



Brilliant Technology Co.

Genius 7R Bill Acceptor

RTW User's Manual



Brilliant Technology Co.

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深圳市福田区红荔西路 7002-2 第一世界广场 A 座 10 楼 B1

@2023/01



A、Features :

- 1、Four ways Acceptance
- 2、Accept multiple Bill width
- 3、High speed, High resolution import Sensors
- 4、Light weight and Quite system Design
- 5、High speed Bill transportation system
- 6、Dimensions : 131.9mm(H) X 95.5mm(W) X 81.5mm(D)
- 7、Power Supply : DC 12V +/- 10%
- 8、Low Power Consumption, Low Standby current
- 9、Firmware and Data Upload Box or On Line Upload
- 10、Patent Optical Recognition, Multiple Wave length, Anti-Fishing, Jam less
- 11、Real time Bill detector in all modes
- 12、Support Up and Downward installation

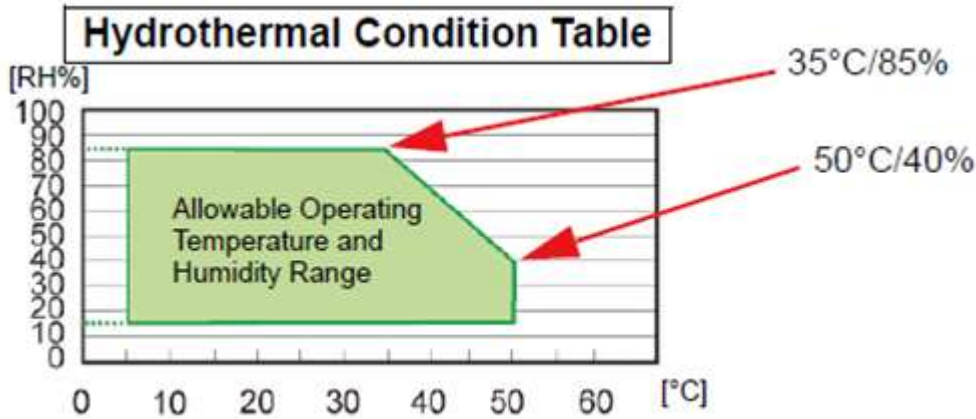
B、 Specifications :

Bill Validation	Worldwide major bank notes
Validation time	< 1 Sec.
Insertion direction	4 directions
Maximum Width	78 mm
Validation Rate	>98%
Acceptance Rate	>98%
Firmware upgrade	Upload Online
Dimension	131.9mm (H) X 95.5mm (W) X 81.5mm (D)
Weight	300g

Note: Except dirty, wet, broken or wrinkled notes. (Used in market)

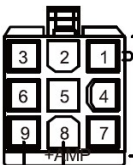
C、 Electrical :

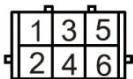
Operation voltage	DC 12V+/- 10%
Operation current	< 1A max.
Standby current	< 10mA
Operation temperature	0°C to +60°C (41°F to 140°F)
Storage temperature	-20°C to +70°C (-4°F to 158°F)
Operation humidity	15% to 85% RH (non-condensed)
Storage humidity	15% to 85% RH (non-condensed)



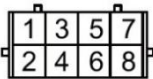
D、Wire Hardness

1. Power : 12VDC Power+ Pulse wire

 AMP 172340-1 Back View	PIN 1	Yellow	Inhibit+
	PIN 2	Green	Inhibit-
	PIN 5	Red	+12VDC
	PIN 7	Blue	Credit Relay (NO)
	PIN 8	Purple	Credit Relay (COM)
	PIN 9	Orange	GND

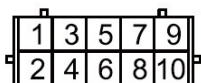
 JST PHD 2.0 mm 2 x 3 Back View	PIN 1	Orange	GND
	PIN 2	Red	+12VDC
	PIN 3	Green	Inhibit-
	PIN 4	Yellow	Inhibit+
	PIN 5	Purple	Credit Relay (COM)
	PIN 6	Blue	Credit Relay (NO)

2. COMMUNICATION RS-232 TTL : Serial Bus

 JST PHD 2.0 mm 2 x 4 Back View	PIN 1	.....	RESERVED
	PIN 2	.....	GND
	PIN 3	.....	RESERVED
	PIN 4	.....	RESERVED
	PIN 5	.....	VDD +3.3V
	PIN 6	.....	RESET
	PIN 7	.....	TXD
	PIN 8	.....	RXD



