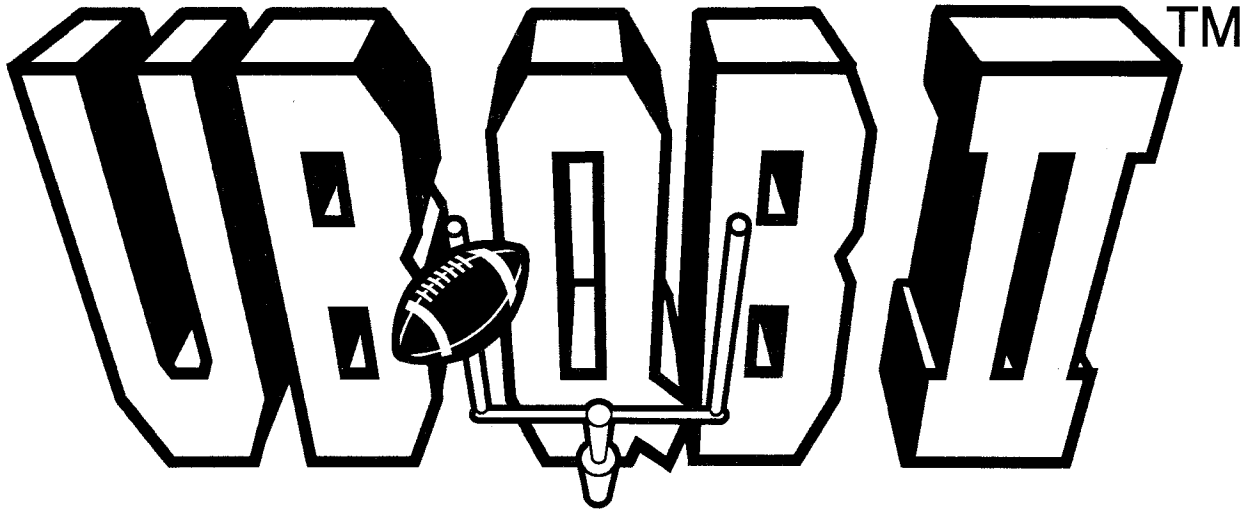


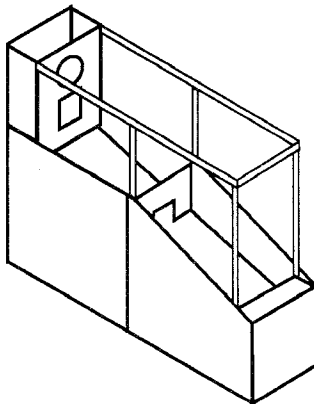


SPORTS GAMES DIVISION  
PH: 602-470-1490 • FAX: 602-470-1495



# FOOTBALL CHALLENGE

## ASSEMBLY / OPERATING MANUAL\*



### SPECIFICATIONS

**WIDTH:** 32 -1/2 inches  
**HEIGHT:** 95 inches  
**LENGTH:** 121 inches  
**WEIGHT:** 700 lbs.  
(750 lb. crated)

### DESCRIPTION

UB QB II is the newest version of our Football sports game with bright new colors! For one or two players. . . players act as the QB, throwing 6 1/2 inch footballs through holes for completions. The moving message sign keeps players & crowd informed of game status, score, & also entertains with graphic special effects.

Skee Ball Inc. (Corporate Offices) • 121 Liberty Lane • Chalfont, PA 18914 • USA • (215) 997-8900 • Fax (215) 997-8982  
Phoenix Offices: (Sports Games Division) • 3669 East La Salle Street • Phoenix, AZ 85040 • USA • (602) 470-1490 • Fax (602) 470-1495  
\* For Service or Parts Information on UBQB II Games Contact the Phoenix AZ. Offices!

UB-QB  
FOOTBALL CHALLENGE  
ASSEMBLY/OPERATING MANUAL

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SKEE-BALL..      PHOENIX, ARIZONA U.S.A

MANUAL DATE:      AUGUST 1994

UB-QB  
FOOTBALL CHALLENGE

SPECIFICATIONS

- \* HEIGHT 7'11"
- \* WIDTH 32-1/2"
- \* LENGTH 10' 1"
- \* WEIGHT 750 LBS BOXED  
700 LBS UNBOXED
- \* POWER CONSUMPTION 115 VOLTS. 115 WATTS  
1 AMP MAXIMUM
- \* POWER SUPPLY FUSE 1 AMP SLO-BLO LITTLEFUSE # 218-001
- \* MODEL MP17 (ARCADE VERSION)

ASSEMBLY TOOLS NEEDED

- 2 7' 16" WRENCH
- 1 5/32" HEX ALLEN DRIVER ( CORDLESS) OR
- 1 5/32" ALLEN WRENCH
- 1 5/16" NUT DRIVER (SUPPLIED BY SBI)

HARDWARE PROVIDED

- 6 1-1/2" X 1/4"-20 BUTTON HEAD BOLTS ( 1 SPARE)
- 24 1/4-20 X 1-1/2" BUTTON HEAD ALLEN BOLT
- 6 1/4" BLACK NYLOC NUTS ( 1 SPARE )
- 50 #10 X 3/4 LONG HEX HEAD SHEETMETAL SCREWS ( 1SPARE )
- 1 5/16 NUT DRIVER
- 24 1/4 BLACK FLATWASHERS
- 4 1/4-20 X 1 1/4" BOTTON HEADS
- 4 1/4 " BLACK WASHERS
- 4 1/4-20 BLACK NYLOC NUTS

ALL OTHER HAREWARE OS ALREADY ATTACHED TO THE GAME.

# UB-QB FOOTBALL CHALLENGE

## INTRODUCTION

Congratulations! You have purchased UB-QB, the only football toss game that realistically captures the excitement, strategy and feel of an actual football game.

The Deluxe arcade version of UB-QB has been designed to make assembly as easy as possible, in combination with a concern towards reducing the effects of wear and tear on the game.

Moving UB-QB from location to location will require two people as the game is approximately 650 pounds and, in its disassembled state, approximately 86 inches long and 66 inches tall.

Skee Ball recommends that you use 2 four wheel dollies (approximately 4" tall) to assist you in moving the game.

All of the electronic parts are already wired and connected so that the game should operate precisely as it did in Skee Ball's factory under test conditions prior to shipping. However, we have also programmed into UB-QB a "Test" system that will help you to determine that the game is working properly and, if not, to pinpoint the problems. This feature is discussed in more detail later in this manual.

## WARNINGS

READ THIS MANUAL THOROUGHLY BEFORE ASSEMBLING YOUR GAME.

FAILURE TO FOLLOW THE INSTRUCTIONS COULD CAUSE DAMAGE TO YOUR GAME AND VOID YOUR WARRANTY. IN ADDITION, THE MANUAL EXPLAINS THE GAME IN DETAIL AND THE OPTIONS YOU HAVE SO THAT YOU AND YOUR PLAYERS CAN ENJOY THE GAME TO ITS FULLEST.

THE POWER CORD MUST BE PLUGGED INTO A GROUNDED, THREE-PRONG OUTLET. FAILURE TO DO SO COULD CAUSE PERSONAL INJURY OR GAME DAMAGE.

REPLACEMENT OF FUSES, LAMPS AND ANY OTHER SERVICING ON THE PRODUCT SHALL BE CONDUCTED BY TRAINED PERSONNEL.

THIS GAME IS DESIGNED FOR INDOOR USE ONLY. THE GAME SHOULD NOT BE INSTALLED OUTDOORS OR IN AREAS DIRECTLY EXPOSED TO SUNLIGHT, HIGH HUMIDITY, DIRECT WATER CONTACT, DUST, HIGH HEAT OR EXTREME COLD. INSTALLATION IN ANY SUCH ENVIRONMENT SHALL VOID THE WARRANTY. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THIS MANUAL, MAY CAUSE INTERFERENCE TO RADIO COMMUNICATIONS. IT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A COMPUTING DEVICE PURSUANT TO SUBPART J OF PART 15 OF FCC RULES, WHICH ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST SUCH INTERFERENCE WHEN OPERATED IN A COMMERCIAL ENVIRONMENT. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE INTERFERENCE IN WHICH CASE THE OPERATOR AT HIS OWN EXPENSE WILL BE REQUIRED TO CORRECT THE INTERFERENCE.

## MAJOR GAME COMPONENTS

(NSG part numbers are in parentheses)

**Rear Assembly** - This is the back portion of the game.

**Front Assembly** - This is the front portion of the game. Pulled out from the Rear Assembly during installation.

**Lower Frame Assembly** - This is the lower portion of the Rear and Front Assemblies.

**Upper Frame Assembly** - This is the upper portion of the Rear and Front Assemblies. Raised up from the Lower Frame Assembly during installation.

**Rear Frame Extension** - "U" shaped framework shipped separately with each game. Attached to the Rear Assembly during installation to prevent the Rear Assembly from backing into a wall.

**Front Wire Panels** (L)SM2414-1 - SM2413-1(R) - There are two of these shipped separately with each game; labeled left and right and must be attached accordingly. Attached to Front Assembly during installation to keep balls from bouncing out the sides and to keep players from throwing from the side of the game to gain an advantage.

**Front Side Panels** (WD2407) - There are two of these green wood panels shipped separately with each game. Attached to the Front Assembly during installation.

**Rear Wire Panels** (L)SM2415-1 - SN2416-1(R) - There are two of these wire panels shipped separately with each game, labeled left and right and must be attached accordingly. Attached to the Rear Assembly during installation. Differentiated from the Front Net Frames in that the Rear Net Panels are framed with welded angle iron.

**Rear Side Panel** (WD2408) - There are two of these green wood panels shipped separately with each game; labeled left and right and must be attached accordingly. Attached to sides of lower Rear Assembly during installation.

**Lower Back Panel** (WD2409) - This panel is shipped separately and is attached to the back of the Lower Rear Assembly during installation.

**Belly Panel** (WD2460) - The green panel between the Front Conveyor Roller and the Front Cabinet. During game play, the footballs roll out of the Rear Assembly on the Conveyor Belt onto the Belly Panel.

Rear Sensor Cover Panels (WD2461) - There are two of these green wood panels shipped separately with each game. (The Rear Sensor Cover Panels are much smaller than the other panels). These are installed by the operator immediately behind and at the sides of the Target Faceplate.

Top Front Wire Panel (SM2417-1) - This panel is shipped separately and labeled Top Front. Attached to the Upper Front Frame Assembly during installation.

Top Rear Wire Panel (SM2418-1) - This panel is shipped separately and labeled Top Rear. Attached to the Upper Rear Assembly during installation.

Target Assembly (MA2166) - This is attached at the rear of the Rear Assembly and is lowered into vertical position during installation. A padded panel with two large holes at which players throw the ball.

Conveyor Motor (GM2146) - The 110V AC motor located under the Moving Message Sign and behind the Belly Curtain in the middle of the game. Carries a two year warranty and may be exchanged at any W.W. Grainger store.

Front Roller (MA2158) - The heat shrink covered roller at the front of the Conveyor Belt.

Conveyor Pillow Block (HW2148) - Hardware that is on the right side of Front Roller. Attaches the right side of the Front Roller to the Rear Assembly.

Conveyor Coupling (HW2184) - Hardware that connects the Conveyor Motor shaft with the left side of Front Roller.

Rear Roller (HW2144) - The metal roller at the rear of Conveyor Belt.

Conveyor Belt (MA2145) - The continuous black vinyl belt running between the Front and Rear Conveyor Rollers.

Ball Return Curtain (CT2135) - There are two of these diagonally attached at each side of the Conveyor Belt.

Throw Sensor Channels (EA2165A) - These two channels are attached at the front of the Rear Assembly and raised into vertical position during installation. Contain optic sensor enabling the game logic to recognize that a ball has been thrown at the Target Assembly. The left and right Throw Sensors are not identical (sold as a pair).

Note: It is recommended that, in the event spares are required, operator should order the PC boards that are installed within the channels, rather than the complete channel assemblies.

Left PC (EA2232).

Right PC (EA2233).

Pass Sensor Channels (EA2179) - These two channels, which are attached vertically to the Target Assembly, contain optic sensors enabling the game logic to recognize that a ball has been successfully thrown through a hole for a complete pass. The wiring of the game enables the game logic to recognize through which hole the ball has been thrown through and therefore whether to treat it as a long or short pass.

Note: It is recommended that in the event spares are required, the operator should order the PC boards that are installed within the channels, rather than the complete channel assemblies.

Emitter Optic PC (EA2092-3C)

Receiver Optic PC (EA2093-3C)

Control Panel (MA2160) - Plastic panel located on top of the Front Cabinet. Imprinted with UB-QB logo and game instructions.

Front Cabinet - Located at the front of the Front Assembly. Accessed by opening the front red door.

Electronic Chassis Plate (EA2561A) - Located in the Front Cabinet. Contains the Logic Board, Power Supply, Sound Board, Power Distribution Board, and one terminal block. Covered by the Chassis Plate Cover (SM2553).

Power Supply (EA2508) - Located on the Electronic Chassis Plate at the bottom right side. The Power Button is located on the top of the Power Supply and the 1A Fuse is on the upper right side.

Logic Board (EA1968) - Located on the Electronic Chassis Plate to the left of the Power Supply. The PCB that controls the game.

Power Distribution Board (EA2524) - Located on the Electronic Chassis Plate immediately above the Power Supply.

Sound Board (EA1982) - Located on the Electronic Chassis Plate above the Power Distribution Board.

Moving Message Sign (EA2277B) - LED display located at the top front of the Rear Assembly behind the Display Glass.

Display Glass (GL2131-1A) - Plastic panel covering the front of the Moving Message Sign. Screenprinted with Scoreboard, Cheerleader and Referee.

Target Light (LT2772) - Flourscent bulb located behind the Moving Message Sign and under the Display Cover. Lights the Target Assembly.

Display Cover (SM2225B-1) - Sheetmetal and Lexan Cover that protects the Moving Message Sign and Target Light.

