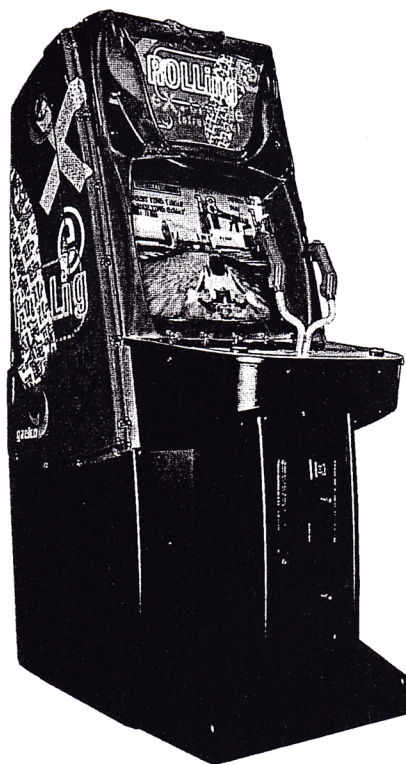




ROLLING EXTREME OPERATOR'S MANUAL



UPRIGHT MODEL

About this product

Thank you for purchasing this Gaelco S.A. product. This manual explains how to correctly and safely operate your game machine. Failing to operate the machine correctly could result in malfunction or accident, so please read the manual carefully before commencing operation

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

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Modifications and/or alterations of the ROLLING EXTREME game machine with kits or parts not supplied by Gaelco S.A. may void de warranty.

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

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FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part A of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operating in a commercial environment. This equipment uses, and can radiate radio frequency energy, if not installed and used according to the instruction manual, and may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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1. GENERAL INFORMATION

1.1 Manufacturer and machine details

Manufacturer	Gaelco, S.A.
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Country	SPAIN
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Fax	+ + 34 93 417 28 02
e-mail	gaelco@gaelco.com

Name	ROLLING EXTREME
Model	UR

1.2 Legislation references

ROLLING EXTREME complies with the following Directives:

- 89/366/CEE Electromagnetic Compatibility Directive and its modifications 91/263/CEE, 92/32/CEE and 93/68/CEE.
- 72/23/CEE Low Voltage Directive

1.3 Technical Service

Technical Service is carried out by Gaelco S.A. or its Distributors.

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 customer, who will consequently become the new “manufacturer” and must operate in compliance with the EMC directive.

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

2.1 Game Description

ROLLING EXTREME is a machine for class A video game, which operates by inserting coins or tokens.

The game has its inspiration in a risk sport which is practised today in the United States of America, known as street luge. In it the riders slide down a stiff slope, lying flat on a four wheeled platform (luge) which is steered by displacing the weight of the body and through the action of the feet.

The game consists of a race against the clock in which the player competes simultaneously with other virtual racers at the same time as avoiding obstacles all along the course. To place himself and to continue with the game, the player should arrive at the finish within a predetermined time.

The player is involved in the contest through the feedback delivered by an interactive handlebar and the exciting images which are projected in real time.

2.2 Dimensions and Weight

Width 765 mm Depth 1136 mm High 1950mm Net Weight 160 Kg .

Crated dimensions and Shipping Weight (using standard euro palet):

Width 800 mm Depth 1200 mm High 2100 mm Weight 175 Kg approx.

2.3 Power Supply

Power Supply Unit	Monitor SB 180 PL/R
Operating Power	220-230 VAC, 50 Hz
Output	+5VDC 20A +12VDC 8A

2.4 Monitor

28" Hantarex Dual Frequency 15-25KHz (working at 25KHz)

2.5 PC Board

PCB Gaelco ROLLING EXTREME

2.6 Controls

Start Button

View Change Button

Handlebar with two grips, each one incorporating two buttons

2.7 Attachments

One Operator's Manual
Two coin box keys
Two rear door keys
One power cord
One linking cord

3. WARNINGS

3.1 Siting of the machine

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 a place exposed to vibration. The machine must be installed on a level surface with levellers properly adjusted.
- In locations near ventilating holes. Doing so could cause internal temperature to rise excessively, resulting in equipment failure.
- Near hazardous substances



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

3.2 Improper uses

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

- This machine must be used only in residential or commercial areas;
- Do not use the machine as support for other objects;
- Do not use the machine in the vicinity of containers holding liquids or liquid dispensing equipment. In general, precautions should be taken against spilling liquids of any kind whatsoever over the machine;
- Ventilation slots must be not obstructed, and the machine must be positioned so as to leave a distance of at least 10cm (4") from possible obstructions;
- Do not run the power cord across passages where pedestrian's feet could get caught on the cord.

The machine should not be used by persons under the influence of alcohol or who are not in good health.

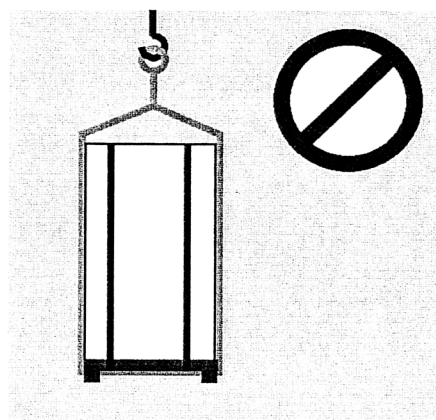
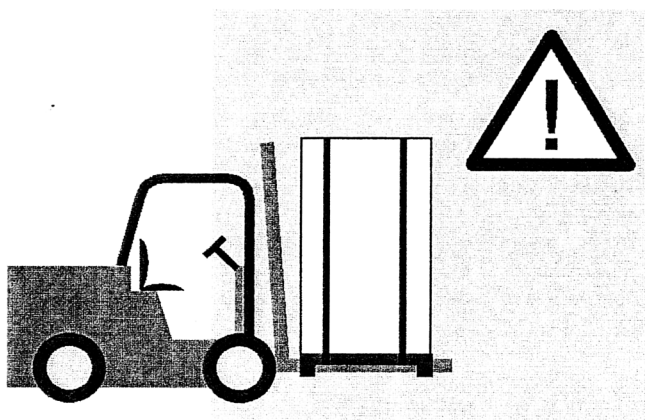
4. HANDLING



This product should be set up, moved or transported by a trained person. Failing to do so could result in injury or product damage. The machine contains parts which are sensitive to vibration and impact. The Printed Circuit Board (PCB) inside the machine uses precision components. You should be very careful when moving or transporting the machine.

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 160 Kg (net weight 140 Kg). The machine must remain packet on its pallet or must be suitably secured to the means of transport.



Unloading of the packed machine on its pallet is permitted only with a forklift truck.

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 Unpacking

The ROLLING EXTREME game cartons should be carefully inspected upon receipt to ensure that the game is complete and was delivered in good conditions.

Shipping damage may void warranty. In case of shipping damage, contact your Distributor and the Transportation Carrier immediately.

4.4 Movement of the unpacked machine

The machine can easily be moved by using its wheels. When moving the game machine, always return the levellers to the extreme up position.

When moving the machine on sloping or uneven surfaces or across steps, proceed with extreme caution to avoid the risk of being crushed!
The cabin is not equipped with lifting rings. It is therefore absolutely prohibited to lift it with ropes or belts!!

5. INSTALLATION AND SETTING UP

When setting up, be sure to fasten the game machine securely. If the unit is not fastened securely, it could be damaged by rocking or could result in injury

5.1 Inspection



The operations described below must be done with the machine unplugged from the electrical power supply system

Inspect the game cabinet by doing the following:

- Examine the cabinet exterior for dents, chips, or broken parts
- Open the rear panel that accesses the interior of the machine. This operation should be done only by a trained person. The keys can be found in a bag fastened to the joystick's handle. After turning the key to the left pull the panel towards you until it leans enough to grip it with both hands by the sides and pull it upwards. In this way it will be freed from the guide that holds it at the bottom. Do not lean the panel out too much without freeing it from the guide, because this could break the chipboard where it is screwed.
- Unlock and open the rear panel -keys are attached behind the coin box door- and inspect the interior of the cabinet
- Check that all the plug-in connectors (on the cabinet harnesses) are firmly plugged in. Do not force connector together. The connectors are keyed so they fit only in the proper orientation. A reverse edge connector can damage the PCB and will void your warranty.
- Inspect the major sub-assemblies, such as the video display monitor, PCB, steering assembly, and speakers. Make sure that they are mounted securely and that all ground wires are firmly connected.
- Inspect the power supply to ensure that is secure.
- Inspect the power cord to insure that there is not cuts or breaks in it.

