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# **Mk2 PENALTY SHOOT OUT SERVICE MANUAL**

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## **1. INFORMATION.**

- 1.1 This Manual is intended as a guide to servicing, fault finding and repairs on your Penalty Shoot Out.
- 1.2 All details and specifications in this manual were correct at the time of print. Harry Levy Amusement Contractor Ltd operate a policy of continuous development and improvement, and reserve the right to modify equipment, or change the specifications and instructions at any time.
- 1.3 Only qualified, professional service personnel should gain entry to the machine, and no liability is accepted by Harry Levy Amusement Contractor Ltd. or any Agents acting for them for any damage or injury arising from the use of this service manual.
- 1.4 It is important that the machine operates according to its design criteria. A detailed description of the correct operation is set out within this manual.

## **2. Delivery**

Remove any transit packing materials from the machine then site the Penalty Shoot out on a smooth level floor. If you take delivery of a partially assembled machine refer to the separate assembly instructions. Handle your machine with care. DO NOT subject it to shocks or damp conditions. DO NOT drop. Connect your Penalty Shoot Out to the mains supply using the mains lead issued with your machine. UK machines have a suitable moulded plug fitted to the lead, with the correct 5 Amp fuse installed. The mains lead plugs into the power socket on the back of the machine. If a different style of plug is required, cut off the plug supplied, then fit a suitable plug to the lead. Fused plugs should be fitted with a 5 Amp rated fuse. All wiring must be carried out by a qualified electrician. **IMPORTANT** - Personnel other than skilled service engineers should disconnect the machine from the mains supply when servicing. Your machine is designed for indoor use only, do not expose to the weather.

	<u>UK (supplied)</u>		<u>USA equivalent</u>
Mains lead	BROWN	LIVE/HOT	BLACK
wiring	BLUE	NEUTRAL	WHITE
	GREEN/YELLOW	EARTH	GREEN

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows;  
The wire coloured Green and Yellow must be connected to the terminal in the plug which is marked with the letter E, or marked by the EARTH symbol, or coloured Green, or Green and Yellow.  
The wire coloured Blue must be connected to the terminal which is marked with the letter N, or NEUTRAL.  
The wire coloured Brown must be connected to the terminal which is marked with the letter L, or LIVE.

**IMPORTANT- This machine must be grounded (EARTHED)**

## **3. GENERAL SERVICING**

### **3.1 Maintenance**

Please follow our easy guide to maintain your Penalty Shoot Out in peak condition, giving you top earnings for many years. The Penalty shoot out is a robust and dependable machine, regular cleaning is the first requirement. To keep the machine in optimum condition for maximum profit, maintain all visible internal and external surfaces in a clean 'as new' condition.

- 1 Laminated cabinet body and paintwork - Clean with an all purpose cleaner then, where required use a wax furniture polish on gloss surfaces.
- 2 Glass and chrome parts - Clean with a quality window cleaning solution.
- 3 Plastic and glass fibre parts - Use a general purpose furniture polish.
- 4 Vacuum clean the artificial grass.

Note ; Do not use abrasive or caustic cleaners or solvents on plastic, painted, or glass fibre parts.

Always use cleaning products according to the manufacturers own instructions.

To clean inside the Playfield unscrew the compression lock until it releases, lift the lid and hook the support in position to hold it in place. Climb over the front frame and vacuum the plastic grass.

### **3.2 Replacement Parts.**

It is of mutual interest that the Penalty Shoot Out is kept in excellent working condition, when requested please order original replacement parts from your distributor or Harry Levy Amusement Contractor Ltd.

### **3.3 Ticket dispenser.**

The ticket dispenser is a Deltronic DL-1275 unit. Please refer to the pink manual for the ticket machine operation, adjustment and electrical specifications.

**To Refill the Tickets :-** Open the top ticket door, or the side door, and load the new ream of tickets into the ticket holder. Feed the tickets into the ticket machine until they touch the rollers. Push the player 'START' button and the ticket machine will complete its award, and continue with its normal game cycle.

### **3.4 Emptying the cash box**

Unlock and open the cash-box door (below the coin mech.). Empty it. The Coin In meter reading (left hand side) should now be taken. The number on the counter minus the last number will indicate the value of coins in the cashbox. Replace the cashbox and lock the door.

## **4. DESCRIPTION OF THE GAME**

### **4.1 Self Test**

At switch on the Penalty Shoot Out will go through a visual start up routine;

The matrix display will show a chequered pattern for a few seconds. The score display will show '0'.

The spot lamps will switch on. The credit display will light up all the segments before showing '0' credits.

The ball stop arm will move to the up position if not already there. It will not move if it is already in the up position. After all of the above tests have been performed the machine will go into the attract mode.

### **4.2 The Single Machine Attract Mode**

The machine will play a series of tunes at intervals (refer to Switch Settings). The matrix display will scroll, advertising the machine continuously.

### **4.3 The Single machine game**

Once credited (if a fraction of a credit is detected the coin mech. lamp will flash) the game begins when the player presses the start button, or after 5 seconds if the button is not pressed. The ball stop releases the football which rolls down to the front of the machine. The goal keeper begins to move from side to side. The player has to use his skill and judgement to kick the ball past the moving goal keeper into the goal. Each goal scored registers on the 'GOALS' display.

