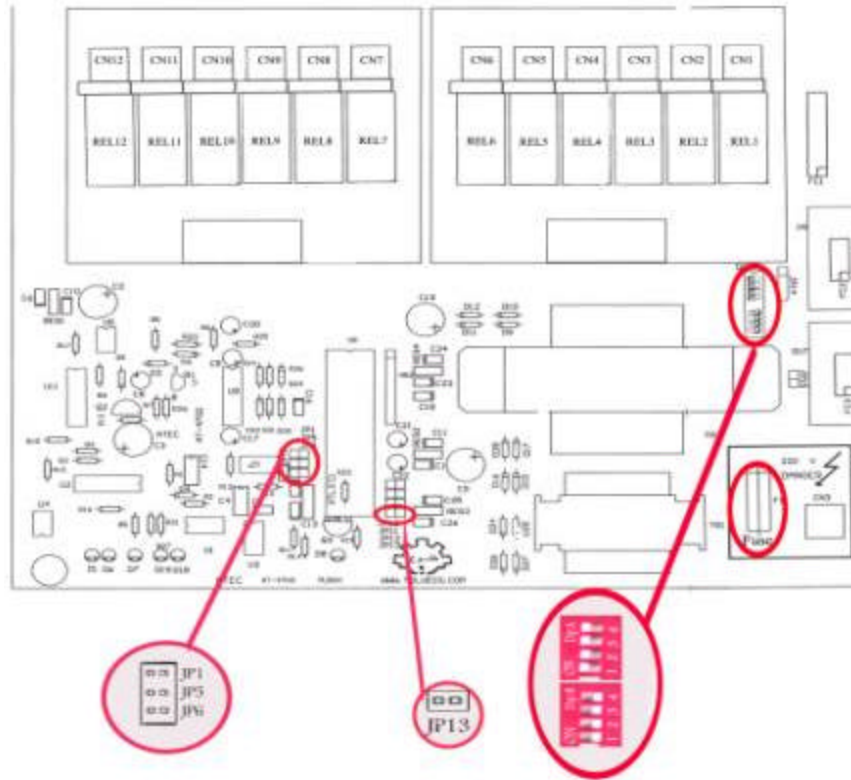


Light Control Board (LCB)

USER'S MANUAL



Light Control Board Case (Fig.1)



Light Control Board (LCB) Layout (Fig.2)

LCB Installation Process

To installation LCB, you must complete the following Steps:

[Step 1. Install LCB on the wall](#)

[Step 2. Connect LCB's Relays & Table's light](#)

[Step 3. Connect Power Cable](#)

[Step 4. Connect Serial Cable & Connect it to computer](#)

[Step 5. Cascading LCBs](#)

[Step 6. LCB's Settings](#)

[Step 7. LCB Power on & Run Billiard Software & Test it](#)

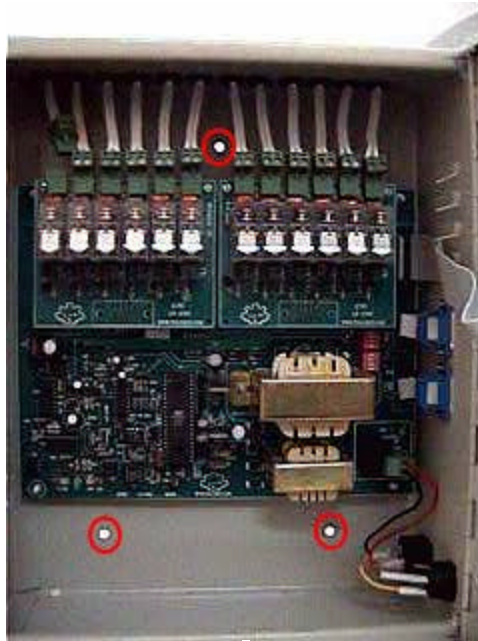
[Step 8. Troubleshooting](#)

Step 1: Install LCB on the Wall

Fix LCB on the wall while using screws and available roll plaques in accessories



Note: Maximum distance between LCB and the computer is 10m(Meter).



Step 2: Connect LCB relay & table light

For wiring and connection of relays with tables' lights, do as followings:

1- In order to turn on lights by computer, put prepared relay contact with on/off handle key in parallel mode fig.3

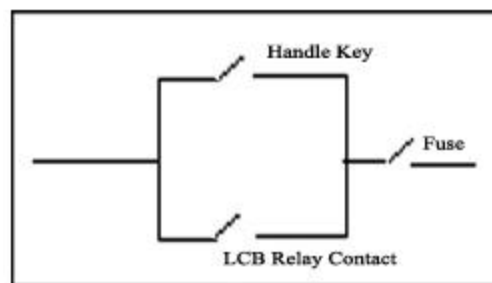


Fig. 3

2- For wiring operation, prepared glands on LCB case and the contacts of LCB relay (prepared by terminals on electrical board) are used.

