



SMASHING DRIVE NYC-IIxM



VERSION

SIT DOWN

CONTENT

OPERATOR'S MANUAL

About SMASHING DRIVE

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 commencing operation

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Modifications and/or alterations of the SMASHING DRIVE 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.

Published by:
GAELCO S.A.
Escipió 9-11
08023 Barcelona - SPAIN
Tel. ++34 93 417 36 26
Fax ++34 93 417 28 02
e-mail gaelco@gaelco.com
web www.gaelco.es

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 data*

Manufacturer GAELECO, S.A.
Address Escipió 9-11
ZIP 08023
City Barcelona
Country : SPAIN
Tel. 34 93 417 36 26
Fax 34 93 417 28 02
e-mail gaelco@gaelco.com

Name of the game SMASHING DRIVE
Model SIT DOWN

1.2 *Legislation references*



SMASHING DRIVE complies with the following CE

EM EMISSION

- 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 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

SMASHING DRIVE is an arcade game based on the frantic driving of a "super-cab" in New York City. The taxi driver picks up a client and races through NY trying to avoid traffic jams and obstacles, discovering many surprising shortcuts and getting extra advantages distributed at points along the course, that convert the cab in a fantastic car worthy of Batman or James Bond. Almost everything is permitted but the car loses speed when smashes against an obstacle, so bad drivers would be punished with rather poor scores.

The goal of the player is to complete the selected circuit in the least possible time, dodging the obstacles that cut across his path, at the same time keeping a fierce competition with another cab controlled by the CPU. Two players can also compete one against each other when the machines are linked.

2.2 Dimensions and Weight

1) Crate dimensions and shipping weight of each module

	width	depth	height	weight
Monitor cabinet	1000mm	1200mm	2000mm	200Kg
Seat platform	800mm	1200mm	1600mm	90Kg

2) Dimensions and net weight of each module unpacked

	width	depth	height	weight
Monitor cabinet	870mm	790mm	1790mm	185Kg
Seat platform	760mm	945mm	1260mm	75Kg

3) Total dimensions of the machine, installed on site

width	depth	height
870mm	1695mm	1790mm

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 Polo/2 STAR PH, code 01297760

2.5 CPU Board

PCB Gaelco SMASHING DRIVE

2.6 Controls

- Steering Wheel
- Start Button & Horn (placed on the Steering Wheel)
- Gas pedal
- Brake pedal

2.7 Attachments

One Operator's Manual
Two coin box keys
Two rear door keys
One line cord (3m long)
One link cable



3. PREVENTIVE MEASURES

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.

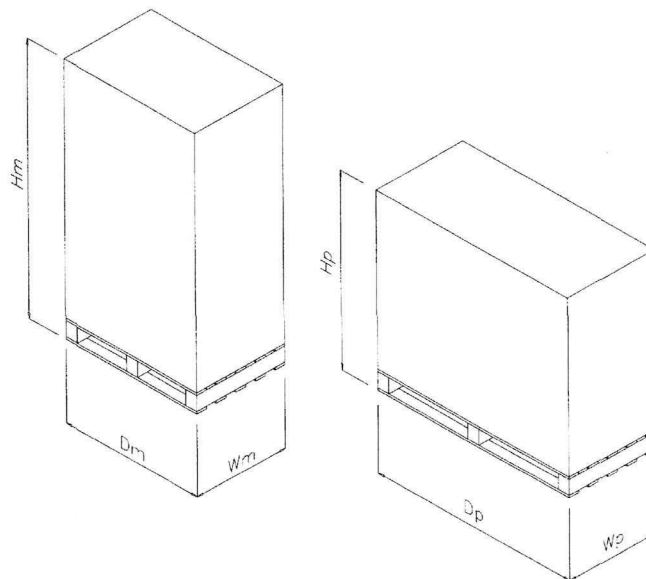
4. HANDLING



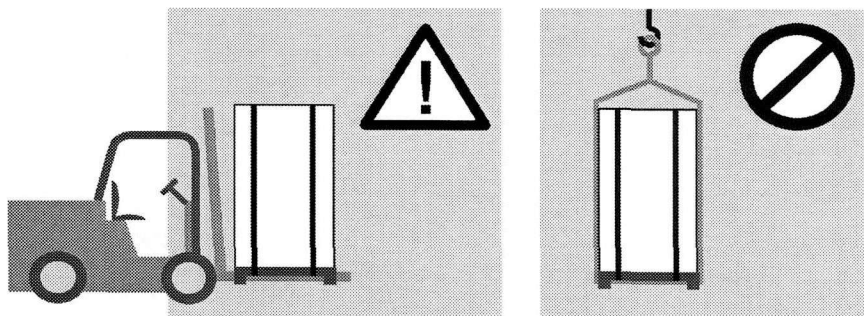
This product should be set up, moved or transported by a trained person. Failing to do so could result in injury or product damage. The machine contains parts that are sensitive to vibration and impact. You must be very careful when moving or transporting the machine.

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 220 Kg for de monitor cabinet and 170 for the platform. The machine, must remain packet 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	crated weight
MONITOR	Wm = 1000mm	Dm = 1200mm	Hm = 2000mm	200Kg
PLATFORM	Wp = 800mm	Dp = 1200mm	Hp = 1600mm	90Kg



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

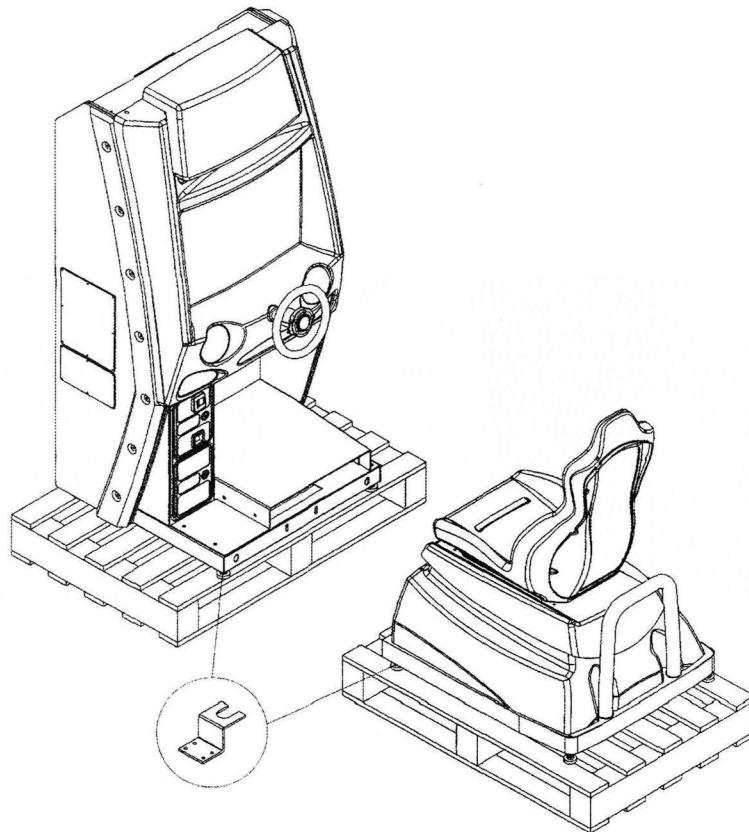
4.3 Reception

The SMASHING DRIVE game cartons should be carefully inspected upon receipt to insure that the game is completed 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 Unpacking

It is convenient to unpack the machine where it is going to be used or in a place as near as possible to this. Two people are needed to lift the cardboard packing over the top of each unit.

Once the packing is removed, the machine looks as shown in the illustration. Both units are fixed to their pallet by metal brackets which must be taken off before putting the machine on the floor.



4.5 Movement of the unpacked machine

The machine can easily moved by using their 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 machine securely. If the unit is not fastened securely, it could be damaged by rocking or could result in injury. The operations described below must be done with the machine unplugged from the electrical power supply system

5.1 Inspection

Inspect the game cabinet by doing the following:

- Examine the cabinet exterior for dents, chips, or broken parts
- The monitor cabinet has a rear door that gives access to the PCB, the monitor and the power supply unit. The door has a safety switch. Only a trained person should do this operation. The keys can be found in a bag fastened to the steering wheel. 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.
- Check that all the plug-in connectors 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 assemblies, such as the video display monitor, PCB, steering wheel and seat. Make sure that they are mounted securely and that all ground wires are firmly connected.
- Inspect the line 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 like thinner may decompose the material.

5.2 Setting up

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

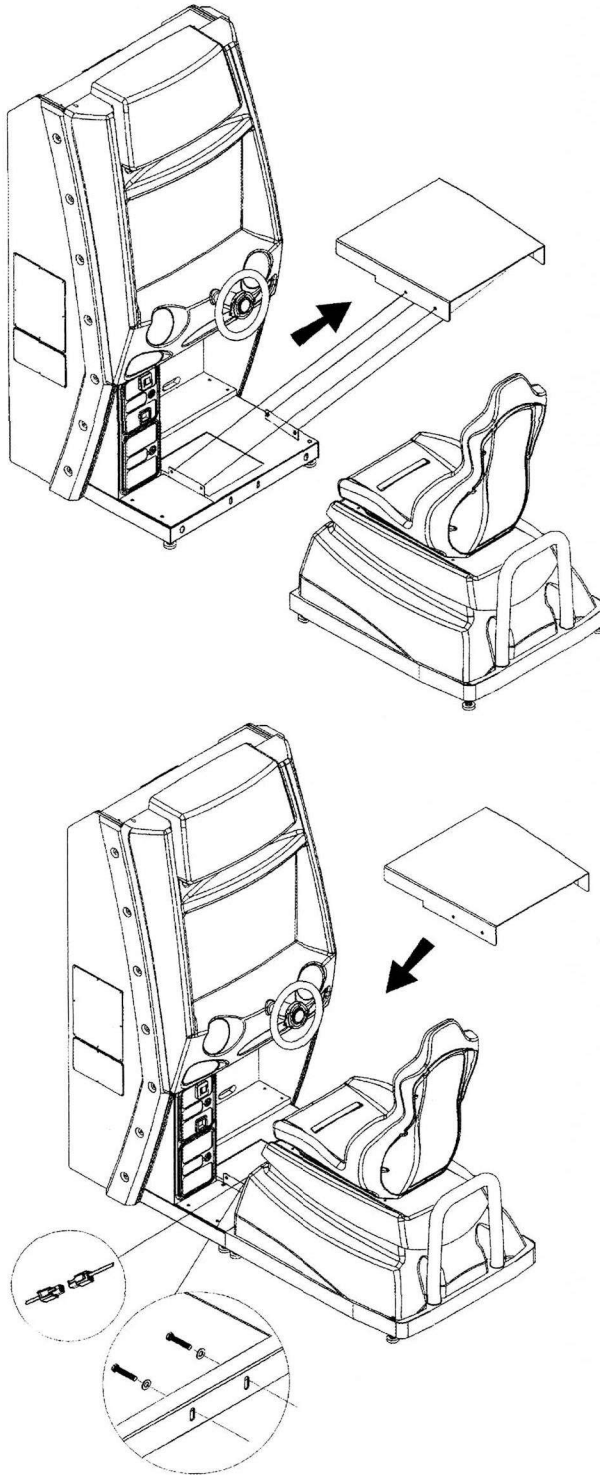
BASIC PRECAUTIONS

- Check that the area chosen to install the machine is distant from heat sources, and that the machine, when fully installed, will not obstruct emergency exits.
- Begin the set up with the monitor cabinet. Adjust the leg levellers by hand so they make contact with the floor. Continue to adjust levellers until the cabinet is levelled 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. Be sure to use within the specified voltage range.
- 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.
- 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 line cord becomes damaged -core exposed, broken, etc- please contact your nearest dealer for replacement. Using a damaged line 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 Assembly of the platform to the monitor cabinet

