OPERATING INSTRUCTIONS AND SERVICE MANUAL

BASEBALL SCOREBOARDS

Models MP-2352 / MP-2354

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1 Description

Your All-American Scoreboard has been carefully inspected and tested before leaving the factory. It is possible, however, that components may be loosened or forced out of adjustment in transit. If this occurs, follow troubleshooting guide (section 4). If equipment then fails to operate, contact immediately:

> ALL-AMERICAN Service Department
> EVERBRITE Corporation
> P. O. Box 97
> Pardeeville, WI 53954
> Telephone: (608) 429-2121
> Toll Free: 800-356-8146

Parts being returned for repair are to be sent to:

> ALL-AMERICAN Service Department
> EVERBRITE Corporation
> 413 South Main Street
> Pardeeville, WI 53954

1.2 Damage

Upon receipt, check for visible damage. If this occurs, or if damage is found after shipment has been accepted, follow the damage claim procedure.

1.3 Damage Claim Procedure

An instruction sheet is enclosed advising the Consignee in case of damage in transit.

If damage is noted at time of delivery, Consignee must obtain an Inspection of Bad Order from the delivering carrier. In order to process your claim, this must be properly filled out with a complete statement of all damage and signed by the carrier.

If damage is discovered after delivery, you should call the delivery company. Have them make out a Concealed Damage report. Fifteen days after delivery are allowed, so this should be done PROMPTLY or it is impossible to process this claim.

Advise EVERBRITE Corporation of necessary replacement parts, or repairs. Consignee will be invoiced and then should file a claim with the carrier to recover charges.

TO FILE YOUR CLAIM FOLLOW THIS PROCEDURE:

(A) Cost of replacement parts or repair charges are invoiced to the carrier by the Consignee.

to the carrier by the Consignee.

(B) The following documents, plus invoice are forwarded to the Trucking Company in support of your claim:

    (a) Original bill of lading.
    (b) Original paid freight bill.
    (c) Certified copy of original invoice.
    (d) Standard form for Presentation of Loss and Damage Claim, properly filled out.

2. INSTALLATION

2.1 General Information

Check shipment and if damaged file damage claim.

Shipping papers accompany each scoreboard. Check carefully to see that you receive the following:

    1 ea Baseball Display
    1 ea Timer Display
    1 ea Control Console
    1 ea Service Manual
    1 ea Mounting Hardware Package
    1 ea Junction Box
    ? ft Control Cable (if ordered)

2.2 Mounting

For permanent mounting to uprights, see the enclosed installation drawing in section 6.

2.3 Data Cable Installation

The MP-40 data cable is approved for direct burial and therefore can be installed with or without conduit. Consult section 6 for junction box and scoreboard wiring.

NOTE !

This equipment complies with the requirements in Part 15 of the FCC rules for a Class A computing devise. Operation of this equipment in a residential area may cause unacceptable interference to radio and TV reception requiring the operator to take whatever steps are necessary to correct the interference.

2.4 Electrical Connections

The models MP-2352 and MP-2353 require the following:

    (15 Watt Lamps) 110 V./ 60 HZ, 30 A. Service
    (25 Watt Lamps) 110 V./ 60 HZ, 50 A. Service

3. CONTROL CONSOLE OPERATION

3.1 Scoreboard Power

Turn on the branch circuit(s) to scoreboard(s). The Home and Guest scores will show "0" and Time will show ":00".

3.2 Console Power

```
|-----------------------------------------------------------------------|
|                              IMPORTANT                                |
|                                                                       |
| To protect the MP-2002 Control Console Electronics from lightning and |
| other transient voltage spikes, it is advisable to disconnect the     |
| Control Console and store in a dry secure area, when it is not in use. |
|-----------------------------------------------------------------------|
```

Plug the control console cable into the press junction box.

Push ON/OFF once to turn the console ON.

Push ON/OFF a second time to shut the console OFF.

The console display should show CODE when first on.

Enter the two digit code (73) shown in the lower lefthand corner of the keyboard as in the following example:

Push CODE   7   3   ENTER

3.3 Console Display

The 4 digit Liquid Crystal Display shows the game time plus information entered from the keyboard.

3.4 Time Setting and Control

(A) To set an 8 minute period; key in the following:

SET   8   0   0   ENTER .

Any time up to 99:59 may be preset in a similar manner.

(B) The   UP/DN   key determines the timer mode. When the LED

indicator glows the timer will count up. The timer will count down when the LED indicator is off.

(C) Push   IN/OUT   to start/stop the timer.

(D) Push RESET to return the timer to the previously set value.

3.5 Team Scores

The Home and Guest Scores can be changed in three different ways.

(A) To Add 1 to the existing score: Push ADD 1 .

(B) To directly enter or correct a score: Push: Home or Guest

SCORE , followed by desired number, then ENTER .

Example: Present Home Score is 15. Change the score
from 15 to 23.

Push: Home SCORE 2 3 ENTER .