To clean the game machine, wipe with a soft cloth damped in a neutral detergent and wrung out. Using organic solvents such a thinner may decompose the material.

5.2 Setting up precautions

The operations described below should carried out by trained persons. AC power must always be turned OFF, and the game unplugged, before replacing any parts or connecting/disconnecting connectors.

- Check that the area chosen is distant from heat sources, and that the machine, when fully installed, will not obstruct emergency exits.
- Adjust the leg levellers by hand so they make contact with the floor. Continue to adjust levellers until machine is level and stable on the floor. After adjustments are complete, secure the height of the leg levellers.
- Since the machine is a heavy object, its leg levellers should be retracted when moving the machine over the floor.
- Once the game machine is set, plug the power cord into a grounded receptacle that provides 220-230 VAC at 50 Hz.
- The Cabinet Monitor must be grounded with a securely connected ground plug. This will ensure safe operation as well as compliance with the applicable FCC and UL regulations.
- The power supply range is between 220-230 VAC. Be sure to use within the specified voltage range
- When unplugging the game from an electrical outlet, always grasp the plug, not the wire. Do not plug or unplug the power cord with wet hands
- If the power cord becomes damaged -core exposed, broken, etc- please contact your nearest dealer for replacement. Using a damaged power cord could result in fire or electrical shock
- The game machine includes areas of high voltages. Care must be taken at all times to avoid electrical shock whenever inspecting or adjusting the game, particularly around the monitor

5.3 Switching the machine ON

The switch is located at the bottom right rear of the cabinet monitor. Switch to position "I" and the machine should turn ON.

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.

5.4 How to change the fuse



The operations described below must be carried out only by a trained person

Previously to any operation turn the main switch OFF and unplug the power cable. The fuse holder is on the filter box, between the power cord socket and the power switch.

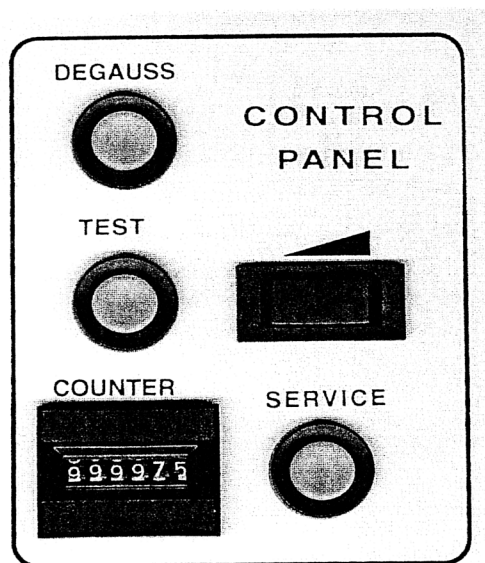
- Unplug the power cord from the filter box
 - Pull out the fuse holder
 - Remove the fuse and check it
 - Replace the fuse if necessary (Europe: 3A/250 V)
 - Attach the fuse holder
 - Plug the power cable
-

6. PROGRAMMING THE MACHINE AND TEST MODE

When the machine is switched on an automatic check of the memories and other connected systems is made. This coincides with the presentation on the screen of the adjustment card (TEST SCREEN), where faults or failures in the system are indicated if they occur. A label on the top of the screen indicates if the PCB is working on Upright or Sit Down mode, depending the option selected. After a few seconds, if no error occurs, it passes automatically to show the game. The interface is also adjusted dynamically each time that a machine is switched on.

Any other adjustment should be made in TEST MODE.

The access to TEST MODE as for the other controls (monitor, global volume, etc.) is made from the CONTROL PANEL which is situated behind the coin box door, and consists of a button to access TEST MODE, a SERVICE button, and a commuter to adjust the GLOBAL VOLUME (raise, lower) of the loud speakers.



Pushing the SERVICE button introduces game credits without moving the coin counter. Pressing the TEST button enters TEST MODE, where the game variables, such as level of difficulty, linkage of machines, etc., can be adjusted. Handlebar adjustment and a check on controls can also be made.

The TEST MODE is a rotary system of 7 menus (screens).

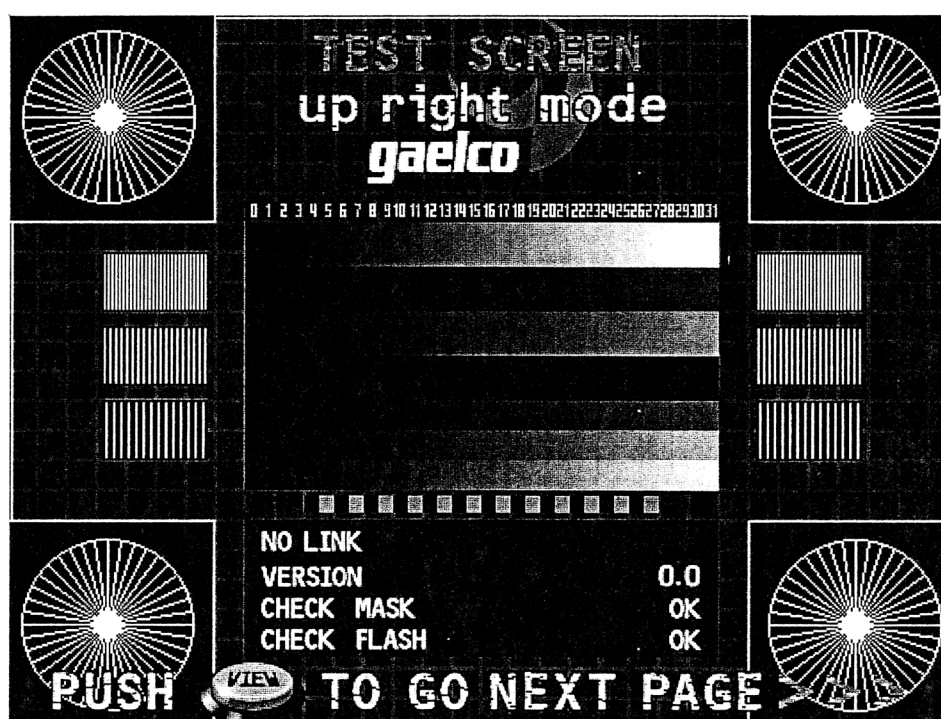
- TEST SCREEN
- INPUT TEST
- GAME ASSIGNMENTS
- OUTPUT TEST
- BOOK KEEPING 1 / 2
- BOOK KEEPING 2 / 2
- EXIT SCREEN

Turning the handlebar towards the left or right allows to look over the main menu from above to below. The on/off condition of each parameter can be changed by using the buttons of the right or left grip. If a parameter has different levels the rising or lowering of level is done in the same way.

To make sure that the changes that have been made are kept permanently , you must not switch off the machine without first leaving TEST MODE with the option EXIT AND SAVE CHANGES of the EXIT SCREEN.

6.1 Screen Adjustment

This screen is the ADJUSTMENT CARD, which should be used to suitably adjust the monitor. It shows you, also, the following information:



NO LINK / LINK MASTER / LINK SLAVE To link two machines, one of them must be defined as master and the other one as slave. When a machine is on link mode, the state of waiting for connection is indicated on the low side of the screen. If the communication can not be established the message on the screen is "no link".


VERSION	software version
CHECK MASK	checksum of the mask memory
CHECK FLASH	checksum of the RAM memory

To jump from this screen onto the next is necessary to push the VIEW button.

6.2 Input Test

The INPUT TEST screen enables you to check the correct functioning of the following controls:

```

— INPUT TEST —
start button:           off
view change button:    on
right brake:           off
left brake:            off
right smash:           off
left smash:            off
adc min max            0.0
adc center:            00
coin chute:            off
service:               off
PUSH  TO GO NEXT PAGE >>>

```

- | | |
|----------------------|---|
| • start button | placed on the left side of the control panel |
| • view change button | placed on the right side |
| • right brake | red trigger on the right handle |
| • left brake | red trigger on the left handle |
| • right smash | green button on top of the right handle |
| • left smash | green button on top of the left handle |
| • adc min max | handlebar displacement test |
| • ADC centre | handlebar centring test |
| • coin chute | entry of de Coin Box |
| • service button | placed on the control panel behind de coin door |

All these controls ought to be normally at OFF. When they are operated the message ON appears on the screen. The displacement of the handlebar (adc min max) goes from -1.0 (left hand stopper position) to 1.0 (right hand stopper). The centre indication should be 0 when the handlebar is placed in the central position.

