**SEGA**®

# SERVICE MANUAL

**COWS MIGHT FLY**

## IMPORTANT

- Before using this product, read this manual carefully to understand the contents herein stated.

- After reading this manual, be sure to keep it near the product or in a convenient place for easy reference when necessary.

# USER MANUAL

This manual is suitable for use in Territories listed below :

U.S.A.

Europe

Asia

# [Table of Contents]

# Simple Facts About The Machine

Machine Name : PIGS MIGHT FLY

Machine overall dimension : H1950mm x W760mm x L750mm

Machine Weight :160kg

Voltage : 120V, 2.2A, 60Hz for US

      : 230V, 1.3A, 50 Hz for the UK

       : for other countries, voltage depend on individual countries.

Power Consumption : 264W for US

                    299W for UK

LCD dimension : Standard 37 inches.

Force require to push the handle : 200 N ( about 44.0 lbs ).

Note : This machine is intended for indoor use only !

# Introduction

This manual describes the information on handling and maintenance of PGIS MIGHT FLY manufactured by VS Electronic Assembly (Zhuhai) Co. Ltd. (authorized by SEGA SAMMY GROUP Japan). The machine must not be used for other improper purposes. Any adjustment procedures and maintenance service must be performed by a qualified engineer or technicians who are comprehensively understands the machine.

> **WARNING**
> **Observe the following safety precautions**
> **when operating this machine.**

✻ The main power switch of the machine is located at the bottom rear panel.

✻ Turn OFF the main power switch before cleaning, inspection, electrical components replacement, repair, or other procedures. Failure to comply this warning may cause accident as a result of electrical shock or malfunction.

✻ Operation on the electrical circuitry of the machine must be always performed by a qualified and trained technician.

✻ Make sure to avoid moisture and dust entering into the machine when it is open. Moisture and dust may be the source of electrical shock, mechanical failure and other errors.

✻ The description of this system manual should be correct and true to the best of our knowledge. Please contact us if there is any chance of defect, flaw, or missing information.

✻ For the event of water drips into the machine accidentally, please temporarily turn off the machine. Open the door on ticket dispenser and clean up any water that may drain into this enclosure.

✻ If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.

# Simple Maintenance Procedures

✳ Main "control panel" - Open the bottom rear panel (wooden), clean up any dust that may have collected over some times. We recommend the clean up be done minimum once a month.

✳ Billboard Area – Open up the rear panel (sheet metal), clean up any dust that may have collected on the billboard over some times. We recommend the clean up be done minimum once a month.

✳ Check the connection of all cables once every month.

✳ Remember to switch of all power supply before carrying out any maintenance.

# Test & Service

Test button          : Enter test mode and carry out test item.

Service button       : Choose test item.

Volume Control button : Adjust volume/sound of the games.

Call the below phone number for further assistance:

1.  USA          : SEGA AMUSEMENTS USA INC.
                   Arthur Avenue, Elk Grove Village, IL 60007-5215, USA
                   Tel : +1-847-364-9787 , +81-888-877-2669 (Toll Free)
                   Fax : +1-847-427-1065

2.  The UK        : SEGA AMUSEMENTS EUROPE Ltd.
                   42 Barwell Businss Park, Leatherhead Road, Chessington,
                   Surrey, KT9 2NY, United Kingdom
                   Tel: +44(0)208-391 8090
                   Fax: +44(0)208-391 8099

3.  ASIA          : SEGA CORPORATION
                   5F TRC Haneda Building, 2-13-1 Higashikojiya
                   Ohta-ku, Tokyo 144-0033
                   Telephone: +81-(0)3-6863-8401
                   Facsimile: +81-(0)3-6863-8407

## <u>Machine Installation</u>

The installation is simple. Follow the below procedures:

1. Lower down the M16 bolt (at the bottom of the machine) so that the whole machine sit firmly on the floor.
2. Connect the AC inlet with the cable provided to the power supply. Switch on the machine. The on-off button is located at the AC inlet (rear bottom).
3. The machine will then start up and initiate the program automatically.

The machine is now READY to be "PLAY".

## Games Descriptions

The game is simple and easy to play.

What you need to do is just to insert your coin and press the start button. The arrow will move left and right. When the arrow is pointing at the target, press the handle once. The Pig will fly and shoot at the target. When the Pig hit the target, your scores will be shown on the screen.

## Getting Started / How to play:

Insert coin/s. (The exact amount of coins is dependant on the Credit Board settings.)

Press the Start Button to start the game.
Watch the game introduction and how to play.
Press down on the See-saw controller to launch the Pig. Timing the launch will enable you to reach the Mother ship (Super Bonus), or hit multiple UFOs to win tickets.

In game there are tiers of UFOs with different ticket values and Pigeons that fly across the screen to obstruct the Pig's flight. At the top of the screen there is one Mother ship, which hitting will win the Super Bonus.

The Super Bonus value is dependant on the Game Settings.

