

# **OWNERS AND SERVICE MANUAL**

## INNOVATIVE CONCEPTS IN ENTERTAINMENT INC.

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#### SAFETY AND WARNINGS

#### **BEFORE YOU BEGIN**

WARNING: WHEN INSTALLING THIS GAME, A GROUNDED A.C. RECEPTACLE MUST BE USED. FAILURE TO DO SO COULD RESULT IN INJURY TO YOURSELF OR OTHERS. FAILURE TO USE A GROUNDED RECEPTACLE COULD ALSO CAUSE IMPROPER GAME OPERATION, OR DAMAGE TO THE ELECTRONICS.

DO NOT DEFEAT OR REMOVE THE GROUNDING PRONG ON THE POWER CORD FOR THE SAME REASON AS GIVEN ABOVE. USING AN IMPROPERLY GROUNDED GAME COULD VOID YOUR WARRANTY.

HAVE A QUALIFIED ELECTRICIAN CHECK YOUR A.C. RECEPTACLE TO BE SURE THE GROUND IS FUNCTIONING PROPERLY.

#### INSTALLATION

Please see assembly booklet insert for instructions on how to assembly the game.

 Once the game is assembled plug the game into the A.C. outlet and turn on power to the game. The switch for the game is located on a power module on the outside rear of the game.

THIS GAME IS DESIGNED TO DISSIPATE STATIC ELECTRICITY THROUGH THE GROUNDING PLANE OF THE GAME. IF THE A.C. GROUND DOES NOT WORK, THE GAME COULD DISCHARGE STATIC ELECTRICITY THROUGH THE GAME CIRCUITRY, WHICH COULD CAUSE DAMAGE.

- 2. Make sure the game is level after installation. It is necessary to make sure the game is level for safety concerns.
- 3. Check that the A.C. voltage rating on the back of the game matches the A.C. voltage of your location.

THE POWER SUPPLY IS NOT VOLTAGE ADJUSTABLE. TO OPERATE THE GAME AT VOLTAGES OTHER THAN THOSE IT WAS DESIGNED FOR. PLEASE CONTACT OUR SERVICE DEPARTMENT FOR VOLTAGE CONVERSION INFORMATION.

#### **WARNING**

DO NOT remove any of the components on the main board (e.g. compact flash and EPROMS) while the game is powered on. This may cause permanent damage to the parts and the main board. Removing any main board component part while powered on will void the warranty.

NOTE: THIS GAME IS INTENDED FOR INDOOR USE ONLY.
ON THE BACK PANEL OF THE GAME: WARNING: SHOCK HAZARD - DO NOT OPEN. REFER SERVICING TO SERVICE PERSONNEL.

# **GAME SETUP AND FEATURES**

#### Introduction

TWO MINUTE DRILL™ is a revolutionary concept in Coin Operated football games. You will see that this game includes many features which make it the obvious choice for your location.

This game incorporates both pop out targets as well as stationary targets that are user friendly and realistic. Fun and easy to play for players of all ages, yet challenging enough for even the expert football players. Practice your football skills and try to better your last score or compete against your friends.

CONTROL PANEL. Attractive LED displays are used to display all scoring and vital information such as time, credits and high score. The control panel is laid out in a convenient user friendly fashion, making it easy for players to operate.

HEAVY DUTY CONSTRUCTION is incorporated throughout the game by using only heavy gage metals and plastics. The game can be assembled and disassembled many times without any harm to the game. You will appreciate this feature if you move your games often.

HIGH TECH GAME ELECTRONICS. Solid state electronics are used throughout the game for their rugged reliability as well as making it virtually impossible to connect harnessing the wrong way. Heavy duty optical sensors are used throughout.

Digital sound effects are used for optimum dependability. Over twenty sound effects are incorporated into the sound effect circuitry. The game electronics have been highly integrated into the Main PC Board assembly, making it easy to repair games. The game has a full feature self-test system to make troubleshooting easier.

OPTIONS. A ticket dispenser and/or a dollar bill acceptor can be ordered with your game.

#### Game Play

The game is an interactive coin operated amusement game.

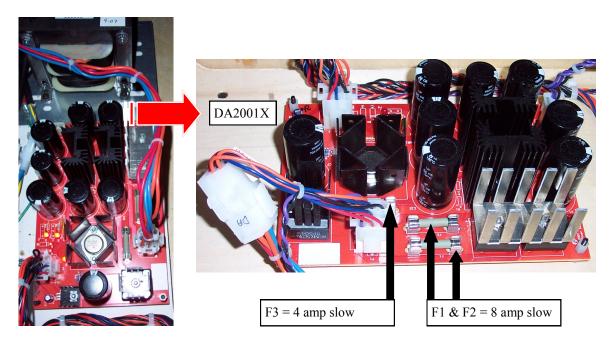
**Linking** is a popular option used in locations where more than one game is to be used. The games are linked with the marquee option to add direct head to head action between the game players. This option is built into each main PC board but requires the marquee to activate, and it is as easy as connecting a phone cord and setting a number between 1-9 on the main circuit board.

Assembly - See insert.

Programming - See insert.

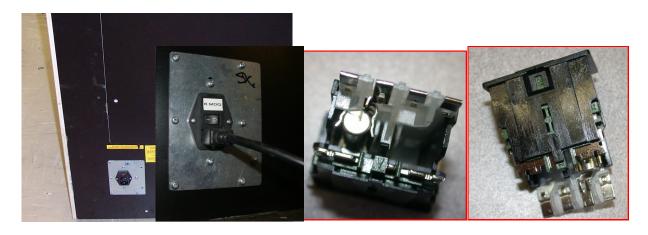
# Power Supply & Transformer

The power supply and transformer are located in the back of the game. To access them, you must open the bottom back access door and located on the left is the power assembly. See pictures below



#### **AC Main Power Fuse**

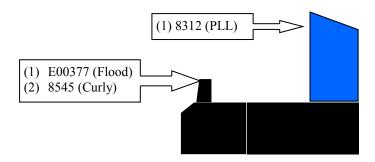
Located in the power module is a 3 amp slow blow fuse. To check or replace the fuse pull the tab with the label out. There is only one fuse installed. See diagram below.



#### General illumination

#### Location of bulbs

There are two 8545's (Compact fluorescent bulbs) located in the control panel, one E00377 (Flood Bulb) and located above the Playfield area is one 8312 (PLL 18 bulb).



#### Control panel bulbs

To access the three bulbs located in the control panel you will need to remove the bracket holding the control panel. Use a 5/32 Allen and 7/16 wrench to remove the 3 bolts holding the top bracket of the control panel. See page 13 for bracket diagram and see pages 8 through 12 for assembly diagrams of the control panel.

#### Playfield bulb

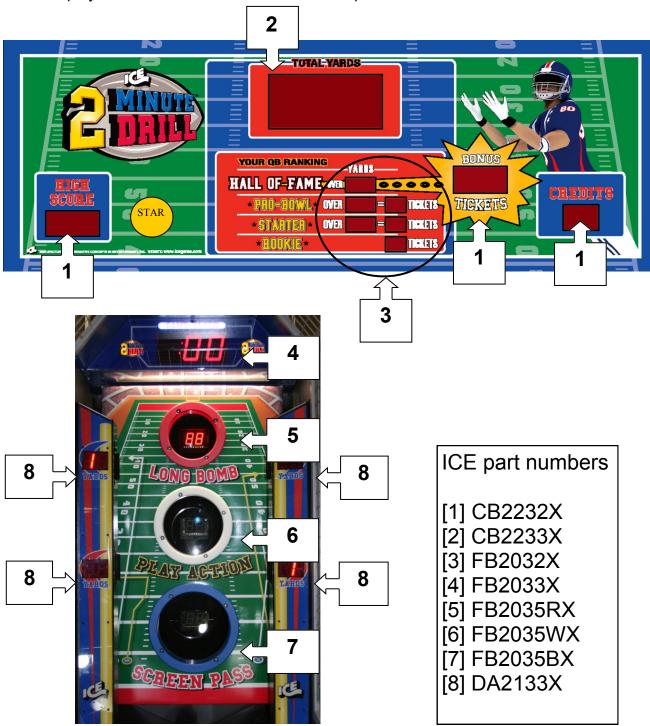
Open the top back door and remove the #2 square head screws that hold the upper cover plate. You can now access the top PLL bulb. It is also possible to access the bulb from the front if access to the back is limited. See diagram on page 14.

#### LED Lights

There are two LED strips to illuminate the word GAME CLOCK located at the top of the playfield in the marquee. You will need to remove the front marquee to replacement the LED strips. See the assembly diagram on page 14 for removal. There are also four strips located in the control panel to illuminate the player's ranking. See diagram on page 13 for access. The LED Strips located in the target area are part of the display assemblies and cannot be replaced alone. See display location on the next page.

#### **Display Board locations**

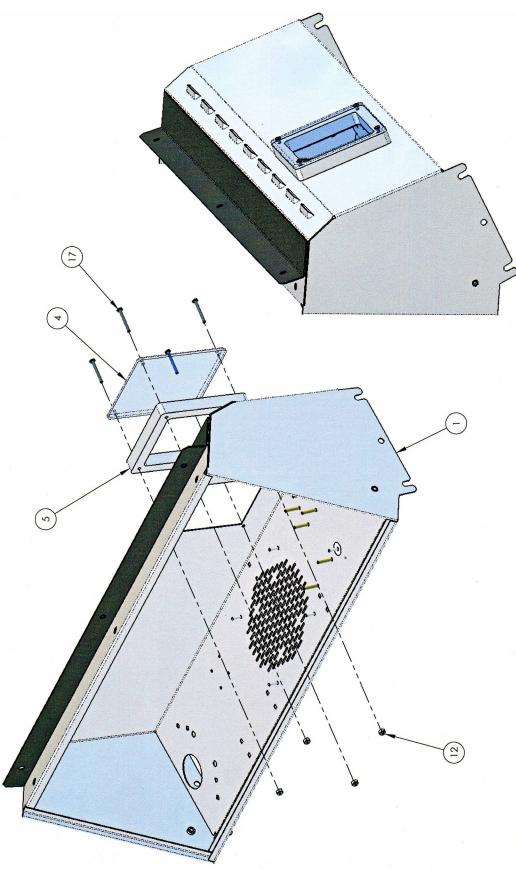
Control panel display boards are located below. FB2032X is a display that includes six display boards and five mini footballs. See picture below.



