

Gen V Radio

Installation Manual

ED-13831

Rev 6 – 8 November 2011

DAKTRONICS

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Rev 6 – 8 November 2011

DAKTRONICS, INC.

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Table of Contents

Table of Contents	i
Section 1: Installation.....	1
1.1 Radio Receiver.....	1
Indoor Scoreboards.....	1
Outdoor Scoreboards	1
1.2 RC-100 Base Station	1
Section 2: Setting Radio Channels	3
2.1 Radio Control Overview	3
2.2 Typical Radio Configurations	3
Single Controller System.....	4
Multiple Controller System with Single Broadcast Group	5
Multiple Controller with Multiple Broadcast Groups	7
Section 3: Daktronics Exchange and Repair & Return Programs	9
3.1 Exchange Program.....	9
Before Contacting Daktronics	9
3.2 Repair & Return Program	10
Shipping Address	10
3.3 Daktronics Warranty and Limitation of Liability	10
Appendix A: Reference Drawings	11
Appendix B: Daktronics Warranty and Limitation of Liability	13

Section 1: Installation

1.1 Radio Receiver

Reference Drawings:

Installation; Indoor, Gen V Radio Receiver	Drawing A-203542
Installation: Outdoor- Gen V Radio Receiver	Drawing A-203543
Install Details: Outdoor Radio/Wire Switch	Drawing B-235957
Installation; Radio Bracket	Drawing A-267405
Installation; Outdoor Gen IV Scbds,w/ Gen V Radio	Drawing A-290166
Installation- Indoor Color Smart- Gen V Receiver	Drawing A-298616

Most scoreboards will have an internal mounting bracket to which the radio receiver will be attached. Refer to the component location drawings included in the scoreboard manual for the radio mounting location. If a bracket was not factory-installed, refer to **Drawing A-267405** for bracket installation instructions.

Indoor Scoreboards

- For standard indoor scoreboards, refer to **Drawing A-203542**.
- For ColorSmart® color-changing digit scoreboards, refer to **Drawing A-298616**.

Outdoor Scoreboards

- For outdoor scoreboards built *after* January 2007, refer to **Drawing A-290166**.
- For outdoor scoreboards built *before* January 2007, refer to **Drawing A-203543**.

Note: For outdoor installations that have a radio/wire switch, refer to **Drawing B-235957**.

1.2 RC-100 Base Station

Reference Drawings:

Base Station: Outdoor Installation	Drawing A-236394
Outdoor Installation: Radio Receiver & Base Station	Drawing A-1069855

Drawing A-236394 shows the installation of an RC-100 base station for outdoor scoreboards. For detailed RC-100 installation and setup instructions, including indoor scoreboards, refer to the **Remote Control System RC-100 All Sport Operation Manual (ED-15133)**, available online at www.daktronics.com/manuals.

In certain situations, it is possible that both an All Sport® radio receiver and an RC-100 base station will be installed in the same outdoor scoreboard. For instance, a handheld RC-100 may be used when running practices, and then a wireless All Sport console would control the scoreboard during the game. In these cases, refer to **Drawing A-1069855**.

Note: The wireless device that takes precedence is the one that the scoreboard receiver finds active first, and it will control the scoreboard until the signal is no longer present.

Section 2: Setting Radio Channels

2.1 Radio Control Overview

The radio receiver units used in Daktronics scoreboards have a channel-setting switch that can be set from 1 through 8 (channels 0, and 9-15 are not used). The receivers also have a jumper that can be used to select a broadcast group from 1-4. The broadcast group defines a group of radio receivers that “listen” to the channel selected on the channel switch as well as “listen” for data sent out on their broadcast channel.

There are four broadcast groups available. Each radio receiver will accept data sent from the broadcast channel of its respective broadcast group (either 1, 2, 3, or 4), as well as data sent from the “Master Broadcast” channel. This is selected when the console is set to Broadcast Group 0 (BCAST 0) and Channel 0.

The radio settings in the console (transmitter) must match the settings in the scoreboard (receiver). By default, both devices are set to **Broadcast Group 1, Channel 01**. The installation drawings in **Appendix A** show the proper way to set the channel and broadcast group numbers for the receiver. The operator must then enter these specific numbers when prompted during console startup.

To determine the settings of a scoreboard without accessing the receiver, first power it down and shut off any radio-equipped consoles in the area. Next, power the scoreboard back up and watch for the radio settings. The settings will appear as “bX CY” where X is the current broadcast group and Y is the current channel.

The settings are typically displayed in the clock digits (**Figure 1**) or Home and Guest score digits (**Figure 2**), depending on the scoreboard model.

The console automatically detects when a radio transmitter is installed and will prompt the user for transmitter settings after a valid sport code is entered.



Figure 1: Radio Settings in Clock Digits

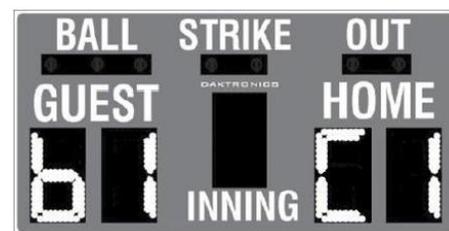


Figure 2: Radio Settings in Score Digits

2.2 Typical Radio Configurations

There are three different radio scenarios that can be accommodated: a single controller system, a multiple controller system with a single broadcast group, and a multiple controller system with multiple broadcast groups. Each of these configurations is described in detail in the following sections.

Single Controller System

In a single controller system (Figure 3), all radio receivers and all scoreboards receive signal from the same console at all times. The default channel and broadcast group settings on the receiver are not typically modified. An example of this type of system is a football field with a scoreboard in one or both end zones displaying the same information.

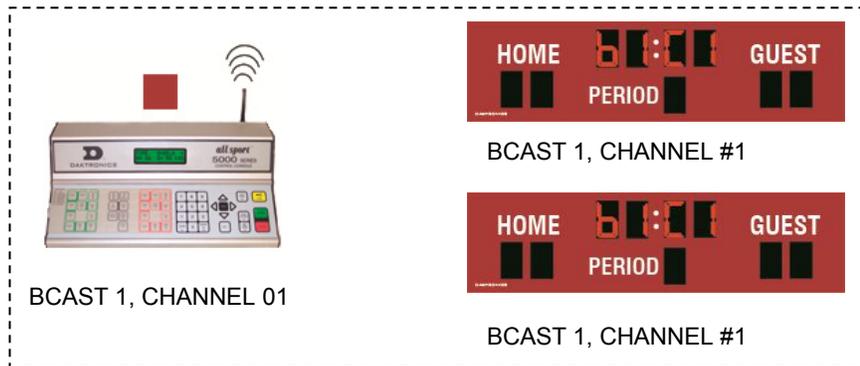


Figure 3: Single Control Console

Typically all single controller systems will use the default setting BCAST = 1, CHAN = 1. All jumpers in the radio receivers must be set to Broadcast 1 (BCAST 1).

Display	Action
<p>RADIO SETTINGS BCAST X CHAN YY</p>	<p>The LCD shows the current radio settings along with a prompt to accept or modify these values.</p> <p>If the radio settings are correct press <ENTER>.</p> <p>If these values are incorrect press <CLEAR>, and the LCD at bottom left is shown, allowing edit of the channel or broadcast group setting.</p>
<p>ENTER TO ACCEPT CLEAR TO MODIFY</p> <p>The LCD will toggle between these 2 screens.</p>	
<p>BCAST GROUP 1* RADIO CHAN 01</p>	<p>Broadcast Group Setting</p> <p>1 Use this setting for all single controller systems. Use the number keys to edit this value and press <ENTER> to accept. The asterisk will move to the channel setting.</p> <p>Channel Setting</p> <p>1-8 Channels 1-8 may be used with broadcast group 1. Edit the channel number to the desired value and press <ENTER> to accept. The channel switch on the receiver must match this value and only the Broadcast 1 (BCAST1) jumper must be set.</p>

Multiple Controller System with Single Broadcast Group

In a multiple controller system with a single broadcast group (Figure 4), there may be one console for each scoreboard and/or one master controller that can run every scoreboard at one time or take control of a specific scoreboard. An example of this type of system is a softball complex with individual scoreboards on several different fields.

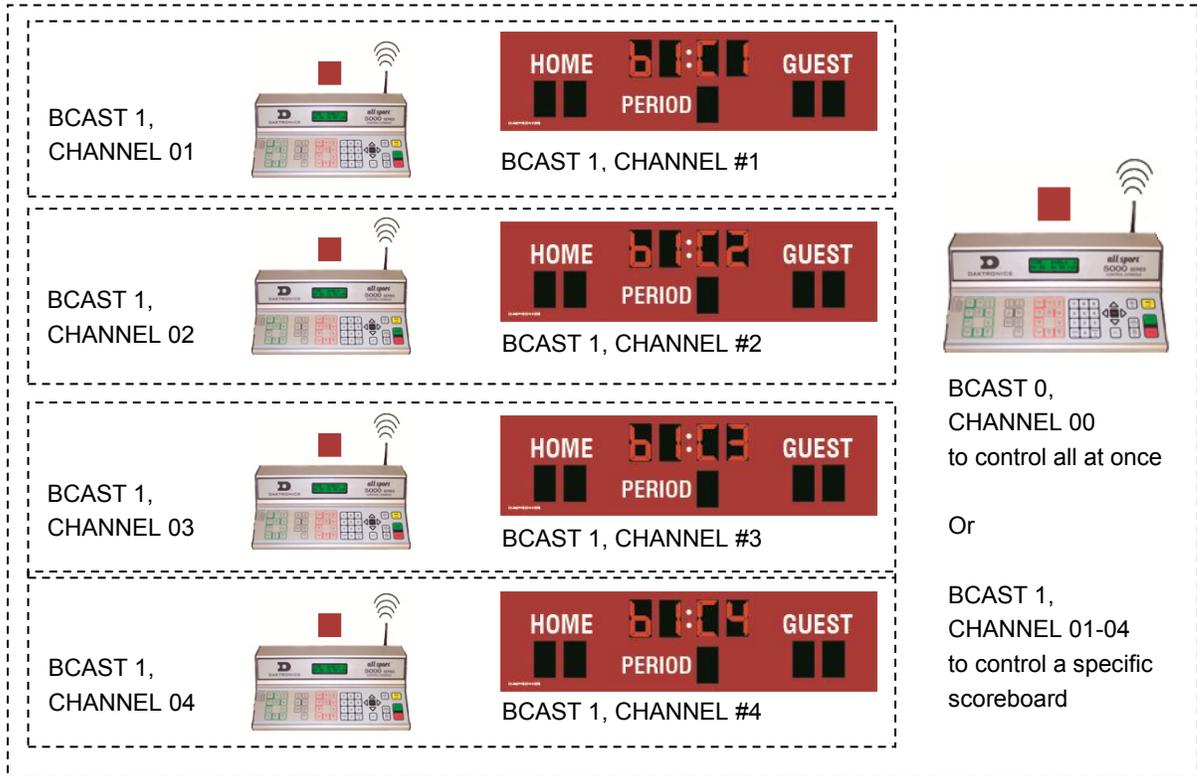


Figure 4: Single Broadcast Group

Multiple controller systems typically use Broadcast 1 and Channel 1 for the first controller and Channels 2-8 for all remaining controllers. All jumpers in the radio receivers must be set to Broadcast 1 (BCAST 1).

