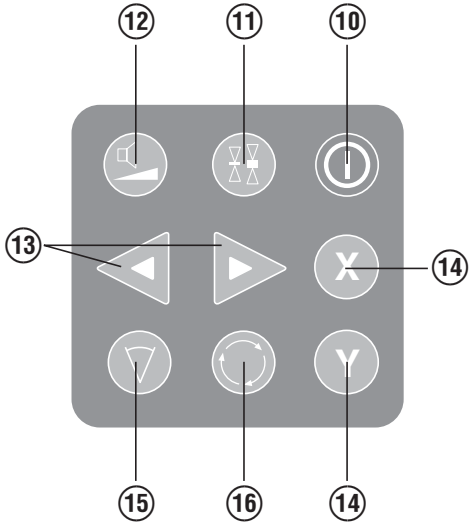

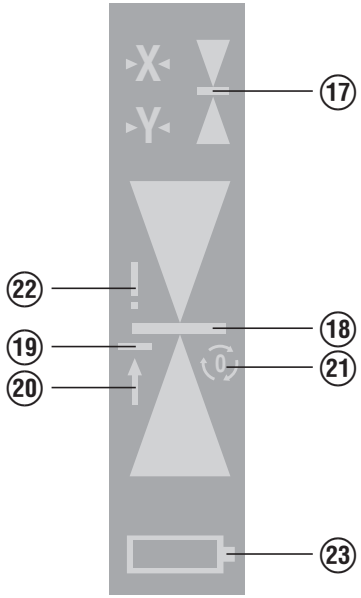

PRA 25 / PRA 26 laser receiver

It is essential that the operating instructions are read before the tool is used the first time.

Always keep these operating instructions together with the tool.

Ensure that the operating instructions are with the tool when it is given to other persons.

Component parts 1

PRA 25 / PRA 26 laser receiver
① Control panel
② Audible signal emission aperture
③ Detection area
④ Display, front side (detailed illustration)
⑤ Marking notch
⑥ Reference plane
⑦ Battery compartment cover
⑧ Mounting thread
⑨ Display, rear side
⑩ On/off key
⑪ Sensitivity selector key (standard or high sensitivity)
⑫ Audible signal selector key
⑬ Direction adjustment key
⑭ Manual/auto alignment key
⑮ Line laser function key
⑯ Rotation speed selector key
⑰ Sensitivity indicator (standard or high)
⑱ Indicator showing position of receiver relative to laser plane
⑲ Line laser function indicator
⑳ Beam catcher mode indicator
㉑ Rotation speed indicator
㉒ Error indicator
㉓ Battery condition indicator

1. General information

1.1 Safety notices and their meaning

-WARNING-
The word WARNING is used to draw attention to a potentially dangerous situation which could lead to severe personal injury or death.

-CAUTION-
Draws attention to a potentially dangerous situation that could lead to minor personal injury or damage to the equipment or other property.

-NOTE-
Draws attention to instructions and other useful information.

1.2 Pictograms

Warning signs

General warning

Symbols

Read the operating instructions before use.

Return waste material for recycling

1 These numbers refer to the corresponding illustrations. The illustrations can be found on the fold-out cover pages. Keep these pages open when studying the operating instructions.
In these operating instructions, the PRA 25 / PRA 26 laser receiver is referred to as " the tool ".

Location of identification data on the tool
The type designation and serial number can be found on the type plate on the tool. Make a note of this data in your operating instructions and always refer to it when making an enquiry to your Hilti representative or service department.

Type: _____

Serial no.: _____

2. Description

2.1 PRA 25 / PRA 26 laser receiver

The PRA 25 / PRA 26 laser receiver is designed to detect the laser beam emitted by the PR 25 / PR 26 rotating laser and provide remote control of its functions.

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2.2 Features

The tool can be mounted on a measuring staff, telescopic staff or, in conjunction with the appropriate holder, on sight rails, wood frames, frames etc.