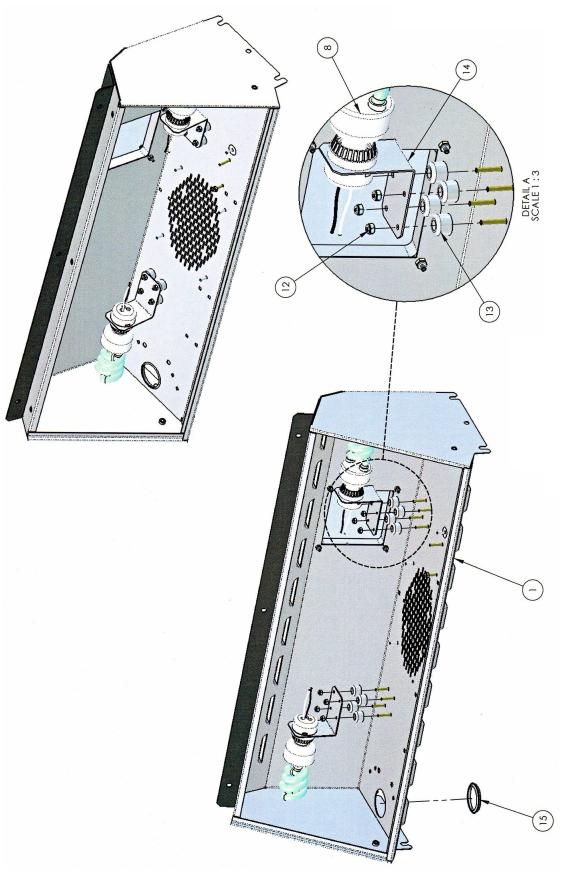


Control Panel Assembly

QTY.	-	-	-	-	-	-	-	2	-	-	-	18	10	2	-	9	4	3	3	8
DESCRIPTION	CONTROL PANEL HOUSING	CONTROL PANEL RETAINER	REBOUND GUARD	CONTROL PANEL LIGHT SHIELD	C. P. LIGHT COVER SPACER	CONTROL PANEL ASSEMBLY	6 X 9 SPEAKER	PIG TAIL LIGHT W/ AR2130X SOCKET	SOCKET FLOOD LAMP	BRACKET (LIGHT SOCKET MTG)	BULB CF FLOOD PAR 30 (MAXLITE SKR3015FLDL, 33020) (15W=75W)	8-32 NYLOCK NUT	BUMPER (#2953w) 9540K53	LIGHT BRACKET	GROMMET (BP2 - PUNCHED)#853118	1/4 x 3/4 FLAT WASHER BLACK (USS)	#8-32 x 1-1/2" LG PPHMS	1/4-20 x 5/8 BHCS (BLACK) SECURITY	1/4-20 NYLOCK NUT	1/4-20 x 1.00" LG. BSHCS
PART NUMBER	FB1001	FB1002	FB3013	FB3016	FB3018	FB7002x	AR2007	AR2130X_8545	BB2022	BT1049	E00377	6072	4002	TG1021	3039	6212	6331	6426	PC60604	PC60622
TEM NO.	-	2	3	4	5	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20

