Walter Schnorrer®
WELDING EQUIPMENT

FOXY

OXYGEN ANALYZER

5 PPM – 1000 PPM



MANUAL

ANKER ENGELUNDS VEJ 6 I DK-9200 AALBORG SV I DENMARK I TEL. +45 96 34 21 21 I FAX. +45 96 34 21 22 I WWW.SCHNORRER.DK

TABLE OF CONTENTS

General instructions 2

Safety instructions 2

Scope of Delivery 3

Device Set-up 4

Operating mode 5

Technical Information 9

Declaration of conformity 10

Safety data-sheet ZVEI 11

ANKER ENGELUNDS VEJ 6 I DK-9200 AALBORG SV I DENMARK I TEL. +45 96 34 21 21 I FAX. +45 96 34 21 22 I WWW.SCHNORRER.DK

GENERAL INSTRUCTIONS

This operating manual describes the components, functionality, operations and safety precautions when using the FOXY oxygen analyzer.

Supplier:

Walter Schnorrer Aps
Anker Engelunds Vej 6
DK-9200 Aalborg

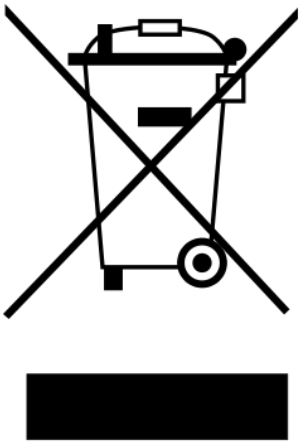
Denmark

Tel.: +45 96342121

E-Mail: info@schnorrer.dk
Internet: www.schnorrer.dk

SAFETY INSTRUCTIONS

The device has a brand-lithium-ion-cell with an internal prevention-circuit (3,7 VDC, 3000 mAh), which is fix-soldered on the plate board.



We advise you to keep the general terms of safety for the use and the transport of these cells.

Please do not dispose the cells in the household refuse!

A safety sheet, the ZVEI from May 2012, is attached to This operating instruction.
Please pay attention to this.

SCOPE OF DELIVERY

The scope of delivery consists of:

1 x FOXY Oxygen Analyzer
1 x Measuring hose with filter and stainless steel gas probe
1 x Transport case
1 x Power supply (charging device) (Input: 100 VAC-240 VAC, 50-60 Hz, 0,25 A. Output: 12 VDC, 1000 mAh, 12 VA)
1 x USB-Stick with operating instruction
1 x Calibration certificate



ANKER ENGELUNDS VEJ 6 I DK-9200 AALBORG SV I DENMARK I TEL. +45 96 34 21 21 I FAX. +45 96 34 21 22 I WWW.SCHNORRER.DK

DEVICE SET-UP



Charging port

Measuring hose with filter (47 micrometer) and stainless steel gas probe (ca. 1200 mm)

Robust plastic case with silicone holster

High-capacity and bright colour OLED-display

LED Charging indicator (green: charging in process, blue: fully charged)

ON/OFF button

Holder for belt or keyhanger



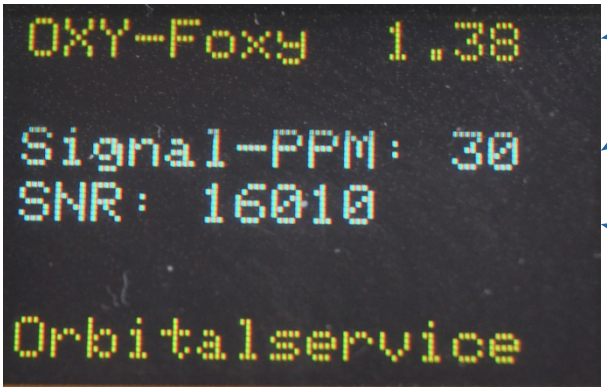
Front

OPERATING MODE

To turn on the device, press the button for 3 seconds.



When turned on, the device will transmit an acoustic signal and show a home screen (seen below) for 3 seconds. This screen displays serial number, software version and signal ppm. The shown ppm value determines the threshold where the device will display the value with green color and transmit an acoustic signal. The pre-programmed value is 30 ppm.



