Remote Control System RC-100

All Sport Operation Manual

ED-15133

Rev 9 - 11 March 2015





ED-15133 Product 1110 Rev 9 – 11 March 2015

DAKTRONICS, INC.

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Section 1: Introduction

This manual is designed to explain the operation of the Daktronics RC-100 Remote Control System for All Sport® applications. For additional information regarding the safety, installation, operation, or service of this system, refer to the telephone numbers listed in **Section 1.2**.

Important Safeguards

- Read and understand all instructions, both general and for specific applications.
- Do not drop the control console or allow it to get wet.
- Do not disassemble control equipment or electronic controls of the display; failure to follow this safeguard will make the warranty null and void.
- Always turn off and/or unplug the control equipment when it is not in use. Never
 yank the power cord to pull the plug from the outlet. Grasp the plug and pull to
 disconnect.
- Do not let any power cord touch hot surfaces or hang over the edge of a table that would damage or cut the cord.
- If an extension cord is necessary, a three-pronged, polarized cord should be used. Arrange the cord with care so that it will not be tripped over or pulled out.
- Inspect console for shipping damage such as rattles and dents, and verify that all equipment is included as itemized on the packing slip. Immediately report any problems to Daktronics; save all packing materials if exchange is necessary.

1.1 Resources

Figure 1 illustrates a Daktronics drawing label. The drawing number is located in the lower-right corner of a drawing. This manual refers to drawings by listing the last set of digits and the letter preceding them. In the example, the drawing would be referred to as **Drawing C-325405**.

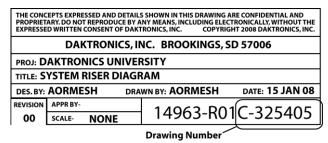


Figure 1: Daktronics Drawing Label

Reference Drawing:

Daktronics identifies manuals by an ED or DD number located on the cover page of each manual. For example, this manual would be referred to as **ED-15133**.

Introduction 1

1.2 Daktronics Exchange and Repair & Return Programs

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:

Assembly Number:	
Job/Contract Number:	
Date Manufactured/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.

2 Introduction

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

Daktronics Warranty and Limitation of Liability

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

Introduction 3

Section 2: RC-100 System Overview

The RC-100 system allows wireless control of multiple scoring and display applications. This system is made up of two distinct hardware components: the RC-100 wireless handheld controller, and the RC-100 wireless Base Station.

The RC-100 wireless handheld controller (**Figure 2**) includes a 4x4 keypad and a 97x32 liquid crystal display (LCD). The RC-100 wireless handheld controller is used to enter information to be displayed on a scoreboard or display. The handheld operates using a 900 MHz radio with internal antenna and comes with a rechargeable Ni-MH (Nickel Metal Hydride) 2000 mAh battery which provides 8-10 hours of operation. An RC-100 system may include multiple RC-100 wireless handheld controllers.

The RC-100 wireless Base Station processes information received from the wireless handheld controllers and sends this information to the scoreboard or another external controller. Based on the application, an RC-100 wireless receiver may be mounted inside the display (**Figure 3**), or placed in an external tabletop enclosure (**Figure 4**). An outdoor enclosure is also available for certain applications.



Figure 2: RC-100 Wireless Handheld Controller

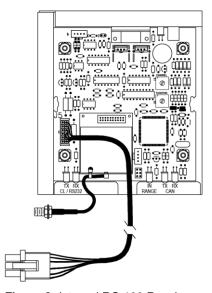


Figure 3: Internal RC-100 Receiver



Figure 4: External RC-100 Base Station (Tabletop Enclosure)

Important Installation Range Considerations

The wireless Base Station must be located at least 10' (3 m) from the wireless handheld controller and no more than 500' (152 m) away. If the wireless handheld is used outside this range, the wireless handheld signal may drop out. Ideally, the handheld controller should have a clear line-of-sight to the Base Station antenna. Make sure the Base Station antenna is pointed straight up for best reception (it should look like a capital "L" when viewed from the side).

Section 3: RC-100 Base Station

The RC-100 wireless Base Station is used to communicate with all RC-100 wireless handheld controllers on the same channel setting. The RC-100 wireless Base Station also is used to update connected displays based with information entered on the wireless handheld controller.

The wireless Base Station includes two switches that must be set to specify the function number and channel of operation. Refer to **Section 3.1** and **Section 3.2**, respectively. In addition, the Base Station includes a server/client jumper that must be set to "Client Mode" in some scenarios that feature multiple displays. Refer to **Section 3.4** for more information.

3.1 Function Setting

The desired RC-100 system function must be configured in the wireless Base Station. A list of possible current functions is shown below, along with the corresponding Function Setting.

Function	Function	Function
Setting	(Base Station Server Mode*)	(Base Station Client Mode*
	Default Function	
0	(last power up function)	All Display Groups
1	CAN Handheld (Judges') Console	Display Group 1
2	GEN I All Sport Scoreboard Controller	Display Group 2
3	DataTime/Data Master Display Control	Display Group 3
4	Reserved	Display Group 4
5	GEN II All Sport Scoreboard Controller	Display Group 2
6	Reserved	
7	Reserved	
8	Reserved	
9	Reserved	
Α	Reserved	
В	Reserved	
С	Reserved	
D	Reserved	
Е	Reserved	
F	Reset Memory/Test**	Reset Memory/Test**

^{*} The function of the Base Station depends on whether it is in Server or Client mode. For a server Base Station, the Function switch sets up the desired application. For a client Base Station, the Function switch sets up the display group to which this display belongs.

^{**}Function Setting "F" is a special setting which resets all saved memory parameters back to defaults. This can be used for situations such as when a password needs to be reset. To use this function, cycle power to the wireless Base Station with the switch in this position and leave on for 10 seconds. Remove power, change to the desired function and continue. All saved memory parameters will be set back to default.