## OPERATOR CONTROLS

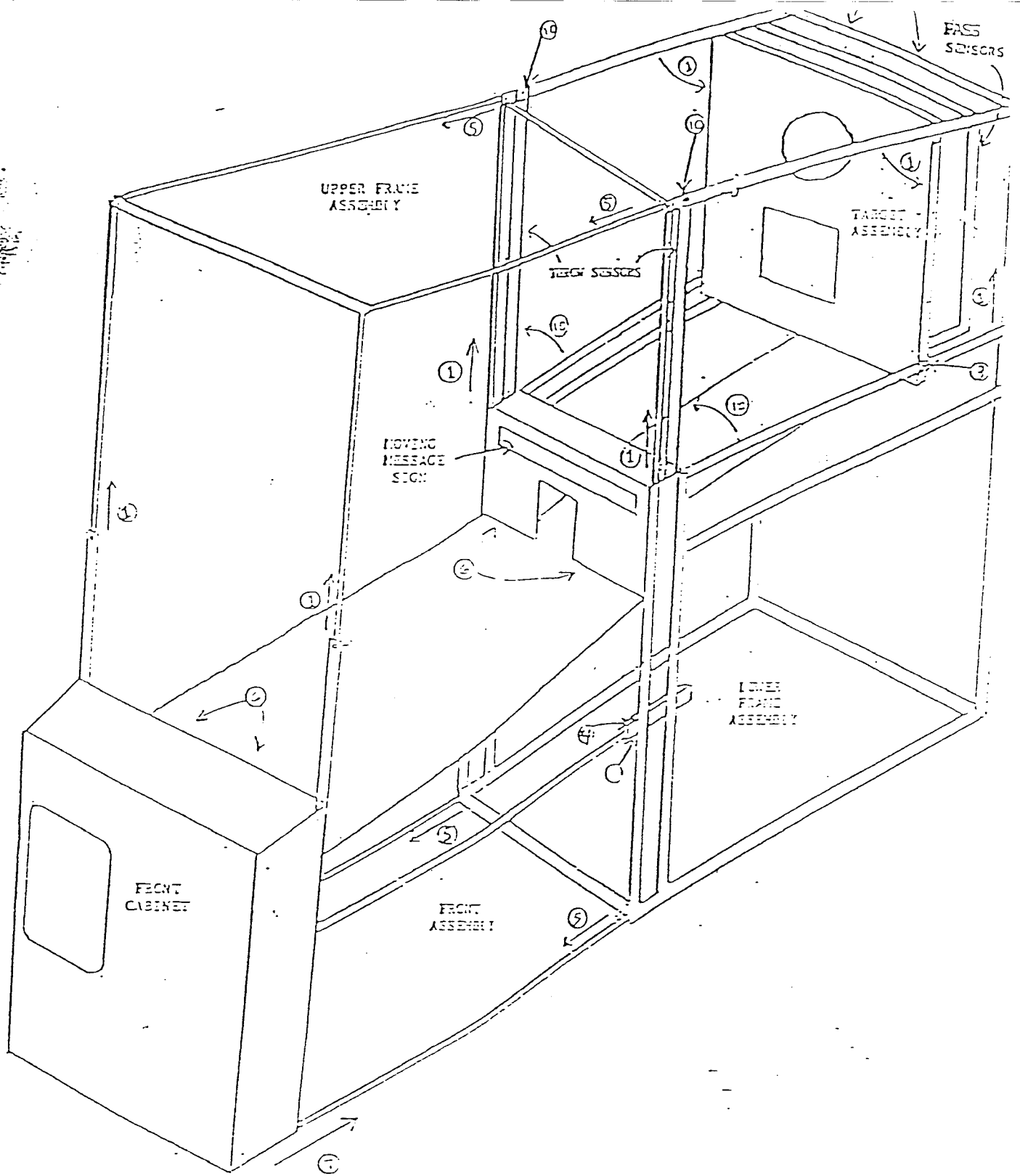
Power Button - On/Off button on top of the Power Supply inside the Front Cabinet.

Test Button - Button located in the middle on the top side of the Electronic Chasis Plate. Pushing this button enables the operator to access software used for testing the game (see "Test Instructions") making adjustments to the game (see "Game Options") and accessing the game's accounting information (see "Accounting").

Volume Control - Knob located on the top side of the Electronic Chasis Plate to the right of the Test Button. Turn clockwise to increase volume, counterclockwise to decrease volume.

Control Buttons - The #1, Kick and #2 Buttons located on the Control Panel. Used during the game by the player for various selections as instructed by the Moving Message Sign. Used by the game operator after pressing the Test Button for various functions in Test, Game Options and Accounting.





UB-QB  
Football Challenge  
Assembly Instructions  
Deluxe Arcade Version

The Deluxe Arcade version of UB-QB has been designed to make assembly as easy as possible, in combination with a concern towards reducing the effects of wear and tear on the game.

It should take two persons no longer than two hours to assemble UB-QB.

All of the electronic parts are already wired and connected so that the game should operate precisely as it did in NSG's factory under test conditions prior to shipping. However, we have also programmed into UB-QB a "Debug" system that will help you to determine that the game is working properly and, if not, to pinpoint the problems. This feature is discussed in more detail later in this manual.

Please do not try to assemble the game without reading and following these instructions which have been prepared based upon the easiest and safest method of assembling UB-QB.

THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THIS MANUAL, MAY CAUSE INTERFERENCE TO RADIO COMMUNICATIONS. IT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A COMPUTING DEVICE PURSUANT TO SUBPART J OF PART 15 OF FCC RULES, WHICH ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST SUCH INTERFERENCE WHEN OPERATED IN A COMMERCIAL ENVIRONMENT. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE INTERFERENCE IN WHICH CASE THE OPERATOR AT HIS OWN EXPENSE WILL BE REQUIRED TO CORRECT THE INTERFERENCE.

## Step by Step Instructions

### Preparatory Steps

1. Cut the banding securing the wooden panels and remove.

NOTE: Panels are tywrapped to frame so that they will not fall when banding is removed. Banding is a precautionary measure for shipping purposes.

2. Proceed by cutting tywraps at top rear of panels while holding in place. You can begin on either side. Remove panels from both sides and stand safely upright.

3. Cut tywraps affixing the wire mesh side panels to the frame and remove.

4. Remove all the remaining wire mesh panels and wooden panels from underneath game and set aside.

5. Slide game off of skid onto level surface.

6. Cut tywrap securing AC Power Cord at rear of game. **IMPORTANT:** Damage to sensor cable may occur if you proceed without cutting this tywrap.

7. Cut tywrap holding target assembly in place. You are now ready to begin assembly of your game.

## Assembly Steps

(The number of each step corresponds to the numbers on the proceeding illustration).

1. With one person at rear and one person in front, raise upper frame assembly upwards until target is in vertical position.
  2. Locate red padded ball stop assembly and place into rear of game behind target with red padding towards target. Brackets go towards bottom and slip behind lower green rear panel. Affix at top using two 1/4-20 x 1-1/4" long button head allen bolts and tighten with a 5/32" allen key. You must also tighten the two button head allen bolts at top of lower green rear panel as these are left loose at the factory to allow entry of the ball stop assembly brackets.
  3. Align holes in main frame with the tabs at the bottom of target and secure using two 1/4-20 x 1-1/2" hex head bolts and nyloc nuts.
  4. Remove two pins and clips from main frame located below message sign.
  5. With one person holding the rear section of the game, pull the front of game outwards just past the predrilled holes on the extension tubes from which the pins were removed in Step 4.
  6. Locate the green belly panel and place so that notches are closest to the conveyor system and under the display glass. The panel should rest on the two tabs located there. The lower end will rest on the extension tubes just below the speaker at the front of the game.
  7. Push the front into main frame until holes line up where pins and clips were removed in Step #4 and reinsert.
- IMPORTANT:** All wire mesh netting panels are labeled as to their location on the game. It is imperative that they be positioned accordingly to insure proper alignment between the brackets and the predrilled holes.
8. Locate front wire mesh netting panels. These are the only ones with an angled side. Position in place and affix using #10 x 3/4" long hex head sheetmetal screws.
  9. Locate the top front and top rear panels and affix on top of the game using #10 x 3/4" long hex head sheetmetal screws.

10. Raise the sensor channels upwards and secure using two 1/4-20 x 1-1/2" hex head bolts and nyloc nuts through predrilled holes. Tighten using a 7/16" wrench.
11. Locate the remaining two netting panels and affix to the rear sides of the game using #10 x 3/4" long hex head sheetmetal screws.
12. Check each of the wire mesh netting panels as attached for excess rattling. Where rattling is excessive, tighten to frame using the long black tywraps included with game where appropriate and pull tight. Cut excess tywraps with clippers.

**IMPORTANT:** All wooden panels are labeled as to their location on the game. It is imperative that they be positioned accordingly to insure proper alignment between the holes in the panels and the blind nuts in the frame.

13. Locate the two small green panels and position with the brackets towards the bottom on either side of the target. Affix at the top using one 1/4-20 x 1-1/4" long button head allen bolt.
14. Locate the two large lower rear panels and affix using five 1/4-20 x 1-1/2" long button head allen bolts on both sides.
15. Locate the two front side panels and affix using five 1/4-20 x 1-1/4" long button head allen bolts.
16. Attach the bottom brackets of the front side netting panels to the inside of the front side wooden panels using two 1/4-20 x 1" long carriage bolts and nyloc nuts on both sides.

Your game is now ready to test!

UB-QB  
Football Challenge  
TEST Instructions

1. With the game powered up, press the Test Button.
2. The Moving Message Sign will display the software revision code (the sequence beginning with "RV" on the top row) and the check code (the sequence on the right side of the top row beginning with "CK #"). You will want to refer to these numbers in the event you need to speak to the NSG Service Department. Pressing #1 & #2 Buttons simultaneously at any time during the following tests will return to this screen.
3. Press the #1 Button on the Control Panel to access Checkout. Press #2 for Hardware tests. This is the starting point for all tests.
4. Sensor Test: Press #1 - Conveyor Motor will start. Press any button to enter test. The Moving Message Sign displays following:

Throw	Short	Long
0	0	0

#1 Button will Start/Stop Conveyor Motor. Throwing the ball will increment the digit under throw. Short & long passes will increment as balls are thrown through the prospective holes. A "bonk" will sound with each throw and a "ta dah" will sound for each short pass completed. "1st & 10" will sound for each long pass completed. Press #1 & 2 simultaneously to exit back to main screen.

Note: It is recommended that you check each individual sensor with your finger vs the ball. Place your finger over each hole and release it quickly then place it back over the same hole. If the sensor does not trigger in 3 seconds. It is slow. This means a component is failing intermittently and must be replaced. This is the most difficult sensor problem to detect. This test should be performed on both sides of the game. In the event you suspect this failure, please contact NSG.

5. Coin Test:

Press #2 for other tests.

Press #1 for coin test.

--The Moving Message Sign displays the following:

Coin 1	Coin 2	Counter
0	0	000000

Drop a coin through righthand coin slot. This will increment Coin 1 digit. Note: \$ Acceptor & Electronic Mechs will increment #1 digit. Drop a coin through lefthand coin slot. This will increment Coin 2 digit. The counter reading on the screen should match that shown on the mechanical Counter.

6. Redemption Test:

Press #2 for other tests

Press #1 for coin test

Press #2 for ticket test

Press any button to enter test

The Moving Message Sign displays the following:

Dispense	Counter
0	000000

Press #1 to increment number of tickets you wish to dispense.

UB-QB  
Football Challenge  
Game Play

#### GAME PHILOSOPHY

We at National Sports Games have attempted to capture the look and feel of a real football game. We have kept the rules the same, where they apply. The One Player Game is exciting and similar in game play to our coin-op basketball game, Super Shot. The Two Player Game is very competitive, as players "march" up and down the field just like the real game.

#### MOVING MESSAGE SIGN

This game is equipped with a unique device to the coin-op amusement industry: a Moving Message Sign that allows the game to interact with the players directly, explaining rules and displaying game status to allow the player to reach a level of entertainment far beyond that of the typical sports-action game. This, of course, equates to more play time and more profits!

#### SOUND

This game also features state-of-the-art sound circuitry. Using this circuitry, players and the crowd hear music, crowd cheers, whistles, gun shots, announcer's cheers and other sound effects. These sound effects enhance the playing experience and attract crowd interest, thereby increasing play time and your profits.

#### STARTING THE GAME

1. Test the game using the preceding Test Instructions.
2. Review the Option Settings at which your game has been set by looking at the Option Sheet Schedule on the inside of the front red door. If you wish to change any Options, see "Game Options."
3. If you have set the game on Free Play, skip Step 4 and proceed directly to Step 5.
4. Insert a coin. The coin counter should increment (counter is located on the coin door). Once you have inserted enough coins to play a game, you will hear the credit sound and the #1 and #2 Buttons will light. If you wish, you may require players to pay for two credits in order to play a two player game. See "Game Options-C. Coins Per Credit." You may continue inserting coins to lengthen the game time.
5. Press the #1 Button for a one player game, or the #2 Button for a two player game. You should hear a whistle to indicate the start of the game.



## ONE PLAYER GAME vs TWO PLAYER GAME

In a One Player game, there are no changes of possession, punts or field goals. The player is challenged to try to complete as many passes to gain as much yardage and score as many points as he can. In this sense, the One Player game is like Super Shot, our basketball skill game. The player hustles to gain as many yards and score as many points as possible.

The Two Player game involves more strategy, is more interactive, and better encompasses the excitement and strategy of real football action. The Two Player game includes all of the features described below.

### CHANGE IN POSSESSION

12. A change in possession will occur with a kickoff to the other team following a touchdown or field goal. A change of possession at the current field position will occur on a 4th down incomplete pass. A change of possession will also occur on a punt or a field goal attempt.

### PUNTING

13. When you reach 4th down, if you are more than 42 yards from the goal, the Kick light will illuminate and the Moving Message Sign will ask you whether you wish to punt. You may press the Kick Button to punt the ball or, if you wish, try another pass. An incomplete pass on the 4th down will result in a change in possession at your present position on the field. Pressing the Kick Button will automatically punt the ball a randomly determined distance ranging from 37 to 52 yards. The return is also randomly determined and ranges from two to nine yards.

### FIELD GOALS

14. If you are within 42 yards of the goal line, the Kick light will come on and you may attempt a field goal if you wish. On fourth down, the Moving Message Sign will ask if you wish to attempt a field goal. You may press the Kick button and attempt a pass at either hole. If successful, you will have made a field goal and will be awarded 3 points. If not, possession will change to the other player who will take over at your field position (unless you kicked from inside your own 20 yard line, in which case he will take over on the 20).

you may decide not to attempt a field goal and to attempt to get the first down or a touchdown, risking a change in possession.

NOTE: Once you are within 42 yards of goal, you may try a field goal on any down. This allows for last second field goal attempts, no matter what the down situation.

#### ENDING THE GAME

15. The game will end once time expires. Coins may be inserted at any time prior to the end of the game to extend play. When the game is over, you will hear a gun shot sound and then the "Mr. Touchdown" melody. The final messages will flash and show the winner, the final score, total yards, total passes thrown and average yards gained per attempt.
16. **HIGH STATS** The player who has earned the best statistics, i.e. the most yards per attempt since the statistics have last been reset, as long as he/she has gained at least 80 yards and has not lost the game (in a Two Player game), will earn recognition and entry in the NSG Hall of Fame. He will be allowed to enter his initials to get recognition on the Moving Message Sign. To enter initials, pressing the #1 Button moves letters left to right, the #2 Button moves right to left and the Kick button enters the letter.

#### REDEMPTION

17. The operator may set the game to dispense tickets, sports cards or tokens (assuming that he has a game with a the appropriate dispenser installed) through the Option Settings. See "Game Options-F. Redemption." We at NSG realize that redemption strategies vary greatly from location to location. As a result, we have given you many options for redemption awards.

UB-QB  
Football Challenge  
Game Options

UB-QB has been designed to give the operator a great deal of flexibility in operating the game. Rather than employing a dip switch system, UB-QB employs a system using the Test Button which affords the operator many more choices than could otherwise be practically provided. The following pages describe the Options available to you, how to review the Option Settings and how to select the Option Settings you want.

The Settings at which the game has been set by the factory have been marked on the Option Setting sheet affixed to the inside of the Front Cabinet of your game.