Software version

Fix adjusted ppm value (at 30 ppm an acoustic signal appears and all lower measuring-values are displayed in green colour)

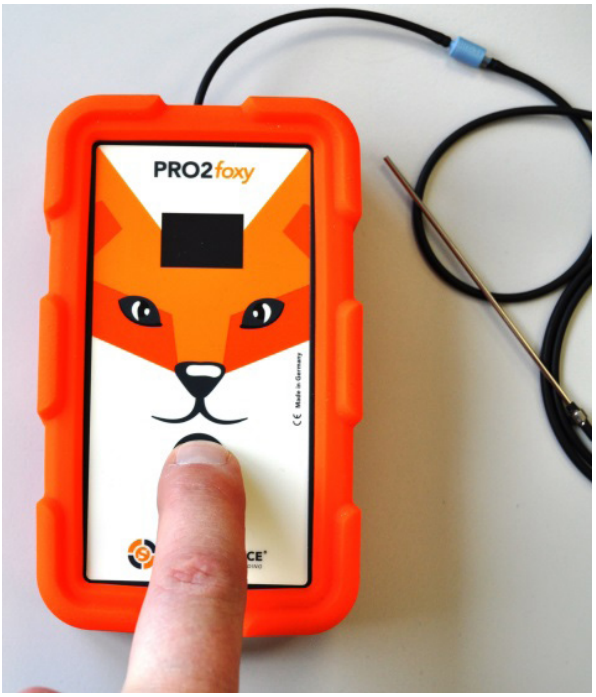
Serial number

After starting the device, you can see the symbols for battery status, temperature heating and a pump wheel. At the bottom there are 4 question marks in different colours (white-red). This means that the pump is inactive, and there is no measuring taking place.



When the device is shaken sideways (position sensor inside), the pump is switched on and the sensor will begin heating. If you don't want to shake the device, pressing the ON/OFF button for 1 second will start the pump and the heating process as well.





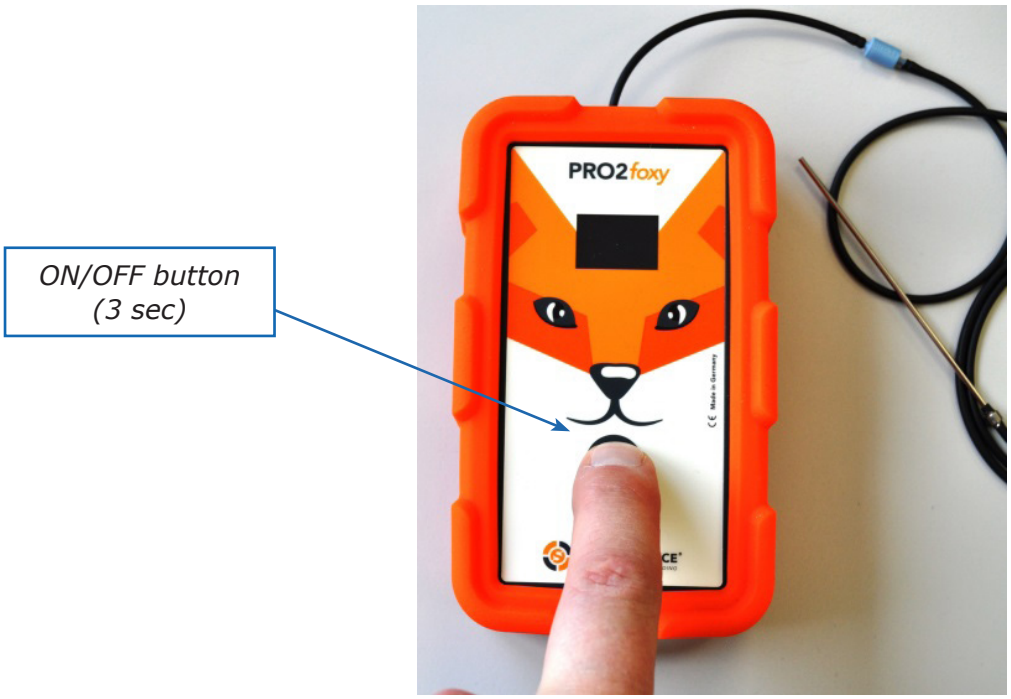
When the value 1000 ppm is displayed, the sensor is heated and the ready for use.



