

ARKSCAN AS58



58MM Thermal Printer Series USER MANUAL



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Safety Notice

PLEASE READ ALL SAFETY INSTRUCTION BEFORE USING YOUR NEW AS58 THERMAL RECEIPT PRINTER.

Please read and save this guide



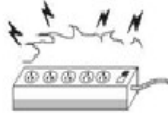


Thank you for choosing Arkscan, our new premium brand in POS technology. This User Manual is part of our commitment to customer satisfaction and product quality throughout the service life of your new receipt printer.

I. Safety & Installation

Arkscan AS58 thermal printer series was designed for easy to operate and cost effective to start with, it's a quick and reliable POS solution for small business, the device is widely deployed to supermarket, grocery store, library, bookstore, coffee shop, restaurants, gas station, department store and other many different kind of small shops.

1.1 Safety warning

In order to operate our printer correctly and prevent any danger or damage, please make sure to follow the following instructions while operating the printer:

 Warning - Indicates an imminently hazardous situation which, if not avoided, could result in death or serious injury.	
<p>Do not simultaneously connect power plugs of different products on one power outlet.</p> <ul style="list-style-type: none">● May cause heat or fire (Dangerous)● Once the power plug is stained with foreign body or water, please use it after cleaning.● When the ports of power socket is loose, please don't continue to use the device.● Use standard products for multiple ports socket. <p>Forbiddance  </p>	<p>When detected suspicious smell, smokes or sound, please shut off the power at once and then take the following measures:</p> <ol style="list-style-type: none">1. Be sure to unplug the power from the socket.2. Confirming no smoke and contact Arkscan for service. <p>Forbiddance  </p>

- Do not pull the power cord when unplug
- Pulling the wire may cause wire broken, fire or other accidents.
 - Hold the power adapter to unplug

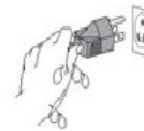
Forbiddance ⓧ



Do not plug or unplug the power cord when hand is wet.

- Danger of electric shock

Forbiddance ⓧ



Keep the drying agent out of the reach of children.

- Children may be poisoned if intake the drying agent.

Forbiddance ⓧ



Keep the poly bag out of reach of children.

- Children may be suffocated if misplaced the poly bag on their head.

Forbiddance ⓧ



Do not overly bend or place heavy object on the power cord that causes fire or other accidents.

Forbiddance ⓧ



Use only supplied products for adaptor.

- It may damage the printer to use the party adaptor, and cause fire.

Use only
supplied
adaptors.



Warning - Indicates an imminently hazardous situation which, if not avoided, could result in death or serious injury.

Do not take apart, repair or transform the printer.

- Use only approved accessories or it may cause damage of the printer. Please consult with Arkscan if you have any concern about this.

Forbiddance ⓧ

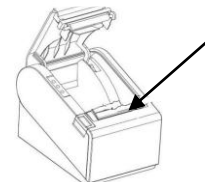






Don't touch the thermal head by hand or other object.

- It may damage the printer, and reduce quality of printing.

Thermal head

Forbiddance ⓧ



<p>Do not let water or any object get inside the printer.</p> <ul style="list-style-type: none"> ● If happens, switch off the printer immediately, and unplug the power and then contact Arkscan for assistance. <p>Forbiddance </p> 	<p>Place the product on a stable place</p> <ul style="list-style-type: none"> ● Falling may make breakage and cause injury. <p>Forbiddance </p> 
<p>Do not operate the printer when it's broken, as it may cause fire or electric shock.</p> <ul style="list-style-type: none"> ● Unplug the power cord, then contact Arkscan. 	

Notice

Electronic products such as printers are susceptible to static damage.

To avoid damage of the product, please power off the printer before connecting or switching off the printer. Once a printer is damaged by statics, please contact Arkscan for further assistance.

