



A.u.S. Spielgeräte GmbH  
A-1210 Wien Scheydgasse 48  
Tel.+43-(0)1-271 66 00 Fax. +43-(0)1-271 66 00 75  
www.aus.at

# GARL2001

## Electronic controller for coin mechanism, with motorised ball release system

For football tables and pool tables



The electronic system Garl2001 seen from the table cabinet

### System components

A 12-channel **electronic coin mechanism** NRI (code 2A4-175, fig.1) able to recognize and accept up to 12 different coins (having a diameter between 19 and 32 mm.). The programming of each channel is identified by a label stuck on the coin mechanism itself.

The coin mechanism is equipped with a **rejector-button** to turn out any false or faulty coin.

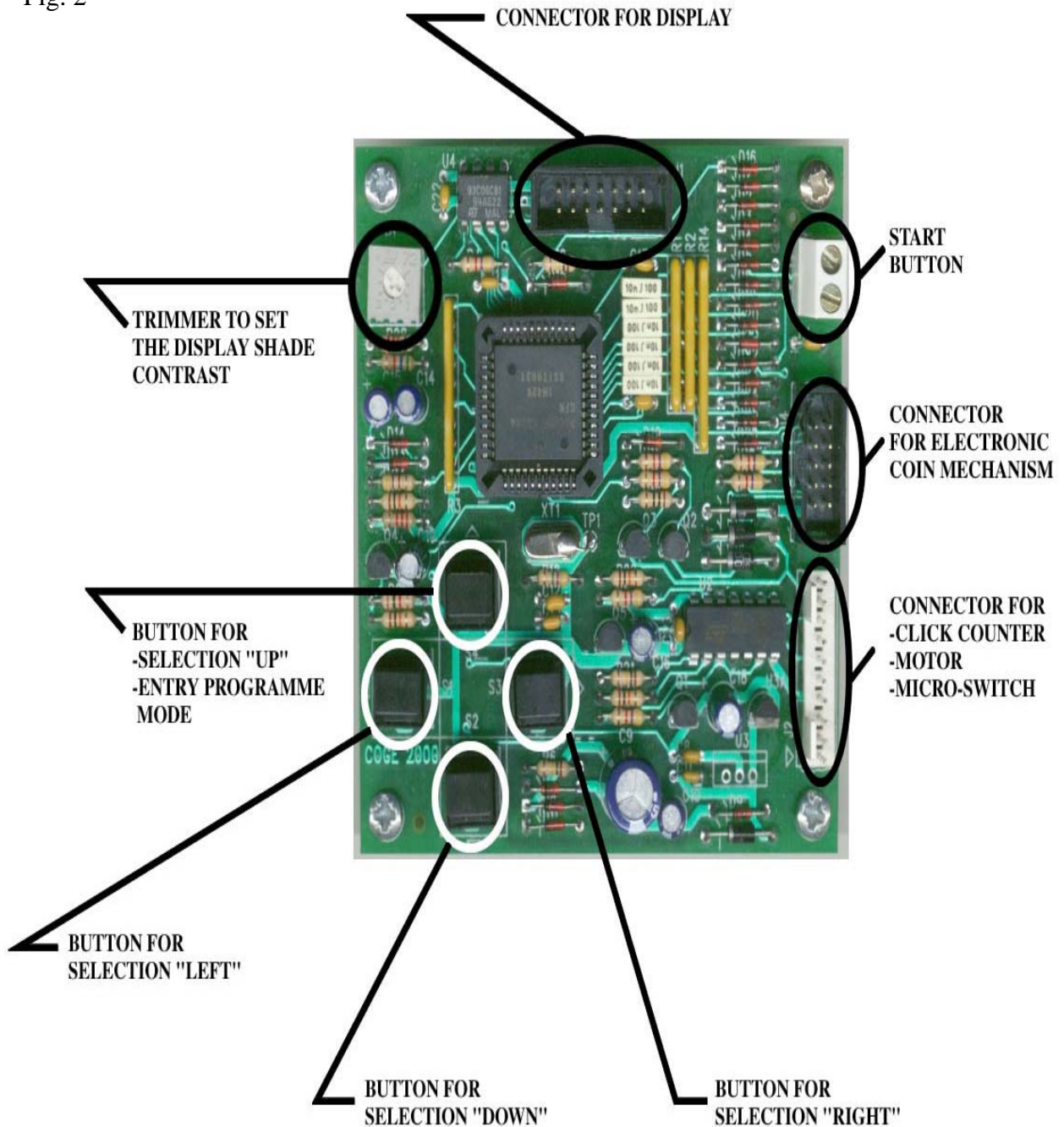
The coin mechanism is fed either by a cable connected to the electrical network (system with direct network connection) or by a battery. In the latter, a **“wake-up” sensor** - placed on the coin mechanism - will activate the coin mechanism exclusively while it is being used, thus limiting the battery consume as much as possible.



