

**AME-2230B
AME-3230B
MOBILE PRINTERS
USER'S MANUAL**



December 29, 2009
Revision 1.0



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Proprietary Statement

This manual contains proprietary information of Argox Information Co., Ltd. It is intended solely for the information and use of parties operating and maintaining the equipment described herein. Such proprietary information may not be used, reproduced, or disclosed to any other parties for any other purpose without the expressed written permission of Argox Information Co., Ltd.

Product Improvements

Continuous improvement of products is a policy of Argox Information Co., Ltd. All specifications and signs are subject to change without notice.

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A 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 the 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 off and on, the user is encouraged to try to correct the interference by the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into a different outlet on a different circuit.
- Consult the dealer or an experience Radio/TV technician for help.

This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to insure compliance. The user is cautioned that any changes or modifications not expressly approved by Argox Information Co., Ltd. could void the user's authority to operate the equipment.

Liability Disclaimer

Argox Information Co., Ltd. takes steps to assure that the company's published engineering specifications and manuals are correct; however, errors do occur. Argox Information Co., Ltd. reserves the right to correct any such errors and disclaims any resulting liability. In no event shall Argox Information Co., Ltd. or anyone else involved in the creation, production, or delivery of the accompanying product (including hardware and software) be liable for any damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of the use of or the results of use of or inability to use such product, even if Argox Information Co., Ltd. has been advised of the possibility of such damages.

CAUTION:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF exposure warning

The equipment complies with FCC RF exposure limits set forth for an uncontrolled environment.

The equipment must not be co-located or operating in conjunction with any other antenna or transmitter.

Safety

The user is cautioned that any changes or modifications which not recommended by Argox Information Co. Ltd. could result in the loss of the user's authority to operate the equipment.

To ensure compliance, the users must use accessories and peripherals which approved by Argox Information Co. Ltd.



Supplemental Information: This device complies with the requirement of FCC Part 15 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.

INDUSTRY CANADA NOTICE:

This device complies with Industry Canada ICES-003 class A requirements. Cet équipement est conforme a ICES-003 classe A de la norm Industrielle Canadian.



Please only use adapters with the following electrical characteristics and are certified by current legislation. Using other adapters may damage the device and void the warranty also cause risks to the user.

Specifications Input: 100-240VAC, 50-60Hz, 1.0 A
Features Output: 9VDC, 1.5A



The manufacturer declares under sole responsibility that this product conforms to the following standards or other normative documents:

EMC: EN 55022:2006+A1:2007, class A
EN 55024:1998+A1:2001+A2:2003
EN 301489-1/-17
EN 300328



Argox Information Co., Ltd certifies that the following products and/or components are compliant with the current requirements of the European Union Restriction on the use of Hazardous Substances (RoHS) Directive, 2002/95/EC.

Getting Started

Congratulations on choosing AME-3230 & AME-3230B mobile printer series, made by Argox Information Co., a leader in the world-wide barcode industry. AME-2230B and AME-3230B are ideally designed to easily bring more efficiency for your business. This manual will help you get to know your new printer and provide sufficient information needed.

Unpacking Printer

After receiving your printer, please check for possible shipping damage:

Inspect the outside of both the box and the printer for possible damage.

1. Open the top cover of the printer to see if the media compartments are in order.

Note: If shipping damage has been discovered, contact your shipping company immediately to file a claim.

2. Check whether you have received the following accessories together with the printer. If there are any item missing, please contact your local dealer.