To go onto the next screen press the VIEW button.

6.3 GAME ASSIGNMENTS

On this screen you can change the following game parameters :


— GAME ASSIGNMENTS —

```

> 0 coins      > 0 credits
0 credits      (free play)

cabinet mode      : upright
link type         : master
advertise sound   : yes

difficulty        : 00 easy
  
```

PUSH  TO GO NEXT PAGE >>>

COIN BOX / CREDITS ADJUSTMENT

To adjust the number of credits (games) that the machine gives for a defined number of coins, the parameter is chosen with...

If the number of coins is set at zero, the machine remains adjusted for FREE PLAY.

It is also possible to program the number of coins required to continue the game, irrespective of the initial price to start.

When two players are racing and one of them does not arrives to the finish line, then, the option **continue to play?** appears. It always consumes one credit despite any coin programming.

CABINET MODE

By means of this option you can choose the type of cabinet to be used. The Rolling Extreme PCB can work either in the **upright** version, where the player plays standing up, and the **sit down** version, where the player plays seated.

LINK TYPE

To link two machines you have to assign a different identity to each one of them. One should be master and the other slave. It is recommended that the left machine is defined as master and the right machine as slave.

If there is no interconnection the option **no link** will be selected.

ADVERTISING SOUND

By means of this option you can program the machine for sound production (or not) when it is in exhibition mode.

DIFFICULTY

The game has 16 levels of difficulty:

- 00 – 03 easy (3 levels)
- 04 – 07 medium difficulty (3 levels)
- 08 pre-set difficulty (selected in the absence of other choice)
- 09 – 11 hard difficulty (3 levels)
- 12 – 15 hardest difficulty (3 levels)

The difficulty can be adjusted using the handlebar grip buttons. Those of the right increase the difficulty and those of the left reduce it. These options have some effect on the time available to the player for finishing the race.

To go onto the next screen press the VIEW button.


6.4 OUTPUT TEST

This screen allows you to check the operation of the output signals from the CPU. On LAMP START option the lamp of the Start button flashes. Pushing the START button into the position COIN COUNTER, the corresponding output is activated.

— OUTPUT TEST —

> lamp start
coin counter (push )

bass sound channel
right sound channel
left sound channel
rear sound channel

PUSH  TO GO NEXT PAGE >>>

The line **sound rear channel** appears when the machine is in **sit down** mode. There is not independent adjustment of volume for each sound channel.


To go onto the next screen press the VIEW button.

6.5 BOOK KEEPING 1/2

This screen displays data for the activity of the machine.

— **BOOK-KEEPING** ————— **1 / 2**

> coins	:	0	
coins	credits	:	0
service	credits	:	0
total	credits	:	0
games 1 player	:	0	
games 2 players	:	0	
continue play	:	0	

PUSH  TO GO NEXT PAGE >>>

Reading from top to bottom, the following data are displayed:

- Coins entered
- Credits owed for the coins entered
- Credits entered with the SERVICE button
- Total number of credits
- Number of games of an individual player
- Number of games of two simultaneous players (Link Mode)
- Number of games on continue mode

To go onto the next screen press the VIEW button.

6.7 BOOK KEEPING 2 / 2

This screen displays time data for the activity of the machine

— **BOOK-KEEPING** ————— **2 / 2**

> total time	: 0000
play time	: 0000
average time	: 0000
longest time	: 0000
shortest time	: 0000

PUSH  FOR NEXT PAGE >>>

Reading from top to bottom:

- Total time the machine is connected in hours and minutes
- Total time the machine is busy in hours, minutes and seconds
- Time of the average credit in minutes and seconds
- Time of the longest credit
- Time of the shortest credit

To go onto the next screen press the VIEW button.


6.7 EXIT SCREEN


On this screen the following options are displayed:

— **EXIT SCREEN** —

exit without save changes
 exit and save changes

> reset ranking **[deleted]**
 reset book-keeping

PUSH  FOR CONFIRM

PUSH  FOR NEXT PAGE >>>

Reading from top to bottom:

- Exit from Test Mode without keeping the changes
- **Exit from Test Mode retaining memory of the changes that have been made in the previous screens**
- Erase data of the game record tables that accumulate from day to day.
- Erase the book-keeping data. Choose the option RESET BOOK KEEPING and push the START button.

Be careful! Whatever the changes that have been selected in the previous screens will be eliminated unless you exit from this final screen using the option **exit and save changes**, confirmed with the START button as indicated on the screen with the message **push START to confirm**.

7. HOW TO PLAY

7.1 GAME ACCESS

Put in sufficient coins or tokens to start the game. Once the price of the game is covered the message PUSH START BUTTON appears on the screen.

The number of games that can be played is shown via the message CREDIT: _ . When the number of coins doesn't coincide with the number of credits, the message is CREDIT: _ / _ . The number that appears to the left shows the coins already put in, whilst the number to the right shows the amount that have still to be inserted.

The message PUSH START BUTTON appears when sufficient coins have been put in. This message is the invitation to begin the initial phase of the game. As soon as the START button is pressed the circuit selection menu appears on the screen (CHOOSE A ROAD). Tilting the handlebars allows to select one of the three circuits available:

SPARKS ROAD	(recommended circuit for beginners)
PURE SPEED	(medium difficulty circuit)
ADRENALIN ROAD	(hard difficulty circuit)

Once a circuit is chosen the selection of rider appears on the screen. The player can choose between four riders, three men and a woman, with distinctive personalities. The selection is made in the same way as the previous screen. From this moment the game begins.

7.2 GAME CONCEPT

The game is inspired on a risk sport practised in the United States of America, known as *street luge*. In it the riders slide down a steep slope lying on a four wheeled platform that they steer by moving the weight of the body and by using their feet.

The game ROLLING EXTREME consists of a race against the clock, in which the player competes simultaneously against other virtual riders while avoiding obstacles which appear all along the course. To gain a place and follow on in the contest, the player should get to the finish line within a fixed time. When you win one phase of the game you pass to the next, until you have finished all the available circuits. If you succeed in this, and if your time is within the Top 20 of those persons who have played up to that time, you can add your initials and your record will remain written in this list.

7.3 CONTROLS

The player has an interactive handlebar provided with two grips, each of which has a red coloured trigger and a green push button. Tilting the handlebar to left or right steers the vehicle, helped by the triggers to force a turn on the bends. The push buttons are used to get other riders out of the road by using the arms.

7.4 INFORMATION ON THE SCREEN

Data is made available so that the player can control his situation during the race. The following information appears:

Upper left zone:

BEST TIME	Absolute record in that phase (shortest time)
RACE TIME	Cumulative time (race chronometer)

Upper central zone:

TIME	Time to finish a stage of the race
CHECK POINT	Appears when the player makes a flying finish

Upper right zone

SPEED	Speed in Km/hr.
YOU 5/9	Classification of the player with respect to those riders who remain in the race (in this case the player is 5 th of 9)

7.5 TRICKS OF THE GAME

The player not only drives but has to avoid obstacles and anticipate the actions of the virtual riders, who will try to push him or her out of the road when they are situated at his/her side. In this case the best defence is a good attack and to do this there are the green push buttons.

In each circuit there is a CHECK POINT to which the player ought to arrive within a fixed time. When the race begins a count down is started. When a check point is crossed extra time is added and the count down continues. The player is classified if he reaches the finishing line before using all the available time; if not the game is over. When the player is classified, the unused time of this phase is added to that for the following one, given that each circuit consists of two phases. The time remaining after the second phase, however, is not transferred to other circuit.

Whatever scrape or collision causes a small loss of time, which is shown on the screen by means of a simulated wheel loss. The interactive handlebar vibrates each time that the player comes off the track.

The player has two types of assistance to improve his position, which are announced with icons at various points of the course. The player has to be reasonably clever to pass over them and get the corresponding advantage, which can be:



Super speed



Super smash icon

The acceleration lasts 3 seconds whilst the capacity for a hit is retained until used. The riders which are smashed with the red glove remain eliminated from the race. To be registered on the list of the 20 best players, the player has to complete the three circuits within a better time than the last of the players already registered.