When a value below the pre-programmed 30 ppm is measured, an acoustic signal is transmitted from the device. This value can be reprogrammed with an Android smartphone.



To turn off the device, press the ON/OFF button for 3 seconds.



Caution!

If the device does not recieve a measuring value for 15 minutes, it will turn off automatically to preserve battery, the sensor and the pump engine.

After restarting the analyzer, it is ready to work in less than 60 sec.

The oxygen analyzer is not suitable for hydrogenous forming gasses!

TECHNICAL INFORMATION

Dimension without case:	140 mm x 85 mm x 90 mm
Dimension with case:	305 mm x 355 mm x 90 mm
Weight without case:	0,3 kg
Weight with case:	1,4 kg
Power supply:	Input: 100 VAC-240 VAC, 50-60 Hz, 0,25 A. Output: 12 VDC, 1000 mAh, 12 VA (Internal Lithium Ion Accu, 3,7 VDC, 4.300 mAh)
Measuring performance:	Measuring hose with filter (47 micrometer) and stainless steel gas probe (length ca. 1200 mm)
Battery-runtime:	Max. measuring time with 100% device ON (ca. 4,5 h)
Battery charging-time:	ca. 10 h

The device should be calibrated once a year. We will confirm the renewal of the calibration by issuing a certificate.

DECLARATION OF CONFORMITY

EC Declaration of conformity

EG-Konformitätserklärung – Déclaration de conformité
according to the European Union Machinery Directive 206/42/EG dated 17.05.2006
for the

EG-Richtlinie
2006/42/EG

Oxygen Analyzer

Type of device: PRO2 foxy
article number: PRO2foxy100
serial number: XXXX

of the company

Orbitalservice GmbH
Kreuzdelle 13
D-63872 Heimbuchenthal

The undersigned hereby declares that the Oxygen Analyzer PRO2 plus Comfort conforms to the applicable fundamental health and safety requirements of the EC Directive due to its design and configuration.

In the event of changes to the system, which have not been authorised by ourselves, this declaration of conformity shall lose its validity.

The legal obligation of this EC-Declaration of Conformity only applies to the European Economic Area.

Applicable EC directives:

EC Machinery Directive:	2006/42/EC dated 17.05.2006
EC Low Voltage Directive:	2006/95/EC dated 12.12.2006
EMC Directive:	2004/108/EG dated 15.12.2004

Applied/Applicable harmonized European standards:

EN 14121/12100	- Risk assessment / technical safety equipment
EN 349	- Safety of machinery, minimum distances
EN 13849	- Safety-related parts of control systems
EN 60 204-1	- Safety of machinery; electrical equipment of machines; part 1: general requirements

Heimbuchenthal, 07th of January 2016

Orbitalservice GmbH
Kreuzdelle 13
D-63872 Heimbuchenthal
Tel. + 49 (0) 6092 82294-0
Fax + 49 (0) 6092 822940-09
E-Mail info@orbitalservice.de

Dirk Kunze
CEO

SAFETY DATA-SHEET ZVEI

ZVEI:
Batterien

ZVEI information leaflet No. 2e
Edition July 2012

Safe handling of lithium batteries

Guide

for creating product-specific Battery Information Sheets

Preliminary note:

This guide is not aimed at users of batteries

In each case, the manufacturer's recommendations (in product-specific data sheets, operating instructions/manuals or product data sheets), have priority over this guide.

The term lithium batteries encompasses a broad field of products with various designs and chemical compositions. Therefore, this guide can highlight only general information and procedures for creating product-specific data sheets.

When commissioning, storing, working with and on batteries as well as decommissioning and disposing of them, the instructions contained herein are to be adhered to strictly and without exception. In cases of doubt, please be sure to contact the manufacturer for clarification.

Due to their product properties and performance data, lithium batteries serve various applications. These include not only portable and stationary applications, but also applications in the automotive industry and industrial applications.

The term "lithium batteries" refers to non-rechargeable and rechargeable systems. This guide refers to both systems. The instructions listed in the data sheet refer to lithium batteries as well as lithium cells, even if most instructions speak only of lithium batteries for the sake of easier readability.