# Test Menu
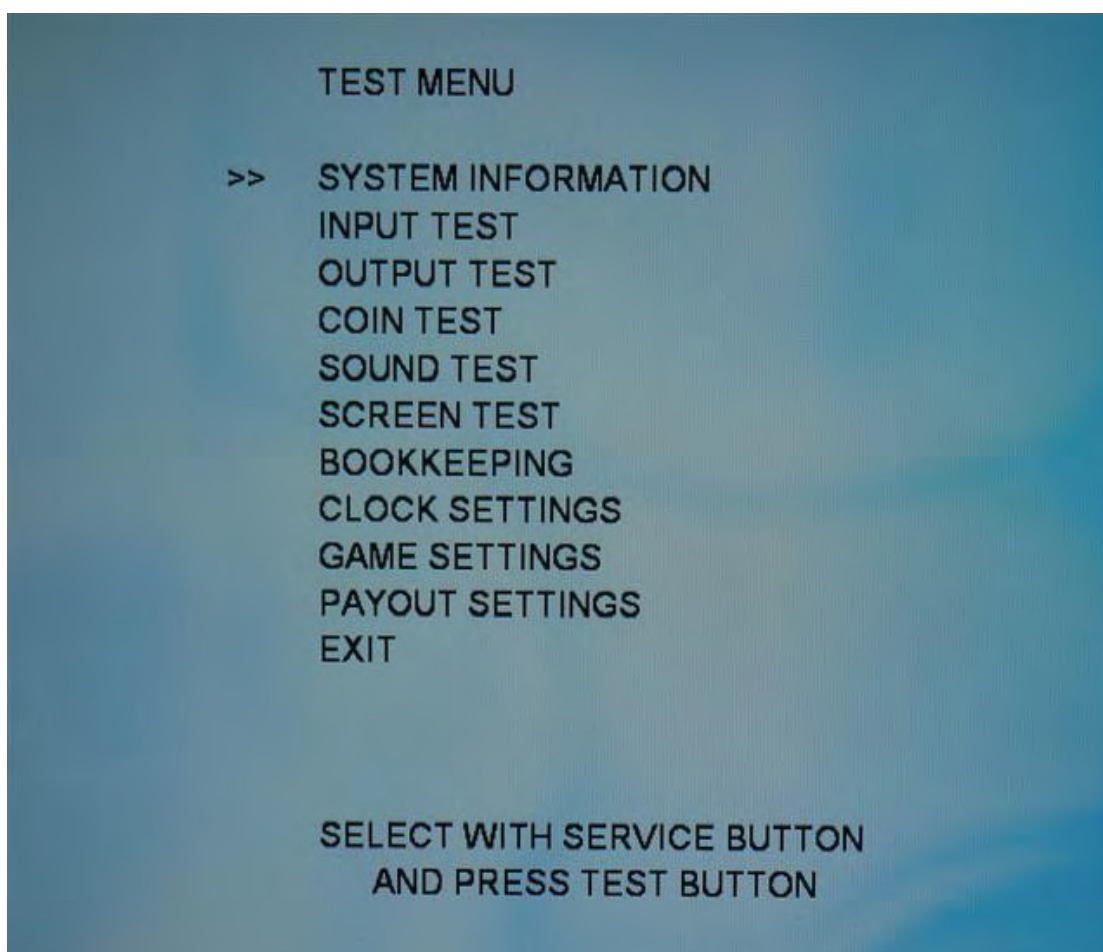


The Main Test Menu lists all of the available tests, each of which is explained in the following sections.
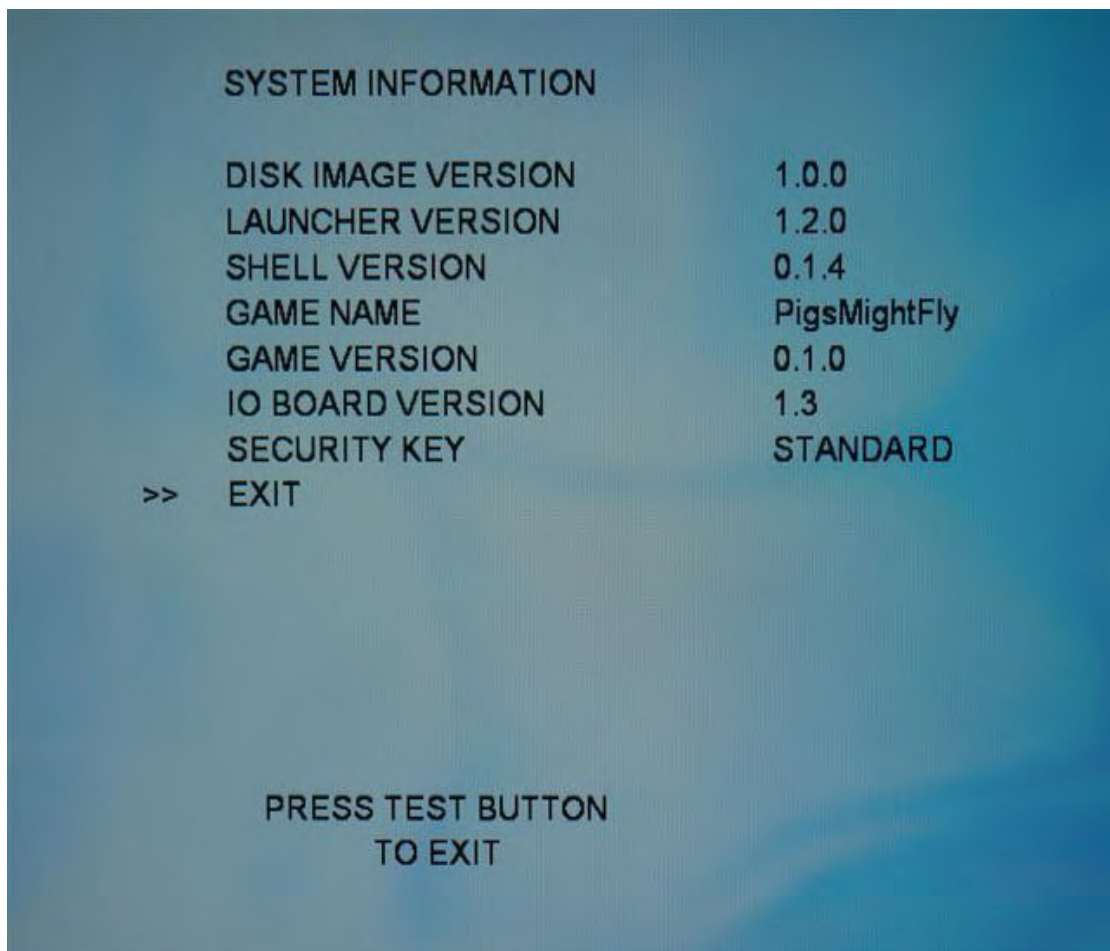
Use the Service button to move the Test Cursor to the next Test.

Use the Test Button to activate the Test high-lighted by the Test Cursor.

If the cursor is moved past the EXIT option, it will reappear at the top of the menu list.

Selecting EXIT will terminate the test routine menu and launch the current game application.

## System Information



The System Information Test lists the revision numbers and names of currently installed system components.

| | |
|---|---|
| Disk Image Version | Version number for the master hard disk image |
| Launcher Version | Version number of Shell Launcher program |
| Shell Version | Version number of Shell program |
| Game Name | Name of currently installed game |

| Game Version | Version number of currently installed game |
|---|---|
| IO Board Version | Version number of IO Board being used |
| Security Key | Type of Security Key installed |

# Input Test
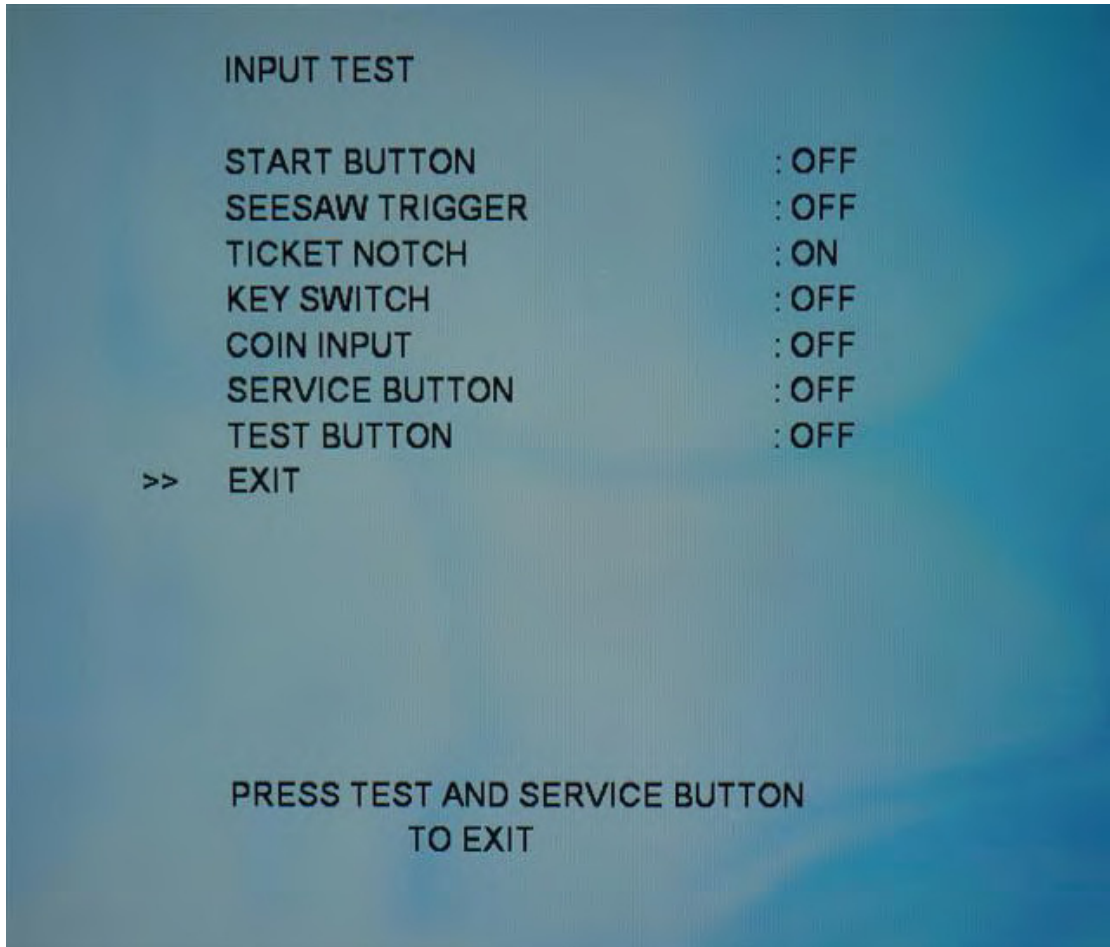


This Test is used to test the 'System Inputs' such as Seesaw Trigger and Start Button. To implement the test, Operate each device listed and check the results on screen.

| Start Button | ON = Pressed, | OFF = Not Pressed. |
|---|---|---|
| Seesaw Trigger | ON = Pressed, | OFF = Not Pressed. |
| Ticket Notch | ON = Pressed, | OFF = Not Pressed. |
| Key Switch | ON = Pressed, | OFF = Not Pressed. |
| Coin Input | ON = Coin signal from VTS, | OFF = No coin signal from |

VTS.

Service Button          ON = Pressed,          OFF = Not Pressed.