8. HOW TO LINK TWO MACHINES

ROLLING EXTREME allows you to connect two machines so that two players can compete directly. To do this the following steps should be taken:

- Make sure that the connection cable is correctly plugged into both machines.
- Switch on both machines.
- Press the TEST button on the CONTROL PANEL of both machines.
- Go to the GAME ASSIGNMENTS on both machines (See section 6.3 of this manual)
- Choose the option LINK TYPE on both machines, and define the condition of each one, **Master** or **Slave**. Recommended:

Left Cabinet	→	Master
Right Cabinet	→	Slave

- Go to the EXIT SCREEN, choose EXIT AND SAVE CHANGES option and validate with START button.

When you want to disconnect the two machines, you should unplug the connection cable and proceed in the same way, going into TEST MODE, GAME ASSIGNMENTS screen and choosing NO LINK in the LINK TYPE parameter for both machines, then exit from de Test Mode with the option EXIT AND SAVE CHANGES of the EXIT screen.

9. MAINTENANCE


In all maintenance operations these directions should always be observed,

- When replacing parts, be sure to use parts of the correct specifications.
- Adjustment is required whenever the game PCB, joystick or potentiometers are changed
- Do not attempt to repair the PCB. It contains sensitive chips that could easily be damaged by even the small internal voltage of a meter. Always return the PCB to your distributor for any repairs.

9.2 Adjustment of the interactive handlebar

To test the correct operation of the interface please go to the INPUT TEST (see section 6).

```

— INPUT TEST —
> start button:           off
  view change button:     on
  right brake:            off
  left brake:             off
  right smash:            off
  left smash:             off
  adc min max             0.0
  adc center:             00
  coin chute:            off
  service:               off
PUSH  TO GO NEXT PAGE >>>
  
```

The minimum and maximum values of the analogic/digital converter are shown in the line **adc min max**. Under normal conditions, this value should be -1.0 when the handlebar is fully turned to the left limit. When the handlebar is turned completely to the right the value should be 1.0. If the handlebar is at the limit of either side and the value does not attain to 1.0 (with the arithmetic sign that corresponds to left or right), the potentiometer is not working properly.

The line **adc centre** is used to check that the value zero of the analogic/digital converter corresponds with the central position of the handlebar. If the handlebar is physically centred (vertical stem position, at 90° to the console) and the value is not zero, this is an indication that the potentiometer is not correctly aligned with respect to the handlebar.

9.2 Basic Troubleshooting

<u>PROBLEM</u>	<u>POSSIBLE SOLUTION</u>
Turn on the cabinet and nothing appears	<ul style="list-style-type: none"> ✓ Check wiring connector connections ✓ Check fuse of the line filter ✓ Check voltage value for +5VDC
Monitor screen is black and no picture or distorted picture	<ul style="list-style-type: none"> ✓ Check for faults on monitor ✓ Check for disconnected cable ✓ Check for faulty PC Board
The colour or the image on the monitor screen is incorrect	<ul style="list-style-type: none"> ✓ Enter Test Mode (section 6) and then enter Screen Test (6.1) making the necessary adjustments.
No sound or the quality is poor	<ul style="list-style-type: none"> ✓ Enter Test Mode and check the Sound Check the speakers and their connections ✓ Check voltage value for +12VDC ✓ Check the volume button on the Control Panel
No response from the Handlebar	<ul style="list-style-type: none"> ✓ Check that the potentiometer belonging to the handlebar is functioning correctly. ✓ Check the connections between the handle potentiometer and the game PC Board: the potentiometer should be supplied between the voltage limits of +5VDC and GND. ✓ On the cursor of the potentiometer should be a voltage of approximately 2.5VDC when the handlebar is centred
The message COMMUNICATION ERROR appears on the screen	<ul style="list-style-type: none"> ✓ Check the link cable