Refer to the machines own game instructions for specific details of the game and awards. The game length and awards may be changed, see the switch settings section.

The game time remaining is displayed graphically throughout the game on the top matrix display. Ten seconds from the end of the game the 'Ref' tells the player "Ten Seconds Mate".

At the end of the game ("The Final Whistle"), the goal keeper stops moving and the ball stop raises to trap the ball, removing it from play. The appropriate award (if selected) is then dispensed.

If credits remain the player may start the next game, (or it starts automatically after 5 seconds), otherwise the machine reverts to the attract mode.

### **4.4 The Linked Game Attract Mode**

The machine will play a series of tunes at intervals (refer to the switch settings). The matrix display will scroll, advertising the machine continuously. The attract routine is interrupted when another machine is credited, the matrix display then scrolls the message 'Join in Now' while the machine announces "Insert Coins To Join In Now".

#### 4.5 The Linked Game

When any machine in a linked group is credited, a 15 second delay occurs before it's game starts. This allows time for any other machines to be credited & 'Join In' the game. The first credited machine will display a countdown from 15 on the 'Goals' display, any other machines credited will join in the countdown. If further machines are not credited during the 15 seconds then the 1st machine starts a single game and the other machines revert to the attract mode.

If subsequent machines are credited during the 15 seconds then they display 'Linked Game!' (alternate words flashing) on the matrix display, and announce "Linked Game!".

They will then simultaneously start the game at the end of the 15 second countdown.

If there is only one machine not being played and it is then credited, the single game will start after 5 seconds or when the Start button is pushed.

All machines will finish together when the standard type game is selected. The winner of a standard linked game is the player with the highest score at the end of the game, or if the scores are equal the winner is the player who achieved that score first. When a winner of a linked game is determined, all the other machines of the group will display the winners machine number on the matrix display - 'PLAYER x WON', where x is the machine number of the winning player. The display alternates the two screens for 10 seconds then continues with it's sequence.

If the non-payout game is selected then each player is entitled to the full duration of his game, or alternatively the NO TIME LIMIT option can be set so that the first player to reach the threshold (goals scored level) is declared the winner and ends the group game for all players.

Once credited (if a fraction of a credit is entered the mech. lamp will flash) the game begins when a player presses the flashing Start button, or after 5 seconds if the button is not pressed.

The ball stop releases the football which rolls down to the front of the machine. The goalkeeper begins to move from side to side. The player has to use his skill and judgement to kick the ball past the moving goalkeeper into the goal. Each goal scored registers on the 'GOALS' display, and the two playfield spot-lamps will flash as the crowd cheers.

Refer to the machines own game instructions for specific details of the game and awards. The game type, game length and awards may be changed, see the switch settings.

The game time remaining is displayed graphically throughout any timed game, on the matrix display. Ten seconds from the end of a game the 'Referee' calls "Ten Seconds Mate".

At the end of the game ("The Final Whistle"), the goalkeeper stops moving and the ball stop raises to trap the ball, removing it from play. The appropriate award (if selected) is then dispensed, or, for the non payout game the winners machine will attract an attendant with announcements, flashing beacon and lights, and a bell, so that the player can be given their award.

**The attendant must switch the keyswitch off and on again to re-set the machine for normal play.**

The matrix display then shows 'Game Over'.

If a player has scored a new high score the machine will announce "High Score of The Day" - NOTE - this does not apply to goal threshold type games.

When the award is complete the machine will revert to the attract mode unless credits remain. If some machine of a linked group have credits remaining they will display 'Linked Game' (alternate words flashing) on the matrix display, and announce "Linked Game!", then any unused machines will invite players to join in (15 seconds, announcing "Insert coins to join in play", while the matrix display scrolls the message 'Join in Now'), before starting. If there are no unused machines the group simultaneously starts the next game.

If the payout Unit is empty the control system will switch the payout device OFF. An alarm will sound saying "Low Tickets", and repeat every 10 seconds until the fault is rectified. During this time no more games can be played. The matrix display will read 'Ticket' and the score display will show 'E1'. (A similar error E2 indicates a time-out fault).

In the event of the ticket machine opto sensors being blocked for two seconds continuously the ticket machine motor is switched off and an alarm message will broadcast saying "Please Call Attendant", and repeat every 10 seconds until the fault is rectified. During this time no more games can be played. The matrix display will read 'Ticket' and the score display will show 'E3'.

When the payout device fault has been rectified (re-filled) the start button needs to be pressed to complete the existing payout. If the award is not complete the machine reverts to the 'Ticket E1 or E2' mode again. The remaining quantity of the award due to the player will be displayed on the score display. Any credits remaining will stay on the credit display.

#### NON PAYOUT OPTION

There is a facility in the set-up menu to select the mode of operation to be NON-PAYOUT.

When enabled, this version requires the menu to be set to fix a threshold value for the number of goals scored. When a player reaches that number of goals during a game, the machine goes into 'win' mode, where it sounds a sequence of "You're a Winner!" messages in a repeating cycle.

As soon as the threshold level goal is scored the whole group game ends, each machine removes the ball from play. There is a menu option that allows the remaining players to continue to try to reach the threshold level. The game time limit will apply when only a single game is played, or when set as an option. If the game time limit is enabled and no player reaches the threshold goal level, the winner is the player with the highest score. If two or more players share the joint high score the winner will be the first player to have scored the high score goal.