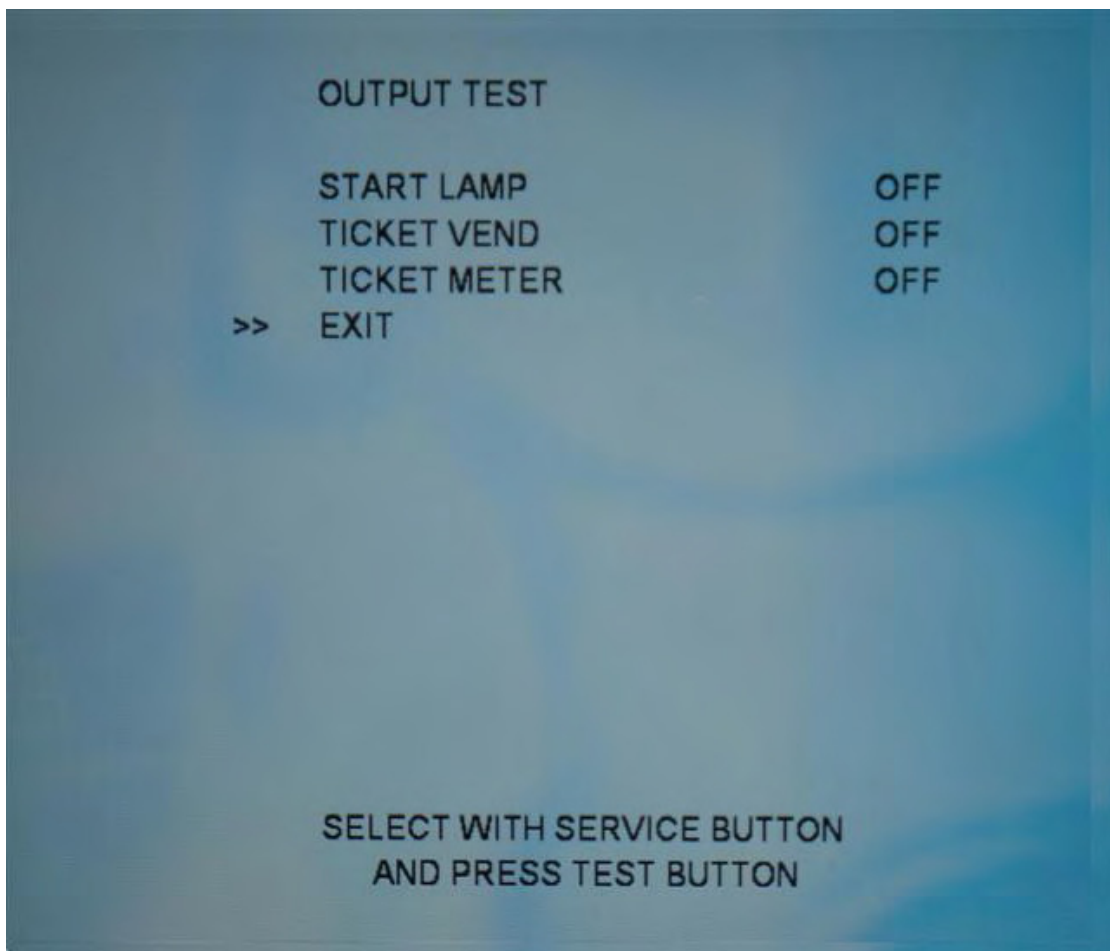Test Button             ON = Pressed,          OFF = Not Pressed.

EXIT                    Press the TEST and SERVICE buttons simultaneously to
EXIT

# Output Test



This Test is used to check System Output such as Lamps and Ticket

Use the Service Button to move the cursor to the desired test item.

Press the Test Button to enter the selected item.

| | |
|---|---|
| Start Lamp | ON = Lamp ON, OFF = Lamp OFF |
| Ticket Vend | ON = Tickets Vend, OFF = Tickets do NOT Vend |
| Ticket Meter | Ticket Meter increase by 1 each ON/OFF cycle |

## Coin Test
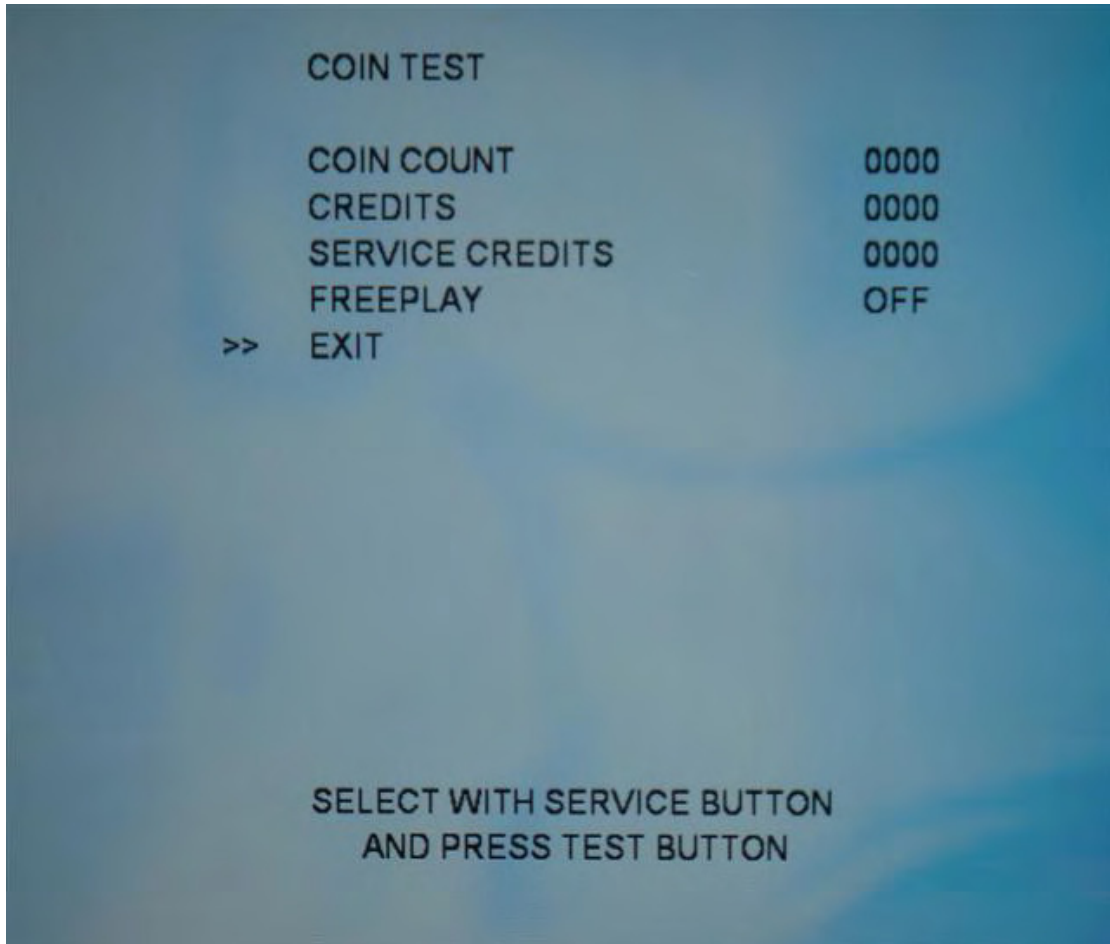


| | |
|---|---|
| Coin Count | Coin Count value from IO Board |
| Credits | Total number of Coin credits added to the system |
| Service Credits | Total number of Service credits added to the system |
| Freeplay | Changes game from Coin in play to Free to play |

# Sound Test
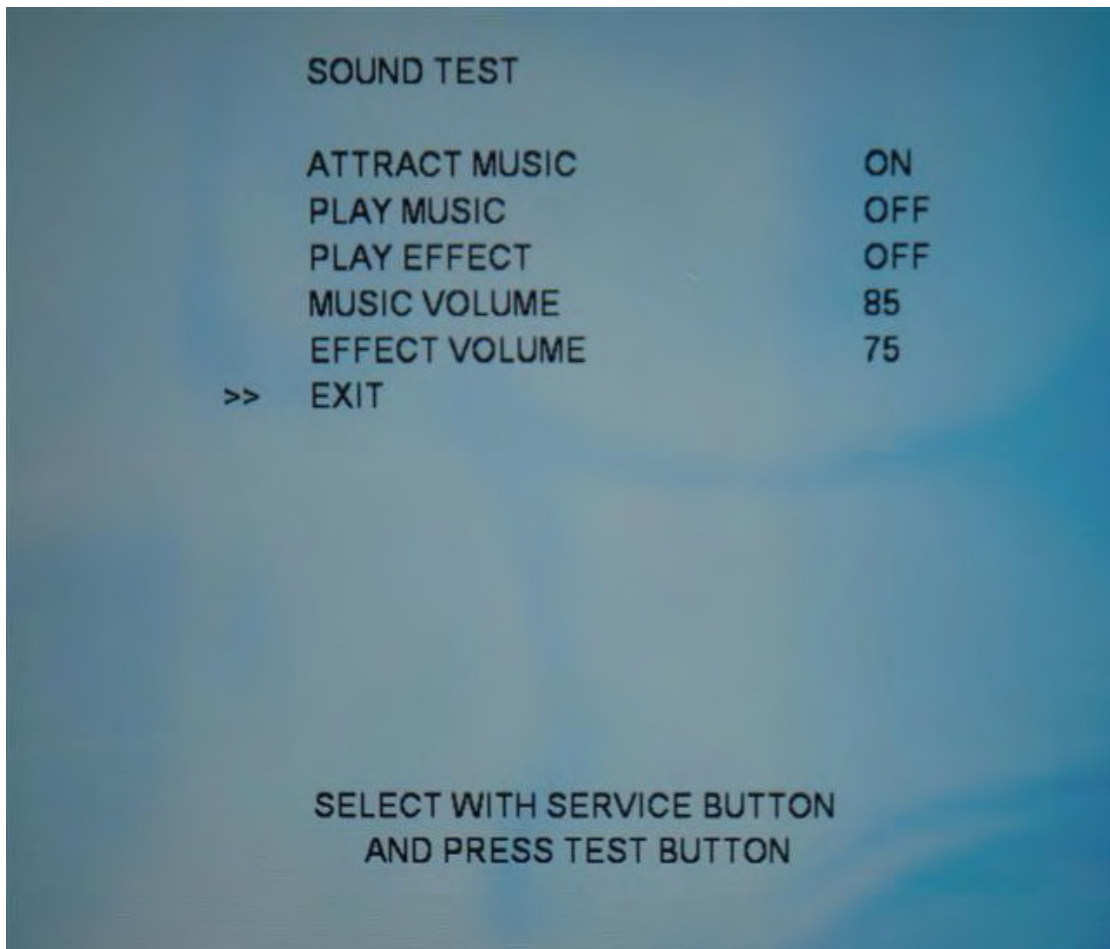


This Test is used to set Audio Levels for the Game and Test the function of the Speakers.