The assembly of the two units together must be done where the machine is to be used. First of all make sure the monitor cabinet is levelled, then follow the instructions step by step:



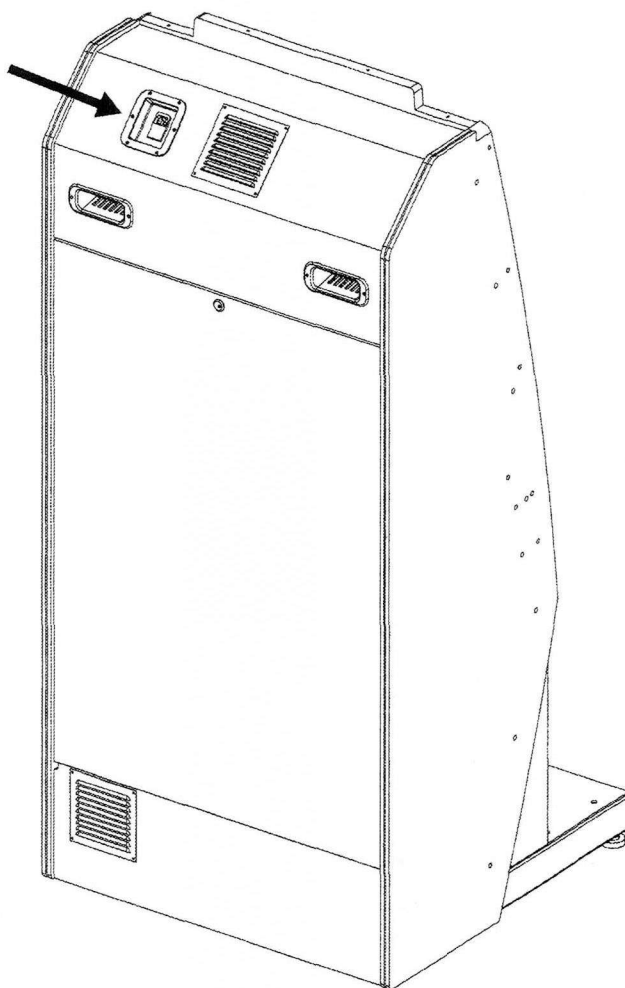
- Take off the feet rest platform SDR-221 removing the five screws that fix it to the base of the monitor cabinet.
- Put together the two modules by pushing the lugs on the platform into the housings in the base of the monitor cabinet.
- Level the seat platform to the same height as the monitor cabinet.
- Connect the cable of the vibrator and tighten the two bolts that fasten the platform to the monitor cabinet. The corresponding nuts are welded to the base of the platform. These are reached via the rectangular window in the base of the monitor cabinet.
- Replace the feet rest platform SDR-221 and attach it to the base with the five screws that were taken out initially.
- Carefully adjust all the levellers so that the whole machine rests firm and level on the floor. Remember that the platform incorporates a vibrator!

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 in the back of the machine, at the top right when viewed from the front.

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.

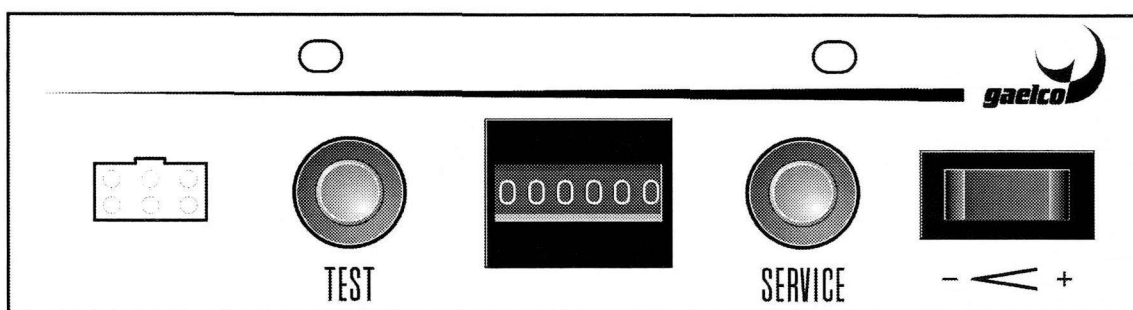


To avoid possible damage to the electronic components, wait several seconds before turning the machine on again.

6. PROGRAMMING THE MACHINE AND TEST MODE

An automatic check of the 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 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 the TEST MODE as for the other controls -monitor, sound, etc.- is made from the CONTROL PANEL, which is situated behind the coin box door. This panel consists of a button to access TEST MODE, a coin counter, a SERVICE button, and a commuter to adjust the VOLUME of the loud speakers.



Pressing the TEST button enters TEST MODE, where the game variables, such as level of difficulty, linkage of machines, etc., can be adjusted. A check of the Steering Wheel and other controls can also be made. The SERVICE button allows the technician to introduce game credits without moving the coin counter.

The TEST MODE is a rotary system of 7 screens

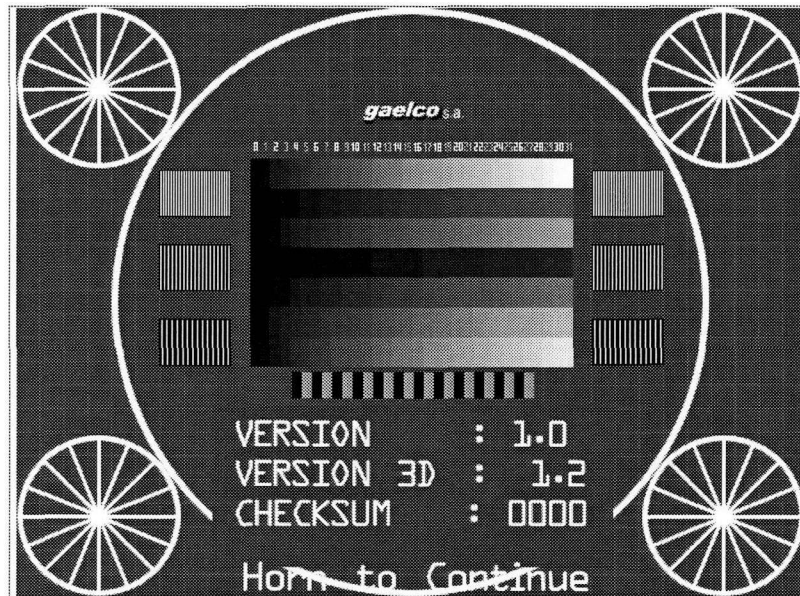
- Settings
- Input Test
- Output Test
- Book Keeping 1 / 3
- Book Keeping 2 / 3
- Book Keeping 3 / 3
- Exit / Continue

By moving the cursor with the accelerator and brake pedals you can choose the option required. Pushing the HORN button placed on the centre of the steering wheel makes the selection.

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 settings** of the Exit / Continue screen.

6.1 SCREEN TEST

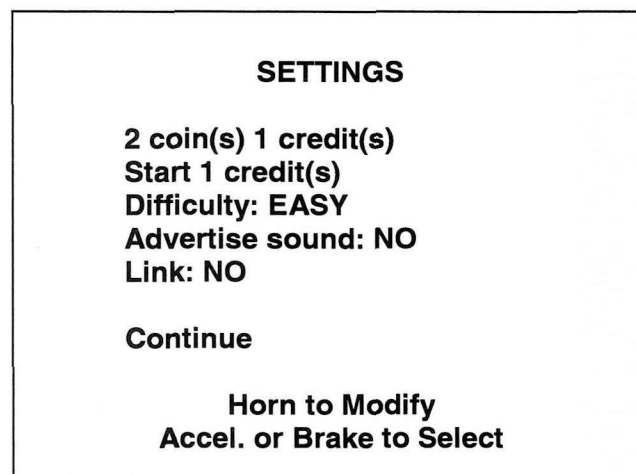
This screen is the ADJUSTMENT CARD, which should be used to suitably adjust the monitor. It shows you, also, the following information:



To jump from this screen onto the next is necessary to push the TEST button or the HORN button.

6.2 SETTINGS

On this screen you can change the following game parameters:



coin(s) / credit(s)

On this option you can adjust the number of credits (games) that the machine gives for a defined number of coins.

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

Start

It is also possible to program the number of coins required to start the game.

Difficulty

The game has four levels of difficulty: **EASY**, **NORMAL**, **HARD** and **HARDEST**

There is also a type of variable difficulty, the **DYNAMIC**, which changes depending on the player's skills and how much busy is the machine.

Advertise sound

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

Link

This line shows the status of the machine. If it is linked with another machine you have to assign a different status to each one of them. One should be **MASTER** and the other **SLAVE** as indicated on the options (**MASTER-RIGHT CABINET / SLAVE-LEF CABINET**).

If there is any interconnection problem, two types of message can appear when playing:

CONFIGURATION ERROR IN ONE CABINET → The machines are successfully connected but there is some error of configuration. For example, perhaps both are in **MASTER** mode, have different level of difficulty or their program versions do not coincide.

NO LINK → There is no communication between the machines. This could be due to a cable fault or because both are in **SLAVE** mode.

If there is no link between two machines the option **NO** should be selected.

To go onto the next screen push the **TEST** button or select the **Continue** option and then push the **HORN** button.



6.3 INPUT TEST

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

INPUT TEST

Steering wheel: 080 (-038)

Accelerator	: --
Brake	: --
Horn	: --
Coin	: --
Service	: --
Test	: --
Volume Up	: --
Volume Down	: --

Hold HORN to Continue

- The Horn button is placed on the centre of the Steering Wheel
- Service and Test buttons, as well as the volume control, are placed on the CONTROL PANEL behind de coin door.

To go onto the next screen press the HORN button for a while.

6.4 OUTPUT TEST

This screen allows you to check all output signals from the CPU: steering wheel motor, vibrator motor, horn lamp and the three sound channels. The parameter is selected by means of the pedals and the status is defined pressing the HORN button.

To check a motor the corresponding line should be ON. The power applied to the motor you choose is controlled by turning the steering wheel. This also applies to the vibrator motor, which is not powered until you turn the wheel.

To leave this screen push the TEST button or operate the Continue option.

OUTPUT TEST

Wheel motor	: OFF (+0.00)
Seat motor	: OFF (+0.00)
Lamp	: OFF
Sound 1	: OFF
Sound 2	: OFF
Sound 3	: OFF
Continue	

**Horn to Modify/Confirm
Accel. or Brake to Select**

6.5 BOOK KEEPING

The data for the activity of the machine are collected on three screens. To go from one screen to another you push the HORN button.

BOOK KEEPING (1/3)		
Credits	:	163
Service Cred.	:	0
One Pl. Games	:	87
Two Pl. Games	:	0
Total Time	:	41h 54m 43s
Play Time	:	3h 12m 39s
Shortest Game	:	0m 15s 43c
Average Game	:	2m 12s 85c
Longest Game	:	14m 00s 75c
Horn to Continue		

Reading from top to bottom, the following information is given on the first screen:

- Credits owed for the coins entered
- Credits entered with the SERVICE button
- Number of games of an individual player
- Number of games of two simultaneous players (Link Mode)
- Total time the machine is connected in hours, minutes and seconds
- Total time the machine is busy in hours, minutes and seconds
- Time of the shortest credit in minutes and seconds
- Time of the average credit in minutes and seconds
- Time of the longest credit in minutes and seconds

The second screen is a time histogram where a detailed distribution of the number of credits is displayed according to their duration, from 0 to 2 minutes until 8 minutes. It also includes the number of times each stage has been surpassed by winning the corresponding stretches.

