Quick-start guide H-5470-8500-03-A



# Primo<sup>™</sup> system



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#### Safetv

#### Information to the user

The part setter and the tool setter are each supplied with one CB2 3 V Lithium manganese dioxide battery. It is also possible to use 1/2 AA 3.6 V Lithium-thionvl chloride batteries. Lithium batteries must be approved to (BS EN 62133:2013 [IEC 62133:2012]). refer to the Primo<sup>™</sup> system installation guide (Renishaw part no. H-5470-8504) for further information. Once the charge in the batteries is depleted, do not attempt to recharge them.

The use of this symbol on the batteries, packaging or accompanying documents indicates that used batteries should not be mixed with general household waste. Dispose of the used batteries at a designated collection point. This will prevent potential negative effects on the environment and human health which could otherwise arise from inappropriate waste handling. Contact your local authority or waste disposal service concerning the separate collection and disposal of batteries. All lithium and rechargeable batteries must be fully discharged or protected from short circuiting prior to disposal.

Ensure replacement batteries are of the correct type and are fitted in accordance with the instructions in the installation guide, refer to the Primo™ system installation guide (Renishaw part no. H-5470-85041) for further information. For specific battery operating, safety and disposal guidelines, refer to the battery manufacturer's literature

Ensure that all batteries are always inserted with the correct • polarity.

- Do not expose to heat or dispose of the batteries in a fire.
- Avoid forced discharge of the battery.
- Do not short-circuit or force discharge the batteries.
- Do not disassemble, pierce, deform or apply excessive pressure to the batteries.
- Do not swallow the batteries
- Keep the batteries out of the reach of children.
- Do not allow batteries to get wet. •
- Do not mix new and used batteries or battery types, as this will result in reduced life and damage to the batteries.
- If a battery is damaged, exercise caution when handling to avoid contact with electrolyte.

Ensure that you comply with international and national battery transport regulations when transporting batteries or the products.

NOTE: Lithium batteries are classified as dangerous goods and strict controls apply to their shipment by air. To reduce the risk of shipment delays, if you need to return the part setter or the tool setter to Renishaw for any reason, do not return any batteries.

In all applications involving the use of machine tools, eve protection is recommended.

The interface has a glass window. Handle with care if broken to avoid iniurv.

Do not store batteries in direct sunlight or rain.



#### Information to the machine supplier/installer

It is the machine supplier's responsibility to ensure that the user is made aware of any hazards involved during operation, including those mentioned in Renishaw product literature, and to ensure that adequate guards and safety interlocks are provided.

If the probe fails, the probe signal may falsely indicate a probe seated condition. Do not rely on probe signals to halt the movement of the machine.

#### Information to the equipment installer

All Renishaw equipment is designed to comply with the relevant EU and FCC regulatory requirements. It is the responsibility of the equipment installer to ensure that the following guidelines are adhered to, in order for the product to function in accordance with these regulations:

- any interface MUST be installed in a position away from any potential sources of electrical noise (for example, power transformers, servo drives);
- all 0 V/ground connections should be connected to the machine "star point" (the "star point" is a single point return for all equipment ground and screen cables). This is very important and failure to adhere to this can cause a potential difference between grounds;
- all screens must be connected as outlined in the user instructions;
- cables must not be routed alongside high current sources (for example, motor power supply cables), or be near high-speed data lines;
- · cable lengths should always be kept to a minimum.

#### Equipment operation

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

#### Key to the symbols



Go to page number



Do not trigger part setter



Refer to *Primo™ system* installation guide



Do not trigger tool setter



Refer to GoProbe pocket guide

#### The Primo<sup>™</sup> system



System ready checks

#### Part setter visual checks



#### Tool setter visual checks



#### Interface visual checks



#### Part setter and tool setter system checks

**CAUTION:** Battery isolation devices are fitted to the part setter and tool setter and must be removed before use. See pages 19 and 32 for details.



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# Fitting the stylus





# Mounting the part setter on a shank









Batteries	1/2 AA (3.6 V) lithium-thionyl chloride × 1					
		Saft	LS 14250	X	Dubilier	SB-AA02
×		Tadiran	SL-750		Maxell	ER3S
		Xeno	XL-050F		Sanyo	CR 14250 SE
					Tadiran	SL-350, SL-550, TL-4902, TL-5902, TL-2150, TL-5101
					Varta	CR ½ AA



# Activating the part setter for the first time



**CAUTION:** Remove battery isolation device from the battery before use.







# Stylus on-centre adjustment







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# Cleaning

Use a clean cloth.