Items supplied PRA 25:

1 PRA 25 laser receiver
1 PRA 25 operating instructions
1 PR 25 / PRA 25 operating instructions
2 batteries (size AA)

Items supplied PRA 26:

1 PRA 26 laser receiver
1 PRA 26 operating instructions
1 PR 26 / PRA 26 operating instructions
2 batteries (size AA)

3. Technical data

Operating range, detection	2 to 300 m (6 to 975 ft); diameter
Operating range, remote control	0 to 100 m (3 to 325 ft); diameter
Laser plane detection sensitivity (PR 25 / PR 26, 10 m)	High: ± 0.8 mm (0.03 inch); Standard: ± 1.5 mm (0.06 inch)
Audible signal	2 volume levels or silent operation
Liquid crystal display	On both sides
Detection area	80 mm (3 1/8 inches)
Center indicator, from top edge of housing	50 mm (2 inches)
Marking notches (center)	On both sides
Automatic cut-out	After 30 min. when no laser beam is detected
Dimensions	165×67×24 mm (6.5″×2.6″×0.9″ inches)
Weight	0.2 kg (0.4 lbs) including batteries
Power supply	2 x size AA batteries
Battery life at 20 °C (+68 °F)	Alkaline batteries: 30 hours
Operating temperature	–20 °C to +50 °C (–4 °F to 122 °F)
Storage temperature	–30 °C to +60 °C (–22 °F to 140 °F)
Protection class	IP 56 (as per IEC 529)
Mounting thread	M5 x 10 mm (0.4 inch)

Right of technical changes reserved.

4. Safety precautions

4.1 Basic information concerning safety

In addition to the information relevant to safety given in each of the sections of these operating instructions, the following points must be strictly observed at all times.

- Tampering with or modification of the tool is not permissible.
- Observe the information printed in the operating instructions concerning operation, care and maintenance.
- Keep laser tools out of reach of children.
- Have the tool repaired only at a Hilti service center.
- Take the surrounding conditions into account. Do not use the tool where there is a risk of fire or explosion.
- Check the operating mode of the tool before each use.

4.2 Intended use

The tool is designed to be used in conjunction with the PR 25 / PR 26 for determining, transferring or checking alignment in the horizontal plane, inclined planes and right angles, e.g.
– Transferring datum and height marks
– Marking out right angles for walls
– Vertical alignment with a reference point
– Setting out inclines

Hilti offers various accessories that allow the tool to be used with maximum efficiency (please refer to the PR 25 / PR 26 operating instructions).

4.3 Proper organization of the workplace

- Avoid unfavorable body positions when working on ladders. Work from a stable stance and stay in balance at all times.
- Measurements taken through panes of glass or other objects may be inaccurate.
- Use the tool only within its specified limits.

4.4 Electromagnetic compatibility

Although the tool complies with the strict requirements of the relevant directives, Hilti cannot entirely rule out the following possibilities:

- The tool may cause interference to other equipment, e.g. aircraft navigational equipment.
- The tool may be subject to interference caused by powerful radiation, possibly leading to incorrect operation. Check the readings for plausibility when measuring under these conditions or if you are unsure of the results.

4.5 General safety precautions

- Check the tool before use. If the tool is found to be damaged, have it repaired at a Hilti service center.
- The accuracy of the tool must be checked after it has been dropped or subjected to other mechanical stress.
- If mounting on an adapter, ensure that the tool is screwed on securely.
- To avoid measurement errors, keep the detection area on the receiver and the laser exit aperture on the rotating laser clean.
- Although the tool is designed for the tough conditions of jobsite use, as with other optical instruments (binoculars, spectacles, cameras) it should be treated with care.
- Although the tool is designed to prevent entry of dampness, it should be wiped dry each time before being put away in its transport container.
- Check that your PRA 25 / PRA 26 responds only to your PR 25 / PR 26 and not to other PR 25 / PR 26 rotating lasers that may be in use on the construction site (see “Pairing”).

4.6 Electrical

- Do not allow the batteries to fall into children's hands.
- Do not overheat or incinerate the batteries. They may explode or release toxic substances.
- Do not attempt to recharge the batteries (non-rechargeable, alkaline type).
- Do not solder the batteries into the tool.
- Do not discharge the batteries by short circuiting. This may cause the batteries to overheat and swell up.
- Do not attempt to open the batteries and do not subject them to excessive mechanical stress.

5. Before use

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-NOTE-

– The tool may be powered only by the batteries recommended by Hilti.

-CAUTION-

– Do not use damaged batteries.
– Do not mix old and new batteries. Do not mix batteries of different types or batteries from various manufacturers.

6. Operation

6.1 Working with the laser receiver

The laser beam and the functions of the tool are indicated by visual and audible signals.

-NOTE-

The tool can be used either as a remote control unit or as a laser receiver. When using the tool as a laser receiver in conjunction with a measuring staff or telescopic staff, check to ensure that it is attached securely.

6.1.1 Switching the tool on

Press the on/off key.

6.1.2 Setting the sensitivity

After switching on, the tool is set automatically to “Standard” beam detection sensitivity. Sensitivity can be set to “High” by pressing the sensitivity selector key.