When a player achieves the threshold level or is identified as the winner, the message 'WINNER' will flash on their matrix display, it will also be announced from the machine so that where required it will attract an attendant to award a player their prize. **The attendant must switch the keyswitch off and on again to reset the machine to continue it's next sequence.**

## **5. SPECIFICATIONS**

### **5.1 Dimensions.** (working)

Height	2030mm	80"
Width	920mm	36"
Depth	3240mm	128"
Weight	255 Kg	561 lbs

### **5.2 Electrical ratings**

At 110 Volts 60 Hz :- 2.1 Amps    230 Watts                      At 230 Volts 50 Hz :- 0.8 Amps    180 Watts

Please refer to the label on the machine (at the cable entry) for your machines designed input voltage.

### **5.3 Error codes and alarm signals**

If the payout Unit is empty the control system will switch the payout device OFF. An alarm will sound saying "Low Tickets", and repeat every 10 seconds until the fault is rectified. During this time no more games can be played. The matrix display will read 'Ticket' and the score display will show 'E1'. The error code 'E2' may also be displayed, this indicates a ticket time-out fault.

In the event of the ticket machine opto sensors being blocked for two seconds continuously the ticket machine motor is switched off and an alarm message will broadcast saying "Please Call Attendant", and repeat every 10 seconds until the fault is rectified. During this time no more games can be played. The matrix display will read 'Ticket' and the score display will show 'E3'. This error code will also be displayed when the ticket count opto is dirty, clean both sides of the opto and it will resume normal function.

When the payout device fault has been rectified (re-filled) the start button needs to be pressed to complete the existing payout. If the award is not complete the machine reverts to the 'Ticket E1 or E2' mode again. The remaining quantity of the award due to the player will be displayed on the score display. Any credits remaining will stay on the credit display.

The error codes 'Opto 1' or 'Opto 2' indicate a fault in one or other of the goal opto sensors, they should be checked to ensure there is no physical damage, that the reflectors are in position, and that the indicator LED's on the base of the opto flash to register the movement of your hand breaking the beam.

Refer section 7.5, Opto Sensors.

## 6. ACCESS

### 6.1 General

With the exception of re-loading tickets for the ticket machine or emptying the cashbox, always disconnect the machine from the mains supply by removing its plug from the supply socket.

### 6.2 Playfield.

To gain access to the playfield, unscrew the compression lock until it releases, lift the lid and hook the support in position to hold it in place.

### 6.3 Coin entry unit.

Opening the side door on the coin entry unit will give you access to the ticket holder, the spot lamps, logic box, power supply unit, fuses and the fan unit. The front coin-mech. door will give you access to the main ON/OFF switch, coin mech., coin and ticket counters and credit board. The top ticket door will only give you access to the ticket machine and ticket holder.

### 6.4 Top sign.

The top sign 'goals scored' display and the matrix display can be accessed by removing the top back door.

### 6.5 Rear of the machine

Removing the top back door of the machine will give you access to the score and matrix display. The bottom door will give you access to the goal area, netting, and ball opto sensors and reflectors.

## 7. ELECTRICAL SYSTEMS.

### 7.1 General.

In general disconnect the machine from the mains supply, then check the looming and connectors for damage, also check the physical condition and operation of the suspect device or unit (remove from the machine if necessary) and bench test if possible. Should a problem develop indicating a board fault it is recommended that the board is returned for repair or replacement by your distributor. Fault diagnosis and repair may be performed by skilled service personnel, but this may invalidate any warranty. Many of the IC's are common components and are available from electronic component suppliers or from Harry Levy Amusement Contractor Ltd.

### 7.2 Wiring check.

If a fault occurs **SWITCH THE MACHINE OFF**, then check that:-

- a) Fuses are intact
- b) All wires are properly secured to their terminals, or securely crimped into connector pins.
- c) All plugs and sockets are correctly mated.
- d) No wires are trapped, damaged or broken.

A visual inspection will show the general condition of wiring. A more thorough test using a continuity tester will be needed to check suspect wiring, however once a machine has been playing successfully for some time wiring is very rarely a cause for concern.

### 7.3 Power supply

When faults occur that affect the whole of the machine then the fuses, power supply and regulation system should be investigated first. Check that the machine is connected to a suitable live mains supply.

**WARNING - HIGH VOLTAGES EXIST WITHIN THIS MACHINE,  
DISCONNECT FROM THE MAINS SUPPLY BEFORE CONTINUING.**

- Check the fuses using a continuity meter.
- Check the main DC feed from the rectifier to the logic control board is between 17 and 21 Volts DC
- Refer to schematics and drawings to check wiring connections.

#### **7.4 Logic Control board.**

The logic control board is situated inside the coin entry unit and fixed to the side door.

#### **WARNING - HIGH VOLTAGES EXIST ON THE COMPONENT BOARD**

Fuses are provided on the board for each low voltage supply and also for the mains supply.

Logic Box Internal Fuse Ratings;-

Fuse FS1        6.3A    Time Delay Type

Fuse FS2        6.3A    Time Delay Type

Fuse FS3        1.6A    Time Delay Type

#### **7.5 Opto sensors**

If, when a goal is scored the score display does not register the goal, check that the opto sensors are functioning correctly by removing the back door, starting a game and waving your hand in front of the sensors one at a time. Refer section 5.3, Error Codes.

