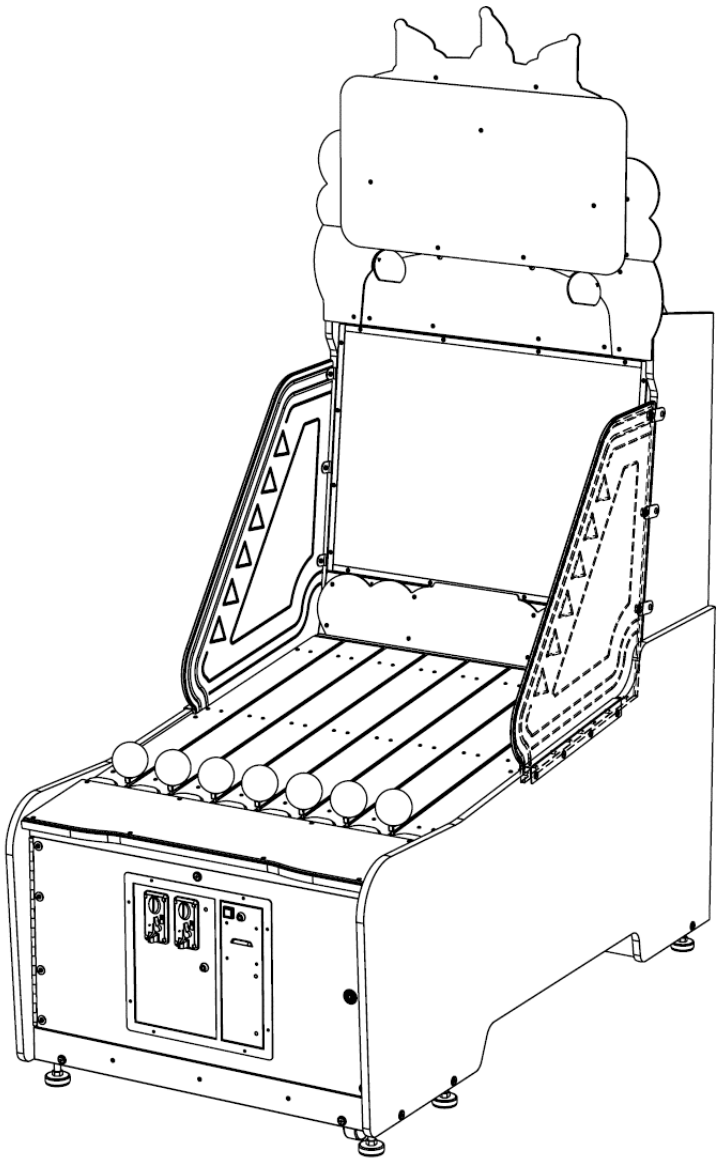
BALL RUNNER



12–MAR–2019

OWNERS AND SERVICE MANUAL

UNIANA CO., LTD

FOR SAFETY

IMPORTANT

The following safety instructions must be followed before using this product.
Read this manual carefully to understand the contents herein stated.
Please be sure to consult an industry specialist when setting up, moving or transporting this product.

For Setting up

- This product should not be set up, moved or transported by anyone other than an industry specialist.
- When installing this product, set the 6 leg levellers evenly on the floor and make sure that the product is installed stably in a horizontal position. Unstable installation may result in injury or accident.
- When installing this product, do not apply undue force on movable parts. Otherwise, injury and accident may result, or the product may be damaged.
- The machine for indoor use only; do not install outside.
- Do not set the game machine up near emergency exits.

Protect the game machine from

- Rain or moisture.
- Direct sunlight.
- Direct heat from air conditioning and heating equipment, etc.
- Hazardous flammable substances.
- Otherwise, an accident or malfunction may result.
- Do not place containers holding chemicals or water on or near the game machine.

For Safety Reasons

- Do not place objects near the ventilating holes.
- Do not bend the power cord by force or place heavy objects on it.
- Never plug or unplug the power cord with wet hands.
- Never unplug the game machine by pulling the power cord.
- Be sure to use indoor wiring within the specified voltage requirements.
  ☞ **NOTE:** For extension cord, use the specified rating.
- Be sure to use the attached power cord.
- Never plug more than one cord at a time into the electrical receptacle.
- Do not lay the power cord across a walkway.
- Be sure to ground this product.
- Do not exert excessive force when moving the machine.
- For proper ventilation, keep the game machine 100mm (4 inches) away from the walls.
- Do not alter the system related dip switch settings.
- If there is any abnormality such as smoke or abnormal noise being emitted from the machine, immediately turn OFF the main power switch and unplug the power cord from the receptacle.
  ☞ **NOTE:** Using the machine in abnormal conditions could result from fire or accidents.
- Do not connect the power cord improperly or permit dust or dirt to come in contact with the connection.
  ☞ **NOTE:** Doing so could affect the power periodically.
- Do not use this product anywhere other than commercial areas.
  ☞ **NOTE:** Using in a residential area or an area next to a residential area could affect signal reception of radios, television sets, telephones, etc.
- Do not plug or unplug the power cord with wet hands.
- If the power cord or power plug becomes damaged, stop use immediately until the damaged is epaired.

BALL RUNNER

FOR INSPECTION & CLEANING

IMPORTANT

The following operation instructions must be followed before using this product.
Read this manual carefully to understand the contents herein stated.
Please be sure to handle the product by qualified specialist only.

Before Cleaning

- Be sure to turn OFF the main power switch and unplug the power cord from the receptacle before inspecting or cleaning the machine.
- When replacing parts, be sure to use parts of the correct specifications. Never use parts other than the specified ones.
- All maintenance should be performed by a qualified specialist only, as high voltage is present in some areas.
- If the sub power switch of the service panel is turned OFF without turning OFF the main power switch of the power supply unit, some parts in the units may remain live. When opening the back door, be sure to turn OFF the main power switch and unplug the power cord from the receptacle.

For Cleaning

- To clean the game machine, wipe with a soft cloth dampened with a neutral non-abrasive detergent.
  - ☞ **NOTE:** Using thinner or other organic solvent or alcohol may damage the material.
  - ☞ **NOTE:** Electrical shock or equipment failure could be caused by water entering the inside of the machine.

FOR MOVING & TRANSPORTATION

Before Moving

- Before moving the machine, be sure to turn OFF the main power switch, unplug the power cord from the receptacle and remove the power cord from the machine.
- Before moving to take the machine off the levellers and move it on the casters.
- Avoid excessive force while moving the machine.

For Transportation

- Components in the game are sensitive to vibrations and impact. Care should be used when moving and transporting the game machine.
- Be sure not to let the machine tip over.

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* This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, 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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BALL RUNNER

1. ABOUT GAME

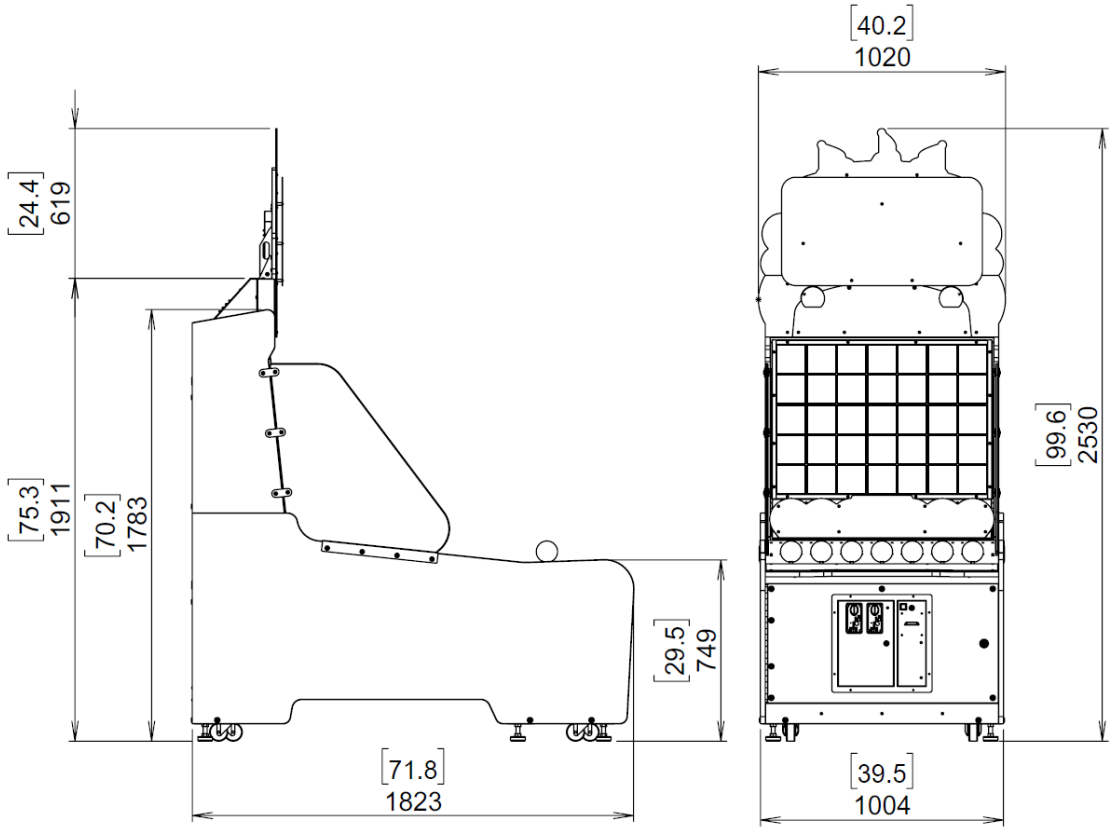
1-1. GAME DESCRIPTION

Ball Runner is a carnival theme ticket redemption game. Use quick reactions, timing and skill to hit all green targets in time! Quickly push the balls to hit all targets to win the bonus!

How to Play

- When the target lights up green, push the ball to hit the target.
- If the ball hit the target correctly, the target turns blue and adds one green cell to the score display panel.
- If the ball hit the wrong target, the target turns red.
- Hit all targets to win the Bonus!

1-2. DIMENSIONS

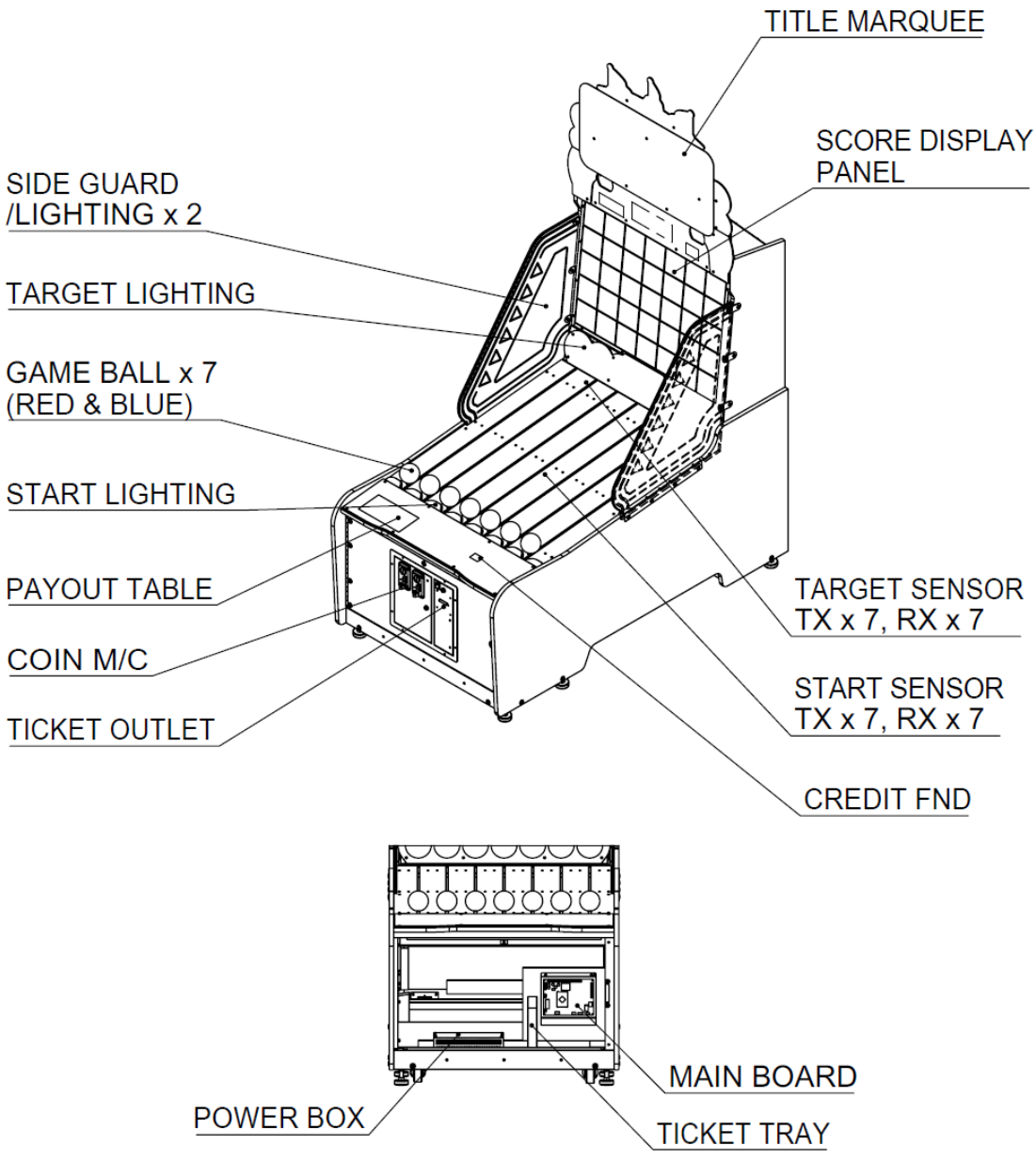


1-3. SPECIFICATION

DIMENSION (See above figure)	W1020 x D1823 x H2530 (mm) W40.2 x D71.8 x H99.6 (inch)
WEIGHT	260kg (573lbs)
POWER	110V / 230V (±10%) 50/60Hz, 180W 1AMP