Selecting Functions

Refer to **Figure 5** for the wireless Base Station circuit board assembly drawing. To access the circuit board:

- For external Base Station enclosures, remove the two screws securing the top cover, and lift it off.
- For internal Base Stations, refer to the scoreboard/display manual for component location and access instructions.

After exposing Base Station circuit board, use a small flathead screwdriver to turn the "S2" rotary switch labeled "FUNCTION" to the desired Function Setting.

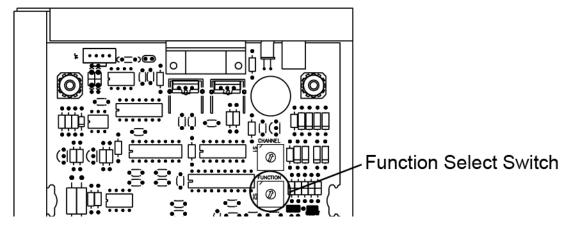


Figure 5: Function Select Switch (Internal Receiver)

After 5 seconds, the wireless Base Station Server will change its function to match the new switch setting. (Any connected wireless handheld controllers should change as well.) When the wireless Base Station Server is turned off and back on, it will always default to the function set on the switch.

All Sport Scoreboard Controller Function

The All Sport Scoreboard Controller will normally operate with the Function Setting "5" selected. However, to support legacy products, Gen I mode of operation may be selected by switching the Function Setting to "2".

Gen I Operation

Function Setting "2" allows Daktronics Gen I handheld controllers to communicate with Gen II Base Stations.

Gen II handheld controllers will recognize which generation Base Station they are communicating with. On first time power-up, the initialization of the radio will take a little longer while it attempts to recognize which generation Base Station is present.

After a successful connection, the handheld controller will recognize and connect immediately with that generation of Base Station.

Keep in mind the following when using the Gen I mode of operation:

- Gen I handheld controllers or Base Stations will not operate in Function "5".
- All Base Stations operating at the same location must be set to the same Function.
- Gen I handheld controllers display ED14905 Version 1.6 or lower on the LCD at power-up. Gen I Base Stations are labeled ED14906 Version 2.1 or lower.
- Gen II handheld controllers display ED14905 Version 2.2 or higher on the LCD at power-up. Gen II Base Stations are labeled ED14906 Version 2.2 or higher.

3.2 Channel Setting

The wireless Base Station and wireless handheld device use internal radio modules to communicate. The radios on both the wireless handheld and wireless Base Station device can be set to any channel ranging from 1-15. "Channel 1" is the default channel used by Daktronics for single base-station installations.

Refer to **Figure 6** for the wireless Base Station circuit board assembly drawing. To access the circuit board:

- For external Base Station enclosures, remove the two screws securing the top cover, and lift it off.
- For internal Base Stations, refer to the scoreboard/display manual for component location and access instructions.

After exposing Base Station circuit board, use a small flathead screwdriver to turn the "S1" rotary switch labeled "CHANNEL" to the desired channel.

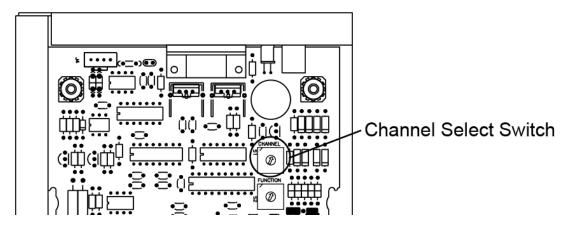


Figure 6: Channel Select Switch (Internal Receiver)

Note: The wireless handheld and Base Station must be set to the same channel in order to communicate. To select the channel in the wireless handheld controller, refer to **Section 4.1**.

Two server Base Stations cannot be powered up in the same area with the same channel setting, or they will interfere with each other. To avoid this, on power-up the server Base Station checks to see if there are any other servers located nearby. If another server is detected, the "IN RANGE" LED (**Figure 10**) will flash quickly to indicate interference, and continue to flash until the channel is changed or the conflicting Base Station is turned off.

3.3 Synchronizing Multiple Base Stations and Channel Selection

If two or more server Base Stations need to operate at the same time in the same location, they must each be set to an independent channel and synchronized accordingly.

The RC-100 wireless system uses frequency-hopping technology to maximize range and minimize interference from other systems. When multiple server Base Stations are installed within range of each other (approximately 2000 feet), Base Stations must be able to synchronize with one another to ensure their hop sequences do not interfere with each other.

This is accomplished by the use of sync groups. A list of the sync groups and their corresponding channel numbers and channel groups are shown in the table below.

Sync Group	Channel Number	Primary Channel Group	Extended Channel Group
1	0	All	
2	1	2, 3, 4, 5	7, 8, 9, 10, 12(C), 13(D), 14(E), 15(F)
3	6	7, 8, 9, 10	12(C), 13(D), 14(E), 15(F)
4	11(B)	12(C), 13(D), 14(E), 15(F)	

The "Channel Number," "Primary Channel Group", and "Extended Channel Group" entries correspond to the settings on the CHANNEL rotary switch (Figure 6) and handheld settings that pertain to the "Sync Group" shown on the same line. Each "Primary Channel Group" lists the channels that will attempt to synchronize to this sync channel as a first choice. If any Base Stations set to these "Primary Channels" are within range of a Base Station set to the corresponding sync channel number, the two Base Stations will sync. The "Extended Channel Group" lists channels that attempt to synchronize to the corresponding sync channel as a second or third choice. When these channels are not within range of their primary sync channel, they will attempt to synchronize to the corresponding sync channel.

When a Base Station is synchronized to a Sync Group, the "IN RANGE" LED (**Figure 10**) will flash briefly approximately every 5 seconds with the number of times flashed corresponding to the sync group: 1 = Channel 0, 2= Channel 1, 3=Channel 6, 4= Channel 11 (B).