1. With the game powered up, press the Test Button located at the top center of the Electronic Chasis Plate inside the Front Cabinet.
2. Once the Moving Message Sign has displayed the software revision and check codes, press the #1 Button to access Checkout.
3. Press the #1 Button again to access Game Options. To cycle through the Game Options, continue pressing the #1 Button. When an Option that you wish to change or review is displayed on the Moving Message Sign, press the Kick Button. The Setting on which this Option is currently operating will be shown on the Moving Message Sign. To cycle through various Settings available for that Option, press the #1 Button. To select a Setting, press the Kick Button. To go back to the previous Option or Setting, press the #2 Button. To exit, press both the #1 and #2 buttons simultaneously and you will go to the start of the Checkout, or press the Test Button and the game will reset.

PRESS

ACTION

#1 Button	Cycle Forward
#2 Button	Cycle Backward
Kick Button	Select
#1 & #2 Buttons	Return to Beginning
Test Button	Reset the Game

## A. DEFAULT OPTION

In this Option, you have the ability to reset all the Options to their "Default Settings" - or factory backup instructions.

Note: The factory may have preset some of your Options in other than the Default Settings. For example, a Default Setting is for "No Redemption". However, if one or two ticket dispensers were installed in your game at the factory, then the factory would have preset your game accordingly and with standard ticket settings, rather than the Default Settings.

The Setting to reset the Default Settings is effectuated as soon as it is selected. After selecting this Setting, you may cycle to those Options that you wish to set at other than the Default Settings.

## B. COIN/TOKEN

In this Option, the operator sets the game to accept coins (including bills if applicable) or tokens. The reason for this is so that the Moving Message Sign informs the player the appropriate pricing (e.g. "\$.50" versus "2 tokens").

If "coins" is selected, the operator then selects the denomination of coin. The primary purpose is to accommodate the \$1.00 coin should it ever be implemented. It also has applications in some foreign coin situations.

This Option instructs the game to treat a coin accepted by one mechanism different than the other.

The game logic is programmed to treat a specified coin denomination as the base coin. In the U.S., this is 25 cents. In foreign countries, this will differ. You can set Coin #1 (left coin mechanism) and Coin #2 (right coin mechanism) to differing multiples of your base coin.

If your game has a dollar bill acceptor that was installed at the factory, it is connected to the game logic through the Coin #1 cable. However, the dollar bill acceptor has been programmed to treat a \$1.00 bill as four quarters by emitting four pulses per \$1.00. We have done this because the Default Setting for the Coin Value Option is: Coin/Coin #1 - \$.25 x 1 and Coin #2 - \$.25 x 1. By programming the dollar bill acceptor this way, there is no need for the customer to change this Option from the Default Setting whether or not he has a dollar bill acceptor.

If your game came from the factory with anything other than two 25 cent coin mechanisms or one 25 cent coin mechanism and one dollar bill acceptor, you should review this Option to confirm the Settings on which this Option is operating.

#### C. COINS PER CREDIT

This Option allows you to set the number of coins required for one credit. This Option should be reviewed in connection with "Option D, Seconds per Credit," "Option E, Extra Time" and "Option J, Game Time Bonus" as they all relate to what and how much time a player gets for his money.

This Option also allows you to determine whether you will allow two players to play a one credit game. One credit will give the player(s) a specified amount of game time (see Option D). This time does not vary whether there are one or two players. If two players play a one credit game, they have to split the game time available. Nonetheless, some operators may wish to require players to pay for two credits in order to be able to select a "two player game". Operators may do this by selecting "Two Player Double Credit."

The Default Setting for this Option is Two Coins per Credit and Two Player Any Credit.

#### D. SECONDS PER CREDIT

This Option allows you to set the amount of game time the player(s) get(s) for one credit.

The Default Setting for this Option is 60 Seconds per Credit.

## E. EXTRA TIME

This Option allows the operator to price the game time differently after the initial credit.

- Standard Credit. If you wish to leave the game time priced consistently on the first credit and thereafter, you select "Standard Credit" under this Option.

- Bonus Credit. If you wish to provide a bonus credit at some number of credits, you select "Bonus Credit" under this Option. The Default Setting for this Option is "Bonus Credit" and "2". Under this Setting, if the game is set on two coins per credit and 60 seconds per credit, once a player has inserted four coins for 2 credits, he would get a bonus credit for a total of 3 credits and thereby 180 seconds of game time. The operator may set the number of credits at which a bonus credit is earned at anywhere from two to five credits.

Coins/Continue. If you wish to award time after the initial credit at different pricing increments and/or a different increment of time, you can do this by selecting "Coins/Continue" under this Option. For example, if you have the game set on two Coins per Credit and 60 seconds per Credit, you could select to give (after the first 60 seconds) additional time of 30 seconds for each additional coin by setting the Extra Time Option at "Coins/Continue", "1 Coin" and "30 Seconds".

## F. REDEMPTION

There are various Options included within this Option category.

1. Equipment. The first function is to inform the game logic what equipment is installed in your game. The selections here are as follows:

- 1 Ticket Dispenser
- 2 Ticket Dispensers
- 1 Card Dispenser
- 1 Token Dispenser
- No Redemption Equipment

If you select No Redemption, you cycle to the next Option.

UB-QB can operate with either one or two ticket dispensers. The advantage of two ticket dispensers is that when two players are playing they know who gets which tickets. Tickets are dispensed as they are earned during game play, thereby providing the players with instant gratification. If all the tickets were dispensed from one dispenser, there could be confusion surrounding how many tickets each player should get if the players are not paying attention and do not tear off their tickets during the game. For this reason, NSG recommends purchasing the game with two ticket dispensers, but we can accommodate just one dispenser if the operator desires. If you select the Card or Token Dispenser, cards or tokens are dispensed in the same manner as tickets are dispensed in the One Ticket Dispenser selection. However, the Moving Message Sign refers to cards or tokens rather than tickets.

2. Category. Once you have selected the Equipment in your game, you need to select the Category on which you wish to award tickets:

Yards  
Points  
Completions  
Coins

"Yards" is the easiest category.

"Points" is the most difficult category.

"Completions" is based on each successfully thrown pass.

"Coins" is used where Redemption is not based on skill, but based solely on the number of coins paid.

3. Ratio. Once you have determined the Category for which you will reward tickets, you must determine the Ratio of tickets (or cards or token) to be earned per that category:

\_\_\_\_\_ [tickets] for \_\_\_\_\_ [category]

For example, assume you have selected yards as the Category for which you will reward tickets. You first select the number of tickets you wish to use as your minimum (usually this would be one). After you make this selection, you would then select how many of that Category (in the example, yards) would be required to achieve the minimum reward. Say as a different example, you set this Option at "points"

and "3 for 6". Then on every sixth point (one touchdown or two field goals), a player will receive three tickets. Lastly, if you have selected "completions" as the Category, you must select two ratios: one for Long Pass Completions and one for Short Pass Completions.

4. Redemption Limit/Maximum. This is the maximum number of tickets (or cards or tokens) that can be earned per coin. It is important to remember that this limit applies per coin. For example, assume that game is set on \$.50 per credit, sixty seconds per credit and a bonus credit at two credits.

If a player puts in \$.50, and the redemption limit is set on four, that player can earn a maximum of eight tickets (four ticket limit x 2 coins). If two players play that same game, the maximum each player can earn is four tickets. If a player puts in \$1.00 (thereby getting a three minute game by virtue of the bonus credit), the maximum is 16 tickets. Once again, if two players play, the maximum would be eight tickets per player.

You may not select a Redemption Limit when the Coin Category is selected to award tickets, as this would be meaningless.

5. Redemption Limit/Minimum. The first setting to be made with regards to redemption is the minimum number of tickets (or cards or tokens) that can be earned per coin. For example, assume that game is set on 50 cents per credit, sixty seconds per credit and a bonus credit at two credits.

If a player puts in 50 cents and the minimum is set on 3 that player can earn a minimum of 6 tickets without even tossing a ball, (3 ticket minimum X 2 coins). If two players play the same game, the minimum each player can earn is 3 tickets.

When player or players exceed the minimum limit, the game defaults to standard redemption. I.E. minimum limit is set for 3 tickets per coin and the customer earns 5 tickets. The minimum number is ignored and not added to the five earned.

6. Redemption Error. In the event a ticket dispenser malfunction occurs during game play, a "call attendant" message will appear on the display to inform player to seek assistance. If the UB-QB logic detects a notch error, the attendant will perform one of the following procedures after correcting the notch failure.



# UBQB FT111E

## CK#F666

### F: COIN/TOKEN

COIN  TOKEN

Coin #1 (25¢ x) 1 2 3 4 5 6 7 8 9 10

Coin #2 (25¢ x) 1 2 3 4 5 6 7 8 9 10

### G: COINS PER CREDIT

1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18 19 20

2 PLAYERS  ANY CREDIT  DOUBLE CREDIT

### H: SECONDS PER CREDIT

15 20 25 30 35 40 45 50 55 60

### I: EXTRA TIME

EACH CREDIT

ONUS CREDIT 2 3 4 5 6 7 8 9 10

EXTRA COINS 1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18 19

### J: REDEMPTION

NO REDEMPTION

Equipment 1 TICKET 2 TICKET  CARD  TOKEN

Category  YARDS  POINTS  COINS  COMPLETIONS

GIVE 1 2 3 4 5

FOR YARDS 5 10 15 20 25 30 35 40 45 50

FOR POINTS 1 2 3 4 5 6 7 8 9

FOR COINS 1 2 3 4 5 6 7 8 9

FOR LONG 1 2 3 4 5 6 7 8 9

FOR SHORT 1 2 3 4 5 6 7 8 9

Maximum  NO MAX

1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18 19 20

Minimum  NO MIN

1 2 3 4 5 6 7 8 9 10

### K: FREE PLAY

ENABLED  DISABLED

1 PLAYER Min. 0 1 2 3 4 5 6 7 8 9

2 PLAYER Min. 0 1 2 3 4 5 6 7 8 9

### L: ATTRACT MUSIC

NO MUSIC

MINUTES 5 10 15 20 25 30

### M: HIGH SCORE ERASE

ENABLED  DISABLED

### N: GAME TIME BONUS

ENABLED  DISABLED

AT POINTS 3 6 7 8 9 10 12 13

14 15 16 17 18 19 20

SECONDS 15 20 25 30 35 40 45 50 55 60

### O: KICKOFF YARDS

1 PLAYER 60 65 70 75 80 85 90

2 PLAYERS  RANDOM 60 65 70 75 80 85 90

### P: YARDAGE

SHORT LOW 1 2 3 4 5 6 7 8 9

SHORT HIGH 1 2 3 4 5 6 7 8 9

LONG LOW 10 11 12 13 14 15 16 17

18 19 20 21 22 23 24

LONG HIGH 10 11 12 13 14 15 16 17

18 19 20 21 22 23 24

### Q: 2 POINT CONVERSION

ENABLED  DISABLED

Please note that this malfunction is generally a result of the game being out of tickets or a dispenser malfunction and not the UB-QB logic.

- A.) Power down the game and then power back on. Tickets owed will be dispensed according to the amount displayed on the moving message sign prior to power down.
- B.) Press the test button and enter the accounting software. Immediately press the test button and exit the accounting. The game will power up while simultaneously clearing any tickets owed.

This feature is meant to accommodate the location when a patron may have just walked away from the machine instead of contacting the attendant.

Clearing of memory in this manner has no effect on the accounting statistics.

- C.) This last procedure is primarily for those using the optional ticket security enclosure whereas an attendant may not have access to the inside of the front cabinet.

Open the ticket door and load or reload the dispenser with tickets. You may use the motor enable switch on the side of the dispenser logic until the "dah dah" tone is heard through the UB-QB speaker. The tone informs you that the ticket notch signal is available.

Press #1 & #2 buttons consecutively and tickets owed will dispense.

**NOTE:** Odd number of tickets:

Example: The game is set for 75 cents per minute of play. Redemption is set for 1 ticket for each 10 points. The minimum is set for 1 ticket. A 2 player game is selected and neither player accumulates enough points to receive a ticket during game play. At the end of the game, player #1 gets 2 tickets and player #2 gets 1 ticket. Odd ticket is always awarded to player #1.

**NOTE:** If at any point you want to go back to the beginning of the Redemption Option, press the #1 and #2 Buttons simultaneously.

The Default Setting for the Redemption Option is No Redemption.

#### G. FREE PLAY

When enabled, this Option permits players to play without inserting any coins. If you elect to enable this Option, you can select the number of minutes (between one and nine) given to a player when he selects a One Player free game and you can select a different number or the same number of minutes (between one and nine) that two players will get when they select a Two Player free game.

The Default Setting for this Option is Disabled.

#### H. ATTRACT MUSIC

This Option allows you to set the length of time between the audio of the attract music. The time can be set in five minute increments beginning at five minutes and ending at 30 minutes. You can also select to disable the attract music so that it never plays except when the game is coined up.

The Default Setting for this Option is Five Minutes.

#### I. HIGH SCORE ERASE

The game logic retains in memory the Best Stats even through a power down. See "Game Play-Best Stats". If you wish to continue to display the Best Stats from an earlier period, you want this Option disabled. If you want to start anew after a power down and allow new players to get the Best Stats recognition without beating prior periods' Best Stats, then you should enable this Option.

The Default Setting for this Option is Disabled.

#### J. GAME TIME BONUS

This Option allows players to earn extra game time through obtaining a specified number of points. The operator may select the number of points required to earn extra game time and the amount of time (in seconds) rewarded. This bonus is one per game. For example, if this Option is set at "7 points" and "30 seconds," a player will receive 30 additional seconds of game time once he obtains seven points. He will not receive additional bonus time upon obtaining 14 points.

The Default Setting for this Option is Disabled.

#### K. KICKOFF YARDS

This Option allows the operator to set the number of yards a player has to goal after a kickoff in a One Player Game and a Two Player Game. For a One Player Game, you may select in 5 yard increments from 60 to 90 yards. For a Two Player Game, you may select from 60 to 90 yards or allow Random yardage within those ranges. The Random setting allows some of the unpredictability found in the actual game of football.

The Default Setting for this Option is "One Player-80 Yards" and "Two Player-Random".

#### L. YARDAGE

This Option permits the operator to select how difficult or easy it is for players to gain yards. You may set the range of yardage that a player gets for completing a short pass and a different range for completing a long pass. Yardage actually gained for a completion within the yardage range is determined randomly with each pass completion. If you do not want yardage to be randomly determined, you can set the low and the high range on the same number therefore assuring that each pass in that hole will receive the same yardage. The software will not let you set the high yardage below the low yardage.

The Default Setting for this Option is "Short Pass Low-1, "Short Pass High-9", "Long Pass Low-10" and Long Pass High-24".

#### M. TWO POINT CONVERSION

This Option allows players to earn two points on an extra point attempt after a touchdown by throwing through the top (long pass) hole. Throws through the bottom (short pass) hole earn one point. If this Option is disabled, throws through either hole earn one point.

The Default Setting for this Option is Enabled.