Goals should be registered in the normal way (one goal every 3 seconds) and the sensors own indicator LED (located underneath the sensor) will flash to indicate it is functioning. If nothing happens check the 'mirror periscope' is clean and securely fixed to the top of the sensor/s, then check the connectors and wiring back to the logic box.

If there is still no response then check the sensor's alignment using the following procedure ;-

1. Leave the machine in attract mode
2. Unplug one of the sensor's (4 way Molex connector)
3. The sensor that is still plugged in will have it's indicator LED lit (on the base), if not, adjust the sensor's position so that the beam is reflected back into itself from the reflector opposite.
4. When the LED is lit, wave your hand slowly in front of the sensor to break the beam. When the beam is broken the LED will switch off.
5. Reconnect the second sensor and disconnect the first and repeat the hand test.
6. If either sensor does not respond correctly then change it for a direct replacement type, supplied by your agent, or by Harry Levy Amusement Contractor Ltd.

The fan unit is located at the bottom of the coin entry unit below the spot lights. Caution must be taken not to put anything through the guards to interfere with the blades.

#### **7.7 Speaker.**

The speaker is fitted inside the coin entry unit. If the speaker is suspected faulty check the wiring connections first, if it needs replacing always use one of the same type and rating (8 Ohm, 25 Watt).

#### **7.8 Lighting.**

#### **WARNING - THE SPOT LAMPS COULD BE HOT.**

Two spot lamps are located in the coin entry unit to illuminate the goal area. To replace a bulb switch the machine off and allow time for the working bulb to cool - to avoid burns from accidental contact.

Open the coin entry unit side door, remove the blown lamp and dispose of carefully. Replace the lamp with one of the same rating and type. **Handle lamp according to the manufacturers instructions!**

#### **7.9 Coin and ticket counters**

Electro-Mechanical counters are located behind the coin mech. door. The left hand counter is the TICKET counter and the right hand counter is the COIN counter, and counts in 10p, 25 cent or token units, as appropriate.

### 7.10 Credit Board

The credit board is located in the coin entry unit behind the coin mech/s.  
This board controls the price of play (and bonuses) of your machine.

#### PRICE OF PLAY

A credit board (type HLCM3 V1.1) is installed behind the coin mech. Switch the machine OFF before making adjustments to switch settings.

SWITCH 1	Pole	1	2	3	4	Price per game	
						UK	USA
		off	off	off	off	2p	
		on	off	off	off	5p	
		off	on	off	off	10p	25 cents
		on	on	off	off	15p	
		off	off	on	off	20p	50 cents
		on	off	on	off	25p	
		off	on	on	off	30p	75 cents
		on	on	on	off	35p	
		off	off	off	on	40p	\$1.00
		on	off	off	on	45p	
		off	on	off	on	50p	\$1.25
		on	on	off	on	60p	\$1.50
		off	off	on	on	70p	\$1.75
		on	off	on	on	80p	\$2.00
		off	on	on	on	90p	\$2.25
		on	on	on	on	£1	\$2.50

SWITCH 1 Pole 5, OFF = Mars Mech, ON = Coin Controls 8 coin

SWITCH 1 Pole 6, not used. Default OFF

SWITCH 1	Pole	7	8	50p Value, Bonus Credits;-
		off	off	0
		on	off	1
		off	on	2
		on	on	3

SWITCH 2	Pole	1	2	3	£1 Value, Bonus Credits;-
		off	off	off	0
		on	off	off	1
		off	on	off	2
		on	on	off	3
		off	off	on	4
		on	off	on	5
		off	on	on	6
		on	on	on	7

SWITCH 2	Pole	4	5	6	DEFAULT SETTINGS
		off	off	off	UK coin set

SWITCH 2	Pole	7	8	Credit Pulse Speed Length ON (mS)	Length OFF (mS)
		off	off	70	70
		on	off	100	100
		off	on	130	130
		on	on	100	200

## 8. Mechanical Systems

### 8.1 Goal keeper assembly

The goal keeper is attached to the goal keeper arm by an M10 aero nut (17mm spanner), washer and shake-proof washer. The flexible rubber mounting is embedded into the goalkeeper permanently.

When replacing the goal keeper make sure that he is facing the front of the machine.

If the goal keeper motor or drive mechanism requires inspection then the floor section can be removed by unscrewing the 4 off M6 hex head screws, covered by the edge of the grass. The goalkeeper does not have to be removed from the arm to access the motor and drive mechanism.

### 8.2 Ball stop assembly

The ball stop arm should fit into the cut out in the floor, and rest just below the level of the grass so the ball rolls smoothly over it. If this is not so then check for obstructions preventing the ball stop arm from positioning correctly. If there are no obstructions then check the position sense microswitches under the floor operating from the end of the arm, as they may need adjusting.

### 8.3 Goal Keeper

The goal keeper may need a clean from time to time. Use warm soapy water, do not use a solvent based cleaner as this will remove the paint and damage the material

### 8.3 Switch settings

Three switches on the top of the logic box are used to operate a set-up menu that is shown on the top 'matrix' and 'goals scored' displays.