PROG and JTAG Upload



JST PHD 2.0 mm
2 x 5 Back View

PIN 1	.....	JTCK
PIN 2	.....	JTMS
PIN 3	.....	JTDO
PIN 4	.....	GND
PIN 5	.....	NC
PIN 6	.....	JTDI
PIN 7	.....	VDD +3.3V
PIN 8	.....	NJTRST
PIN 9	.....	TXD2
PIN10	.....	RXD2

3. 6 PIN Power Connection and 8 PIN Data Connection.

POWER	Pin No.		
CREDIT RELAY(COMMON)	1		
CREDIT RELAY(N.O)	2		
INHIBIT-	3		
INHIBIT+	4		
GROUND	5		
POWER (+12V)	6		
COMMUNICATION	Pin No.		
RS-232 TXD TTL	1		
RS-232 RXD TTL	2		
VDD +3.3V	3		
RESET	4		
RESERVED	5		
RESERVED	6		
RESERVED	7		
GROUND	8		



E、Installation

In/Out circuit

(1) Pulse Interface connection, See figure 1、 2.

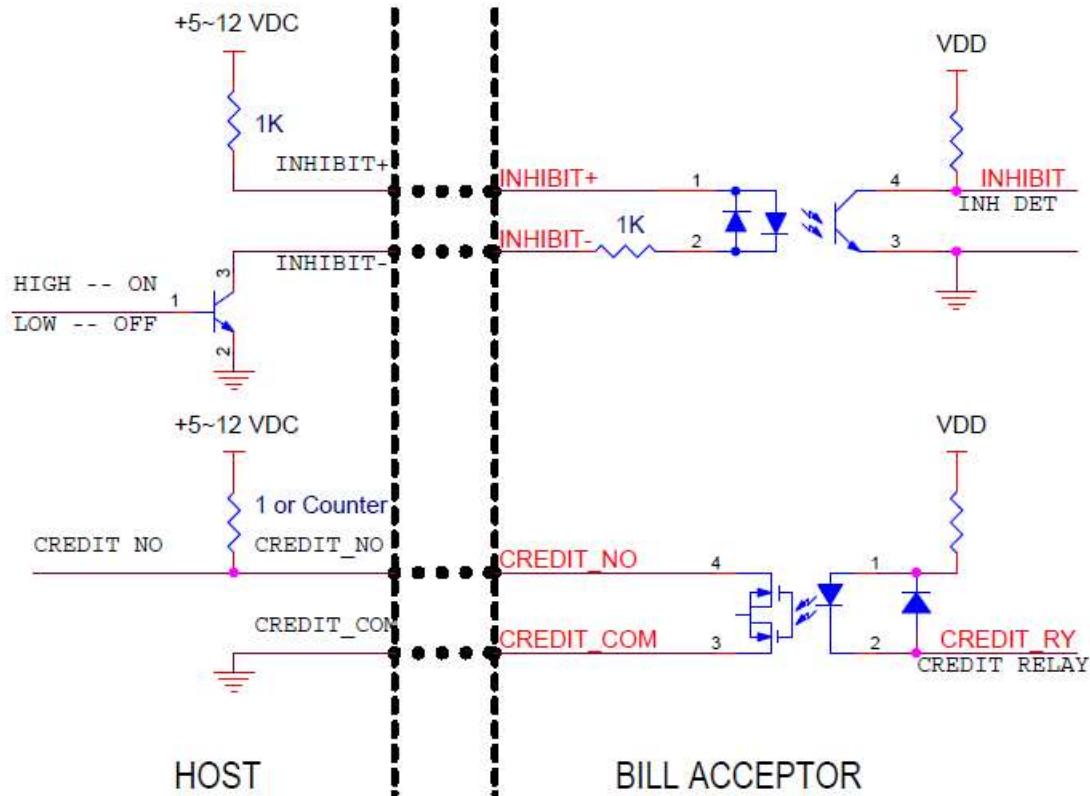


Figure 1.