(C) To clear the score: Push Home or Guest SCORE CLEAR .

3.6 Inning

The inning is changed in the same way as the direct entry of
team scores.

3.7 Ball, Strike, Out

Push BALL , STRIKE , or OUT once for each progressive

illumination of the respective indicators.

3.8 Hit And Error

Push HIT or ERROR to illuminate the appropriate indicator.

3.9 Day / Night Dimmer

Push DIM to either brighten or dim the lamps in the

scoreboard display.

4. MAINTENANCE AND TROUBLESHOOTING

4.1 Introduction

This section gives maintenance and troubleshooting information.
Included are troubleshooting guides for typical scoreboard
malfunctions. If the cause of a problem cannot be determined,
please contact the customer service department.

```
*********************************************************************
*                                                                   *
*                          WARNING !                                *
*                                                                   *
* 110 VAC wires are exposed whenever the cover over the controller is *
* removed from the scoreboard.  Use extreme caution during          *
* troubleshooting or repair.  To avoid possible damage always remove *
* power before removing the cover or replacing assemblies.          *
*                                                                   *
*********************************************************************
```

4.2 Test Equipment

A simple analog or digital voltmeter will be sufficient for all user repairable problems. Printed circuit boards requiring troubleshooting should be returned to the factory.

4.3 Troubleshooting

Whenever possible, follow the troubleshooting guides prior to contacting the customer service department. If a problem not described in the guides exists, contact the customer service department immediately. Refer to the diagrams provided for assistance in troubleshooting scoreboard malfunctions.

4.4 Troubleshooting Guide

(A) Scoreboard Doesn't Light and Console Doesn't Work

   (a) Check that the main power switch is turned on.
   (b) Replace any defective or blown fuses.
   (c) Check the power connections and voltages at the scoreboard.
   (d) Contact the customer service department.

(B) Scoreboard Digits Don't Light But the Console Works

   (a) With the main power "off" remove the cover over the controller assembly.

   (b) Check all connections.

   (c) Turn main power "on".

   (d) If board still doesn't light check the transformer voltage going to the Reciever PCB assembly (blue wires) using a voltmeter set on the 12 VAC or higher scale.

   If the voltage is less than 8 VAC contact the customer service department.

   If the voltage is between 8-12 VAC see the replacement parts list for a Receiver PCB assembly, and contact the service department.

(C) The Scoreboard Digits Light But The Console Doesn't Work.

   (a) Check for continuity between the scoreboard and the junction box.

   (b) If an open circuit is found the problem is either the cable or a cable connection.

   (c) If the continuity test checks good then check the voltage between the green wire and the white wire in the junction box using a voltmeter set on the 12 VAC or higher scale.

If the voltage is 0 V see the Controller parts list for a transformer assembly.

If the voltage is less than 8 VAC consult the controller wiring diagram for instructions on long cable compensation.

If the voltage is between 8 VAC and 12 VAC contact the customer service department.

(D) The Scoreboard Digits Light the Console Works but there Is No Control Of The Scoreboard.

    (a) Check the voltage between the black and red wires in the junction box with a voltmeter set on the 3 VDC or higher scale. (2-3 VDC when working properly)

    . If the voltage is 0 V contact the service department for assistance.

    If the voltage is correct (2-3 V) check that this reading also appears at the scoreboard.

    If the correct voltage also appears at the scoreboard see the replacement parts list for a Receiver PCB Assembly.

(E) The Scoreboard Works But Some Lights Stay On All The Time

    (a) With the Main Power OFF, switch the plug from the bad digit with the plug for a known good digit.

    Example: Plug "C" in "D" and "D" in "C" locations.

    (b) Turn the power back on. If the same lights remain lit, the problem is a shorted lamp socket. If the lights now stay on in a different digit the problem is the driver board. See the replacement parts list for the proper replacement driver board.

(F) The Scoreboard Works But Some Lights Do Not Come On

    (a) Check for burned out lamps.

    (b) Check for broken wire or bad connection on 12 pin connector.

    (c) See the replacement parts list for the proper replacement driver board.