Any Base Stations set to channels in the "Channel Groups" section will continuously scan for sync Base Stations whenever no handheld controllers are connected. This will allow these boards to be powered up in any sequence and still obtain network synchronization.

Installations with a Central Base Station

If the installation includes a central Base Station located approximately 3000' (914 m) or closer to all other Base Stations, a Base Station set on channel 1 may be installed in this location. All other Base Stations may be set to values in the primary and extended channel groups for this channel number to avoid interference within the channels. **Figure 7** shows an example of a baseball facility with 9 diamonds, each having its own server Base Station.

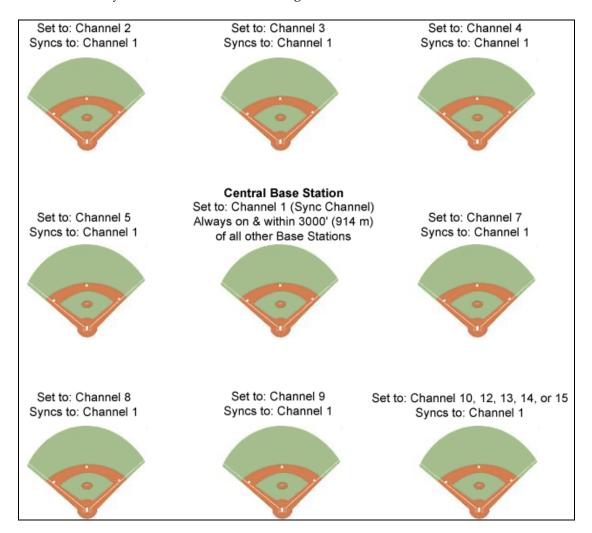


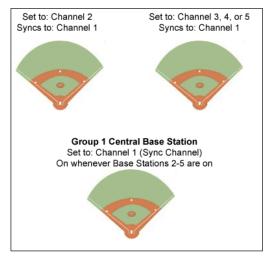
Figure 7: Multiple Base Stations w/ Central Location

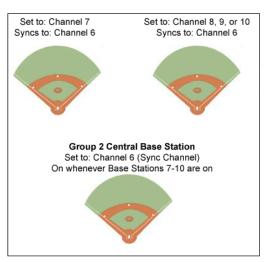
Note: In order to remain synchronized with one another, no Base Station in the area may be set to channel 6 or 11. Also, the central Base Station must remain on at all times during the operation of any other Base Station.

Installations with Base Station Groups

If the installation does not include a central location as described above, or if groups of Base Stations will be powered down at times, other groups will need to be active and using Sync Groups 3 and 4 (channels 6 and 11).

An operator may use Sync Groups 3 and 4 (channels 6 and 11) as synchronizing channels for two other independent groups of scoreboards that may or may not be in range of any other groups. **Figure 8** shows an example of a baseball facility that also has 9 diamonds; however, in this setup there is no central location and instead uses 3 independent channel groups.





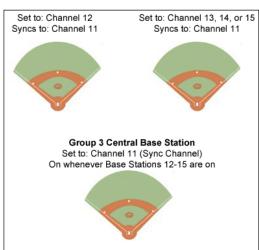


Figure 8: Multiple Base Station Groups

Note: An important limitation exists for channels 1, 6, and 11. Since other channels use these channels for synchronization purposes, Base Stations on these channels cannot scan during normal operation, only at power-up. For this reason, these Base Stations must be powered up in-order (1 first, then 6, then 11) in order to maintain overall network synchronization in the case where it is needed to have Channels 1, 6, and 11 all powered up at the same time.

3.4 Server/Client Mode Setting

The RC-100 wireless Base Station can operate in either Server Mode or Client Mode, depending on application requirements. For most applications, the wireless Base Station will operate in Server Mode, and no change from the default setting will be necessary.

In **Server Mode**, the wireless Base Station controls all wireless handheld devices, either through an onboard program (i.e. All Sport® or DataTime®), or by acting as a router to pass data back and forth between wireless handheld devices and an external control system (such as an OmniSport® 2000 console). An RC-100 network (on a single channel) contains **one and only one** server Base Station device.

In **Client Mode**, a wireless Base Station relies on another server Base Station to supply it with data. This client Base Station will typically provide data for a second wireless scoreboard or display, as needed for All Sport or DataTime functions. Since the Function Select switch is not needed to select a function when the Base Station is in Client Mode, the function switch selects the display group instead. For more information refer to **Section 3.1**.

Refer to **Figure 9** for the wireless Base Station circuit board assembly drawing. To access the circuit board:

- For external Base Station enclosures, remove the two screws securing the top cover, and lift it off
- For internal Base Stations, refer to the scoreboard/display manual for component location and access instructions.

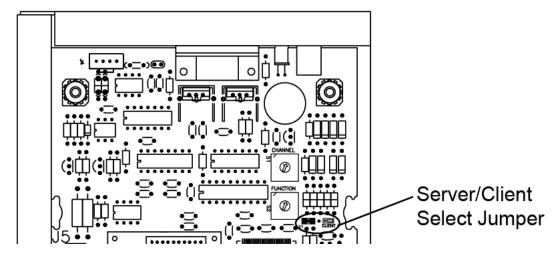


Figure 9: Server/Client Select Jumper (Internal Receiver)

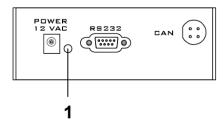
Wireless Base Station Server/Client Mode is selected via the "X1" Server/Client Jumper. Insert the jumper over the top two posts as shown in the "CLIENT" label on the circuit board to put the wireless Base Station in Client Mode. For Server Mode, leave the jumper over the bottom two posts (factory default).

