



OWNERS AND SERVICE MANUAL

INNOVATIVE CONCEPTS IN ENTERTAINMENT INC.

10123 MAIN STREET, CLARENCE, NY 14031

SERVICE: 1-716-759-0360

FAX: 1-716-759-0884

E-MAIL: service@icegame.com

WEBSITE: www.icegame.com

Monstrous - Edition UL certified

Safety Warnings, AC requirements, power ratings	4
SETUP:	
Floating the playfield	5
Accessing meters, tickets, and programming buttons.	
7	
Cabinet Illumination Remote	8
Programming Information	9
SERVICE	
Hopper Care	11
Computer Removal	12
Coin Mech care	
Marquee Lighting	13
Power supply care	
Pusher Deck arm removal	14
Pusher Deck sensor information	
Elevator removal	15
Playfield / Monitor Removal	17
SCHEMATICS	
H-bridge	18
Serial I/O interface	19
HARNESS	20-37
WARRANTY	38

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.

NOTE: THIS GAME IS INTENDED FOR INDOOR USE ONLY.

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.

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.

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.

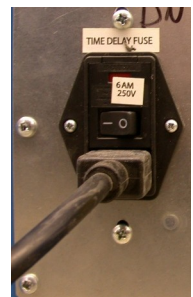
ALWAYS REMOVE POWER TO THE GAME, BEFORE ATTEMPTING ANY SERVICE, UNLESS NEEDED FOR SPECIFIC TESTING. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SERIOUS INJURY TO YOURSELF OR OTHERS.

THIS GAME IS NOT SUITABLE FOR INSTALLATION IN AN AREA WHERE A WATER JET COULD BE USED.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance

AC Power Information

The games main fuse is accessed through the back of the game at the power mod. Above the power cord is a small panel that contains the main fuse. The value of the fuse for 110 volt users is 5 AMPS at 250Volt type slow blow.



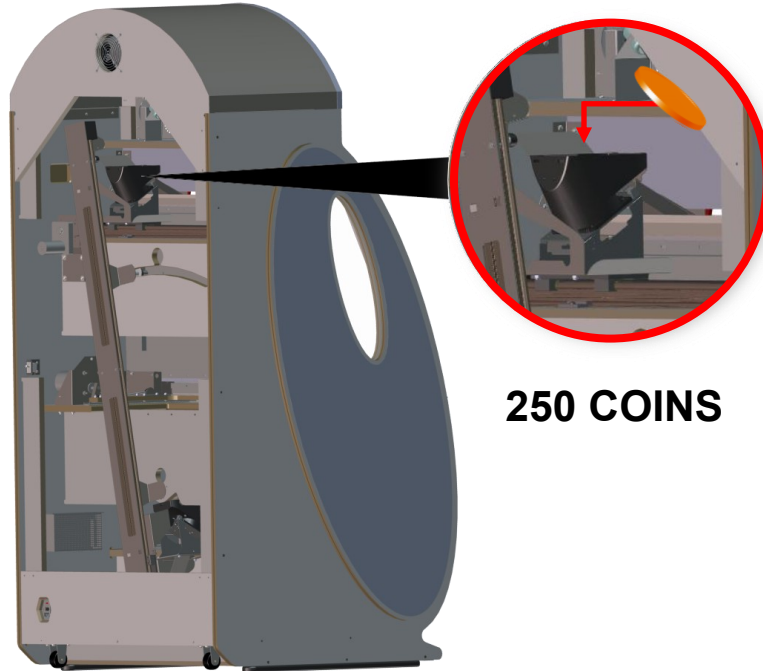
SETUP - Floating your playfield.

Your game has been shipped with pre-counted bags of coins. Each bag will be labeled with how many coins they contain. They should be 250 coins, 900 coins, and 50 coins.

It is important to float your playfield as instructed below.

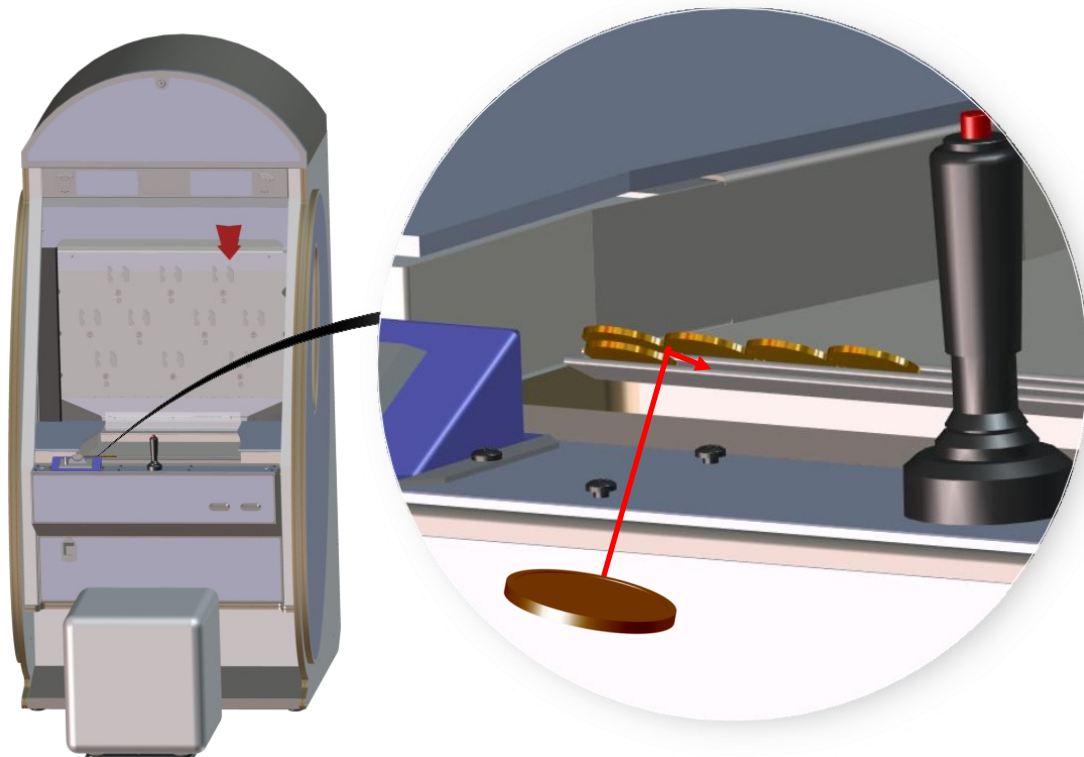
Step 1:

Open the back door of your game and dump the coins from the 250 bag into the upper hopper.



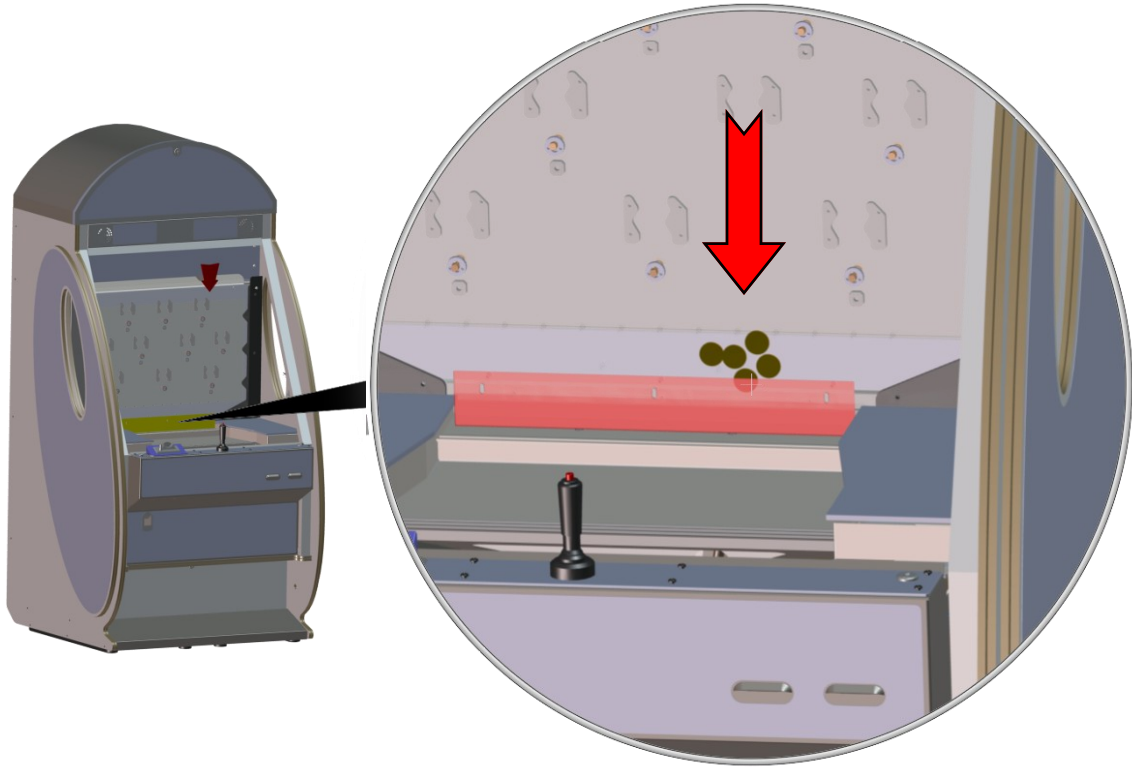
Step 2:

Unlock the front glass and put aside. Open the bag with 900 coins and take out enough coins to fill the coins over the edge riser slots.



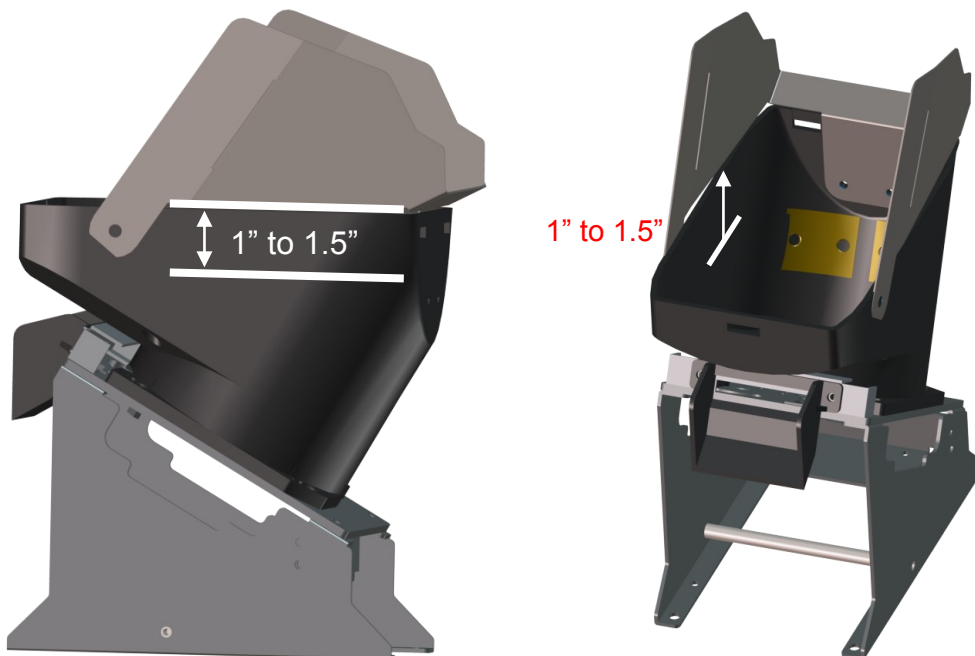
Step 3:

Take the remaining coins and with the machine turned on and the upper pusher deck moving back and forth, drop handfuls of coins behind the player field scraper shown below in red. As you drop handfuls of coins behind the player field scraper some will fall over the edge. This is expected and necessary to properly float the playfield. DO NOT DUMP THE COINS ONTO THE PLAYFIELD AS IT WILL IMPACT THE PAYOUT PRECENTAGE!!



Final Step:

The remaining bag of coins should be stored in the bottom of the game and used only after the game has ran for a period of time. It may or may not become necessary to use the remaining bag of coins. If the lower hopper reports that the level of coins are low, then dump the remaining bag of 50 into the bottom hopper. You can visually inspect the level of coins in the bottom hopper. The coins should fill the hopper up to 1" to 1.5" below the top of the hopper as shown below.