#### OPTION SETTINGS SCHEDULE

The schedule of all possible Option Settings follows. This should also be attached to the inside of the game's Front Cabinet and marked to indicate the Settings preset at the factory. If you change these settings, we recommend you mark your copy accordingly.

OPTIONS SETTINGS SCHEDULE

A. DEFAULT

Enabled  
 Not Enabled

B. COIN/TOKEN

Coin  
 Token

If Coin Option Enabled:

2. COIN #1

25 cents x 1  
 25 cents x 2  
 25 cents x 3  
 25 cents x 4  
 25 cents x 5  
 25 cents x 6  
 25 cents x 7  
 25 cents x 8  
 25 cents x 9  
 25 cents x 10

3. COIN #2

25 cents x 1  
 25 cents x 2  
 25 cents x 3  
 25 cents x 4  
 25 cents x 5  
 25 cents x 6  
 25 cents x 7  
 25 cents x 8  
 25 cents x 9  
 25 cents x 10

C. COINS PER CREDIT

<input type="checkbox"/> 1	<input type="checkbox"/> 11
<input type="checkbox"/> 2	<input type="checkbox"/> 12
<input type="checkbox"/> 3	<input type="checkbox"/> 13
<input type="checkbox"/> 4	<input type="checkbox"/> 14
<input type="checkbox"/> 5	<input type="checkbox"/> 15
<input type="checkbox"/> 6	<input type="checkbox"/> 16
<input type="checkbox"/> 7	<input type="checkbox"/> 17
<input type="checkbox"/> 8	<input type="checkbox"/> 18
<input type="checkbox"/> 9	<input type="checkbox"/> 19
<input type="checkbox"/> 10	<input type="checkbox"/> 20

- Two Player Any Credit
- Two Player Double Credit

D. SECONDS PER CREDIT

<input type="checkbox"/> 15	<input type="checkbox"/> 40
<input type="checkbox"/> 20	<input type="checkbox"/> 45
<input type="checkbox"/> 25	<input type="checkbox"/> 50
<input type="checkbox"/> 30	<input type="checkbox"/> 55
<input type="checkbox"/> 35	<input type="checkbox"/> 60

E. EXTRA TIME

Standard Credit  
 Bonus Credit  
 Coins/Continue

1. If Bonus Selected

Bonus at

<input type="checkbox"/> 2	<input type="checkbox"/> 4
<input type="checkbox"/> 3	<input type="checkbox"/> 5

2. If Coins Selected

(a) Coins \*

<input type="checkbox"/> 1	<input type="checkbox"/> 6	<input type="checkbox"/> 11	<input type="checkbox"/> 16
<input type="checkbox"/> 2	<input type="checkbox"/> 7	<input type="checkbox"/> 12	<input type="checkbox"/> 17
<input type="checkbox"/> 3	<input type="checkbox"/> 8	<input type="checkbox"/> 13	<input type="checkbox"/> 18
<input type="checkbox"/> 4	<input type="checkbox"/> 9	<input type="checkbox"/> 14	<input type="checkbox"/> 19
<input type="checkbox"/> 5	<input type="checkbox"/> 10	<input type="checkbox"/> 15	<input type="checkbox"/> 20

\* Software only indicates the number of coins up to less than the number of coins selected for a Standard Credit.

(b) Seconds

<input type="checkbox"/> 15	<input type="checkbox"/> 40
<input type="checkbox"/> 20	<input type="checkbox"/> 45
<input type="checkbox"/> 25	<input type="checkbox"/> 50
<input type="checkbox"/> 30	<input type="checkbox"/> 55
<input type="checkbox"/> 35	<input type="checkbox"/> 60

F. REDEMPTION

1. EQUIPMENT

No Redemption  
 1 Ticket Dispenser  
 2 Ticket Dispensers  
 1 Card Dispenser  
 1 Token Dispenser

2. CATEGORY

Yards  
 Points  
 Coins  
 Completions

3. RATIO				Unless Yards, then	
<u>  </u> 1	For	<u>  </u> 1	<u>  </u> 6	<u>  </u> 5	<u>  </u> 30
<u>  </u> 2		<u>  </u> 2	<u>  </u> 7	<u>  </u> 10	<u>  </u> 35
<u>  </u> 3		<u>  </u> 3	<u>  </u> 8	<u>  </u> 15	<u>  </u> 40
<u>  </u> 4		<u>  </u> 4	<u>  </u> 9	<u>  </u> 20	<u>  </u> 45
<u>  </u> 5				<u>  </u> 25	<u>  </u> 50

NOTE: If Completions selected, indicate Long Pass Ratio with an "L" and Short Pass Ratio with an "S".

4. LIMIT

<u>  </u> No Limit			
<u>  </u> 1	<u>  </u> 6	<u>  </u> 11	<u>  </u> 16
<u>  </u> 2	<u>  </u> 7	<u>  </u> 12	<u>  </u> 17
<u>  </u> 3	<u>  </u> 8	<u>  </u> 13	<u>  </u> 18
<u>  </u> 4	<u>  </u> 9	<u>  </u> 14	<u>  </u> 19
<u>  </u> 5	<u>  </u> 10	<u>  </u> 15	<u>  </u> 20

G. FREE PLAY

  Disabled  
  Enabled

If Free Play Enabled:

1. 1 PLAYER MINUTES

  1   6  
  2   7  
  3   8  
  4   9  
  5   0

2. 2 PLAYER MINUTES

  1   6  
  2   7  
  3   8  
  4   9  
  5   0

H. ATTRACT MUSIC

(In Minutes)

  5   25  
  10   30  
  15   No Music  
  20

I. HIGH SCORE ERASE

  Disabled  
  Enabled

J. GAME TIME BONUS

  Disabled  
  Enabled

IF ENABLED

1. Points

___ 3	___ 14
___ 6	___ 15
___ 7	___ 16
___ 8	___ 17
___ 9	___ 18
___ 10	___ 19
___ 12	___ 20
___ 13	

2. Seconds

___ 15	___ 40
___ 20	___ 45
___ 25	___ 50
___ 30	___ 55
___ 35	___ 60

K. KICKOFF YARDS

1. One Player

___ 60	___ 80
___ 65	___ 85
___ 70	___ 90
___ 75	

2. Two Player

___ Random	___ 75
___ 60	___ 80
___ 65	___ 85
___ 70	___ 90

L. YARDAGE

1. Short Pass Low

___ 1	___ 6
___ 2	___ 7
___ 3	___ 8
___ 4	___ 9
___ 5	

2. Short Pass High

___ 1	___ 6
___ 2	___ 7
___ 3	___ 8
___ 4	___ 9
___ 5	___ No Range(will appear at the same number as selected on the low Setting)



3. Long Pass Low

<input type="checkbox"/> 10	<input type="checkbox"/> 15	<input type="checkbox"/> 20
<input type="checkbox"/> 11	<input type="checkbox"/> 16	<input type="checkbox"/> 21
<input type="checkbox"/> 12	<input type="checkbox"/> 17	<input type="checkbox"/> 22
<input type="checkbox"/> 13	<input type="checkbox"/> 18	<input type="checkbox"/> 23
<input type="checkbox"/> 14	<input type="checkbox"/> 19	<input type="checkbox"/> 24

4. Long Pass High

<input type="checkbox"/> 10	<input type="checkbox"/> 15	<input type="checkbox"/> 20
<input type="checkbox"/> 11	<input type="checkbox"/> 16	<input type="checkbox"/> 21
<input type="checkbox"/> 12	<input type="checkbox"/> 17	<input type="checkbox"/> 22
<input type="checkbox"/> 13	<input type="checkbox"/> 18	<input type="checkbox"/> 23
<input type="checkbox"/> 14	<input type="checkbox"/> 19	<input type="checkbox"/> 24

No Range (Will  
appear at the same  
number as selected  
on the low Setting)

M. TWO POINT CONVERSION

Disabled  
 Enabled

## ACCOUNTING

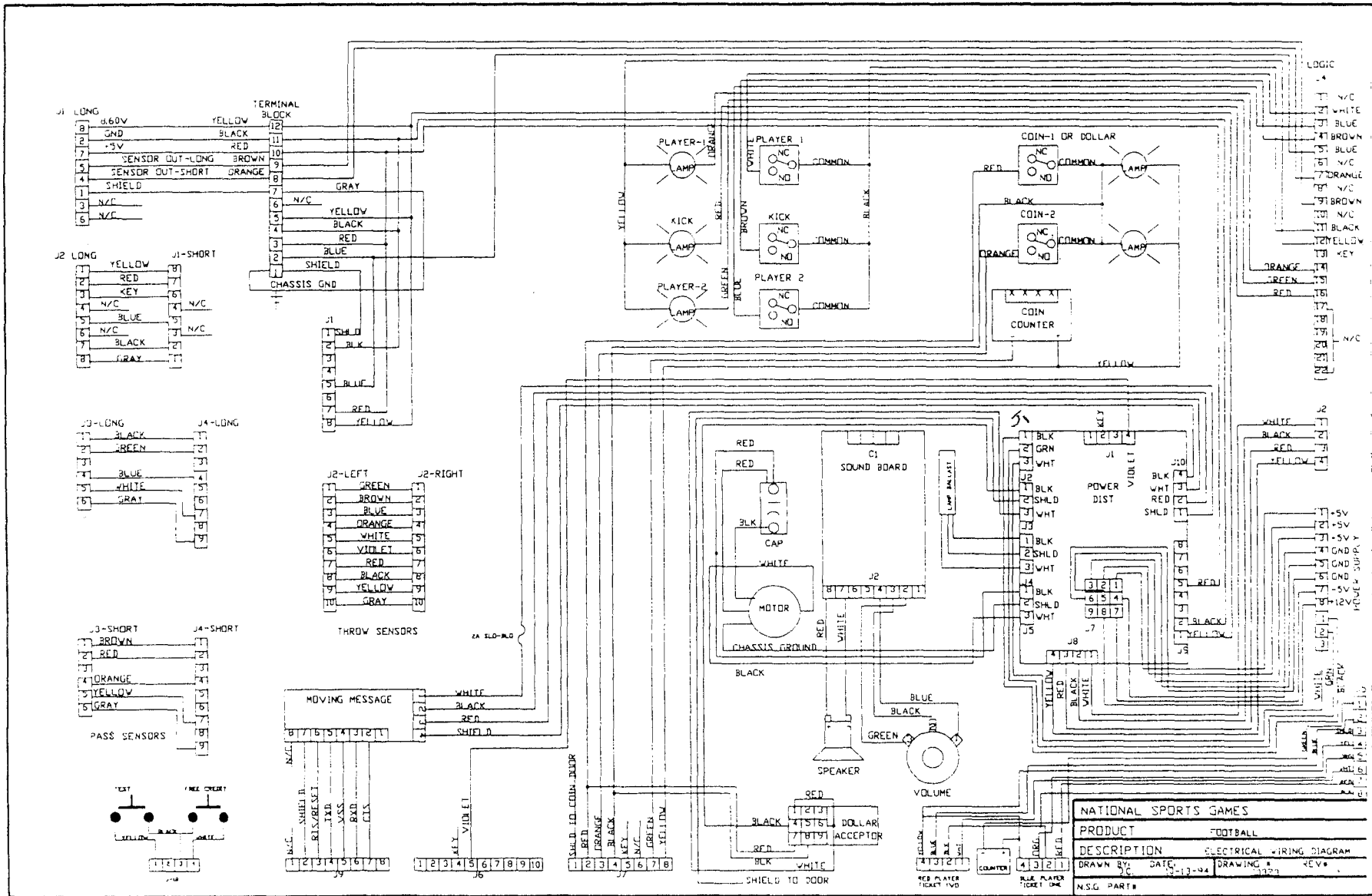
This feature allows you to retrieve a variety of information concerning the coins put into the game, the play of the game and, if applicable, the dispensing of tickets or cards.

To access the Accounting information, press the Test Button. After the Moving Message Sign has reset, press the #2 Button on the Control Panel to access the Accounting software. Within the Accounting software, press the #1 Button to advance to the next item, the #2 Button to move back to the previous item, and both the #1 and #2 Buttons simultaneously to return to the start. To clear the subtotals, proceed to the last item on the menu and press the Kick Button.

Listed below are the items included within the Accounting mode and a description if applicable.

<u>Item</u>	<u>Description</u>
Accounts Total	The Total amount of money put into the game since it was shipped from the factory.
Accounts Subtotal	The amount of money put into the game since this item was last cleared.
Coin #1 Total	The total number of coins put through Coin #1.
Coin #1 Subtotal	The number of coins put through Coin #1 since this item was last cleared.
Coin #2 Total	The total number of coins put through Coin #2.
Coin #2 Subtotal	The number of coins put through Coin #2 since this item was last cleared.
Coin Counter	This should match the mechanical coin counter on the coin door. The total number of coins put through the game.
Bonus Total	The total number of bonus credits given.
Bonus Subtotal	The number of bonus credits given since this item was last cleared.
Coin #1 Test	The total number of "coins" put through coin slot #1 during test.

