

CASH DRAWER

■ USER'S GUIDE VER. A

NOTICE

The manufacturer of the POS cash drawer makes no representation or warranties, either expressed or implied, by or with respect to anything in this manual, and shall not be liable for any implied warranties of fitness for a particular purpose or for any indirect, special or consequential damages. Information in this document is subject to change without notice and does not represent a commitment on the part of the manufacturer.

FCC NOTICE

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A digital device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.



Models CR-3101/3201
CR-3102/3202
CR-3103/3203

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FEATURES

- . Rugged design with reinforced heavy gauge steel construction.
- . Large ball bearings riding on special guides for remarkably smooth drawer slide
- . Contemporary style
- . Input/Output expansion connectors.
- . Advanced electronics that extend the MTBF (Mean Time Between Failure).
- . Precision mechanical parts with tight tolerance to assure wobble-free drawer movements.
- . Check slot for non-cash or large-bill transaction.
- . Three-position lock for maximum cash security.
- . Optional interfaces include:
 - Dedicated RS232C (CR-3101/3201)
 - Non-dedicated RS232C (CR-3102/3202)
 - Parallel (CR-3103/3203)
- . Removable tray with a lock-on cover. Bill compartments and coin compartments are adjustable. The tray cover TC3100 for CR-3101~3 and TC3200 for CR-3201~3 are optional.
- . Open-drawer indicator output
- . Mutual convertability among CR-3101~3 and among CR-3201~3.

CARTON CONTENTS

1. Cash drawer preassembled
2. User's manual
3. Key 2 pcs, there is a key serial no. sticker on the cash drawer bottom plate. If user lost the key he/she can order the key according to this number.
4. Separator of bill compartment 4 pcs (for CR-3101~3) / 5pcs (for CR-3201~3), separator of coin compartment 6 pcs.
5. Cable:
 - CCBLA-077-2 with one 9PF and one 25PF connector. (for CR-3101/3102/3201/3202)
 - CCBLA-089 with one 25PM and one 25PF connector (for CR-3103/CR-3203).
6. Power adapter: Supplies 12VAC 1A.

INTERFACE DESCRIPTION

Model CR-3101/3201 with Dedicated Interface:

- Connect the drawer to the computer as shown in Fig 1. Connect the power adapter output to the Power Input jack.
- Whenever the POS application software transmits data of any kind to the computer COM1 (or COM2) port, the drawer will be opened. No other RS232C data-receiving devices should be connected to the same serial port.

- For dedicated interface BIT 7 of S2 must be set to OFF and BIT 8 of S2 set to ON. Please refer to Fig 3.

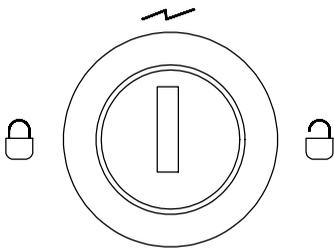
Model CR-3102/3202 with Non-Dedicated Interface:

- Connect the drawer to the computer as shown in Figure 1. Connect the power adapter output to the Power Input jack.
- Whenever the POS application software transmits the pre-set security code to the COM1 (or COM2) port, the drawer will be opened. The pre-set security code was preset by the manufacturer at (07 Hex) and can be changed as shown in Fig 3. Under normal operations, the selected pre-set code should be a non-displayable ASCII character. For example, a hexadecimal number between 01 to 1F. Note that other RS232C devices can be connected to the same serial port, as long as this preset security code makes no influence to the other RS232C device.
- For non-dedicated interface, BIT 7 of S2 must be set to ON and BIT 8 of S2 must be set to OFF. Please refer to Fig 3.

Model CR-3103/3203 with Parallel Interface:

- Connect the drawer to the computer as shown in Figure 2. Connect the power adapter output to the Power Input jack.
- Whenever the POS application software transmits the pre-set security code to the parallel LPT1 port, the drawer will be opened. The pre-set security code was preset by the manufacturer at (07 Hex) and can be changed as shown in Fig 3. Under normal operations, the selected pre-set code should be non-displayable ASCII character. For example, a hexadecimal number between 01 to 1F. Note that other parallel devices such as printer can be connected to the same parallel port, as long as this preset security code makes no influence to the other parallel devices.

Model CR-3101~3/3201~3 Keylock Operation:



: Permanent lock the drawer.



: Open the drawer by the key.



: Automatic open the drawer by or the computer control.