1.2 Notice

- (1) The printer should be installed on a firm location to avoid vibration and shake that may cause the falling.
- (2) Do not use or store the printer in the location of high temperature, humidity or heavy pollution.
- (3) The power adapter of printer should be connected to a properly grounded socket. Avoid using the same socket with other large electronic machines or the equipments which could cause the voltage fluctuation.
- (4) Do not let water or foreign objects get inside the printer, if it happens, please turn off the power supply immediately.
- (5) Printer could not be worked under the paperless process; otherwise it would seriously damage the print roll and the thermal print head.
- (6) Please disconnect the power supply if a long time not to use the printer.
- (7) The user is not allowed to dismantle the printer by self for repairing or remolding.
- (8) Use only supplied power adapter.
- (9) In order to ensure the printing quality and extend the life of printer, please use the recommendatory thermal paper or the one which has the same quality.
- (10) Please make sure the power of printer is off when plugging the connecting line.

(11) Please keep the user manual for reference when using.

II. Summary

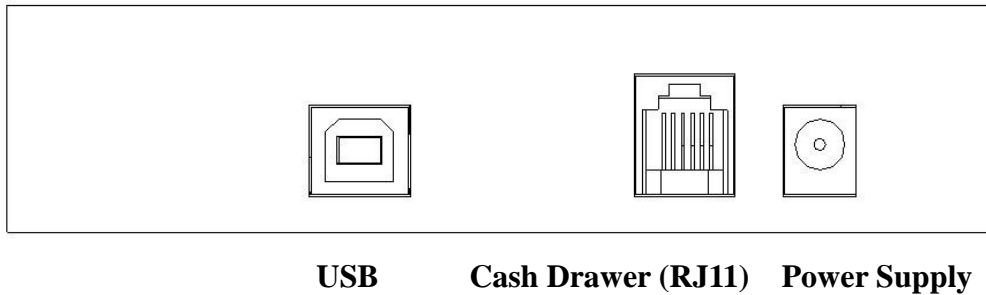
2.1 Main features

- High printing quality
- Low noise printing
- Support cash drawer driver
- Compact and lightweight
- Good structure, easy using
- Interface: USB, Serial, Parallel
- Text font could be magnified, bolded or underlined and the user also could adjust the character spacing before printing.
- Supports the print of different density bitmap and download image.
- High print speed
- Low power consumption and operation cost, using thermal paper only, neither needs ribbon nor ink.
- Emulation: ESC/POS

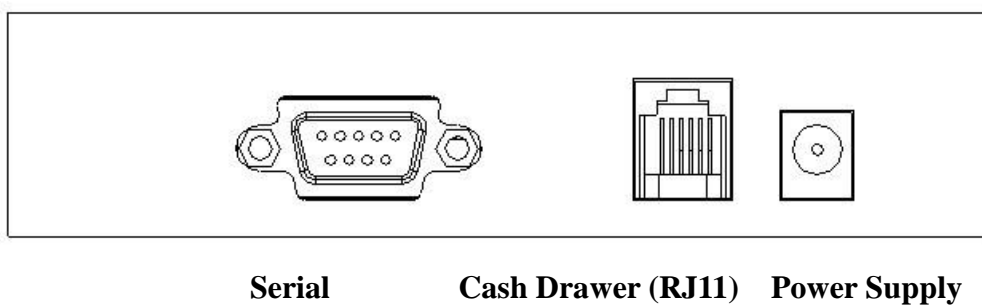
III. Specification

- Printing Method: Direct thermal printing
- Paper Width: 58mm / 2.25inches
- Effective Printing Width: 48mm
- Printing Speed: 90mm/sec (Max)
- Print head performance:
 - Resolution: 384 dots/line or 8 dots/mm
 - TPH: 50KM
- Support interface:

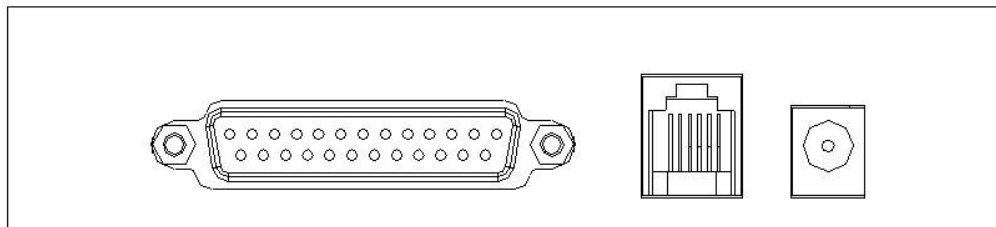
Model AS58U: Universal USB interface (Standard B)



Model AS58S: DB9 female head interface, baud rate is 9600bps, data structure is no parity, 8 bits of data and 1 stop bit, supports RTS/CTS and XON/XOFF handshake protocol.