For more details, see Fig. 4

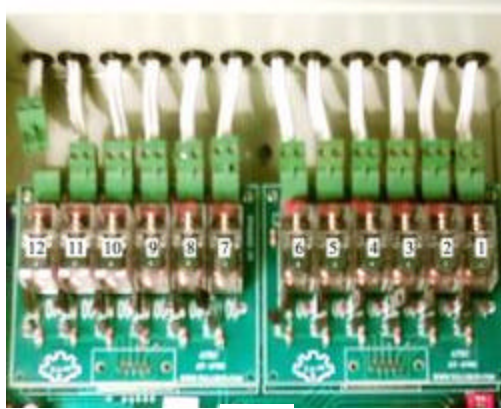





Fig. 4

 **Note 1:** In order to control lights by computer, handle key of lights must be on off-position.

 **Note 2:** For safety, it is advised to use an appropriate fuse with handle key/ LCB relay contact in a series circuit. (fig. 3)

 **Note 3:** While connecting LCB relay contacts and table lights, be careful to connect identical and similar relay number and table number.

Step 3: Connect Power Cable

Connect power cable in accessories case to LCB and then plug in. (Fig. 1)

Step 4: Connect Serial Cable and Connect it To Computer

LCB has 2 connector (button/buttonhole, male/ female) which can be connected to a computer by serial cables in accessories set and if needed, to other LCBs (in Cascade position). In order to connect LCB to computer, connect long serial cable to one of serial port of computer and connect its other end to Input connector of LCB. (Fig.1)



Note 1: LCB Input connector is like the form of female.



Note 2: Screw on connectors must be fixed strictly on computer port and LCB port.



Note 3: Number of tables which can be connected to each LCB are 12 and if we have more tables in the club, we need to use another LCB.(See its connection in step 5)



Note 4: Hardware part of LCB is adjusted as followings:

- *jp1= OFF , jp5= OFF , jp6= OFF (default state)(these 3 jumper specify the LCB address)*

-*All Dipswitch A keys are on ON-position. (Default state)*

- *All Dipswitch B keys are on OFF-position. (Default state)*

Step 5: Cascading LCBs

If the number of club tables is more than 12, we will need one or more LCB. (For 12 table in clube, one LCB is installed). For installation, do as followings:

1- Fix new LCB case on the wall like step 1.


2- Try to have a connection between connector of LCB relays with lights on the table according to the number of connector and table number. (Like step 2)

3- Connect new LCB power cable.

4- Use short serial cable in accessories and connect LCB1 Outputport to LCB2 Inport. (Fig.1)



Note 1: LCB out port is male (button) and LCB in port is female (button-hole).


 **Note 2:** *The length of short serial cable is 50 cm. and therefore install new LCB near LCB 1.*

 **Note 3:** *The hardware part of LCB2 is adjusted as followings:*

-jp1=ON , jp5=OFF, jp6=OFF(LCB address is set on 2).

- All Dipswitch A keys are on OFF-position.

-All Dipswitch B keys are on ON-position.

 **Note 4:** *If another LCB is needed (if tables are more than 24), LCB3 is installed as followings:*

1-Fix LCB 3 case on the wall as step 1.

2-Try to have a connection between LCB3 relay connectors with lights on the table according to the number of connector and table. (Do this like step 2).

3-Connect LCB3 power cable.

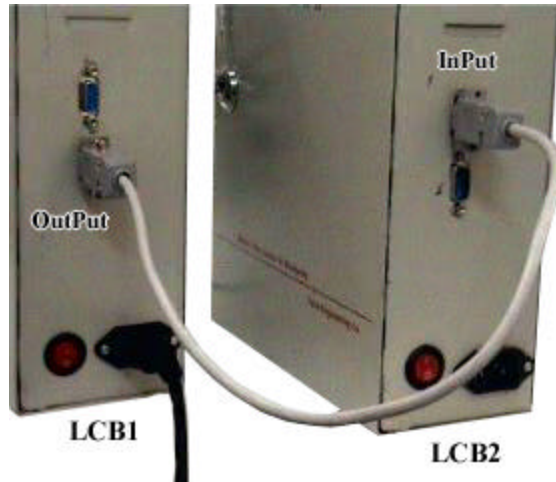
4- Use short serial cable in accessories and connect LCB2 Out port to LCB3 In port.

5- The hardware part of LCB3 is adjusted as followings:

-jp1=OFF , jp 5=ON , jp 6=OFF (LCB address is set on 3).