| | |
|---|---|
| Attract Music | ON = Sound will be played in the Attract mode |
| | OFF = No sound in Attract mode |
| Play Music | ON = A test audio sample will be played |
| | OFF = Test audio sample is turned off |
| Play Effect | ON = A sound effect is played |
| | OFF = Sound effect is no longer played |
| Music Volume | 00 to 95 – Volume level for in game Music audio |
| Effect Volume | 00 to 95 – Volume level for in game Sound Effects |

# Screen Test
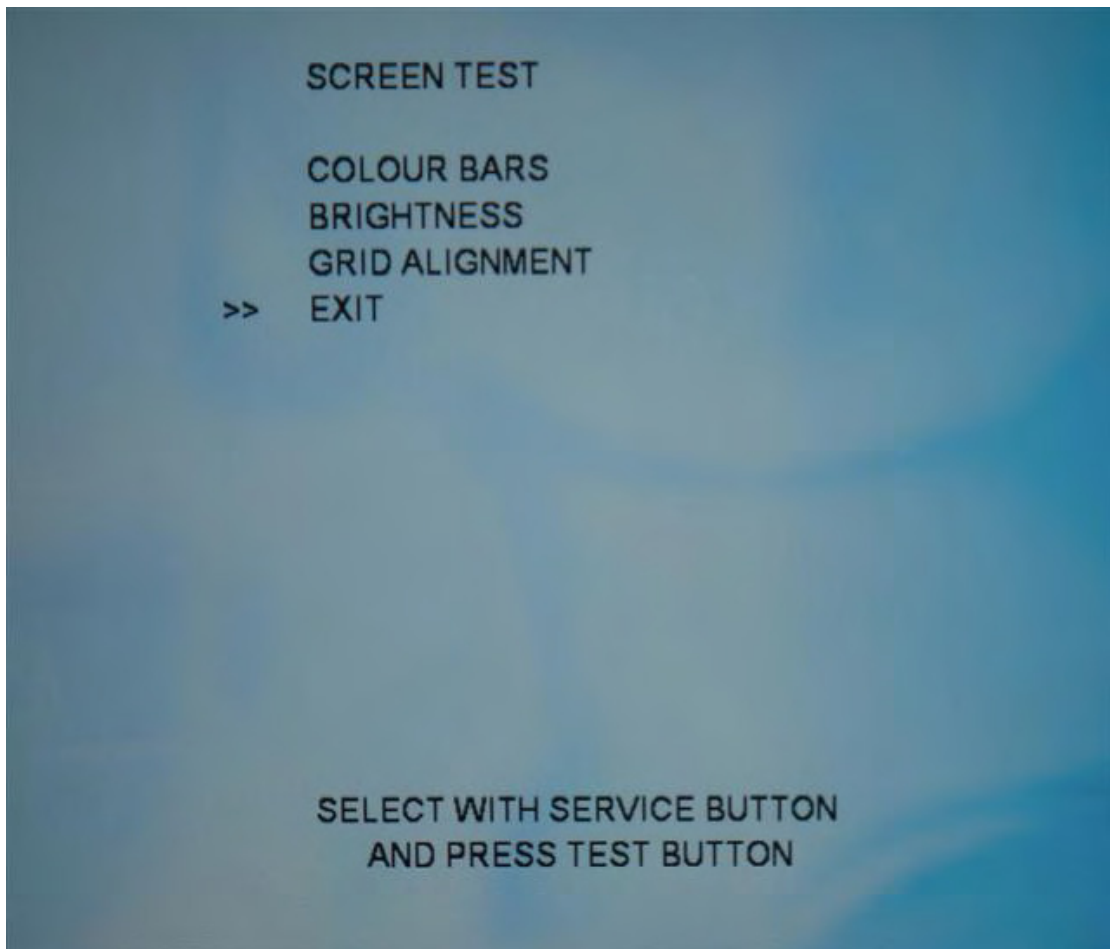


This Test is used to display various test patterns for the display screen.

Colour Bars          Displays vertical colour bars for colour balance correction

Brightness          Displays graduated greyscale for brightness adjustment

Grid Alignment   Displays grid for screen size alignment

# Bookkeeping

This Test displays the bookkeeping meters, it consists of 3 pages.

## Bookkeeping Page 1
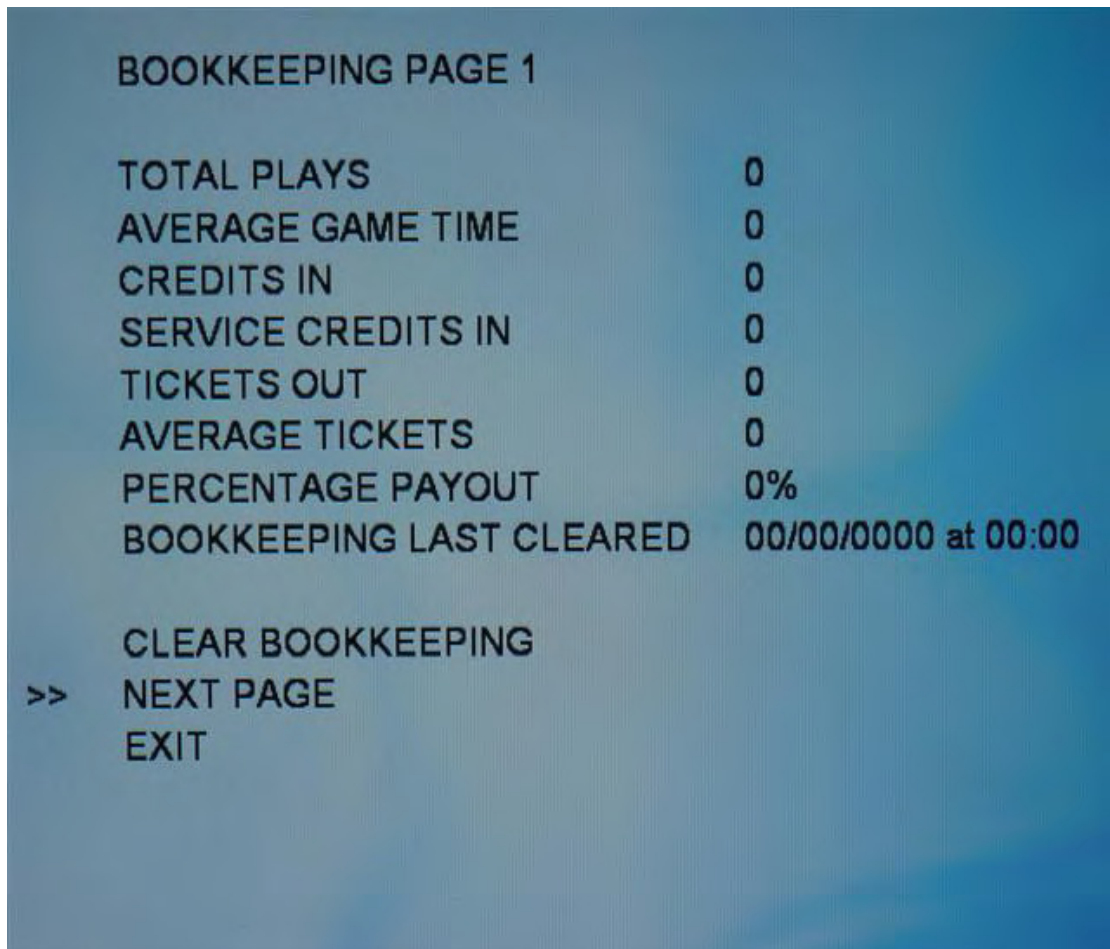


| | |
|---|---|
| Total Plays | Total number of games played |
| Average Game Time | Average time in milliseconds per game |
| Credits In | Total number of coin credits inserted |
| Service Credits In | Total number of service credits inserted |
| Tickets Out | Total number of tickets dispensed |
| Average Tickets | Average number of tickets dispensed per game |
| Percentage Payout | Percentage of tickets dispensed for all games |
| Bookkeeping Last Cleared | Date and time the bookkeeping was last cleared |