Drawing A-317837 in **Appendix A** shows an example of how a server/client system is used to operate two game timers at opposite ends of a football field.

3.5 Wireless Base Station LEDs

The wireless Base Station circuit board includes several light-emitting diodes (LEDs) for diagnostic purposes, as shown in **Figure 10** and described in the table that follows.

Base Station (Front View)



Base Station (Rear View)

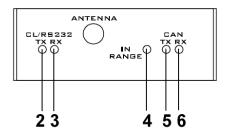
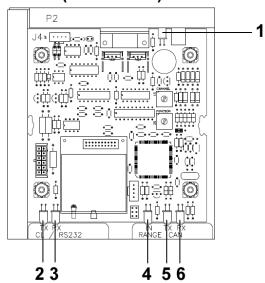


Figure 10: Wireless Base Station LEDs

Wireless Reciever (Front View)



#	LED	Color	Function
1	POWER	Green	This LED illuminates when the Base Station or receiver is connected to a power source
2	CL/RS232 TX	Red	This LED flashes when the Base Station transmits Current Loop (CL) or RS-232 data via wire: • Current Loop output is used to control scoreboards. • RS-232 output is used to communicate with external devices, such as a computer with DakTennis™.
3	CL/RS232 RX	Green	This LED flashes when the Base Station receives Current Loop (CL) or RS-232 data from another device via wire.
4	IN RANGE	Amber	On a server Base Station, this LED flashes several times at start-up to indicate that it is searching for other server Base Stations on the same channel within range. If one is found, this LED flashes continuously to indicate that only one server Base Station is allowed on a given channel. Once in operation mode, this LED will either be on or off to indicate whether or not one or more handheld devices are currently connected to the Base Station. On a client Base Station, this LED is on whenever it is connected to a server Base Station.
			This LED also shows sync status. Refer to the Section 3.3 .

5	CAN TX	Green	This LED flashes when Controller Area Network (CAN) data is transmitted to a connected device, such as the OmniSport 2000 console.
6	CAN RX	Red	This LED flashes when Controller Area Network (CAN) data is received from a connected device, such as the OmniSport 2000 console.

LED Error Diagnostics

The CL/RS232 TX, CL/RS232 RX, IN RANGE, and CAN TX LEDs are also used to display errors that can occur in wireless Base Station operation. Refer to **Section 18** for more information about these errors.

Section 4: RC-100 Handheld Controller

4.1 Powering the Controller On and Off

Using the Keypad

- Press and hold the <ON/OFF> key momentarily to power on the controller. If the LCD does not display text within a few seconds, the internal battery is most likely dead and will need to be recharged (refer to Section 4.3).
- Press and hold the **<ON/OFF>** key for 5 seconds to power off the controller. The LCD will display a power down message.

Using External Power

Plugging the wireless handheld controller into an external power source via the power connector on top of the unit will turn it on (and charge its internal batteries). The wireless handheld will not turn off if connected to external power. When connected to external power, the top line of the LCD will show a power plug (**Figure 11**).



Figure 11: External Power Detect Status

When external power is removed and charging is complete, the handheld will power down after a 5 second prompt to conserve battery power. Press any key during the prompt after disconnecting external power to keep the handheld controller powered on.

4.2 Battery Operation

When the controller is powered on, an indicator on the top line of the LCD shows the current battery status (**Figure 12**). The three segments within the battery will gradually disappear as the battery loses its charge.



Figure 12: Battery Status

Idle Time

When using battery power, by default the controller shuts itself off or "sleeps" automatically after 45 minutes inactivity. The idle time setting may be turned off (refer to **Section 4.4**), but to increase battery life, be sure to manually turn the console off when it will be inactive for a long period of time.

4.3 Battery Recharging

A charger is contained inside the wireless handheld controller for re-charging the batteries. To recharge the batteries when not in use, simply connect an external power source to the power connector on top of the unit. A completely discharged battery will take approximately 1.5 hours of fast charging to recharge. For information on battery replacement, see **Section 18.3**.

A 12 VAC wallpack transformer (Daktronics part # T-1118) is included with the wireless handheld controller for recharging the batteries and providing external power. Daktronics also offers a charging station capable of recharging up to 6 units at a time. Refer to **Drawing A-231674** in **Appendix A** for more information on charging station operation.

4.4 Operation Modes

The RC-100 wireless handheld controller (**Figure 2**) always operates in one of two modes: Config or Connect.

Config Mode

Config ("configuration") mode (**Figure 13**) is used when a wireless server Base Station is not controlling a wireless handheld. Config mode is used to set up operational settings in the wireless handheld controller.



Figure 13: Config Mode LCD Icon

If the wireless handheld has not yet been configured for a specific channel, the Config mode will start automatically when the device is first powered on. If it has been previously configured, the wireless handheld will attempt to connect at the last connected channel.

- Configuration mode may be entered at any time by pressing and holding the **<CONFIG>** key for 5 seconds.
- Use the \uparrow and \downarrow arrow keys to move through the possible configuration items.

Setting Default Radio Channel Number

Display	Action	
PRESS ENT TO SET CHANNEL	Press <enter></enter> to set the default radio channel number.	
RADIO CHANNEL DEFAULT: NN*	Use the number keys to enter the desired channel number.	
NN = Current Channel Number (Default: 1)	Press <enter></enter> again to save the setting.	
	Note: The channel number should match the setting on the desired wireless Base Station to connect to on power-up. Refer to Section 3.2 for more information on setting the Base Station channel number.	

Setting LCD Contrast

Display	Action
PRESS ENT TO SET CONTRAST	Press <enter></enter> to set the contrast level.
CONTRAST UP - ↑ CONTRAST DN - ↓	Use the up or down arrow keys on the keypad to set the desired contrast.
	Press <enter></enter> again to save the setting.