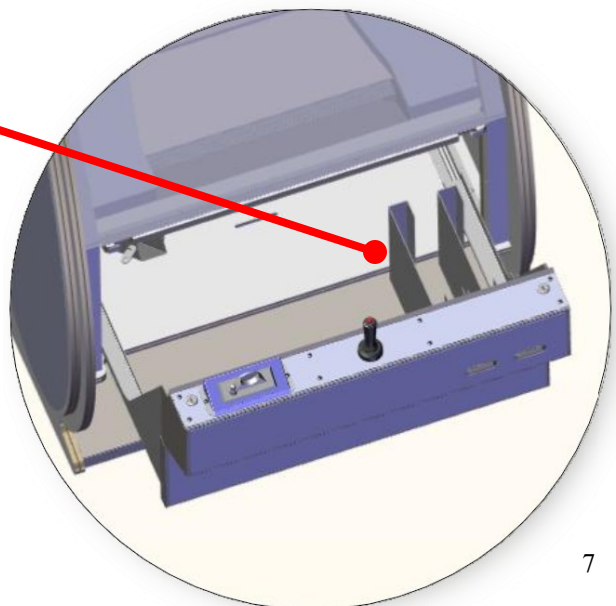
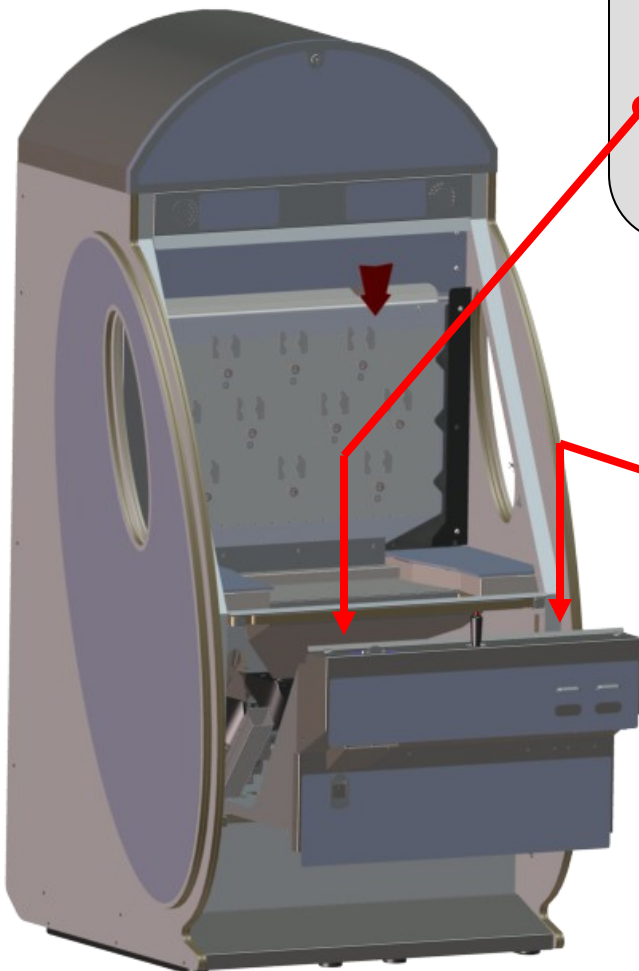
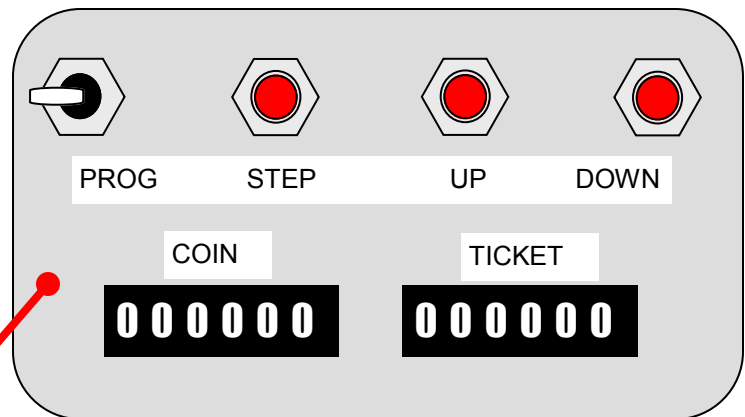
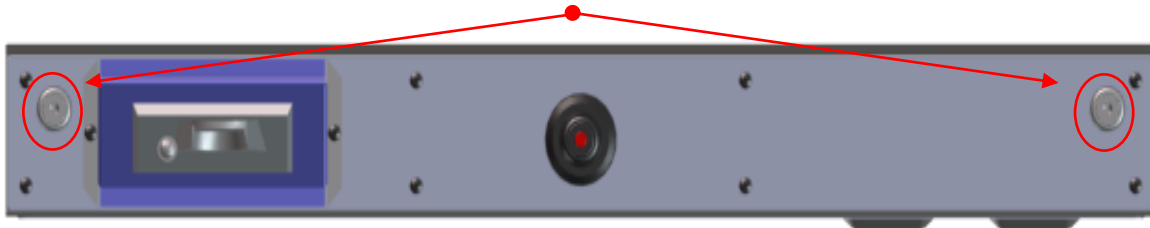


Setup - Accessing Meters, Ticket Dispensers, and Operator's Control Panel.

From the top of the control panel, unlock both locks and slide the drawer open. Located on the left side is the operator's control panel. On the control panel is the coin meter, ticket meter, toggle switch and buttons to allow you to change the game's options. See "Setup - Programming" for more information.

Located on the right side of the game are two ticket dispensers. You will need to load these with tickets before operating your game. It is recommend to load each ticket bins with two stacks of tickets.

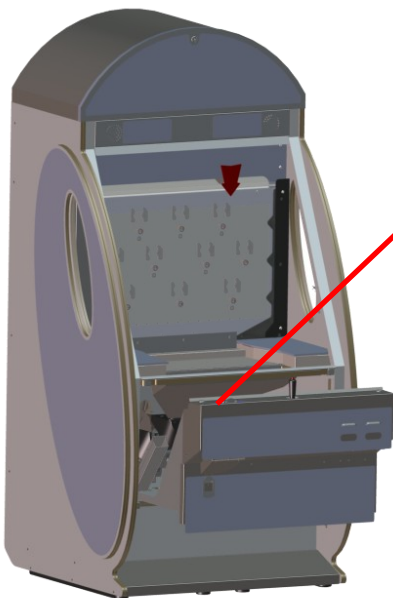
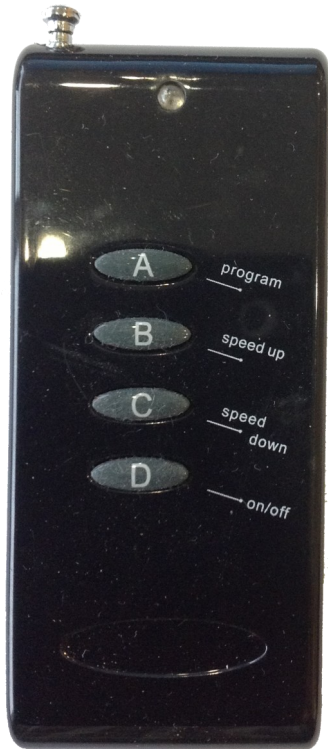
Top of game, unlock these.



Setup - Remotes

Cabinet lighting

Thirty seconds after power is applied to the cabinet the side illuminate should begin to change to different colors. If the lights do not power on, press the "D" button to turn them on.

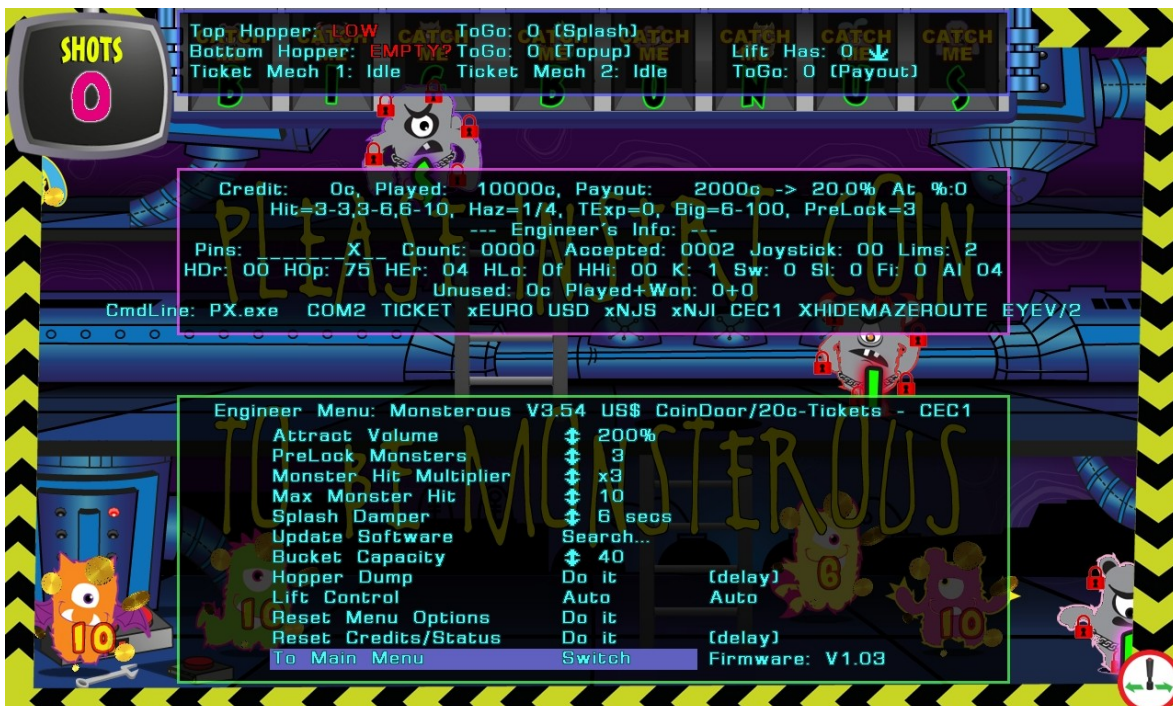


Setup - Programming

Your game has been shipped already configured with our suggested settings. To verify or change any option, open the upper drawer shown on page 9 and toggle the toggle switch. You should see a screen exactly as shown below. To move the cursor up or down, press the “UP” and “DOWN” buttons to move the cursor. When the option you wish to change is highlighted, press the “STEP” button and using the “UP” or “DOWN” buttons you can adjust its value.



To access further options, move the cursor to the last option called “TO ENGINEER MENU” and press “STEP”. You can now adjust further options. To exit back to the game, toggle the toggle switch the other way.



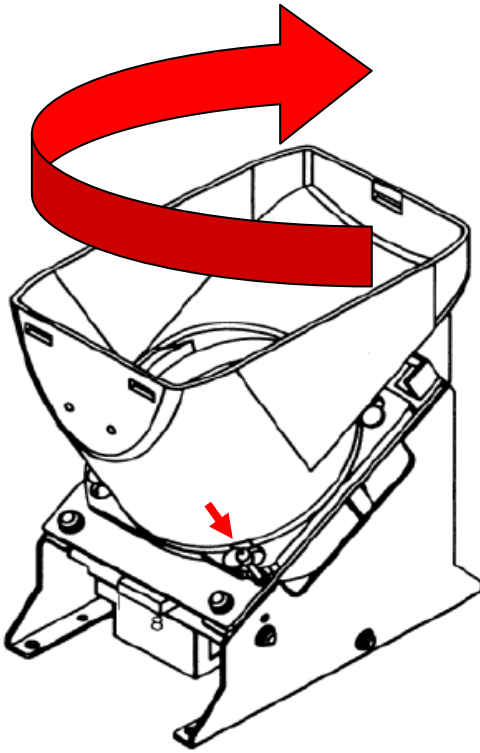
Setup - Programming (Continued)

Definition of options:

Sound Effects Volume	Volume level percentage that game will play game sound effects.
Music Volume	Volume level percentage of Music.
Overall Aim%	The value of this option is your desired payout.
Coin in Value	What is the value of your coin or token.
Cost of Game	How much are you charging for one play of the game?
Shot Value	This value will determine how many shots you will give your player. The game will subject from the "cost of game" for each shot. <i>For example, if cost of game is 20 cents, and you set this to 4 cents, the player will get 5 shots.</i>
Ticket Value	The cost of your ticket or what do you value your ticket at.
Tickets per COE	How many tickets you want to give per coin that falls over the edge.
Just for Playing Tickets	When enough money is inserted for a credit, the game will pay this value out to the player before he begins.
Max Bonus	Sets a limit to how much a bonus can be, useful when the multiplier
Reset Alarms	This will clear all errors reported.
To Engineer Menu	This allows you to access the other screen of options.
Attract Volume	What volume level percentage the game will output the external amp.
PreLock Monsters	This allows you to put monitors in jail already allowing players to reach the bonus faster.
Monster Hit Multiplier	All monster's coin value will be multiplied by this value.
Max Monster Hit	This will set a limit on the highest amount to be paid out per monster.
Splash Damper	Delays entrance to the Mega Bonus game.
Update Software	Refer to ICE technical support or use a restore disk.
Bucket Capacity	Internal setting for ICE technical support use.
Lift Control	Internal setting for ICE technical support use.
Reset Menu Options	Defaults all values of the game.
Reset Credits/Status	Clear credits left in game and current game status.
To Main Menu	This allows you to return to the main menu.

Hopper Jams and Adjustments

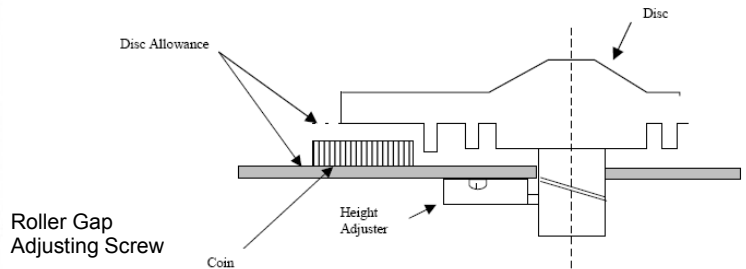
Hopper Jams



Although the game is designed to be as trouble free as possible a coin jam can occur in any of the hoppers. This can happen if a foreign object falls into the hopper itself or a coin has become defective. The game will alert you to which hopper has the coin jam. The upper hoppers have a high capacity extension installed that allows more coins to be present. They also have additional wiring to detect hoppers that will over flow. Disconnect these wires prior to removing the hopper bowl. The hopper is a two piece unit. The bottom assembly is attached to the cabinet while the top called the bowl is designed to be twisted and removed. It is recommend to remove as many coins as possible before removing the hopper bowl. To twist the hopper bowl off you have to press down the release button shown with the down arrow and then twist the bowl clockwise. Once the foreign object has been removed check the spacing of the wheel and the coin out so that only one coin will exit when the hopper is ran. See below for details. To replace the bowl, twist counter-clockwise until it “snaps” back in.

Hopper Adjustments

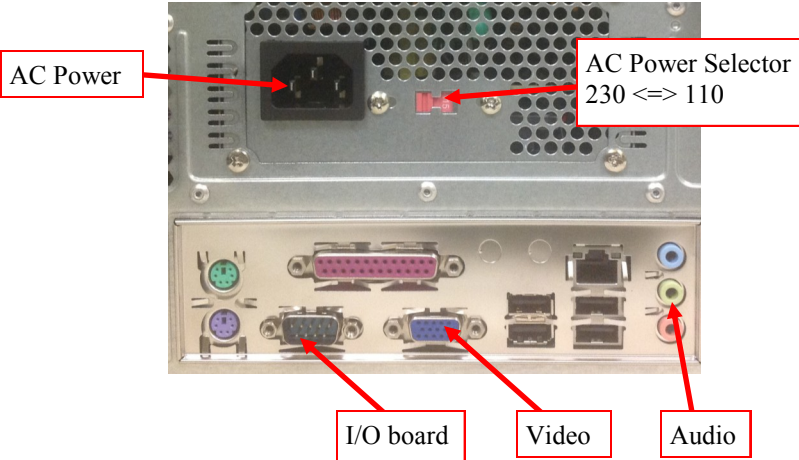
After a hopper jam has occurred the gap between the disc and the lower assembly might have to be adjusted. Remove the hopper following the “Hopper Removal Instructions” and one coin from one of the hoppers. Slide the coin as shown below and adjust the gap adjusting screw until the height of the wheel is within the specs listed below.