Model AS58P: 25PIN (Male head) bidirectional parallel interface, 8 bit parallel interface, supports BUSY/nAck handshake protocol.



Parallel Cash Drawer (RJ11) Power Supply

Cash Drawer Control: 6 lines RJ-11 socket, output: DC12V/1A

Character:

ASCII code character set: 12×24 dots, 1.25 (W) ×3.00 (H) mm

Chinese character: 24×24 dots, 3.00 (W) ×3.00 (H) mm

International Codepage: PC437、Katakana、PC850、PC860、PC863、PC865、WPC1252、PC866、PC852、PC858 and so on

Printing Code: Supports UPC-A、UPC-E、EAN(JAN)13、EAN(JAN)8、CODE39、CODABAR、ITF、CODE93、CODE128.

● Support paper type:

Paper Type: Thermal paper

Paper Width: 57.5±0.5mm Paper Thickness: 0.06~0.08mm

Paper roll diameter: Φ80mm

Recommendatory thermal paper:

Item #: AP58 Arkscan, LLC

Item #: AF50KS-E Manufacturer: Jujo Thermal Oy(Finland)

Item #: TF-50KS-E Manufacturer: Nippon Paper Industries Co., Ltd

Note:

- (1) Suggest to use the recommendatory thermal paper or the one which has the same quality, otherwise, would affect the printing result; even though, shorten the life of thermal head.
- (2) Do not use the paper roll that the end of paper is pasted at the axis core, it would cause the damage to the printer.

-
- (3) If the thermal paper is polluted by the chemical or oil, it would fading or decrease the feeling of heat and influence the print result finally.
 - (4) It would result the fading of thermal paper if to use the hard material to chafe the surface.
 - (5) Please pay attention to the temperature, humidity and illumination of the storage for thermal paper.

The paper would fade if the storage temperature is over 70 centigrade.

- MCBF: 5×10^6 lines

- Emulation: ESC/POS

Print Font: Supports ANK: 12 x24, 9x17, Chinese: 24 x 24

Print Dot/Map: Supports the printing of different dots and maps

- Power Adapter:

Adapter Input: AC 110V/220V,50~60Hz

Adapter Output: DC 12V/2A

Printer Input: DC 12V/2A

- Net Weight: About 1kg (exclude the paper roll)

- Dimension:

210(L) × 135(W) × 130(H) mm

- Environmental Adaption:

Operation Temperature:0~50°C Operation Humidity:10~80%

Storage Temperature:-10~60°C Storage Humidity:10~90%

- Model #:

AS58U USB Interface


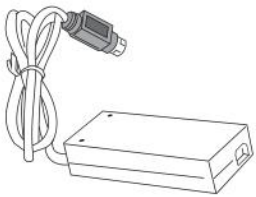
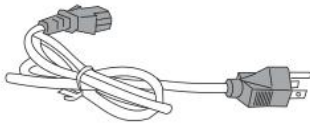
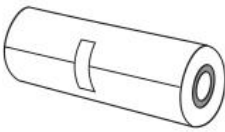
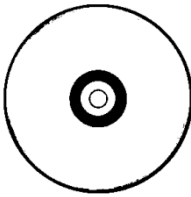
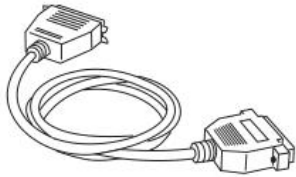
AS58S Serial Interface