The switches are as follows ;-

**ENTER** - nearest the heat sink

**DECREASE** (or **DECREMENT**) - middle key

**INCREASE** (or **INCREMENT**) - furthest from the heat sink

- 1) Switch the machine off. (Inside the coin-mech. door)
- 2) Open the side door on the coin entry unit to access the Logic box
- 3) Hold the **ENTER** key down and switch the machine on. Release the key after 1 second. '**ENG 0**' will appear on the displays at the top of the machine.
- 4) Press the **ENTER KEY**. - '**OPTION 0**' will appear, select your option ;-
  - 0 = Single or linked timed game with or without ticket award.
  - 1 = Single or linked timed game with or without coin award.
  - 2 = Linked game, no time limit, with or without ticket award.
  - 3 = Linked game, no time limit, with or without coin award.

Press the enter key again.

Note, in the following description example values are shown to help with the explanation. The values that appear on the display of your machine may not be the same. **Only one game feature should be selected for correct operation (Ø).**

5) The next item is '**GAME T 12**'. This indicates the length of time the game lasts, in this case it indicates 120 seconds (multiply the number shown, by 10). If you wish to increase the time press the Increase button, to decrease the time press the Decrease button. Press 'enter' when the correct value is displayed.

6) (Ø) The next item is '**BONUS 0**'. This is the quantity of bonus tickets awarded when reaching each score threshold shown in 'BONUS-A', 'BONUS-B', and 'BONUS-C' (below). Press enter when the correct value shows.

7) The next three items are '**BON A 3**', '**BON B 6**', '**BON C 9**'.

The 3, 6 and 9 represent the number of goals needed to be scored in order to receive the bonus award (each time) as shown above in section 6. Using the '**INCREASE**' and '**DECREASE**' keys the bonus score levels can be altered.

Press enter when the correct value shows at each level.

8) (Ø) The next item is '**BON H 0**' This sets the number of tickets awarded each time a player achieves the "High Score of the Day".

9) (Ø) The next item is '**BON W 0**' When the machines are linked this sets the number of bonus tickets awarded to the winner of a linked game. This award is in addition to the normal award.

10) The next item is '**WIN J 0**' When the games are linked this sets the number of goals to be scored to trigger the Progressive Topsign award.

11) (Ø) The next item is '**WINNER 5**' This sets the goal threshold level for the end of a (no time limit) game, when the winners beacon / bell is activated and the machine announces the winner. It has to be reset

by an attendant operating the reset keyswitch.

12) The next item is '**TICKET 2**'. This sets the quantity of tickets awarded per goal during normal play. This is separate and additional to any bonus awards. If a ticket machine is NOT fitted set this value (and all bonus award values) to 0.

SPECIAL NOTE :- The minus quantity settings can be used as follows :- (Ignore -0)  
**- 1** = 2 goals per ticket. **- 2** = 4 goals per ticket. **- 3** = 6 goals per ticket etc to - 9.

13) The next item is '**TIC IN 0**'. Leave at 0 for ticket awards as above. If a fixed number of tickets have to be awarded for each game, then increment the display to the required value. Tickets are awarded at the end of each game. Set the values in 6) 7) & 8) to 0 to prevent score related awards, or these will be awarded as well.

14) The next item is '**A TIME 4**' (ATTRACT INTERVAL TIME). This displays the time interval between the attract sound messages. The number displayed has to be multiplied by 10 to calculate the attract interval in seconds.

15) The next item is '**NUMBER 0**' This MUST be set at 0 when the Penalty Shoot Out operates as an individual machine. When machines are linked together in groups this sets the identity number of each machine. Each machine in a linked group must have a unique identity number, from 1 to 8, ALWAYS starting with machine number one.

16) The last item is '**RUN ON 5**' Leave this setting at 0 to allow a linked 'Goal Threshold' game to continue until the number of goals is reached, or set a time value (as item 5) to allow the 'Run On' length of game if the goals are scored quicker.

17) Press '**ENTER**' to display the original message '**OPTION 0**' then switch the machine off, wait 10 seconds, and switch back on again to enable the new settings.

#### 9. TROUBLE-SHOOTING

Always replace faulty items with units of the same specification. Where possible, determine the original cause of a fault and rectify to avoid recurrence of the problem.

If a coin mech. or ticket dispenser is suspect, test it in another machine in place of a known good unit.