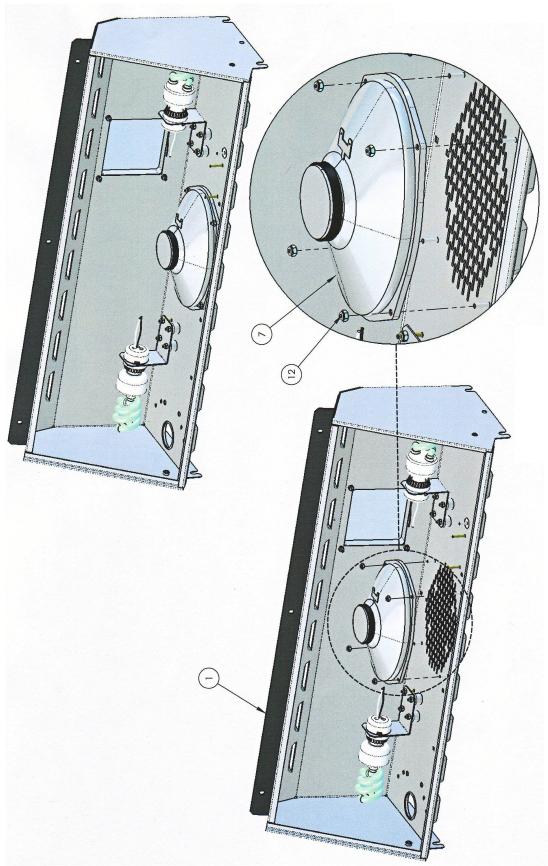


Control Panel Assembly FB1001X

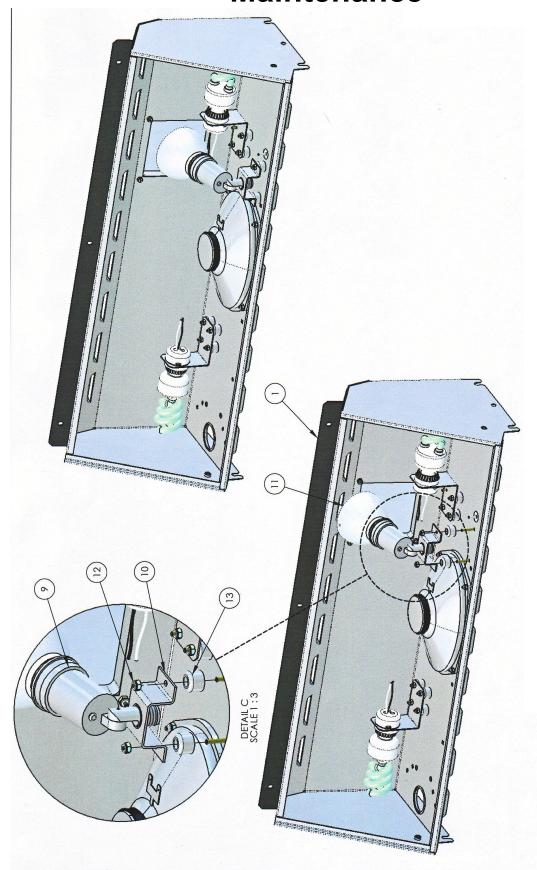


Control Panel Assembly FB1001X

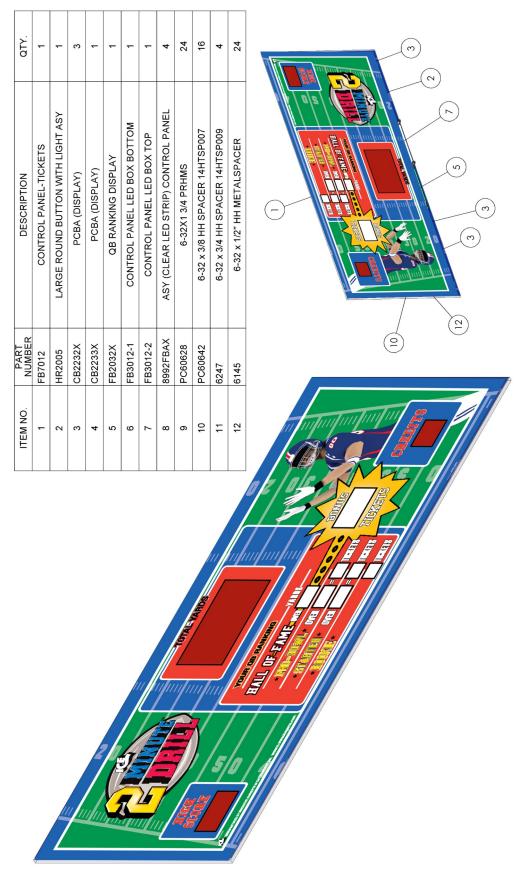


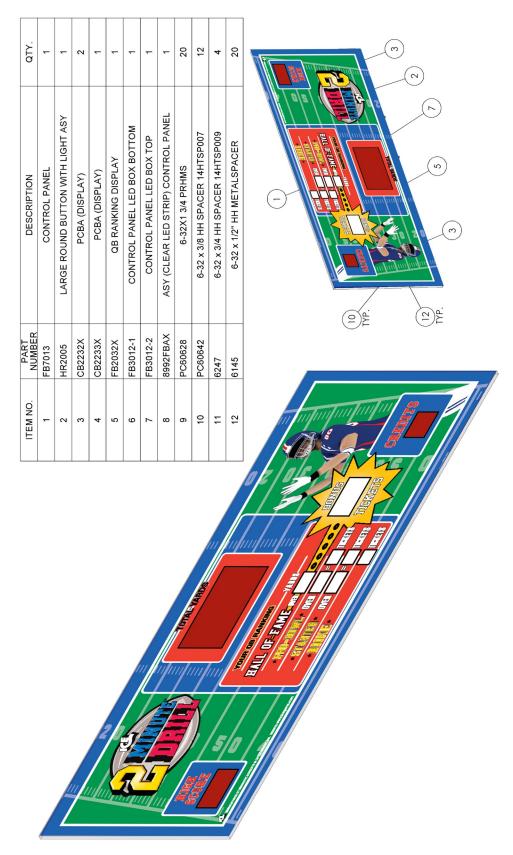


# Control Panel Assembly FB1001X



# **Maintenance** Control Panel Assembly FB1001X

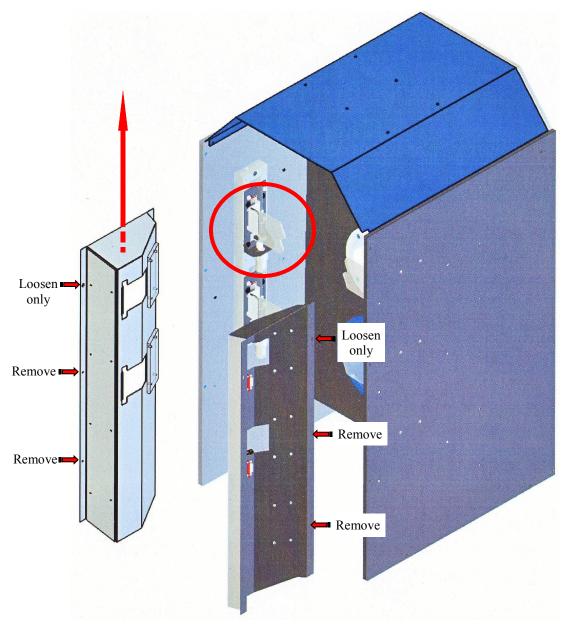


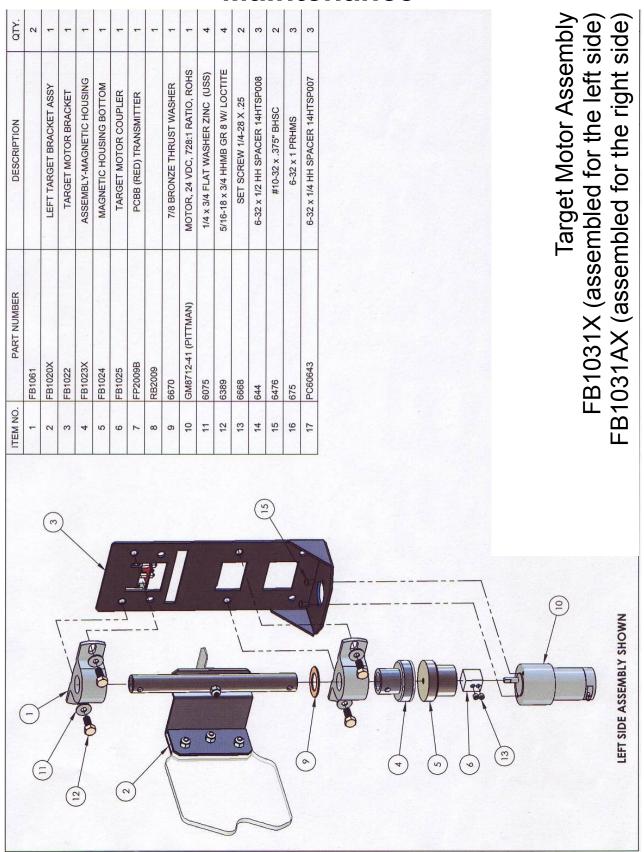


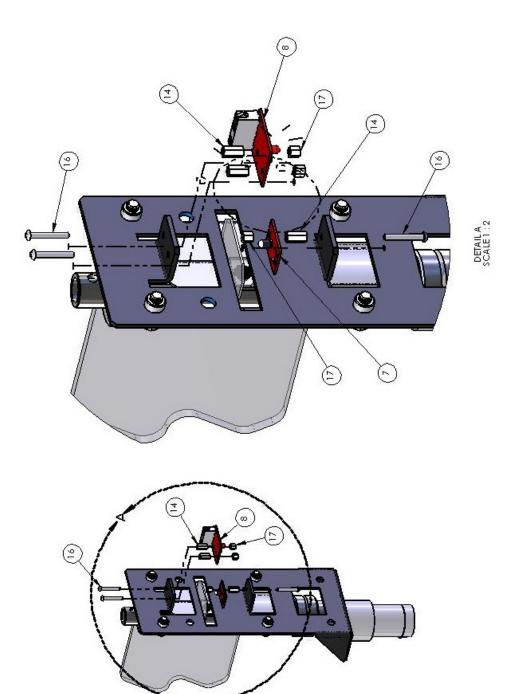
# Marquee light box assembly

#### **Target Covers**

To access the target motors you will need to remove the display housing. You also will need to ensure the targets are protruding out as shown below. Unlatch the harness clamps located in the back side of the game first. Remove the four mounting screws at the bottom back of the game in order to gain access to remove the back door. This will allow you enough slack in the wires to lift the covers off and lay them on their side. It is not necessary to fully remove the target covers to access the target motors. Only remove the four lower bolts and loosen the two top bolts. Slide the cover up until the top bolts heads can slide out the slotted holes. The diagram shows the location of the bolts. Bolt locations are shown on two different covers but exists on both sides of the cover.