Setting Power Save Mode

Display	Action
PRESS ENT TO SET PWR ON TIME	Press <enter></enter> to set the power off (idle) time. With this setting enabled, the controller will turn off automatically after 45 minutes of inactivity.
Power Save: ON ↑ or ↓ to Set	Use the up or down arrow keys on the keypad to turn the power save mode ON or OFF.
	Press <enter></enter> again to save the setting.

Connect Mode

Connect mode (**Figure 14**) is used when the wireless handheld is connected to a wireless server Base Station. In Connect mode, the wireless Base Station determines the operation of the handheld, and all operation is specific to the wireless Base Station Function selected.



Switching to Connect Mode

After all initialization and configuration is complete, the wireless handheld controller will be ready to connect to a wireless Base Station.

Display	Action	
INITIALIZING RADIO	Press <connect></connect> to create a connection to an available wireless Base Station on the channel shown.	
	Note: The Wireless Base Station must be powered	
CONNECTING VIA CHANNEL NN*	 on and must be set to the specified channel. If a connection was made, the wireless handheld 	
NN = Channel Setting	will be operating in Connect mode. Refer to the application-specific sections for operation details.	
	If a connection could not be made, refer to Section 18 for information about how to resolve the problem.	

Signal Strength Indicator

Once a connection has been made, the top line of the LCD will show the signal strength (**Figure 15**). This indicator shows the approximate signal strength of the network connection. Each successive bar indicates an additional level of signal strength between the handheld and Base Station.



Figure 15: Signal Strength

When no bars or 1 bar is visible, the connection to the wireless network is likely to be limited, and the console may occasionally fail to respond. To improve signal strength, move within range of the Base Station, and remove any obstacles located between the Base Station and handheld controller if possible. For more information refer to **Section 2**.

4.5 Common Keys

Several keys on the default keypad layout are common to multiple wireless handheld applications. These keys are noted in **Figure 16**. For a description of the function of keys for a particular application, refer to the application-specific sections of this manual.

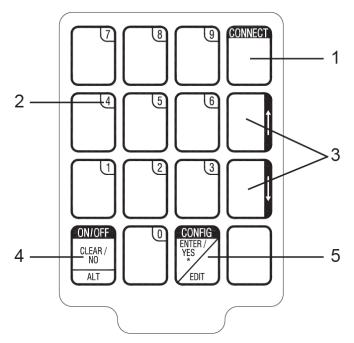


Figure 16: Common RC-100 Keys

#	Key	Function
		This key is used to connect to a wireless Base Station. Refer to Section 4.4 for more information.
1	CONNECT	Pressing <alt></alt> followed by <connect></connect> when a connection is made to a wireless Base Station will show Base Station synchronization and revision information. Refer to Section 18.2 for more information.
2	Numbers	These keys are used for numeric entry functions. While a particular key may normally be assigned to application-specific functions, in an Edit routine, they are also used to enter the number shown in the corner of the key.

3	Up/Down Arrows	These keys are used to navigate through menu choices and make certain selections. Arrows may also be assigned to application-specific functions.
	ON/OFF	The ON/OFF operation of this key is described in Section 4.1 .
4	CLEAR/NO	The CLEAR operation of this key pertains to editing and data entry routines. When editing a value, press <clear></clear> to remove that value. The CLEAR operation may also be used to escape out of an editing function. If a key was pressed inadvertently, or if the value being edited should not be changed, pressing <clear></clear> twice exits the editing routine without modifying the value.
		The NO operation of this key also pertains to editing and data entry routines. When a question prompt is shown on the LCD, press this key to answer the question with a "No."
	ALT	The ALT operation of this key selects alternate actions for certain application keys. Press this key before pressing another key to activate a secondary function. Refer to the section following this table for more information.
	CONFIG	The CONFIG operation of this key is described in Section 4.4 .
	ENTER/YES	The ENTER function of this key pertains to editing and data entry routines. After editing a value, press <enter></enter> to save the change.
5		The YES function of this key also pertains to editing and data entry routines. When a question prompt is shown on the LCD, press this key to answer the question with a "Yes."
	EDIT	The EDIT function of this key is used to edit the data associated with a particular key. For instance, pressing <edit></edit> followed by a "+1" key will allow the operator to manually type in a new value using the number keys. Refer to the application-specific sections for more information about which keys have EDIT functionality.

Alternate Function Keys

An alternate function of a key, if applicable, will be shown on the bottom the key below a horizontal line. Refer to **Figure 17** for an example.

- Press the key once to run the primary function.
- Press <ALT> followed by the key to run the alternate function.

SET Primary Function

UP/DN Alternate Function

Figure 17: Key with ALT Functionality

Section 5: All Sport Applications

This section provides information about the "All Sport" function of the RC-100 wireless Base Station. Refer to the sections following this section for sport-specific operation.

5.1 Selecting All Sport Applications (Code Numbers)

To select a specific All Sport application (such as baseball, tennis, etc.) the "All Sport" function must first be set in the wireless Base Station (refer to **Section 3.1**).

Once the All Sport *function* has been selected, an All Sport *application* may be selected by entering a specific code number on the wireless handheld controller. This number is typically located on the bottom center of the keypad insert. These numbers are also listed in **Section 5.2** and in the application-specific sections.

Display	Action
ENTER CODE NN (APPLICATION) NN = current setting	Enter the code number corresponding to the application using the number keys on the keypad. When the code number is correctly selected, a short description will be shown on the bottom line of the LCD. Note: Since the wireless Base Station is typically used with a single application, once the code number has been set, the wireless Base Station will continue to use the same code number each time power is reset. To change code numbers, use the <new code=""> key on the wireless hand-held. Refer to Section 5.3 for more information.</new>
ENTER CODE NN NOT FOUND	"NOT FOUND" is shown on bottom line of the LCD if the specified code number was not available. This typically means either the code was entered incorrectly, or the Base Station firmware does not support it. If this is a new code number that is not supported, the Base Station will need to be either replaced or reprogrammed. Contact Daktronics Customer Service. Refer to Section 1.2 .
RESUME PREVIOUS GAME?	If the handheld controller is powered down and powered back on, the question at left will appear. Press <yes></yes> to retain the previously-entered settings, or press <no></no> to start a new game under the last code entered.