The REACH regulation (1907/2006/EC) has replaced the EU directive for safety data sheets (91/155/EU). Both the now valid REACH regulation and the no longer valid directive require safety data sheets to be created and updated for materials and preparations. For products – including lithium batteries, – no EU safety data sheets are required according to European chemicals regulations.

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

This is the place for providing information particular to product and manufacturer for the respective products used (including trade name, respective product specification, information about the manufacturer, phone, fax, e-mail, Internet).

2. HAZARDS IDENTIFICATION

Lithium batteries have a gas-tight seal and are safe insofar as they are used and handled in accordance with the manufacturer's specifications.

Warning!

Do not charge batteries if they are not rechargeable battery systems.

When recharging batteries, never use chargers which are unsuitable for the battery type.

Do not short-circuit them. Do not inflict mechanical damage (puncturing, deforming, disassembling etc.). Do not heat them above the permitted temperature or burn them. Keep batteries away from small children. Always store batteries in a dry and cool place.

When handled properly and in accordance with the parameters specified by the manufacturer, lithium batteries are safe during use. Improper handling or conditions leading to improper operation can cause leakage of battery substances and products of decomposition and reactions associated with these, which can cause personal injury and environmental damage.

Since a wide variety of chemical substances are used, always follow the manufacturer's directions for immediate measures and first-aid measures in the event of an accident.

In general, contact with leaking battery substances can pose a danger to personal health and the environment. For this reason, when coming into contact with batteries with a conspicuous appearance (leaking substances, deformed, discoloured, dented or the like), sufficient body and breathing protection is required. Lithium batteries can, for example, react very severely in combination with fire. This can result in battery components being ejected with considerable force.

Handling and operational safety:

Lithium batteries are always to be handled in accordance with the manufacturer's specifications. This is true particularly for complying with the limits for maximum current load, charging and end-point voltages, and mechanical and thermal loads.

Usually product packages are marketed that have already been matched. Such products are in no wise to be modified or tampered with, since that could result in substantial safety hazards.

Use the charging process tailored to the respective cell type of a rechargeable battery.

Danger!

As with other batteries, so also for lithium batteries it is true that even when thought to be discharged, they can still represent a source of danger. On the one hand, they can deliver a very high short-circuit current. On the other hand, even in the state of the minimum permitted end-point voltage, lithium batteries with a high voltage (over 75 Volts) can pose a danger of a lethal electric shock.

For most products, too deep a discharge leads to permanent damage. Deep-discharged lithium batteries are no longer permitted to be charged or operated.

In all cases, avoid excessive charging voltages and overcharging. They can lead directly to critical situations, but also have a negative impact on battery life. For this reason, some manufacturers recommend gentle charging processes, which reduce the currently available energy, but by means of the lower charging voltage lead to a significantly lengthened product life.

If additional instructions are needed at this point, they can be taken, for example, from DIN EN 62133 "Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications" as well as DIN EN 60086-4 "Primary batteries, Part 4: Safety of lithium batteries".

3. COMPOSITION / INFORMATION ON INGREDIENTS

The respective substances are to be taken from the manufacturer and product-specific data sheets for lithium batteries.

Note: Lithium batteries are products which release no substances when used properly.

4. FIRST AID MEASURES

When handled and stored properly, lithium cells and batteries do not represent a source of danger.

Since, depending on the manufacturer, various ingredients are used, in the case of damage always follow the instructions in the respective manufacturer's product-specific data sheets.

Skin or eye contact: If the substances come into contact with the skin or eyes thoroughly rinse the affected areas with water for at least 15 minutes. In the event of eye contact, in addition to thoroughly rinsing with water, always contact a doctor.

Burns:
If burns are caused, treat them accordingly. Likewise, we urgently recommend contacting a doctor.

Respiratory tract:
Leave the room immediately if there is an intensive smoke build-up or release of gas. Call in a doctor if there are large quantities and irritation of the airways. If possible provide for sufficient ventilation.

Swallowing:
Rinse out the mouth and around the mouth with water. Immediately call for the help of a doctor.

