



Basketball Scoring Systems

Installation, Maintenance & Troubleshooting Manual

ED-3367

Models No.:

BB-1013B, BB-1013S, BB-1713B, BB-1713S, BB-1713B-A, BB-1713S-A

ED#3367

Product#1009

Rev. 10 - 28 Dec 1998

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DAKTRONICS, INC.

Setting New Standards Worldwide

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Section 1: Introduction

1.1 How to Use this Manual

This manual is designed to explain installation and maintenance of the display system. Details for display maintenance are also given. For questions regarding the safety, installation, operation or service of this system, please refer to the telephone numbers listed on the cover page of this manual.

☛ Important Safeguards:

1. Read and understand these instructions before installing.
2. Do not drop the control console or allow it to get wet.
3. Be sure the scoreboard is properly grounded with a ground rod at the scoreboard location.
4. *Disconnect power to the scoreboard when it is not in use.*
5. *Disconnect power when servicing the scoreboard.*
6. Do not modify the scoreboard structure or attach any panels or coverings to the scoreboard without the express written consent of Daktronics, Inc.

The box below illustrates Daktronics drawing numbering system. The drawing number “7087-P08A-69945” illustrates how Daktronics identifies individual drawings. This number is located in the bottom right corner of the drawing. Drawings are referred to in the manual by the last set of digits and the letter preceding them. In the example below, the drawing would be referred to as **Drawing A-69945**. All reference drawings are inserted at the *end of the first section which references them*.

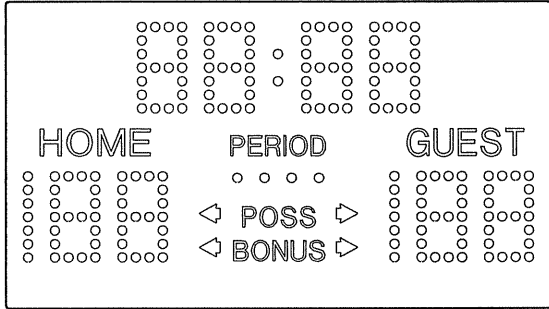
DAKTRONICS, INC. BROOKINGS, SD 57006		
PROJ:		
TITLE:		
DES. BY:	DRAWN BY:	DATE:
APPR. BY:	7087-P08A-69945	
SCALE:		

1.2 Scoreboard Overview

Reference Drawings:	Model Identification, Basketball	Drawing A-38330
	Model Identification Basketball	Drawing A-38512
	Single/Dual Display Installation	Drawing A-67460

The Daktronics Basketball Scoring System is from a family of display systems designed to offer simple installation, easy readability and reliability. The microprocessor control assures consistent operation and accuracy.

Drawings A-38330, A-38512 and A-67460 show the six basic display models covered in this manual, BB-1013S, BB-1713S, BB-1713S-A, BB-1013B, BB-1713B and BB-1713B-A. There are three different display configurations consisting of either 13" dot digits or bar digits. The dimensions and weight of each display is also listed on the drawings. Display model number and electrical requirements are listed on the label on the front of the display, left of the period indicators.

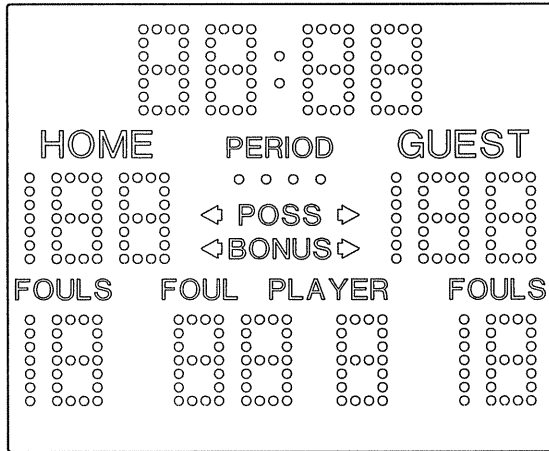
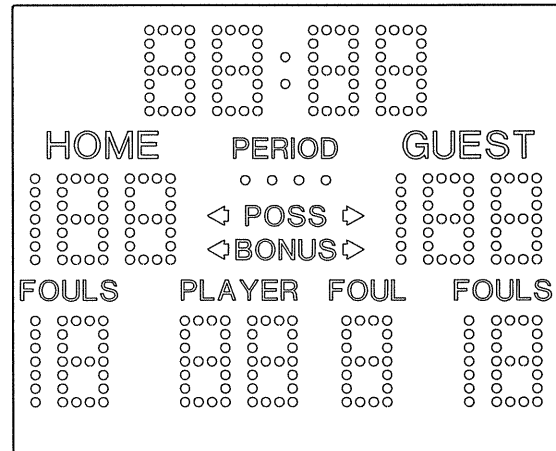


Model No. BB-1013S

Height: 45.25 in. (1149 mm)
 Width: 80.76 in. (2051 mm)
 Depth: 6 in. (153 mm)
 Weight: 85 lbs. (39 kg)

Model No. BB-1713S

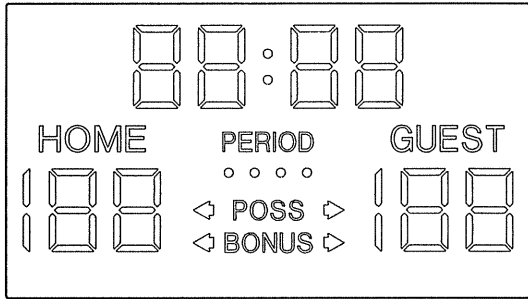
Height: 66.25 in. (1683 mm)
 Width: 80.76 in. (2051 mm)
 Depth: 6 in. (153 mm)
 Weight: 133 lbs. (61 kg)



Model No. BB-1713S-A

Height: 66.25 in. (1683 mm)
 Width: 80.76 in. (2051 mm)
 Depth: 6 in. (153 mm)
 Weight: 133 lbs. (61 kg)

DAKTRONICS, INC. BROOKINGS, SD 57006					
2		15 NOV 93	CHANGED WEIGHT OF BB-1713'S FROM 110 LBS. TO 133 LBS.	CFICK	
1		22 JUN 93	CHANGED FROM "B" TO "A" SIZE DRAWING.	C FICK	
REV.	DATE	DESCRIPTION		BY	APPR.
PROJ: BASKETBALL			TITLE: MODEL IDENTIFICATION, BASKETBALL		
DES. BY:			DRAWN BY: HEIDERSCHIEDT		DATE: 19 JUN 89
REVISION		APPR. BY:		1009-R08A-38330	
		SCALE: 1=26			

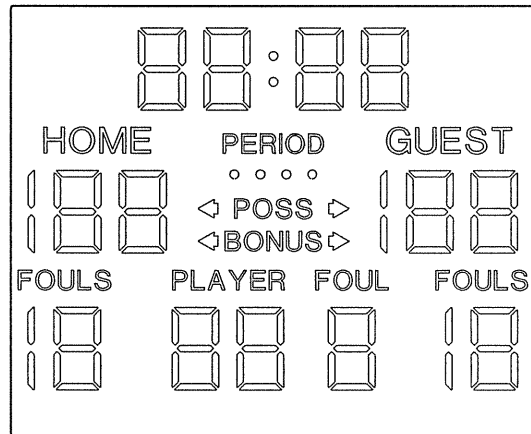


~~Model No. BB-1013B~~

Height: 45.25 in. (1149 mm)
 Width: 80.76 in. (2051 mm)
 Depth: 6 in. (153 mm)
 Weight: 95 lbs. (44 kg)

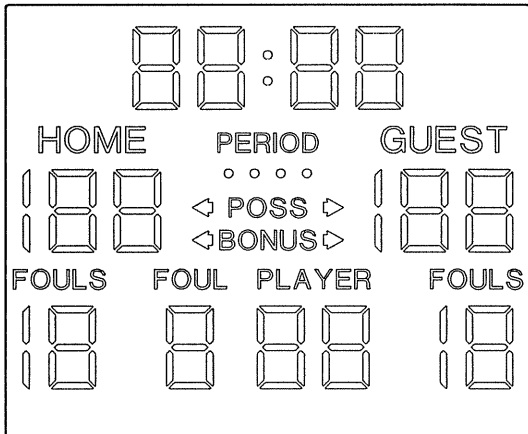
~~Model No. BB-1713B~~

Height: 66.25 in. (1683 mm)
 Width: 80.76 in. (2051 mm)
 Depth: 6 in. (153 mm)
 Weight: 138 lbs. (63 kg)



~~Model No. BB-1713B-A~~

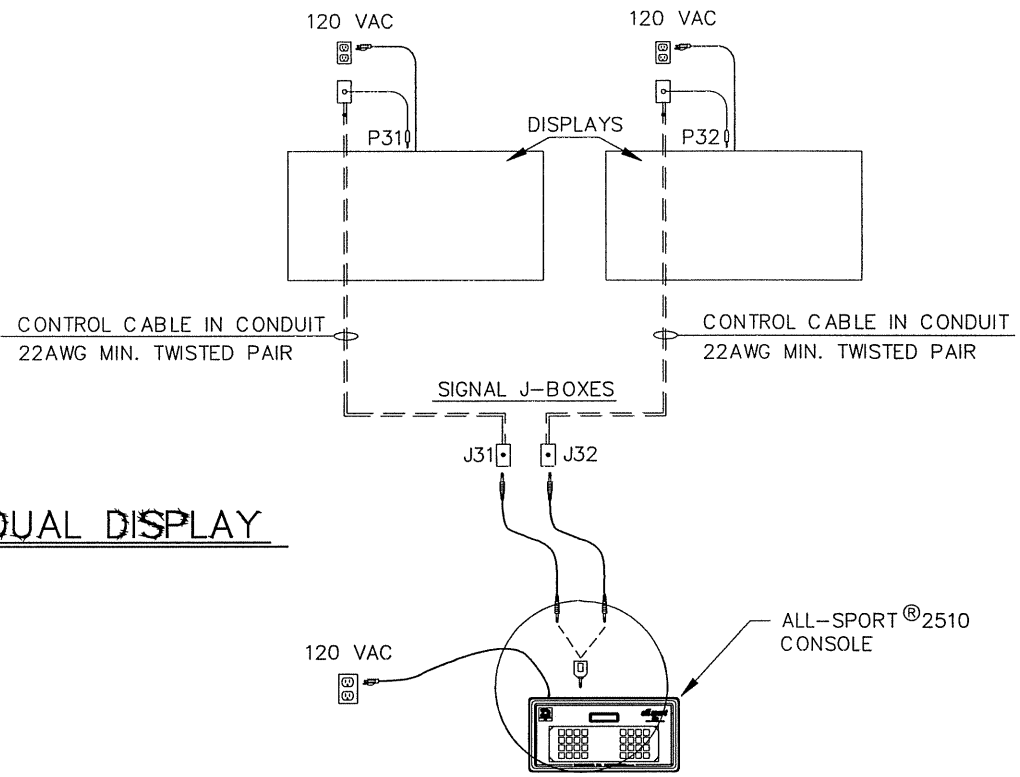
Height: 66.25 in. (1683 mm)
 Width: 80.76 in. (2051 mm)
 Depth: 6 in. (153 mm)
 Weight: 138 lbs. (63 kg)