#### Mounting the probe on the machine table









Or

Batteries	1/2 AA (3.6 V) lithium-thionyl chloride × 1					
		Saft	LS 14250	X	Dubilier	SB-AA02
		Tadiran	SL-750		Maxell	ER3S
		Xeno	XL-050F		Sanyo	CR 14250 SE
					Tadiran	SL-350, SL-550,
						TL-4902, TL-5902, TL-2150, TL-5101
					Varta	CR ½ AA



# Activating the tool setter for the first time





**CAUTION:** Remove battery isolation device from the battery before use.







# Tool setter stylus adjustment - reasons for stylus levelling






**CAUTION:** Always complete step 1 before performing step 2.





# Cleaning

Use a clean cloth.



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# Interface visual diagnostics





# Primo system wiring diagram





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NOTE: If the error code E08 appears on the interface's 'REMAINING CREDIT (DAYS)' window when the start switch setting is changed, the part setter must be reacquired.

NC

NC





# Cleaning

Use a clean cloth.



# Primo system set-up





# Part setter acquisition method





**NOTE:** The interface will need to be switched off and on again during part setter acquisitioning.







# Tool setter acquisition method





**NOTE:** The interface will need to be switched off and on again during tool setter acquisitioning.







# Changing the credit token





# Changing the credit token







# Primo system set-up and calibration



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#### Warranty

Unless you and Renishaw have agreed and signed a separate written agreement, the equipment and/or software are sold subject to the Renishaw Standard Terms and Conditions supplied with such equipment and/or software, or available on request from your local Renishaw office.

Renishaw warrants its equipment and software for a limited period (as set out in the Standard Terms and Conditions), provided that they are installed and used exactly as defined in associated Renishaw documentation. You should consult these Standard Terms and Conditions to find out the full details of your warranty.

Equipment and/or software purchased by you from a third-party supplier is subject to separate terms and conditions supplied with such equipment and/or software. You should contact your thirdparty supplier for details.

#### China RoHS

For more information on China RoHS visit: www.renishaw.com/mtpchinarohs

#### EU declaration of conformity

# CE

Renishaw plc declares under its sole responsibility that the Primo radio part setter, Primo radio 3D tool setter and Primo interface is in conformity with all relevant Union legislation.

The full text of the EU declaration of conformity is available at: www.renishaw.com/mtpdoc

#### WEEE directive



The use of this symbol on Renishaw products and/or accompanying documentation indicates that the product should not be mixed with general household waste upon disposal. It is the responsibility of the end user to dispose of this product at a designated collection point for waste electrical and electronic equipment (WEEE) to enable reuse or recycling. Correct disposal of this product will help to save valuable resources and prevent potential negative effects on the environment. For more information, contact your local waste disposal service or Renishaw distributor.

#### **REACH** regulation

Information required by Article 33(1) of Regulation (EC) No. 1907/2006 ("REACH") relating to products containing substances of very high concern (SVHCs) is available at: www.renishaw.com/REACH

#### FCC Information to user (USA only)

#### 47 CFR Section 15.19

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference, and
- 2. This device must accept any interference received, including interference that may cause undesired operation.

#### 47 CFR Section 15.21

The user is cautioned that any changes or modifications not expressly approved by Renishaw plc or authorised representative could void the user's authority to operate the equipment.

# Patents

Features of the Primo system, and features of similar products are the subject of one or more of the following patents and/or patent applications:

CN 100466003	IN 215787	TW I380025
CN 101354230	WO 2004/057552	TW I407278
CN 101354266	WO 2015/162431	TW I486733
CN 101482402	JP 3967592	US 10401162
CN 106471334	JP 4237051	US 6776344
EP 1185838	JP 4575781	US 6941671
EP 1425550	JP 4754427	US 7145468
EP 1457786	JP 4773677	US 7285935
EP 1477767	JP 4851488	US 7441707
EP 1477768	JP 5238749	US 7486195
EP 1576560	JP 5254692	US 7812736
EP 1701234	JP 5390719	US 7821420
EP 1734426	JP 5410700	US 8437978
EP 1804020	JP 5491646	US 8464054
EP 2018935	JP 6622216	US 8700351
EP 2019284	KR 1001244	US 9140547
EP 2216761		

EP 3134707

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#### 安全须知

#### 用户须知

工件测头和对刀仪均配有一节CR2 3 V裡-二氧化锰 电池。也可以使用%AA 3.6 V锂亚硫酰氯电池。锂电池 必须符合BS EN 62133:2013 [IEC 62133:2012] 标准。 详情请参阅《Primo™系统》安装指南(雷尼绍文档编号 H-5470-8507)。电池电量耗尽之后,请勿尝试给电池充 电。



