

gaelco
→ FOOTBALL

OPERATOR'S MANUAL



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IT IS THE RESPONSIBILITY OF THE OPERATOR TO CARE ABOUT CUSTOMER SAFETY AT ALL TIMES. PLEASE READ AND OBSERVE THE NOTES ON SAFETY DESCRIBED IN THIS MANUAL.

ABAUT GAELCO FOOTBALL

Thank you for purchasing this Gaelco S.A. product. This manual explains how to safely operate your game machine. Failing to operate the machine correctly could result in malfunction or accident, so please read the manual carefully before starting operation, specially the SAFETY NOTES (Section 3).

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Note: Operator's Manual Specifications are subject to change without prior notice

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GAELCO FOOTBALL has been manufactured in accordance with European Community directives. Any changes or modifications to this machine have to be authorised by Gaelco S.A. and must be in accordance with the European Community directives.

Using spare parts that do not fit specifications will void the warranty.

Removal of serial numbers and/or bar codes from product or components will void the warranty as well.

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Under some conditions of extreme external interference, such as radio transmissions or mains transients, some degradation of performance may occur. However the machine will recover its normal performance as soon as the interference has ceased or been removed. It is not necessary any intervention of the operating personnel for the recovering of the machine.

Note: If the game processor resets due to an interruption or reduction of the mains voltage, any credits established would be lost.

INDEX

- 1. GENERAL INFORMATION**
 - 1.1 Manufacturer and machine data
 - 1.2 Legislation references
 - 1.3 Technical Service
 - 1.4 Responsibility
 - 2. SPECIFICATIONS**
 - 2.1 Description of the game
 - 2.2 Dimensions and weight
 - 2.3 Power Supply
 - 2.4 Monitor
 - 2.5 PCB
 - 2.6 Controls
 - 2.7 Attachments
 - 3. SAFETY NOTES**
 - 3.1 General considerations
 - 3.2 Precautions concerning location
 - 3.3 Precautions to be heeded moving the machine
 - 3.4 Precautions to be heeded during operation
 - 4. MATERIAL HANDLING**
 - 4.1 Transport of packaged units
 - 4.2 Storage
 - 4.3 Reception
 - 5. UNPACKING, ASSEMBLING AND INSTALLATION**
 - 5.1 Inspection before assembling
 - 5.2 Assembling and installation
 - 5.3 Getting ready to start
 - 5.4 Switching on the machine
 - 6. PROGRAMMING THE MACHINE AND TEST MODE**
 - 6.1 Screen test
 - 6.2 Controls menu
 - 6.2.1 Input test
 - 6.2.2 Ball test
 - 6.3 Settings menu
 - 6.3.1 Sound settings
 - 6.3.2 Game settings
 - 6.3.3 Coin settings
 - 6.3.4 Team selection
 - 6.4 Book-keeping
 - 7. HOW TO PLAY**
 - 8. MAINTENANCE**
 - 8.1 Removing the ball
 - 8.2 Installing the ball
 - 8.3 Arm disassembling
 - 8.4 Ball cover replacement
 - 8.5 Fuse replacement
 - 8.6 Periodical Maintenance
 - 8.7 Troubleshooting
 - 9. PARTS LIST**
 - 9.1 Monitor cabinet - accessories
 - 9.2 Front plastic and related parts
 - 9.3 Monitor linkage
 - 9.4 Rear top parts
 - 9.5 Coin box and union bracket
 - 9.6 Test and Service panel
 - 9.7 Front door
 - 9.8 Electronic parts
 - 9.9 Rear bottom parts
 - 9.10 Cabinet base
 - 9.11 Platform – structural parts
 - 9.12 Platform – console parts
 - 9.13 Platform – interface linkage
 - 9.14 Interface – ball parts
 - 9.15 Interface – arm parts
 - 9.16 Interface – mechanism parts (1)
 - 9.17 Interface – mechanism parts (2)
 - 10. WIRING DIAGRAMS**
 - 10.1 Power supply wiring
 - 10.2 Ground wiring
 - 10.3 General wiring
 - 11. CREDIT DISTRIBUTOR SETUP**
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Gaelco FOOTBALL



1. GENERAL INFORMATION

1.1 MANUFACTURER AND MACHINE DATA

Manufacturer	GAELCO, S.A.
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Name of the game GAELCO FOOTBALL

1.2 LEGISLATION REFERENCES



GAELCO FOOTBALL complies with the following CE regulations:

EM MISSION

- EN 61000-3-2 (1995), Harmonics
- EN 61000-3-3 (1995), Fluctuations
- EN 55022 (1994), Continuous conducted emission (Class A)
- EN 55022 (1994), Radiated emission (Class A)

EM IMMUNITY

- EN 61000-4-2 (1995), ESD
- EN 61000-4-3 (1996) & ENV 50204 (1995), Radiated field of RF
- EN 61000-4-4 (1995), EFT burst
- EN 61000-4-5 (1995), Surges
- EN 61000-4-6 (1996), RF common mode
- EN 61000-4-8 (1993), 50 Hz H-field
- EN 61000-4-11 (1994), Dips, interruptions

ELECTRICAL SAFETY

UNE EN 60335-1 (1997) + Erratum (1997) + A11 (1997) + A12 (1997) + A13 (1999)
+ A14 (1999) + Erratum (1999)

1.3 TECHNICAL SERVICE

Gaelco S.A. or its Distributors carry out technical Service.

1.4 RESPONSIBILITY

Any modifications made to this machine that are not authorised in writing by the manufacturer will be considered to be at the exclusive responsibility of the operator, who will consequently become the new "manufacturer" and must operate in compliance with the European Community directives.

In case of an accident caused by a defective part, the manufacturer will assume responsibility only if the machine was defective in its original condition. However, this responsibility shall be diminished or even totally annulled if the operator or the player do not follow the instructions provided or if the operator uses spare parts that are not covered by guarantee, are not authorised in writing or do not correspond to the specified technical characteristics.

2. SPECIFICATIONS

GAME DESCRIPTION

GAELCO FOOTBALL is an integrated football simulator designed as a dedicated arcade machine. It includes two special interfaces that simulate a football's behaviour, providing greater game realism using foot control over the ball.

The game's various options recreate a wide range of football club play and competitions, ranging from training to a full European championship, all at the individual player level. The simulator also permits two people to play at the same time (the machine features two play stations complete with all the controls and a virtual football). The machine meets all of the CE stringent electrical safety regulations.

DIMENSIONS AND WEIGHT

1) Crate dimensions and shipping weight

width	depth	height	weight
1000 mm	1400 mm	2100 mm	295 Kg

2) Dimensions of the machine, installed on site

width	depth	height	weight
1300 mm	1690 mm	1980 mm	270 Kg

GAELCO FOOTBALL

POWER SUPPLY

Operating Power: 220-230 VAC, 50 Hz
Output: +5VDC 20A, +12VDC 8A

MONITOR

28" Hantarex Polo/2 STAR PH, code 0129776

CPU BOARD

PCB GAELCO FOOTBALL

CONTROLS

Each player has the following controls:

- Start Button
- Three buttons allowing several game functions
- Ball interface
- Joystick

ATTACHMENTS

Operator's Manual	(1)
Monitor Manual	(1)
Coin box keys	(2)
Front door keys	(2)
Rear door keys	(2)
Power cord (3m long)	(1)
Cabinet's rear stoppers	(2)

Note: The keys are attached to one joystick. The other items are in the coin box.

3. SAFETY NOTES

In order to use this machine safely, please read carefully this manual BEFORE the installation, use or maintenance of the machine.

The Operator's Manual and other manuals delivered with the machine must be available to the operating and service personnel.

When transporting or reselling the machine, please be sure to attach this Manual.

The GAELCO FOOTBALL machine has been designed for indoor use only, within residential or commercial areas, and must be used exclusively for the purpose intended.

Gaelco SA bears no responsibility for accidents, injury or damage resulting for unauthorized changes or improper use of the machine.

3.1 GENERAL SAFETY CONSIDERATIONS



- Before operating the machine, check that it has been installed correctly and in accordance with this Manual.
- As some parts of the machine move during game play, there are places where the distance between the stationary section and the mobile section changes. Despite the measures implemented to avoid accidents, if the operator feels that a person is in any danger, he should warn that person.
- Installation, service or routine maintenance should be carried out by qualified personnel.
- Before connecting the machine to the mains supply, verify that it is set for the correct voltage and that the proper fuses are already installed.
- When replacing fuses, use spare fuses of the same type and rating than the originals. The use of other material can cause serious damages on the electronic circuits or even a fire hazard. Check the Parts List to know the exact specifications.
- The machine includes areas of high voltage. Care must be taken at all times to avoid electrical shock whenever inspecting or adjusting the equipment, particularly around the monitor.
- To ensure safe operation, the machine must be grounded with a plug securely connected to Earth.
- Do not turn ON the power switch until the machine has been installed on its dedicated place.

If there is any error or problem with this machine, operation must be stopped immediately.

3.2 SAFETY PRECAUTIONS CONCERNING LOCATION



Do not place the machine where it might be an obstacle in case on emergency (i.e. close to fire extinguishers or emergency exits).

The machine must be installed on a level surface with levellers properly adjusted.

This machine has been for indoor use only, within residential or commercial spaces. Absolutely do not set up the machine outdoors or under the following conditions:

- Direct exposure to sunlight, high humidity, water contact, dust, high heat or extreme cold.
- In locations near containers holding liquids or liquid dispensing equipment. In general, precautions should be taken against spilling liquids of any kind whatsoever over the machine.
- In a place exposed to vibration.
- In locations near ventilating holes. Doing so could cause internal temperature to rise excessively, resulting in equipment failure.
- Near hazardous substances

Furthermore:

- Ventilation slots must be not obstructed, and the machine must be positioned so as to leave a distance of at least 100mm (4") from possible obstructions
- Do not run the power cord across passages where pedestrian's feet could get caught on the cord.

GAELCO shall not be held responsible for any damage resulting from the failure to observe these instructions.

3.2.1 SECURING IN PLACE

The platform does not require levellers given that it is supported on a tripod, which sits securely on the floor. The only levellers requiring adjustment are those on the monitor cabinet base. These need to be properly adjusted, ensuring firm contact with floor. Failure to adjust them correctly may result in excessive machine vibration during game play.

After making the adjustment of all legs, secure the height of each one by fastening the nut upward.

3.3 PRECAUTIONS TO BE HEDED WHEN MOVING THE MACHINE



Once the machine has been unpacked, it is advisable to move each unit separately.

The monitor cabinet can easily moved by using the castors. When moving the cabinet, always retract the levellers to the extreme up position, so the castors can make contact with the floor. Please ensure that the levellers are raised fully when moving the machine, even for short distances.

To move the platform, get behind the machine and tilt it slightly so that it is supported on the wheels, holding it by the tube as shown in Section 5.2.

DO NOT under any circumstances drag the platform by pulling on the joysticks or on the ball arms.

Furthermore::

- If there are steps or step-like differences in grade, move the machine by separating into each unit (monitor cabinet and platform).
- When moving the machine on slopping or uneven surfaces or across steps, proceed with extreme caution to avoid the risk of being crushed!
- During transportation, pay attention so that the castors do not thread power cords.
- Ensure that there is enough room to get through doors or to avoid collision with elements hanging from the ceiling. Read section 4 to know the dimensions of the machine.

The two units of the machine are not equipped with lifting rings. It is therefore absolutely prohibited to lift them with ropes or belts!

3.4 PRECAUTIONS TO BE HEEDED DURING OPERATION

Please heed the following indications in order to ensure the safety of the customers when using this game machine. Be sure to read and get a good understanding of each item:



- Before starting the operation, please check if all the level adjusters are in firm contact with the surface of the ground. If they are not, the cabinet can move and cause an accident.
- Do not use the machine as support for other objects
- Do not put on the machine or near by any kind of receptacle containing chemicals or water.
- Ensure to provide enough space around the machine to avoid the risk of injury or trouble. Insufficient installation space can cause the player to come in contact with spectators or hit them.

In order to avoid injury and accidents, it is not allowed to use the machine to those persons who fall under the following cases:

- Intoxicated persons,
- Persons who are not in good health, such those having problems of high blood pressure or heart malfunctions,
- Pregnant women,
- Persons wearing high-heeled shoes,
- Persons whose acts do not observe the warning notices.

Despite the machine is fitted with protection hoods to avoid access to potentially dangerous places, do not allow customers to put hands, fingers or extraneous matter in any opening of the cabinet.

4. MATERIAL HANDLING

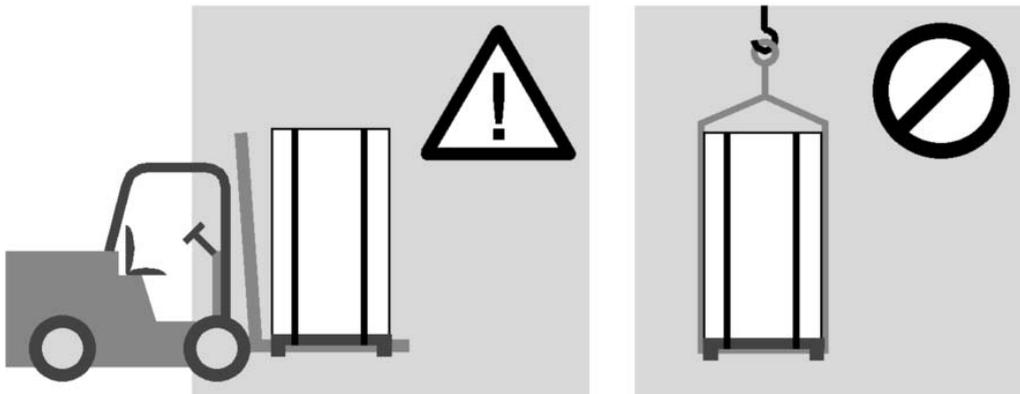


This machine should be transported or moved by trained persons. Failing to do so could result in injury or product damage. Please be very careful.

4.1 EQUIPMENT NEEDED FOR TRANSPORTING THE PACKED MACHINE

The packed machine must be transported in a closed means of transport with sufficient carrying capacity for the gross weight of the machine, which is 295Kg. The machine, must remain packed on its pallet must be suitably secured to the means of transport. It is very important that the lifting forks are pushed right to the back of the wooden pallet, to give optimum stability to the load.

width	depth	height	weight
1000 mm	1400 mm	2100 mm	295 Kg



It is not allowed to lift the packed machine with ropes or belts, as the package is not equipped with suitable lifting points for this type of transport.

4.2 STORAGE

Store the packed machine in sheltered and dry areas. Temperatures allowed: maximum +45°C / minimum -5°C

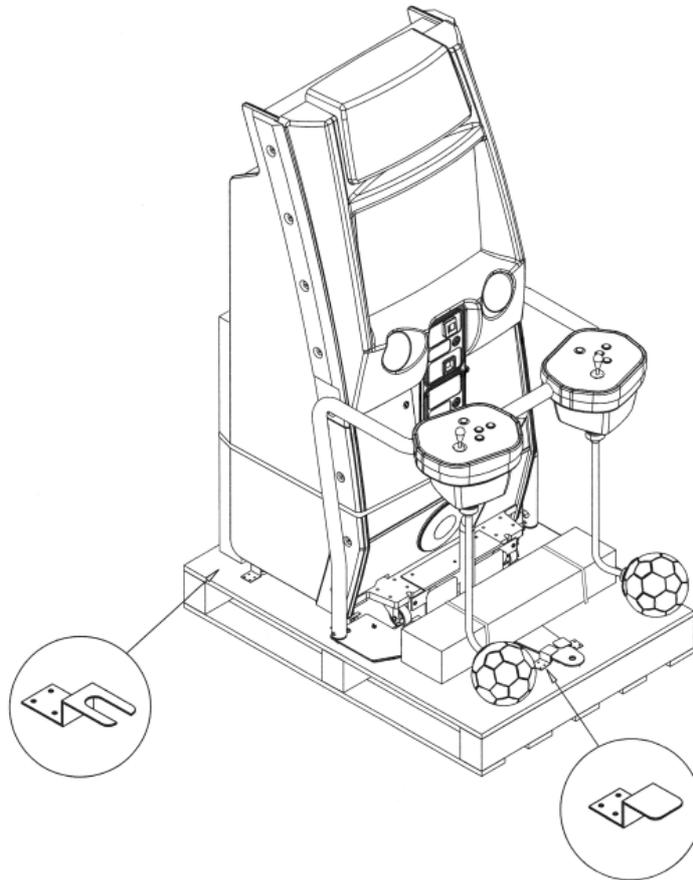
4.3 RECEPTION

The GAELCO FOOTBALL packaging should be carefully inspected upon receipt to ensure that the product is delivered in good conditions.

Shipping damage may void warranty. In case of shipping damage, contact your Distributor and the Transportation Carrier immediately. See section 5.1 for further inspection.

5. UNPACKING, ASSEMBLING AND INSTALLATION

It is advisable to unpack the machine as near as possible to where it is going to be used. Two people are needed to lift the cardboard packing over the top of the machine. Once the packaging has been removed, the machine looks as shown in the illustration.



The machine comprises two units: the monitor cabinet and the platform. Each unit is fastened to the pallet by metal brackets, which need to be removed in order to put the machine on the floor.

5.1 INSPECTION BEFORE ASSEMBLING

Normally, GAELCO products are ready to assembly immediately after transporting to the location. Nevertheless, some mishandling may occur during transportation. Check the following points to ensure that the machine has been delivered in a satisfactory condition:

- Examine the cabinet exterior for dents, chips, or broken parts.
- Verify that castors and levelers are not damaged.
- Inspect the major assemblies, such as the monitor, consoles, etc.
- Ensure that the power supply voltage and frequency requirements meet those of the location.
- Verify that keys delivered with the machine can open all doors.
- Check if all accessories are available.

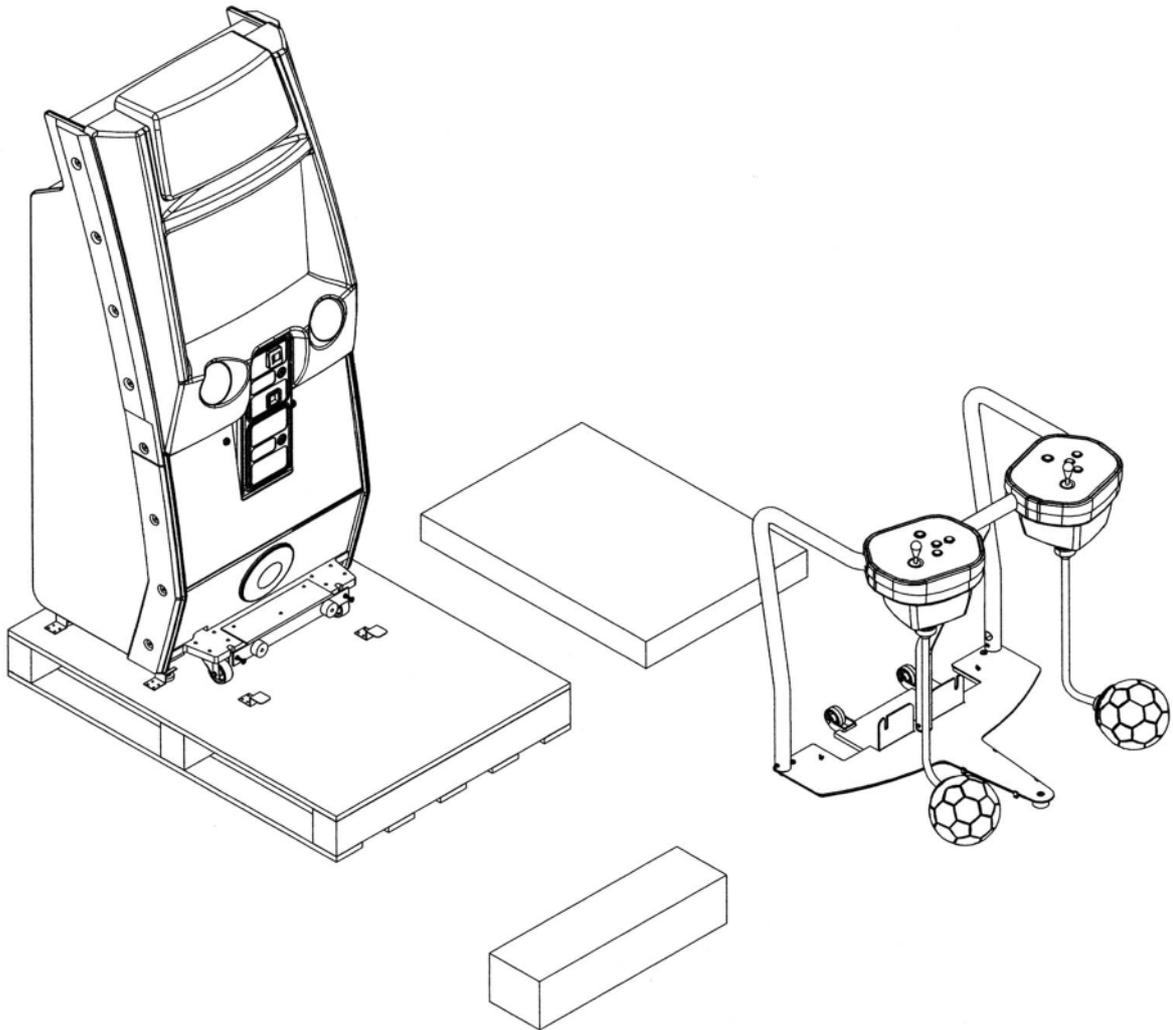
5.2 ASSEMBLING AND INSTALLATION

To assemble the machine proceed as follows:

1. Take out containing the metallic accessories.
2. Remove the metal brackets that fix the machine to the pallet.



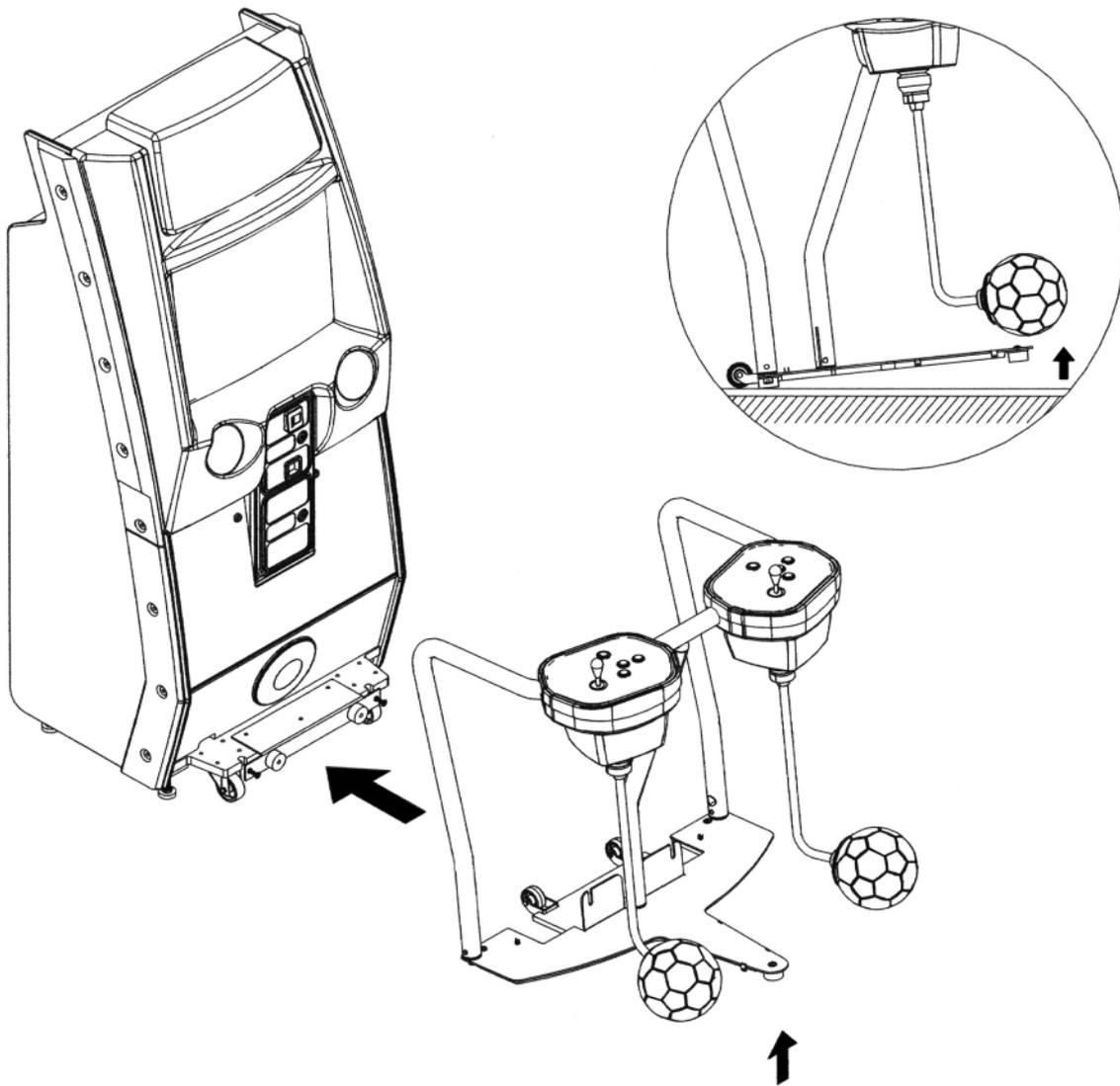
3. Raise the leg levelers of the cabinet and put it down on the floor with the help of a ramp. Then put down the platform unit. Be very careful to avoid the risk of being crushed!