Keylock

SPECIFICATIONS

MECHANICAL:

	CR-3101~3	CR-3201~3
Weight	6.5 kgs	9 kgs
Height	9 cm	9.5 cm
Width	40 cm	50 cm
Depth	41.5 cm	42 cm

ELECTRICAL:

INPUT TO SOLENOID

Pulse Amplitude	12VDC to 24VDC
Pulse Width	200 milliseconds to 300 milliseconds
Pulse Duty Cycle	10% maximum
Peak Current	1 Ampere

POWER ADAPTER

Input Voltage	120VAC, +10% -20% 50 -60Hz 20W
Output Voltage	12VAC at 1A

SERIAL INPUT (CR-3101/3201, CR-3102/3202)

Data Format	Standard RS232C
Protocol (see Figure3)	No handshake
	Baud rate: 150,300,600,1200,2400,4800,9600*, 19,200
	Parity: none*, even, or odd
	Data bits: 7 or 8*
Security Code(CR-3102/3202)	1-255; 7*
Open-Drawer Indicator	Open-collector, conducting between Pin9 and Pin11 of P3 when drawer opened

(* denotes factory default setting)

PARALLEL INPUT (CR-3103/3203)

Data Format	Standard Centronics parallel interface
Security Code	1-255; factory preset value = 7
Open-Drawer Indicator	Open-collector, conducting between Pin9 and Pin11 of P3 when drawer opened

CONNECTOR PIN-OUT (See Fig 4)

P1 (DB25M) - Parallel Input From Computer

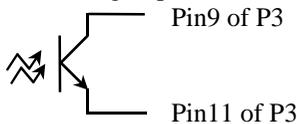
- 1 - -Strobe
- 2 - Data 0
-
-
- 9 - Data 7
- 10 - -ACK
- 11 - Busy
- 12 - Paper End
- 13 - Select
- 14 - Auto Feed
- 15 - Error
- 16 - -Initialize Printer
- 17 - -Select Input
- 18 - NC
- 19 through 25 - Ground

P2 (DB25F) - Parallel Output to Printer

- 1 - -Strobe
- 2 - Data 0
-
-
- 9 - Data 7
- 10 - -ACK
- 11 - Busy
- 12 - Paper End
- 13 - Select
- 14 - Auto Feed
- 15 - Error
- 16 - -Initialize Printer
- 17 - -Select Input
- 18,21,25 - Printer-Connected detection
- 19,20,22,23,24 - Ground

P3 (DB25M) - Serial Input From Computer

- 2 - Receive data from computer
- 3 - Transmit data to computer
- 4 - RTS, Request To Send; from computer;(connected to 5)
- 5 - CTS, Clear To Send; to computer;(connected to 4)
- 6 - DSR, Data Set Ready; to computer;(connected to 8 & 20)
- 7 - Ground
- 8 - DCD, Data Carrier Detect; to computer;(connected to 6 & 20)
- 9 - Open-drawer indicator; collector of optical sensor (positive end), conducting to pin 11 when drawer opened.
- 11 - Open-drawer indicator; emitter of optical sensor (negative end), conducting to pin 9 when drawer opened.



- 18 - POS printer interface, pair with pin 25
- 20 - DTR, Data Terminal Ready; from computer; (connected to 6 & 8)
- 25 - POS printer interface, pair with pin 18

Note for Additional Features to RS-232C:

1. Open-drawer status of the drawer can be fed back to the computer through the use of Pin9 and Pin11 as described above.
2. The simulation to CR-3100/CR-3200 can be achieved through the use of Pin18 and Pin25 as described above. That is the Pin18 and Pin25 pair can be used as the input to solenoid in CR-3100/CR-3200 without the need of the power adapter by connecting this pair to POS printer output, then CR-3101~3/CR-3201~3 will work the same way as CR-3100/CR-3200.

P4 (DB9F) - Pass-through Serial Output

- 2 - Transmit data to computer, connected to Pin3 of P3.
 - 3 - Receive data from computer, connected to Pin2 of P3.
 - 5 - Ground
- (Pins 1,4,6,7,8,9 are connected to the corresponding pin in P5)

P5 (DB9M) - Pass-Through Serial Output

Same as P4

P6 (DB9M) - Serial Input from computer

- 1 - DCD (connected to pins 4 & 6)
- 2 - Receive data from computer, connected to Pin2 of P3.
- 3 - Transmit data to computer, connected to Pin3 of P3.
- 4 - DTR (connected to pins 1 & 6)
- 5 - Ground
- 6 - DSR (connected to pins 1 & 4)
- 7 - RTS (connected to pin 8)
- 8 - CTS (connected to pin7)