Coin Thickness	Disc Allowance
1.3mm - 1.9mm	Coin Thickness + 0.2mm - 0.5mm
1.9mm - 2.4mm	Coin Thickness + 0.3mm - 0.7mm
2.4mm - 3.1mm	Coin Thickness + 0.4mm - 0.9mm

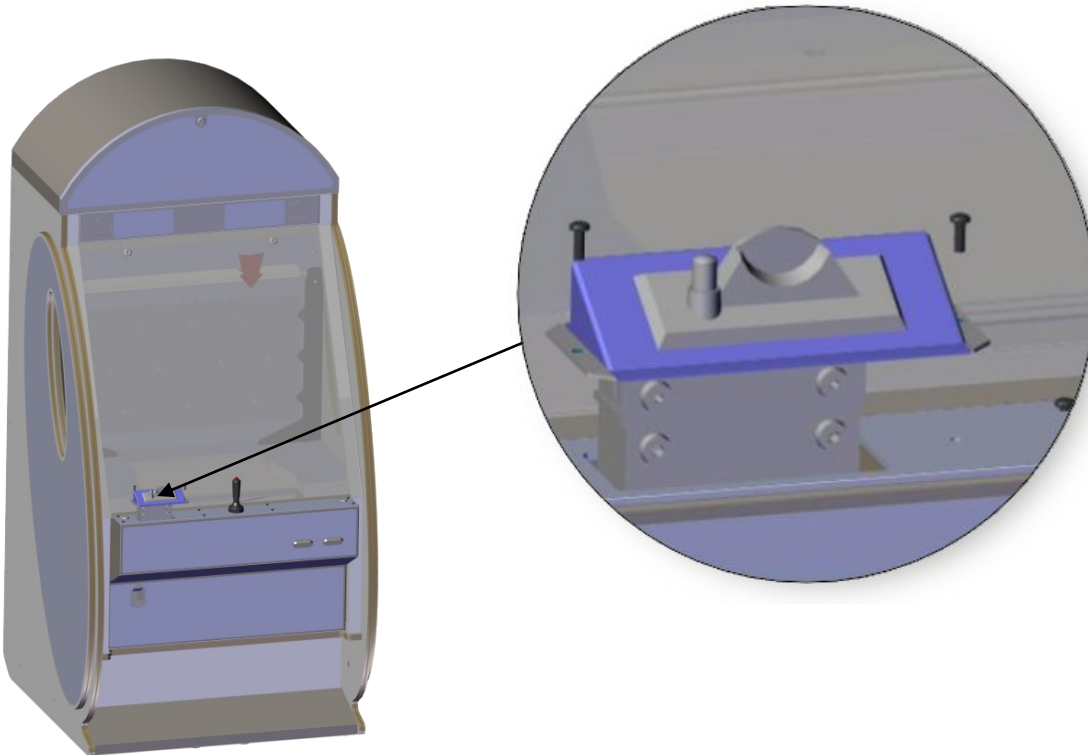
Computer Removal.

Remove the bottom door and at the left you will find the computer. Release the strap holding the computer to the cabinet by pressing on the sides of the buckle. Disconnect wire connections and pull straight out.



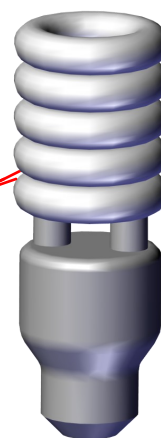
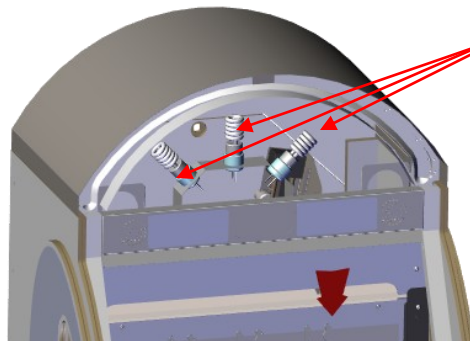
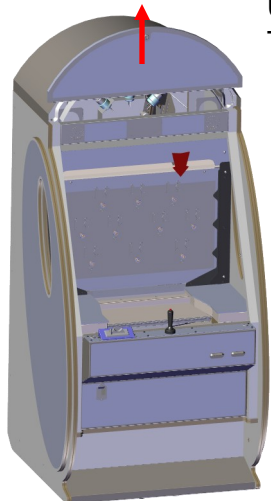
Accessing coin mech.

Remove the two Allen screws shown and the assembly will slide up and out.



Marquee Lighting.

Unlock upper marquee and lift up.
There are 3 curly bulbs.



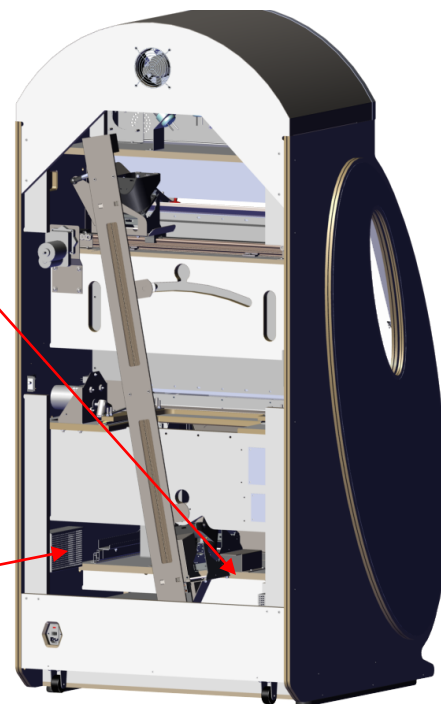
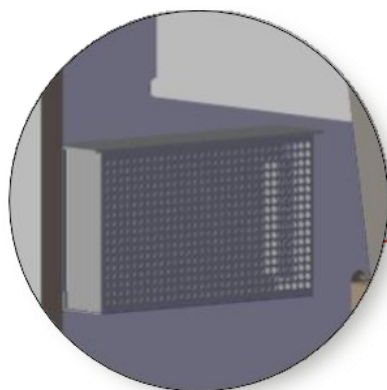
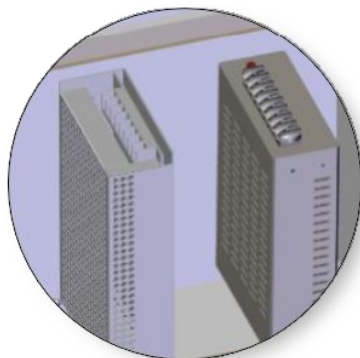
ICE Part number

E00382

Power Supplies.

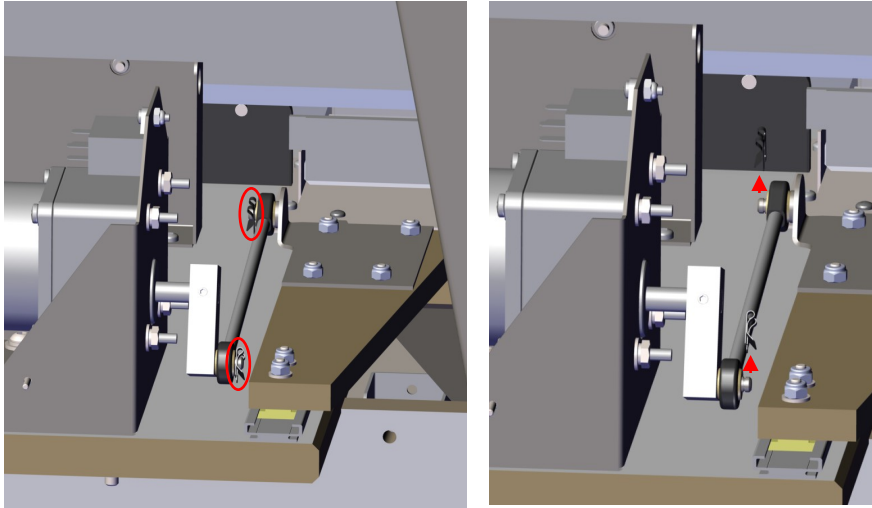
Located on the bottom, right of the game are the two power supplies. The left one only supplies 12 volts and its part number is IA2010. The right one is both +24 volts and +12 volts and its part number is DS2010.

The power supply that is mounted on the left cabinet wall supplies +24 volts to the monitor. The part number is mon42/47PS.



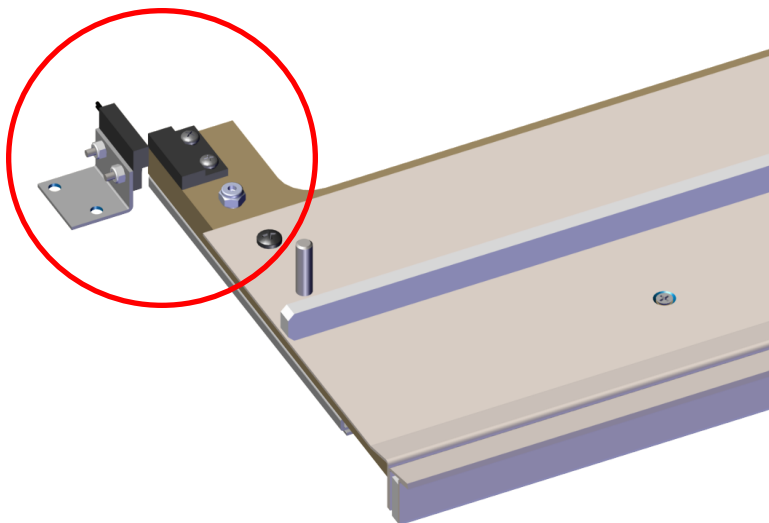
Pusher Deck Arm removal

Open the back door of the game and locate the pusher deck arm. Remove the clips circled.



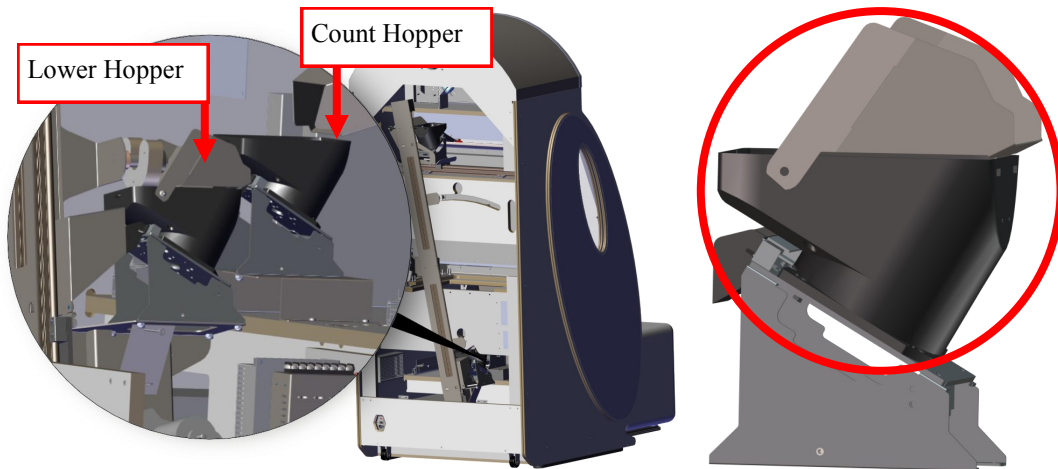
Pusher Deck Sensor Information

When the back door is removed from the game, power to the pusher is removed. The game will sound an alarm to inform you that the pusher deck is not working. This is accomplished by a hall effect sensor (magnetic). As the pusher deck moves back and forth it will make and break contact with the sensor. The game will watch for this change of state and alarm if not seen.

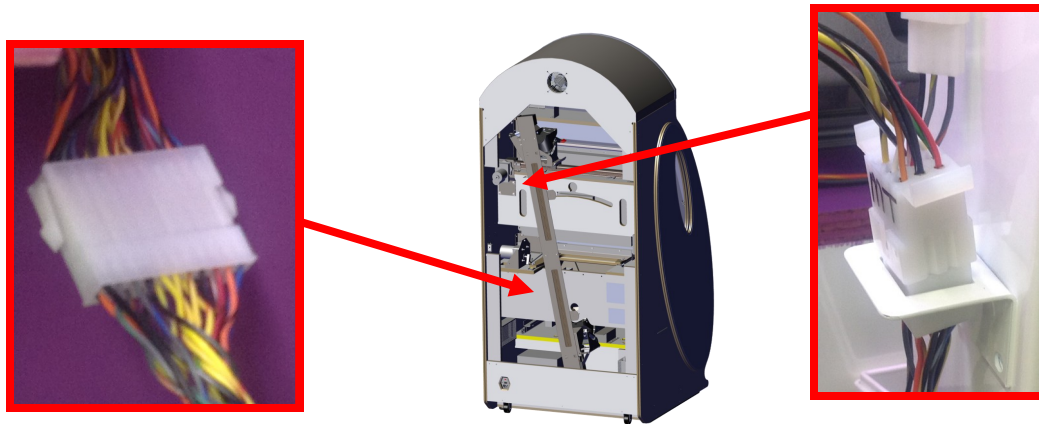


Elevator removal

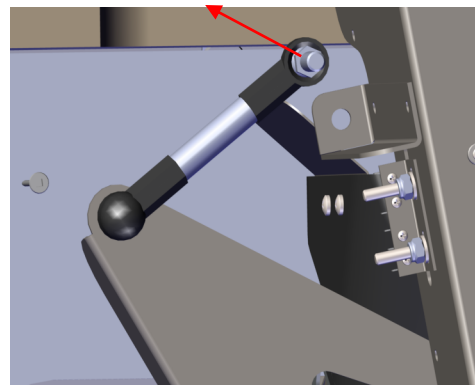
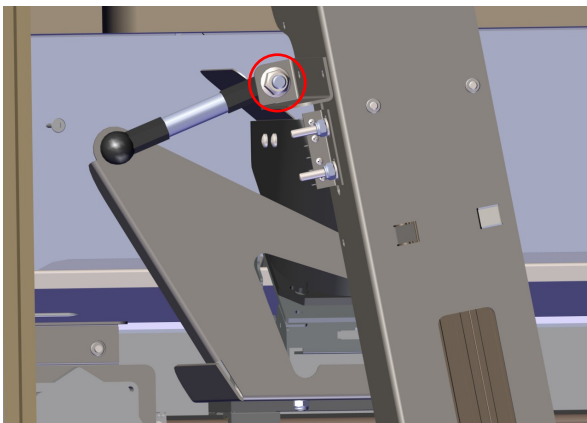
Open the back door and remove the lower hopper bowl shown below. You will need to remove the count hopper bowl extension first. To remove, press release button, twist and lift out. Now remove the lower hopper bowl. See the section “Hopper Jams and Adjustments” for more information.



Disconnect the two wire harnesses shown below.