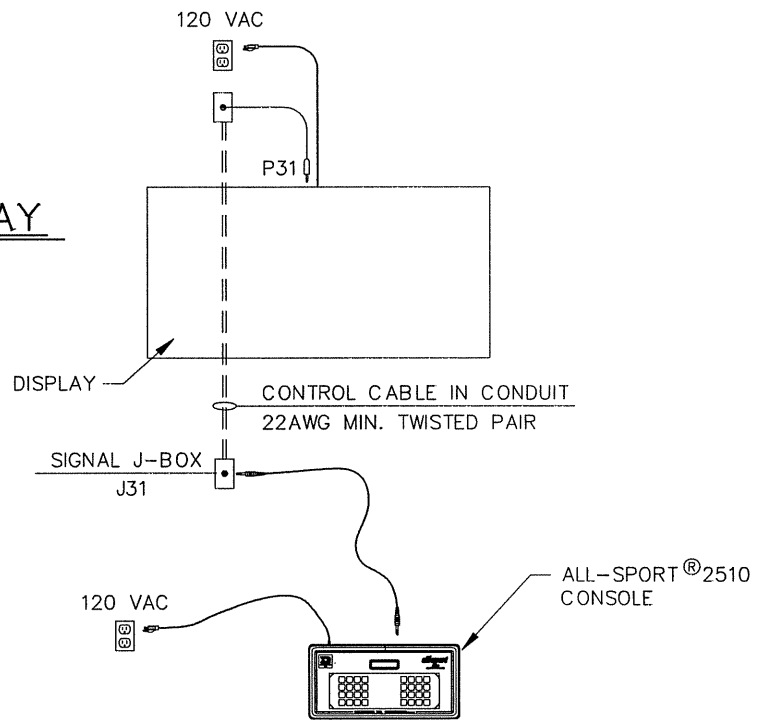
3	15 NOV 93	CHANGED WEIGHT OF BB-1713's FROM 120 LBS. TO 138 LBS.	CFICK	
2	22 JUN 93	CHANGED FROM "B" TO "A" SIZE DRAWING.	CFICK	
1	22 JUN 93	CHANGED DISPLAY NAMES FROM BB-xx12B TO BB-xx13B.	JLH	
REV.	DATE	DESCRIPTION	BY	APPR.

DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: BASKETBALL			
TITLE: MODEL IDENTIFICATION BASKETBALL			
DES. BY:		DRAWN BY: HEIDERSCHIEDT DATE: 19 JUN 89	
REVISION	APPR BY:	1009-R08A-38512	
	SCALE: 1=26		

DUAL DISPLAY



SINGLE DISPLAY



DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ: BASKETBALL SCOREBOARDS	
TITLE: SINGLE/DUAL DISPLAY INSTALLATION	
DES. BY:	DATE: 12 JAN 95
REVISION	SCALE: NONE
APPR. BY:	1009-R10A-67460

REV	DATE	DESCRIPTION	BY	APPR.

Section 2: Mechanical & Electrical Installation

Reference Drawing: Single/Dual Display Installation **Drawing A-67460**

Refer to **Drawing A-67460** in **Section 1** for a general system configuration for single and dual display installations.

- Provide grounded 120 VAC circuits to display and control locations.
- Route control signal cable in conduit from the control location to the display location. One pair of conductors (22 AWG min.) is required for each display. One-half-inch conduit is adequate for these wires.

If existing cable in good condition is available, two conductors from it may be used. Cable should run less than 1000 feet from the control location to the display. For greater lengths, contact Daktronics.

- Mount the display as described in **Section 2.1**.
- Make electrical connections as described in **Section 2.2**.

2.1 Mounting

Reference Drawing: Scoreboard Mounting **Drawing A-26861**

Angles for lifting the display and holes for attaching the display to the wall are provided in the frame of the display, as shown in **Drawing A-26861**.

Due to the variety of wall materials used in sports facilities, we cannot anticipate your needs and provide a mounting bolt or anchor suited to your installation. Suitable mounting hardware may be purchased at your local hardware store. Bolts with expansion or toggle anchors are available for a variety of wall materials. Be sure that the method you choose is adequate to safely support the weight of the display.

Use the lifting angles in the top of the frame to lift the display. Secure the display to the wall with the holes in the back, as shown in **Drawing A-26861**. Two holes at the bottom of the display are provided to secure the bottom of the display to the wall in a similar manner.

The pattern of four mounting holes is 66.25 inches wide. For BB-1013S and BB-1013B, the pattern is 44.10 inches high. For BB-1713S, BB-1713S-A, BB-1713B, and BB-1713B-A the vertical hole spacing is 65.10 inches.

2.2 Electrical Installation

Electrical installation involves routing of power and control signal wiring through separate conduit or wire ways. Control signal cable is not provided as part of this system and can be purchased locally.

2.2.1 Power

Each display is equipped with a 120 VAC, 3-prong plug. Provide a grounded receptacle and plug it in. Actual maximum display power consumption is as follows:

Model Number	Maximum Power (in watts)
BB-1013S	319
BB-1013B	430
BB-1713S, BB-1713S-A	510
BB-1713B, BB-1713B-A	692

The control console requires a 120 VAC receptacle for power. Power requirement is less than one amp.

2.2.2 Signal

Reference Drawing: Signal Connection; Installation **Drawing A-28214**
Installation, J-Box w/ Tip Shunt **Drawing A-43399**
Single/Dual Display Installation **Drawing A-67464**

If running 4 or less displays simultaneously:

1. Route conduit and cable between display location(s) and the control location.
2. Use paired cable, minimum 22 AWG, connecting the cable to the junction box at the control end.
3. Install the phone plug provided to the display end of the cable.
4. Insert plug into the jack (J301) on the top of the display. Make connections according to **Drawing A-28124**.

For running 4 or less displays, simultaneously or independently:

1. Route conduit and cable between display location(s) and the control location.
2. Use paired cable, minimum 22 AWG, connecting the cable to the junction box at the control end.
3. Install the phone plug provided to the display end of the cable.
4. Insert plug into the jack (J301) on the top of the display.
5. Make connections according to **Drawing A-43399**.

For running 4 or more displays or Foul/Player Panels:

1. Route conduit and cable between display location(s) and the control location.
2. Use paired cable, minimum 22 AWG, connecting the cable to the junction box at the control end.
3. Install the phone plug provided to the display end of the cable.
4. Insert plug into the jack (J301) on the top of the display.
5. Make connections according to **Drawing A-67464**.

Refer to **Section 3.2** for output functions and applications.

2.3 Basketball Codes and What Each Output Operates

The following table describes what model of basketball scoreboard can be operated from each of the outputs of All Sport® consoles.

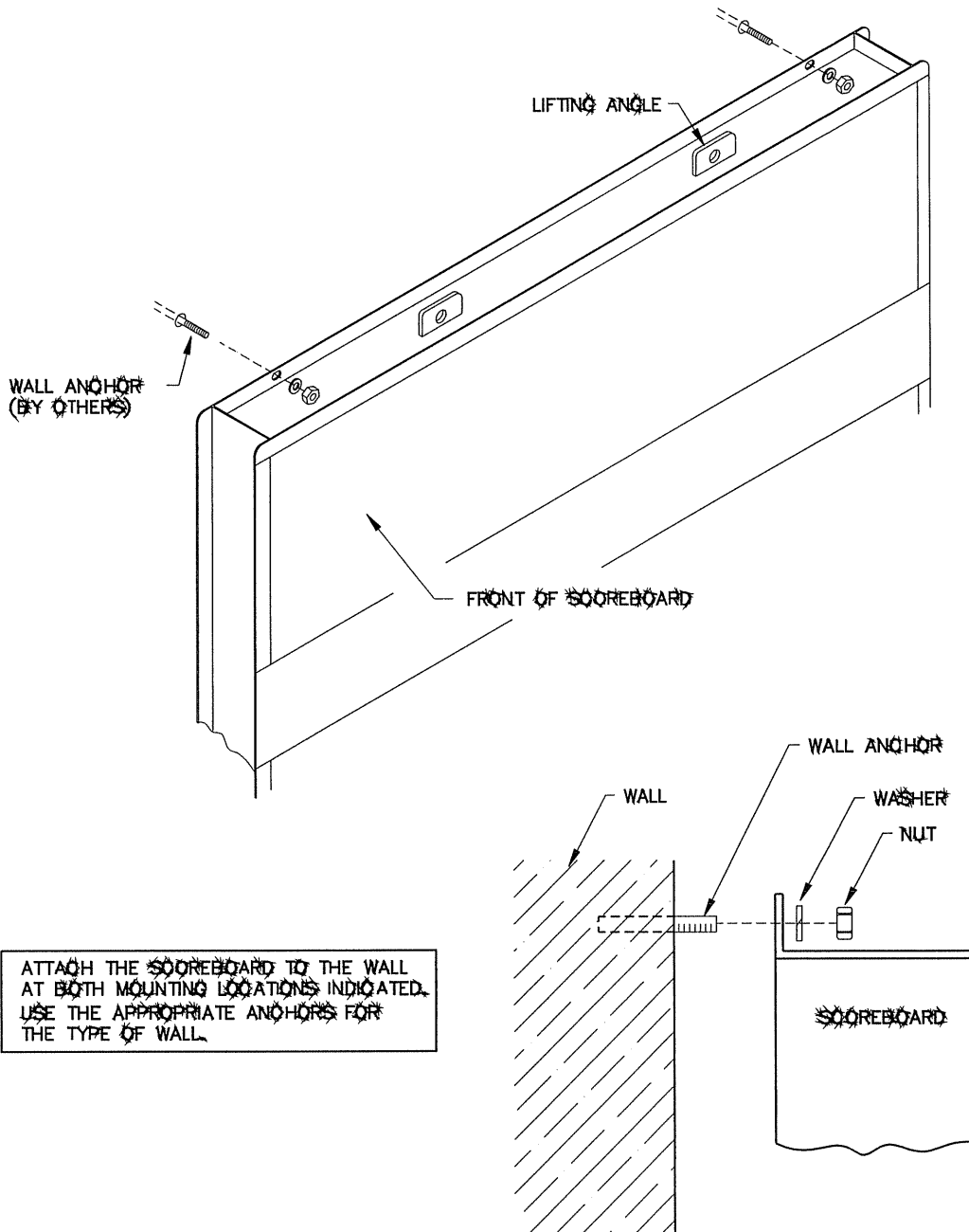
All Sport® 2000, 2100, 2500, and 2510 use only output 1. All Sport® 2200, 2300, 2600, and 2610 use outputs 1 through 4.