Fig. 1

A **programming board GARL2001** (code 2A4-141, fig. 2) with a digital counter, a starting button, a trimmer to set the display shade contrast, various connectors and the four buttons UP, DOWN, RIGHT, LEFT to effect the programming.

Fig. 2



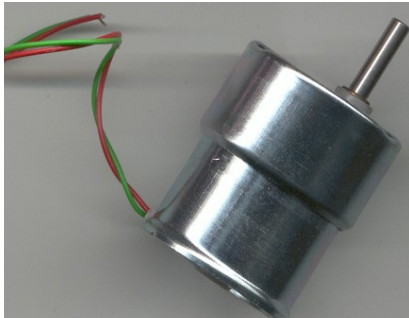


Fig. 3



Fig. 4

A **motorised ball release mechanism** composed by a motor (code 2A38-66, fig. 3), a cam (code 2A38-60, fig. 4), a ball release lever (code 2A38-61, fig. 5), a releasing arm (code 2A332-1, fig. 6) a micro-switch (code 2A38-67, fig. 7).



Fig. 6



Fig. 5

Fig. 7

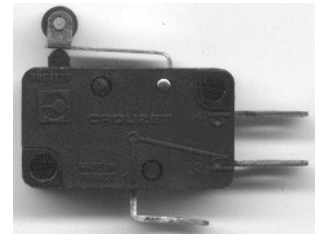


Fig. 8



A non-resettable **mechanical click-counter** for a double check of the games played (code 2A4-95, fig.8).

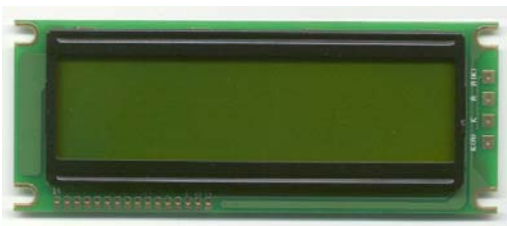


Fig. 9

A **liquid crystal display** (code 2A4-156, fig. 9) showing all programming steps, including: the total amount reached by the coins inserted, the credits registered, the games played, the total cash.

The display is set in a plastic support (code 2A4-143, fig. 10) and protected by a plexiglass cover (code 2A4-155, fig. 11).



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Fig. 10



Fig. 11

A complete set of wires connecting all the system components (code 2A4-98).



Fig. 12

A lead-sealed 12 V long duration rechargeable **battery** (code 2A38-68, fig. 12) lasting over 18 months in the absence of recharging (supplied on battery-operated version only).

A **cable to connect the system to the electrical network** (supplied on version with direct network connection only, code 2A207-5).

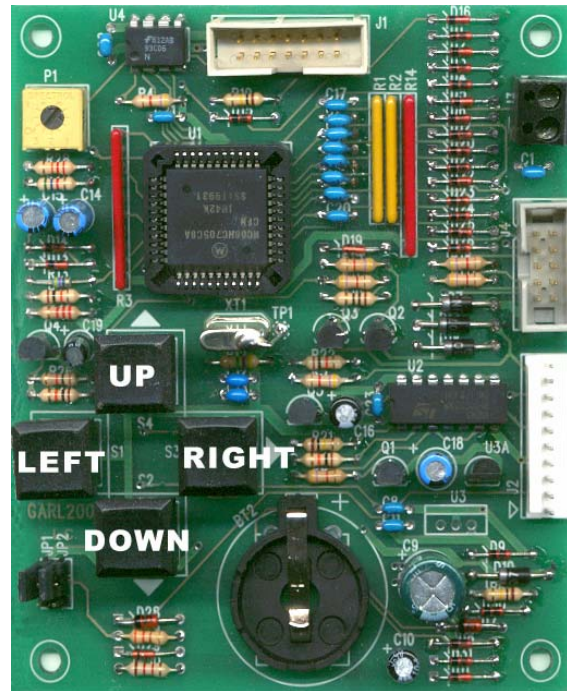
A **Start** button (code 2A4-154, fig. 13).