6.1.3 Adjusting the audible signal volume

After switching on, the tool is set automatically to “Normal” signal volume.
The volume can be set to “High” by pressing the signal volume selector key and to “Off” by pressing the key a second time.

6.1.4 Detecting the laser beam 2

Hold the laser receiver perpendicular to the plane of the rotating laser beam. Detection of the beam is indicated by an audible signal and visually by illumination of the center display segment.

6.1.5 Catching the laser beam 3

Hold the laser receiver perpendicular to the plane of the rotating laser where the beam can be detected. Press the line laser key once to switch to beam-catching mode. This is indicated in the display by the line laser symbol and an additional arrow. The beam is then “caught” and remains stationary at the PRA 25 / PRA 26 as soon as the PR 25 / PR 26 has located its position.

6.1.6 Adjusting the speed of rotation

The speed of rotation can be adjusted by pressing the rotation speed selector key.

– Press the key once to set rotation to medium speed.
– Press the key again to set rotation to high speed.
– Press the key once more to return to medium speed.
– Press the key yet again to set rotation to low speed.
– A further press of the key stops rotation.
– The next press of the key sets rotation to low speed.
– This procedure repeats itself.

6.1.7 Line laser function

After pressing the line function key, the PR 25 / PR 26 projects a laser line. The line can be lengthened or shortened by pressing the key again.

– Press the key once to project a short line.
– Press the key again to project a medium-length line.
– Press the key once more to project a long line.
– Press the key yet again to project an extra-long line.
– A further press of the key switches the tool back to the long line.
– The next press of the key switches the tool back to the medium-length line.
– Press the key once more to switch to a short line.
– Press the key again to project a laser spot.
– This procedure repeats itself.

6.1.8 Moving the laser line and spot

The laser line or laser spot can be moved to the left or right by pressing the direction keys.
Holding down the direction keys increases the speed of movement and the laser line or spot then move continuously.

6.1.9 Automatic alignment 4

A basic prerequisite for auto alignment is that the PR 25 / PR 26 rotating laser is set up exactly according to instructions. The PR 25 / PR 26 must be set up so that the correct axis (X or Y) is positioned in the direction in which alignment is to be performed. This can only be done in conjunction with the PRA 25 / PRA 26 laser receiver.

Procedure:

– Position the PR 25 / PR 26 at the reference point and with the correct axis in the direction in which alignment is to be performed (the operating range for auto alignment is a radius of 5–50 m).
– Position the PRA 25 / PRA 26 laser receiver at the desired point.
– Check that no obstacles prevent communication between the PR 25 / PR 26 and the PRA 25 / PRA 26.
– Activate the auto alignment function by pressing the X or Y key three times within one second. It is important that the axes correspond correctly, i.e. when X (Y) is to be aligned with the reference point, auto alignment of the X (Y) axis must be enabled by way of the PRA 25 / PRA 26.
– As long as the PR 25 / PR 26 is not in line laser mode, it then switches automatically to medium rotation speed and begins the search process. The auto align function is indicated in the display by the axis currently being aligned and by blinking arrows. An audible signal is emitted continuously during the search process.
– The direction of the search process can be changed by pressing the direction arrows.
– The beam moves to the zero point (reference plane) as soon as the laser beam strikes the target area on the PRA 25 / PRA 26.
– After reaching this point (finding the reference plane), a signal sounds briefly indicating that the process is complete. Only the axis that has been aligned is then shown in the display.

If the process cannot be completed within a certain period of time, an error is indicated in the display.

-NOTE- If an error is displayed
Please check that the PRA 25 / PRA 26 is positioned within the inclination range (+/–5°) and that no obstacles are located between the rotating laser and the laser receiver.

6.2. Manual alignment 5

A basic prerequisite for manual alignment is that the PR 25 is set up accurately. The PR 25 / PR 26 must be set up so that the correct axis (X or Y) is positioned in the direction in which alignment is to be performed.

Procedure:

– Position the PR 25 / PR 26 at the reference point and with the correct axis in the direction in which alignment is to be performed (the operating range for manual alignment is a radius of 5–50 m).
– Check that no obstacles prevent communication between the PR 25 / PR 26 and the PRA 25 / PRA 26.
– Activate the manual alignment function by pressing the X or Y key twice within 1 second. It is important that the axes correspond correctly, i.e. when X (Y) is to be aligned with the reference point, alignment of the X (Y) axis must be enabled by way of the PRA 25 / PRA 26.
– The laser beam can be moved to the desired position by pressing the direction keys. Holding down the direction keys increases the speed of movement and the laser line or spot then move continuously.
– The manual alignment function is indicated in the display by the axis currently being aligned and by stationary (constantly lit) arrows. An audible signal is also emitted continuously during the search process.
– The system switches to normal operation when no key is pressed within 5 seconds. Only the axis that has been aligned is then indicated in the display.