Display	Action
<div data-bbox="298 415 662 510" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> RADIO SETTINGS BCAST X CHAN YY </div> <div data-bbox="298 554 662 648" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> ENTER TO ACCEPT CLEAR TO MODIFY </div> <p data-bbox="298 667 607 730">The LCD will toggle between these 2 screens.</p> <div data-bbox="298 856 662 951" style="border: 1px solid black; padding: 5px;"> BCAST GROUP 1* RADIO CHAN 01 </div>	<p data-bbox="691 428 1351 491">The LCD shows the current radio settings along with a prompt to accept or modify these values.</p> <p data-bbox="691 533 1205 564">If the radio settings are correct press <ENTER>.</p> <p data-bbox="691 600 1351 699">If these values are incorrect press <CLEAR>, and the LCD at bottom left is shown, allowing edit of the channel or broadcast group setting.</p> <p data-bbox="691 730 1010 762">Broadcast Group Setting</p> <p data-bbox="699 768 1351 898">1 Use this setting for all multiple controllers with single broadcast group setups. Use the number keys to edit this value and press <ENTER> to accept. The asterisk will move to the channel setting.</p> <p data-bbox="691 936 896 968">Channel Setting</p> <p data-bbox="699 974 1351 1140">1-8 Channels 1-8 may be used with broadcast channel 1. Edit the channel number to the desired value and press <ENTER> to accept. The channel switch on the receiver must match this value and only the Broadcast 1 (BCAST1) jumper must be set.</p>

Multiple Controller with Multiple Broadcast Groups

In a multiple controller system with multiple broadcast groups (Figure 5), there are many consoles that control multiple scoreboards and/or scoreboard groups. The radio receiver inside the scoreboard is set to broadcast group 1, 2, 3, or 4. By changing the console settings to the specific broadcast group address, a single console can control all scoreboards or specific groups of scoreboards. One example of this scenario is split court operation in basketball installations, where scoreboards are used to score multiple games at once, but can be grouped together to show one game if necessary. Refer to **Drawing A-202943** as an example.

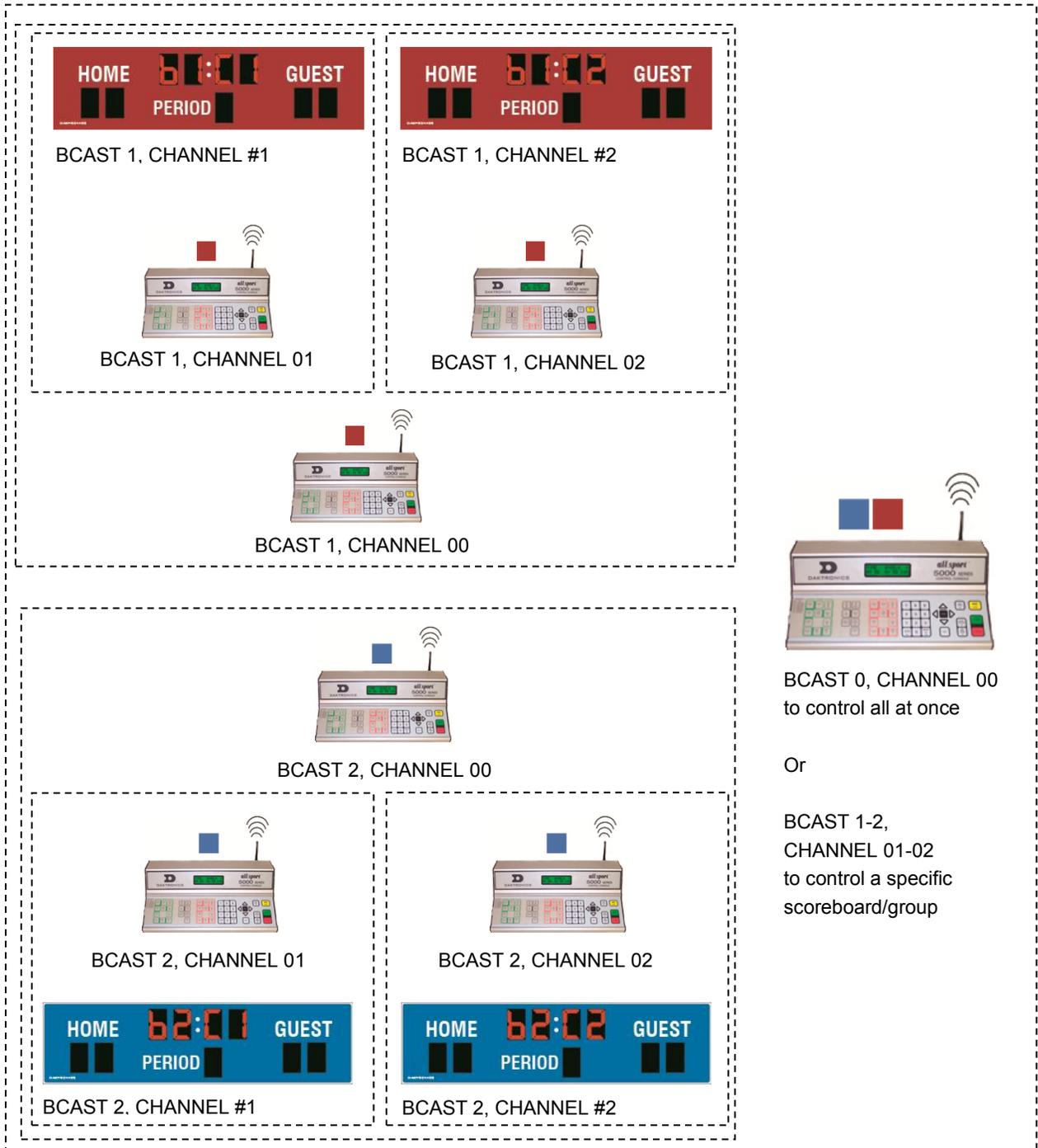


Figure 5: Multiple Broadcast Group

Typically all multiple controller systems will use Broadcast Group 1 Channel 1 for the first controller in Broadcast Group 1 and Broadcast Group 2 Channel 1 for the first controller in Broadcast Group 2. All other consoles in a group are added sequentially, using channels 2-8 for groups 1 and 3, and channels 2-4 for groups 2 and 4.

Display	Action																										
<div data-bbox="298 449 662 541" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> RADIO SETTINGS BCAST X CHAN YY </div> <div data-bbox="298 590 662 682" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> ENTER TO ACCEPT CLEAR TO MODIFY </div> <p>The LCD will toggle between these 2 screens.</p> <div data-bbox="298 890 662 982" style="border: 1px solid black; padding: 5px;"> BCAST GROUP 1* RADIO CHAN 01 </div>	<p>The LCD shows the current radio settings along with a prompt to accept or modify these values.</p> <p>If the radio settings are correct press <ENTER>.</p> <p>If these values are incorrect press <CLEAR>, and the LCD at bottom left is shown, allowing edit of the channel or broadcast group setting. Use the number keys to enter the desired broadcast group and press <ENTER> to accept. The asterisk will move to the channel setting.</p> <p>Edit the channel number to the desired value and press <ENTER> to accept.</p> <table border="1" data-bbox="695 940 1357 1461"> <thead> <tr> <th>Broadcast Group</th> <th>Channel Setting</th> <th>Control Scoreboards</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>All Scoreboards</td> </tr> <tr> <td rowspan="2">1</td> <td>0</td> <td>All in BCAST Group 1</td> </tr> <tr> <td>1-8</td> <td>Set to corresponding BCAST 1 Channel</td> </tr> <tr> <td rowspan="2">2</td> <td>0</td> <td>All in BCAST Group 2</td> </tr> <tr> <td>1-4</td> <td>Set to Corresponding BCAST 2 Channel</td> </tr> <tr> <td rowspan="2">3</td> <td>0</td> <td>All in BCAST Group 3</td> </tr> <tr> <td>1-8</td> <td>Set to corresponding BCAST 3 Channel</td> </tr> <tr> <td rowspan="2">4</td> <td>0</td> <td>All in BCAST Group 4</td> </tr> <tr> <td>1-4</td> <td>Set to corresponding BCAST 4 Channel</td> </tr> </tbody> </table>	Broadcast Group	Channel Setting	Control Scoreboards	0	0	All Scoreboards	1	0	All in BCAST Group 1	1-8	Set to corresponding BCAST 1 Channel	2	0	All in BCAST Group 2	1-4	Set to Corresponding BCAST 2 Channel	3	0	All in BCAST Group 3	1-8	Set to corresponding BCAST 3 Channel	4	0	All in BCAST Group 4	1-4	Set to corresponding BCAST 4 Channel
Broadcast Group	Channel Setting	Control Scoreboards																									
0	0	All Scoreboards																									
1	0	All in BCAST Group 1																									
	1-8	Set to corresponding BCAST 1 Channel																									
2	0	All in BCAST Group 2																									
	1-4	Set to Corresponding BCAST 2 Channel																									
3	0	All in BCAST Group 3																									
	1-8	Set to corresponding BCAST 3 Channel																									
4	0	All in BCAST Group 4																									
	1-4	Set to corresponding BCAST 4 Channel																									

Section 3: Daktronics Exchange and Repair & Return Programs

3.1 Exchange Program

The Daktronics Exchange Program is a service for quickly replacing key components in need of repair. If a component fails, Daktronics sends a replacement part to the customer who, in turn, returns the failed component to Daktronics. This decreases equipment downtime. Customers who follow the program guidelines explained below will receive this service.

Before Contacting Daktronics

Identify these important numbers:

Model Number: _____
Job/Contract Number: _____
Date Installed: _____
Daktronics Customer ID Number: _____

To participate in the Exchange Program, follow these steps.

1. Call Daktronics Customer Service.

Market Description	Customer Service Number
Schools (including community/junior colleges), religious organizations, municipal clubs and community centers	877-605-1115
Universities and professional sporting events, live events for auditoriums and arenas	866-343-6018

2. When the new exchange part is received, mail the old part to Daktronics.

If the replacement part fixes the problem, send in the problem part being replaced.

- a. Package the old part in the same shipping materials in which the replacement part arrived.
- b. Fill out and attach the enclosed UPS shipping document.
- c. Ship the part to Daktronics.

3. The defective or unused parts must be returned to Daktronics within 5 weeks of initial order shipment.

If any part is not returned within five (5) weeks, a non-refundable invoice will be presented to the customer for the costs of replenishing the exchange parts inventory with a new part.

Daktronics reserves the right to refuse parts that have been damaged due to acts of nature or causes other than normal wear and tear.

3.2 Repair & Return Program

For items not subject to exchange, Daktronics offers a Repair & Return Program. To send a part for repair, follow these steps:

1. **Call or fax Daktronics Customer Service:**
Refer to the appropriate market number in the chart listed on the previous page.
Fax: 605-697-4444
2. **Receive a case number before shipping.**
This expedites repair of the part.
3. **Package and pad the item carefully to prevent damage during shipment.**
Electronic components, such as printed circuit boards, should be placed in an antistatic bag before boxing. Daktronics does not recommend using packing 'peanuts' when shipping.
4. **Enclose:**
 - name
 - address
 - phone number
 - the case number
 - a clear description of symptoms

Shipping Address

Daktronics Customer Service
[Case #]
201 Daktronics Drive, Dock E
Brookings, SD 57006

3.3 Daktronics Warranty and Limitation of Liability

The Daktronics Warranty and Limitation of Liability is located in **Appendix B**. The Warranty is independent of Extended Service agreements and is the authority in matters of service, repair, and display operation.

Appendix A: Reference Drawings

System Riser; Gen V or VI Mult. Broadcast/Channel Groups.....	Drawing A-202943
Installation; Indoor, Gen V Radio Receiver	Drawing A-203542
Installation: Outdoor- Gen V Radio Receiver	Drawing A-203543
Install Details: Outdoor Radio/Wire Switch.....	Drawing B-235957
Base Station: Outdoor Installation	Drawing A-236394
Installation; Radio Bracket.....	Drawing A-267405
Installation; Outdoor Gen IV Scbds,w/ Gen V Radio	Drawing A-290166
Installation- Indoor Color Smart- Gen V Receiver	Drawing A-298616
Outdoor Installation: Radio Receiver & Base Station.....	Drawing A-1069855

THIS RISER LAYOUT IS FOR AN ALL GEN V RADIO SYSTEM OR AN ALL GEN VI RADIO SYSTEM.