Code #	Output 1	Output 2	Output 3	Output 4
03	BB-18	B-18	G/S CLOCK	BB-17
04	BB-18A	BB-18A	G/S CLOCK	BB-17A
05	BB-18	BB-18	G/S CLOCK	BB-17
06	BB-18A	BB-18A	G/S CLOCK	BB-17A
07	BB-18	FP-15 DR1	FP-15 DR2	BB-17
08	BB-18A	FP-15 DR1	FP-15 DR2	BB-17A
10	PCS-4	PCS-4	PCS-4	PCS-4
11	BB-17	BB-17	G/S CLOCK	BB-17
12	BB-17A	BB-17A	G/S CLOCK	BB-17A
13	BB-17	BB-17	G/S CLOCK	BB-17
14	BB-17A	BB-17A	G/S CLOCK	BB-17A
15	FP-15 DR1	FP-15 DR2	-	FP-15 DR4*
16	FP-25 DR1	FP-25 DR2	FP-25 DR3	FP-25 DR4*
17	BB-17	FP-15 DR1	FP-15 DR2	BB-17
18	BB-17A	FP-15 DR1	FP-15 DR2	BB-17A

- BB-18 includes BB-1113S, BB-1113B, BB-1813S BB-1813B, & BB-114-CL.
- BB-18A includes BB-1113S, BB-1113B, BB-1813S-A BB-1818B-A, & BB-114-CL.
- BB-17 includes BB-1013S, BB-1013B, BB-1713S, BB-1713B, & BB-87B.
- BB-17A includes BB-1013S, BB-1013B, BB-1713S-A, BB-1713B-A & BB-87B.

* Codes 15 & 16 fourth output is used as an input to time/score console.

Note: This manual covers displays that use the BB-17 group.

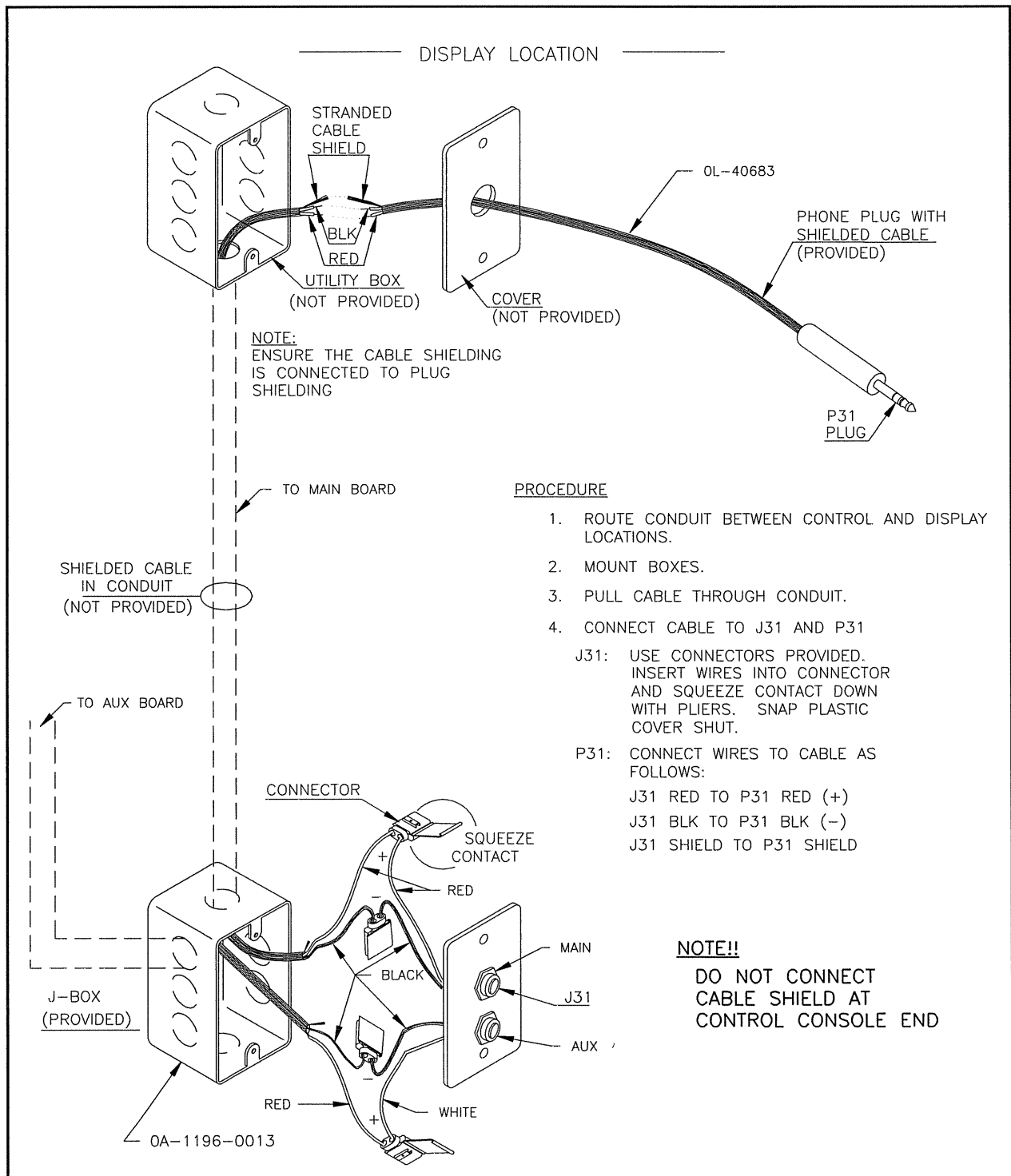


ATTACH THE SCOREBOARD TO THE WALL AT BOTH MOUNTING LOCATIONS INDICATED. USE THE APPROPRIATE ANCHORS FOR THE TYPE OF WALL.

1	05NOV91	REDREW ON A-SIZE ON ACAD.	JLH
---	---------	---------------------------	-----

REV.	DATE	DESCRIPTION	BY	APPR.
4	18AUG94	DELETED REFERENCE TO SPECIFIC MODELS	AVB	AVB
3	1 NOV 93	REMOVED LIFTING HOLES AT EACH SIDE OF DISPLAY AND ADDED LIFTING ANGLES	C FICK	
2	10 JAN 92	ADDED "MOUNTING STUDS LOCATIONS" DETAIL.	C FICK	

DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ:	
TITLE: SCOREBOARD MOUNTING	
DES. BY: WREDER	DRAWN BY: WREDER DATE: 14APR86
REVISION	APPR. BY: AVB
SCALE: NONE	1009-R10A-26861



PROCEDURE

1. ROUTE CONDUIT BETWEEN CONTROL AND DISPLAY LOCATIONS.
2. MOUNT BOXES.
3. PULL CABLE THROUGH CONDUIT.
4. CONNECT CABLE TO J31 AND P31

J31: USE CONNECTORS PROVIDED. INSERT WIRES INTO CONNECTOR AND SQUEEZE CONTACT DOWN WITH PLIERS. SNAP PLASTIC COVER SHUT.

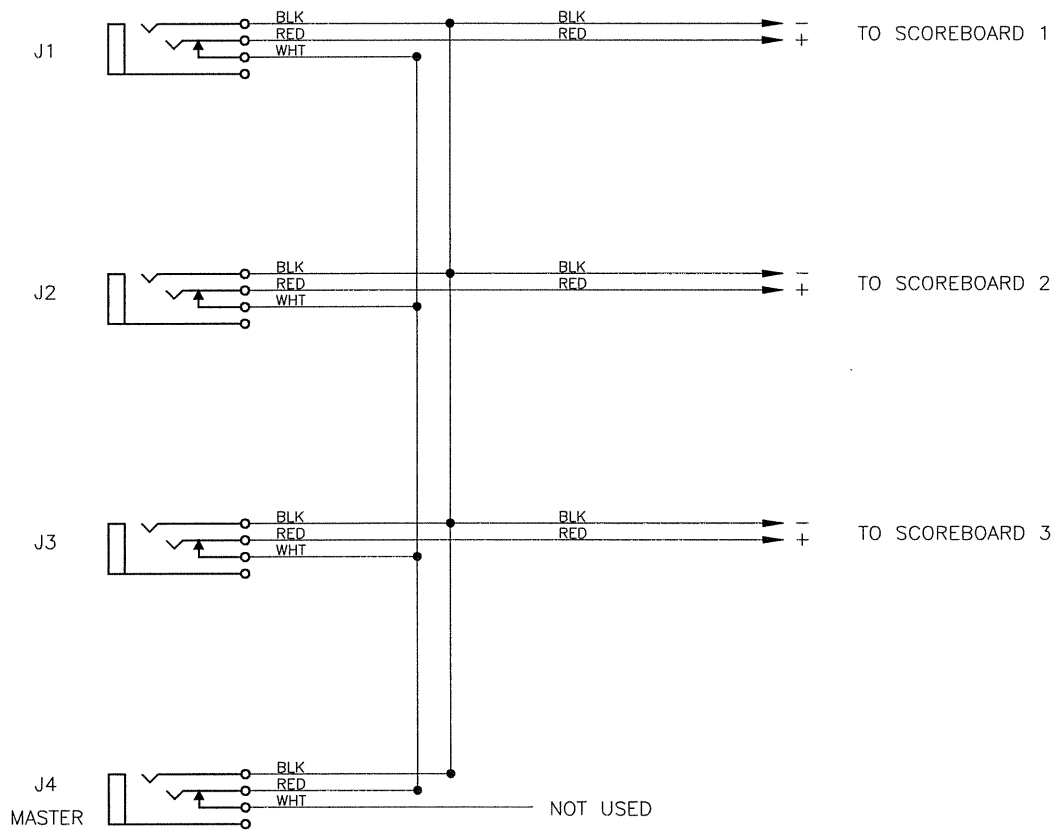
P31: CONNECT WIRES TO CABLE AS FOLLOWS:
 J31 RED TO P31 RED (+)
 J31 BLK TO P31 BLK (-)
 J31 SHIELD TO P31 SHIELD

NOTE!!