BOOK KEEPING (2/3)		
0,00-2,00: XX	2,00-2,30: XX	
2,30-3,00: XX	3,00-3,30: XX	
3,30-4,00: XX	4,00-4,30: XX	
4,30-5,00: XX	5,00-5,30: XX	
5,30-6,00: XX	6,00-7,00: XX	
7,00-8,00: XX	8,00-n,nn: XX	
Win. P1: XX (0 / 0 / 0 / 0)		
Win. P2: XX (0 / 0 / 0 / 0)		
Win. P3: XX (0 / 0 / 0 / 0)		
Winners DUSK&WIRED: XX		
Horn to Continue		

Win. P1 → winners of the **EARLY BIRD** stage

Win. P2 → winners of the **RUSH HOUR** stage

Win. P3 → winners of the **NIGHT OWL** stage

Each stage consists of three stretches, plus a bonus stretch when the player makes enough points. The bonus stretch has three “time extended” lines.

The **DUSK&WIRED** stage is not available until the player surpasses the other three stages.

The third screen shows additional information about the game incidences on each stage:

Lvl: Game level
 Cont: Continue (Number of players)
 GmOv: Game Over (“ “ “ ”)
 Win: Winners on each level
 MinT: Minimum time
 AvgT: Average time

To go onto the next screen press the HORN button.

BOOK KEEPING (3/3)

Lvl	Cont	GmOv	Win	MinT	AvgT
1.1	4	23	8	84.55	87.58
1.2	0	5	1	79.55	80.90
1.3	0	6	2	79.53	105.81
2.1	6	18	3	88.61	91.06
2.2	0	2	0	86.46	0.00
2.	0	0	1	84.53	87.51
3.1	1	5	1	86.55	91.06
3.2	0	3	0	87.55	0.00
3.3	2	1	0	85.16	0.00
4.1	0	0	0	134.43	0.00

Horn to Continue

6.6 EXIT / CONTINUE SCREEN

On this screen the following options are displayed:

Reset Book Keeping
 Reset Record Tables
 Exit and Save Settings
 Exit Without save Settings
 CONTINUE IN TEST MODE

Horn to Confirm
 Accel. or Brake to Select

Reading from top to bottom:

- Erase data of the game record tables that accumulate from day to day.
- Erase the book keeping data.
- **Exit from Test Mode retaining memory of the changes that have been made in the previous screens**
- Exit from Test Mode without keeping the changes
- Continue in Test Mode

Selection is made with the brake and accelerator pedals, while the option chosen is switched in with the horn 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 Horn button as indicated on the bottom of the screen.

7. HOW TO PLAY

Starting the game

To start to play it is necessary to put enough coins to cover the price of at least one credit (credit::1). If the programmed number of coins is not reached, the message could be, for example, credit: 0 1/2. In this case, the first figure is the number of credits obtained (none) and, in the fraction, the first figure is the number of coins already introduced (one) whereas the second figure is the number of coins necessary (two) to reach the price of the credit. The cost of a credit is programmed from Test Mode (see section 6.2). When the game has a cost different to one credit, as in the example of the previous paragraph, the player has to introduce coins until the price is equal or greater than the programmed option.

When the necessary coins have been put in, the player has to press the HORN button, placed on the centre of the steering wheel. From this moment the game begins.

The player can choose any one of the 3 main stages by turning the steering wheel. Pressing the HORN button confirms the choice. The game begins as soon as the confirmation is made or after ten seconds.

Game System

SMASHING DRIVE is an arcade game based on the frantic driving of a "super-cab" in New York City. The taxi driver picks up a client and races through NY trying to avoid traffic jams and obstacles, discovering many surprising shortcuts and getting extra advantages distributed at points along the course, that convert the cab in a fantastic car worthy of Batman or James Bond. Almost everything is permitted but the car loses speed when smashes against an obstacle, so bad drivers would be punished with rather poor scores.

The goal of the player is to complete the selected circuit in the least possible time, dodging the obstacles that cut across his path, at the same time keeping a fierce competition with another cab controlled by the CPU. Two players can also race one against each other when the machines are linked.

There are 3 different stages, as mentioned above, plus a hidden one that is available if the player succeed in winning completely all the previous stages. Each stage, or phase, consists of three stretches of 80 seconds each, approximately.

The player can choose any of the three different stages of the game. To win a game stage the player must reach the end of each stage before the rival taxi. When playing against the machine, the opponent taxi carries the CPU sign. When two machines are linked and the opponent is another player, his taxi carries the PL2 sign.

Time goes on as soon as the game starts. In the middle and at the end of each section there is TIME EXTENDED line where the player can get extra time.

The player is eliminated if does not complete the full stage before the time limit. This varies according the difficulty of the course.

The hidden stage is a special run of just over two minutes long, with two TIME EXTENDED points.

Controls

The player has a steering wheel to drive the vehicle, an accelerator pedal to speed up and a brake pedal to stop with. The steering wheel has a button in the center to sound the horn and for some other uses. When the horn is active cars and pedestrians get out of the way, but excessive and unnecessary use causes a temporary loss of function.

The player can make spectacular maneuvers with these controls. For example:

- Rapid turn of the steering wheel with the brake pedal down hard: this causes a skid, giving a faster and tighter turn of the vehicle.
- Rapid turn of the steering wheel when the taxi is near and parallel to other vehicle: result is a strong side impact.

Special Advantage icons

Scattered along the course are a series of icons which can be captured if the player crosses them with the taxi. Each icon gives some type of advantage for a short span of time:



TURBO: Gives a fantastic increase of speed

BIG-FOOT: Provides the taxi with giant wheels capable of crushing anything.

CUTTER: Equips the taxi with circular saws for cutting obstacles.



REPAIR: Allows the player to repair any crash damage

CRASH: Super bumpers that allow the taxi to crash head-on without damage.

SONIC: The horn can make sonic blasts that destroy nearby vehicles.



GLIDER: The taxi can manoeuvre whilst in the air, thanks to ailerons.

TIME: Time bonus

(?): Surprise! (any of the previous helps)

8. HOW TO LINK TWO MACHINES

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

1. Make sure that the connection cable is correctly plugged into both machines.
2. Switch on both machines.
3. Press the TEST button on the CONTROL PANEL of both machines.
4. Go to the SETTINGS on both machines (See section 6.2 of this manual)
5. Define the condition of each machine, **Master** or **Slave** as indicated on the SETTINGS screen.
6. Go to the EXIT / CONTINUE screen, choose EXIT AND SAVE CHANGES option and validate with START button (Horn).

When you want to disconnect the two machines, you should unplug the link cable and proceed in the same way from step 2. On step 5 choose NO for both machines, then exit from the Test Mode with the option EXIT AND SAVE CHANGES of the EXIT / CONTINUE 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.

9.1 Checking the steering wheel

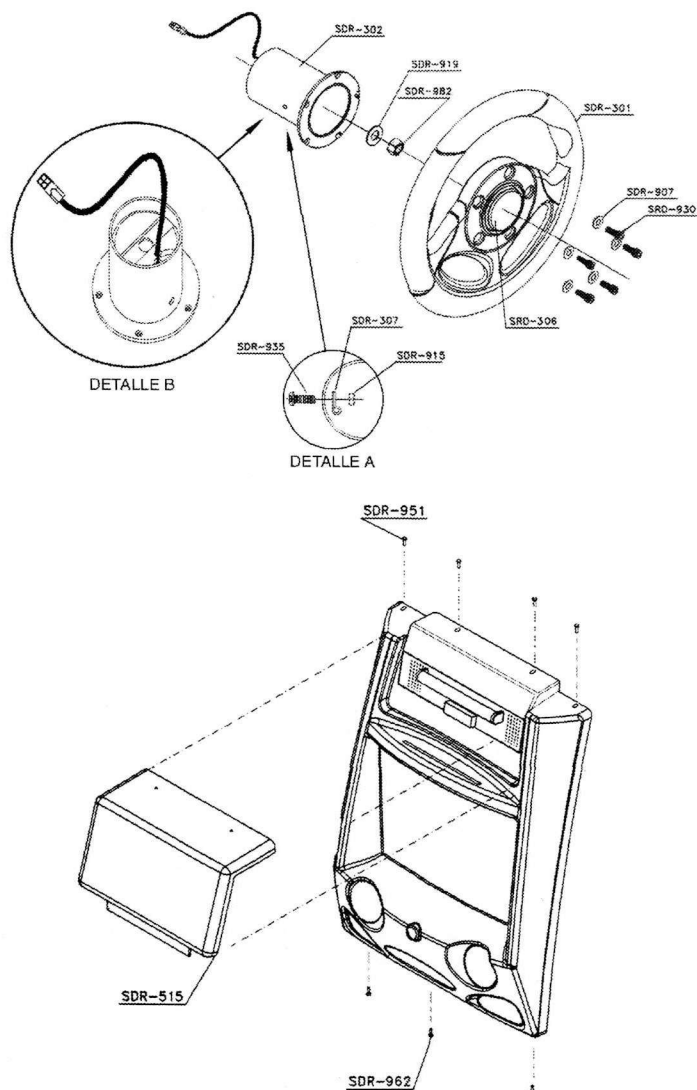
The control of the steering wheel is adjusted automatically as the player turns it from one side to another, so that no further adjustment is necessary. None the less, if you suspect its is not working well, a simple test can be made. Enter INPUT TEST (section 6.3) and go to the Steering wheel line (should be switched ON). When the steering wheel is in its central position, the figure in brackets should be close to zero.

9.2 Fuse replacement

Before starting this operation disconnect the machine from the mains supply using the switch located on the rear of the monitor cabinet (see section 5.4). For greater safety you can unplug the mains cable. The fuse is in the same unit as the switch and the mains cable socket.



9.3 Access to the steering wheel mechanism

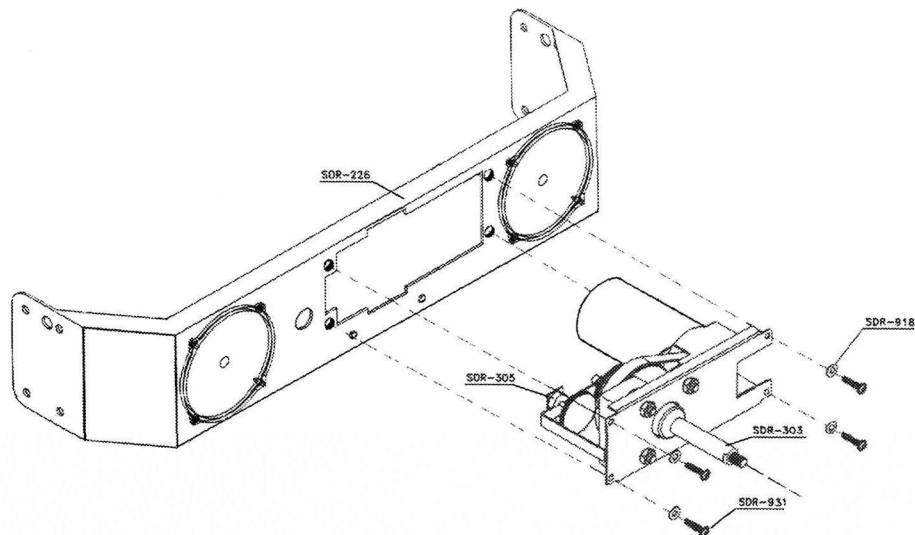


To get at the steering wheel mechanism, do as follows:

- 1) Remove the steering wheel after unscrewing the five bolts SDR-930 which fasten it to its cylindrical mounting.
- 2) Unscrew the nut SDR-882 using a 19mm tube spanner
- 3) Disconnect the cable and remove the steering wheel.
- 4) Unscrew the four screws SDR-951 and the three SDR-962 which hold the plastic panel in position.
- 5) Loosen (do not unscrew completely) the screws of the side mouldings which retain the plastic panel
- 6) Remove the plastic panel so the mechanism can be examined or taken out.