5. REPLACEMENT PARTS LIST
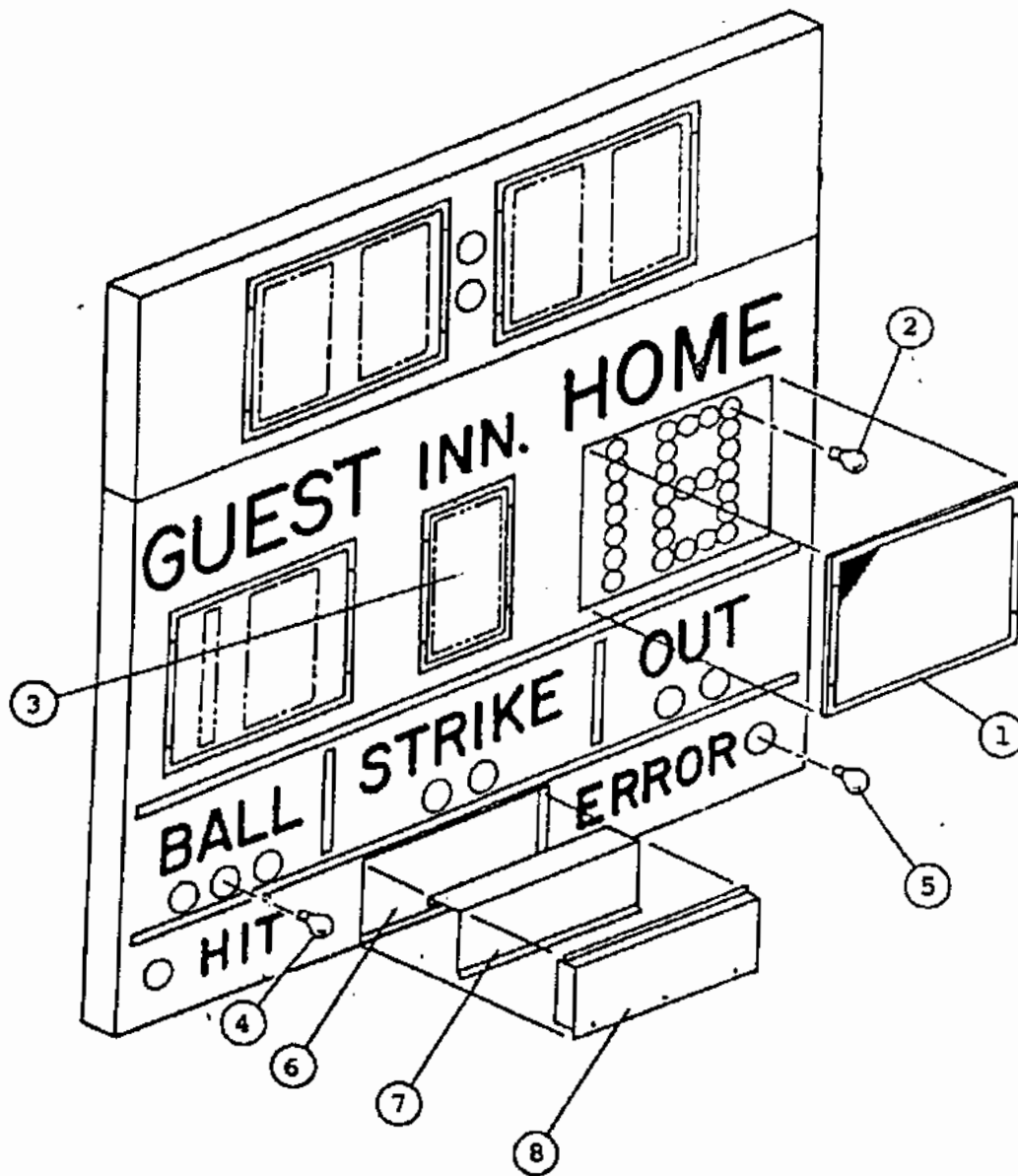
5.1 Scoreboard Display Parts

figure 1

DISPLAY ASSEMBLY

REPLACEMENT PARTS LIST (MP-2352/MP-2353)

fig.& index	MFG PART NUMBER	DESCRIPTION	REF DES	VENDOR PART #
1-	150729	Display Assembly,Timer (MP-2352/53		150729
1-1	171663	Face Screen, Timer Min or Sec		171663
1-2	850022	Lamp, 15W/130V Clear		15A15 CL
1-	150728	Display Assembly (MP-2352)		150728
1-	150747	Display Assembly (MP-2353)		150747
1-1	171663	Face Screen, H.& G. Score		171663
1-3	153020	Face Screen, Inning		153020
1-4	850030	Lamp, 25W/130V Clear (B S O)		25A19 CL
1-2	850022	Lamp, 15W/130V Clear		15A15 CL
1-5	850032	Lamp, 40W/130V Clear (H E)		40A19 CL
1-6	150733	Controller Assembly	A2	150733
1-7	150660	Rainshield		150660
1-8	150668	Service Door		150668
	150365	MP-2001 Control Console		150365
	150208	Control Console Slipsheet		150208
	150184	Transmitter PCB Assembly	A1	150184
	702785	Connector, 5 Pin Male CCT	P1	RM12BPG-5P
	151002	Press Box Junction Box		151002
	702786	Connector, 5 Pin Female	J1	RM12BRD-5S
	150508	Cable, MP-40 Control		YR21233