4. Place the monitor cabinet on its definitive location and strictly follow the instructions described in section 3.2.

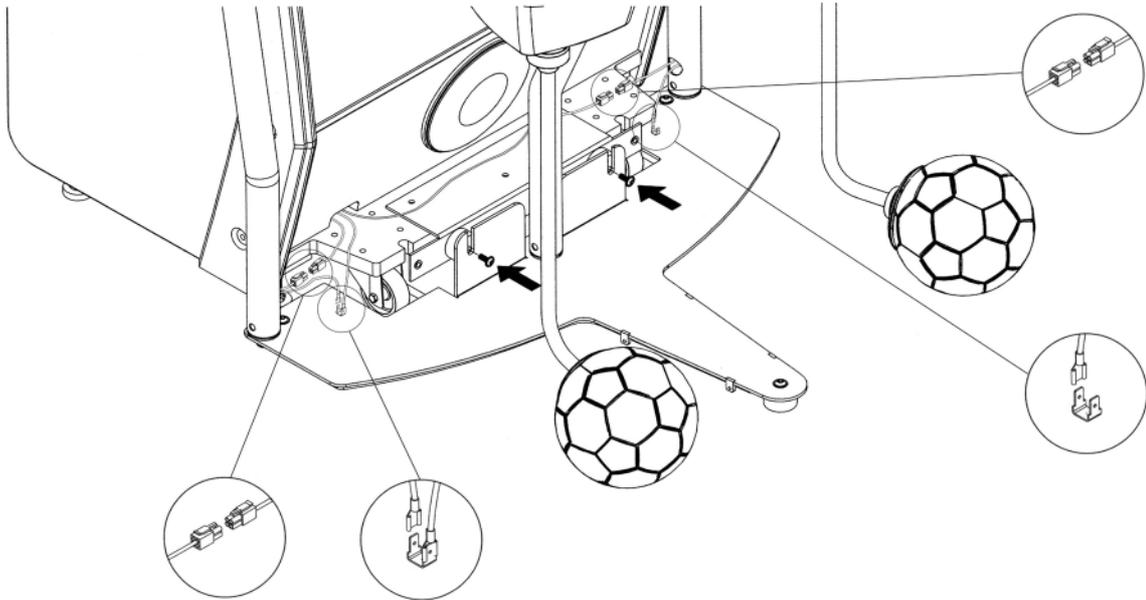
Gaelco Football

- Put the platform and the monitor cabinet together. To do so, place the part behind the footballs so that it slots into the platform base (tilting it slightly as shown in the drawing so that the football assembly slides on its castors). When the units cannot be moved closer from this angle, slide the platform from the football side of the assembly.

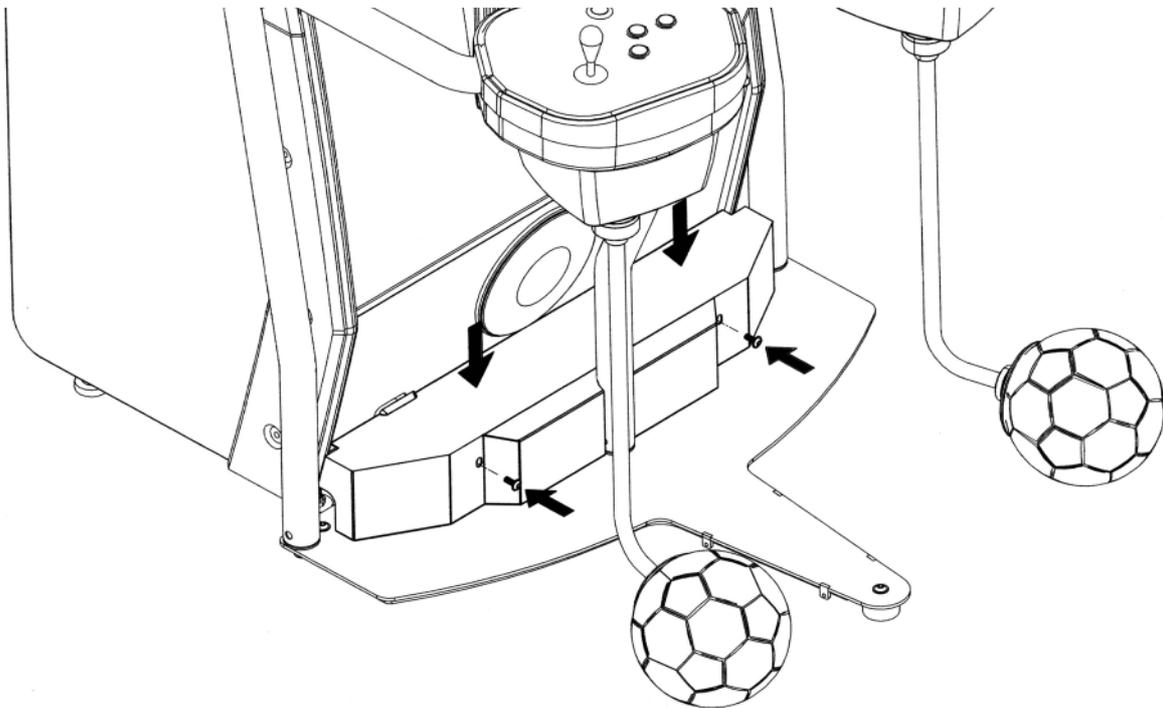


GAELCO FOOTBALL

6. Connect the cables as shown in the illustration.
7. Position the two screws joining the cabinet with the platform, but do not tighten them just yet.
8. Level the cabinet with respect to the platform, ensuring the two vertical tray posts are parallel with the sides of the cabinet.
9. Tighten the two bolts that fasten the platform to the monitor cabinet.

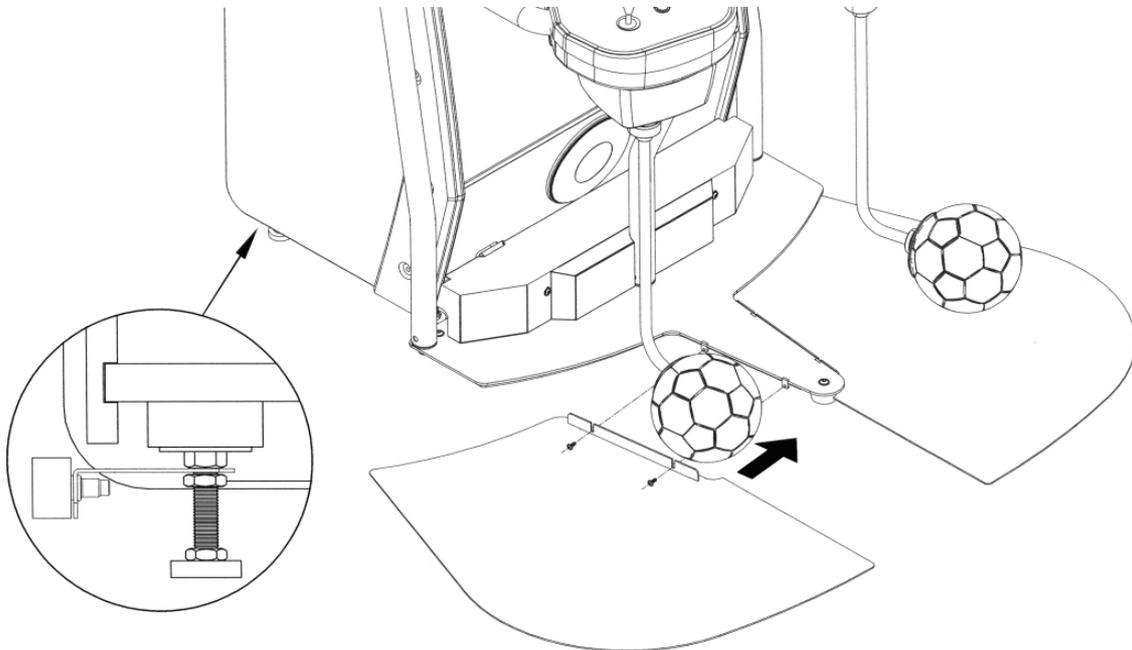


10. Unpack the metallic cover and install it as shown in the illustration.



GAELCO FOOTBALL

11. Unpack the platform plates and proceed to assemble the, as shown in the illustration. Assemble the cabinet's rear stoppers (these are to be found in the coin box). These stoppers ensure the machine can be placed against the wall whilst leaving a safe distance between the two. Mount the levellers, located between the nut and counter-nut. This completes assembly of the machine.



WARNING

- If the machine needs to be moved, no matter how little, raise the cabinet levellers so that the machine can be moved on its wheels. Move each unit separately. The platform is easier to move when the plates are not mounted.



- NEVER TRY TO DRAG THE MACHINE BY THE FOOTBALL ARMS OR BY THE JOYSTICKS.
- When the machine needs cleaning, use a moistened cloth with a little neutral detergent. Do not use cleaning products containing solvents as these can damage the machine's plastic surfaces.

5.3 GETTING READY TO START



BEFORE SWITCHING ON THE MACHINE, PLEASE CHECK THAT THE INSTALLATION MEETS ALL THE REQUIREMENTS DESCRIBED ON CHAPTER 3 (SAFETY NOTES) AND SPACIALLY THOSE OF SECTION 3.2.

Please check again the following points:

- The area chosen for the machine is well away from heat sources.
- The machine does not obstruct emergency exits.
- The whole machine is level and stable on the floor. The leg levelers are secured in place.
- The power cord is plugged into a grounded receptacle that provides the specified voltage and frequency.

Mains supply must be always turned off before handling connectors or electric parts.

5.4 SWITCHING ON THE MACHINE

The mains switch is located in the compact filter assembly, which also contains the fuse and the socket for the mains cable. It is found on the back of the monitor cabinet, close to the billboard. To start the machine, push the switch to position "I".

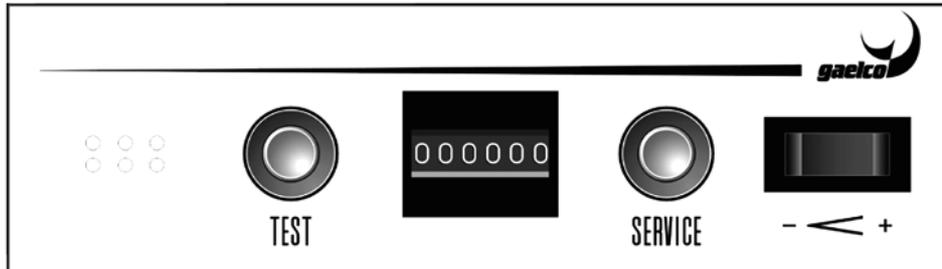
The machine can be switched OFF (position "0") in any moment that is considered to be necessary. If a game is in progress on the machine, the credit will be lost.

To avoid possible damage to the electronic components, wait several seconds before turning the machine on again.

6. PROGRAMMING THE MACHINE AND TEST MODE

An automatic test of memories is made when the machine is switched on. This coincides with the presentation of the Screen Test. After a few seconds, if no error occurs, it automatically goes on to show the game.

The access to the TEST MODE is made from the CONTROL PANEL, which is located behind the coin box door. This device consists of a plate with a TEST button, a SERVICE button, a coin counter, and a commuter to adjust the sound volume of the loudspeaker.



Pushing the SERVICE button introduces game credits without moving the coin counter. Pressing the TEST button enters the **test menu**. This screen shows five options:

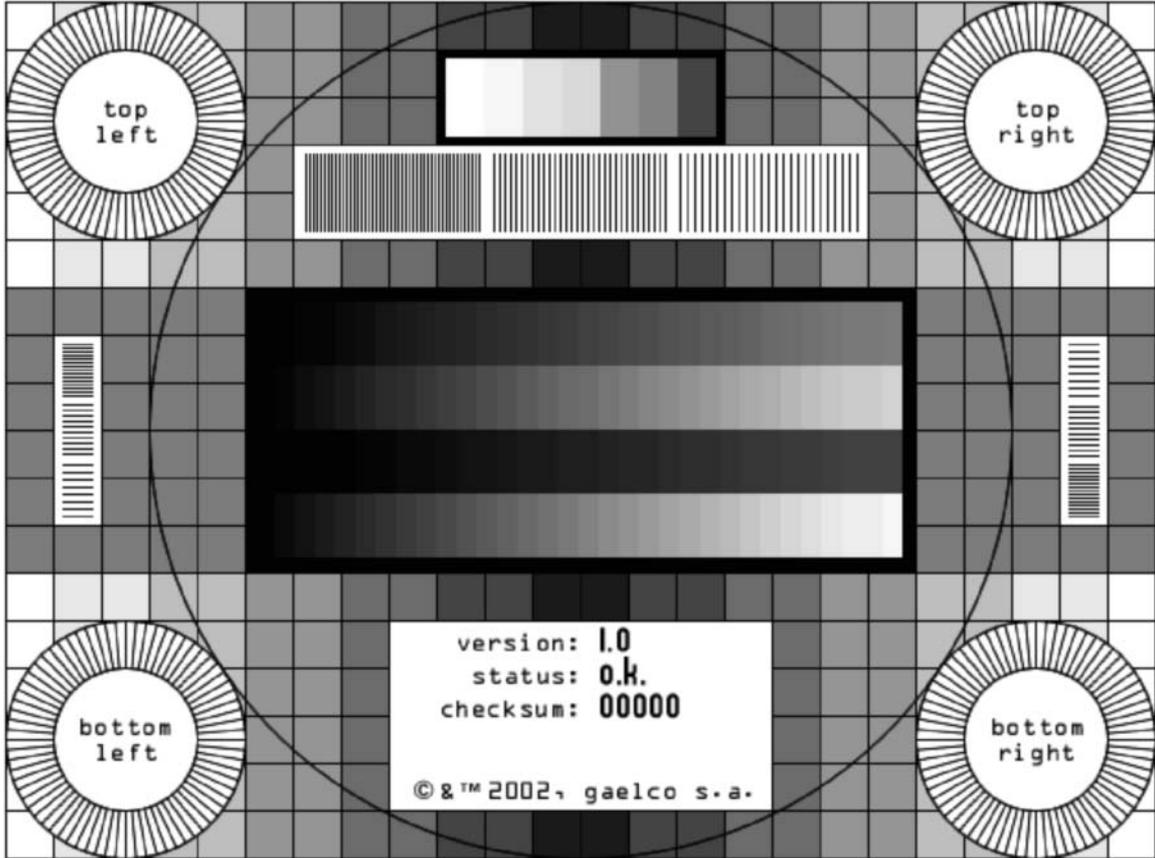
- screen adjust**
- control test**
- settings**
- book-keeping**
- exit**

The required option is selected by moving the cursor with the joystick. To activate the option, press any button of the console (A,B,C)

To return to the exhibition mode, use the **exit** option.

6.1 SCREEN ADJUST

This screen should be used to suitable adjust the monitor (geometry, focus, color, etc.)



Additional information is supplied about the program version and the memory status, that should be "OK" when the game processor is working fine.

To return to the main menu press any game button.

6.2 CONTROLS TEST

The **controls menu** screen enables you to check the correct operation of the controls available on the machine. It offers two options: **input test** and **ball test**.

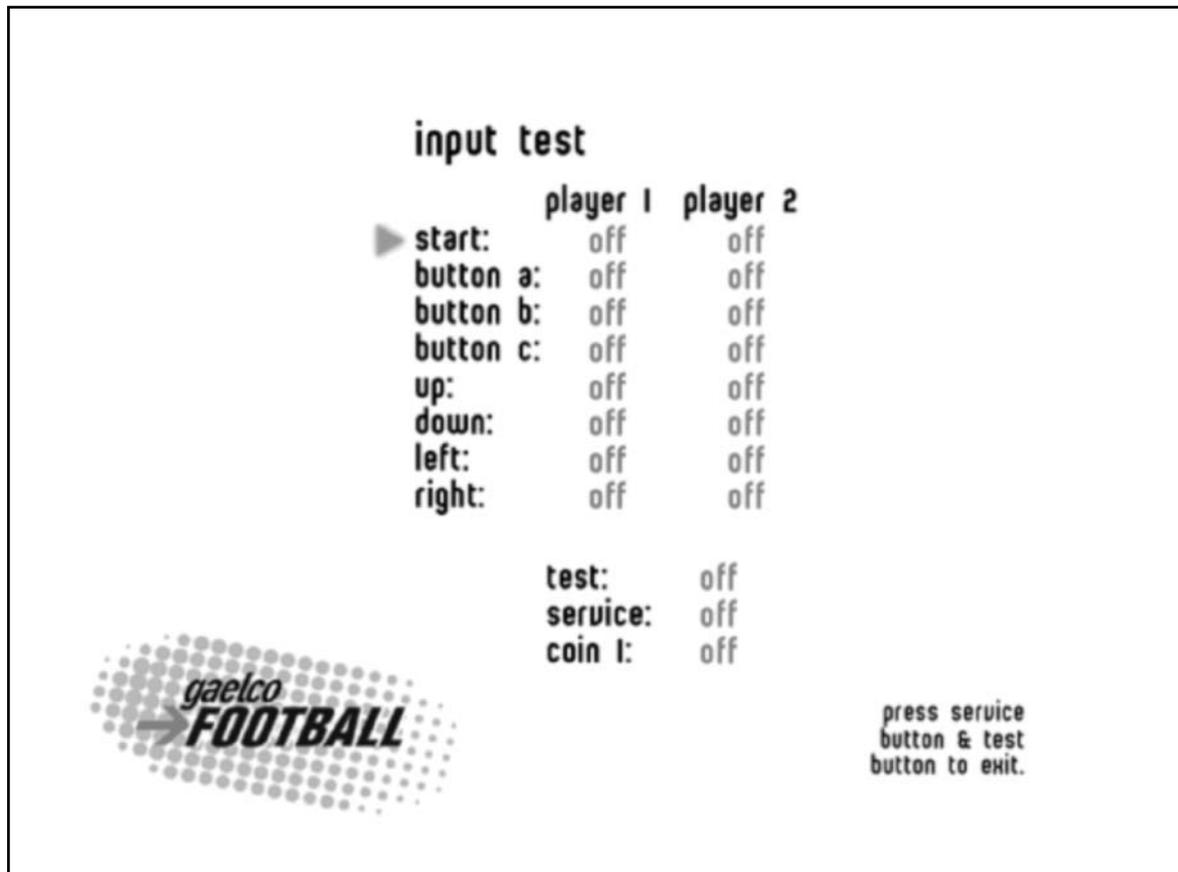
Moving the cursor with the joystick chooses the option, and pressing any button accesses the new menu.

To return to the main menu use the **exit** option.

6.2.1 INPUT TEST

This screen allows you to check the operation of the console controls for players 1 and 2, as well as the control panel buttons and the coin counter.

The state of each one of the controls before operation is OFF, changing to state ON when activated. If this change does not happen there is some fault in the operation of the device.



To return to the previous screen (controls menu) press TEST and SERVICE buttons simultaneously.

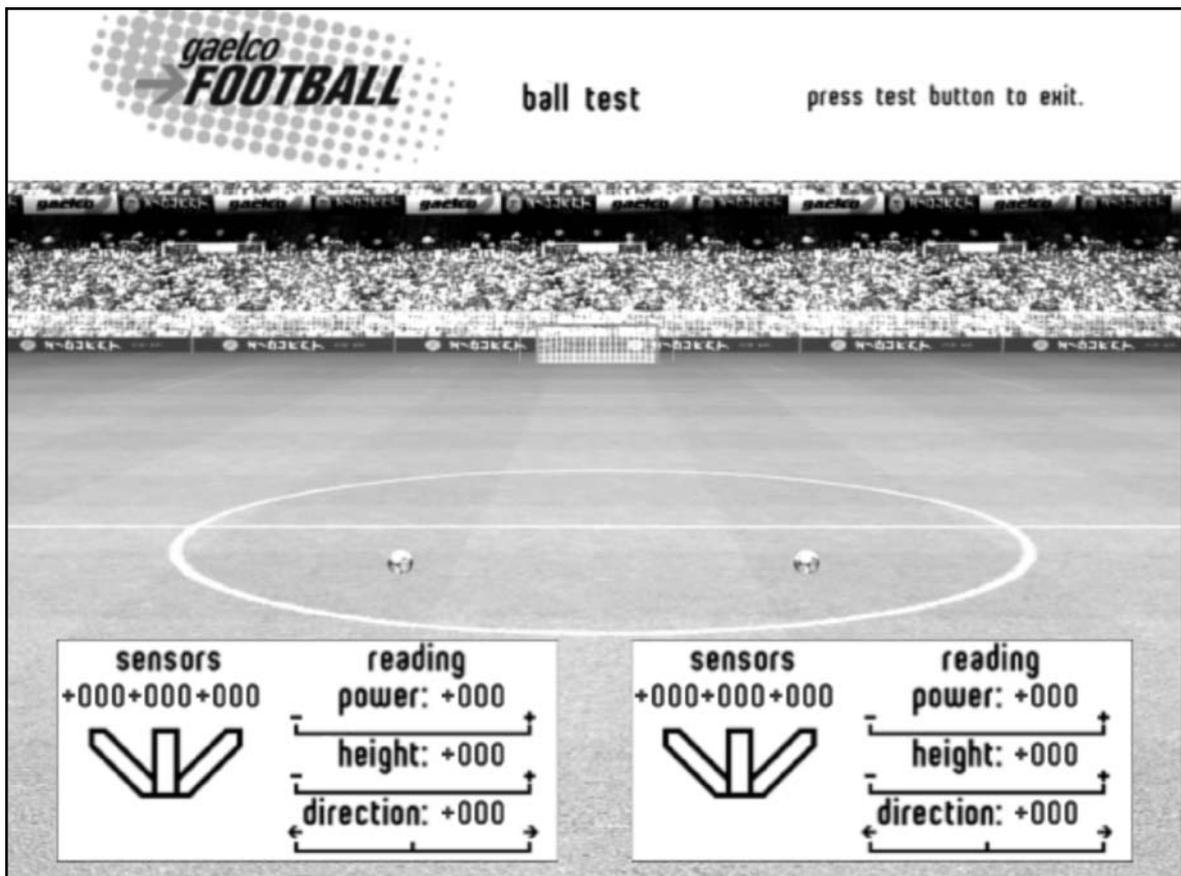
6.2.2 BALL TEST

On this screen you can check the operation of the balls.