Use the Service button to navigate, and the Test button to action changes of the following options

Clear Bookkeeping                 Clears all Bookkeeping data
Next Page                 Shows Bookkeeping Page 2

## Bookkeeping Page 2
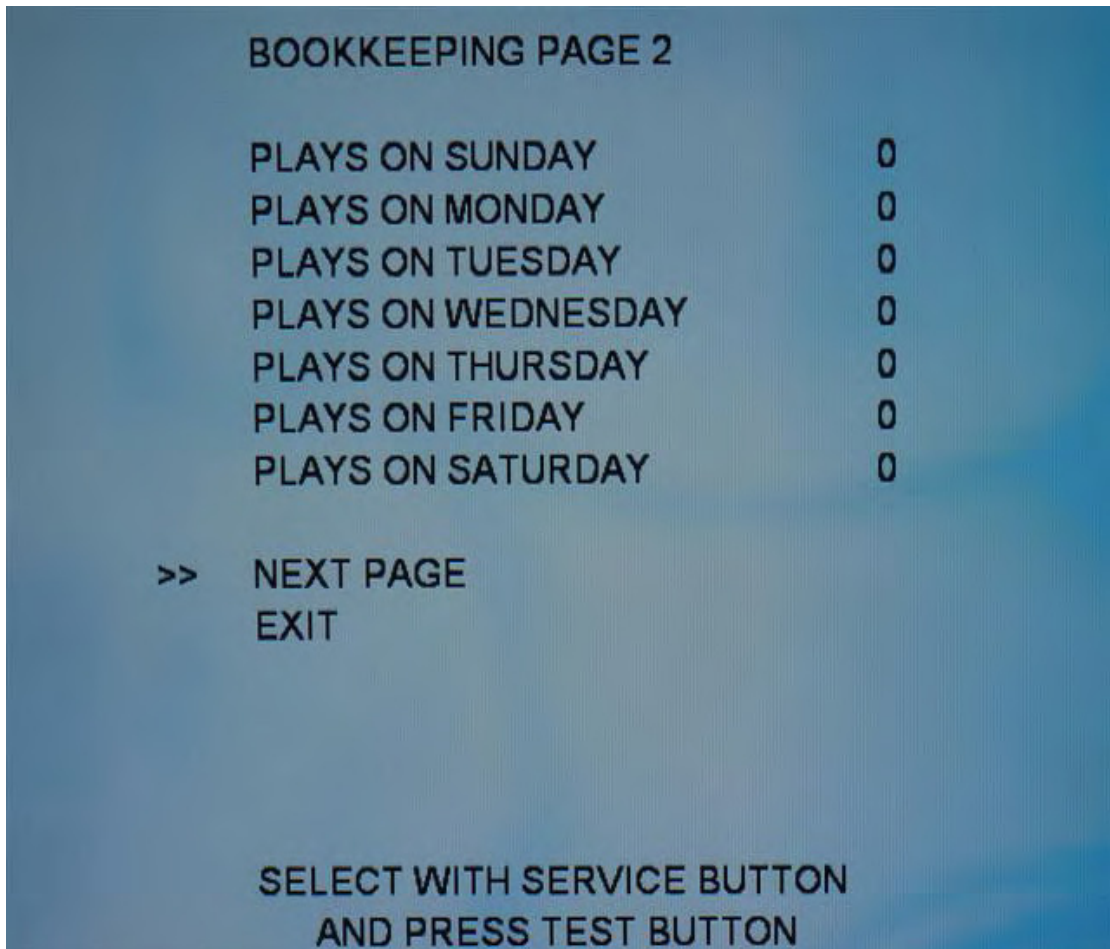


Plays On Sunday                 Total number of plays on a Sunday

Plays On Monday                 Total number of plays on a Monday

Plays On Tuesday                 Total number of plays on a Tuesday

Plays On Wednesday        Total number of plays on a Wednesday

Plays On Thursday                 Total number of plays on a Thursday

Plays On Friday        Total number of plays on a Friday

Plays On Saturday                 Total number of plays on a Saturday

Use the Service button to navigate, and the Test button to action changes of the following options

Next Page                    Shows Bookkeeping Page 3

## Bookkeeping Page 3
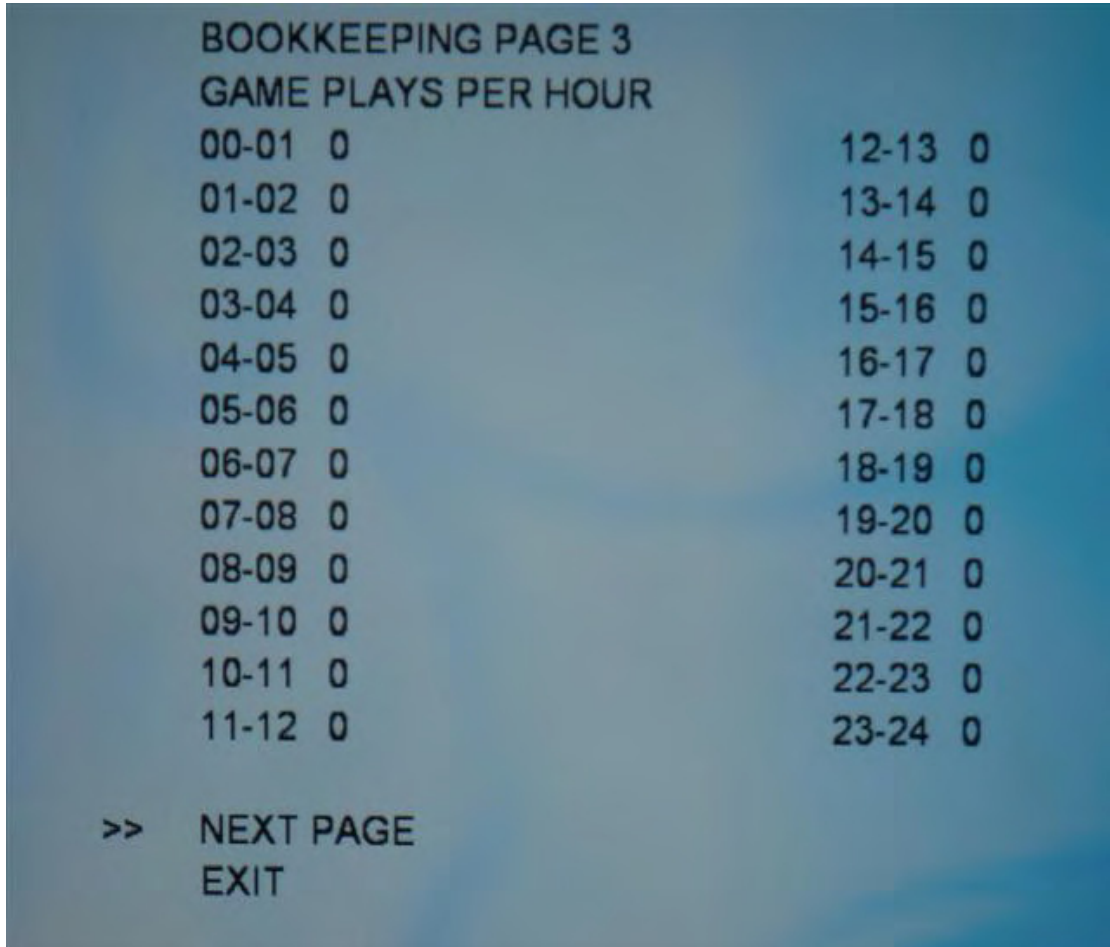


This Test displays a total of games, broken down into hours a day.