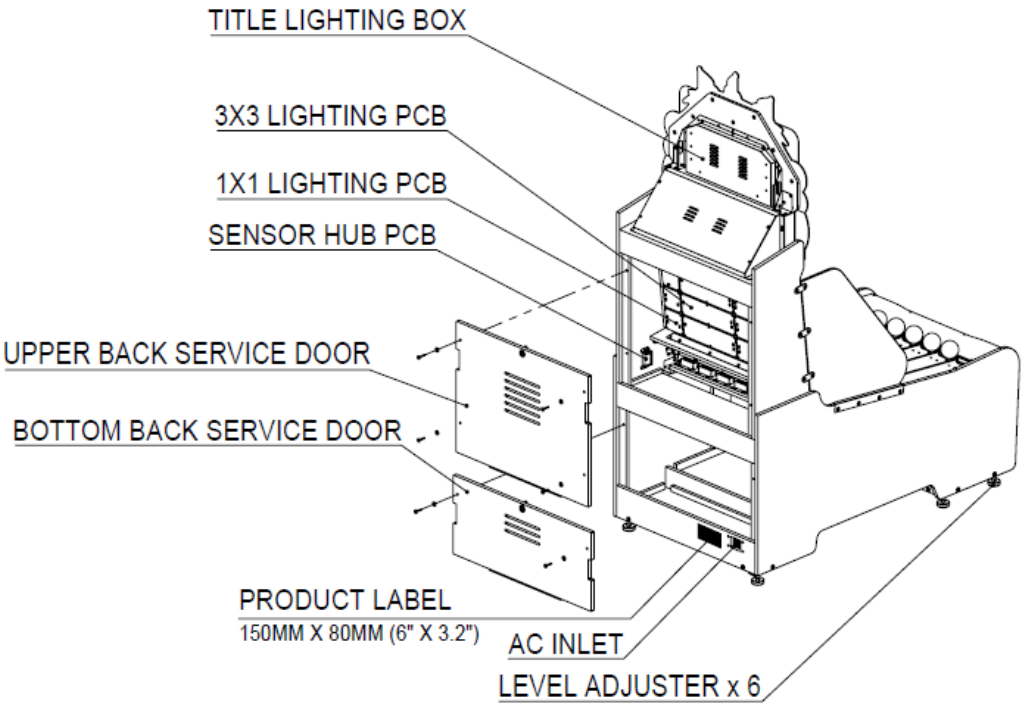
2. NAME OF PARTS & LOCATION

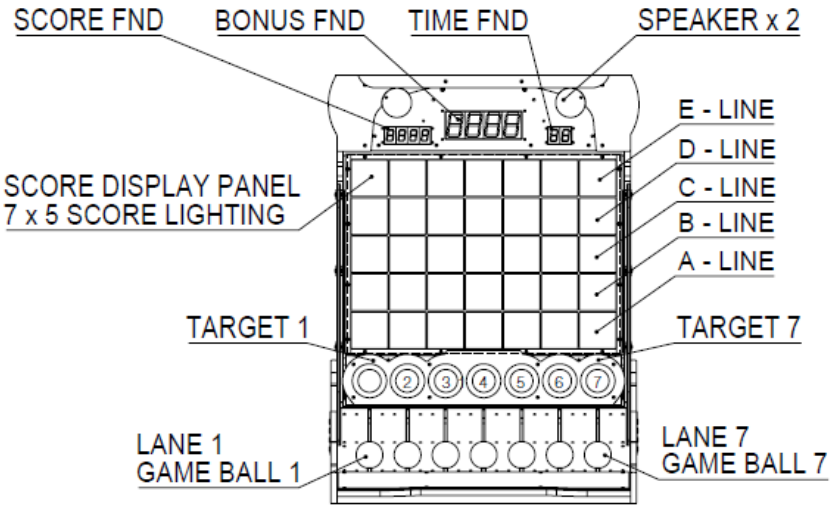
2-1. FRONT & RIGHT SIDE PARTS



BALL RUNNER

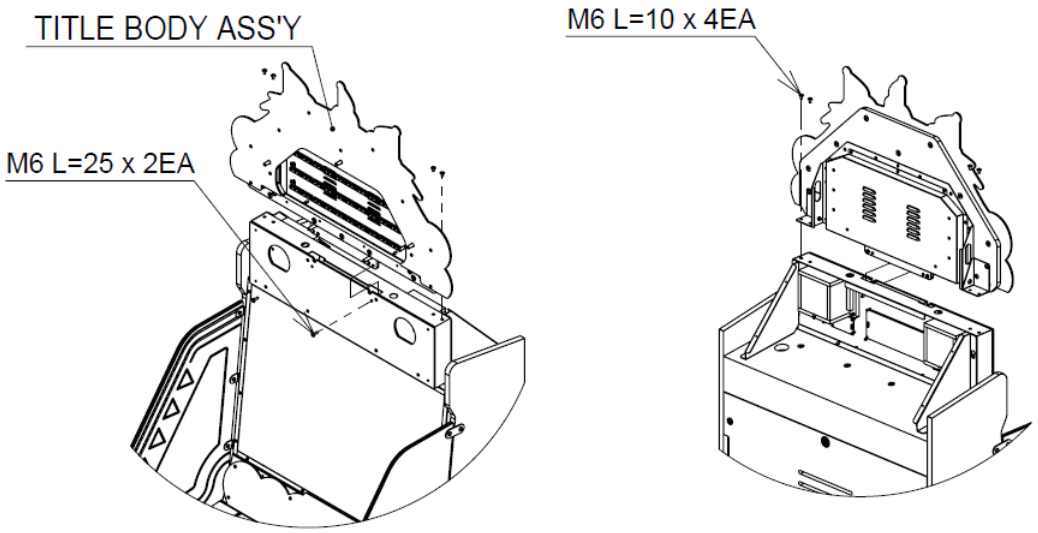
2-2. BACK & PLAY FIELD PARTS



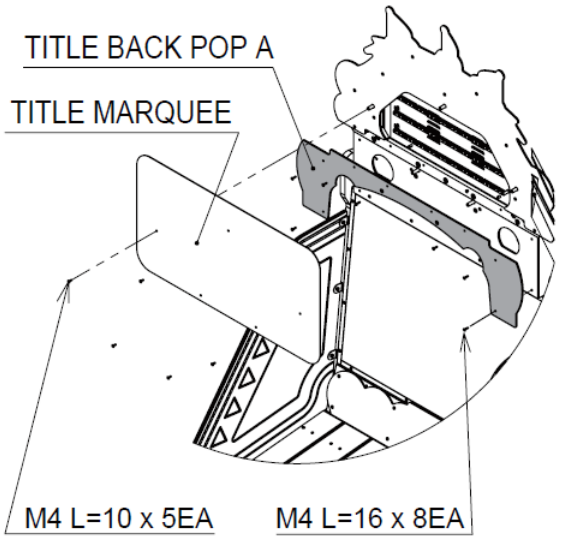


2-3. TOP MARQUEE ASSEMBLY

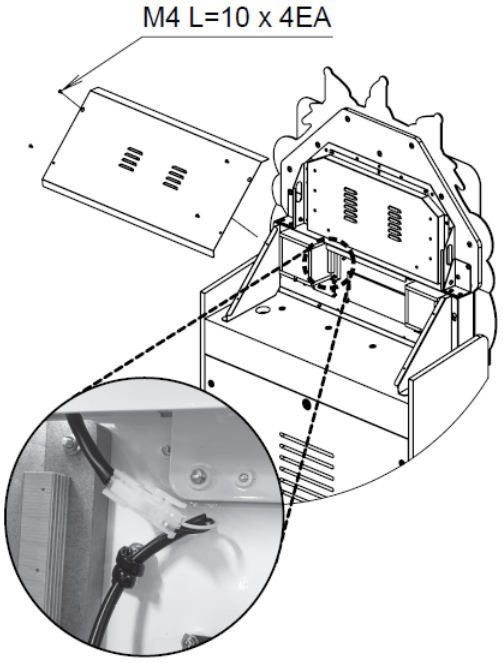
1 ATTATCH TITLE BODY



2 ATTATCH TITLE MARQUEE

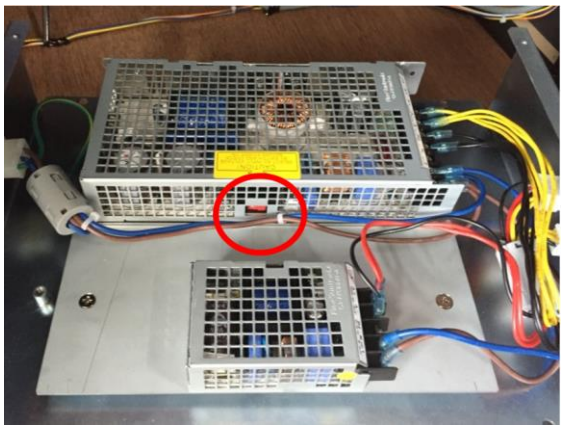
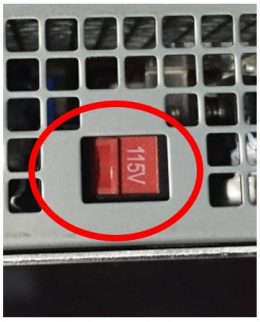


3 CONNECT HARNESS



BALL RUNNER

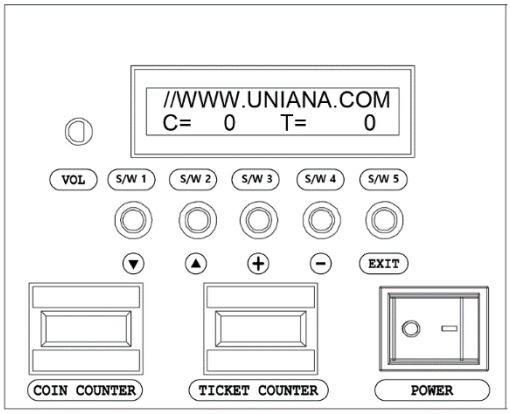
2-4. POWER SUPPLY VOLTAGE SELECT

Step	Figure	Description
1		Turn off the machine and disconnect the power plug.
2		Remove the 4 bolts on the power box top cover.
3		Please remove the cover and check SMPS 12V.
4		Move and set the PSU Switch as the local voltage. (230V/115V)
5		Assemble in reverse order.

3. GAME SETUP & TEST MODE

3-1. CONTROL PANEL

Control Panel Switch



Function of Control Panel

VOLUME	MODULATE SOUND
S/W 1	ACCESS SETUP MODE
	SELECT SETUP MODE (NEXT)
S/W 2	ACCESS TEST MODE
	SELECT SETUP MODE (PREVIOUS)
S/W 3	INCREASE SETUP VALUE
S/W 4	DECREASE SETUP VALUE
S/W 5	EXIT SETUP MODE

Bookkeeping

C	NUMBER OF COINS
T	NUMBER OF DISPENSED TICKETS

- **SERVICE COIN MODE**

1. Push and hold S/W5 (EXIT) button.
2. Push S/W3 (+) button for service coin.
   ☞ **NOTE :** Coin will not be counted on meter or in bookkeeping.

- **CLEAR CREDIT**

1. Push and hold S/W5 for 5 seconds.

- **CLEAR CREDIT & BOOKEEPING**

1. Turn power off.
2. Push and hold S/W5 (EXIT) button.
3. Turn power on while holding in S/W5 (EXIT) button.

- **FACTORY RESET: CLEAR SET VALUES**

1. Turn power off.
2. Turn power on while holding in S/W3 & S/W4 button.
3. Keep holding in S/W3 & S/W4 button until machine is completely on.
   (It may take up to 10 seconds)

BALL RUNNER

3-2. SETUP MODE

To access setup mode

- Push S/W 1 (▼) button to get into setup mode.
- Push S/W 1 (▼) button to move to next set up item.
- Push S/W 2 (▲) button to move to previous setup item.