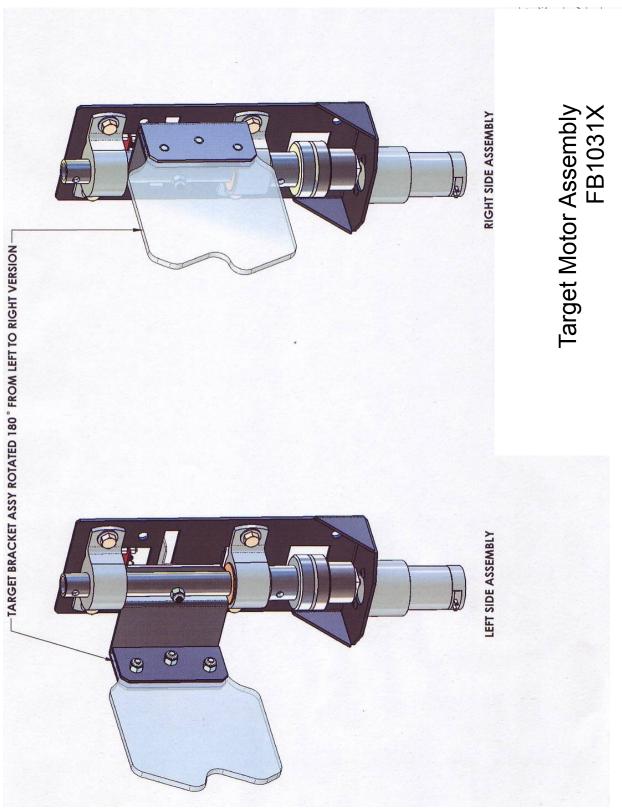


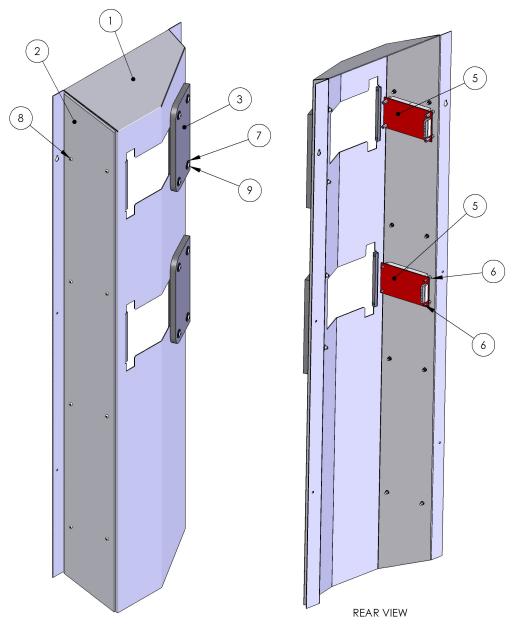




Target Motor Assembly FB1031X

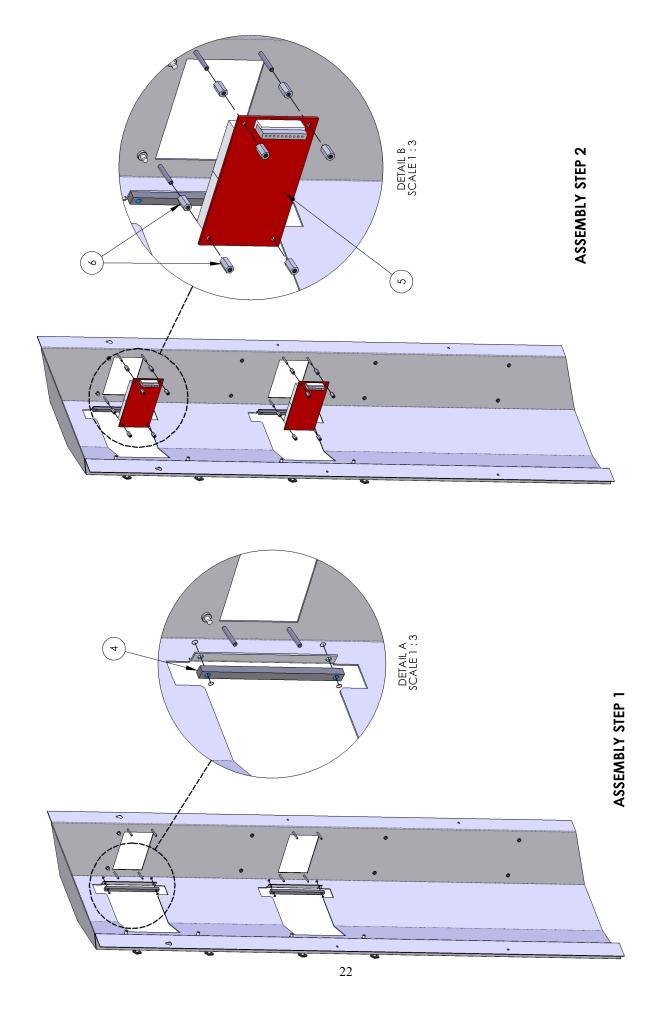
LEFT SIDE ASSEMBLY SHOWN

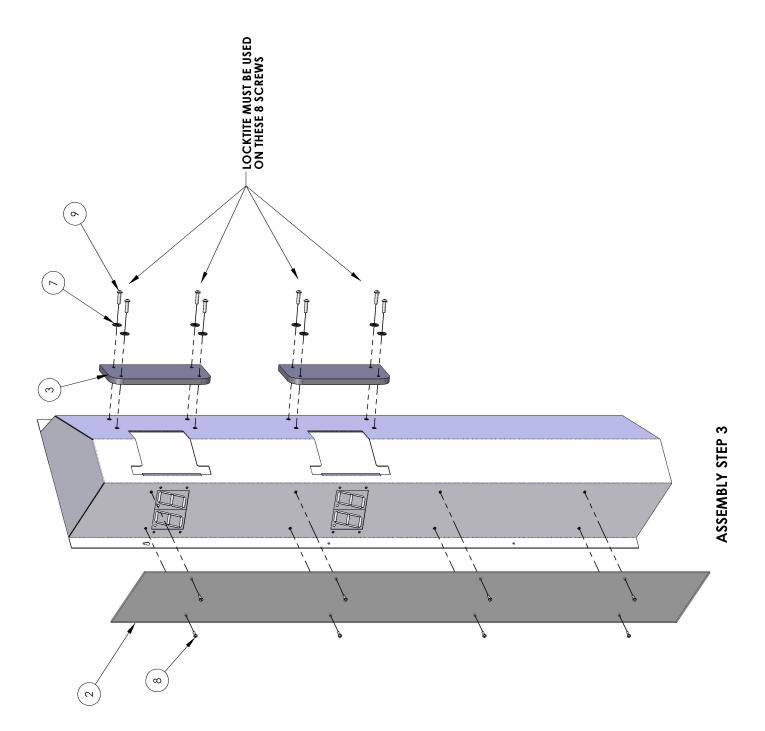




FRONT VIEW

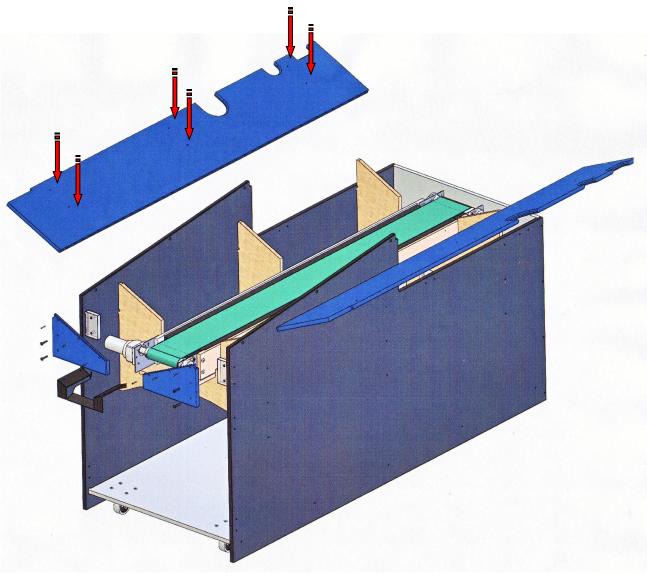
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	FB1016	TARGET COVER LEFT/RIGHT	1
2	FB3014	DISPLAY STRIP LEFT/RIGHT	1
3	FB4005	TARGET COVER SPACER	2
4	FB4006	TARGET SMALL PADDING	2
5	DA2133X	PCBA (SMALL DISPLAY, BRIGHT)	2
6	6446	8-32 x 1/2 HH SPACER	16
7	6212	1/4 x 3/4 FLAT WASHER BLACK (USS)	8
8	6320	8-32 X 5/8 PRHMS W/LOCKTITE	8
9	PC60622	1/4-20 x 1" LG. BSHCS	8

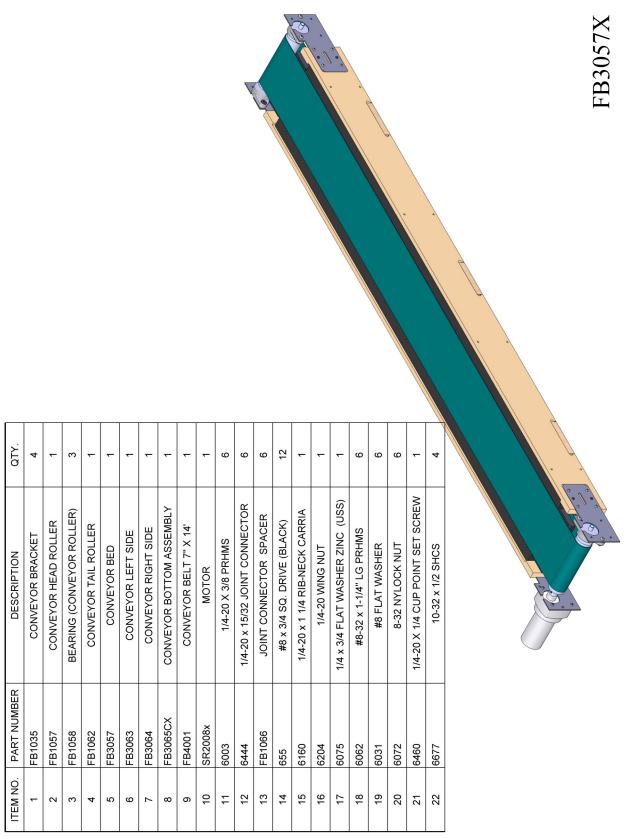


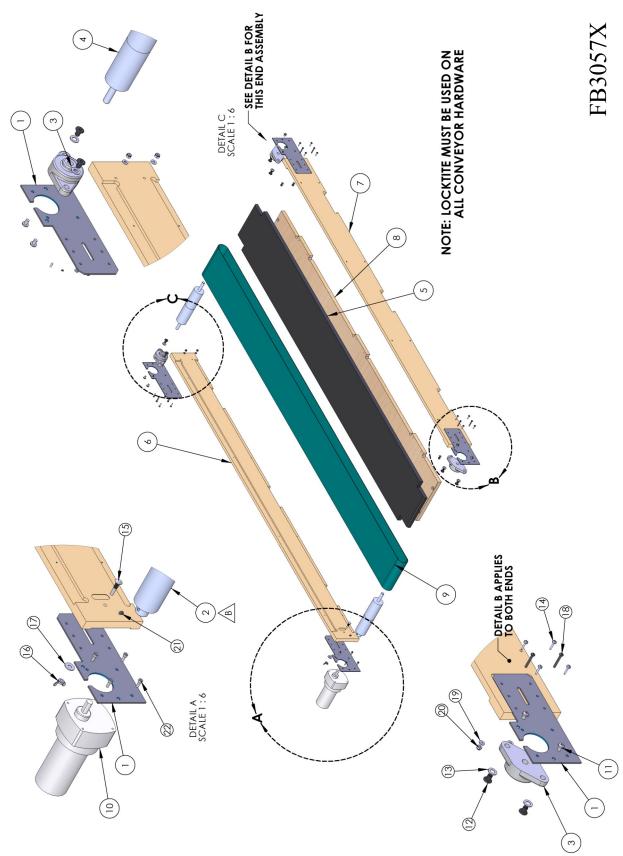


#### **Conveyor Assembly Access**

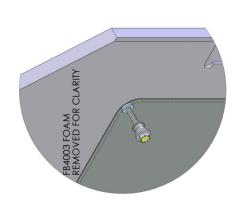
To access the conveyor assembly you will need to remove the side wall panels. It is not necessary to remove the target covers in order to remove the side wall panels but to ensure that they are not scratched it is recommended. Refer to page 15 on how to remove target covers. Remove the five bolts holding the front cover plates first and remove the finger guard as shown below. Now remove the six screws holding the side wall panels. Slide the panel down and out if the target covers are still installed.

