

V420T / V430T / V460T

Print & Apply System

User Manual

Bilingual Edition / 中英对照版

Shenzhen Aiweima Technology Co., Ltd. (Nmark) — www.nmark.com.cn

V420BT/V430BT

打印贴标机

使用说明

Nmark

Cover

Print & Apply System (print-and-apply labeling machine)

V420BT / V430BT

User Manual

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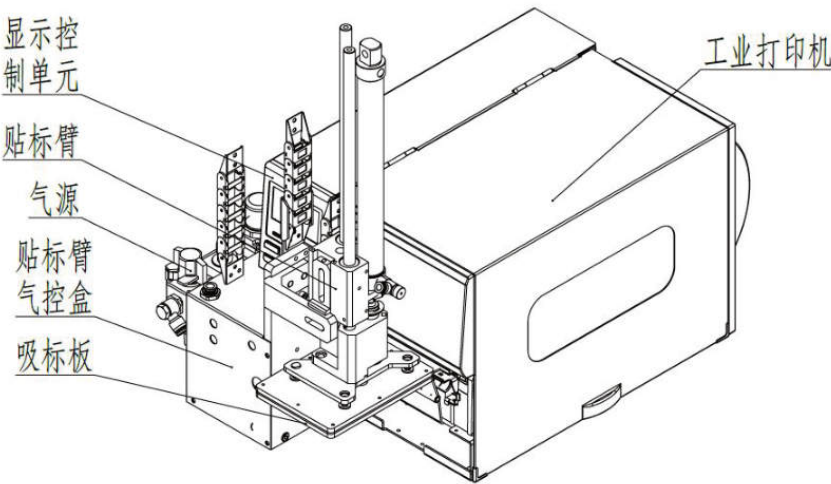
1. New template
2. Download template
3. Invoke template

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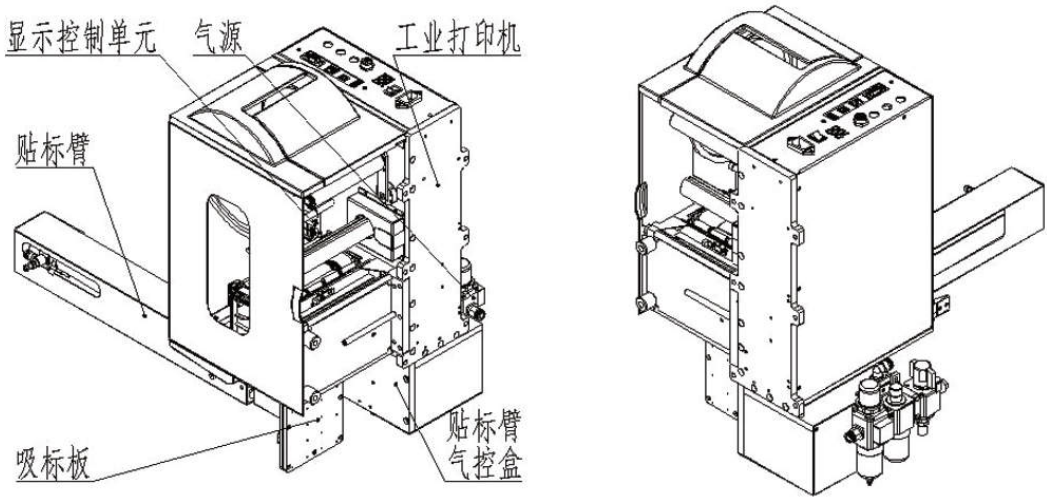
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顶贴、侧贴篇

顶贴整体结构



侧贴整体结构



Top / Side Labeling — Overall Structure

Illustration/diagram page - see the original Chinese document for the image.

Top-labeling overall structure; side-labeling overall structure.

顶贴、侧贴、卧贴性能指标

- 1.顶贴、侧贴、卧贴物品清单
 - 1.1 工业打印机
 - 1.2 贴标臂
 - 1.3 贴标板
- 2.顶贴、侧贴、卧贴打印性能
 - 2.1 打印模式：热转印/热感
 - 2.2 分辨率：203dpi/306dpi (V420BT/V430BT)
 - 2.3 标签尺寸：最大宽度110mm 最大长度300mm
 - 2.4 纸卷长度：180m
 - 2.5 色带长度：300m (V420BT/V430BT)
 - 2.6 打印速度：150mm每秒/125mm每秒 (V420BT/V430BT)
 - 2.7 最大打印宽度：104mm
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- 3.顶贴、侧贴、卧贴标性能
 - 3.1 贴标臂种类：气缸
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 - 3.5 外部信号：输入1：触发打印 输出1：打印完成
输入2：触发贴标 输出2：贴标完成
输入3：清除数据 输出3：故障报警
 - 3.6 指令控制：DIAGNOSTIC LABARM 105 1\r\n //启动打印
DIAGNOSTIC LABARM 105 2\r\n //启动贴标
 - 3.7 生产节拍：大于等于3 秒/张(100mm*100mm标签)
 - 3.8 行程：150mm 有效行程，联系销售工程师进行确认
- 4.顶贴、侧贴、卧贴打印贴标软件
 - 4.1 标签编辑：NSCL指令集
 - 4.2 通讯端口：网口输入 USB输入 串口输入
 - 4.3 标签打印：用户自行发送标签打印数据到打印贴标机
 - 4.4 打印方式：windows电脑驱动打印
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- 5.保修条款
 - 5.1 打印头保修30公里或三个月以先到达为准
 - 5.2 打印主机及贴标主体部分保修一年
 - 5.3 耗材除外
- 6.需要的耗材
 - 6.1 碳带
 - 6.2 标签

Top / Side / Horizontal Labeling — Performance Specifications

1. Top / side / horizontal labeling item list

- 1.1 Industrial printer
- 1.2 Labeling arm
- 1.3 Labeling plate

2. Top / side / horizontal printing performance

- 2.1 Print mode: thermal transfer / thermal direct
- 2.2 Resolution: 203 dpi / 306 dpi (V420BT / V430BT)
- 2.3 Label size: max width 110 mm, max length 300 mm
- 2.4 Media roll length: 180 m
- 2.5 Ribbon length: 300 m (V420BT / V430BT)
- 2.6 Print speed: 150 mm/s / 125 mm/s (V420BT / V430BT)
- 2.7 Max print width: 104 mm
- 2.8 Max print height: 300 mm

3. Top / side / horizontal labeling performance

- 3.1 Labeling arm type: pneumatic cylinder
- 3.2 Labeling method: tamp labeling
- 3.3 Labeling direction: top / side / horizontal
- 3.4 Label size: max width 110 mm, max length 300 mm
- 3.5 External signals: Input 1: trigger print — Output 1: print complete;
Input 2: trigger label — Output 2: labeling complete;
Input 3: clear data — Output 3: fault alarm
- 3.6 Command control: DIAGNOSTIC LABARM 105 1 — start printing;
DIAGNOSTIC LABARM 105 2 — start labeling
- 3.7 Cycle time: ≥ 3 s/label (100 mm x 100 mm label)
- 3.8 Stroke: 150 mm effective stroke; confirm with the sales engineer

4. Top / side / horizontal print-and-apply software

- 4.1 Label editing: NSCL command set
- 4.2 Communication ports: Ethernet input, USB input, serial input
- 4.3 Label printing: user sends label print data to the print & apply system
- 4.4 Printing method: Windows driver printing; command-set printing; template printing

5. Warranty terms

- 5.1 Printhead warranty: 30 km or three months, whichever comes first
- 5.2 Print host and labeling body: one-year warranty
- 5.3 Consumables excluded

6. Consumables required

- 6.1 Thermal transfer ribbon
- 6.2 Labels

顶贴、侧贴篇

顶贴、侧贴、卧贴机使用及维护

- 1.设备使用AC220V电源。
- 2.使用气源压力0.8-1Mpa，气流量不少于60L/min，气管直径8毫米。
- 3.气源的接入及气源处理组件使用说明：
 - 1)初次安装在气源接口处插入外径8mm的气源供气管，调整压力表压力至0.4-0.5Mpa，保证供给压力稳定，气体干燥洁净。
 - 2)如需调整压力提起减压阀旋钮顺时针旋转增加压力，逆时针旋转为减小压力。调整完成后下压旋钮进行锁定。
 - 3)图中残压释放阀处于关闭状态，下压旋钮且顺时针旋转90度贴标机接通气源，此时吸标板上升至吸标位置。（注意：打开残压阀吸标板会上升，关闭残压阀吸标板会下落，注意刮碰。避免损坏设备及刮碰人员！）
 - 4)气源处理组件需每日检查空气过滤器中的水，如果过滤器中的水满了，手动按排水口，即可排水。

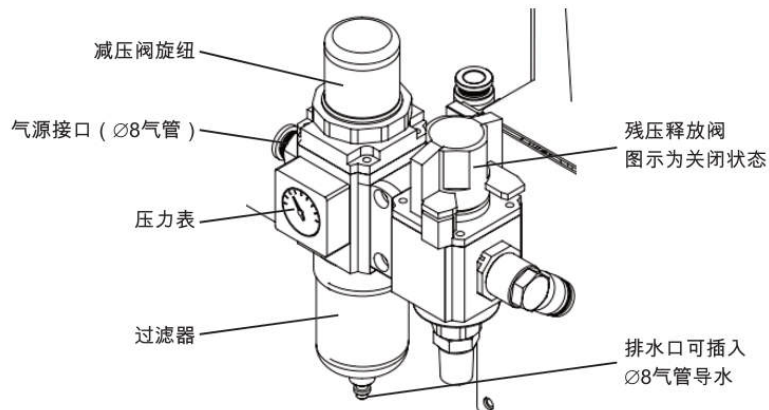
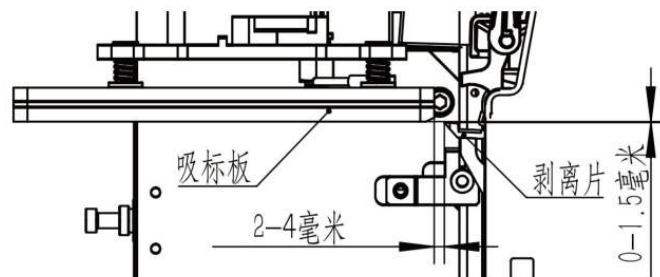


图1

- 4.定期保养气泵，排水排油。保证气源洁净、含水量不可过高。
- 5.初次使用检查吸标板高度与剥离片之间高度0mm~1.5mm之间进行调整，前后间隙2-4mm，调整后关闭气源手动升降吸标板看是否刮碰剥离片以免损坏元件。调整间隙时，松开L块的固定螺钉，前后滑移L块调整至需要位置再锁紧螺钉。调整上下高度时，松开滑动块固定的两个螺钉，旋转上方调整螺钉，逆时针旋转吹标板向上移动，顺时针吸标板向下移动。见图2。



Top / Side / Horizontal Labeling Machines — Use & Maintenance

1. The equipment operates on AC 220 V power.
2. Air supply pressure 0.8–1 MPa, air flow not less than 60 L/min, tubing diameter 8 mm.

3. Air supply connection and air-treatment unit

- 1) On first installation, insert an 8 mm OD air supply tube into the air inlet, and adjust the pressure gauge to 0.4–0.5 MPa, ensuring a stable supply of dry, clean air.
- 2) To adjust pressure, lift the pressure-reducing valve knob: turn clockwise to increase, counterclockwise to decrease. After adjustment, press the knob down to lock it.
- 3) The residual-pressure release valve shown is in the closed state. Press the knob down and turn it 90° clockwise to open the air supply to the labeling machine; the label-suction plate then rises to the label pick-up position. (Caution: opening the residual-pressure valve raises the suction plate, and closing it lowers the suction plate — watch for collision. Avoid damaging the equipment or injuring personnel!)
- 4) The air-treatment unit must be checked daily for water in the air filter. If the filter is full, press the drain port to drain it.

Labels in Figure 1: pressure-reducing valve knob; air inlet (Ø8 mm tube); pressure gauge; residual-pressure release valve (shown in closed state); filter; drain port (Ø8 mm tube can be inserted for water drainage).

顶贴、侧贴篇

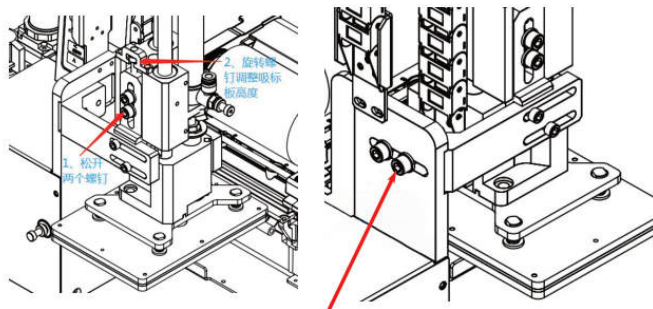
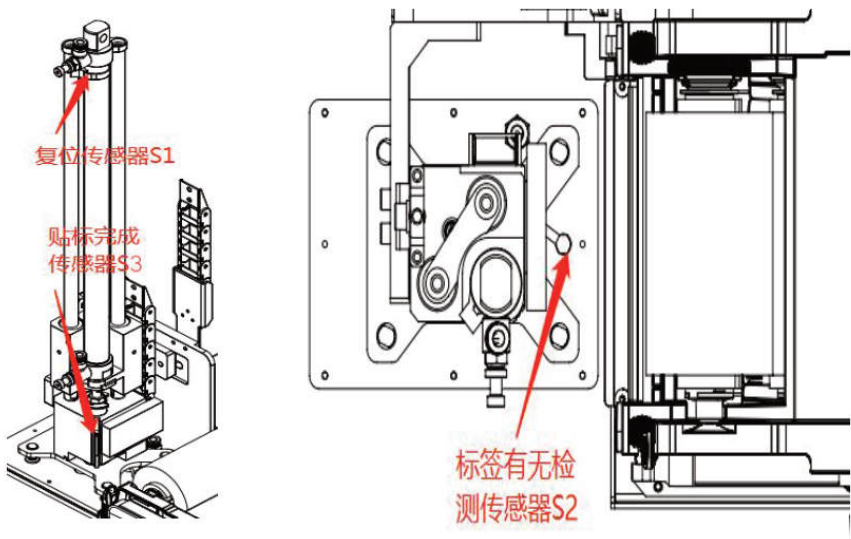


图2

前后间隙2-4mm，
调整间隙时，松开L块的固定螺钉，
前后滑移L块调整至需要位置再锁紧螺钉。

- 6、初次使用，通电、通气开机后检查复位传感器S1、贴标完成传感器S3及标签有无检测传感器S2传感器是否正常工作。复位传感器S1通电、通气、开机后处于常亮状态。标签有无检测传感器S2打印走纸过程中剥离开的标签对其遮挡其放大器控制盒会有红绿双灯亮起。贴标完成传感器S3在接触物体时会亮起，触发后贴标臂会缩回。
- 注：若复位传感器异常，贴标时会报错S1。
通常未完成正常贴标通常会报错S2。



Top / Side Labeling — Sensor Check

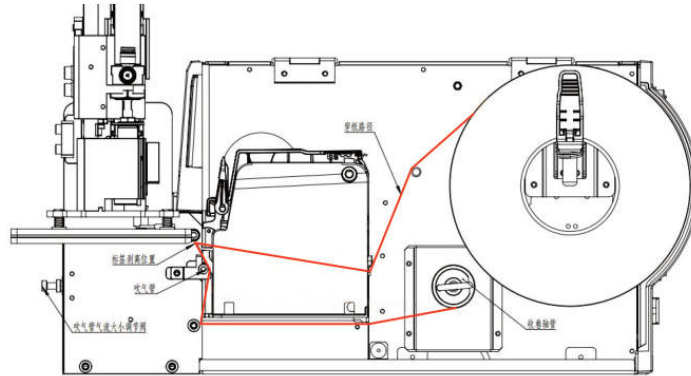
6. On first use, after powering on and connecting air, check whether the reset sensor S1, the labeling-complete sensor S3 and the label-presence sensor S2 work normally. After power-on and air-on, the reset sensor S1 stays continuously lit. During printing/media feed, when a peeled label covers the label-presence sensor S2, its amplifier box shows both red and green lights on. The labeling-complete sensor S3 lights when it contacts an object; after it is triggered, the labeling arm retracts.

Note: if the reset sensor is abnormal, the machine reports S1 when labeling. Failure to complete normal labeling usually reports S2.

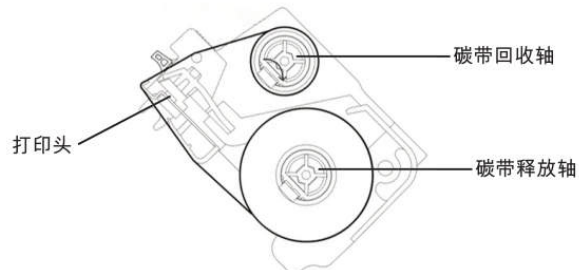
Figure 2: front–rear clearance 2–4 mm. To adjust, loosen the fixing screw of the L-block, slide the L-block forward/backward to the required position, then re-tighten the screw.

顶贴、侧贴篇

- 7、使用时注意穿纸位置及方法。如图示意穿纸路径，只有正确穿纸才不会影响正常工作。例如纸张如果穿到吹气管前面挡住吹气孔打印时标签会掉落。



- 8、碳带安装路径：



- 9、(如图2位置)贴标时检查贴标完成传感器S3在触碰贴标物体时是否亮灯。贴标时下方无物体时贴标臂会下落到最大行程处停止，保持一小段时间(5s)会自动缩回，此时会提示贴标臂错误S3报警。

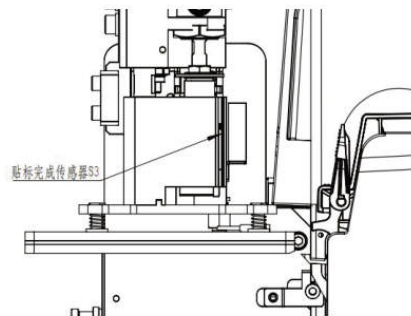


图2

- 10、吹气气流量大小对贴标的影响：气流量过大或吹气角度不适合时，会产生把纸吹跑现象，气流量过小或吹气角度不适合时会产生标签不贴合吸标板标签掉落现象。应当让被剥离的标签沿着吸标板下平面平稳向前平移。
- 11、注明：使用前检查事项同样适用日常工作中故障检查。
- 12、遇到电磁阀、真空发生器等电气、机械故障时需打开护罩检查时，建议联系售后服务。
- 13、贴标机工作时必须按要求固定，否则会造成贴标机被顶起从而发生危险事故。

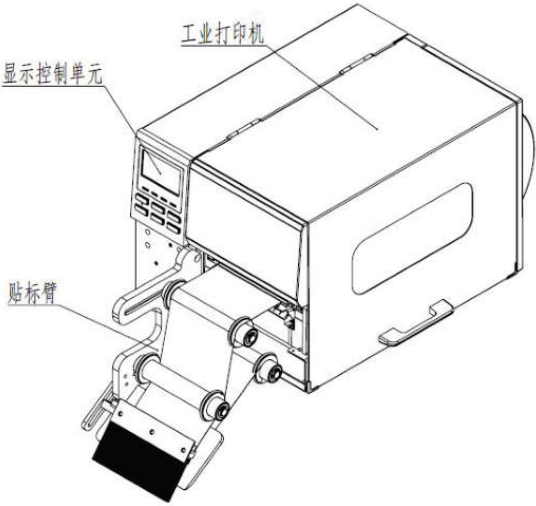
Top / Side Labeling — Media & Ribbon Path, Blow Air

7. Note the media loading position and path during use. Follow the illustrated media path; only correct threading avoids affecting normal operation. For example, if media is threaded in front of the blow tube and blocks the blow holes, labels will fall during printing.
8. Ribbon installation path (see Figure 2).
9. When labeling, check whether the labeling-complete sensor S3 lights when it touches the object being labeled (position shown in Figure 2). If there is no object below, the labeling arm lowers to its full stroke and stops, holds briefly (5 s), then retracts automatically; the machine then reports labeling arm error S3.
10. Effect of blow air flow on labeling: if the air flow is too strong or the blow angle is unsuitable, the label may be blown away; if too weak or at a wrong angle, the label will not stick to the suction plate and will fall. The peeled label should move smoothly forward along the lower face of the suction plate.
11. Note: the pre-use check items also apply to routine fault checks.
12. When electrical or mechanical faults such as solenoid-valve or vacuum-generator problems require opening the cover for inspection, contact after-sales service.
13. The labeling machine must be fixed as required during operation, otherwise the machine may be lifted up and cause a dangerous accident.

Labels in Figure 2: printhead; ribbon take-up shaft; ribbon supply shaft.

刮贴篇

刮贴机整体结构



刮贴机性能指标

- 1.物品清单
 - 1.1 工业打印机
 - 1.2 贴标臂
- 2.刮贴机打印性能
 - 2.1 打印模式：热转印/热感
 - 2.2 分辨率：203dpi/306dpi (V420BT/V430BT)
 - 2.3 标签尺寸：最大宽度110mm 最大长度300mm
 - 2.4 纸卷长度：180m
 - 2.5 色带长度：300m/300m (V420BT/V430BT)
 - 2.6 打印速度：150mm每秒/125mm每秒 (V420BT/V430BT)
 - 2.7 最大打印宽度：104mm
 - 2.8 最大打印高度：300mm
- 3.刮贴机贴标性能
 - 3.1 贴标方式：刮贴
 - 3.2 贴标方向：水平
 - 3.3 标签尺寸：最大宽度110mm 最大长度300mm
 - 3.4 外部信号：

输入1：触发打印	输出1：打印完成
输入2：触发贴标	输出2：贴标完成
输入3：清除数据	输出3：故障报警
- 4.刮贴机打印贴标软件
 - 4.1 标签编辑：NSCL指令集
 - 4.2 通讯端口：网口输入 USB输入 串口输入
 - 4.3 标签打印：用户自行发送标签打印数据到打印贴标机
 - 4.4 打印方式：

windows电脑驱动打印
指令集控制打印
模板控制打印
- 5.保修条款
 - 5.1 打印头保修30公里或三个月以先到达为准
 - 5.2 打印主机及贴标主体部分保修一年
 - 5.3 耗材除外
- 6.需要的耗材
 - 6.1 碳带
 - 6.2 标签

Scrape Labeling — Structure & Specifications

1. Item list

- 1.1 Industrial printer
- 1.2 Labeling arm

2. Scrape labeling machine — printing performance

- 2.1 Print mode: thermal transfer / thermal direct
- 2.2 Resolution: 203 dpi / 306 dpi (V420BT / V430BT)
- 2.3 Label size: max width 110 mm, max length 300 mm
- 2.4 Media roll length: 180 m
- 2.5 Ribbon length: 300 m / 300 m (V420BT / V430BT)
- 2.6 Print speed: 150 mm/s / 125 mm/s (V420BT / V430BT)
- 2.7 Max print width: 104 mm
- 2.8 Max print height: 300 mm

3. Scrape labeling machine — labeling performance

- 3.1 Labeling method: scrape labeling
- 3.2 Labeling direction: horizontal
- 3.3 Label size: max width 110 mm, max length 300 mm
- 3.4 External signals: Input 1: trigger print — Output 1: print complete;
Input 2: trigger label — Output 2: labeling complete;
Input 3: clear data — Output 3: fault alarm

4. Scrape labeling machine — print-and-apply software

- 4.1 Label editing: NSCL command set
- 4.2 Communication ports: Ethernet input, USB input, serial input
- 4.3 Label printing: user sends label print data to the print & apply system
- 4.4 Printing method: Windows driver printing; command-set printing; template printing

5. Warranty terms

- 5.1 Printhead warranty: 30 km or three months, whichever comes first
- 5.2 Print host and labeling body: one-year warranty
- 5.3 Consumables excluded

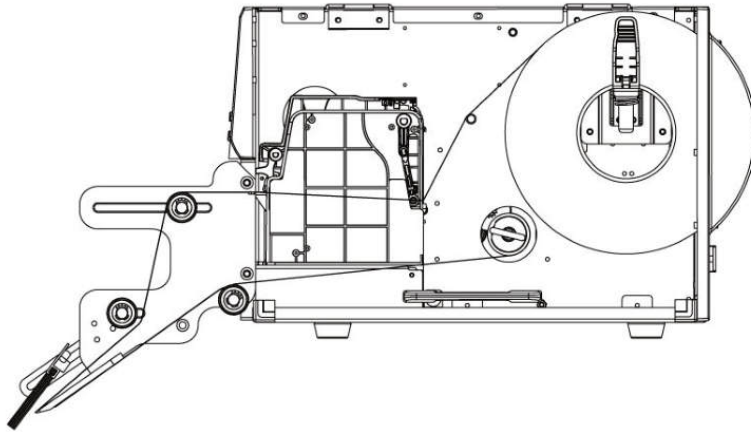
6. Consumables required

- 6.1 Thermal transfer ribbon
- 6.2 Labels

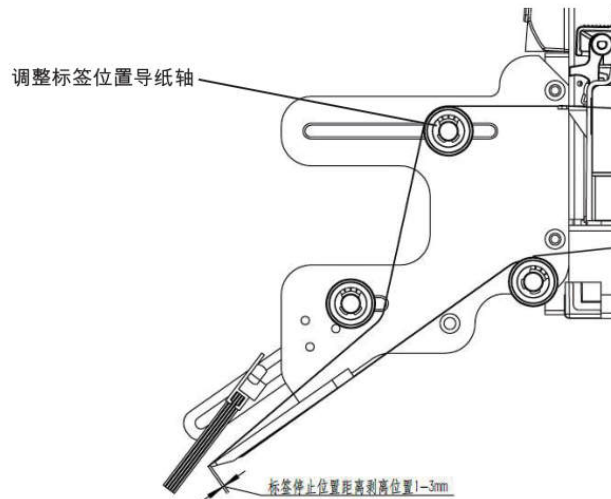
刮贴篇

刮贴机使用及维护

- 1.设备使用AC220V电源。
- 2.初次使用设置：
 - 1) 设置打印参数标签大小与实际标签相符 (宽度及高度) : 菜单—打印参数—标签高度 (标签宽度)
 - 2) 如图安装标签纸



- 3) 初次测试: 触发打印传感器插于后部面板打印信号接口, 按键: 菜单—贴标臂—参数—脱机模式(出厂默认打印使能开启), 遮挡传感器进行贴标走纸, 贴几次标签, 标签停留位置稳定后需进行标签停止位置调整。注意每次剥离开的标签及时取走避免粘贴到其它物体上。
- 4) 标签停止位置调整: 前后调整导纸轴使得标签停止位置距离剥离位置1-3mm, 或根据实际需要调整, 剥离片下部距离被贴物体尽量近1-5mm为宜。



- 3.刮贴机配合生产线使用打印速度为2-6即50-150mm/s,打印速度要大于生产线传送速度。

Scrape Labeling — Use & Maintenance

1. The equipment operates on AC 220 V power.

2. First-use setup

1) Set the print parameters so the label size matches the actual label (width and height): Menu – Print Parameters – Label Height (Label Width).