10. PARTS LIST

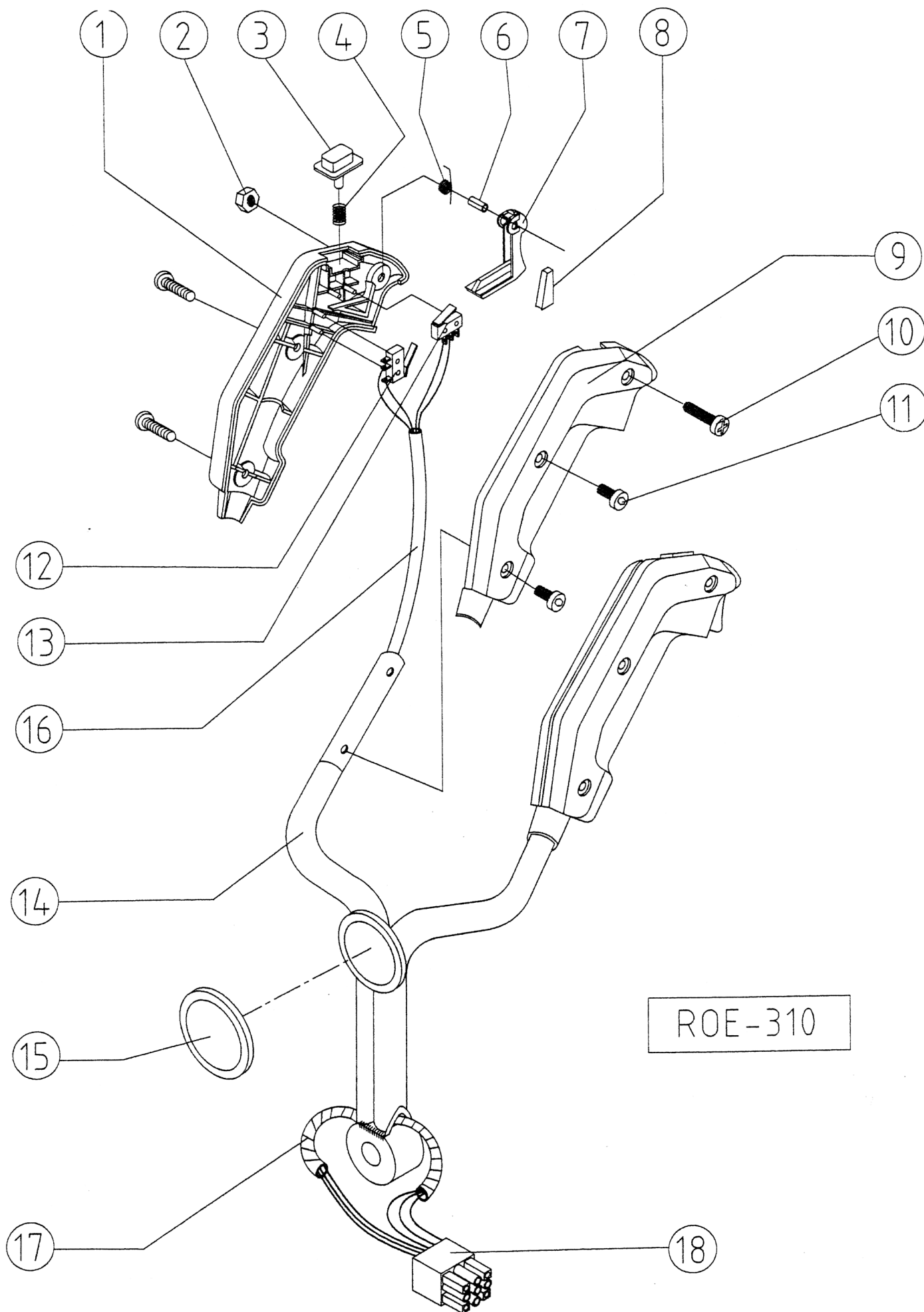
10.1 General List

CODE		QTY
ROE-100	UPRIGHT WOOD CABINET	1
ROE-150	DM LOUDSPEAKER BOX (includes tube and fiber glass)	1
ROE-210	DOUBLE FRAME MINI DOOR (coin door and cash box door)	1
ROE-220	LEFT HANDLEBAR METAL PLATE (green)	1
ROE-221	RIGHT HANDLEBAR METAL PLATE (green)	1
ROE-225	HANDLEBAR BRACKET	1
ROE-226	BRACKET, control panel	3
ROE-230	BRACKET, loudspeaker box fixing	2
ROE-300	HANDLEBAR ASSEMBLY, including interface mechanism & motor	1
ROE-301	START PUSH BUTTON, REF.A 0113 GREEN COLOUR	1
ROE-302	VIEW CHANGE PUSH BUTTON, REF.A 0113 GREEN COLOUR	1
ROE-350	28" DOUBLE FREQUENCY MONITOR (25 KHz) Medium Planar	1
ROE-352	EXTENSION CABLE, monitor remote control	1
ROE-353	SUPPORT, monitor remote control	1
ROE-355	POWER SUPPLY	1
ROE-356	CRÉDIT ADAPTOR PCB, for electronic coin acceptor	1
ROE-357	ROLLING EXTREME CPU BOARD	1
ROE-358	MOTOR CONTROL UNIT	1
ROE-360	5" SPEAKER, 4 OHMS / 60 W 2 WAY code 35.1368 Kindvox	1
ROE-362	8" SPEAKER (SUBWOOFER) 100w / 4 OHMS, loudspeaker box	1
ROE-363	FAN, 220 VAC 120x120	1
ROE-364	COMPACT FILTER & FUSE HOLDER UNIT, code 702F3G ILT	1
ROE-365	FAN GRILL	2
ROE-366	VENTILATION GRILL 15X15, rear door	1
ROE-367	VENTILATION GRILL 15X15, lower back panel	1
ROE-370	POWER CABLE	1
ROE-371	SOCKET, fluorescent tube	2
ROE-372	FLUORESCENT 15W	1
ROE-373	BALLAST, fluorescent	1
ROE-375	TRANSFORMER, 230 V / 18 - 0 - 18 V / 5 A / 180 VA, code 15962	1
ROE-380	CABINET WIRING (complete)	1
ROE-385	STRIP CONNECTOR 2X16 (GROUND)	1
ROE-386	ELECTRIC TERMINAL S-10, main supply	2
ROE-389	LINKAGE CABLE	1
ROE-390	TEST & SERVICE PANEL	1
ROE-395	SOUND BUTTON, test & service panel	1
ROE-396	TEST BUTTON	1
ROE-396	SERVICE BUTTON	1
ROE-396	DEMAGNETISATION BUTTON, test & service panel	1
ROE-399	COUNTER 6VDC	1
ROE-419	ELECTRONIC COIN ACCEPTOR	1
ROE-421	PLASTIC GRAB HANDLE(2 REAR + 2 under control panel assembly)	4
ROE-431	LEG LEVELER (included in the cabinet)	4
ROE-432	REAR WHEEL (included in the cabinet)	2
ROE-433	SWIVELLING FRONT WHEEL (included in the cabinet)	2
ROE-440	ASHTRAY	2
ROE-251	SCREW, 1001-10,9 M 8x30, lateral panels fixing	20
ROE-252	SCREW, 1001-10,9 M 6x20	20
ROE-519	ATTRACTION PANEL, screen printed	1
ROE-520	LEFT SIDE PANEL, screen printed plastic	1
ROE-521	RIGHT SIDE PANEL, screen printed plastic	1
ROE-522	FRONTAL PANEL, with attraction panel and speaker grills	1
ROE-523	CONTROL PANEL COVER, screen printed plastic (PET)	1
ROE-524	PROTECTOR, black plakene (handlebar course cover)	1
ROE-599	OPERATOR'S MANUAL	1

10.2 HANDLEBAR SUB-ASSEMBLY (ROE-310)

POS.	DESCRIPTION	ROE CODE	MANUF. CODE	QTY
1	LEFT HANDEL, grip	ROE-321	C-36-HC01010205	2
2	NUT M4	ROE-322	C-22-02014	2
3	TOP PUSH BUTTON	ROE-323	C-36-HC01020103	2
4	SPRING, top push button	ROE-324	C-36-HC01031101	2
5	SPRING, trigger	ROE-325	C-36-HC01031102	2
6	BOLT, trigger	ROE-326	C-36-HC01060000	2
7	TRIGGER	ROE-327	C-36-HC01020201	2
8	RUBBER STOPPER, trigger	ROE-328	C-36-HC01060100	2
9	RIGHT HANDLE, grip	ROE-329	C-36-HC01010105	2
10	SCREW DIN7985 M4x25	ROE-330	C-22-0105425	2
11	SCREW ISO DIN7380 M5x8	ROE-331	C-22-0115508	8
12	MICROSWITCH, trigger	ROE-332	C-36-HC01040201	2
13	MICROSWITCH, top push button	ROE-333	C-36-HC01040101	2
14	HANDLEBAR	ROE-311	C-36-4080309	1
15	LOGO DISK, zamak	ROE-312		1
16	HARNESS, handlebar	ROE-313		2
17	HARNESS PROTECTION	ROE-314		2
18	CONNECTOR	ROE-315		1

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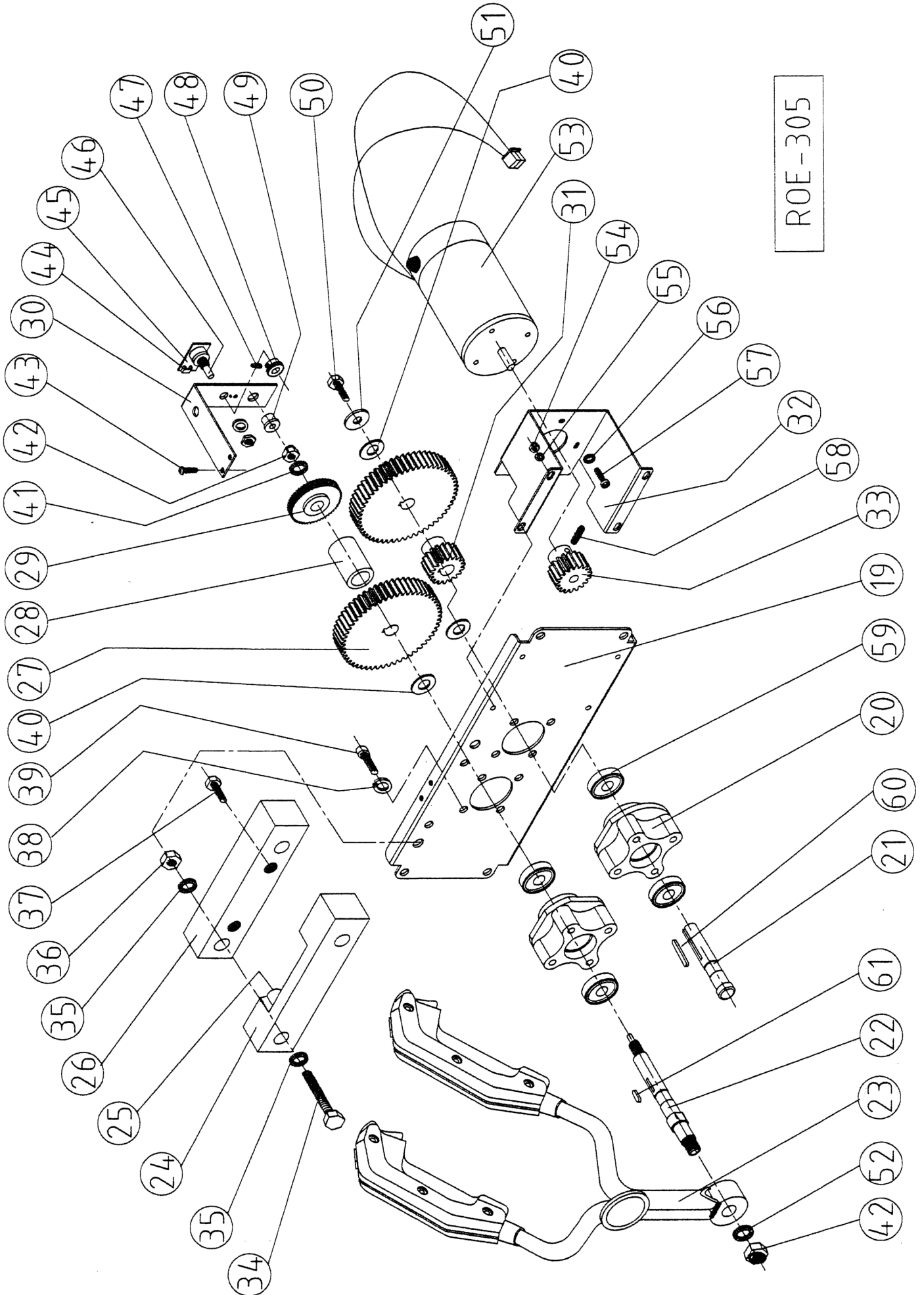