To change the value of item selected, follow below

- Push S/W 3 (+) or S/W 4 (-) button to increase or decrease set up value.
- Push S/W 1 (▼) or S/W 2 (▲) button to move to next or previous setup item.
- Push S/W 5 (EXIT) button to enter exit mode.
  - Push S/W 1 (▼) button to save changes and exit setup mode.
  - Push S/W 2 (▲) button to discard changes and exit setup mode.
- Power off and switch back on 5 seconds for the change to take effect

SETUP MODE FLOW CHART

1. CREDIT MODE **1_COIN 1_PLAY**	**Set up credit mode** *(Default Coin 1/Credit 1)(Adjustable Free play, Coin 0~20/Credit 1~20)* - S/W 3 : Set up coin value (0~20) - S/W 4 : Set up credit value per one coin (1~20) ☞ **NOTE :** Set up coin value as 0 for free play mode.
2. GAME TIME **VALUE = [30 sec]**	**Set up game time** *(Default 30 sec)(Adjustable 25~60 sec)* ☞ **NOTE :** Game time increase by 5 seconds. If you increase the game time, the game level becomes very easy. For e.g. 40 sec hard play is easier than 30 sec easy mode.
3. DIFF. LEVEL **VALUE=[1.8]**	**Set up game difficulty level** *(Default 1.8)(Adjustable 1~2.4)* - ***Very easy play*** (1.9~2.4) - ***Easy play*** with long target lit time (1.8~1.9) - ***Normal play*** with average target lit time (1.6~1.7) - ***Hard play*** with the short target lit time (1.4~1.5) - ***Very hard play*** with very short target lit time (1.2~1.3) - Use for testing purpose only (1~1.1) ☞ **NOTE :** Each game level has different target lit time.
4. AUTO START **VALUE = [1]**	**Set a game auto start time** *(Default 1 sec)(Adjustable 1~9 sec)* ☞ **NOTE :** Game auto starts after demo play.
5. ADD BALL **VALUE = [0]**	**Set up additional ball targets** *(Default 0)(Adjustable 0~5)* ☞ **NOTE :** In addition to total targets(Total 35 targets per play), you can add random ball targets.
6. BONUS TICKET **VALUE = [1000]**	**Set up bonus ticket value** *(Default 1000)(Adjustable 0~9999)* ☞ **NOTE :** Bonus ticket value Increase by 1.

7. BONUS ADD VALUE = [0]

Set up incremental bonus ticket value
(Default 0)(Adjustable 0~100)
☞ **NOTE :** Set desired incremental bonus tickets value per play.

8. BONUS MAX VALUE = [1000]

Set up bonus maximum ticket value
(Default 1000)(Adjustable 0~9999)
☞ **NOTE :** e.g. when you set up the max ticket value as 500, the bonus ticket value will not accumulate more than 500.

9. TICKET VALUE VALUE = [1]

Set up number of tickets per score
(Default 1)(Adjustable 1~2)
☞ **NOTE :** Dispense one ticket per one ticket or two tickets.

10. DEMO PLAY VALUE = [1 min]

Set up repeat time for demo play
(Default 1)(Adjustable 0~30 min)
☞ **NOTE :** e.g. If you set up the demo repeat time for 1 minute, the demo play will play by 1-minute cycle. Set up time value as 0 to turn off the demo play.

11. DEMO SOUND VALUE = [ON]

Set up sound effect for demo play
(Default ON) (Turn ON/OFF).

12. BACK LIGHT VALUE = [90]

Set up the lighting brightness of the display panel and the target
(Default 90)(Adjustable 0~100)
☞ **NOTE :** Brightness value increase by 10.

13. SCORE PRESET VALUE = [3]

Set up the presets for number of tickets
(Default 4)(Adjustable 1~5)

Preset		No.1	No.2	No.3	No. 4	No. 5
Number of coins (recommended)		2 Coins $0.5 / £0.5	4 Coins $1 / £1	6 Coins $1.5 / £1.5	8 Coins $2 / £2	12 Coins $3 / £3
Scores	0~2990	4	10	15	20	30
	3000~5990	10	20	25	50	70
	6000~7990	15	30	40	75	100
	8000~8990	25	40	60	100	150
	Bonus	200	500	1000	1000	1500

☞ **NOTE :** e.g. If you set up preset no.3 and scored 4,000 points, you get 25 tickets.

14. POINTS < 3000 TICKETS = [15]

Set up the tickets value of score 0~2990
(Default 15)(Adjustable 0~9999)

15. POINTS < 6000 TICKETS = [25]

Set up the tickets value of score 3000~5990
(Default 25)(Adjustable 0~9999)

16. POINTS < 8000 TICKETS = [40]

Set up the tickets value of score 6000~7990
(Default 40)(Adjustable 0~9999)

17. POINTS < 9000 TICKETS = [60]

Set up the tickets value of score 8000~8990
(Default 60)(Adjustable 0~9999)

18. BONUS FREE VALUE = [OFF]

Set up one more free game after the bonus win
(Default OFF)(Turn ON/OFF)

IMPORTANT

After changing setup values, you must turn OFF and turn ON the power for the new settings to take effect.

BALL RUNNER

3-3. TEST MODE

To access setup mode

- Push S/W 2 (▲) button to get into test mode
- Push S/W 1 (▼) button to move to next set up item
- Push S/W 2 (▲) button to move to previous setup item

To change the value of item selected, please follow below

- Push S/W 3 (+) or S/W 4 (-) button to increase or decrease set up value
- Push S/W 1 (▼) or S/W 2 (▲) button advance between set up items
- Push S/W 5 (EXIT) button to exit test mode

1.LED RGB TEST
LED_RED

LED Lighting Test

☞ **NOTE :** Press S/W3, S/W4 button to switch colors through.
(Off – Red – Green – Blue – Yellow – Purple – Cyan – White)

2. TARGET TEST

Target Test

☞ **NOTE :** Push the balls to check the start and target sensors.
- Target light (green) : start sensor is OK
- Target light (blue) : target sensor is OK

3. FND TEST

FND Test

☞ **NOTE :** All FND will automatically display 0~9 in cycles.

4. COUNTER TEST

Coin Counter Test

☞ **NOTE :** Press S/W 3 button to increase coin counter by 1.
Press S/W 4 button to increase ticket counter by 1.

5. SOUND TEST
VALUE = [0]

Sound Test (0~29)

☞ **NOTE :** Press S/W3 = Select Sound, Press S/W4 = Play selected Sound

6. TICKET TEST
S/W3 = 1 TICKET

Ticket Test

☞ **NOTE :** Press S/W3 to dispense a ticket.

7. RECORD
WINS=0/100

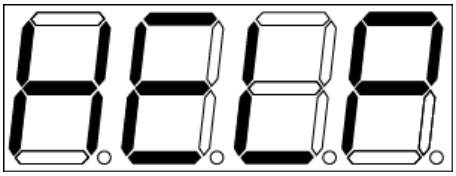
Play Record

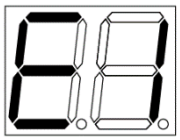
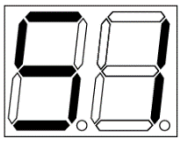
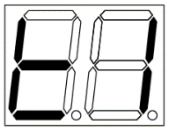
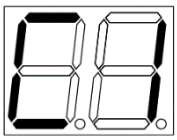
Sections	Remark
Wins	Number of win bonus / Total number of play
S4	Number of win from score range 8000~8990
S3	Number of win from score range 6000~7990
S2	Number of win from score range 3000~5990
S1	Number of win from score range 0~2990

☞ **NOTE :** Press S/W3, S/W4 button to check the lists. Press and hold S/W5 and turn on the power to rest it with bookkeeping.

4. ERROR & TROUBLE SHOOTING

4-1. ERROR CODE

[BONUS FND]	[ERROR CODE]
	● **HELP : TICKET ERROR** **There is a ticket dispensing problem.**

[CREDIT FND]	[ERROR CODE]
	● **E1~E7 : BALL RETURN ERROR** **The ball on each lane failed to return to its original position.**
	● **S1~S7 : START SENSOR ERROR** **The start sensor for each lane is not functioning properly.**
	● **T1~T7 : TARGET SENSOR ERROR** **The target sensor for each lane is not functioning properly.**
	● **C1 : COIN MECHANISMS ERROR** **There is a problem with the coin jam or signal.**

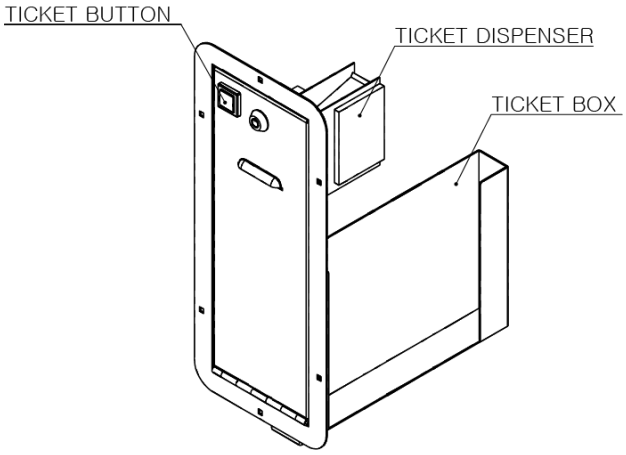
BALL RUNNER

4-2. TROUBLE SHOOTING: TICKET ERROR

TICKER ERROR : HELP

First step of trouble shooting ticket error

- If ticket box is empty, load new tickets to ticket dispenser and push ticket button.
- If ticket button does not work, test ticket dispenser & ticket lamp.



- **If ticket dispenser does not work**

1. Check connectors & harness
2. Replace ticket dispenser
3. Replace main board

- **When ticket dispenser work properly**

1. Check connectors & harness
2. Check ticket button test
3. Replace ticket button
4. Replace main board

4-3. TROUBLE SHOOTING: BALL RETURN ERROR (E1~E7)

BALL RETURN ERROR : E1~E7

First step of trouble shooting ball return error

- Return all balls to its original position.
- Stop all balls from pressing the targets.
- If there is a hardware problem, turn off the power and correct the problem.
- If problem continues, please check **4-4. Trouble shooting: SENSOR ERROR (S1~S7, T1~T7).**

- **Error Condition**

1. During the game play, the ball on each lane failed to return to its original position.
2. During the game play, the ball is pressing on target for more than 3 seconds.
3. If above error continues, the target (green) will not appear and it will flash as red color.
4. If more than 3 lanes have above errors, all targets (green) will not appear and all targets will flash as red color.

4-4. TROUBLE SHOOTING: SENSOR ERROR (S1~S7, T1~T7)

START SENSOR ERROR : S1~S7

First step of trouble shooting sensor error

- There is a problem with start sensor of the lane.
- Remove the playfield cover from left and right.
- Check the wire and connector.
- If the problem continues, replace the sensors.
- If the problem continues, replace the main board.

TARGET SENSOR ERROR : T1~T7

First step of trouble shooting sensor error

- There is a problem with target sensor of the lane.
- Remove the target light box.
- Check the wire and connector.
- If the problem continues, replace the sensors.
- If the problem continues, replace the main board.

4-5. TROUBLE SHOOTING: COIN MECHANISMS ERROR (C1)

COIN MECHANISMS ERROR : C1

First step of trouble shooting sensor error

- Check the coin acceptor.
- Check the wire from the coin acceptor.
- If the problem continues, replace the coin acceptor.

- **Error Condition**

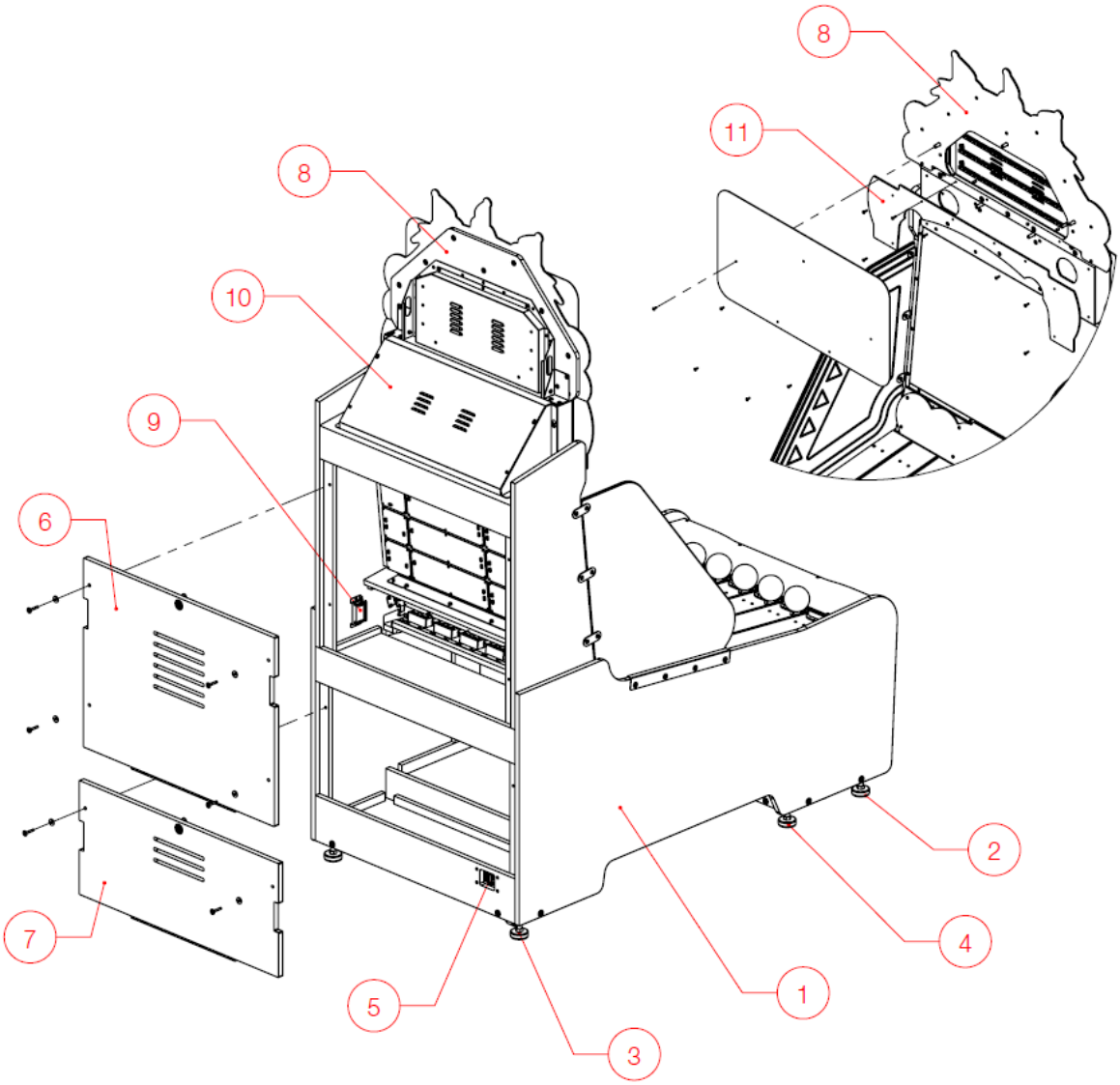
1. C1 error occurs when the signal on the coin acceptor is too long.
2. The error may occur from coin jam or signal.