2) Install the label media as shown in the figure.

3) First test: plug the trigger-print sensor into the print-signal interface on the rear panel. Keys: Menu – Labeling Arm – Parameters – Offline Mode (the factory default has print enable on). Block the sensor to feed and label, and after several labels the label stop position becomes stable, then adjust the label stop position. Note: remove each peeled label promptly to avoid it sticking to other objects.

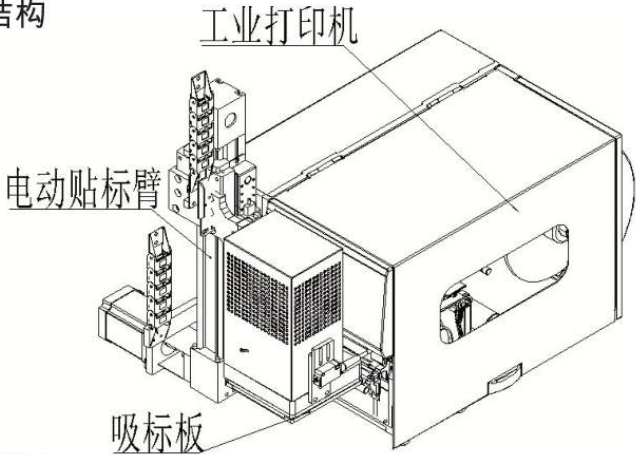
4) Label stop position adjustment: move the media guide shaft forward/backward so the label stop position is 1–3 mm from the peel position, or adjust as actually required. The lower edge of the peel plate should be as close to the labeled object as practical, ideally 1–5 mm.

Figure label: media guide shaft for adjusting label position.

3. When the scrape labeling machine works with a production line, the print speed is 2–6, i.e. 50–150 mm/s; the print speed must be higher than the production-line conveyor speed.

电动贴篇

电动贴标机整体结构



电动贴标机性能指标

- 1.物品清单
 - 1.1 工业打印机
 - 1.2 贴标臂
- 2.电动贴标机打印性能
 - 2.1 打印模式：热转印/热感
 - 2.2 分辨率：203dpi/306dpi (V420BT/V430BT)
 - 2.3 标签尺寸：最大宽度110mm 最大长度300mm
 - 2.4 纸卷长度：180m
 - 2.5 色带长度：300m/300m (V420BT/V430BT)
 - 2.6 打印速度：150mm每秒/125mm每秒 (V420BT/V430BT)
 - 2.7 最大打印宽度：104mm
 - 2.8 最大打印高度：300mm
- 3.电动贴标机贴标性能
 - 3.1 贴标方式：电动贴
 - 3.2 贴标方向：水平
 - 3.3 标签尺寸：最大宽度110mm 最大长度300mm
 - 3.4 外部信号：

输入1：触发打印	输出1：打印完成
输入2：触发贴标	输出2：贴标完成
输入3：清除数据	输出3：故障报警
- 4.电动贴标机打印贴标软件
 - 4.1 标签编辑：NSCL指令集
 - 4.2 通讯端口：网口输入 USB输入 串口输入
 - 4.3 标签打印：用户自行发送标签打印数据到打印贴标机
 - 4.4 打印方式：

windows电脑驱动打印
指令集控制打印
模板控制打印
- 5.保修条款
 - 5.1 打印头保修30公里或三个月以先到达为准
 - 5.2 打印主机及贴标主体部分保修一年
 - 5.3 耗材除外
- 6.需要的耗材
 - 6.1 碳带
 - 6.2 标签

Electric Labeling — Structure & Specifications

1. Item list

- 1.1 Industrial printer
- 1.2 Labeling arm

2. Electric labeling machine — printing performance

- 2.1 Print mode: thermal transfer / thermal direct
- 2.2 Resolution: 203 dpi / 306 dpi (V420BT / V430BT)
- 2.3 Label size: max width 110 mm, max length 300 mm
- 2.4 Media roll length: 180 m
- 2.5 Ribbon length: 300 m / 300 m (V420BT / V430BT)
- 2.6 Print speed: 150 mm/s / 125 mm/s (V420BT / V430BT)
- 2.7 Max print width: 104 mm
- 2.8 Max print height: 300 mm

3. Electric labeling machine — labeling performance

- 3.1 Labeling method: electric labeling
- 3.2 Labeling direction: horizontal
- 3.3 Label size: max width 110 mm, max length 300 mm
- 3.4 External signals: Input 1: trigger print — Output 1: print complete;
Input 2: trigger label — Output 2: labeling complete;
Input 3: clear data — Output 3: fault alarm

4. Electric labeling machine — print-and-apply software

- 4.1 Label editing: NSCL command set
- 4.2 Communication ports: Ethernet input, USB input, serial input
- 4.3 Label printing: user sends label print data to the print & apply system
- 4.4 Printing method: Windows driver printing; command-set printing; template printing

5. Warranty terms

- 5.1 Printhead warranty: 30 km or three months, whichever comes first
- 5.2 Print host and labeling body: one-year warranty
- 5.3 Consumables excluded

6. Consumables required

- 6.1 Thermal transfer ribbon
- 6.2 Labels

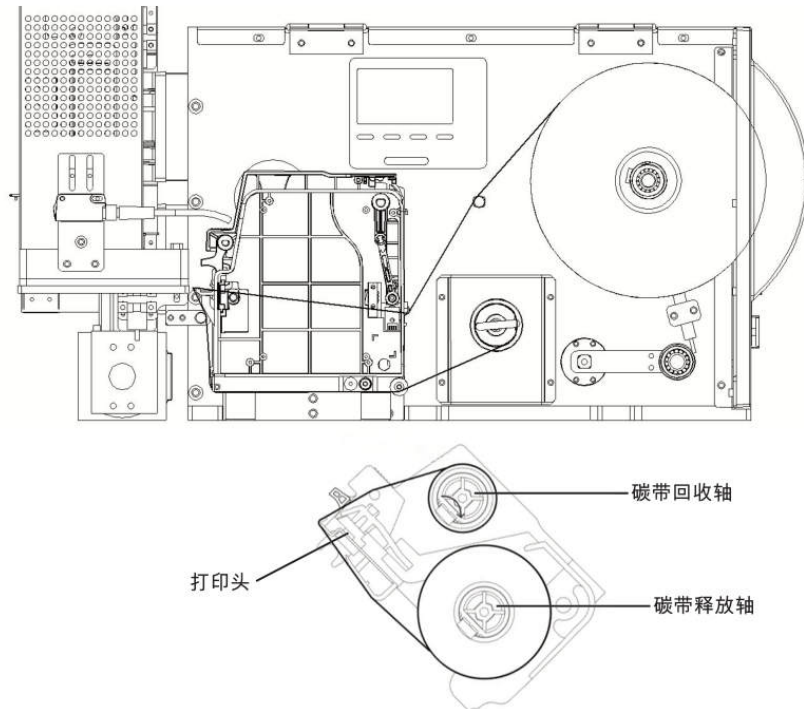
电动贴篇

电动贴标机使用及维护

1.设备使用AC220V电源。

2.初次使用设置：

- 1) 设置打印参数标签大小与实际标签相符 (宽度及高度) ：菜单—3打印参数—标签高度 (标签宽度)
- 2) 安装标签纸及碳带



- 3) 初次测试：开机贴标臂自动寻位，吸标板停于待吸标位置。
显示屏操作：主菜单 - 8贴标臂 - 单次测试模式，每按一次贴标一次。

3.常见问题说明：

- 1) 物体检测传感器未检测到物体，贴标臂自动下降到最底端，测试模式按菜单/确认键消除报警，数据打印模式按清除/返回键消除报警。检查并取走贴标失败标签。
- 2) 物体检测传感器未检测到物体，贴标臂下降到吸标板接触到物体，设备报警，电机会有异常声响，短暂停留后贴标臂返回待接标位置并报警，测试模式按菜单/确认键消除报警，数据打印模式按清除/返回键消除报警。检查并取走贴标失败标签。
- 3) 更换碳带、更换标签纸、即进行打印头抬起操作，此时会造成前两个标签打印位置不准确，打印贴标失败时要及时清理未贴标标签，并进行消错报警处理。

Electric Labeling — Use & Maintenance

1. The equipment operates on AC 220 V power.

2. First-use setup

1) Set the print parameters so the label size matches the actual label (width and height): Menu – 3 Print Parameters – Label Height (Label Width).

2) Install the label media and ribbon.

1) If the object-detection sensor does not detect an object, the labeling arm lowers automatically to the bottom. In test mode press Menu/Enter to clear the alarm; in data-print mode press Clear/Return to clear the alarm. Check and remove the failed label.

2) If the object-detection sensor does not detect an object, the labeling arm lowers until the suction plate contacts the object; the machine alarms and the motor may make an abnormal sound. After a short dwell the arm returns to the label-receive position and alarms. In test mode press Menu/Enter to clear the alarm; in data-print mode press Clear/Return. Check and remove the failed label.

3) After changing ribbon or label media (which involves lifting the printhead), the print position of the first two labels may be inaccurate. When print-and-apply fails, promptly clear the unapplied labels and clear the alarm.

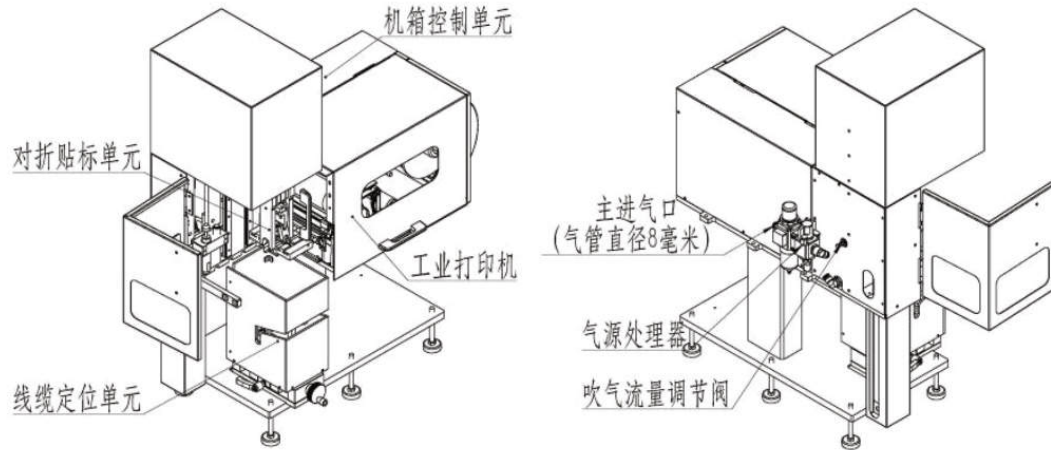
3) First test: on power-on the labeling arm auto-homes and the suction plate stops at the label-pick position. Display operation: Main Menu – 8 Labeling Arm – Single Test Mode; each press applies one label.

3. Common problems

Figure labels: printhead; ribbon take-up shaft; ribbon supply shaft.

打印线缆对折贴标机篇

打印线缆对折贴标机整体结构



打印线缆对折贴标机整体结构

1. 物品清单
 - 1.1 工业打印机
 - 1.2 贴标臂
 - 1.3 线缆定位单元
 - 1.4 配件 (航空插头、脚踏开关等)
2. 打印性能
 - 2.1 打印模式: 热转印/热感
 - 2.2 分辨率: 203dpi/306dpi/600dpi (V420-C/V430-C/V460-C)
 - 2.3 标签尺寸: 宽度110 最大长度100mm
 - 2.4 纸卷长度: 180m
 - 2.5 色带长度: 300m (V420-C/V430-C)
260m (V460-C)
 - 2.6 打印速度: 125mm/s (V420-C/V430-C)
50mm/s (V460-C)
3. 贴标性能
 - 3.1 贴标臂种类: 气缸
 - 3.2 贴标方式: 对折
 - 3.3 贴标方向: 垂直顶贴
 - 3.4 标签尺寸: 最大宽度110mm 最大长度100mm
 - 3.5 对折夹头定制: 适用标签宽度110mm 标签高度10-100mm
 - 3.6 外部信号: 输入3: 清除数据 输出3: 故障报警
 - 3.7 生产节拍: 约4 秒/张
4. 打印线缆对折贴标机软件
 - 4.1 标签编辑: NPL指令集
 - 4.2 数据来源: 网口输入/USB输入/串口输入
 - 4.3 标签打印: 用户自行发送标签打印数据到打印贴标机
 - 4.4 打印方式: windows电脑驱动打印
指令集控制打印
模板控制打印

Cable Fold Labeling — Structure & Specifications

1. Item list

- 1.1 Industrial printer
- 1.2 Labeling arm
- 1.3 Cable positioning unit
- 1.4 Accessories (aviation plug, foot switch, etc.)

2. Printing performance

- 2.1 Print mode: thermal transfer / thermal direct
- 2.2 Resolution: 203 dpi / 306 dpi / 600 dpi (V420-C / V430-C / V460-C)
- 2.3 Label size: width 110 mm, max length 100 mm
- 2.4 Media roll length: 180 m
- 2.5 Ribbon length: 300 m (V420-C / V430-C); 260 m (V460-C)
- 2.6 Print speed: 125 mm/s (V420-C / V430-C); 50 mm/s (V460-C)

3. Labeling performance

- 3.1 Labeling arm type: pneumatic cylinder
- 3.2 Labeling method: fold (wrap-around fold)
- 3.3 Labeling direction: vertical top labeling
- 3.4 Label size: max width 110 mm, max length 100 mm
- 3.5 Fold clamp customization: suitable label width 110 mm, label height 10–100 mm
- 3.6 External signals: Input 3: clear data — Output 3: fault alarm
- 3.7 Cycle time: approx. 4 s/label

4. Cable fold labeling software

- 4.1 Label editing: NPL command set
- 4.2 Data source: Ethernet / USB / serial input
- 4.3 Label printing: user sends label print data to the print & apply system
- 4.4 Printing method: Windows driver printing; command-set printing; template printing

打印线缆对折贴标机篇

5. 保修条款

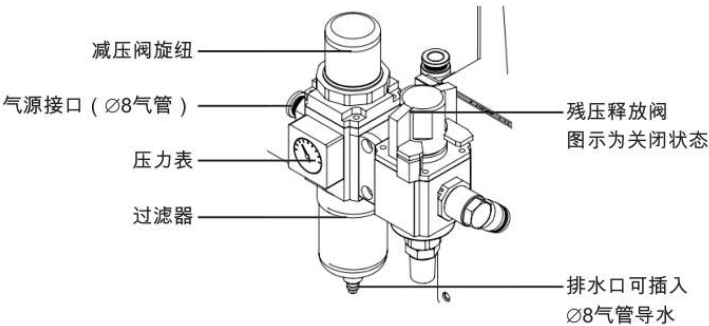
- 5.1 打印头保修30公里或三个月以先到达为准
- 5.2 打印主机及贴标主体部分保修一年
- 5.3 耗材除外

6. 需要的耗材

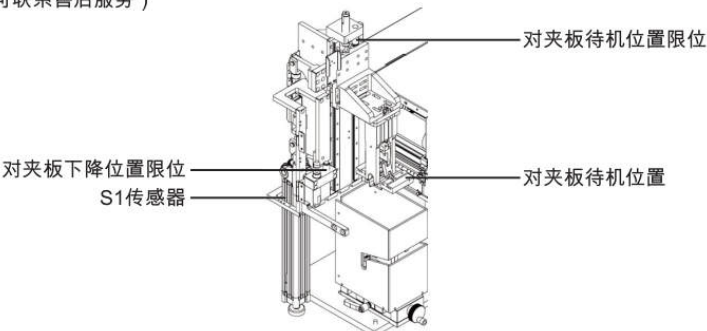
- 6.1 碳带
- 6.2 标签

打印线缆对折贴标机使用及维护

- 1. 设备使用AC220V电源。
- 2. 使用气源压力0.8-1Mpa，气流量60L/min，气管外径8毫米
- 3. 气源的接入及气源处理组件使用说明：
 - 1) 初次安装在气源接口处插入外径8的气源供气管，调整压力表压力至0.4-0.5Mpa，保证真空发生器供给压力稳定。
 - 2) 如需调整压力提起减压阀旋钮顺时针旋转增加压力，逆时针旋转为减小压力。调整完成后下压旋钮进行锁定。
 - 3) 图中残压释放阀处于关闭状态，下压旋钮且顺时针旋转90度贴标机接通气源，此时吸标板上升至吸标位置。（注意：打开残压阀吸标板会上升，关闭残压阀吸标板会下落，注意刮碰。避免损坏设备及刮碰人员！
 - 4) 气源处理组件需每日检查空气过滤器中的水，空气过滤器为手动排水，如果过滤器中的水满了，或日常维护需要排水时，手动向内推开排水口接头即可排水。



- 4. 定期保养气泵，排水排油。保证气源洁净、含水量不可过高。
- 5. 调整下降位置限位可以调整夹合线缆的位置；调整待机位置限位标签打印走纸过程中吸附在对夹板上，位置过低对夹板侧向会阻挡标签走出，过高会影响走纸精度，或影响贴标。（以上出厂时已调整完毕，如出现问题可联系售后服务）



Cable Fold Labeling — Use & Maintenance

1. The equipment operates on AC 220 V power.
2. Air supply pressure 0.8–1 MPa, air flow 60 L/min, tubing OD 8 mm.

3. Air supply connection and air-treatment unit

- 1) On first installation, insert an 8 mm OD air supply tube into the air inlet and adjust the pressure gauge to 0.4–0.5 MPa, ensuring a stable supply to the vacuum generator.
- 2) To adjust pressure, lift the pressure-reducing valve knob: clockwise increases, counterclockwise decreases. After adjustment, press the knob down to lock it.
- 3) The residual-pressure release valve shown is closed. Press the knob down and turn it 90° clockwise to open the air supply; the suction plate then rises to the pick-up position. (Caution: opening the residual-pressure valve raises the suction plate and closing it lowers it — watch for collision. Avoid damaging the equipment or injuring personnel.)
- 4) The air-treatment unit must be checked daily for water; the air filter drains manually. When the filter is full or routine draining is needed, push the drain-port fitting inward to drain.
4. Perform periodic maintenance on the air pump: drain water and oil. Keep the air supply clean with low moisture content.
5. Adjusting the lower-position limit adjusts where the cable is clamped; the standby-position limit is used while the label is being fed and held on the fold plate during printing. If too low, the fold plate side will block the label from feeding out; if too high, it affects feed accuracy or labeling. (These are adjusted at the factory; contact after-sales service if problems occur.)

5. Warranty terms

- 5.1 Printhead warranty: 30 km or three months, whichever comes first
- 5.2 Print host and labeling body: one-year warranty
- 5.3 Consumables excluded

6. Consumables required

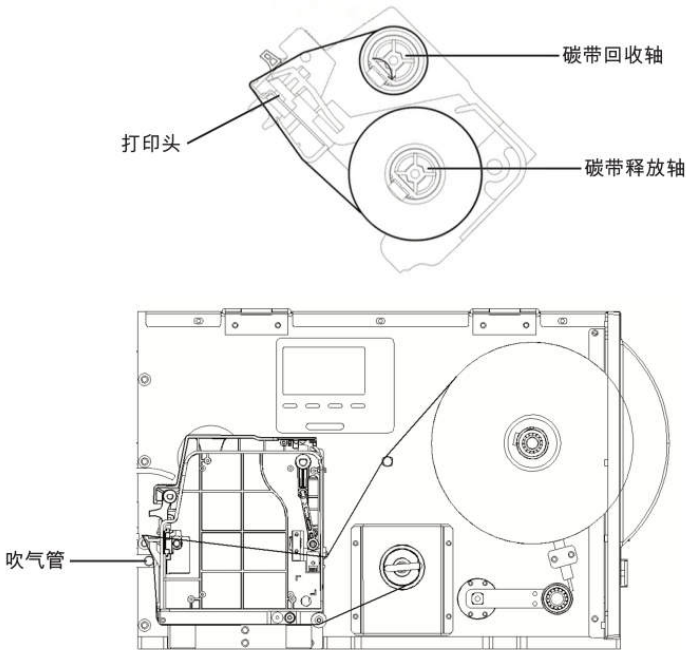
- 6.1 Thermal transfer ribbon
- 6.2 Labels

Figure labels: residual-pressure release valve (shown closed); fold-plate standby-position limit; pressure-reducing valve knob; air inlet (Ø8 mm tube); pressure gauge; filter; drain port (Ø8 mm tube can be inserted for drainage); S1 sensor; fold-plate lower-position limit; fold-plate standby position.

打印线缆对折贴标机篇

6.开机状态下未接通气源报错S1，此时对夹板会下落在下方，此时需要接通气源，接通气源后贴标臂对夹板复位，S1传感器常亮，可按清除键消错；工作中如果报错S1，即是S1传感器未常亮即开始工作，此时需要检查S1传感器是否常亮，如果对夹板待机位置正确，很可能S1传感器松动位置有所变化，需要重新调整S1传感器位置使其常亮。气压不足或气源关闭会导致夹板复位位置过低，S1传感器未常亮，注意排查S1传感器报错原因。

7.使用时注意穿纸及碳带安装路径。如图示意穿纸及碳带安装路径，只有正确穿纸才不会影响正常工作。例如纸张如果穿到吹气管前面挡住吹气孔打印时标签会掉落。



8.遇到电磁阀、真空发生器等电气、机械故障时需打开护罩检查时，建议联系售后服务。

Cable Fold Labeling — S1 Sensor

6. If the machine is powered on but the air supply is not connected, it reports S1 and the fold plate drops to the lower position. Connect the air supply; after air is on, the labeling-arm fold plate resets and the S1 sensor stays continuously lit. Press the Clear key to clear the error. If S1 is reported during work, it means the S1 sensor was not continuously lit when work started; check whether the S1 sensor stays lit. If the fold-plate standby position is correct, the S1 sensor has likely loosened and shifted; re-adjust the S1 sensor position so it stays lit. Insufficient air pressure or a closed air supply will cause the fold plate reset position to be too low and the S1 sensor not to stay lit; investigate the cause of the S1 sensor error accordingly.

7. Note the media and ribbon threading path during use. Follow the illustrated media and ribbon path; only correct threading avoids affecting normal operation. For example, if media is threaded in front of the blow tube and blocks the blow holes, labels will fall during printing.

8. When electrical or mechanical faults such as solenoid-valve or vacuum-generator problems require opening the cover for inspection, contact after-sales service.

Figure labels: printhead; ribbon take-up shaft; blow tube; ribbon supply shaft.

打印线缆对折贴标机篇

打印线缆对折贴标机常见故障排除

故障现象	解决办法
标签无法吸附在对夹板上	标签安装过程中，挡住了吹气管。 进行更换碳带、标签等打印头抬起操作后，标签走纸初始位置有偏差，按几次走纸键使得标签走准位置（单张标签完全走出剥离，后一张标签前端距离剥离片剥离位置0-1毫米左右）
更换不同材料标签	关闭打印机，按住feed按键，开机，当报错指示灯闪烁松手，打印机自动校验纸张，当打印机停止，校验成功。观察标签位置是否正确，当剥离片上的标签前端距离剥离片剥离位置0-1毫米左右时校验成功，可以进行贴标等操作。
色带错误	检查色带是否安装正确。 安装时，收紧色带，不可留余太多。 关机重新启动打印机，按走纸键试试，是否恢复正常。
色带缺失	如色带已用尽，更换新的色带。 检查打印参数配置，打印热敏纸时无碳带打印方式选择热感。
无法正常开机	检查电源供电是否正常，是否符合220V供电要求。 总电源开关是否按到  位，总电源开关无需关闭，每次按  软启动按钮开关机即可。长期不使用时可以关闭总电源开关。 如供电正常仍无法开机，请联系厂家进行处理。
打印效果差	调节打印浓度或打印速度。 打印头脏：清洁打印头。
点缺失	打印头脏：清洁打印头。 打印头损坏：关闭打印机，联系售后进行处理。

Cable Fold Labeling — Common Fault Troubleshooting

Label cannot be held on the fold plate

Symptom / Solution:

During label installation the blow tube is blocked → re-thread correctly.