在电池、包装或随附文档上使用本符号,表示废旧电 池不可与普通生活垃圾混合。请在指定的收集点处置废旧 电池。这样可以防止由于废品处理不当对环境和人类健康 造成的潜在不良影响。请联系当地相关政府部门或废品处 置服务商,了解电池的单独回收与处置规定。在处置前, 必须使所有的锂电池和充电电池完全放电或采取防短路措施。 请确保备用电池型号正确,并按照本安装指南中的说 明进行安装:详情请参阅《*Primo™ system*》安装指南( 雷尼绍文档编号 H-5470-8507)。有关具体的电池作业、 安全和处置指导原则,请参阅电池制造商的资料。

- 确保所有安装的电池正负极方向正确。
- 请勿将电池存放在阳光直射或淋雨的地方。
- 请勿将电池加热或弃入火中处置。
- 避免将电池强制放电。
- 请勿使电池短路。
- 请勿对电池进行拆解、穿透、施加过度压力,或使其变形。
- 请勿吞咽电池。
- 请将电池放在儿童无法接触的地方。
- 不要让电池受潮。
- 不要将新旧电池或不同的电池类型混用,因为这会缩短 电池寿命并损坏电池。
- 如果电池损坏,请小心处理,不要触碰到电解液。

在运输电池或本产品时,应确保符合国际和国家电池 运输条例。

注:锂电池被定义为危险品,空运有严格的控制。为了减 少运输延期的风险,无论出于何种原因,若您需要将工件 测头或对刀仪返回雷尼绍,请勿包含任何电池。

在所有涉及使用机床的应用中,建议采取保护眼睛的 措施。

接口有一个玻璃窗口。如果玻璃破碎,请务必小心, 以免受伤。

#### 机床供应商/安装商须知

机床制造商有责任确保用户了解操作中存在的任何危 险,包括雷尼绍产品说明书中所述的危险,并应确保提供 充分的防护装置和安全联动装置。

如果测头测量失败,则有误发测头已复位状态信号的 可能。切勿单凭测头信号来停止机床运动。

#### 设备安装商须知

雷尼绍所有设备的设计均符合相关的EU和FCC监管 要求。为使产品按照这些规定工作,设备安装商有责任保 证遵守以下指导原则:

- 任何接口的安装位置必须远离任何潜在的电噪声源,如 变压器、伺服系统驱动装置等;
- 所有0伏/接地连接都应当连接到机床接地终端上 ("接地终端"是所有设备地线和屏蔽电缆的单点回路)。这一点非常重要,不遵守此规定会造成接地之间 存在电位差;
- 所有屏蔽装置都必须按使用说明书中所述进行连接;
- 电缆线路不得与电机电源电缆等高电流源并行或靠近高 速数据传输线;
- 电缆长度应始终保持最短。

#### 设备操作

如果设备使用方式与制造商要求的方式不符,设备提供的保护功能可能会减弱。

# **Radio approvals**

## Radio part setter

Australia:





"Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados".

#### Canada: IC: 3928A-PRPS

This device complies with Industry Canada licenceexempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1)l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement. EU:

India:

NER-ETA/338

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Japan:



This device is granted pursuant to the Japanese Radio Law and the Japanese Telecommunications Business Law This device should not be modified (otherwise the granted designation number will become invalid).





#### Class A Equipment (Industrial Use)

이 기기는 업무용(A급) 전자파적합기기로서 판 매자 또는 사용자는 이 점을 주의하시기 바 라 며, 가정외의 지역에서 사용하는 것을 목적으 로 합니다.

Taiwan:



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低功率射頻電機之使用不得影響飛航安全及干擾合法通 信:經發現有干擾現象時,應立即停用,並改善至無干擾時方 得繼續使用。

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USA: FCC ID: KQGPRPS

Exempt: China Thailand Vietnam

# **Radio approvals**

## Radio 3D tool setter

Australia:





"Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados".

#### Canada: IC: 3928A-PR3DTS

This device complies with Industry Canada licenceexempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

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USA: FCC ID: KQGPR3DTS

Exempt: China Thailand Vietnam

# **Radio approvals**

## Interface

Australia:





"Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados".

#### Canada: IC: 3928A-PI

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India:
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NER-ETA/665

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低功率射頻電機之使用不得影響飛航安全及干擾合法通 信:經發現有干擾現象時,應立即停用,並改善至無干擾時方 得繼續使用。

前項合法通信,指依電信法規定作業之無線電通信。低功率 射頻電機須忍受合法通信或工業、科學及醫療用電波輻射 性電機設備之干擾。

USA: FCC ID: KQGPI

Exempt: China Thailand Vietnam

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For worldwide contact details, visit www.renishaw.com/contact

