

# **Diamond Cabinet**

## **DWS ( type )**

User's Manual

Revision 1.1

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## 2 Revision History

<b>Version</b>	<b>Date</b>	<b>Author</b>	<b>Description</b>
1.0	2011.27.07	DLV	Initial document release
1.1	2011.17.11	DLV	Change power supply

### 3 Overview

#### 3.1 Dimensions

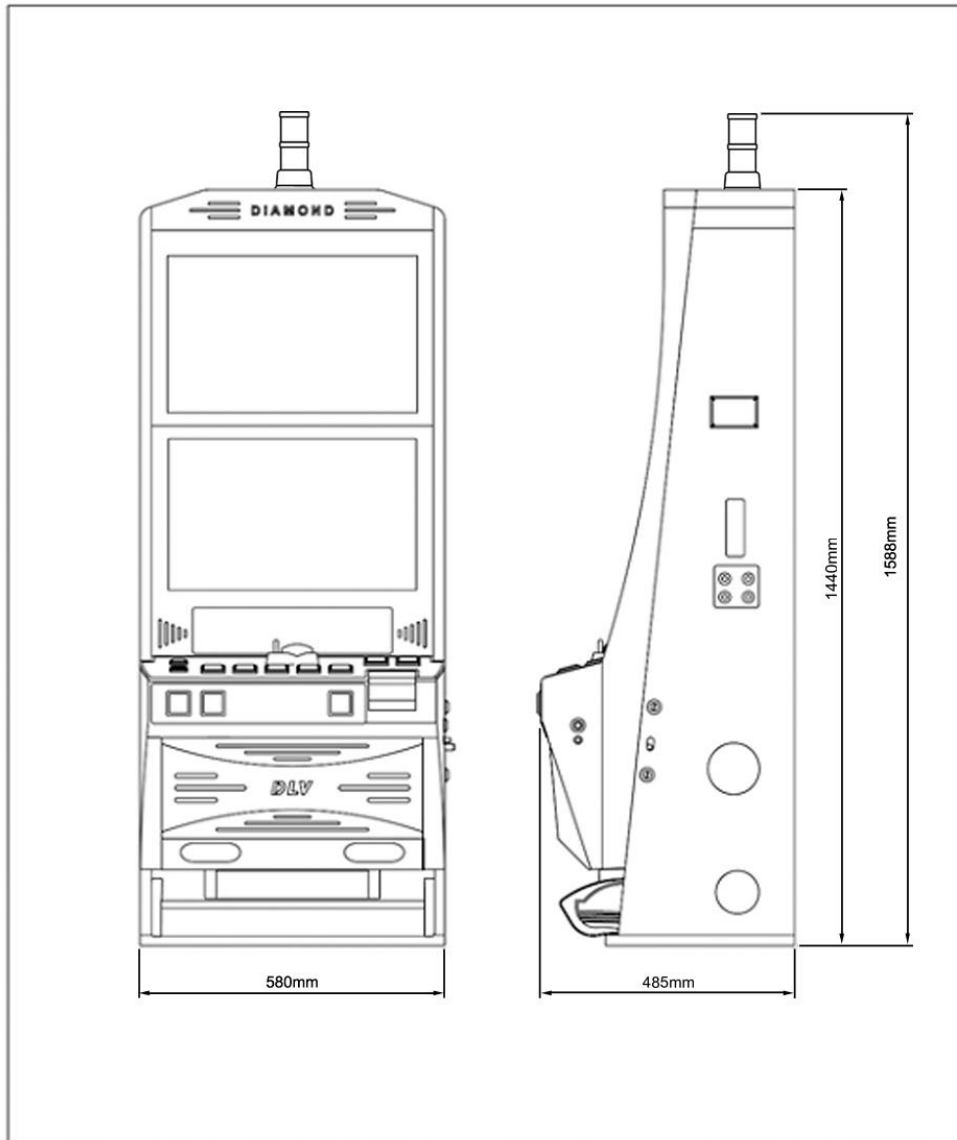


Figure 1: Machine dimensions

## 3.2 Operating Elements

1. Coin entry
2. Bill entry
3. Belly door lock
4. Main door lock
5. I-Button key (optional)
6. Coin tray

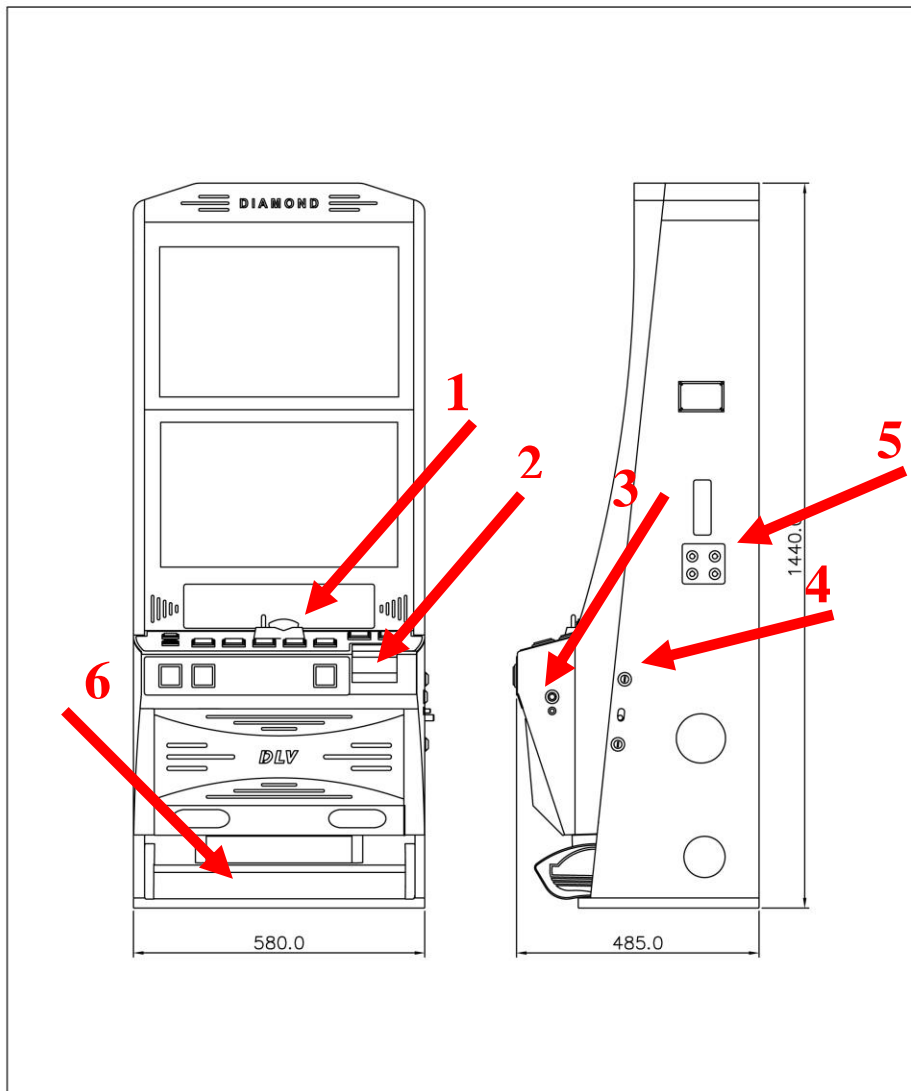


Figure 2: Machine Operating Elements

### 3.3 Description of components

1. Top light
2. Monitors
3. Games PCB
4. Power Supply Unit
5. Power Supply Main
6. Bill Acceptor
7. Hopper
8. Coin Acceptor
9. Loudspeaker