After printhead-lift operations such as changing ribbon or labels, the initial media feed position is off → press the feed key several times until the label is positioned correctly (a single label fully peeled out, with the front edge of the next label about 0–1 mm from the peel plate).

After changing to a different label material → switch the printer off, hold the FEED key and power on; release when the error light flashes. The printer calibrates the media automatically; calibration succeeds when it stops. Check the label position — calibration is correct when the front edge of the label on the peel plate is about 0–1 mm from the peel position, and labeling can proceed.

Ribbon error / ribbon missing

Check that the ribbon is installed correctly. When installing, tighten the ribbon without leaving too much slack. If the ribbon is used up, replace it with a new one. Check the print-parameter configuration — when printing thermal media without a ribbon, select thermal direct.

Cannot power on

Check whether the power supply is normal and meets the 220 V requirement. Check whether the main power switch is fully pressed; the main switch need not be turned off — use the soft-start button each time to switch on/off. The main switch may be turned off for long-term non-use. If the supply is normal but it still will not start, contact the manufacturer.

Poor print quality

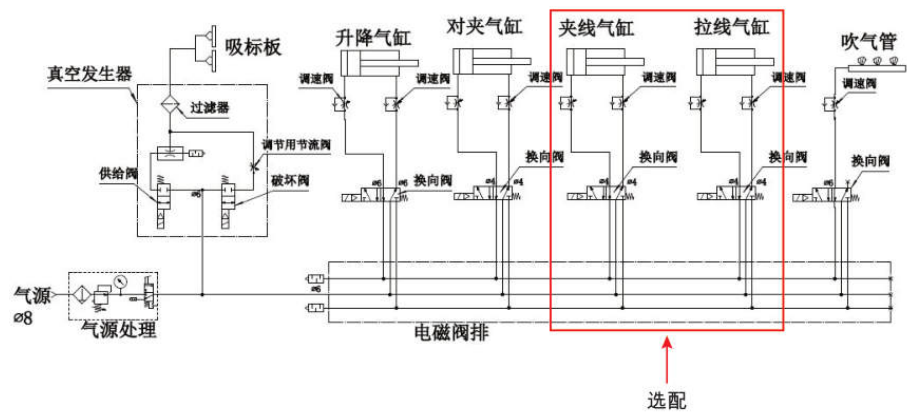
Adjust print darkness or print speed. Dirty printhead: clean the printhead.

Missing dots

Dirty printhead: clean the printhead. Damaged printhead: switch off and contact after-sales service.

打印线缆对折贴标机篇

气动原理图



易损件清单

序号	名称	型号	数量	品牌
1	接头	PC4M5	2	亚德客
2	打印头	V430T-106	1	NMK
3	胶辊组	D421-107	1	NMK

Cable Fold Labeling — Pneumatic Schematic & Wear Parts List

Pneumatic schematic (see the original document for the diagram).

Wear parts list

No. 1 — Fitting — Model PC4M5 — Qty 2 — Brand Airtac — Optional

No. 2 — Printhead — Model V430T-106 — Qty 1 — Brand NMK

No. 3 — Platen roller assembly — Model D421-107 — Qty 1 — Brand NMK

操作及控制篇

软件连接打印贴标机处理说明

1.关于打印贴标机使用的打印指令文件。

客户提供详细标签样式，我们生成一种打印机可以识别的指令文件（文本形式），文件中将用户需要变化的字段（如产品名称，编号，条码号等）做一些特殊的处理，比如标记为111111，22222。。。。，打印时软件提前读取文件信息，将变化的字段数据替换其中。再将这个数据用 U T F 8 格式发给打印机就可以了。数据发送后，打印机可以给用户返回成功或失败，和失败后的故障信息，故障信息按位体现到返回信息中。

2.模板打印：

- 下载模板文件
使用BarLabel软件生成模板文件xxx.FRM，并下载到打印机中。
- 调用模板打印

FR"xxx.FRM"	//调用模板"xxx.FRM"
?	//参数提示符
1	//第一个参数的值
Kg	//第二个参数值
4.2	//第三个参数的值
P1,1	//启动打印

3.关于打印机网口使用说明：

设备后面板网口共有三种用途，分别是模板下载、网络打印、状态反馈。以下将对三种用途分别进行说明。

在使用网口前，首先要让打印贴标机和上位机处于同一网段，打印贴标机默认出厂IP为192.168.1.69 网关为192.168.1.1，端口为 9100，用户可在系统设置-通讯接口-网络接口菜单下自行设置 IP 地址和本地端口，打印贴标机共有三个网络端口，分别是 9100，9200 和 9300，9100 端口用于打印数据的接收、打印模板的下载、控制指令的接收，9200 端口主要用于打印贴标机状态的输出。9300端口用于网口扫码打印。打印数据端口9100用户可自行修改，但不可与9200端口、9300端口冲突，如要修改其余两个端口，需联系销售或售后人员。

用法说明

1) 模板下载

利用 Barlabel 标签编辑软件制作号打印模板，下载打印模板的方式选择网络打印，选择需要下载的模板文件（.FRM）填写打印贴标机的 IP 地址及 IP 端口，即可通过网口将打印模板下载到打印贴标机中。

Operation & Control — Connecting Software to the Print & Apply System

1. Print command files used by the print & apply system

The customer provides the detailed label layout, and we generate a printer-readable command file (text form). Fields that the user needs to vary (e.g. product name, serial number, barcode) are specially handled — marked as 111111, 22222, etc. When printing, the software reads the file information in advance and replaces the variable field data, then sends the data to the printer in UTF-8 format. After the data is sent, the printer can return success or failure plus the fault information after failure; the fault information is represented bit-by-bit in the returned message.

2. Template printing

3. Printer Ethernet port usage

Usage

The Ethernet port on the rear panel has three purposes: template download, network printing, and status feedback. Each is described below.

Before using the Ethernet port, put the print & apply system and the host computer on the same network segment. The factory default IP is 192.168.1.69, gateway 192.168.1.1, port 9100. The user can set the IP address and local port under System Settings – Communication Interface – Network Interface. The print & apply system has three network ports: 9100, 9200 and 9300. Port 9100 receives print data, downloads print templates, and receives control commands; port 9200 mainly outputs print & apply system status; port 9300 is used for network barcode-scan printing. The print-data port 9100 can be changed by the user but must not conflict with ports 9200 or 9300; to change the other two ports, contact sales or after-sales personnel.

Download the template file

Use the Barlabel label editing software to create the print template, choose Network Print as the template download method, select the template file (.FRM) to download, and enter the print & apply system IP address and port; the template is then downloaded to the machine over the Ethernet port.

Invoke the template to print

FR"xxx.FRM" // invoke template "xxx.FRM"

? // parameter prompt

1 // value of first parameter

Kg // value of second parameter

4.2 // value of third parameter

P1,1 // start printing

Use BarLabel software to generate the template file xxx.FRM and download it to the printer.

操作及控制篇



使用 FR 指令调用打印模板时，也可以通过网口发送 FR 指令。

2) 网络打印

网络打印可细分为直接打印和调用驱动打印，直接打印即将打印内容以指令集的方式通过TCP/IP协议发送到打印贴标机中，打印机的 TCP/IP 连接方式为服务端长连接方式，调用驱动打印即安装 Nmark 打印机驱动，上位机通过调用打印机驱动，将标签数据发送到打印贴标机中。

2.1) 直接打印

直接打印用户可利用本公司开发的 Barlabel 标签编辑软件进行标签编辑，该软件不需要安装驱动即可打印标签，用户在打印时选择网络打印，填写好打印机 IP 地址以及端口即可直接通过网口将标签数据下发给打印机。

2.2) 调用驱动打印

调用网络驱动打印，用户需要在电脑上安装对应型号的打印贴标机网络驱动（安装教程参考Nmark 打印贴标机驱动安装教程及使用说明）然后通过网络驱动下发打印数据。

3) 状态反馈

用户可以通过 9200 端口监控打印贴标机状态，软件链接到打印机后，将打印机可以识别的数据信息发给打印机，打印机执行指定的命令，或打印标签数据命令。之后软件可以收取打印机返回的信息，得到打印成功或失败后的故障信息。

返回的故障信息说明
0X7B 0XFF 0XFF 0X00 0X04 0X7C 0X00 0X00 0X00 0X00 0X7D
以上就是一个打印机打印后返回的信息（0X 表示 16 进制数据）。

Operation & Control — Network Printing & Status Feedback

2) Network printing

When invoking a print template with the FR command, the FR command can also be sent over the Ethernet port. Network printing is divided into direct printing and driver printing. Direct printing sends the print content as commands to the print & apply system over TCP/IP; the printer uses a server-side persistent connection. Driver printing installs the Nmark printer driver, and the host computer sends label data to the machine by invoking the printer driver.

3) Status feedback

The user can monitor the print & apply system status through port 9200. After the software connects to the printer, it sends printer-recognizable data to the printer; the printer executes the specified command or prints the label data. The software can then receive the information returned by the printer, obtaining fault information after print success or failure.

Returned fault information

0X7B 0XFF 0XFF 0X00 0X04 0X7C 0X00 0X00 0X00 0X00 0X7D

The above is the information returned after a print (0X indicates hexadecimal data).

2.1) Direct printing

For direct printing the user can edit labels with our Barlabel label editing software, which prints labels without installing a driver. When printing, select Network Print and enter the printer IP address and port to send the label data to the printer directly over the Ethernet port.

2.2) Driver printing

For network driver printing, install the matching network driver for the print & apply system on the computer (see the Nmark print & apply system driver installation guide), then send print data through the network driver.

操作及控制篇

各个数据说明如下：

byte0: 数据开始标志

byte1,byte2:

0XFF 0XFF 正在打印中

0XFF 0XFE 打印完成

0XFF 0XFD 贴标完成

0XFF 0XFC 打印机空闲

byte3,byte4: 打印机状态数据长度 (0x00 0x04)

byte5: 分割字符

byte6,byte7,byte8,byte9: 对应的 bit31---bit0，相应的 bit 置1，表示打印机不同的错误状态其中：

bit0--打印暂停

bit1--打印头抬起

bit2--缺纸

bit3--色带异常

bit4--色带缺失

bit5--黑标错误

bit6--打印头温度过高

bit7--打印头电压过低

bit8--打印数据异常

bit9--切刀异常

bit10--程序复位重启

bit11--贴标臂异常

byte10:数据结束标志

打印过程中，打印机实时返回打印机状态数据。

打印机空闲时，间隔 5 秒返回一条状态数据。

4) 扫码打印

用户可利用网口连接网络扫码器进行扫码打印，环境部署中将打印机作为服务端，扫码器作为客户端使用TCP/IP的通讯方式，配置读码器时，服务端IP地址为打印机IP地址，数据端口为9300。这种方式适用于脱机模板打印，扫码器扫码得到的信息可以用来替换模板中的变量和触发打印。

Operation & Control — Barcode-Scan Printing & Status Data

4) Barcode-scan printing

The user can connect a network barcode scanner over the Ethernet port for scan printing. In the deployment, the printer acts as the server and the scanner as the client using TCP/IP. When configuring the reader, the server IP address is the printer IP address and the data port is 9300. This method suits offline template printing; the information obtained by scanning replaces template variables and triggers printing.

Data field description

byte0: data start flag

byte1, byte2:

0XFF 0XFF — printing in progress

0XFF 0XFE — print complete

0XFF 0XFD — labeling complete

0XFF 0XFC — printer idle

byte3, byte4: printer status data length (0x00 0x04)

byte5: separator character

byte6, byte7, byte8, byte9: corresponding bit31–bit0; setting a bit to 1 indicates a different printer error state:

bit0 — print paused

bit1 — printhead lifted

bit2 — out of paper

bit3 — ribbon error

bit4 — ribbon missing

bit5 — black mark error

bit6 — printhead over-temperature

bit7 — printhead voltage too low

bit8 — print data error

bit9 — cutter error

bit10 — program reset / restart

bit11 — labeling arm error

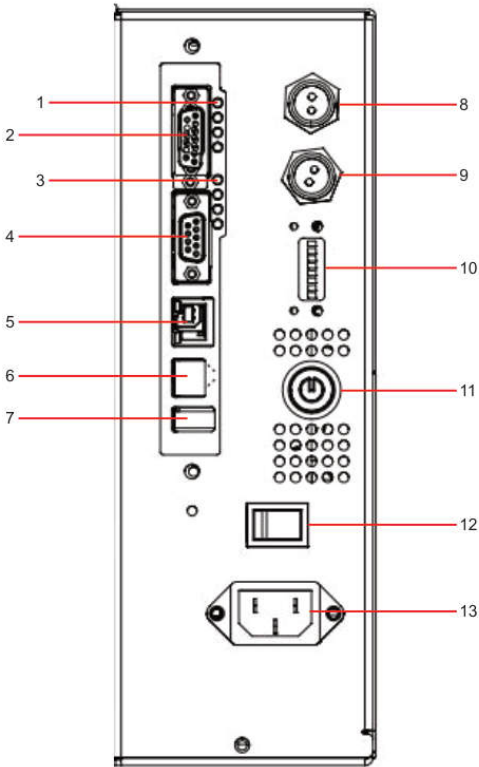
byte10: data end flag

During printing, the printer returns status data in real time. When idle, it returns one status message every 5 seconds.

操作及控制篇

硬件连接说明

1.后面板接口



1	1输出电源指示灯 2打印完成指示灯 3贴标完成指示灯 4报警信号指示灯
2	信号输入、信号输出接口C
3	5打印使能指示灯 6贴标使能指示灯 7清除数据指示灯 8清除错误指示灯
4	RS232数据串口
5	RJ45数据网口
6	USB数据接口
7	USB设备接口
8	启动打印航插A
9	启动贴标航插B
10	传感器选择开关
11	电源软开关
12	电源总开关
13	电源线接口

Operation & Control — Hardware Connection: Rear Panel Interfaces

1. Rear panel interfaces

Indicators: 1 output-power indicator; 2 print-complete indicator; 3 labeling-complete indicator; 4 alarm-signal indicator; 5 print-enable indicator; 6 label-enable indicator; 7 clear-data indicator; 8 clear-error indicator.

Connectors/controls (numbered 1–13 on the rear panel), including:

RJ45 data Ethernet port

USB data interface

USB device interface

Signal input / signal output interface C

RS232 data serial port

Start-print aviation plug A

Sensor selection switch

Main power switch

Power cord inlet

Start-labeling aviation plug B

Power soft switch

操作及控制篇

软件连接打印贴标机处理说明

1.1 开关机方法

开机方法：按“电源总开关”到“--”闭合位置，再按一下“电源软开关”红灯亮起。
 关机方法1：按“电源总开关”到“O”断开位置。
 关机方法2：按显示面板“POWER键”确认关机，再按“电源总开关”到“O”断开位置。

1.2 传感器选择开关用法（务必关机后更改）

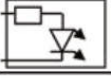
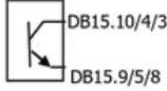
传感器选择开关	1-4路拨码开关	5-8路拨码开关
选择反射传感器	ON	OFF
选择对射传感器	OFF	ON

1.3 “RS232数据串口”DB9引脚定义：

打印机串口DB9母		
引脚号	功能说明	缩写
1	悬空	
2	发送数据	TXD
3	接收数据	RXD
4	悬空	
5	信号地	GND
6	悬空	
7	悬空	
8	悬空	
9	悬空	

1.4 “信号输入、信号输出接口C” DB15引脚定义：

引脚号	线色	引脚定义	引脚缩写	引脚号	线色	引脚定义	引脚缩写
14	粉色	输出24V	24V	10	蓝	打印完成输出+	ENDP+
15	浅绿	输出0V	0V	9	绿	打印完成输出 -	ENDP -
3	棕	报警信号输出+	ALM+	11	紫	清除数据输入+	CLR+
8	黄	报警信号输出 -	ALM -	12	灰	清除数据输入 -	CLR -
4	棕白	贴标完成输出+	ENDT+	13	白	清除错误输入	CERR
5	红	贴标完成输出 -	ENDT -	其余引脚悬空			

输入信号 (非隔离 PNP 型)	启动打印	输入信号为高电平有效 
	启动贴标	
	清除错误	
输入信号 (光耦隔离型)	清除数据	NPN 或 PNP 型输入 
输出信号 (光耦隔离型)	打印状态	NPN 或 PNP 型输出 
	贴标状态	
	报警状态	

Operation & Control — Power, Sensor Switch & Pin Definitions

1.1 Power on/off

Power on: press the main power switch to the "--" (closed) position, then press the power soft switch; the red light turns on.

Power off method 1: press the main power switch to the "O" (open) position.

Power off method 2: press the POWER key on the display panel to confirm shutdown, then press the main power switch to the "O" position.

1.2 Sensor selection switch (must be changed only after power off)

Select reflective sensor / select through-beam sensor. Two banks of DIP switches: 1–4 and 5–8.

1.3 RS232 data serial port — DB9 pin definition (printer DB9 female)

Pin 1: NC; Pin 2: TXD (transmit data); Pin 3: RXD (receive data); Pin 4: NC; Pin 5: GND (signal ground); Pins 6–9: NC.

1.4 Signal input / output interface C — DB15 pin definition

Pin 14 (pink): 24 V output — 24V

Pin 15 (light green): 0 V output — 0V

Pin 3 (brown): alarm signal output + — ALM+

Pin 8 (yellow): alarm signal output - — ALM-

Pin 4 (brown/white): labeling-complete output + — ENDT+

Pin 5 (red): labeling-complete output - — ENDT-

Pin 10 (blue): print-complete output + — ENDP+

Pin 9 (green): print-complete output - — ENDP-

Pin 11 (purple): clear-data input + — CLR+

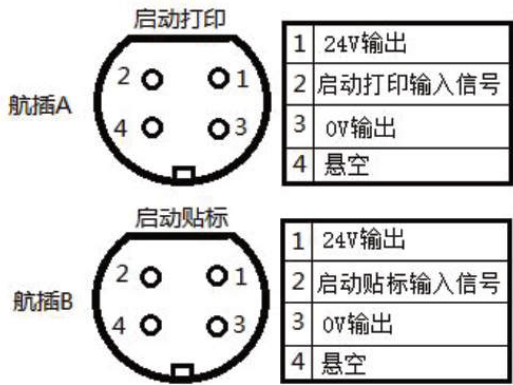
Pin 12 (gray): clear-data input - — CLR-

Pin 13 (white): clear-error input — CERR

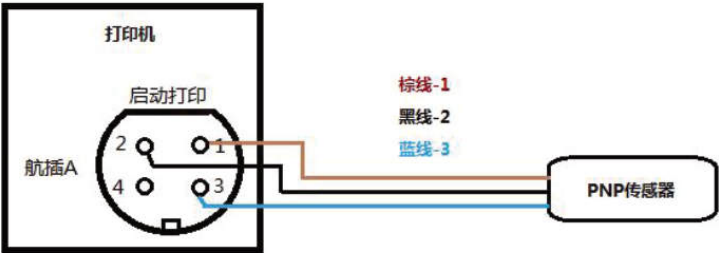
Remaining pins unconnected (NC).

操作及控制篇

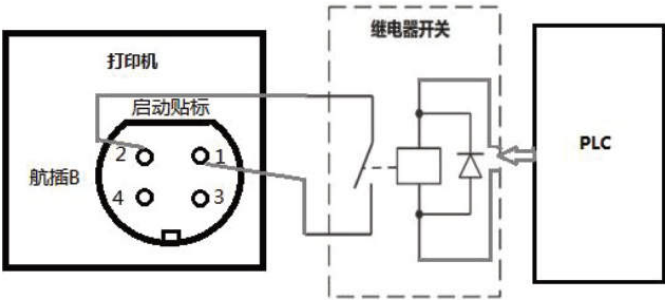
2.启动打印航插A、启动贴标航插B接线说明
启动打印输入信号和启动贴标输入信号均为高有效，即输入信号接24V则启动。



2.1 只能接PNP型光电传感器
以航插A“启动打印”信号为例，航插B接法相同。



2.2 接PLC方法
以航插B“启动贴标”信号为例，航插A接法相同。



Operation & Control — Aviation Plug A / B Wiring

2. Start-print aviation plug A & start-labeling aviation plug B wiring

Both the start-print input signal and the start-labeling input signal are active-high, i.e. the input starts when 24 V is applied.

Example using aviation plug A "start print" signal; aviation plug B is wired the same way. Example using aviation plug B "start label" signal; aviation plug A is wired the same way.

2.1 Can only connect PNP-type photoelectric sensors

2.2 Connecting to a PLC

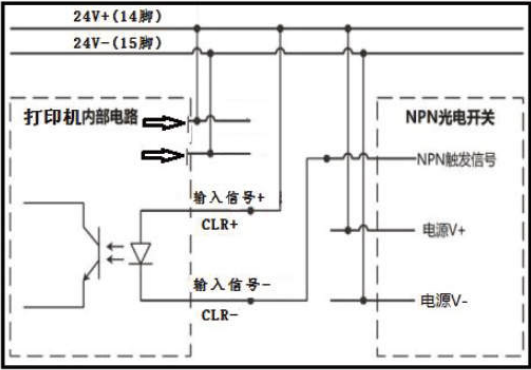
Illustration/diagram page - see the original Chinese document for the image.

操作及控制篇

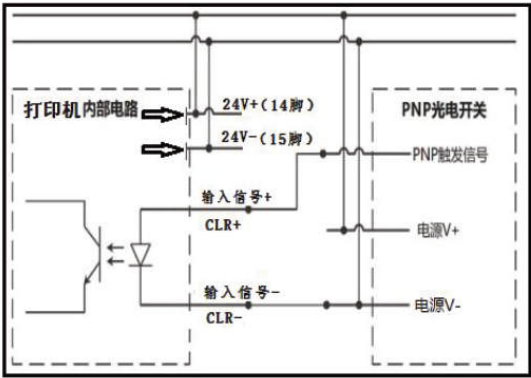
3. 接口C接线说明 (图中24V+即为24V , 24V-即为0V)

3.1 清除数据输入信号接光电传感器接法

3.1.1 接NPN型传感器

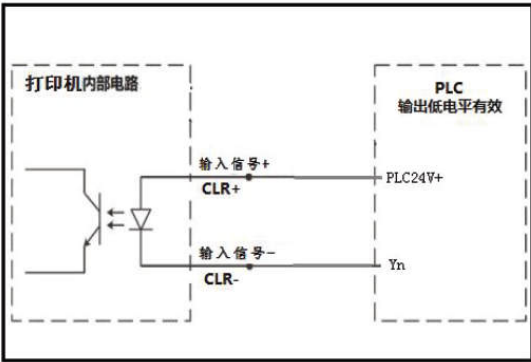


3.1.2 接PNP型传感器



3.2 清除数据输入信号接PLC接法

3.2.1 PLC输出有效信号为低电平：



Operation & Control — Interface C Wiring

3. Interface C wiring (in the figures, 24V+ is 24 V, 24V- is 0 V)

3.1 Clear-data input signal — photoelectric sensor connection

3.1.1 Connecting an NPN-type sensor

3.1.2 Connecting a PNP-type sensor

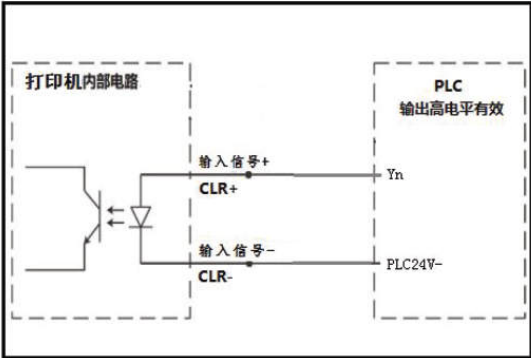
3.2 Clear-data input signal — PLC connection

3.2.1 PLC output active-low:

Illustration/diagram page - see the original Chinese document for the image.

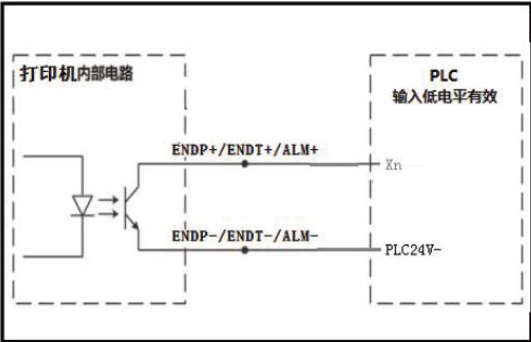
操作及控制篇

3.2.2 PLC输出有效信号为高电平：

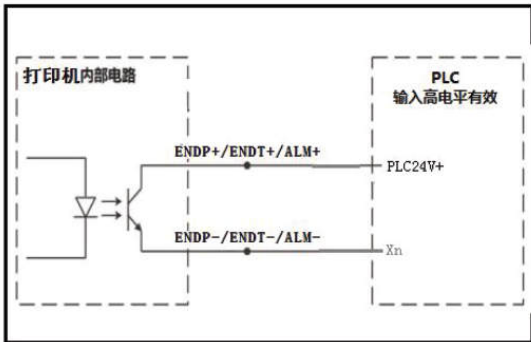


3.3接口C-输出信号接法（打印完成输出、贴标完成输出、报警信号输出）

1) PLC输入有效信号为低电平：



2) PLC输入有效信号为高电平：



Operation & Control — Interface C Output Signals

3.3 Interface C — output signal connection (print-complete output, labeling-complete output, alarm signal output)

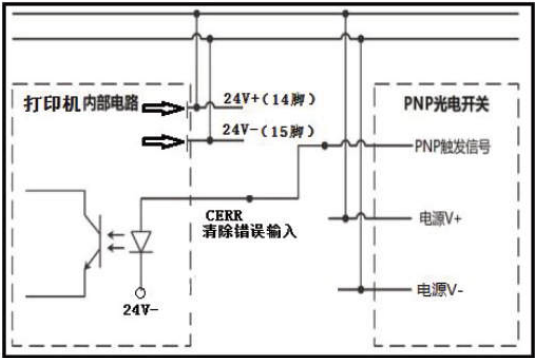
3.2.2 PLC output active-high:

- 1) PLC input active-low:
- 2) PLC input active-high:

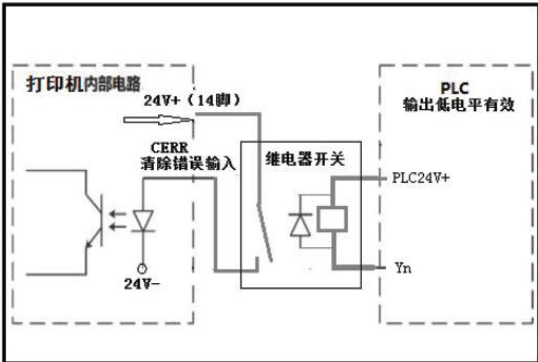
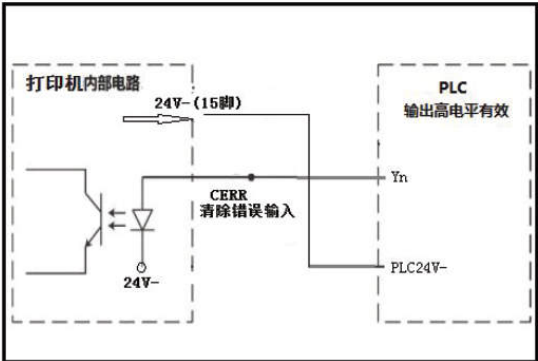
Illustration/diagram page - see the original Chinese document for the image.