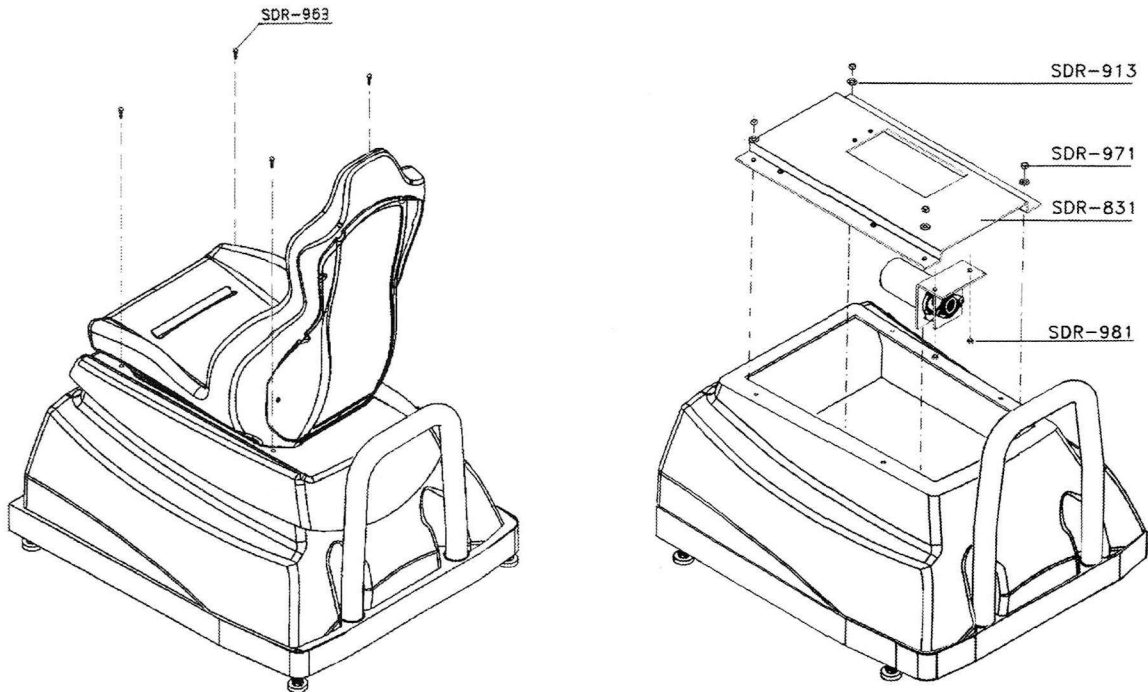
WARNING

The horn cable is fixed to the cylinder support SDR-302 with the plastic clamp SDR-307 and a special housing (DETALLE B) where it fits under pressure. Please do not forget to check those fixings when mounting the cylinder.



9.4 Access to the vibrator

The first step to access the vibrator is to dismantle the seat assembly by taking out the four bolts SDR-963 which hold it to the platform. To take out the rear bolts is necessary to move the seat forwards. The front bolts are exposed when the seat is moved backwards.



Once the seat assembly is removed, the vibrator can be accessed when the plate SDR-831 is unscrewed. If you need to work on the vibrator, there is a detailed diagram in section 10.8.



9.4 Basic troubleshooting

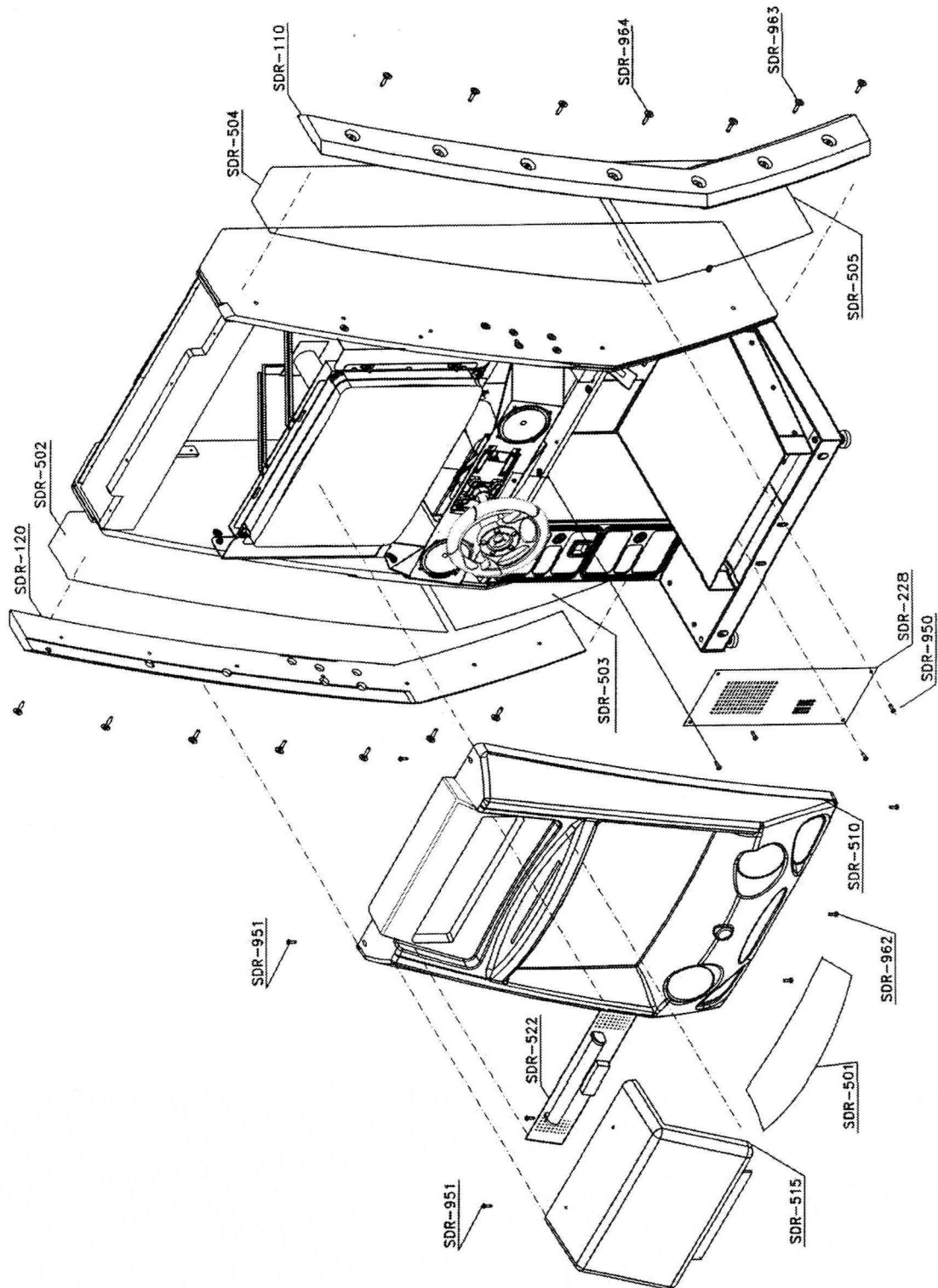
<u>PROBLEM</u>	<u>POSSIBLE SOLUTION</u>
Nothing happens when turning on the machine	<ul style="list-style-type: none"> ✓ Check wiring connector connections ✓ Check fuse of the line filter ✓ Check voltage value for +5VDC on PSU
Monitor screen is black or the picture is distorted	<ul style="list-style-type: none"> ✓ Check for faults on monitor ✓ Check for disconnected cable ✓ Check for faulty PC Board
Colour or image on the screen is not correct	<ul style="list-style-type: none"> ✓ Enter Screen Test (section 6.1) on Test Mode making the necessary adjustments.
There is no sound or its 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
The steering wheel is not operating properly	<ul style="list-style-type: none"> ✓ Check that the potentiometer belonging to the steering wheel is working correctly. ✓ Check the connections between the potentiometer and the CPU. ✓ 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 steering wheel is centred
The message COMMUNICATION ERROR appears on the screen	<ul style="list-style-type: none"> ✓ Check the link ✓ Follow the indications of section 6.2 (SETTINGS)

10. PARTS LIST

10.1 MONITOR CABINET – Plastics and attachments

CODE	DESCRIPTION
SDR-110	<i>SIDE COVER, RIGHT</i>
SDR-120	<i>SIDE COVER, LEFT</i>
SDR-228	<i>SUBWOOFER PROTECTION PLATE</i>
SDR-501	<i>STICKER - INSTRUCTIONS</i>
SDR-502	<i>STICKER - UPPER LEFT</i>
SDR-503	<i>STICKER - LOWER LEFT</i>
SDR-504	<i>STICKER - UPPER RIGHT</i>
SDR-505	<i>STICKER - LOWER RIGHT</i>
SDR-510	<i>FRONT PLASTIC</i>
SDR-515	<i>ATTRACTION PANEL ASSEMBLY</i>
SDR-522	<i>FLUORESCENT ASSEMBLY, attraction panel</i>
SDR-950	<i>SCREW RA81 SELFTHREAD, 3,9x9</i>
SDR-951	<i>SCREW RA81 SELFTHREAD, 3,9X20</i>
SDR-963	<i>SCREW UM 1001 M8X20 BLACK</i>
SDR-964	<i>SCREW UM1001 M8X40 BLACK</i>