FUNCTION	DIP SW SETTING		CONTROL
INHIBIT	IINHIBIT ACTIVE	LOW	LOW
		HIGH	HIGH
ENABLE	INHIBIT ACTIVE	LOW	HIGH
		HIGH	LOW

Figure 2.



The diagram illustrates the electrical connection between a HOST and a BILL ACCEPTOR. On the HOST side, the RXD line is connected to a VDC supply through a resistor. The TXD line is connected to a driver circuit, which is represented by a triangle with pins 3 and 4. The RXD and TXD lines are shown crossing two vertical dashed lines representing the interface between the HOST and the BILL ACCEPTOR.

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(3) ccTalk Interface, See figure 5

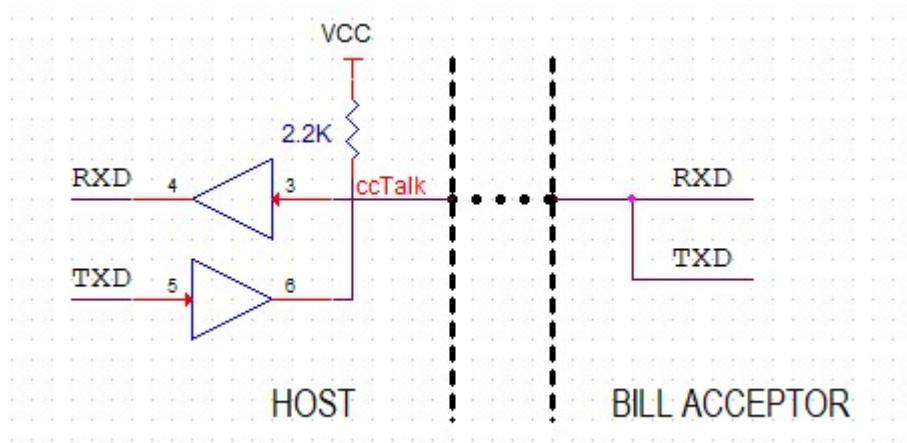
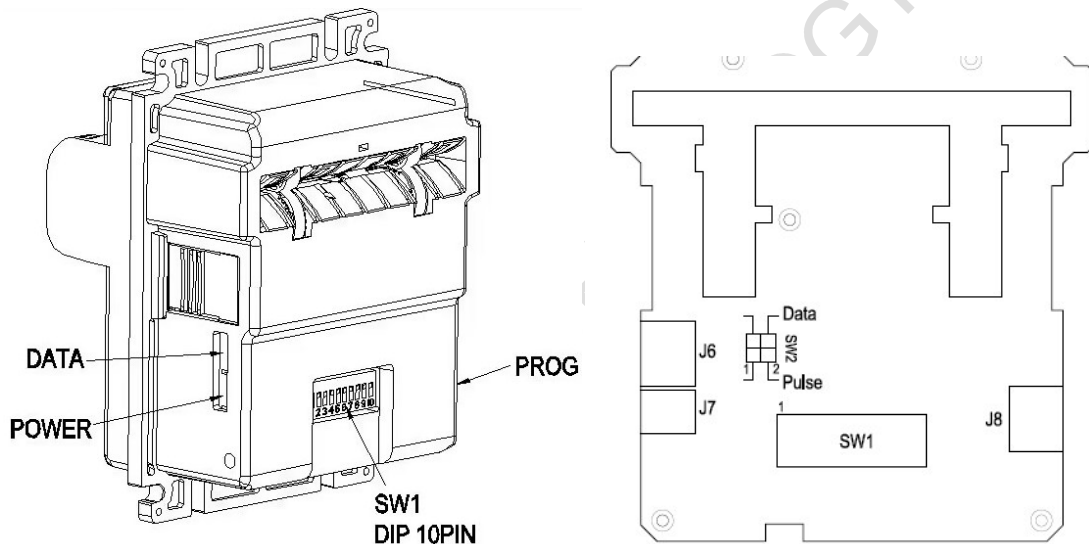


Figure 5



Genius7R DIP SWITCH SETTING

There are two setting DIP switches, SW1 is a 10p DIP switch located in the back, SW2 is on the PCB inside of the unit.

Open back cover, SW2#2 in “UP”, set the unit in Data mode (RS-232 TTL), turn it in “DOWN” position will set to Pulse mode.