6.2.1 Surveillance

The surveillance function checks to ensure that no displacement of the aligned plane has occurred (e.g. due to vibration). If displacement has occurred, the laser plane is realigned to the zero point (as long as it is still within the receiving area). An additional laser receiver is required for working with the surveillance function. A PRA 25 / PRA 26 may be used to detect the laser beam. As surveillance begins by way of the auto alignment function, the PR 25 / PR 26 must be set up accurately. The PR 25 / PR 26 must be set up so that the correct axis (X or Y) is positioned in the direction in which alignment is to be performed.

Procedure:

– Position the PR 25 / PR 26 at the reference point and with the correct axis in the direction in which alignment is to be performed (the operating range for auto alignment is a radius of 5–50 m).
– Position the PRA 25 / PRA 26 laser receiver at the desired point.
– Check that no obstacles prevent communication between the PR 25 / PR 26 and the PRA 25 / PRA 26.
– Activation of this function requires the PRA 25 / PRA 26 to be switched off. While pressing and holding the X or Y key (the key for the axis you wish to align), switch on the laser receiver by pressing the on/off key.
– The system is then in surveillance mode. The surveillance function is indicated in the display – the axis currently being aligned and the arrows blink alternately.
– The auto alignment process then begins as previously described.
– The auto alignment process stops as soon as the zero point has been found. In contrast to full auto alignment, no audible signal is emitted at the end of the process.
– A check is carried out at regular intervals to ensure that laser plane has not been displaced. If it is found to have been displaced, the laser plane is again brought

into alignment with the zero point (as long as the laser beam is still within the detector target area and line of sight between the rotating laser and the laser receiver has not been interrupted for a long period).

-NOTE- If an error is displayed
Please check that the PRA 25 / PRA 26 is positioned within the operating range (within a 5–50 m radius, inclination range +/– 5°). Check that the line of sight between the two devices is not obstructed during the entire monitoring period.

6.2.2 Pairing

It is possible to configure the PR 25 / PR 26 and the PRA 25 / PRA 26 as a pair. When the two devices are paired, the rotating laser and the laser receiver are assigned to each other. The rotating laser then receives commands only from its "own" laser receiver unit. The devices can be paired by pressing and holding down the on/off keys on both devices simultaneously.

-NOTE-
The PR 25 / PR 26 and PRA 25 / PRA 26 are not paired when supplied. Each unpaired rotating laser receives commands from any unpaired laser receiver.

Pairing procedure:

– The devices can be paired by pressing and holding down the on/off keys on the PR 25 / PR 26 and PRA 25 / PRA 26 simultaneously, as previously described, for more than 3 seconds. Successful pairing is confirmed by an audible signal emitted by the PRA 25 / PRA 26 and by the LEDs on the PR 25 / PR 26 blinking.

Canceling pairing:

– Pairing can be cancelled by pressing and holding down the on/off keys for more than 3 seconds. Cancellation of pairing can only be successful when the on/off keys on the PR 25 / PR 26 and PRA 25 / PRA 26 are not pressed simultaneously. Successful cancellation of pairing is confirmed by the PRA 25 / PRA 26 by the emission of an audible signal and by the symbol "!" displayed. The PR 25 / PR 26 confirms cancellation of pairing by causing all LEDs to blink.

7. Hilti calibration service

We recommend that the tool is checked by the Hilti Calibration Service at regular intervals in order to verify its reliability in accordance with standards and legal requirements. Use can be made of the Hilti Calibration Service at any time, but checking at least once a year is recommended.
The Calibration Service provides confirmation that the tool is in conformance, on the day it is tested, with the specifications given in the operating instructions.

The tool will be re-adjusted if deviations from the manufacturer's specification are found. After checking and adjustment, a calibration sticker applied to the tool and a calibration certificate provide written verification that the tool operates in accordance with the manufacturer's specification.
Calibration certificates are always required by companies certified according to ISO 900x.
Your local Hilti Center or representative will be pleased to provide further information.

7.1 Checking accuracy

Please refer to the PR 25 / PR 26 operating instructions.

8. Care and maintenance

8.1 Cleaning and drying

Use only a clean, soft cloth for cleaning. If necessary, slightly moisten the cloth with pure alcohol or a little water.

-NOTE-
- Do not use any other liquids as these may damage the plastic parts.
- Observe the temperature limits when storing your equipment. This is particularly important in winter or summer, especially if the equipment is kept inside a vehicle (storage temperatures: –30 °C to +60 °C/ –22 °F to +140 °F).