操作及控制篇

3.4 接口C-清除错误信号
清除错误输入信号为高电平有效，即清除错误输入信号接24V为有效。
3.4.1 只能接PNP型光电传感器



3.4.2 接PLC输出 (PLC输出有效信号为高或低电平)



Operation & Control — Interface C Clear-Error Signal

3.4 Interface C — clear-error signal

3.4.1 Can only connect PNP-type photoelectric sensors

The clear-error input is active-high, i.e. it is valid when 24 V is applied to the clear-error input.

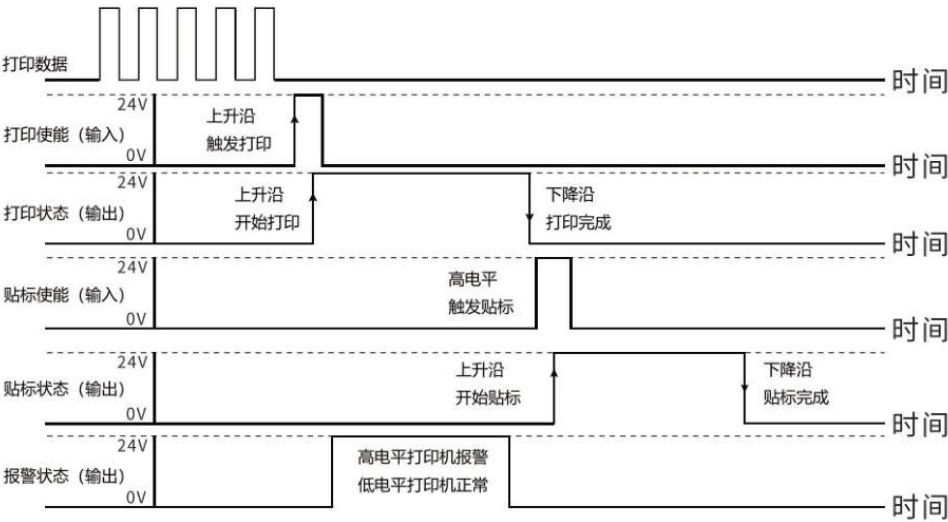
3.4.2 Connecting to PLC output (PLC output active high or low)

Illustration/diagram page - see the original Chinese document for the image.

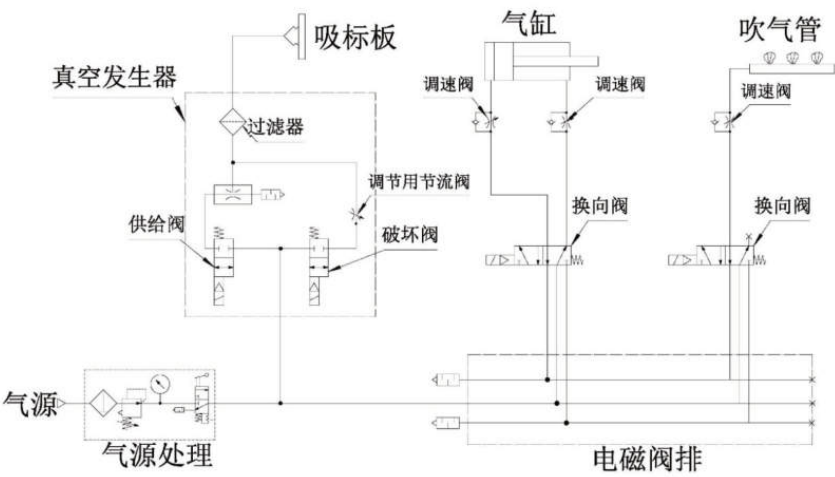
操作及控制篇

4. 时序图

贴标机打印贴标时序控制图：



5. 气动原理图



Operation & Control — Timing Diagram & Pneumatic Schematic

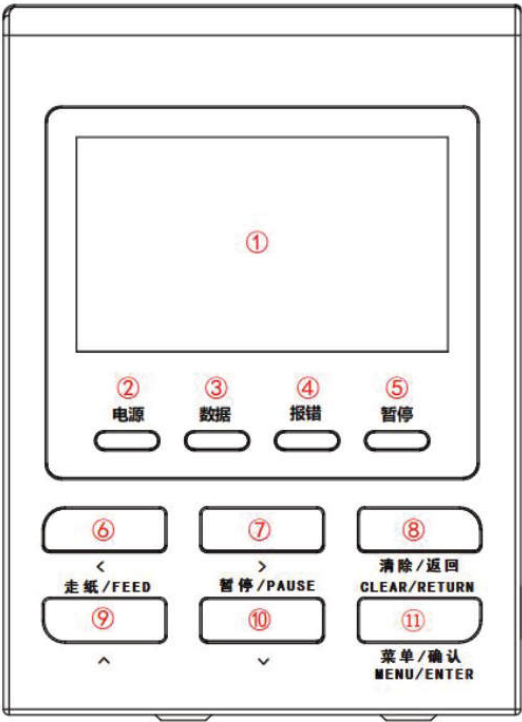
4. Timing diagram

5. Pneumatic schematic

Illustration/diagram page - see the original Chinese document for the image.

操作及控制篇

控制面板说明



1	显示屏显示打印机当前状态
2	电源（绿色指示灯）
3	数据（绿色指示灯）
4	报错（红色指示灯）
5	暂停（红色指示灯）
6	每次按下‘走纸/FEED’可以强制打印机送出一张空白标签 ‘<’方向键左，仅在菜单中有效
7	按下‘暂停/PAUSE’可以暂停/启动打印机打印 ‘>’方向键右，仅在菜单中有效
8	‘清除’消除错误，使打印机重新打印 ‘返回’返回上一层或退出菜单，仅在菜单中有效
9	‘^’方向键上，仅在菜单中有效，可更改参数值，常见用途是增大选项值
10	‘v’方向键下，仅在菜单中有效，可更改参数值，常见用途是减小选项值
11	‘菜单’按下进入菜单功能 ‘确认’仅在菜单中有效。可以选择并确认显示屏上的

Operation & Control — Control Panel Description

Control panel keys and indicators:

- 1 — Display: shows the current printer status.
 - 2 — Power (green indicator).
 - 3 — Data (green indicator).
 - 4 — Error (red indicator).
 - 5 — Pause (red indicator).
 - 6 — Clear: clears errors so the printer can print again.
 - 7 — Menu: press to enter the menu functions.
 - 8 — Return: returns to the previous level or exits the menu (menu only).
 - 9 — Up arrow key: menu-only; changes parameter values, commonly to increase an option value.
 - 10 — Down arrow key: menu-only; changes parameter values, commonly to decrease an option value.
- Left arrow key: menu-only.
- Right arrow key: menu-only.
- Enter: menu-only; selects and confirms the item shown on the display.
- Press FEED each time to force the printer to feed one blank label. Press PAUSE to pause/resume printing.

操作及控制篇

屏幕说明 以下是打印机开机以后屏幕显示的信息



V4X0B-T	打印机型号
NSCL	当前打印机使用的指令集
在线	打印机当前状态
打印数量	000000当前打印的数量，重启打印机后恢复000000.
等待打印数据	等待上位机向打印机传送打印数据

用户菜单 以下是打印机的用户菜单以及各菜单中显示的项目。
菜单

1	系统设置
2	打印参数
3	传感器校正
4	贴标臂
5	RFID
6	模板打印
7	配置选择
8	出厂设置
9	版本信息
10	系统重启
11	LANGUAGE

Operation & Control — Screen & Menu

Screen description

The following is the information shown after the printer powers on:

Printer model: V4X0B-T

Command set currently used by the printer: NSCL

Printer current status: Online

Print count: 000000 current printed quantity (resets to 000000 after restart).

Waiting for print data: waiting for the host computer to send print data to the printer.

User menu

The following is the printer user menu and the items shown in each menu:

1 System Settings; 2 Print Parameters; 3 Sensor Calibration; 4 Labeling Arm; 5 RFID; 6 Template Printing; 7 Configuration Selection; 8 Factory Settings; 9 Version Information; 10 System Restart; 11 LANGUAGE.

操作及控制篇

1.系统设置	
软件设置	【密码：1234】
指令集	NSCL NTPL NZPL
触发模式	连续 单次
参数锁定	纸张类型 送纸偏移 坐标偏移 标签大小 打印方式 打印速度 打印浓度
兼容模式	DEFAULT TOSHIBA ZEBRA
起始偏移	
打印机标识	显示 不显示
残缺标签重打	
退纸模式	打印前退纸 打印后退纸
通讯接口	
USB	
RS232	波特率 数据位 停止位 校验位
网络接口	IP 子网 网关 端口
密码设置	设置密码 关闭密码
实时时钟	日期 时间 星期
报警设置	色带报警设置 仅报警提示 报警且停止打印 无数据报警 不报警
打印启动时报警	
等待数据时报警	

Operation & Control — 1. System Settings

Software settings [password: 1234]

Command set: NSCL / NTPL / NZPL

Trigger mode: Continuous / Single

Parameter lock

Paper type

Feed offset

Coordinate offset

Label size

Print method

Print speed

Print darkness

Compatibility mode: DEFAULT / TOSHIBA / ZEBRA

Start offset

Printer ID: Display / Do not display

Defective-label reprint

Retract mode: Retract before print / Retract after print

Communication interface: USB / RS232; baud rate; data bits; stop bits; parity

Network interface: IP; subnet; gateway; port

Password settings: set password / disable password

Real-time clock: date; time; day of week

Alarm settings

Ribbon alarm: alarm prompt only / alarm and stop printing

No-data alarm: no alarm / alarm at print start / alarm while waiting for data

操作及控制篇

2.打印参数	打印高度		
	打印宽度		
	标签间隙		
	打印方式	热转	
	纸张类型	热感	
		连续	
	打印速度	黑标	
		间隙	
打印浓度			
		送纸偏移	
		X轴偏移	
		Y轴偏移	
		文本间距	
打印数量			
3.传感器校正	传感器自动检测		
	反射传感器设置	反射黑标阈值	
		反射缺纸阈值	
		传感器实时值	
		阈值设置向导	
	透射传感器设置	穿透间隙阈值	
		穿透缺纸阈值	
		传感器实时值	
		阈值设置向导	
	更新传感器信息		
	打印传感器曲线		
4.贴标臂			
	参数设置		
	贴标类型	工业机	
		贴标机	
		刮贴机	
	回卷电机	使能	
		禁止	
	打印信号	脉冲	
		电平	
		禁止	
	贴标信号	脉冲	
		电平	
		禁止	
	打印周期		
	贴标延时		
	回卷长度		
	回卷速度		
	回卷暂停		
	延时回卷		
	掉签检测	使能	
		禁止	

Operation & Control — 2–4. Print Parameters, Sensor Calibration, Labeling Arm

2. Print parameters

Print height; print width; label gap

Print method: thermal transfer / thermal direct

Paper type: continuous / black mark / gap

Print speed; print darkness; feed offset; X-axis offset; Y-axis offset; text spacing; print quantity

3. Sensor calibration

Sensor auto-detect

Reflective sensor settings: reflective black-mark threshold; reflective out-of-paper threshold; sensor real-time value; threshold setting wizard

Transmissive sensor settings: through-beam gap threshold; through-beam out-of-paper threshold; sensor real-time value; threshold setting wizard

Update sensor information

Print sensor curve

4. Labeling arm

Parameter settings

Labeling type: industrial machine / labeling machine / scrape labeling machine

Rewind motor: enable / disable

Print signal: pulse / level / disable

Labeling signal: pulse / level / disable

Print cycle; labeling delay; rewind length; rewind speed; rewind pause; delayed rewind

Dropped-label detection: enable / disable

操作及控制篇

	退纸延时 退纸速度 真空长度 压感过滤 到位信号	
		使能 禁止
贴标板复位	贴标完成	
		贴标板脱离接触
	真空保持 吹标延时 回卷保持	
测试模式		长回卷 短回卷
	单次贴标测试 循环贴标测试 单步贴标测试 贴标臂测试 回卷电机测试 打印循环测试	
贴标方式	打印贴标 不打印贴标	
手动控制	贴标臂 吹气管 吸标板 继电器	
5.RFID		
6.模板打印 模板	打印机 U盘	
变量 模式		
	FR指令 协议数据 IO信号 条码扫描	
7.配置选择 配置_1	配置_2 配置_3 配置_4 配置_5	
当前配置=> 当前配置<=		
8.出厂设置	恢复出厂	否 是
	系统监测	系统配置页 打印头检测 标签打印测试

Operation & Control — Labeling Arm (continued), RFID, Template, Config, Factory

Retract delay; retract speed; vacuum length; pressure-sense filtering

In-position signal: enable / disable

Labeling complete; labeling-plate reset; labeling-plate release; vacuum hold; blow delay

Rewind hold: long rewind / short rewind

Test mode

Single labeling test; cyclic labeling test; single-step labeling test; labeling arm test; rewind motor test; print cycle test

Labeling method

Print and label / label without printing

Manual control

Labeling arm; blow tube; suction plate; relay

5. RFID

6. Template printing

Template: printer / USB drive

Variables

Mode: FR command / protocol data / IO signal / barcode scan

7. Configuration selection

Config_1; Config_2; Config_3; Config_4; Config_5; current config => / current config <=

8. Factory settings

Restore factory defaults: no / yes

System monitoring; system configuration page; printhead test; label print test

操作及控制篇

	实时监测	打印头温度 碳带传感器 回卷传感器
	打印里程 调试模式 报警记录	
9.版本信息	HARD: BOOT: SOFT:	
10.系统重启	否 是	
11.LANGUAGE	CHINESE ENGLISH	

菜单使用说明

- 1.贴标臂功能使用说明：

打印机需处于关机状态，按住菜单按键，打开打印机开关，当报错指示灯闪烁松开手，再次进入菜单中，贴标臂中的功能方可修改。
- 2.菜单设置使用说明：

菜单中参数或设置更改后需要先返回主界面，再关机重启打印机方可保存生效。

Operation & Control — Menu Usage Notes & Version Information

Menu usage notes

1. Labeling-arm function notes: the printer must be off. Hold the Menu key, switch on the printer, and release when the error light flashes, then re-enter the menu; the labeling-arm functions can then be modified.

After changing parameters or settings in the menu, return to the main screen first, then power off and restart the printer for the changes to be saved and take effect.

2. Menu setting notes

Real-time monitoring

Printhead temperature; ribbon sensor; rewind sensor; print mileage
Debug mode; alarm log

9. Version information

HARD: / BOOT: / SOFT:

10. System restart

No / Yes

11. LANGUAGE

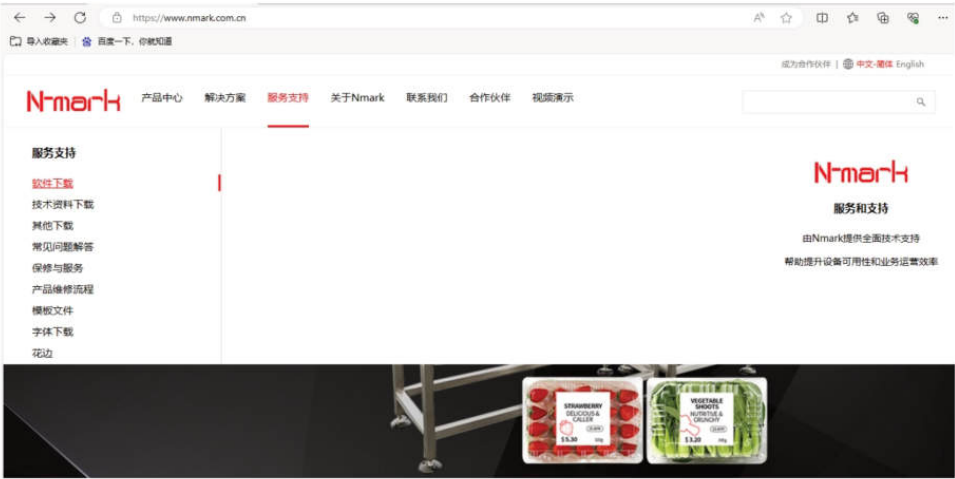
CHINESE / ENGLISH

顶贴、侧贴篇

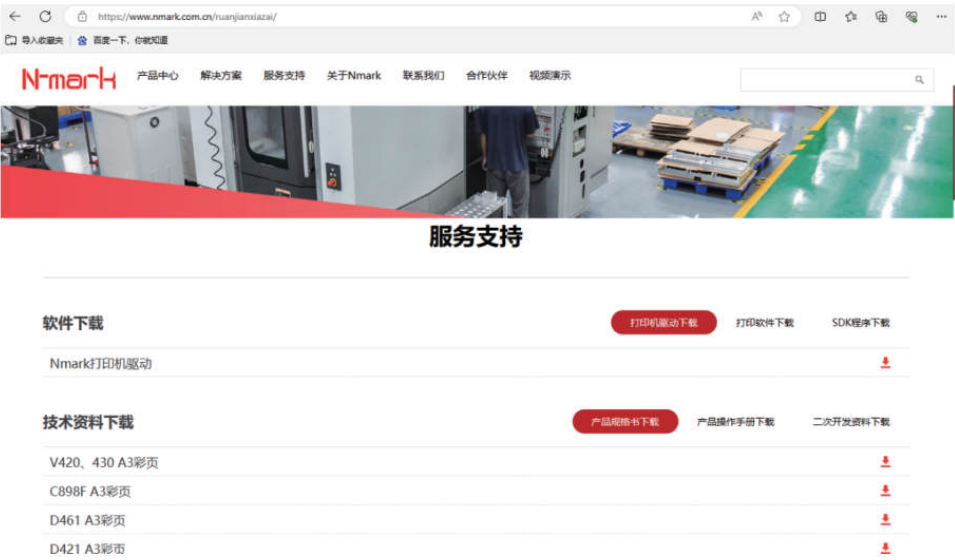
驱动安装

下载驱动

1. 电脑浏览器输入官方网址www.nmark.com.cn，进入官方网站，进入网站首页，点击服务支持，选择软件下载。



2. 点击打印机驱动下载，点击下载按钮。



Driver Installation — Download the Driver (1)

Download the driver

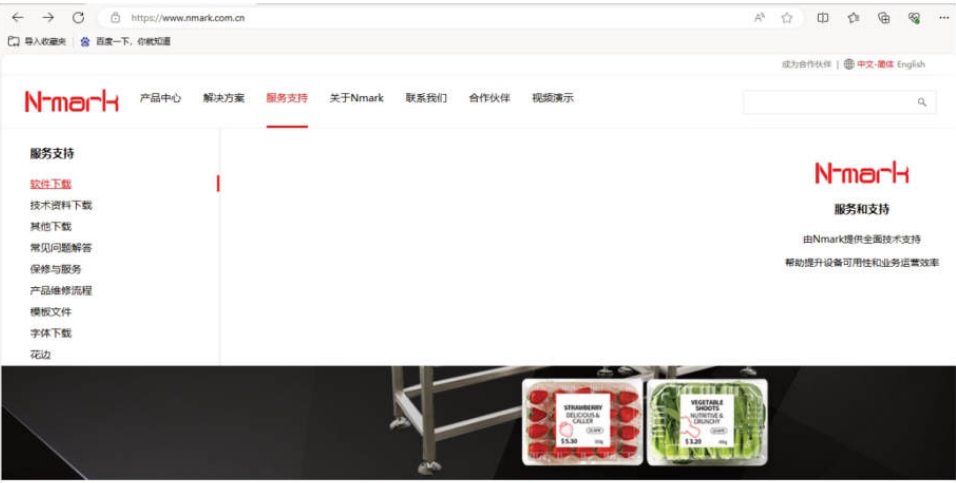
1. In a computer browser enter the official website www.nmark.com.cn, go to the homepage, click Service & Support, and select Software Download.
2. Click printer driver download, then click the Download button.

操作及控制篇

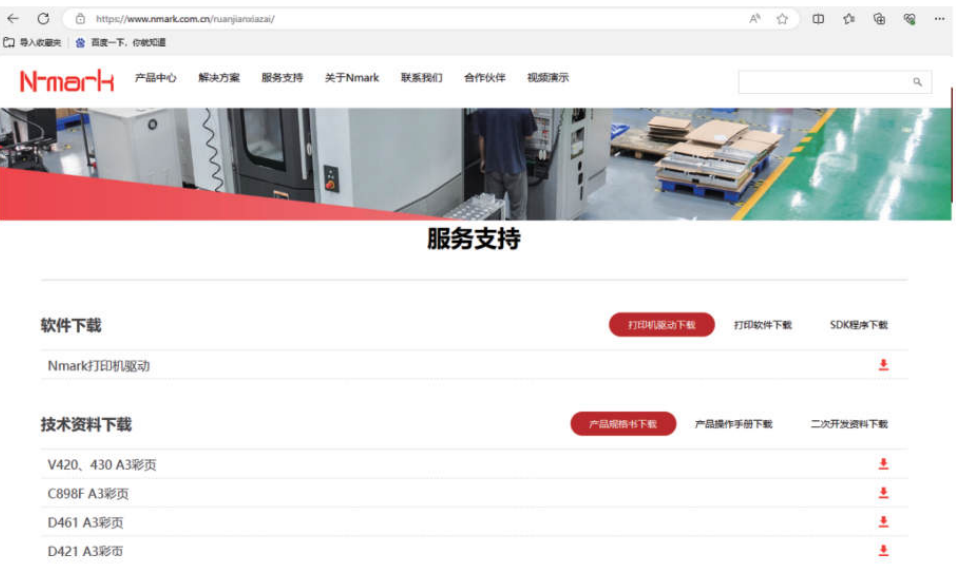
驱动安装

下载驱动

1. 电脑浏览器输入官方网址www.nmark.com.cn，进入官方网站，进入网站首页，点击服务支持，选择软件下载。



2. 点击打印机驱动下载，点击下载按钮。



Driver Installation — Download the Driver (2)

Download the driver

1. In a computer browser enter the official website www.nmark.com.cn, go to the homepage, click Service & Support, and select Software Download.
2. Click printer driver download, then click the Download button.

安装驱动

安装usb驱动

1.下载后解压打开文件夹，双击PrnInst.exe运行

Common	2019/8/28 10:33	文件夹	
Tools	2019/8/28 10:33	文件夹	
Win32	2019/8/28 10:33	文件夹	
Win64	2019/8/28 10:33	文件夹	
License.eng	2019/5/16 7:52	ENG 文件	47 KB
Nmark.cat	2019/8/14 14:07	安全目录	33 KB
Nmark.inf	2019/8/14 14:03	安装信息	11 KB
PrnInst.exe	2019/8/14 14:08	应用程序	2,613 KB
readme.txt	2019/5/20 13:55	文本文档	4 KB

2.点击下一步。



Driver Installation — Install the Driver (1)

Install the USB driver

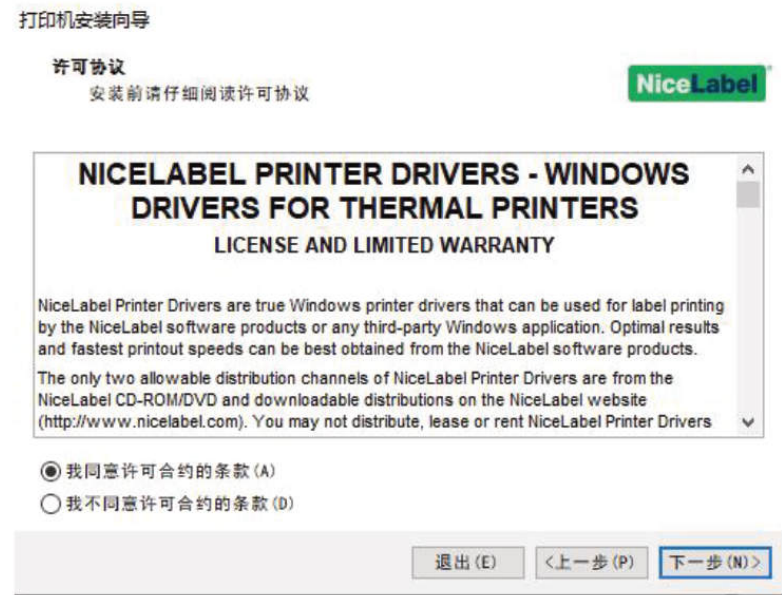
1. After downloading, extract and open the folder, and double-click PrnInst.exe to run it.
2. Click Next.