ROE-310

10.3 MECHANICAL INTERFACE SUB-ASSEMBLY (ROE-305)

POS.	DESCRIPTION	MANUF. CODE	QTY
19	ATTACHMENT PLATFORM	S-40-8010101	1
20	BEARING HOUSING	C-40-000310	2
21	TRANSMISSION SHAFT	C-40-800310	1
22	HANDLEBAR SHAFT	C-40-800300	1
23	HANDLEBAR ASSEMBLY	ROE-310	1
24	STOPPER BRACKET, plastic	C-40-804107	1
25	STOPPER, neoprene	C-40-070023	2
26	STOPPER BLOCK, plastic	C-40-804007	1
27	PINION Z=54 M2	C-40-802108	2
28	SLEEVE, handlebar shaft	S-40-8004001	1
29	GEARWHEEL Z80 M.O.75, plastic	C-40-022087	1
30	POTENTIOMETER BRACKET	C-40-801040	1
31	PINION Z=18 M2	C-40-808236	1
32	MOTOR BRACKET	S-40-8050101	1
33	MOTOR PINION Z=18 M2	C-40-802036	1
34	SCREW, Hex.DIN 933 M10 X90	C-22-01031090	2
35	WASHER, Ade DIN 6798/A 10 m/m	C-22-030810	4
36	NUT, Hex. DIN 934 M10	C-22-020110	2
37	SCREW Hex. DIN 933 M8X16	C-22-0103816	2
38	WASHER, Grower M8	C-22-03068	8
39	SCREW, allen DIN 912 M8X20	C-22-0112820	8
40	WASHER PS 15X21X1 DIN 988	C-22-03601522	3
41	WASHER AET M12	C-22-030412	2
42	NUT DIN 985 M12, self-block	C-22-020212	2
43	SCREW Hex. / DIN 933 M4X8	C-22-0103481	2
44	CONNECTOR, 3 pin, potentiometer PCB	ROE-342	1
45	POTENTIOMETER PCB, assembled	ROE-340	1
46	POTENTIOMETER 5K	ROE-341	1
47	BOLT allen DIN 913 M4X6	C-22-0501406	1
48	POTENTIOMETER PINION, brass	C-40-401510	1
49	SLEEVE B10X6X10	C-43-050300	1
50	SCREW, Hex. DIN 933 M8X10	C-22-0103810	1
51	WASHER DIN 90218.4X25	C-22-03038	1
52	WASHER Ade DIN 6798/A 12 m/m	C-22-030812	1
53	MOTOR, 20V / 3.9ADC - model 1582	C-29-401580	1
54	NUT DIN 985 M5, self-block	C-22-02025	4
55	WASHER DIN 125 M5, flat	C-22-03015	4
56	WASHER, Ade DIN 6798/A 4 m/m	C-22-03084	4
57	SCREW DIN 7985 M4X10	C-22-0105410	4
58	BOLT allen DIN 913 M5X16	C-22-0501516	1
59	BEARING 6002 ZZ	C-40-206002	4
60	KEY WODRUF DIN 6885 F.114 5X5X45	C-22-80025545	1
61	KEY WODRUF DIN 6885 F.114 5X5X18	C-22-80025518	1

ROE-305

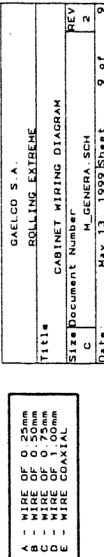


11. WIRING DIAGRAMS

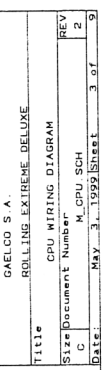
INDEX

- 11.1 CABINET WIRING DIAGRAM
- 11.2 CPU WIRING DIAGRAM
- 11.3 CONTROLS WIRING DIAGRAM
- 11.4 SPEAKERS WIRING DIAGRAM
- 11.5 ELECTRONIC COIN DOOR DIAGRAM
- 11.6 MECHANIC COIN DOOR DIAGRAM
- 11.7 POWER WIRING DIAGRAM
- 11.8 GROUND WIRING DIAGRAM