Fig. 13



## PROGRAMMING INSTRUCTIONS



### INTRODUCTION

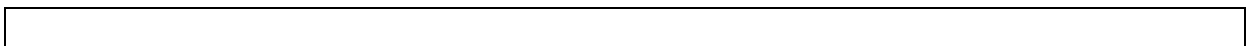
The mainboard programming is effected by operating the 4 keys named UP, DOWN, LEFT and RIGHT, easily identifiable in picture right.

As a general rule, use UP and DOWN to run the main menu (vertical movement), LEFT and RIGHT to select the required options at each different menu level (horizontal movement). Follow the programming steps on the display.

The programming steps detailed in the following paragraphs are also illustrated by the flow chart in the last page, for a quicker reference.

### PROGRAMMING STEPS

1. Press key UP to enter programme mode: the display will light up reading GARLANDO ITALY release 1.7.





**Warning:** in order to avoid an excessive battery consume the display will turn off after 15 seconds of non use and it will be necessary to re-start programming. The options previously selected will be kept.

To stop the display switching off automatically, please see the relevant paragraph into the Hidden Programming menu, further on.

2. After a few seconds the display will automatically shift to show GAMES PLAYED and a number, corresponding to the total amount of the games played since the machine has been working.

**Warning:**

To modify the number of the GAMES PLAYED or the TOTAL MONEY CASHED see the instructions contained in the Hidden Programming menu, further on.

3. Press key DOWN to reach the subsequent level, reading TOTAL MONEY CASHED and a number: this is the total amount of the money collected into the cash-box (to which it should actually correspond, unless this has been emptied or the total value has been reset). The number showing the amount cashed is preceded by the symbol of the currency used, which will be possible to modify at a later step. Now you may encounter a few different situations:

If no password has been set, the programme will go directly to SET GAME PRICE.

**Use of the password**

If instead a password has been previously set, the display will show INSERT PASSWORD to allow advancing through the programming mode. After inserting it, press RIGHT to confirm it.

If the password inputed is correct, the programme will give access to SET GAME PRICE

If the password inserted is wrong, the display will warn WRONG PASSWORD: press LEFT to go back to INSERT PASSWORD.

If you have forgotten your password, see paragraph How to solve problems for help.

If no password has been set but you now wish to do it, please see point 11.



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4. SET GAME PRICE. Press RIGHT to access section GAME PRICE: the display shows a number. Use LEFT and RIGHT to shift rightwards or leftwards and select the digit to modify, then use UP and DOWN to increase or decrease its value: the number resulting will be the cost of a game.
5. Press RIGHT to confirm the value set: the system goes back to menu SET GAME PRICE: press DOWN to access the main menu.



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6. The following level is SET 1° BONUS. Press RIGHT to access the option.

If no bonus is set the display will read NO BONUS (SET). To set a bonus press UP and the display will read 1 BONUS EVERY.....GAMES (from 2 to 9). Press Up to increase its value and DOWN to decrease it, the confirm by RIGHT.

Press DOWN to SET 2° BONUS.

If you do not wish to set any bonus, just press RIGHT to exit and then DOWN to return to the main menu.

7. SET 2° BONUS: act as above. Beware: the value of the second bonus must necessary be higher than the first: if a bonus is inserted with a value smaller than the first bonus, the programme automatically goes back to SET 1° BONUS to enable modifying its value.

If you want to skip this step, press RIGHT to exit. Press DOWN to reach the following level.

8. SET COIN MECHANISM CHANNELS: press RIGHT to set the 1° channel. After inputting the coin value the channel must accept, press RIGHT to confirm.

Do the same for each of the six channels If you wish to disconnect a channel, digit a row of zeroes.