-All Dip switch A keys are on OFF-position.

-All Dip switch B keys are on ON-position.



Step 6 : LCB settings


Necessary hardware settings for all LCBs are presented here:

Tables Connected	Dip switch B	Dip switch A	Jp6	jp5	jp1	
Table 1 to 12	OFF	ON	Off	Off	Off	LCB 1
Table 13 to 24	ON	OFF	Off	Off	ON	LCB 2
to 36 Table	ON	OFF	Off	ON	Off	LCB3
Table37 to 48	ON	OFF	Off	ON	ON	LCB4
Table49 to	ON	OFF	ON	Off	Off	LCB5
Table61 to 72	ON	OFF	ON	Off	ON	LCB6
Table 73 to 84	ON	OFF	ON	ON	Off	LCB7



Note 1: If JP13 jumper on each of LCBs (see fig.1) becomes ON, all table lights

which are connected to this LCB, will be ON. By this way, we can check the correct connection of table lights which are connected to this LCB.

 **Note 2:** If power fuse is on OFF-position (not functioning), lift the adjacent door of power terminal (CN3 terminal) and change the fuse.(Fig. 1)


Specification of the fuse: 5Am. , 25 V

Step 7: LCB Power on & Run Billiard Software & Test it

Turn on power key of LCB or LCBs and do as followings:

- 1- Put all handle keys of lights (which are on the table) on OFF-position.
- 2- Put jp13 jumper on ON-position on LCB. In this state, all table lights which are connected to this LCB, must become ON. If the light of each table is on Off-position, its connection is faulty. Therefore examine their wiring as step 2.
- 3- Put jp13 jumper on Off-position.
- 4-Run Billiard Club Program software and do these settings as followings:
 - a. From "Setting" and then "Setting Programs" , press Edit key.
 - b. Select the option "Control of lighting of tables by computer" by a tick.
 - c. For more settings, Press ... key (It is in front of it).

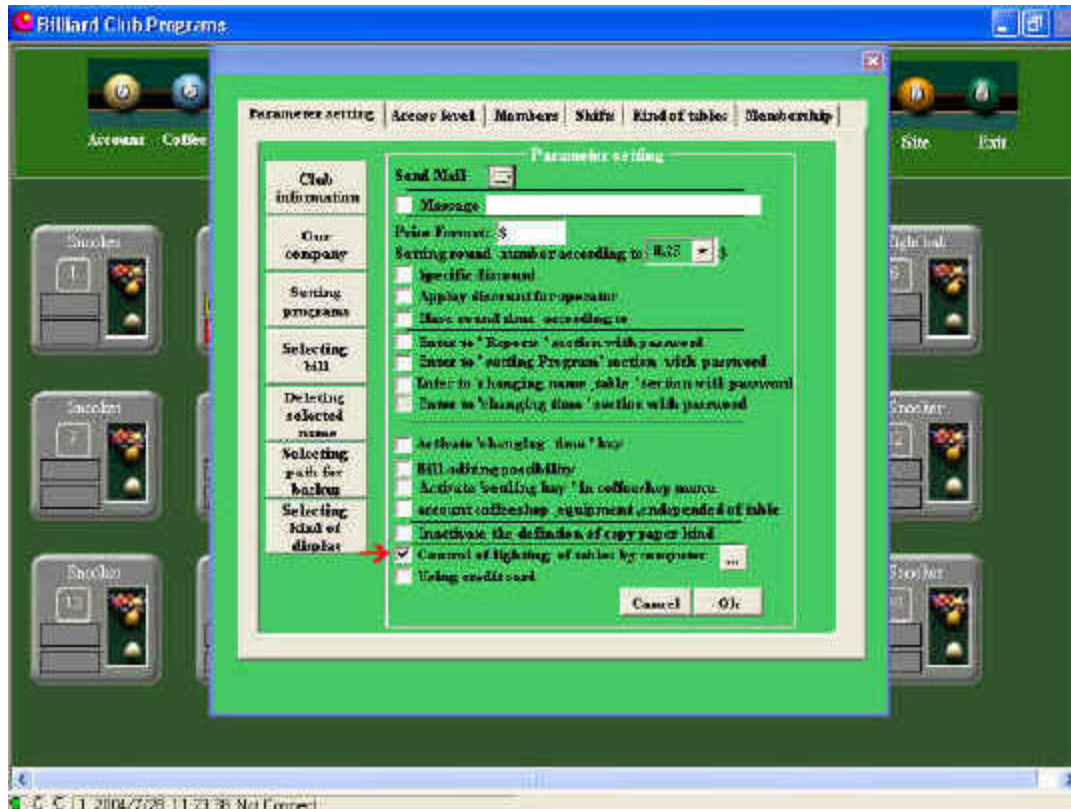
If the serial port (used while connecting serial cable to computer) is not similar and identical to the number of the port(adjusted in this section), correct it.