Note: For RC-100 systems using a Controller Area Network (CAN), it will not be necessary to enter a sport code. Instead, the RC-100 will automatically detect the operation mode when it is correctly connected to a controller (typically an OmniSport 2000 console).

5.2 Keypad Inserts

Keypad inserts allow a single console to control multiple sports and applications. Select the proper insert from the chart below and slide it into the opening on the bottom of the controller until it stops. To remove an insert, pull on the tab that extends from the controller.

If an insert is lost or damaged, a copy of the sport insert drawing, located in **Appendix B**, can be used until a replacement can be ordered.

Sport/Application	Insert Number	Code
Clock/Score	LL-2613	01
Volleyball	0G-239304	02
Baseball	LL-2605	03, 23
Play Clock / Pitch Timer	LL-2653	05
Segment Timer	LL-2613	06
Tennis	LL-2607	08
Sand Volleyball	LL-2607	09
Basketball	LL-2632	10
Football	0G-1031603	61, 62
Remote Start/Stop	0G-319079	98
Goal Judge	LL-2663	99
Judge's Console (CAN)	LL-2606	N/A
Rodeo (CAN)	LL-2608	N/A

Keypad Insert Operation Concepts

A keypad insert identifies the keys required for normal operation of a specific sport or application. In most cases, pressing a key immediately changes the scoreboard/display. Keys that require entry of additional information are marked by a dot, (such as **SET TIME •>**). This additional information is usually a number followed by the **SENTER>** key.

Some keys are labeled **+1.** Pressing one of these keys once "increments", or increases, the corresponding field on the scoreboard by one (such as score or period). A key with **-1** "decrements", or decreases, by one.

On some inserts, certain keys have been grouped together under the heading **HOME** or **GUEST**. These keys are **team** keys and work the same for both teams. They affect the statistics only for that one team. Keys not under one of these headings are **Game** keys. They are general keys for the progress of the game (such as period or quarter). Other keys may be grouped in a similar way to emphasize that they work together.

5.3 Common All Sport Application Keys

Several All Sport applications provide keys with the same functionality, as described below.

Note: For other common wireless handheld keys, refer to Section 4.5.

New Code (Alternate Function)

The New Code key (**Figure 18**) is used to select a new code number and change the current All Sport application.

Applies to: Baseball, Basketball, Clock/Score, Football, Goal Judge, Play Clock/Pitch Timer, Segment Timer, Tennis, Volleyball, Sand Volleyball



Figure 18: New Code Key

Display	Action
PRESS ENT TO SELECT NEW CODE	This key is typically implemented as an alternate function. Press <alt></alt> followed by <new code=""></new> .
	Press <enter></enter> to select a new code number. Refer to Section 5.1 .
	Note: All data for the current application will be lost.
	Press <clear></clear> to cancel and resume normal operation.

New Game (Alternate Function)

The New Game key (**Figure 19**) is used to reset all current game data for a specific application. Use it to prepare for a new game by removing all data from the display.



Applies to: Baseball, Basketball, Clock/Score, Football, Volleyball

Figure 19: New Game Key

Display	Action
PRESS ENT TO SELECT NEW GAME	This key is typically implemented as an alternate function. Press <alt></alt> followed by <new game=""></new> .
	Press <enter></enter> to start a new game.
	Note: All data for the current or last game in progress will be lost.
	Press <clear></clear> to cancel and resume normal operation.

Start

Press **<START>** (Figure 20) to start the main clock.

Applies to: Baseball, Basketball, Clock/Score, Football, Play Clock/Pitch Timer, Remote Start/Stop, Sand Volleyball, Segment Timer, Tennis

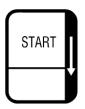


Figure 20: Start Key

Stop

Press **<STOP>** (**Figure 21**) to stop the main clock.

Applies to: Baseball, Basketball, Clock/Score, Football, Play Clock/Pitch Timer, Remote Start/Stop, Sand Volleyball, Segment Timer, Tennis

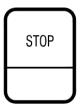


Figure 21: Stop Key

Set Time

The Set Time key (**Figure 22**) is used to set or adjust the game time after the game clock has been stopped (or before it has started).

Applies to: Basketball, Clock/Score, Football, Play Clock/Pitch Timer, Sand Volleyball, Segment Timer, Tennis



Figure 22: Set Time Key

Display	Action
TIME EDIT SET CURR MM:SS.T*	This key is typically implemented as an Alternate function. Press <alt></alt> followed by <set time="" •=""></set> to display the current time of the clock.
MM:SS.T = minutes, seconds, tenths of a second	To change the time, enter the desired value the using the number keys on the keypad and press <enter></enter> .
(Only basketball supports tenths of a second; baseball supports hours, minutes, and seconds)	Press <clear></clear> twice to cancel any changes and return to the game.
CLOCK RUNNING MM:SS	If the clock is running when the <set time="" •=""></set> is pressed, the message at left will appear briefly. This feature may be used to view the current clock time on
MM:SS = minutes, seconds	the controller.

UP/DN (Alternate Function)

The UP/DN key (**Figure 23**) is typically the alternate function of the Set Time key. This key lets the operator select whether the game clock counts up to the set time or counts down from the set time.