ONE CONSOLE SET TO
BCAST = 01
CHANNEL = 01
CONTROLLING SCBD #1 ONLY



SCBD #1

SCOREBOARD
WITH RADIO SET
TO BCAST = 01
CHANNEL = 01

ONE CONSOLE SET TO
BCAST = 02
CHANNEL = 01
CONTROLLING SCBD #3 ONLY



SCBD #3

SCOREBOARD
WITH RADIO SET
TO BCAST = 02
CHANNEL = 01

ONE CONSOLE SET TO
BCAST = 03
CHANNEL = 01
CONTROLLING SCBD #5 ONLY



SCBD #5

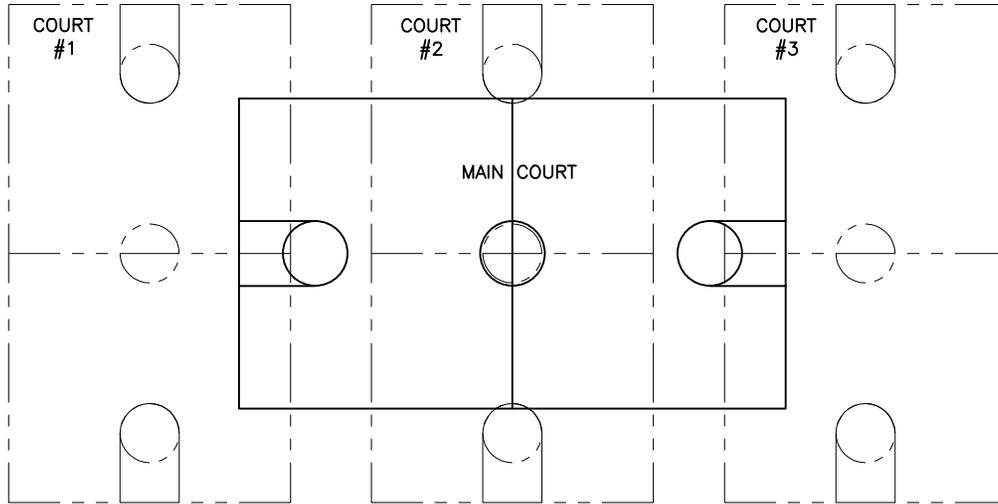
SCOREBOARD
WITH RADIO SET
TO BCAST = 03
CHANNEL = 01

COURT
#1 CONTROL

ONE CONSOLE SET TO
BCAST = 01
CHANNEL = 00
CONTROLLING
SCOREBOARDS #1&2

COURT
#3 CONTROL

ONE CONSOLE SET TO
BCAST = 03
CHANNEL = 00
CONTROLLING
SCOREBOARDS #5&6



COURT
#2 CONTROL

ONE CONSOLE SET TO
BCAST = 02
CHANNEL = 00
CONTROLLING
SCOREBOARDS #3&4

MAIN COURT
CONTROL

ONE CONSOLE SET TO
BCAST = 00
CHANNEL = 00
CONTROLLING
SCOREBOARDS #1-6

SCBD #2

SCOREBOARD
WITH RADIO SET
TO BCAST = 01
CHANNEL = 02



ONE CONSOLE SET TO
BCAST = 01
CHANNEL = 02
CONTROLLING SCBD #2 ONLY

SCBD #4

SCOREBOARD
WITH RADIO SET
TO BCAST = 02
CHANNEL = 02



ONE CONSOLE SET TO
BCAST = 02
CHANNEL = 02
CONTROLLING SCBD #4 ONLY

SCBD #6

SCOREBOARD
WITH RADIO SET
TO BCAST = 03
CHANNEL = 02



ONE CONSOLE SET TO
BCAST = 03
CHANNEL = 02
CONTROLLING SCBD #6 ONLY

NOTE: THIS CONFIGURATION IS ONLY COMPATIBLE WITH GEN V RADIOS

REV 01	DATE: 07 AUG 12	UPDATED TITLE NAME TO INCLUDE VI RADIO ADDED TEXT TO THE RISER TO SAY V OR VI	BY: MMW
SHEET 01	REV 01	JOB NO: P1110	FUNC-TYPE-SIZE R-01-A
202943			

PROJ: ALL SPOT RADIO
TITLE: SYSTEM RISER: GEN V OR VI MULTI BROADCAST CHANNEL GROUPS
DESIGN: MILLER
SCALE: NONE
DRAWN: RTAGTOW
DATE: 21 JAN 04

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BROOKINGS, SD 57006
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SETTING CHANNELS

NOTE:

IF ALL SCOREBOARDS ARE RUN FROM ONE CONSOLE AT ALL TIMES PLEASE GO DIRECTLY TO THE INSTALLATION INSTRUCTIONS AT RIGHT.

STEP 1

OPEN RADIO RECEIVER BY REMOVING 4 SCREWS IN COVER.

STEP 2

USE A SMALL FLAT HEAD SCREWDRIVER TO CHANGE THE SWITCH TO THE DESIRED CHANNEL NUMBER. SEE DETAIL "C" FOR LOCATION OF CHANNEL SWITCH. REFER TO DRAWING A-203113 FOR CHANNEL SETTING CRITERIA.

STEP 3

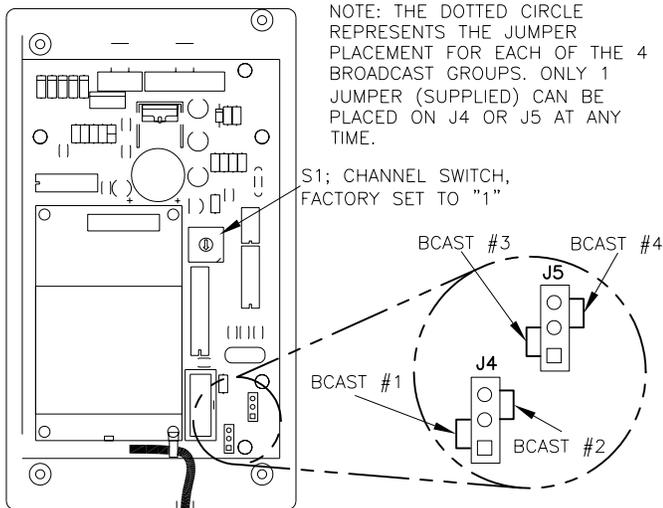
IF NECESSARY; RADIO BROADCAST GROUPS (#1-4) CAN BE CHANGED USING THE JUMPER ON EITHER J4 OR J5. SEE DETAIL "C" FOR LOCATION OF BCAST JUMPER (J4 OR J5). REFER TO DRAWING A-203113 FOR BCAST SELECTION CRITERIA.

STEP 4

NOTE THE CHANNEL NUMBER AND BCAST SETTING FOR THE RADIO RECEIVER AND PUT COVER BACK ON. REFER TO SECTION AT RIGHT FOR RADIO RECEIVER INSTALLATION.

DETAIL: C

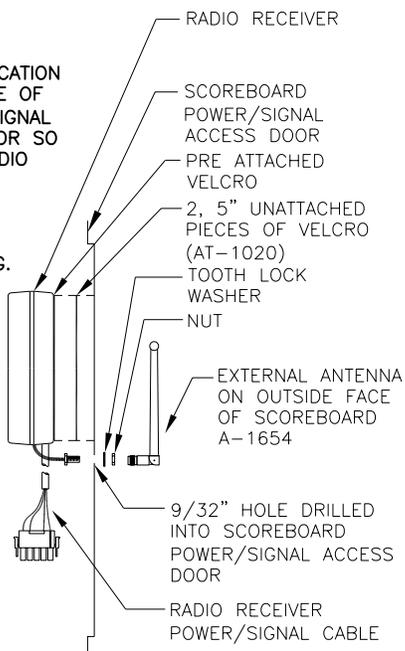
CHANNEL SWITCH AND BCAST JUMPER LOCATIONS
FRONT VIEW OF RADIO RECEIVER; COVER REMOVED



DETAIL: A

MOUNTING THE RADIO RECEIVER ENCLOSURE
SCOREBOARD LEFT SIDE CUT AWAY VIEW

NOTE:
BE SURE TO CHOOSE A LOCATION ON THE INSIDE OF THE POWER/SIGNAL ENTRANCE DOOR SO WHEN THE RADIO IS MOUNTED INTERNALLY IT WILL NOT INTERFERE WITH ANYTHING.



STEP 1

IF YOU WILL HAVE A SETUP OTHER THAN ALL SCOREBOARDS BEING RUN WITH ONE CONTROLLER AT ALL TIMES PLEASE REFER TO THE INSTRUCTIONS AT LEFT, OTHERWISE PROCEED TO STEP 2.

STEP 2

TURN POWER OFF TO THE SCOREBOARD. FIND A LOCATION ON THE INSIDE OF THE POWER/SIGNAL ACCESS DOOR SO THE RADIO ENCLOSURE, ONCE MOUNTED, WILL NOT INTERFERE WITH THE CLOSING OF THE DOOR. (REFER TO YOUR SCOREBOARD'S INSTALLATION MANUAL TO DETERMINE THE LOCATION OF THE POWER/SIGNAL ACCESS DOOR.) IF INSTALLING THE RADIO RECEIVER IN A SHOT CLOCK FIND A PLACE INSIDE OF THE SHOT CLOCK TOWARD THE TOP; MAKE SURE THAT THE LOCATION CHOSEN WILL NOT INTERFERE WITH THE FUTURE INSTALLATION OF A VHI.

STEP 3

CHECK FOR A PREDRILLED 9/32" HOLE IN THE FRONT POWER/SIGNAL ACCESS DOOR (TOP OF SHOT CLOCK). IF THERE IS NO HOLE DRILL A 9/32" HOLE THROUGH THE FACE OF THE DOOR. AS SHOWN IN DETAIL "A".

STEP 4

ATTACH THE 2, 5" VELCRO STRIPS TO THE VELCRO ON THE BACKSIDE OF THE RADIO RECEIVER ENCLOSURE. REMOVE THE STICKY BACKING FROM THE VELCRO STRIPS AND PRESS THEM INTO PLACE ON THE SCOREBOARD POWER/SIGNAL ACCESS DOOR (TOP OF SHOT CLOCK) DIRECTLY ABOVE THE HOLE YOU DRILLED EARLIER.

STEP 5

FEED THE ANTENNA CABLE FROM THE RADIO RECEIVER THROUGH THE 9/32" HOLE AND ATTACH IT TO THE FACE OF THE SCOREBOARD WITH THE SUPPLIED LOCK WASHER AND NUT.

STEP 6

ATTACH THE PROVIDED ANTENNA TO THE PREVIOUSLY MOUNTED ANTENNA CABLE AND TIGHTEN. BE SURE TO HAVE THE ANTENNA POINTING UP AS SHOWN IN DETAIL "A".

STEP 7

LOCATE THE 5 PIN JACK IN THE DRIVER TRAY HARNESS. CHECK TO SEE IF THERE IS A GRAY WIRE IN POSITION 3 OF J45. IF THERE IS A GRAY WIRE PLEASE REFER TO DRAWING A-181729. IF THERE IS A BROWN WIRE IN POSITION 3 OF J45 CONTINUE INSTALLATION.