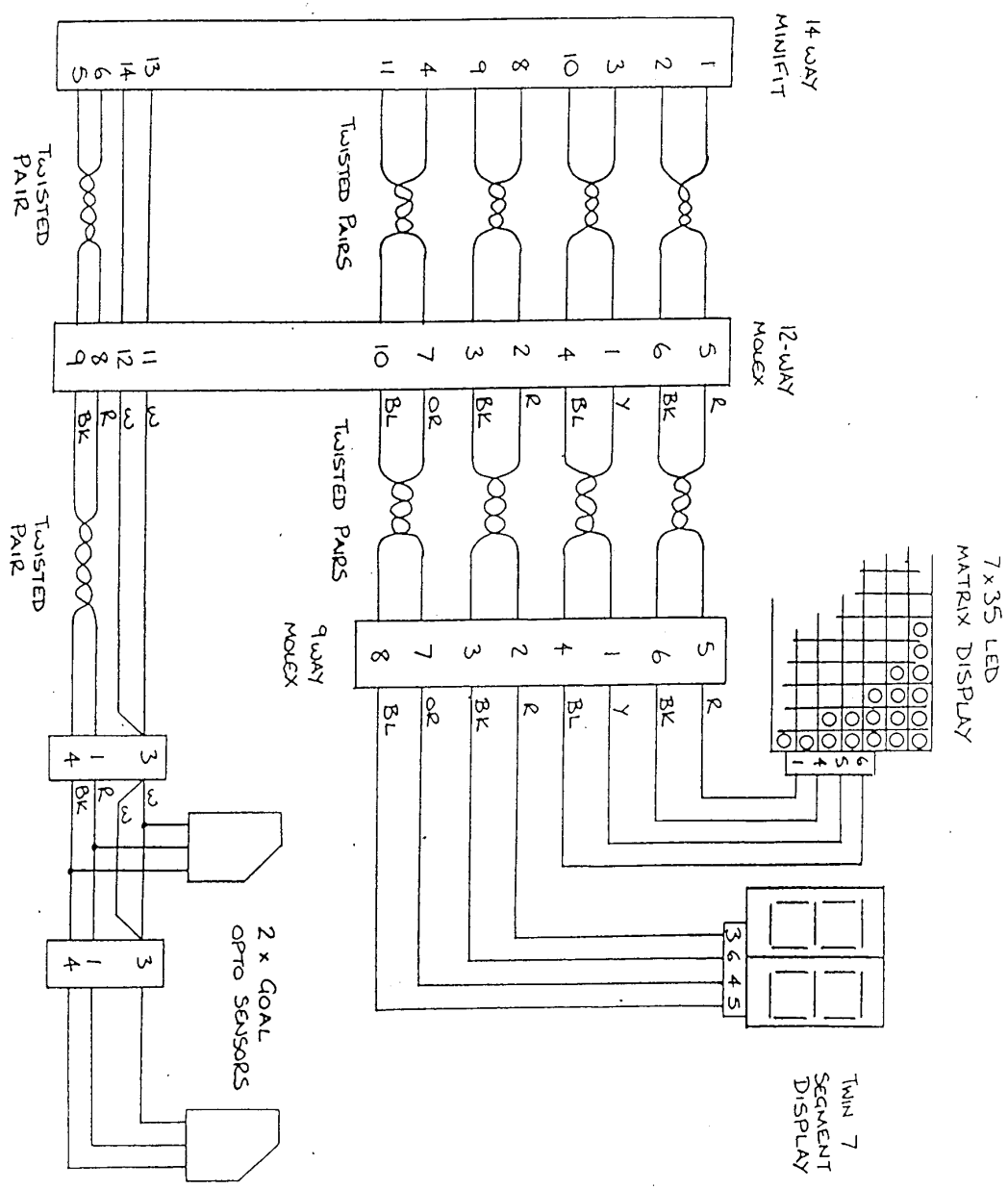
<u>Symptom</u>	<u>Possible Fault</u>	<u>Remedy</u>
No Sound	Volume Speaker	Turn up volume on control box. Check speakers
Goal keeper not moving	Power. Jammed on obstruction	Check / replace fuse. Check and remove obstruction. See Ball Stop.
Ticket machine not working	Ticket jam. Motor Ticket P.C.B	Clear jam Bench test if possible. Check transistor 2N2222, & IC 40106 opto-sensor. See Deltronic manual.
Ball stop not working	Obstruction on the playfield Power Wiring	Check playfield, clear any obstruction Check / change fuse Check connections.
Fan not working	Wiring Fan	Check connection. Replace
Ball stop gate continues to move after game ends	Micro switch	Micro switch not making for long enough at the end of each travel.

## Wiring Diagrams

CONTROLLED DOCUMENT

CONTROL CON 3

Colour Code  
 BK = BLACK  
 R = RED  
 OR = ORANGE  
 Y = YELLOW  
 BL = BLUE  
 W = WHITE



ISSUE	DESCRIPTION	APPRO DATE
1		
2		
3		

Dev /  
 Read

**TITLE**  
 SCORE + MATRIX DISPLAYS  
 GOAL OPTO SENSOR  
 WIRING

DRAWN Bud	TRACED	CHECKED	APPROVED	DATE 16.3.95
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**DRAWING No. HLP5-5026-C**