DO NOT CONNECT CABLE SHIELD AT CONTROL CONSOLE END

REV.	DATE	DESCRIPTION	BY	APPR.
05	30 JUL 03	BOLD FACED GROUNDING NOTE	TLH	
04	17 JUN 03	CHANGED GROUING PROCEDURES	JJC	MWM
3	17 JAN 02	ADDED AUX TO J-BOX	JJS	
2	25 MAR 92	CHANGED WHITE TO RED	JTC	
1	05 NOV 91	REDREW ON A-SIZE ON ACAD.	JLH	

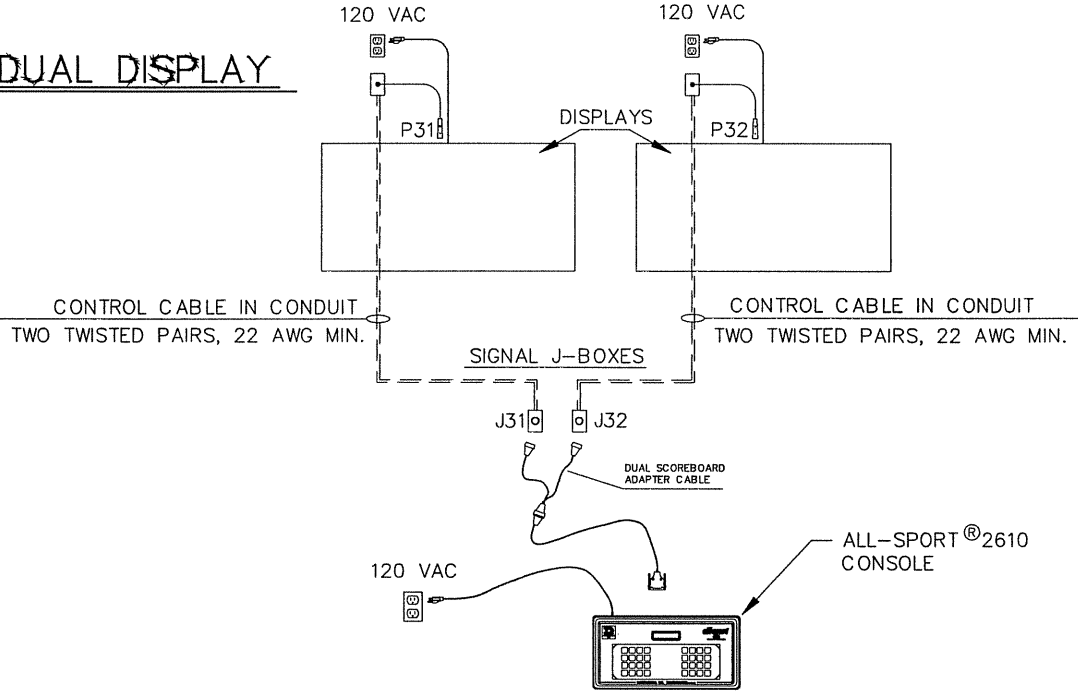
DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: BASKETBALL			
TITLE: SIGNAL CONNECTION; INSTALLATION			
DES. BY: AVB		DRAWN BY: MHART	
		DATE: 15SEP86	
REVISION	APPR. BY: AVB	1009-R10A-28124	
05	SCALE: NONE		



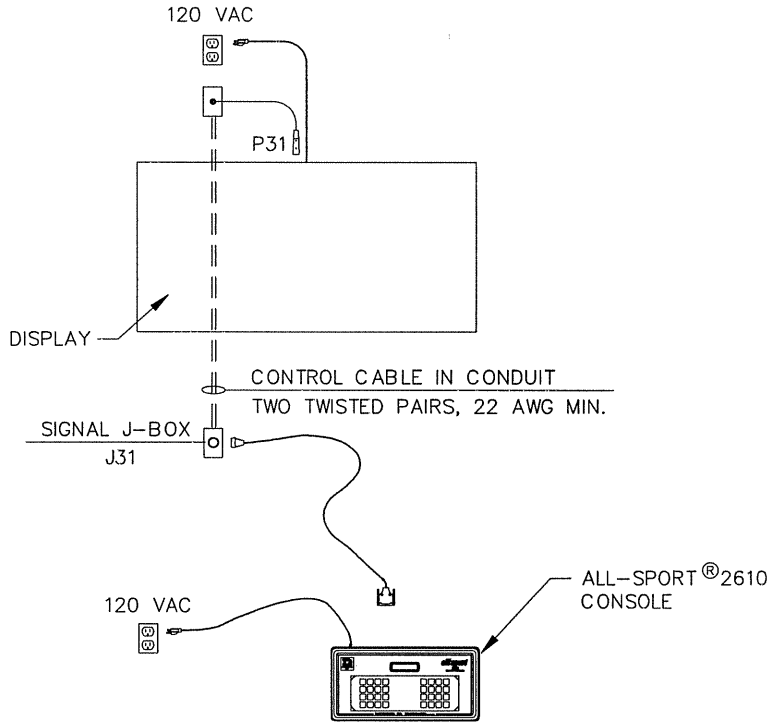
DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ: BASKETBALL	
TITLE: INSTALLATION, J-BOX W/TIP SHUNT	
DES. BY: JHEIDERSCHIEDT DRAWN BY: JHEIDERSCHIEDT DATE: 16JUL90	
REVISION	APPR. BY:
SCALE: NONE	1009-R10A-43399

REV.	DATE	DESCRIPTION	BY	APPR.

DUAL DISPLAY



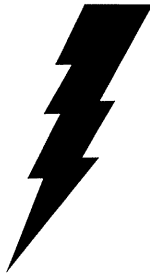
SINGLE DISPLAY



DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ:	BASKETBALL SCOREBOARDS
TITLE:	SINGLE/DUAL DISPLAY INSTALLATION
DES. BY:	DRAWN BY: NJA DATE: 16 JAN 95
REVISION	APPR. BY:
SCALE:	NONE
1009-R10A-67464	

REV.	DATE	DESCRIPTION	BY	APPR.

Section 3: Maintenance & Troubleshooting



IMPORTANT NOTES:

1. **Disconnect power before any repair or maintenance work is done on the scoreboard!**
2. **Any access to internal display electronics must be made by qualified service personnel.**
3. **Disconnect power when the scoreboard is not in use.**

3.1 Lamp Service

Reference Drawings: Lamp Service, 13" 4x7 Dot Matrix **Drawing A-26872**
 Lamp Service, 7 Segment Bar **Drawing A-38533**

The primary service required by Daktronics Basketball Scoring Displays is to replace lamps periodically. Replacement lamps are type no. 656, 28V, 60 ma, wedge base. Daktronics part number is DS-1115. Do not use higher power lamps or lamps rated for different voltage or damage may result.

To remove lamps in the dot matrix digit refer to **Drawing A-26872** and follow the steps below:

1. Remove the screws securing the digit to the display.
2. Remove the digit.
3. Rotate the lamp holder 1/4 turn and remove it from the reflector.
4. Pull the lamp from the lamp holder.
5. Insert the new lamp.
6. Replace the lamp holder into the reflector.
7. Position the digit in the display and secure with screws.

To remove lamps in the segment bar digit refer to **Drawing A-38533** and follow the steps below:

1. Remove the screws securing the digit and remove the digit.
2. Rotate the lamp holder 1/4 turn and remove it from the socket panel.
3. Pull the lamp from the lamp holder.
4. Insert the new lamp.
5. Replace the lamp holder.
6. Replace the digit and secure with the screws.

3.2 Lamp Driver

Reference Drawings: Lamp Driver, 16 Col., w/o Fan **Drawing A-37073**
 Component Locations, BB-1013X **Drawing A-38514**
 Component Locations, BB-1713X **Drawing A-38516**
 Component Locations, BB-1713X-A **Drawing A-38517**

In the display, the task of switching lamps on and off is performed by the lamp driver (refer to **Drawing A-37073**). Each lamp driver has 20 connectors providing power and signal inputs and outputs to digits and indicators. The function of each of these connectors is as follows:

Connector Number	Function
1-16	Output to digits and indicators
17	Control signal input
18	Power input for connectors 1-8
19	Power (120V) input for driver logic
20	Power input for connector 9-16

Output connectors 1 through 16 each have 9 pins. Pin 7 provides power to the digit or indicators wired to that connector. The other 8 pins provide switching connections. **Drawings A-38514, A-38516 and A-38517** show which connector number or connector and pin number, operates each digit or indicator in each display model.

3.3 Segmentation

Reference Drawing: Segmentation, 4x7 Digit **Drawing A-26762**
 Segmentation, 7 Segment Bar Digit **Drawing A-38532**

In each digit, certain lamps always go on and off together. These groupings of lamps are referred to as "segments." **Drawings A-27672 and A-38532** show which connector pin number is wired to each digit segment, and the wiring color code used throughout the display.

3.4 Fuses

Reference Drawing: Lamp Driver, 16 Col., w/o fan **Drawing A-37073**

The lamp driver in the scoreboard has 17 fuses. There is one fuse to protect each digit circuit. These fuses are type AGC-10 (as in **Drawing A-37073**) and are located next to each digit output under a single metal cover.

The other fuse, F17, is type AGC-1/2. It is located near the left end of the driver, under the same cover as F1 through F16. This fuse protects the driver logic circuit and the fan.

Additionally, each display has one fuse, F401, located behind the access door, to protect 120 VAC wiring circuits. Replace fuses only with fuses of the same type and rating.

3.5 Component Location and Access

Reference Drawings: Schematic, BB-1013S, BB-1713S **Drawing A-26169**
 Schematic, Power/Signal, BB-1713B **Drawing A-38491**
 Component Locations, BB-1013X **Drawing A-38514**
 Component Locations, BB-1713X **Drawing A-38516**
 Component Locations, BB-1713X-A **Drawing A-38517**

Drawings A-38514, A-38516 and A-38517 show front views of the six display models covered here, and the locations of the various components. The component numbers correspond to the schematics, **Drawings A-26169 and A-38491**.

The lamp driver is located behind the indicator panel. Release the fasteners securing the panel to gain access.

3.6 Schematic

Reference Drawings: Schematic, BB-1013S, BB-1713S **Drawing A-26169**
 Schematic, Power/Signal, BB-1713B **Drawing A-38491**
 Component Locations, BB-1013X **Drawing A-38514**
 Component Locations, BB-1713X **Drawing A-38516**
 Component Locations, BB-1713X-A **Drawing A-38517**

Drawings A-26169 and **A-38491** show the power and signal inputs and the 120V wiring. The component numbers correspond to **Drawings A-38514, A-38516** and **A-38517**. **Note:** Disconnect power before servicing and when the display is not in use. Keeping power on may shorten the life of some electronic components.