Each hour is logged separately in 24 hour format therefore

00-01 logs games between 12am and 1am

01-02 logs games between 1am and 2am

               and so on

23-24 logs games between 11pm and 12am

Next Page                          Returns you to the Test Menu

# Clock Setting
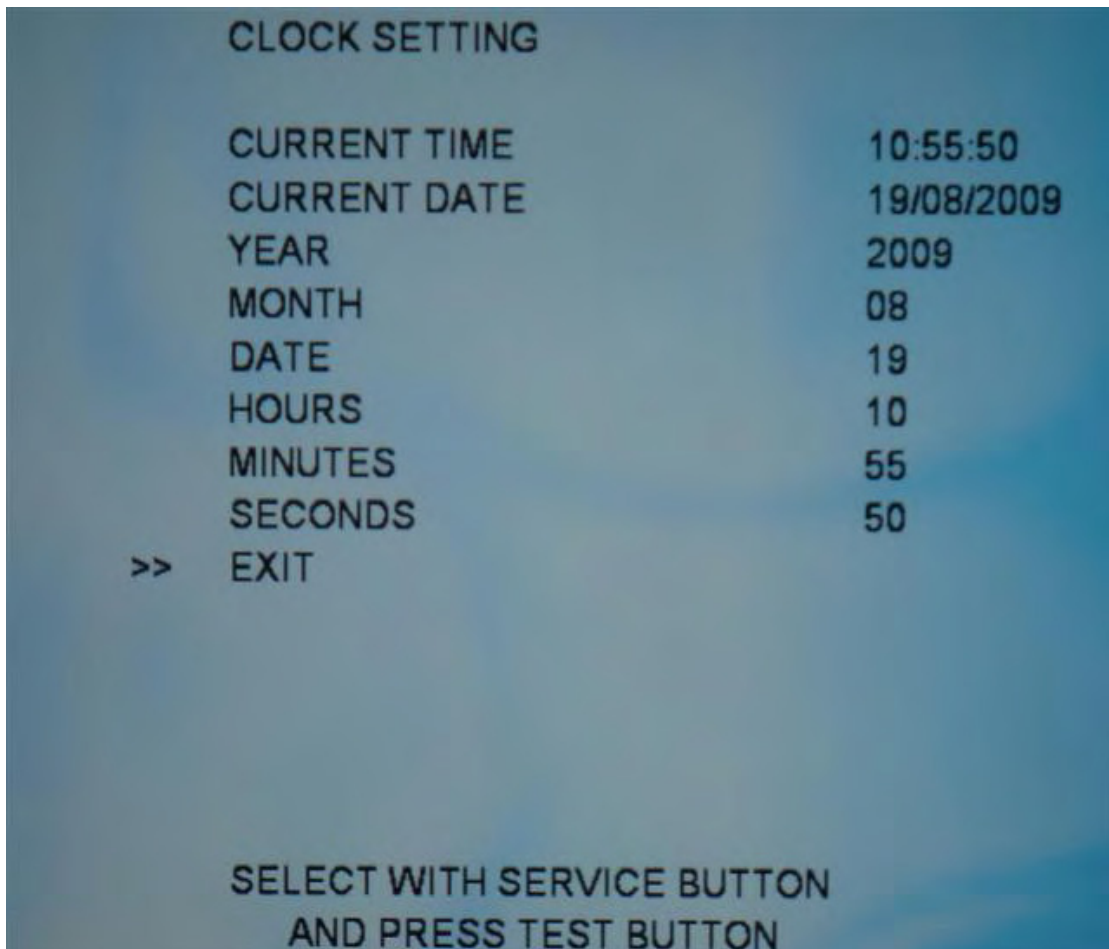


This Test is used to set the PC's real time clock facility

Use the Service button to navigate, and the Test button to action changes to the follow options.

* "Current Time" and "Current Date" can not be selected and change after changing the below options

| | |
|---|---|
| Current Time | Current time in 24 hour format HH:MM:SS |
| Current Date | Current date in format DD/MM/YYYY |
| Year | 2005 to 2050 – Year setting |
| Month | 1 to 12 – Month setting |
| Date | 1 to 31 – Date setting (max value month dependant) |
| Hours | 00 to 23 – Hours setting |

| Minutes | 00 to 59 – Minutes setting |
|---|---|
| Seconds | 00 to 59 – Seconds settings |

# Game Settings
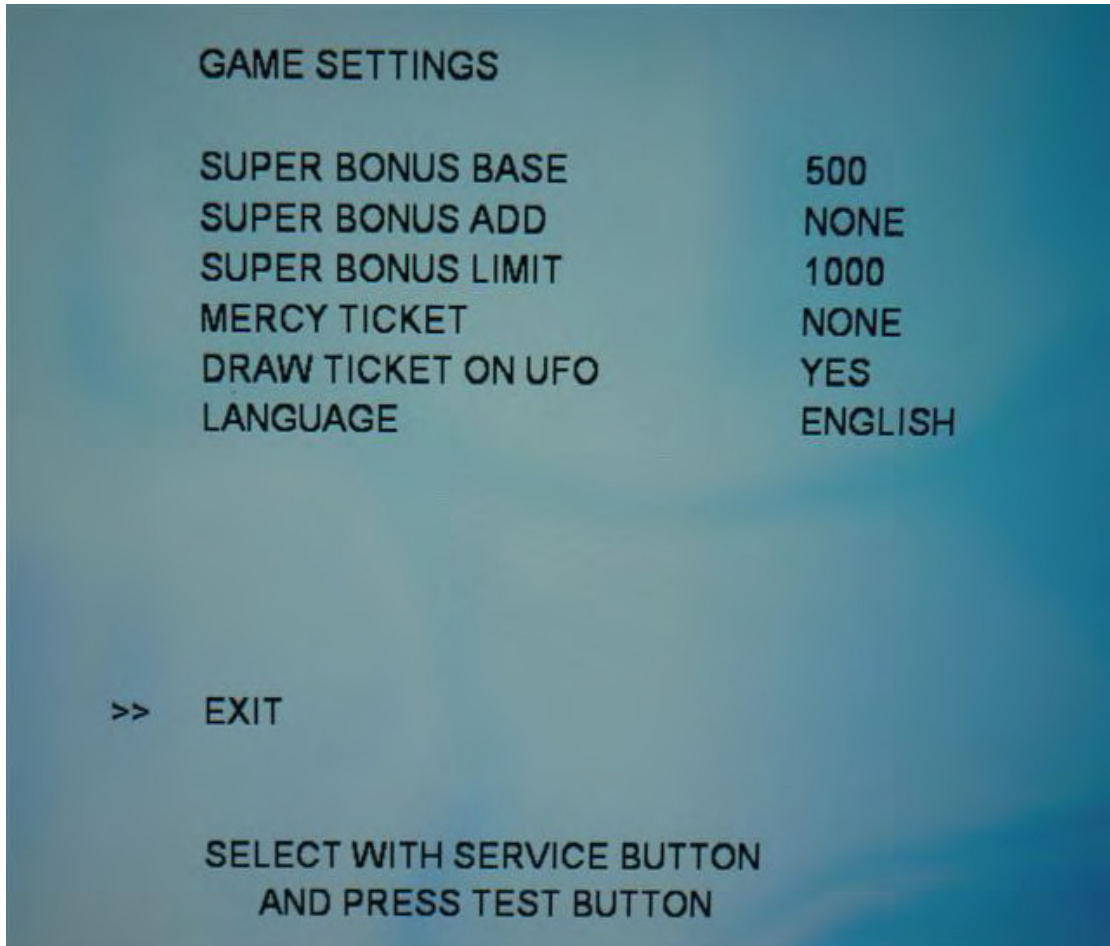


This Test is used to set various game parameters.

Use the Service Button to navigate, and the Test to action changes to the following options.

| Super Bonus Base | This sets the minimum starting value of tickets paid out when the Super Bonus is won. Options: 10, 20, 50, 100, 200, 300, 500 |
|---|---|
| Super Bonus Add | This mode increases the Super Bonus value each play by |

the option chosen.

E.g. Super Bonus Add set to "2" each play the Super Bonus will increase by 2.

Options: *None, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

*Setting Super Bonus Add to "None" will turn off this mode and the value of Super Bonus Base value is used

Super Bonus Limit

Set the maximum amount of tickets to be paid out when the Super Bonus is won. When used with Super Bonus Add mode, tickets will start from Super Bonus Base value setting and increment by the value of Super Bonus Add mode until the Super Bonus Limit Value is reached.

Options: 10, 20, 50, 100, 250, 500, 750, 1000

Mercy Ticket

Mercy tickets are awarded to the player regardless of if s/he hits a target. If the player hits a target they are still awarded the Mercy tickets in addition to the tickets won in game, unless Super Bonus is won.

Options: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Draw Ticket On UFO

This feature places a numerical ticket value on the UFO. The "Mystery UFOs" simply have a question mark (?) on them.

Options: ON = Draw Ticket on UFO on
OFF = Draw Ticket on UFO off

Language

This option changes the language for in game instructions.