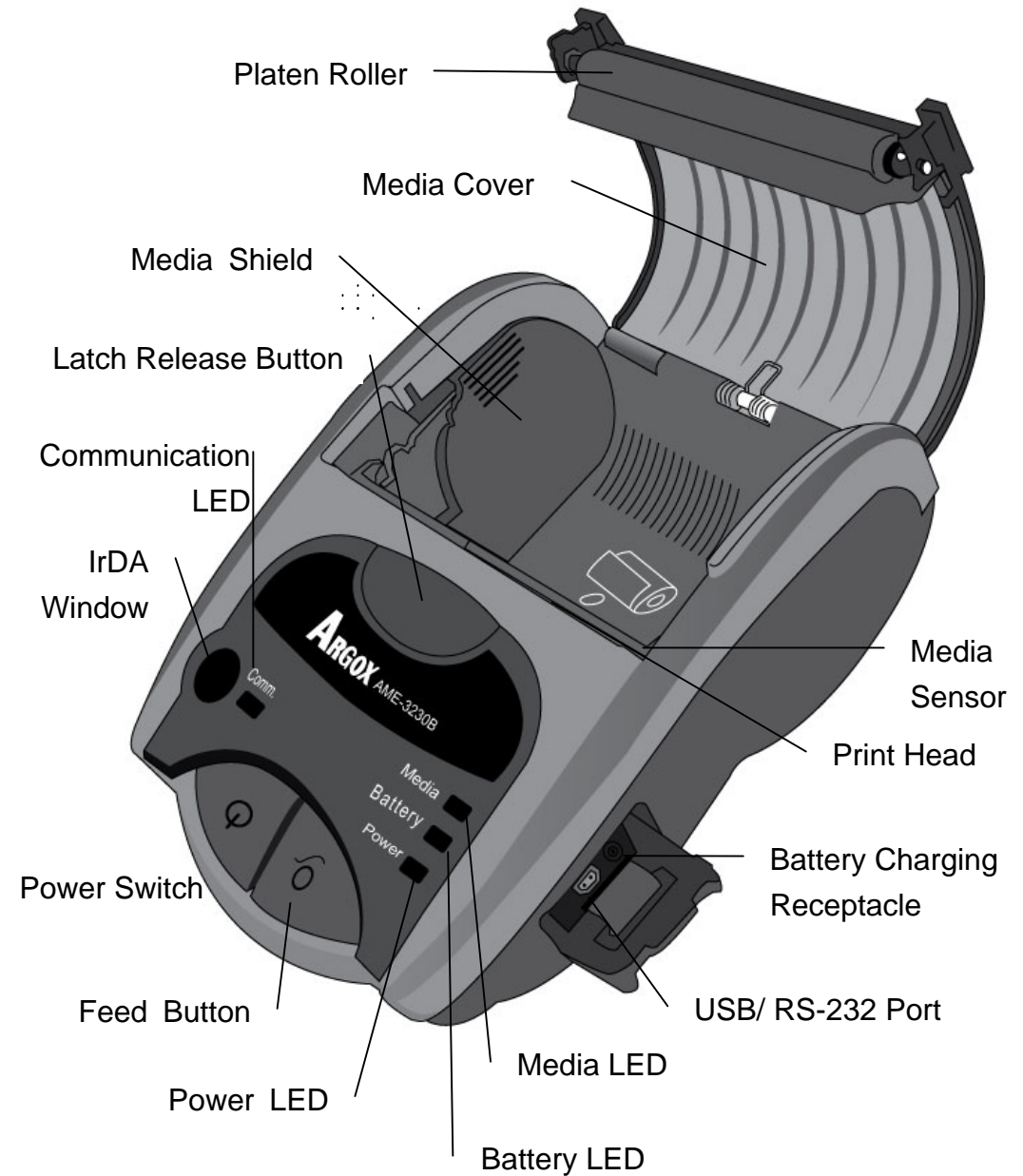


Package Contents

- Printer
- Power Supply
- Battery
- Belt Strap & Screw

- Sample Media
- Media Shield
- CD Rom
- Printhead Cleaning Pen
- Quick Guide

Printer Overview

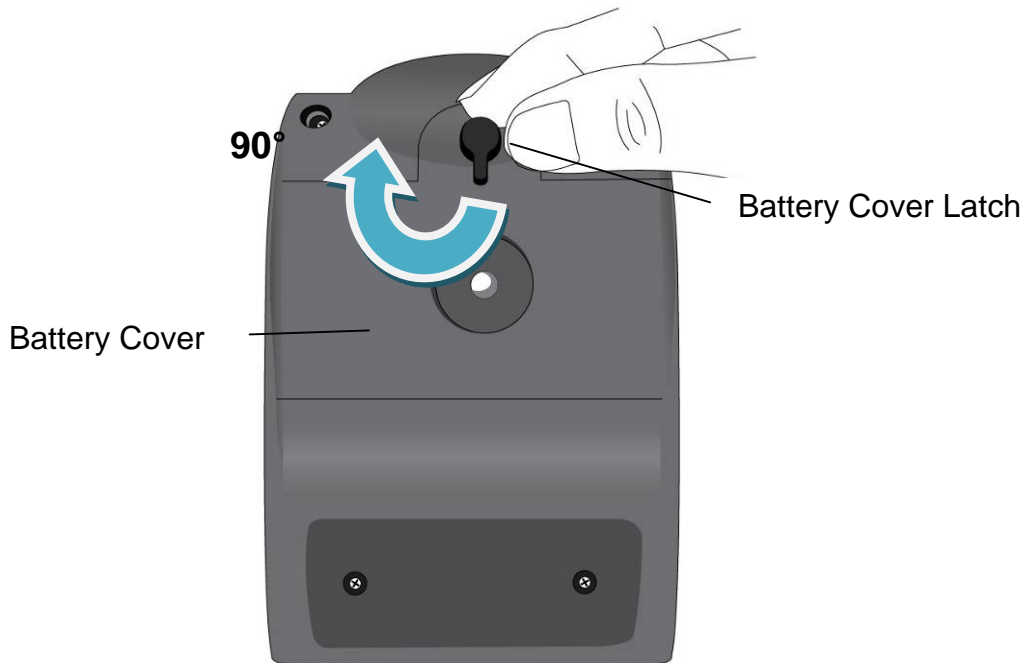


Battery

Each printer package contains one battery pack. Printer power is only supplied by the battery; printer cannot work while battery is not installed, even if the Power Supply is connected. You must fully charge the battery before using the printer for the first time.