CONTROLLER BOARD JUMPERS (Located inside the drawer)

- J1** - Connects to Input Power Jack for 12VAC @1A
- JP1** - Not used
- JP3** - Pin 1-2 to receive security code via Pin3 of P3, Pin3 of P6, Pin2 of P4 or Pin2 of P5.
Pin 3-4* to receive security code via Pin2 of P3, Pin2 of P6, Pin3 of P4 or Pin3 of P5.
(*denotes factory default setting)
- JP4** - Connects to solenoid, no polarity
- JP5** - Connects to P3 for open-drawer indicator
 - 1 collector, open-drawer indicator
 - 2 emitter, open-drawer indicator
 - 3, 4 ground
- JP6** - Connects to optical interrupter
 - 1 collector
 - 2 cathode (ground)
 - 3 emitter (ground)
 - 4 anode
- S1** - Set security code. Please refer to Figure 3.
- S2** - Set RS232 protocol. Please refer to Figure 3.
- S2** - BIT7 ON and BIT8 OFF for non-dedicated RS-232C.
- S2** - BIT7 OFF and BIT8 ON for dedicated RS-232C.

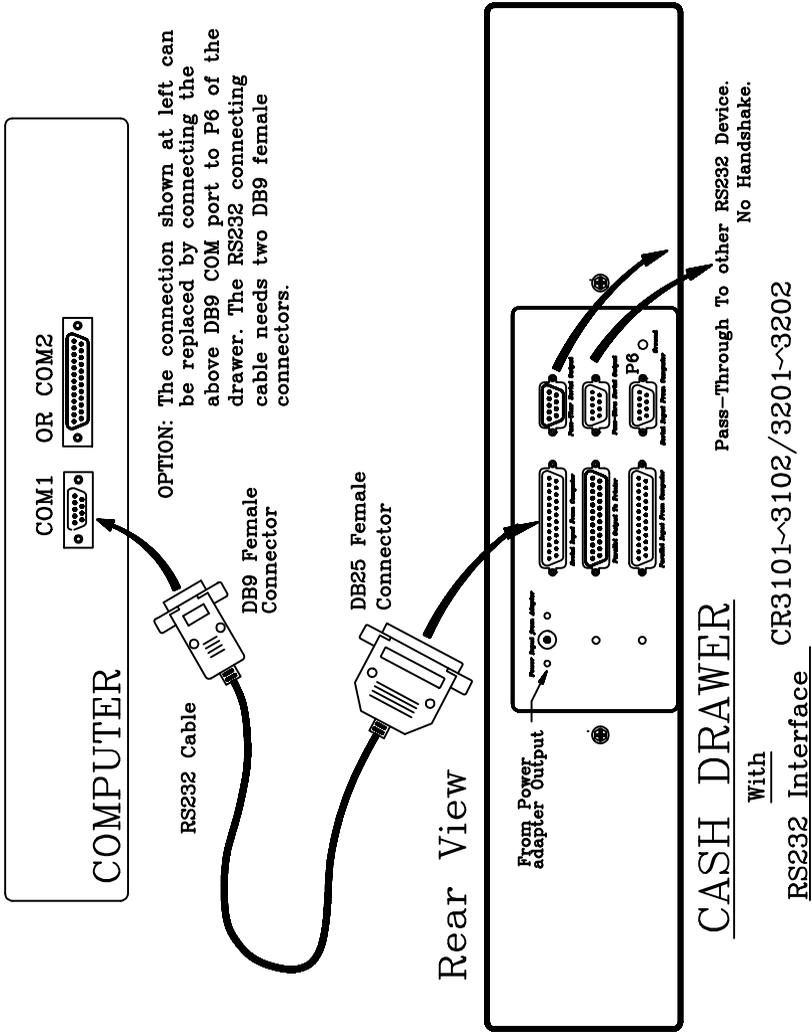


Figure 1

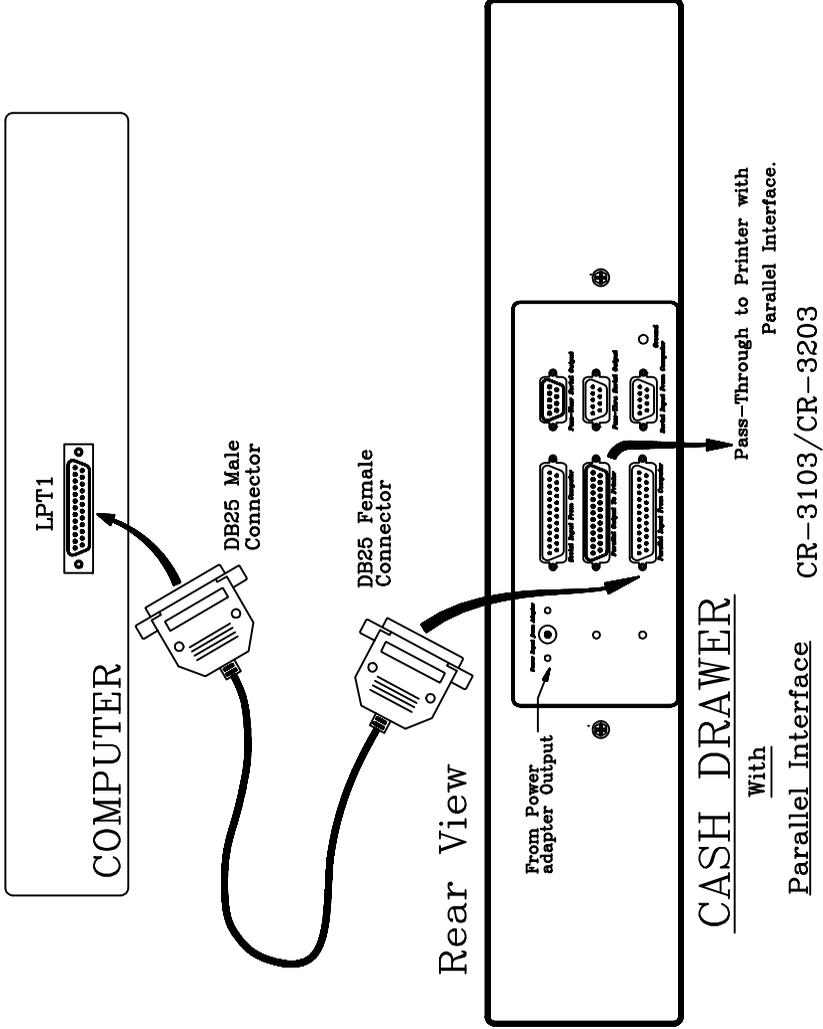
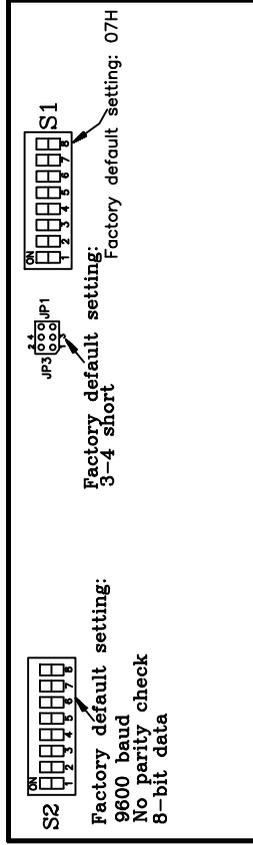


Figure 2

S2(RS232 Protocol) S1(Set Security Code)

BIT	19.2K	9600	4800	2400	1200	600	300	150	Number to be added to the security code if OFF
1	OFF	ON	OFF	ON	OFF	ON	OFF	ON	1
2	OFF	ON	OFF	ON	OFF	ON	OFF	ON	2
3	OFF	OFF	OFF	OFF	ON	ON	ON	ON	4
4	OFF	= Parity Check; ON = No Parity, Check							8
5	OFF	= Odd parity; ON = Even parity							16
6	OFF	= 8-bit data; ON = 7-bit data							32
BIT 7	ON	and BIT 8 OFF for non-dedicated RS-232							64
BIT 7	OFF	and BIT 8 ON for dedicated RS-232							128

Default Setting: BIT 1,2,3 OFF and BIT 4,5,6,7,8 ON. Security code is 07H.