5. PART LIST & WIRING DIAGRAM

5-1. PART LIST

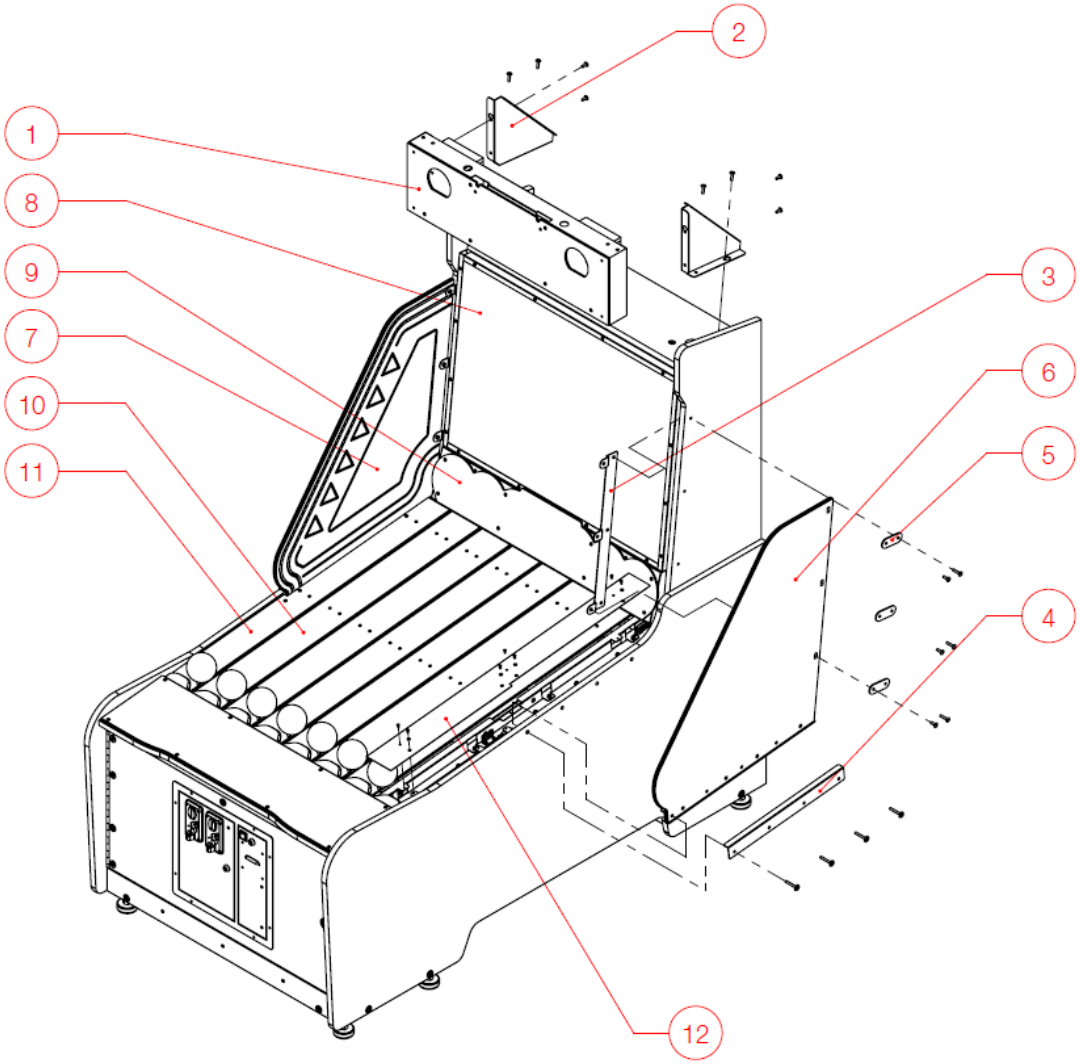
TOP ASSEMBLY - 1

No.	PART NAME	QTY	CODE No.
1	WOOD CABINET,UBR_R0	1	W41180100A
2	ASSY,CASTER BKT(L)	2	A71181920A
3	ASSY,CASTER BKT(R)	2	A71181930A
4	ASSY,ADJUSTER BKT	2	A41181910A
5	ASSY,AC INLET FILTER	1	A01140102A
6	ASSY,BACK UPPER SERVICE DOOR	1	A41180300A
7	ASSY,BACK BOT SERVICE DOOR	1	A41180400A
8	ASSY,TITLE BODY_R0	1	A41183100A
9	ASSY,SENSOR HUB	1	A41180550A
10	TITLE BACK COVER_R0	1	S41183293A
11	TITLE BACK POP A_R0	1	G41183182A



TOP ASSEMBLY - 2

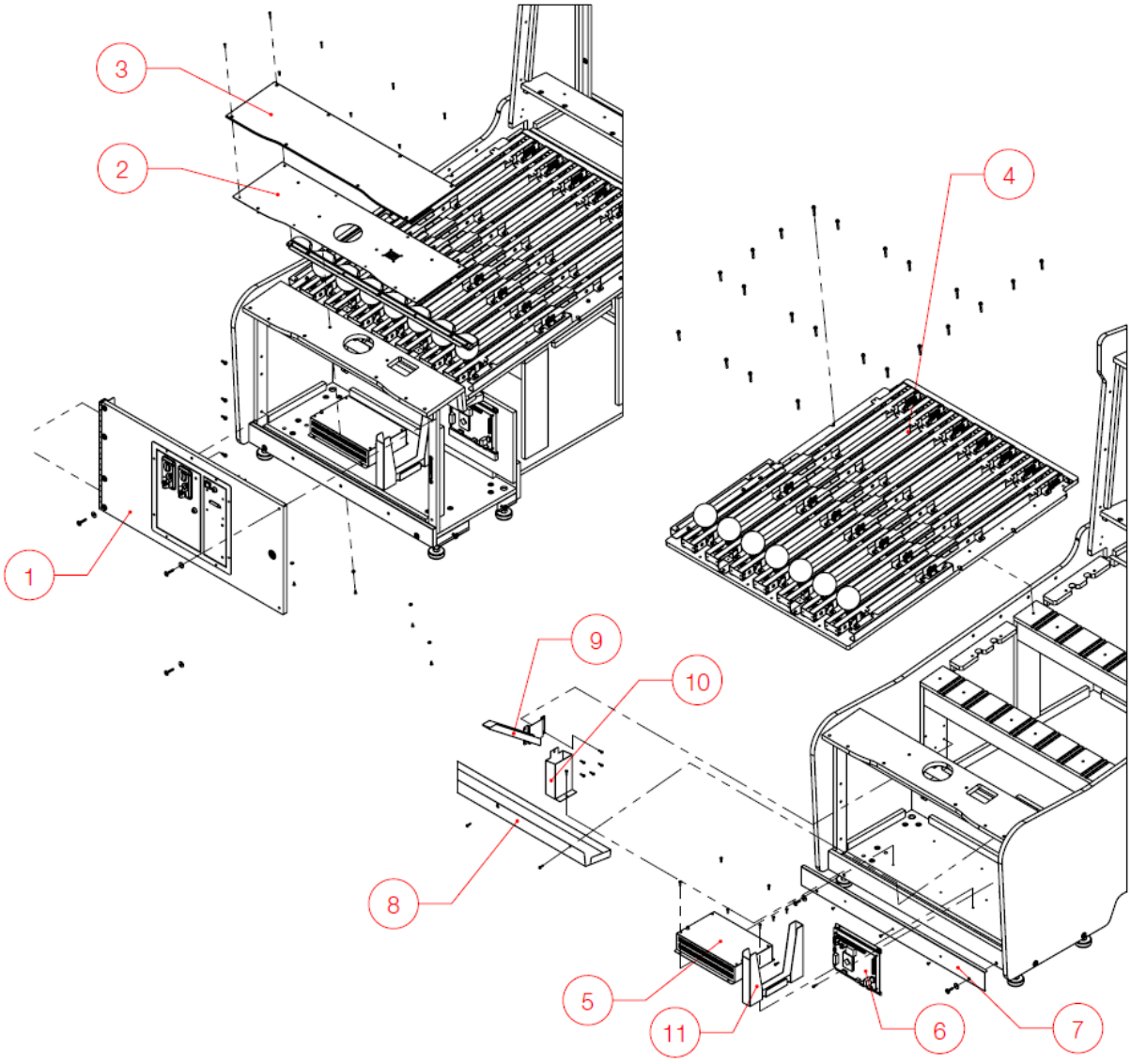
No.	PART NAME	QTY	CODE No.
1	ASSY,SCORE FND BOX	1	A41183200A
2	TITLE BKT A_R0	2	S41183291A
3	SIDE GUARD BKT B_R0	2	S41182103A
4	SIDE GUARD BKT C_R0	2	S41181912A
5	SIDE GUARD LINK_R0	6	S41182105A
6	ASSY,SIDE GUARD(R)_R0	1	A41182100A
7	ASSY,SIDE GUARD(L)_R0	1	A41182120A
8	ASSY,SCORE LIGHTING BOX_R0	1	A41180500A
9	ASSY,TARGET LIGHTING BOX_R0	1	A41181500A
10	RAIL COVER A_R0	6	S41180601A
11	RAIL COVER B(L)_R0	1	S41180602A
12	RAIL COVER B(R)_R0	1	S41180603A



BALL RUNNER

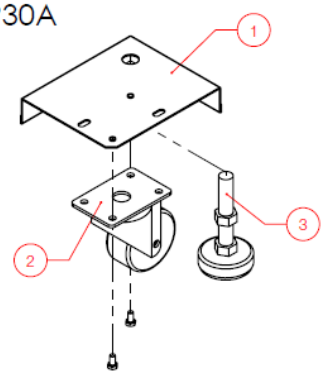
TOP ASSEMBLY - 3

No.	PART NAME	QTY	CODE No.
1	ASSY,FRONT SERVICE DOOR	1	A41180200A
2	ASSY,BUTTON BOARD BASE	1	A41181700A
3	ASSY,BUTTON BOARD_R0	1	A41181600A
4	ASSY,GAME RAIL BOARD	1	A41180600A
5	ASSY,POWER BOX,C164300A	1	A70164300A
6	ASSY,MAIN BOARD,UBR	1	A41187100A
7	FRONT BOTTOM GUIDE,UBR_R0	1	S41181914A
8	FRONT SLOPE A_R0	1	S41181921A
9	FRONT SLOPE B_R0	1	S41181922A
10	FRONT SLOPE C	1	S41181923A
11	TICKET TRAY BOX	1	S70143121A



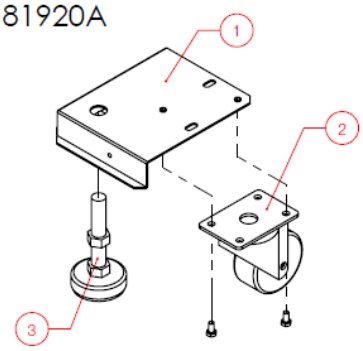
No.	PART NAME	SPEC	QTY	CODE No.
1	CASTER BKT(R)	2T	1	S50149721A
2	CASTER(3INCH-ROTATE)		1	B00141101A
3	M16x120_FOOTER		1	B00141201A

ASSY,CASTER BKT(R) A71181930A



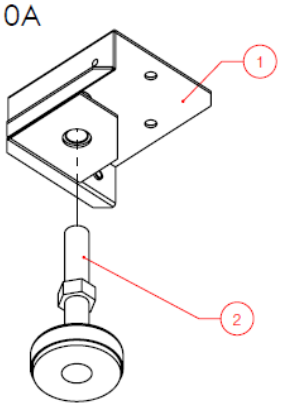
No.	PART NAME	SPEC	QTY	CODE No.
1	CASTER BKT(L)	2T	1	S50149701A
2	CASTER(3INCH-ROTATE)		1	B00141101A
3	M16x120_FOOTER		1	B00141201A