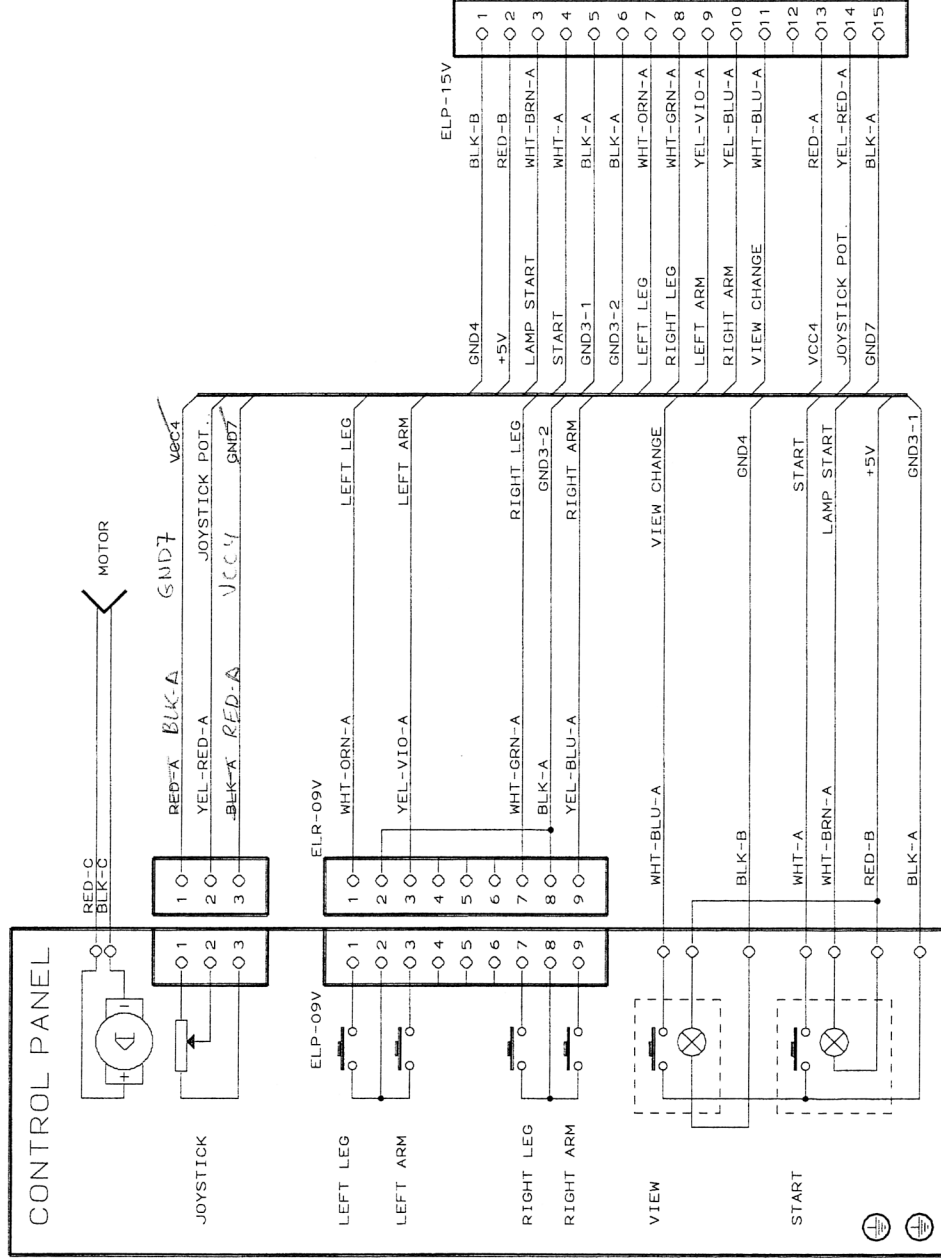
11.1 CABINET WIRING DIAGRAM



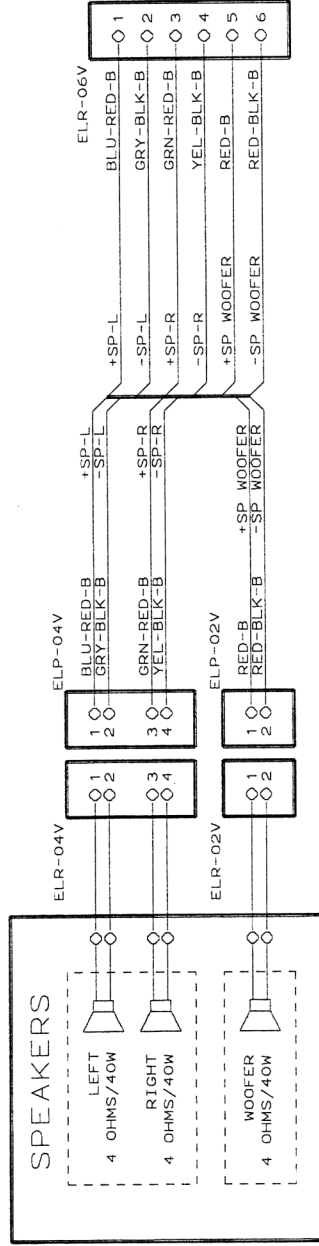
11.2 CPU WIRING DIAGRAM



11.3 CONTROLS WIRING DIAGRAM

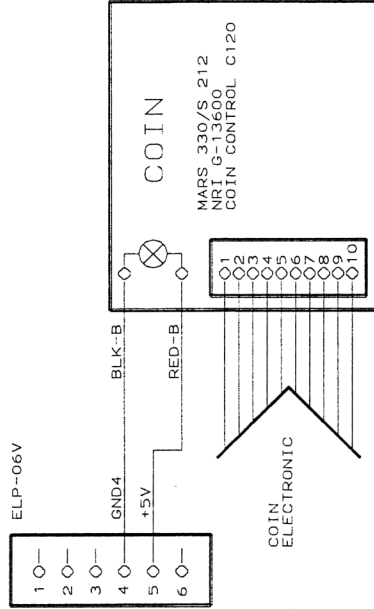


11.4 SPEAKERS WIRING DIAGRAM



A - WIRE OF 0.25mm
B - WIRE OF 0.50mm
C - WIRE OF 0.75mm
D - WIRE OF 1.00mm
E - WIRE COAXIAL

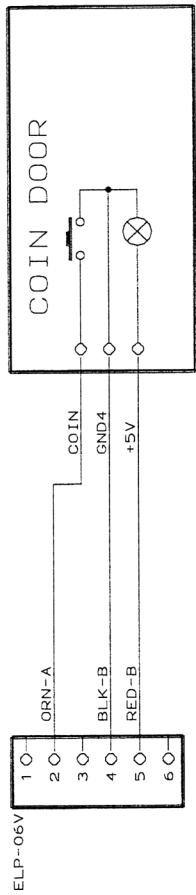
11.5 ELECTRONIC COIN DOOR - WIRING DIAGRAM



- A - WIRE OF 0.25mm
- B - WIRE OF 0.50mm
- C - WIRE OF 0.75mm
- D - WIRE OF 1.00mm
- E - WIRE COAXIAL

Gaelco S.A.	
ROLLING EXTREME	
Title	
COIN DOOR WIRING DIAGRAM	
Size	Document Number
B	M_MON-CC.SCH
REV	2
Date	May 3, 1999
Sheet	7 of 9

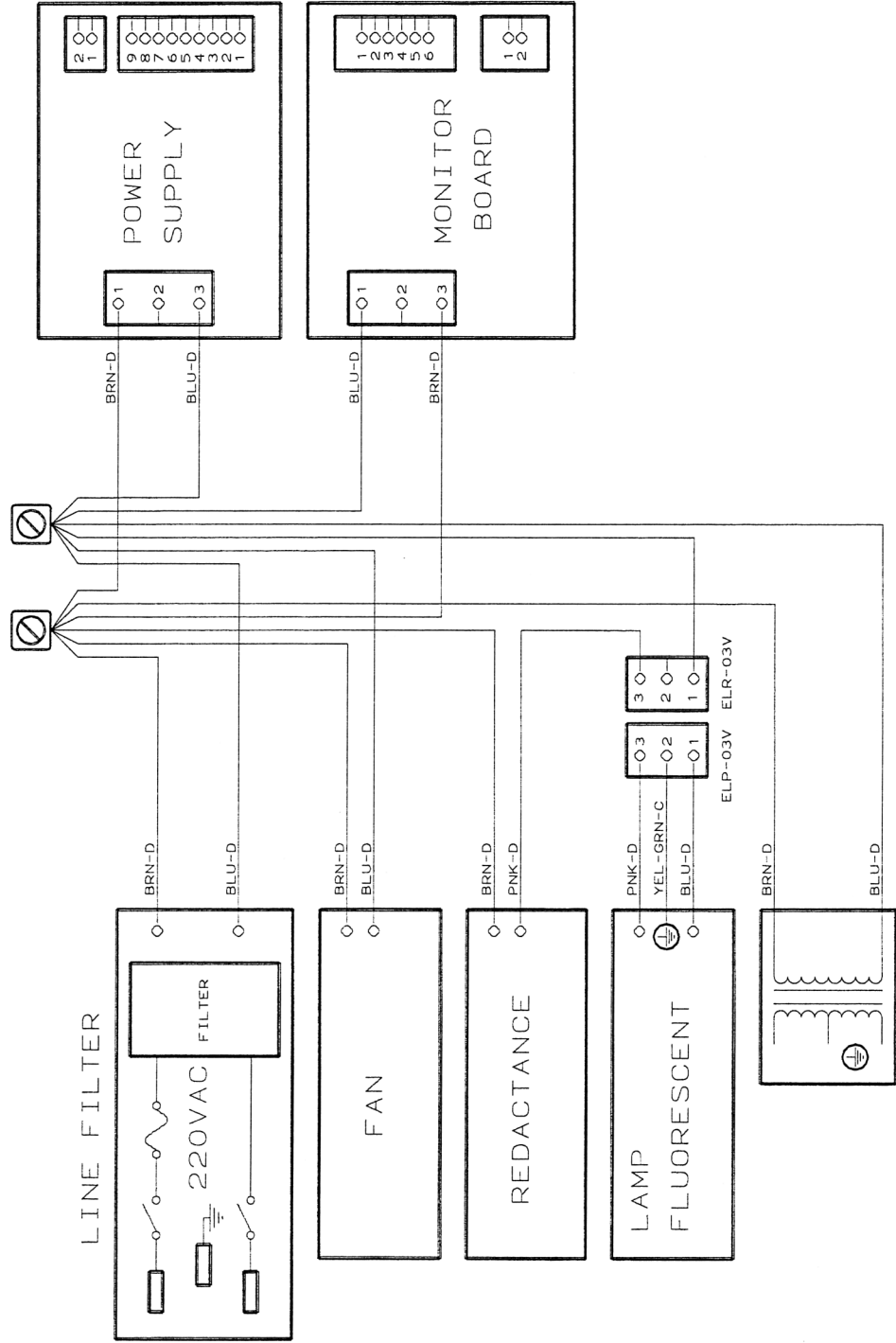
11.6 MECHANIC COIN DOOR – WIRING DIAGRAM