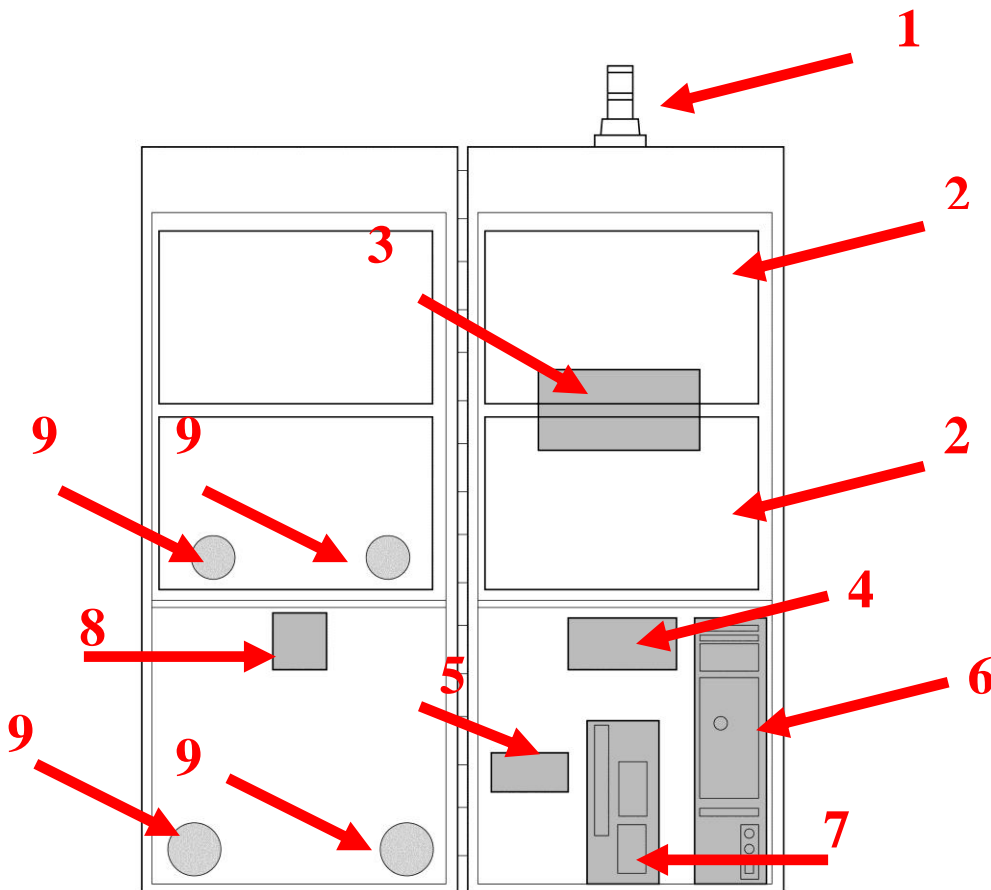


Figure 3: Description of components



## 4 Installation

### 4.1 Installation instructions

It must be ensured that the machine is operated in an upright position.

Further, the machine has to be screwed down tightly to the base by means on the mounting material included in the delivery. The minimum distance between two machines should be 25 cm to avoid possible damage when opening the main door. The minimum distance to a possible back wall or the like should be 10 cm. The mounting holes (figure 3) has to be used in case the machine is to be installed on the table provided by the customer (machine has been delivered without base).

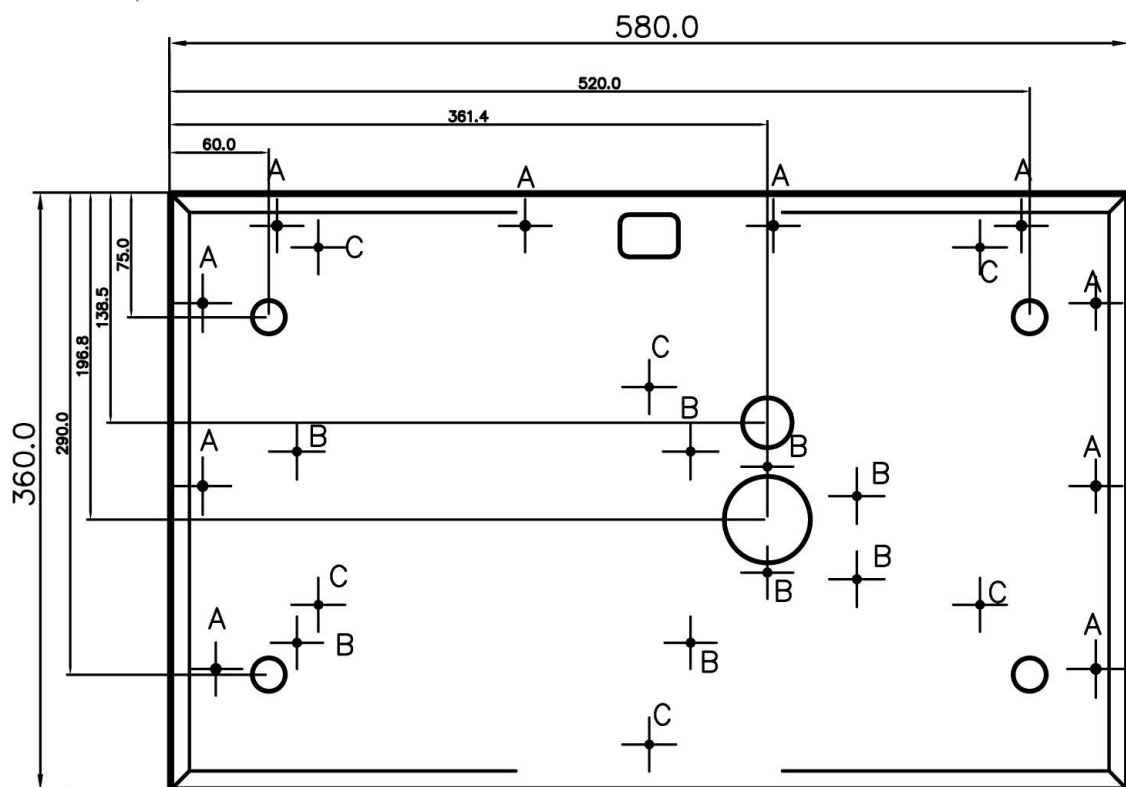


Figure 4: Machine mounting holes and dimensions

### 4.2 Power up

Before start check the line voltage and grounding. Machine is designed to operate at 100-120V/200-240V, 50-60Hz.

AC power outlet to which machine is connected should be easily accessed in case of emergency.

### 4.3 Safety precautions

This section is provided to avoid damage to the machine and minimize damage and chances of electric shock to maintenance personnel and users.

### **4.3.1 Static sensitive parts**

Machine contains static-sensitive components, which could be damaged by electric discharges. Before maintaining inner components of the machine always touch ground straps inside the machine to neutralize electric charges.

### **4.3.2 Power off**

In case of emergency power off the machine!

The machine will be completely powered off only when the AC plug is removed from the outlet. If the machine is connected with the uninterruptible power supply, be sure to switch it off.

**WARNING: Unplugging the machine with wet hands or in wet environment can result in electric shock.**

### **4.3.3 Cabinet ventilation**

Do not block or insert any objects into the ventilation holes. This may result in machine overheating or could result in risk of fire or electric shock.

Provide adequate space between machine and other objects, to allow normal ventilation conditions.

### **4.3.4 Liquid**

Avoid spilling any kind of liquids on the machine. Never don't clean the machine with the water jet. This may result in risk of fire or electric shock. In case of the accident, unplug the machine immediately and contact the qualified technical staff.

### **4.3.5 Avoid damages to the wires**

Damaged power cord can result in a risk of fire or short circuit. If the power cord is damaged, it must be replaced by a special cord available from the manufacturer or its service agent.

### **4.3.6 Uncommon behavior**

If there are unusual sounds, lights or smells coming out of the machine, power off the machine completely and contact the qualified technical staff. Failure of doing so may result in risk of fire.

### **4.3.7 Wires**

Make sure that all the wires inside and outside of the machine are not damaged, squeezed or stretched. Also check the wire near the AC plug is not frayed.

Damaged wires can cause short circuit or fire risks.

### **4.3.8 Environment**

Machine is suitable for indoor use only!

Do not expose the machine under any circumstances to wet environments or temperatures greater than 50°C.

After transportation or storage in cold environments do not power up machine immediately, wait for machine to reach normal operating temperature.