Applies to: Basketball, Clock/Score, Football, Play Clock/Pitch Timer, Sand Volleyball, Segment Timer, Tennis

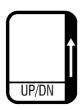


Figure 23: UP/DN Key

Display	Action
MAIN CLOCK-DOWN↓ 1-UP 2-DOWN	This key is typically implemented as an alternate function. After the main clock has been stopped, press ALT> followed by <up dn=""> to set the direction of the clock. Press <1> or <2> to select UP or DOWN (default). The current direction of the clock is shown by an arrow on the LCD.</up>
	on the Lob.

Dim (Alternate Function)

The Dim key (**Figure 24**) sets the dimming level (brightness) of the display.



Applies to: Baseball, Basketball, Clock/Score, Football, Play Clock/Pitch Timer, Sand Volleyball, Segment Timer, Tennis, Volleyball

Figure 24: Dim Key

Display	Action
DIMMING LEVEL (0-9): NN% NN = current level NONE = bright	This key is typically implemented as an alternate function Press <alt> followed by <dim> to view the current dimming level. Press <0> through <9> to change the dimming level. Press <enter> to save. Press <clear> to cancel and resume normal operation.</clear></enter></dim></alt>

Manual Horn

Press the **<MANUAL HORN>** key (**Figure 25**) to sound the horn. The horn sounds as long as the key is pressed and stops sounding when the key is released.

Applies to: Basketball, Clock/Score, Football, Remote Start/Stop, Sand Volleyball, Segment Timer, Tennis



Figure 25: Manual Horn Key

Auto Horn

Use the Auto Horn key (**Figure 26**) to set whether the horn sounds automatically when the main clock reaches 0:00.

Applies to: Basketball, Clock/Score, Football, Segment Timer

Note: For Football, the Auto Horn is an alternate function.



Figure 26: Auto Horn Key

Display	Action
AUTO HORN-ON ↑ 1-ON, 2-OFF	Press <auto horn=""></auto> and then press <1> or <2> to select ON (default) or OFF.

When Auto Horn is enabled, a small 'h' will appear under the clock direction arrow on the LCD. **Figure 27** shows an example where the clock is counting down and the auto horn is enabled.



Section 6: Clock/Score Operation

Sport Insert: LL-2613

Code: 01 (Use Code 11 for optimized server/client operation.)

The sport insert drawing is located in **Appendix B**. If an insert is lost or damaged, a copy of the insert drawing can be used until a replacement arrives. Refer **Section 4.1** for information on starting the console and **Section 5.3** for additional All Sport application keys.

6.1 Clock Score Keys

Home/Guest Score +1, -1

Display	Action
HOME SCORE + 1 NN	Press the appropriate HOME or GUEST <score +1=""></score> or <score -1=""></score> key to increment or decrement the total number of points for the team.
HOME SCORE EDIT NN*	To manually change values, first press <edit></edit> then either <score +1=""></score> to display the current setting. Enter the correct number using the
NN = current setting	keypad and press <enter></enter> to save.

Period +1

Display	Action
PERIOD +1 N	Press <period +1=""></period> to increment the current period number.
PERIOD EDIT	To manually change values, first press <edit></edit> then <period +1=""></period> to display the current setting. Enter the correct number using the keypad and press <enter></enter>
NN = current setting	to save.

Set TOD (Alternate Function)

Display	Action
SET TIME OF DAY 12HR HH:MM:SS*	Press <alt></alt> followed by <set tod=""></set> to set the Time of Day. Enter the correct number using the keypad and press <enter></enter> to save. The time of day clock is now
HH:MM:SS = hours, mins, secs	displayed, if the scoreboard has that capability.

Section 7: Volleyball Operation

Sport Insert: 0G-239304

Code: 02

The sport insert drawing is located in **Appendix B**. If an insert is lost or damaged, a copy of the insert drawing can be used until a replacement arrives. Refer **Section 4.1** for information on starting the console and **Section 5.3** for additional All Sport application keys.

7.1 Volleyball Keys

Home/Guest Score +1, -1

Display	Action
HOME SCORE + 1 NN	Press the appropriate HOME or GUEST <score +1=""></score> or <score -1=""></score> key to increment or decrement the total number of points for the team.
HOME SCORE EDIT NN*	To manually change values, first press <edit></edit> then either <score +1=""></score> or <score -1=""></score> to display the current setting. Enter the correct number using the keypad and press <enter></enter> to save.
NN = current setting	keypad and press <enter></enter> to save.

Home/Guest Won +1, -1

Display	Action
HOME WON + 1 NN	Press the appropriate HOME or GUEST <won +1=""></won> or <won -1=""></won> key to increment or decrement the total number of games won for the team.
HOME WON EDIT NN* NN = current setting	To manually change values, first press <edit></edit> then either <won +1=""></won> or <won -1=""></won> to display the current setting. Enter the correct number using the keypad and press <enter></enter> to save.

Volleyball Operation

Reset Game Score

Display	Action
RESET GAME? ENTER TO ACCEPT	Press <reset game="" score=""> followed by <enter> to reset both home and guest scores to zero. This key is used to clear the Game Score fields at the beginning of each match.</enter></reset>

Game +1, -1

Display	Action
GAME # +1 N	Press <game< b=""> +1> to increment the current game number, or press <game< b=""> +1> to decrement the number.</game<></game<>
GAME # EDIT N* N = current setting	To manually change values, first press <edit></edit> then either <game +1=""></game> or <game -1=""></game> to display the current setting. Enter the correct number using the keypad and press <enter></enter> to save.

Section 8: Baseball Operation

Sport Insert: LL-2605

Code: 03, 23

The sport insert drawing is located in **Appendix B**. If an insert is lost or damaged, a copy of the insert drawing can be used until a replacement arrives. Refer **Section 4.1** for information on starting the console and **Section 5.3** for additional All Sport application keys.