Options: English, Russian, Spanish

# Payout Settings

```
           PAYOUT SETTINGS

           PAYOUT IN FREEPLAY              OFF
           VALUE OF PLAY                   0.25
           VALUE OF TICKET                 0.01
           AIMING PERCENTAGE               60%
    >>     EXIT




           SELECT WITH SERVICE BUTTON
             AND PRESS TEST BUTTON
```
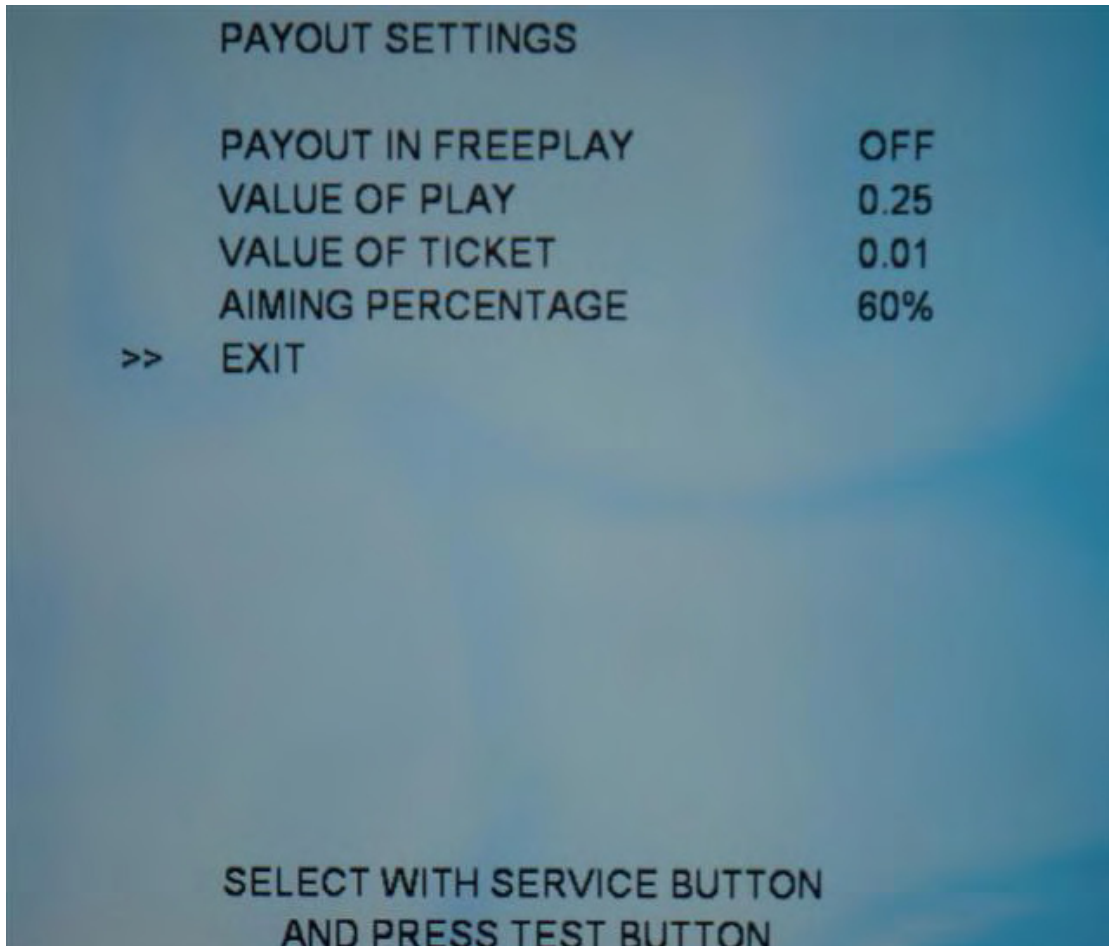
This Test is used to set ticket Payout parameters.

Payout In Freeplay   Enables/Disables ticket payout in Freeplay

         Options:

       ON = Tickets in Freeplay will be awarded

       OFF = Tickets in Freeplay will NOT be awarded

       *Default setting for this should be OFF

Value Of Play    This setting should be the same as the Credit Board.

       If you change the VALUE OF PLAY you will need to

change the Credit Board settings. Please note changing the Credit Board setting WILL NOT change VALUE OF PLAY settings, or vice versa.

Options: 0.01, 0.02, 0.05, 0.10, 0.20, 0.25, 0.30, 0.50,
1.00, 2.00

Value Of Ticket        This sets the cash value of 1 ticket.

Options: 0.01, 0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08,
0.09, 0.10, 0.20, 0.25, 0.50, 1.00, 2.00

Aiming Percentage              The Aiming Percentage uses the settings from Value
of                                    Play and Value of Ticket to calculate a rough
payout                                     guide.

Options: 20%, 25%, 30%, 35%, 40%, 45%, 50%, 55%,
60%

# Wiring Diagram

SEGA AMUSEMENTS EUROPE, LTD.

PIGS MIGHT FLY - DRAFT

ORIGINAL SIZE A3

UB-2/2

THIS DRAWING WILL IN NO WAY BE COPIED. TO BE RETURNED ON DEMAND.