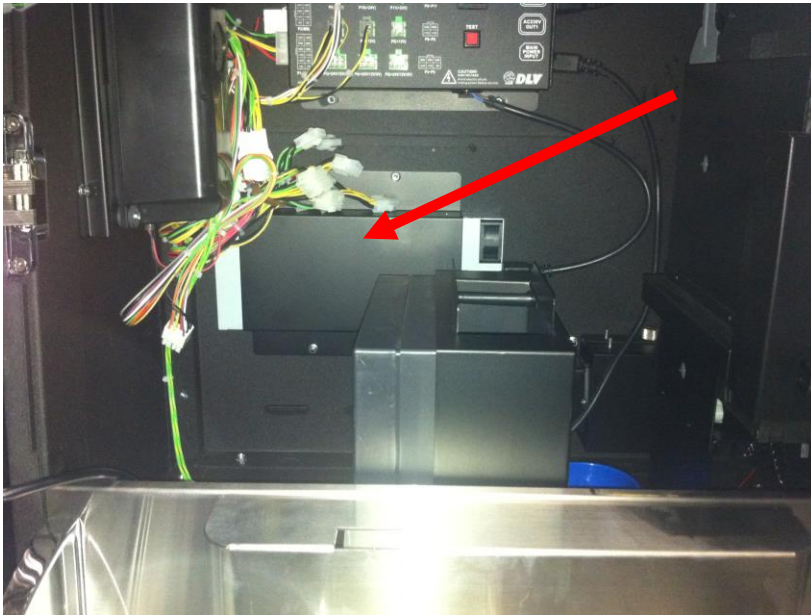
The recommended operating temperature is between 10°C and 35°C and relative humidity of 30% to 80% (non-condensing).

Do not install machine near heaters or other electronic devices that produce a lot of heat or dust. Failure of doing so can result in risk of machine malfunction, overheating or fire.

## 5 Power supply

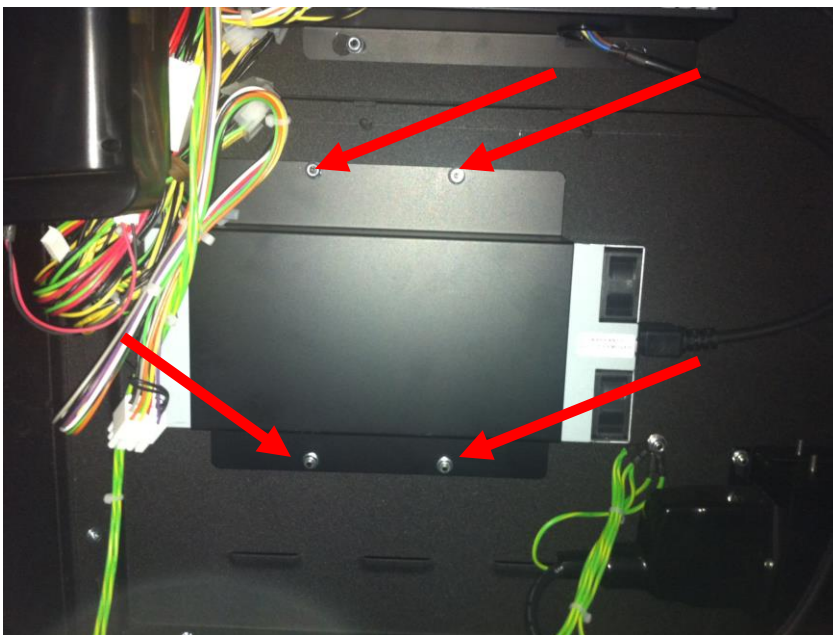
### 5.1 Position in machine

The power supply is located under the Power distributor box (as shown on picture).



### 5.2 Removal

To remove the power supply, disconnect all the wiring and unscrew four screws that hold the power supply in place (shown with red arrows).



### 5.3 Characteristics

Type	<b>Hsuan-I International</b>
Model	<b>PR-3863-00</b>
Input	<b>100-240V~ , 47Hz-63Hz</b>
Output	+5V:6A
Output	+12V:20.5A
Output	+24V:4.7A
Output watt	<b>386 W</b>

### 5.4 Connectors

#### 5.4.1 DC Output Connector

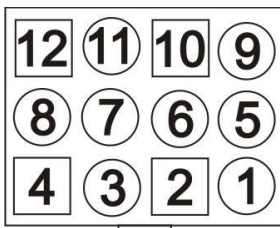


Figure 5: DC Output Connector

Pin No.	Color	Description
4, 8, 12	RED	+5V
5, 9	YELLOW	+12V
7, 11	GREEN	+24V
2, 3, 6, 10	BLACK	GND

Table 1: DC Output Connector Pin Layout

## 6 Coin Acceptor

### 6.1 Function

Type **NRI G-13 ( parallel or CCTalk mode )** or compatible coin acceptor with up to 6 pre-programmed coin channels

The coin diverter is mounted underneath the coin acceptor and sorts the coins depending on the hopper fill level either to the hopper or directly to the cash box.

### 6.2 Accepted coins

Machine can accept following coins:

Country	Coin value
Latvia	1 LVL

Table 2: Accepted coin table

### 6.3 Error Handling

1. Unplug the machine and open the main door;
2. Check that the coin acceptor is positioned correctly, remove any jammed coins;
3. Ensure that the coin acceptor cable is connected properly to the device;
4. Check if coin sorter can freely move for one position to another.

### 6.4 Replacement

If coin acceptor can not be fixed in-place, the complete device should be replaced.

1. Unplug the machine and open the main door;
2. Loosen black plastic brackets;
3. Tilt the upper part of coin acceptor first, and then remove coin acceptor from the bracket;
4. Unplug the cable;
5. Repeat steps above in the reverse order;



Figure 6: Coin Acceptor bracket position

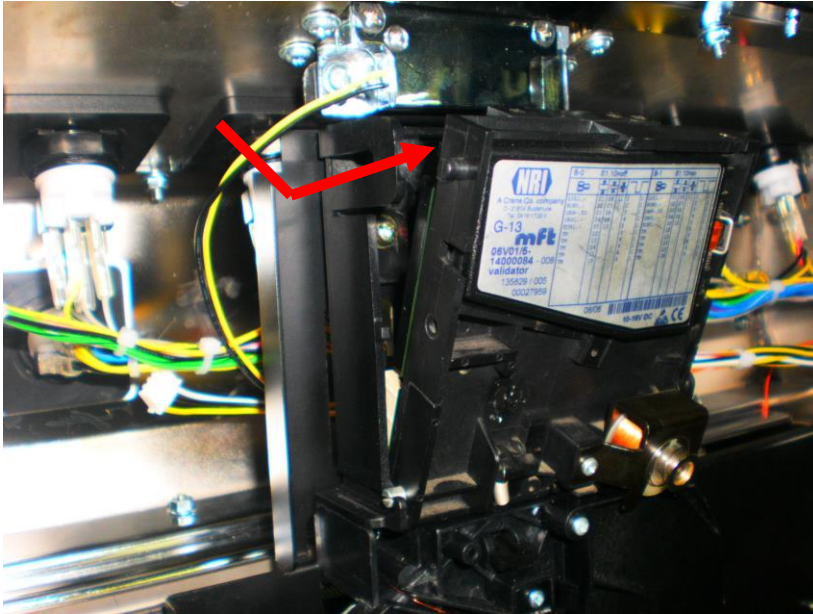


Figure 7: Removal of the coin acceptor

## 6.5 Connector

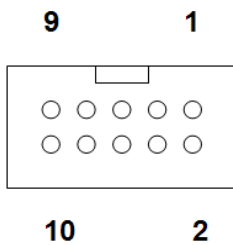


Figure 8: Coin Acceptor Connector

Pin No.	Description	Potential
1	GND	Low
2	+12V DC	High
3	Coin E	Active low
4	Coin F	Active low
5	Return	Active low
6	Common inhibit	Active high
7	Coin A	Active low
8	Coin B	Active low
9	Coin C	Active low
10	Coin D	Active low

Table 3: Coin Acceptor Connector Pin Layout

## 7 Coin Hopper

### 7.1 Function

Type Alberici HopperKID ( Standart or CCTalk mode ) or compatible hopper

**WARNING: Machine should be powered off before removing or installing coin hopper!**

### 7.2 Payout coins

Machine can pay out following coins:

Country	Coin value
Latvia	1 LVL

Table 4: Payout coin table

### 7.3 Error Handling

1. Check the correct mounting of the hopper;
2. Check the plug fitting;
3. Remove jammed coins if such exist
4. Clean the hopper from dirt and dust

### 7.4 Replacement

1. Unplug the machine and open the door forward
2. Lift the coin tray and take it out
3. Remove the Hopper forward.

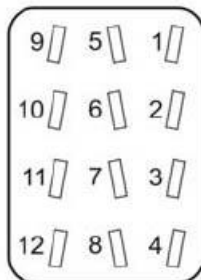


Figure 9: Coin Tray Remove Direction



**Figure 10: Coin Hopper Remove Direction**

## 7.5 Connector



**Figure 11: Coin Hopper Connector**

Pin No.	Description
1	Motor supply 0 volt
2	Logic 0 volt
3	uP Sensor Output
4	IN1
5	Security output
6	High level sense output
7	Low level sense output
8	IN2
9	Motor supply +24V
10	Logic supply
11	Raw Sensor Output
12	IN3

**Table 5: Coin Hopper Connector Pin Layout**



## 8 Bill Acceptor

### 8.1 Function

Type JCM UBA/Cash Code / MEI Cashflow

The Bill validator accepts the bank notes in all 4 directions. By changing software in flash memory any country settings can be adjusted.