3.7 Troubleshooting

Observed Problem	Possible Cause	Remedy
Display won't light	Console not connected or poor connection	Check console connection
	No power to console	Check console power
	Power off at source	Check power
	Fuse blown at display	Replace fuse
	Driver logic fuse blown	Replace fuse
Individual lamps won't light	Lamp burned out	Replace lamp
	Broken wire	Locate and repair break
Segment won't light	Burned-out lamps	Replace lamps
	Broken wire	Locate and repair break
	Driver malfunction	Contact Daktronics
Segment stays lit	Driver malfunction	Contact Daktronics
Garbled display	Console malfunction	Contact Daktronics
	Poor signal connection	Check console connections
	Driver malfunction	Contact Daktronics
Entire digit won't light	Broken wire	Locate and repair break
	Fuse blown in driver	Replace fuse

3.8 Replacement Parts

Description	Where Used	Part Number
Fuse; AGC-1/2	Driver Logic	F-1000
Fuse; AGC-10	Driver Outputs	F-1006
Fuse; ABC-10	Main	F-1007
Fuse holder; panel mount	X-1032	
Lamp, #656 Wedge Base	Digits, Indicators	DS-1115
Lamp holder, T-3 1/4 Wedge Base	Digits, Indicators	X-1075
Horn; 24 VAC, 60 Hz	All models	DS-1119
Plug, 1/4" phone	Signal Connection	P-1041
Junction Box; Phone Jack	Signal Connection	0A-1009-0038
Lamp Driver, 10-column	BB-1013S, BB-1013B	0A-1033-0103
Lamp Driver; 16-column	BB-1713S, BB-1713S-A, BB-1713B, BB-1713B-A	0A-1033-0101

3.9 Unit Exchange/Replacement Procedure

Daktronics unique exchange program offers our clients the quickest, most economical way of receiving product repairs. If a component has failed, Daktronics will send the customer a replacement. The customer, in turn, sends the failed components to Daktronics. This not only saves money, but also decreases the time that the display is inoperable. Daktronics offers repair and return on a timely basis. In urgent situations, every attempt is made to ship by the fastest transit method available.

1. **Packaging for Return:** Package and pad the item well to prevent damage during shipment. Electronic components such as printed circuit boards should either be installed in an enclosure or placed in an anti-static bag before boxing.

Please enclose your name and address along with a list of all the symptoms. Please be as specific as possible.

2. **Lampbank and Driver Packaging Instructions:** Lampbanks and drivers should be placed in a static-free enclosure for return shipping. An anti-static convoluted foam packing is available from Daktronics, part number PK-1135 for your use if needed. The shipping box (Daktronics part number PK-1006) should be used in conjunction with the foam.
3. **Where to Send:** To return parts for service, contact your local representative prior to shipment to acquire a Return Material Authorization Number (RMA#). This will speed up the repair of your unit.

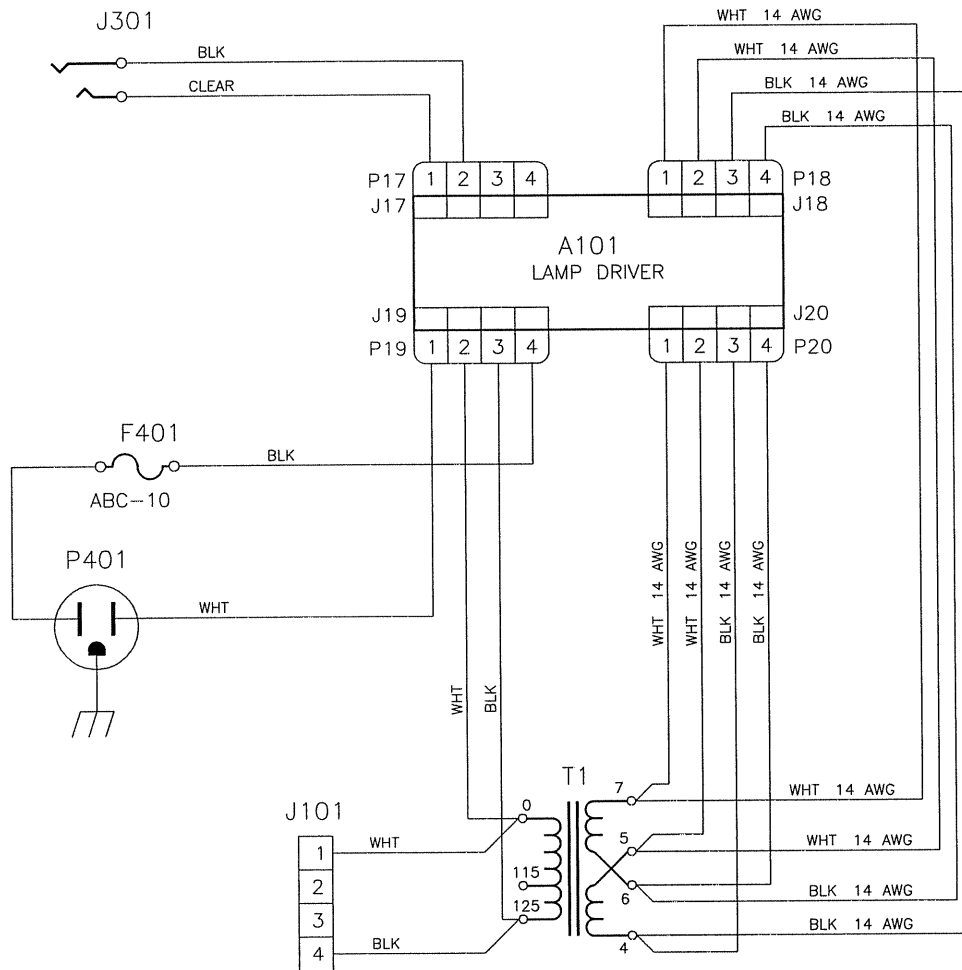
When returning defective items under the exchange program, please utilize the UPS Blue Return Tags found in the package containing the exchange unit sent from Daktronics. This will speed up the transaction and help avoid any confusion when the part is returned to Daktronics. **The defective item must be returned within 15 days of receiving a replacement part.** Using the UPS Blue Return tag immediately will eliminate the possibility of late charges being assessed against your account.

Mail: Daktronics, Inc., Customer Service
PO Box 5128
331 32nd Avenue
Brookings, SD 57006

Phone: Toll Free: 1-800-843-9879
or 1-605-697-4400

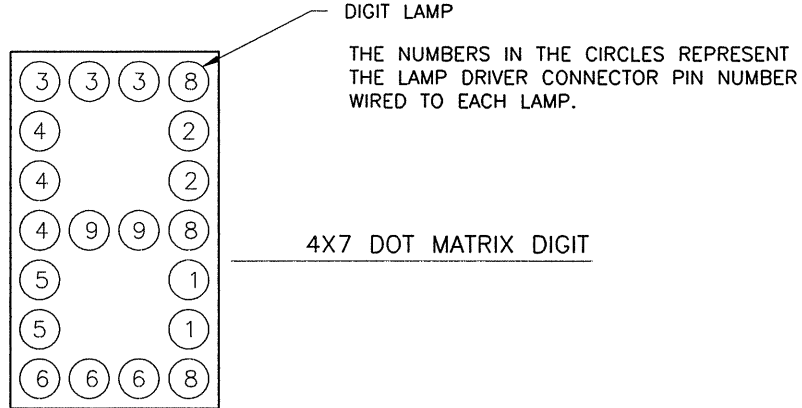
Customer Service Fax: 1-605-697-4444

e-mail: helpdesk@daktronics.com



REV.	DATE	DESCRIPTION	BY	APPR.
5	21 OCT 99	SWAP CONNECTIONS FROM T1-0 TO P19 T1-125 TP P19.	AVB	
4	11APR95	ADDED WIRES FROM T1 TO A101-P18 AND TO A101-P20.	AVB	AVB
3	13 JULY 93	ADDED WIRES TO PIN 3 OF P18 & P20.	C FICK	
2	15JUN92	REDRAWN ON CADD, ON A-SIZE-V, INDICATED WIRE GAUGE ON SECONDARY.	AVB	AVB
1	25FEB86	REDRAWN IN INK.	AVB	AVB

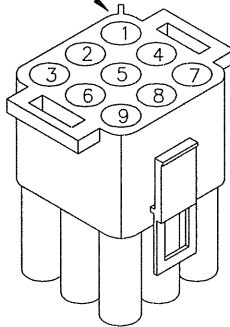
DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ: BASKETBALL SCOREBOARDS	
TITLE: SCHEMATIC, BB-1013S, BB-1713S	
DES. BY: AVB	DRAWN BY: A VANBEMMEL DATE: 15JUN92
REVISION	APPR. BY:
SCALE: NONE	1009-R03A-26169



COLOR CODE		
PIN NO.	WIRE COLOR	DRIVER SEGMENT
1	ORANGE	C
2	RED	B
3	BROWN	A
4	BLUE	F
5	PINK	E
6	TAN	D
7	BLACK	COMMON
8	GRAY	H
9	VIOLET	G

CONNECTOR PIN NUMBERING

NOTE SPLINE NEAR NO. 1

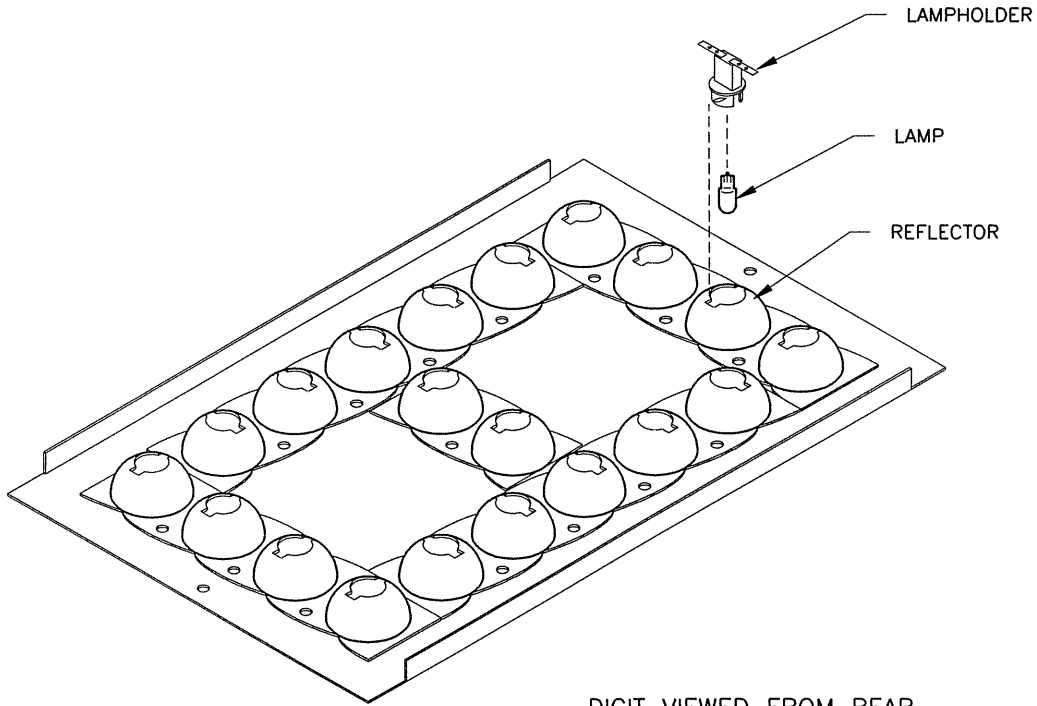


DAKTRONICS, INC. BROOKINGS, SD 57006				
2	29JAN93	CHANGED TO ASIZE-V BORDER.	AVB	AVB
1	18APR89	REDRAWN ON CAD.	AVB	AVB
REV.	DATE	DESCRIPTION	BY	APPR
PROJ: OUTDOOR SCOREBOARDS		TITLE: SEGMENTATION, 4X7 DIGIT		
DES. BY:		DRAWN BY: WREDER		DATE: 10APR86
REVISION	APPR. BY:	1064-R04A-26762		
	SCALE: NONE			

WARNING: DISCONNECT POWER BEFORE SERVICING DIGITS

PROCEDURE:

1. REMOVE THE SCREWS SECURING THE DIGIT TO THE DISPLAY.
2. REMOVE THE DIGIT.
3. ROTATE THE LAMPHOLDER 1/4 TURN AND REMOVE IT FROM THE REFLECTOR.
4. PULL THE LAMP FROM THE LAMPHOLDER.
5. INSERT THE NEW LAMP.
6. REPLACE THE LAMPHOLDER INTO THE REFLECTOR.
7. POSITION THE DIGIT IN THE DISPLAY AND SECURE WITH SCREWS.