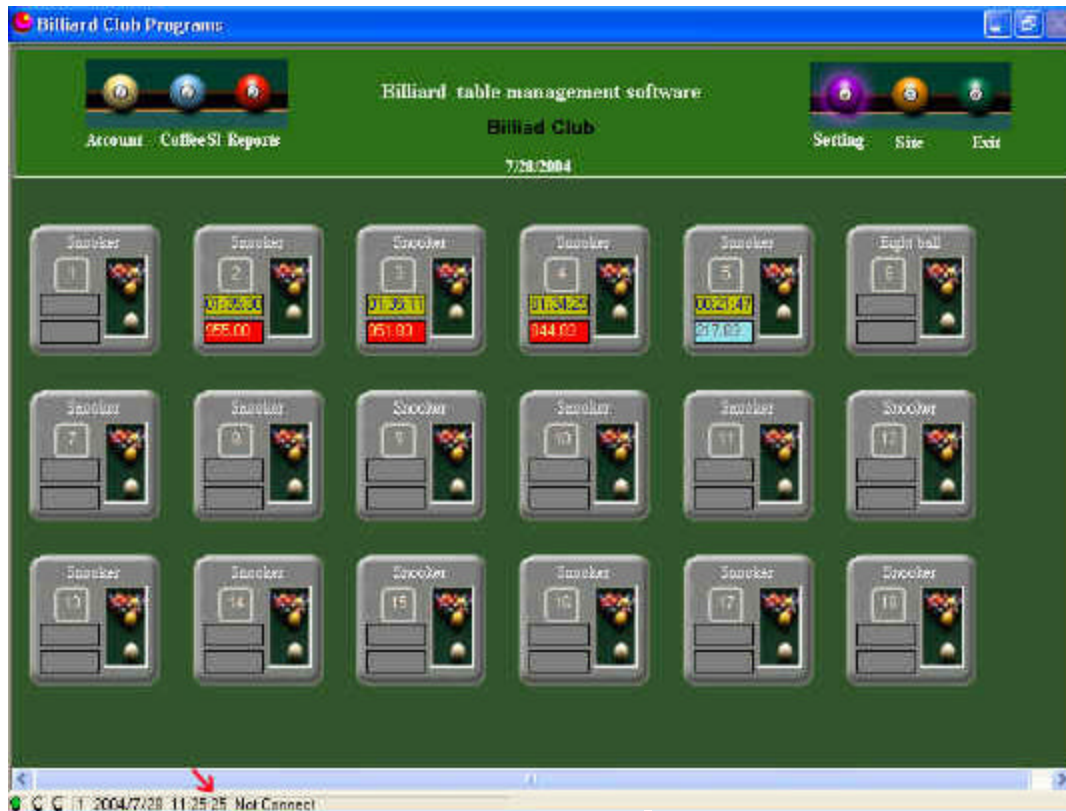
 **Note :** If your computer has only one serial port , this port is like Default number 1. In this section, change the number of the port to the port 1.

- Exit the program by pressing *OK*.

-In this situation, *Status bar* is activated (it is below the page) and specifies software relation with *LCBs*.

- If there is no connection between *LCB* and software, refer to troubleshooting.





Step 8: Troubleshooting

Situation 1: LED power on LCB is not ON.

- Remedy:
- a.* Power cable is not connected to LCB or has not been plugged in or the socket has no electricity.
 - b.* Power key (on LCB) is not ON.
 - c.* F1 fuse is out of functioning.

Situation 2: No relation with software

- Remedy:
- a.* Cable which connects LCB serial to computer is not connected.
 - b.* Serial cable which is connected to IN-position of LCB, is not

connected.

c. Dipswitch A or Dipswitch B has not been set. (Refer to step 6 for setting)

d. LCB Address jumpers have not been set. (For setting, refer to step 6)

e. The number of serial port has not been set correctly in software. (For setting, refer to step 7)

Situation 3: One of the lamps on LCB is not turned off by computer but its LED on the door of LCB is OFF.

Remedy: ON/OFF handle key on this table is on ON-position. Put it on OFF-position.

Situation 4: One of the lamps on one of LCB can not be turned on by computer but its LED on the door of LCB is ON.

Remedy: Connecting wire from LCB relay connector to table lights is faulty. (Refer to step 2).

Situation 5: All lights on the tables are ON.

Remedy: *a.* JP13 jumper is on ON-position. (See step 6)

b. In software , Check Box "Turn on all lights" (related to ON-position of all of tables together) has been selected. (Refer to software procedure)

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