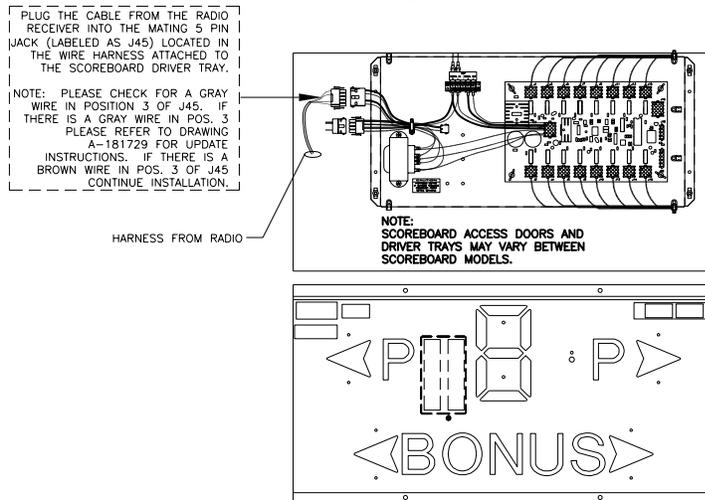
PLUG THE 5 PIN MALE PLUG FROM THE RADIO RECEIVER INTO THE MATING 5 PIN JACK (J45) ON THE DRIVER PANEL AS SHOWN IN DETAIL "B".

STEP 8

CLOSE SCOREBOARD POWER/SIGNAL ACCESS DOOR. TURN POWER BACK ON TO SCOREBOARD. THE RADIO RECEIVER IS NOW READY FOR OPERATION.

DETAIL: B

CONNECTING THE RADIO RECEIVER WIRE HARNESS
FRONT VIEW OF DRIVER TRAY



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DAKTRONICS, INC. BROOKINGS, SD 57006			
PROJ: ALL SPORT RADIO			
TITLE: INSTALLATION; INDOOR, GEN V RADIO RECEIVER			
DES. BY: RTAGTOW		DRAWN BY: RTAGTOW	
		DATE: 02 FEB 04	
REVISION	APPR. BY: MMILLER	1110-R01A-203542	
00	SCALE: NONE		

REV.	DATE	DESCRIPTION	BY	APPR.

MULTIPLE CONSOLES WITH MULTIPLE SCOREBOARDS OR SINGLE CONSOLE WITH SINGLE SCOREBOARD

SETTING CHANNELS

STEP 1

OPEN RADIO RECEIVER BY REMOVING 4 SCREWS IN COVER.

STEP 2

USE A SMALL FLAT HEAD SCREWDRIVER TO CHANGE THE SWITCH TO THE DESIRED CHANNEL NUMBER. SEE DETAIL "C" FOR LOCATION OF CHANNEL SWITCH. REFER TO DRAWING A-203113 FOR CHANNEL SETTING CRITERIA.

STEP 3

IF NECESSARY; RADIO BROADCAST GROUPS (#1-4) CAN BE CHANGED USING THE JUMPER ON EITHER J4 OR J5. SEE DETAIL "C" FOR LOCATION OF BCAST JUMPER (J4 OR J5). REFER TO DRAWING A-203113 FOR BCAST SELECTION CRITERIA.

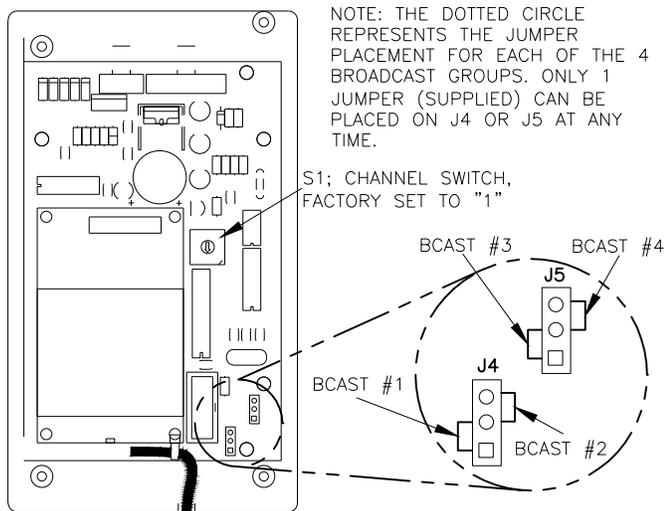
SETTING CHANNELS

STEP 4

NOTE THE CHANNEL NUMBER AND BCAST SETTING FOR THE RADIO RECEIVER AND PUT COVER BACK ON. REFER TO THE SECTION AT RIGHT FOR RADIO RECEIVER INSTALLATION.

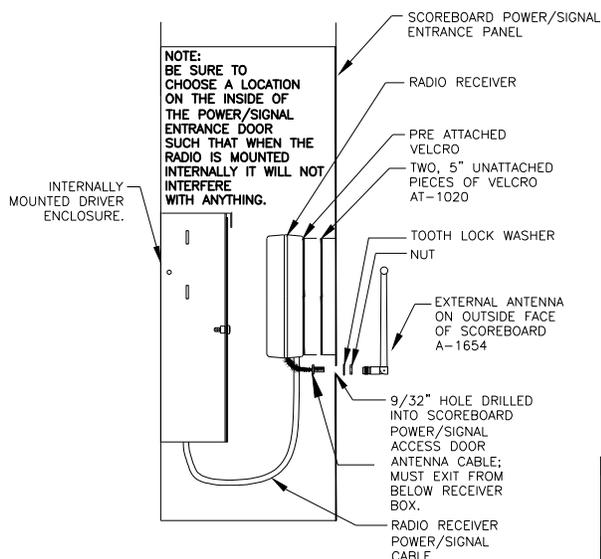
DETAIL: C

CHANNEL SWITCH AND BCAST JUMPER LOCATIONS
FRONT VIEW OF RADIO RECEIVER; COVER REMOVED



DETAIL: A

MOUNTING THE RADIO RECEIVER ENCLOSURE
SCOREBOARD LEFT SIDE CUT AWAY VIEW



SINGLE CONSOLE RUNNING MULTIPLE SCOREBOARDS

SETTING CHANNELS

STEP 1

TURN POWER OFF TO THE SCOREBOARD. LOCATE POWER/SIGNAL ACCESS DOOR AND OPEN. REMOVE COVER FROM DRIVER ENCLOSURE.

STEP 2

FIND A LOCATION ON THE INSIDE OF THE POWER/SIGNAL ACCESS DOOR SUCH THAT THE RADIO ENCLOSURE, ONCE MOUNTED, WILL NOT INTERFERE WITH THE CLOSING OF THE DOOR. (REFER TO YOUR SCOREBOARD'S INSTALLATION MANUAL TO DETERMINE THE LOCATION OF THE POWER/SIGNAL ACCESS DOOR.)

STEP 3

CHECK FOR A PREDRILLED 9/32" HOLE IN THE FACE OF THE POWER/SIGNAL ACCESS DOOR. IF THERE IS NO HOLE, DRILL A 9/32" HOLE THROUGH THE FACE OF THE DOOR. AS SHOWN IN DETAIL "A".

STEP 4

ATTACH THE TWO, 5" VELCRO STRIPS TO THE VELCRO ON THE BACKSIDE OF THE RADIO RECEIVER ENCLOSURE. REMOVE THE STICKY BACKING FROM THE VELCRO STRIPS AND PRESS THEM INTO PLACE ON THE SCOREBOARD POWER/SIGNAL ACCESS DOOR DIRECTLY ABOVE THE HOLE YOU DRILLED EARLIER.

STEP 5

FEED THE ANTENNA CABLE FROM THE RADIO RECEIVER THROUGH THE 9/32" HOLE AND ATTACH IT TO THE FACE OF THE SCOREBOARD WITH THE SUPPLIED LOCK WASHER AND NUT. MAKE SURE THAT THE ANTENNA CABLE IS COMING FROM THE BOTTOM OF THE RADIO RECEIVER, AS SHOWN IN DETAIL "A". IF THE RADIO RECEIVER IS INSTALLED WITH THE ANTENNA CABLE POINTING TO THE TOP OR SIDE THE RECEIVER ENCLOSURE WILL POSSIBLY FILL WITH WATER AND DESTROY THE RADIO.

STEP 6

ATTACH THE PROVIDED ANTENNA TO THE PREVIOUSLY MOUNTED ANTENNA CABLE AND TIGHTEN. BE SURE TO HAVE THE ANTENNA POINTING UP AS SHOWN IN DETAIL "A".

STEP 7

CONNECT THE HARNESS FROM THE RADIO RECEIVER TO THE 5 PIN JACK J45 FROM THE DRIVER ENCLOSURE AS SHOWN IN DETAIL "B". DO NOT ATTEMPT TO PLUG THE RADIO INTO ANYWHERE ELSE AS THIS MAY DESTROY THE RADIO.

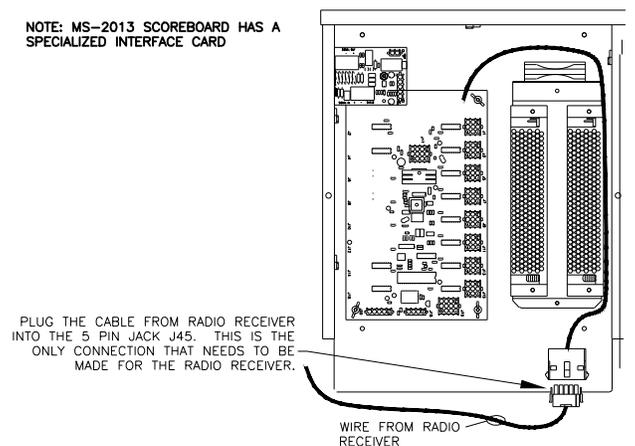
STEP 8

REPLACE COVER OVER DRIVER ENCLOSURE AND CLOSE POWER/SIGNAL ACCESS DOOR. THE RADIO RECEIVER IS NOW READY FOR OPERATION.

DETAIL: B

CONNECTING THE RADIO RECEIVER WIRE HARNESS
FRONT VIEW OF DRIVER ENCLOSURE; LID REMOVED

NOTE: MS-2013 SCOREBOARD HAS A SPECIALIZED INTERFACE CARD



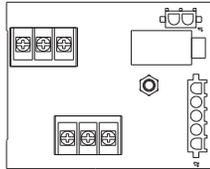
	DAKTRONICS, INC. BROOKINGS, SD 57006		THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2010 DAKTRONICS, INC.	
	DO NOT SCALE DRAWING			
PROJ: ALL SPROT RADIO				
TITLE: INSTALLATION: OUTDOOR- GEN V RADIO RECEIVER				
DESIGN: RTAGTOW		DRAWN: RTAGTOW		DATE: 02 FEB 04
SCALE: NONE				
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	203543
01	02	P1110	R-01-A	

REV 02	DATE: 16 JUL 10	CHG INPUT CONNECTION OF RADIO RX	BY: KZB
REV 01	DATE: 19 OCT 04	EDITED TEXT	BY: ADH

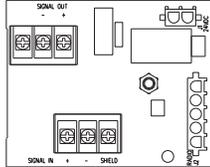
INSTALLATION STEPS:

1. TURN OFF POWER TO THE SCOREBOARD.
2. REMOVE OLD WIRE/RADIO SWITCH CARD. INSTALL NEW WIRE/RADIO SWITCH CARD USING SAME HARDWARE.
3. CONNECT POWER TO RADIO/WIRE SWITCH CARD.
 - 3.1 CONNECT 2 PIN POWER PLUG FROM POWER SUPPLY (PS02) TO POWER JACK J1 ON WIRE/RADIO SWITCH CARD.
4. CONNECT SIGNAL INTO THE WIRE/RADIO SWITCH CARD BY INSTALLING SIG IN WIRES (+,-) FROM LED DRIVER J17(1,2) TO SIG OUT TERMINALS (+,-) ON WIRE/RADIO SWITCH CARD.
5. DOUBLE CHECK ALL CONNECTIONS TO BE SURE SYSTEM IS CONNECTED PROPERLY AND THAT ALL CONNECTIONS ARE TIGHT.
6. CLOSE SCOREBOARD PANEL.
7. TURN POWER BACK ON TO SCOREBOARD AND TEST.