9. SELECT CURRENCY: press RIGHT to enter menu SELECT NOW and move by keys RIGHT and LEFT until the chosen currency appears on the display: confirm the selection by pressing RIGHT. The currencies available are Euro, Swiss Franc (FR), Dollar (\$), Crown (Kr), Dirham / Dinar (Dr).

In case the required currency should be none of the above, it is also possible to set the coin mechanism for other currencies, with no indication on the display. Two options are offered, one for currencies using fractions, the other for those which do not.

10. SELECT LANGUAGE: press RIGHT to enter menu SELECT NOW and effect your selection among ITALIANO (Italian), ENGLISH, DEUTSCH (German), FRANÇAIS (French). Use UP and DOWN, and confirm it by pressing RIGHT.

From now on, all the words on the display will appear in the language selected.

11. Press key DOWN to access the level allowing to set a new password, CHOOSE NEW PASSWORD and then SELECT NOW. Use this applies if a password has never been set or whenever you wish to modify your current password. A password can be any string of 4 numbers from 0 to 9. Shift the cursor position using LEFT and RIGHT in correspondence of each digit and increase or decrease its value by operating keys UP (to increase) or DOWN (to decrease); then press RIGHT to confirm it: the display will offer you two choices: CANCEL (press LEFT) or CONFIRM (press RIGHT).

If you do not wish to use any password simply press DOWN.





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12. The final level is represented by EXIT: press RIGHT to exit programme mode and store all information. The display will now turn off.

If you want to go back to the programming, press UP to go to the immediately previous step (CHOOSE NEW PASSWORD) or DOWN to go to the beginning of programming (SET GAME PRICE).

## **APPENDIX I**

### **Hidden programming**

It allows some particular operations, that have been kept reserved because of their cruciality. Differently from the other options, all easily found on the display, to effect the hidden programming it is necessary to know the keys to press, as this section does not appear in any programming phase.

The operations possible are:

- A - altering the number of the games totally played
- B - resetting the number showing the money cashed
- C - disactivating the automatic display switching off
- D - setting a new password

A - To access the hidden programming menu press the keys on the mainboard in the following sequence: LEFT, LEFT, UP, LEFT. The phrase PRESET NUMBER OF GAMES will appear, allowing the alteration of the number of games totally played. Press RIGHT to enter SELECT NOW, input the required number by using RIGHT and LEFT to shift and UP and DOWN to increase or decrease the value of each digit. Finally press RIGHT again to confirm: the programme returns to PRESET NUMBER OF GAMES. Press DOWN to proceed to the second hidden programming level.

B - RESET TOTAL MONEY CASHED will completely clear the number corresponding to the total cash. Modifying or resetting the total value cashed by a machine can be useful whenever the value shown on the display does not correspond to the money actually cashed anymore, because the cash-box has been emptied.

Press RIGHT to reset and subsequently confirm or cancel using keys LEFT (CANCEL) and RIGHT (CONFIRM). Press DOWN.

C - DISPLAY AUTO SHUTDOWN. In the battery-operated version a prolonged use of the display would cause an excessive consume completely exhausting the battery in a short time. For this reason, to avoid an excessive and unnecessary battery consume, the display is programmed to automatically switch off after 15 seconds after the last key has been used.

In the version plugged to the electrical network (without battery), instead, the low consume mode is not necessary. In this case, or even in the battery-operated version when you may feel it s necessary to keep the display on for more than 15 seconds, it is possible to activate a device preventing it from switching off.. When it is no longer necessary to have the display on, please make sure that you disactivate this device again.



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How to do: if the automatic switching off is activated, when you reach DISPLAY AUTO SHUTDOWN the display shows <ON> (the display will switch off). If it is deactivated it will show <OFF> (the display will remain lighted up). To select the required option, use RIGHT and LEFT and then DOWN to access the subsequent level.

D - CHOOSE NEW PASSWORD: use this step to insert a password for the first time or to change the password already used. The password can be made by any string of 4 numbers from 0 to 9. To set it use RIGHT and LEFT in correspondence of each digit and UP and DOWN to increase and decrease its value. Confirm using RIGHT, the display will request to CANCEL (press LEFT) or CONFIRM (press RIGHT).