5. FIRE-FIGHTING MEASURES

Fires from lithium batteries in use (such as in a laptop or electric vehicle) can in principle be fought with water. Differentiating between various systems of lithium batteries at the time of a fire is generally not possible and is unnecessary.

Due to the design and the battery properties, no additional or special extinguishing agents need to be available, since the batteries are protected accordingly. Fire surrounding the batteries is to be fought with conventional extinguishing agents. The fire of a battery cannot be considered separately from the surrounding fire.

The cooling effect of water effectively impedes fire from spreading to battery cells which still have not reached the critical ignition temperature ("thermal runaway").

Use of water is also favourable in light of its wide availability.

Hybrid or fully electric vehicles pose no greater risk with the high-voltage batteries switched off than conventional vehicles.

As with all fires, inhalation of the gases produced by the fire can harm one's health. For this reason, provide for sufficient ventilation.

Note:
When firefighting, regardless of these general statements concerning use of lithium batteries, take into consideration the various stages in manufacturing batteries (such as cell production, lab, assembly of cells into batteries), for in these stages cell manufacturers and assembly centres can take special measures which are not suitable for the stage of finished batteries. Due to the need to take into consideration the respective circumstances for this purpose, no relevant recommendations can be made here.

6. ACCIDENTAL RELEASE MEASURES

If the battery housing gets damaged, electrolyte can leak out. Seal batteries in an airtight plastic bag, having added dry sand, chalk powder ($CaCO_3$) or vermiculite. Traces of electrolyte can be soaked up with dry paper towels. When doing so, prevent direct contact with skin by wearing safety gloves. Thoroughly rinse with water.

Use personal safety equipment appropriate for the situation (safety gloves, protective clothing, safety mask, breathing protection). For specific information about personal safety equipment, refer to the manufacturer and product-specific information.

Always proceed in accordance with the manufacturer's instructions. If required, obtain information from the manufacturer.

7. HANDLING AND STORAGE

In each case, carefully observe the warnings on batteries and the operating instructions for devices and other applications. Use only the recommended battery types. Usually only cells of the same type and design can be used. Thus, for example, lithium cells and NiMH cells or cells with a different capacity and voltage are never permitted to be used together.

Effectively prevent a short circuit of the battery poles by using suitable insulation.

Lithium batteries are preferably to be stored at room temperature and in a dry location (for details, refer to the manufacturer's specifications concerning the storage temperature range); large temperature fluctuations are to be avoided. (For example, do not store in the vicinity of heating elements, do not expose to sunshine for long periods).

If substances leak out due to damage or improper handling, be sure to comply with the manufacturer's instructions. This particularly includes the use of personal safety equipment.

When storing great quantities of lithium batteries, make an arrangement with the local authorities. In general and independent of batteries: A building permit is required for storage buildings.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Lithium batteries are products, from which no substance is released under normal and reasonably foreseeable conditions of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

At this place, reference is made to the properties of the respectively used substances, which are described in the manufacturer and product-specific data sheets for lithium batteries.

10. STABILITY AND REACTIVITY

If an upper temperature limit is exceeded (see product-specific data sheets of the manufacturer), the batteries are in danger of bursting.

When charging a rechargeable system, always be sure to comply with the upper voltage limit. If the limits are exceeded, the battery may burst or even explode. Charging a non-rechargeable system, which is not permitted, may cause the battery to burst or explode.

Likewise, the end-point voltage must not be undershot. Here as well, there is a danger of bursting.

11. TOXICOLOGICAL INFORMATION

At this place, reference is made to the toxicological information of the respectively used substances, which are described in the manufacturer and product-specific data sheets for lithium batteries.

12. ECOLOGICAL INFORMATION

At this place, reference is made to the environment-related information of the respectively used substances, which are described in the manufacturer and product-specific data sheets for lithium batteries.

13. DISPOSAL CONSIDERATIONS

Lithium batteries are marked with the symbol of the crossed-out wheeled bin (see figure).



The symbol reminds the end user that batteries are not permitted to be disposed of with household waste, but must be collected separately. Spent batteries have to be returned free of charge to collection schemes or distributors.

To prevent short circuits and associated heating up, lithium batteries are never permitted to be stored or transported in bulk form and unprotected. Suitable measures against short circuits include:

- Placing the batteries in original packaging or a plastic bag
- Masking the poles
- Embedding in dry sand

For portable lithium batteries, collection and recycling targets are defined as part of the European battery legislation.