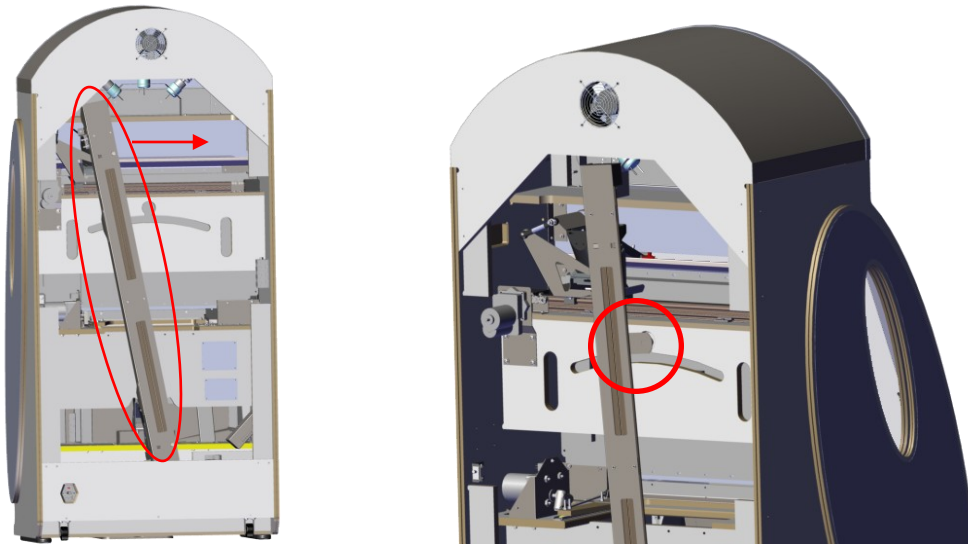


Remove the nut holding the control arm to the elevator. Rotate the arm out of the way.

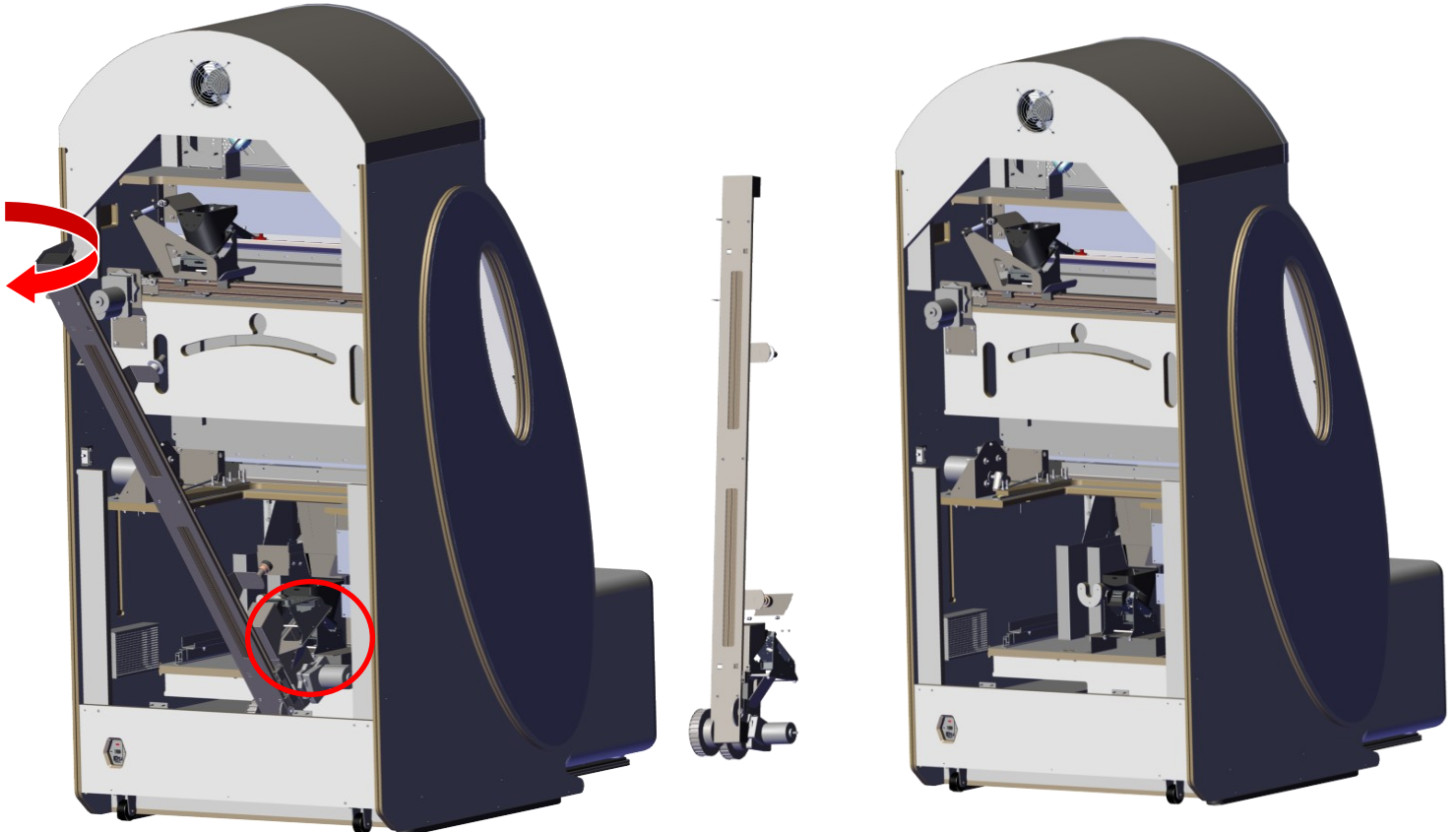


Elevator Removal (CONT)

Slide the elevator assembly to center. The elevator should be lined up with the large hole in the center of the back panel.



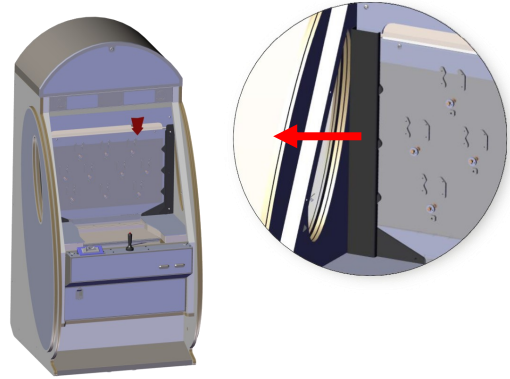
Slightly lift up and back. Now twist the elevator to the right so that the bottom hopper will clear the bottom shelf. Lift the assembly out.



Playfield / Monitor Removal

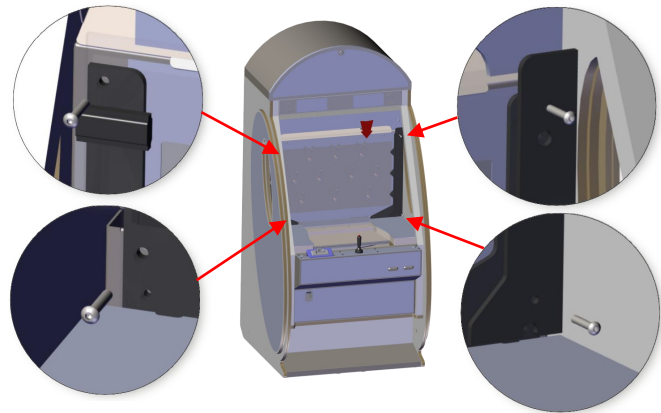
Step 1

Unlock glass and place aside. Remove left plastic cover by pulling it straight back.



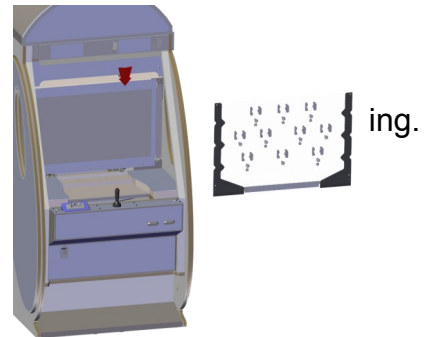
Step 2

Remove the four mounting bolts shown.



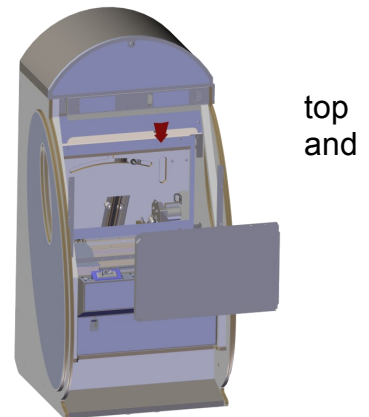
Step 3

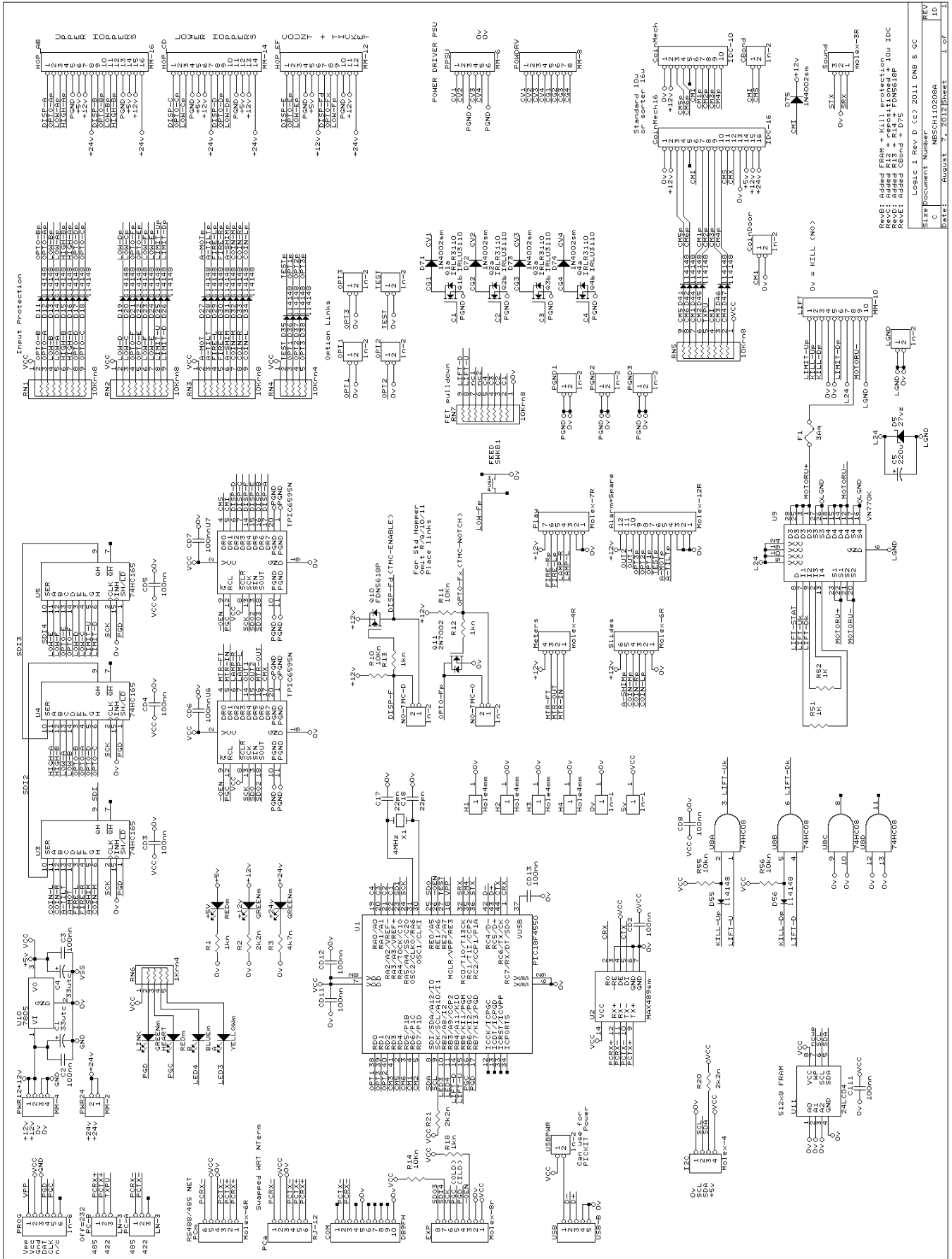
Remove the playfield partially to unplug the playfield wiring. Once the harness is unplugged remove the playfield completely and put aside.



Step 4

Before you remove the four mounting screws located at the top and bottom of the monitor, disconnect the DVI/VGA cable unscrew the power connections. Now you can remove the monitor.





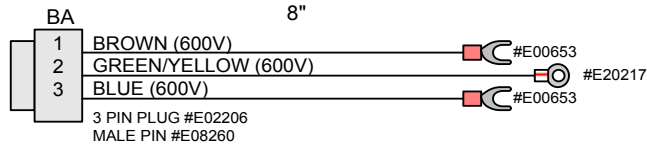
RevB: Added FRAM + Kill protection
 RevC: Added R13 + R49 + FRAM51P
 RevE: Added GBone + D75