8.2 Storage

Remove the tool from its case if it has become wet. Clean and dry the tool, its carrying case and accessories (at max. temperature of 40 °C/108 °F). Re-pack the equipment only when it is completely dry.
Check the accuracy of the equipment before it is used after a long period of storage or transportation.

8.3 Transportation

Use either the original Hilti cardboard box or packaging of equivalent quality for transporting or shipping your equipment.

-CAUTION-
Always remove the batteries before shipping the tool.

9. Disposal

-CAUTION-
Improper disposal of the equipment may have serious consequences:
- The burning of plastic components generates toxic fumes which may present a health hazard.
- Batteries may explode if damaged or exposed to very high temperatures and thus cause poisoning, burns, acid burns or environmental pollution.
- Careless disposal may permit unauthorized and improper use of the equipment, possibly leading to serious personal injury, injury to third parties and pollution of the environment.

Most of the materials from which Hilti tools or appliances are manufactured can be recycled. The materials must be properly separated before they can be recycled. In many countries, Hilti has already made arrangements for taking back old tools and appliances for recycling. Ask Hilti Customer Service or your Hilti Representative for further information.

Dispose of batteries in accordance with national regulations

Only for EU countries

Disposal of electric tools together with household waste is not permissible!

In observance of European Directive 2002/96/EC on waste electrical and electronic equipment and its implementation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

10. Manufacturer's warranty – tools

Hilti warrants that the tool supplied is free of defects in material and workmanship. This warranty is valid so long as the tool is operated and handled correctly, cleaned and serviced properly and in accordance with the Hilti Operating Instructions, and the technical system is maintained. This means that only original Hilti consumables, components and spare parts may be used in the tool.

This warranty provides the free-of-charge repair or replacement of defective parts only over the entire lifespan of the tool. Parts requiring repair or replacement as a result of normal wear and tear are not covered by this warranty.

Additional claims are excluded, unless stringent national rules prohibit such exclusion. In particular, Hilti is not obligated for direct, indirect, incidental or consequential damages, losses or expenses in connection with, or by reason of, the use of, or inability to use the tool for any purpose. Implied warranties of merchantability or fitness for a particular purpose are specifically excluded.

For repair or replacement, send tool or related parts immediately upon discovery of the defect to the address of the local Hilti marketing organization provided.

This constitutes Hilti's entire obligation with regard to warranty and supersedes all prior or contemporaneous comments and oral or written agreements concerning warranties.

11. FCC statement (applicable in US) / IC statement (applicable in Canada)

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-CAUTION-

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules.These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

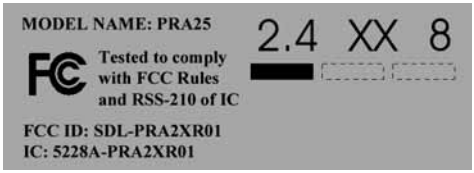
- Re-orient or re-locate the receiving antenna.
- Increase the distance between the equipment and receiver.
- Consult the dealer or an experienced TV/radio technician for assistance.

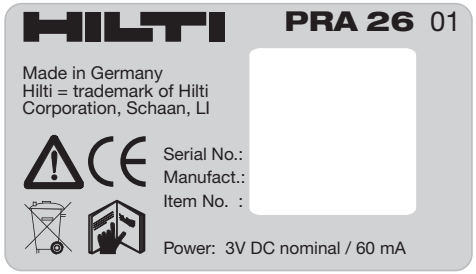
(Requested by FCC §15.21): Changes or modifications not expressly approved by Hilti could restrict the user's right to operate the equipment.

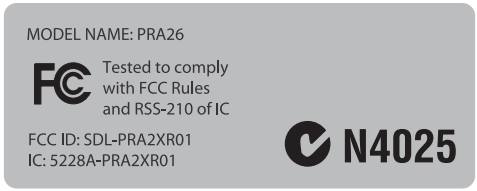
This device complies with Part 15 of the FCC Rules and RSS-210 of IC. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Information plates on the product:







12. EC conformity

Designation:	Laser receiver
Type:	PRA 25 / PRA 26
Year of design:	2004 / 2008

In conformance with CE CE

We declare, on our own responsibility, that this product complies with the following directives and standards:
EN 300 440-2, EN 301 489-3 V1.4.1,
EN 60950-1:2006/IEC 60950-1:2006

Hilti Corporation

Tassilo Deinzer
Head
Measuring Systems BU
02 / 2008

Reinhard Waibel
Head of Development
Measuring Systems BU
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