Every time the interface detects a kick, the information provided by the ball's sensors is shown on the screen. Such information, together with an interpretation of the data received, is useful in checking that the interface is operating fine. The movements shown on the screen by the ball give further information. If any of the sensors does not give coherent data, or the movement of the ball is not appropriate, it will be necessary to verify the interface.

The interface requires a short period of stabilization after each kick, during with it does not process a new reading. To be completely sure that this interval has passed it is necessary to wait for the ball to situate itself again at the rest point (on the screen), before giving it another kick

If the interface detects a new reading during the interval of stabilization, it will be shown on the screen as rebound. If this is produced without the ball receiving a new impact it is possible that there is some failure in the operation of the mechanism. In any case the appearance of isolated rebounds is quite normal, particularly after strong impacts, but the continuous detection of **rebounds** from impacts of low intensity is a symptom that the interface has stability problems and should be replaced.



To return to the previous menu press the TEST button.

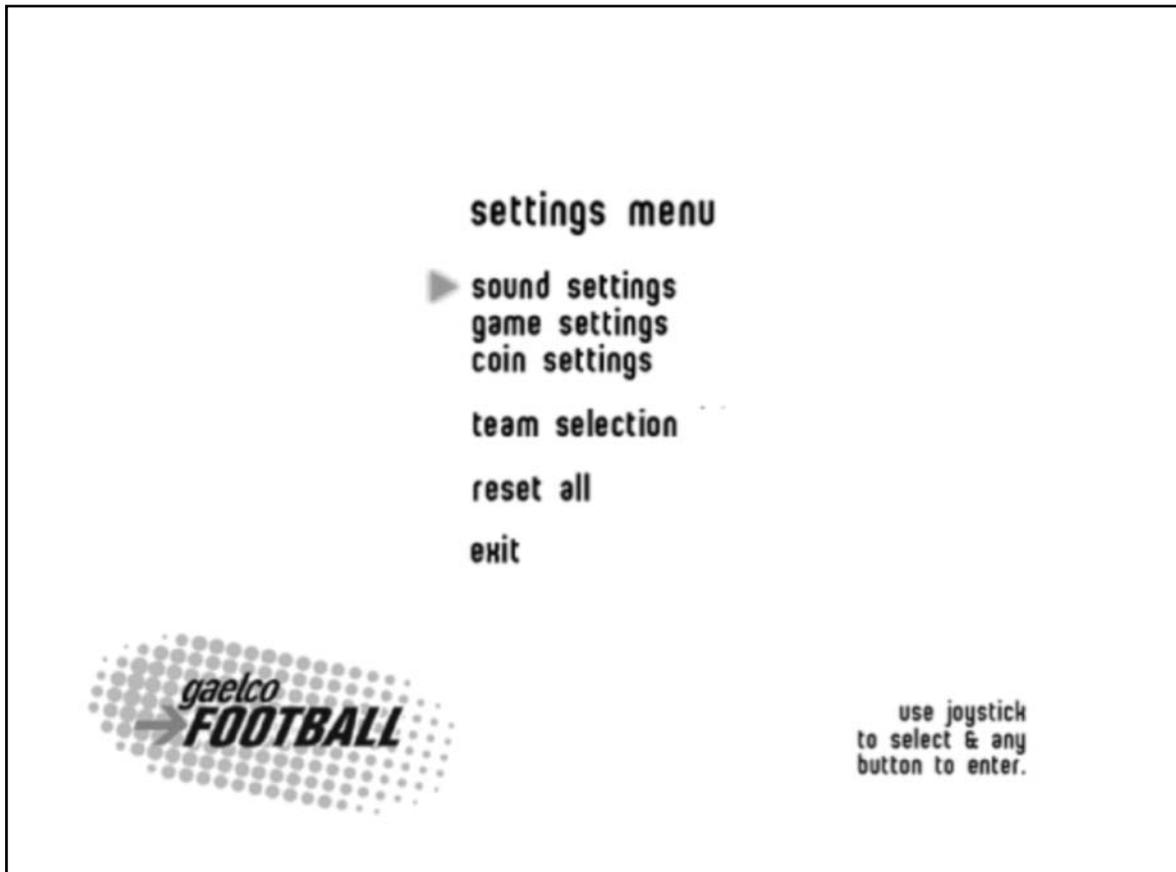
6.3 SETTINGS MENU

This menu gives access to four screens where you can select and program the game settings for each machine in its final location.

The **team selection** option allows you make your own selection of 20 teams from the 30 available on the game.

The option **reset all** restores all the parameters to the values originally set at the factory.

The option required is chosen by moving the cursor with the joystick and it is accessed by pressing any of the game buttons.



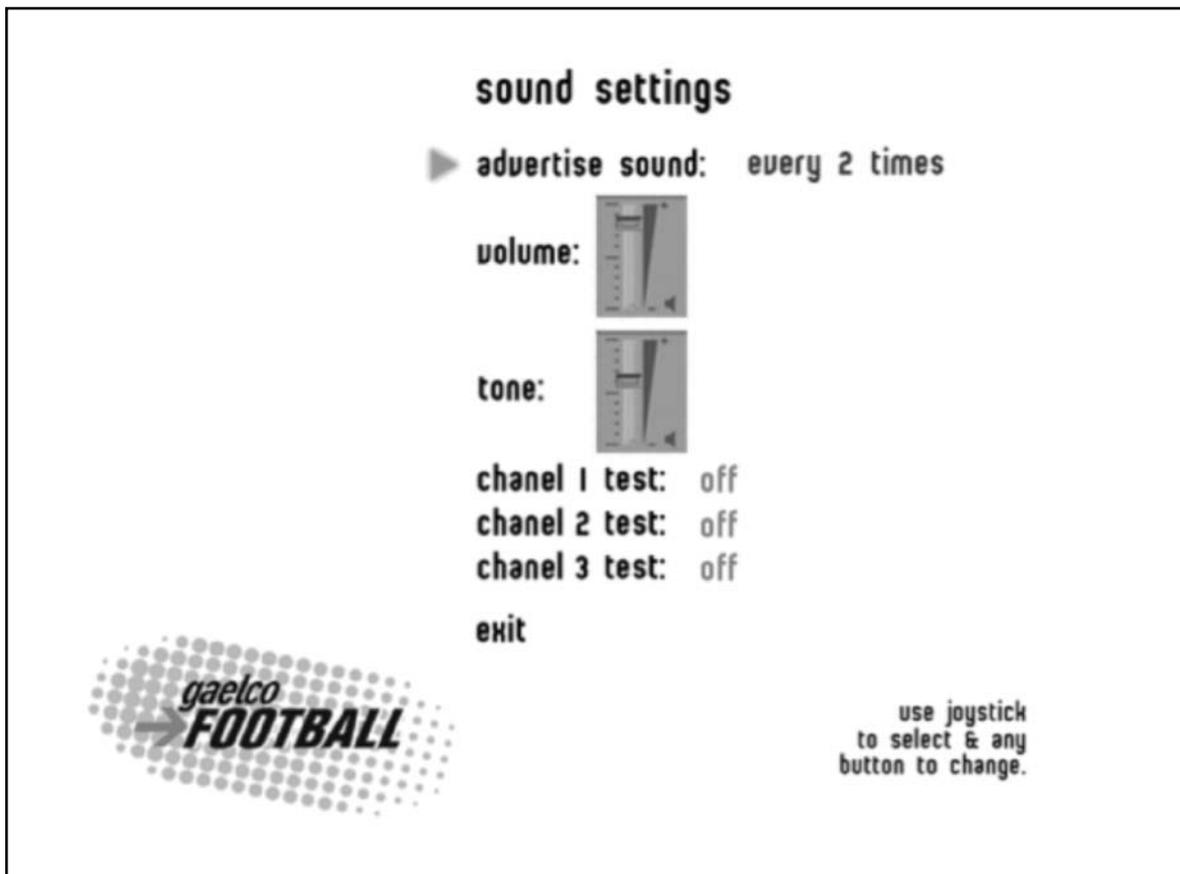
To return to the main menu use the option **exit**.

6.3.1 SOUND SETTINGS

By means of this screen you can define the use of the sound on the machine.

The **advertise sound** line refers to sound on the exhibition phase of the game. Four different choices are offered:

- on** – the advertise sound plays throughout the time of exhibition
- off** – no sound at all
- every 2 times** – the advertise sound plays once every two exhibition routines
- every 4 times** – the advertise sound plays once every four exhibition routines



The **volume** option allows you to adjust the volume of the sound by pushing the corresponding switch of the control panel.

The **tone** option allows you to change the level of low and high frequencies by pushing the same button as for the volume control. Each pushing increase the value. Positive values increase the high notes and negative values the low ones.

You can also check the individual performance of the three sound channels. If there is sufficient volume, but nothing is heard from the selected channel, this indicates a possible fault.

The option is selected by moving the cursor with the joystick, and pressing any game button accesses it.

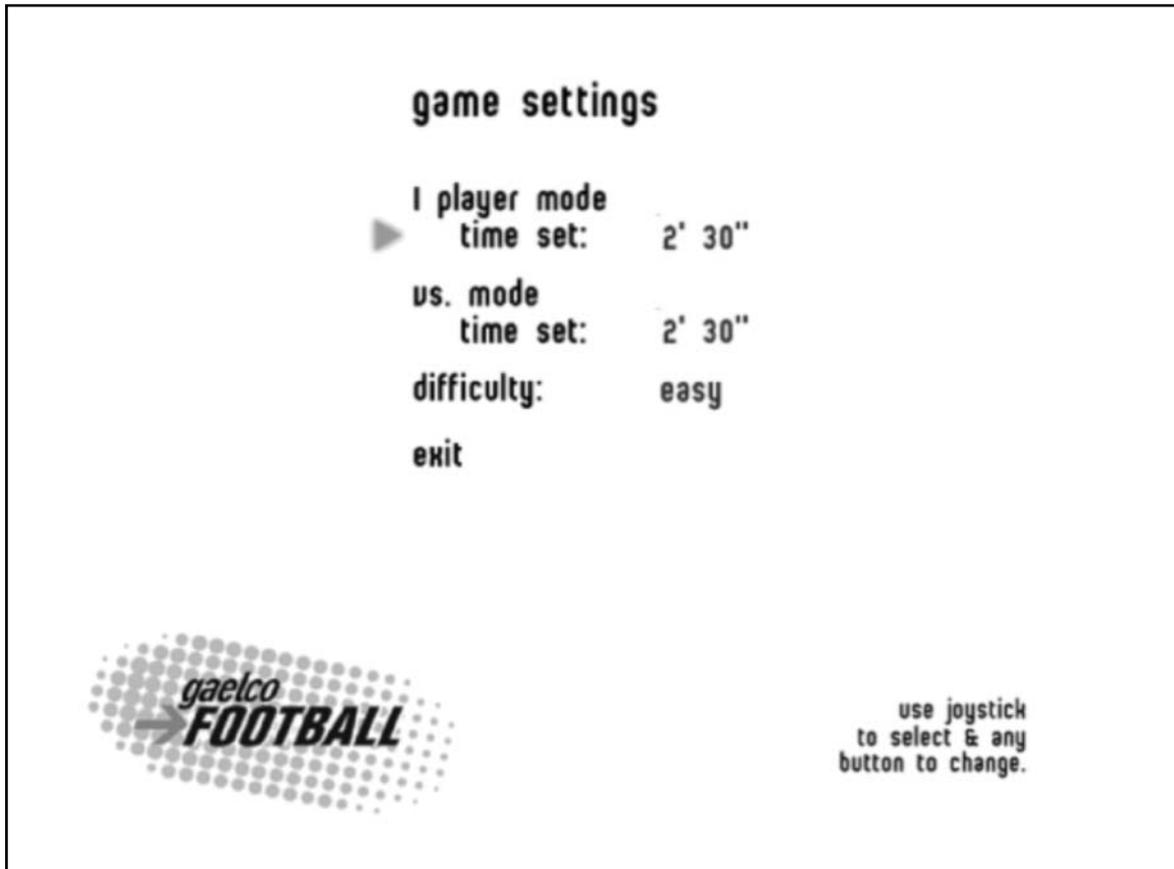
To return to the main menu use the option **exit**.

6.3.2 GAME SETTINGS

On this screen the game settings can be programmed. The machine allows different options for games with one or two players.

The duration of the games can be selected with the **time set** option, between 1' 30" and 4' 00" in intervals of 15 seconds, in any mode (one player against the machine or two players).

There are three levels of difficulty: **easy**, **normal** (original setting), **hard**.



The option required is chosen by moving the cursor with the joystick and the setting is made by pressing any game button (A, B, C).

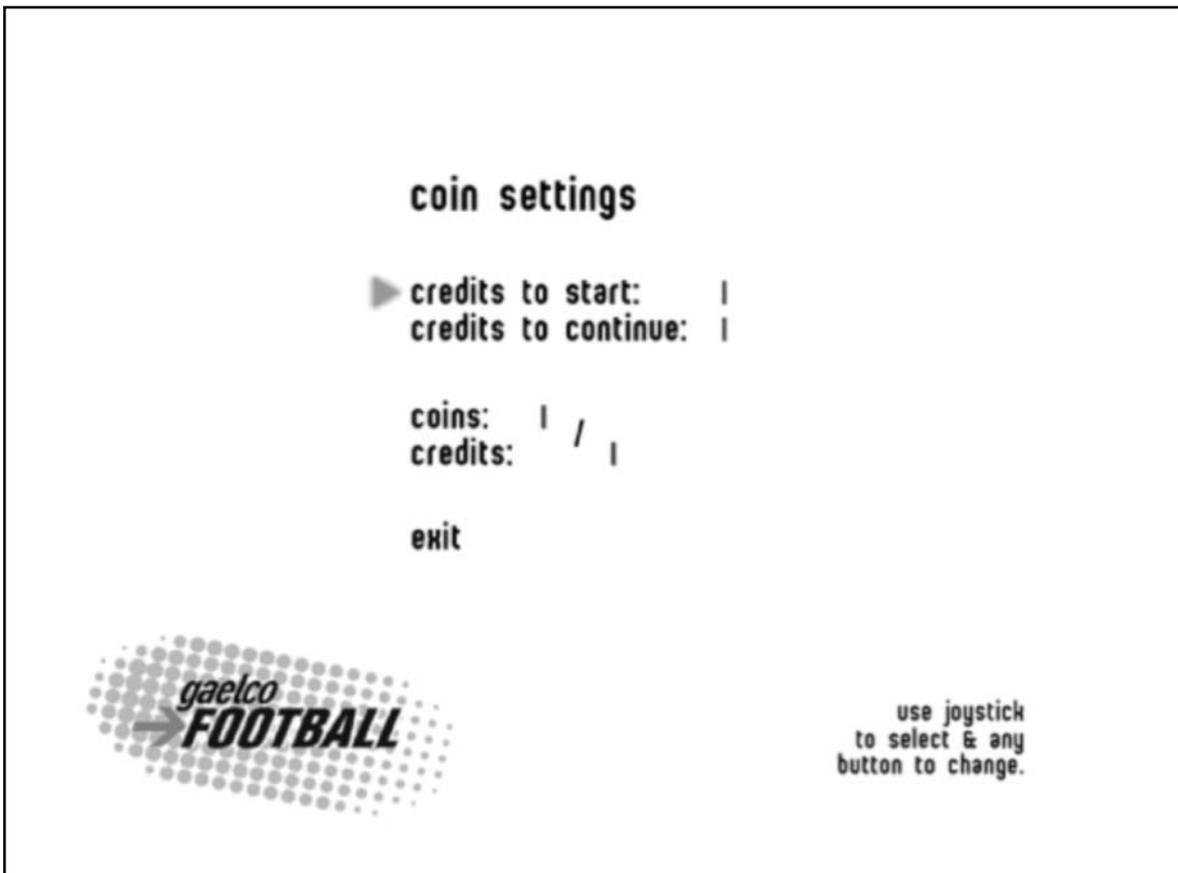
To return to the main menu use the option **exit**.

6.3.3 COIN SETTINGS

On this screen you can define the price of the game.

credits to start: This decides the number of credits necessary to start a game. The original setting is 1, and it should remain 1 unless you want to put a different price to accept continue. The **freeplay** options permits play without payments.

credits to continue: This decides the number of credits necessary for the acceptance of the continuation. Original setting is 1. Its value is always less or equal to that of **credits to start**.



The options **coins** and **credits** are for the selection of the game price. The original setting is 1/1.

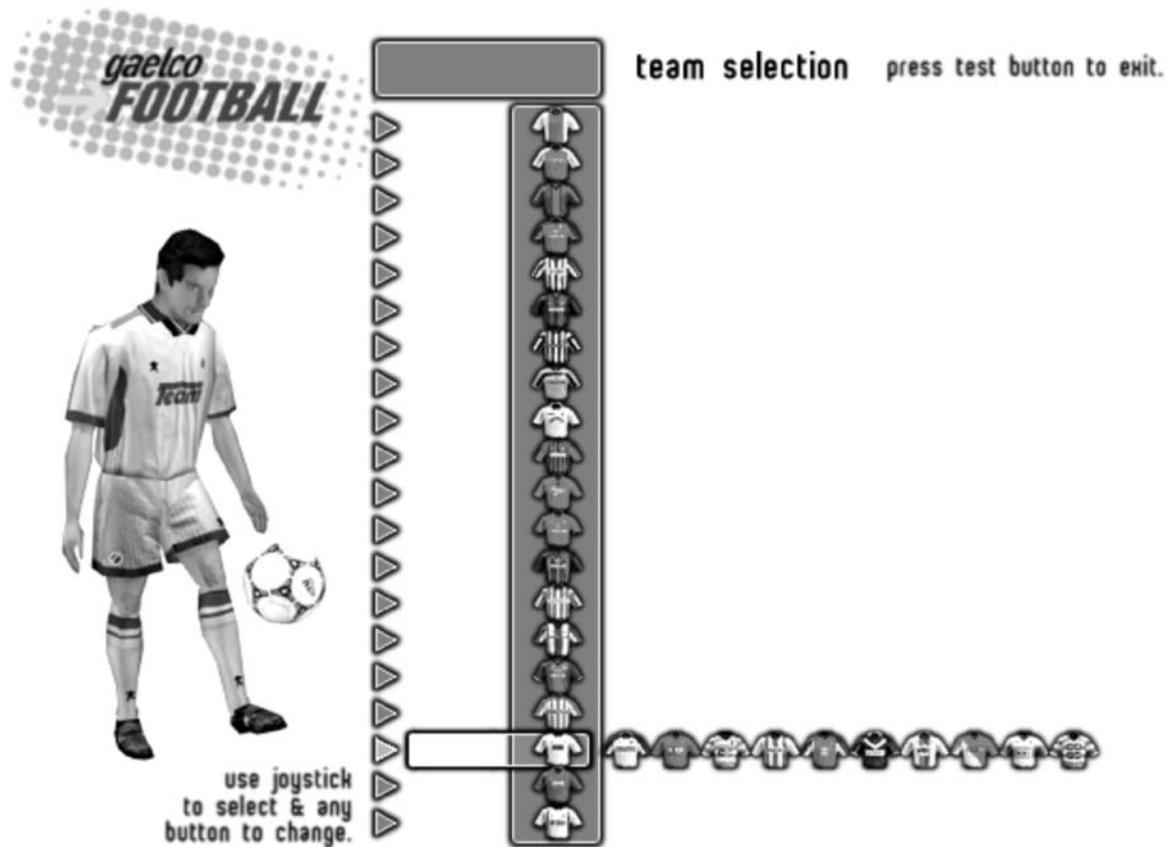
The machine incorporates a programmable coin box where more complex coin settings can be made.

The option required is chosen by moving the cursor with the joystick and the setting is made by pressing any game button.

To return to the previous menu use the option **exit**.

6.3.4 TEAM SELECTION

The teams that will be available for player selection can be chosen from this screen.



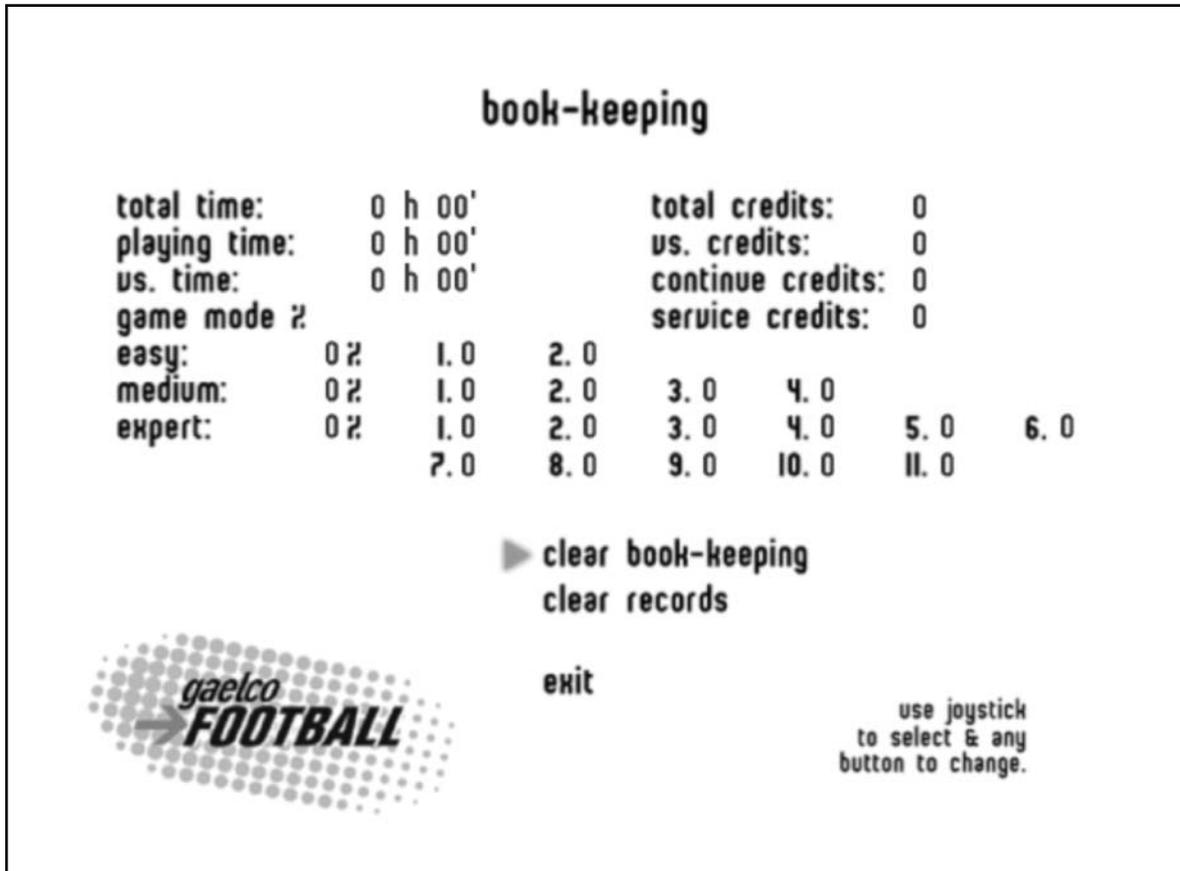
The machine stores 30 teams but only 20 are displayed on the screen. The 20 displayed can be chosen by the operator using the **team selection** option. Alternatively, the default list of 20 teams comprises those which are considered most important.