### 8.2 Accepted bills

Machine can accept and handle following banknotes

Country	Bill value
Latvia	5 LVL
	10 LVL
	20 LVL
	50 LVL
	100 LVL

Table 6: Accepted bill table

### 8.3 Adjustment and troubleshooting

Check +12V with Voltmeter at the output of the power supply unit.

In case of a short circuit in the machine the power supply switches off automatically.

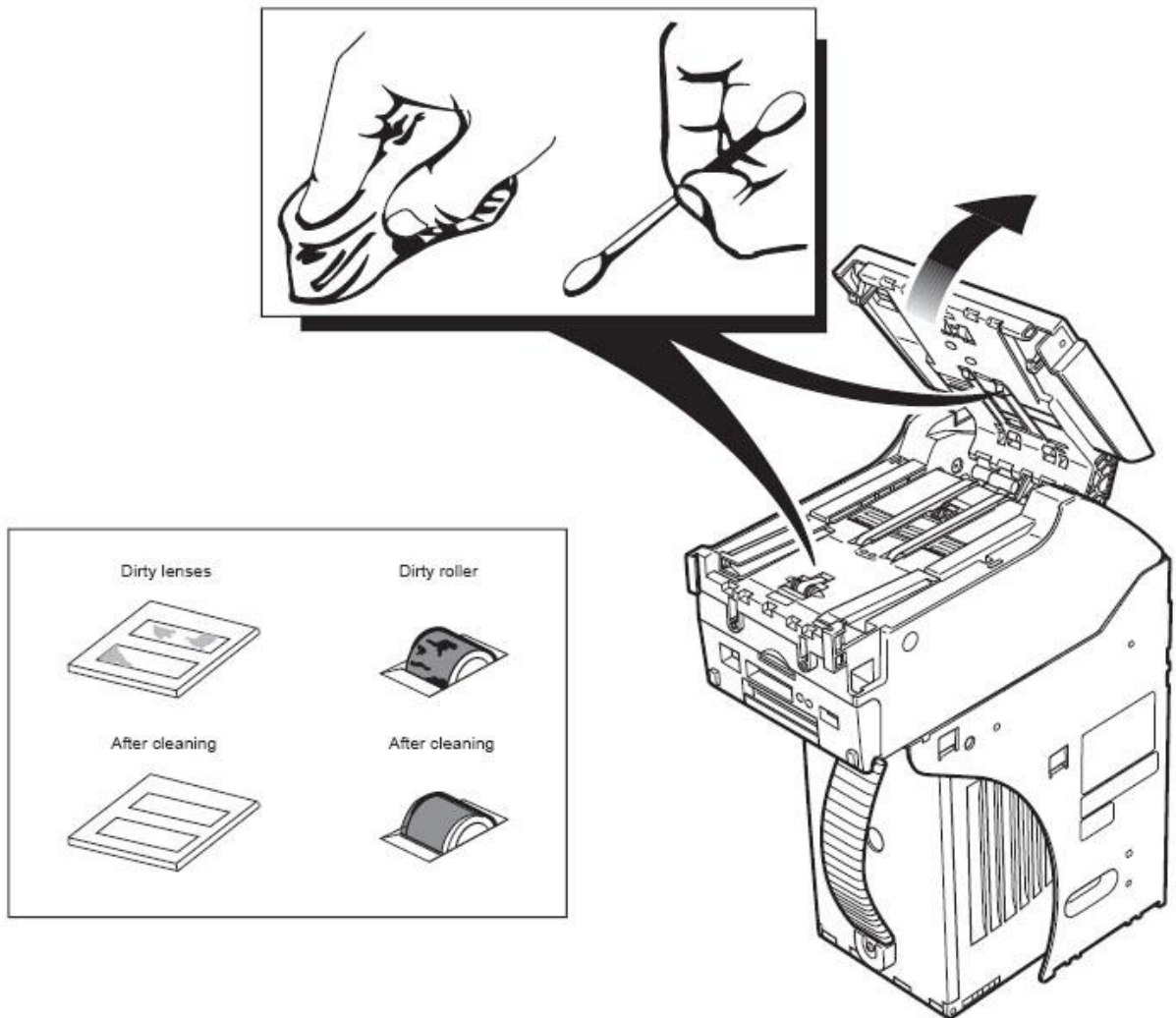
Switch machine back on after repair of the short circuit. In most cases the power supply unit work properly again (yellow lit).

### 8.4 Error handling

#### 8.4.1 Cleaning

To clean the lenses, use a lint-free cloth and mild nonabrasive detergent such as liquid dish soap mixed with water.

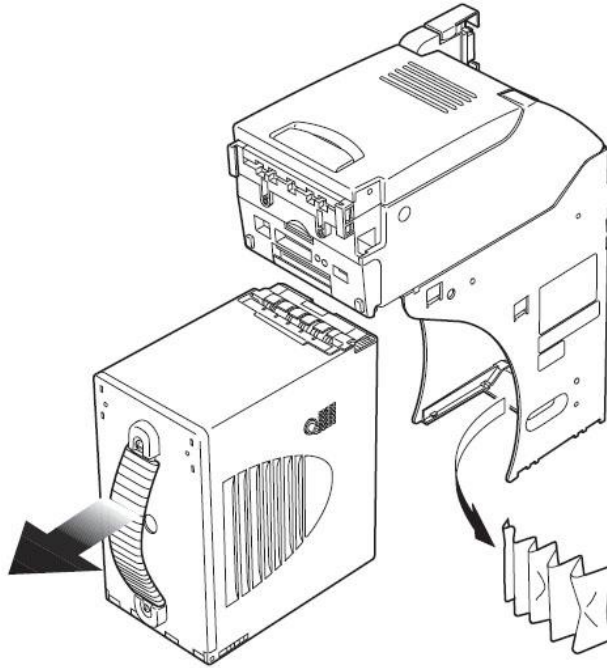
1. Pull the tabs on both sides of the acceptor forwarded to open the acceptor's head;
2. Open the acceptor head front and rear covers to clean bill path, rollers and belts.



**Figure 12: Bill Acceptor Cleaning**

#### **8.4.2 Bill is jammed in Acceptor**

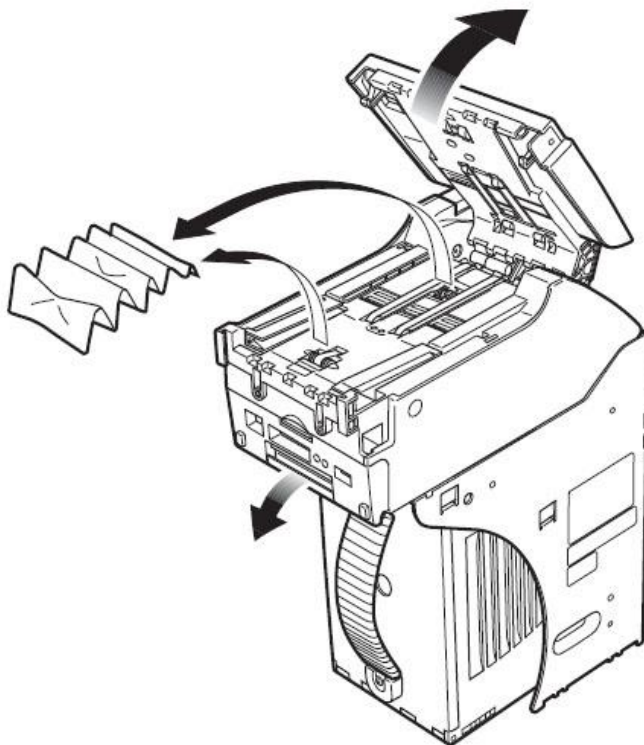
When a bill is jammed near the entrance of the stacker box, unlock the box and pull it out to remove the jammed bill.