Logic 1 Rev D (C) 2011 ONE 8 GC

Size Document Number
 C NBSCH10208A
 DATE: AUGUST 7, 2012Sheet 1 of 1

BA2063LX

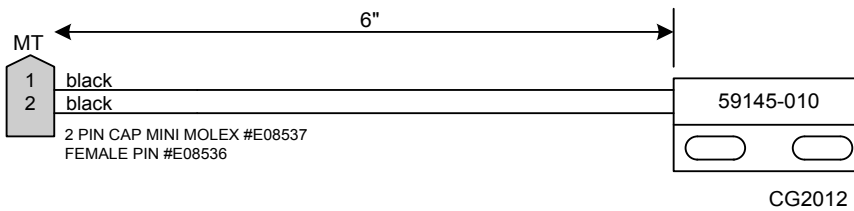
TO:
MT2064LX



TO:
MON26/32PS

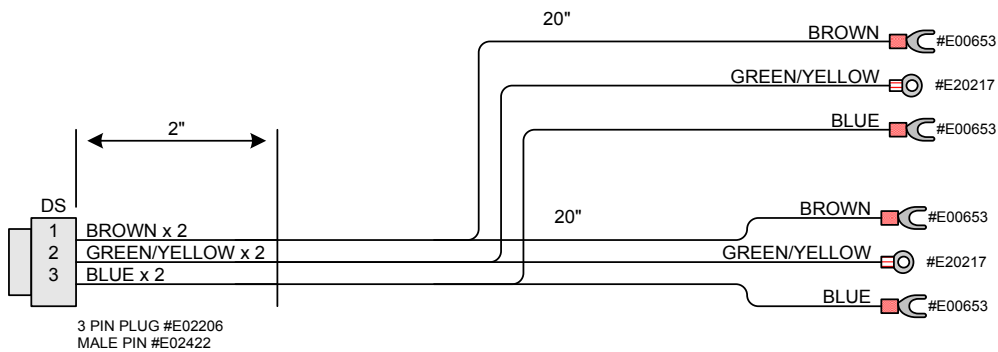
CG2012MT

TO:
MT2083LX



DS2065LX

TO:
MT2062MX

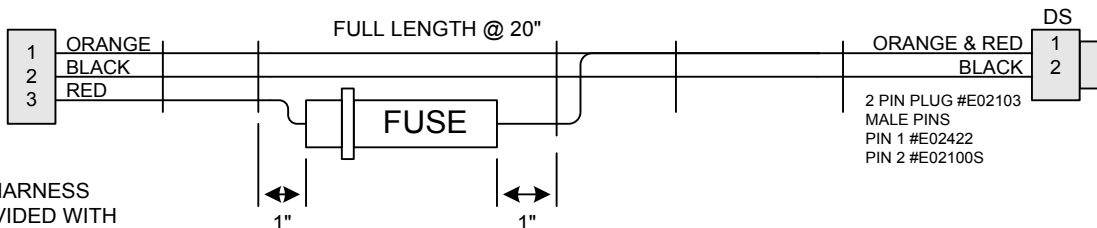


TO:
IA2010

TO:
DS2010

DS2085LX

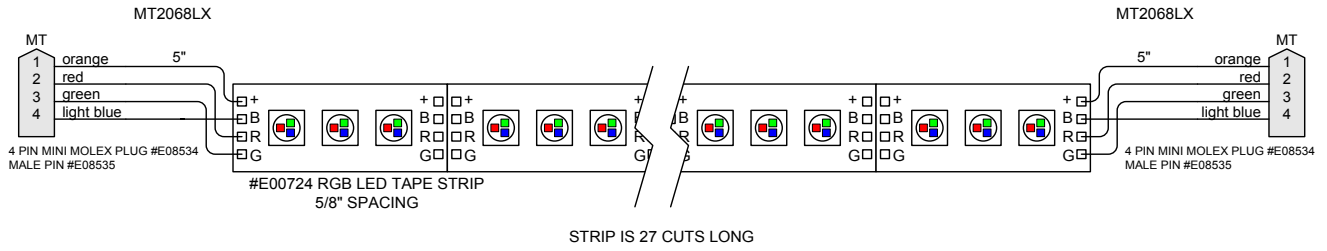
Remote
Ground
Power



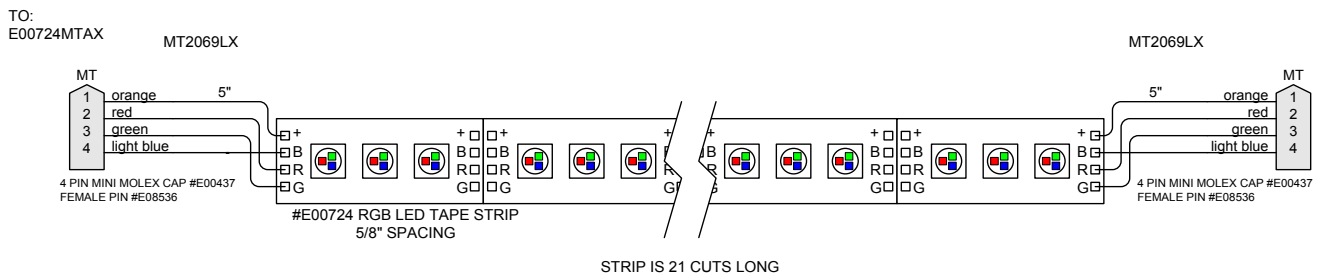
* HARNESS
PROVIDED WITH
EV2009 AUDIO
AMPLIFIER

TO:
MT2050HX

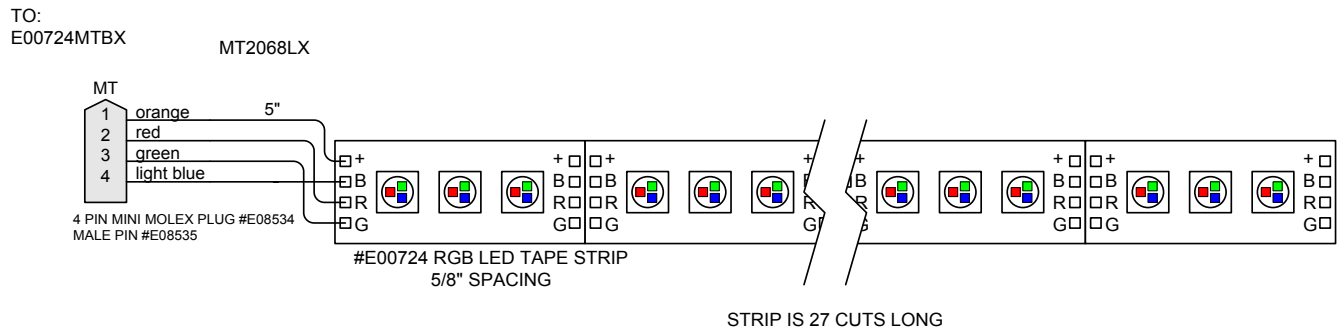
E00724MTAX



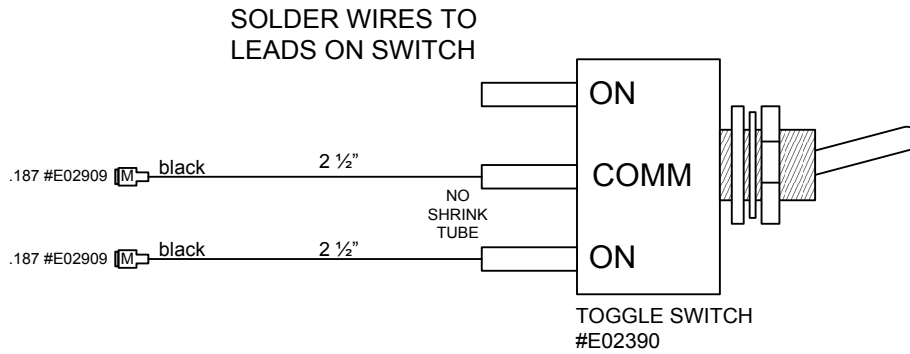
E00724MTBX



E00724MTX

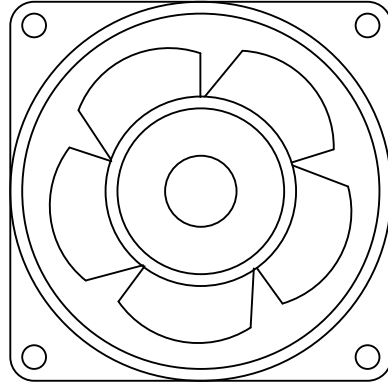


E02390X



MS2364X

#HD2364 – 110V AC FAN



12"

13"

#E20217

GREEN/YELLOW

brown
GREEN/YELLOW
brown

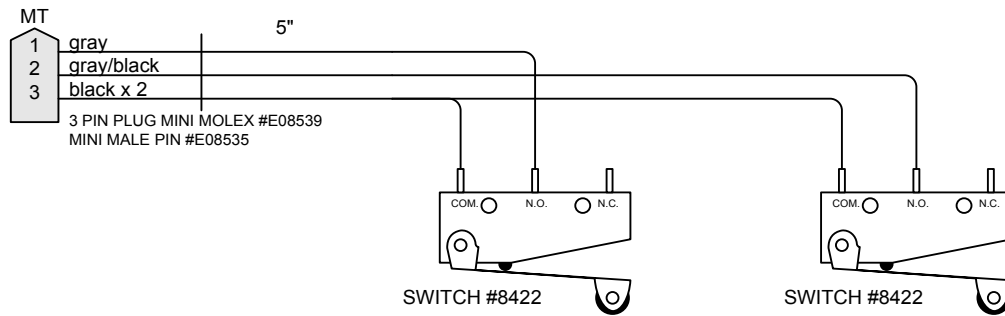
MS

1
2
3

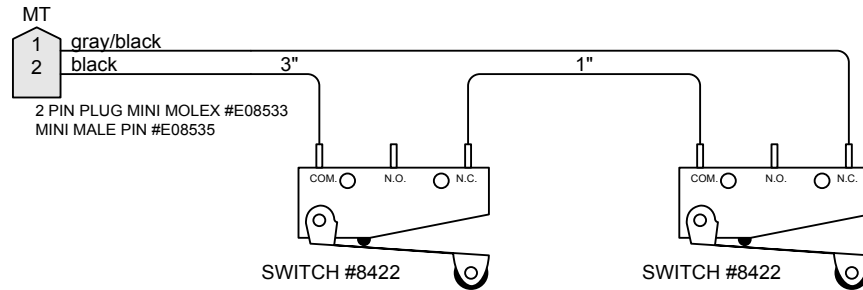
3 PIN PLUG #E02206
SOLID PIN #E02100S
PIN 2 #E08260

TO:
MT2063MX

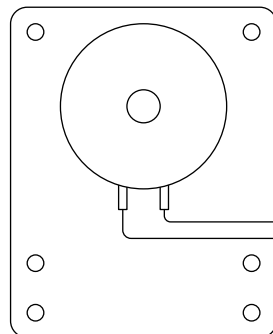
MT1033X



MT1055X



MT2008X



MT2008 MOTOR

2"

black -M- .187 #E02909
black -M- .187 #E02909

TO:
MT2050HX
MT2084HX

MOTOR 1+2

- 1 black/yellow
- 2 gray/red
- 3 orange/yellow
- 4 gray/brown
- 5
- 6
- 7
- 8
- 9 orange
- 10 black

PAGE 2

10 PIN CST-100 #E02851
CST PIN #E00383

PWR 12

- 1 ORANGE
- 2
- 3
- 4 BLACK

4 PIN MOLEX HOUSING #E00274
MOLEX SOCKET #E02065

PWR 12

- 1 ORANGE
- 2
- 3 BLACK
- 4 BLACK

4 PIN MOLEX HOUSING #E00274
MOLEX SOCKET #E02065

LIFT

- 1 gray/orange
- 2 gray/yellow
- 3 gray/green
- 4 black/gray
- 5
- 6 gray/blue
- 7 ORANGE
- 8 ORANGE/BLACK
- 9 BLACK
- 10 BLACK/WHITE

10 PIN MOLEX HOUSING #E00275
MOLEX SOCKET #E02065

PPSU

- 1 LIGHT BLUE
- 2
- 3 BLACK/WHITE
- 4
- 5
- 6

6 PIN MOLEX HOUSING #E02097
MOLEX SOCKET #E02065

PWR 24

- 1
- 2 LIGHT BLUE

2 PIN MOLEX HOUSING #E00392
MOLEX SOCKET #E02065

TO:
MT2060MX

- MT
- 1 black
 - 2 BLACK
 - 3 BLACK
 - 4 BLACK
 - 5 BLACK/WHITE
 - 6 BLACK/WHITE x 2
 - 7 orange
 - 8 ORANGE
 - 9 ORANGE
 - 10 ORANGE
 - 11 ORANGE
 - 12
 - 13
 - 14 LIGHT BLUE
 - 15 LIGHT BLUE

TO:
DS2085LX

- 1 ORANGE
- 2 BLACK/WHITE

2 PIN CAP #E02181
FEMALE PIN #E02102

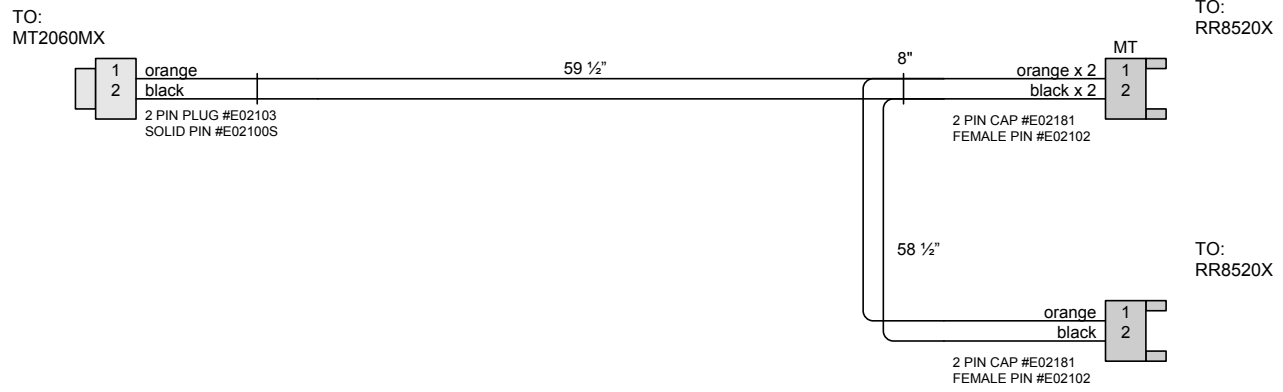
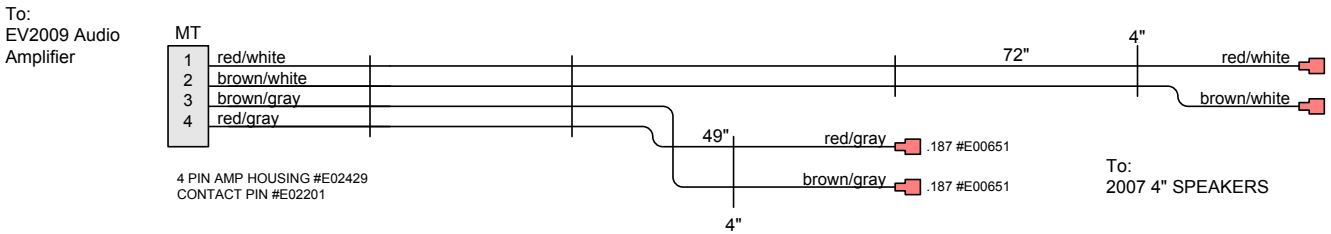
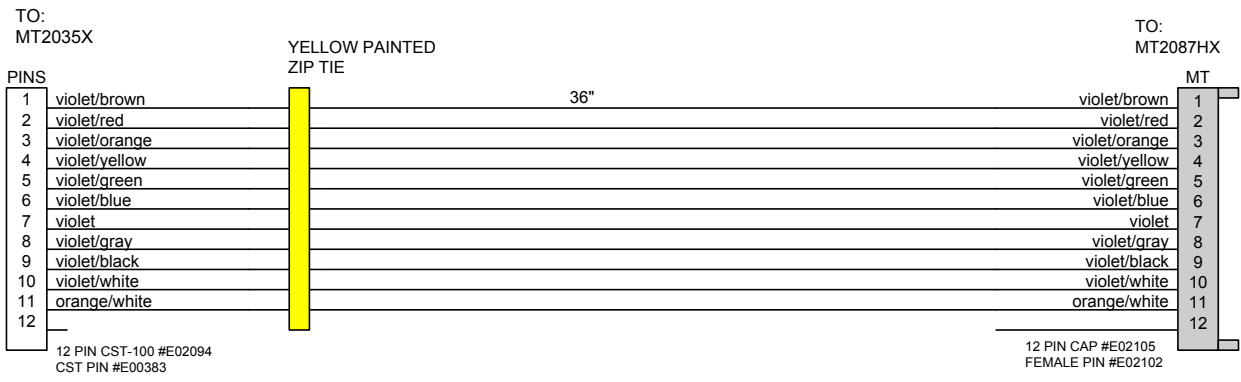
TO:
E08973

N.O.