OLD CARD OP-1110-0011

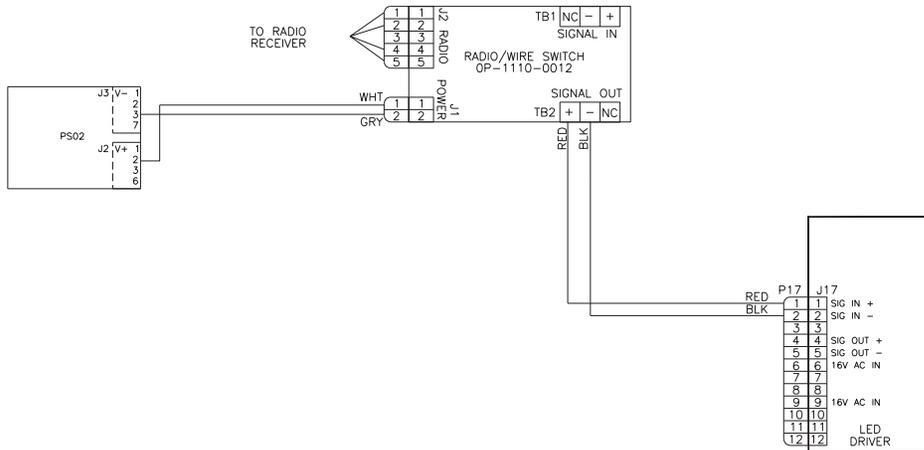


NEW CARD OP-1110-0012



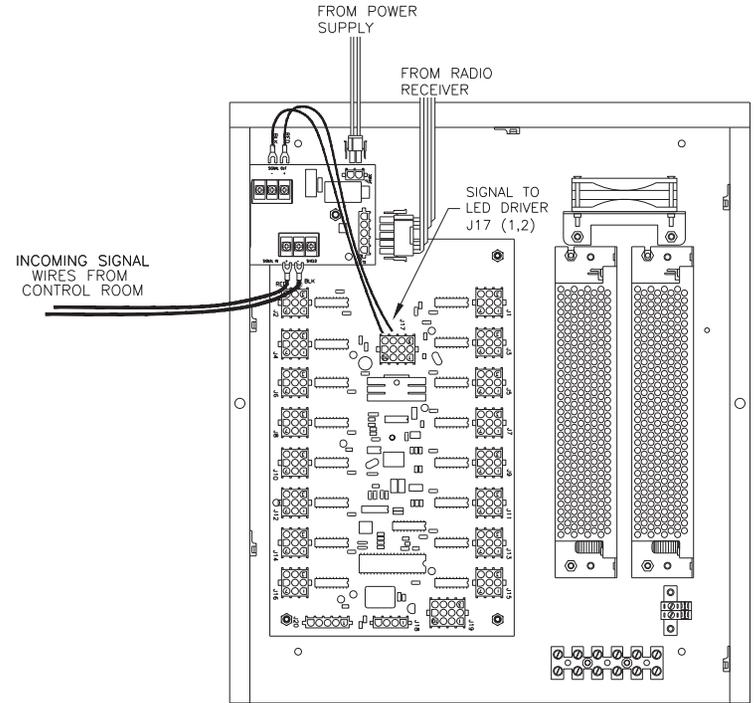
STEP 2
INSTALL NEW CARD

STEP 5
CHECK CONNECTIONS



0A-1110-0041

STEP 4
SIGNAL INSTALLATION



REV 02	DATE: 13 JUL 10	FIX WIRE TERMINATION SPOT	BY: KZB
REV 01	DATE: 16 APR 07	SWAPPED WIRES IN STEP 5	BY: KZB
DAKTRONICS, INC. BROOKINGS, SD 57006		THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2010 DAKTRONICS, INC.	
DO NOT SCALE DRAWING			
PROJ: RADIO LINK			
TITLE: INSTALL DETAILS: OUTDOOR RADIO/WIRE SWITCH			
DESIGN:	DATE: 05 MAR 05	DRAWN: KBIERBA	
SCALE: NONE			
SHEET	REV 02	JOB NO: P1110	FLUNC-TYPE-SIZE: E-01-B
			235957

TOP VIEW

BASE STATION VIEW WITH FUNCTION SETTINGS CHART

STEP 1.1

USING A NUT DRIVER, REMOVE THE TWO NUTS ON THE TOP OF THE RADIO ENCLOSURE. REMOVE THE COVER FROM THE ENCLOSURE.

STEP 1.2

USING A SMALL FLAT HEAD SCREW DRIVER OR YOUR FINGERS CHANGE THE SWITCHES TO THE DESIRED CHANNEL AND FUNCTION NUMBER. (REFER TO STEP 1.2 VIEW AND CHART FOR CHANNEL SELECTION.)

STEP 1.3

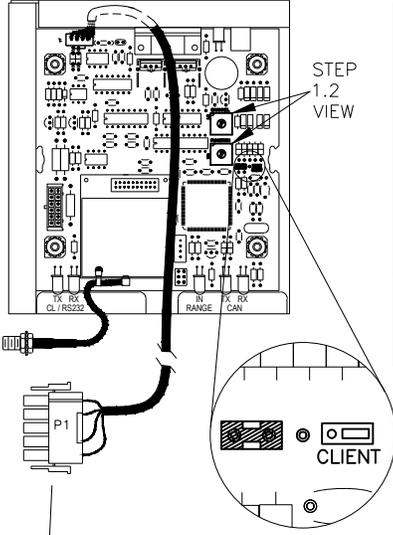
NOTE THE CHANNEL NUMBER YOU HAVE SET AND REATTACH THE COVER ON THE ENCLOSURE USING THE NUTS REMOVED IN STEP 1.1. BE SURE TO REINSTALL THE ANTENNA CABLE AND COVER AS THEY WERE.

STEP 1.4

BASE STATION IS SET IN FACTORY FOR SERVER MODE. FOR CLIENT MODE, SET JUMPERS TO RIGHT MOST POSITION.

STEP 1.2 CHART

FUNCTION SETTING	FUNCTION (SERVER MODE)
0	DEFAULT FUNCTION (LAST POWER UP FUNCTION)
1	CAN HANDHELD JUDGES CONSOLE
2	ALL SPORT SCBD CONTROLLER - GEN I
3	DATA TIME MASTER DISPLAY CONTROLLER
5	ALL SPORT SCBD CONTROLLER - GEN II
F	RESET MEMORY/TEST
4, 6-E	RESERVED



STEP 2.1

FIND A LOCATION ON THE INSIDE OF THE POWER/SIGNAL ACCESS DOOR WHERE THE BASE STATION ENCLOSURE, ONCE MOUNTED, WILL NOT INTERFERE WITH CLOSING THE DOOR. (REFER TO YOUR SCOREBOARDS INSTALLATION MANUAL TO DETERMINE THE LOCATION OF THE POWER/SIGNAL ACCESS DOOR.)

STEP 2.2

CHECK FOR A PRE-DRILLED 9/32" HOLE IN THE ACCESS DOOR. IF THERE IS NO HOLE, DRILL A 9/32" HOLE THROUGH THE FACE OF THE DOOR AS SHOWN BELOW.

STEP 2.3

USE VELCRO STRIPS PROVIDED AND ATTACH ENCLOSURE DIRECTLY ABOVE THE HOLE YOU DRILLED EARLIER.

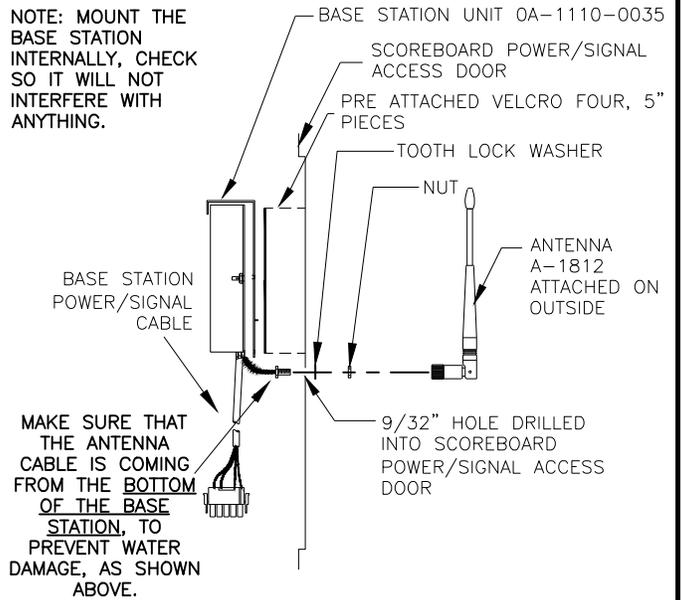
STEP 2.4

FEED THE ANTENNA CABLE THROUGH THE 9/32" HOLE, SECURE WITH THE SUPPLIED LOCK WASHER AND NUT.

STEP 2.5

ATTACH THE PROVIDED ANTENNA TO THE MOUNTED ANTENNA CABLE AND TIGHTEN. BE SURE TO HAVE THE ANTENNA POINTING UP AS SHOWN BELOW.

NOTE: MOUNT THE BASE STATION INTERNALLY, CHECK SO IT WILL NOT INTERFERE WITH ANYTHING.

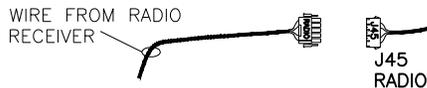
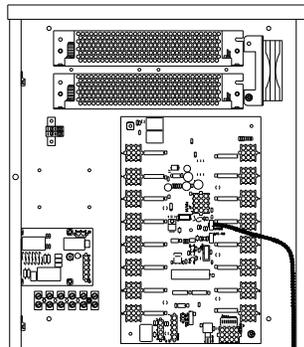


CURRENT LAYOUT

-FOR LAYOUT BEFORE JAN 2007 SEE RIGHT

CONNECTING THE BASE STATION WIRE HARNESS FRONT VIEW OF DRIVER ENCLOSURE; LID REMOVED

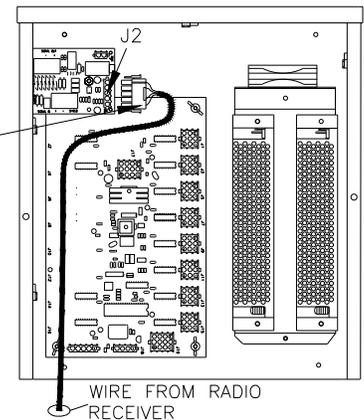
- PLUG THE CABLE FROM RADIO RECEIVER INTO THE 5 PIN JACK LABELED J45.
- THE OTHER END OF THE J45 HARNESS SHOULD ALREADY BE CONNECTED TO J21 (RADIO) ON THE DRIVER.
- THIS IS THE ONLY CONNECTION THAT NEEDS TO BE MADE FOR THE RADIO RECEIVER.



BEFORE JAN 2007

CONNECTING THE BASE STATION WIRE HARNESS FRONT VIEW OF DRIVER ENCLOSURE; LID REMOVED

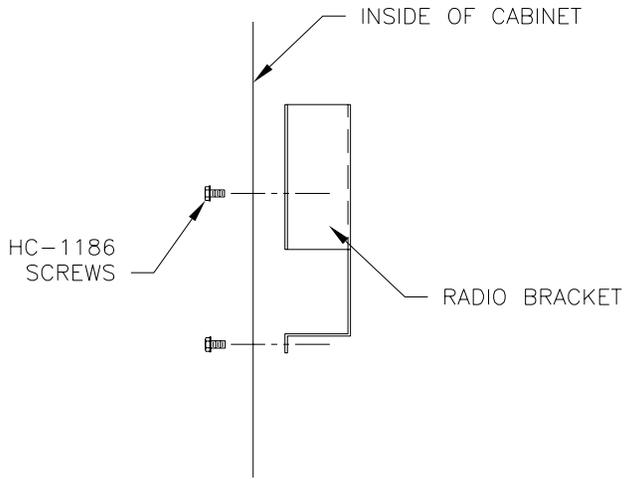
PLUG P1 FROM RADIO BASE STATION INTO THE J2, RADIO 5 PIN JACK ON THE SIGNAL INPUT CARD, LOCATED INSIDE OF DRIVER ENCLOSURE. THIS IS THE ONLY CONNECTION THAT NEEDS TO BE MADE FOR THE RADIO RECEIVER.