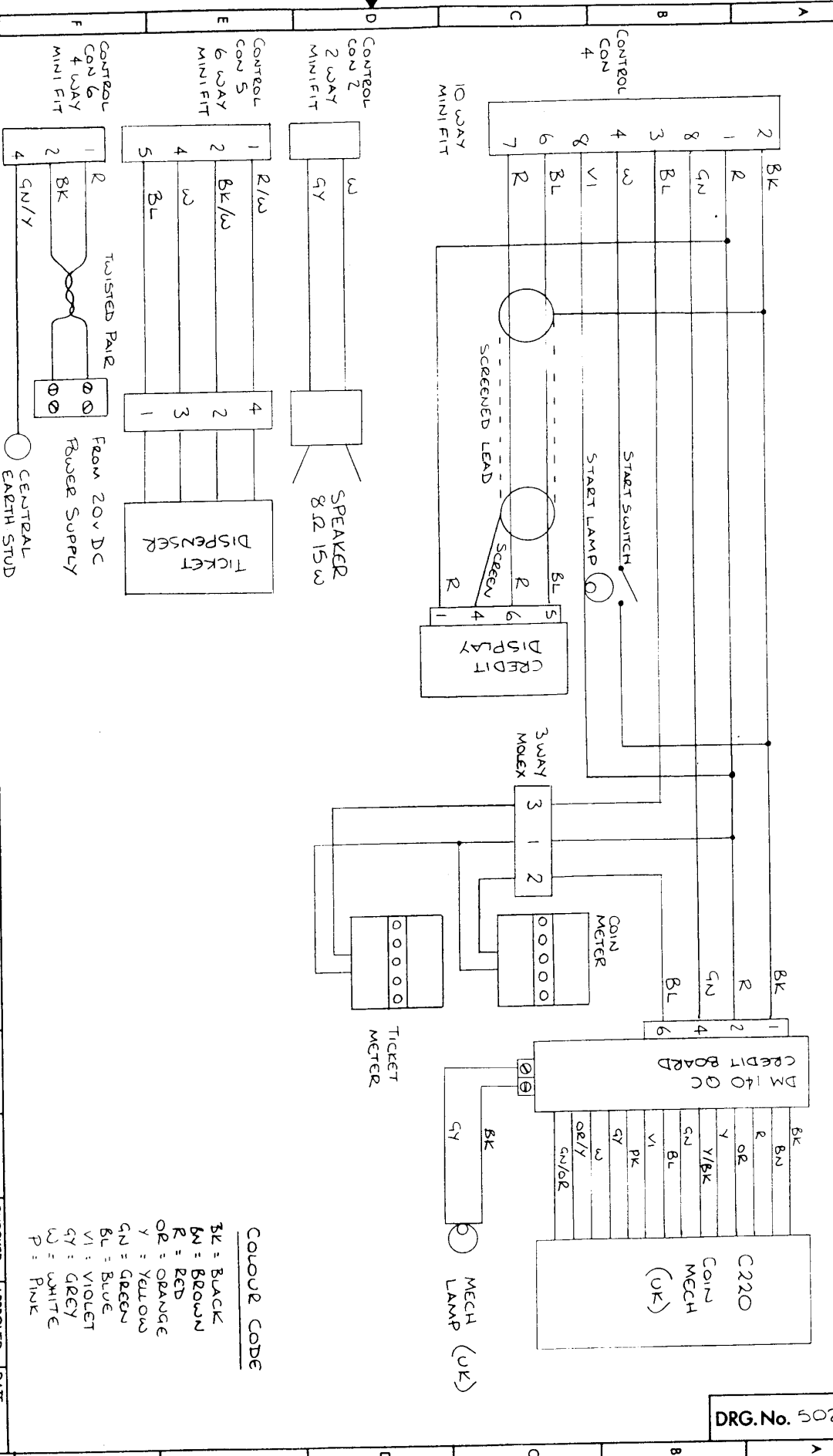
DRG.No.5026

PART OF

DO NOT SCALE

SHEET OF

DRG. No. 5027

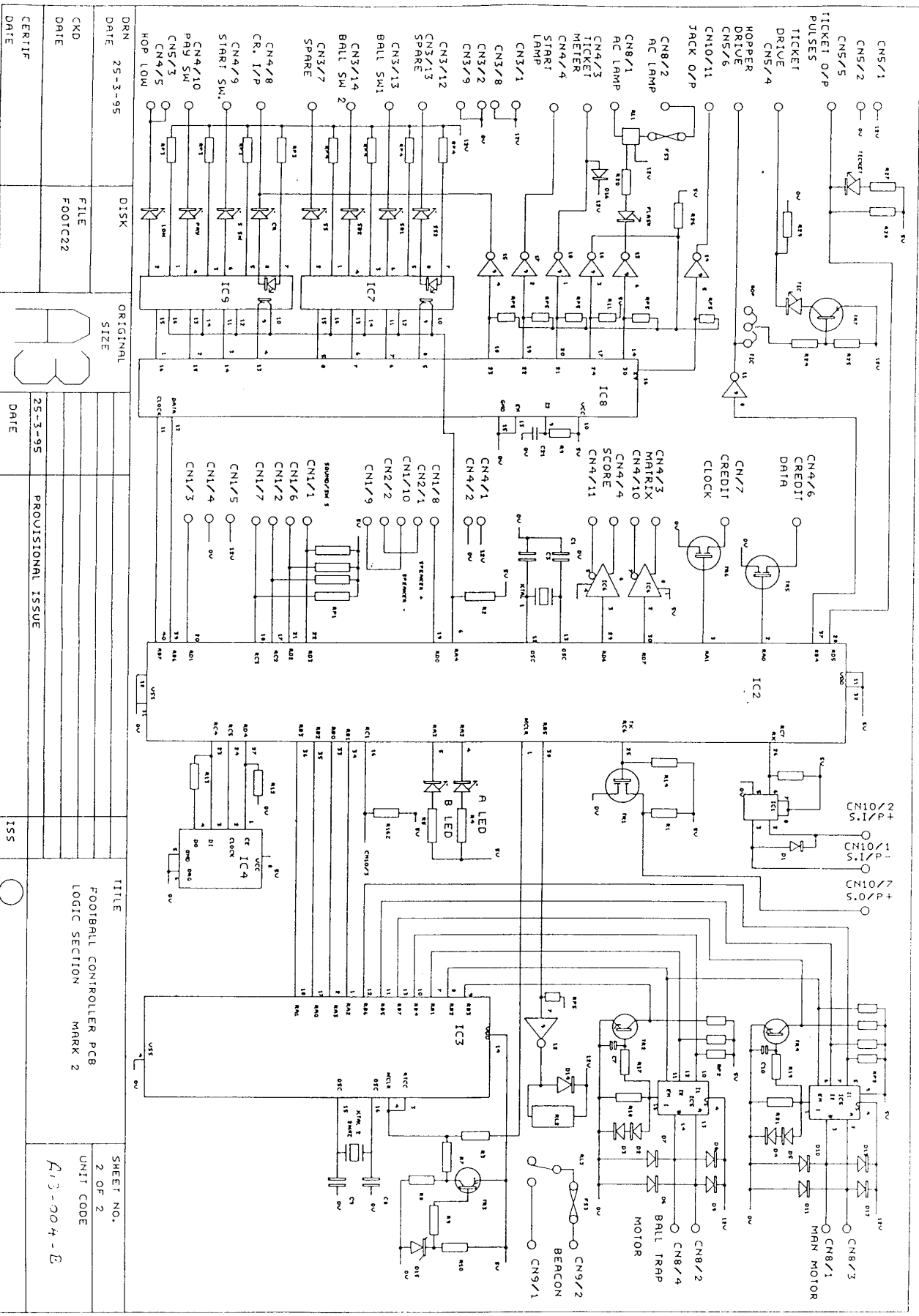


**COLOUR CODE**  
 BK = BLACK  
 BR = BROWN  
 R = RED  
 OR = ORANGE  
 Y = YELLOW  
 GN = GREEN  
 BL = BLUE  
 V1 = VIOLET  
 GR = GREY  
 W = WHITE  
 P = PINK

ISSUE	DESCRIPTION	APPD.	DATE

DESCRIPTION	APPD.	DATE	DEV
CONTROL CON 6 4 WAY MINIFIT			
CONTROL CON 5 6 WAY MINIFIT			
CONTROL CON 2 2 WAY MINIFIT			
CONTROL CON 4			
CONTROL CON 6 4 WAY MINIFIT			

TITLE	DRAWN	TRACED	CHECKED	APPROVED	DATE
CONTROL PANEL WIRING	BW				16.3.95
DRAWING No. H.L.P.S - 5027 - C					



DRN	25-3-95	DISK	ORIGINAL SIZE
CKD		FILE	FOOTIC22
DATE			
CERTIF			
DATE			

DATE	25-3-95	PROVISIONAL ISSUE
DATE		
DATE		
DATE		
DATE		

TITLE	FOOTBALL CONTROLLER PCB LOGIC SECTION MARK 2
SHEET NO.	2 OF 2
UNIT CODE	A13-004-E
ISS	





### 11. Spare parts list

Below is a list of parts for the Penalty Shoot-Out. There is a description, stock number, and picture number to help you identify the part you require. When a part is needed please quote the description and the Harry Levy Amusement Contractor Ltd stock number.

<u>Description</u>	<u>Harry Levy Stock Number</u>
Speaker	6979
Spot Lamps (U.S.A.)	7828
Spot Lamps (U.K.)	7521
C220 Coin Validator	6673
Credit Display P.C.B	7706