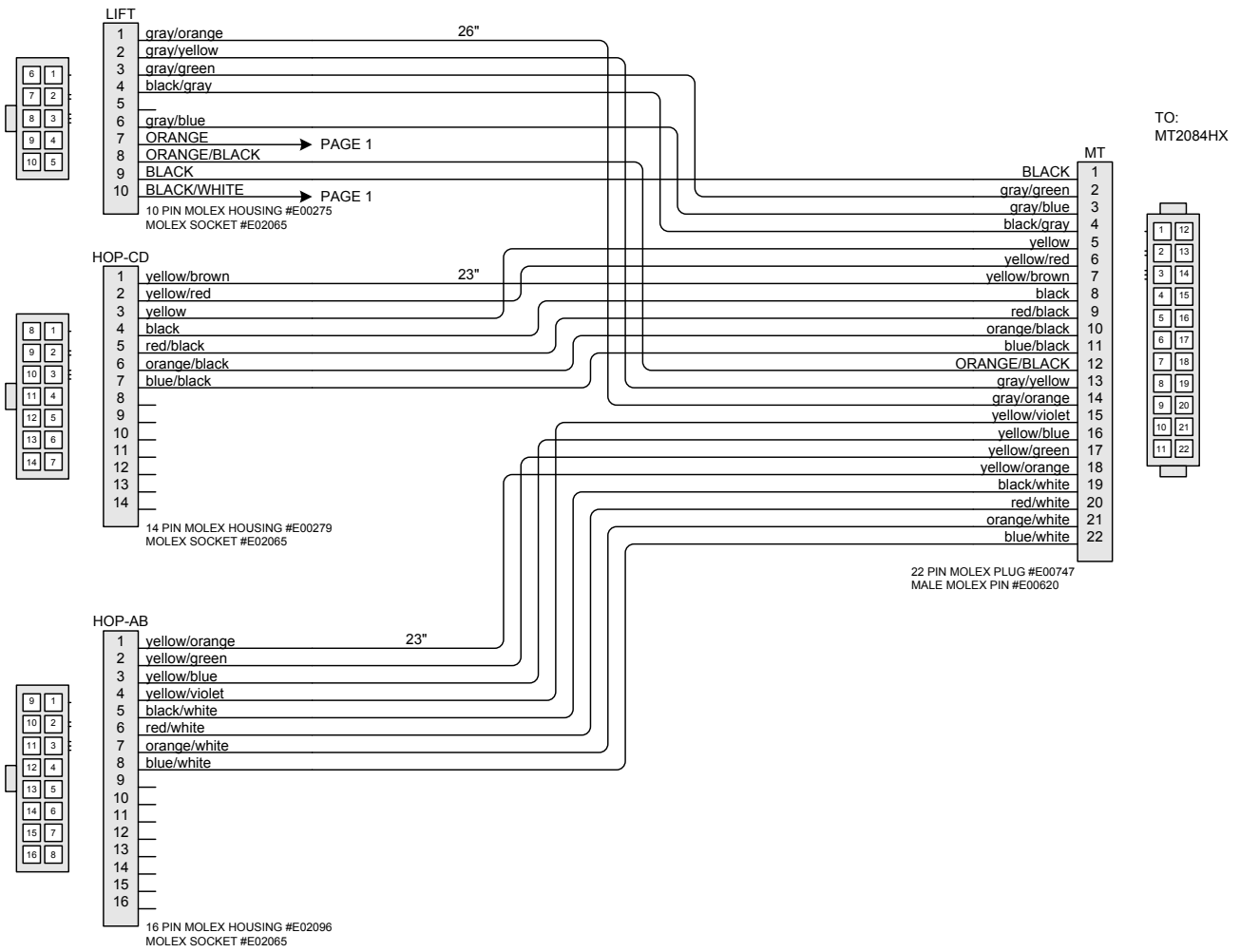
- ORANGE .187 #E00651
- ORANGE .187 #E00651

COM

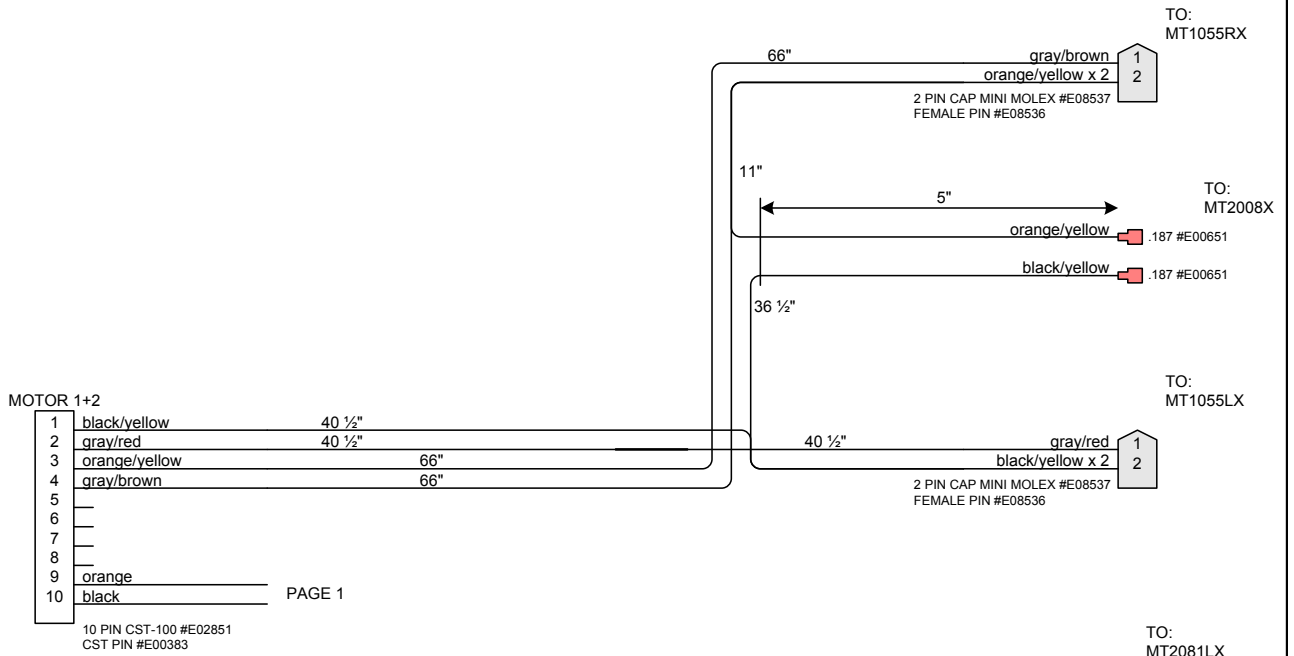
MT2050HX (2 of 6)



MT2050HX (3 of 6)

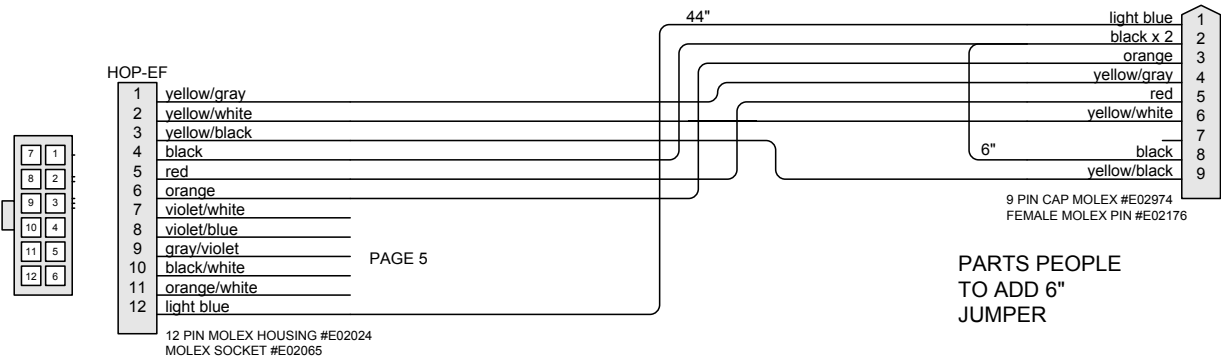


MT2050HX (4 of 6)