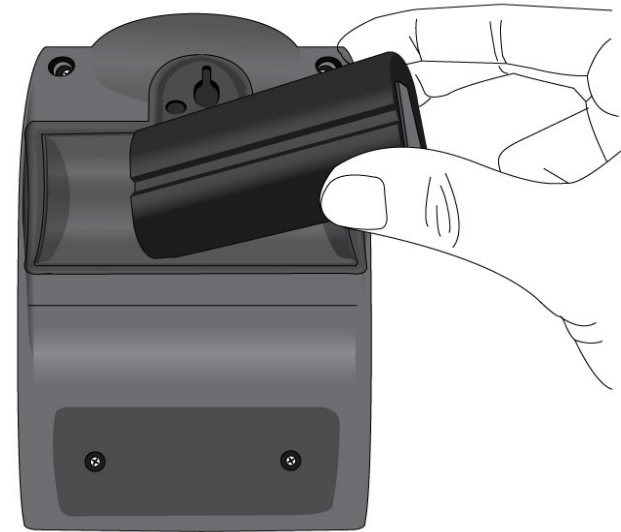
Installing the Battery

1. To release the Battery Cover, rotate the Battery Cover Latch 1/4 turn to the left, as shown below:

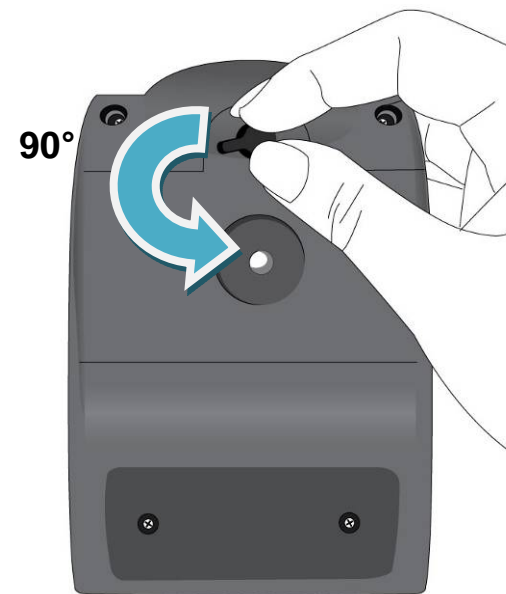


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2. Remove the Battery Cover; install the Battery Pack into printer:



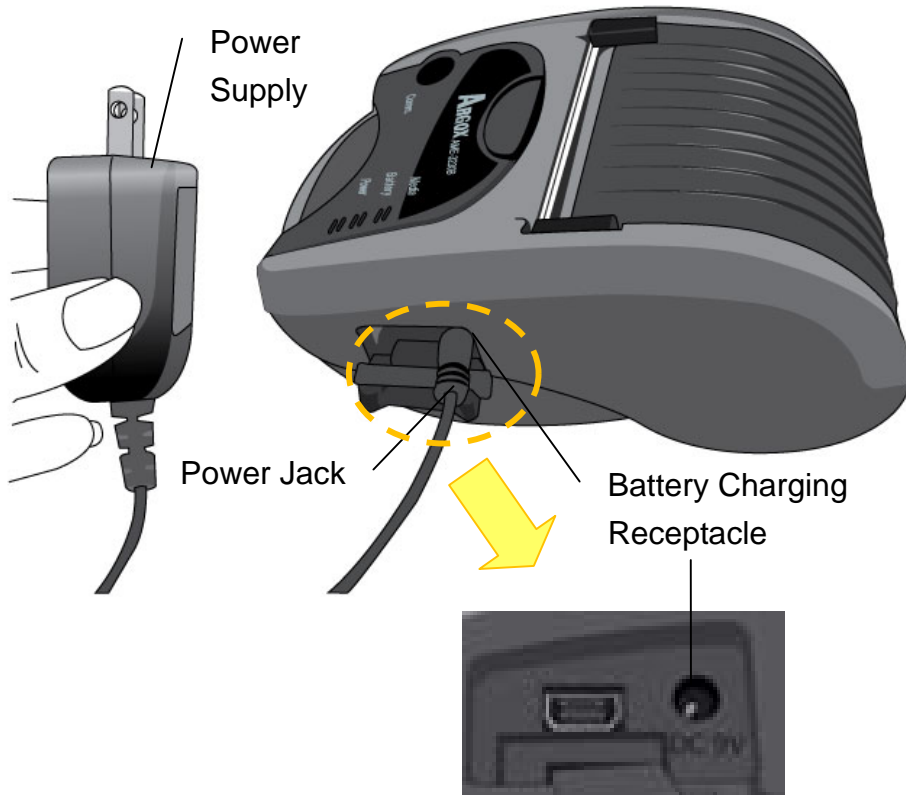
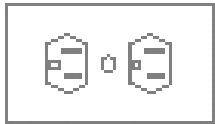
3. Re-install the Battery Cover; rotate the Battery Cover Latch 1/4 turn to the right to lock up:



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Charging the Battery

1. After installing the Battery Pack, connect the Power Supply's Power Jack into printer's Battery Charging Receptacle.
2. Then plug the Power Supply into the AC wall receptacle. Printer's Battery LED will remain yellow during charging.



3. The battery will be fast charged; after about **3.5 hours (210 minutes)**, the Battery LED will be off to remind battery is fully charged and ready for use.