**Figure 13: Removing jammed bill from the Bill Acceptor Stacker**

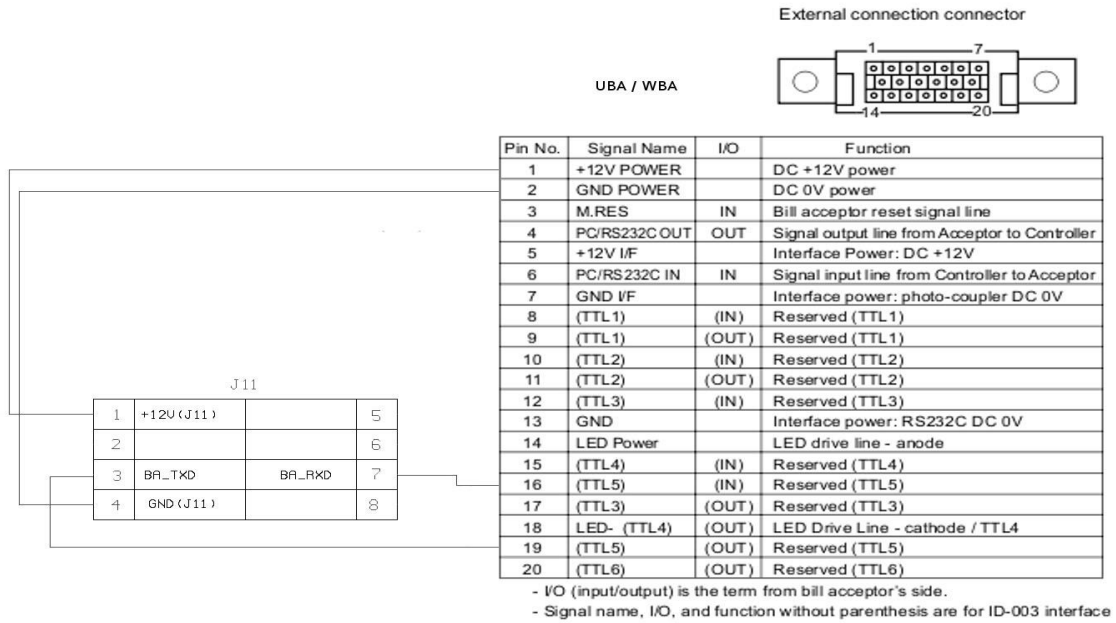
### **8.4.3 Bill is jammed near the acceptor's entrance**

When a bill is jammed near the acceptor's entrance, pull the tabs on the top of the acceptor to open the cover of acceptor's unit. Remove the jammed bill.



**Figure 14: Removing jammed bill from the Bill Acceptor entrance**

## 8.5 Connector



**Table 7: Bill Acceptor Connector Pin Layout**

## 9 Hardware meters

### 9.1 Position in machine

Hardware meters are mounted on the right wall inside the cabinet next to gaming board.

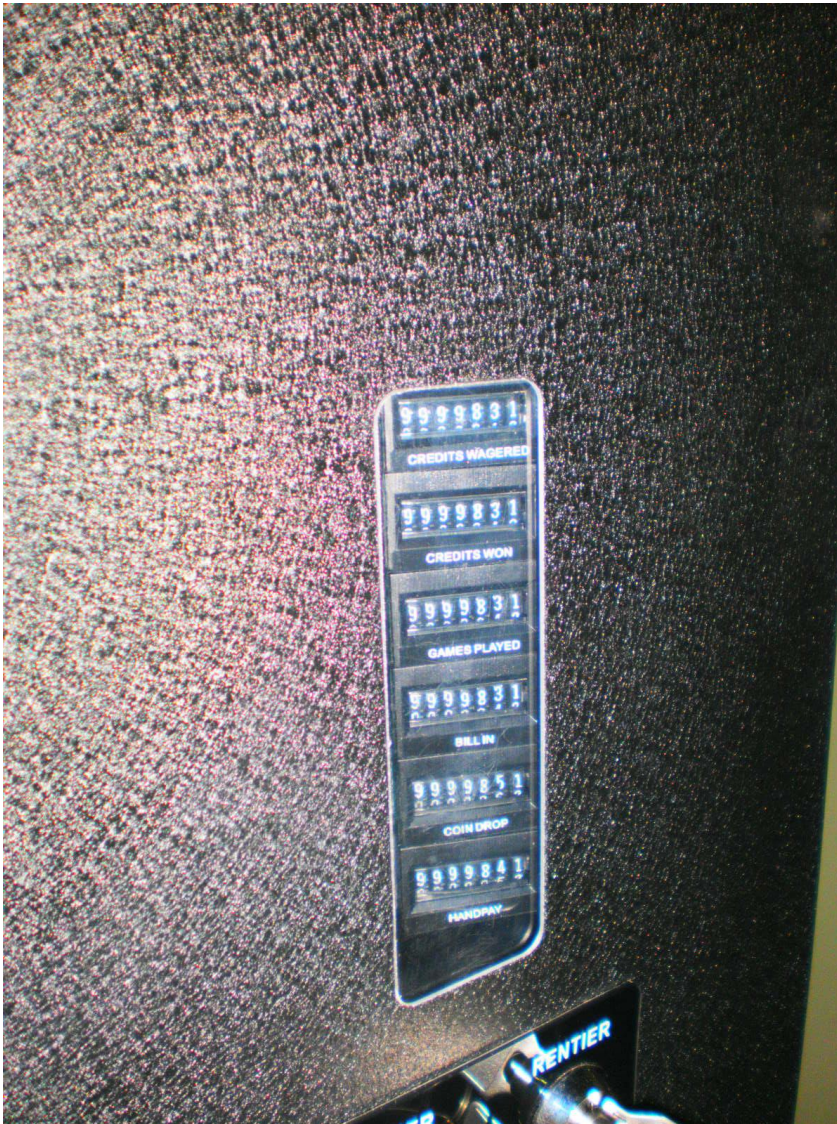


Figure 15: Hardware Meters Position in Machine

### 9.2 Function

1. CREDITS WAGERED
2. CREDITS WON
3. GAMES PLAYED
4. BILL IN
5. COIN DROP
6. HANDPAY

### 9.3 Troubleshooting

1. Check the connectors of the meter unit.
2. If an error message is triggered by a malfunction or non-activation of individual meter, the device must be removed from the operation and the meters circuit board must be exchanged.

### 9.4 Exchange of the meters

If any defects cannot be repaired, the defective meter has to be exchanged.

1. Unplug the machine and open the main door;
2. Unscrew screws as shown on picture;
3. Remove meters circuit board;
4. Unplug cable from the meters circuit board;