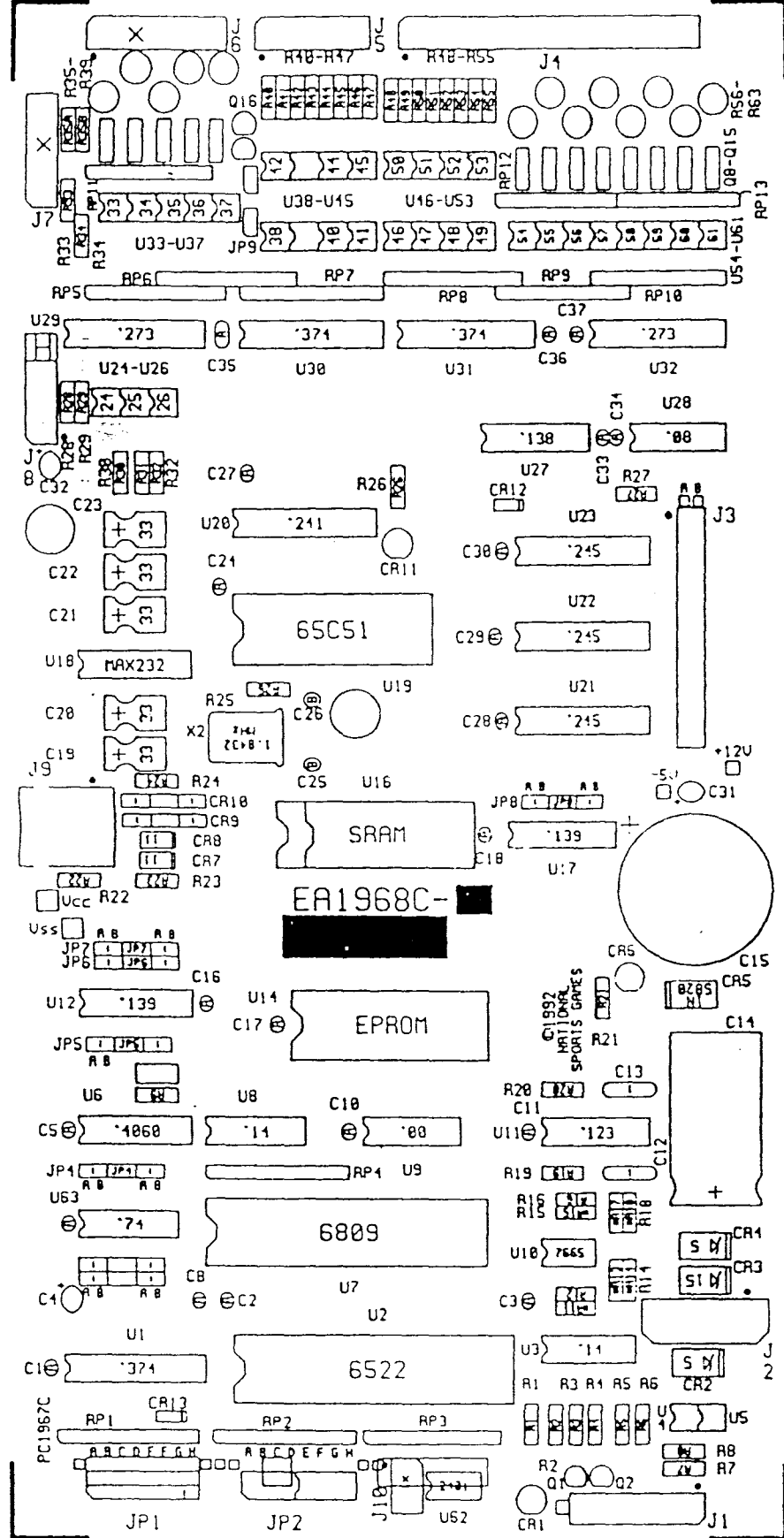
Coin 2 Test	The total number of "coins" put through coin slot #2 during test.
Free Play Total	The total number of free play games played on the game.
Free Play Subtotal	The number of free play games played since this item was last cleared.
Games Total	The total number of games played (includes free play).
Games Subtotal	The number of games played since this item was last cleared. This item can only be cleared by clearing the One Player Subtotal and Two Player Subtotal.
One Player Total	The total number of One Player games played.
One Player Subtotal	The number of One Player games since this items was cleared.
Two Player Total	The total number of Two Player games played.
Two Player Subtotal	The number of Two Player games since this item was cleared.
X Play Total	The total number of times bonus time has been given to players because of scoring achievements (Option J).
X Play Subtotal	The number of times bonus time has been given since this item was cleared.
Redemption Total	The total number of tickets (or cards or tokens) dispensed.
Redemption Subtotal	The number of tickets (or cards or tokens) dispensed since this item was cleared.
Redemption Counter	Should match the mechanical counter on the ticket door. The total number of tickets dispensed.
Redemption Max	The most tickets dispensed in one game since this item was cleared.
Clear Subtotals	Allows for clearing of all subtotal values.



NATIONAL SPORTS GAMES	
PRODUCT	FOOTBALL
DESCRIPTION	ELECTRICAL WIRING DIAGRAM
DRAWN BY: SC	DATE: 12-13-54
DRAWING #	REV#
N.S.G. PART #	

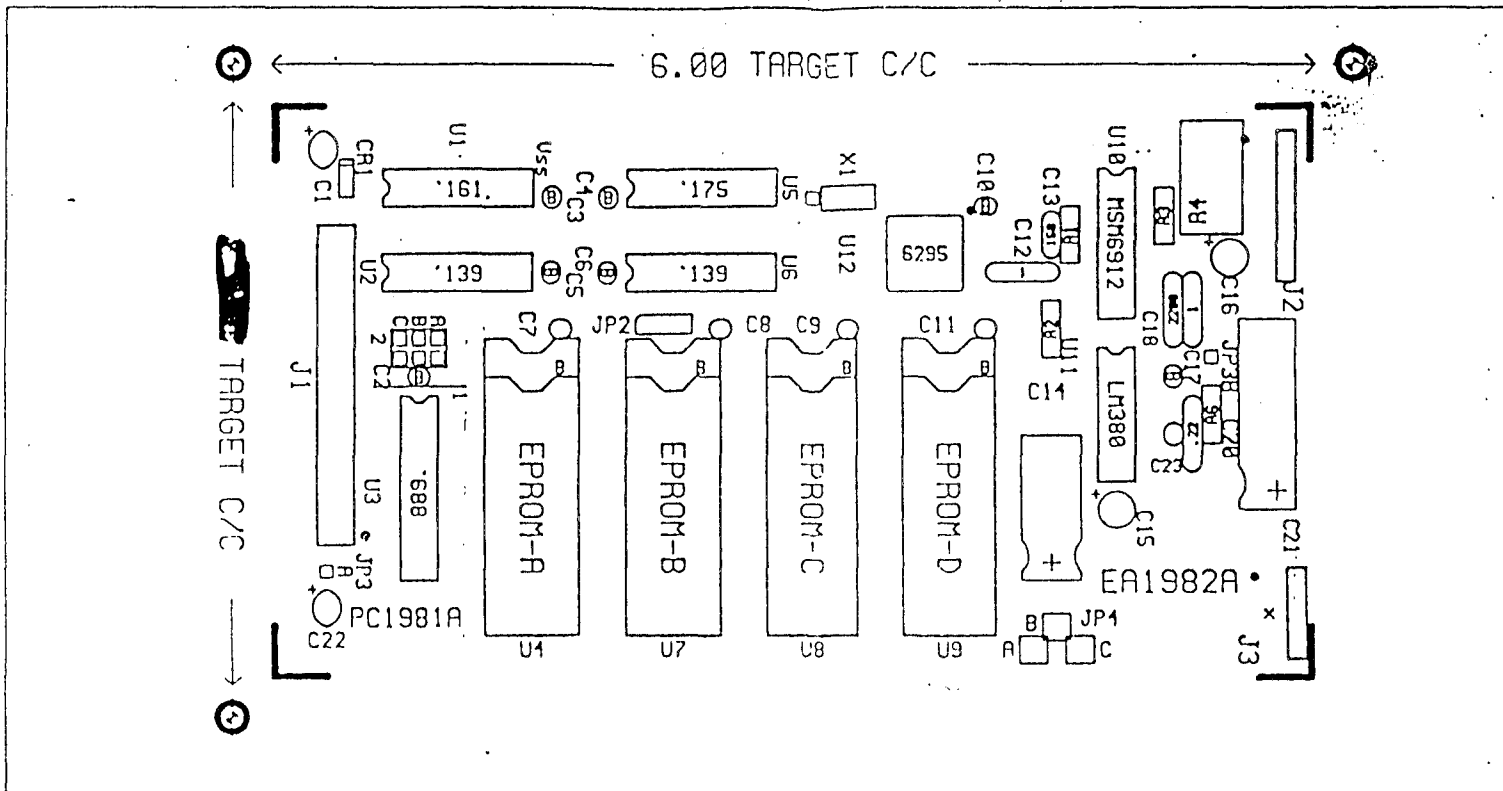
11.800 TARGET C/C

6.300 TARGET C/C



NATIONAL SPORTS GAMES, INC.		TITLE UNIVERSAL GAME PCB		REV
PCB DIMENSION (L x W)		THICKNESS	DRAWING NO.	
2 00.000 x 00.000		.063	PC1967	
PCB MATERIAL		LEAD PLATE	FINISH	SCALE: 1x
FR4		2	TIN/NICKLE	DATE: 07-17-92
UNLESS OTHERWISE SPECIFIED		DIMENSIONS ARE IN INCHES		
.XX = 0.010		.XXX = 0.005		
SIZE	IDENT. NO.	DATE	SHEET 1 OF 5	
N/A	PCB	07-17-92	PC1967	

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# NATIONAL SPORTS GAMES, INC.

LAYERS	PCB DIMENSION (L x W)	THICKNESS
2	5.500 x 3.000	.063
PCB MATERIAL	Cu WEIGHT	PLATE
FR4	2oz	n/a
FINISH		
TIN/NICKLE		

TITLE	AUX. SOUND PCB		
SILK SCREEN MASK			

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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES

.XX = ±.020 .XXX = ±.010 ANGLES = ±0.5°

SIZE	IDENT. NO.	DRAWING NO.	REV.
A	PCB	PC1981	A
SCALE: 1x	DATE: 02-07-92	SHEET 1 OF 5	

## UBQB CABLE LIST

CONNECTOR: J1

PCB: POWER DISTRIBUTION

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	N/C			
2	N/C			
3	N/C	Key		
4	Purple	Motor On	J6-5 Logic	

CONNECTOR: J2

PCB: POWER DISTRIBUTION

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Black	AC Hot	Power-Supply	
2	Green	Earth Ground	Power-Supply	
3	White	AC Neutral	Power-Supply	

CONNECTOR: J3

PCB: POWER DISTRIBUTION

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Red	AC Neutral	Bill Acceptor	
2	Bare	Shield	Coin Door	
3	Black	AC Hot	Bill Acceptor	

CONNECTOR: J5

PCB: POWER DISTRIBUTION

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Red	AC Neutral	Motor	
2	Bare	Earth Ground	Motor	
3	Black	Switched Ac Hot	Motor	

CONNECTOR: J7

PCB: POWER DISTRIBUTION

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Red	+ 5 V	Power-Supply	
2	Red	+ 5 V	Power-Supply	
3	Red	+ 5 V	Power-Supply	
4	Black	Vss	Power-Supply	
5	Black	Vss	Power-Supply	
6	Black	Vss	Power-Supply	
7	White	- 5 V	Power-Supply	
8	Yellow	+ 12 V	Power-Supply	
9	N/C	Key		

# UBQB CABLE LIST

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Connector: J8

PCB: POWER DISTRIBUTION

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	White	-5 V	J2-1 (Logic)	
2	Red	Vss	J2-2 (Logic)	
3	Black	+5 V	J2-3 (Logic)	
4	Yellow	+12 V	J2-4 (Logic)	

Connector: J9

PCB: POWER DISTRIBUTION

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Yellow	+ Regulated	TB-5, TB-12	
2	Black	Vss	TB-4, TB-11	
3	n/c			
4	n/c			
5	RED	+5 V	TB-3, TB-10	
6	n/c			
7	n/c			
8	n/c			

Connector: J10

PCB: POWER DISTRIBUTION

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Green	Earth Ground	Sign J2-4	
2	Red	20 VAC	Sign J2-3	
3	White	C/T	Sign J2-1	
4	Black	20 VAC	Sign J2-2	

Connector: J2

PCB: UNIVERSAL

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	White	-5 VDC	Power Dist. J8-1	
2	Black	Vss (Common)	Power Dist. J8-2	
3	Red	+5 VDC	Power Dist. J8-3	
4	Yellow	+12 VDC	Power Dist. J8-4	



# UBQB CABLE LIST

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Connector: J4

PCB: UNIVERSAL

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	n/c			
2	White	Player 1 Button	Player 1 Switch (n/o)	
3	Blue	Player 2 Button	Player 2 Switch (n/o)	
4	Brown	Kick Button	Kick Switch (n/o)	
5	Blue	Throw Sensor In	TB-2	
6	n/c			
7	Orange	Short Pass Sensor In	TB-8	
8	n/c			
9	Brown	Long Pass Sensor In	TB-9	
10	n/c			
11	Black	Vss	Kick Switch (com) Player 1 Switch (com) Player 2 Switch (com)	
12	Yellow	+12 VDC	Kick Lamp Player 1 Lamp Player 2 Lamp	
13	n/c	Key		
14	Orange	Player 1 Out	Player 1 Lamp	
15	Green	Player 2 Out	Player 2 Lamp	
16	Red	Kick Out	Kick Lamp	
17	n/c			
18	n/c			
19	n/c			
20	n/c			
21	n/c			
22	n/c			

Connector: J5

PCB: UNIVERSAL

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Bare	Shield	Ticket-Case	
2	Yellow	+12 VDC	Ticket-4	
3	White	Motor Enable	Ticket-3	
4	n/c	Key		
5	Blue	Notch In	Ticket-1	
6	Black	Vss	Ticket-2	

# UBQB CABLE LIST

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Connector: J6

PCB: UNIVERSAL

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	n/c			
2	n/c			
3	n/c			
4	n/c	Key		
5	Purple	Motor On	Power Dist. J1-4	
6	n/c			
7	n/c			
8	n/c			
9	n/c			
10	n/c			

Connector: J7

PCB: UNIVERSAL

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Bare	Shield	Coin Door	
2	Red	Coin 1 In	Coin 1 Switch (N/O)	
3	Orange	Coin 2 In	Coin 2 Switch (N/O)	
4	Black	Vss	Coin 1 (COM) Coin 2 (COM) Coin Lamps	
5	n/c	Key		
6	n/c			
7	White	Coin Counter Pluse	Coin Counter	
8	Red	+12 VDC	Coin Counter + Coin Lamps	

Connector: J8

PCB: UNIVERSAL

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Bare	Shield	Aux Shield	
2	Red	Receive	Aux-2	
3	n/c	Key		
4	WHITE	Enable	Aux-1	
5	Green	Transmit	Aux-4	
6	Black	Vss	Aux-3	

# UBQB CABLE LIST

Page 41

Connector: J8

PCB: POWER DISTRIBUTION

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	White	-5 V	J2-1 (Logic)	
2	Red	Vss	J2-2 (Logic)	
3	Black	+5 V	J2-3 (Logic)	
4	Yellow	+12 V	J2-4 (Logic)	

Connector: J9

PCB: POWER DISTRIBUTION

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Yellow	+ Regulated	TB-5, TB-12	
2	Black	Vss	TB-4, TB-11	
3	n/c			
4	n/c			
5	RED	+5 V	TB-3, TB-10	
6	n/c			
7	n/c			
8	n/c			

Connector: J10

PCB: POWER DISTRIBUTION

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Green	Earth Ground	Sign J2-4	
2	Red	20 VAC	Sign J2-3	
3	White	C/T	Sign J2-1	
4	Black	20 VAC	Sign J2-2	

Connector: J2

PCB: UNIVERSAL

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	White	-5 VDC	Power Dist. J8-1	
2	Black	Vss (Common)	Power Dist. J8-2	
3	Red	+5 VDC	Power Dist. J8-3	
4	Yellow	+12 VDC	Power Dist. J8-4	

# UBQB CABLE LIST

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Connector: J1

PCB: LONG PASS SENSOR

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Bare	Shield	TB-7	
2	Black	Vss	TB-11	
3	n/c			
4	Orange	Short Pass Sensor Out	TB-8	
5	Brown	Long Pass Sensor Out	TB-9	
6	n/c	Key		
7	Red	+ 5 VDC	TB-10	
8	Yellow	+ Regulated	TB-12	

Connector: J3

PCB: LONG PASS SENSOR

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Black	Vss	J4-1	
2	Green	Drive-1	J4-2	
3	n/c			
4	Blue	Drove-2	J4-4	
5	Yellow	+ Regulated	J4-7	
6	Bare	Shield	J4-9	
	Gray		J4-9	

Connector: J2

PCB: LONG PASS SENSOR

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Yellow	+ Regulated	J1-8	Short Pass Receiver
2	Red	+ 5 VDC	J1-7	Short Pass Receiver
3	n/c	Key		
4	n/c			
5	Blue	Short Pass Sensor Out	J1-4	Short Pass Receiver
6	n/c			
7	Black	Vss	J1-2	Short Pass Receiver
8	Bare	Shield	J1-1	Short Pass Receiver

# UBQB CABLE LIST

Page 43

Connector: J3

PCB: SHORT PASS SENSOR

PIN	WIRE COLOR	FUNCTION	DESTINATION	COMMENTS
1	Brown	Vss	J4-1	Short Pass Emitter
2	Red	Drive-1	J4-2	Short Pass Emitter
3	n/c			
4	Orange	Drive-2	J4-4	Short Pass Emitter
5	Yellow	+ Regulated	J4-7	Short Pass Emitter
6	Bare Gray	Shield	J4-9	Short And Long Emitter Long Receiver

## TERMINAL BLOCK

PIN	WIRE COLOR	A SIDE DESTINATION	B SIDE DESTINATION
1	Bare Gray	Chassis Ground	Chassis Ground
2	Blue	Left Throw Sensor J1-5	Logic J4-3
3	Red	Left Throw Sensor J1-7	Power Distribution J9-5
4	Black	Left Throw Sensor J1-2	Power Distribution J9-2
5	Yellow	Left Throw Sensor J1-8	Power Distribution J9-1
6	n/c		
7	Gray Bare	Long Pass Sensor J1-1	Chassis Ground
8	Orange	Long Pass Senson J1-4	Logic J4-7
9	Brown	Long Pass Senson J1-5	Logic J4-4
10	Red	Long Pass Senson J1-7	Power Distribution J9-5
11	Black	Long Pass Senson J1-2	Power Distribution J9-2
12	Yellow	Long Pass Senson J1-8	Power Distribution J9-1

UB-QB  
FOOTBALL CHALLENGE  
TROUBLESHOOTING GUIDE

Introduction:

The purpose of this guide is to help you pinpoint a problem area and eliminate the undue process of parts swapping, expedited snipping charges and other hassles associated with a breakdown due to unknown causes. In order to successfully follow this guide, it is imperative the individual understands the overall play of the game and its test functions.