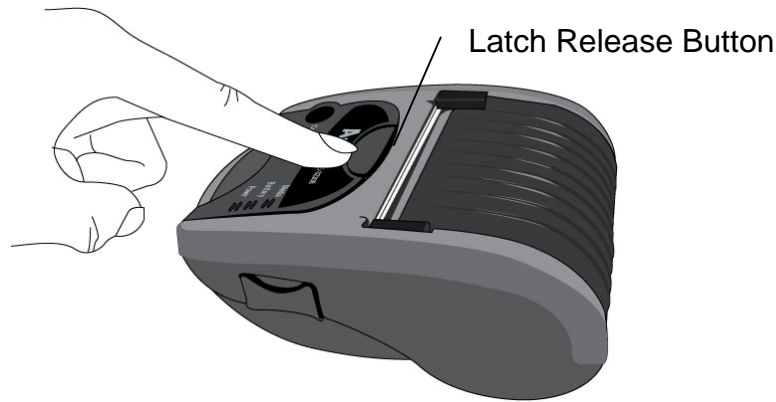
Note: *Operating the printer during charging will increase charging time. Wait until battery is fully charged to operate the printer.*

Battery & Power Notifications

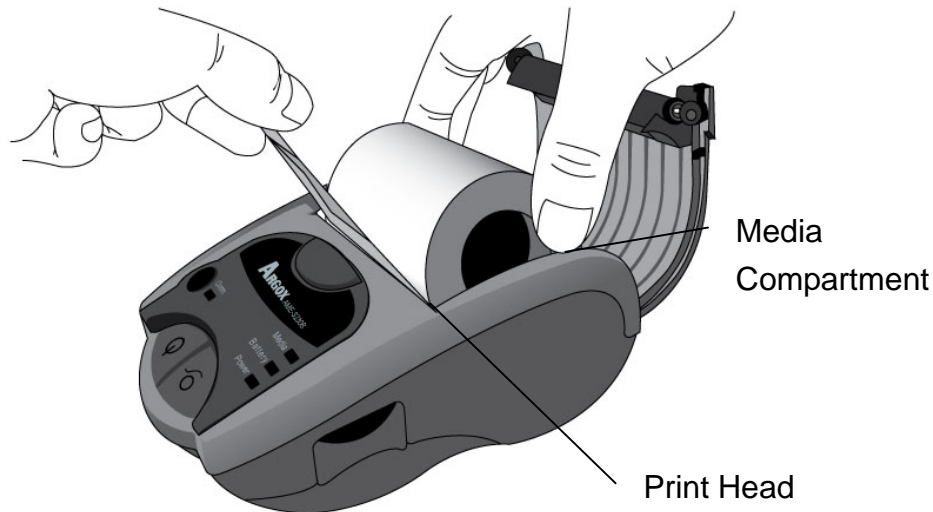
1. Do not disassemble the Battery Pack, in case of malfunction.
2. Keep the Battery Pack and printer away from fire, liquids, and conductive material to avoid possible damage and danger.
3. Be sure to use the Power Supply and Battery Pack provided or approved by Argox.
4. Any damage caused by abnormal use will void the warranty.

Loading Media

1. Press the Latch Release Button on printer to automatically open the Media Cover:

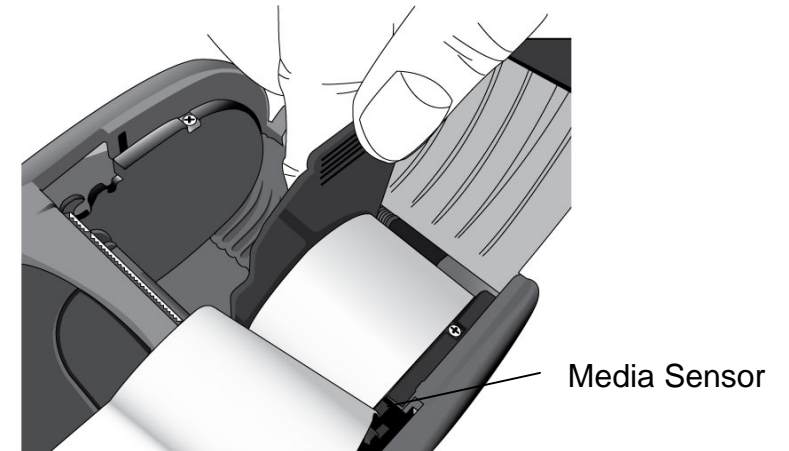


2. Place the media supply roll into the Media Compartment. Make sure media supply unwinds near Print Head, as in the direction shown below:

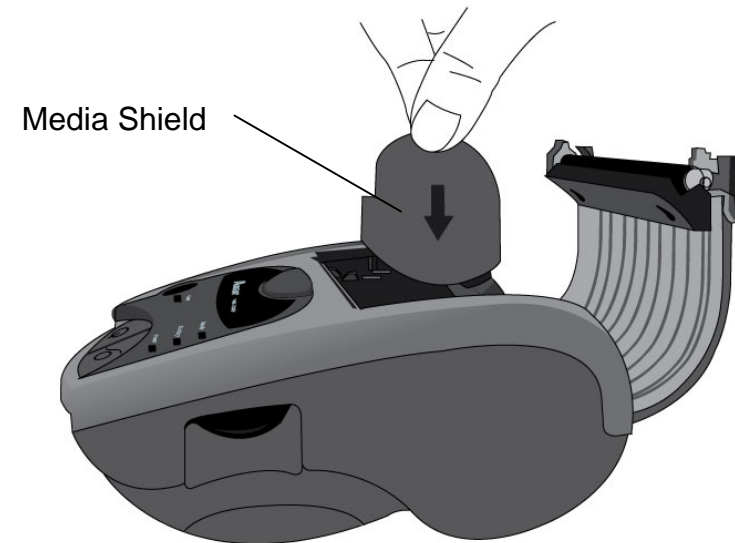


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3. For media supply rolls with width less than 3 inches:
Load media supply first, and then align media supply roll to the right end for correct detection of Media Sensor:

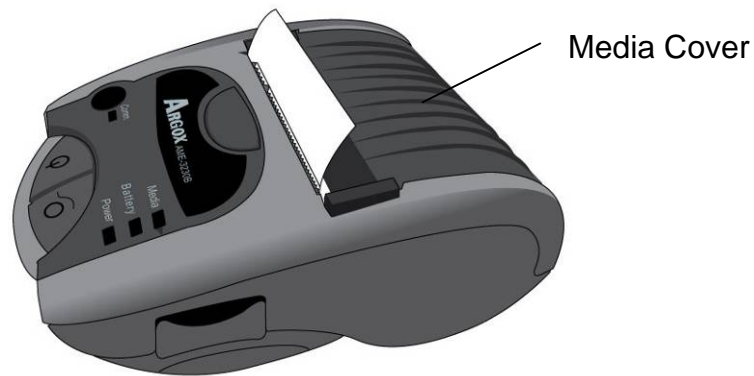


4. Install the Media Shield into Media Compartment, and lean closely against the media supply roll:



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5. Pull a short length of media out of the printer. Close the Media Cover and press to properly latch until you hear a click:



6. Tearing Media:
To tear media, pull the media edge against the Tear Bar as in the direction below:

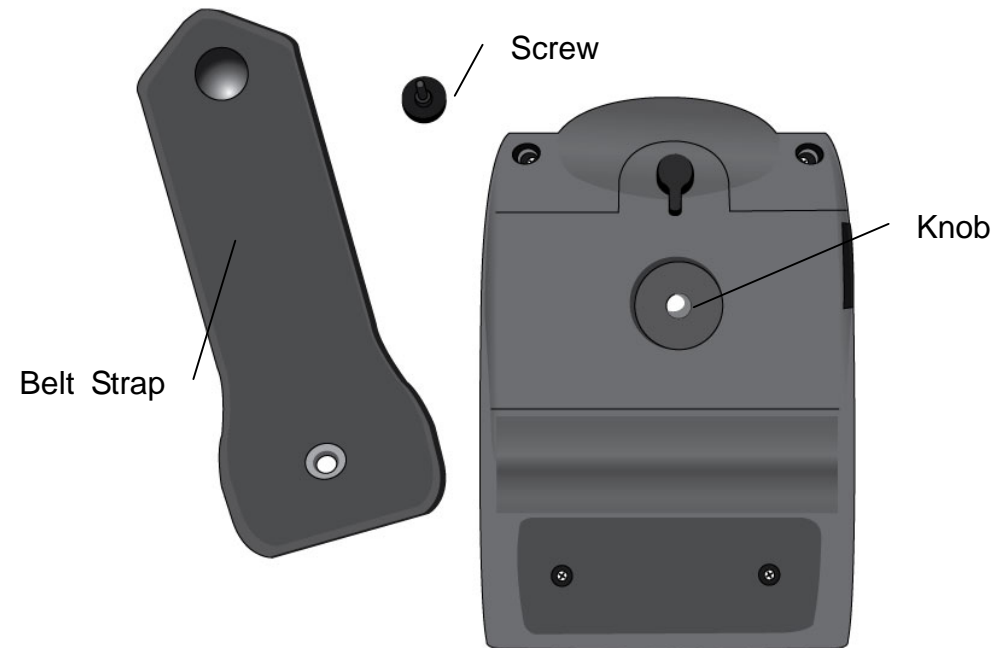


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Wearing Belt Strap

Considering convenience of operators, the Belt Strap design is easy to use and quick to install, as a standard feature of Argox AME-2230B and AME-3230B:

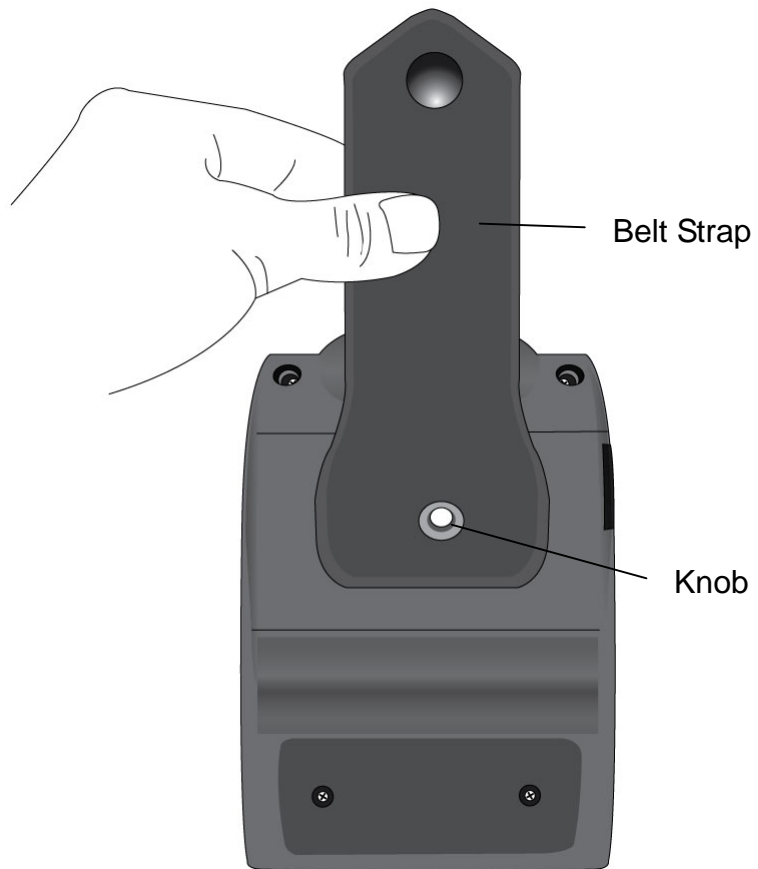
1. Prepare the Belt Strap and the Screw.
Find the Knob located at the printer bottom, right above the Battery Cover:



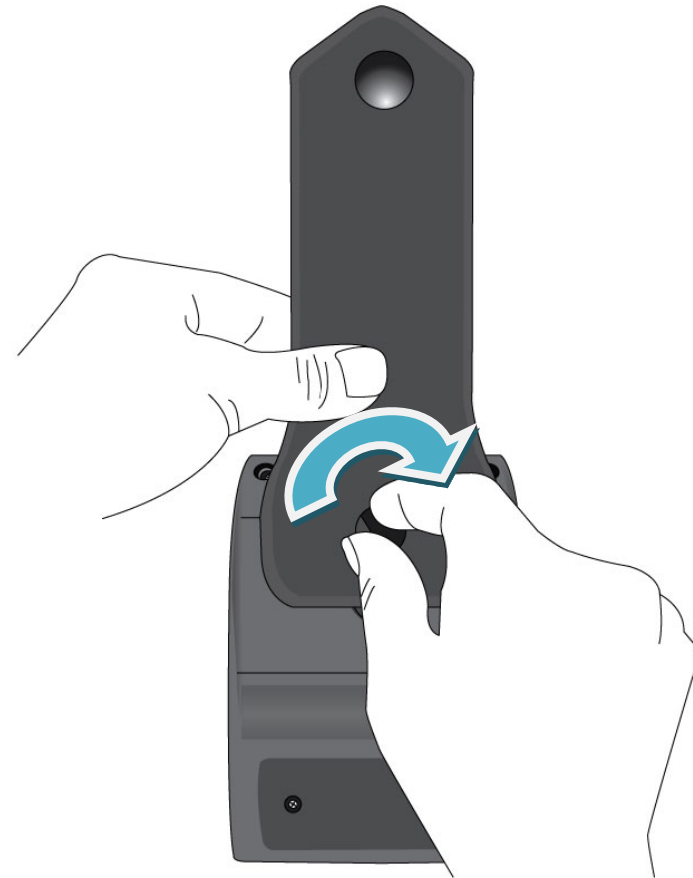
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2. Attach the Belt Strap onto the Knob.

Notice the exterior surface of Belt Strap should face toward you:



3. Insert the Screw onto the Knob, through the Belt Strap, and tighten clock-wise until it is fully secured:



4. Now that printer has been attached with the Belt Strap, place top of the Belt Strap over your belt:



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5. Pull down top of the Belt Strap to fix onto the lock:



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Controls & Connections

Self-Test before Connecting

After the Battery is charged and media is loaded, and before connecting the printer to a computer or a portable data terminal, perform a printer self-test label to verify if printer works properly:

Printing a Self-Test Label

- Press the Power Switch to turn off the printer.
- Make sure the Battery is installed, and media is loaded.
- Press and hold the Feed Button, and then press the Power Switch to turn on the printer.
- After printer starts to print, release the Feed Button.
- Wait until printer finishes printing, press the Power Switch or Feed Button to resume the normal printing mode.

Note: To know more about info on self-test printouts, check Page 30. Troubleshooting – Printing a Configuration Report

Printer Controls and Indicators

The printer's controls and indicators are shown in the diagram below:



Feed Button:

1. Pressing this button during printing will make printer pause.
2. To feed a blank label.

Power Switch: Turn ON/OFF the printer.

The following table explains control and indicator functions to help understanding LED indications and printer status:

Printer Status	Power LED (Green)	Battery LED (Green & Red)	Media LED (Orange)	Communication LED (Blue)	Beep
Power On	ON				
Power Off					
Media Out	ON		Blinking		
Bluetooth Connection	ON			ON	Beep x1
IrDA Connection	ON				Beep x2
RS232 Connection	ON				Beep x3
Charger Connected		ON (Green)			
Battery Low	ON	Blinking slowly (Red)			
Battery Out (printer will power off)	ON	Blinking fast (Red)			Beep

Smart Battery Power Management

The AME-3230B mobile printer is equipped with a Li-ion battery pack (7.4V 2200mAh). With the Smart Battery Power Management function, AME-2230B and AME-3230B are able to monitor and automatically remind operators of different battery power status:

Battery Power Status	Printer's Indications
100%	Battery LED remains on
10%	Battery LED blinks slowly (Reminder: battery power will be 5% in about 30-60minutes))
5%	Battery LED blinks + warning beeps (Reminder: battery power will be 0% in about 30-60minutes)
0%	printer suspends printing (some minor power remains)

Note:

1. If the standby duration exceeds **3 minutes**, printer will turn off automatically, in order to decrease power consumption.
2. The standby duration is changeable, to be set by operators; printer's default standby duration is 3 minutes.

Connecting the Printer

The interfaces of AME-3230 AME-2230 include RS-232, USB(2.0), and IrDA.