A - WIRE OF 0.25mm
B - WIRE OF 0.50mm
C - WIRE OF 0.75mm
D - WIRE OF 1.00mm
E - WIRE COAXIAL

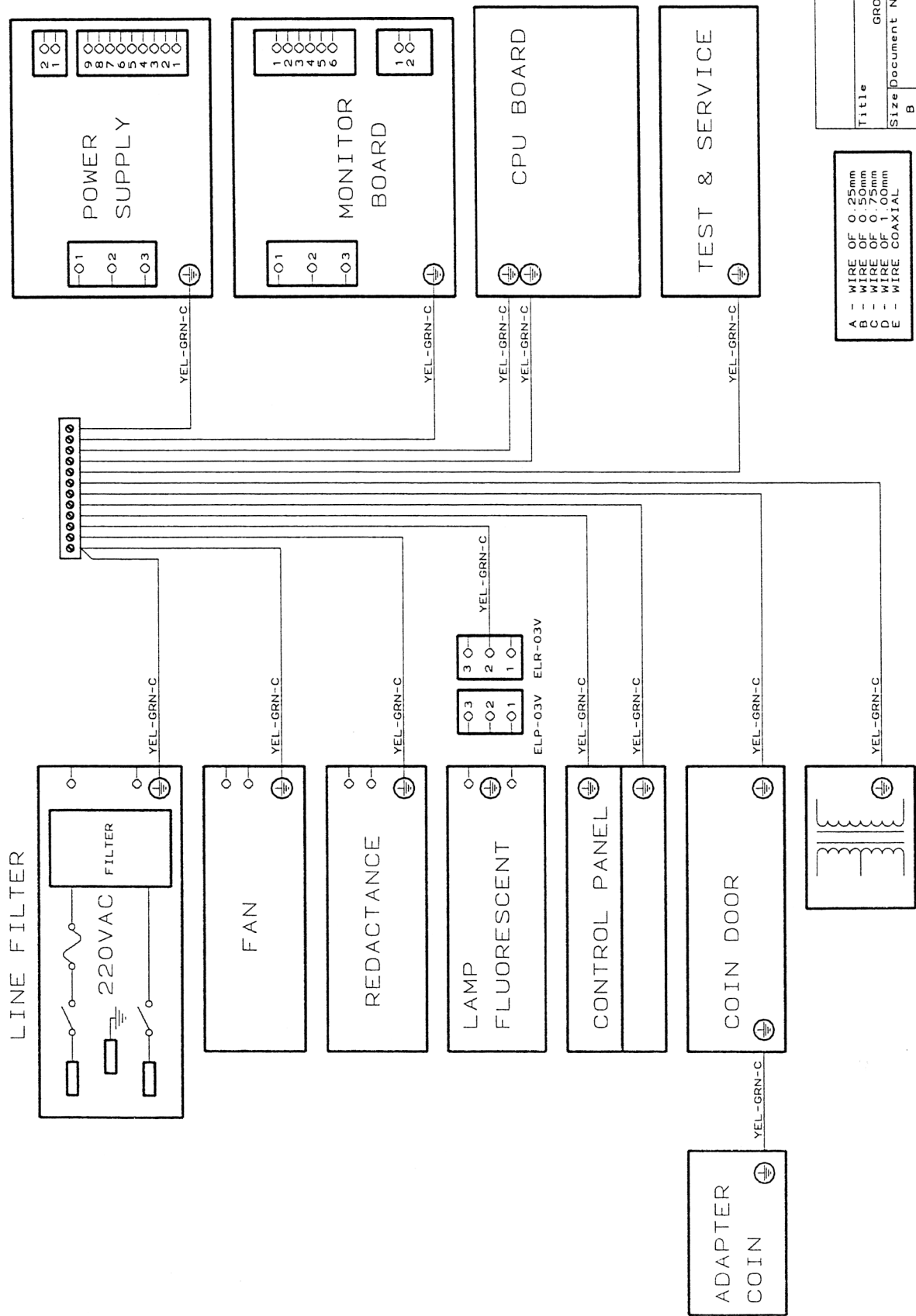
GAELCO S. A.			
ROLLING EXTREME			
Title			
COIN DOOR WIRING DIAGRAM			
Size	Document Number	REV	
B	M MON-ME .SCH	2	
Date:	May 3, 1999	Sheet	8 of 9

11.7 POWER WIRING DIAGRAM



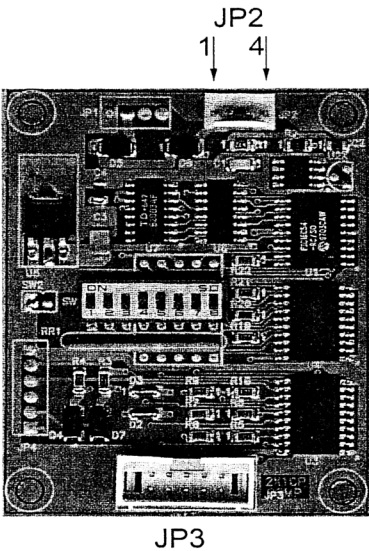
A - WIRE OF 0.25mm
B - WIRE OF 0.50mm
C - WIRE OF 0.75mm
D - WIRE OF 1.00mm
E - WIRE COAXIAL

11.8 GROUND WIRING DIAGRAM



12. CREDIT DISTRIBUTOR SETUP

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



Connector JP2 This connector should be connected to Surf Planet 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, programmable per channels.

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

9	7	5	3	1
10	8	6	4	2

Note: Layout view corresponding to components side

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
Germany	= =	= =	5 DM	= =	2 DM	1 DM
Switzerland	= =	= =	5 FS	= =	2 FS	1 FS
France	20FF	10 FF	5 FF	= =	2 FF	1 FF
Italy	= =	= =	500 L	= =	200 L	100 L
USA	= =	= =	= =	1 \$	50 Ct	25 Ct
Great Britain	= =	1 £	50 Pe	= =	20 Pe	10 Pe
Spain	500Pt	= =	200 Pt	100 Pt	50Pt	25 Pt
Australia	= =	= =	5 \$	= =	2 \$	1 \$
Belgium	= =	= =	50 FB	= =	20 FB	= =
Norway	20 Kr	10 Kr	5 Kr	= =	= =	1 Kr
Greece	= =	= =	= =	= =	100 Dr	50 Dr
Portugal	= =	= =	= =	200 ESC	100ESC	50ESC

SWITCH SETUP

SW1: Always OFF

SW2: Coin multiplication factor

SW2= OFF (Europe except Spain)	Channel:	1	2	3	4	5	6
	Value:	x 20	x 10	x 5	x 4	x 2	x 1
SW2= ON (Spain and USA)	Channel:	1	2	3	4	5	6
	Value:	x 20	x 10	x 8	x 4	x 2	x 1

SW3: Not used

SW4-SW5: Extra Credits (Bonuses)

Combination of these two dip switches is used to program bonuses (free games)m 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).

CREDITS table				BONUS table(SW4/SW5)			
SW6	SW7	SW8	Val/Cr	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

(*)Adds another credit for the second lap.

APPLICATION EXAMPLES

Example No. 1

Spain: 25 Pts = 1 pulse	SW1=	off	SERIAL input. (25 Pt via PIN 8) = (Channel 6)
	SW2=	on	Input values x1 x2 x4 x8 x20
	SW3=		Not used.
	SW4=	on	EXTRA credit for 500Pt.
	SW5=	off	
	SW6=	on	8 pulses / 1 credit.
	SW7=	off	
	SW8=	on	
RESULT:	200 Pts /1 credit; 500 Pts / 3 credits;		

Example No. 2

Germany: 1 DM = 1 pulse	SW1=	off	SERIAL input. (1 DM via PIN 8) = (Channel 6)
	SW2=	off	Input values x1 x2 -- x5
	SW3=		Not used.
	SW4=	on	EXTRA credit on the 5th Coin.
	SW5=	off	
	SW6=	off	1 pulse / 1 credit.
	SW7=	off	
	SW8=	off	
RESULT:	1 DM /1 credit; 5 DM / 6 credits;		

Example No. 3

France (1): 1 FF = 1 pulse	SW1=	off	SERIAL input. (5 FF 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	
	SW6=	off	5 pulses / 1 credit.
	SW7=	off	
	SW8=	on	
RESULT:	5 FF /1 credit; 20 FF / 5 credits;		

APPLICATION EXAMPLES

Example No. 4

France (2): 1 FF = 1 pulse	SW1=	off	SERIAL input. (5 FF via PIN 5) = (Channel 3)
	SW2=	off	Input values x1 x2 -- x5
	SW3=		Not used
	SW4=	off	EXTRA credit on the 20th pulse (=20 FF)
	SW5=	on	
	SW6=	off	10 pulses / 1 credit.
	SW7=	on	
	SW8=	on	
RESULT:	10 FF / 1 credit; 20 FF / 3 credits		

Example No. 5

Great Britain : 10 Pen=1 pulse	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) and 10th pulse (=1 £)
	SW5=	off	
	SW6=	off	3 pulses / 1 credit.
	SW7=	on	
	SW8=	off	
RESULT:	30 Pn /1 cred.; 50 Pn /2 cred.; 1 £ / 5 cred.		

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