PAGE 1

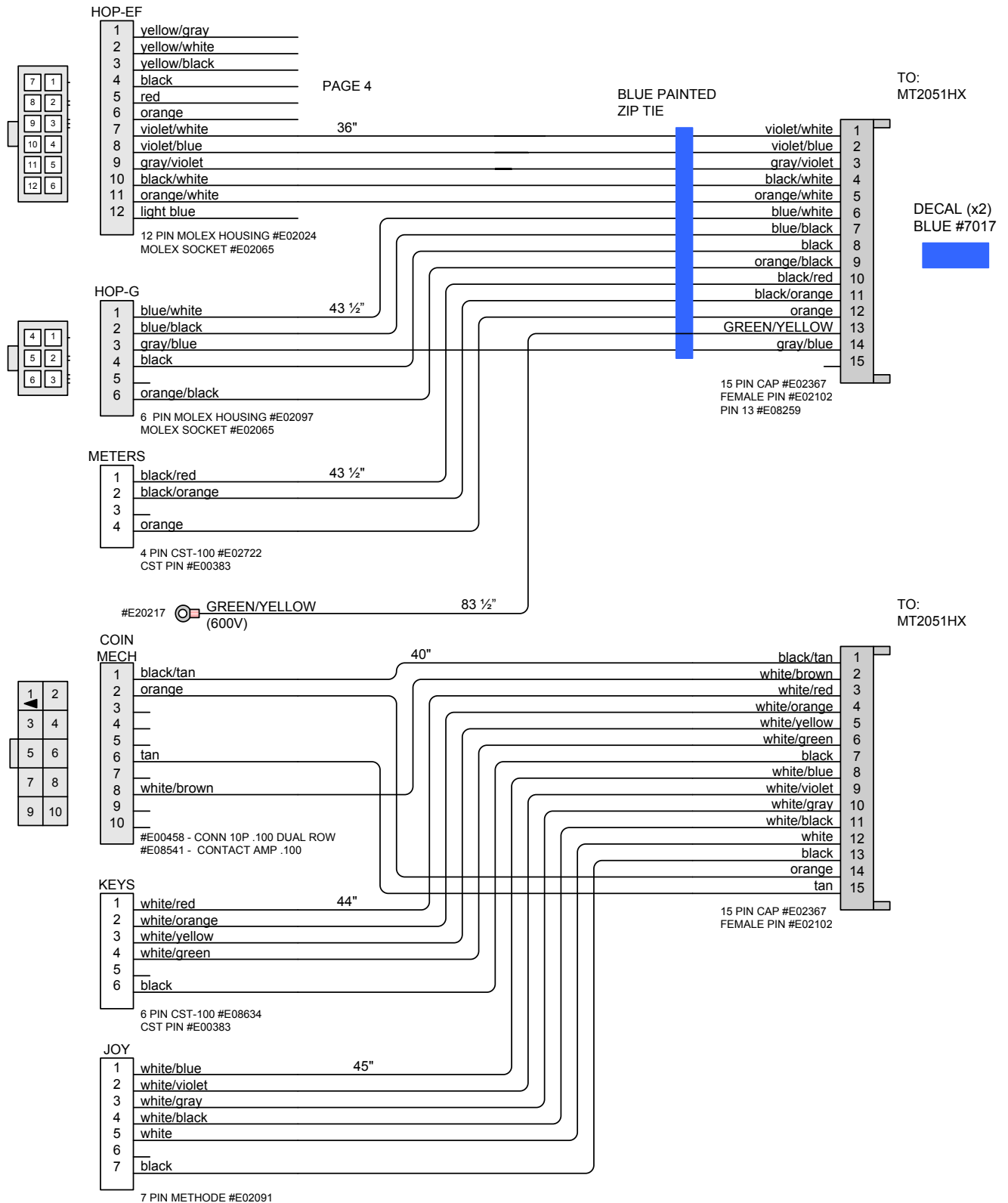
TO: MT2081LX



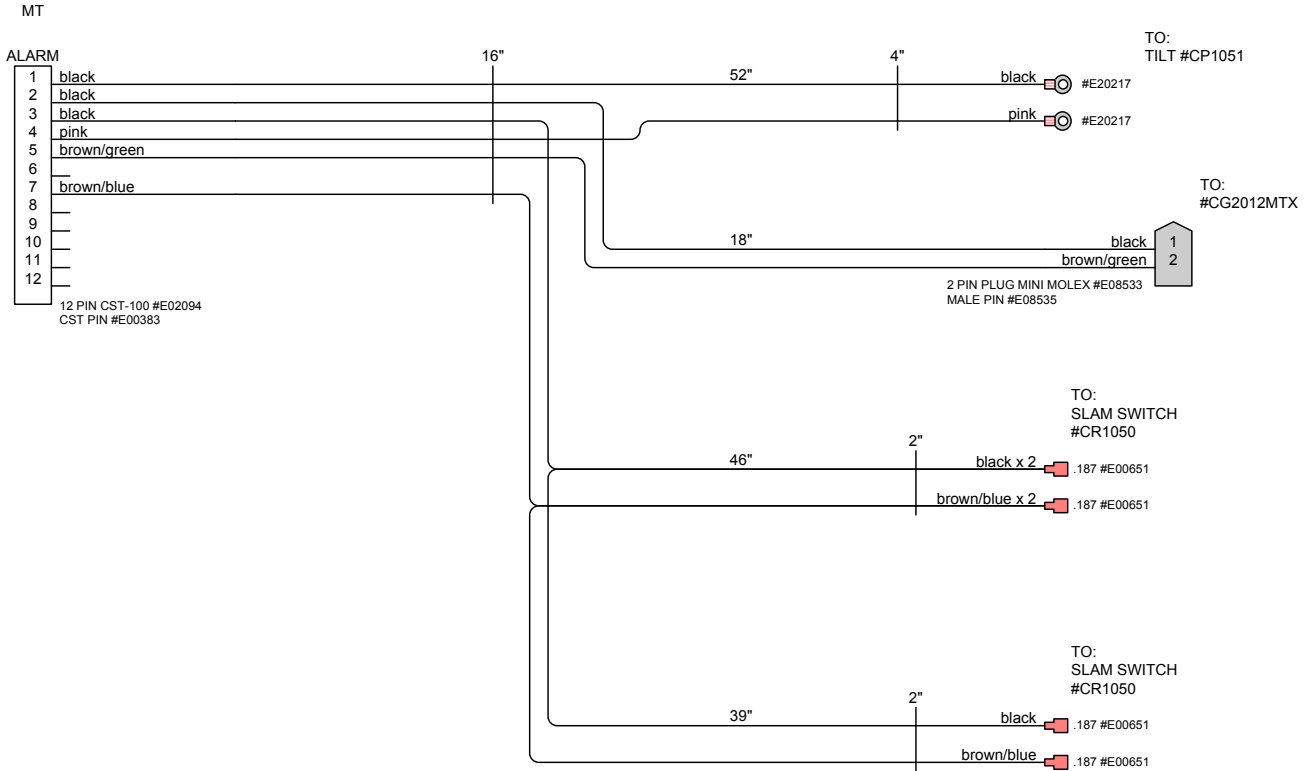
PAGE 5

PARTS PEOPLE
TO ADD 6"
JUMPER

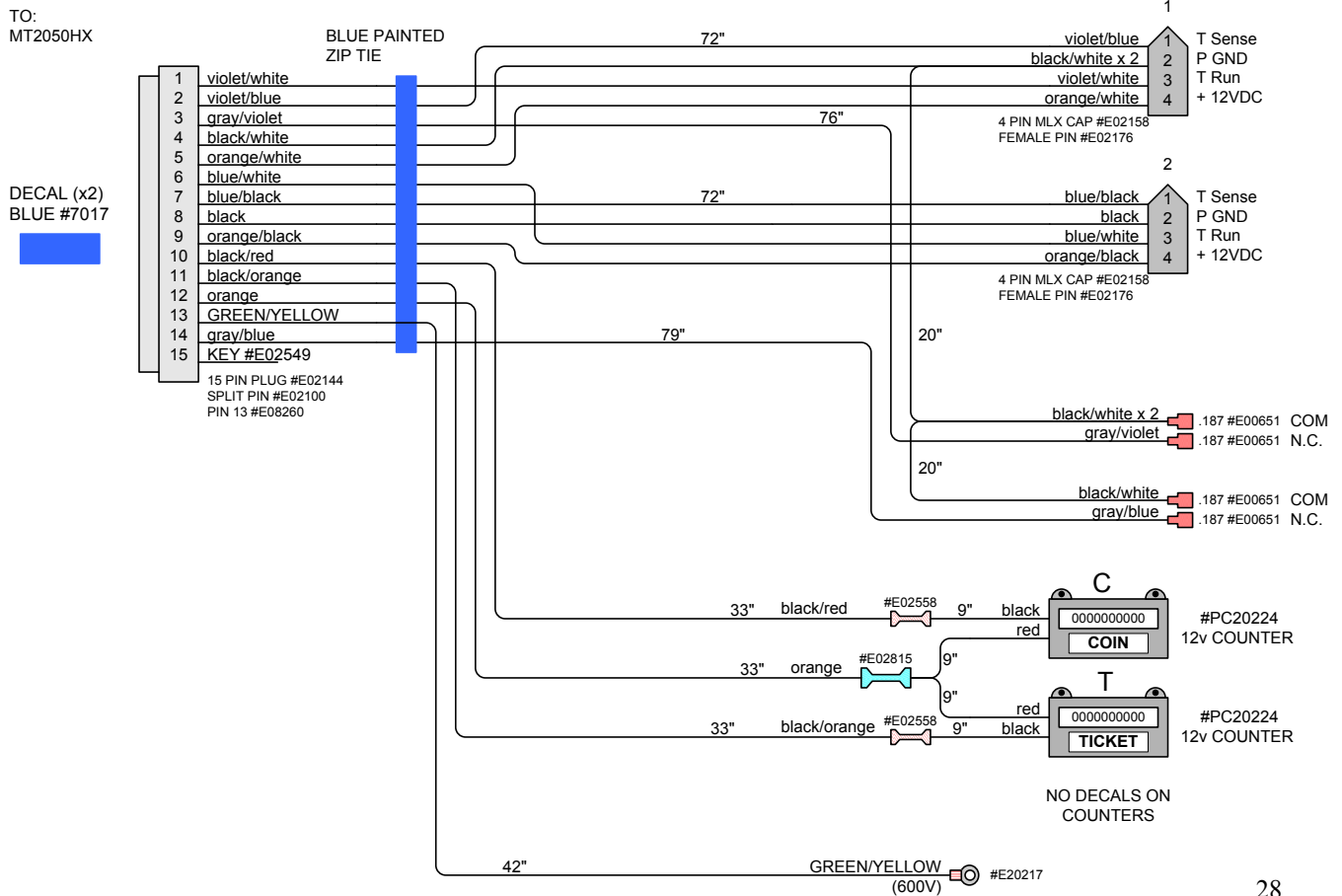
MT2050HX (5 of 6)



MT2050HX (6 of 6)

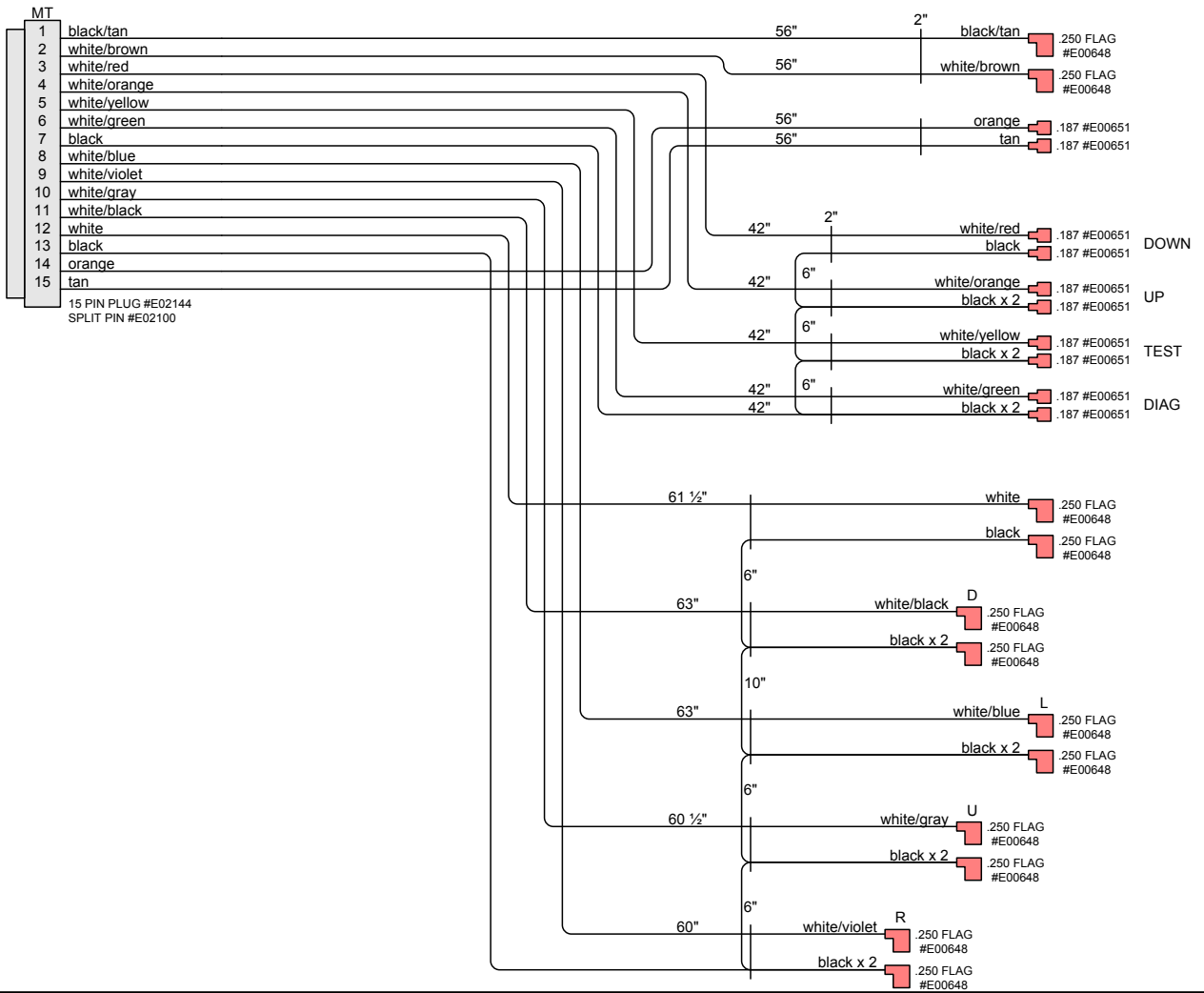


MT2051HX (1 of 2)



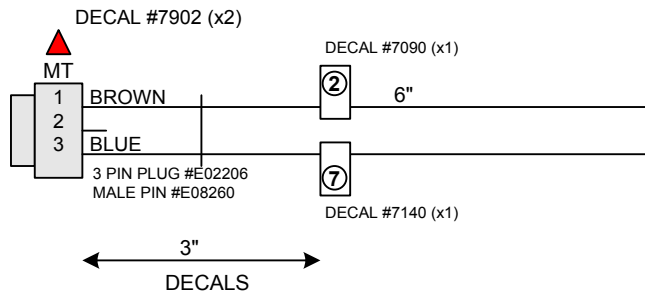
MT2051HX (2 of 2)