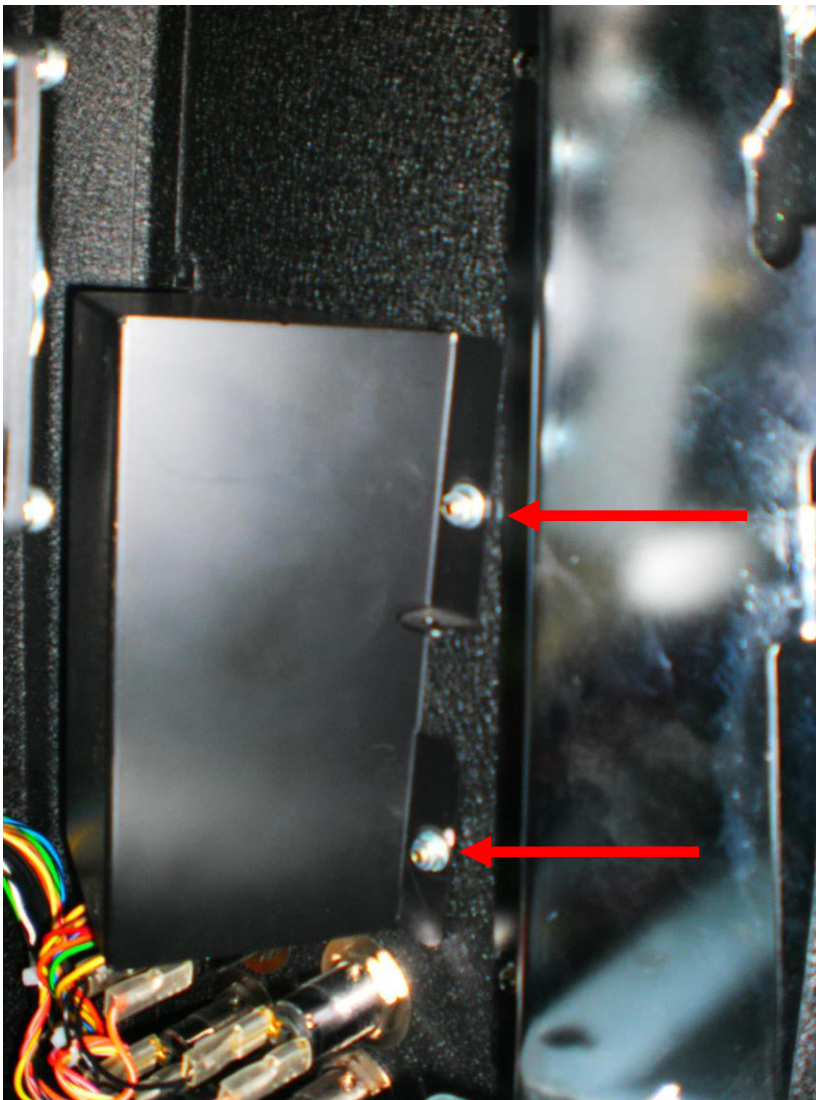
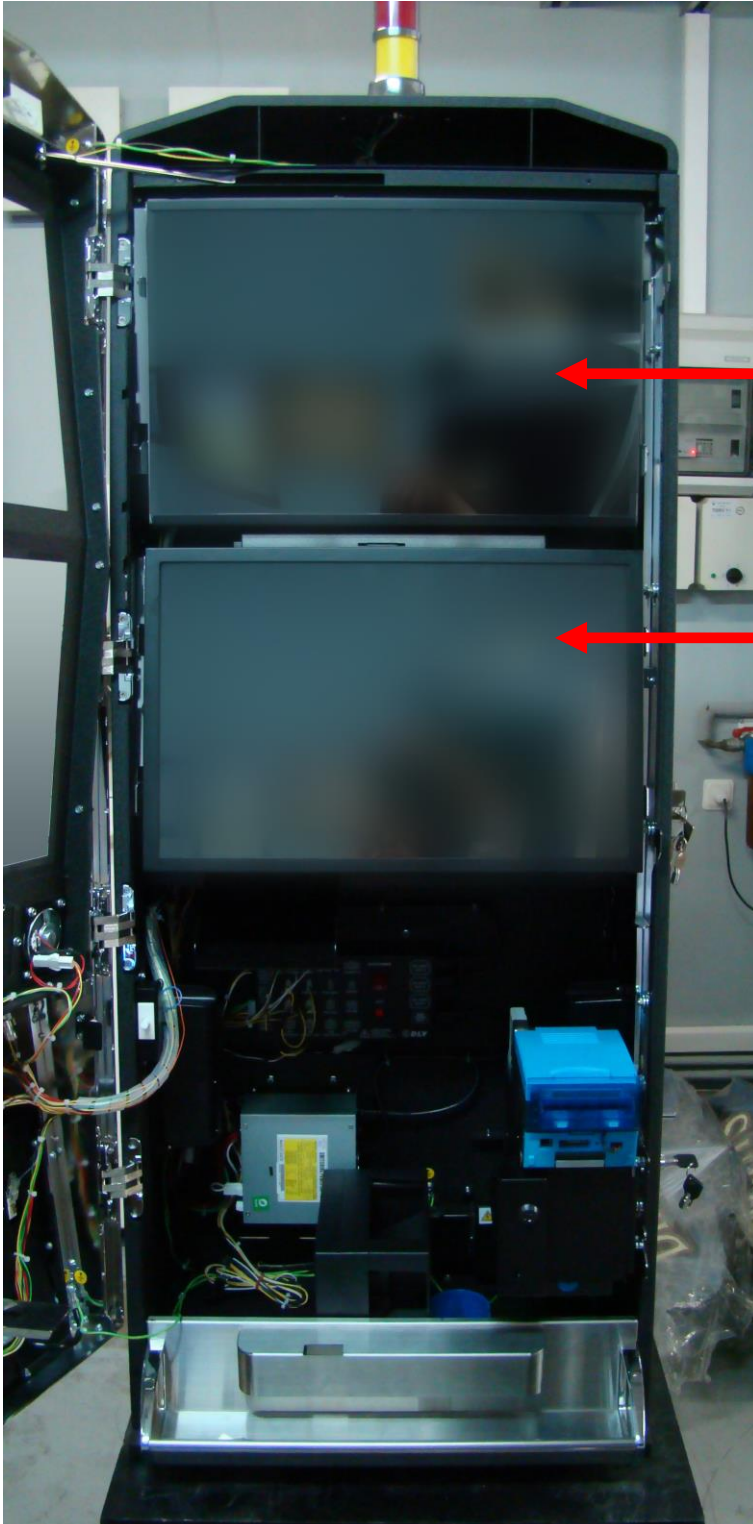


Figure 16: Exchange on the Hardware Meters Circuit Board

## 10 Monitors

### 10.1 Position in machine



**Figure 17: Monitors Position in Machine**

## **10.2 Function**

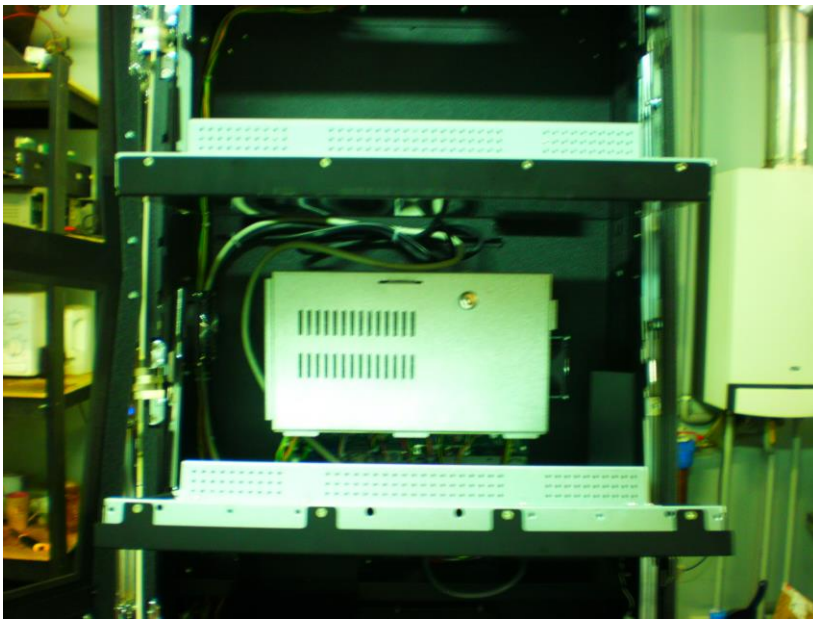
The monitors show the game play, the error messages and the audit system.

## **10.3 Troubleshooting**

Check if the monitors and the connectors of the cables are fixed correctly in their mounting.

## **10.4 Exchange of the monitors**

If any defects cannot be repaired, the defective monitor has to be exchanged.