ST-1360UK
ASSY MAIN BD

ST-1000UK
MAIN ASSY

838-1454-01AUK
SW & VOLT CTL BD

TEST
SERVICE
VOL

220-5600-01
SR3 COIN MECH

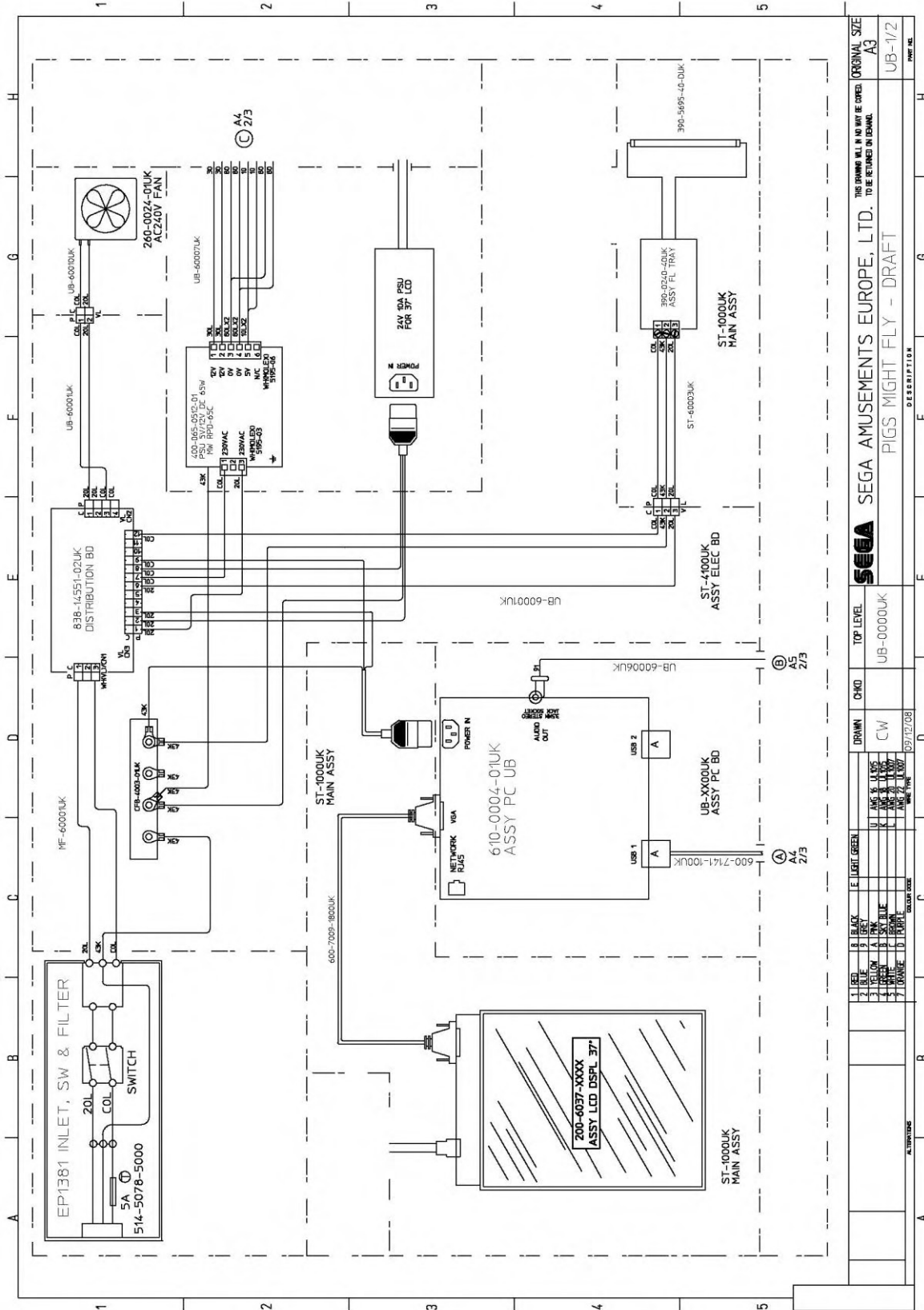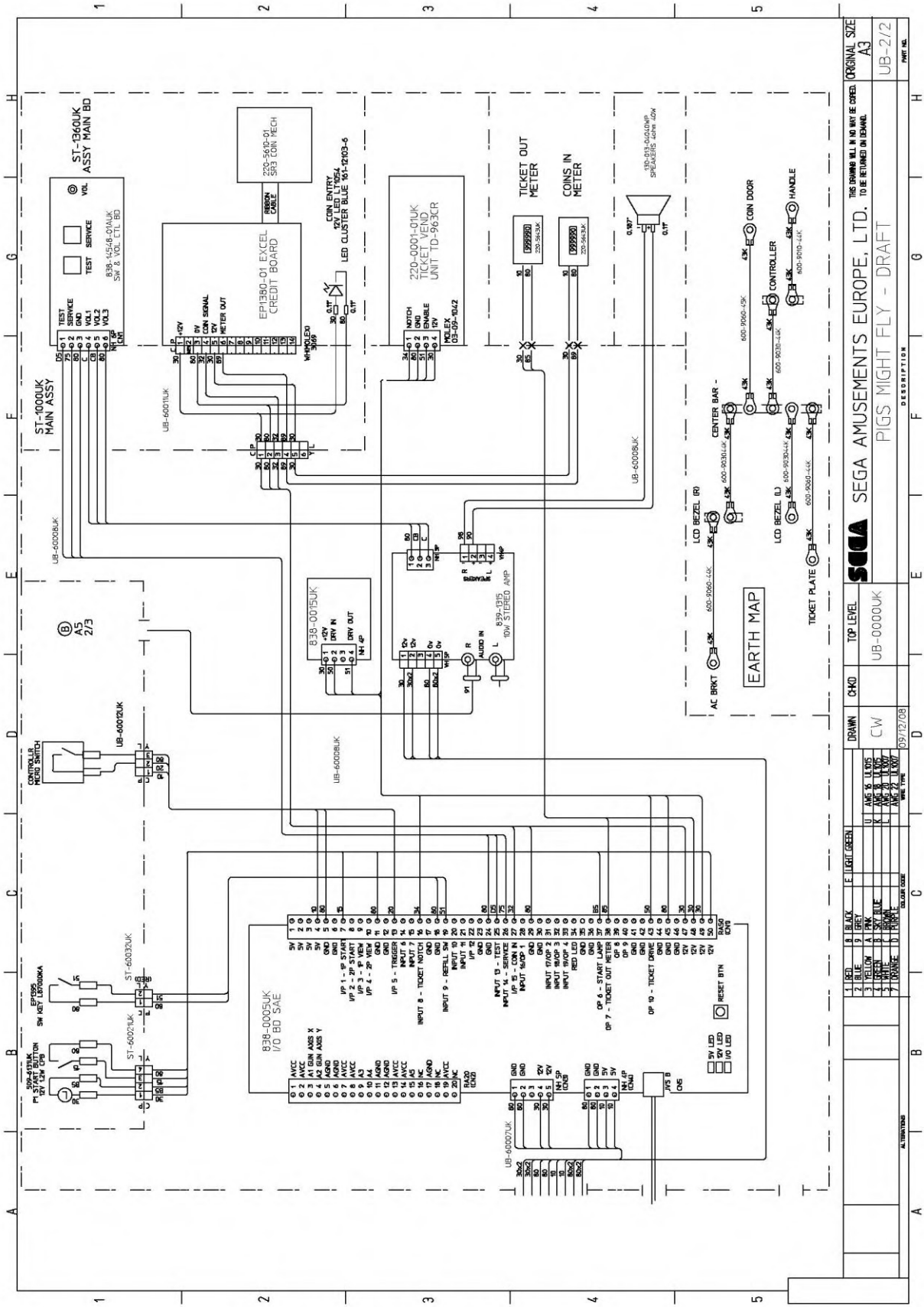EPI380-01 EXCEL
CREDIT BOARD

WH-MOLEX)
3069

COIN ENTRY
12V LED LLT1054
LED CLUSTER BLUE 161-12103-6

RIBBON CABLE

UB-6001UK

220-0001-01UK
TICKET VEND
UNIT TD-963CR

MOLEX
03-09-1042

TICKET OUT
METER

COINS IN
METER

190-014-0U2UDWP
SPEAKERS 4ohm 40W

COIN DOOR

CONTROLLER

HANDLE

CENTER BAR

LCD BEZEL (R)

LCD BEZEL (L)

TICKET PLATE

EARTH MAP

AC BRKT

838-0015UK
+12V
DRV OUT
DRV IN

SPEAKERS
R
L

839-1315
10W STEREO AMP

AUDIO IN

UB-6008UK

UB-6008UK

CONTROLLER
MICRO SWITCH

UB-6002UK

EP1595
SW KEY 870100KA

ST-6003UK

ST-6002UK

500-6131UK
P1 START BUTTON
12V 12W CPB

838-0005UK
I/O BD SAE

AVCC
A1 GAIN AXIS X
A2 GAIN AXIS Y
AGND
A3
A4
AGND
AVCC
NC
AVCC

5V
5V
5V
5V
GND
GND

I/P 1 - 1P START
I/P 2 - 2P START
I/P 3 - 1P VIEW
I/P 4 - 2P VIEW
GND
INPUT 5
INPUT 6
INPUT 7
GND
INPUT 8

I/P 5 - TRIGGER
INPUT 8 - TICKET NOTCH
INPUT 9 - REFILL SW
INPUT 10
INPUT 11
GND
INPUT 12

INPUT 13 - CON IN
INPUT 14 - SERVICE
INPUT 15 - TEST
INPUT 16/OP 1

INPUT 17/OP 2
INPUT 18/OP 3
INPUT 19/OP 4
RED LED
GND
OP 5 - START LAMP

OP 6 - TICKET METER
OP 7 - TICKET OUT METER
OP 8
OP 9
OP 10 - TICKET DRIVE
12V
12V
12V
12V

RESET BTN

5V LED
12V LED
I/O LED

UB-6007UK

JVS B
GND

UB-0000UK

TOP LEVEL

UB-0000UK

DRAWN  CW

CHKD

09/12/08

COLOUR CODE

1 RED       8 BLACK
2 BLUE      9 GREY
3 YELLOW    A PINK
4 GREEN     B BLUE
5 WHITE     C PURPLE
6 ORANGE    D BROWN
            E LIGHT GREEN

WIRE TYPE
U AWG 16 UL1015
K AWG 20 UL1007
L AWG 22 UL1007

# Design Related Parts

UB-1022UK

UB-1302UK

UB-1022UK

UB-1028UK (Right)

UB-1028UK (Left)

UB-2007UK

UB-2001UK

UB-1026UK (Right)

UB-1025UK (Left)

UB-1022UK

# Part List

| ASSEMBLY NUMBER | ASSEMBLY NAME | QUANTITY |
| --- | --- | --- |
| UB-1001UK | ASSY MAIN CABINET | 1 |
| UB-1001-01-DUK | ASSY DOOR FRONT | 1 |
| 610-9500UK-01 | ASSY COIN BOX DOOR | 1 |
| UB-1150UK | ASSY INPUT SWITCH | 1 |
| UB-2500UK | ASSY CONTROLLER | 1 |
| UB-1019-01UK | MICROSWITCH ASSY | 1 |
| UB-2001UK | PLATE CTRL PNL | 1 |
| UB-2007-01UK | START BUTTON ASSY | 1 |
| UB-1400UK | ASSY DISPLAY | 1 |
| 200-6037-LGP | ASSY LCD LGP | 1 |
| UB-1006-01UK | BEZEL LCD RIGHT ASSY | 1 |
| UB-1007-01UK | BEZEL LCD LEFT ASSY | 1 |
| UB-1300UK-01 | ASSY TOP BOX | 1 |
| UB-1302UK | BILLBOARD LIGHT PLATE ASSY | 1 |
| UB-1350UK-01 | ASSY FAN | 1 |
| UB-1360UK-01 | LIGHT ASSY | 1 |
| MF-0400UK | ASSY AC UNIT | 1 |
| UB-1001-01-CUK | ASSY DOOR BACK | 1 |

UB-1007-01UK

UB-1300UK-01

UB-1350UK-01

200-60370LGP

UB-1006-01UK

UB-2007-01UK

UB-1150UK

UB-101-01-DUK

UB-1001UK

610-9500UK-01

UB-1001-01-CUK

UB-1028UK

(IN BACK SIDE)