操作及控制篇

3.点击安装驱动



4.选择我同意许可合约的条款，点击下一步



Driver Installation — Install the Driver (2)

3. Click Install Driver.
4. Select "I agree to the terms of the license agreement" and click Next.

操作及控制篇

5.选择USB端口



6.重新连接USB线



Driver Installation — Install the Driver (3)

5. Select the USB port.
6. Reconnect the USB cable.

操作及控制篇

7. 点击安装

打印机安装向导

打印机选项

请在安装前指定打印机选项

NiceLabel

Printer name: Nmark D-430

驱动程序版本: 8.0.22.17536

端口名: USB018

选择语言: 简体中文

位置:

备注:

☐ 我要将这打印机设置为 Windows 默认打印机 (D)

退出 (E) <上一步 (P) 安装 (I)

8. 等待安装完成

打印机安装向导

正在安装设备驱动程序

“打印机安装向导”正在安装设备驱动程序。

NiceLabel

正在安装设备驱动程序。
Nmark D-430

正在安装设备驱动程序。
Nmark D-430

Easily design and print
barcode labels

Get your free trial

取消 (C)

Driver Installation — Install the Driver (4)

7. Click Install.
8. Wait for installation to complete.

操作及控制篇

9. 安装完成，点击退出

打印机安装向导

打印机选项

请在安装前指定打印机选项

NiceLabel

Printer name:

Nmark D-430

驱动程序版本:

8.0.22.17536

端口名:

USB018

选择语言:

简体中文

位置:

备注:

☐ 我要将这打印机设置为 Windows 默认打印机 (D)

退出 (E)

< 上一步 (P)

安装 (I)

安装网络端口驱动

1. 重复上述步骤一到步骤四，选择网络端口

打印机安装向导

选择端口

选择打印机已绑定的端口

NiceLabel

→ 网络端口(T)

安装有线或无线网络打印机

→ USB端口(U)

安装USB即插即用设备

→ 其他(O)

安装串口 (COM) 或并口 (LPT)

退出 (E)

< 上一步 (P)

下一步 (N) >

Driver Installation — Install the Network Port Driver (1)

9. Installation complete; click Exit.

Install the network port driver

1. Repeat steps 1 through 4 above, and select the network port.

操作及控制篇

2.选择与打印机对印的驱动程序，点击下一步

打印机安装向导

选择打印机

请选择您需要安装的打印机型号

NiceLabel

Nmark C-698
Nmark C-699
Nmark C-898
Nmark C-899
Nmark D-420
Nmark D-420B
Nmark D-421
Nmark D-430
Nmark D-430B
Nmark D-431
Nmark D-461
Nmark I-420
Nmark I-430
Nmark I-820
Nmark I-830
Nmark L-220
Nmark ND-3212
Nmark ND-3312
Nmark ND-4212

退出 (E) <上一步 (P) 下一步 (N) >

3.选择创建一个新的网络端口，点击下一步

打印机安装向导

选择网络端口

选择您打印机已连接的端口

NiceLabel

☒ 创建一个新的网络端口 (C)

☐ 使用现有端口 (U)

端口	类型	配置
LAN_Nmark V-430	Advanced Port Mo...	192.168.0.69:9100
LAN_Nmark V-430_(1)	Advanced Port Mo...	192.168.1.69:9100
LAN_TCP/IP	Advanced Port Mo...	192.168.0.69:9100
LAN_TSC_TTP-346MU	Advanced Port Mo...	192.168.0.211:9100

☐ 显示所有端口 (A) 配置 (O)

退出 (E) <上一步 (P) 下一步 (N) >

Driver Installation — Install the Network Port Driver (2)

2. Select the driver that matches the printer, and click Next.
3. Select "Create a new network port" and click Next.

操作及控制篇

4.输入打印机ip地址，打印机默认出厂ip地址为192.168.1.69，点击下一步

打印机安装向导

添加网络端口

为目标打印机配置端口

NiceLabel

端口名:

LAN_Nmark_V-430_(1)_(1)

打印机名或IP地址

192.168.1.69

端口号:

9100

退出(E)

<上一步(P)

下一步(N)>

5.点击安装

打印机安装向导

打印机选项

请在安装前指定打印机选项

NiceLabel

Printer name:

Nmark V-430

驱动程序版本:

8.0.22.17536

端口名:

LAN_Nmark_V-430_(1)_(1)

选择语言:

简体中文

位置:

备注:

☐ 我要将这打印机设置为 Windows 默认打印机(D)

退出(E)

<上一步(P)

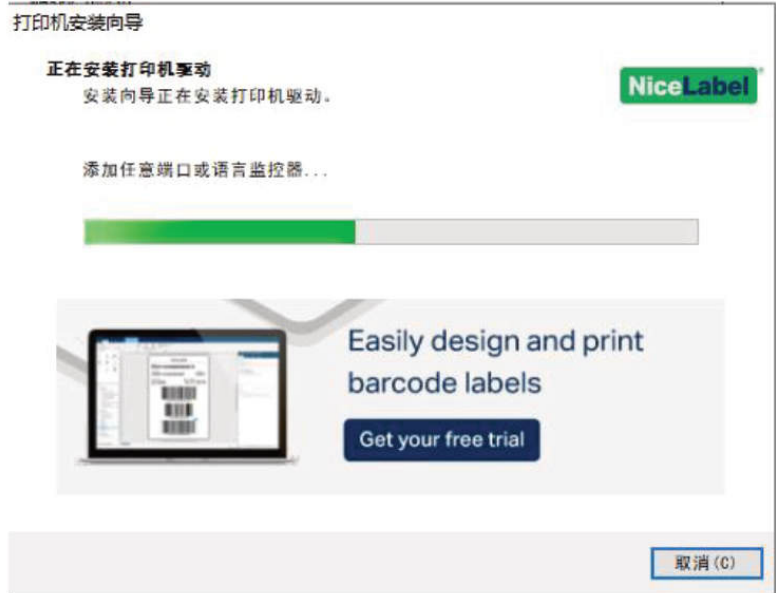
安装(I)

Driver Installation — Install the Network Port Driver (3)

4. Enter the printer IP address (factory default IP is 192.168.1.69) and click Next.
5. Click Install.

操作及控制篇

6.等待安装完成



7.安装完成，点击退出



驱动设置

安装完成后，进入电脑控制面板，选择设备和打印机，右键打印机属性，点击端口，取消勾选启用双向支持，网络驱动修改ip地址选中打印机端口，点击配置端，即可修改ip地址。

Driver Installation — Install the Network Port Driver (4) & Driver Settings

6. Wait for installation to complete.

7. Installation complete; click Exit.

Driver settings

After installation, go to the computer Control Panel, select Devices and Printers, right-click the printer properties, click Ports, and uncheck "Enable bidirectional support". To change the IP address for the network driver, select the printer port and click Configure Port to modify the IP address.

Nmark打印贴标机色带报警说明

Nmark打印贴标机色带报警说明

一.功能描述

色带报警功能时Nmark打印贴标机的一项基础功能，设置该功能可以让用户第一时间知悉色带的使用情况，提醒用户及时更换色带，提高生产效率。色带报警功能有三种表现形式，一种为屏幕显示，一种为IO信号输出，一种为TCP/IP数据输出，IO信号输出和TCP/IP数据输出可利用在无人值守系统中，通过获取输出信号确定色带是否用完。

二.设置方法及模式介绍

进入打印机菜单，进入系统设置子菜单，选择报警设置，可设置色带报警模式，有仅报警提示和报警且停止打印两种报警模式可选。

仅报警提示模式：

当色带用完后，在屏幕上提示色带错误，请检查色带是否用尽，信号输出端口输出报错信号，TCP/IP输出报警数据。

报警且停止打印模式：

当色带用完后，在屏幕上提示色带错误，请检查色带是否用尽，信号输出端口输出报错信号，TCP/IP输出报警数据，同时停止打印机的打印任务。

三.外部信号接口输出

对与不同系列的Nmark打印贴标机，所使用的外部接口不同，本说明着重介绍报警输出相关的内容，其他内容请参考使用说明书获取更新信息。

四.TCP/IP输出

关于具体的TCP/IP通讯说明可参考设备说明书操作及控制篇以下着重介绍报警输出。

返回的数据帧格式为：

0X7B 0XFF 0XFF 0X00 0X04 0X7C 0X00 0X00 0X00 0X00 0X7D

0X7B为byte0，色带报警标志位为byte9的bit4，当发生色带报警时，将该位置1。

Nmark Print & Apply System — Ribbon Alarm

1. Function description

The ribbon alarm is a basic function of the Nmark print & apply system. Enabling it lets the user know the ribbon usage status immediately, reminding the user to change the ribbon promptly and improving production efficiency. The ribbon alarm has three forms: screen display, IO signal output, and TCP/IP data output. IO and TCP/IP outputs can be used in unattended systems, where the output signal determines whether the ribbon is used up.

2. Setting method and modes

Enter the printer menu, enter the System Settings submenu, select Alarm Settings to set the ribbon alarm mode. Two modes are available: alarm prompt only, and alarm and stop printing.

3. External signal interface output

Different Nmark print & apply system series use different external interfaces. This section focuses on the alarm-output related content; for other content refer to the user manual for the latest information.

4. TCP/IP output

For the specific TCP/IP communication description, refer to the Operation & Control section of the user manual. The alarm output is highlighted below.

0X7B is byte0, and the ribbon alarm flag is bit4 of byte9. When a ribbon alarm occurs, this bit is set to 1.

The returned data frame format is:

0X7B 0XFF 0XFF 0X00 0X04 0X7C 0X00 0X00 0X00 0X00 0X7D

Alarm prompt only mode: when the ribbon is used up, the screen shows "Ribbon error, check whether the ribbon is used up"; the signal output port outputs an error signal, and TCP/IP outputs the alarm data.

Alarm and stop printing mode: when the ribbon is used up, the screen shows "Ribbon error, check whether the ribbon is used up"; the signal output port outputs an error signal, TCP/IP outputs the alarm data, and at the same time the printer stops the print job.

Nmark工业打印机及打印贴标机错误出纸的解决方案

Nmark工业打印机及打印贴标机错误出纸的解决方案

一.在线打印

在线打印模式下打印过程中出现连续两张标签，可以使用以下几个方法查看：

- 1.在打印贴标机打印菜单中查看纸张类型和标签大小是否正确。
- 2.纸张类型如果为黑标纸，打开打印头，检查一下标签纸下方的传感器位置是否偏离，如果偏离，手动移动到便签纸底下。如果传感器表面有污渍，利用酒精擦拭传感器表面。
- 3.清除所有打印任务，在打印机菜单中找到参数校准，选择传感器自动检测校准传感器参数。如果打印贴标机类型为V4X0B系列，在传感器校准完成后，屏幕会显示传感器曲线，如果曲线波峰太小或者传感器曲线为一条直线，可能传感器损坏。
- 4.更换纸张类型为间隙纸，需要在打印机系统设置，软件设置里边将纸张类型锁定按照步骤三校准传感器参数。
- 5.适当增加贴标臂选项中的贴标延时，以过滤干扰型号。

注：传感器校准方法见下方在线打印方法传感器校准方法

二.脱机模板

在线打印模式下打印过程中出现连续两张标签，可以使用以下几个方法查看：

- 1.在打印贴标机打印菜单中查看纸张类型和标签大小是否正确。
- 2.纸张类型如果为黑标纸，打开打印头，检查一下标签纸下方的传感器位置是否偏离，如果偏离，手动移动到标签纸底下。如果传感器表面有污渍，利用酒精擦拭传感器表面。传感器图片见图1。
- 3.关闭打印贴标机，按住走纸键不松手，当报错灯闪烁时，松开走纸键，打印贴标机自动校准传感器参数。
- 4.将模板触发模式修改为FR指令，重启打印贴标机，在打印机菜单中找到参数校准，选择传感器自动检测校准传感器参数。如果打印贴标机类型为V4X0B系列，在传感器校准完成后，屏幕会显示传感器曲线，如果曲线波峰太小或者传感器曲线为一条直线，可能传感器损坏。
- 6.不修改模板触发模式，将纸张类型修改为除连续纸外的另外一个，需要在打印机系统设置，软件设置里边将纸张类型锁定按照按照步骤四校准传感器参数。
- 7.适当增加贴标臂选项中的贴标延时，以过滤干扰型号。

注：传感器校准方法见下方脱机模板方法传感器校准方法



图1

Nmark Industrial Printer & Print & Apply System — Media Feed Error Solution

1. Online printing

If two consecutive labels appear during printing in online mode, check using the following methods:

1. In the print & apply system print menu, check whether the paper type and label size are correct.
2. If the paper type is black-mark, open the printhead and check whether the sensor under the label media has shifted; if so, move it manually under the label media. If the sensor surface is dirty, wipe it with alcohol.
3. Clear all print jobs; in the printer menu find Parameter Calibration and select Sensor Auto-detect to calibrate the sensor. For V4X0B series machines, the screen shows the sensor curve after calibration; if the curve peak is too small or the curve is a straight line, the sensor may be damaged.
4. If changing the paper type to gap paper, lock the paper type in Printer System Settings – Software Settings and calibrate the sensor as in step 3.
5. Appropriately increase the labeling delay in the labeling-arm options to filter interference.

2. Offline template

1. In the print & apply system print menu, check whether the paper type and label size are correct.
2. If the paper type is black-mark, open the printhead and check whether the sensor under the label media has shifted; if so, move it manually under the label media. If the sensor surface is dirty, wipe it with alcohol (sensor shown in Figure 1).
3. Switch the print & apply system off, hold the FEED key; when the error light flashes, release it, and the machine calibrates the sensor automatically.
4. Change the template trigger mode to FR command, restart the machine, find Parameter Calibration in the menu and select Sensor Auto-detect to calibrate. For V4X0B series machines, the screen shows the sensor curve after calibration; if the peak is too small or the curve is a straight line, the sensor may be damaged.
6. Without changing the template trigger mode, change the paper type to one other than continuous paper; lock the paper type in Printer System Settings – Software Settings and calibrate the sensor as in step 4.
7. Appropriately increase the labeling delay in the labeling-arm options to filter interference.

Figure 1: black-mark sensor.

Nmark工业打印机及打印贴标机错误出纸的解决方案

三.在线打印方式传感器校准方法

V4X0系列传感器校准方法

- 1.进入打印机菜单，选择打印参数



- 2.进入打印参数菜单，查看纸张类型，如果纸张类型为黑标，必须确保黑标传感器位于标签纸正下方



Media Feed Error Solution — Online Mode Sensor Calibration (V4X0)

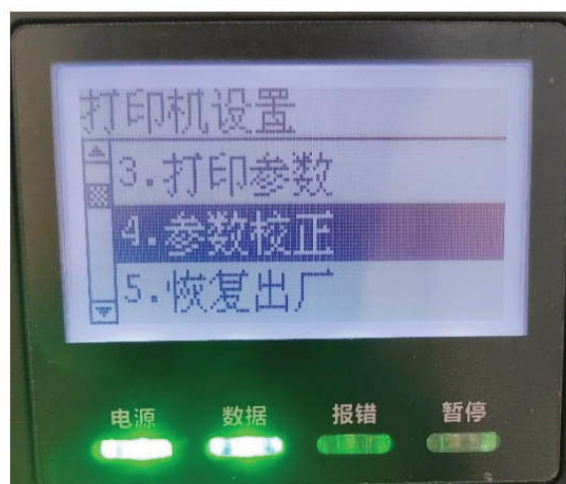
3. Online printing — sensor calibration method

V4X0 series sensor calibration

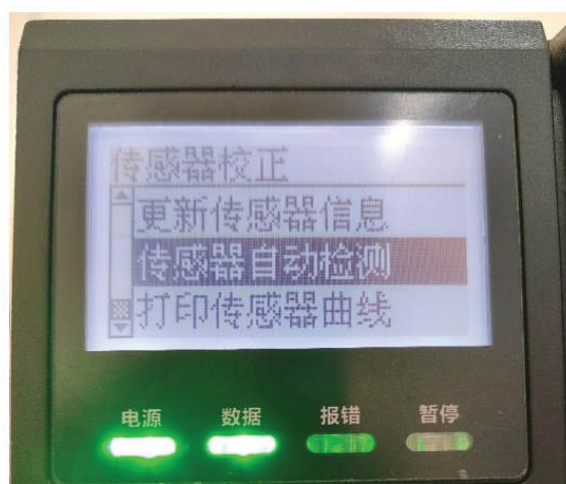
1. Enter the printer menu and select Print Parameters.
2. Enter the Print Parameters menu and check the paper type. If the paper type is black mark, ensure the black-mark sensor is directly under the label media.

Nmark工业打印机及打印贴标机错误出纸的解决方案

3. 返回打印机菜单界面，选择参数校正，按确认键进入



4. 选择传感器自动检测，按确认键开始进行传感器校准。

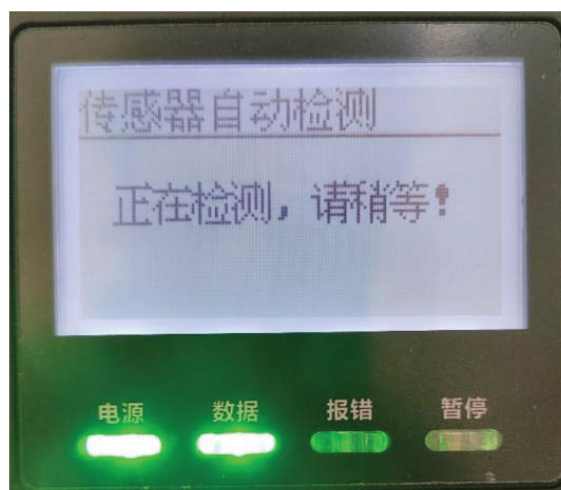


Media Feed Error Solution — Sensor Calibration (V4X0)

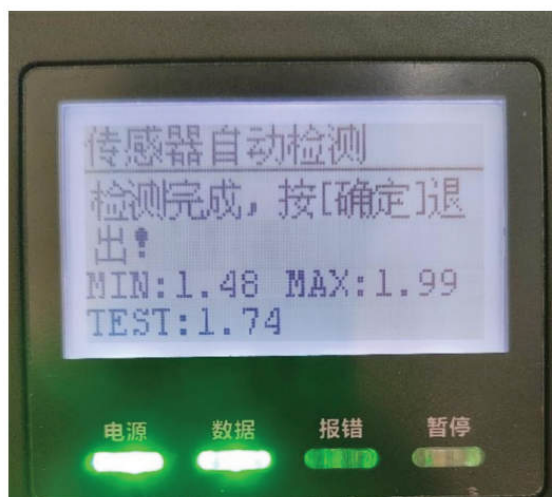
3. Return to the printer menu, select Parameter Calibration, and press Enter.
4. Select Sensor Auto-detect and press Enter to start sensor calibration.

Nmark工业打印机及打印贴标机错误出纸的解决方案

5.等待校准完成



6.校准完成后屏幕显示传感器最大值, 最小值以及测试值



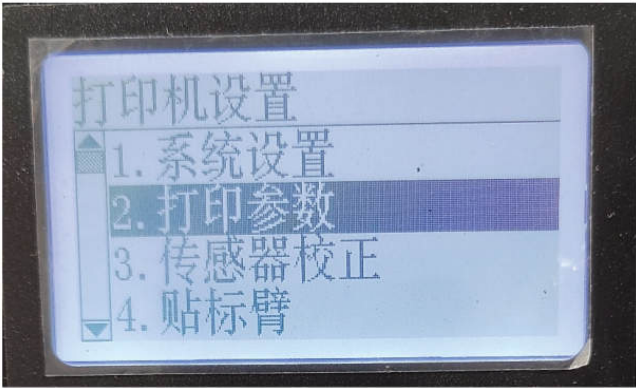
Media Feed Error Solution — Sensor Calibration (V4X0)

5. Wait for calibration to complete.
6. After calibration, the screen shows the sensor maximum, minimum and test values.

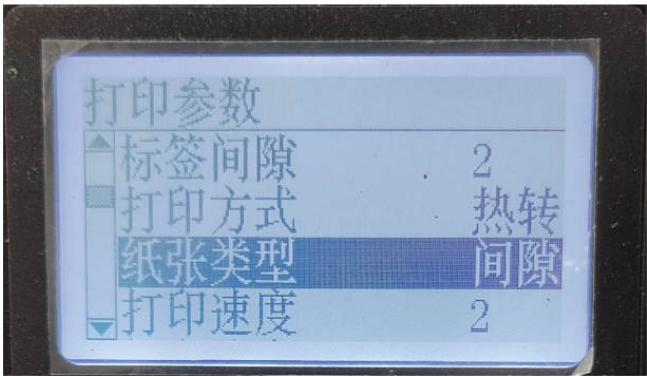
Nmark工业打印机及打印贴标机错误出纸的解决方案

V4X0B系列传感器校准方法

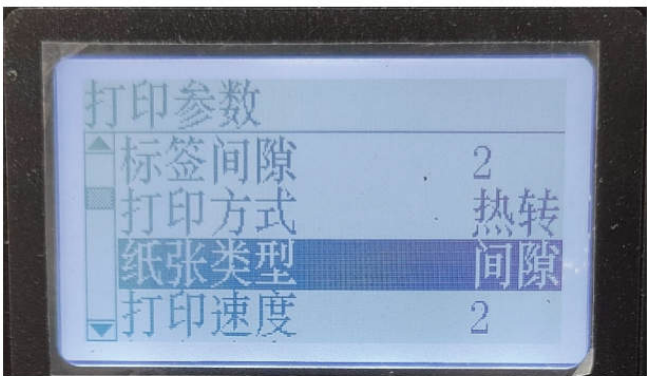
1.进入打印机菜单，选择打印参数



2.进入打印参数菜单，查看纸张类型，如果纸张类型为黑标，必须确保黑标传感器位于标签纸正下方



3.返回打印机菜单界面，选择传感器校正，按确认键进入



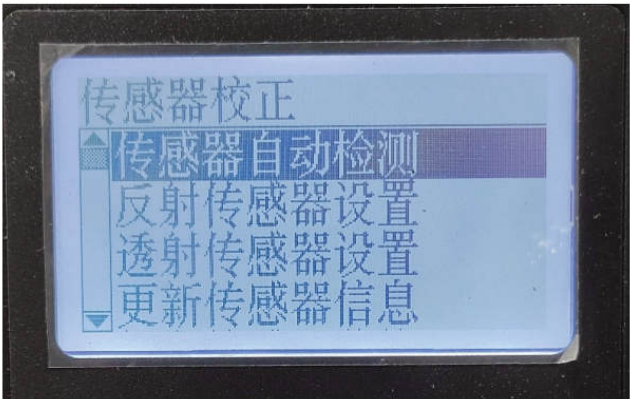
Media Feed Error Solution — Sensor Calibration (V4X0B)

V4X0B series sensor calibration

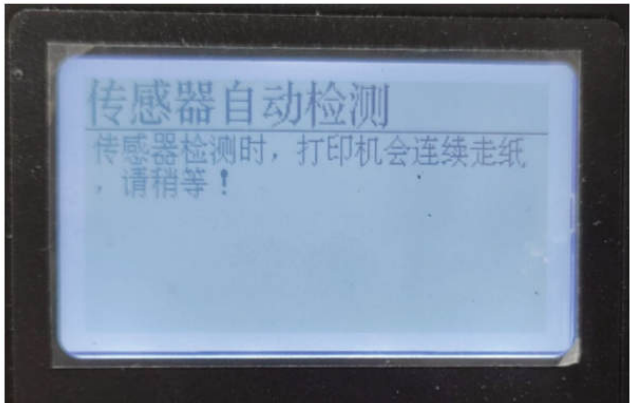
1. Enter the printer menu and select Print Parameters.
2. Enter the Print Parameters menu and check the paper type. If the paper type is black mark, ensure the black-mark sensor is directly under the label media.
3. Return to the printer menu, select Sensor Calibration, and press Enter.

Nmark工业打印机及打印贴标机错误出纸的解决方案

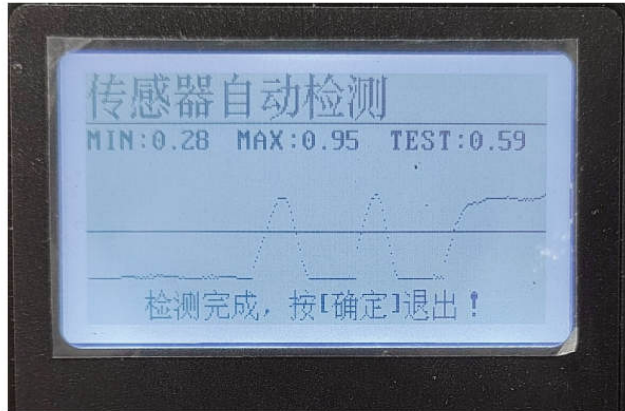
4.选择传感器自动检测，按确认键开始进行传感器校准



5.等待校准完成



6.校准完成后屏幕显示传感器最大值，最小值以及测试值。同时会在屏幕上打印出所选的传感器曲线



Media Feed Error Solution — Sensor Calibration (V4X0B)

4. Select Sensor Auto-detect and press Enter to start sensor calibration.
5. Wait for calibration to complete.
6. After calibration, the screen shows the sensor maximum, minimum and test values, and also prints the selected sensor curve on the screen.