ASSY,CASTER BKT(L) A71181920A



No.	PART NAME	SPEC	QTY	CODE No.
1	ADJUSTER BKT	2T	1	S41181911A
2	M16x120_FOOTER		1	B00141201A

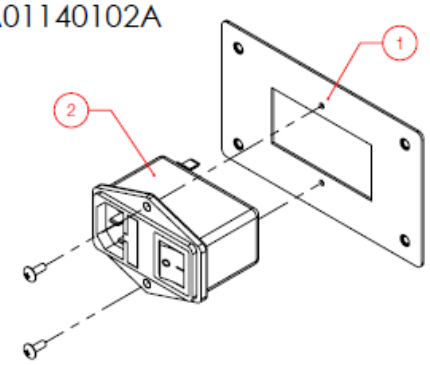
ASSY,ADJUSTER BKT A41181910A



BALL RUNNER

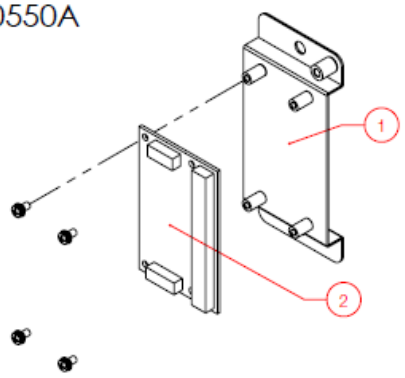
No.	PART NAME	SPEC	QTY	CODE No.
1	AC INLET FILTER BRK	1.2T	1	S01140101A
2	NOISE FILTER(IP-0622-H2)		1	C01140102A

ASSY,AC INLET FILTER A01140102A



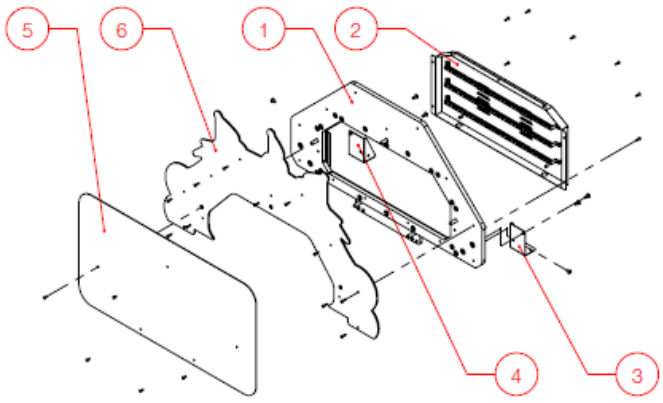
No.	PART NAME	SPEC	QTY	CODE No.
1	IO PCB BKT_R0		1	S41180551A
2	PCB,SENSOR HUB_E11175102B		1	E11175102B

ASSY,SENSOR HUB A41180550A



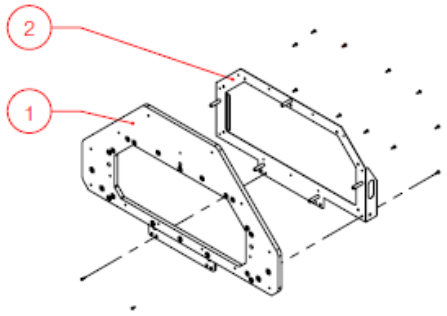
No.	PART NAME	SPEC	QTY	CODE No.
1	ASSY,TITLE BACK BOARD		1	A41183300A
2	ASSY,TITLE LIGHTING BOX_R0		1	A41183400A
3	TITLE BKT B(R)_R0		1	S41183292A
4	TITLE BKT B(L)_R0		1	S41183298A
5	TITLE FRONT COVER_R0		1	G41183188A
6	TITLE BACK POP B_R0		1	G41183183A

ASSY,TITLE BODY_R0 A41183100A



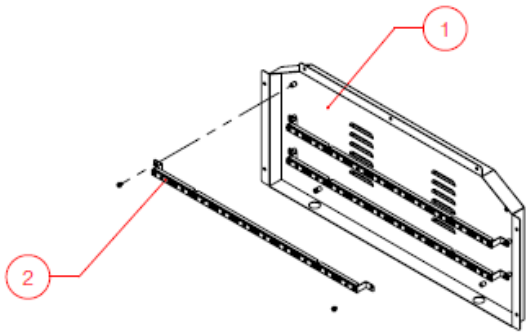
No.	PART NAME	SPEC	QTY	CODE No.
1	TITLE BACK BOARD_R0		1	W41183301A
2	TITLE BACK BKT_R0		1	S41183302A

ASSY,TITLE BACK BOARD A41183300A



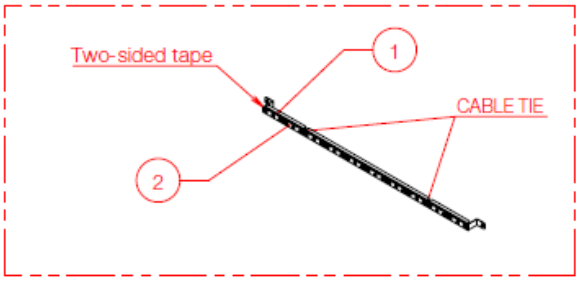
No.	PART NAME	SPEC	QTY	CODE No.
1	TITLE LIGITING BOX_R0		1	S41183401A
2	ASSY,LED BAR LIGHTING,500_A_R0		3	A41183480A

ASSY,TITLE LIGHTING BOX_R0 A41183400A



No.	PART NAME	SPEC	QTY	CODE No.
1	LED BAR BRK,500_A,UBR_R0	1.2T	1	S41183481A
2	PCB,LIGHTING LED-500		1	C03160211A

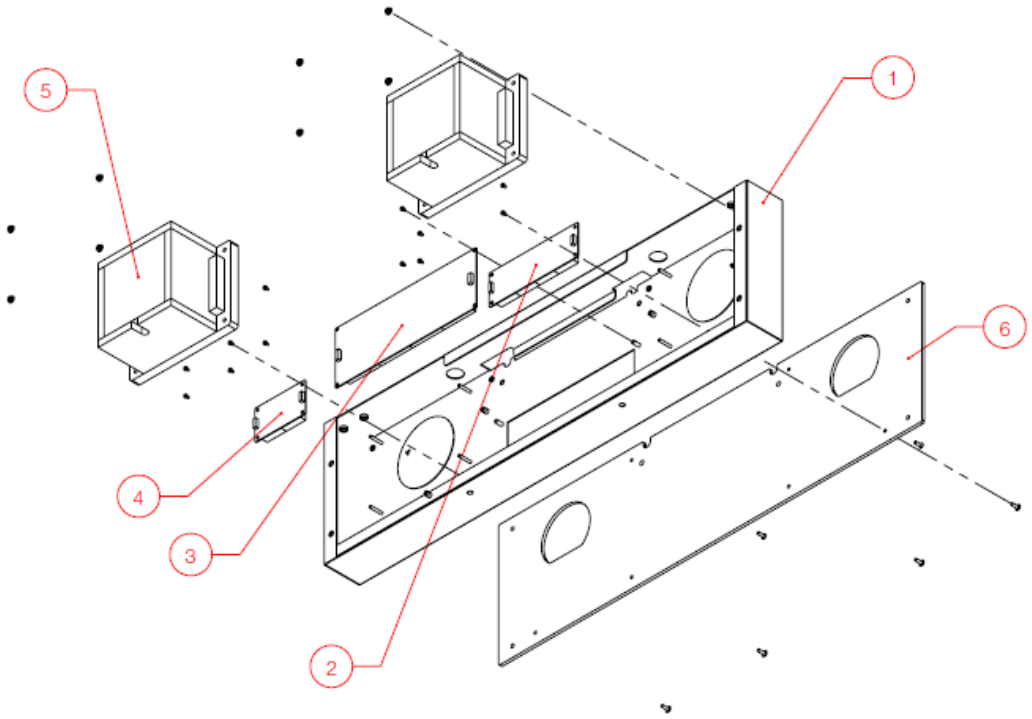
ASSY,LED BAR LIGHTING,500_A_R0 A41183480A



BALL RUNNER

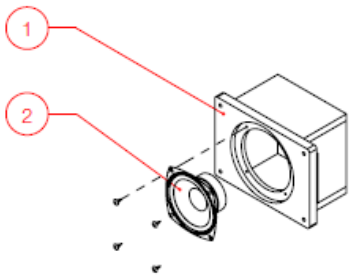
No.	PART NAME	SPEC	QTY	CODE No.
1	SCORE BOARD BOX_R0		1	S41183201A
2	PCB,SCORE FND_E11183201A	SCORE FND	1	E11183201A
3	PCB,BONUS FND_E11163501A		1	E11163501A
4	PCB,TIME FND_E11173201A		1	E11173201A
5	ASSY,TITLE SPEAKER BOX		2	A41183210A
6	TITLE FND COVER ACRYL_R0		1	G41183181A

ASSY,SCORE FND BOX A41183200A



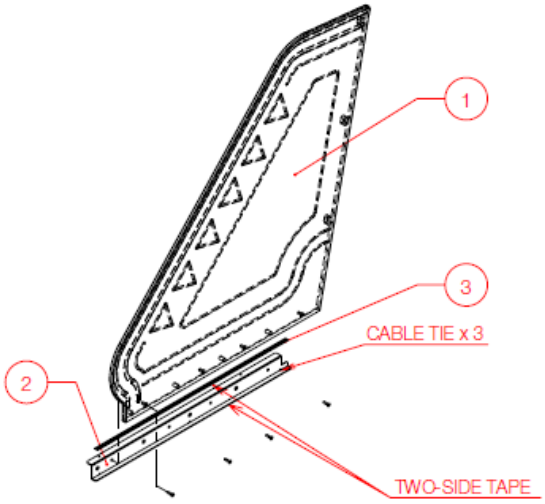
No.	PART NAME	SPEC	QTY	CODE No.
1	TITLE SPEAKER BOX_R0		1	W41183211A
2	SPEAKER_F406_(4inch_4ohm,20W)	MID	1	C02160702A

ASSY,TITLE SPEAKER BOX A41183210A



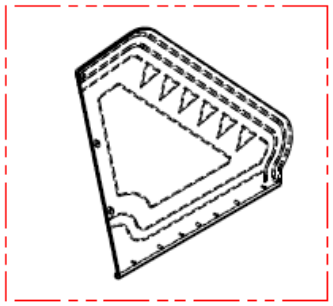
No.	PART NAME	SPEC	QTY	CODE No.
1	SIDE GUARD ACRYL(R)_R0	CLEAR 12T	1	G41182101A
2	SIDE GUARD BKT A(R)_R0		1	S41182102A
3	LED LINE_RGB_36EA_L600		1	C03180101A

ASSY,SIDE GUARD(R)_R0 A41182100A



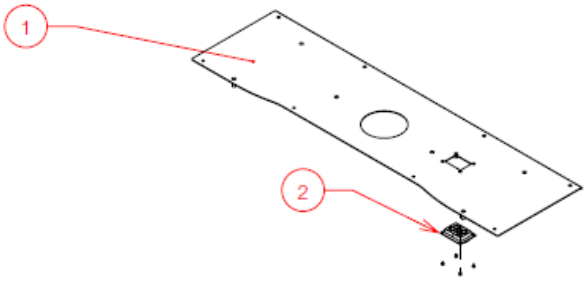
No.	PART NAME	SPEC	QTY	CODE No.
1	SIDE GUARD ACRYL(L)_R0		1	G41182121A
2	SIDE GUARD BKT A(L)_R0		1	S41182122A
3	LED LINE_RGB_36EA_L600		1	C03180101A