Ticket Dispenser(DL-1275)	6381
Q.C Board P.C.B	7330
Counters	6029
Fan Unit (U.K.)	6995
Fan Unit (U.S.A.)	6141
Logic Unit Box	8015
Logic Board only	8076
Sound Board Only	8077
Power Supply Assembly (Complete Unit)	PS-008
Speaker Grill	6242
Start Button	7082
Ticket Door	HL 4623

#### Coin entry unit perspex artwork and display/awards stickers.

Instruction Panel	HL 4358
Award Sticker	HL 4360
Bonus Award Sticker	HL 4359
Credit Display	HL 4439
Coin Sticker (U.S.A.)	HL 4437
Coin Sticker (U.K.)	HL 4436

#### Back Frame

Matrix Display P.C.B	8074
Score Display P.C.B	7705
Retro-Reflective Opto Sensors	6058
Perspex Display artwork	HL 4152
Reflector	HL 6064

#### Front Frame Assembly

Bungie cords	7689
Bungie Cord padding Assembly	PS-005
Rubber Kick Protectors (Left)	HL 4724
Rubber Kick Protectors (Right)	HL 4726
Grass Cover Protector	HL 7627
Nylon Bush	HL 4614
Compressor Piping	7699
Selloc Pin	7455
Cable Ties	6282
L/H Front Frame Block	HL 4728
R/H Front Frame Block	HL 4729

#### Goal Keeper Assembly

Goal Keeper Motor	7428
Goal Keeper MAN	7691
Goal Keeper BOY	7906
Oilite Bearing (goalie link)	7870
Oilite Bearing	6026

Ball Stop Assembly

Ball Stop Motor	7429
Ball Stop Micro Switches	6133
Oilite Bearing	6025

General

Footballs	7668
301 Locks and keys	6087
201 Locks and keys	6278
Compression lock key	8014