Nmark工业打印机及打印贴标机错误出纸的解决方案

四.脱机模板方式传感器校准方法

方式1：将模板触发方式修改为FR指令，关闭打印机，按住键盘走纸键不松手，开启电源，当报错灯闪烁时松开走纸键，打印机开始自动校准传感器。

方式2. 修改纸张类型，需要在打印机系统设置，软件设置里边将纸张类型锁定，直接关闭打印机，按住键盘走纸键不松手，开启电源，当报错灯闪烁时松开走纸键，打印机开始自动校准传感器。

Media Feed Error Solution — Offline Template Mode Sensor Calibration

4. Offline template — sensor calibration method

Method 1: change the template trigger mode to FR command, switch off the printer, hold the FEED key, and power on; release the FEED key when the error light flashes and the printer starts calibrating the sensor automatically.

Method 2: change the paper type, lock the paper type in Printer System Settings – Software Settings, switch off the printer directly, hold the FEED key and power on; release the FEED key when the error light flashes and the printer starts calibrating the sensor automatically.

Nmark打印贴标机相关参数说明

Nmark打印贴标机相关参数说明

打印参数

打印高度：所使用的标签高度。
 打印宽度：所使用的标签宽度。
 间隙高度：两个标签之间的间隙大小。
 打印方式：无色带使用热感，有色带使用热转。
 纸张类型：使用的标签纸类型，修改纸张类型可修改使用的传感器，连续纸不使用传感器，黑标纸使用反射传感器，间隙纸使用透射传感器。
 打印浓度：浓度越大，颜色越深。浓度越小，颜色越浅。
 打印速度：控制打印标签的速度。
 进纸偏移：下一张标签边缘距离剥离片边缘的位置。
 X轴偏移：标签内容在标签纸上的横向位置偏移。
 Y轴偏移：标签内容在标签纸上的纵向位置偏移。
 文本间距：模板中文本变量的字符间距。
 打印数量：有受控和不受控两种，受控表示上位机发送多少标签数据，贴标机打印多少标签数据，不受控表示贴标机打印的标签数量与上位机发送的数量无关。

贴标参数

贴标类型：设置贴标机的工作模式，与机器类型有关。
 回卷电机：使能/禁止回卷电机
 打印信号：脉冲/电平/禁止（选脉冲或电平方式，发送打印数据后需要io触发打印）
 贴标信号：脉冲/电平/禁止（选脉冲或电平方式，打印完成后需要io触发贴标）
 打印周期：两次打印之间的时间间隔
 贴标延时：接收到贴标信号后，延时贴标
 回卷长度：回卷电机退纸长度
 回卷速度：回卷电机的速度
 回卷暂停：回卷电机暂停的距离，影响标签和贴标板之间的缝隙大小
 延时回卷：回卷暂停后，设置回卷重新启动的延时，保证标签更好的吸紧
 掉签检测：是否检测贴标板下方有标签
 退纸延时：控制贴标板下压过程中，回卷电机回退的时机
 退纸速度：打印机电机回退速度
 真空长度：正打印过程中，控制贴标板的吸真空位置大小
 压感过滤：过滤贴标板开始下压时异常信号
 到位信号：贴标板接触到贴标问题触发的信号
 贴标完成：贴标完成信号触发的位置
 真空保持：设置贴标板接触物体的时间长短
 吹标延时：吹标时长（吹标机使用）
 回卷保持：回卷电机模式



打印贴标机操作视频



工业打印机操作视频

Nmark Print & Apply System — Related Parameters (1)

Print parameters

Print height: the label height in use.

Print width: the label width in use.

Gap height: the gap size between two labels.

Print method: thermal direct when no ribbon; thermal transfer when a ribbon is used.

Paper type: the label media type in use. Changing the paper type changes the sensor used — continuous paper uses no sensor, black-mark paper uses the reflective sensor, gap paper uses the transmissive sensor.

Print darkness: the higher the darkness, the darker the color; the lower, the lighter.

Print speed: controls the label printing speed.

Feed offset: the distance from the next label edge to the peel plate edge.

X-axis offset: horizontal position offset of the label content on the media.

Y-axis offset: vertical position offset of the label content on the media.

Text spacing: character spacing of the text variables in the template.

Print quantity: controlled or uncontrolled. Controlled means the machine prints as many labels as the host sends; uncontrolled means the printed quantity is independent of the number sent by the host.

Labeling parameters

Labeling type: sets the machine working mode; depends on machine type.

Rewind motor: enable/disable the rewind motor.

Print signal: pulse / level / disable (when pulse or level is selected, an IO trigger is required to print after print data is sent).

Labeling signal: pulse / level / disable (when pulse or level is selected, an IO trigger is required to label after printing completes).

Print cycle: time interval between two prints.

Labeling delay: delay labeling after receiving the labeling signal.

Rewind length: rewind-motor retract length.

Rewind speed: rewind-motor speed.

Rewind pause: rewind-motor pause distance, which affects the gap between the label and the labeling plate.

Delayed rewind: after the rewind pause, sets the delay before rewinding restarts, to help the label hold better.

Dropped-label detection: whether to detect a label under the labeling plate.

Retract delay: controls the rewind-motor retract timing while the labeling plate presses down.

Retract speed: printer motor retract speed.

Vacuum length: controls the vacuum suction position/size of the labeling plate during printing.

Pressure-sense filtering: filters abnormal signals when the labeling plate begins pressing down.

In-position signal: the signal triggered when the labeling plate contacts the labeling object.

Labeling complete: the position where the labeling-complete signal is triggered.

Vacuum hold: sets how long the labeling plate contacts the object.

Blow delay: blow duration (used by blow labeling machines).

Rewind hold: rewind-motor mode.

Nmark打印贴标机相关参数说明

系统参数

指令集：选择打印机当前支持指令集
触发模式：打印信号触发后打印的数量
参数锁定：某个参数锁定后，该参数不受上位机影响

传感器参数

反射黑标阈值：检测标签起始和结束的阈值
反射缺纸阈值：检测有无纸张的阈值，大于该值，表示无纸
透射间隙阈值：检测标签起始和结束的阈值
透射缺纸阈值：检测有无纸张的阈值，大于该值，表示无纸

模板打印触发模式

FR指令：FR指令
协议数据：特殊协议
IO信号：需要连接外部的IO信号
条码扫描：主USB口连接扫码枪

Nmark Print & Apply System — Related Parameters (2)

System parameters

Command set: selects the command set currently supported by the printer.

Trigger mode: the quantity printed after the print signal is triggered.

Parameter lock: when a parameter is locked, it is not affected by the host computer.

Sensor parameters

Reflective black-mark threshold: threshold for detecting label start and end.

Reflective out-of-paper threshold: threshold for detecting paper presence; above this value means no paper.

Transmissive gap threshold: threshold for detecting label start and end.

Transmissive out-of-paper threshold: threshold for detecting paper presence; above this value means no paper.

Template printing trigger mode

FR command: FR command.

Protocol data: special protocol.

IO signal: requires an external IO signal connection.

Barcode scan: a scanner connected to the main USB port.

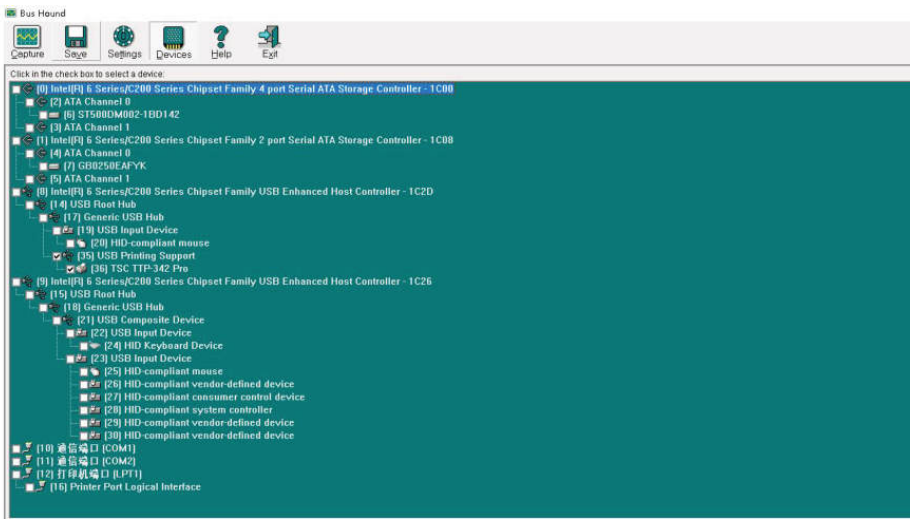
Nmark打印贴标机USB打印对接其他专用软件指导

Nmark打印贴标机USB打印对接其他专用软件指导

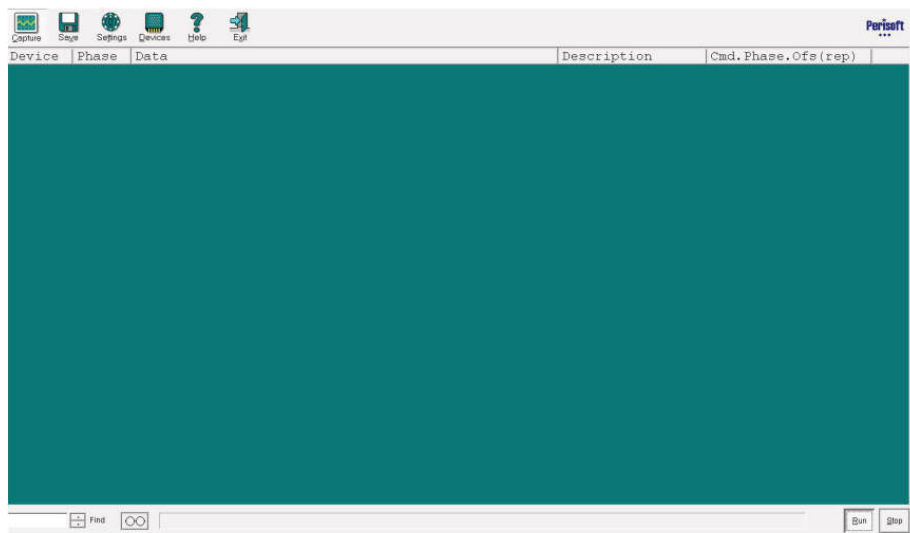
由于USB通讯的特殊性，使用其他打印机专用软件调用Nmark打印机驱动会出现错误，当必须使用其他专用软件时，可以利用以下方法解决无法调用驱动的错误。首先，需要明确打印机是否支持专用软件输出的指令集，以及专用软件对应打印机与Nmark打印贴标机分辨率相同的打印机的USB参数，获取参数可以利用BusHound软件。确定以上信息后便可进行修改。

一.BusHound获取参数教程

1.打开BusHound软件，点击Devices，勾选打印机以及USB Printing Support。



2.点击Capture回到，点击stop清空窗口，点击run开始抓取



Nmark Print & Apply System — USB Printing with Third-party Software (1)

Because of the special nature of USB communication, using other dedicated printer software to invoke the Nmark printer driver causes errors. When a dedicated third-party software must be used, the following method resolves the "cannot invoke driver" error. First confirm whether the printer supports the command set output by the dedicated software, and the USB parameters of a printer (matched to the dedicated software) that has the same resolution as the Nmark print & apply system. Parameters can be obtained with the BusHound software. Once confirmed, make the modifications.

1. BusHound parameter acquisition tutorial

1. Open BusHound, click Devices, and check the printer and USB Printing Support.
2. Click Capture to return, click Stop to clear the window, then click Run to start capturing.

Nmark打印贴标机USB打印对接其他专用软件指导

3.重启打印机，获取到相关参数

CTL	80 06 0100 0000 0012	GET DESCRIPTOR
IN	12 01 00 02 02 00 00 40 03 12 31 01 00 01 01 02	@..1.....
	03 01	..
CTL	80 06 0200 0000 0109	GET DESCRIPTOR
IN	09 02 20 00 01 01 00 80 32 09 04 00 00 02 07 01	2.....
	02 00 07 05 02 02 40 00 00 07 05 82 02 40 00 00	@.....@..
CTL	00 09 0001 0000 0000	SET CONFIG
CTL	80 06 0303 0409 0103	GET DESCRIPTOR
IN	10 03 50 00 72 00 69 00 6e 00 74 00 65 00 72 00	..P.r.i.n.t.e.r.
CTL	a1 00 0000 0000 03f1	get device id
IN	00 2f 4d 46 47 3a 54 53 43 3b 43 4d 44 3a 54 53	./MFG:TSC;CMD:TS
	50 4c 3b 4d 44 4c 3a 54 54 50 2d 33 34 32 20 50	PL;MDL:TTP-342 P
	72 6f 3b 43 4c 53 3a 50 52 49 4e 54 45 52 3b	ro;CLS:PRINTER;
CTL	a1 00 0000 0000 0400	get device id
USTS	c0010000	canceled

注：VID:1203 PID:0131

二.参数修改方法

1.利用Nmark打印贴标机配置工具修改 Nmark打印贴标机USB参数。
修改方法如下：

(1) 打开Ptools软件，选择已连接的Nmark打印机，点击连接

语言版本
简体中文

单位
☒ 毫米 ☐ 英寸

USB

V430

连接

超级用户

打印机和贴标机设

档案管理

通讯工具

高级设置

传感器手动校正

打印头温度

通讯参数

打印自检页

打印测试页

恢复出厂

usb参数

贴标器参数

版本信息

打印机重启

打印

系统

打印速度

打印方式

打印浓度

间隙高度

标签宽度

参考点

标签高度

顶部偏移

传感器

打印方向

开机后动作

送纸偏移

Nmark Print & Apply System — USB Printing with Third-party Software (2)

2. Parameter modification method

3. Restart the printer to obtain the relevant parameters.

1. Use the Nmark print & apply system configuration tool to modify the Nmark print & apply system USB parameters. The modification method is as follows:

(1) Open the Ptools software, select the connected Nmark printer, and click Connect.

Note: VID:1203 PID:0131

Nmark打印贴标机USB打印对接其他专用软件指导

(2) 点击USB参数，点击读取，此步骤需要超级用户权限



(3) 修改USB参数为打印软件所对应的打印机的USB参数，点击设置，重启打印机即可

三.安装专用软件对应打印机的驱动

Nmark Print & Apply System — USB Printing with Third-party Software (3)

3. Install the driver of the printer corresponding to the dedicated software

(2) Click USB Parameters, then click Read; this step requires super-user permission.

(3) Change the USB parameters to those of the printer corresponding to the print software, click Set, and restart the printer.

Ptools升级程序

Ptools升级程序

1.解压后，双击ptools图标



2.双击ptools图标



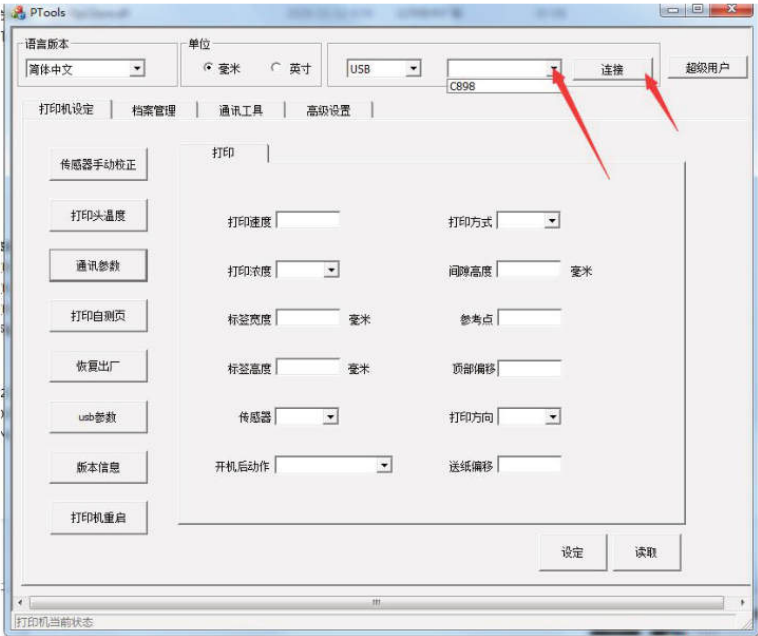
Ptools Upgrade Utility (1)

1. After extracting, double-click the Ptools icon.
2. Double-click the Ptools icon.

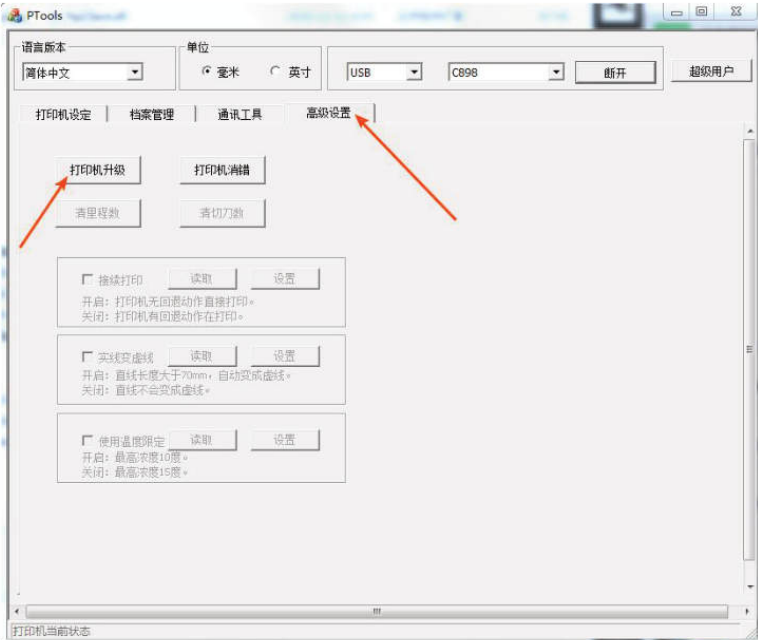
Illustration/diagram page - see the original Chinese document for the image.

Ptools升级程序

3.连接好usb线，找到机器型号，选中，点连接



4.点击高级设置，点击打印机升级



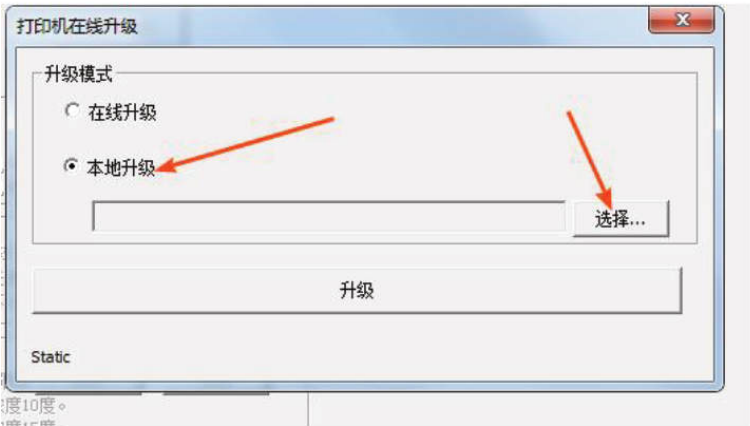
Ptools Upgrade Utility (2)

3. Connect the USB cable, find the machine model, select it, and click Connect.
4. Click Advanced Settings, then click Printer Upgrade.

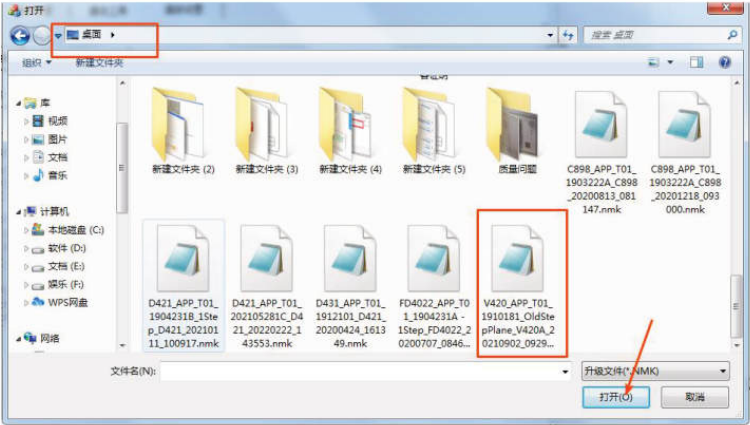
Illustration/diagram page - see the original Chinese document for the image.

Ptools升级程序

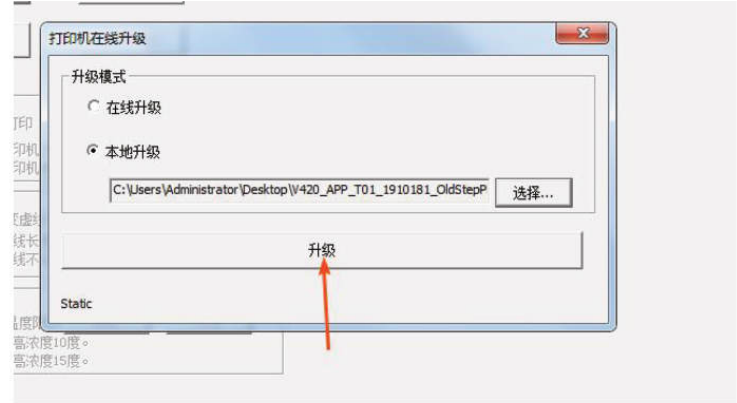
5.点击本地升级，点击选择



6.找到升级文件位置，点击打开



7.点击升级



Ptools Upgrade Utility (3)

5. Click Local Upgrade, then click Select.
6. Find the upgrade file location and click Open.
7. Click Upgrade.

Illustration/diagram page - see the original Chinese document for the image.

触摸屏Nmark打印软件使用说明

触摸屏Nmark打印软件使用说明

注：本文档着重介绍调用U盘文件方式打印

一.软件介绍

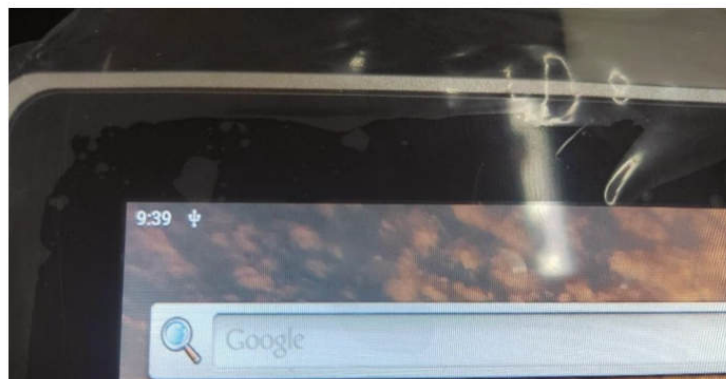
Nmark标签打印软件可以通过软件标签编辑和调用U盘内存储的标签文件两种方式进行标签打印。标签编辑方式即用户在使用时可以在触摸屏上进行标签的制作，不需要使用其他软件。调用U盘方式即用户将在电脑上用本公司开发的Barlabel标签编辑软件编辑好所需要的所有标签文件，将.BLX文件存储到U盘内，Nmark标签打印软件通过调用U盘内的文件进行打印。

二.使用步骤

1.为触摸屏和Nmark打印机上电。



2.将已经存储了标签文件的U盘插在触摸屏下方的任意一个USB接口上，屏幕显示连接图标即为连结成功。



Touchscreen Nmark Print Software — Introduction & Steps

Note: this document focuses on the USB-drive file invocation printing method.

1. Software introduction

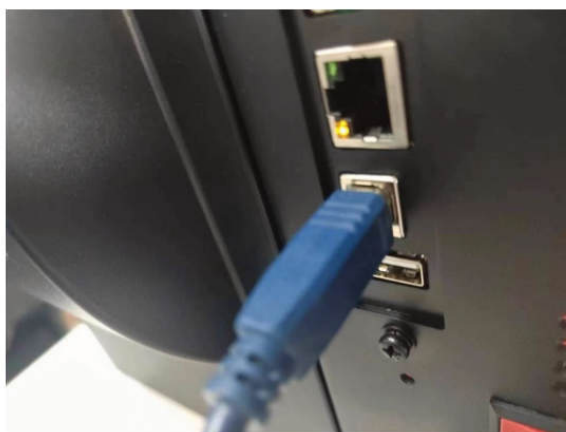
The Nmark label printing software prints labels in two ways: on-screen label editing, and invoking label files stored on a USB drive. In editing mode the user makes labels directly on the touchscreen without other software. In USB-drive mode, the user prepares all required label files on a computer with our Barlabel label editing software, stores the .BLX files on a USB drive, and the Nmark label printing software prints by invoking the files on the USB drive.

2. Operating steps

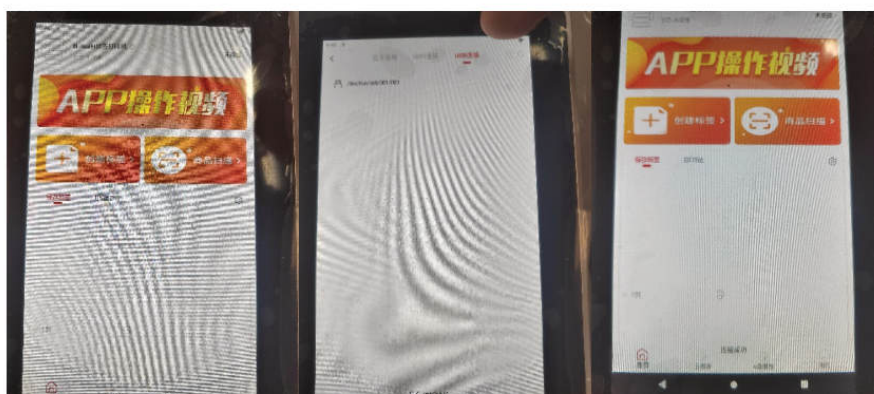
1. Power on the touchscreen and the Nmark printer.
2. Insert the USB drive (with the label files) into any USB port below the touchscreen; the screen showing the connection icon indicates success.