ASSY,SIDE GUARD(L)_R0 A41182120A



No.	PART NAME	SPEC	QTY	CODE No.
1	BUTTON BOARD MID PL,UBR_R0		1	S41181601A
2	PCB,CREDIT FND	FND-24x34x2EA	1	E11163401B

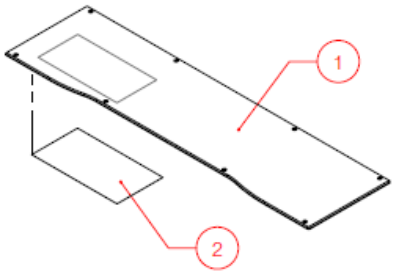
ASSY,BUTTON BOARD BASE A41181700A



BALL RUNNER

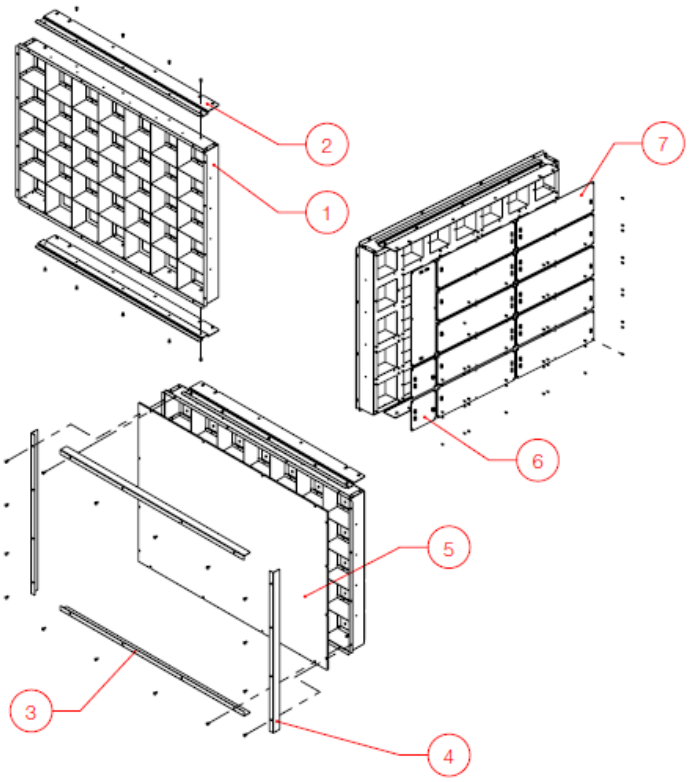
No.	PART NAME	SPEC	QTY	CODE No.
1	HOW TO BOARD ACRYL,UBR_R0	5T	1	G41181611A
2	PAYOUT SHEET	VAR.	1	G411816**A

ASSY,BUTTON BOARD_R0 A41181600A



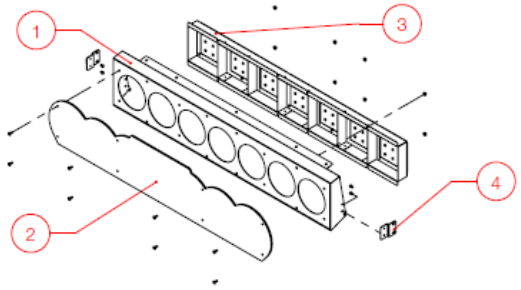
No.	PART NAME	SPEC	QTY	CODE No.
1	SCORE LIGHTING BOX		1	S41180510A
2	SCORE BOX BKT_R0		2	S41180521A
3	SCORE LIGHTING COVER BKT A_R0		2	S41180522A
4	SCORE LIGHTING COVER BKT B_R0		2	S41180523A
5	SCORE LIGHTING COVER ACRYL_R0		1	G41180531A
6	PCB,LIGHTING_1X1		2	E11184201A
7	PCB,LIGHTING_3X1		11	E11184101A

ASSY,SCORE LIGHTING BOX_R0 A41180500A



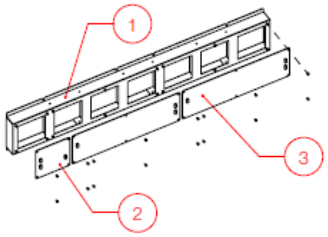
No.	PART NAME	SPEC	QTY	CODE No.
1	TARGET COVER PL_R0		1	S41181501A
2	TARGET BOX LIGHTING ACRYL_R0		1	G41181502A
3	ASSY,TARGET BACK LIGHT		1	A41181510A
4	TARGET BOX BKT_R0		2	S41181503A

ASSY,TARGET LIGHTING BOX_R0 A41181500A



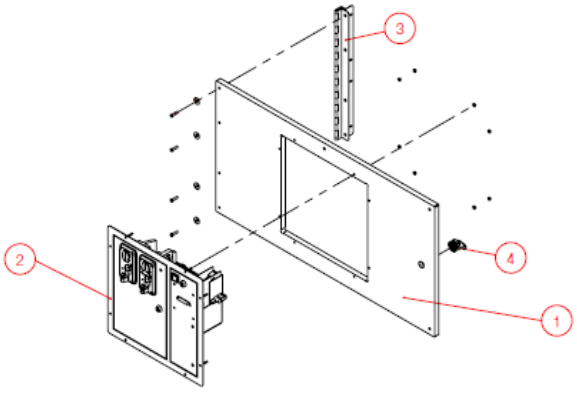
No.	PART NAME	SPEC	QTY	CODE No.
1	TARGET LIGHTING BOX_R0		1	S41181520A
2	PCB,LIGHTING_1X1		1	E11184201A
3	PCB,LIGHTING_3X1		2	E11184101A

ASSY,TARGET BACK LIGHT A41181510A



No.	PART NAME	SPEC	QTY	CODE No.
1	FRONT SERVICE DOOR PL		1	W41180191A
2	ASSY,TCKET 2DOOR_R0B		1	A70143100A
3	HINGE,FRONT SERVICE DOOR_R0		1	S411802060A
4	CAM LOCK 18mm	WOODEN/7001	1	B0014013A

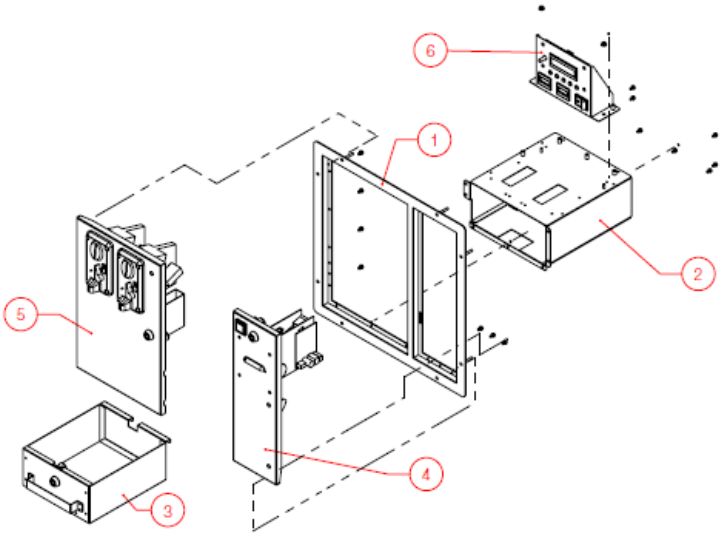
ASSY,FRONT SERVICE DOOR A41180200A



BALL RUNNER

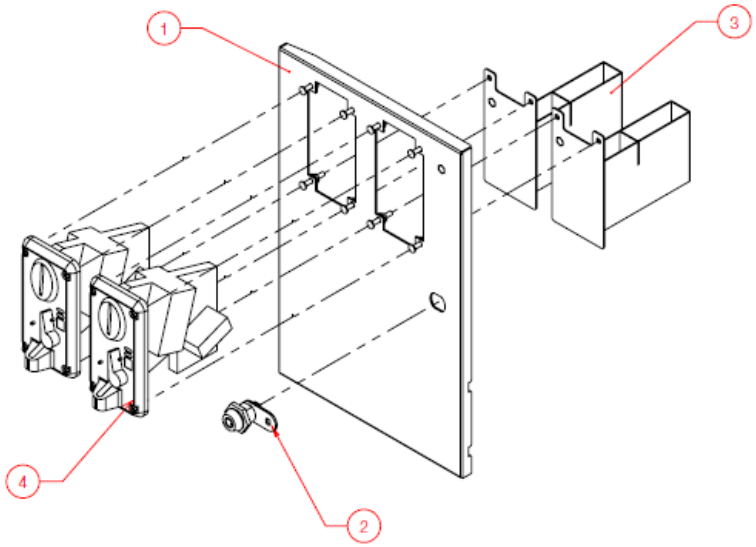
No.	PART NAME	SPEC	QTY	CODE No.
1	TICKET 2DOOR FRAME_R0B		1	S70143101A
2	COIN BOX COVER_R0B	1.2T	1	S70143132A
3	ASSY,COIN BOX		1	A70143130A
4	ASSY,TICKET DOOR_R0B		1	A70143110A
5	ASSY,COIN MC DOOR(2COIN)		1	A70143140A
6	ASSY,CONTROL SWITCH PANEL		1	A71142100A

ASSY,TCKET 2DOOR_R0B A70143100A



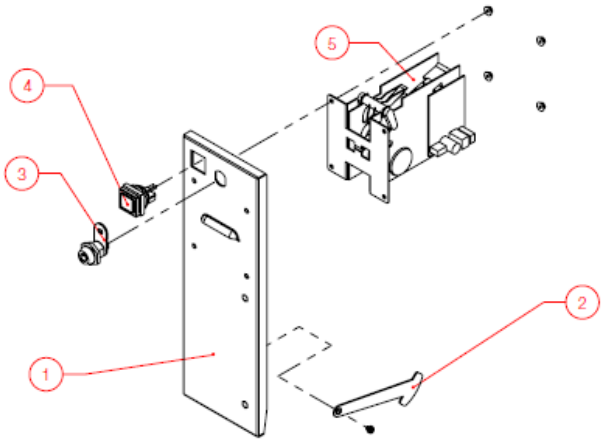
No.	PART NAME	SPEC	QTY	CODE No.
1	COIN MC DOOR(2COIN)		1	S70143141A
2	CAM LOCK 18mm		1	B00140102A
3	COIN BOX GUIDE	1.2T	2	S70143145A
4	COIN SELECTOR(TW-333)	TW-333	2	C02140602A

ASSY,COIN MC DOOR(2COIN) A70143140A



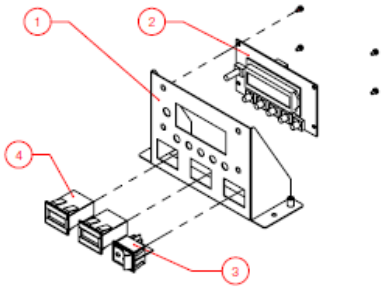
No.	PART NAME	QTY	CODE No.
1	TICKET DOOR_R0B	1	S70143111A
2	TICKET DOOR STOPPER	1	S70143115A
3	CAM LOCK 18mm	1	B00140102A
4	TICKET LAMP BUTTON_(AMPB-26SH-R12D)	1	C02140401A
5	TICKET DISPENSER(CLE CL-002Q-386)	1	C02140501A

ASSY,TICKET DOOR_R0B A70143110A



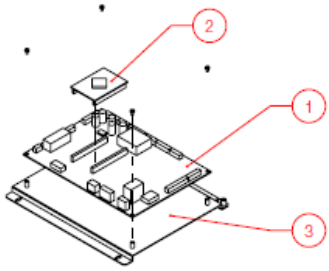
No.	PART NAME	SPEC	QTY	CODE No.
1	CONTROL SWITCH PANEL BKT	1T	1	S71142101B
2	PCB,CONTROL PANEL TEXT LCD		1	E11172001A
3	ROCKER SWITCH		1	C01140101A
4	COUNTER		2	C02140801A

ASSY,CONTROL SWITCH PANEL A71142100A



No.	PART NAME	SPEC	QTY	CODE No.
1	PCB,MAIN BOARD,UBR		1	E11181101A
2	PCB.CPU,UBR		1	E11161201A
3	MAIN BOARD BASE,UBR	1.2T	1	S71142201B

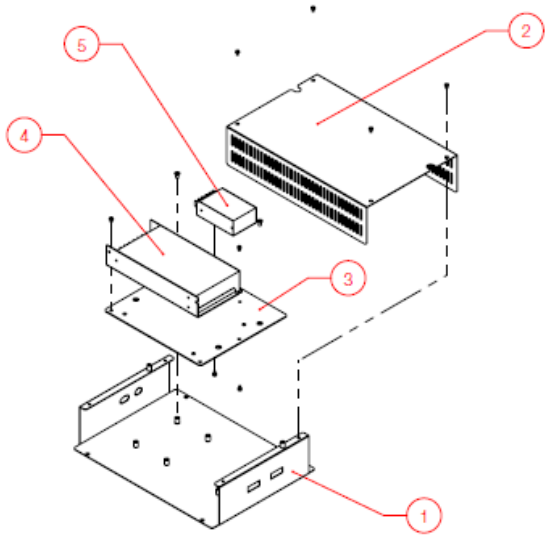
ASSY,MAIN BOARD,UBR A41187100A



BALL RUNNER

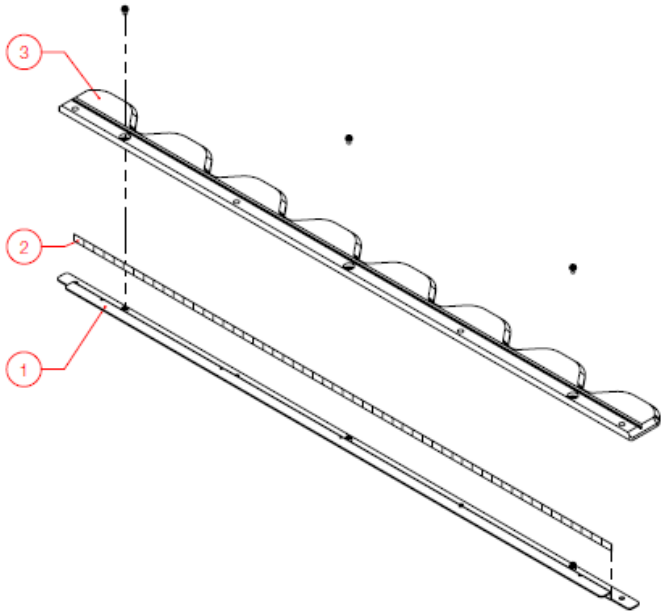
No.	PART NAME	SPEC	QTY	CODE No.
1	POWER BOX BASE,C164301A		1	S70164301A
2	POWER BOX COVER,C144102B		1	S70144102B
3	SMPS BASE,C164403A		1	S70164303B
4	SMPS(JSF150-12)	12V 15A	1	C02140203A
5	SMPS(JSF25-05)	5V 2.5A	1	C02140201A