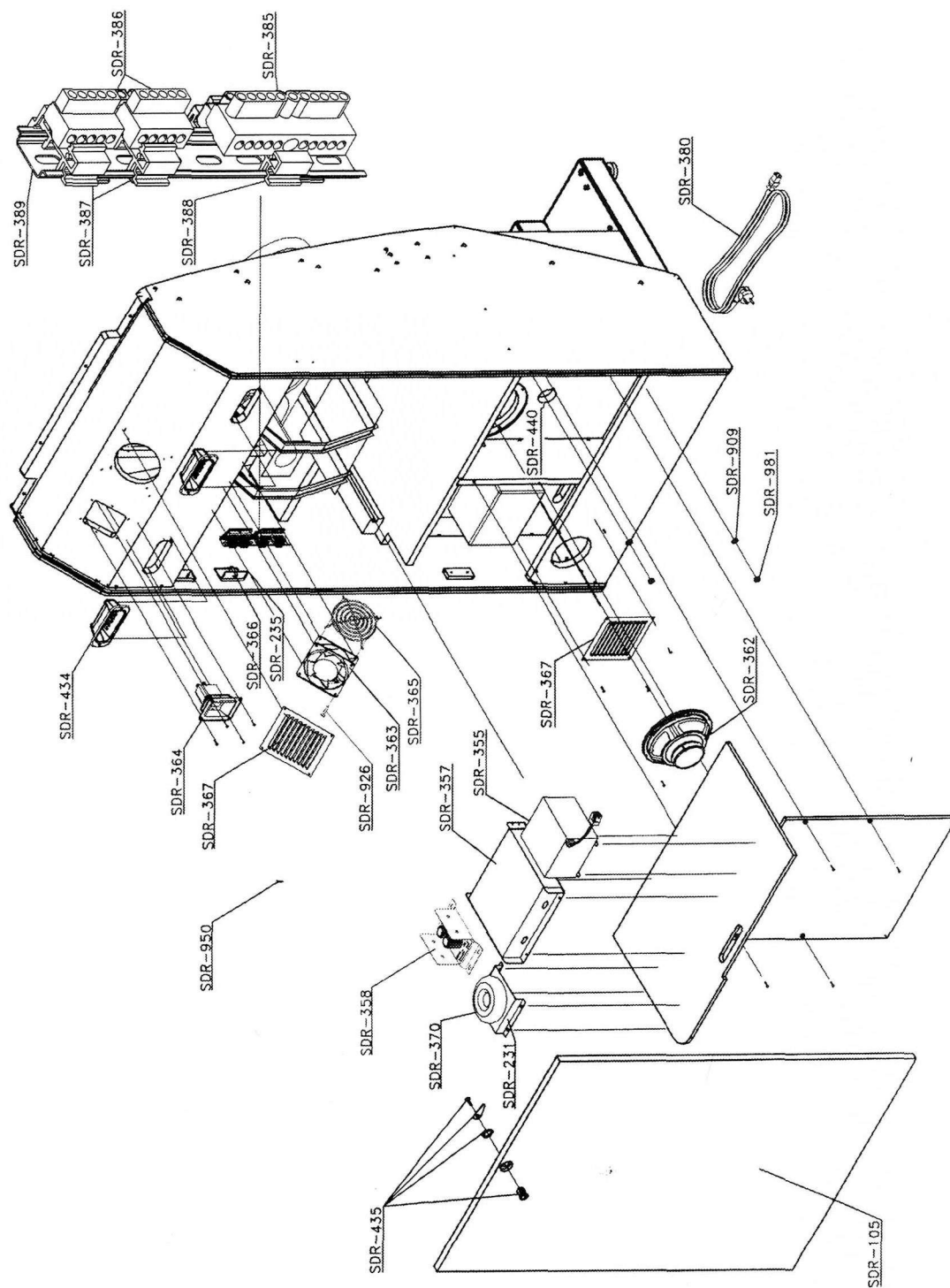




10.2 MONITOR CABINET ASSEMBLY – Back view

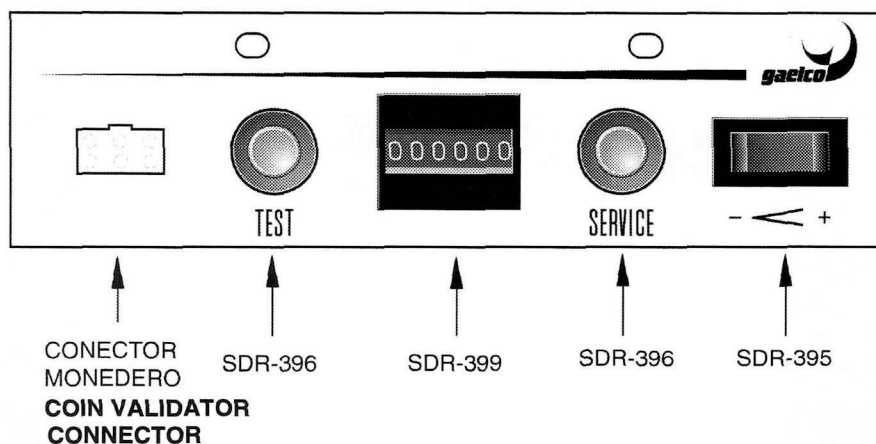
CODE	DESCRIPTION
SDR-105	<i>BACK DOOR</i>
SDR-231	<i>SUPPORTING PLATE, toroidal transformer</i>
SDR-235	<i>BRACKET, Safety switch</i>
SDR-355	<i>POWER SUPPLY UNIT, REF. SB180PL/R</i>
SDR-357	<i>SMASHING DRIVE CPU BOARD</i>
SDR-358	<i>MOTOR CONTROL UNIT</i>
SDR-362	<i>8" SPEAKER (SUBWOOFER) – 100W / 4Ω</i>
SDR-363	<i>FAN, 220V 120X120</i>
SDR-364	<i>AC FILTER & FUSE HOLDER, REF. 2752F3G ILT</i>
SDR-365	<i>FAN GRILL</i>
SDR-366	<i>SAFETY SWITCH, back door</i>
SDR-367	<i>VENTILATION GRILL 15X15</i>
SDR-370	<i>TOROIDAL TRANSFORMER 228/18-0-18, 160VA, 4,44A</i>
SDR-380	<i>POWER CABLE</i>
SDR-385	<i>GROUND DERIVATION TERMINAL BLOCK BM 9982</i>
SDR-386	<i>POWER SUPPLY DERIVATION TERMINAL BLOCK (5c.) BM 997</i>
SDR-387	<i>BASE BM 99601 for fixing derivation terminal block BM 997</i>
SDR-388	<i>BASE BM 99821 for fixing derivation terminal block BM 9982</i>
SDR-389	<i>FIXING RAIL for derivation terminal blocks</i>
SDR-434	<i>PLASTIC GRAB HANDLE C3605</i>
SDR-435	<i>DOOR LOCK, AGA REF.135</i>
SDR-440	<i>PASTIC TUBE, subwoofer box</i>
SDR-909	<i>WASHER DIN 9021, M8</i>
SDR-926	<i>SCREW DIN 7985 M4X5 COPPERPLATED, fan ground</i>
SDR-981	<i>NUT DIN 985, M8</i>

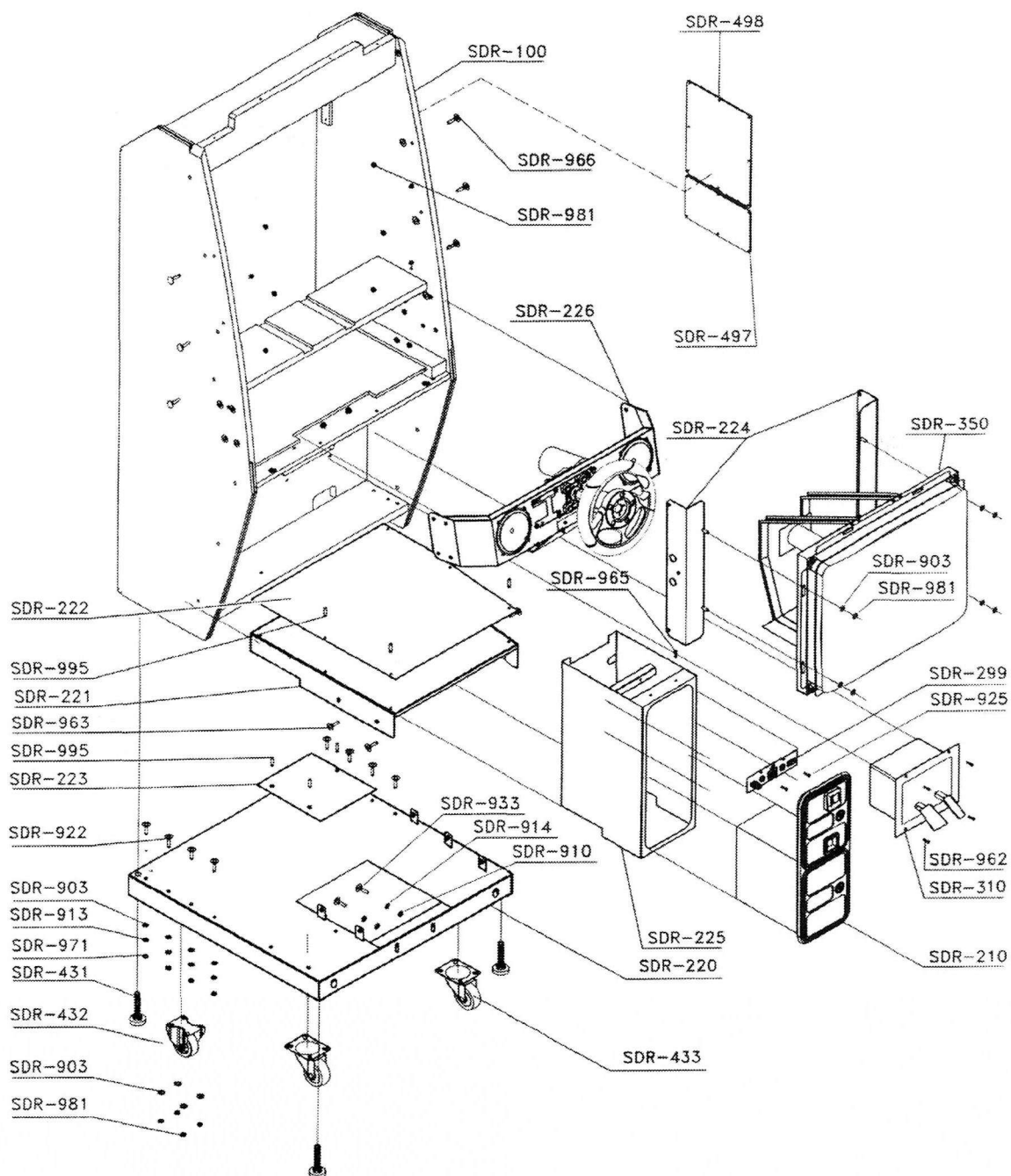




10.3 MONITOR CABINET – Front view

CODE	DESCRIPTION
SDR-100	WOODEN CABINET
SDR-210	DOUBLE FRAME MINIDOOR (coin door and cash box door)
SDR-220	METALLIC BASE
SDR-221	FEET REST PLATFORM
SDR-222	ALUMINIUM COVER, feet rest platform
SDR-223	ALUMINIUM PLATE, feet rest platform
SDR-224	BRACKET, monitor
SDR-225	RECEPTACLE for dual frame minidoor
SDR-226	BRACKET, steering wheel
SDR-299	TEST & SERVICE PANEL
SDR-310	DUAL FOOT PEDAL ASSEMBLY, GAS/BRAKE, REF. A-4110120152
SDR-350	28" MONITOR, POLO/2, STAR PH, REF. 02197760
SDR-431	LEG LEVELER, ILM16X50
SDR-432	REAR WHEEL Ø100
SDR-433	SWIVELLING FRONT WHEEL Ø100
SDR-497	ID LABEL
SDR-498	DOCUMENT HOLDER
SDR-903	WASHER DIN 125, M8
SDR-910	WASHER DIN 9021, M10
SDR-913	GROWER WASHER DIN 127, M8
SDR-914	GROWER WASHER DIN 127, M10
SDR-921	SCREW UM1001, M8X30
SDR-922	SCREW DIN 603, M8X45
SDR-925	SCREW DIN 7985, M4X10
SDR-933	SCREW DIN 912, M10X25
SDR-962	SCREW UM1001, M6X20
SDR-963	SCREW UM1001, M8X20
SDR-965	SCREW UM1001, M6X30
SDR-971	NUT DIN 934, M8
SDR-981	NUT DIN 985, M8
SDR-995	RIVET Ø4