To change team: select the shirt colours of the team you want to stop playing for by selecting it with the joystick and then clicking as many times as necessary with any button until the new team's shirt appears above the old one.

To return to the previous menu, press the **test** button.

6.4 BOOK-KEEPING

This screen gives information about the activity of the machine: number of credits in the different game modes, time data and number of players who have finished at each level of the game.



Data are accumulative and remain stored when the machine is switched off. The **clear book-keeping** option sets all counters to zero.

The records introduced by the players also remain in memory when the machine is switched off. Choosing the **clear records** option erases these values, the original data recorded at the factory remaining.

The required option is selected by moving the cursor with the joystick and changing the choice using any button.

To return to the previous menu use the option **exit**.

7. HOW TO PLAY

Game description

GAELCO FOOTBALL is an integrated football simulator designed as a dedicated arcade machine. It includes two special interfaces that simulate a football's behavior, providing greater game realism using foot control over the ball.

The game's various options recreate a wide range of football club play and competitions, ranging from training to a full European championship, all at the individual player level. The simulator also permits two people to play at the same time (the machine features two play stations complete with all the controls and a virtual football).

Game start

To start playing, introduce enough coins for the credit counter to at least show credit: 1. If the programmed number of coins is not reached, a message will show on the lines of credit:0 coins:1/2 where credit is the number of credits available (zero in this case) and coins shows a fraction (one) of the number (two) coins required to increase the number of credits (i.e. in this case, two coins are needed for each credit). If test mode establishes that the cost of the game is higher than a credit: 0/2, coins will have to be introduced until the number of credits is the same as or greater than the programmed figure.

Once the requisite coins have been introduced, press the START button at the play station you want to play from. The game begins from this point onwards as the player successively chooses the game mode and the team he will play for. The player can choose between 20 teams, moving the cursor up and down using the joystick. The player shirt number can be selected by pressing any button (A, B, C).

Game concept

GAELCO FOOTBALL is a football game simulator. It provides three competition levels for the individual player and a single match mode for two players. The aim of the game is to win all the matches by getting through the elimination rounds. As a general rule, the player who wins a match continues playing unless it is the last match in an individual championship or an extra game in two-player mode (in which case the session finishes at the end of the game, no matter what the result).

GAME MODES

INDIVIDUAL MODES: PLAYER AGAINST THE MACHINE

As mentioned above, the game provides three options of differing difficulty levels for individual games. This ensures that each player can pit himself against the machine at a level he feels comfortable with. Another player who wants a match in two-player mode can interrupt individual games at any moment. To do so, the player must have enough credits to begin the game. The game is started by pressing the START button at the empty play station. This automatically changes the play mode and a new game starts from scratch.

training league – easy

This is the easiest game mode and is suitable for novices who are learning. It is the equivalent of a three-way pre-season tournament, with two elimination rounds (semi-finals and finals) between four teams. The maximum number of games played at this stage is two. The winner goes to the next round. In the case of a draw, there is a round of penalties (3 for each player). If the player loses, he has the option of continuing in the championship by paying for a new match (continue) and repeating the previous game.

European cup – medium

This mode is for players who are experienced on the machine. It simulates the European Cup where the player must get through four single-game elimination rounds: eighth finals, quarter finals, semi-finals and the final.

The maximum number of games played at this stage is four. The winner goes to the next round. In the case of a draw, there is a round of penalties (3 for each player). If the player loses, he has the option of continuing in the championship by paying for a new match (continue) and repeating the previous game.

European League - expert

This mode is for expert players. It simulates a modern European Cup, with a classification league in four groups of four teams each, in which home and away games are played. This makes a total of six games in this competition stage after which teams are classified, the first two in each league going on to the next round. The following games have to be won to continue playing. Both draws and defeats eliminate the player and in this case the continue option does not repeat the previous game.

There are two elimination rounds (quarter and semi-finals) for teams going forward from the league, played in double matches in which both games in the round accumulate points. The player must win at least the first game to avoid paying (continue option). In the second game, the important thing is to qualify. Depending on the number of points required, a player may even lose the match and still qualify. If there is draw, the winner will be decided on penalties. If the player wishes to continue (continue) after being eliminated after the second game, he must go through the whole round again.

Finally, after passing the two eliminatory rounds, the player gets to the cup final –a single match which decides the overall winner. If there is a draw, the game is decided on penalties.

The maximum number of games which can played at this stage is 11.

TWO-PLAYER MODE

In two-player matches, the loser pays. Both players pay for the first game. From then on, the winner gets to play the next match and the loser either quits or has to pay for the match if he wants to continue playing. If the loser quits, a new player can take his place, paying for the match. If no new players come forward to challenge him, the winner goes on to the final game against the machine. If a match finishes in a draw, the result is decided on penalties.

CONTROLS

The machine has two identical play stations, identified with a orange flash (player 1) and a yellow flash (player 2).

Each play station has the following controls:

- A **Joystick**: this is used to control the active player (indicated by a screen cursor) and to select the direction of feints when one of the feint buttons is pressed.
- A **Start button**: this starts the game.
- Three **buttons marked A, B, C**: with different functions for both attack and defense.
Button A changes the controlled defense player and begins a long attacking feint.
Button B is for clearances, kick-ins, blocks balls in defense and begins short attacking feints.
Button C is for running, whether in attack or defense. The button has to be pressed repeatedly to increase speed.
- A **virtual football**: this is a mechanical interface which incorporates an electronic device that both measures and renders the force and direction of player's kicks with great precision. It is used to make passes, fouls and take penalties, corners, shots and headers, etc.

These controls provide an enormous range of possibilities, making the machine a superbly integrated football simulator in which each player's skill gives the game a depth, which is seldom found on other sports simulators.

SCREEN INFORMATION

The player has the following on-screen information during matches.

- **Scoreboard.** This shows the current match score. It is located at the centre top of the screen. The left hand side shows player 1's score and the right hand side player 2's score. Each player's team shirt is also shown.
- **Stopwatch.** This shows the elapsed match time. It is located at the top of the screen to the right of the scoreboard.
- **Stage indicator.** This indicates the round and type of championship of the match being played. It is located at the top of the screen to the left of the scoreboard.
- **Speed indicators.** These show the speed achieved by a player using the run button. There is one for each player and they are located on the bottom of the screen: player 1 to the left and player 2 to the right.
- **Penalty scoreboard.** This scoreboard only appears in penalty rounds. It is the only scoreboard on screen during penalty rounds, replacing the normal goal scoreboard. The upper part shows the results of penalties taken by Player 1 and the lower one by Player 2.



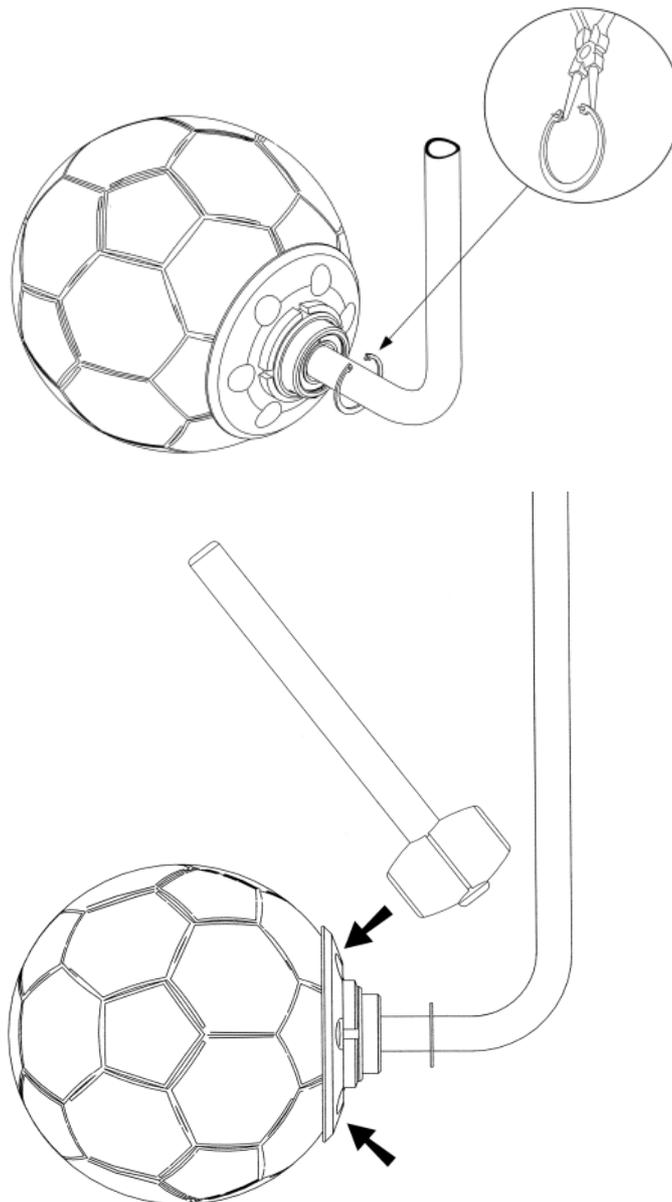
8. MAINTENANCE AND TECHNICAL SERVICE

8.1 REMOVING THE BALL

To remove the football (FUR-610), use special pliers for inner elastic rings, given that the ball is fastened to the arm (FUR-630) by one of those rings (FUR-633)

Once the elastic ring (seeger) has been removed, give a few light taps to the outer disk of the football with a rubber or nylon hammer (or with the hand) and the ball will come away easily. The nylon rings (FUR-634) seated in the interior are the only things that tend to stick.

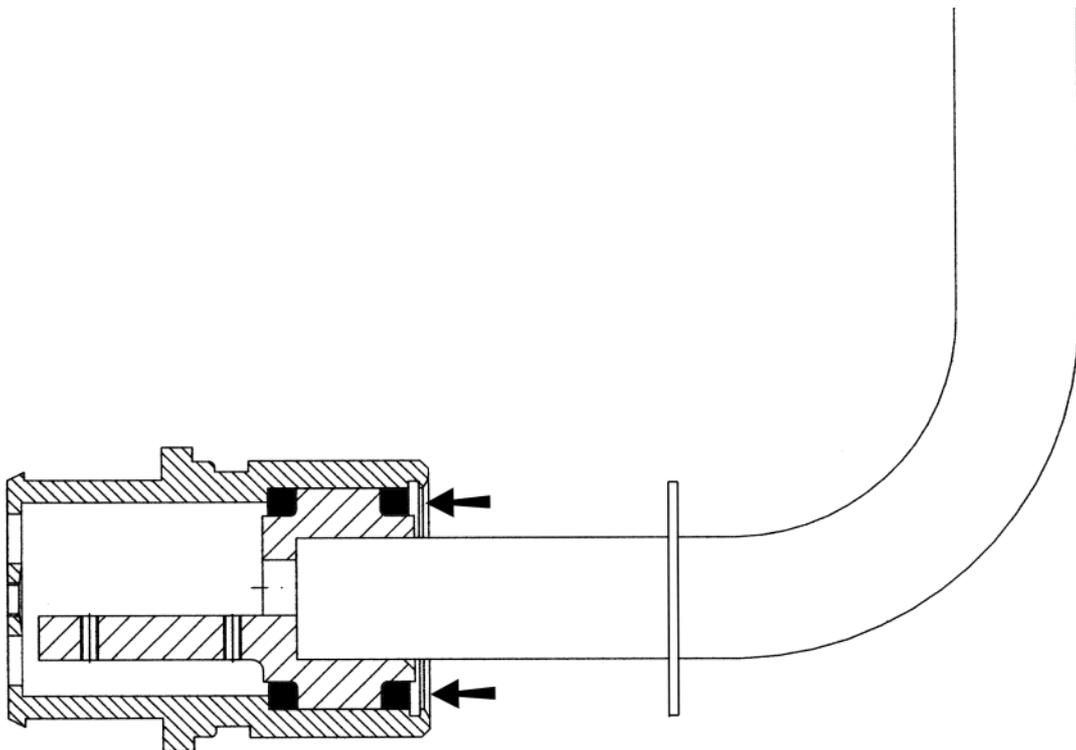
WARNING. Ensure the ball comes off straight without pulling -damage to the electronics may be caused otherwise.



8.2 INSERTING THE BALL

Before assembling the ball, ensure the two nylon rings (FUR – 634) are properly seated in the electronic housing, as shown in the drawing. On entering, the ball tends to push out the outer ring. It is important to make sure the ring is properly seated (ensure the whole of the seeger ring channel is clearly visible). When this has been checked, place the elastic ring (seeger) in the channel using a suitable pair of pliers.

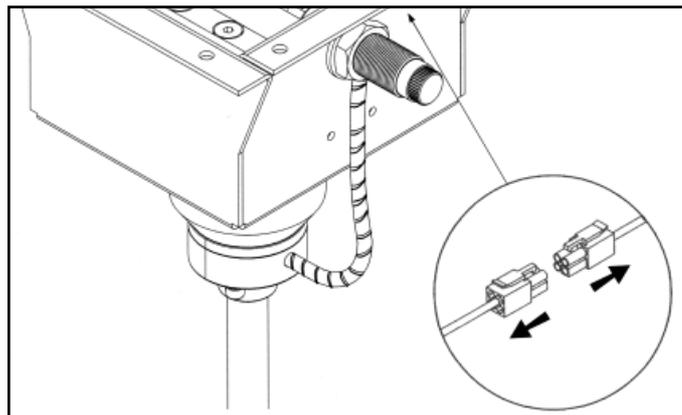
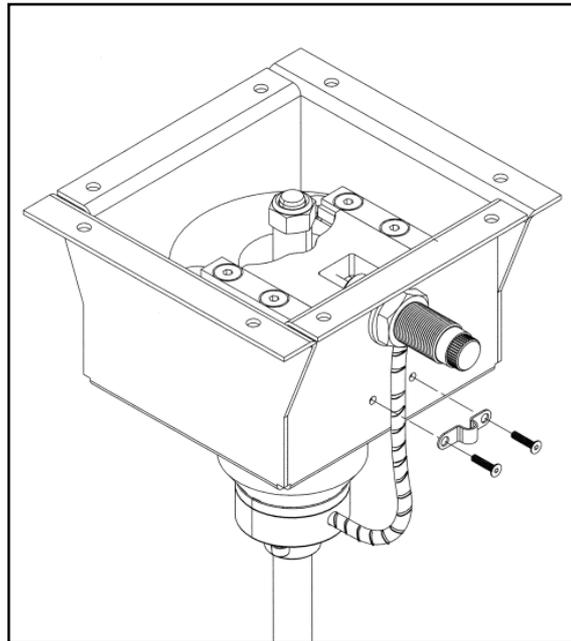
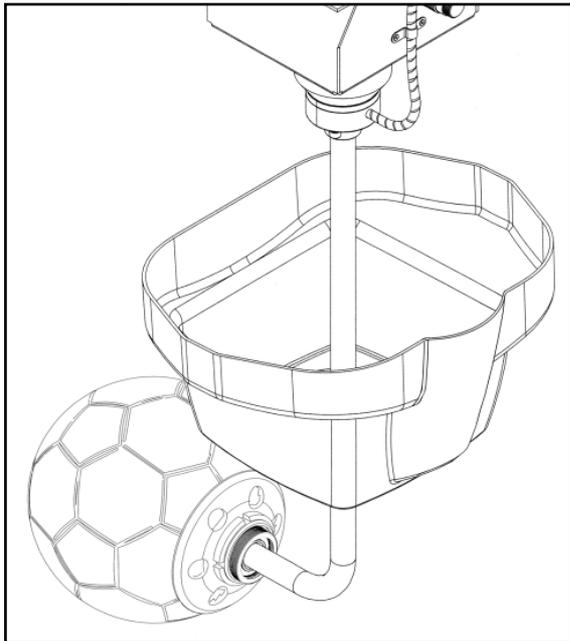
WARNING: Ensure the seeger ring is completely inserted in the whole of the ball cylinder. If the ring has been properly mounted, you will be able to twist the ball with your hand. Note that the ball does not twist freely – there is some friction. It stops twisting as soon as force is no longer applied.



8.3 ARM DISASSEMBLY

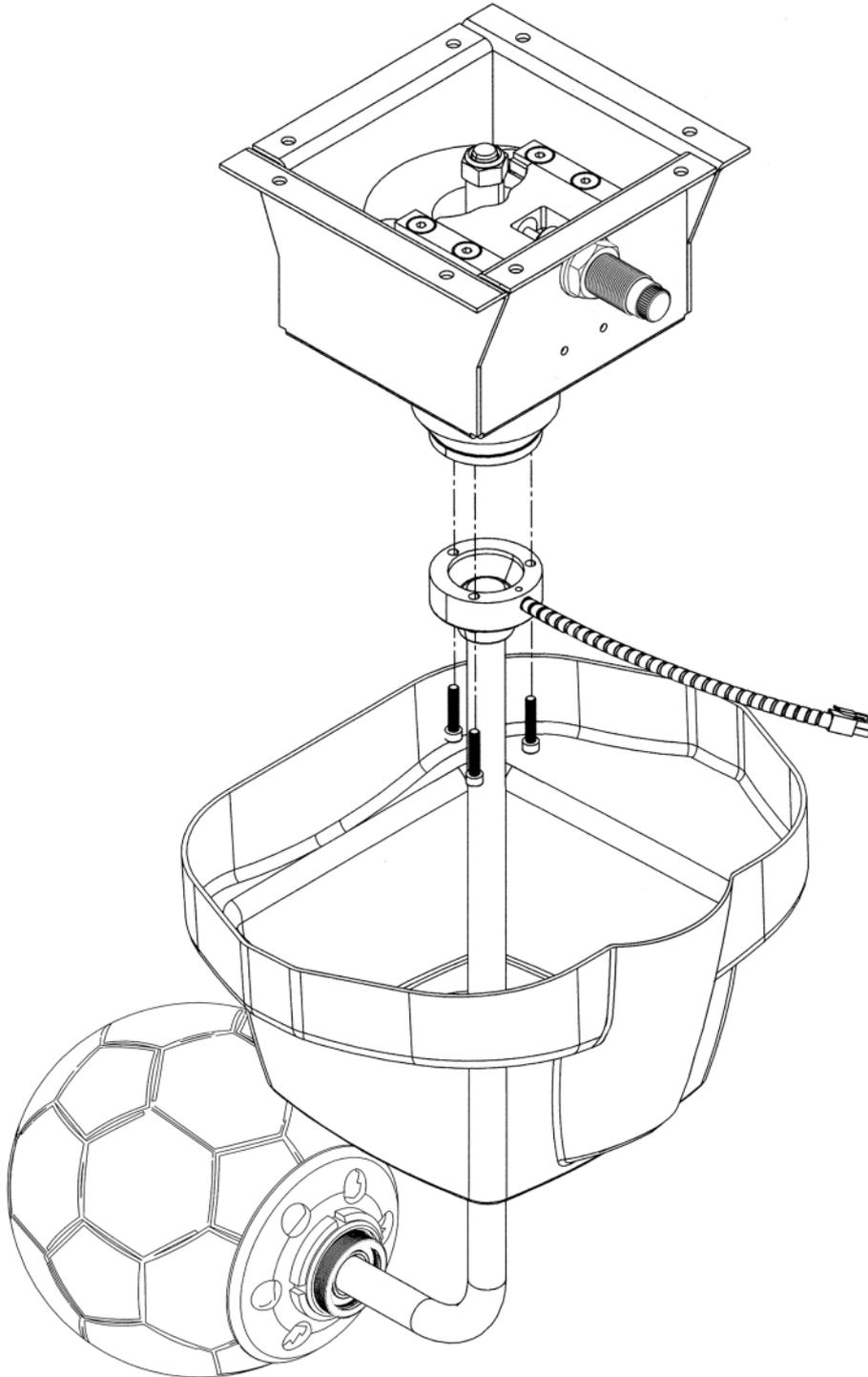
To disassemble the arm, proceed as follows:

1. Unscrew the lower cover of the mechanism, leaving the arm suspended.
2. Remove the two clamp screws, freeing the armoured cable.
3. Disconnect the cable.



GAELCO FOOTBALL

After following the steps above, remove the three screws fastening the arm to the rest of the mechanism.



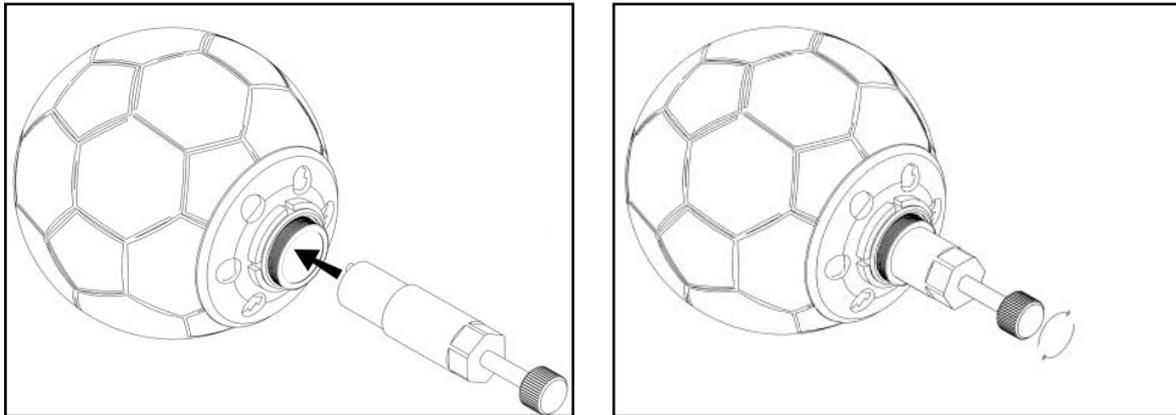
WARNING: When the arm needs to be sent for repair, remove the ball first (see procedure in Section 8.1)

8.4 REPLACING THE BALL COVERING

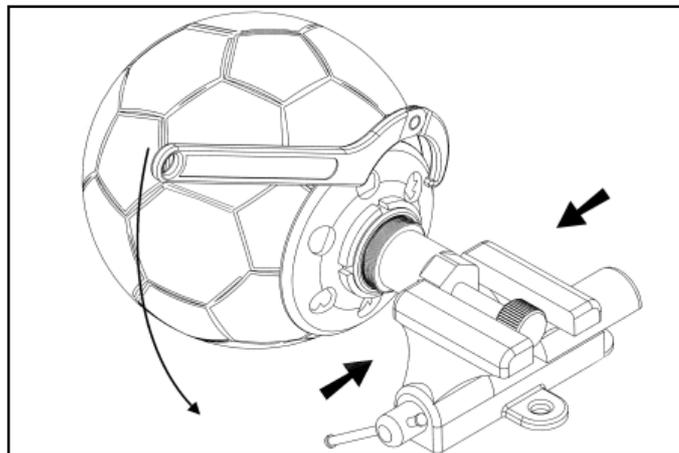
As far as special tools are necessary, the official distributor's personnel usually do the job of changing the ball covering. It is recommended that the operator's personnel only change one ball assembly for another as shown in section 8.1.