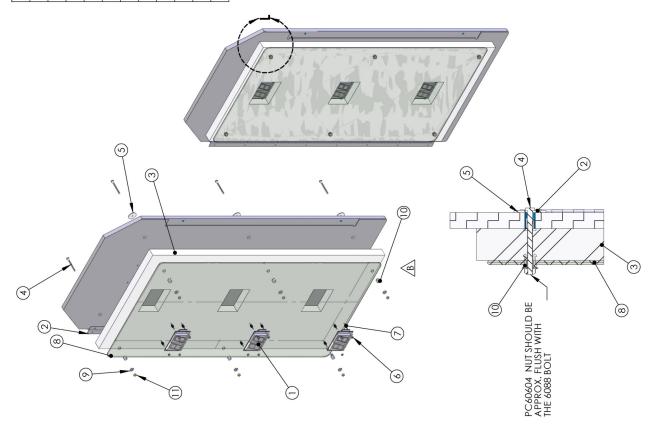




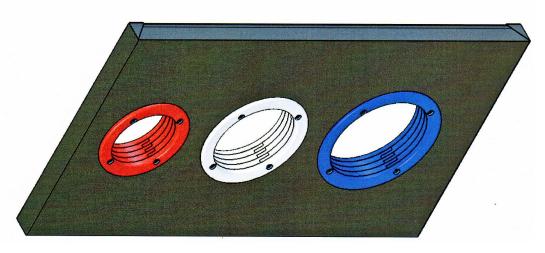


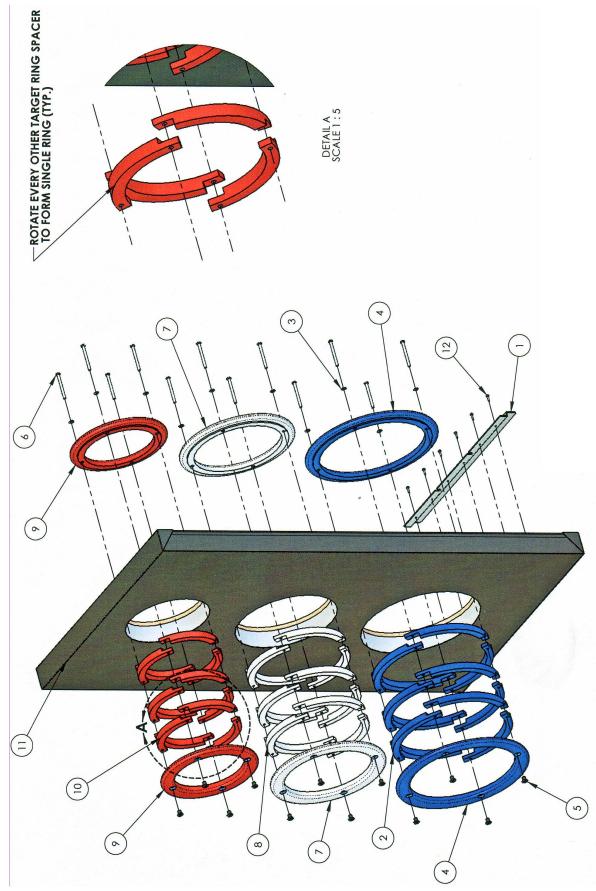
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	FB2035X	DISPLAY BOARD	3
2	FB3081CX	REAR ACCESS PANEL, HINGE ASSY	-
3	FB4003	REAR DOOR FOAM PAD	1
4	8809	1/4-20 X 3" HH FT BOLT	9
2	0209	1/4 x 1-1/2 OD F-WASHER	9
9	6004a	8-32 KEP NUT	12
7	6457	SHOCK MOUNT 8-32 (THD BOTH ENDS)	12
8	FB3101	REAR DOOR DISPLAY COVER	_
6	6075	1/4 x 3/4 FLAT WASHER	9
10	4028	GROMMET	9
11	PC60604	NYLOCK NUT, 1/4-20	9

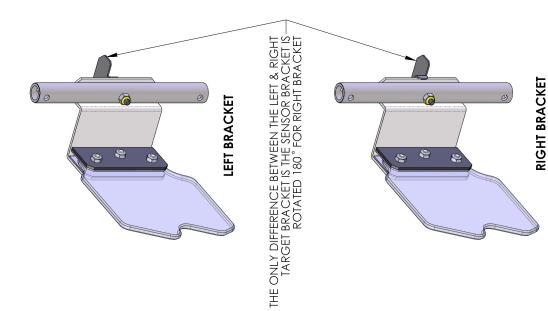


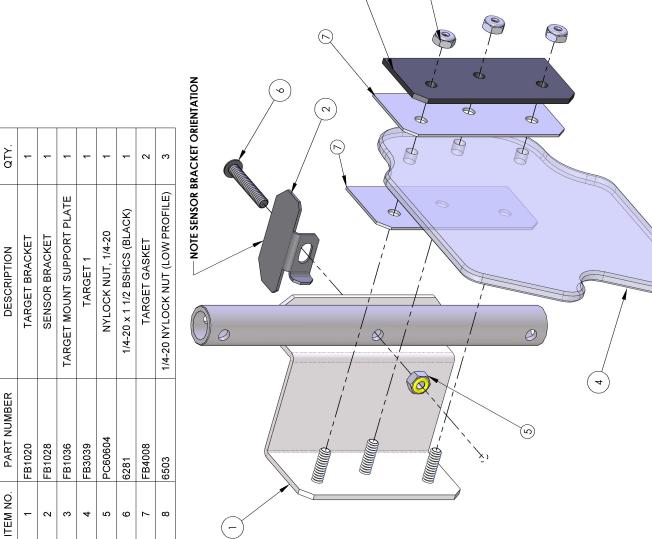


QTY.	-	12	12	2	12	12	2	12	2	12	-	9
DESCRIPTION	FRONT GLASS RETAINER	BOTTOM TARGET RING SPACER	1/4 X 1/2 X .062 FLAT WASHER	BOTTOM TARGET RING CAP	1/4-20 x 15/32 JOINT CONNECTOR	1/4-20 X 3" HH FT BOLT	MIDDLE TARGET RING CAP	MIDDLE TARGET RING SPACER	TOP TARGET RING CAP	TOP TARGET RING SPACER	PLAYFIELD ASSEMBLY	#8 x 3/4 SQ. DRIVE (BLACK)
PART NUMBER	CG1042	FB3007-2	2909	FB3007-1	6444	6088	FB3008-1	FB3008-2	FB3009-1	FB3009-2	FB3084CX	655
ITEM NO.	1	2	3	4	5	9	7	8	6	10	11	12