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	<p>DO NOT SCALE DRAWING</p>		
<p>PROJ:RC-100</p>			
<p>TITLE:BASE STATION: OUTDOOR INSTALLATION</p>			
<p>DESIGN:MMILLER</p>		<p>DRAWN:APAGE</p>	
<p>SCALE: 1 = 7</p>		<p>DATE: 11 MAR 05</p>	
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
	02	P1110	E-07-A
			236394

02	23 AUG 11	ADDED NEW DETAIL TO DRAWING UPDATED TITLE BLOCK AND FUNCTION CHART	JUL
01	18 JUNE 08	ADDED STEP 1.4 AND DETAIL	AMG

REV.	01	20 MAR 07	ADDED 3/16TH TO DRILL SIZE INFORMATION	DMD	
DATE			DESCRIPTION	BY	APPR.

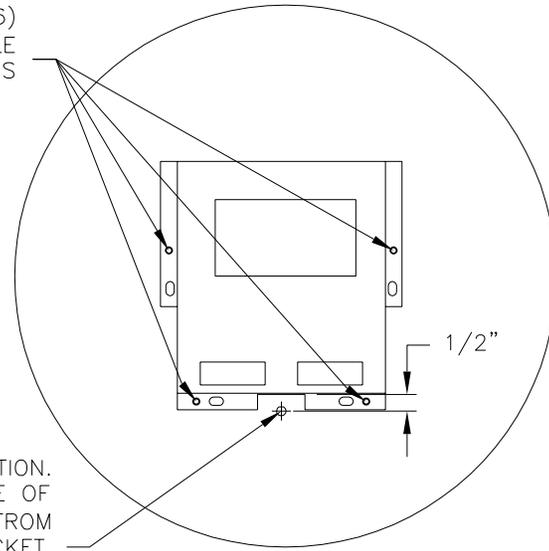


SIDE VIEW

INSTALLATION INTRUCTIONS

- 1) DETERMINE BEST LOCATION FOR PLACEMENT OF BRACKET.
 - *NOTE:
 - a) EXISTING ANTENNA HOLE MAY BE UNUSABLE.
 - b) BRACKET SHOULD NOT INTERFERE WITH ANY INTERNAL SCORBOARD COMPONENTS
 - c) RADIO ANTENNA SHOULD NOT INTERFERE WITH CAPTIONS.
 - d) BRACKET MUST BE WITHIN (5) FEET OF MASTER DRIVER.
- 2) USING BRACKET AS TEMPLATE, MARK LOCATIONS OF SCREW HOLES AND ANTENNA HOLE (IF NECESSARY).
- 3) DRILL SCREW HOLES WITH $\varnothing 0.188$ " DRILL BIT. DRILL ANTENNA HOLE WITH $\varnothing 0.250$ " DRILL BIT (IF NECESSARY).
- 4) ATTACH RADIO BRACKET USING HC-1186 SCREWS.
- 5) REFER TO RADIO INSTALLATION GUIDE FOR CONNECTING RADIO UNIT.

DRILL A (3/16)
 $\varnothing 0.188$ " HOLE
AT THESE LOCATIONS



LAYOUT VIEW

PROJ: RADIO LINK		TITLE: INSTALLATION; RADIO BRACKET	
DES. BY: TJOHNSON		DRAWN BY: TJOHNSON	
REVISION	APPR. BY:	DATE: 21MAR06	
01	SCALE: NONE	1110-E10A-267405	

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PROJ: RADIO LINK
DAKTRONICS, INC. BROOKINGS, SD 57006

MULTIPLE CONSOLES WITH MULTIPLE SCOREBOARDS OR SINGLE CONSOLE WITH SINGLE SCOREBOARD

SETTING CHANNELS

STEP 1

OPEN RADIO RECEIVER BY REMOVING 4 SCREWS IN COVER.

STEP 2

USE A SMALL FLAT HEAD SCREWDRIVER TO CHANGE THE SWITCH TO THE DESIRED CHANNEL NUMBER. SEE DETAIL "A" FOR LOCATION OF CHANNEL SWITCH. REFER TO DRAWING A-203113 FOR CHANNEL SETTING CRITERIA.

STEP 3

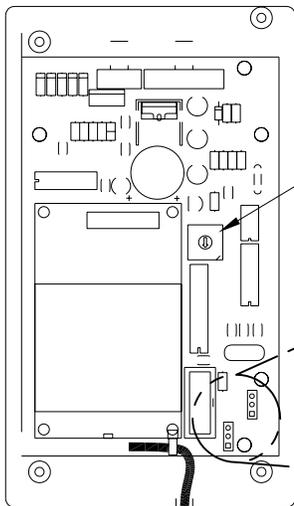
IF NECESSARY; RADIO BROADCAST GROUPS (#1-4) CAN BE CHANGED USING THE JUMPER ON EITHER J4 OR J5. SEE DETAIL "A" FOR LOCATION OF BCAST JUMPER (J4 OR J5). REFER TO DRAWING A-203113 FOR BCAST SELECTION CRITERIA.

STEP 4

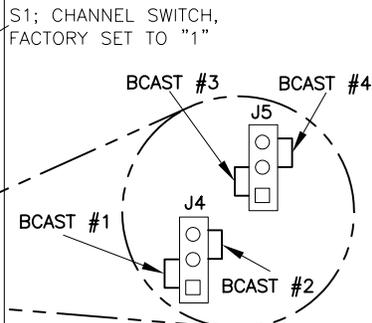
NOTE THE CHANNEL NUMBER AND BCAST SETTING FOR THE RADIO RECEIVER AND PUT COVER BACK ON. REFER TO THE SECTION AT RIGHT FOR RADIO RECEIVER INSTALLATION.

DETAIL: A

CHANNEL SWITCH AND BCAST JUMPER LOCATIONS
FRONT VIEW OF RADIO RECEIVER; COVER REMOVED

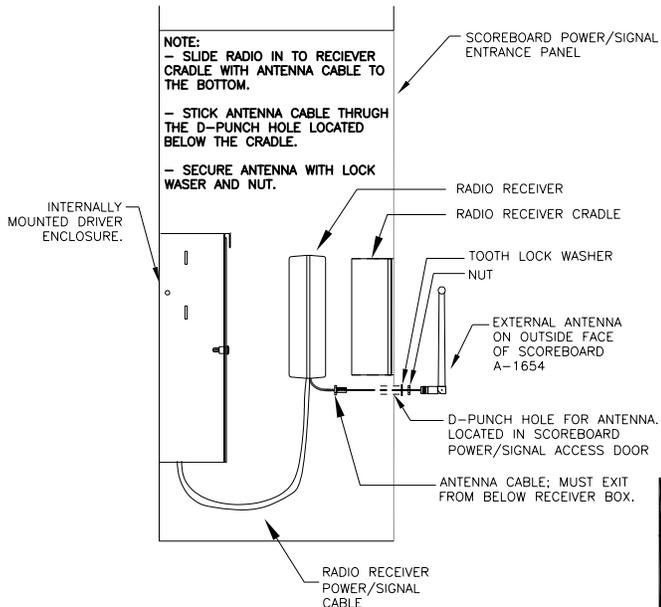


NOTE: THE DOTTED CIRCLE REPRESENTS THE JUMPER PLACEMENT FOR EACH OF THE 4 BROADCAST GROUPS. ONLY 1 JUMPER (SUPPLIED) CAN BE PLACED ON J4 OR J5 AT ANY TIME.



DETAIL: B

MOUNTING THE RADIO RECEIVER ENCLOSURE
SCOREBOARD LEFT SIDE CUT AWAY VIEW



NOTE:
- SLIDE RADIO IN TO RECEIVER CRADLE WITH ANTENNA CABLE TO THE BOTTOM.
- STICK ANTENNA CABLE THROUGH THE D-PUNCH HOLE LOCATED BELOW THE CRADLE.
- SECURE ANTENNA WITH LOCK WASER AND NUT.

FOR SCOREBOARDS SHIPPED AFTER JAN, 2007

STEP 1

IF YOU WILL HAVE A SETUP OTHER THAN ALL SCOREBOARDS BEING RUN WITH ONE CONTROLLER AT ALL TIMES PLEASE REFER TO INSTRUCTIONS AT LEFT, OTHERWISE PROCEED TO STEP 2.

STEP 2

TURN POWER OFF TO THE SCOREBOARD. LOCATE POWER/SIGNAL ACCESS DOOR AND OPEN. REMOVE COVER FROM DRIVER ENCLOSURE.

STEP 3

FIND THE LOCATION ON THE INSIDE OF THE POWER/SIGNAL ACCESS DOOR THAT HOLDS THE PREEXISTING RADIO CRADLE FOR THE RADIO ENCLOSURE. PLACE RECEIVER IN CRADLE. REFER TO YOUR SCOREBOARD'S INSTALLATION MANUAL TO DETERMINE THE LOCATION OF THE POWER/SIGNAL ACCESS DOOR.)

STEP 4

PLACE RADIO IN RADIO RECEIVER CRADLE ASSEMBLY. VELCRO STRIPS ARE PROVIDED FOR SCOREBOARDS THAT DO NOT HAVE THE RADIO CRADLE.

STEP 5

FEED THE ANTENNA CABLE FROM THE RADIO RECEIVER THROUGH THE D-PUNCH HOLE AND ATTACH IT TO THE FACE OF THE SCOREBOARD WITH THE SUPPLIED LOCK WASHER AND NUT. **MAKE SURE THAT THE ANTENNA CABLE IS COMING FROM THE BOTTOM OF THE RADIO RECEIVER, AS SHOWN IN DETAIL "B".** IF THE RADIO RECEIVER IS INSTALLED WITH THE ANTENNA CABLE POINTING TO THE TOP OR SIDE THE RECEIVER ENCLOSURE WILL POSSIBLY FILL WITH WATER AND DESTROY THE RADIO.

STEP 6

ATTACH THE PROVIDED ANTENNA TO THE PREVIOUSLY MOUNTED ANTENNA CABLE AND TIGHTEN. BE SURE TO HAVE THE ANTENNA POINTING UP AS SHOWN IN DETAIL "B".

STEP 7

CONNECT THE HARNESS FROM THE RADIO RECEIVER TO THE 5 PIN JACK LABELED J45 COMING FROM THE DRIVER. THE J45 HARNESS SHOULD ALREADY BE PLUGGED INTO THE J21 JACK ON THE DRIVER.

DO NOT ATTEMPT TO PLUG THE RADIO INTO ANYWHERE ELSE AS THIS MAY DESTROY THE RADIO.

STEP 8

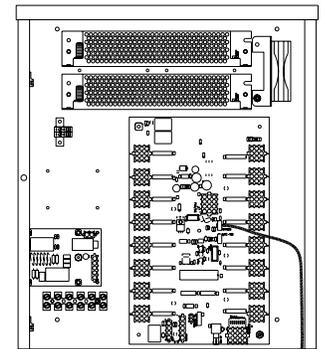
REPLACE COVER OVER DRIVER ENCLOSURE AND CLOSE POWER/SIGNAL ACCESS DOOR. THE RADIO RECEIVER IS NOW READY FOR OPERATION.

DETAIL: C

CONNECTING THE RADIO RECEIVER WIRE HARNESS
FRONT VIEW OF DRIVER ENCLOSURE; LID REMOVED

NOTE: MS-2013 SCOREBOARD HAS A SPECIALIZED INTERFACE CARD

- PLUG THE CABLE FROM RADIO RECEIVER INTO THE 5 PIN JACK LABELED J45.
- THE OTHER END OF THE J45 HARNESS SHOULD ALREADY BE CONNECTED TO J21 (RADIO) ON THE DRIVER.
- THIS IS THE ONLY CONNECTION THAT NEEDS TO BE MADE FOR THE RADIO RECEIVER.