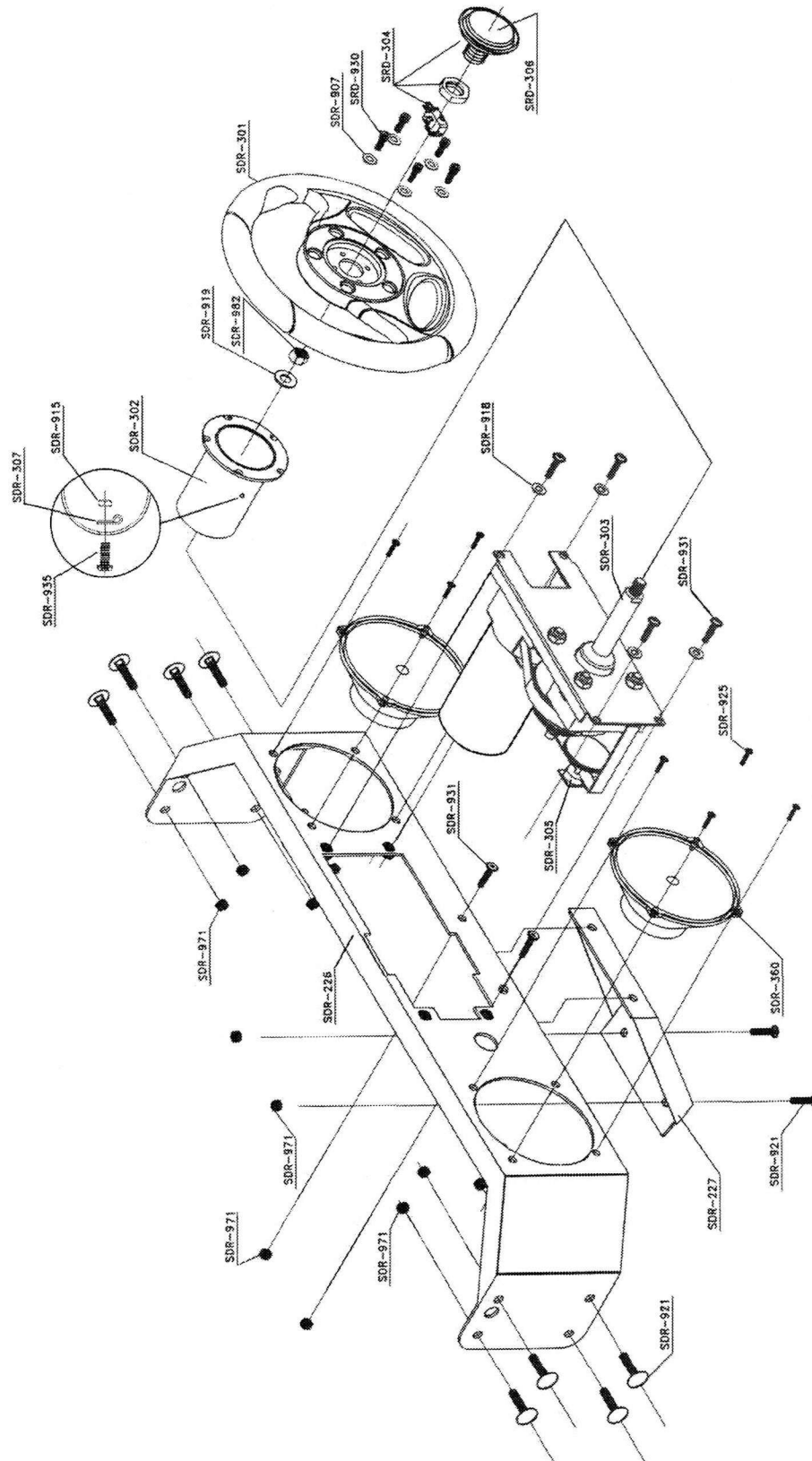


MONITOR CABINET – FRONT VIEW

10.4 STEERING WHEEL ASSEMBLY

CODE	DESCRIPTION
SDR-226	<i>BRACKET, steering wheel mechanism</i>
SDR-227	<i>BRACKET SUPPORT</i>
SDR-301	<i>STEERING WHEEL</i>
SDR-302	<i>COUPLING CYLINDER, steering wheel</i>
SDR-303	<i>STEERING WHEEL MECHANISM</i>
SDR-304	<i>HORN BUTTON</i>
SDR-305	<i>POTENTIOMETER 5KΩ</i>
SDR-306	<i>STICKER, horn button</i>
SDR-307	<i>CABLE CLAMP N-4</i>
SDR-360	<i>5" SPEAKER / 4Ω / 60W – 2 WAY, REF. KINDVOX 35.1368</i>
SDR-907	<i>WASHER AEF M6</i>
SDR-915	<i>WASHER DIN 6923, M5</i>
SDR-918	<i>WASHER DIN 6789A, M8</i>
SDR-919	<i>WASHER DIN 6798A, M12</i>
SDR-921	<i>SCREW UM1001, M8X30</i>
SDR-925	<i>SCREW DIN 7985, M4X10</i>
SDR-930	<i>SCREW DIN 912, M6X16</i>
SDR-931	<i>SCREW DIN 912, M8X20</i>
SDR-935	<i>SCREW ISO 7380, M5X10</i>
SDR-971	<i>NUT DIN 934, M8</i>
SDR-981	<i>NUT DIN 985, M8</i>
SDR-982	<i>NUT DIN 985, M12</i>





STEERING WHEEL ASSEMBLY

10.5 STEERING WHEEL MECHANISM

CODE	DESCRIPTION
C-22-03036	WASHER, belt fastener
C-22-0103660	SCREW, belt fastener
C-22-0501410	SLEEVE, potentiometer pinion
C-22-80025525	KEY WODRUF, steering wheel shaft
C-29-401582	MOTOR 20VDC, 3.9A MODEL 1582
C-29-405680	POTENTIOMETER 5K Ω , with PCB (SDR-305)
C-40-000300	BEARING HOUSING
C-40-022087	PLASTIC PINION, shaft
C-40-023097	PLASTIC PINION, potentiometer
C-40-025048	MOTOR PULLEY, plastic
C-40-085027	BELT 15mm 400/5
C-40-203100	SLEEVE, motor pulley
C-40-206002	BEARING 6002 ZZ
C-40-0250301	OMEGA, belt fastener
C-43-050300	GUIDE SLEEVE, self-oil
C-GA-TX00010	ATTACHMENT PLATE
C-GA-TX00020	MOTOR BRACKET
C-GA-TX00030	POTENTIOMETER BRACKET, iron
C-GA-TX01010	SHAFT (SDR-303)
C-GA-TX02010	STOPPER
C-GA-TX03600	SHAFT PULLEY, iron
C-GA-TX05200	SLEEVE, steering wheel shaft

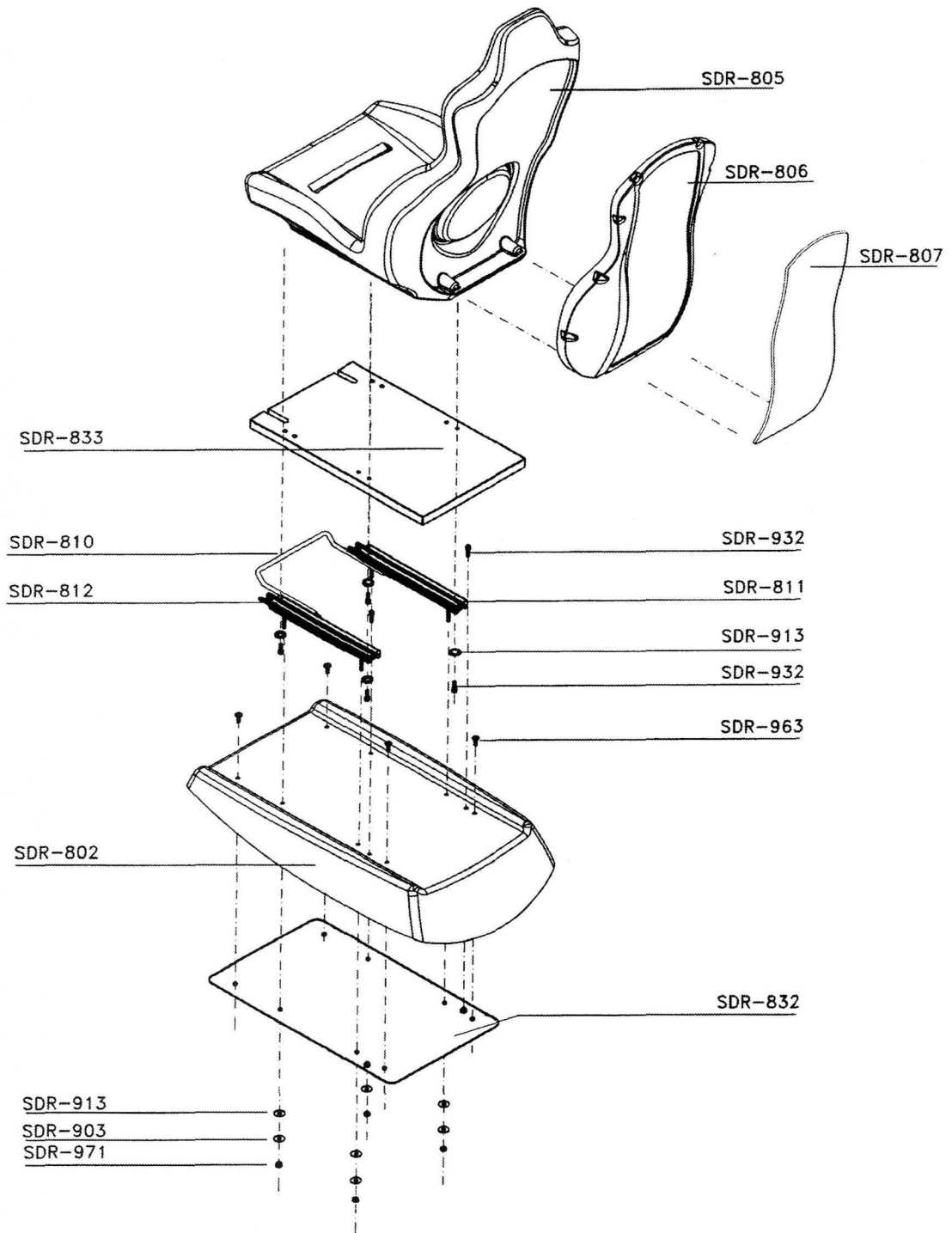


10.6 SEAT ASSEMBLY

CODE	DESCRIPTION
SDR-802	<i>MOVIBLE PLASTIC COVER, seat slides</i>
SDR-805	<i>SEAT</i>
SDR-806	<i>BACK COVER, seat</i>
SDR-807	<i>STICKER, back cover</i>
SDR-810	<i>HANDLE, seat slides</i>
SDR-811	<i>SEAT SLIDE, RIGHT</i>
SDR-812	<i>SEAT SLIDE, LEFT</i>
SDR-832	<i>SUPPORTING PLATE, seat</i>
SDR-833	<i>PROTECTION PLATE, seat slides</i>
SDR-903	<i>WASHER DIN 125, M8</i>
SDR-913	<i>GROWER WASHER DIN 127, M8</i>
SDR-932	<i>SCREW DIN 912, M8X16</i>
SDR-963	<i>SCREW UM1001, M8X20 BLACK</i>
SDR-971	<i>NUT DIN 934, M8</i>