A) DISASSEMBLING

1. Place the tool inside the ball cylinder so that the two pins are firmly pushed into the holes that are at the end of the cylinder. Then turn gently the handle of the tool, without using force, until the cylinder is screwed to the tool.



2. Fix the tool in a bench vice, so that the nut is gripped as shown in the drawing.



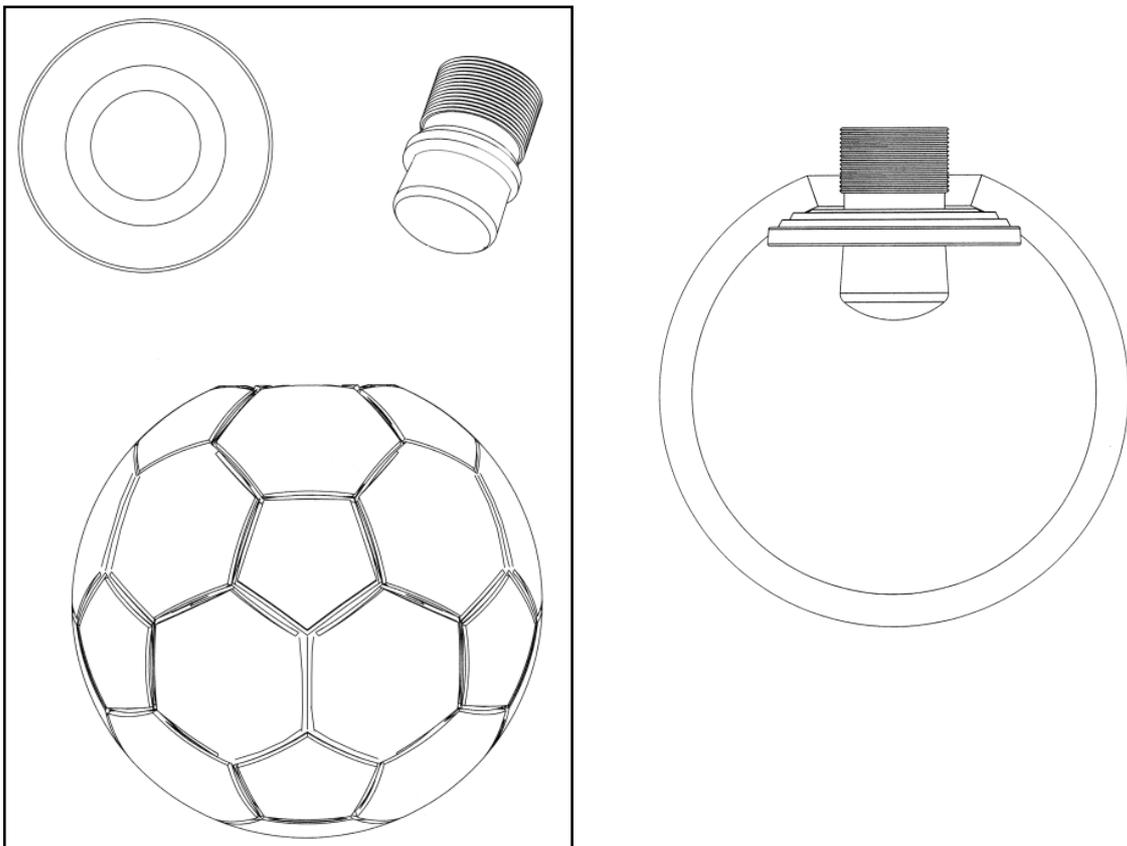
3. Using a hook spanner (\varnothing 50-80) unscrew the KM nut which holds the ball holder by two clamping disks. In order to make the operation easier it is recommended to put a tube onto the handle of the spanner to act as a lever.

4. When the KM nut comes off so does the external disc. To get out the rest of the assembly put your hand inside the ball and separate the disc from the cylinder. Compressing the ball so that the opening is oval makes it easier for the inner disc to be taken out. The disc will then slip on one side without any difficulty.

B) ASSEMBLY

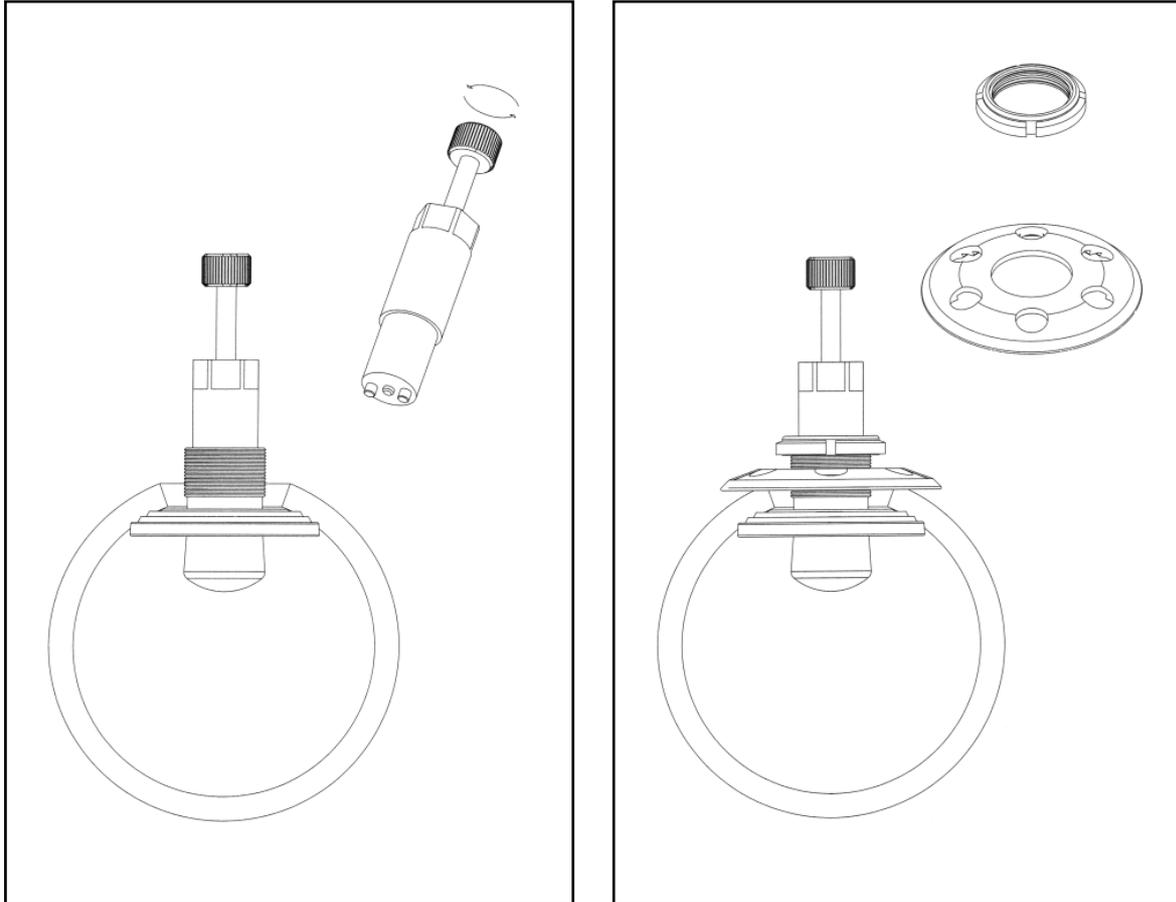
The ball assembly is put together as follows:

1. Squeeze the cover of the ball until the opening is oval, so the inner disc FUR-616 can pass on its edge. Then insert the cylinder FUR-615, with its top fitted (FUR-613), so that the threaded end fits in the central hole of the disc by its concave section.
2. Insert the cylinder unto the disc and without letting go turn the ball upside, so that the disc drops down by gravity, seating the disc in the cylinder. Release the cylinder and catch it again by the hollow end, moving your hand until the disc rest again against the inside of the opening. At this stage the disc and the cylinder have to be positioned as shown in the drawing.



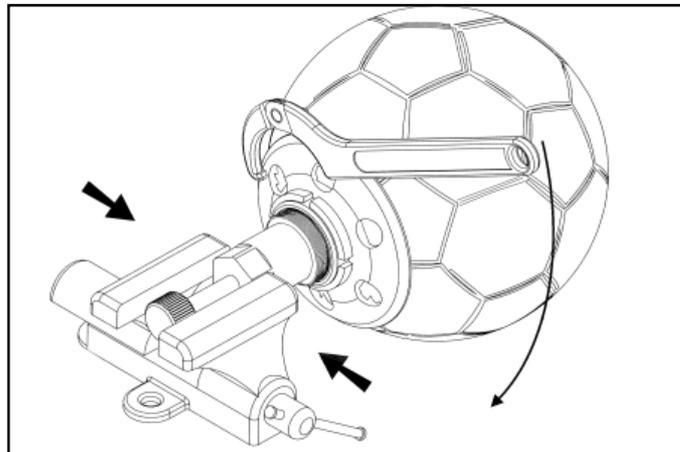
- 3) Fit the tool into the cylinder, following step 1 of the disassembling procedure. Then put the external disc (FUR-617), behind the tool, and the KM nut FUR-618.

Gaelco Football



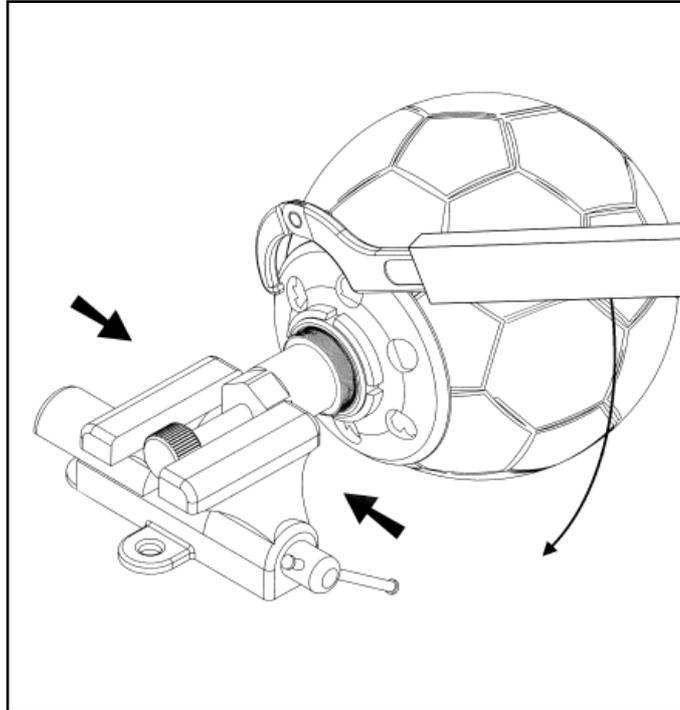
4) When the nut starts to clamp the discs, make sure that they are centered with respect to the opening. This can be easily checked by looking through the holes of the outer disc so, you can see the opening rim.

5) Hold the tool on the bench vice and grip the KM nut with the hook spanner, as shown in the drawing, taking care that the assembly of cylinder and discs remains in the center of the opening rim.

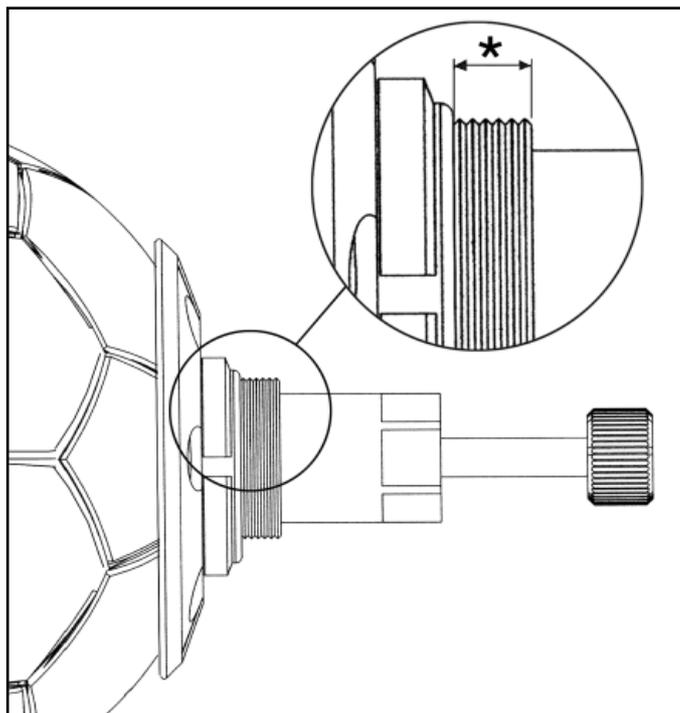


GAELCO FOOTBALL

6. For the self-locking KM nut of $\text{Ø}50\text{mm}$ it is necessary to use considerable force to cut a thread into the plastic, so that to complete the tightening it is useful to increase the leverage on the spanner by lengthening the handle with a piece of iron tube.



7. Continue to tighten until the cylinder starts to stick out behind the nut. Stop tightening when the thread stands 14mm proud (*) with respect to the KM nut, as shown in the drawing.



8.5 FUSE REPLACEMENT

Before starting this operation disconnect the machine from the supply using the switch located on rear of the monitor cabinet, close to the billboard (see drawing of section 9.4) For greater safety you can unplug the mains cable. The fuse is in the same unit as the switch and the mains cable socket.

8.6 PERIODIC MAINTENANCE

The GAELCO FOOTBALL machine does not need any more attention than a conventional video game machine. However, it is advisable to carry out frequent checks on the ball interface since this part of the mechanism is prone to wear.

In particular, when you put the machine in test mode, check the direction and force signals received for both footballs reflect the kicks you give them.

8.7 BASIC TROUBLE SHOOTING

PROBLEM

POSSIBLE CAUSE

Nothing happens when turning on the machine

- Check the mains fuse
- Check actual voltage value for +5VDC
- Check wiring connections

Monitor screen is black or the picture is distorted

- Check for faults on monitor
- Check for disconnected cable
- Check for faulty PCB

Color or image on the monitor is not correct

Enter screen test (see section 6.1) and make the necessary adjustments

There is no sound or its quality is poor

- Check the speakers and their connections
- Check actual voltage value for +12VDC
- Check the volume switch on the control panel

There is not good control of the ball

- Check connections
- Carry out a ball test (6.2.2)

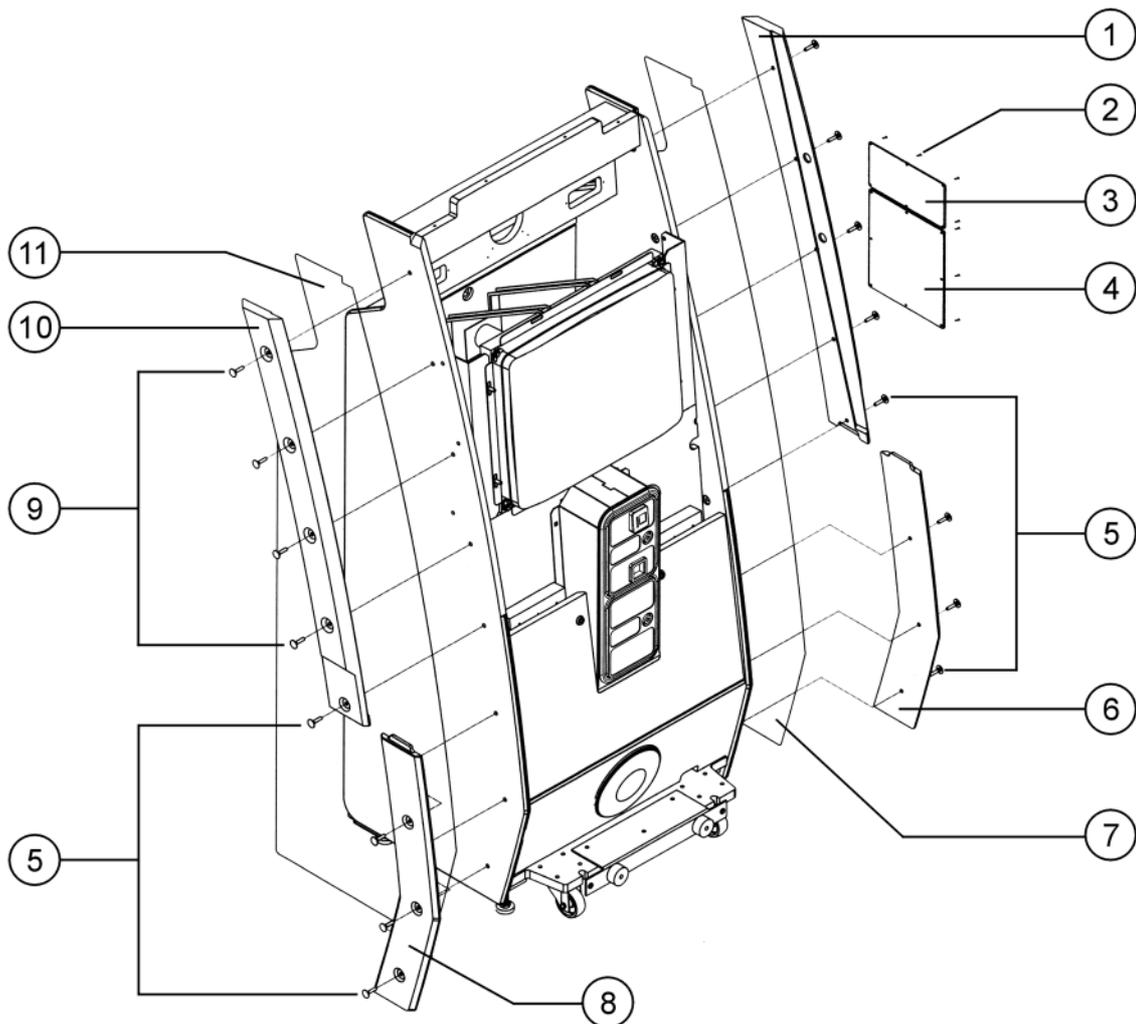
OPERATOR'S COMMENTS

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9. PARTS LIST

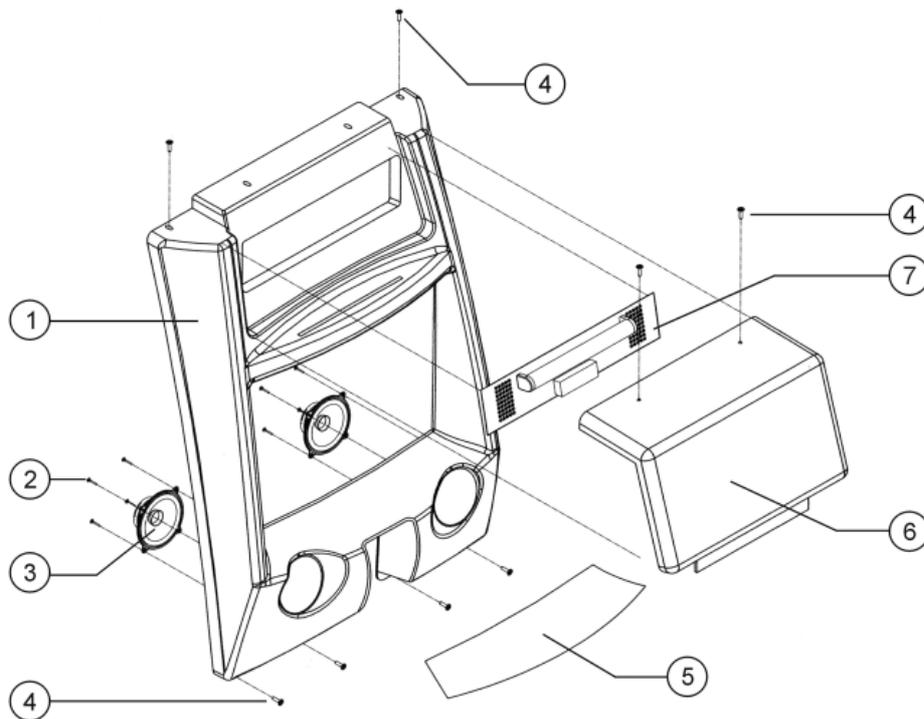
9.1 MONITOR CABINET – ACCESSORIES

	CODE	DESCRIPTION
1	FUR-153	UPPER COVER – RIGHT SIDE
3	FUR-496	MACHINE NUMBER PLATE
4	FUR-497	DOCUMENT HOLDER (MACHINE DATA)
5	--	SCREW UM1001 – M80X30 ZN
6	FUR-154	LOWER COVER – RIGHT SIDE
7	FUR-503	STICKER – RIGHT SIDE
8	FUR-152	LOWER COVER – LEFT SIDE
9	--	SCREW
10	FUR-151	UPPER COVER – LEFT SIDE
11	FUR-502	STICKER – LEFT SIDE



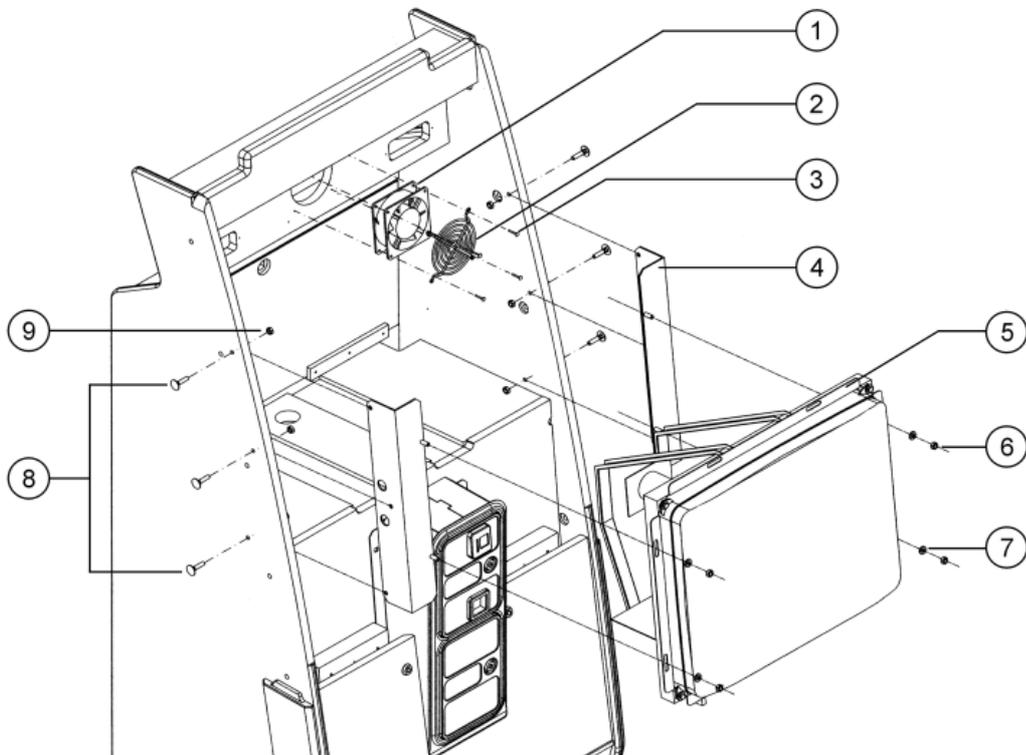
9.2 FRONT PLASTIC AND RELATED PARTS

CODE	DESCRIPTION
1 FUR-510	FRONT PLASTIC
2 --	SCREW DIN 7981 – 3,9 X13 - BLACK
3 FUR-360	5" LOUDSPEAKER, 60W, 2VIAS, SHIELDED
4 --	SCREW DIN7981 – 3,5X16 – BLACK
5 FUR-501	STICKER - INSTRUCTIONS
6 FUR-515	BILLBOARD
7 FUR-517	FLUORESCENT ASSEMBLY