TO:
MT2050HX



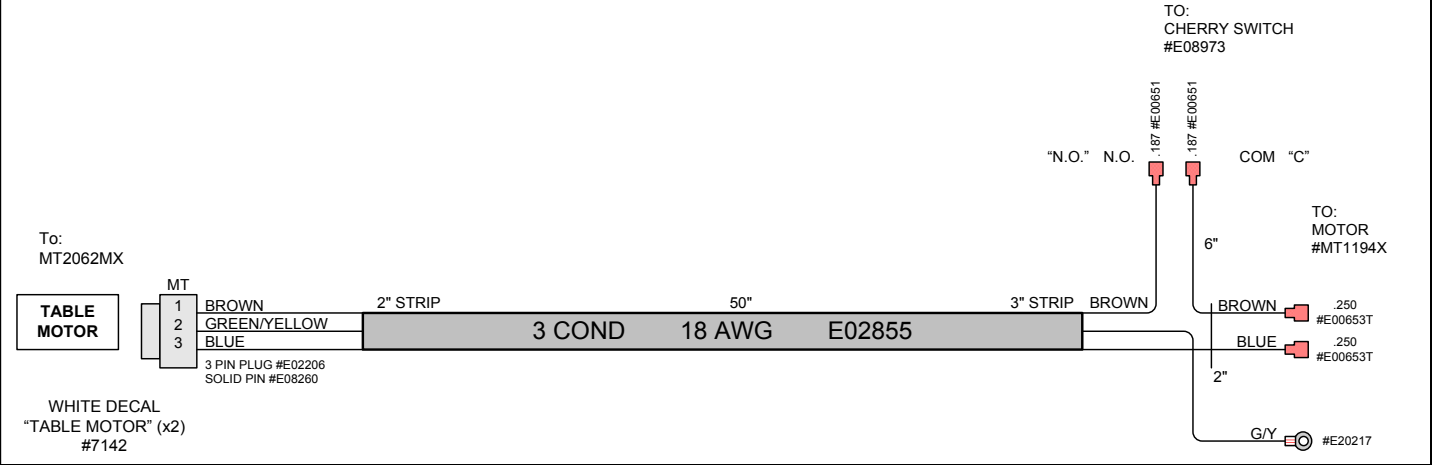
MT2061LX

TO:
SX007X 5A
POWER MOD ASY

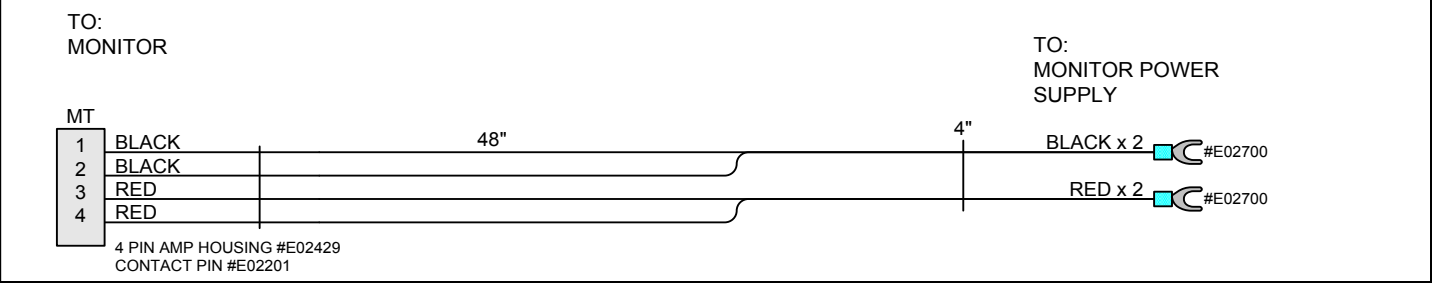


***CONNECT WIRES TO # SCREW TERMINALS ON 2004 - OCTAL SOCKET**

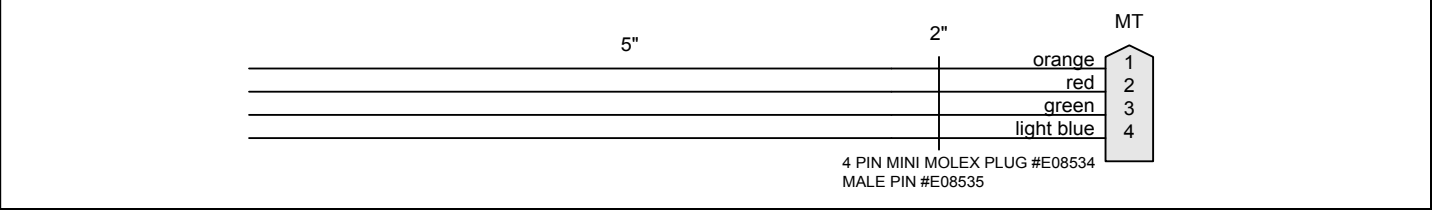
MT2065LX



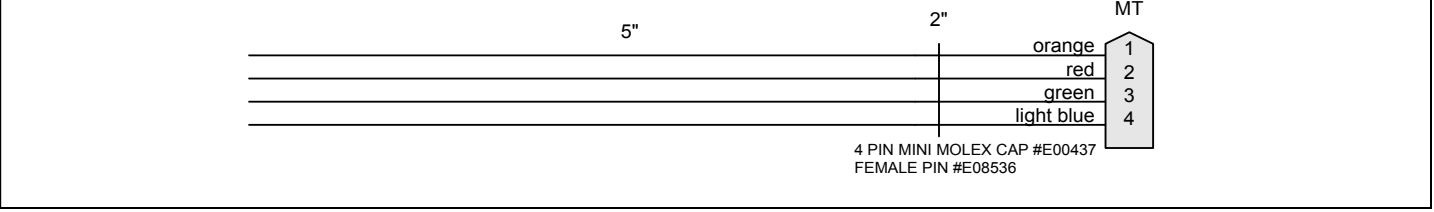
MT2066LX



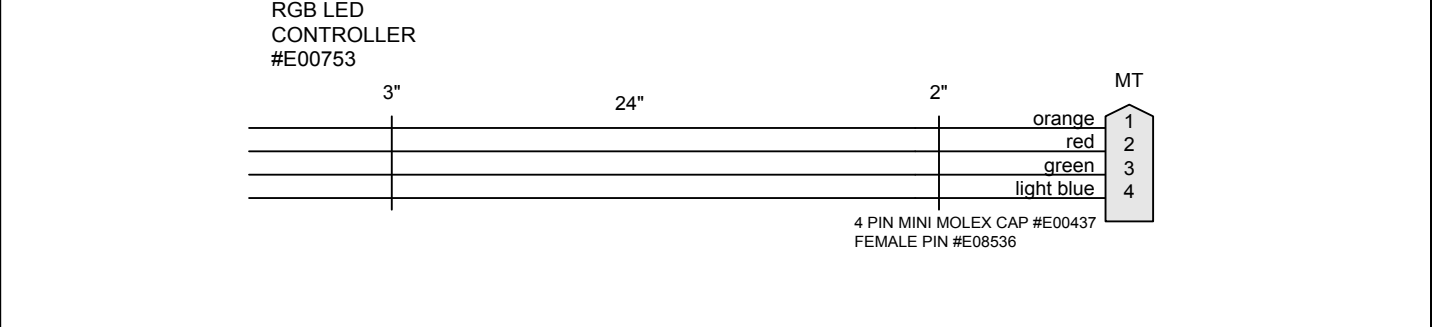
MT2068LX



MT2069LX



MT2070LX



MT2084LX

TO:
MT2008X

TO:
MT1033DX

.187 #E00651 ORANGE/BLACK
.187 #E00651 BLACK

16" gray/blue 1
gray/green 2
black/gray 3

3 PIN CAP MINI MOLEX #E08538
FEMALE PIN #E08536

30"

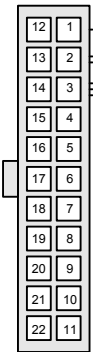
TO:
MT2081LX

TO:
MT2050HX

20" blue/black 1
black x 2 2
orange/black 3
yellow/brown 4
red/black 5
yellow/red 6
yellow 7
black 8
6" black 9

9 PIN CAP MOLEX #E02974
FEMALE PIN #E02176

MT
1 BLACK
2 gray/green
3 gray/blue
4 black/gray x 2
5 yellow
6 yellow/red
7 yellow/brown
8 black
9 red/black
10 orange/black
11 blue/black
12 ORANGE/BLACK
13 gray/yellow
14 gray/orange
15 yellow/violet
16 yellow/blue
17 yellow/green
18 yellow/orange
19 black/white
20 red/white
21 orange/white
22 blue/white
22 PIN MOLEX HOUSING #E00281
MOLEX SOCKET #E02065



PARTS PEOPLE
TO ADD 6"
JUMPER

TO:
MT2081LX

34" blue/white 1
black/white x 2 2
orange/white 3
yellow/orange 4
red/white 5
yellow/green 6
yellow/blue 7
6" black/white 8
yellow/violet 9

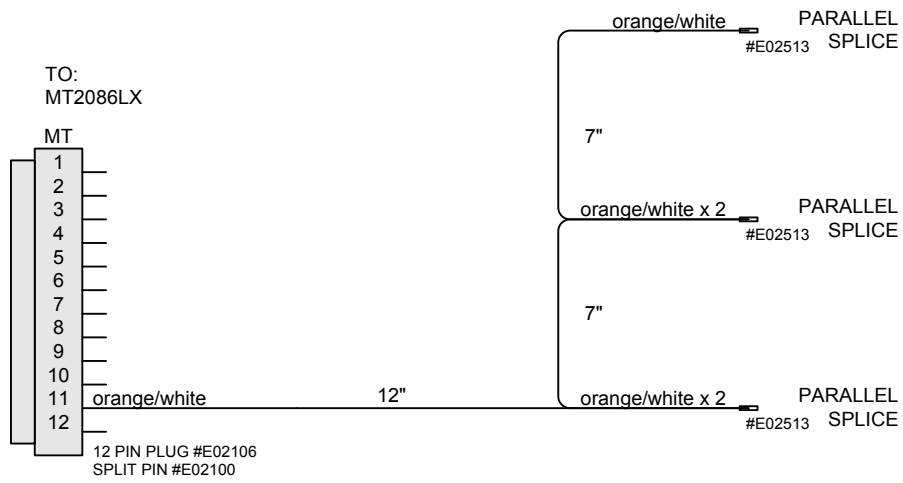
9 PIN CAP MOLEX #E02974
FEMALE PIN #E02176

TO:
MT1033UX

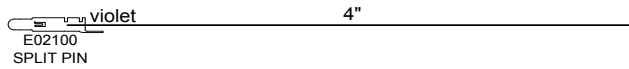
36" gray/yellow 1
gray/orange 2
black/gray 3

3 PIN CAP MINI MOLEX #E08538
FEMALE PIN #E08536

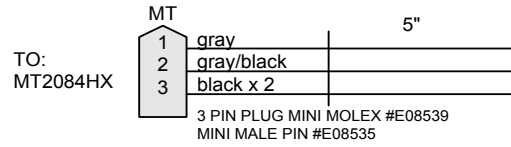
MT2087LX



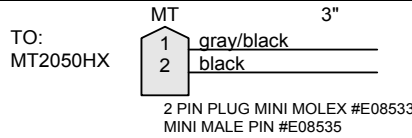
MT2088LX



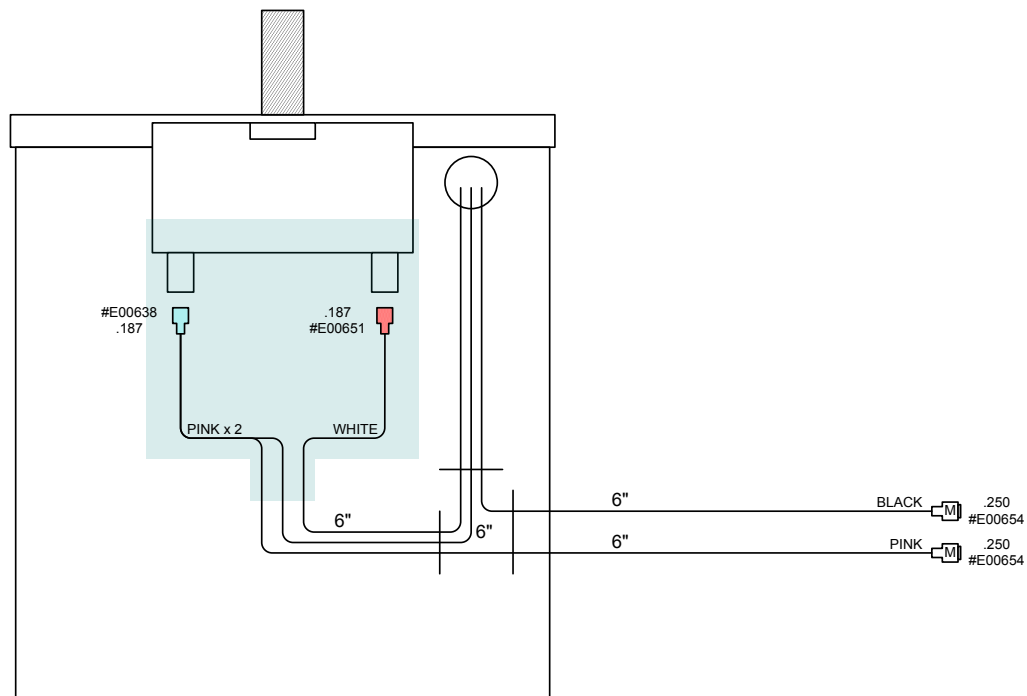
MT2089LX



MT2090LX



PE2009X



RR8520X

#RR1026-P802 - BRACKET LAMP

#8520 - HALOGEN BULB SOCKET

TO:
MT2067LX

WHITE
WHITE



2 PIN PLUG #E02103
SOLID PIN #E02100S

SX2007X

#SX2007X-POWER MODULE ASY

#E02258 - FUSE 5 AMP 250V (MDL - 5)

DECAL #7085
5 AMP
250V

DECAL #7077

TIME DELAY FUSE

#2892-POWER MODULE
CORCOM (PELSOSXO)



BLUE
.187 #E00651

5 AMP FUSE

BROWN

#E02017



GREEN/YELLOW

3"

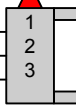
GREEN/YELLOW x 2
#E00638
.187

#SX2055X-POWER MODULE HARNESS

DECAL #7902 (x2)

10"

BROWN x 2
GREEN/YELLOW x 2
BLUE x 2



3 PIN CAP #E02288
FEMALE #E02013

TO:
MT2061LX

15"

BROWN x 2
GREEN/YELLOW x 2
BLUE x 2

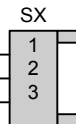


3 PIN CAP #E02288
FEMALE #E02013

TO:
MT2062MX

6"

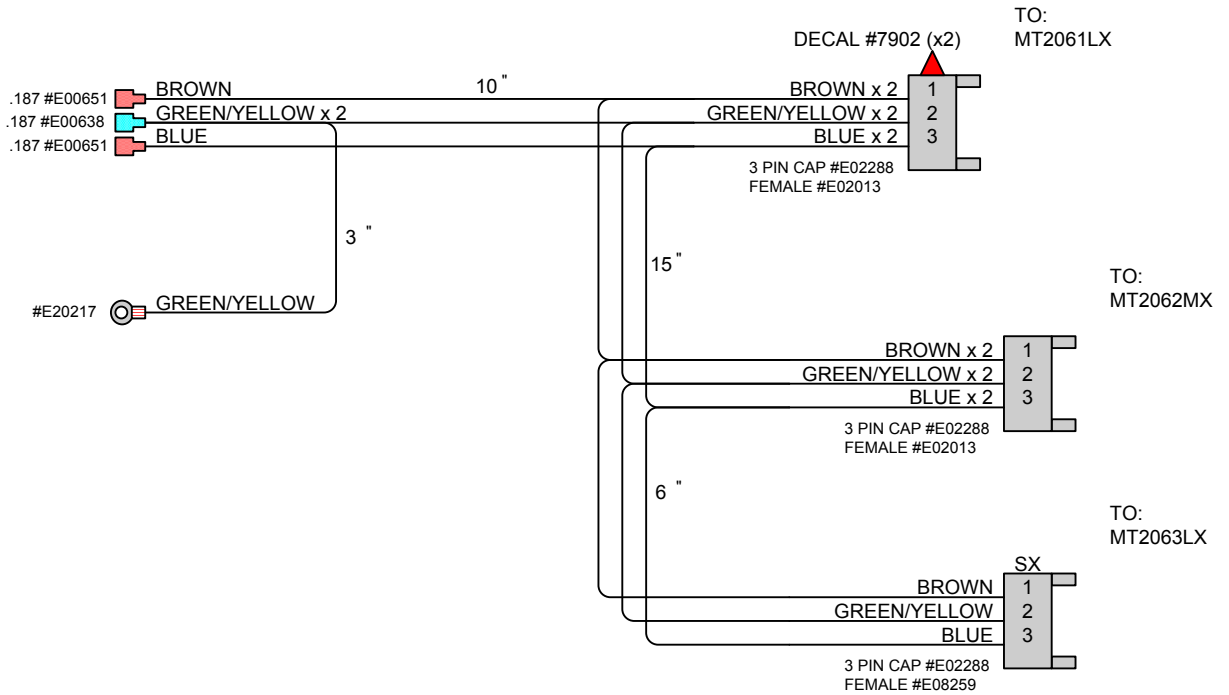
BROWN
GREEN/YELLOW
BLUE



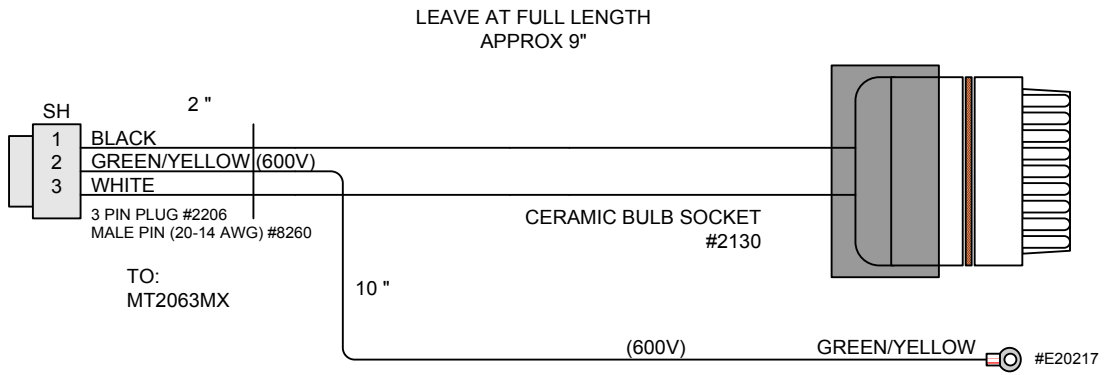
3 PIN CAP #E02288
FEMALE #E08259

TO:
MT2063LX

SX2055X



SX2130X





WARRANTY POLICY

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.

Innovative Concepts in Entertainment
10123 Main St.
Clarence, NY 14031
Phone #: (716) - 759 - 0360
Fax #: (716) - 759 - 0884
www.icegame.com