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un fideo!*



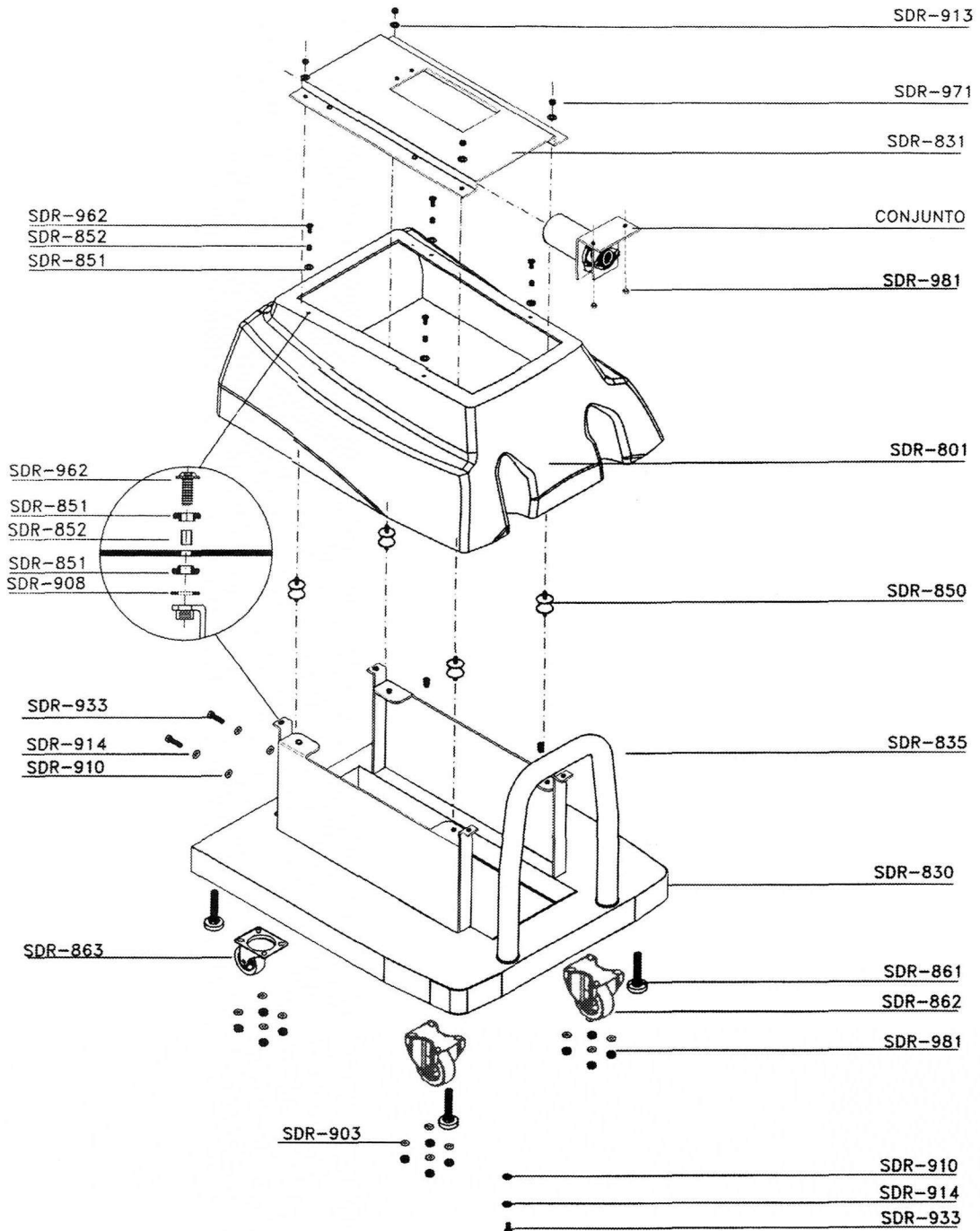


SEAT ASSEMBLY

10.7 PLATFORM ASSEMBLY

CODE	DESCRIPTION
SDR-801	<i>PLASTIC COVER</i>
SDR-830	<i>MAIN STRUCTURE</i>
SDR-831	<i>VIBRATOR BASE</i>
SDR-835	<i>"U" TUBE</i>
SDR-850	<i>SILENT BLOCK 34X34 / 55 SHORE</i>
SDR-851	<i>RING K19 COMPAK, rubber</i>
SDR-852	<i>SEPARATOR SLEEVE K112 COMPAK, brass</i>
SDR-861	<i>LEG LEVELER</i>
SDR-862	<i>REAR WHEEL Ø100, REF.9955715</i>
SDR-863	<i>SWIVELLING FRONT WHEEL Ø100, REF. 9955705</i>
SDR-903	<i>WASHER DIN 125, M8 (silent block)</i>
SDR-908	<i>WASHER DIN 9021, M6</i>
SDR-910	<i>WASHER DIN 9021, M10</i>
SDR-913	<i>GROWER WASHER DIN127, M8</i>
SDR-914	<i>GROWER WASHER DIN 127, M10</i>
SDR-933	<i>SCREW DIN912 M10X25</i>
SDR-971	<i>NUT DIN 934, M8</i>
SDR-981	<i>NUT DIN 985, M8</i>



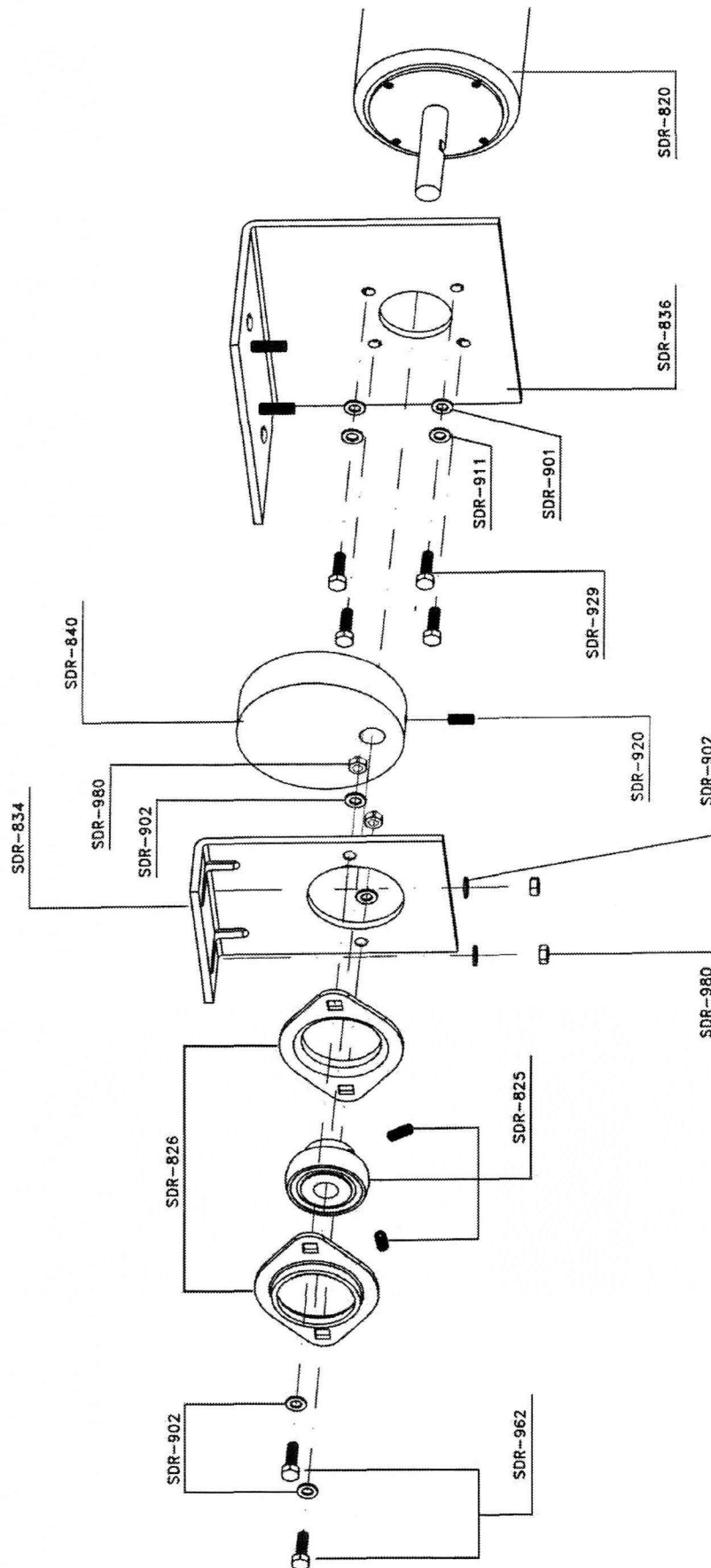


PLATFORM ASSEMBLY

10.8 VIBRATOR ASSEMBLY

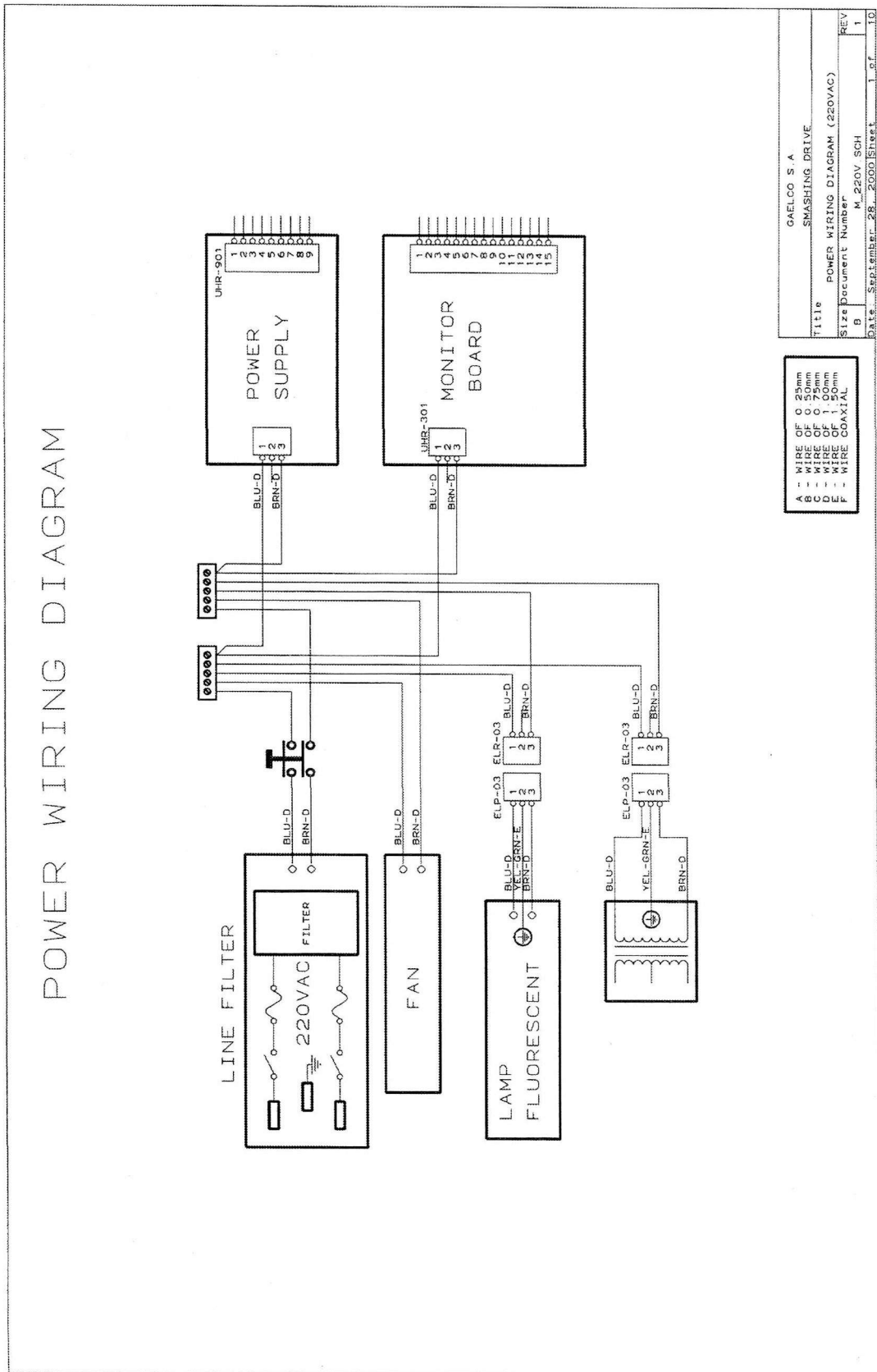
CODE	DESCRIPTION
SDR-820	MOTOR
SDR-825	BEARING ASSEMBLY SB201-BPFL-12
SDR-826	BEARING HOUSING BPFL-12
SDR-834	BEARING BRACKET
SDR-836	MOTOR BRACKET
SDR-840	ECCENTRIC DISC
SDR-901	WASHER DIN 125, M4
SDR-902	WASHER DIN 125, M6
SDR-911	GROWER WASHER DIN 127, M4
SDR-920	BOLT DIN 913 M6X16, ALLEN
SDR-929	SCREW DIN 912, M4X14
SDR-962	SCREW UM1001, M6X20
SDR-980	NUT DIN 985, M6