5.2 Controller Assembly Parts
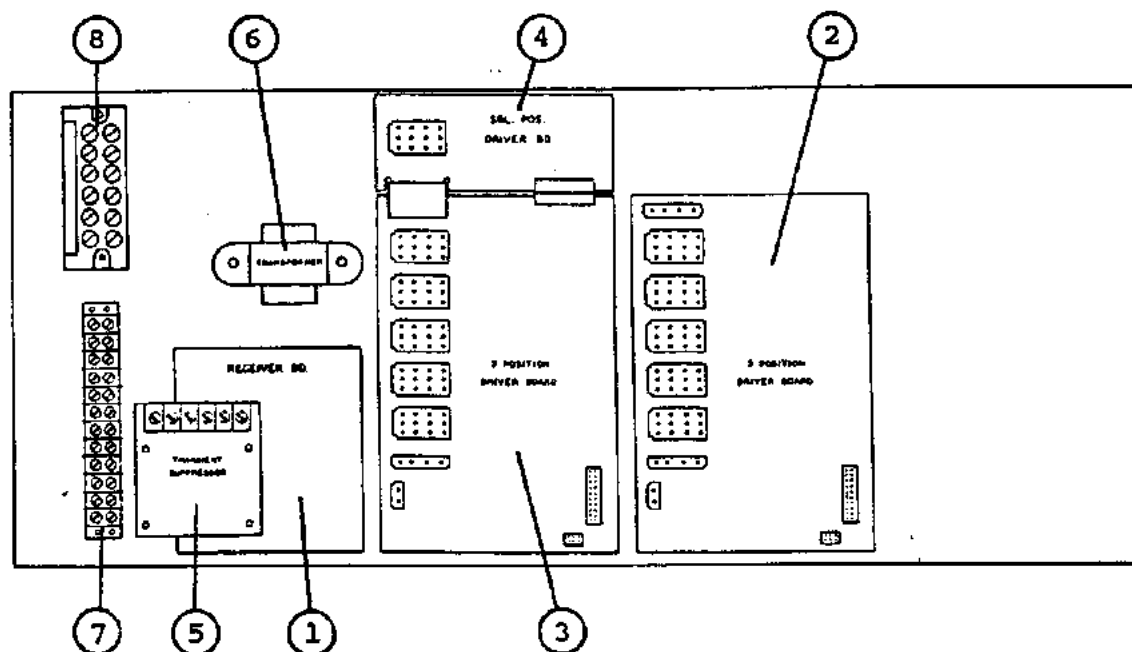
figure 2

CONTROLLER ASSEMBLY

fig.& index	MFG PART NUMBER	DESCRIPTION	REF DES	VENDOR PART #
2-	150733	Controller Assembly	A2	150733
2-1	150366	Receiver PCB Assembly	A3	150366
2-2	150368	Driver PC Board Assembly, 5 Pos.	A6	150368
2-3	170249	Driver PC Board Assembly, 5 Pos.	A4	170249
2-4	150370	Driver PC Board Assembly, 1 Pos.	A5	150370
2-5	118522	PC BD Assy, Transient Suppressor	A10	118522
2-6	151301	Transformer Assembly, 8V/18V	T1	CS-697
2-7	701103	Terminal Block, 12C (Data)	TB1	671-12
2-8	701134	Terminal Block, 6C (Power)	TB-2	1106
2-	705075	Ribbon Cable Assy. 20C W/2F Con		AS-1053
2-	705723	Spacer, P.C.Board (Amerlock)		PCS-6

REPLACEMENT PARTS LIST (MP-2352/MP-2353)