AS58P Parallel Interface

IV. Installation and Operation

4.1 Contents in the package

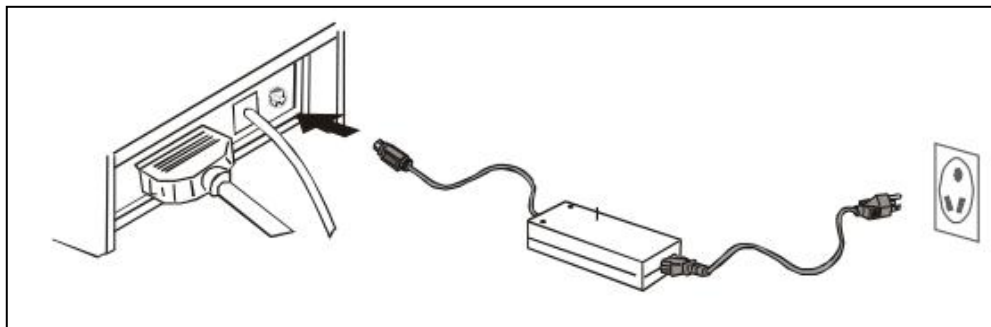
The package comes with the following items:

Printer 	Power Adapter 	Power Cord 
Paper Roll 	CD 	Communication Cable 

*** Communication cable = Interface Cable**

4.2 Printer connection

1. Connect the power supplier as shown below, make the printer's power button is switched to OFF position, the "O" position on the button.



2. Connect Interface Cable to the applicable I/O connector port in the back of the printer
3. Connect other end of the Interface Cable to the applicable connector port on POS system.

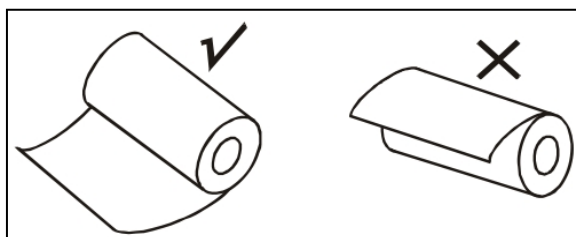
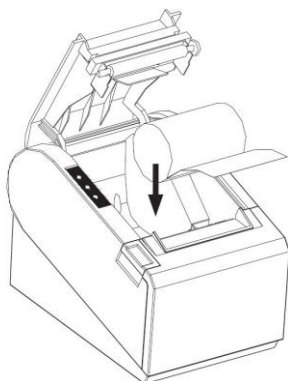
The following is for Cash Drawer only:

4. Connect a cash drawer's Interface Cable to printer's RJ11 connector port
5. Connect other end of the Interface Cable to RJ11 connector port to Cash Drawer.

4.3 Load the paper roll

Model: AS58 printer use 58mm width thermal paper with easy paper loading. The steps to load a paper roll:

- (1) Open printer cover.
- (2) Load the paper roll as following picture.



- (3) Pull-out some paper
- (4) Close cover by press down the cover.