触摸屏Nmark打印软件使用说明

3.用USB线连接触摸屏和Nmark打印机



4.打开Nmark标签打印软件，点击右上角未连接，选择USB连接，选择弹出的USB设备，弹出权限申请时选择确定，再次选择弹出的USB设备，下方提示连接成功。

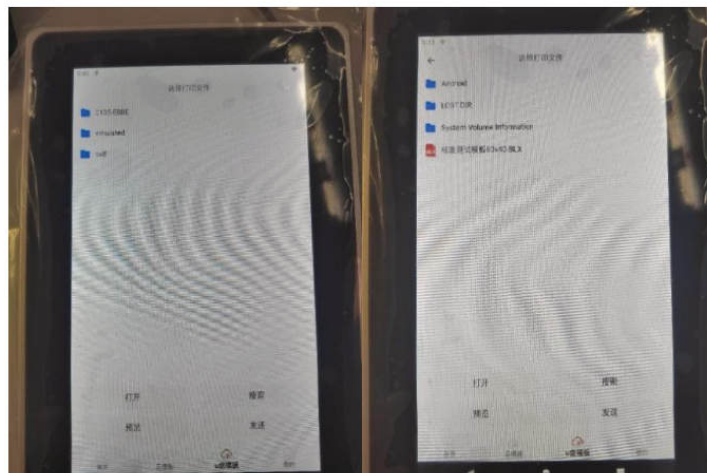


Touchscreen Nmark Print Software — Steps (continued)

3. Connect the touchscreen to the Nmark printer with a USB cable.
4. Open the Nmark label printing software, click "Not connected" in the upper right, select USB connection, select the popped-up USB device, select Confirm when the permission request appears, select the USB device again, and the bottom shows "connected successfully".

触摸屏Nmark打印软件使用说明

5. 选择U盘模板，点击名为U盘id号的文件夹，打开后即可找到存储的标签文件，选择需要打印的标签文件，点击打开，等待加载完成，点击发送打印机即可打印出需要的标签



6. 触摸屏上对标签进行二次编辑，打开U盘中需要编辑的标签文件，点击编辑按钮，界面会自动跳转到标签编辑界面，编辑完成后需要保存标签文件，文件会自动保存在本地目录下，可以在主界面查看U盘里的标签文件不会被修改



Touchscreen Nmark Print Software — Steps (continued)

5. Select USB-drive template, click the folder named with the USB-drive ID, open it to find the stored label files, select the label file to print, click Open, wait for loading to finish, then click Send to Printer to print the required label.
6. For secondary editing on the touchscreen, open the label file to edit on the USB drive, click the Edit button, and the interface jumps to the label editing screen. After editing, save the label file; it is automatically saved to the local directory. The label file on the USB drive can be viewed on the main screen and is not modified.

触摸屏Nmark打印软件使用说明

7.将U盘文件存储在触摸屏内部共有两种方法

方法1：在触摸屏软件里打开U盘里的标签文件，点击编辑，进入编辑界面，可以选择编辑或者不编辑文件，然后保存，即可将文件保存在触摸屏中。

方法2：在U盘模板界面选择需要保存在本地的标签文件，选择复制，可以选择覆盖或者跳过同名，然后在软件“我的”界面，打开我的文件即可看到保存的标签文件。

三.软件更新方法

需要更新软件时，打开via浏览器，打开保存的书签，即可进入更新网站，卸载旧版本，下载安装最新版本即可。

四.网络打印使用方法

1.连接网线打印

(1)触摸屏和打印机之间利用网线直连

打开触摸屏设置，选择网络和互联网点击以太网，选择静态IP模式，配置相关参数，网络前缀长度输入24，IP地址以及默认网关根据用户所在环境的局域网自行配置。触摸屏的IP地址必须和打印机IP地址处在同一个网段。



(2)触摸屏和打印机之间通过交换机或者路由器连接

这种连接方式不需要手动配置触摸屏的IP地址，交换机或路由器会自动给触摸屏分配IP地址

Touchscreen Nmark Print Software — Save to Local, Update, Network Printing

7. There are two methods to store USB-drive files inside the touchscreen:

Method 1: open the USB-drive label file in the touchscreen software, click Edit to enter the editing screen, choose to edit or not, then Save; the file is saved in the touchscreen.

Method 2: on the USB-drive template screen select the label file to save locally, choose Copy, choose overwrite or skip same-name files, then open "My" in the software and open My Files to see the saved label file.

3. Software update method

To update the software, open the Via browser and open the saved bookmark to enter the update website; uninstall the old version and download/install the latest version.

4. Network printing method

1. Printing over a network cable

(1) Direct network-cable connection between touchscreen and printer: open the touchscreen settings, select Network & Internet, click Ethernet, select static IP mode and configure the parameters; enter 24 for the network prefix length, and configure the IP address and default gateway according to the user's LAN. The touchscreen IP must be on the same network segment as the printer IP.

(2) Connection between touchscreen and printer through a switch or router: this method needs no manual touchscreen IP configuration; the switch/router assigns the touchscreen an IP automatically.

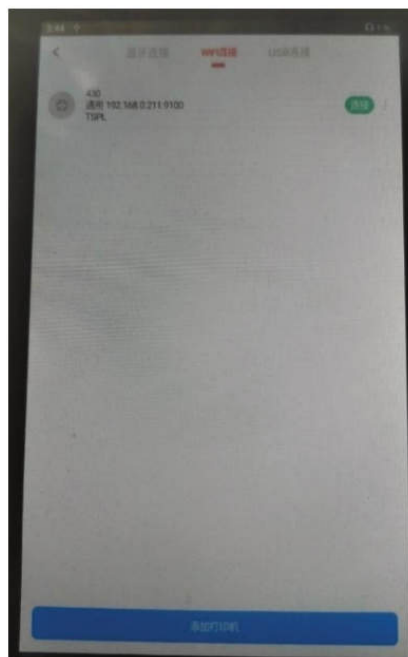
触摸屏Nmark打印软件使用说明

2. 利用WIFI进行打印

将打印在路由器上，触摸屏连接该路由器的WIFI。

打开Nmark标签打印软件，点击右上角未连接，点击WIFI连接，添加打印机，输入打印机名称、IP地址以及端口号，打印机默认端口号为9100.点击确定。列表中出现新增的打印机即可。

点击连接，等待软件返回首页。



Touchscreen Nmark Print Software — WiFi Printing

2. Printing over WiFi

Connect the printer to the router, and connect the touchscreen to that router's WiFi.

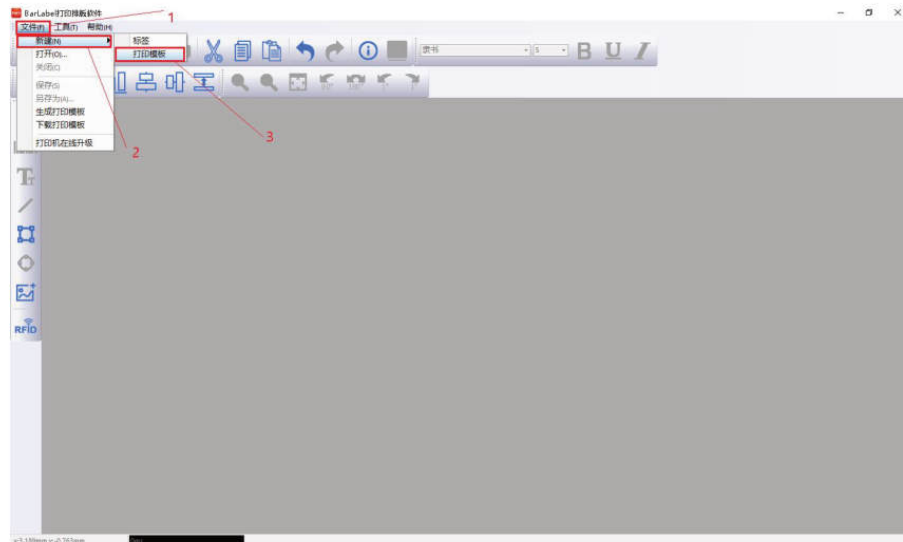
Open the Nmark label printing software, click "Not connected" in the upper right, click WiFi connection, add a printer, enter the printer name, IP address and port number (the printer default port is 9100), and click OK. The new printer then appears in the list.

Click Connect and wait for the software to return to the home screen.

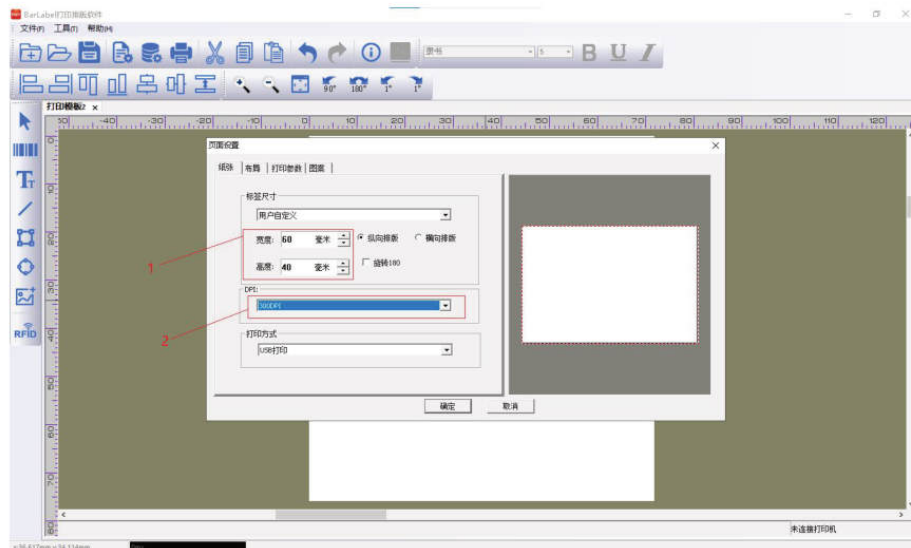
Barlabel打印模板制作与调用功能说明

一.新建模板

打开Barlabel软件，点击文件，新建，打印模板



双击空白区域，修改模板宽度和高度、分辨率、打印方式。



利用左边的控件进行模板编辑。

Barlabel Print Template Creation & Invocation (1)

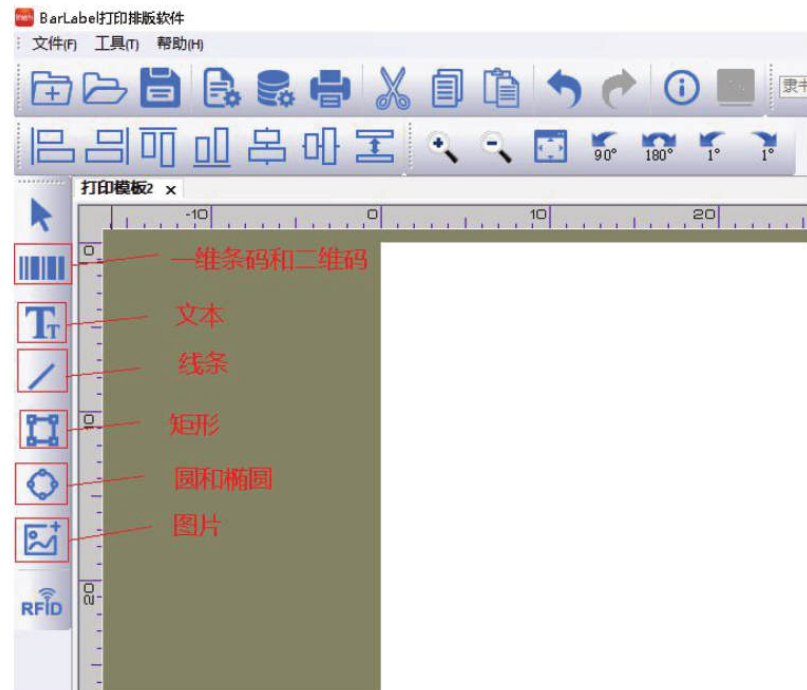
1. New template

Open the Barlabel software, click File > New > Print Template.

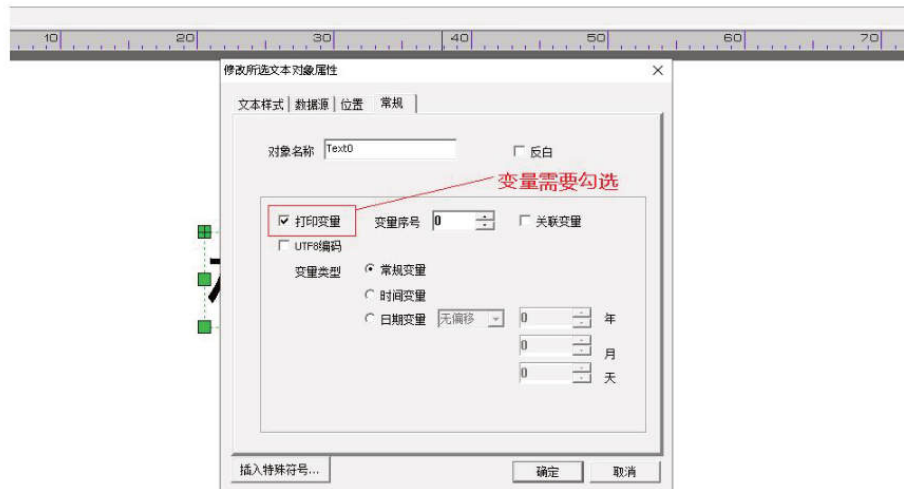
Double-click the blank area to change the template width and height, resolution, and print method.

Use the controls on the left to edit the template.

Barlabel打印模板制作与调用功能说明



放置好内容后，可双击修改内容的具体属性，如果该项为变量，需要在常规中勾选打印变量



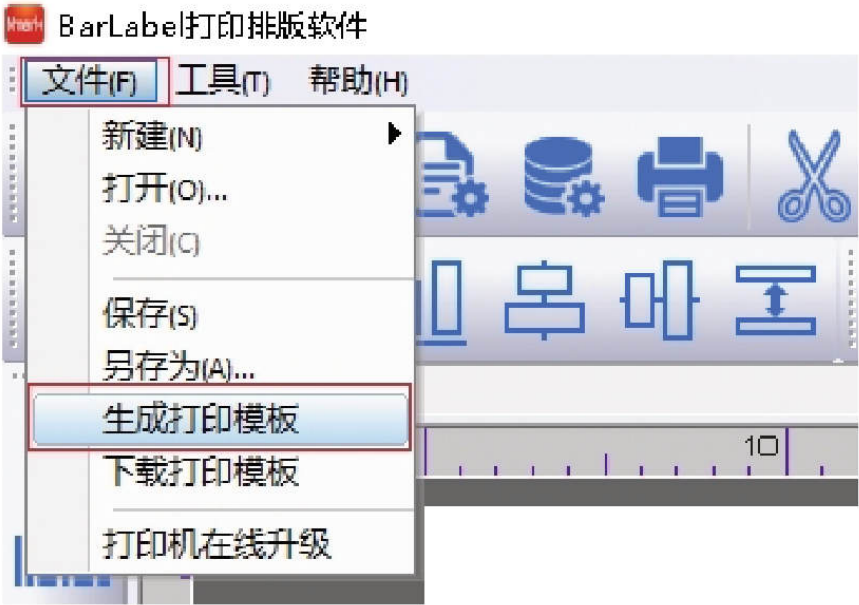
排版完成后点击文件，生成打印模板，编辑文件名称，保存即可

Barlabel Print Template Creation & Invocation (2)

After placing the content, double-click to edit the specific properties of an item; if the item is a variable, check "print variable" in the General tab.

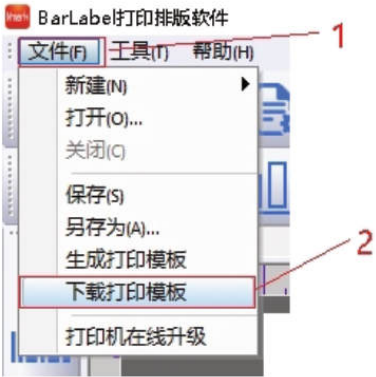
After layout is complete, click File > Generate Print Template, edit the file name, and save.

BarLabel打印模板制作与调用功能说明



二.下载模板

用USB或者网线连接打印机，如果通过网络下载，需要确保打印机与电脑处于同一局域网。
打开Barlabel软件,点击文件，下载打印模板，选择生成的同名FRM文件，根据自己的通信接口，点击下载即可



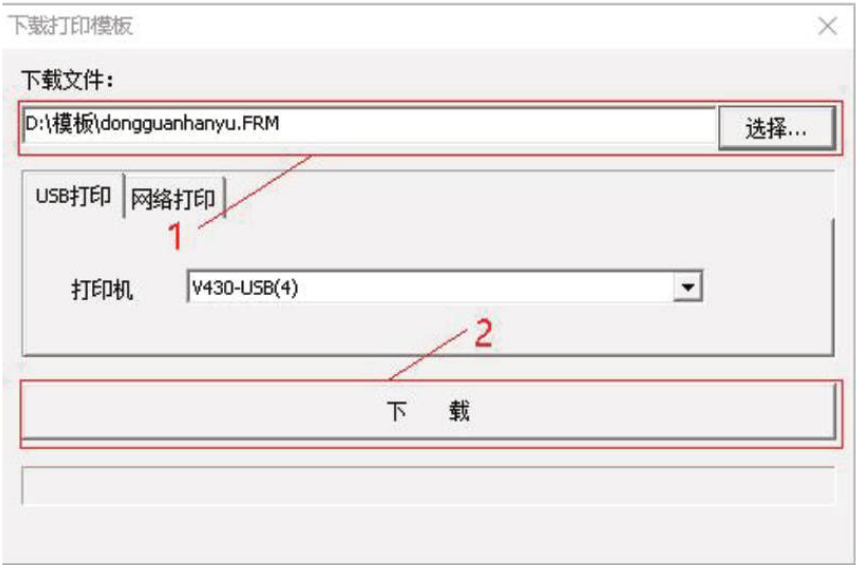
Barlabel Print Template Creation & Invocation (3)

2. Download template

Connect the printer with USB or a network cable; when downloading over the network, ensure the printer and computer are on the same LAN.

Open the Barlabel software, click File > Download Print Template, select the generated FRM file of the same name, and click Download according to your communication interface.

Barlabel打印模板制作与调用功能说明



提示下载完成



模板下载成功后，需要在打印机上选择需要打印的模板，并设置触发模式，同时需要在打印机菜单，系统设置，软件设置下设置打印机触发模式，选择打印模板的方式如下。
菜单键进入打印机菜单，进入模板打印选项。



选择“模板”行，按“确认”键，可进入模板列表，选择需要脱机打印的模板。
选择“模式”行，按“确认”键，可进入模式列表，共有4种模式可以选择，FR指令、协议数据、IO信号、条码扫描。
FR指令：本公司自定义调用打印模板的专用指令。
协议数据：特殊协议
IO信号：外部IO接口接收的信号，需要在贴标臂菜单中将需要使用的外部接口使能。
条码扫描：通过连接在打印机后面板的USB扫码枪进行触发。
说明：打印机非脱机模式下，必须把“模式”改为“FR指令”

Barlabel Print Template Creation & Invocation (4)

After the template downloads successfully, select the template to print on the printer and set the trigger mode; also set the printer trigger mode under Printer Menu – System Settings – Software Settings. The method to select the print template is as follows.

Press the Menu key to enter the printer menu and enter the Template Printing option.

Select the "Template" row and press Enter to enter the template list; select the template for offline printing.

Select the "Mode" row and press Enter to enter the mode list; four modes are available: FR command, protocol data, IO signal, and barcode scan.

FR command: our custom command for invoking a print template.

Protocol data: special protocol.

IO signal: a signal received on the external IO interface; the required external interface must be enabled in the labeling-arm menu.

Barcode scan: triggered by a USB scanner connected to the printer rear panel.

Note: in non-offline mode, the "Mode" must be changed to "FR command".

Prompts that the download is complete.

Barlabel打印模板制作与调用功能说明

调用模板有在线调用和脱机调用两种方式。
在线调用即通过电脑上位机发送调用指令，打印机收到指令后，找到打印机内部对应的模板文件或打印机后面板USB_HOST接口连接的U盘中的模板文件（部分机型支持），并将指令代码中的内容赋值给打印模板中的变量。
脱机调用依托外部信号，可使用外部IO接口触发或扫码枪触发。变量内容可以利用键盘编辑。

三.调用模板

1.在线调用
打印机支持USB、TCP、RS232三种通讯方式，调用命令格式如下
FR"TEST.FRM" 表示调用模板的名字，后面需要跟回车换行("\r\n")
? 固定格式，必须有，后面需要跟回车换行("\r\n")
数据1 第一个变量的数据，后面需要跟回车换行("\r\n")
数据2 第二个变量的数据，后面需要跟回车换行("\r\n")
数据3 第三个变量的数据，后面需要跟回车换行("\r\n")
P1,1 表示启动打印，固定格式，必须有，后面需要跟回车换行("\r\n")
说明：如果模板还有多个变量，可在第五行和第六行之间顺序插入，每个变量后面需要跟回车换行("\r\n")，指令中的?以及""必须在英文输入法下输入。
2.脱机调用
模板触发模式选择IO信号或者条码扫描即可实现脱机调用，脱机调用修改模板内容可使用键盘进行修改。
在利用Barlabel建立打印模板时，常规变量会按照建立顺序自动排序，时间变量和日期变量不参与排序，建立好模板后，将模板文件下载到打印机中，按照描述的选择模板的方式选择需要打印的打印模板。在变量菜单中按照模板中变量的顺序在初值位置利用键盘输入变量内容，可以根据模板中的变量类型在打印机中选择变量类型。
模板中有时间和日期变量时，只需在模板变量列表中添加时间变量和日期变量即可，无需考虑顺序。
3.删除模板
选择“模板”行，按“确认”键，可进入模板列表，选择需要删除的打印模板，选择删除，确认删除即可。



Barlabel Print Template Creation & Invocation (5)

3. Invoke template

There are two ways to invoke a template: online and offline.

Online invocation sends the invocation command from the computer host; after receiving the command, the printer finds the corresponding template file inside the printer or on the USB drive connected to the rear-panel USB_HOST port (supported by some models), and assigns the content in the command to the template variables.

Offline invocation relies on external signals — an external IO interface trigger or a scanner trigger. Variable content can be edited with the keyboard.

1. Online invocation

The printer supports USB, TCP and RS232 communication. The invocation command format is as follows:

FR"TEST.FRM" // name of the template to invoke; must be followed by CR/LF (" ")

? // fixed format, required; must be followed by CR/LF (" ")

Data 1 // first variable data; must be followed by CR/LF (" ")

Data 2 // second variable data; must be followed by CR/LF (" ")

Data 3 // third variable data; must be followed by CR/LF (" ")

P1,1 // start printing; fixed format, required; must be followed by CR/LF (" ")

Note: if the template has more variables, insert them in order between lines five and six, each followed by CR/LF (" "). The "?" and quotes in the command must be entered with an English input method.

2. Offline invocation

Selecting IO signal or barcode scan as the template trigger mode enables offline invocation; to modify template content in offline mode, use the keyboard.

When building a print template with Barlabel, regular variables are sorted automatically in creation order; time and date variables are not sorted. After the template is built, download it to the printer and select the template as described. In the Variables menu, enter variable content with the keyboard at the initial-value position in the order of the template variables; the variable type can be selected on the printer according to the template variable type.

When the template has time and date variables, just add them to the template variable list; order does not matter.

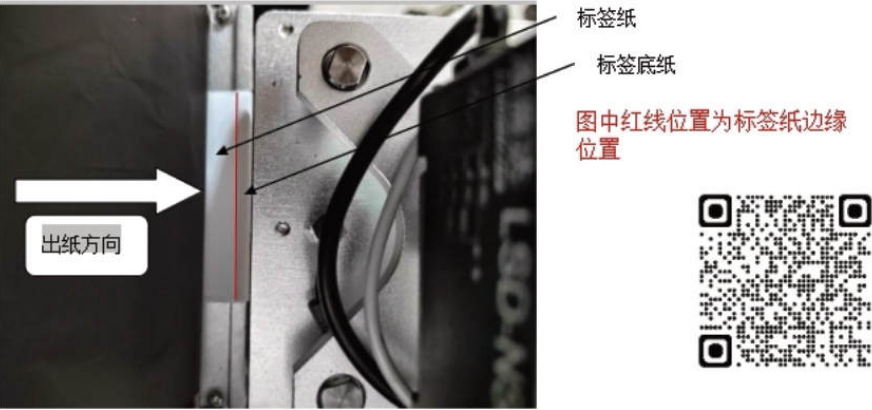
3. Delete template

Select the "Template" row and press Enter to enter the template list; select the template to delete, choose Delete, and confirm.