6. DIAGRAMS

6.1 Control Console Keyboard and Slipsheet Layout
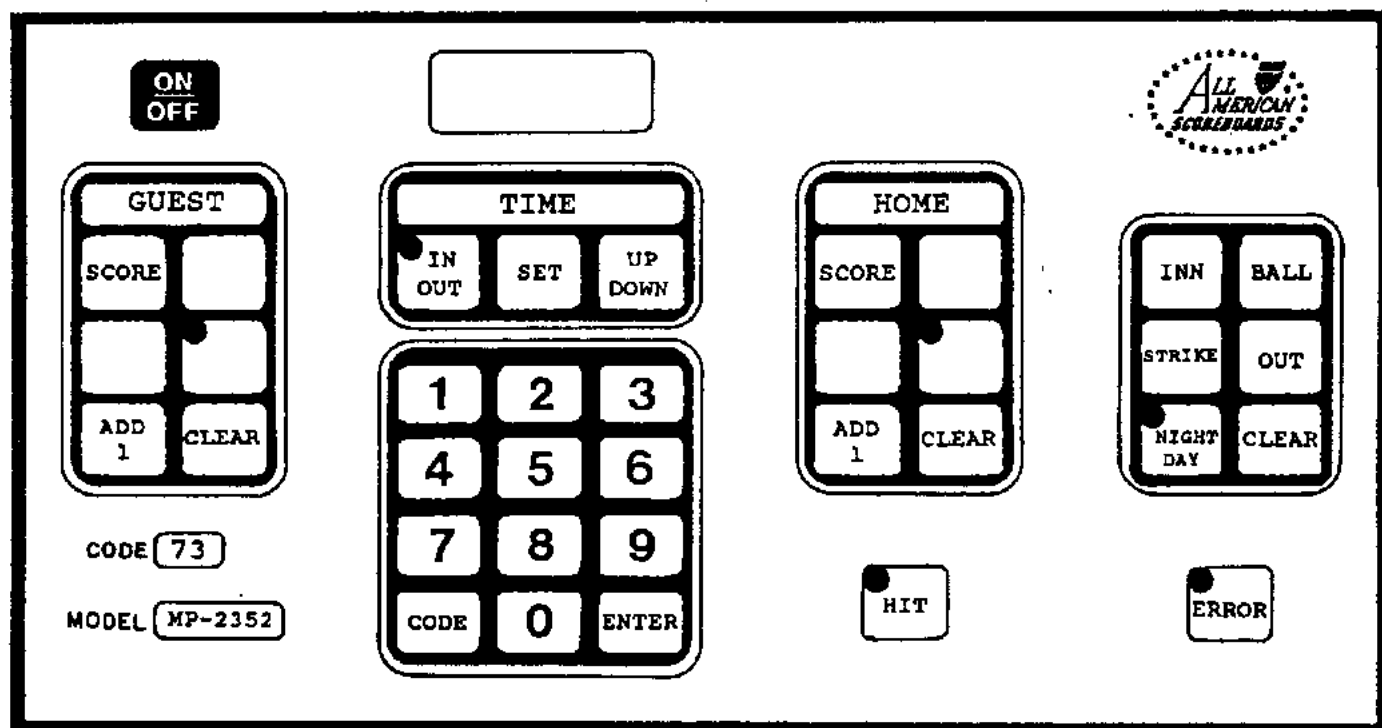
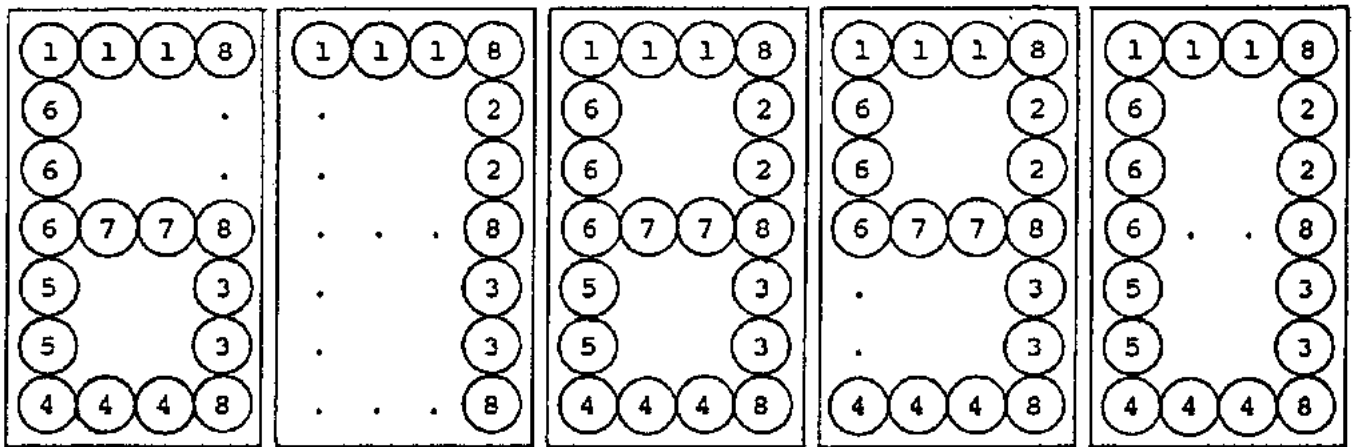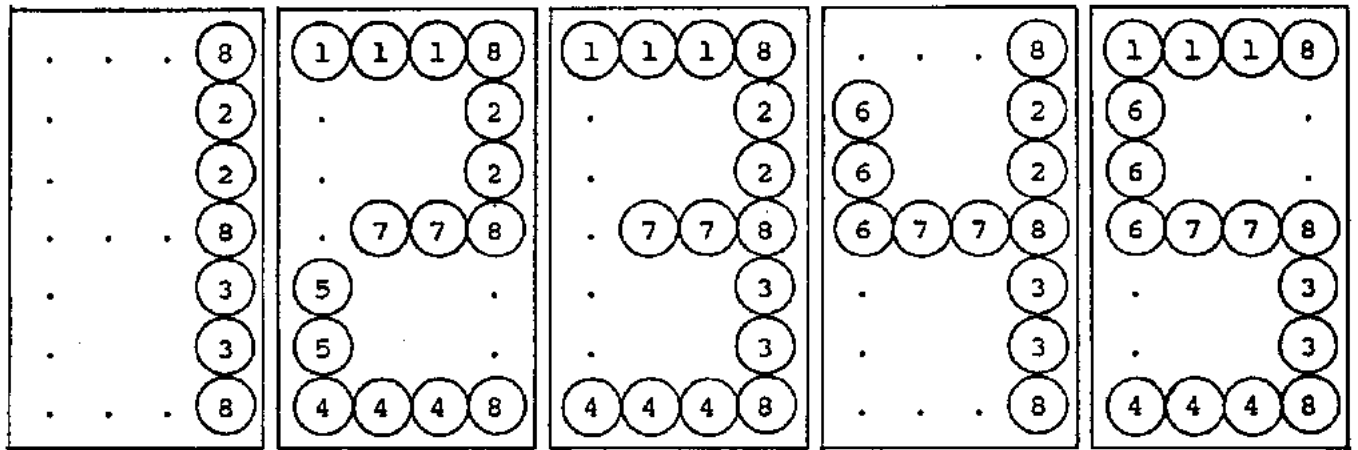**Console Keyboard (MP-2352/MP-2353)**