Based on the European battery directive and as specified in Germany by the German Battery Act, all battery manufacturers and importers have to register with the German Federal Environment Agency before placing batteries on the market. The organisation of the take-back of spent batteries must be specified at the time of registration. Acceptance of the producer obligations has to be clearly defined for all batteries before initially placing them on the market.

However, Member States may dispose of collected portable batteries or accumulators in landfills or underground storage when no viable end market is available.

Disposal of waste industrial and automotive batteries by incineration or in landfills is prohibited. However, residues of any batteries and accumulators that have undergone both treatment and recycling may be disposed of in landfills or by incineration.

14. TRANSPORT INFORMATION

Important note!

Commercial transport of lithium batteries is subject to dangerous goods regulations. Transport preparations and transport are exclusively to be carried out by appropriately trained persons and/or the process has to be accompanied by corresponding experts or qualified companies.

Transport regulations:
Lithium batteries are subject to the following dangerous goods regulations and exceptions to them—in the version applicable in each case:

Class 9
UN 3090: LITHIUM METAL BATTERIES
UN 3091: LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, or
LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT
UN 3480: LITHIUM ION BATTERIES (including lithium-ion-polymer batteries)
UN 3481: LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, or
LITHIUM ION BATTERIES PACKED WITH EQUIPMENT
(including lithium-ion-polymer batteries)
Packing group: II, Tunnel category E

Special provisions and packing instructions:
ADR, RID: 188, 230, 310, 636, P903, P903a, P903b
Note: For ADR, see
http://www.unece.org/trans/danger/publi/adr/adr2011/11contentse.html

IATA: A88, A99, A154, A164, P965, P966, P967, P968, P969, P970
Note: For the IATA Guidance Document on lithium batteries, see
www.iata.org/whatwedo/cargo/dangerous_goods/Pages/lithium_batteries.aspx

IMDG Code: 188, 230, 310, P903
EmS: F-A, S-I
Stowage category A

Test and inspection specifications
In accordance with the dangerous goods regulations for lithium batteries, each new type of cell or battery must have passed all tests listed in the UN Manual of Tests and Criteria, Part III, Section 38.3. This particularly applies also if multiple cells or batteries have been assembled into new batteries (battery packs or battery assemblies).
Note: For the UN Manual, see
www.unece.org/trans/danger/publi/manual/Rev6/ManRev6-files_e.html

Used batteries are also subject to these regulations. In the case of used batteries which are intact and undamaged, usually the regulations for new batteries can be applied.

Defective or damaged batteries are subject to more stringent regulations, ranging all the way to complete prohibition of transport. The prohibition of transport applies to air transport carriers (ICAO T.I., IATA DGR - special provision A154).

However, for the transport of used — but not damaged — batteries, refer also to the corresponding special regulations (636), and/or packaging instructions (P903a and P903b / ADR).

Waste batteries and batteries which are sent for recycling or disposal are prohibited from air transport (IATA Special provision A 183).

Exceptions are to be approved by the competent authority of the country of origin and the respective country of the airline.

15. REGULATORY INFORMATION

In Germany, the law governing the sale, return and environmentally sound disposal of batteries and secondary cells (Batteries Act – Batteriegesetz, BattG) from 25 June 2009 applies. This law serves to implement the directive 2006/66/EC (battery directive).)

[Note: In other countries specific regulations are to be considered as appropriate.]

16. OTHER INFORMATION

The instructions provide help for complying with legal specifications, but do not replace them.

The foregoing information was compiled to the best of our knowledge and belief.

It does not represent any guarantee of properties. Distributors and users of the product have their own responsibility for observing applicable laws and regulations.

ZVEI: Batterien

Editor:
ZVEI – Zentralverband Elektrotechnik- und Elektronikindustrie e. V.
Fachverband Batterien
Lyoner Straße 9
60528 Frankfurt, Germany

Phone: +49 69 6302-283
Fax: +49 69 6302-362
E-mail: batterien@zvei.org

© ZVEI 2012
In spite of all due care, however, we cannot accept any liability for the information being complete, correct or up to date.