4.4 Power Switch, Keystroke and Indicator Light

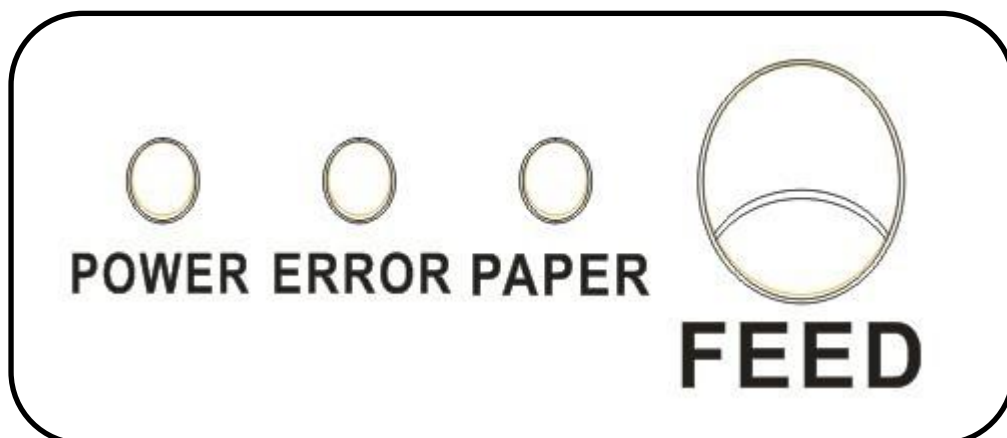
4.4.1 Power switch

Switch is for turning on/off the power supply of printer which is located right ahead of it. When pressing “-” is turn on the printer and pressing “O” is turn off.

Notice: Do not turn on the switch unless power supply is connected.

4.4.2 Keystroke and indicator light

Keystroke and indicator board is listed as below:



Function Description of Keystroke and Indicator Light:

FEED Button:

Feed paper as needed.

POWER Indicator (Green) :

Printer is connected to the power supply.

ERROR Indicator (Red) :

It's possibly caused by

1. Printer is overheat.
2. Paper roll is in low supply
3. Paper roll cover is not installed correctly
4. Paper jams Error Indicator flashes. Please see Fix Paper Jam on how to fix it.

Such as: paperless, paper jam, print head overheat, print head error or other situations.

PAPER Indicator (Red) :

1. Paper roll is in low supply
2. Paper is installed backward.

V. Self-checking

Self-checking can test the printer is work well or not, if it can print the test list correctly that means the printer is good enough (which is excluding the problem with the connected interface to PC); otherwise, it needs repair.

Self-checking could print software version number, print density, interface type, English character and some Chinese characters by order.

Self-checking procedure: Make sure the printer is connected to the power, then press the feed key and switch on the power supply while the key is still under pressing. At the same time, the printer begins to self-checking. Please loosen the key within five seconds and the printer would print the self-testing list after it.

The test list looks like the following when it finished:

Selftest

** Completed **

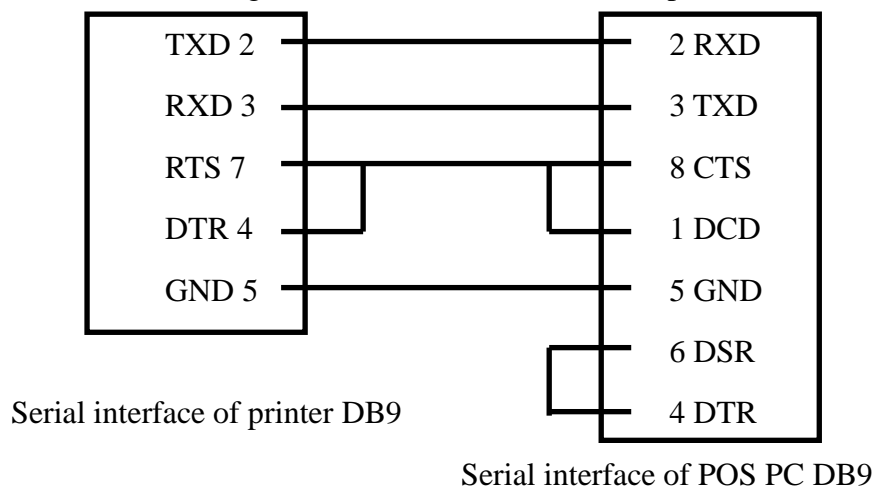
VI. Serial Interface

AS58S serial interface adopt RS-232 standard, baud rate is 9600bps, data structure is no parity, 8 bits of data and 1 stop bit, supports RTS/CTS and XON/XOFF handshake protocol.

Pin function of serial interface is listed as below:

Pin number	Model	Signal Source	Specification
2	TXD	Printer	The printer will be sent XON/XOFF to PC when operating the XON/XOFF handshake protocol.
3	RXD	PC	Printer received the data from PC.
7	RTS	Printer	The signal reflects the current printing status, low voltage means the printer could not receive the data, high voltage is contrary.
5	GND	-----	Signal Source
4	DTR	Printer	The same as pin number 7.