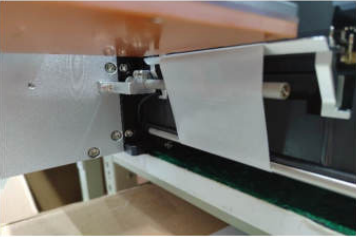
附录

附录一 常见问题及解决方法

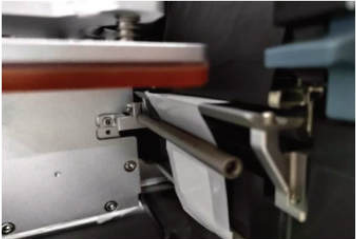
1. 标签打印完成后，标签未停留在贴标板上，贴标机提示标签丢失报警？
- 1.1 观察标签打印停止的位置是否正确？标签打印停止的位置，应该是下一张标签的边缘在剥离片的后面1mm左右，如果位置相差太大，需要调整进纸偏移，进纸偏移默认是27mm, 调整方法参考《打印贴标机使用说明》或视频二维码。



- 1.2 检查吹气管是否被遮挡，或者吹气角度不合适。调整方法参考《打印贴标机使用说明》或视频二维码。
- 错误装纸：



正确装纸：



Appendix 1 — Common Problems & Solutions (1)

1. After label printing completes, the label does not stay on the labeling plate and the machine reports a label-loss alarm.

1.1 Check whether the label print stop position is correct. The stop position should be such that the next label edge is about 1 mm behind the peel plate; if the position differs greatly, adjust the feed offset (default 27 mm). For adjustment, refer to the user manual or the video QR code.

1.2 Check whether the blow tube is blocked or the blow angle is unsuitable. For adjustment, refer to the user manual or the video QR code.

Incorrect media loading vs. correct media loading (see figure).

附录

- 1.3 真空是否足够和有效, 吸标不稳考虑适当的增加或减少气孔的个数。如果标签过大, 需要考虑调整真空大小, 减小真空形成的范围防止吸力过大, 标签不能顺利推出。
- 1.4 通过屏幕菜单调整延时回卷的大小(部分机型为真空延时)。
- 1.5 标签是否符合要求, 标签要选择贴标用的标签纸, 不可伤到标签底纸, 且标签地址不宜太厚。
- 1.6 纸张类型设置使用反射传感器。
- 1.7 贴标板高低不合适或不平行
- 1.8 剥离不稳定, 回卷轴转动不稳, 回卷轴的摩擦片压力需要增加, 或者需要更换了
- 1.9 气压太低, 导致贴标板区域无法形成有效真空, 标签因重力掉落。
- 2. 打印内容位置不准怎么调整?
- 2.1 可以通过屏幕菜单, 调整打印机的X轴偏移和Y轴偏移。参考《打印贴标机使用说明》或视频二维码。



- 2.2 校正一下传感器参数
- 2.3 设置纸张类型反射传感器
- 2.4 如果是打开打印头, 就要多走几个标签, 让打印机适应一下
- 3. 换了不同尺寸的标签, 打印和贴标的位置不准?
- 3.1 更换标签后打印机无法立即将传感器阈值自动调整到合适范围, 需要打印5, 6个标签打印贴标机才会适应。然后打印贴标机就可以正常工作了。
- 3.2 需打印的标签尺寸与模板的尺寸不一致。
- 4. 怎样调整贴标的速度?
- 可以通过调整气缸的进气和出气气量来调整。参考打印贴标机使用说明或视频二维码。



- 5. 打印机不识别纸张出现黑标错误怎么办?
- 5.1 手动拿走标签后按清除/返回按键多打印几个标签看看。
- 5.2 没有打印纸了。
- 5.3 标签纸有缺失, 或者标签纸之前的缝隙没有了。
- 5.4 标签尺寸设置的过小。
- 5.5 在菜单里面校正纸张, 测试曲线和高低参数值
- 6. 贴标打印机io如何输出?
- 6.1 触发打印后, 打印开始并输出24V高电平, 打印完成输出低电平。
- 6.2 触发贴标后, 贴标开始并输出24V高电平, 贴标完成输出低电平。
- 6.3 详情请参考打印贴标机操作手册。
- 7. 不希望软件改变贴标机参数怎么办?
- 7.1 如果所有的参数都不允许修改可以将打印机的打印模式修改为打印机模式, 即在打印机上将所有的参数锁死。



Appendix 1 — Common Problems & Solutions (2)

1.3 Check whether the vacuum is sufficient and effective; if label holding is unstable, consider increasing or decreasing the number of air holes. If the label is too large, consider adjusting the vacuum size to reduce the vacuum area, preventing excessive suction that keeps the label from being pushed out smoothly.

1.4 Adjust the delayed rewind (vacuum delay on some models) through the screen menu.

1.5 Check whether the label meets requirements; use label media intended for labeling, avoid damaging the liner, and avoid media that is too thick.

1.6 Set the paper type to reflective sensor.

1.7 The labeling plate height is unsuitable or not parallel.

1.8 Unstable peeling, unstable rewind shaft rotation — the friction-plate pressure of the rewind shaft needs to be increased or the part needs replacing.

1.9 Air pressure too low, so no effective vacuum forms in the labeling-plate area and the label falls by gravity.

2. How to adjust inaccurate print content position?

2.1 Adjust the X-axis and Y-axis offsets through the screen menu. Refer to the user manual or the video QR code.

2.2 Calibrate the sensor parameters.

2.3 Set the paper type to reflective sensor.

2.4 If the printhead was opened, feed several labels to let the printer adapt.

3. After changing to a different label size, the print and labeling positions are inaccurate.

3.1 After changing labels, the printer cannot immediately auto-adjust the sensor threshold to the right range; it needs 5–6 labels to adapt, after which it works normally.

3.2 The label size to be printed does not match the template size.

4. How to adjust labeling speed?

Adjust the intake and exhaust air flow of the pneumatic cylinder. Refer to the user manual or the video QR code.

5. The printer does not recognize the paper and reports a black-mark error.

5.1 Manually remove the label and press Clear/Return, then print several labels.

5.2 No print media left.

5.3 Label media is missing labels, or the gap between labels is gone.

5.4 The label size is set too small.

5.5 Calibrate the media in the menu and test the curve and high/low parameter values.

6. How does the print & apply system output IO?

6.1 After triggering print, printing starts and outputs a 24 V high level; when printing completes it outputs a low level.

6.2 After triggering labeling, labeling starts and outputs a 24 V high level; when labeling completes it outputs a low level.

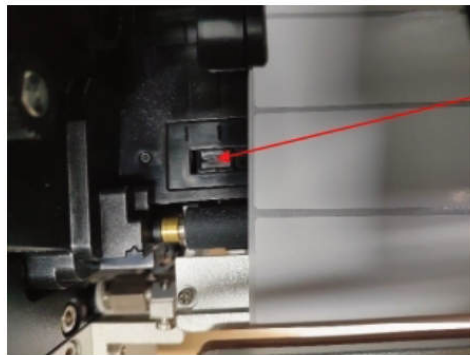
6.3 For details, refer to the print & apply system operation manual.

7. How to prevent software from changing the machine parameters?

7.1 If no parameters may be modified, change the printer mode to printer mode, i.e. lock all parameters on the printer.

附录

- 7.2如果不允许部分参数被修改，可以将打印模式指令集方式下不希望改变的参数锁定。
- 8.打印数据发送了，打印机不打印？
- 8.1 观察打印机屏幕是否显示“等待打印数据”，如果显示“等待打印数据”则打印数据并没有发送过来。
- 8.2打印机屏幕如果显示“等待打印信号”，则需要触发打印IO信号。
- 8.3 打印机屏幕是否有显示报错提示，打印机必须在无错状态才能正常打印。
- 8.4如果是采用打印机驱动，需要了解打印机驱动安装是否正确
- 8.4 检查连接线是否有问题。
- 8.5 如果数据灯闪了，说明数据过来了，打印机没有解析，查看打印机目前选择的指令集是否正确，一般采用NSCL指令集。
- 8.6如果是网口连接，查看打印机网口配置是否正确。
- 9.碳带报错什么原因？
- 9.1 后部碳带轴管没有安装好。
- 9.2 碳带用完。
- 9.3 扣合打印头的时候没有将碳带拉紧一些。
- 10.缺纸报错
- 10.1 传感器位置太偏，标签纸没有遮挡传感器。



传感器

- 10.2 标签纸用完或中间缺失部分标签纸。
- 10.3 标签纸比较透光，需要校正传感器的参数。
- 11.耗材如何安装操作
- 11.1 安装碳带和纸卷时，按下卡扣开关打开打印头，将标签纸卡在卡纸片之间，将色带未使用部分安装在下面，使用过的部分安装在上边。
- 11.2 更换标签纸时，首先打开打印头部分，用手前推右侧挡纸片上的卡扣，将两侧挡纸片分开，拿出旧纸，将新纸放好后，利用挡纸片卡住标签纸。
- 12.如何安装打印机驱动？
- 可以用USB接口驱动，也可以用网口驱动，USB驱动只要按照我们提供的打印机驱动程序，按照提示安装就可以了，网口驱动需要配置打印机的网口参数ip地址和端口，这可以通过打印机按键和屏幕显示来设置。我们的打印机驱动兼容 win7 和 win10。安装方法参考右侧二维码。



Appendix 1 — Common Problems & Solutions (3)

7.2 If only some parameters must not be modified, lock the undesired parameters under the command-set print mode.

8. Print data was sent but the printer does not print.

8.1 Check whether the printer screen shows "waiting for print data"; if so, the print data has not arrived.

8.2 If the screen shows "waiting for print signal", the print IO signal must be triggered.

8.3 Check whether the screen shows an error; the printer must be error-free to print normally.

8.4 If using a printer driver, check that the driver is installed correctly.

8.4 Check whether the connection cable has a problem.

8.5 If the data light flashes, data has arrived but the printer does not parse it; check whether the currently selected command set is correct (NSCL is generally used).

8.6 If using the Ethernet port, check that the printer network-port configuration is correct.

9. What causes a ribbon error?

9.1 The rear ribbon shaft tube is not installed properly.

9.2 The ribbon is used up.

9.3 The ribbon was not pulled tight when the printhead was closed.

10. Out-of-paper error.

10.1 The sensor position is too far off and the label media does not cover the sensor.

10.2 The label media is used up, or labels are missing in the middle.

10.3 The label media is too translucent; calibrate the sensor parameters.

11. How to install consumables.

11.1 To install the ribbon and media roll, press the latch to open the printhead, place the label media between the media guide plates, install the unused ribbon on the bottom and the used part on top.

11.2 To change label media, first open the printhead, push the latch on the right media guide plate forward, separate the two guide plates, remove the old media, load the new media, and clamp it with the guide plates.

12. How to install the printer driver?

Either the USB-interface driver or the network-port driver can be used. For the USB driver, follow the prompts of our provided driver. For the network driver, configure the printer network-port IP address and port, which can be set via the printer keys and screen. Our printer driver is compatible with Windows 7 and Windows 10. For the installation method, refer to the QR code on the right.

附录

13. 打印机驱动如何设置? (参考右侧二维码)

- 13.1 设置打印页面, 注意打印方向。
- 13.2 设置进纸偏移。
- 13.3 设置关闭双向支持。
- 13.4 设置直接打印选择。



14. 打印机支持的编程语言是什么意思?

要想让打印机完美打印您想要的图像, 必须要一种描述这个图像的语言告诉打印机, 这种语言就是打印机支持的指令集, 目前我们支持的打印机语言有 NSCL 和 TPL, 具体内容可以找 Nmark 技术支持索取。

15. 打印机硬件模板文件是什么?

打印机模板文件是根据指令集自动生成的一段打印特定标签内容的字符串, 其中可变的内容, 不能是图像, 而是具体的变量内容, 后期在编程的时候, 将这些内容替换掉, 就变成了你想要打印的内容。

16. 为什么打印机软件模板文件推荐用 TPL 指令集?

NSCL 指令集在描述图像的时候是二进制数, 如果用一些文本编辑工具, 打开以后一些数据会被修改。而 TPL 的非压缩模式, 图像数据可以用文本字符来描述, 所以你可以用记事本这类普通的编辑软件, 对模板进行浏览和局部修改。

17. 打印软件 barlabel、nicelabel、bartender 有什么区别, 怎么使用?

17.1 barlabel 是深圳艾维码自己研发的打印软件, 使用该软件, 你不需要安装驱动, 该软件可以自动识别我们的打印机, 可以直接编辑标签打印使用。

17.2 nicelabel 是一个和我们合作的第三方打印软件厂商, 我们的打印机标准驱动也是 nicelabel 开发的。您可以到 nicelabel 官网了解更多 nicelabel 软件的知识。

17.3 bartender 也是一个第三方的打印软件厂商, 和我们没有直接的合作, 您可以直接安装我们的打印机驱动, 然后用 bartender 来调用。有些原来调用打印机驱动打印打印机的网口参数 ip 地址和端口, 这可以通过打印机按键和屏幕显示来设置。我们的打印机驱动兼容 win7 和 win10。

18. 小标签贴标注意事项是什么? 气压太小吸不住, 贴标的时候容易跑偏, 一般是 0.4 到 0.5MP 的气压。

问题: 打印机偶尔有乱码, 或不正常? 答: 检查打印机驱动的双向支持是否打开, 如果打开请关闭。

问题: 打印机驱动更改以后不起作用?

答: 看看是不是有打印机驱动的副本, 如果有副本, 需要将参数都改掉。

20. 标签识别传感器怎么设置(视频)

21. 贴标臂传感器 S1 S2 S3 的作用(视频)



22. 打印机走纸出现随机的不准的原因?

22.1 打印机内部的卡纸滑块太紧, 导致标签纸走不顺可以放松卡纸滑块。

22.2 回卷轴拉力太大, 导致标签纸被拉伸过多, 可以调整回卷轴摩擦弹簧压力。

23. 标签纸偶发剥离不良

23.1 更换适合剥离的标签纸

23.2 增加回卷轴摩擦片压力, 增加标签底纸压力。

23.3 回卷轴摩擦片受损更换摩擦片

24. 打印贴标机气压如何检查

24.1 气压不足时声音会明显变化, 检查进气三联件气表指针所指的位置, 正常使用过程中气压应达到 0.5

25. 打印贴标机同时出现好几张标签如何处理

25.1 检查贴标机打印参数中的纸张类型和使用的标签类型是否一致。

25.2 检查打印参数中设置的标签大小。

25.3 在打印机上进行传感器校正。

26. 打印机接收数据后无任何响应

在菜单出厂设置中找到调试模式, 检查打印机接收的数据是否与下发的数据是否一致。

Appendix 1 — Common Problems & Solutions (4)

13. How to set the printer driver (refer to the QR code on the right).

13.1 Set the print page; note the print direction.

13.2 Set the feed offset.

13.3 Disable bidirectional support.

13.4 Set the direct-print selection.

14. What do the programming languages supported by the printer mean?

To make the printer perfectly print the desired image, a language describing that image must tell the printer what to print; this language is the command set the printer supports. The printer languages we currently support are NSCL and TPL; contact Nmark technical support for details.

15. What is a printer hardware template file?

A printer template file is a string that prints specific label content, generated automatically from the command set. Its variable parts cannot be images; they are concrete variable content. During later programming, these parts are replaced to become the content you want to print.

16. Why is the TPL command set recommended for printer software template files?

The NSCL command set describes images in binary; if opened with some text editors, part of the data may be modified. In TPL's uncompressed mode, image data can be described with text characters, so ordinary editors like Notepad can browse and locally modify the template.

17. What is the difference between barlabel, nicelabel and bartender, and how are they used?

17.1 Barlabel is printing software developed by Shenzhen Aiweima. It needs no driver; it auto-detects our printers and can edit and print labels directly.

17.2 NiceLabel is a third-party printing software vendor we cooperate with; our standard printer driver is also developed by NiceLabel. Visit the NiceLabel website for more information.

17.3 BarTender is also a third-party printing software vendor, with no direct cooperation with us. You can install our printer driver and invoke it with BarTender. The printer's network-port IP address and port (used by some software that invokes the printer driver) can be set via the printer keys and screen. Our printer driver is compatible with Windows 7 and Windows 10.

18. What are the precautions for labeling small labels? If the air pressure is too low the label will not hold and is prone to skew during labeling; the pressure is generally 0.4–0.5 MPa.

Q: The printer occasionally shows garbled text or behaves abnormally. A: Check whether the driver's bidirectional support is enabled; if so, disable it.

Q: Changes to the printer driver do not take effect. A: Check whether there is a duplicate of the printer driver; if so, change all its parameters.

20. How to set the label recognition sensor (video).

21. The roles of labeling-arm sensors S1, S2 and S3 (video).

22. Why is the printer feed occasionally inaccurate at random?

22.1 The media clamping slider inside the printer is too tight, making the label media feed poorly; loosen it.

22.2 The rewind shaft tension is too high, stretching the media too much; adjust the rewind-shaft friction-spring pressure.

23. Occasional poor label peeling.

23.1 Use label media more suitable for peeling.

23.2 Increase the rewind-shaft friction-plate pressure to increase label-liner pressure.

23.3 If the rewind-shaft friction plate is worn, replace it.

24. How to check the print & apply system air pressure.

24.1 When the pressure is insufficient the sound changes noticeably; check the air-gauge needle position on the intake air-treatment (FRL) unit. During normal use the pressure should reach 0.5 MPa.

25. How to handle several labels appearing at once.

25.1 Check that the paper type in the print parameters matches the label type in use.

25.2 Check the label size set in the print parameters.

25.3 Perform sensor calibration on the printer.

26. The printer does not respond after receiving data.

Find Debug Mode under Factory Settings in the menu, and check whether the data received by the printer matches the data sent.

注意事项

附录二 注意事项

1. 在使用任何型号的打印机时，必须确保电源接地。
2. 各种产品在使用时必须定期维护，打印头和传感器定期使用酒精擦拭，机械结构在长期使用过程中可能会出现松动，需要紧固。
3. 贴标机在使用过程中，由于贴标板上的气孔数量按照预定时的标签大小决定，在更换小的标签纸后，可能会出现标签纸无法吸附在贴标板上，需要将多余的气孔堵住。
4. 当打印内容偏移时，需要适当调整坐标偏移。
5. 打印机每次设置完网络参数后，需要关机重启才能保存网络参数。
6. 安装打印机驱动后，必须在打印机属性中将打印机端口双向支持关闭。不关闭双向支持，打印机接收打印任务后可能会报错。
7. 修改贴标臂参数时需要先关机，按住菜单键开机，否则贴标臂参数未锁定状态无法修改。
8. 安装标签纸时，必须确保便签纸卡在挡纸块中间，否则打印过程中标签纸会跑偏，导致打印位置偏移或出现缺纸报警。

说明书名称解释

1	热敏(直热或热感)	是一种使用热敏标签打印的方式,纸张表面有热敏涂层,可以受热变黑,这种方式不需要碳带(色带),但是打印耐久性差,不能接受阳光暴晒,采用这种方式打印,打印机也要设置成这种模式,不然会报碳带错误。
2	热转印(碳带打印)	是一种需要使用碳带(色带)才能打印的方式,标签不需要热敏涂层,打印内容不易丢失,标签的材质和碳带的材质有很多,由于我们的材料经过了各种性能测试符合打印和贴标要求,推荐使用Nmark系列标签和碳带。采用这种方式,需要将打印机设置成热转印方式,否则碳带缺失的时候,打印机不会报警。
3	热敏标签	带热敏涂层的标签,不需要碳带,可以直接打印。
4	碳带(色带)	用于热转印打印,是通过打印头的加热,将碳带上的墨粉转印到标签纸上,碳带主要分腊基 混合基 树脂基 三种材质,Nmark都有对应的材质的产品,用碳带打印的标签,保存持久,字迹和图案清晰。
5	黑标传感器 (反射传感器, 黑色标记传感器)	位于打印胶辊的后面一厘米左右的位置,可以左右移动,该传感器必须位于标签纸的下方,用于检测标签间隙,实现标签的准确定位 贴标机一般选择这个黑标传感器 不要选择其他的传感器。
6	穿透传感器 (有间隙的标签)	贴标机一般不选这个传感器。
7	黑标阈值	是指打印机区分黑标部分和标签部分的检测电压值,一般是取传感器识别黑标部分(标签间隙部分)和识别标签部分电压值的两者的平均值
8	剥离	是指将标签和底纸分离开,用于贴标。
9	打印数量不受控 模式/受控模式	客户打印的标签数量不固定时,打印机会自动打印前一个标签,一直到客户下发其他的标签为止,受控模式时,打印机打印的数量按照上位机下发的数量打印。
10	模板打印	是指预先通过Nmark的Barlabel软件编辑一个模板,并且定义好需要的变量,然后下载模板到打印机。
11	打印分辨率	打印机芯的打印头的分辨率,目前支持203dpi 306dpi 600dpi 打印分辨率越高打印的内容越细腻不容易出现锯齿),如果打印条码,条码的总长度可以更小,一般推荐203dpi和306dpi的分辨率,600dpi分辨率会影响打印速度和增加打印机的成本。

Appendix 2 — Precautions & Terminology (1)

Precautions

1. When using any printer model, the power supply must be grounded.
2. Products must be maintained regularly; wipe the printhead and sensors with alcohol regularly. Mechanical structures may loosen during long-term use and must be tightened.
3. Because the number of air holes on the labeling plate is decided by the predetermined label size, after changing to smaller label media the label may not hold on the labeling plate; the extra air holes must be blocked.
4. When the print content is offset, adjust the coordinate offset appropriately.
5. After setting the network parameters, the printer must be powered off and restarted to save them.
6. After installing the printer driver, bidirectional support must be disabled in the printer-port properties. Otherwise the printer may error after receiving a print job.
7. When modifying labeling-arm parameters, power off first, hold the Menu key and power on; otherwise the labeling-arm parameters are in the locked state and cannot be modified.
8. When loading label media, the media must be clamped between the media guide blocks; otherwise the media will skew during printing, causing print-position offset or an out-of-paper alarm.

Glossary of manual terms

- 1 — Thermal direct (thermal): a printing method using thermal label media whose surface has a thermal coating that turns black when heated. It needs no ribbon, but has poor durability and cannot withstand sunlight. The printer must be set to this mode, otherwise it reports a ribbon error.
- 2 — Ribbon (thermal transfer ribbon): a method that requires a ribbon to print; the label needs no thermal coating, and the printed content is durable. There are many label and ribbon materials; since our materials have passed various performance tests and meet printing and labeling requirements, Nmark series labels and ribbons are recommended. The printer must be set to thermal transfer mode, otherwise the printer will not alarm when the ribbon is missing.
- 3 — Thermal label: a label with a thermal coating; no ribbon needed, prints directly.
- 4 — Thermal transfer (ribbon printing): used for thermal transfer printing; the printhead heats and transfers the ribbon ink to the label. Ribbons come mainly in wax, wax/resin and resin types, and Nmark has products for each. Labels printed with ribbon are durable with clear text and graphics.
- 5 — Black-mark sensor (reflective sensor / black-mark sensor): located about 1 cm behind the platen roller and can move left/right; it must be under the label media to detect the label gap for accurate label positioning. Labeling machines generally select this black-mark sensor; do not select other sensors.
- 6 — Black-mark threshold: the detection voltage value distinguishing the black-mark part from the label part; generally the average of the sensor voltage for the black-mark part (label gap) and the label part.
- 7 — Through-beam sensor (labels with gap): labeling machines generally do not select this sensor.
- 8 — Peeling: separating the label from the liner for labeling.
- 9 — Uncontrolled/controlled print quantity mode: when the quantity of labels the customer prints is not fixed, the printer automatically prints the previous label until the customer sends other labels; in controlled mode the printer prints the quantity sent by the host.
- 10 — Template printing: pre-edit a template with Nmark's Barlabel software, define the required variables, then download the template to the printer.
- 11 — Print resolution: the printhead resolution of the print mechanism. Currently 203 dpi, 306 dpi and 600 dpi are supported; the higher the resolution, the finer the printed content (less jagged). For

barcodes, the total barcode length can be smaller. 203 dpi and 306 dpi are generally recommended; 600 dpi affects print speed and increases printer cost.

注意事项

12	打印头	打印头是打印机的核心部件，也是一个易损件，它会受标签纸的磨损而消耗，打印到一定的公里数就要更换。
13	贴标板复位传感器 S1	位于气缸的上部,贴标板回到原始位置以后,该传感器亮起,贴标机判定贴标板已经回到原始位置,打印机就可以开始打印剥离。
14	标签有无检测传感器 S2	位于贴标板上,用于测试贴标板上的标签是否存在,正常的情况,应该是标签剥离以后吸附在贴标板上,传感器应该亮起,贴标板完成贴标以后,该灯应该熄灭,不然贴标机就会报错S2传感器错误。
15	贴标完成传感 S3	位于贴标头固定块的缝隙处,用于测试贴标压力,贴标压力到达一定数值,触发该传感器动作,贴标机认为已经贴标完成。
16	贴标板(吸标板)	位于贴标臂端部,用于吸取标签,有真空吸附。
17	贴标臂	用于贴标动作的气缸及导向组合件,长度可以订制

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Appendix 2 — Terminology (2) & Company Information

12 — Printhead: the core component of the printer and a wear part; it wears from label media abrasion and must be replaced after a certain print mileage.

13 — Labeling arm: the cylinder and guide assembly for the labeling action; the length can be customized.

14 — Labeling-plate reset sensor S1: located above the cylinder; after the labeling plate returns to its original position, this sensor lights, and the machine determines the labeling plate has returned and can begin printing/peeling.

15 — Labeling-complete sensor S3: located in the gap of the labeling-head fixing block; it measures labeling pressure. When the pressure reaches a certain value, the sensor is triggered and the machine considers labeling complete.

16 — Label-presence sensor S2: located on the labeling plate, detects whether a label is present on the plate. Normally, after peeling the label is held on the labeling plate and the sensor lights; after labeling completes, the light turns off. Otherwise the machine reports S2 sensor error.

17 — Labeling plate (suction plate): located at the end of the labeling arm; holds the label by vacuum suction.

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