The interfaces of AME-3230B AME-2230B include RS-232, USB(2.0), IrDA, and Bluetooth 2.0.

USB and RS-232 communication cables are optional accessories.

USB & RS-232 Communications:

No additional setups are required for cable communications.

Note: Turn off the printer before connecting or disconnecting USB or RS-232 interface cables

- **USB:**
Once USB cable is connected, printer will detect automatically and link to host, without emitting beeps.
- **RS-232:**
When printer is off and RS-232 cable gets connected, printer will emit 3 beeps and automatically switches to RS-232 mode. Next time when printer is turned on, with RS-232 cable remained, printer will emit 1 beep (Bluetooth mode), and then 3 beeps to indicate RS-232 mode.
When RS-232 cable is disconnected, printer will emit 1

beep and switch back to Bluetooth mode.

Bluetooth & IrDA Communications:

The default communication mode of AME-3230B is Bluetooth. What follows will explain how to switch between Bluetooth and IrDA modes.

- **IrDA:**
When printer is in Bluetooth mode, if you press and hold the Feed Button, printer will switch to IrDA mode, while emitting 2 beeps.
- **Bluetooth:**
When printer is in IrDA mode, if you press and hold the Feed Button, printer will switch to Bluetooth mode, while emitting 1 beep.
As long as printer is in Bluetooth mode, the Communication Indicator will always remain blue, whether Bluetooth connection to host is linked or unlinked.

Note: The Communication Indicator will blink blue, during data transmission via all interfaces – Bluetooth, IrDA, RS-232, and USB.

Drivers & Software

AME-2230B and AME-3230B are bundled with their smart printer drivers. By means of this, users can easily print a receipt or label within any Windows applications, e.g. Microsoft Word, labeling software like Bartender, .etc, in operation systems including Windows 2000/ XP/ Vista/ Windows 7.

The AME- 2230B and AME-3230B drivers and Bartender labeling software are available via Argox CD-Rom included in the printer package.

Troubleshooting

Normally, when the printer is in not working properly, the "Power" LED blinks continuously; while printing and communication between the host and printer stops.

Printer Status Indications

Printer status and error indications are displayed via LED indicators. Generally, when a malfunction or an abnormal condition is detected, the ERROR LED will blink.

The table below shows the LED indications corresponding to various errors:

Status	Blinking LED
PAUSE	POWER LED blinking
Possible Symptom & Solution	
The printer is at the PAUSE status. Press FEED button to return to normal printing mode.	

Status	Blinking LED
MEDIA OUT	MEDIA LED blinking
Possible Symptom & Solution	
1. The media is not installed or used up.	

2. Printer fails to detect the media gaps/ black-marks.	
Status	Blinking LED
SERIAL I/O ERROR	POWER LED blinking
Possible Symptom & Solution	
The format or baud rate of the RS232 communication is inconsistent between the printer and host.	

Status	Blinking LED
MEMORY FULL	POWER LED blinking
Possible Symptom & Solution	
The printer memory buffer is fully loaded by downloadable soft fonts, graphics or forms. Check the format & size of stored data with available memory size or call for service.	

Status	Blinking LED
Print Head overheated	POWER LED blinking
Possible Symptom & Solution	
Printer enters the PAUSE status to wait print head to cool down; printer will resume printing tasks when it is ready.	

Performing Calibration

If labels with gaps / black-marks are in use, perform media calibration before printing, to make printer index correctly.

1. Properly install labels.
2. Power off the printer.
3. Press and Hold the FEED button then turn on power; do not release the button until printer starts to feed labels.
4. Afterwards, press FEED button once or twice to check if labels get correctly indexed.

Note: You must always carry out calibration when changing media. Failure to do so will result in improper detection by the label sensor.

Printing a Configuration Report

The Configuration report, or called Self-Test report, can works as a printer diagnosis tool. Steps to print a Configuration report are listed as below:




1. Press the Power Switch to turn off the printer.
2. Make sure the Battery is installed, and media is loaded.
3. Press and hold the Feed Button, and then press the Power Switch to turn on the printer.
4. After printer starts to print, release the Feed Button.
5. Wait until printer finishes printing, press the Power Switch or Feed Button to resume the normal printing mode.


Sample printout of Configuration (Self-Test):




```

Mobile Printer AME3230-201.00 113009
STANDARD RAM: 8388608 BYTES
AVAILABLE RAM: 6805184 BYTES
LABEL LENGTH: 21 M
FLASH MEMORY: 4096K BYTES
INT. FONTS: FONT ID: 966
                CHAR. SET: 136
                HEIGHT: 13
H. POSITION ADJUST.: 0000
CHECKSUM: 0000
LAB LEN(TOP TO TOP): 43 mm.
ABS. DARKNESS: 16
TRIM. DARKNESS: 0
DIRECT THERMAL
REF: 2099
MOTOR LEVEL: LOW

RS232: 9600, 8, N, 1P. XON/XOFF.
MAX LABEL HEIGHT: 100 INCHES
CARET CONTROL CHAR : <^> 5EH
DELIMITER CONTROL CHAR : <, > 2CH
TILDE CONTROL CHAR : <~> 7EH
CODE PAGE : USA1
MEDIA : CONTINUOUS
REPRINT AFTER ERROR : ENABLED
SLEEP TIME: 3 MINUTES
LABEL ANALYSIS LENGTH: 60 mm
BLUETOOTH DEVICE: Argox AME-3230
BLUETOOTH PIN: 0000
    
```