Reading the Game Play portion of the Assembly/Operating Manual will enable one to better understand how and when certain functions relating to hardware (the physical printed circuit boards and components thereof) and software (the program which actually commands the hardware) interact.

Reading the test portion of the Assembly/Operating Manual will enable one to pinpoint the problem area quickly.

The ability to utilize a DVM (Digital Volt Meter) is critical and this guide will be of little value to anyone not understanding the operation of a DVM.

The overall content is written according to the most common problems of which NSG has been made aware. Listed below are general descriptions of the principal working parts of UB-QB and a brief analysis of their functions.

Section A

1. Checking DC Voltages

Refer to Figure 1.

NOTE: The term continuity is used herein. Simply put, one end of the circuit is connected to another.

- A. +5 Volts - attach black lead from VSS on Logic PC and put red lead at Band Side of CR5. A steady reading of 5.10 should show on the DVM.

This voltage is strictly for the logic.

- B. +12 Volts - attach black lead from VSS on Logic PC and put red lead at + Side of C11. A steady reading of 12.10 should show on the DVM.

This voltage is for lamps and sound.

It is also necessary to check the regulated side of the 12 VDC as follows. Attach black lead from DVM at terminal block (black wire) and put red lead at terminal block (yellow wire). A steady reading of 8.60 should show on the DVM.

This voltage is strictly for sensor logic.

## 2. Logic Printed Circuit Board

This is the largest printed circuit board (PCB) in the game and the option switches are located on this PCB.

- A. Red light - labeled CR6, next to large green capacitor (C15). When on this signifies game is in reset.

Upon powering up game, this light comes on momentarily and then turns off. This signifies that the logic has successfully performed its power up sequence.

- B. Green light - labeled CR1.

When flashing at one second intervals, this signifies that the program is operating properly.

- C. Orange Light - Data from Matrix Display being received.

## 3. Sound PCB

This PCB is mounted to the top of the logic and towards the top of the game. It creates all sounds for the game.

Volume control is located on the top of the chassis plate. This is a small round device, and it is labeled. Volume is increased by turning clockwise.

4. Power Distribution/Motor Control PCB

This PCB is located directly between the Sound PCB and the Power Supply. This circuit switches AC Power to the conveyor motor when it receives a command from the logic. It generates 20VAC for the moving message display. The sensor power is 8.6 VDC regulated from this PCB as well. 110 volts for the Target Lamp & Bill Acceptor originates from this PCB also.

5. Power Supply

This is a chrome metal box mounted directly next to the logic PCB. This unit converts the AC voltage coming from pushbutton on/off switch is a small metal button. The voltage adjust is located 2" to the left of the on/off switch and adjusts voltage up counter clockwise.

6. Regulator

Located on the power distribution/motor control PCB (LM 338K). It converts 12 VDC to 8.60 VDC.

7. AC Line Fuse

Located on the upper right hand side of the power supply. In the event a "short" should occur anywhere in the AC system, the fuse will blow in order to protect the system. Replace with 1 amp slow-blo only.

8. Moving Message Display

Located in center of game. This unit displays game status and test information.

There are three L.E.D.s located on the left side of the game and they are visible from side of game below sensor channel.

Red = Sign is in reset  
Orange = Data is being received when flickering  
Green = Health light should be flashing at one second intervals

9. Throw Sensors

Located above message display enclosed in sheetmetal channels with covers. Although the PCBs appear similar, there is a difference between the left and right sides.



There are three emitters and three receivers on each side. The emitters and receivers are staggered so as to eliminate the infra red light beams from interfering with each other.

The left side receives the DC Power from the logic and transmits back when a sensor is triggered.

10. Pass Sensors

Located behind the target and enclosed in sheetmetal channels with covers.

- A. Pass receiving PCBs (2) located in left channel.
- B. Pass transmitter PCBs (2) located in right channel.

Transmitters constantly send a beam of light to receivers. When the light is interrupted, a signal is sent to the logic indicating a pass was completed.

11. Conveyor Drive Motor

Located below message display on left hand side of game. Motor is attached to a roller which turns a belt to return the footballs to the player. The motor is direct drive eliminating belts, pulleys etc.

Section B

Game Power Up Sequence - Normal Condition

1. Plug in game with front door open.
2. Red light (labeled on chassis cover "RED") on logic comes on, then off.
3. Green light (labeled on chassis cover "GREEN") flashes at one second intervals.
4. After 5 seconds, message displays system reset six times prior to sounding "Have A Nice Day".
5. Display will run pregame message while playing theme song "Mr. Touchdown".

# **NSG** **NATIONAL SPORTS GAMES**

America's Leading Sports Game Company

## **\* WARRANTY \***

National Sports Games, Inc., ("NSG") warrants to the original purchaser that the purchased product shall be free from defects in material and workmanship for a period of 60 days from the date of purchase, provided that the purchaser promptly notifies NSG in writing of a defect falling under this warranty. NSG's sole responsibility under this warranty shall be to repair or replace any product or any part thereof which fails during the warranty period as a result of any defect in material and workmanship. In no event shall NSG be liable for any incidental or consequential damages of any kind which may arise in connection with the product. NSG may require the purchaser to return any defective equipment or part to NSG at customer's cost prior to repairing or replacing any such item. This warranty is contingent upon proper and normal use of the product and does not cover equipment which has been modified without NSG's written consent or which has been subject to unusual physical stress, incorrect assembly, hook-up or other misuse, or on which the original identification marks have been removed. This warranty does not cover damage resulting from negligence of a carrier while being shipped from NSG to the purchaser.

Limitation on Liability - NSG's liability for damages hereunder, including but not limited to, liability for patent infringement or breach of warranty, shall not exceed the total of all charges and fees paid by the purchaser hereunder, exclusive of any taxes or other charges, (other than income taxes) which NSG was required to pay to third parties as the result of the receipt of such amounts. Purchaser expressly agrees in the event of any breach of this Agreement by NSG that purchaser's exclusive remedy hereunder shall be the right to recover damages, if any, sustained by purchaser, subject to the limitation on the amount of damages set forth above. **IN NO EVENT WILL NSG BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOST PROFITS EVEN IF NSG HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.** The terms "incidental damages" and "consequential damages" shall have in this agreement the same meaning as given in Arizona Revised Statutes 47-2715 (U.C.C. 2-715), as the same may be amended from time to time.

In no case, whether on account of any act or failure to act by NSG or others, shall NSG be liable to purchaser for NSG's or another manufacturer's negligence in design, manufacture, delivery or installation of the equipment.

Warranty

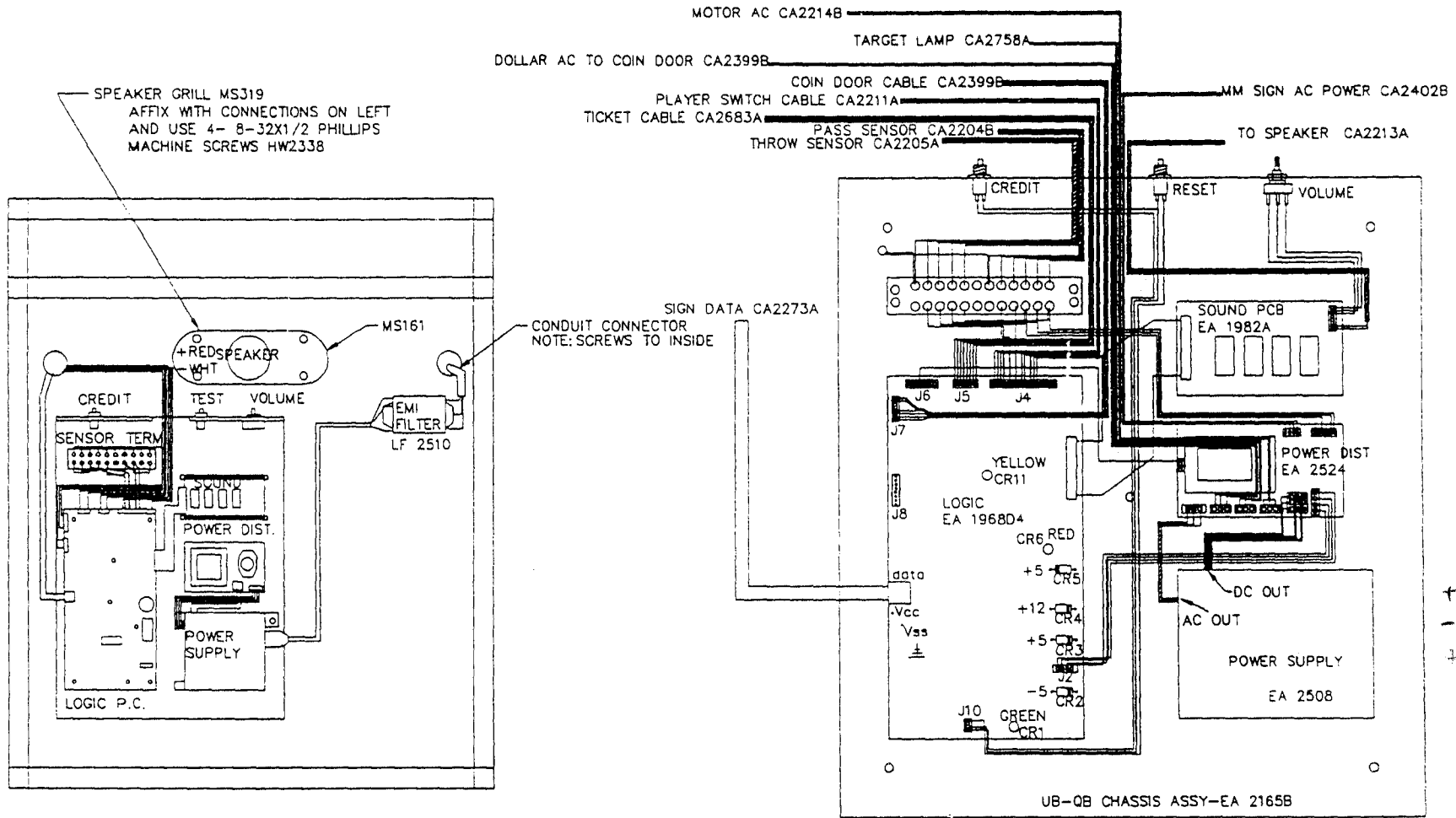
Page 57

No action, regardless of its form, whether in contract, in tort (including negligence), or otherwise, arising out of, or as a result of, this agreement, shall be commenced by purchaser more than one year after the occurrence of the act or event giving rise to such action.

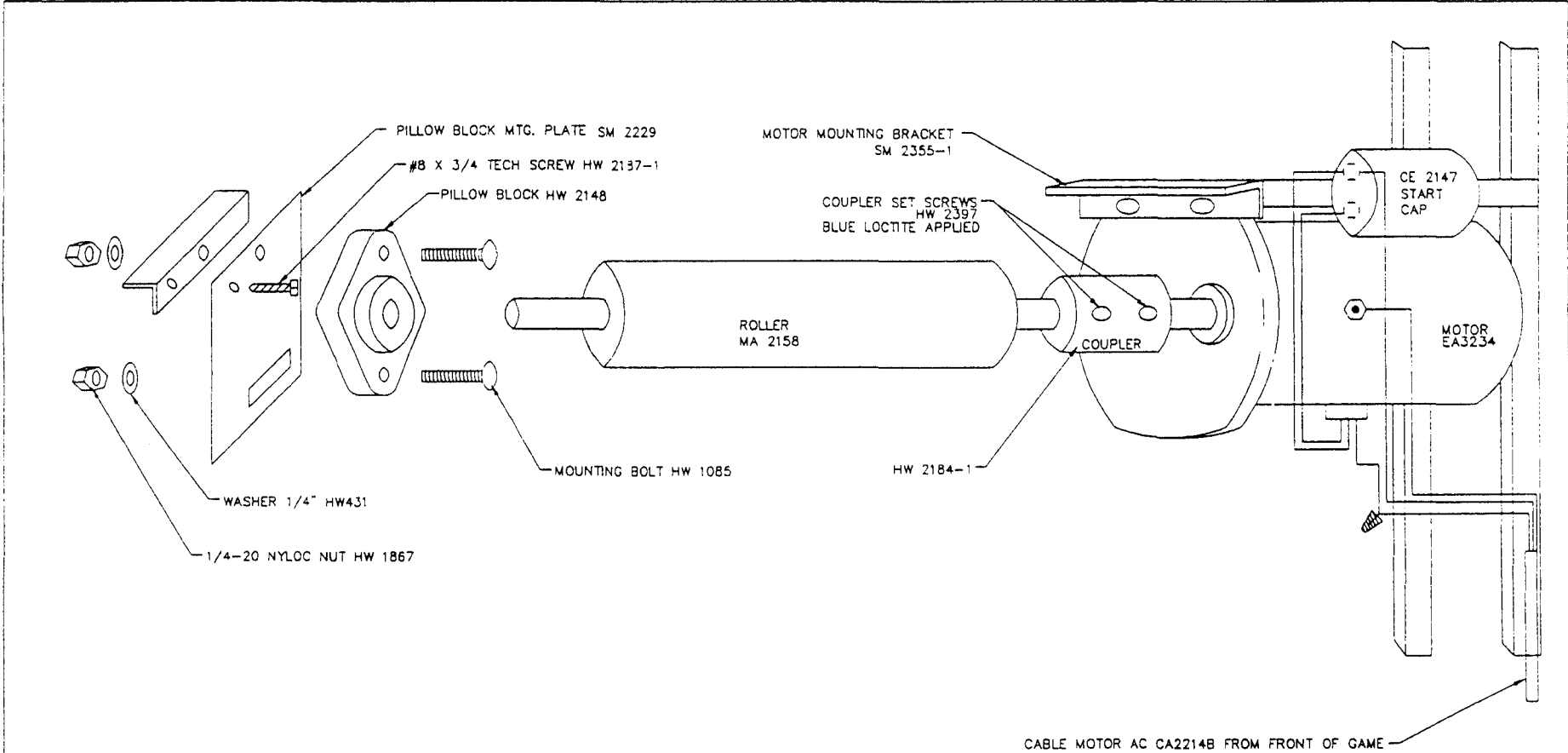
Purchaser acknowledges and agrees that purchaser's rights and remedies against any supplier or manufacturer of the equipment shall be subject to and limited by any limitations on liability or remedies contained in any agreement concerning non-NSG equipment between NSG and such supplier or manufacturer, as though purchaser were a party to such agreement.

**THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

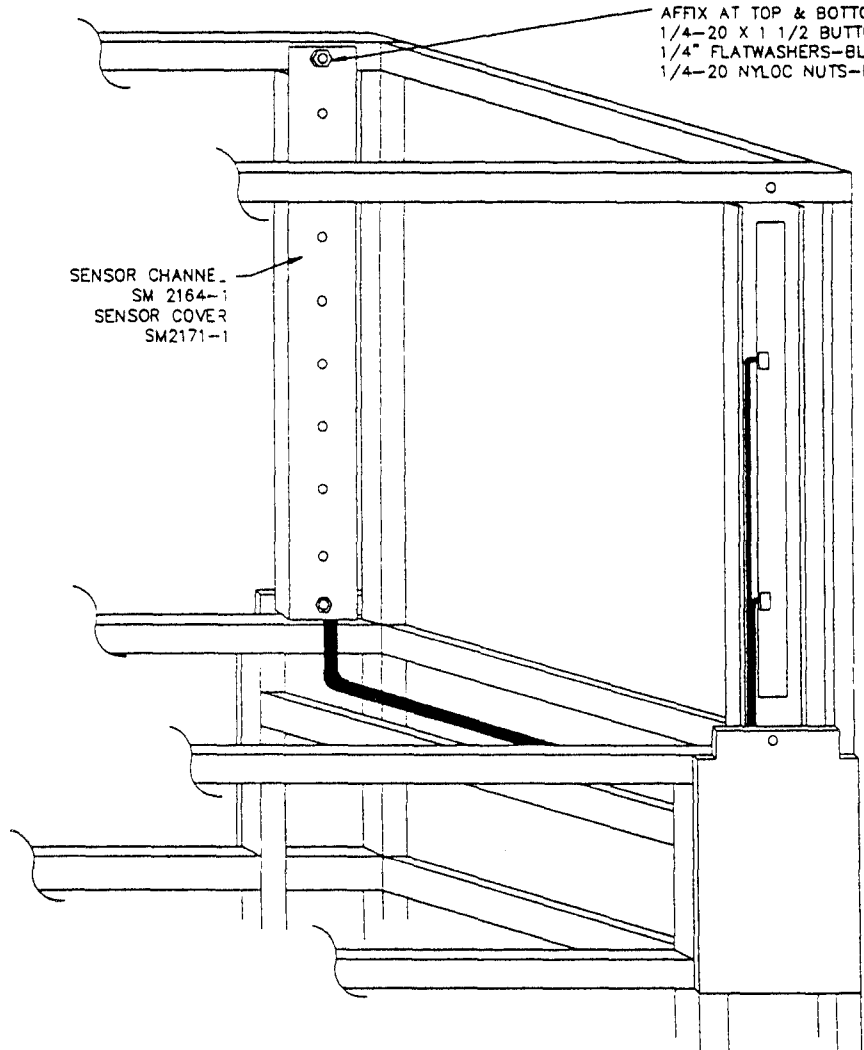
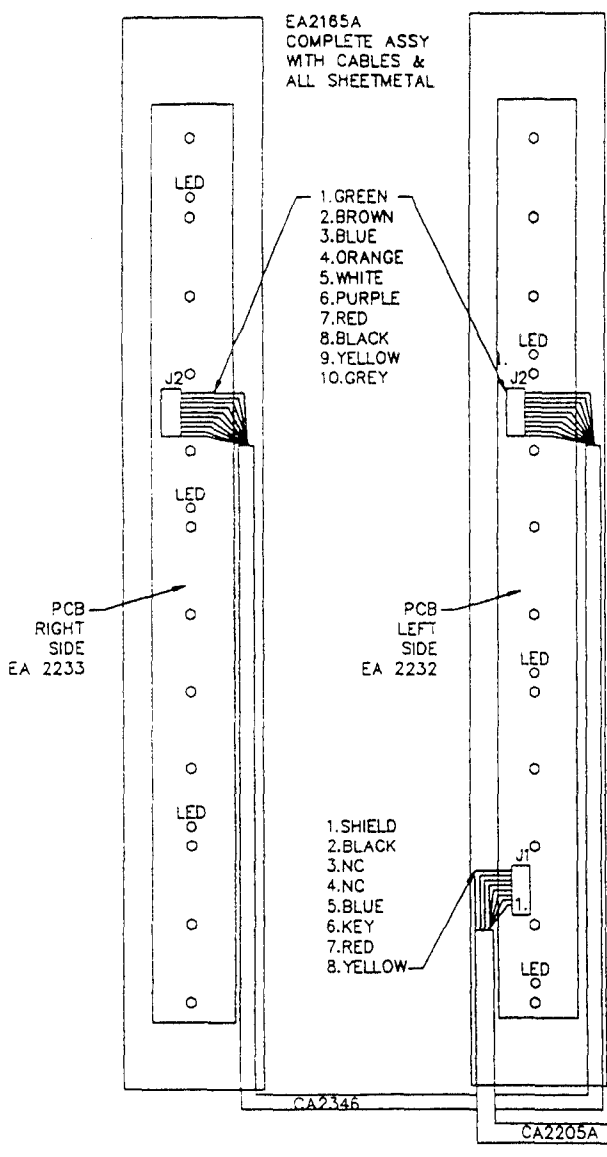
Made in the U.S.A.



NATIONAL SPORTS GAMES			
PRODUCT:	UB-QB FOOTBALL		
DESCRIPTION:	CHASSIS ASSY		
DRAWN BY:	DATE:	DRWG NO:	REV#
D.C.	10-11-93	30483	0
N.S.G. PART#	0		

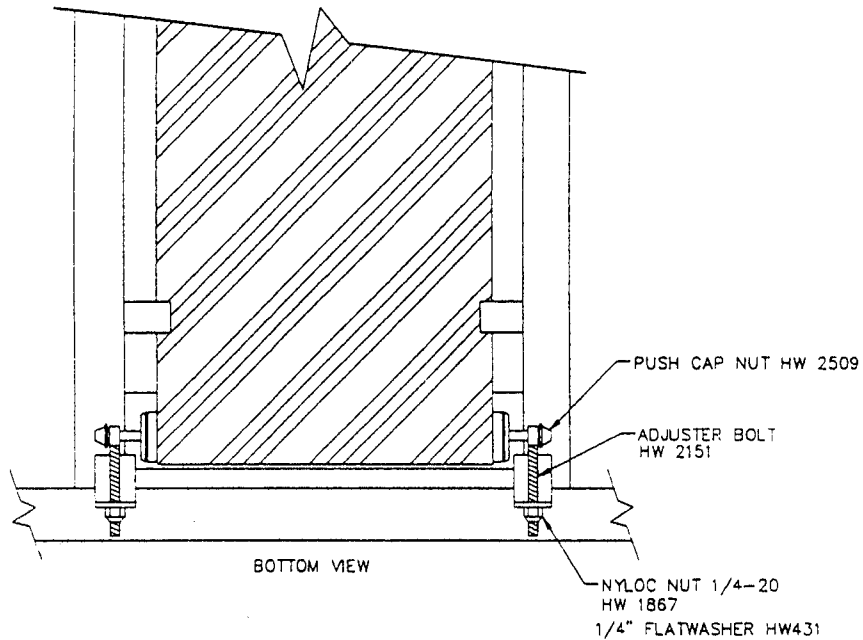


NATIONAL SPORTS GAMES			
PRODUCT	UR-QR FOOTBALL		
DESCRIPTION	MOTOR & ROLLER ASSY		
DRWN BY:	DATE	DRWG#	REV#
D.C.	10-13-93	30485	0
N.S.G. PART#	0		

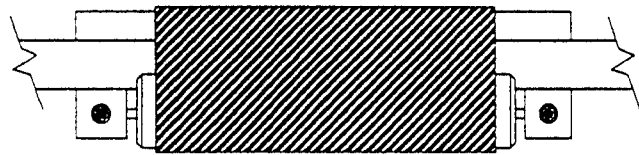


NOTE: HARDWARE TO INSTALL PCB'S  
UNDER PCB- 6-32 X 5/16  
STANDOFF HW2422  
#6 INTERNAL LOCKWASHER HW262  
TOP OF PCB  
6-32 X 7/16 STANDOFF HW3163  
TO AFFIX COVERS  
6-32 X 5/16 PHMS HW 746-1

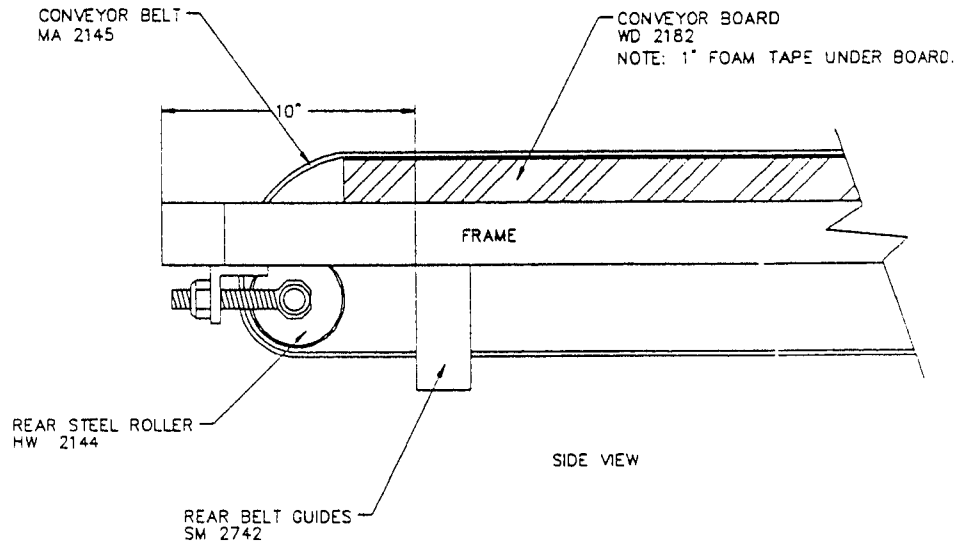
NATIONAL SPORTS GAMES			
PRODUCT:	UB-OB FOOTBALL		
DESCRIPTION:	THROW SENSOR ASSY		
DRWN BY:	DATE:	DRWG#	REV#
D.C.	10-29-93	30488	C
N.S.C. PART#	0 EA 2165A		