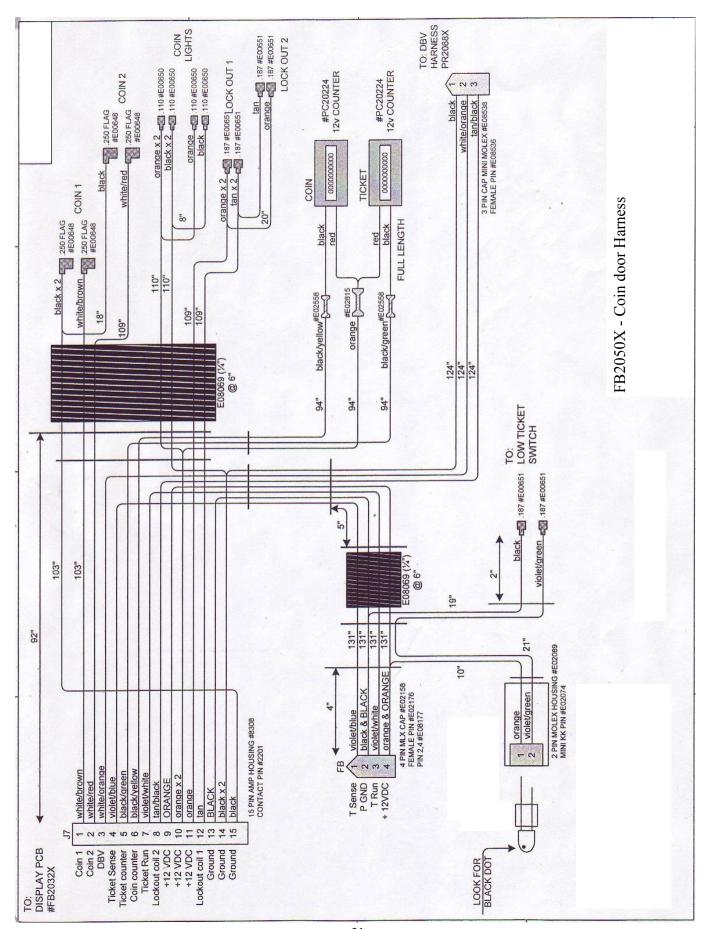


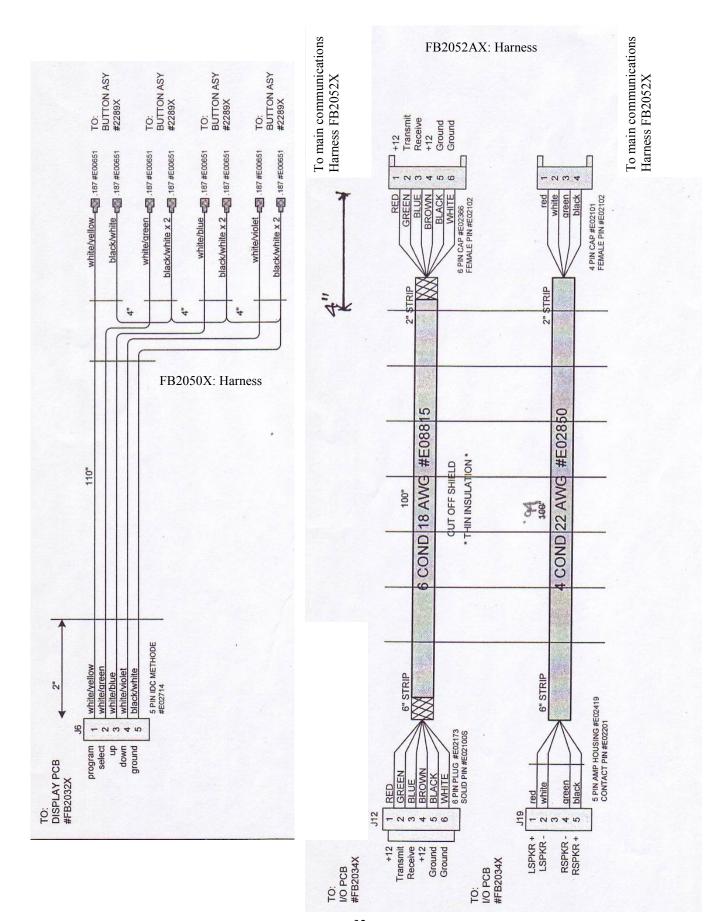


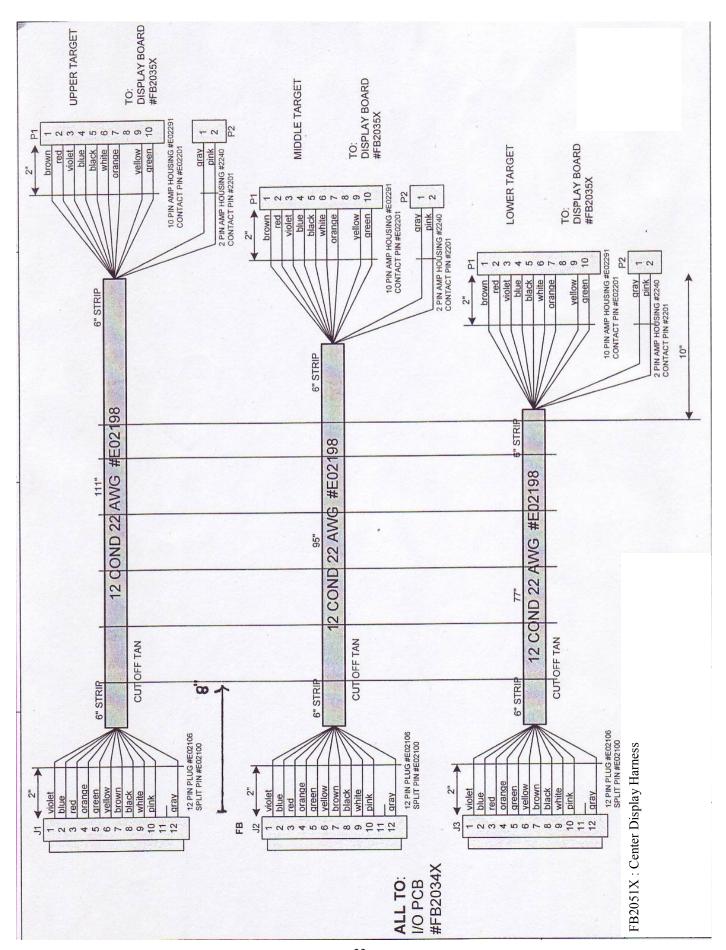


m

**LEFT BRACKET SHOWN HERE** 



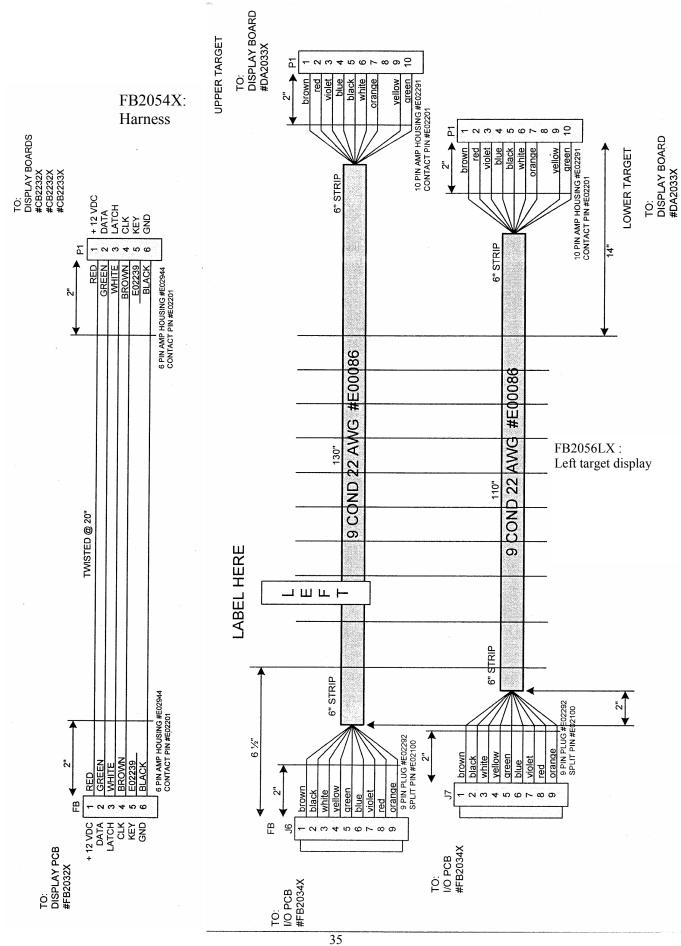


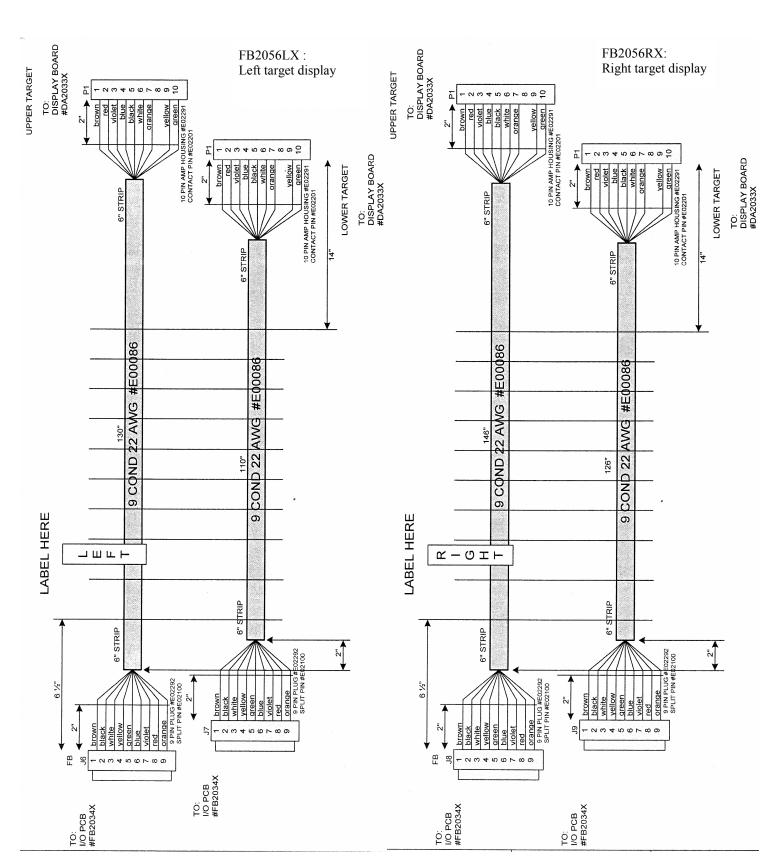


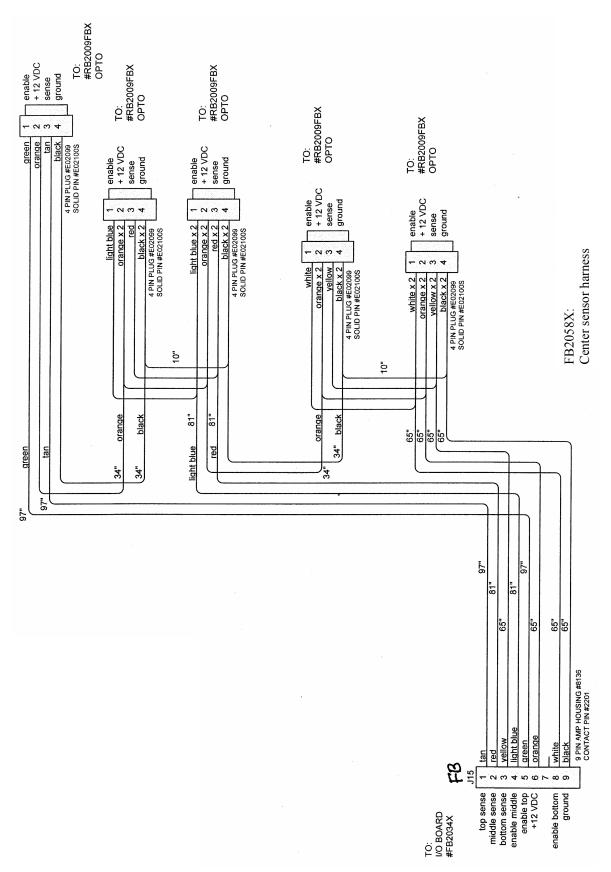
TO: DISPLAY PCB #FB2032X TO: FRONT SPEAKER #AR2007 TO: CONTROL PANEL SPEAKER #AR2007 Receive +12 +12 +12 Transmit Ground FB2057X: Button Harness red/gray 250 #E00653T brown/gray 250 #E00653T BLACK & WHITE 6 Green PLUG #E02173 SOLID PIN #E02100S PIN 6 · E02422 5 GREEN BROWN BLUE To control panel buttons red/white = .250 brown/white 250 #E00653T yellow/brown 250 orange (#E00653T black x 2 € 350 x 250 x black (250 ) 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 125 grav/red 250 #E00653T gray/brown € 3250 #E00653T FB2052X: Harness 6" STRIP 8 ₽ 6 COND 18 AWG #E08815 \* THIN INSULATION \* 83" OUT OFF SHIELD 4 4 4 4 <u>4</u> .09 83" .09 6 PIN IDC METHODE #E08634 yellow/red gray/brown gray/red yellow/brow orange black 26" STRIP **−0040**0 8 To main communications extension WHITE 6 PIN PLUG #E02173 SOLID PIN #E02100S red/gray brown/gray red/white brown/white 4 PIN PLUG #E02099 SOLID PIN #E02100S TO: DISPLAY PCB #FB2032X HB2052~ pur FB2052AX +12 Fransmit Receive +12