**Figure 18: Monitors Exchange**



## 11 Harness

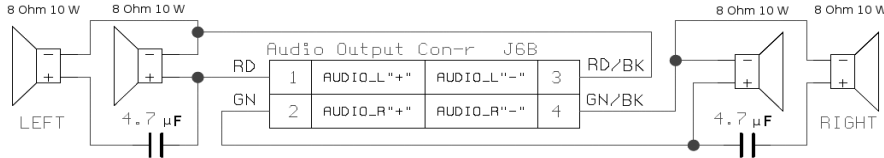


Figure 19: Audio Connector

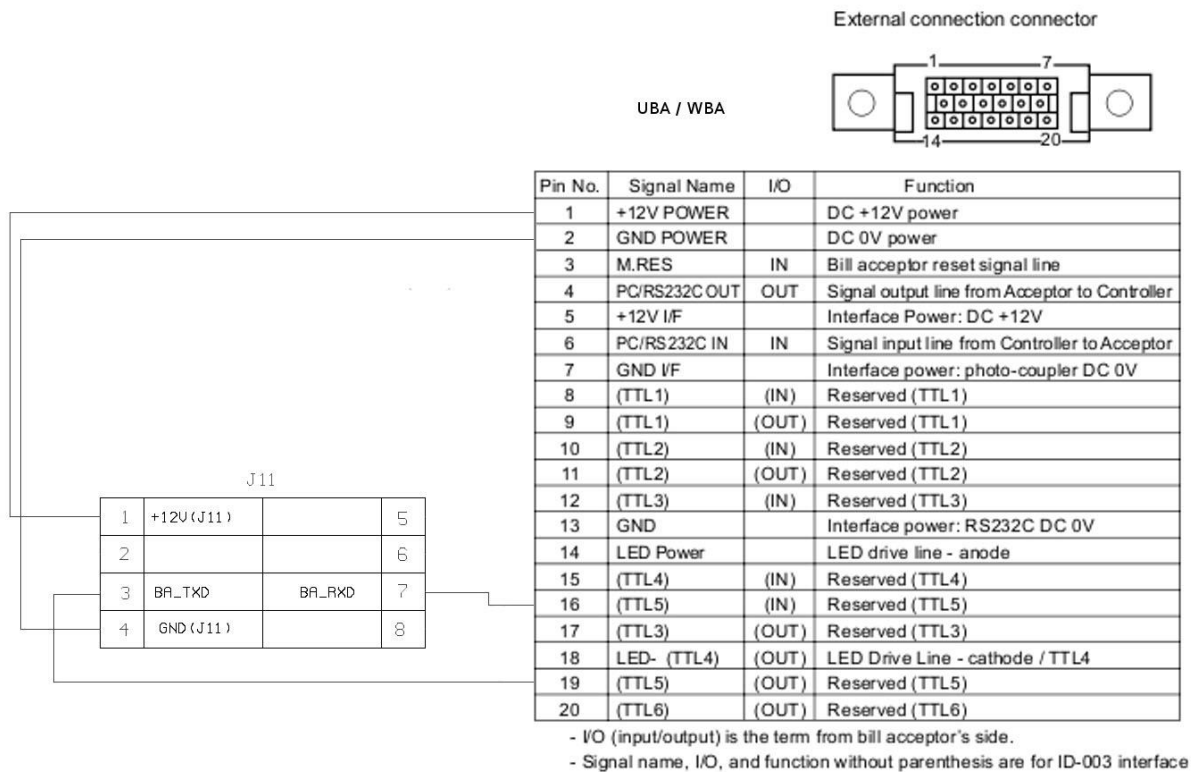


Figure 20: JCM UBA10 Connector

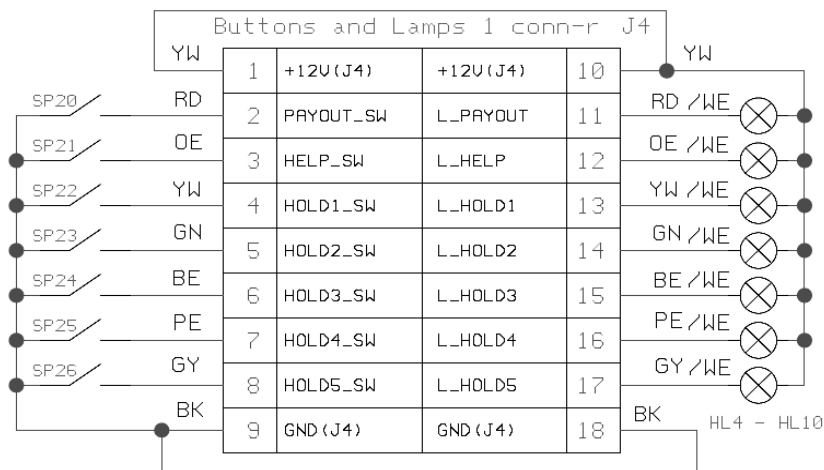
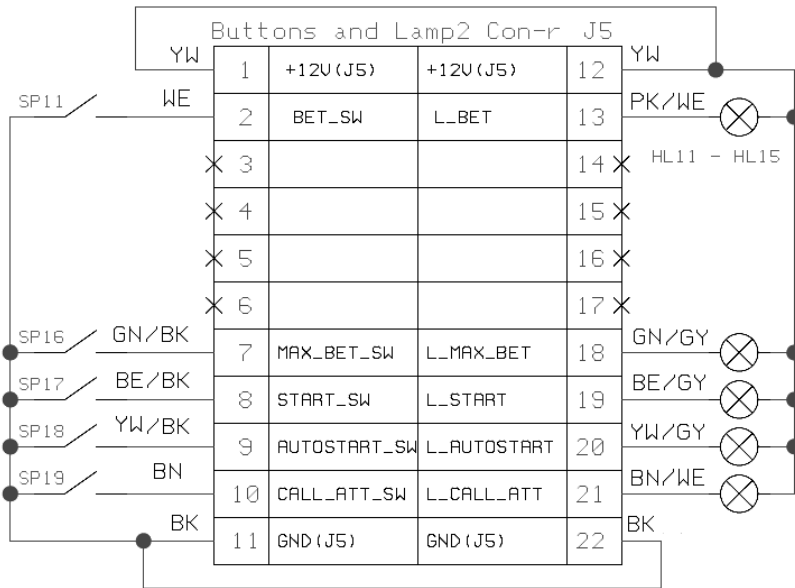
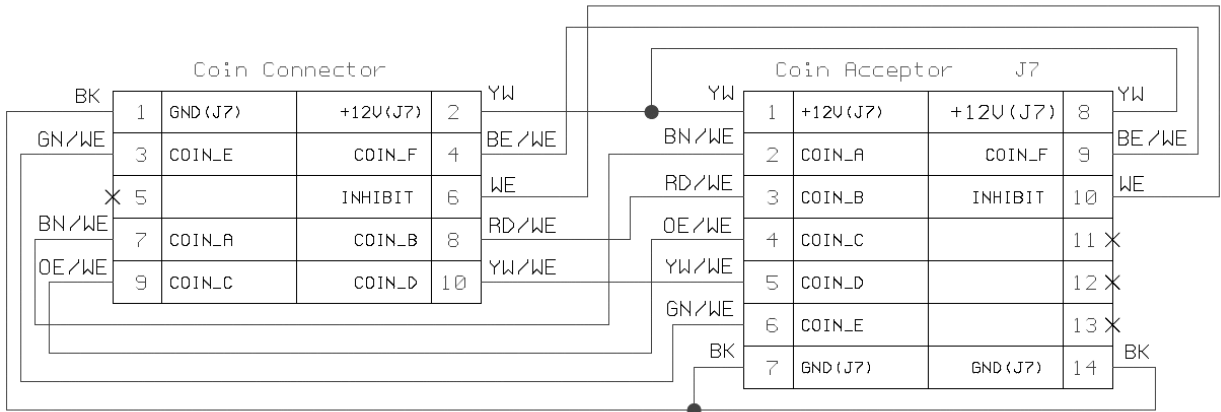


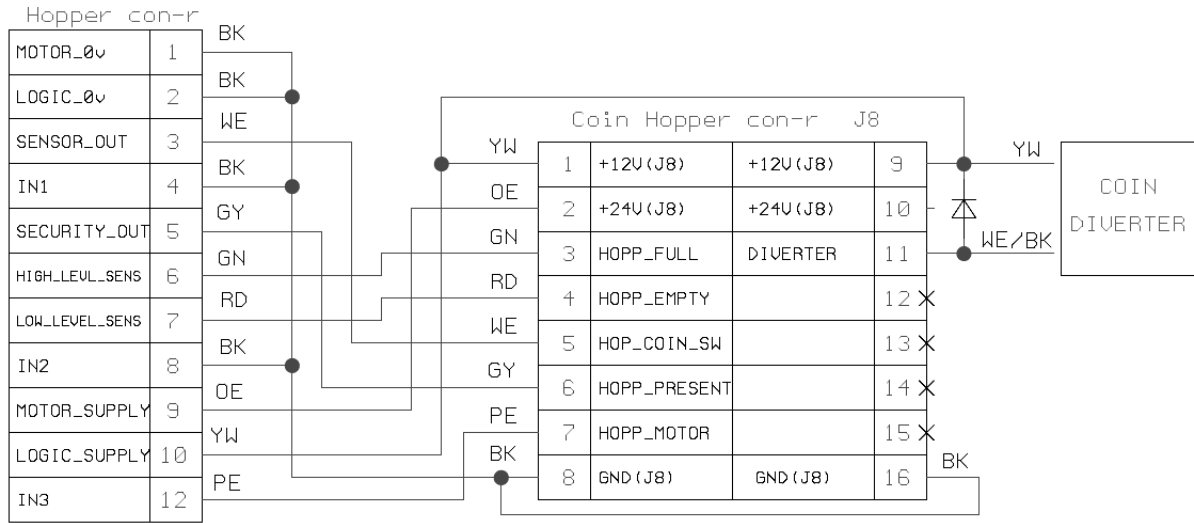
Figure 21: Buttons and Lamps Connector 1