FUNCTION	SW#1	SW#2
Data Mode (RS232, ccTalk)	X	On
Pulse Mode (Anti-Interference)	On	Off
Pulse Mode	Off	

* With Anti Interference Cable



10P Switch in Pulse Mode Setting:

Function	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10
1 Pulse /Dollar	Off									
5 Pulses /Dollar	On									
Pulse Output NO (Normal Open)		On								
Pulse Output NC (Normal Close)		Off								
Low level inhibit			On							
High level inhibit			Off							
Pulse Rate Lo=50ms				On						
Hi=100ms										
Pulse Rate Lo=50ms				Off						
Hi=300ms										
Accept Channel 1					On					
Reject Channel 1					Off					
Accept Channel 2						On				
Reject Channel 2						Off				
Accept Channel 3							On			
Reject Channel 3							Off			
Accept Channel 4								On		
Reject Channel 4								Off		
Accept Channel 5									On	
Reject Channel 5									Off	
Accept Channel 6										On
Reject Channel 6										Off

10P Switch in Data Mode Setting:

Function	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10
I-Protocol1.04	Off	Off	Off	Off						
I-Protocol1.06	On	Off	Off	Off						
MDB	Off	Off	On	Off						
J Protocol	On	Off	On	Off				N/A		
ccTalk (Normal Check)	Off	Off	Off	On						
ccTalk (CRC Check)	On	Off	Off	On						
TL Protocol	Off	Off	On	On						

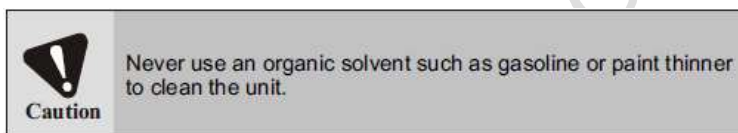
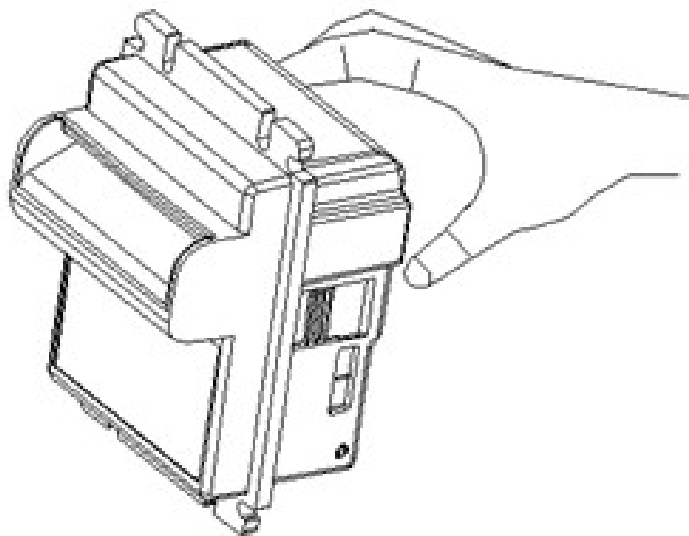
NOTE:

Please restart unit after setting.



F、Product disassembly and maintenance

1. Disassembly



2. Cleaning

Any residuals in the channel of the sensors or LED will causing bill jam or decrease acceptance rate.

For the best performance, please cleanup internal channel regularly

Please refer to the following steps to cleanup internal channel :

- (1) Turn off the power and remove power cable.
- (2) Open the back cover by press the both sides lock and pull out.
- (3) Use a soft brush to clean the back cover and use clean paper to clean the bill path.

H、Troubleshooting

Entrance light is breathing Red/Green/Blue colors in normal operation. This light also indicated the errors by flashing color alternatively. The unit need to clean or re-calibration if only two colors remains.