 *Firmware version*
 *Printed label length*
 *Flash memory capacity*

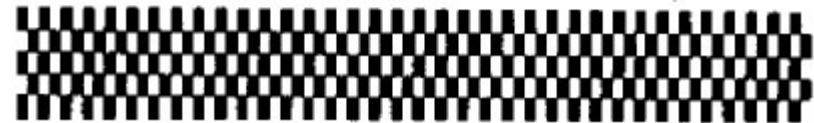
 *RS-232 parameters*


 *Media type setting*
 *Standby duration (in minutes)*
 *Bluetooth PIN code*

```

THIS IS FONT A. 0123ABCabc
THIS IS FONT B. 0123ABCABC
THIS IS FONT C. 0123ABCabc
THIS IS FONT D. 0123ABCabc
THIS IS FONT E. 0123ABCabc
THIS IS FONT F. 0123ABCabc
FONT G. 0123
CG Triumv Bd Condensed.
    
```

 *Internal fonts*




Print Head test

Printer Maintenance

Print Head Maintenance Guide

To keep the Print Head remain in the best conditions and efficiency and to extend duration for use, regular cleaning action is needed:

Note: Always switch off printer power before cleaning.

1. Cleaning Interval:

It's strongly recommended to regularly clean print heads at least when changing every one label roll (in direct thermal printing mode). In addition, if printers are operated under critical applications and environments, or if it's found that print quality is degraded, please clean print heads more frequently.

2. Cleaning Material:

Surface of print head's heating element is very fragile. To prevent from any possible damage, please use the Printhead Cleaning Pen in printer package, or soft cloth/ cotton buds with "Ethanol" or "industry alcohol" to clean print head surface.

It's strongly recommended to wear hand gloves during cleaning progress.

Do not touch print head surface by bare hands or with any hard equipment.

Water or spit should be kept away in case of corrosion on heating elements.

3. Cleaning Direction:

When cleaning the print head, always wipe in One-Way Direction - from Left to Right only, or, from Right to Left only, to clean "Heating Line" of print head gently without excessive stress. Do not wipe back and forth, to avoid dust or dirt on cleaning cotton would be attached onto print head again.

Cleaning the Media Sensor:

Debris or dirt on the Media Sensor can cause a miss-read or unstable detection to index label gaps/ black-marks. Clean the Media Sensor properly with a cotton bud dampened with alcohol.

Specifications

General Specifications

Specifications	AME-3230 (3") AME-2230 (2")	AME-3230B(3") AME-2230B(2")
Printing Method	Direct Thermal	
Printing Resolution	203 dpi(8 dots/mm)	
Printing Speed	2~ 3ips(51~76mm/s)	
Printing Length	40"(1016mm)	
Printing Width	AME-3230B 2.8" (72mm) AME-2230B 2" (54mm)	
Memory	8MB DRAM(6MB User available), 4MB Flash ROM(2MB User available)	
CPU Type	32 bit RISC microprocessor	
Media Sensor	Media gap/black line sensor, Paper end sensor, Open cover sensor	
Operation Interface	LED indicator x 4 (Power status/Battery/Media/Communication), Button x 2(Power/Feed)	
Communication Interface	RS-232, USB(2.0), IrDA	RS-232, USB(2.0), IrDA, Bluetooth 2.0
Fonts	Internal character sets standard 5 alpha-numeric fonts from 0.049"H ~ 0.23" H (1.25mm ~ 6.0mm) All fonts are expandable up to 24x24 4 direction 0 ~ 38 ³⁸ rotation Ability to print any Windows True Type font easily	

Interface Specifications

Serial Interface:

RS-232C port with a mini-type 10-pin connector.

Flow Control mechanism is either RTS/CTS or X-on/X-off (control characters are DC2 and DC4).

Programmable parameters are listed as below:

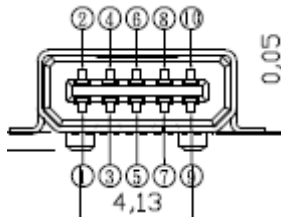
Speed: 1200, 2400, 4800, 9600, 19200,
38400, 57600, 115200 bauds

Parity: Odd, Even or None.

Data Bits: 7 or 8 bits.

Stop Bit(s): 1 or 2 bits.

Factory Default Parameters: 9600 bauds, no parity,
8 data bits, 1 stop bit.



Pin	Signal	Description
3	Transmitted Data, TxD	Output. Serial "Transmitted Data".

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5	Received Data, RxD	Input. Serial "Received Data"
7	Request to Send, RTS	Output. Used as the control signal for "H/W Flow Control"
9	Clear to Send, CTS	Input. Used as the control signal for "H/W Flow Control"
10	GND	Signal ground

USB Interface:

This port complies with USB 2.0 Full-Speed communication.

The USB interface is a mini-type USB 10-pin connector.

Pin	Signal	Description
2	VBUS	5V
4	D -	Differential data signaling pair -
6	D +	Differential data signaling pair +
10	GND	Ground

Bluetooth Interface:

Bluetooth version: 2.0

Communication range: 10 meters

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IrDA (Infrared) Interface:

IrDA version: 1.0

Communication zone:

