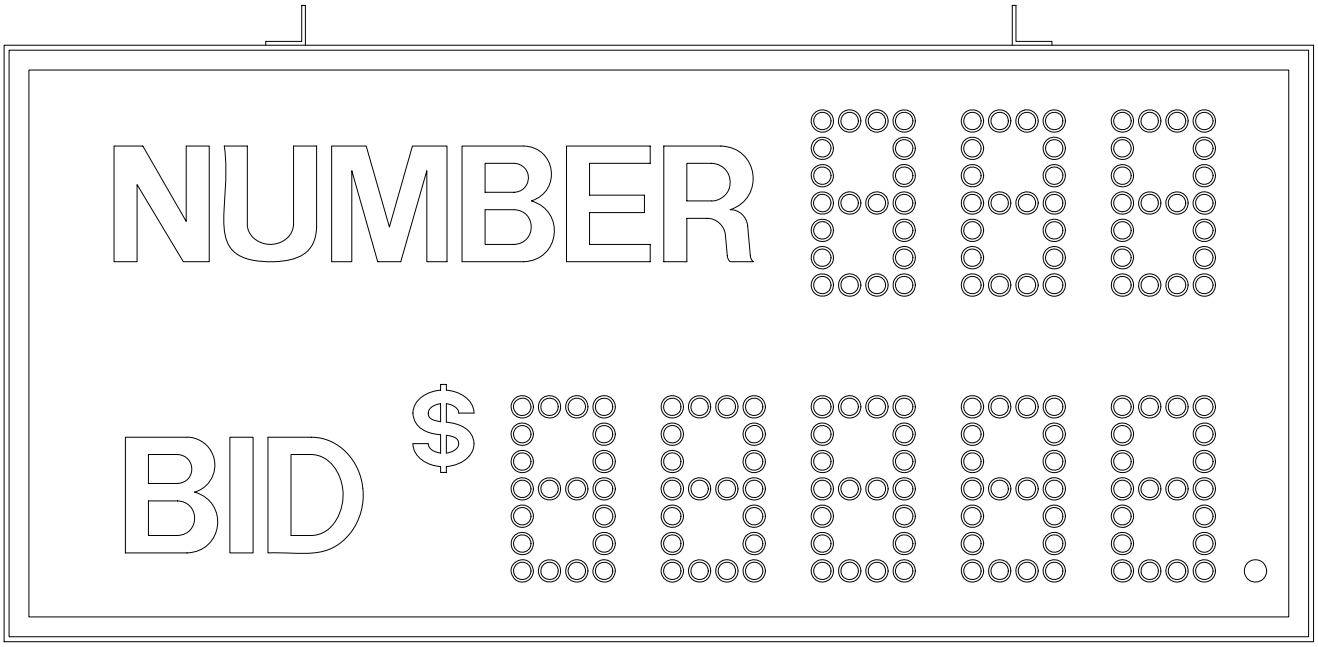
ALL AMERICAN
SCOREBOARDS
A Product of Everbrite 401 S. Main St. Pardeeville, WI 53901 (608)429-2121 / (800)356-8146

OPERATING INSTRUCTIONS AND SERVICE MANUAL

HORSE AUCTION BOARD

MODEL MP-3908



EFFECTIVE JUNE 26, 1995

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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 the troubleshooting guide (Section 4). If equipment then fails to operate, contact immediately:

ALL-AMERICAN SCOREBOARDS - Service Department
EVERBRITE LLC
P.O. Box 100
Pardeeville, WI 53954
Telephone: (608) 429-2121
Toll Free: (800) 356-8146
E-mail: score@everbrite.com

Parts being returned for repair are to be sent to:

ALL-AMERICAN SCOREBOARDS - Service Department
EVERBRITE LLC
401 South Main Street
Pardeeville, WI 53954

NOTE

If you need to send parts in for repair, please call the ALL AMERICAN service department for a returned goods authorization (RGA) number.

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 the 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 it must be 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. 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.

(B) The following documents, properly filled out, 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

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 Display
1 ea Control Console
1 ea Service Manual

IMPORTANT!
The MP-40 cable supplied by ALL AMERICAN SCOREBOARDS for use on the Microprocessor based scoreboards is specifically designed for this system. Use of a substitute cable may void the warranty on the scoreboard!

2.2 Mounting

For mounting, 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.

2.4 Electrical connections

The Scoreboard requires a 120 Volt 60 HZ 20 AMP electrical outlet.

IMPORTANT !!!
To protect the MP-2000 control from damage, it is advisable to disconnect the control and store in a dry secure area when not in use.

NOTE
This equipment is **ETL** (Electronics Testing Laboratories) **CSA** and **NRTL** approved and complies with the requirements in part 15 of the FCC rules for a class A computing device. Operation of this equipment in a residential area may cause unacceptable interference to radio and television reception, requiring the operator to take whatever steps are necessary to correct the interference.

3. CONTROL CONSOLE OPERATION

3.1 Scoreboard Power

Turn on the branch circuit(s) to the scoreboard(s). The Bid will read 0 when the scoreboard is turned on.

3.2 Console Power

Plug the control console cable into the scoreboard or junction box.

Push **ON/OFF** once to turn the console ON.

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

When first turned on; the console display should show as follows:

0000

3.3 Console Display

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

3.4 Bid Control

Push **+25** , **+50** , **+100** , **+250** , **+500** , or **+1000** , to add that amount to the existing bid.

Push **BID** followed by the desired number, then **ENTER** to correct or change the bid.

Example: Present bid is 25. Change the bid from 25 to 30.

Push: **BID** **3** **0** **ENTER** .

Push **BID NUM** followed by the desired number, then **ENTER** to display the bidder number.

To clear the bid and bidder number: Push **CLEAR** .

> WARNING
> 120 VAC wires are exposed whenever the cover on the display is removed.
> Use extreme caution during troubleshooting or repair. To avoid possible damage to equipment or personal injury, always turn off the main power before removing the cover or replacing assemblies, or replacing lamps.

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.

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 Guides

(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 switch "off"; remove the cover over the controller assembly.
(b) Check all connections.
(c) Turn the main power "on".
(d) If the scoreboard still doesn't light, check the transformer voltage going to the receiver PCB (printed circuit board) 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 Customer 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, 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 VDC, see the controller parts list for a transformer assembly.

If the voltage is between 7 VAC and 13 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 following voltages in the junction box, with respect to the shield, with a voltmeter set on the 3 VDC or higher:

Shield to Red = Approximately 1.0 VDC
Shield to Black = Approximately 1.0 VDC

(b) If the voltage is 0 VDC contact the Customer Service Department for assistance.
(c) If the voltage is correct, check that this reading also appears at the scoreboard.
(d) 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" into "D" and "D" into "C" locations.

(b) Turn the power back on. If the same lamps remain lit all the time, the problem is a shorted lamp socket. If the lamps on a different digit now stay lit all the time, the problem is on the driver PCB assembly. See the replacement parts list for the proper replacement part.

(F) The scoreboard works, but some lights do not come on.

(a) Check for burned out lamps.
(b) Check for a broken wire or bad connection on the 12 pin connector.
(c) See the replacement parts list for the proper replacement driver board.

IMPORTANT !!!

In this scoreboard the 120 volt line is on the lamp socket all the time, and the common is switched to turn the lamps on and off. For this reason, to avoid damage to the equipment or personal injury, it is important to turn the main power off when changing the lamps.

5. REPLACEMENT PARTS LIST

5.1 Scoreboard Display Parts

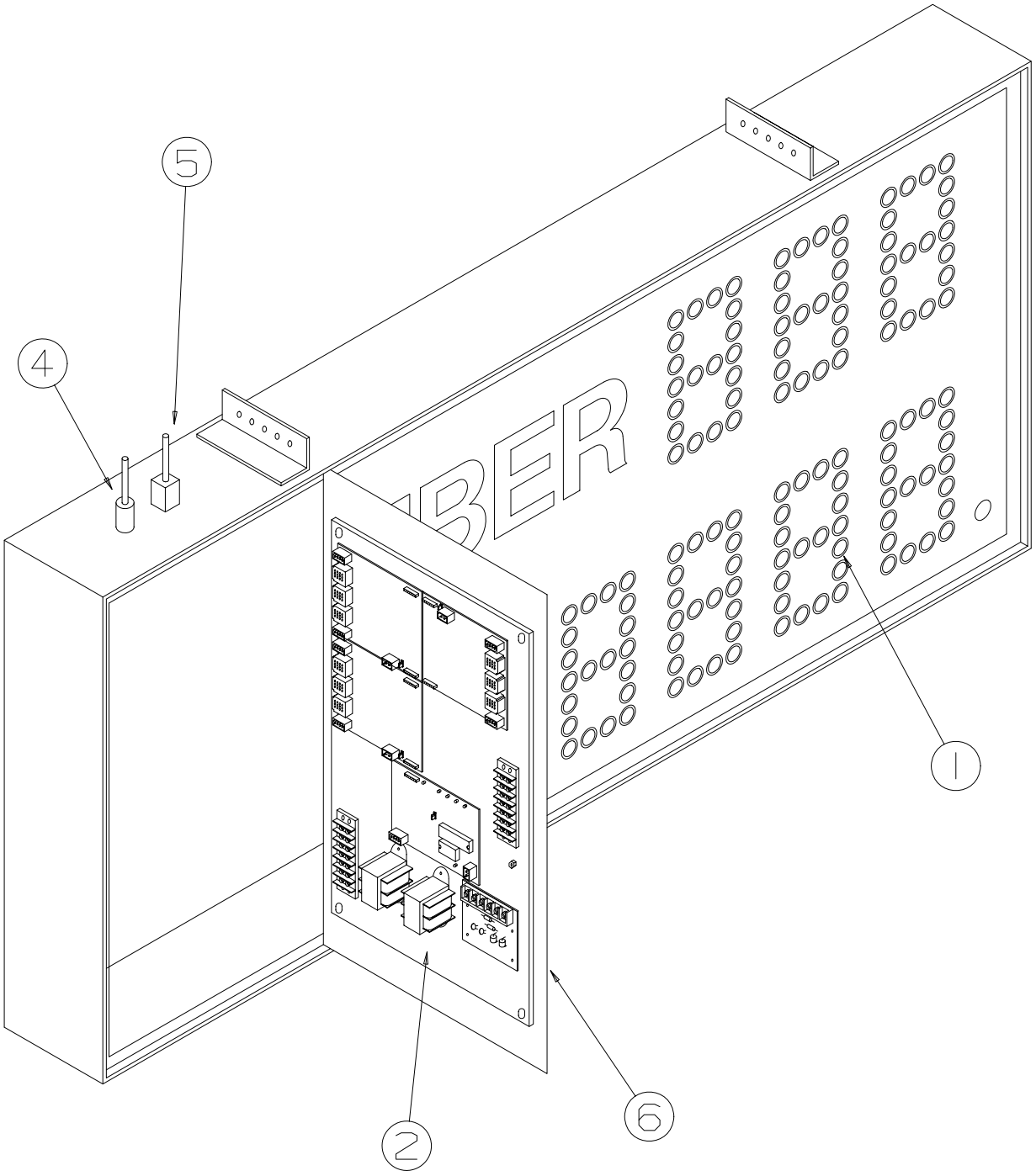


figure 1

DISPLAY ASSEMBLY

REPLACEMENT PARTS LIST (MP-39XX Horse Auction)

fig.& index	MFG PART NUMBER	DESCRIPTION	REF DES	VENDOR PART #
1-	000000	Display Assembly		000000
1-1	850001	Lamp, 7 Watt 125 V. 7C7 White		7C7/W
1-2	SU479300	Controller Assembly *****SEE DETAIL FIGURE 2*****	A2	SU479300
1-3	SU00038	Fuse Box,		SU00038
		*** LOCATED IN OPPOSITE SIDE SERVICE DOOR AS CONTROLLER ASSEMBLY ***		
1-3A	121880	Fuse, 15A 250V 1/4" X 1 1/4"	F1-F3	ABC-15
1-4A	702786	Connector, 5 Pin Female	J1	RM12BRD-5S
1-4B	702785	Connector, 5 Pin Male CCT	P1	RM12BPG-5P
1-7	EL044100	Resistor, 2 OHM 30 WATT Wire Wound		HL-24-09Z
	120387	Control Console		120387
	119771	Slipsheet Pair		119771
	150184	Transmitter PCB Assembly	A1	150184
	702785	Connector, 5 Pin Male Cable	P1	RM12BPG5P
	150500	Cable, MP-41		8723 Belden

5.2 Controller Assembly Parts

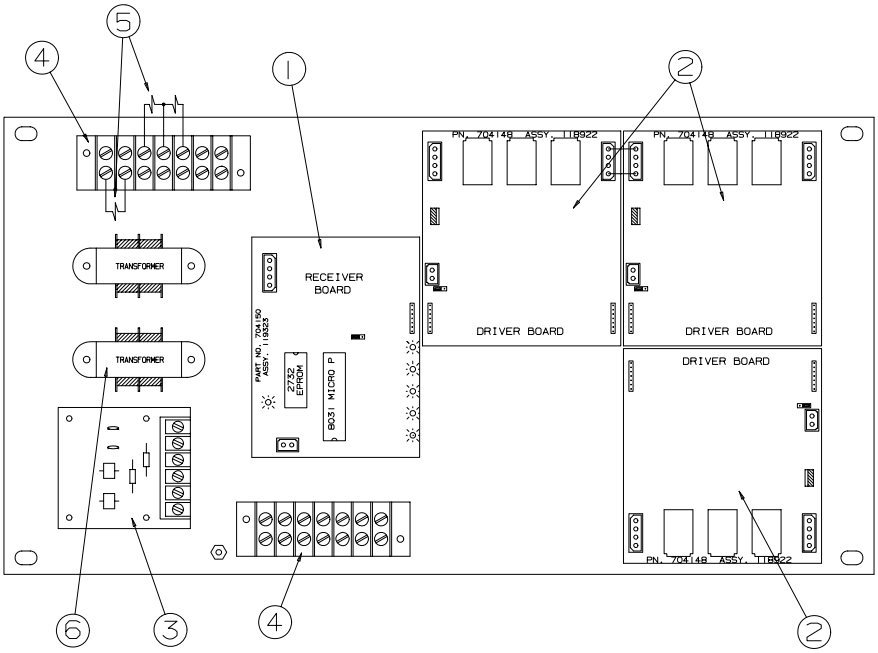


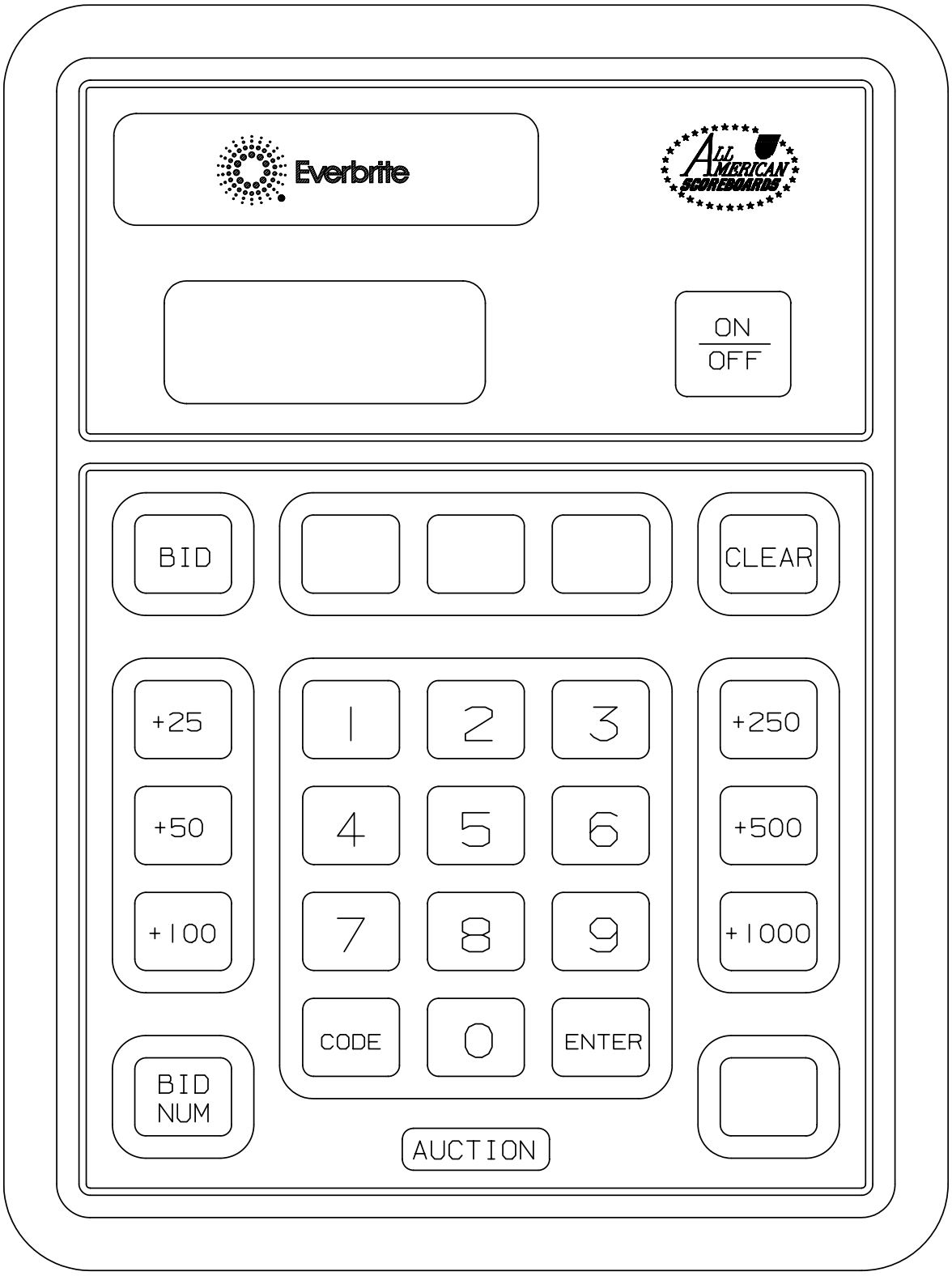
figure 2

CONTROLLER ASSEMBLY

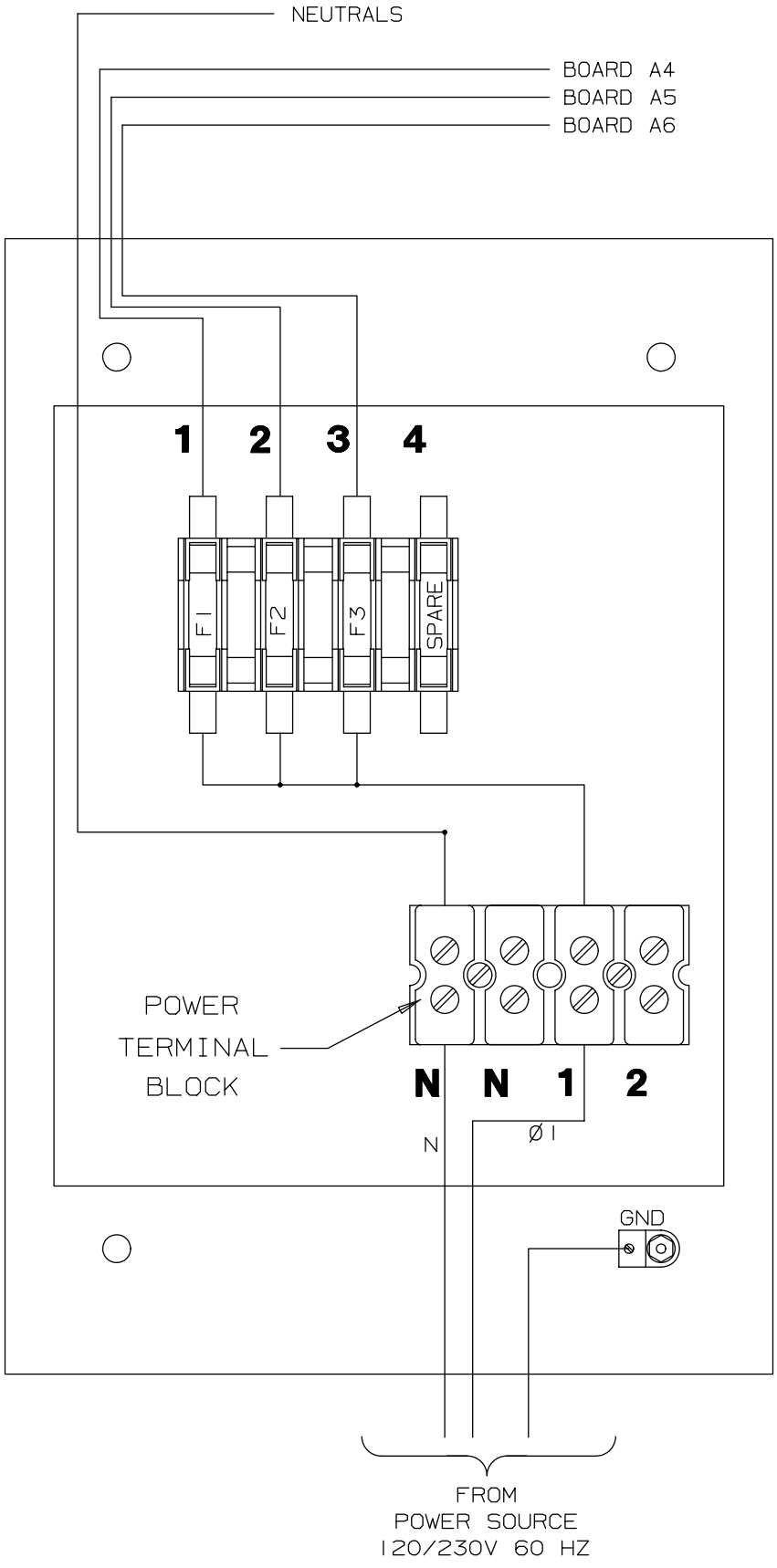
REPLACEMENT PARTS LIST (MP-39XX Horse Auction)				
fig.& index	MFG PART NUMBER	DESCRIPTION	REF DES	VENDOR PART #
2-	SU479300	Controller Assembly		SU479300
2-1	119323	Receiver PCB Assembly *** PROGRAM 3MP-CNT-V00***	A3	119323
2-2	118922	Driver PCB Assembly, 3 Position	A4-A6	118922
2-3	118522	Transient Suppressor PCB Assembly	A6	118522
2-4	701137	Terminal Block, 7C	TB1&2	670-7
2-5	700520	Varistor,		ERZ-C20DK201U
2-6	703719	Transformer, 8V/18V	T1/T2	CS-697
2-7	HB005600	Cover		HB005600
2-8	705723	Spacer, P.C.Board		LCBS-6-01

6. DIAGRAMS

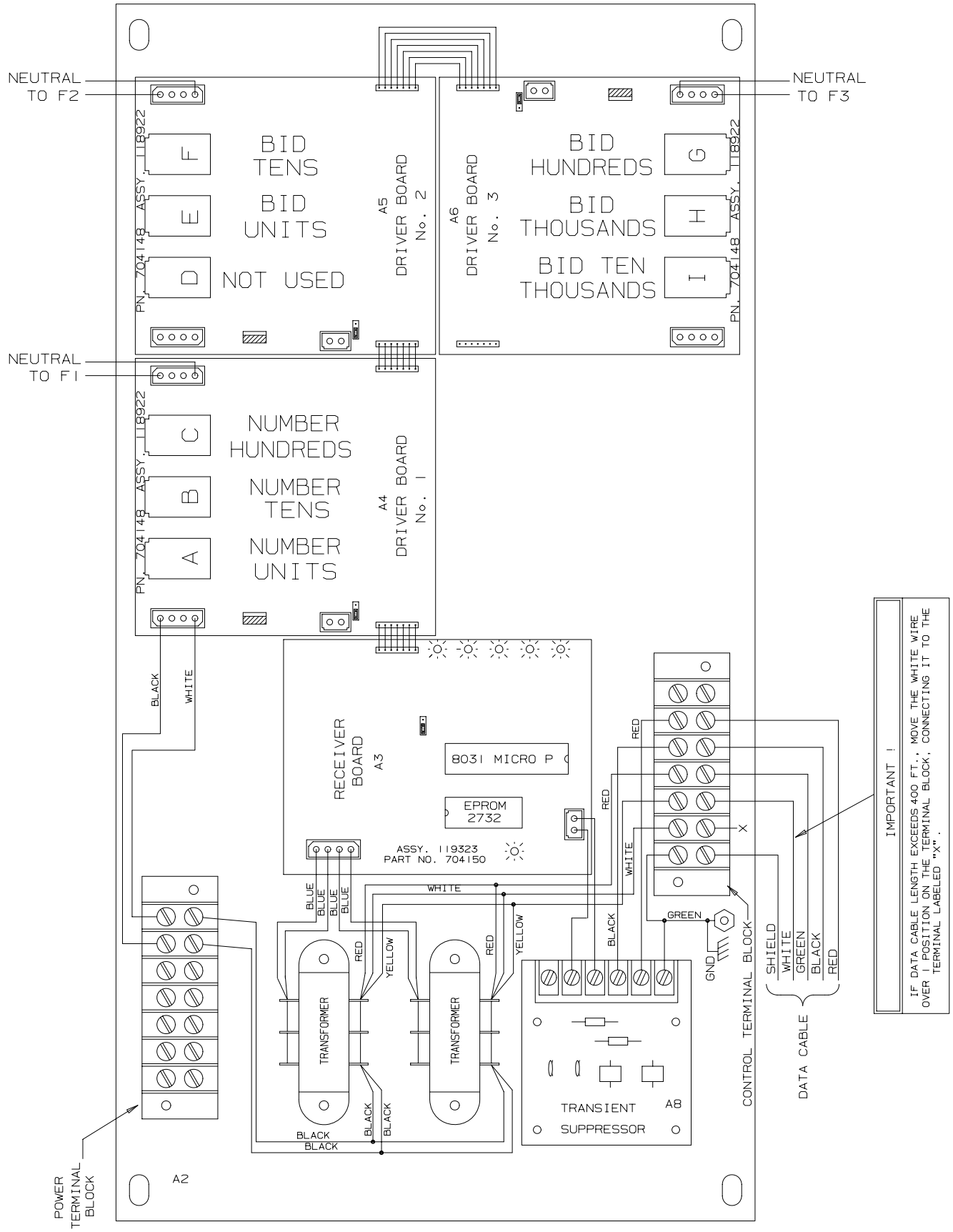
6.1 Control Console Keyboard and Slipsheet Layout



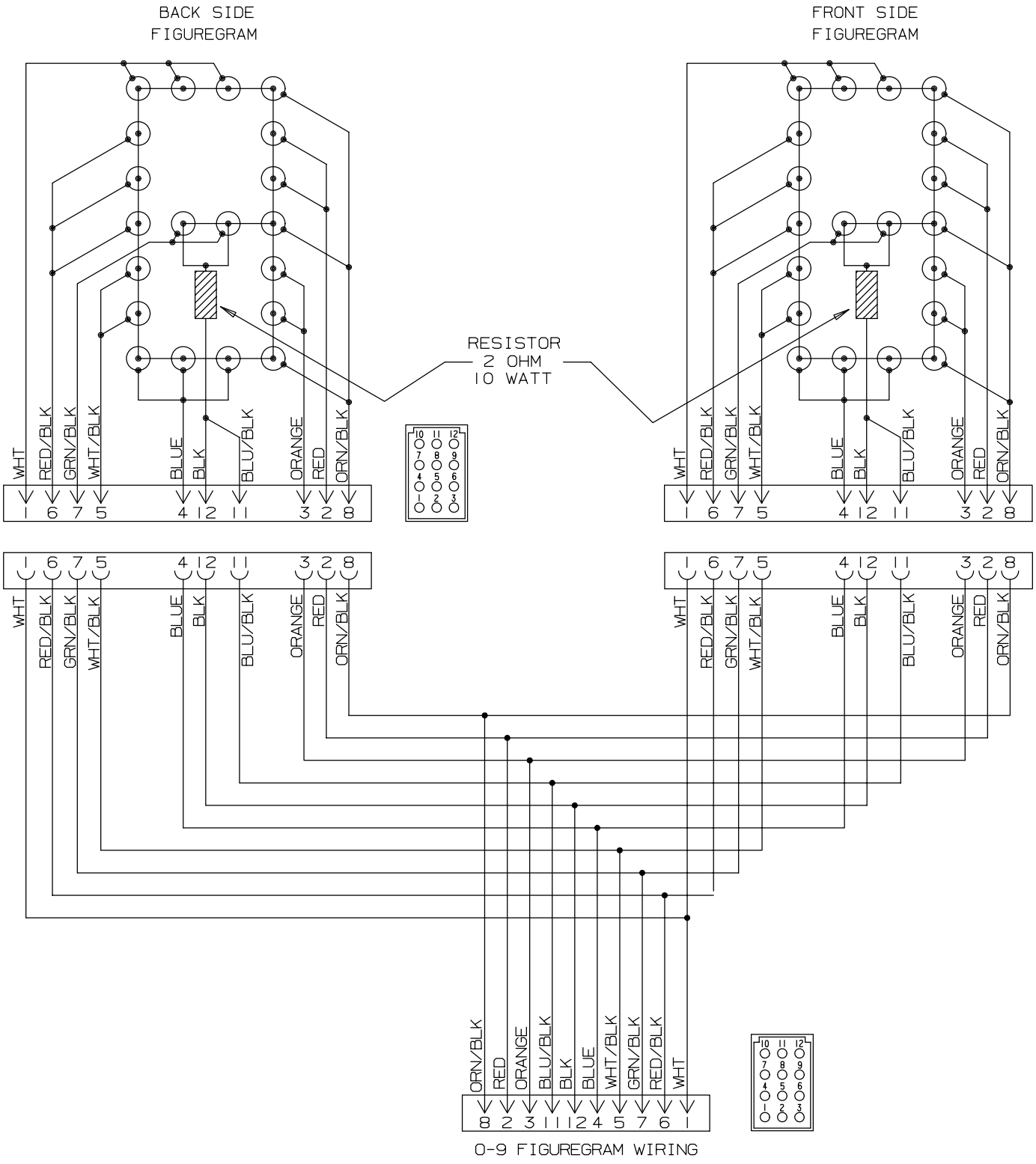
6.2 Power Wiring



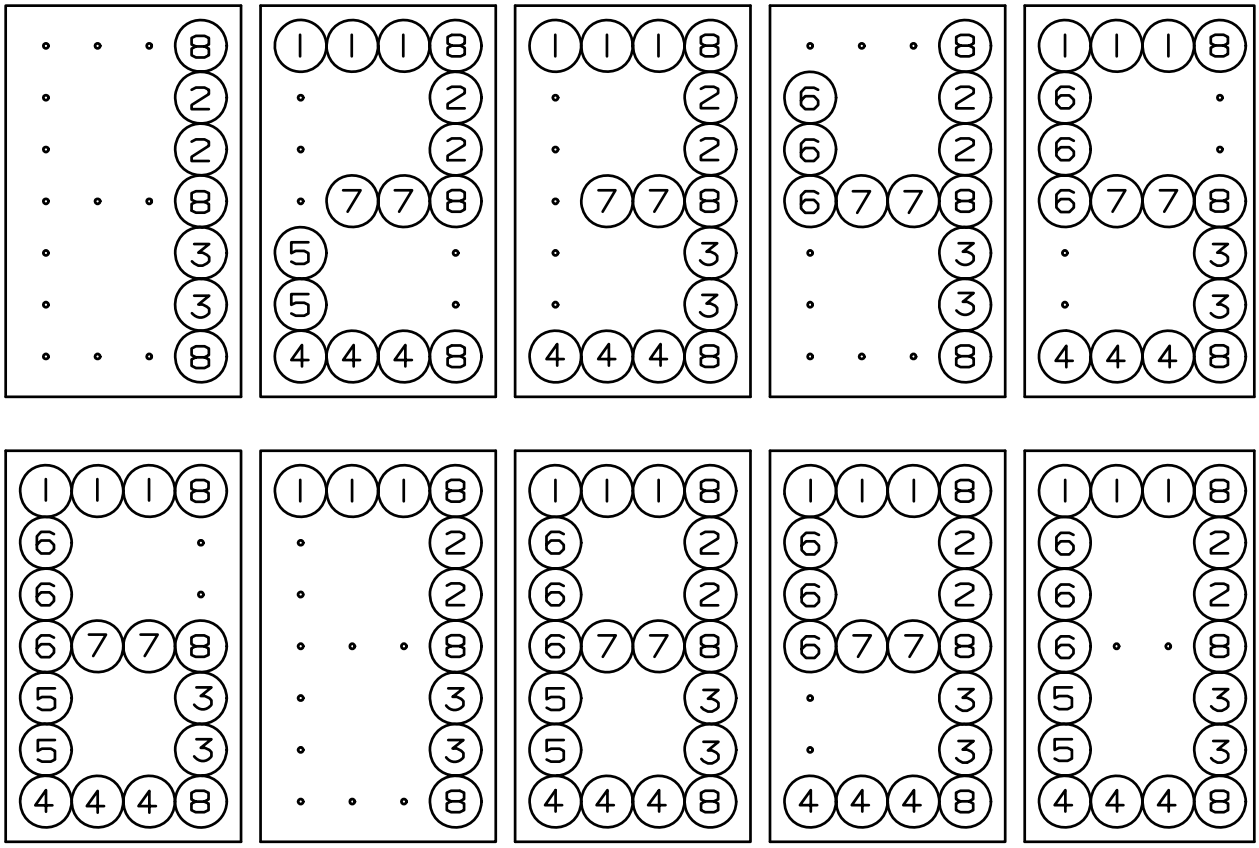
6.3 Controller Assembly Wiring and Layout

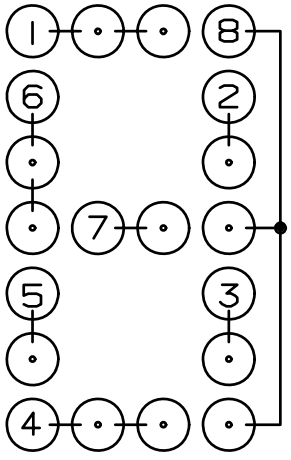


6.4 Display Wiring and Layout



6.5 Microprocessor 4 X 7 Lamp Pattern (8 Bit)





NUMERALS

BIT NUMBERS	0	1	2	3	4	5	6	7	8	9
1	0	.	2	3	.	5	6	7	8	9
2	0	1	2	3	4	.	.	7	8	9
3	0	1	.	3	4	5	6	7	8	9
4	0	.	2	3	.	5	6	.	8	9
5	0	.	2	.	.	.	6	.	8	.
6	0	.	.	.	4	5	6	.	8	9
7	.	.	2	3	4	5	6	.	8	9
8	0	1	2	3	4	5	6	7	8	9

6.6 Jumper Location on 3 Position System

All of the 3 position drivers and receivers are identical except for the jumper on each board. Make sure the jumpers are set for the model of scoreboard you are installing them into.

(A) On the receiver board (refer to figure); Jumper pins 2 & 3 for models MP-3385, MP-3312, MP-3529, and MP-3549. Jumper pins 1 & 2 for all other models.

(B) On the driver board (refer to figure); Jumper pins 1 & 2 for use of a horn. Jumper pins 2 & 3 for all others.

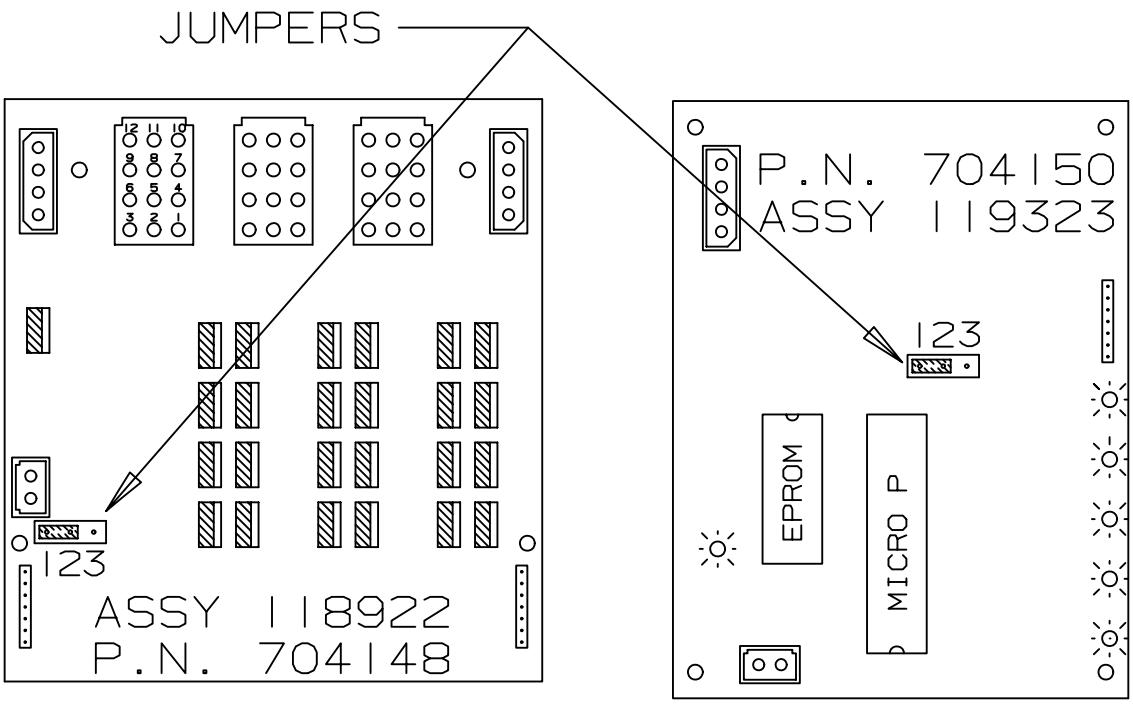
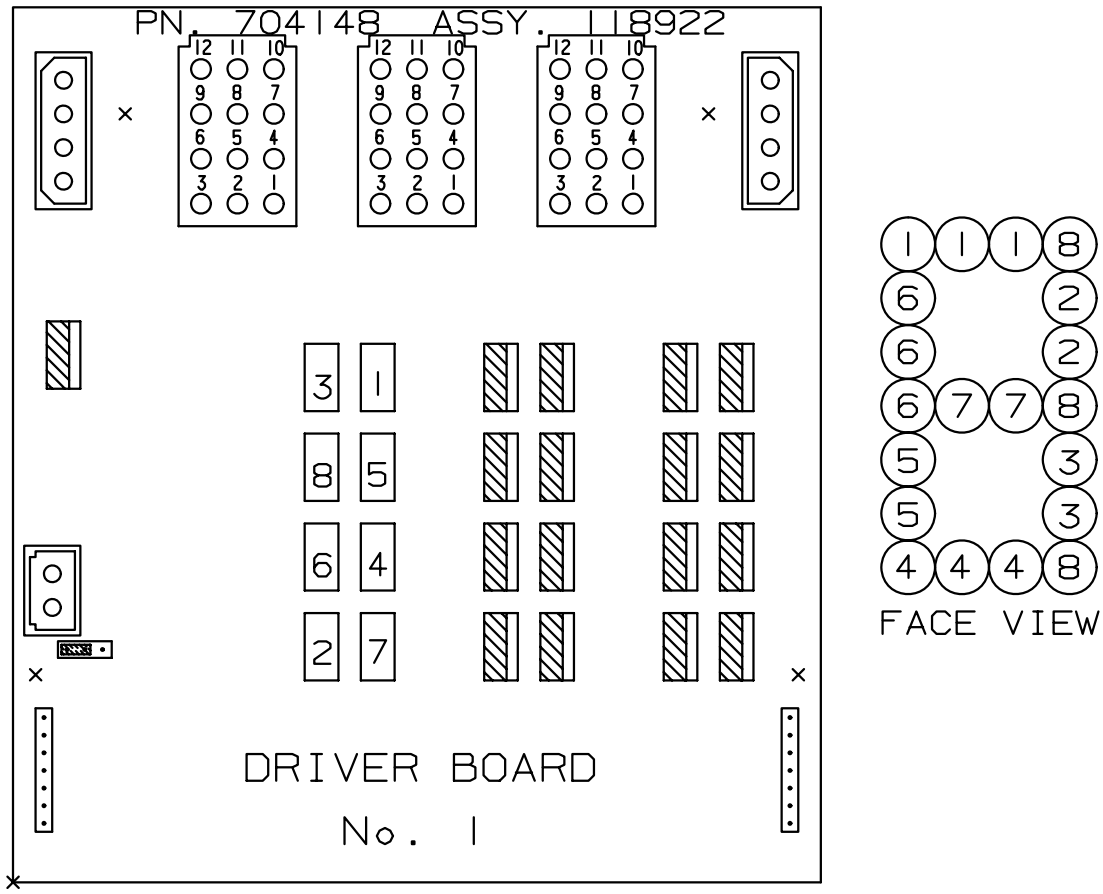


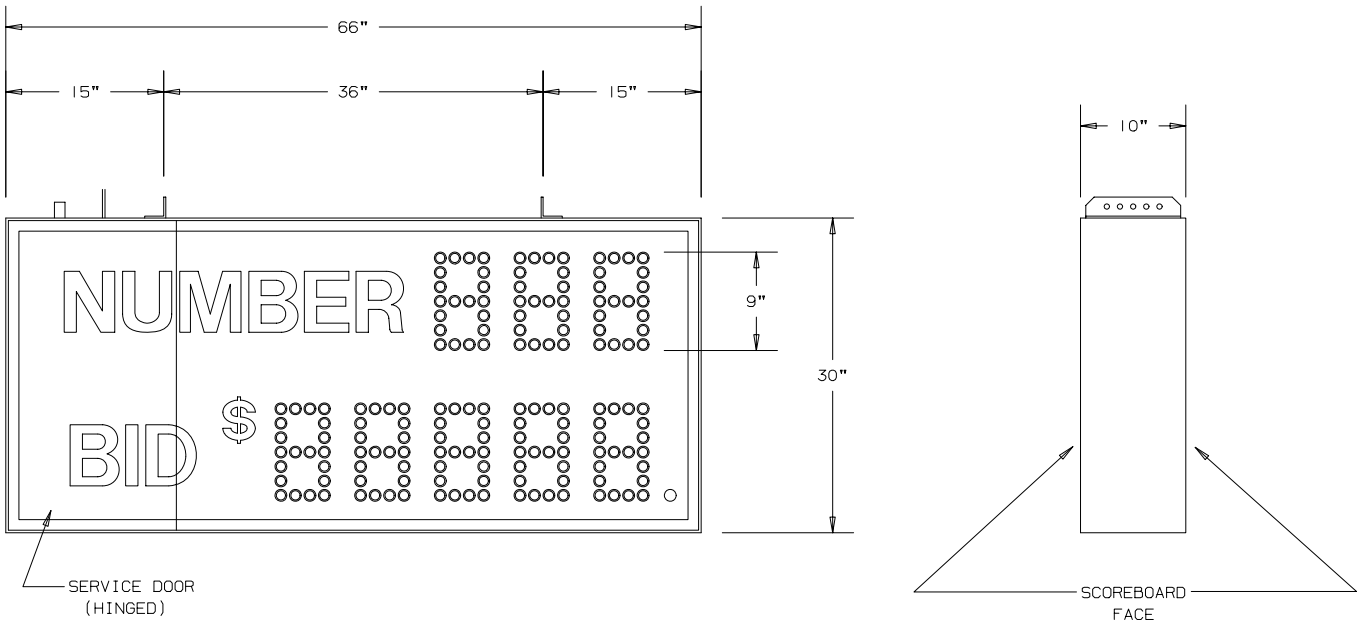
FIGURE A FIGURE B

JUMPER LOCATION

6.7 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.



MP TRIAC PLACEMENT

6.8 Installation