6.2 Press Box Junction Box Wiring

(4) CONDUCTOR SHIELDED DATA CABLE FROM SCOREBOARD CONTROLLER.

5 CONTACT FEMALE PLUG. NO. RM-12BRD-5S

RED

BLACK

GREEN

WHITE

RAINPROOF (OUTDOOR) CONTROL JUNCTION BOX.

(7) PIN TERMINAL BLOCK. (100 SERIES)

CABLE SHIELD.

JUNCTION BOX WIRING
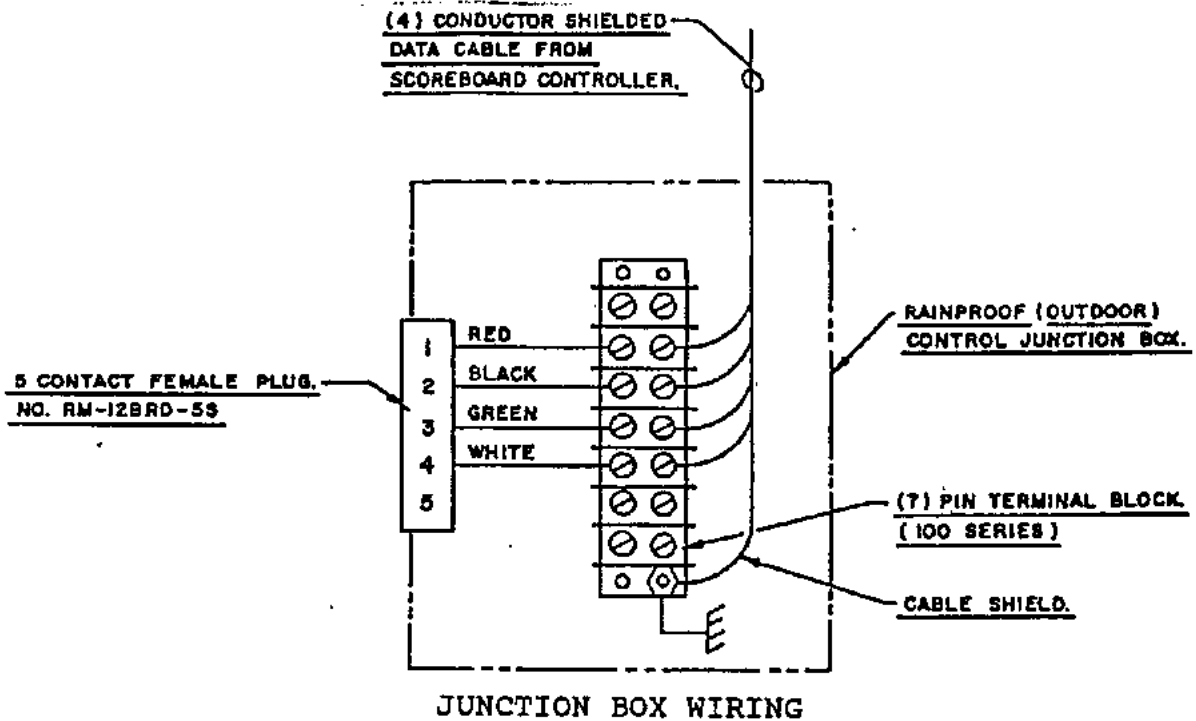
6.3 Jumper Location on 5 Position Driver Board

JUMPER PLUG LOCATION.

JUMPER PLUG LOCATION.

JUMPER PLUG LOCATION.

DRIVER BOARD NO. 1

DRIVER BOARD NO. 2

DRIVER BOARD NO. 3

POSITIONS OF DRIVER P.C. BOARDS ON CONTROLLER PLATE.

5 POSITION DRIVER BOARD

RIBBON CABLE CONNECTOR.

JUMPER CONNECTOR

JUMPER LOCATION

6.4 Controller Wiring and Layout

CONTROLLER LAYOUT
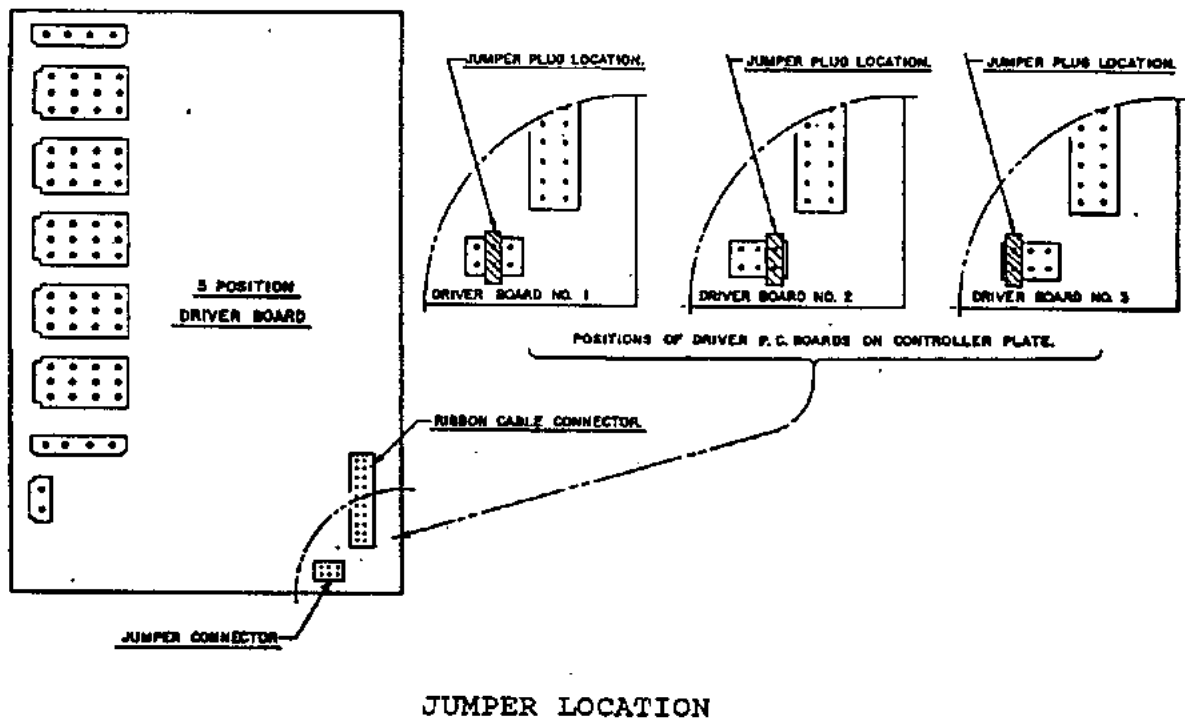
6.5 Microprocessor 4X7 Lamp Pattern (8 Bit)
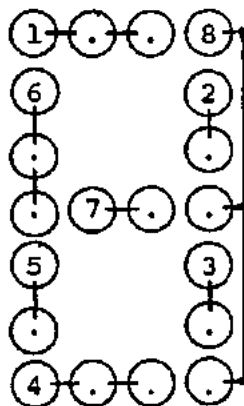
8 BITS

NUMERALS

		0	1	2	3	4	5	6	7	8	9
	1	0	.	2	3	.	5	6	7	8	9
B	2	0	1	2	3	4	.	.	7	8	9
I											
T	3	0	1	.	3	4	5	6	7	8	9
N	4	0	.	2	3	.	5	6	.	8	9
U											
M	5	0	.	2	.	.	.	6	.	8	.
B											
E	6	0	.	.	.	4	5	6	.	8	9
R											
S	7	.	.	2	3	4	5	6	.	8	9
	8	0	1	2	3	4	5	6	7	8	9