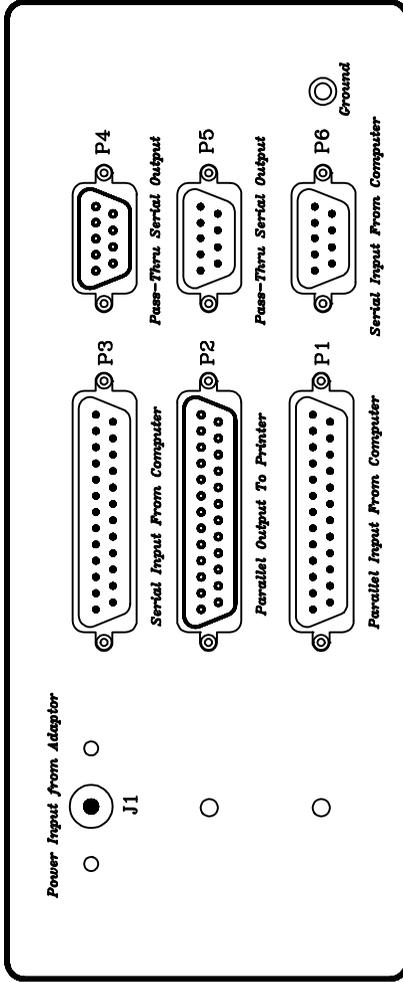


CONTROL BOARD, CASH DRAWER

(Inside the cash drawer)

CR-3101~3/CR-3201~3

Figure 3



CONNECTOR PANEL

FOR

Cash Drawers with Serial RS232 or Parallel Interface

CR-3101~3/CR-3201~3

Figure 4

Check Slot

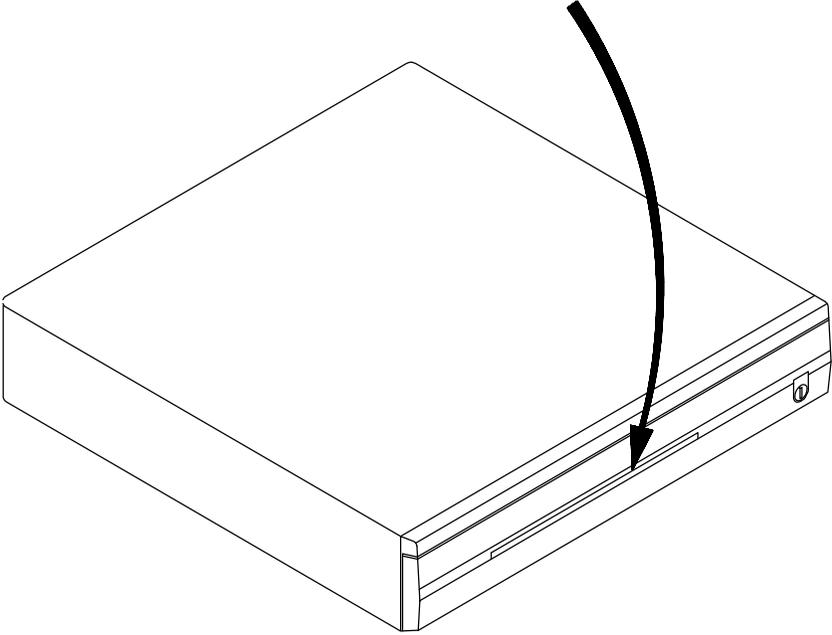


Figure 5

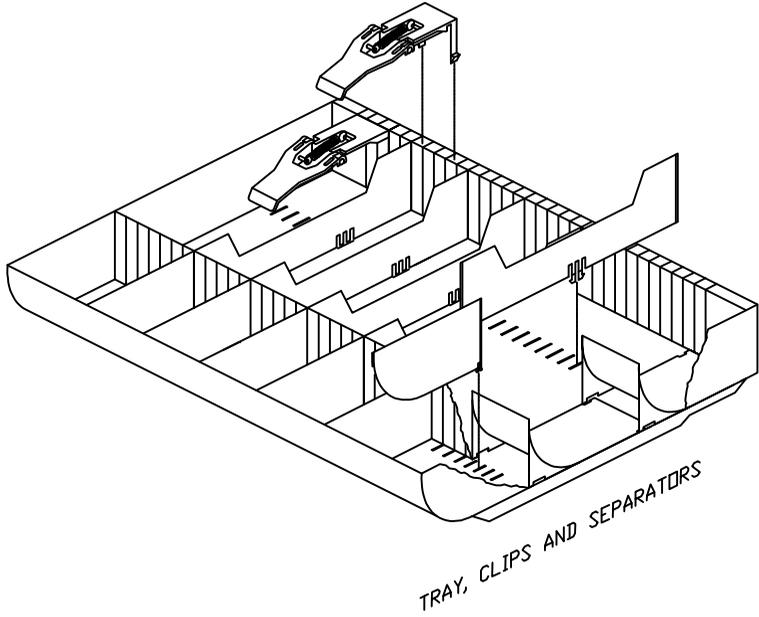


Figure 6