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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: ALL SPROT RADIO

TITLE: INSTALLATION; OUTDOOR GEN IV SCBDS,W/ GEN V RADIO

DES. BY: SLOWWAG

DRAWN BY: SLOWWAG

DATE: 15 NOV 06

REVISION APPR. BY: MMILLER

00 SCALE: NONE

1110-R01A-290166

REV.	DATE	DESCRIPTION	BY	APPR.

SETTING CHANNELS

NOTE: IF ALL SCOREBOARDS ARE RUN FROM ONE CONSOLE AT ALL TIMES PLEASE GO DIRECTLY TO THE INSTALLATION INSTRUCTIONS AT RIGHT.

STEP 1
OPEN RADIO RECEIVER BY REMOVING 4 SCREWS IN COVER.

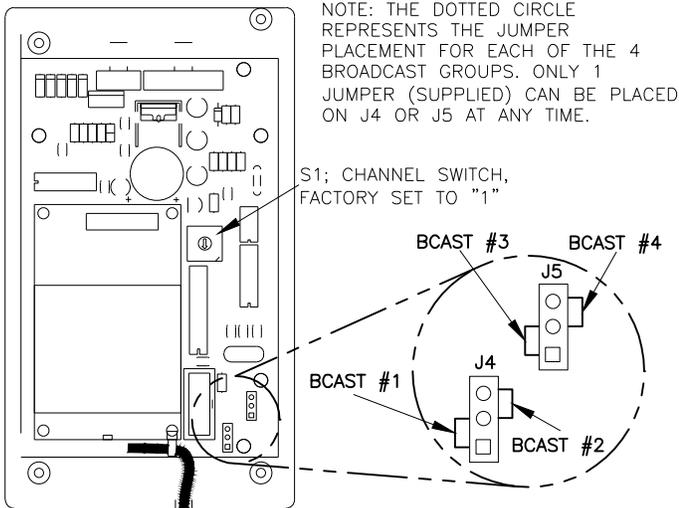
STEP 2
USE A SMALL FLAT HEAD SCREWDRIVER TO CHANGE THE SWITCH TO THE DESIRED CHANNEL NUMBER. SEE DETAIL "C" FOR LOCATION OF CHANNEL SWITCH. REFER TO DRAWING A-203113 FOR CHANNEL SETTING CRITERIA.

STEP 3
IF NECESSARY; RADIO BROADCAST GROUPS (#1-4) CAN BE CHANGED USING THE JUMPER ON EITHER J4 OR J5. SEE DETAIL "C" FOR LOCATION OF BCAST JUMPER (J4 OR J5). REFER TO DRAWING A-203113 FOR BCAST SELECTION CRITERIA.

STEP 4
NOTE THE CHANNEL NUMBER AND BCAST SETTING FOR THE RADIO RECEIVER AND PUT COVER BACK ON. REFER TO SECTION AT RIGHT FOR RADIO RECEIVER INSTALLATION.

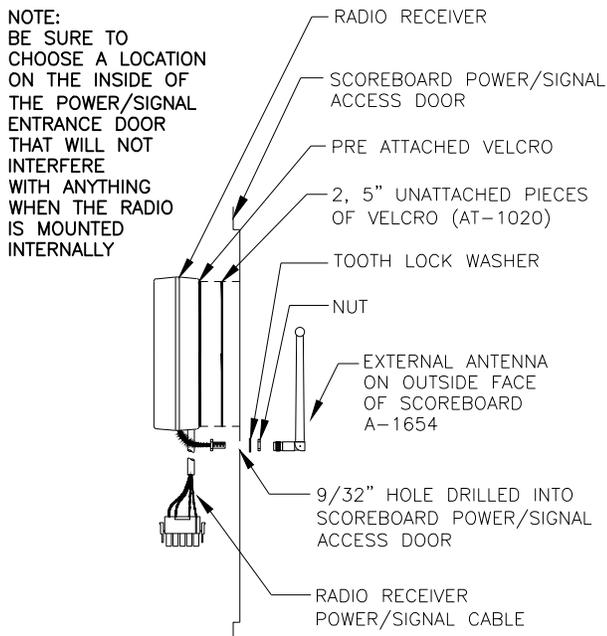
DETAIL: C

CHANNEL SWITCH AND BCAST JUMPER LOCATIONS
FRONT VIEW OF RADIO RECEIVER; COVER REMOVED



DETAIL: A

MOUNTING THE RADIO RECEIVER ENCLOSURE
SCOREBOARD LEFT SIDE CUT AWAY VIEW



STEP 1
IF YOU WILL HAVE A SETUP OTHER THAN ALL SCOREBOARDS BEING RUN WITH ONE CONTROLLER AT ALL TIMES PLEASE REFER TO THE INSTRUCTIONS AT LEFT, OTHERWISE PROCEED TO STEP 2.

STEP 2
TURN POWER OFF TO THE SCOREBOARD. A TYPICAL LOCATION FOR MOUNTING OF THE RADIO IS NEXT TO THE PERIOD DIGIT. SEE DETAIL "B" BELOW. ONCE MOUNTED, MAKE SURE IT WILL NOT INTERFERE WITH THE CLOSING OF ANY PANEL. IF INSTALLING THE RADIO RECEIVER IN A SHOT CLOCK FIND A PLACE INSIDE OF THE SHOT CLOCK TOWARD THE TOP; MAKE SURE THAT THE LOCATION CHOSEN WILL NOT INTERFERE WITH THE FUTURE INSTALLATION OF A VHI.

STEP 3
CHECK FOR A PREDRILLED 9/32" HOLE IN NEXT TO PERIOD DIGIT OR TOP OF SHOT CLOCK. IF THERE IS NO HOLE, DRILL A 9/32" HOLE THROUGH THE FACE OF THE DOOR. AS SHOWN IN DETAIL "A".

STEP 4
ATTACH THE 2, 5" VELCRO STRIPS TO THE VELCRO ON THE BACKSIDE OF THE RADIO RECEIVER ENCLOSURE. REMOVE THE STICKY BACKING FROM THE VELCRO STRIPS AND PRESS THEM INTO PLACE ON THE SCOREBOARD POWER/SIGNAL ACCESS DOOR (TOP OF SHOT CLOCK) DIRECTLY ABOVE THE HOLE YOU DRILLED EARLIER.

STEP 5
FEED THE ANTENNA CABLE FROM THE RADIO RECEIVER THROUGH THE 9/32" HOLE AND ATTACH IT TO THE FACE OF THE SCOREBOARD WITH THE SUPPLIED LOCK WASHER AND NUT.

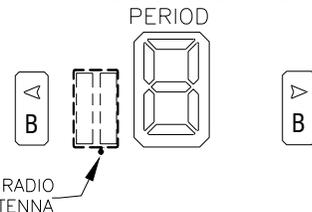
STEP 6
ATTACH THE PROVIDED ANTENNA TO THE PREVIOUSLY MOUNTED ANTENNA CABLE AND TIGHTEN. BE SURE TO HAVE THE ANTENNA POINTING UP AS SHOWN IN DETAIL "A".

STEP 7
ROUTE RADIO HARNESS TO DRIVER TRAY LOCATION, CONNECT TO FIVE PIN JACK (J45) ON THE DRIVER TRAY HARNESS. CHECK TO SEE IF THERE IS A GRAY WIRE IN POSITION 3 OF J45. IF THERE IS A GRAY WIRE PLEASE REFER TO DRAWING A-181729. IF THERE IS A BROWN WIRE IN POSITION 3 OF J45 CONTINUE INSTALLATION. PLUG THE 5 PIN MALE PLUG FROM THE RADIO RECEIVER INTO THE MATING 5 PIN JACK (J45) ON THE DRIVER PANEL AS SHOWN IN DETAIL "B".

STEP 8
CLOSE SCOREBOARD POWER/SIGNAL ACCESS DOOR. TURN POWER BACK ON TO SCOREBOARD. THE RADIO RECEIVER IS NOW READY FOR OPERATION.

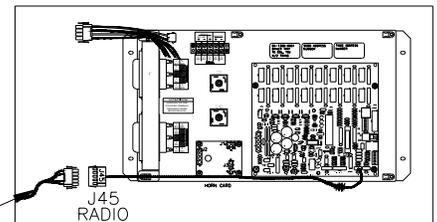
DETAIL: B

CONNECTING THE RADIO RECEIVER WIRE HARNESS TO DRIVER TRAY



NOTE:
LOCATE DRIVER TRAY, TYPICALLY BEHIND HOME SCORE OR THE CLOCK, LOCATION MAY VARY BETWEEN SCOREBOARD MODELS

NOTE:
PLUG THE CABLE FROM THE RADIO RECEIVER INTO THE MATING 5 PIN JACK (LABELED AS J45) LOCATED IN THE WIRE HARNESS ATTACHED TO THE SCOREBOARD DRIVER TRAY.



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PROJ: ALLSPORT RADIO TITLE: INSTALLATION- INDOOR COLOR SMART- GEN V RECEIVER			
DESIGN:		DRAWN: DDINING	
SCALE: NONE		DATE: 6 MAR 07	
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
02	01	P1110	R-03-A
			298616

REV 02	DATE: 10 NOV 11	UPDATED DRAWING TO MATCH DWG-203542	BY: JJJ
REV 01	DATE: 24 AUG 11	CORRECTED TYPOS AND UPDATED TITLE BLOCK	BY: JJJ

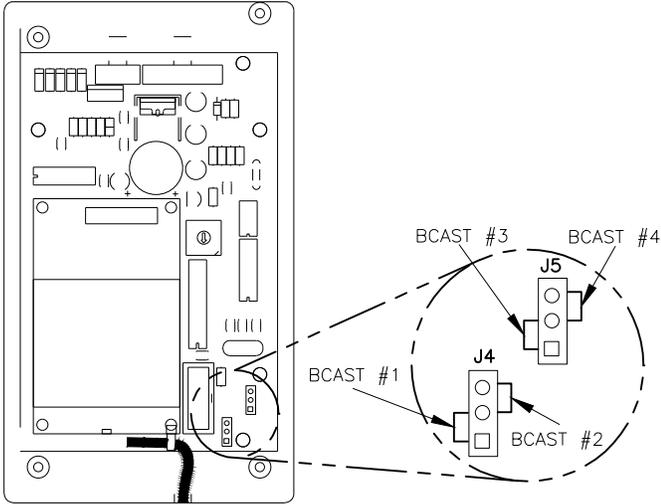
DRAWING USED TO CONNECT TWO RADIOS TO THE SAME DRIVER.

NOTE: THE TWO RECEIVERS SHOULD BE MOUNTED A COUPLE FEET APART

ALLSPORT 2.4GHZ RADIO RECEIVER VIEW

STEP 1
REFER TO DWG-00203543 FOR INSTRUCTIONS ON SETTING THE CHANNEL AND MOUNTING INSIDE THE POWER/SIGNAL ACCESS DOOR

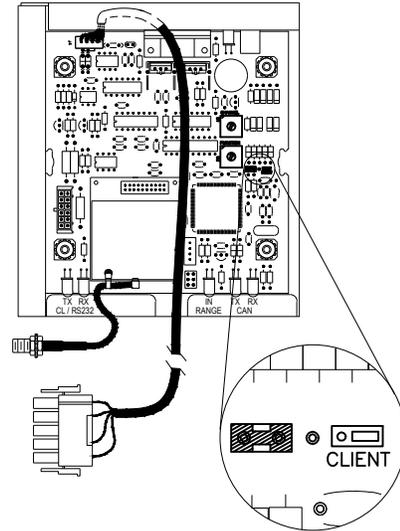
CHANNEL SWITCH AND BCAST JUMPER LOCATIONS
FRONT VIEW OF RADIO RECEIVER; COVER REMOVED



RC-100 BASE STATION VIEW

STEP 1
REFER TO DWG-00236394 FOR INSTRUCTIONS ON SETTING THE CHANNEL AND MOUNTING INSIDE THE POWER/SIGNAL ACCESS DOOR.