If you do not wish to insert a password or to modify the existing one, then press DOWN to exit the hidden programming. When you read EXIT press RIGHT.

Should you wish to go back to the general programming first press RIGHT to confirm the EXIT from the hidden programming and then DOWN to go back to SET GAME PRICE.

## **APPENDIX II**

### **How to solve some common problems**

#### **1. What to do if you forget your password**

In case you should forget the password you had previously set, it is necessary to effect a complete reset of the programming. Please follow these steps:

- disconnect the system (disconnecting the battery cable or unplugging the system)
- press and keep pressed all together keys LEFT, UP, RIGHT and while keeping them pressed connect the system again.

The display now lights up and shows the first programming step (SET GAME PRICE) but in Italian, reading IMPOSTAZIONE COSTO PARTITA. In fact, by doing this, you have cancelled all the programming details previously inserted, including your language choice, while the number of games played and the total money cashed have been put to zero. The programming language appearing automatically is Italian. We therefore suggest that, before you start reprogramming the system, you effect your language selection: from IMPOSTAZIONE COSTO PARTITA press DOWN to run the programme until you read SELEZIONE LINGUA, press RIGHT and, when you read SELEZIONARE, run the programme by using UP or DOWN until you find ENGLISH. Then confirm by pressing RIGHT.

#### **2. How to deactivate your password**

Enter the programme as usual and insert your password to be allowed proceeding. Run the menu until you find CHOOSE NEW PASSWORD. Put all the 4 digits to zero. Now the programme access is free and you will not be requested a password to run it.

#### **3. The coin mechanism does not accept coins**



The reasons may be the following:

- a The ends of the grey cable may not be correctly inserted into their housing either on the coin mechanism or on the pc board. Solution: detach them and, after making sure they are undamaged, link them correctly.
- b The battery is exhausted. Solution: you need either replacing or re-charging the battery
- c The coin mechanism does not work. Solution: replace the coin mechanism

#### **4. The coin mechanism accepts coins but, after pressing the START button, the balls are not released**

You can encounter one of the following situations:

##### **4.1 The display shows the credit value reached, it put it to zero and, after pressing the START button, the motor begins rotating:**

This is a mechanical problem concerning the releasing lever. Solution: put the lever into its correct position and tighten its screw using a 4mm spanner.

##### **4.2 The display shows the credit value reached, it put it to zero and, after pressing the START button, the motor does NOT rotate:**

- a. The pc board does not work. Solution: replace the pc board.
- b. The motor is burnt. Solution: replace the motor

##### **4.3 The display shows the credit value reached but, after pressing the START button, it does not put it to zero and the motor does NOT rotate:**

- a. The connexion between the START button to the pc board is interrupted. You should check that the cable is correctly connected both to the pc board and to the button.
- b. The START button does not work. Solution: replace the START button.
- c. The pc board does not work. Solution: the pc board needs replacing.

##### **4.4 The display does NOT show the credit value reached, or addirittura it does not light up but alla pressione the START button the motor begins rotating:**

- a. The display shade contrast is too weak. Solution: set it turning the grey trimmer placed on the pc board: turn it anticlockwise until you have reached the best shade contrast.
- b. The display does not work. Solution: the display needs replacing.

##### **4.5 The display does NOT show the credit value reached, or when the START button is pressed, it does not light up and the motor does rotate:**

The pc board, does not work and it needs replacing.

#### **5. The coin mechanism accepts the coins but, after pressing the START button, the motor rotates incessantly without stopping:**

The reasons may be the following:

5.1 The micro-switch is not pressed by the cam when the rotation comes to an end. Make sure that the screws fixing the micro-switch are not loose. If so, put the microswitch in the correct position so that it is pressed by the motor cam and tighten the screws.

5.2 The micro-switch is pressed but the motor does not stop.



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- a. The cable connecting the micro-switch to the pc board may be interrupted. Solution: checke that the cable is well connected both to the pc board and to the micro-switch.
- b. The micro-switch does not work. Solution: the micro-switch needs replacing.

For any problem not mentioned in this manual please contact our technical department.

**WARNING:** we recommend you to keep these intructions strictly confidential, in order to prevent unauthorized people from modifying the programming.



# PROGRAMMING