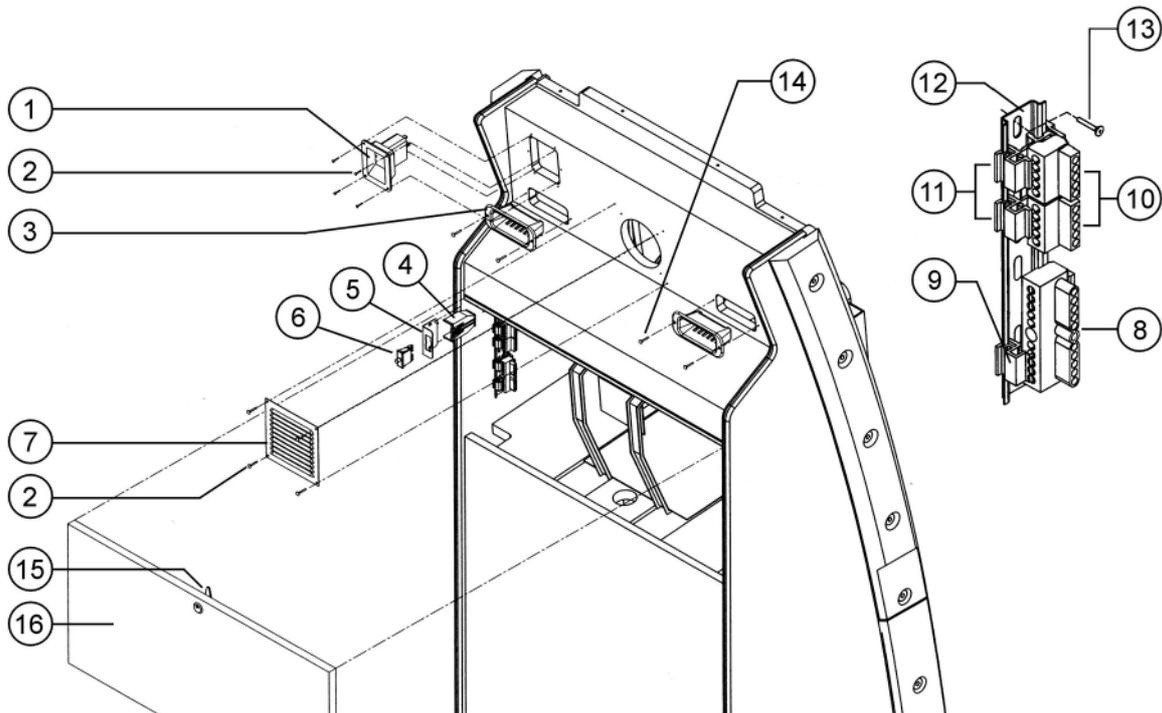
9.3 MONITOR ASSEMBLY

	CODE	DESCRIPTION
1	FUR-363	FAN 220V
2	FUR-365	FAN GRILL (METALLIC)
3	--	SCREW DIN7982 – 4X60
4	FUR-222	MONITOR BRACKET
5	FUR-350	MONITOR
6	--	NUT DIN985 – M6 SELF-LOCKING
7	--	WASHER DIN9021 – M6X18
8	--	SCREW UM1001 – M8X30 ZN
9	--	NUT DIN985 – M8 SELF-LOCKING



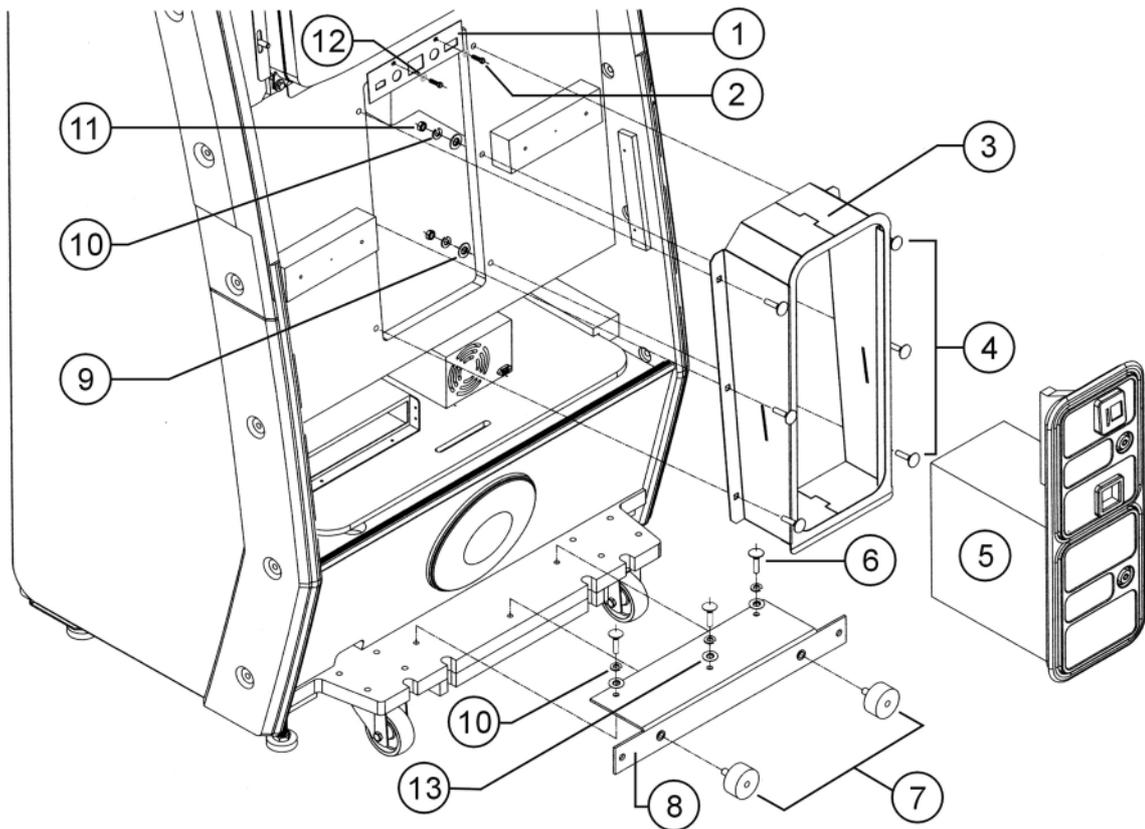
9.4 MONITOR CABINET – REAR TOP PARTS

	CODE	DESCRIPTION
1	FUR-364	AC FILTER & FUSE HOLDER 3A
2	--	SCREW DIN7981 – 3,5X16
3	FUR-43A	PLASTIC GRAB HANDLE
4	FUR-383	PLASTIC COVER, safety switch
5	FUR-235	BRACKET, safety switch
6	FUR-366	SAFETY SWITCH
7	FUR-367	VENTILATION GRILL 150X150
8	FUR-385	GROUND DERIVATION TERMINAL BLOCK BM9982
9	FUR-388	BASE BM99821 for derivation terminal block BM9982
10	FUR-386	POWER SUPPLY DERIVATION TERMINAL BLOCK BM997
11	FUR-387	BASE BM99601 for derivation terminal block BM997
12	FUR-389	RAIL DIN for derivation terminal blocks
13	--	SCREW DIN7981 – 4,8X13
14	--	SCREW DIN7982 – 4X18
15	FUR-130	REAR DOOR
16	FUR-435	LOCK, rear door



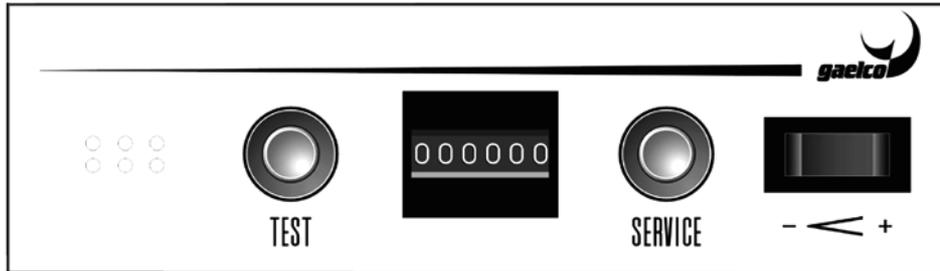
9.5 COIN BOX AND UNION BRACKET

CODE	DESCRIPTION
1 FUR-299	TEST & SERVICE PANEL
2 --	SCREW DIN933 – M4X25
3 FUR-221	HOUSING for double frame minidoor
4 --	SCREW DIN603 – M8X40 ZN
5 FUR-410	DOUBLE FRAME MINIDOOR (coin door and cash box door)
6 --	SCREW DIN933 – M8X60
7 FUR-442	STOPPER – RADIAFLEX
8 FUR-224	ASSEMBLING BRACKET
9 --	WASHER DIN904 – M8 XØ20
10 --	WASHER DIN127 – M8
11 --	NUT DIN934 – M8
12 --	WASHER DIN127 – M4



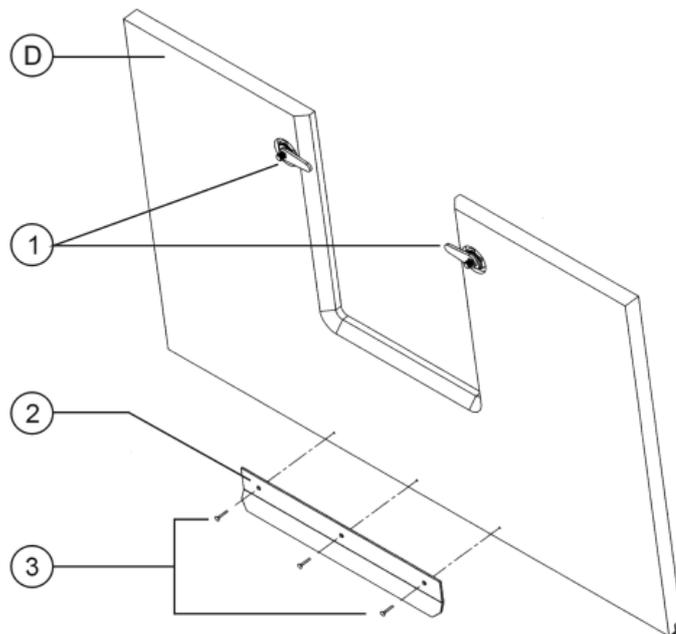
9.6 TEST & SERVICE PANEL

	CODE	DESCRIPTION
1	FUR-395	SWITCH -<+ VOLUME
2	FUR-396	TEST / SERVICE BUTTON
3	FUR-399	COUNTER 12V



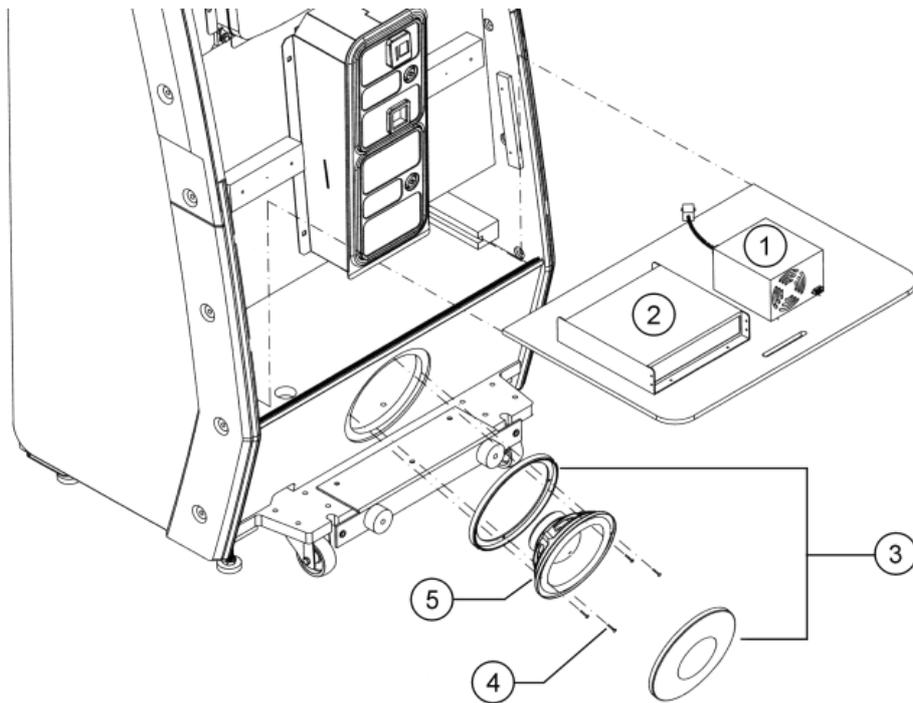
9.7 FRONT DOOR

	CODE	DESCRIPTION
D	FUR-120	FRONT DOOR
1	FUR-435	LOCK (X2)
2	FUR-223	BRACKET
3	--	SCREW DIN7981 – 3,9X13



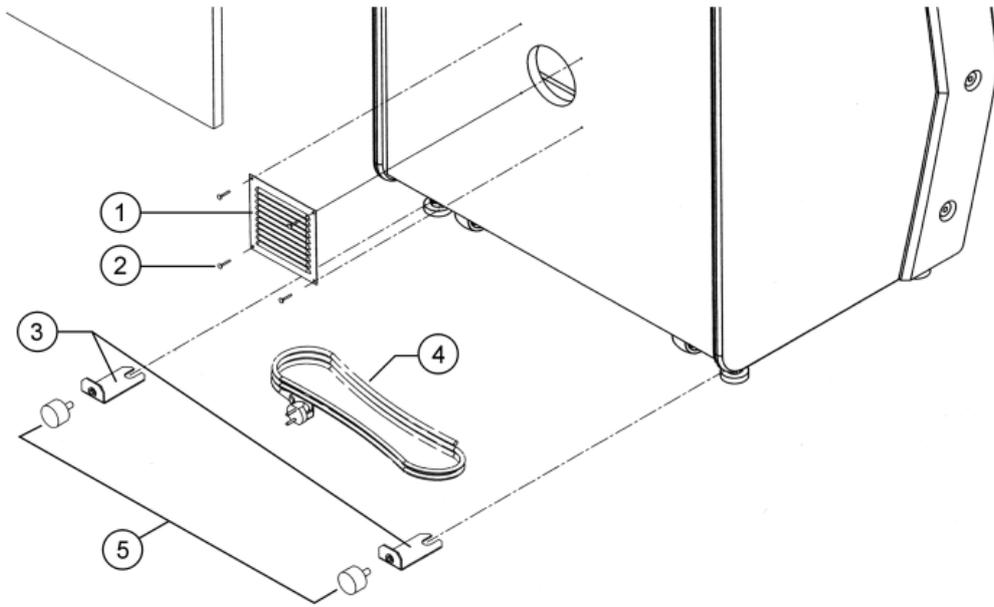
9.8 ELECTRONIC PARTS AND SUBWOOFER

	CODE	DESCRIPTION
1	FUR-355	POWER SUPPLY
2	FUR-357	PCB GAELCO FOOTBALL
3	--	SCREW DIN7981 – 3,5X16 – BLACK
4	FUR-375	GRILL, subwoofer
5	FUR-362	8" SUBWOOFER



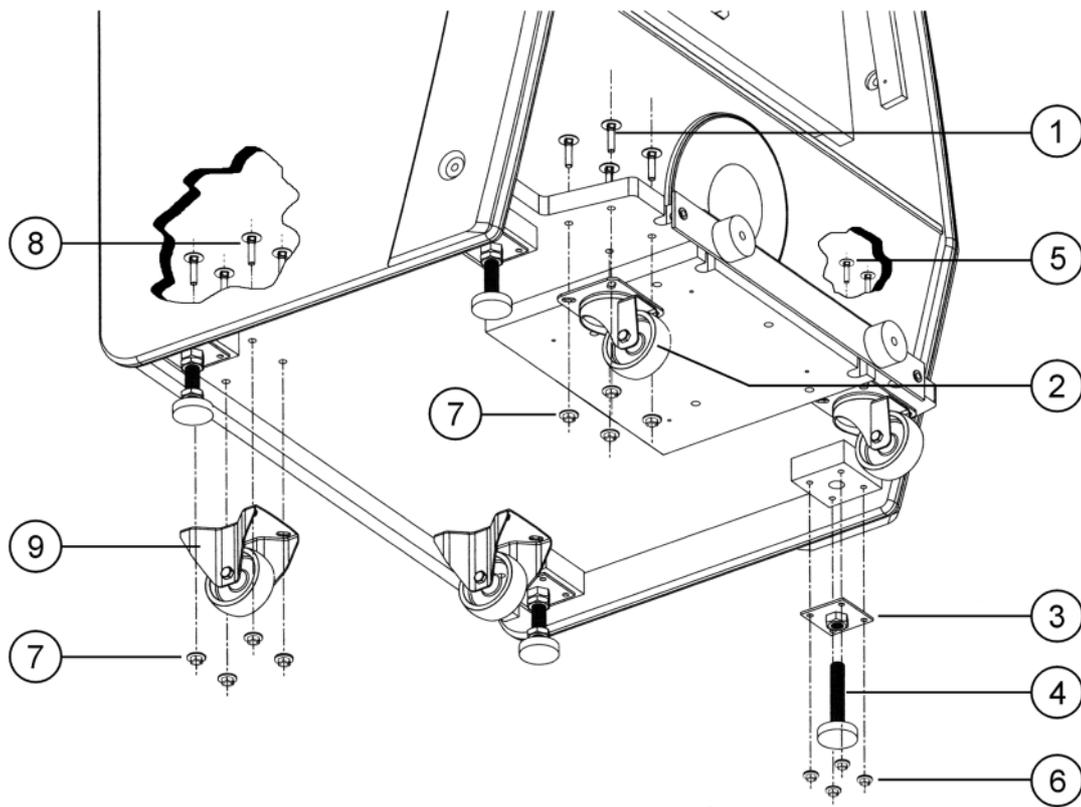
9.9 MONITOR CABINET – REAR BOTTOM PARTS

	CODE	DESCRIPTION
1	FUR-367	VENTILATION GRILL 15X15
2	--	SCREW DIN7981 – 3,9X9,5 – BLACK
3	FUR-225	STOPPER BRACKET
4	FUR-380	MAINS CABLE 2,8m
5	FUR-441	STOPPER Ø50X25



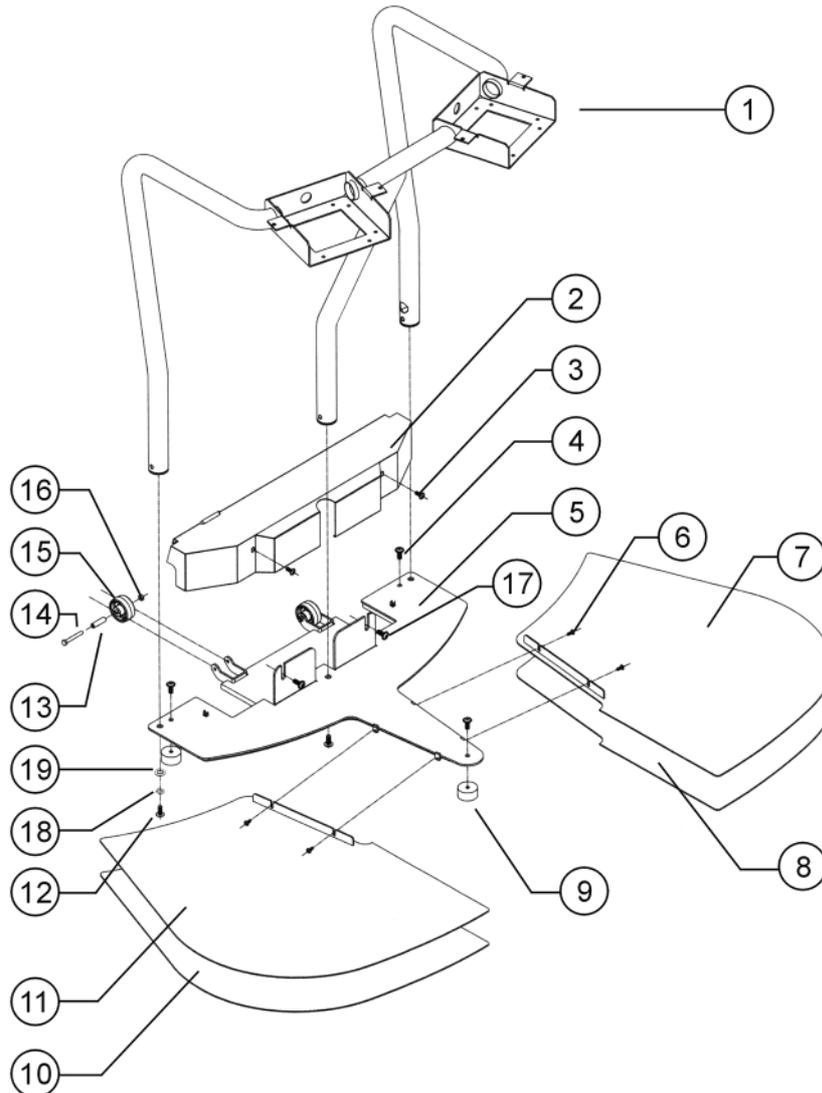
9.10 MONITOR CABINET BASE

CODE	DESCRIPTION
1 --	SCREW DIN603 – M8X30
2 FUR-433	SWIVELING CASTOR – Ø80
3 FUR-234	BRACKET, level adjuster
4 FUR-431	LEVEL ADJUSTER
5 --	SCREW DIN603 – M6X30
6 --	NUT DIN6923 – M6
7 --	NUTDIN6923 – M8
8 --	SCREW DIN603 – M8X40
9 FUR-432	CASTOR – Ø80