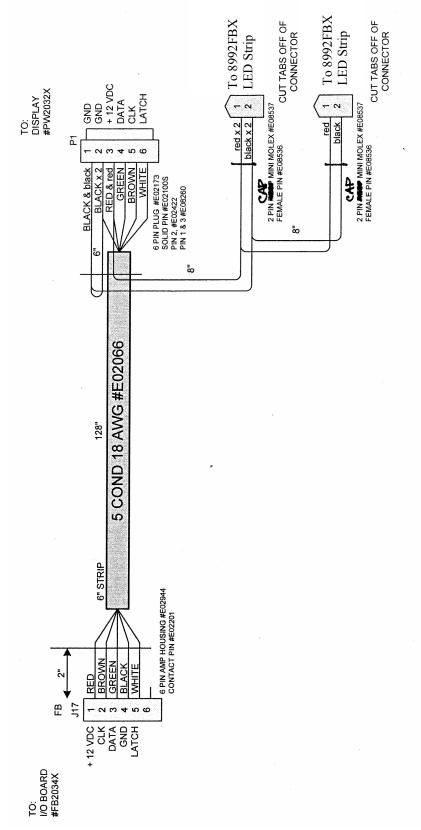
To main communications extension

FB2052AX

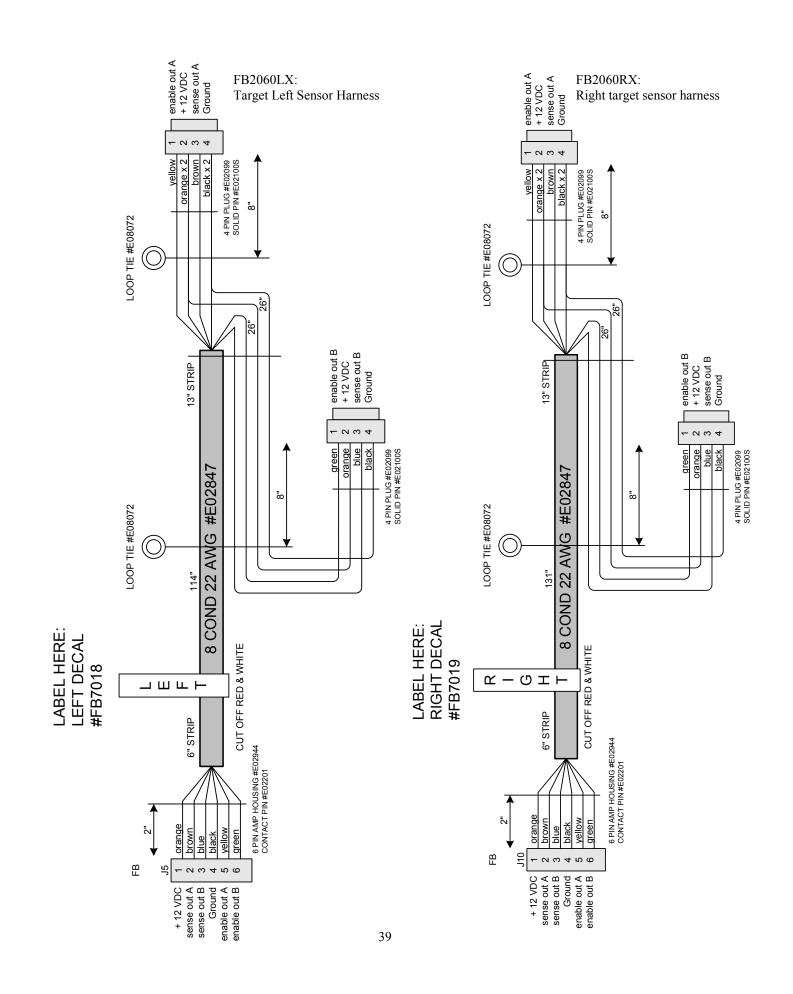


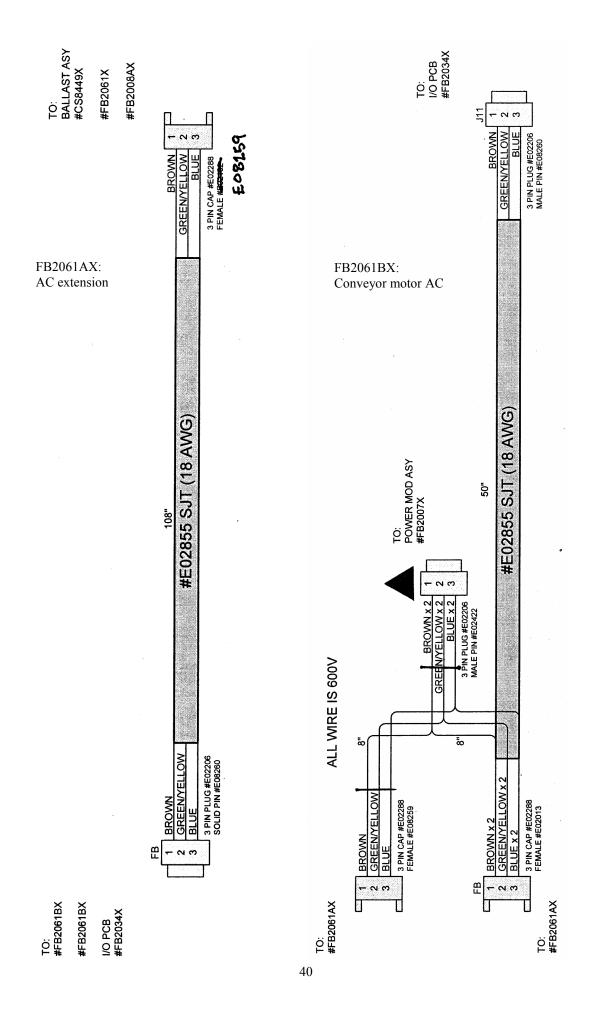


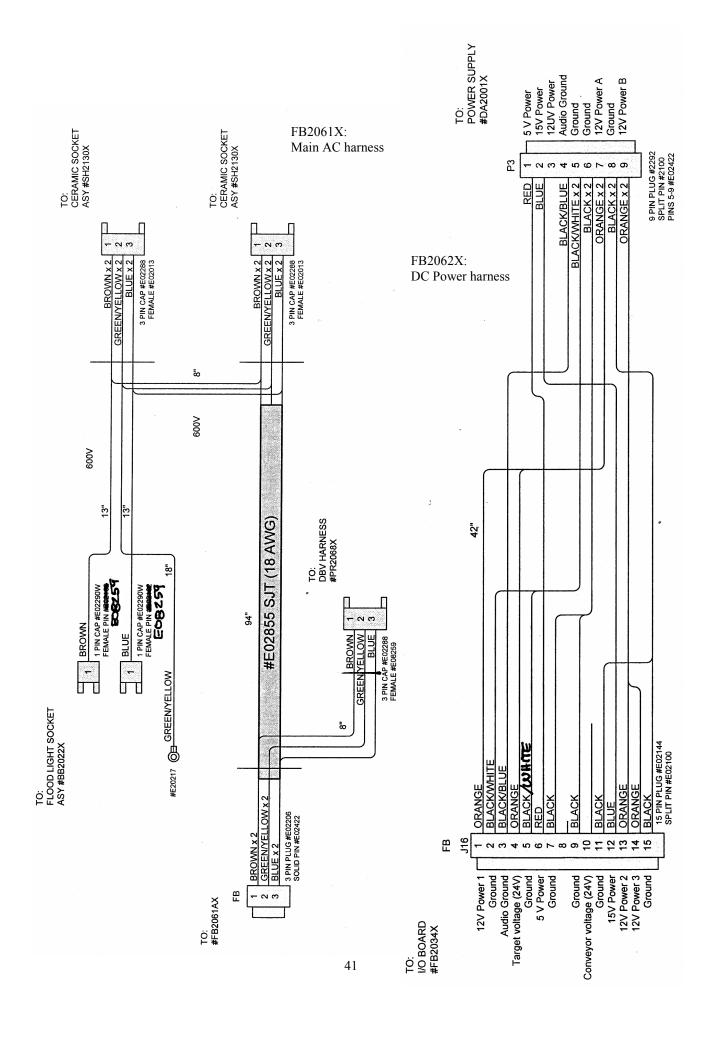


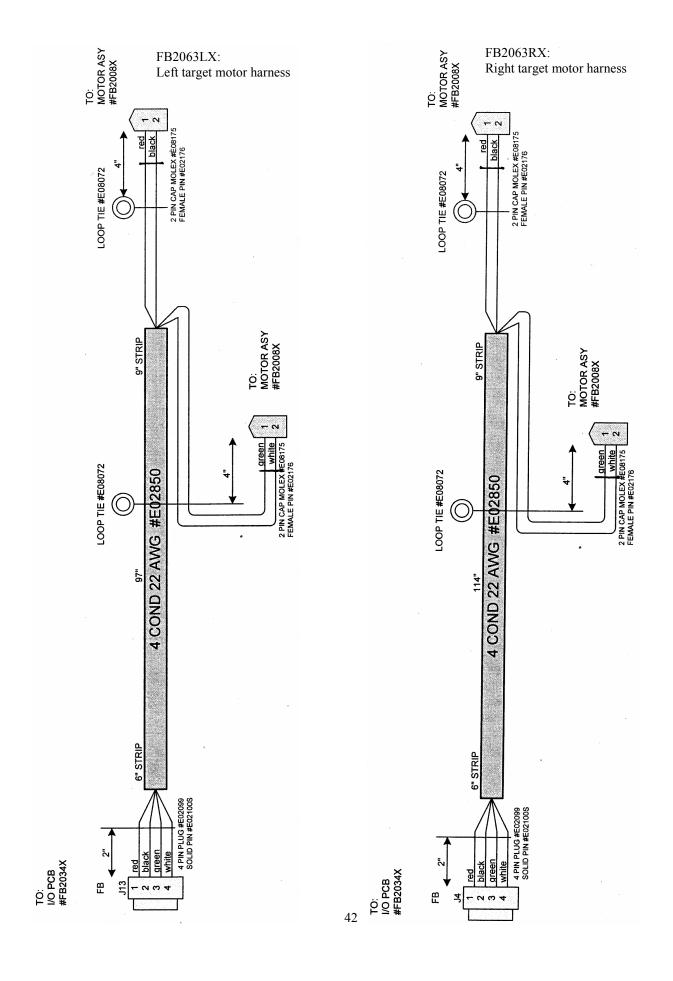


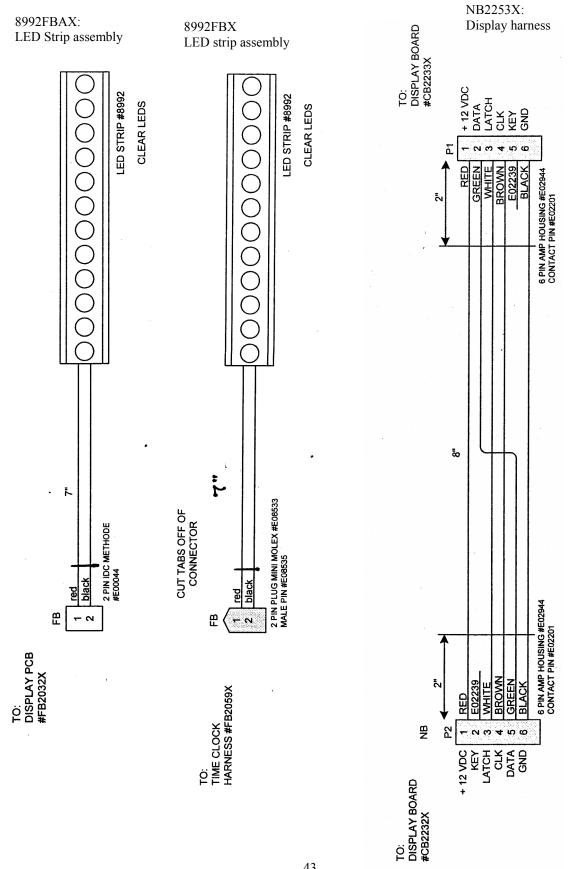
FB2059X: Time Clock Harness

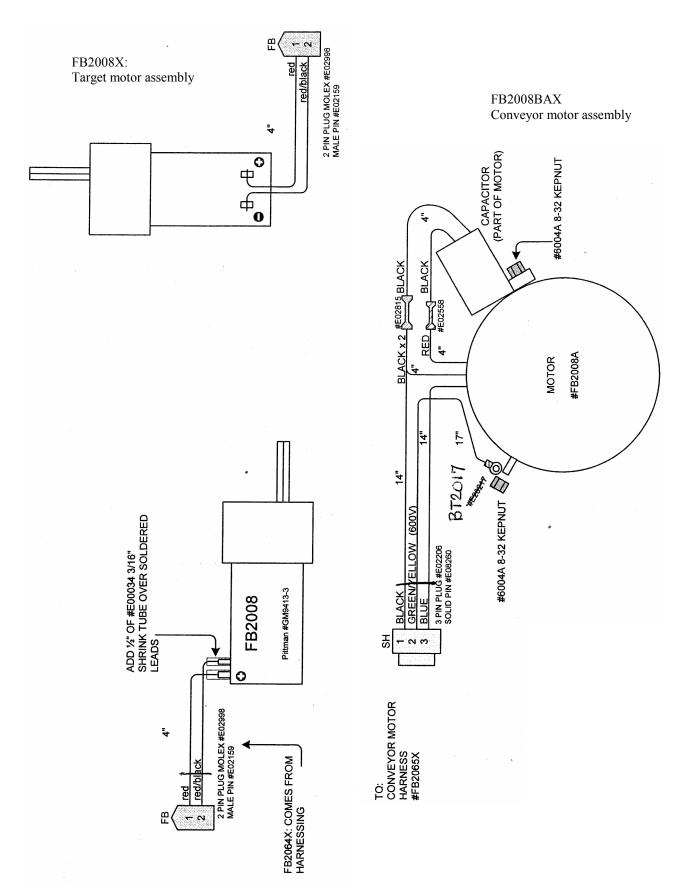


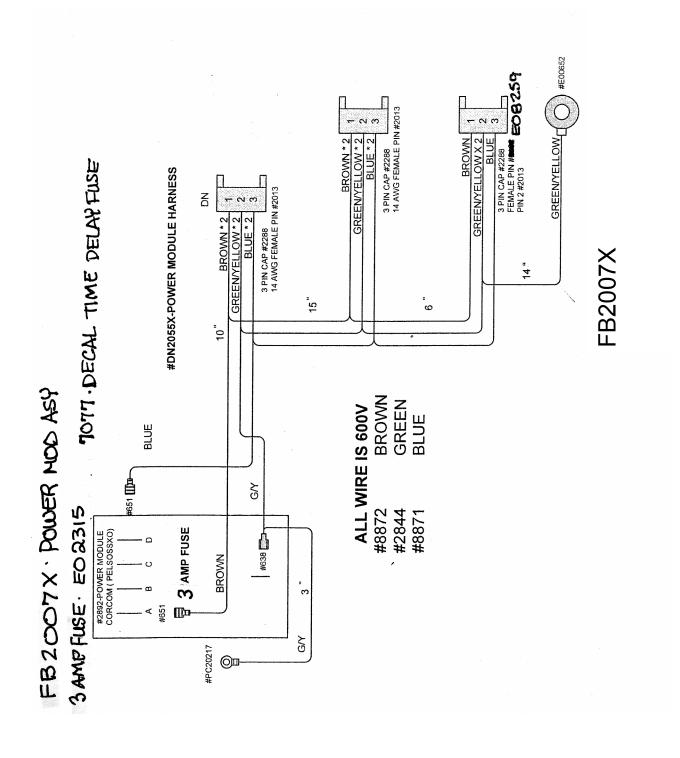












## **Spare Parts Listing**

### Electronics:

FB2002X Isolation Transformer (for TUV games)

1029WSX ASY RESET BUTTON

8992FBAX ASY (CLEAR LED STRIP for control panel) 8992FBX ASY (CLEAR LED STRIP for game clock)

AR2007 6X9 SPEAKER

BB2022X ASY FLOOD LAMP SOCKET

CB2232X PCBA (DISPLAY) CB2233X PCBA (DISPLAY) CS8449X ASY (BALLAST)

DA2001X PCBA (POWER SUPPLY)
DA2002X ASY (TRANSFORMER)
DA2133X PCBA (SMALL DISPLAY)
FB2007X ASY (POWER MOD 3 MDQ)

E00377 BULB OF FLOOD

FB2008AX ASY (CONVEYOR MOTOR)

FB2008X ASY (TARGET MOTOR) included in FB1031X

FB2032X PCBA (DISPLAY) FB2033X PCBA (TIME CLOCK)

FB2034X PCBA (MAIN I/O) \*\* Cannot be purchased separate E08716 FLASH CARD \*\* Cannot be purchased separate

E2034X PCBA (BRAIN BOARD) \*\* Cannot be purchased separate

FB2035BX PCBA (DISPLAY, BLUE LEDS)
FB2035RX PCBA (DISPLAY, RED LEDS)
FB2035WX PCBA (DISPLAY, WHITE LEDS)
HR2005 BUTTON LG ROUND WHITE

PP250X ASY (SOCKET)

RB2009FBX \*\* PCBA (OPTO SENSE FOOTBALL)

RB2009BX \*\* PCBA (OPTO SENSE) included in FB1031X

RB2009EX \* (OPTO SENSE FOOTBALL)

FP2009EX \* PCBA (OPTO SENSE) included in FB1031X

#### Mechanical:

FB1031X ASY, TARGET MOTOR LEFT SIDE FB1031AX ASY, TARGET MOTOR RIGHT SIDE

FB1061 PILLOW BLOCK BEARING

FB3013 REBOUND GUARD

FB3014 DISPLAY STRIP LEFT/RIGHT

FB3015 NUMBER GUARD

FB3039 TARGET

### NOTE:

\*\*Games manufactured before June 2008
\*Games manufactured after June 2008

# **Spare Parts Listing**

## Decals:

START BUTTON FB7001 FB7003 **BALL RETURN DECAL** FB7005 Target Top Left FB7006 **Target Top Right** FB7007 **Target Bottom Left** FB7008 Target Bottom Right CONTROL PANEL FB7013 FB7029 MARQUEE-GAME CLOCK

## Miscellaneous:

FB3001 8.5" FOOTBALL

FB4001 ENDLESS CONVEYOR BELT