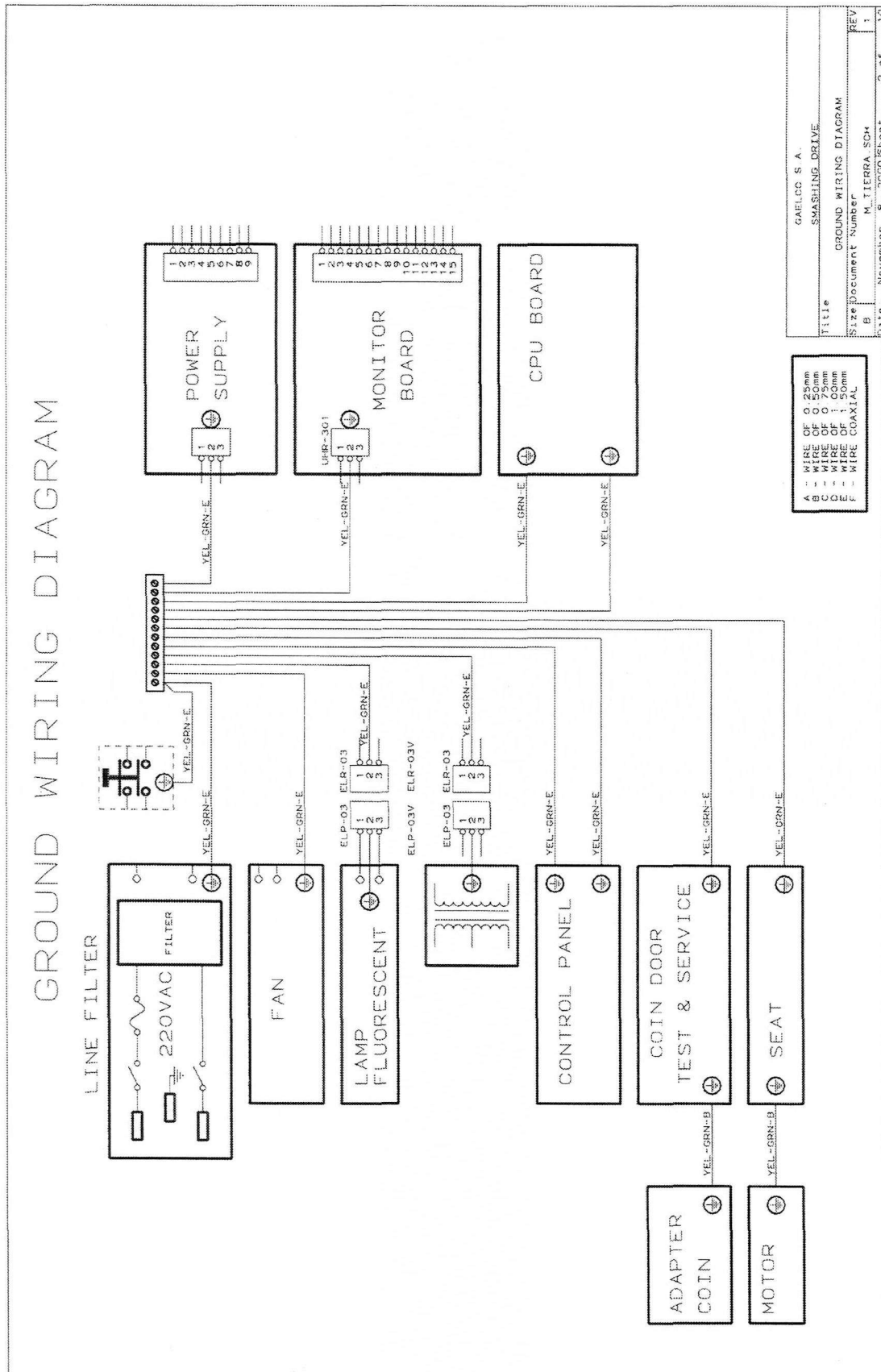




11. WIRING DIAGRAMS

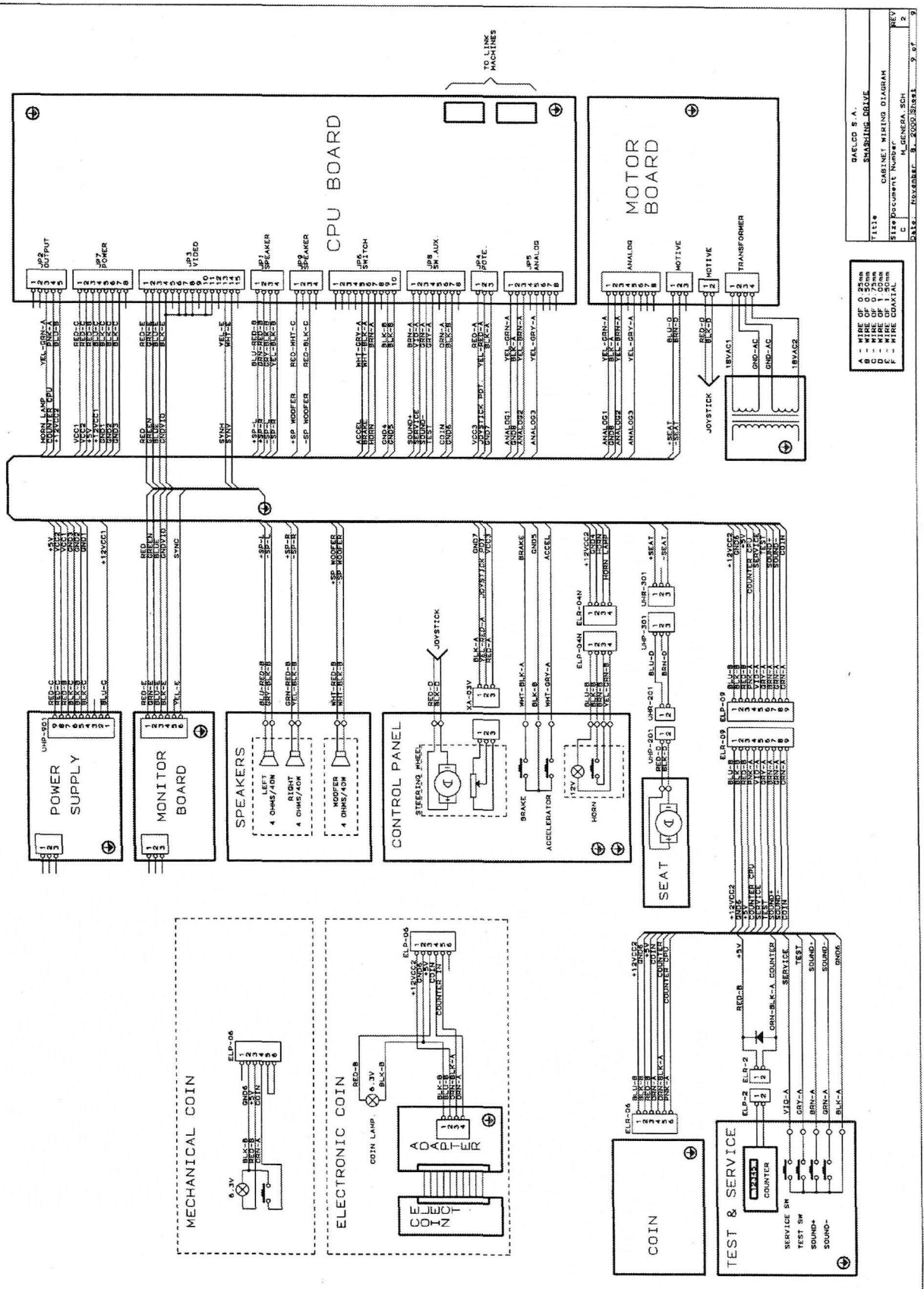
11.1 POWER WIRING



11.2 GROUND WIRING

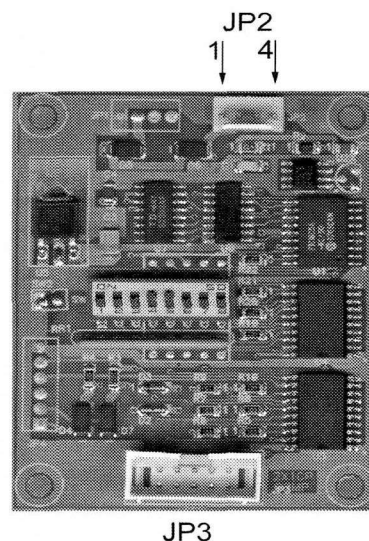
11.3 CABINET WIRING

CABINET 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, programme 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
Italy	==	==	500 L	==	200 L	100 L
USA	==	==	==	1 \$	50 Ct	25 Ct
France	20FF	10 FF	5 FF	==	2 FF	1 FF
Greece	==	==	==	==	100 Dr	50 Dr
Portugal	==	==	==	200 ESC	100ESC	50ESC
Great Britain	==	1 £	50 Pen	==	20 Pen	10 Pen
Germany	==	==	5 DM	==	2 DM	1 DM
Spain	500Pta	==	200 Pta	100 Pta	50Pta	25 Pta
Australia	==	==	5 \$	==	2 \$	1 \$
Belgium	==	==	50 FB	==	20 FB	==
Switzerland	==	==	5 FS	==	2 FS	1 FS
Sweden	==	10 Kr	5 Kr	==	==	1 Kr
Norway	20 Kr	10 Kr	5 Kr	==	==	1 Kr
EURO (high)	==	==	==	2	1	50c
EURO (low)	2	1	50c	==	20c	10c



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

Example No. 2

Germany:	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	
1 DM = 1 pulse	SW6=	Off	1 pulse / 1 credit.
	SW7=	Off	
	SW8=	Off	
RESULT:	1 DM /1 credit; 5 DM / 6 credits;		

Example No. 3

France (1):	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	
1 FF = 1 pulse	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):	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	
1 FF = 1 pulse	SW6=	Off	10 pulses / 1 credit.
	SW7=	On	
	SW8=	On	
RESULT:	10 FF /1 credit; 20 FF / 3 credits		

Example No. 5

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) and 10th pulse (=1 £)
	SW5=	Off	
10 Pen=1 pulse	SW6=	Off	3 pulses / 1 credit.
	SW7=	On	
	SW8=	Off	
RESULT:	30 Pen /1 cred.; 50 Pen /2 cred.; 1 £ / 5 cred.		

NOTES

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