MICROPROCESSOR 4 X 7 (8 BIT) LAMP PATTERN

6.6 Figuregram Wiring

11	2	8

12C Male Con. on
4C 18AWG Cable

1	6	5	4	12	7	11	3	2	8

12C Male Con. on 12C 18AWG Cable
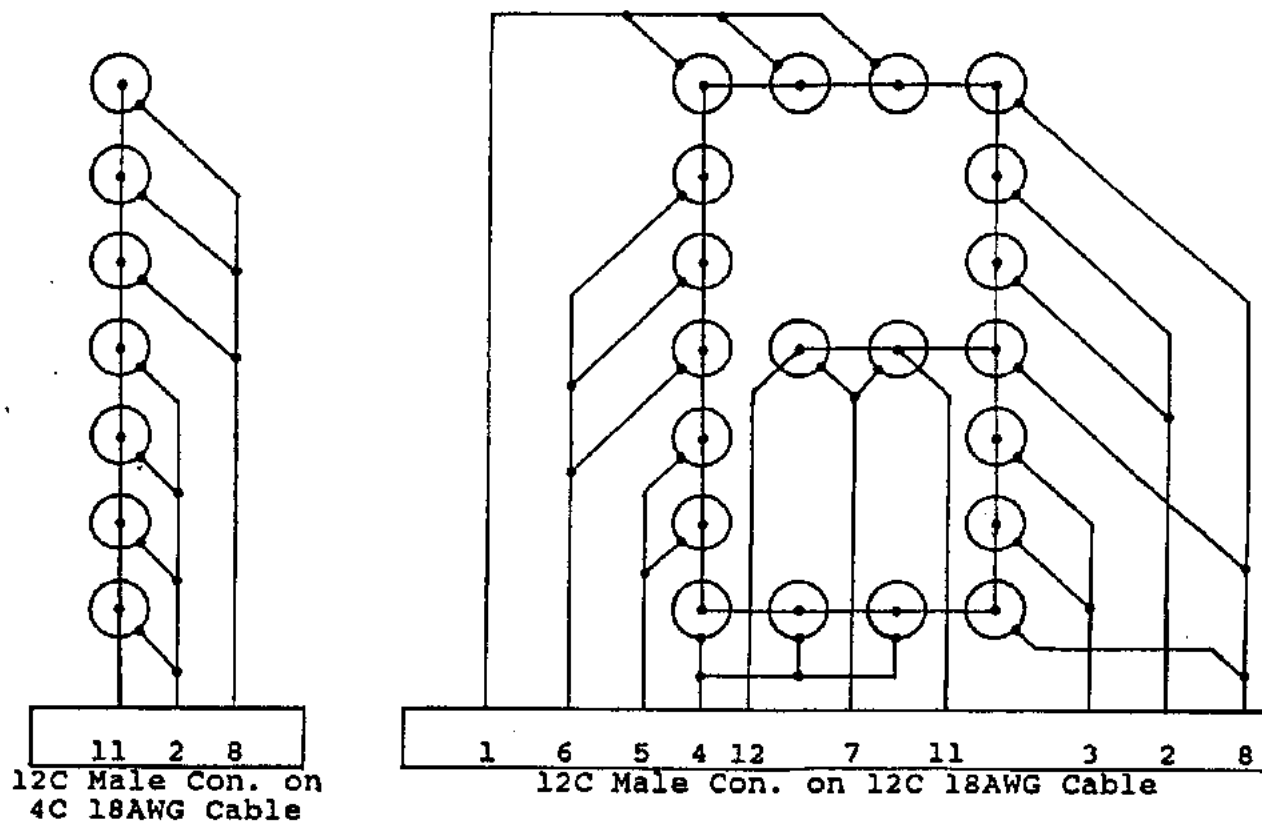
8 BIT FIGUREGRAM WIRING (Face View)

6.7 Ball, Strike, Out and Hit Indicator Wiring

BALL	STRIKE	OUT	HIT

6	3	4	10	1	7	11	8	2	12	5

12C Male Con. on 12C 18AWG Cable
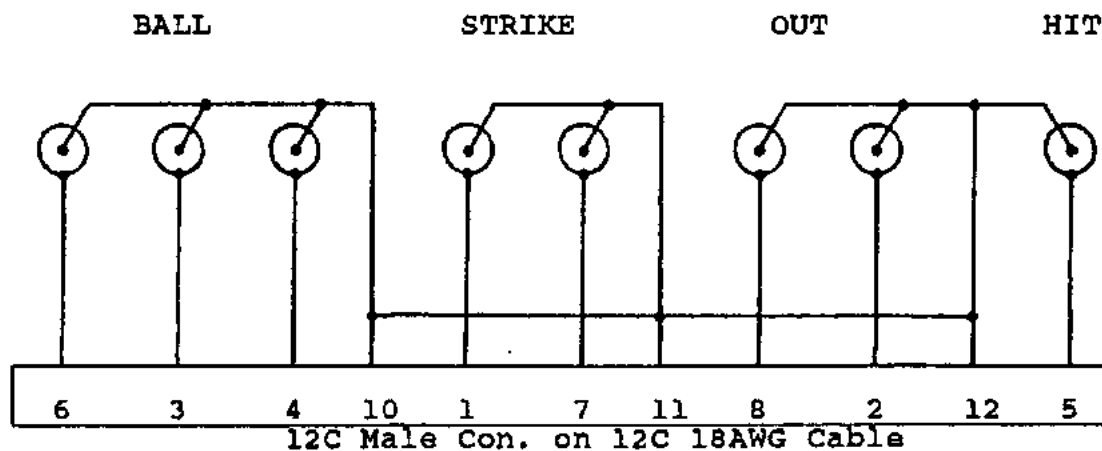
BALL, STRIKE, OUT and HIT WIRING

6.8 Triac Placement

The triac is the switch that controls the figuregram lamps. The triacs for any given figuregram are adjacent to the twelve pin connector on the driver board that controls that figuregram.

Shown below is the triac placement and bit designation relative to the figuregram bit pattern.

12 Pin Connector

Triacs

Figuregram Bit Pattern

MP TRIAC PLACEMENT

6.4 Controller Wiring and Layout

Old configuration for 2353 (*Programs HP-2353 ABS and EN6*)

CONTROLLER LAYOUT

OUTPUT TO SCOREBOARD

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