FB4002 FRONT TARGET PAD FB4003 REAR DOOR FOAM PAD

RR5001-P802 COIN DOOR (TRIPLE) SINGLE MECH Black

RR5001-P200 COIN DOOR (TRIPLE) SINGLE MECH Orange Gloss RR5001-P901 COIN DOOR (TRIPLE) SINGLE MECH Gold Metallic RR5001-P903 COIN DOOR (TRIPLE) SINGLE MECH Powder Gray

### MARQUEE:

E02016 25' PHONE CORD 2770 7' PHONE CORD



I.C.E. Inc warrants all components in new machines to be free of defects in materials and workmanship for the period listed below:

- 180 days on Main PCB's, Computers & Motors
- 1 year on all LCD monitor panels
- 90 days on all other electronic and mechanical components
- 30 days on all I.C.E. repairs and parts purchases

I.C.E. Inc shall not be obligated to furnish a warranty request under the following conditions:

- Equipment or parts have failed through normal wear and tear
- Equipment has been subjected to unwarranted stress, abuse or neglect
- Equipment has been damaged as a result of arbitrary repair/modification

Products will only be covered under warranty by obtaining an I.C.E. authorized RMA #. To obtain an RMA # please provide I.C.E. tech support with the game serial # or original I.C.E. invoice # and a detailed description of the failure or fault symptoms.

I.C.E. Inc will assume no liability whatsoever for costs associated with labor or travel time to replace defective parts. All defective warranty covered components will be replaced with new or factory refurbished components equal to OEM specifications.

I.C.E. Inc will cover domestic UPS ground, or comparable shipping costs during the warranty period. International or expedited shipments are available for an additional charge. To obtain credit defective parts must be returned to I.C.E. Inc, at the customer's expense, within 30 days. After 30 days a 15% re-stocking fee will apply to all returns.

ICE distributors are independent, privately owned and operated. In their judgment, they may sell parts and/or accessories other than those manufactured by I.C.E. Inc. We cannot be responsible for the quality, suitability or safety of any non-I.C.E. part or modification (including labor) that is performed by such a distributor.

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