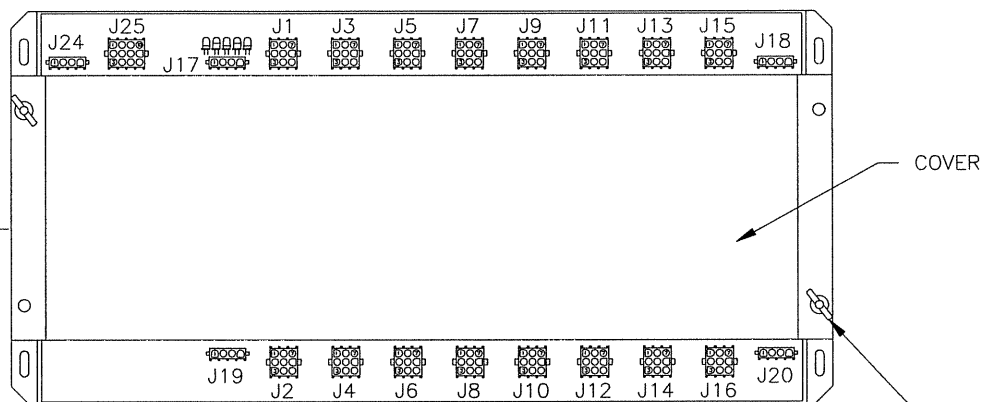
DIGIT VIEWED FROM REAR

WIRING NOT SHOWN

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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: INDOOR SCOREBOARDS			
TITLE: LAMP SERVICE, 13" 4X7 DOT MATRIX DIGIT			
DES. BY: AVB		DRAWN BY: W REDER	
		DATE: 29APR86	
REVISION	APPR. BY: AVB	1009-R10A-26872	
02	SCALE: 1=4		

2	25JUN91	REDRAWN ON CAD. CHANGED TO A-SIZE-V	AVB	AVB
1	10SEP86	DELETED NYLATCHES.	MHART	AVB
REV.	DATE	DESCRIPTION	BY	APPR.

DRIVER FRONT VIEW WITH COVER



REMOVE TWO WING NUTS TO REMOVE COVER AND GAIN ACCESS TO FUSES.

J24			
PIN	FUNCTION	PIN	FUNCTION
1	NETWORK+	7	ADDR 3 -
2	NETWORK-	8	NTW GND -
3	NTWREF-P	9	NTW GND -
4	ADDR 0 -	10	FAN SW HOT
5	ADDR 1 -	11	FAN HOT
6	ADDR 2 -	12	NEUT

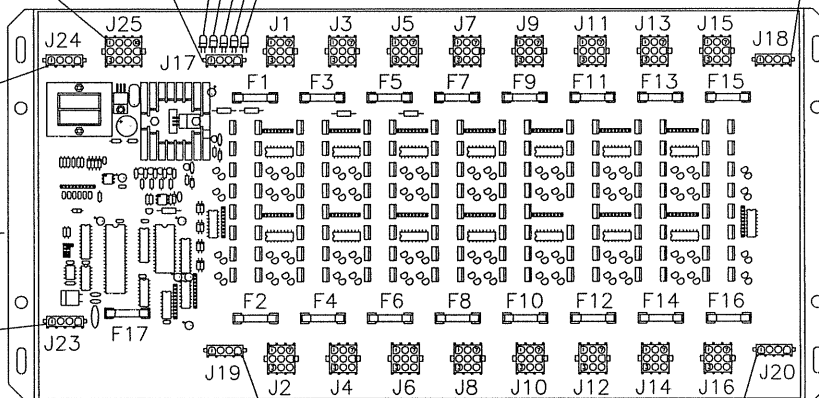
J17	
PIN	FUNCTION
1	SIGNAL +
2	SIGNAL -
3	N.C.
4	N.C.

J1 - J16	
PIN	FUNCTION
1	SEG C
2	SEG B
3	SEG A
4	SEG F
5	SEG E
6	SEG D
7	COMMON
8	SEG H
9	SEG G

J18	
PIN	FUNCTION
1	LAMP NEUT
2	LAMP NEUT
3	LAMP HOT 1, 3, 5, 7
4	LAMP HOT 2, 4, 6, 8

J24	
PIN	FUNCTION
1	-5V
2	DIM SEL 1
3	-5V
4	DIM SEL 2

DRIVER FRONT VIEW WITH COVER REMOVED



J23 (NOT USED IN THIS MODEL)

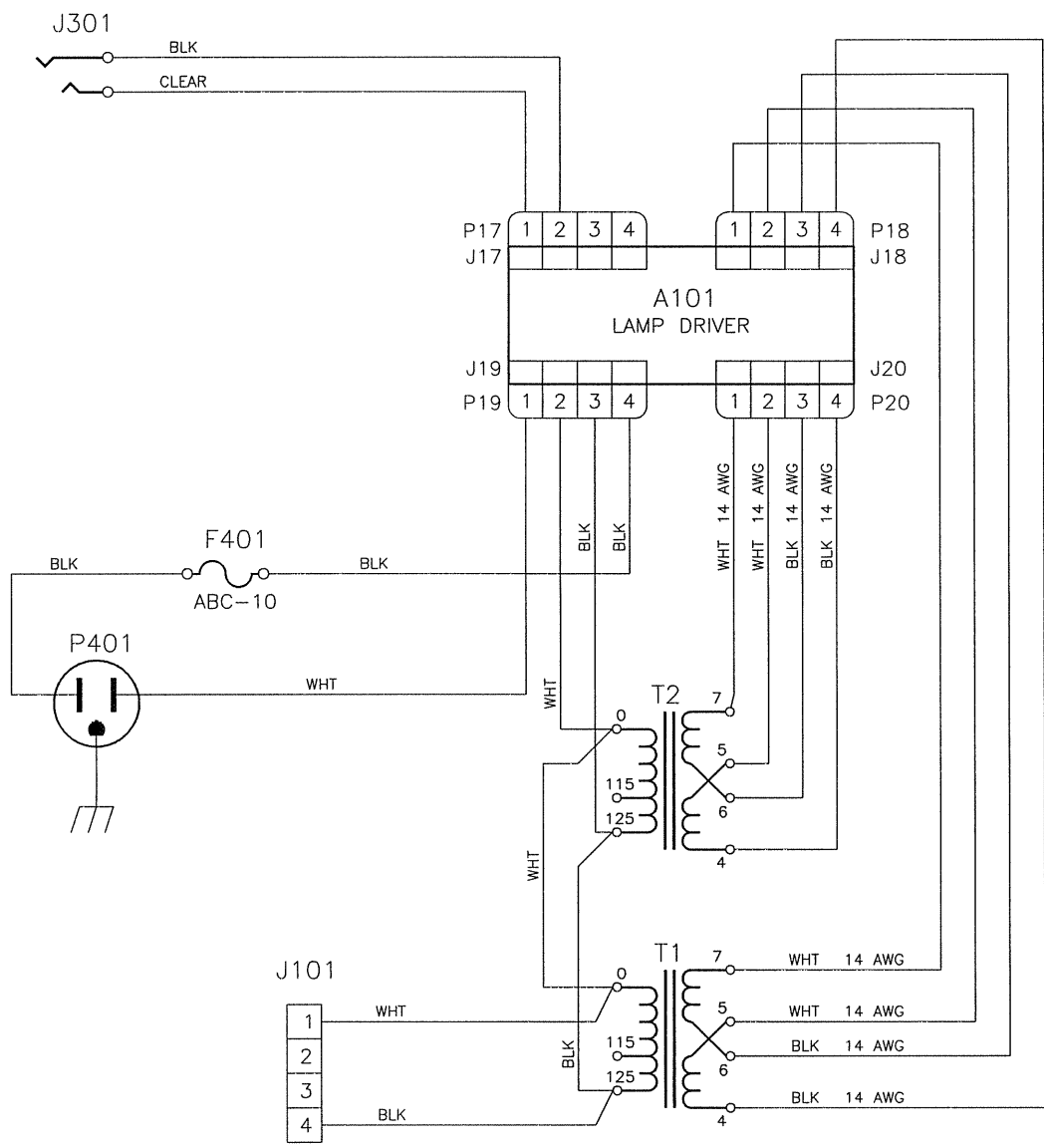
J23	
PIN	FUNCTION
1	FAN SW HOT
2	N.C.
3	FAN HOT
4	NEUT

J19	
PIN	FUNCTION
1	NEUTRAL
2	NEUTRAL
3	120V HOT
4	120V HOT

J20	
PIN	FUNCTION
1	LAMP NEUT
2	LAMP NEUT
3	LAMP HOT 9,11,13,15
4	LAMP HOT 10,12,14,16

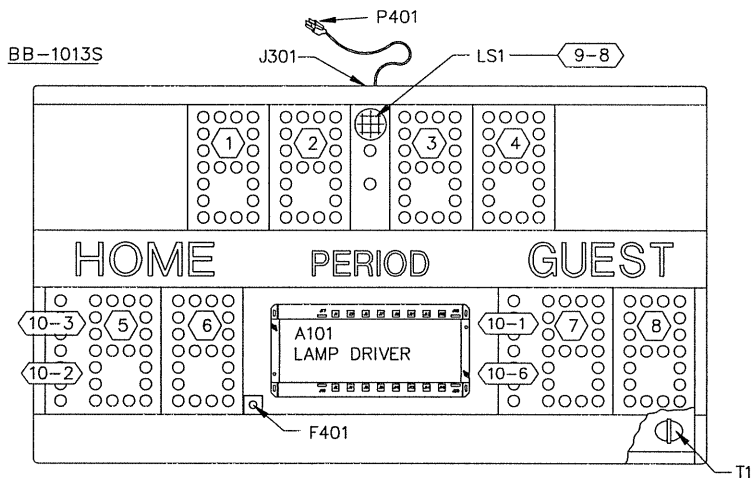
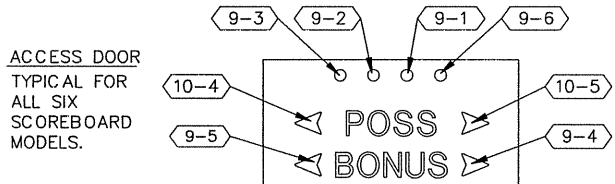
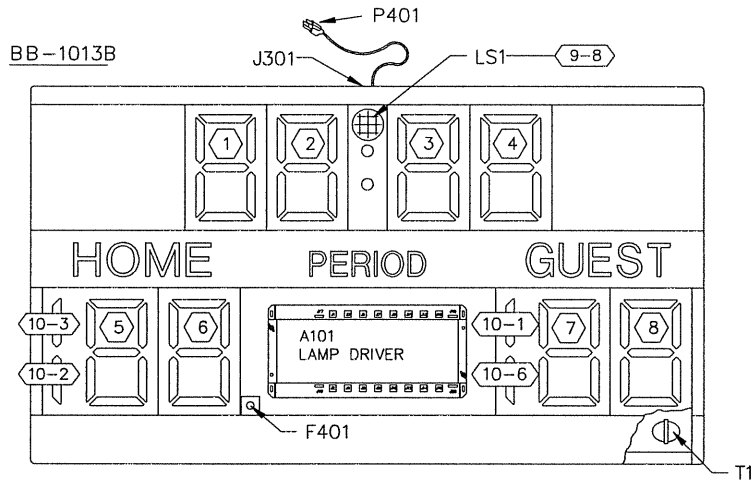
F1 THRU F16 ARE TYPE AGC-10, DAKTRONICS PART NUMBER F-1006. F17 IS TYPE AGC-1/2, DAKTRONICS PART NUMBER F-1000