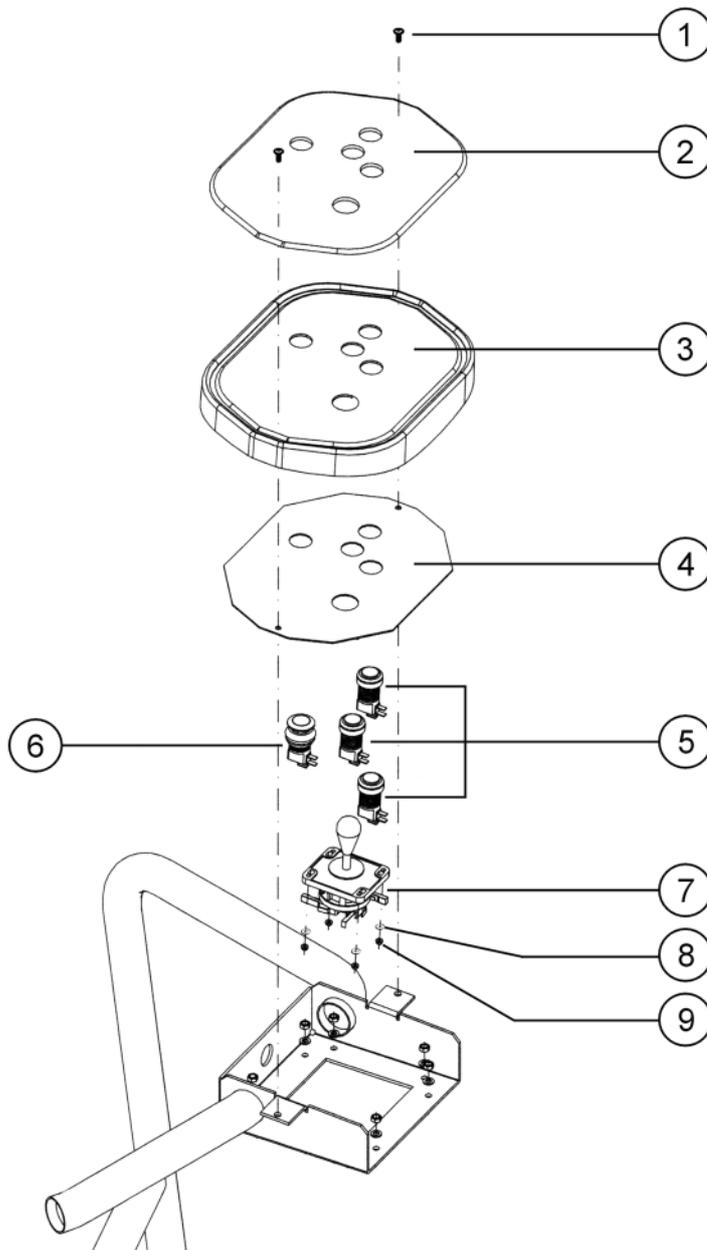
9.11 PLATFORM – STRUCTURAL PARTS

	CODE	DESCRIPTION
1	FUR-250	TUBULAR STRUCTURE
2	FUR-261	BASE COVER
3	--	SCREW UM1001 – M8X20
4	--	SCREW UM1001 – M10X20
5	FUR-260	BASE
6	--	SCREW UM1001 – M6X10
7	FUR-280	FLOOR PLATE – RIGTH SIDE
8	FUR-438	ANTI-SLIDING RUBBER – RIGHT SIDE
9	FUR-443	STOPPER Ø50X25 FEMALE
10	FUR-437	ANTI-SLIDING RUBBER – LEFT SIDE
11	FUR-270	FLOOR PLATE – LEFT SIDE
12	--	SCREW DIN933 – M14X40
13	FUR-446	CASTOR SLEEVE
14	--	SCREW DIN912 – M8X60
15	FUR-445	CASTOR Ø60X30 NYLON
16	--	NUT DIN985 – M8
17	--	SCREW UM1001 – M10X16
18	--	WASHER DIN127 – M14
19	--	WASHER DIN125 – M14



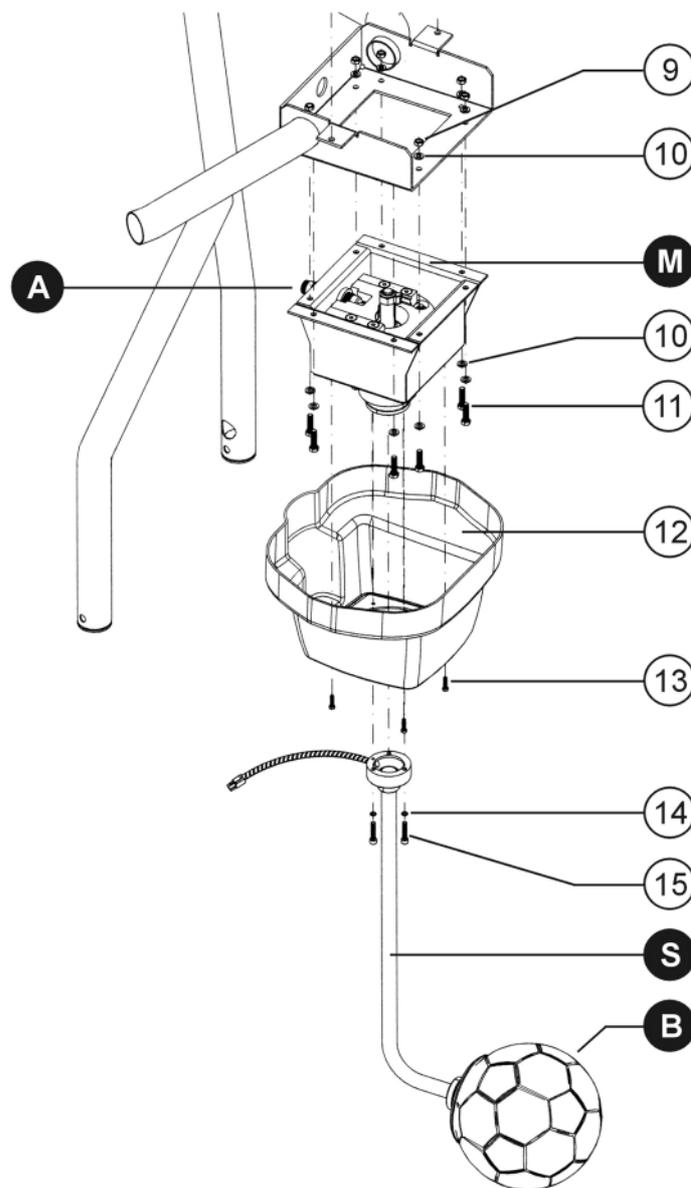
9.12 PLATFORM – CONSOLE PARTS

CODE	DESCRIPTION
1 --	SCREW UM1001 – M6X20
2 FUR-553	GAME INSTRUCTIONS PANEL
3 FUR-552	UPPER COVER, console
4 FUR-251	JOYSTICK PLATE
5 FUR-305	GAME BUTTON – RIGHT SIDE (YELLOW)
FUR-306	GAME BUTTON – LEFT SIDE (ORANGE)
6 FUR-303	START BUTTON – RIGHT SIDE (YELLOW)
FUR-304	START BUTTON – LEFT SIDE (ORANGE)
7 FUR-301	JOYSTICK – RIGHT SIDE (YELLOW)
FUR-302	JOYSTICK – LEFT SIDE (ORANGE)
8 --	WASHER DIN125 – M5
9 --	NUT DIN985 – M5



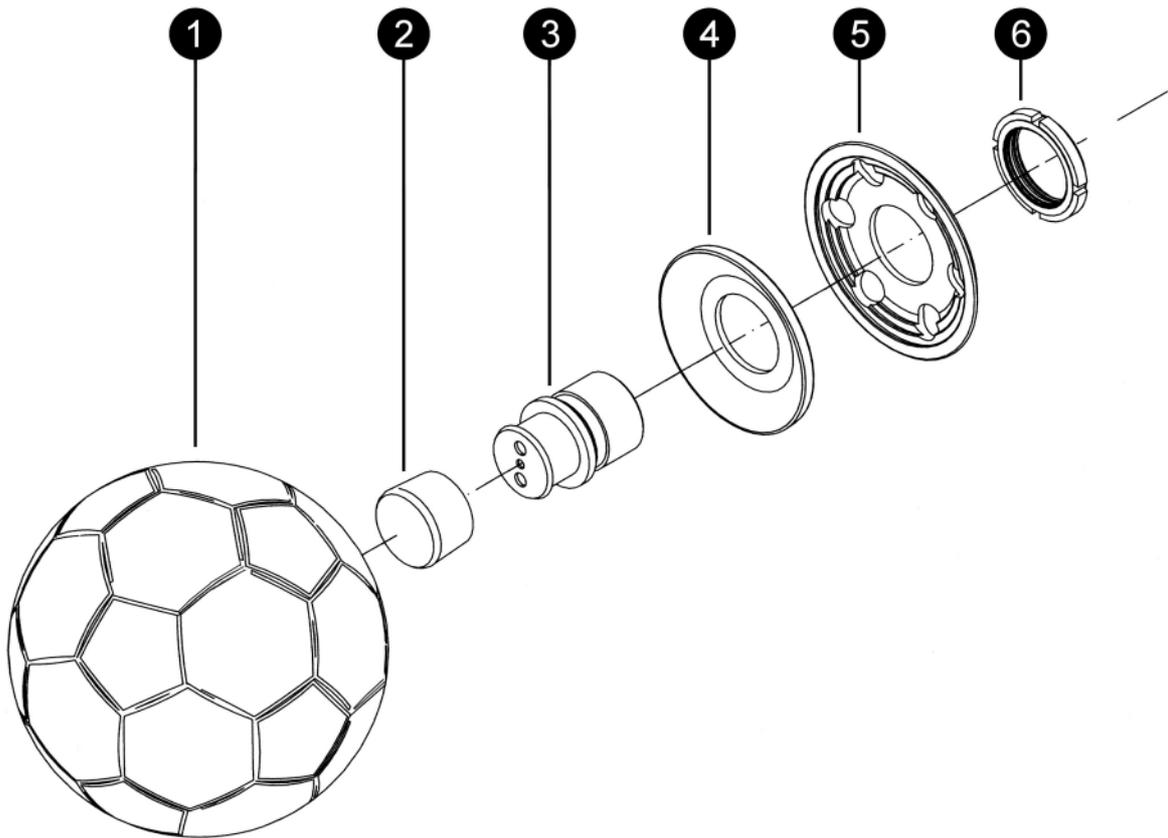
9.13 PLATFORM – INTERFACE LINKAGE

	CODE	DESCRIPTION
A	FUR-670	SHOCK ABSORBER CKD – SCK – 00 – 8.0
B	FUR-610	BALL ASSEMBLY
S	FUR-630	ARM ASSEMBLY
M	FUR-640	MECHANISM ASSEMBLY
9	--	NUT DIN985 – M8
10	--	WASHER DIN125 – M8
11	--	SCREW DIN912 – M8X20
12	FUR-551	LOWER COVER, console
13	--	SCREW UM1001 – M6X10 ZN
14	--	WASHER DIN127 – M6
15	--	SCREW DIN912 – M6X30 – STILL 12,9



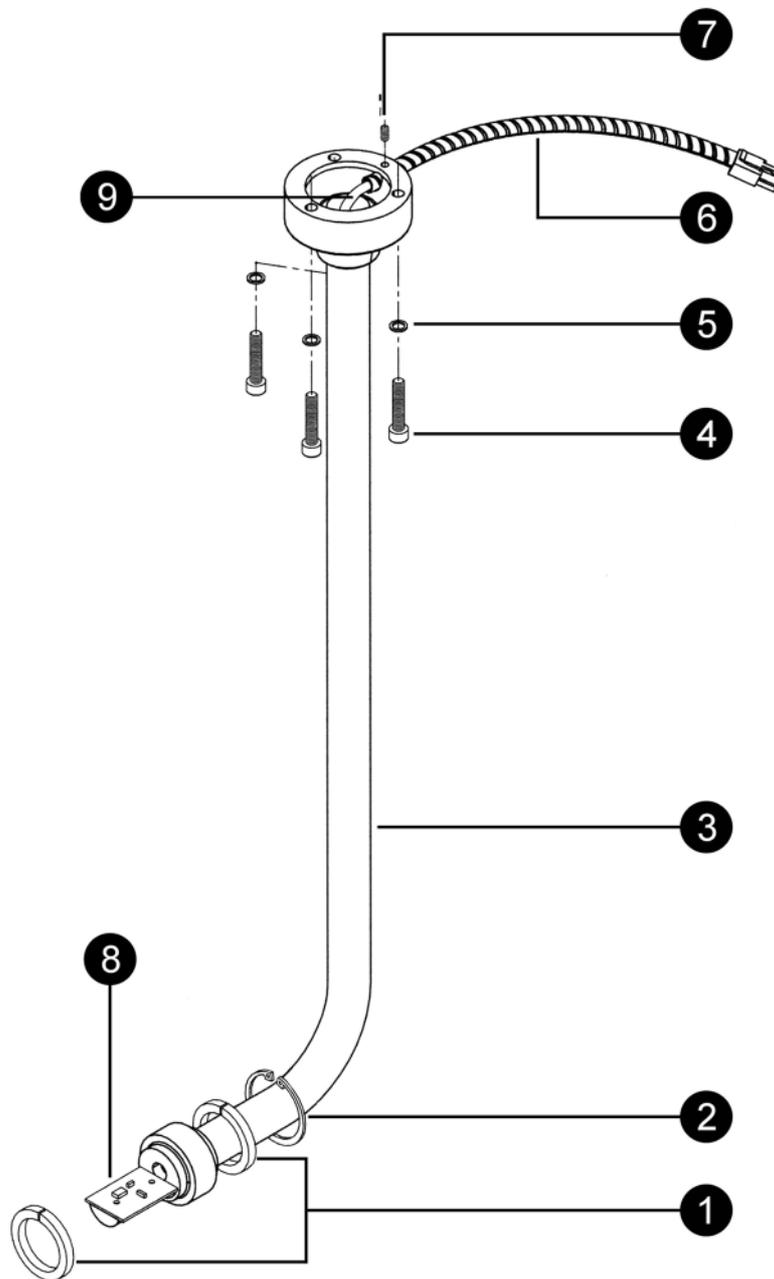
9.14 INTERFACE – BALL PARTS

	CODE	DESCRIPTION
1	FUR-611	BALL COVER – EVA
2	FUR-613	RUBBER FERRULE Ø45
3	FUR-615	BALL CYLINDER
4	FUR-616	INNER DISC – ALUMINIUM
5	FUR-617	EXTERNAL DISC – ALUMINIUM
6	FUR-618	SELF-LOCKING NUT KM M50



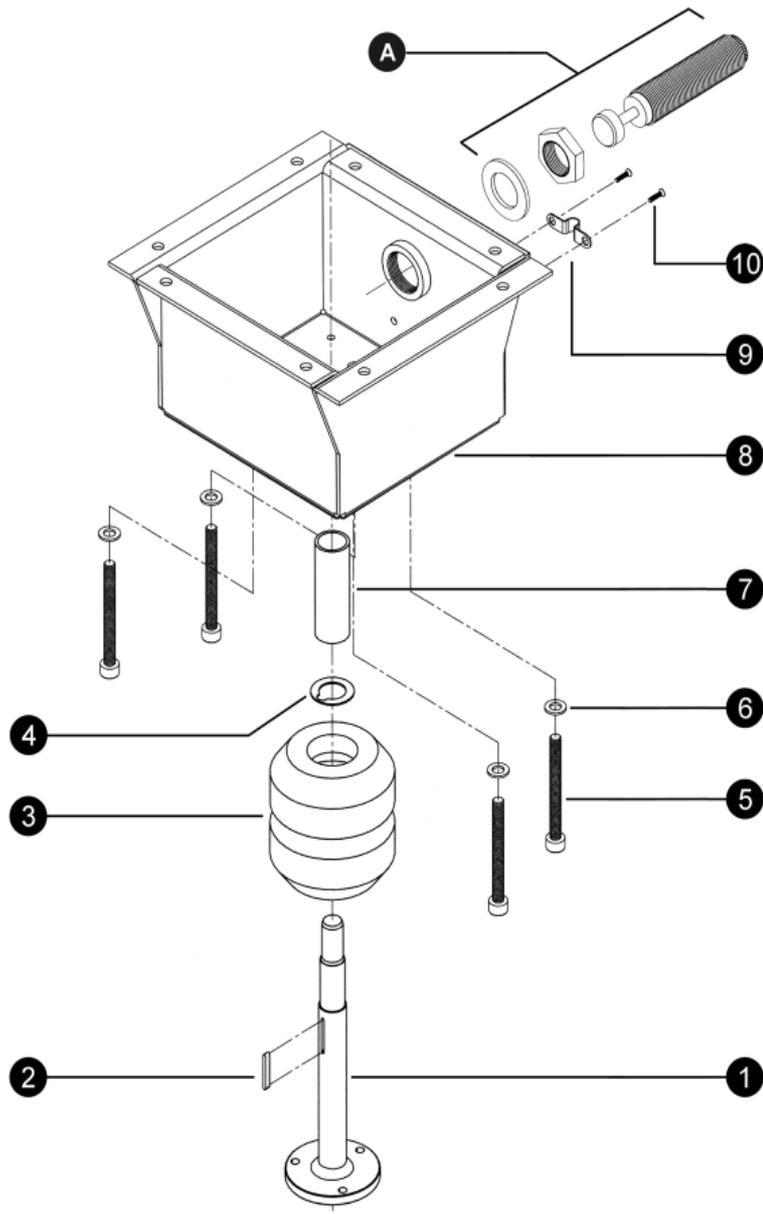
9.15 INTERFACE – ARM PARTS

	CODE	DESCRIPTION
1	FUR-634	NYLON RING
2	FU3-633	ELASTIC RING (SEGGER), INTERNAL Ø40
3	FUR-631	ARM UNIT
4	--	SCREW DIN912 – M6X30 – ACERO 12.9
5	--	WASHER DIN127 – M6
6	FUR-632	PROTECTION SHIELD, sensor cable
7	--	GRUB SCREW DIN913 – M4X4
8	FUR-621	SENSOR PCB
9	FUR-635	SENSOR CABLE



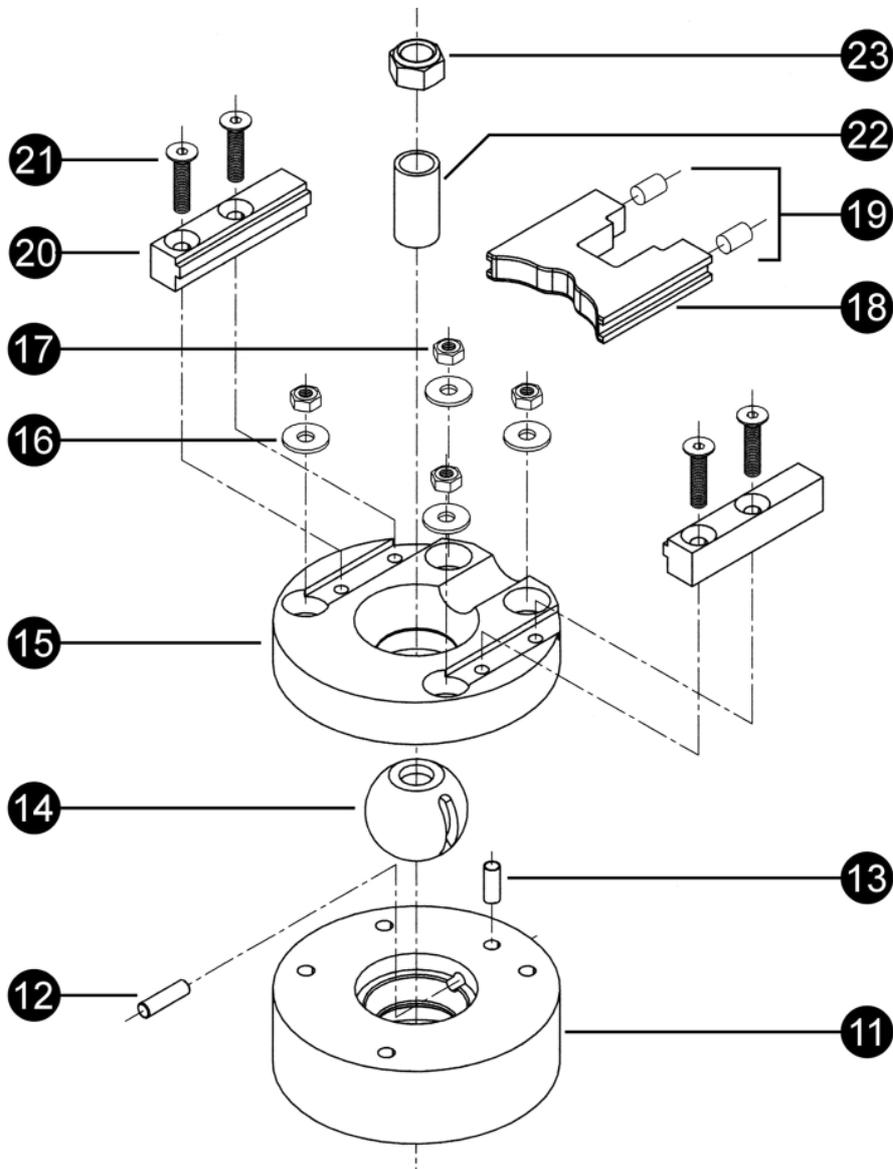
9.16 INTERFACE – MECHANISM PARTS (1)

CODE	DESCRIPTION
1 FUR-661	SHAFT
2 FUR-662	WOODRUFF KEY 5X5X30
3 FUR-663	SOPORTE EVIDCOM CAUCHO
4 FUR-664	SPECIAL WASHER
5 --	SCREW DIN912 – M8X70
6 --	WASHER M8 Ø16,5 EXT. X 1,4
7 FUR-665	TEFLON SLEEVE
8 FUR-690	METALLIC BOX
9 FUR-666	CLAMP
10 --	SCREW UM1001 – M6X30
A FUR-670	SHOCK ABSORBER CKD – SCK – 00 – 8.0



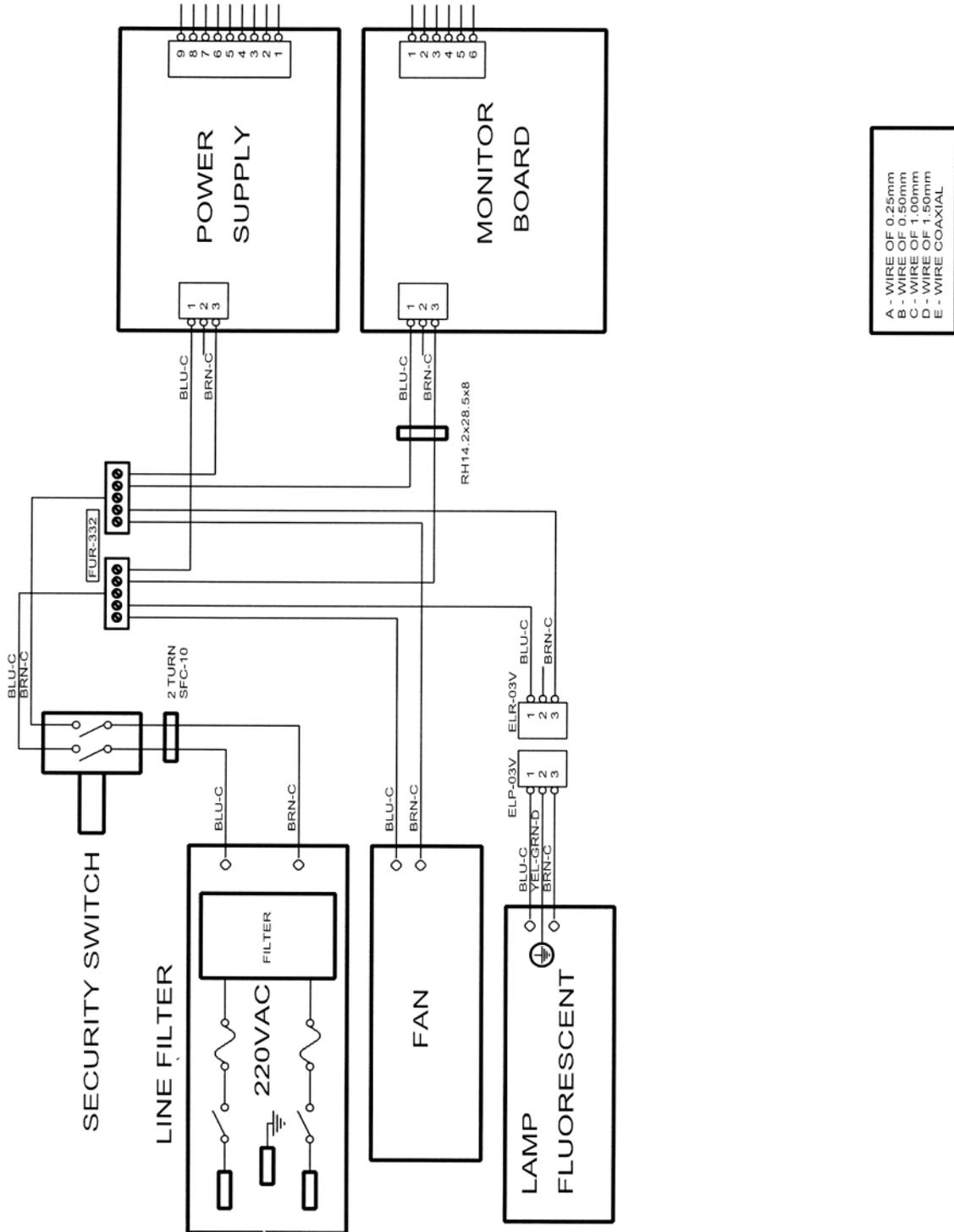
9.17 INTERFACE – MECHANISM PARTS (2)