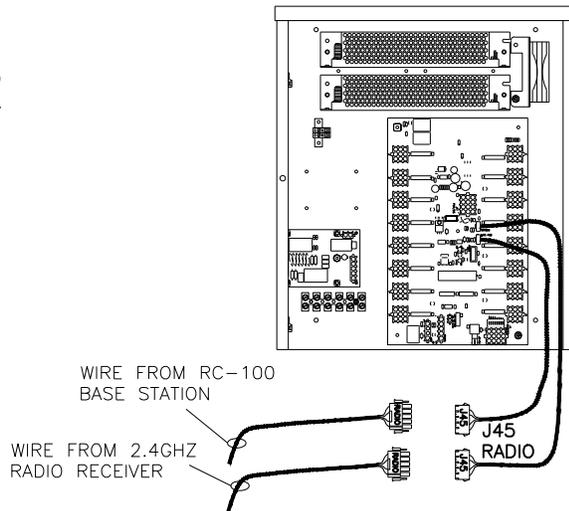
-SECOND 9/32" HOLE WILL NEED TO BE DRILLED INTO SCOREBOARD ACCESS DOOR TO ATTACH THE SECOND ANTENNA



CONNECTING THE RC-100 BASE STATION AND THE ALLSPORT 2.4GHZ RADIO RECEIVER WIRE HARNESSES
FRONT VIEW OF DRIVER ENCLOSURE; LID REMOVED

- PLUG THE CABLE FROM THE 2.4GHZ RADIO RECEIVER INTO THE EXISTING HARNESS 5 PIN JACK LABELED J45.
- VERIFY THE OTHER END OF THE J45 HARNESS SHOULD ALREADY BE CONNECTED TO J21 (RADIO) ON THE DRIVER.
- THIS IS THE ONLY CONNECTION THAT NEEDS TO BE MADE FOR THE 2.4GHZ RADIO RECEIVER AT THE DRIVER LOCATION
- ADD A SECOND J45 HARNESS (0A-1388-0004) AND CONNECT IT TO J22 (RC-100) ON THE DRIVER
- PLUG THE CABLE FROM THE RC-100 BASE STATION INTO THE SECOND HARNESS 5 PIN JACK LABELED J45
- THIS IS THE ONLY CONNECTION THAT NEEDS TO BE MADE FOR THE RC-100 BASE STATION AT THE DRIVER LOCATION

NOTE:
ONLY ONE WIRELESS CONTROLLER CAN BE USED AT A TIME.



 DAKTRONICS, INC. BROOKINGS, SD 57006 DO NOT SCALE DRAWING		THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2011 DAKTRONICS, INC.	
		PROJ: RC-100 / ALL SPORT RADIO TITLE: OUTDOOR INSTALLATION: RADIO RECEIVER & BASE STATION DESIGN: JLAIRD DRAWN: JLAIRD DATE: 22 SEP 11	
SHEET 00		JOB NO: P1110	
REV 00		FUNC-TYPE-SIZE R-01-A	
			1069855

Appendix B: Daktronics Warranty and Limitation of Liability

**DAKTRONICS
WARRANTY AND LIMITATION OF LIABILITY**

This Warranty and Limitation of Liability (the "Warranty") sets forth the warranty provided by Daktronics with respect to the Equipment. By accepting delivery of the Equipment, Purchaser agrees to be bound by and accept these terms and conditions. All defined terms within the Warranty shall have the same meaning and definition as provided elsewhere in the Agreement.

DAKTRONICS WILL ONLY BE OBLIGATED TO HONOR THE WARRANTY SET FORTH IN THESE TERMS AND CONDITIONS UPON RECEIPT OF FULL PAYMENT FOR THE EQUIPMENT.

1. Warranty Coverage

A. Daktronics warrants to the original end-user that the Equipment will be free from Defects (as defined below) in materials and workmanship for a period of one (1) year (the "Warranty Period"). The warranty period shall commence on the earlier of: (i) four weeks from the date that the equipment leaves Daktronics' facility; or (ii) Substantial Completion as defined herein. The warranty period shall expire on the first anniversary of the commencement date.

"Substantial Completion" means the operational availability of the Equipment to the Purchaser in accordance with the Equipment's specifications, without regard to punch-list items, or other non-substantial items which do not affect the operation of the Equipment.

B. Daktronics' obligation under this Warranty is limited to, at Daktronics' option, replacing or repairing, any Equipment or part thereof that is found by Daktronics not to conform to the Equipment's specifications. Unless otherwise directed by Daktronics, any defective part or component shall be returned to Daktronics for repair or replacement. Daktronics may, at its option, provide on-site warranty service. Daktronics shall have a reasonable period of time to make such replacements or repairs and all labor associated therewith shall be performed during regular working hours. Regular working hours are Monday through Friday between 8:00 a.m. and 5:00 p.m. at the location where labor is performed, excluding any holidays observed by either Purchaser or Daktronics.

C. Daktronics shall pay ground transportation charges for the return of any defective component of the Equipment. If returned Equipment is repaired or replaced under the terms of this warranty, Daktronics will prepay ground transportation charges back to Purchaser; otherwise, Purchaser shall pay transportation charges to return the Equipment back to the Purchaser. All returns must be pre-approved by Daktronics before shipment. Daktronics shall not be obligated to pay freight for any unapproved return. Purchaser shall pay any upgraded or expedited transportation charges.

D. Any replacement parts or Equipment will be new or serviceably used, comparable in function and performance to the original part or Equipment, and warranted for the remainder of the Warranty Period. Purchasing additional parts or Equipment from the Seller does not extend this Warranty Period.

E. Defects shall be defined as follows. With regard to the Equipment (excepting LEDs), a "Defect" shall refer to a material variance from the design specifications that prohibit the Equipment from operating for its intended use. With respect to LEDs, "Defects" are defined as LED pixels that cease to emit light. The limited warranty provided by Daktronics does not impose any duty or liability upon Daktronics for partial LED pixel degradation. Nor does the limited warranty provide for the replacement or installation of communication methods including but not limited to, wire, fiber optic cable, conduit, trenching, or for the purpose of overcoming local site interference radio equipment substitutions.

THIS LIMITED WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THE EQUIPMENT AND REPLACES ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SPECIFICALLY, EXCEPT AS PROVIDED HEREIN, THE SELLER UNDERTAKES NO RESPONSIBILITY FOR THE QUALITY OF THE EQUIPMENT OR THAT THE EQUIPMENT WILL BE FIT FOR ANY PARTICULAR PURPOSE FOR WHICH PURCHASER MAY BE BUYING THE EQUIPMENT. ANY IMPLIED WARRANTY IS LIMITED IN DURATION TO THE WARRANTY PERIOD. NO ORAL OR WRITTEN INFORMATION, OR ADVICE GIVEN BY THE COMPANY, ITS AGENTS OR EMPLOYEES, SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF THIS LIMITED WARRANTY.

THIS LIMITED WARRANTY IS NOT TRANSFERABLE.

2. Exclusion from Warranty Coverage

The limited warranty provided by Daktronics does not impose any duty or liability upon Daktronics for:

A. Any damage occurring, at any time, during shipment of Equipment unless otherwise provided for in the Agreement. When returning Equipment to Daktronics for repair or replacement, Purchaser assumes all risk of loss or damage, and agrees to use any shipping containers that might be provided by Daktronics and to ship the Equipment in the manner prescribed by Daktronics;

B. Any damage caused by the unauthorized adjustment, repair or service of the Equipment by anyone other than personnel of Daktronics or its authorized repair agents;



C. Damage caused by the failure to provide a continuously suitable environment, including, but not limited to: (i) neglect or misuse, (ii) a failure or sudden surge of electrical power, (iii) improper air conditioning or humidity control, or (iv) any other cause other than ordinary use;

D. Damage caused by fire, flood, earthquake, water, wind, lightning or other natural disaster, strike, inability to obtain materials or utilities, war, terrorism, civil disturbance or any other cause beyond Daktronics' reasonable control;

E. Failure to adjust, repair or replace any item of Equipment if it would be impractical for Daktronics personnel to do so because of connection of the Equipment by mechanical or electrical means to another device not supplied by Daktronics, or the existence of general environmental conditions at the site that pose a danger to Daktronics personnel;

F. Any statements made about the product by salesmen, dealers, distributors or agents, unless such statements are in a written document signed by an officer of Daktronics. Such statements as are not included in a signed writing do not constitute warranties, shall not be relied upon by Purchaser and are not part of the contract of sale;

G. Any damage arising from the use of Daktronics products in any application other than the commercial and industrial applications for which they are intended, unless, upon request, such use is specifically approved in writing by Daktronics; or

H. Any performance of preventive maintenance.

3. **Limitation of Liability**

Daktronics shall be under no obligation to furnish continued service under this Warranty if alterations are made to the Equipment without the prior written approval of Daktronics.

It is specifically agreed that the price of the Equipment is based upon the following limitation of liability. In no event shall Daktronics (including its subsidiaries, affiliates, officers, directors, employees, or agents) be liable for any special, consequential, incidental or exemplary damages arising out of or in any way connected with the Equipment or otherwise, including but not limited to damages for lost profits, cost of substitute or replacement equipment, down time, lost data, injury to property or any damages or sums paid by Purchaser to third parties, even if Daktronics has been advised of the possibility of such damages. The foregoing limitation of liability shall apply whether any claim is based upon principles of contract, tort or statutory duty, principles of indemnity or contribution, or otherwise.

In no event shall Daktronics be liable to Purchaser or any other party for loss, damage, or injury of any kind or nature arising out of or in connection with this Warranty in excess of the purchase price of the Equipment actually delivered to and paid for by the Purchaser. The Purchaser's remedy in any dispute under this Warranty shall be ultimately limited to the Purchase Price of the Equipment to the extent the Purchase Price has been paid.

4. **Assignment of Rights**

The Warranty contained herein extends only to the original end-user (which may be the Purchaser) of the Equipment and no attempt to extend the Warranty to any subsequent user-transferee of the Equipment shall be valid or enforceable without the express written consent of Daktronics.

5. **Dispute Resolution**

Any dispute between the parties will be resolved exclusively and finally by arbitration administered by the American Arbitration Association ("AAA") and conducted under its rules, except as otherwise provided below. The arbitration will be conducted before a single arbitrator. The arbitration shall be held in Brookings, South Dakota. Any decision rendered in such arbitration proceedings will be final and binding on each of the parties, and judgment may be entered thereon in any court of competent jurisdiction. This arbitration agreement is made pursuant to a transaction involving interstate commerce, and shall be governed by the Federal Arbitration Act.

6. **Governing Law**

The rights and obligations of the parties under this warranty shall not be governed by the provisions of the United Nations Convention on Contracts for the International Sales of Goods of 1980. Both parties consent to the application of the laws of the State of South Dakota to govern, interpret, and enforce all of Purchaser and Daktronics rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Warranty, without regard to conflict of law principles.

7. **Availability of Extended Service Agreement**

For Purchaser's protection, in addition to that afforded by the warranties set forth herein, Purchaser may purchase extended warranty services to cover the Equipment. The Extended Service Agreement, available from Daktronics, provides for electronic parts repair and/or on-site labor for an extended period from the date of expiration of this warranty. Alternatively, an Extended Service Agreement may be purchased in conjunction with this warranty for extended additional services. For further information, contact Daktronics Customer Service at 1-800-DAKTRONics (1-800-325-8766).