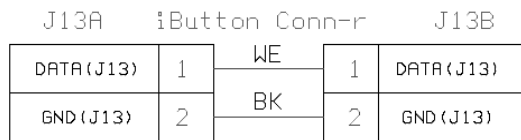
**Figure 22: Buttons and Lamps Connector 2**



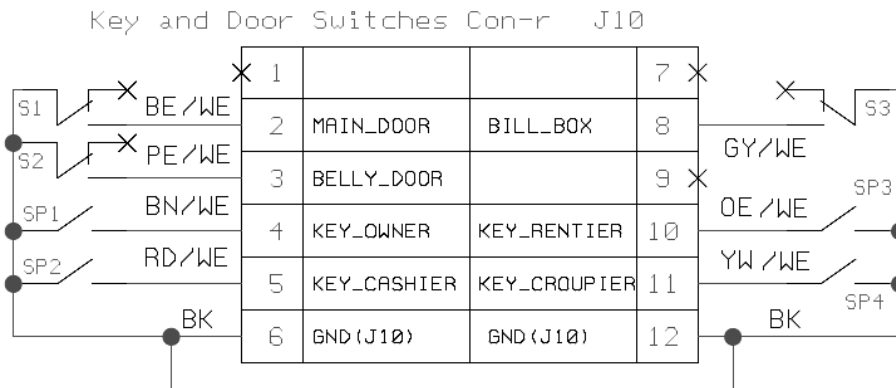
**Figure 23: Coin Acceptor Connector**



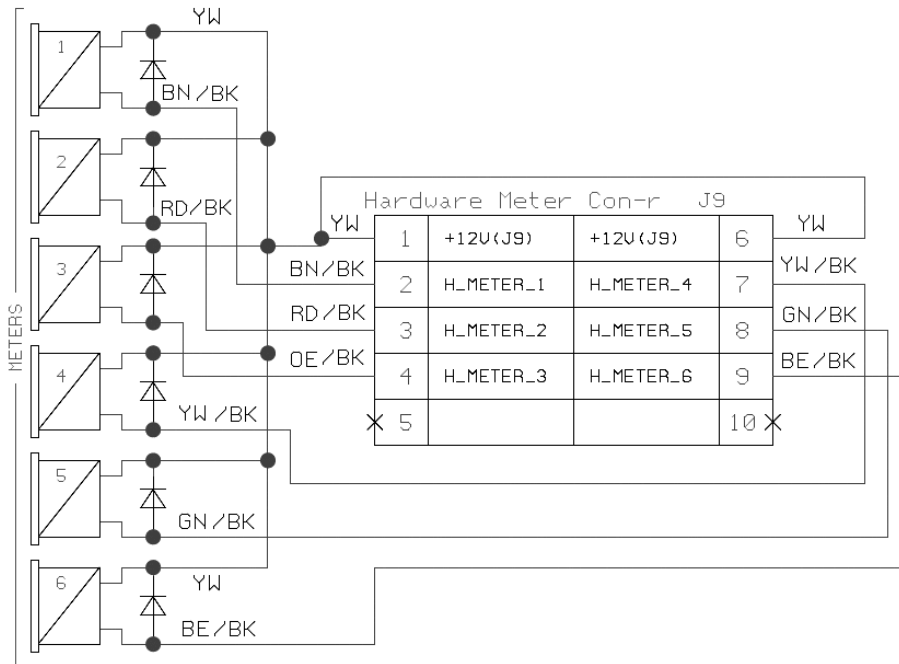
**Figure 24: Coin Hopper Connector**



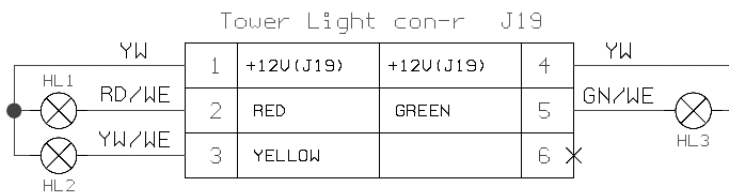
**Figure 25: iButton Connector**



**Figure 26: Key and Door Switch Connector**

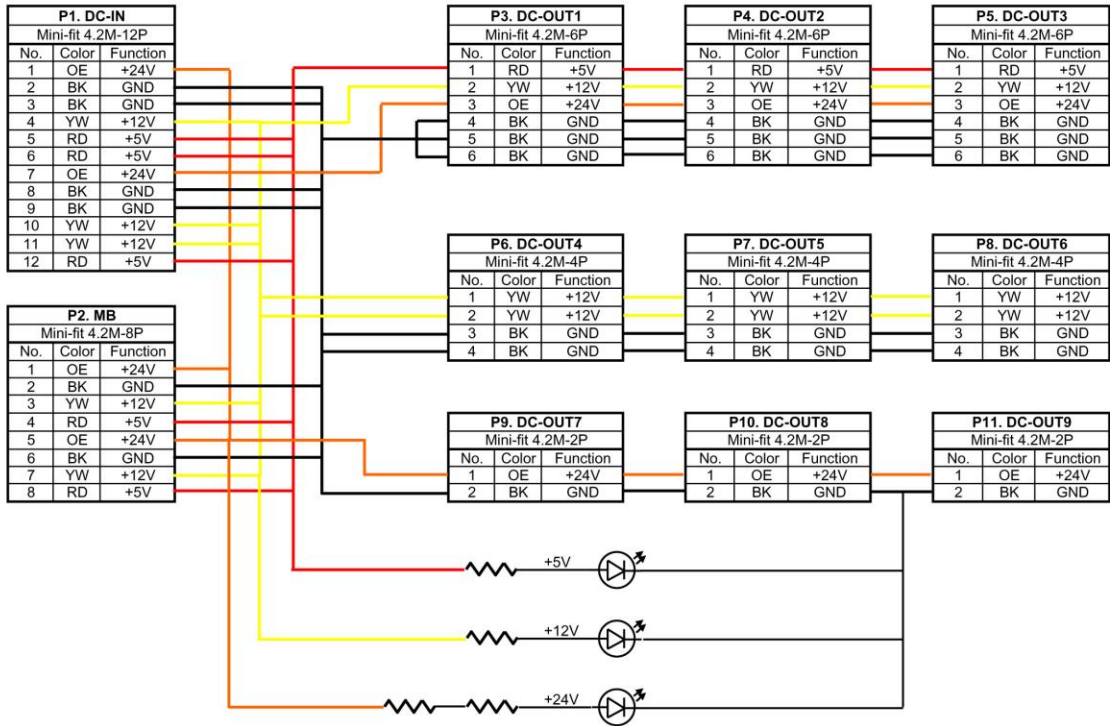


**Figure 27: Hardware Meters Connector**

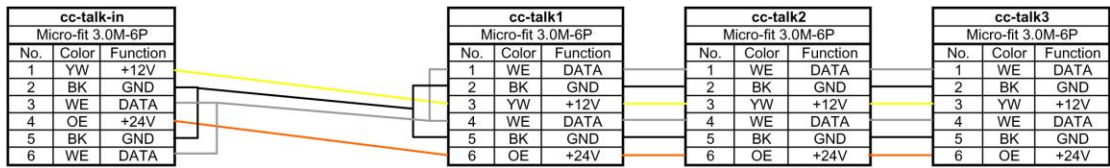


**Figure 28: Tower Light Connector**

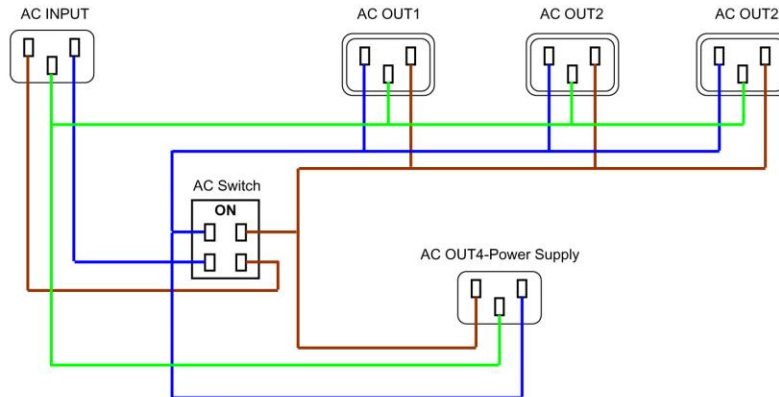
**DC Connection:**



**cc-talk Connection:**



**AC Connection:**



**Figure 29: Power Supply Unit Connector**