Connection diagram of serial interface between printer and PC:



VII. Parallel Interface

AS58P parallel interface is 25pin, 8 bit parallel transfers, supports BUSY/nAck handshake protocol.

Pin function of parallel interface is listed as below:

Pin number	Model	Signal Source	Specification
1	/STB	PC	Data strobe trigger pulse, data is read-in when falling edge.
2	DATA2	PC	These signals stand for the first to the eighth information of parallel data. Each signal when the logic shows "1" is high electrical level, when the logic shows "0" is low electrical level.
3	DATA3	PC	
4	DATA4	PC	
5	DATA5	PC	
6	DATA6	PC	
7	DATA7	PC	
8	DATA8	PC	
9	DATA9	PC	
10	nAck	Printer	Answer signal means the printer has received the data of previous byte.
11	BUSY	Printer	High electrical level means the printer is busy, could not receive data.
12	GND	-----	Electrical grounding, low electrical level.
13	Select	Printer	The resistance pulls up high electrical level.
18-25	GND	-----	Electrical grounding, low electrical level.
15	NError(nFault)	Printer	Error signal.

VIII. Cash Drawer Interface

Cash drawer interface adopt RJ-11 standard, 6 lines socket and the output of it is DC 12V/1A. Insert the RJ-11 socket to the corresponding interface which could through the printer to open the cash drawer.

Pin function of cash drawer interface is listed as below:

Pin Number	Signal	Flow Direction
1	Empty	Empty
2	Electrical grounding	Output
3	Empty	Empty
4	Driver Signal of Cash Drawer	Output
5	Empty	Empty
6	Empty	Empty

IX. Printer Maintenance

9.1 Print head maintenance

When the printer has following circumstances should clean the print head:

- (1) Printing is not clear;
- (2) Some longitudinal columns on the printing page is vague;
- (3) Loud noise when feeding.

Procedure of maintaining the print head is listed below:

- (1) Turn off the power supply and open the top cover. Remove the paper if necessary.
- (2) Please wait for the cooling of print head if it just finish printing.
- (3) Use the cotton cloth and dip it in the absolute ethyl alcohol to clean the surface of print head.
- (4) When the absolute ethyl alcohol is completely volatilized, please close the top cover and restart the printer.

9.2 Sensor maintenance

When the printer has following circumstance should clean the paperless sensor:

- (1) During the printing, the printer occasionally stops print and the paperless alarm is beeping.
- (2) No paperless alarm.

Procedure of maintaining the sensor is listed below:

-
- (1) Turn off the power supply and open the top cover. Remove the paper if necessary.
 - (2) Use the cotton cloth and dip it in the absolute ethyl alcohol to clean the surface of sensor.
 - (3) When the absolute ethyl alcohol is completely volatilized, please close the top cover and restart the printer.

9.3 Print roll maintenance

When the printer has following circumstance should clean the print roll:

- (1) Printing is not clear;
- (2) Some longitudinal columns on the printing page is vague;
- (3) Loud noise when feeding.

Procedure of maintaining the print roll is listed below:

- (1) Turn off the power supply and open the top cover.
- (2) Use the cotton cloth and dip it in the absolute ethyl alcohol to clean the surface of print roll.
- (3) When the absolute ethyl alcohol is completely volatilized, please close the top cover.

Notice:

- (1) The power supply of printer should be turned off when the routine maintenance.
- (2) Do not use hand or metal to touch the surface of print head and not use tweezers to scratch the superficies of print head, print roll or sensor.
- (3) Do not use oil or acetone to do the maintenance.
- (4) When the absolute ethyl alcohol is completed volatilized, then power on the printer.

X. Fix Paper Jams

When paper jams inside the paper, here are the steps to fix it

1. Power off the printer
2. Wait for the paper cool down
3. Remove the jammed papers
4. Reload the paper roll
5. Close the printer cover
6. Power On printer.

**Run into any technical issue or
having an issue to setup the
printer?**

Please visit our website for help

www.arkscan.com

or email us at

support@arkscan.com