DAKTRONICS, INC. BROOKINGS, SD 57006					
2	29 APR 97	ADDED TABLES OF PINS AND FUNCTIONS.	AVB	AVB	PROJ: MULTIPLEX CONTROLLERS
1	02 JAN 92	CHANGED FROM "B" TO "A" SIZE DWG.	CF		TITLE: LAMP DRIVER, 16 COL., W/O FAN
REV.	DATE	DESCRIPTION	BY	APPR.	DES. BY: JLH DRAWN BY: JLH DATE: 20 FEB 89
					REVISION APPR. BY: SCALE: 1=5
					1033-R04A-37073



3	12NOV96	CORRECTED BLK & WHT DESIGNATIONS ON WIRES TO P18 & P20.	AVB	AVB
2	12JUN92	REDRAWN ON A-SIZE-V. INDICATED WIRE GAUGE ON SECONDARY.	AVB	AVB
1	13APR90	CHANGED MODEL NAMES FROM 12S TO 13B	JLH	AVB
REV.	DATE	DESCRIPTION	BY	APPR.

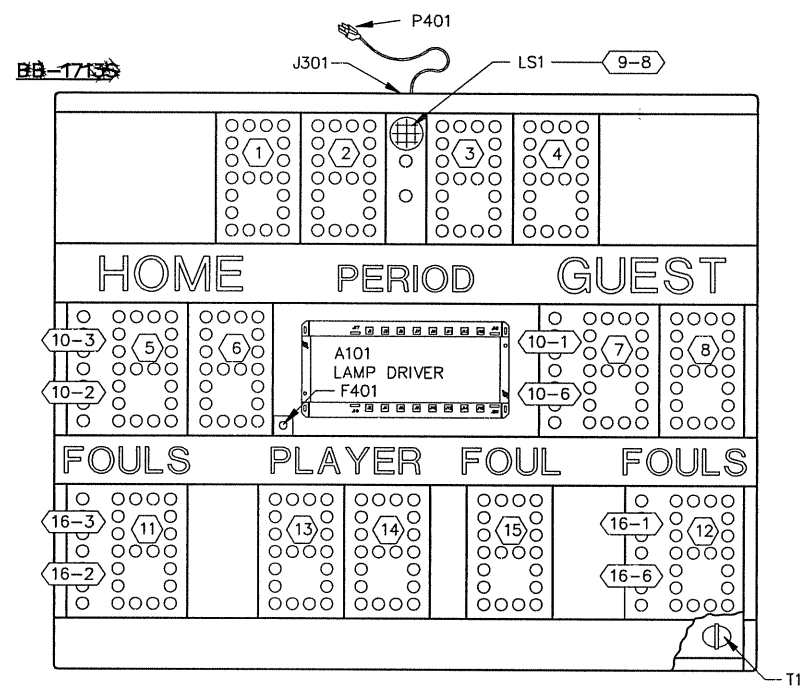
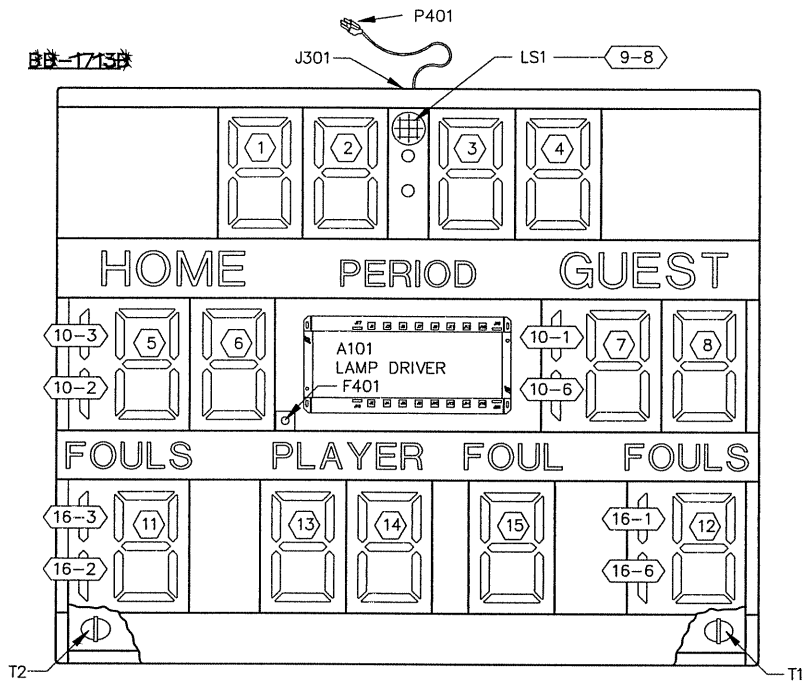
DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: BASKETBALL SCOREBOARDS			
TITLE: SCHEMATIC, POWER/SIGNAL, BB-1713B			
DES. BY: AVB		DRAWN BY: A VANBEMMEL	
DATE: 15JUN92			
REVISION	APPR. BY:		
	SCALE: NONE	1009-R03A-38491	





- = LAMP DRIVER CONNECTOR NO. TO WHICH DIGIT IS WIRED.
- = LAMP DRIVER CONNECTOR AND PIN NO.

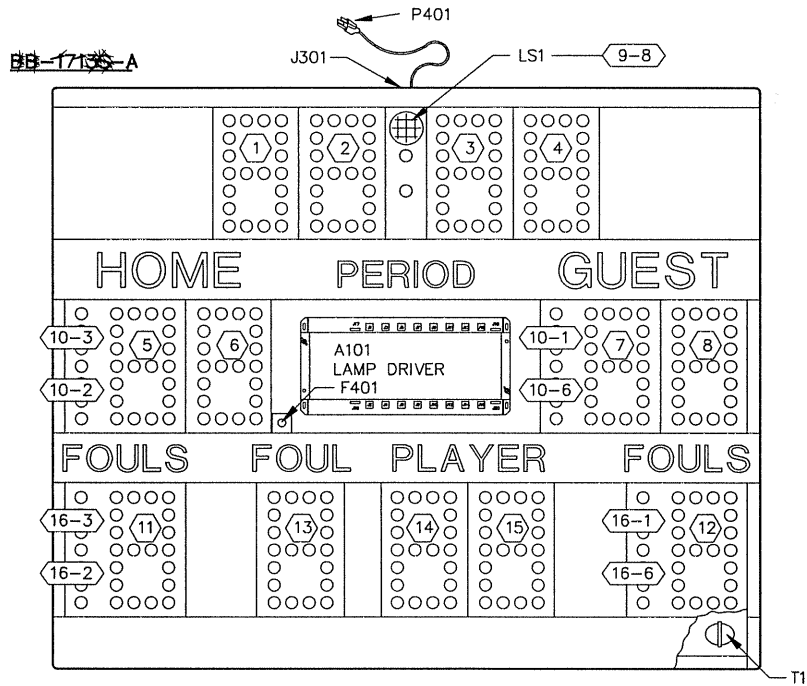
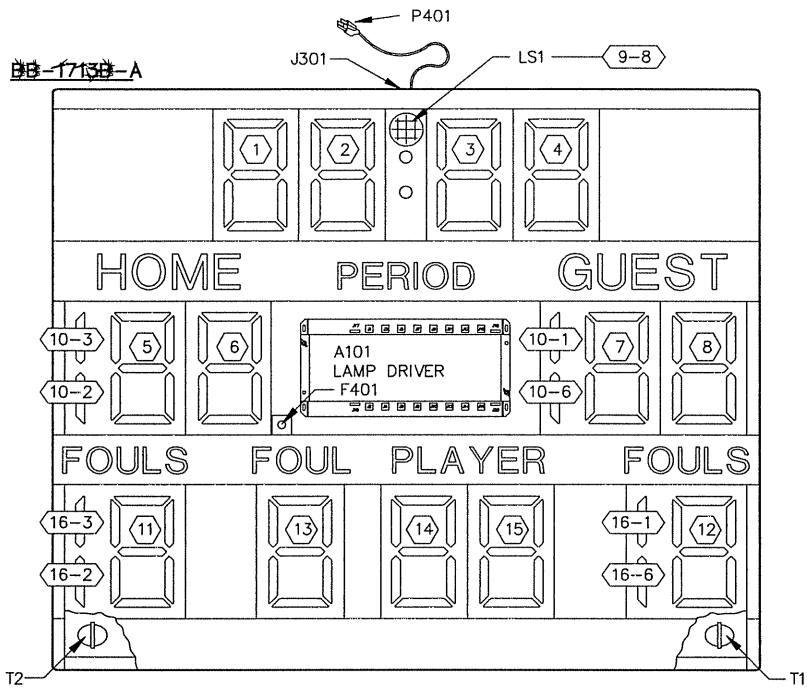
COMPONENT	DESCRIPTION	PART NO.
P401	POWER CORD	W-1025
F401	FUSE HOLDER	X-1032
F401	FUSE, ABC-10	F-1007
J301	SIGNAL JACK	J-1003
LS1	HORN	DS-1119
T1	TRANSFORMER	T-1009
A101	LAMP DRIVER	0A-1033-0103



3	10 DEC 97	CHNG OLD STYLE ARROW TO NEW STYLE. ADDED PART TABLE.	MWJ		DAKTRONICS, INC. BROOKINGS, SD 57006	
2	13 JAN 95	CHANGED FROM B-SIZE TO A-SIZE BORDER.	NJA		PROJ: BASKETBALL SCOREBOARDS	
1	13 MAR 90	CHANGED NAME OF DISPLAY FROM BB-1012S TO BB-1013B.	JLH		TITLE: COMPONENT LOCATIONS, INCANDESCENT BB-1013X	
REV.	DATE	DESCRIPTION	BY	APPR.	DES. BY:	DRAWN BY: HEIDERSHEIDT DATE: 30 JUN 89
					REVISION	APPR. BY:
					SCALE: 1=20	1009-R04A-38514



 = LAMP DRIVER CONNECTOR NO. TO WHICH DIGIT IS WIRED.
 = LAMP DRIVER CONNECTOR AND PIN NO.