CODE	DESCRIPTION
11	FUR-641 LOWER BLOCK
12	FUR-642 SPECIAL BOLT, TEMPERED
13	FUR-643 BOLT Ø8X21
14	FUR-644 BALL JOINT
15	FUR-645 UPPER BLOCK
16	FUR-649 WASHER Ø22X8,5X2
17	-- NUT DIN985 – M8
18	FUR-647 GUIDE
18	FUR-648 GUIDE STOPPERS
20	FUR-646 ALUMINIUM RAILS (KIT)
21	-- SCREW DIN7991 – M8X30
22	FUR-650 SEPARATOR SLEEVE
23	-- NUT DIN985 – M16

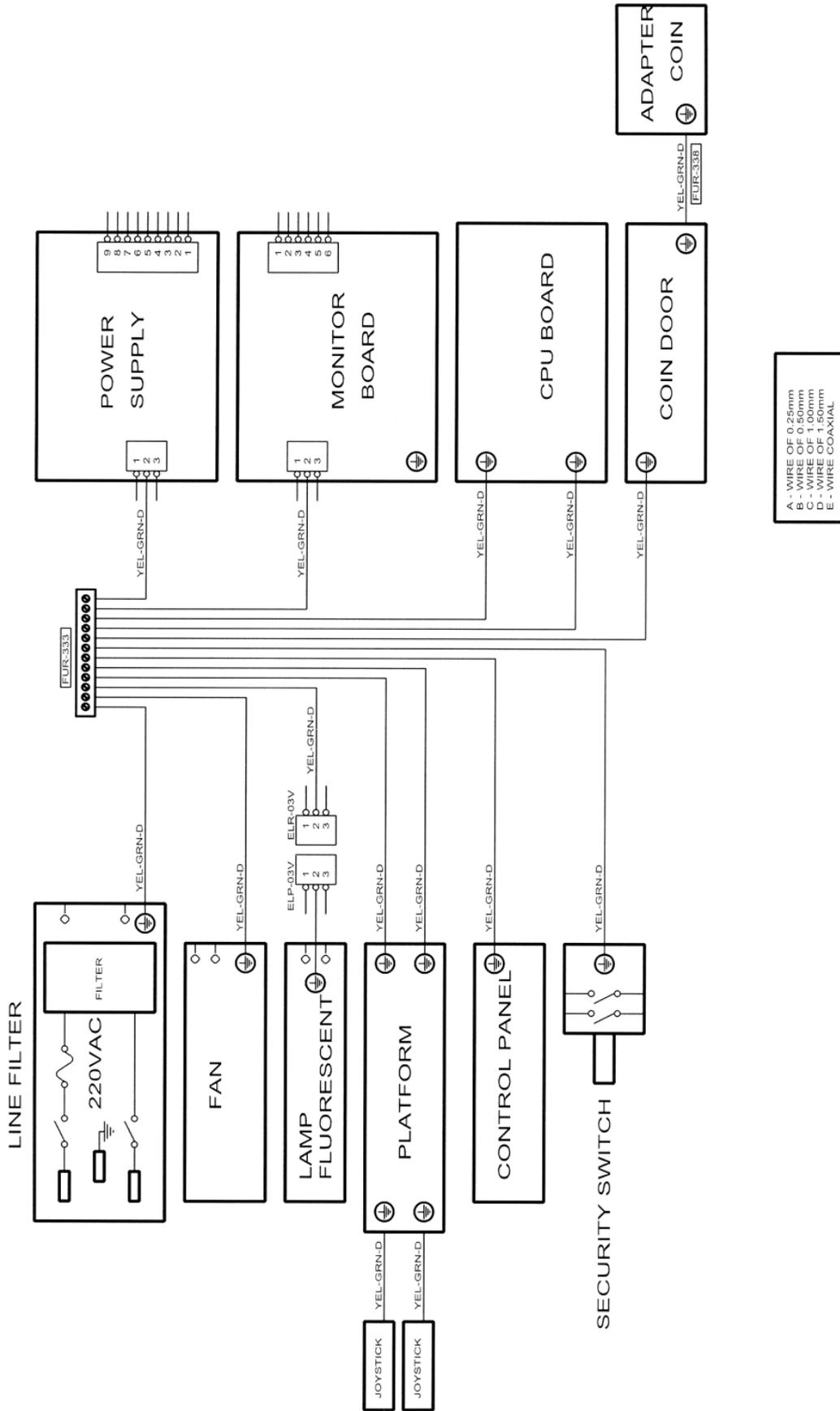


10. WIRING DIAGRAMS

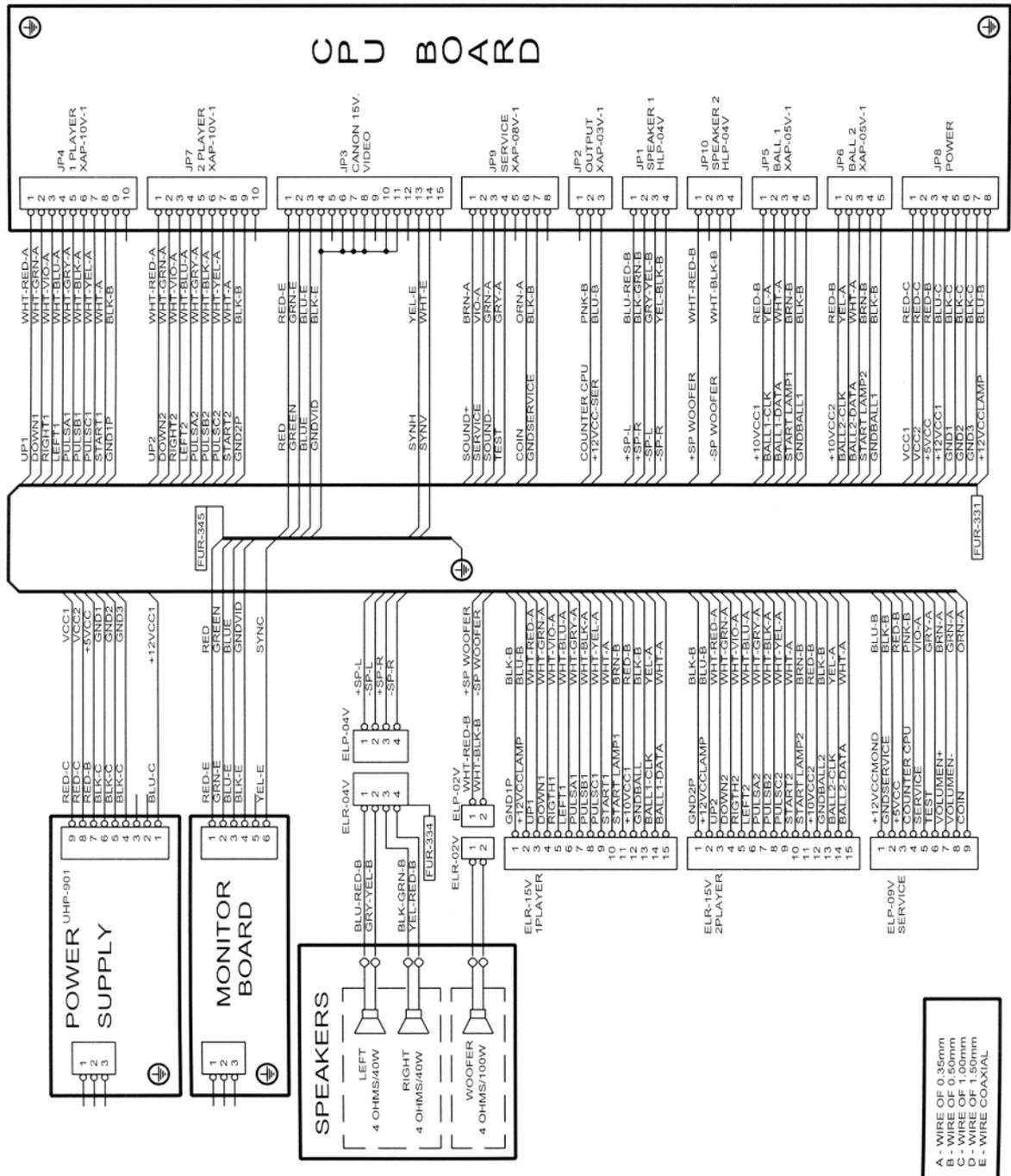
10.1 POWER WIRING



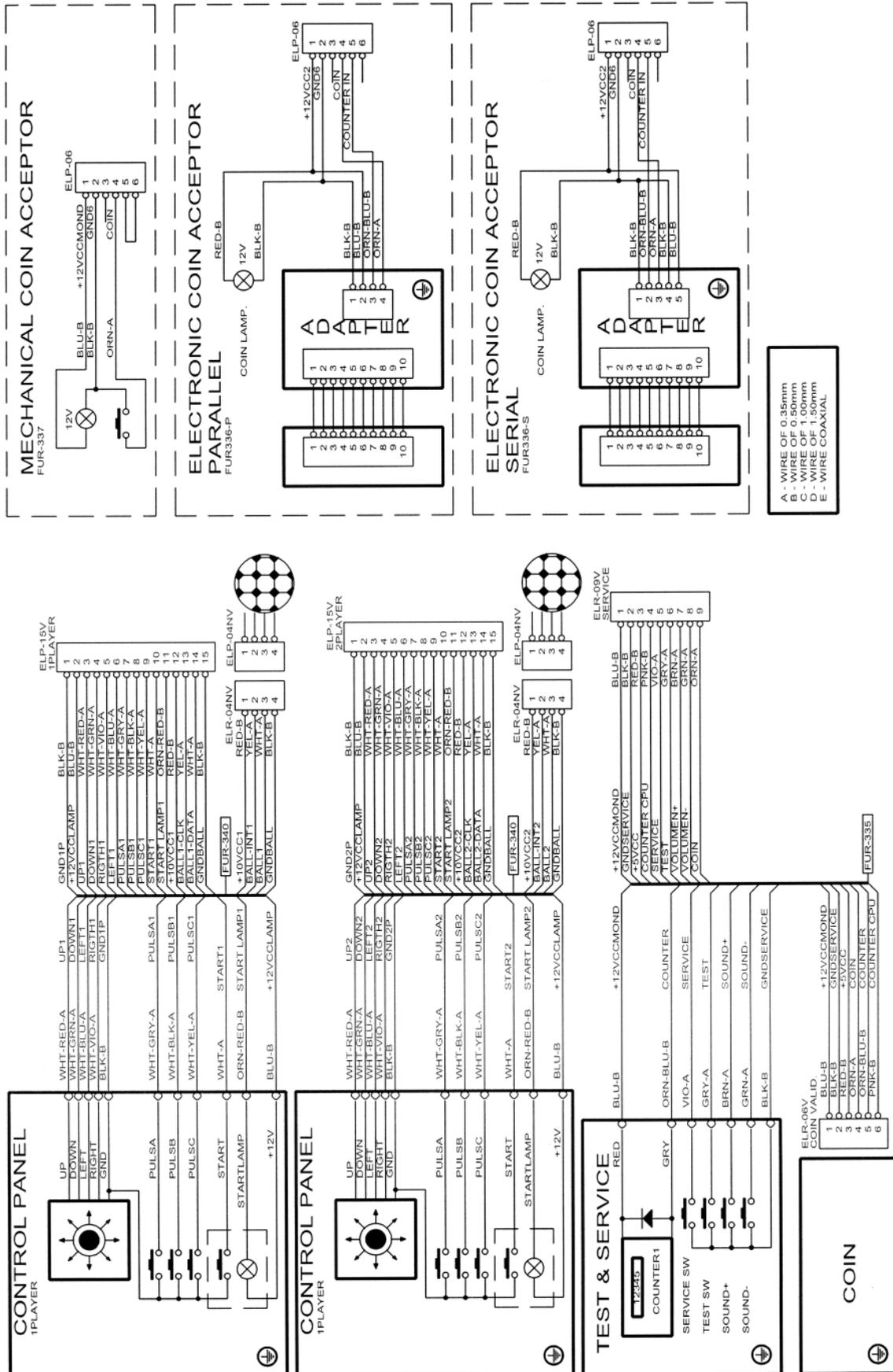
10.2 GROUND WIRING



10.3 GENERAL WIRING (1)

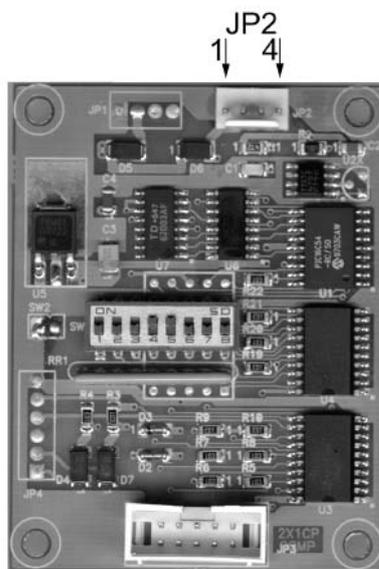


10.4 GENERAL WIRING (2)



11. CREDIT DISTRIBUTOR SETUP

JP1:Not used
JP2:Cabinet
JP3:Coin controller
JP4:Not used



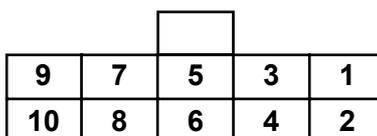
JP3

Connector JP2: This connector should be connected to ATV PCB wiring

JP2	Description	Values	Source/Destination
Pin 1	Input GND	GND	GND power supply
Pin 2	Input VDC	+12 VDC	DC power supply
Pin 3	Counter output	0/+5/+12 VDC	Coin counter
Pin 4	Credits output	+5/0 VDC	Credits for CPU

Connector JP3: Input connector of electronic coin controller. Setup per channel.

PIN	Signal	Active
1	0V	0V
2	+12VDC	+12VDC
3	Output 5	0V
4	Output 6	0V
5	- - -	
6	Lock	High
7	Output 1	0V
8	Output 2	0V
9	Output 3	0V
10	Output 4	0V



(As seen from components side)

Gaelco Football

PROGRAMMING OF COIN CONTROLLERS

Controllers supported: COIN CONTROL C-120
 NRI G-13.6000
 MARS CASHFLOW 330

MARS 330/S 212	OPA	OPB	OPC	OPD	OPE	OPF
NRI G-13.6000	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6
Coin Control C 120	Coin 1	Coin 2	Coin 3	Coin 4	Coin 5	Coin 6
PIN Controller:	7	8	9	10	3	4
USA	= =	= =	= =	1 \$	50 Ct	25 Ct
Great Britain	= =	1 £	50 Pen	= =	20 Pen	10 Pen
Australia	= =	= =	5 \$	= =	2 \$	1 \$
Switzerland	= =	= =	5 Fr	= =	2 FS	1 FS
Sweden	= =	10 Kr	5 Kr	= =	= =	1 Kr
Norway	20 Kr	10 Kr	5 Kr	= =	= =	1 Kr
EURO €	2€	1€	50c	= =	20c	10c

ELECTRONIC COIN ACCEPTOR RM5 COMESTERO

Operating mode: serial communication. An interface card (RM927) is delivered with the coin acceptor in order to adapt the connections between this unit and the CPU board.

Coin setting:

Chanel	OUT 1	OUT 2	OUT 3	OUT 4	OUT 5	OUT 6
coin	2€	1€	50c		20c	10c

The coins accepted are: **2€, 1€, 50c, 20c, 10c.**

Game price: Combinations of 6 dip switches (Sw1 a Sw4) are used to define the price of the game, as shown in the table.

Extra credits (bonuses): Combinations of Sw5 y Sw6 are used to program bonuses (free games).

The machine gives a bonus every time the player inserts the amount shown in the table.

CREDITS Table					BONUS Table (Sw5/Sw6)			
Value/Credit	Sw1	Sw2	Sw3	Sw4	off/off	on/off	off/on	on/on
By default	OFF	OFF	OFF	OFF				
10c	ON	OFF	OFF	OFF	No bonus	20c	30c	40c
20c	OFF	ON	OFF	OFF	No bonus	40c	60c	80c
30c	ON	ON	OFF	OFF	No bonus	60c	90c	1,2€
40c	OFF	OFF	ON	OFF	No bonus	80c	1,2€	1,6€
50c	ON	OFF	ON	OFF	No bonus	1€	1,5€	2€
60c	OFF	ON	ON	OFF	No bonus	1,2€	1,8€	2,4€
70c	ON	ON	ON	OFF	No bonus	1,4€	2,1€	2,8€
80c	OFF	OFF	OFF	ON	No bonus	1,6€	2,4€	3,2€
90c	ON	OFF	OFF	ON	No bonus	1,8€	2,7€	3,6€
1€	OFF	ON	OFF	ON	No bonus	2€	3€	4€
1,1€	ON	ON	OFF	ON	No bonus	2,2€	3,3€	4,4€
1,2€	OFF	OFF	ON	ON	No bonus	2,4€	3,6€	4,8€
1,3€	ON	OFF	ON	ON	No bonus	2,6€	3,9€	5,2€
1,4€	OFF	ON	ON	ON	No bonus	2,8€	4,2€	5,6€
1,5€	ON	ON	ON	ON	No bonus	3€	4,5€	6€

SWITCH SETUP FOR EUROS

SW1: Always OFF

SW2: Always OFF

SW3: Not used

SW4-SW5: Extra Credits (Bonuses)

Combinations of this two dip switches are used to program bonuses (free games) according to the scale shown in the table. The table varies according to the game price selected.

SW6-SW7-SW8: Game Price

These dip switches are used to choose the game price. The bonus table shows the combination of game prices with the payments that allow the player to obtain extra games (bonuses).

(*) Add another credit for the second lap.

CREDITS table				BONUS table (SW4/SW5)			
SW6	SW7	SW8	Value/Credit	OFF/OFF	ON/OFF	OFF/ON	ON/ON
OFF	OFF	OFF	10c	No bonus	50c	40c	20c
ON	OFF	OFF	20c	No bonus	50c	40c	20c
OFF	ON	OFF	30c	No bonus	*50c	30c	60c
ON	ON	OFF	40c	No bonus	2 €	1,6 €	80c
OFF	OFF	ON	50c	No bonus	2,5 €	2 €	1 €
ON	OFF	ON	80c	No bonus	2 €	1,6 €	80c
OFF	ON	ON	1 €	No bonus	2,5 €	2 €	1 €
ON	ON	ON	1,2 €	No bonus	2 €	1,6 €	2,4 €

APPLICATION EXAMPLES

Game price: 50c, NO BONUS

Switch set up:

SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
OFF	ON						

Game price: 50c, BONUS FOR 2 € (4 credits + 1 credit free)

Switch setup:

SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
OFF	OFF	OFF	OFF	ON	OFF	OFF	ON

Game price: 1€ , NO BONUS

Switch setup:

SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
OFF	OFF	OFF	OFF	OFF	OFF	ON	ON

Game price: 1€ , BONUS FOR 2,5€ (2 credits + 1 credit free)

Switch setup:

SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
OFF	OFF	OFF	ON	OFF	OFF	OFF	ON

SWITCH SETUP FOR OTHERS CURRENCIES

SW1: Always OFF

SW2: Coin multiplication factor

SW2=OFF Euro €, and rest of Europe	Chanel:	1	2	3	4	5	6
	Value:	X20	X10	X5	X4	X2	X1
SW2=ON (USA)	Chanel:	1	2	3	4	5	6
	Value:	X20	X10	X8	X4	X2	X1

SW3: Not used

SW4-SW5: Extra Credits (Bonuses)

Combinations of these two dip switches are used to program bonuses (free games) according to the scale shown in the table. The table varies according to the game price selected.

SW6-SW7-SW8: Game Price

These dip switches are used to choose the game price. The bonus table shows the combination of game prices with the payments that allow the player to obtain extra games (bonuses).

(*) Adds another credit for the second lap.

CREDITS table				BONUS table (SW4/SW5)			
SW6	SW7	SW8	Value/Credit	OFF/OFF	ON/OFF	OFF/ON	ON/ON
OFF	OFF	OFF	1	0	5	4	2
ON	OFF	OFF	2	0	5	4	2
OFF	ON	OFF	3	0	*5	3	6
ON	ON	OFF	4	0	20	16	8
OFF	OFF	ON	5	0	25	20	10
ON	OFF	ON	8	0	20	16	8
OFF	ON	ON	10	0	25	20	10
ON	ON	ON	12	0	20	16	24

APPLICATION EXAMPLES

Example 1

Switzerland	SW1 =	OFF	SERIAL input. (5 FS via PIN 5) = (Channel 3)
	SW2 =	OFF	Input values x1 x2 — x5
	SW3 =		Not used
	SW4 =	OFF	EXTRA credit on the 20th pulse (=20FF)
	SW5 =	ON	
1 FF = 1 pulse	SW6 =	OFF	5 pulses / 1 credit.
	SW7 =	OFF	
	SW8 =	ON	
RESULTS:	5 FS / 1 credit; 20 FS / 5 credits		

Example 2

Sweden	SW1 =	OFF	SERIAL input. (5 Kr via PIN 5) = (Channel 3)
	SW2 =	OFF	Input values x1 x2 — x5
	SW3 =		Not used
	SW4 =	OFF	EXTRA credit on the 20th pulse (=20FF)
	SW5 =	ON	
1 Kr = 1 pulse	SW6 =	OFF	5 pulses / 1 credit.
	SW7 =	OFF	
	SW8 =	ON	
RESULTS:	5 Kr / 1 credit; 20 Kr / 5 credits		

Example 3

Norway	SW1 =	OFF	SERIAL input. (5 Kr via PIN 5) = (Channel 3)
	SW2 =	OFF	Input values x1 x2 — x5
	SW3 =		Not used
	SW4 =	ON	EXTRA credit on the 25th pulse (=20Kr)
	SW5 =	OFF	
1 Kr = 1 pulse	SW6 =	OFF	10 pulses / 1 credit.
	SW7 =	ON	
	SW8 =	ON	
RESULTS:	10 Kr / 1 credit; 25 Kr / 3 credits		

Example 4

Great Britain	SW1 =	OFF	SERIAL input. (10 Pen via PIN 8) = (Channel 6)
	SW2 =	OFF	Input values x1 x2 — x5
	SW3 =		Not used
	SW4 =	ON	EXTRA credits on the 5th pulse (=50 Pen)
	SW5 =	OFF	and 10th pulse (1 £)
1 Pen = 1 pulse	SW6 =	OFF	3 pulses / 1 credit.
	SW7 =	ON	
	SW8 =	OFF	
RESULTS:	30 Pen / 1 credit; 50 Pen / 2 credits; 1 £ / 5 credits		