ASSY,POWER BOX,C164300A A70164300A



No.	PART NAME	SPEC	QTY	CODE No.
1	FRONT LIGHTING ACRYL BKT		1	S41182501A
2	LED LINE_RGB_54EA_L900		1	C03180102A
3	RAIL FRONT COVER ACRYL_R0		1	G41182502A

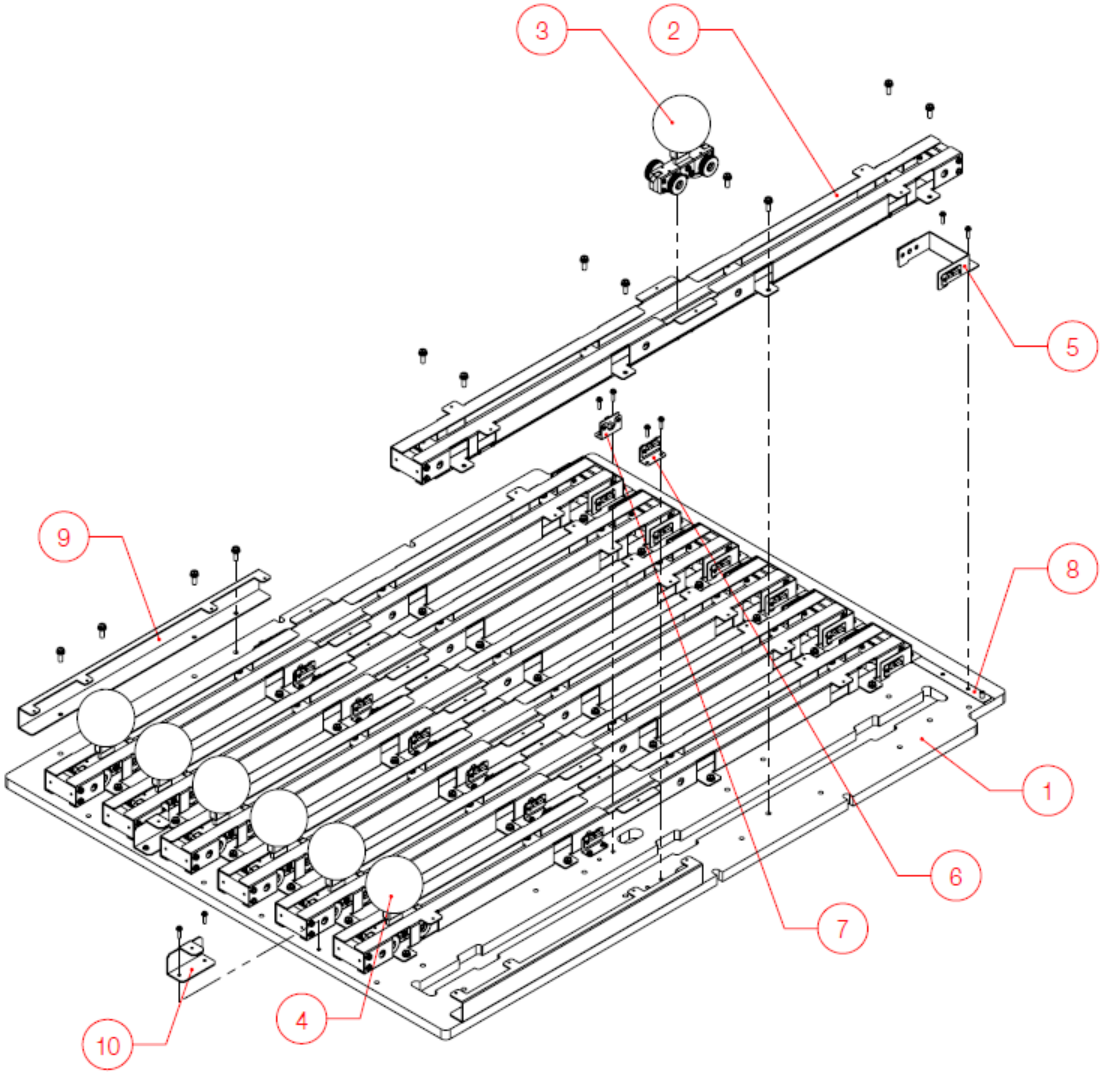
ASSY,RAIL FRONT LIGHTING A41182500A



BALL RUNNER

No.	PART NAME	SPEC	QTY	CODE No.
1	RAIL BASE WOODEN PLATE_R0		1	W41180601A
2	ASSY,BALL MOVER RAIL_R0		7	A41180700A
3	BALL MOVER ASS'Y (RED)	RED BALL (4/3EA)	4	A41188910A
4	BALL MOVER ASS'Y (BLUE)	BLUE BALL (3/4EA)	3	A41188920A
5	ASSY,TARGET SENSOR BKT		7	A41181100A
6	ASSY,BALL SENSOR RX		7	A41181200A
7	ASSY,BALL SENSOR TX		7	A41181300A
8	TARGET SENSOR CON PL_R0		1	S41181106A
9	SIDE FIXTTURE GUIDE_R0		2	S41181913A
10	FRONT LIGHTING BKT		2	S41180603A

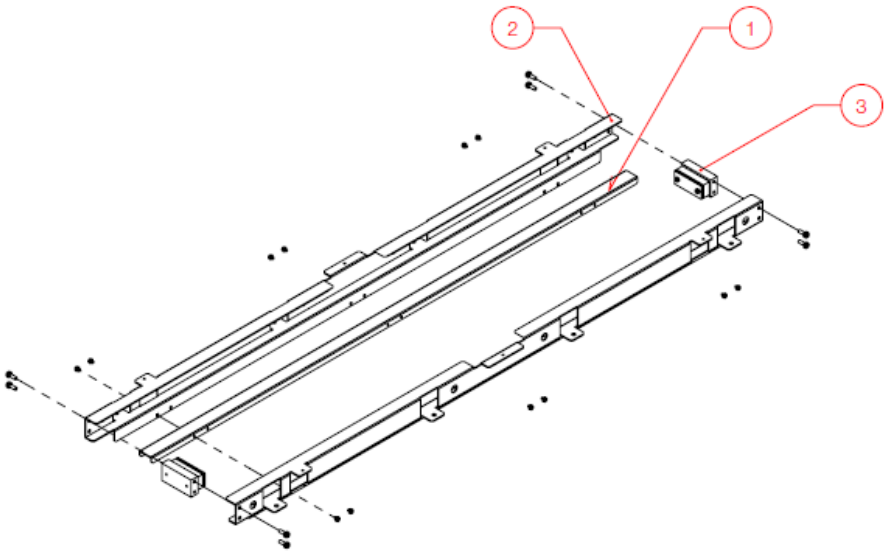
ASSY,GAME RAIL BOARD A41180600A



BALL RUNNER

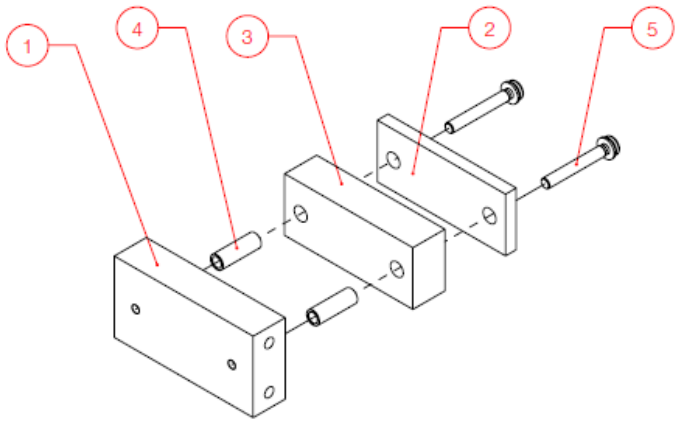
No.	PART NAME	SPEC	QTY	CODE No.
1	RAIL BOTTOM GUIDE_R0		1	S41180701A
2	BALL SIDE RAIL_R0		2	S41180702A
3	ASSY,RAIL STOPPER BLOCK		2	A41180710A

ASSY,BALL MOVER RAIL_R0 A41180700A



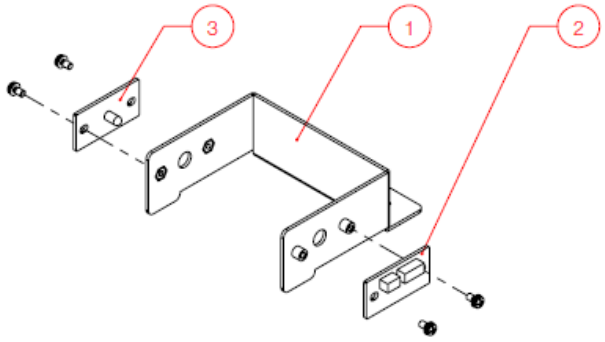
No.	PART NAME	SPEC	QTY	CODE No.
1	RAIL STOPPER BLOCK		1	M41180711A
2	BALL STOPPER_R0		1	M41180712A
3	BALL BUFFER _R0		1	M41180713A
4	STOPPER BUSHING		2	M41180714A
5	SEMS-S-M4 x 30		2	

ASSY,RAIL STOPPER BLOCK A41180710A



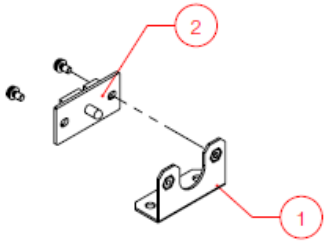
No.	PART NAME	SPEC	QTY	CODE No.
1	TARGET SENSOR BKT		1	S41181101A
2	PCB,PHOTO SENSOR_RX		1	E11165201B
3	PCB,PHOTO SENSOR_TX		1	E11165301B

ASSY,TARGET SENSOR BKT A41181100A



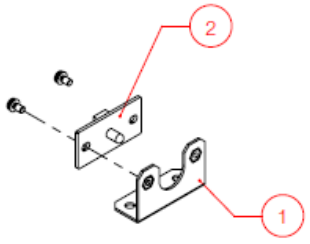
No.	PART NAME	SPEC	QTY	CODE No.
1	BALL SENSOR BKT A		1	S41181201A
2	PCB,PHOTO SENSOR_RX		1	E11165201B