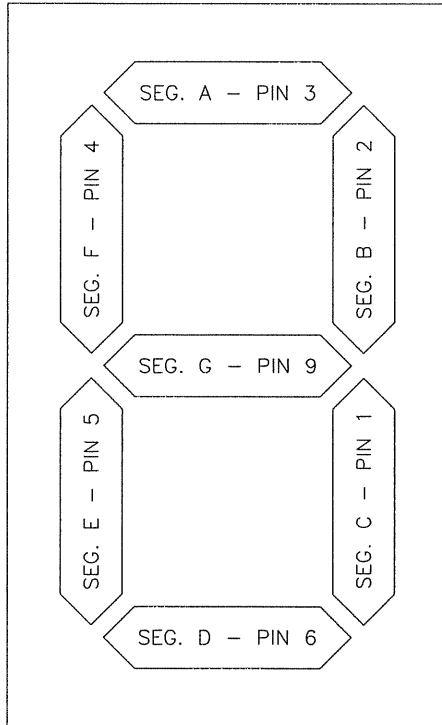
DAKTRONICS, INC. BROOKINGS, SD 57006				
PROJ: BASKETBALL SCOREBOARDS				
TITLE: COMPONENT LOCATIONS, BB-1713X				
DES. BY:		DRAWN BY: HEIDERSCHIEDT DATE: 5 JUN 89		
REV.	DATE	DESCRIPTION	BY	APPR.
2	16 JAN 95	CHANGED FROM A SIZE TO B SIZE.	NJA	
1	5 MAR 90	CHANGED NAME OF DISPLAY FROM BB-1712S TO BB-1713B.	JLH	
REVISION		APPR. BY:	1009-R04A-38516	
		SCALE: 1=20		



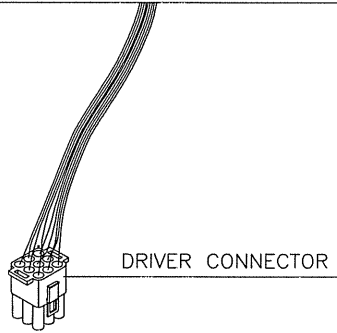
 = LAMP DRIVER CONNECTOR NO. TO WHICH DIGIT IS WIRED.
 = LAMP DRIVER CONNECTOR AND PIN NO.

REV.	DATE	DESCRIPTION	BY	APPR.
2	13 JAN 95	CHANGED FROM B SIZE TO A SIZE.	NJA	
1	13 MAR 90	CHANGED NAME OF DISPLAY FROM BB-17125-A TO BB-1713B-A.	JLH	

DAKTRONICS, INC. BROOKINGS, SD 57006	
PROJ: BASKETBALL SCOREBOARDS	
TITLE: COMPONENT LOCATIONS, BB-1713X-A	
DES. BY:	DRAWN BY: HEIDERSCHIEDT DATE: 5 JUN 89
REVISION	APPR. BY:
SCALE: 1=20	1009-R04B-38517

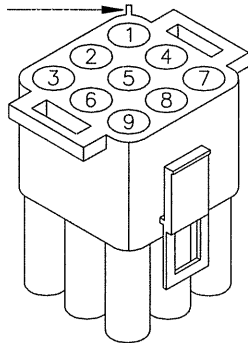


7 SEGMENT BAR DIGIT
FRONT VIEW



COLOR CODE		
PIN NO.	WIRE COLOR	DRIVER SEGMENT
1	ORN	C
2	RED	B
3	BRN	A
4	BLU	F
5	PNK	E
6	TAN	D
7	BLK	COM.
8	GRY	H
9	VIO	G

CONNECTOR PIN NUMBERING
NOTE SPLINE NEAR NO. 1



NOTE: "H" SEGMENT, GRAY WIRE IS NOT USED ON 7 SEGMENT BAR DIGIT.

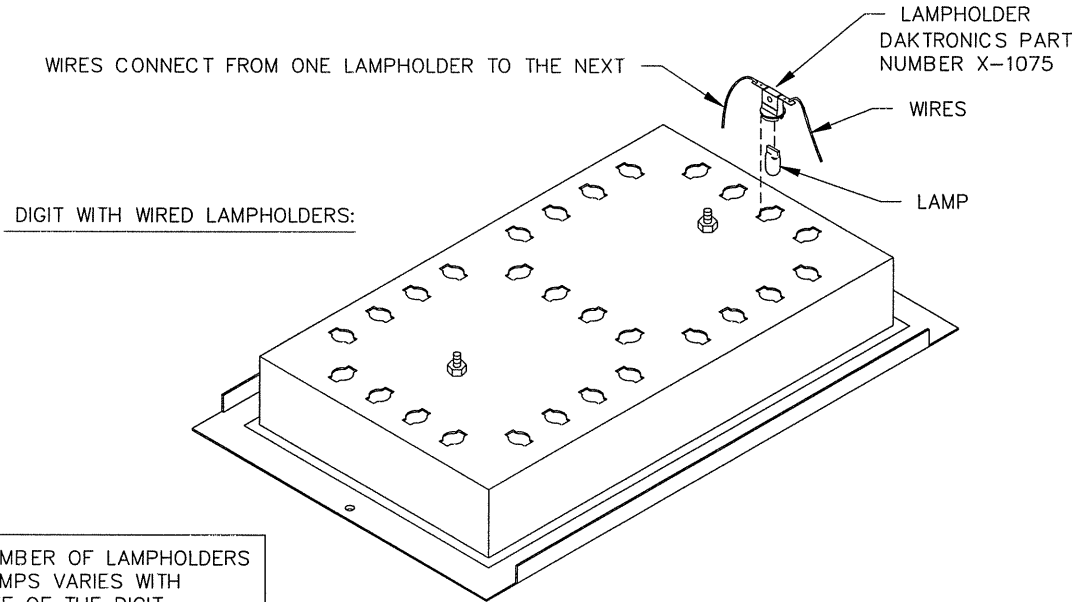
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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: BASKETBALL			
TITLE: SEGMENTATION, 7 SEGMENT BAR DIGIT			
DES. BY:		DRAWN BY: HEIDERSCHIEDT DATE: 5 JUN 89	
REVISION	APPR. BY: AVB	1009-R04A-38532	
02	SCALE: 1=4		

REV.	DATE	DESCRIPTION	BY	APPR.
2	30 APR 97	ADDED SEGMENT DESIGNATIONS TO DIGIT FIGURE.	AVB	AVB
1	2 JAN 92	CHANGED FROM B-SIZE TO A-SIZE DWG.	C FICK	

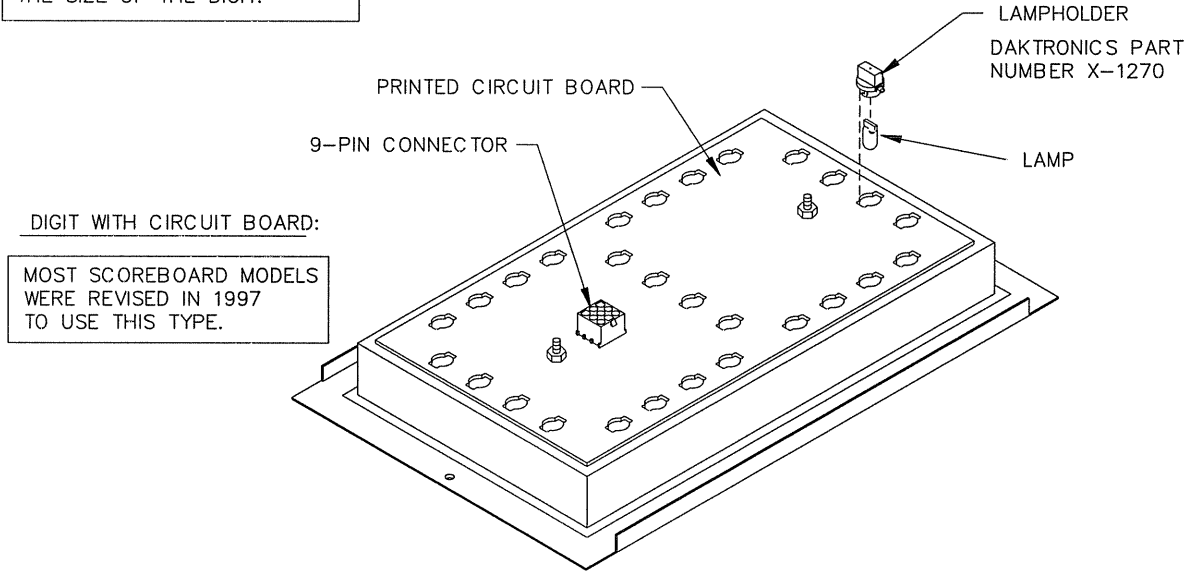
WARNING: DISCONNECT POWER BEFORE SERVICING DIGITS.

PROCEDURE:

1. REMOVE THE SCREWS SECURING THE DIGIT AND REMOVE THE DIGIT..
2. ROTATE LAMPHOLDER 1/4 TURN AND REMOVE IT FROM THE SOCKET PANEL.
3. PULL THE LAMP FROM THE LAMPHOLDER.
4. INSERT THE NEW LAMP.
5. REPLACE THE LAMPHOLDER.
6. REPLACE THE DIGIT AND SECURE WITH THE SCREWS.



THE NUMBER OF LAMPHOLDERS
AND LAMPS VARIES WITH
THE SIZE OF THE DIGIT.



MOST SCOREBOARD MODELS
WERE REVISED IN 1997
TO USE THIS TYPE.

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DAKTRONICS, INC. BROOKINGS, SD 57006

REV.	DATE	DESCRIPTION	BY	APPR
2	27 MAR 97	ADDED FIGURE FOR PC BOARD DIGIT.	AVB	AVB
1	2 JAN 92	CHANGED FROM "B" TO "A" SIZE DWG.	CFICK	

PROJ: BASKETBALL	
TITLE: LAMP SERVICE, 7 SEGMENT BAR DIGIT	
DES. BY:	DRAWN BY: HEIDERSCHIEDT DATE: 5 JULY 89
REVISION	APPR. BY: AVB
02	SCALE: 1=5
1009-R10A-38533	