BOTTOM VIEW

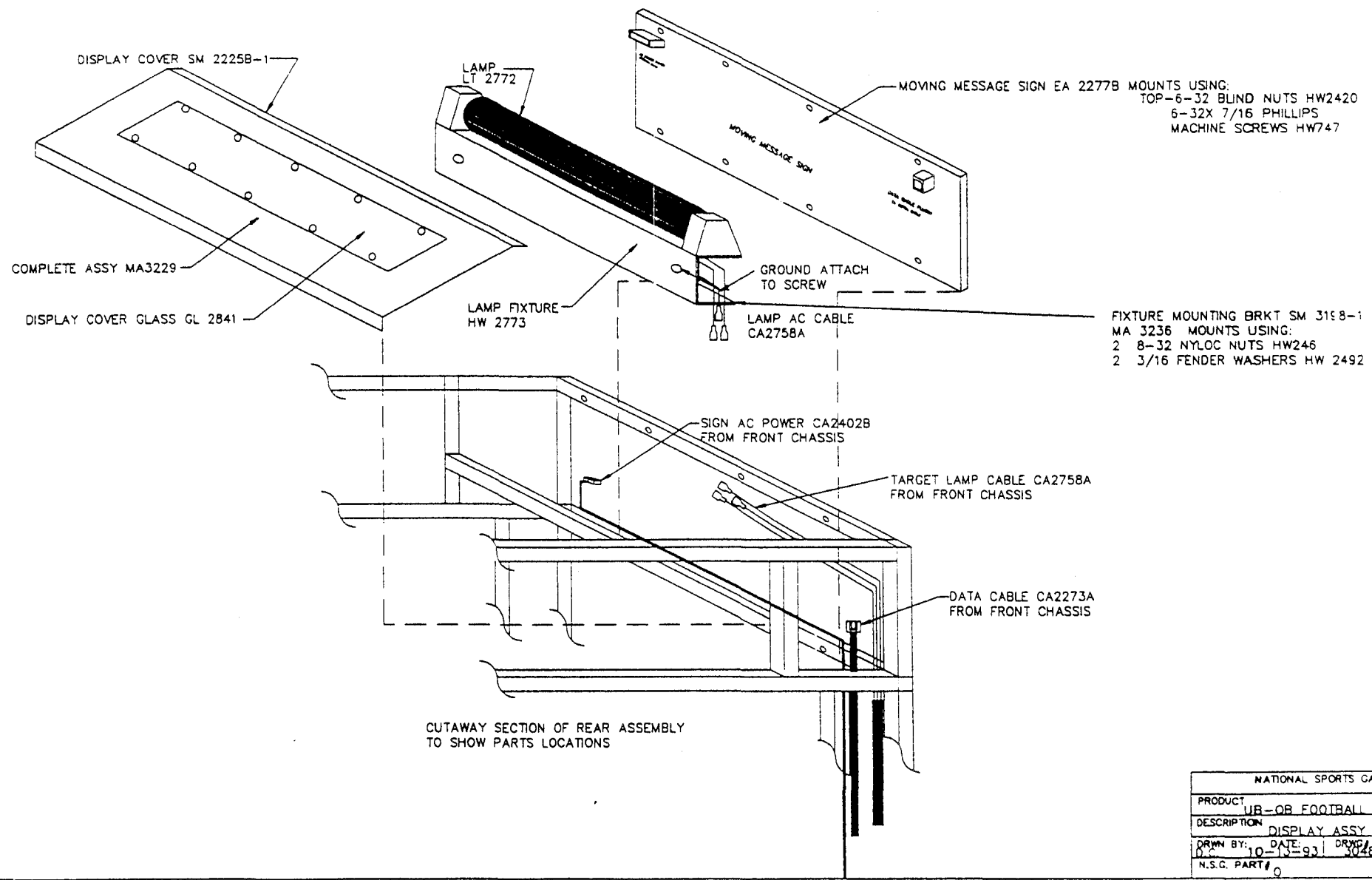


REAR VIEW



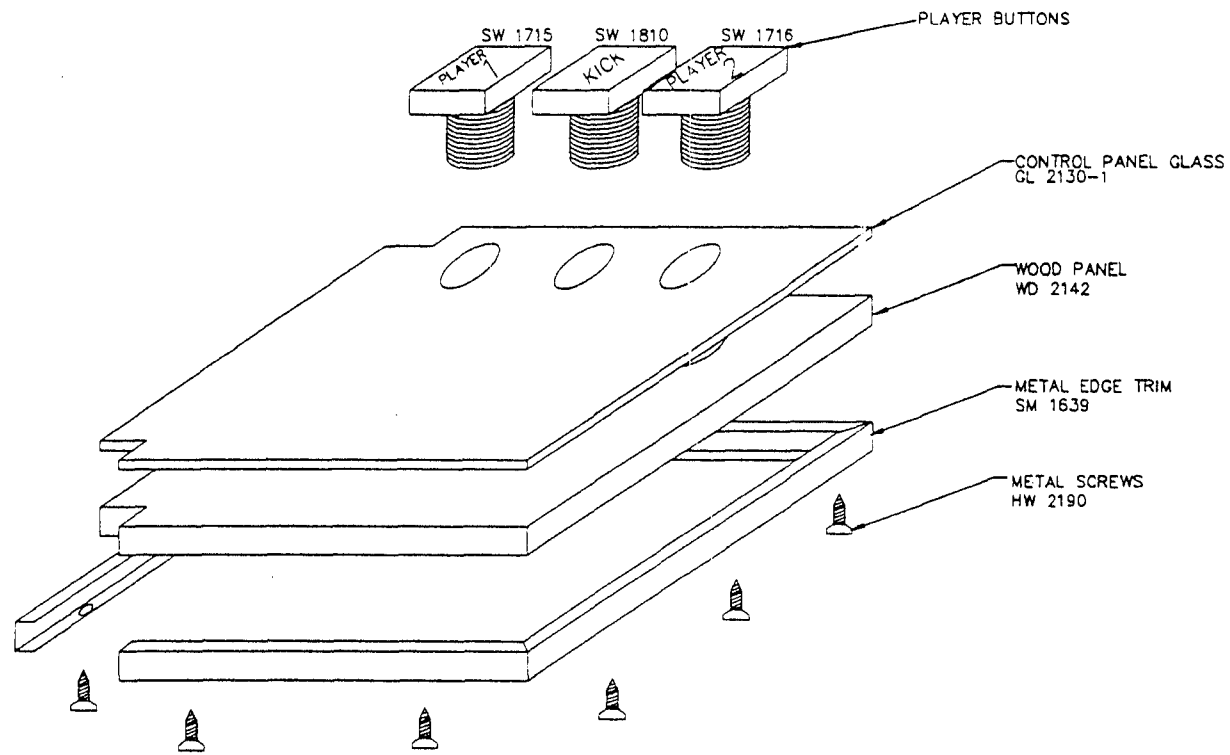
SIDE VIEW

NATIONAL SPORTS GAMES			
PRODUCT	UB-OB FOOTBALL		
DESCRIPTION	REAR ROLLER ASSY		
DRWN BY:	DATE:	DRWG#	REV#
0.2	10-18-93	30487	0
N.S.G. PART# 0			

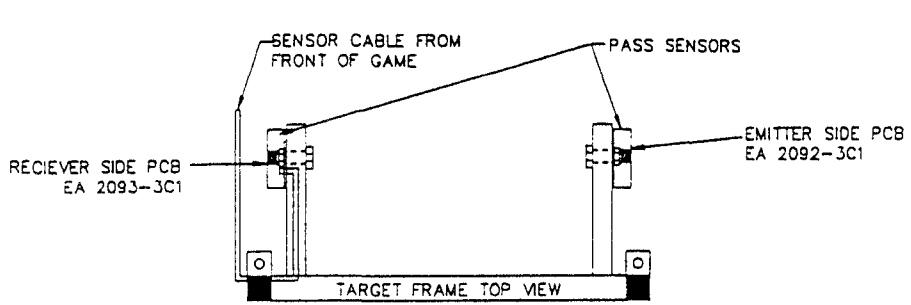


NATIONAL SPORTS GAMES			
PRODUCT	UB-OR FOOTBALL		
DESCRIPTION	DISPLAY ASSY		
DRAWN BY:	DATE:	DRWG/	REV#
02	10-13-93	30486	0
N.S.G. PART#	0		

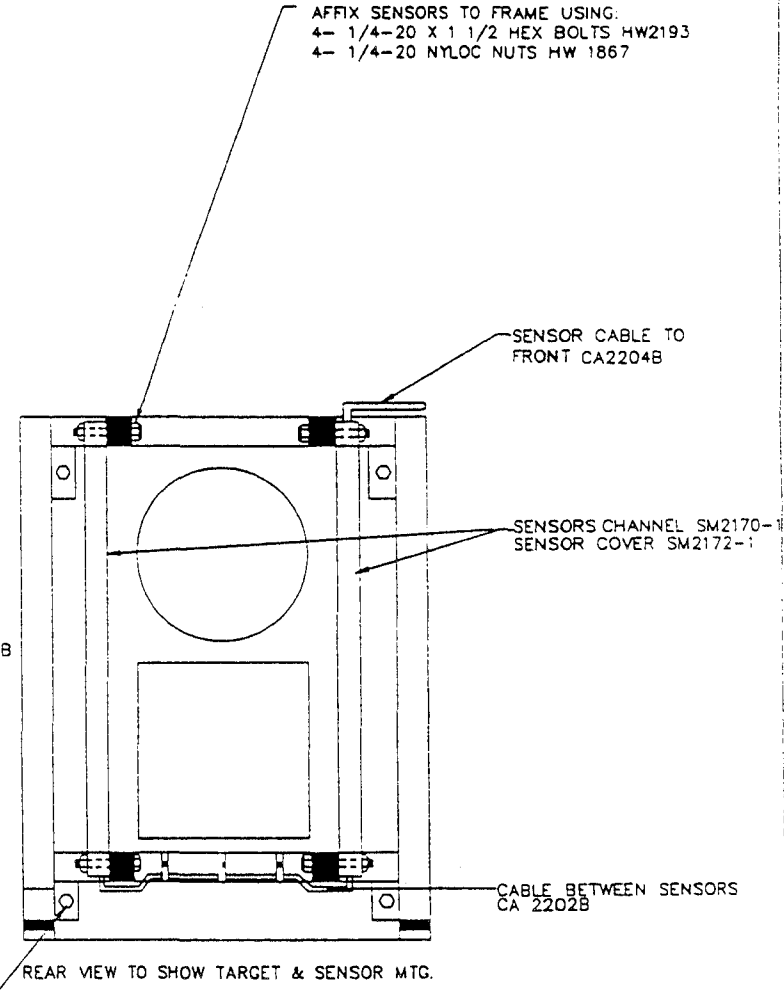
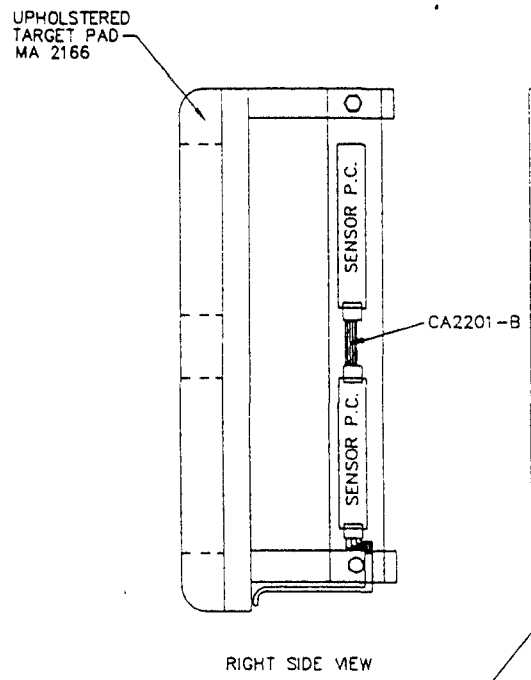
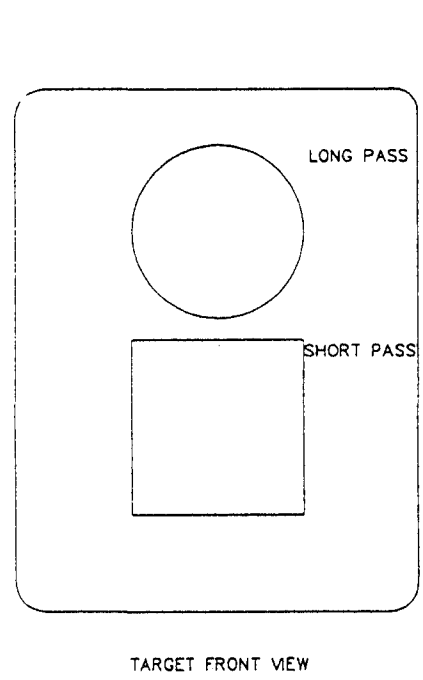




NATIONAL SPORTS GAMES			
PRODUCT	UB-OB FOOTBALL		
DESCRIPTION	CONTROL PANEL ASSY		
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D.C.	10-13-93	30484	0
N.S.G. PART#	MA 2160		

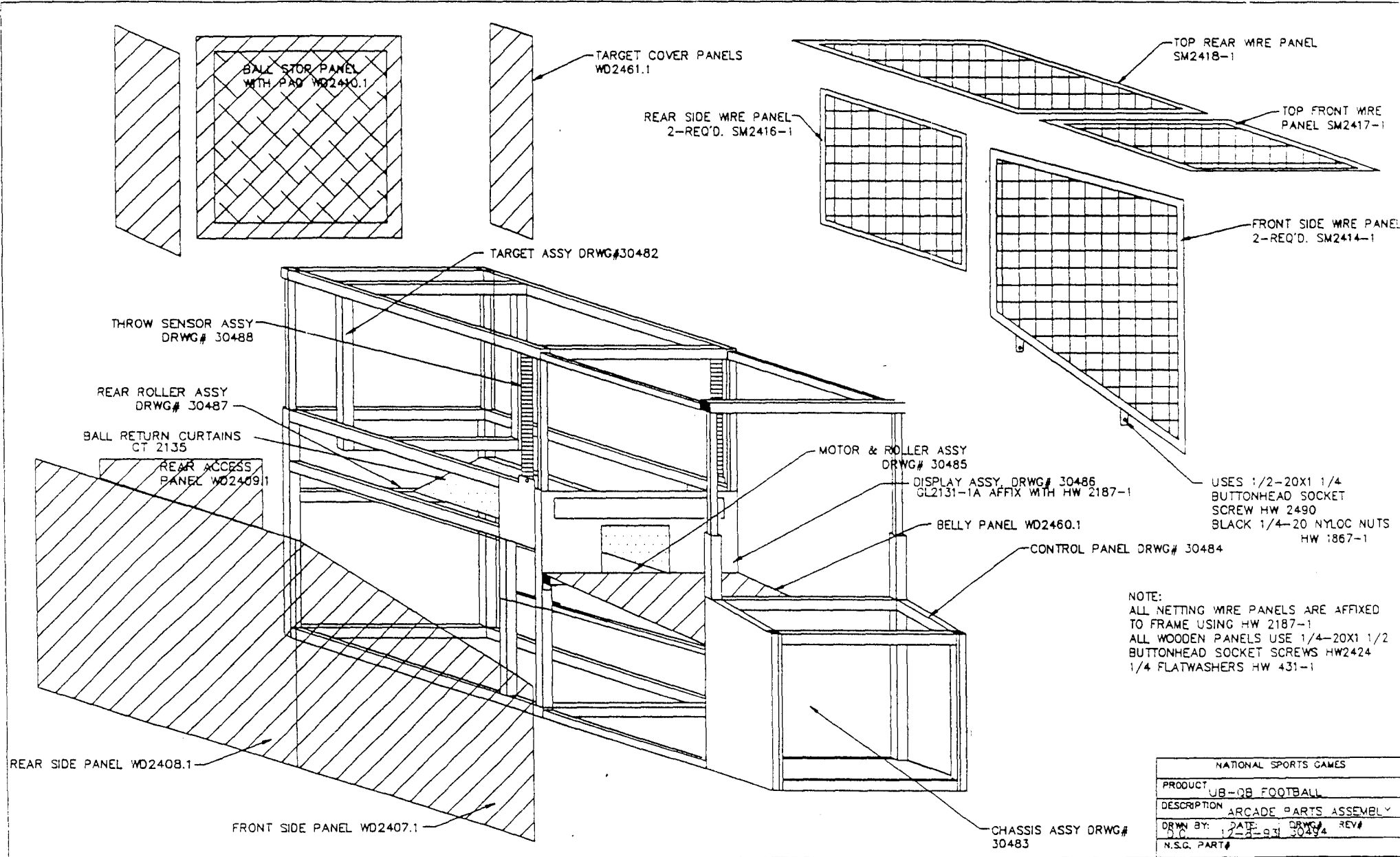


AFFIX SENSORS TO FRAME USING:  
 4- 1/4-20 X 1 1/2 HEX BOLTS HW2193  
 4- 1/4-20 NYLOC NUTS HW 1867



ATTACH TARGET TO FRAME USING:  
 4-1/4-20 X 1 3/4 BOLT HW 2192  
 4-1/4 LOCKWASHERS HW 442

NATIONAL SPORTS GAMES			
PRODUCT	11B-OB FOOTBALL		
DESCRIPTION	TARGET ASSY		
DRWN BY:	DATE:	DRWG#:	REV#:
D.C.	10-11-93	30482	0
N.S.G. PART#	0		



NATIONAL SPORTS GAMES	
PRODUCT	UB-08 FOOTBALL
DESCRIPTION	ARCADE PARTS ASSEMBLY
DRW BY: J.C.	DATE: 12-29-93
DRWG# 30483	REV# 4
N.S.G. PART#	

## Optional Bill Acceptor Installation

### **DANGER**

#### **RISK OF ELECTRIC SHOCK.**

**DISCONNECT ALL POWER PRIOR TO INSTALLATION OF CURRENCY MECHANISM.**

**THIS GAME WAS DESIGNED FOR THE MARS ELECTRONICS MODEL #VFM2-U4C BILL ACCEPTOR ONLY. DO NOT OPERATE THIS GAME WITH ANY OTHER ALTERNATE MODEL.**

- 1: Disconnect 9 pin connector between coin door and main logic.
- 2: Remove the 4 screws holding coin door to main enclosure door.
- 3: Remove coin door.
- 4: Install new bill acceptor door.
- 5: Attach the bill acceptor door with the 4 screws removed in step 2.
- 6: Connect 9 pin connector between bill acceptor door and main logic.