ASSY,BALL SENSOR RX A41181200A



No.	PART NAME	SPEC	QTY	CODE No.
1	BALL SENSOR BKT A		1	S41181201A
2	PCB,PHOTO SENSOR_TX		1	E11165301B

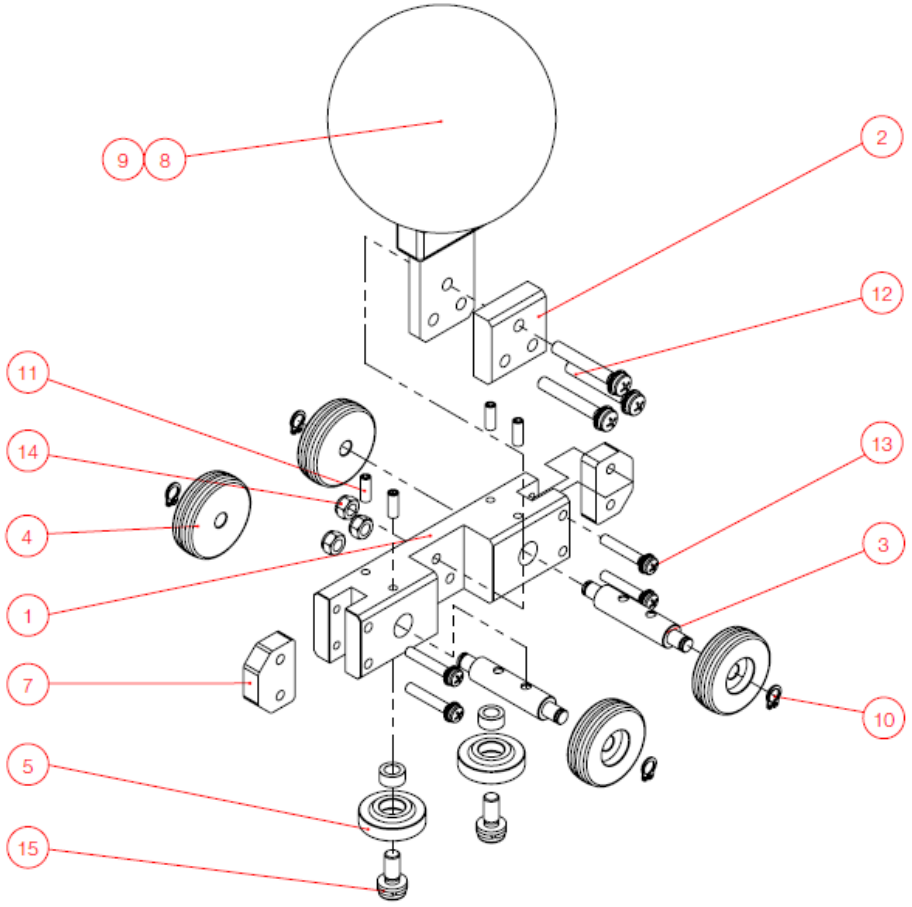
ASSY,BALL SENSOR TX A41181300A



BALL RUNNER

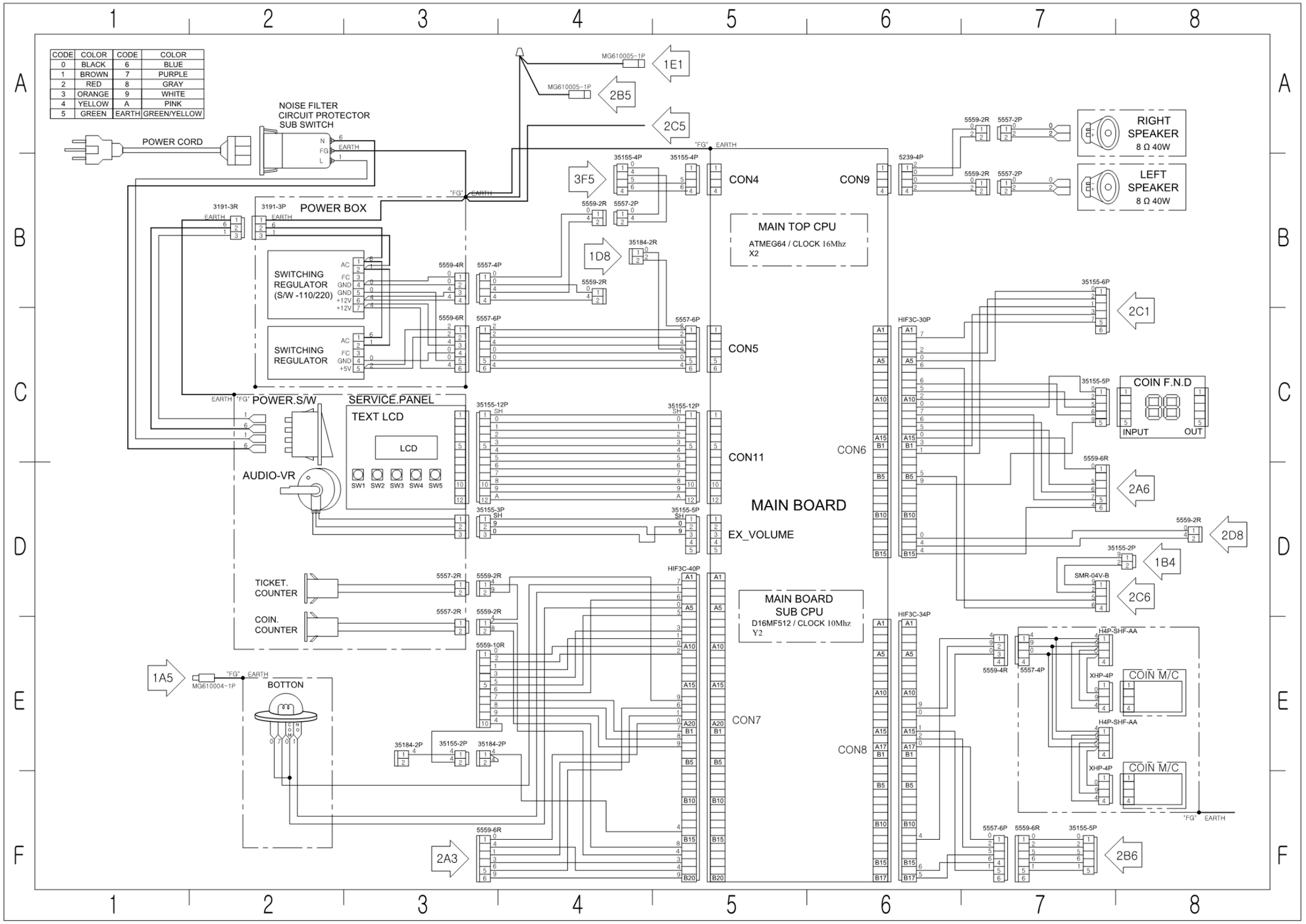
No.	PART NAME	RED/QTY	BLUE/QTY	CODE No.
1	MOVER BLOCK_R0	1	1	M41180801A
2	MOVER BLOCK COVER_R0	1	1	M41180802A
3	SIDE WHEEL SHAFT_R0	2	2	M41180803A
4	SIDE WHEEL_R0	4	4	M41180805A
5	BOTTOM WHEEL(MC)	2	2	M41180806A
6	BOTTTOM BUSH PIPE	2	2	M41180807A
7	MOVER STOPPER_R0	2	2	M41180804A
8	GAME BALL (RED)	1	-	M41186901A
9	GAME BALL (BLUE)	-	1	M41186902A
10	CIRCLIP-CE-6	4	4	
11	ConeP - M4 x 12-C	4	4	
12	SEMS-S-M5 x 35	3	3	
13	SEMS-S-M4 x 25	4	4	
14	NUT-M5-SL-NY	3	3	
15	SEMS-S-M6 x 16	2	2	

ASSY,BALL MOVER RED - A41180910A
BLUE - A41180920A



5-2. WIRING DIAGRAM

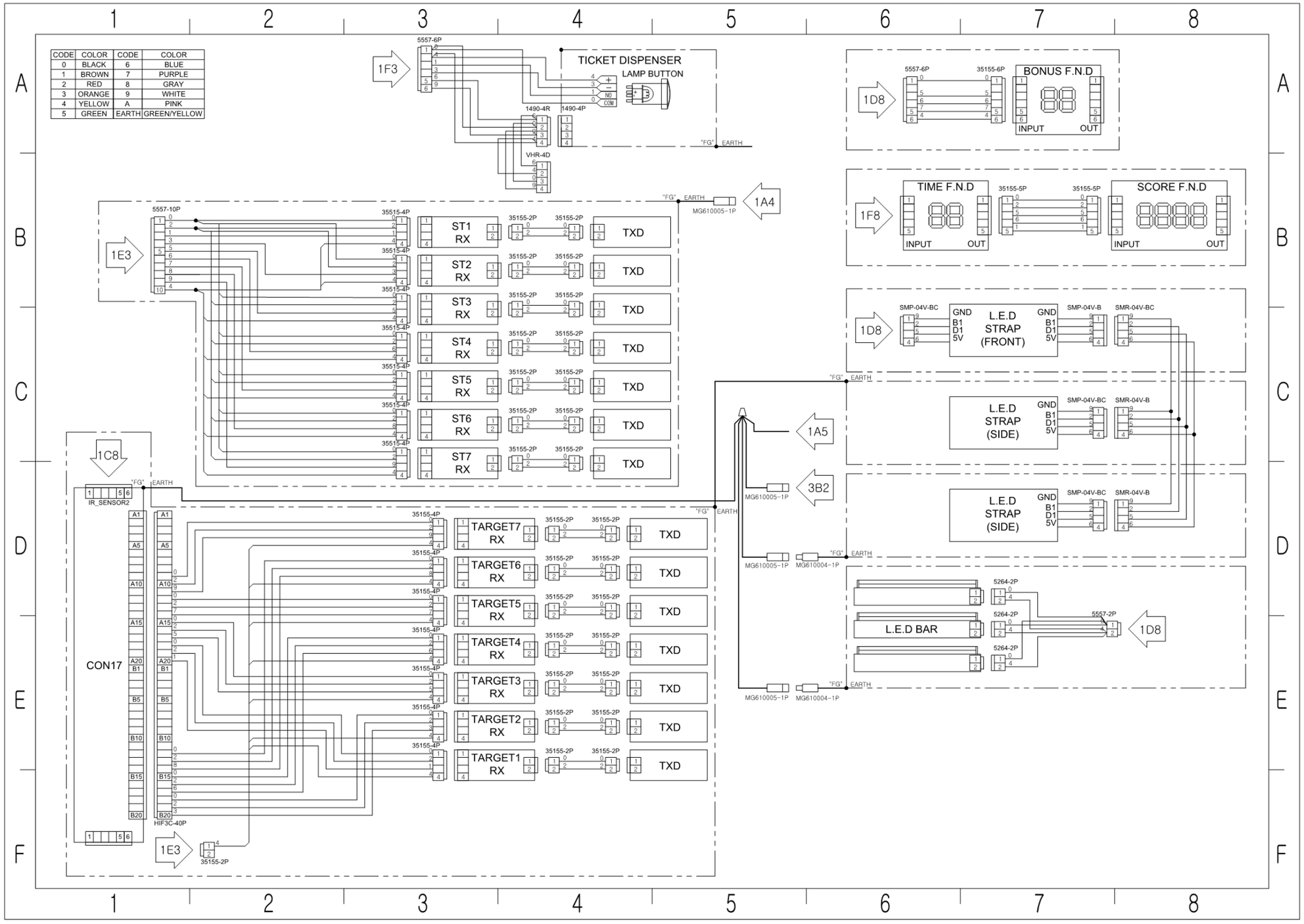
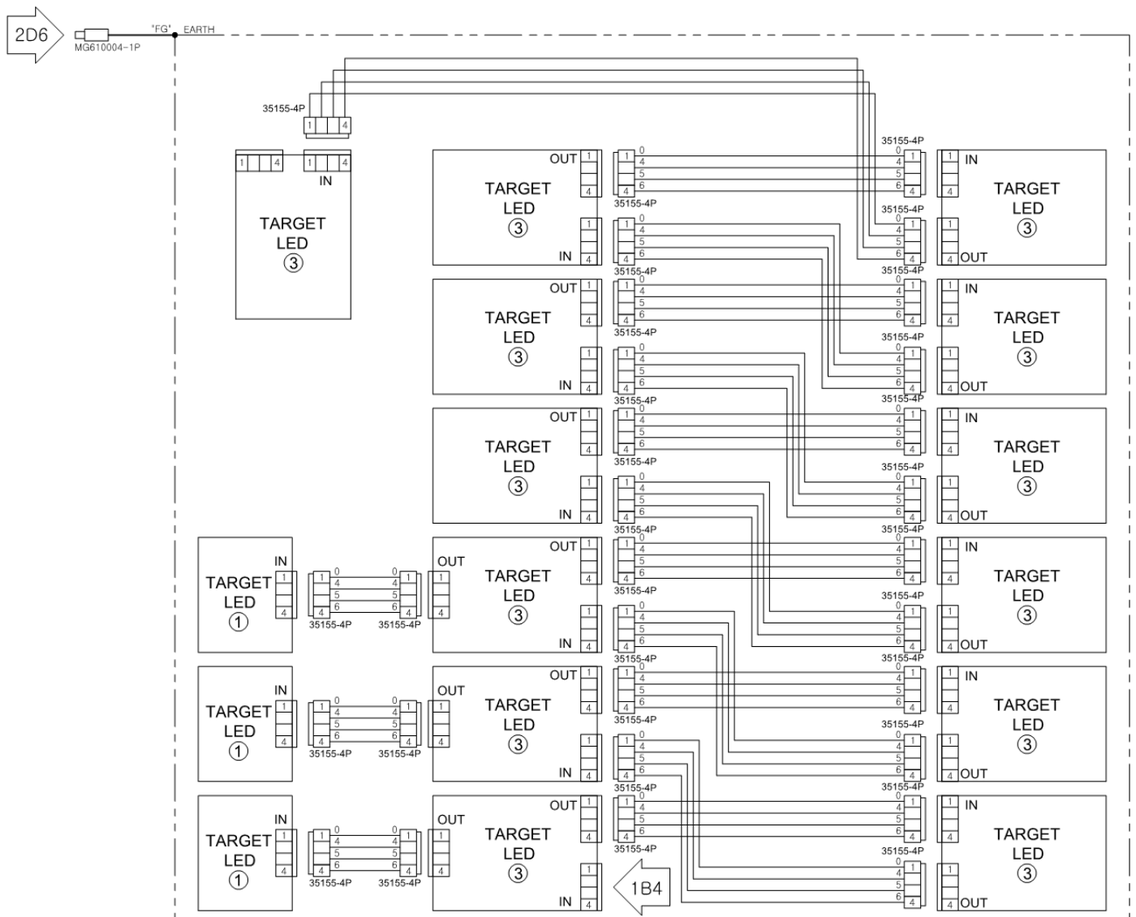
H41189901D BALL RUNNER WIRING DIAGRAM Specificatlons for regions using 110 / 230 voltage area. 1/3



H41189902B BALL RUNNER WIRING DIAGRAM

Specificatlons for regions using 110 / 230 voltage area. 2/3

CODE	COLOR	CODE	COLOR
0	BLACK	6	BLUE
1	BROWN	7	PURPLE
2	RED	8	GRAY
3	ORANGE	9	WHITE
4	YELLOW	A	PINK
5	GREEN	EARTH	GREEN/YELLOW



CODE	COLOR	CODE	COLOR
0	BLACK	6	BLUE
1	BROWN	7	PURPLE
2	RED	8	GRAY
3	ORANGE	9	WHITE
4	YELLOW	A	PINK
5	GREEN	EARTH	GREEN/YELLOW