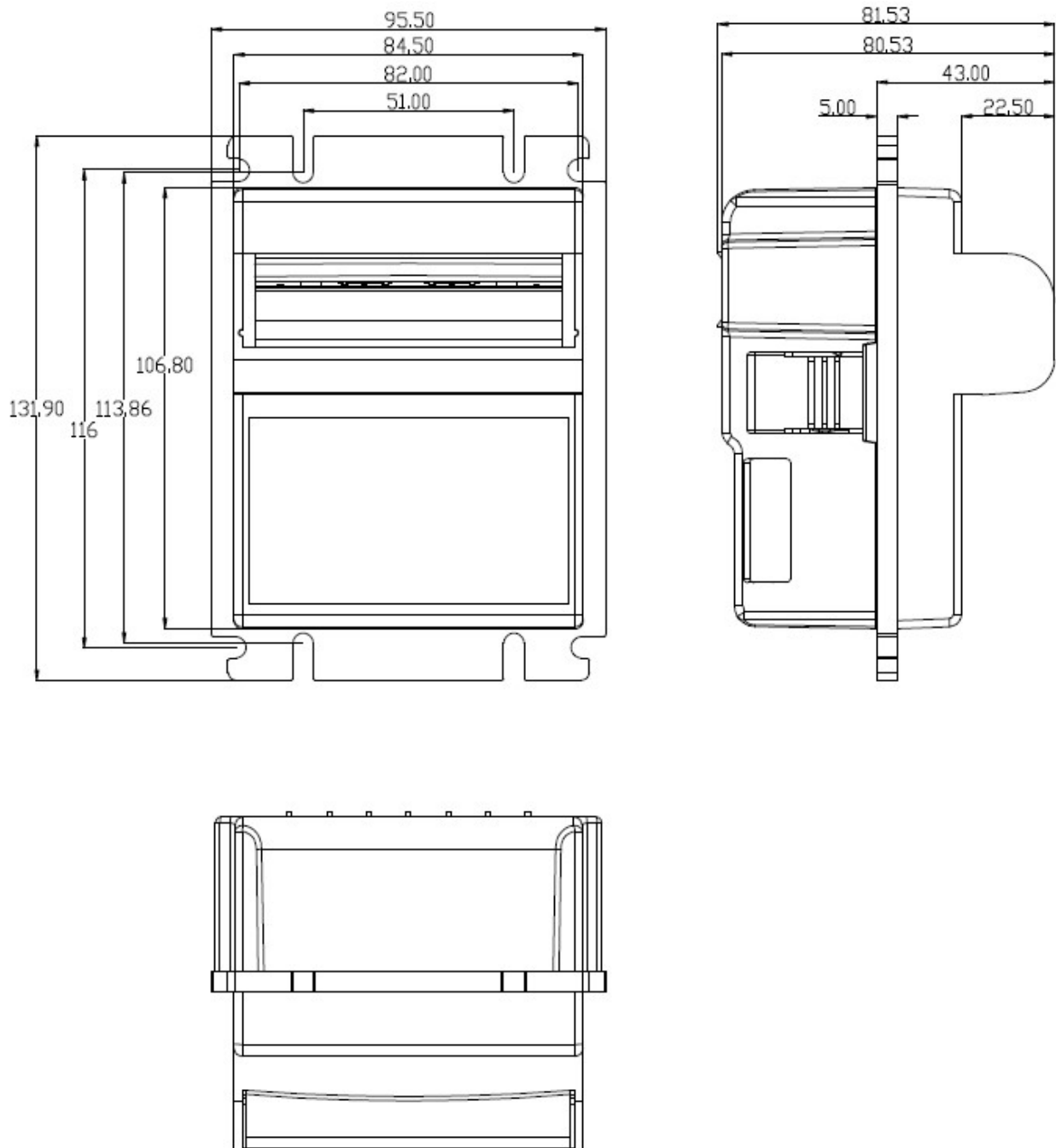
BEZEL LED error messages

Number of flashing color LED :

Red	Green	Blue	Error message	Remarks	Record
0	0	1	Unit inhibit by switch setting or inhibit command from host		Yes
1	1	1	Power initialization, not connected with host		Yes
2	0	1	Bill jam in entry position	Auto recovery	Yes
2	0	2	Bill jam in the back	Auto recovery	Yes
3	0	1	Input or output sensor errors	Sensor damaged	Yes
3	0	2	Validation Sensors error.	Sensor damaged	Yes
3	0	3	Anti-Fishing error	Remain operation	Yes
4	0	1	Motor time out	Auto recovery in each 10Sec	Yes
5	0	1	No Valid Bill data, needs to update	Factory / Setting	Yes



G、Drawing Dimensions





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