8.1 Baseball Keys

Home/Guest Score +1, -1

Display	Action
HOME SCORE + 1 NN	Press the appropriate HOME or GUEST <score +1=""></score> or <score -1=""></score> key to increment or decrement the total number of runs for the team.
HOME SCORE EDIT NN* NN = current setting	To manually change values, first press <edit></edit> then either <score +1=""></score> or <score -1=""></score> to display the current setting. Enter the correct number using the keypad and press <enter></enter> to save.

Out +1, Inning +1

Display	Action
	Press <out< b=""> +1> or <inning< b=""> +1> to increment the total outs or innings, respectively. The numbers will immediately update on the LCD.</inning<></out<>
INNING # EDIT NN*	To manually change values, first press <edit></edit> then <out +1=""></out> or <inning +1=""></inning> to display the current setting. Enter the correct number using the keypad and
NN = current setting	press <enter></enter> to save.

Ball, Strike, Clear Ball & Strike

- Press **<BALL +1>** or **<STRIKE +1>** to increment the ball and strike digits. The respective numbers will immediately update on the LCD.
- Press **<CLEAR BALL & STRIKE>** to clear the digits to zero.

Note: If the ball count value is 4 when **<BALL +1>** is pressed, the value is blanked out. If the strike count value is 3 when **< STRIKE +1>** is pressed, the value is blanked out.

Baseball Operation 33

Hit, Error

Display	Action
ERROR ON	Press the <hit></hit> or <error></error> key to turn on the Hit or Error indicator or digits. The message at left will appear briefly.

Time, At Bat, H/E (Alternate Function)

The **<TIME>**, **<AT BAT>**, and **<H/E>** alternate function keys are used to select what is shown on the two time digits. First press the **<ALT>** key and then one of the above keys to select what is displayed on the two time digits. If **<TIME>** is selected, they will show two digits of time. If **<AT BAT>** is selected, they will show the player At Bat. If **<H/E>** is selected, they will show an 'H' or an 'E' on the first digit when **<HIT>** or **<ERROR>** is pressed.

Time/At Bat

If the controller is set to show the time, the **<TIME/AT BAT ·>** key operates like the standard **<SET TIME>** key (refer to **Section 5.3**). If the controller is set to show AT BAT, it will operate as shown below.

Display	Action
AT BAT: EDIT	Press the <time at="" bat="" •=""></time> key, enter the current batter number, and then press <enter></enter> .
NN = current setting	

Section 9: Play Clock & Pitch Timer Operation

Sport Insert: LL-2653

Code: 05

The sport insert drawing is located in **Appendix B**. If an insert is lost or damaged, a copy of the insert drawing can be used until a replacement arrives. Refer **Section 4.1** for information on starting the console and **Section 5.3** for additional All Sport application keys.

9.1 Play Clock & Pitch Timer Keys

Set Reset 1, Set Reset 2

Display	Action
TIME EDIT RESET 1 MM:SS*	Press <set 1="" reset="" ·=""></set> or <set 2="" reset="" ·=""></set> to set the current Reset 1 or Reset 2 value, respectively, for the play clock/pitch timer.
MM:SS = minutes, seconds	To change the time, enter the desired value the using the number keys on the keypad and press <enter></enter> .

Reset 1, Reset 2

- Press <RESET 1> to return the timer to the Reset 1 value configured above.
- Press **<RESET 2>** to return the timer to the **Reset 2** value configured above.

For more information about play clock setups featuring server/client Base Stations, refer to **Drawing A-317837** in **Appendix A**.

Section 10: Segment Timer Operation

Sport Insert: LL-2613

Code: 06

The sport insert drawing is located in **Appendix B**. If an insert is lost or damaged, a copy of the insert drawing can be used until a replacement arrives. Refer **Section 4.1** for information on starting the console and **Section 5.3** for additional All Sport application keys.

10.1 Segment Timer Information

The segment timer is used to time events such as practice sessions. The operation of the segment timer is determined by 40 segments of pre-programmed length. The segment timer will count down starting at the segment number that is set as **First Segment**. When the first segment is completed, the segment timer will count the **Interval Time** and proceed with the next segment. The timer will continue counting segments until the segment number that is set as **Last Segment** is counted down. It then will reset to the segment saved as the **First Segment** and will either begin counting down or pause for the **START>** key to be pressed, depending on the **Auto Stop At Last Seg** setting. To stop the timer after each segment is completed, use the **Auto Stop** feature.

The **First Segment** and **Last Segment** values can be used to set up specific practice sessions. For example, the practice session for one sport could be programmed to use segments 1-10, while another might use segments 11-20. Set the **First Segment** and **Last Segment** values to the desired segment numbers for the session, and the console will count down each of the segments in order, either stopping on the last segment or looping through included segments again, based on the **Auto Stop At Last Seg** setting.

The default **First Segment** value is 1. The default value for the **Last Segment** is 40.

10.2 Segment Timer Keys

First/Last Segment

Display	Action
	Press the <first last="" segment=""></first> key. This setting
FIRST SEG NN* LAST SEG XX	determines the first and last segment in a range of segments to run when <start></start> is pressed.
NN = current first segment	Enter the First Segment value and press <enter></enter> .
XX = current last segment	Enter the Last Segment and press <enter> to exit.</enter>
	The controller will be reset to the segment saved as First Segment when the <reset 1st="" segment="" to=""> key is pressed.</reset>
	The controller automatically resets to the segment saved as First Segment after the segment saved as Last Segment is completed.

Segment Number/Time

Display	Action
SEGMENT: NN* TIME EDIT	Press <seg. no.="" time="" •=""></seg.> to set individual segment times.
	Enter the segment to be edited using the number keys on the keypad and press <enter></enter> .
SEGMENT: NN TIME EDIT MM:SS*	Enter the time for the segment using the number keys on the keypad and press <enter></enter> to accept the time and move to the next segment time.
NN = segment number MM:SS = minutes, seconds	Press <enter></enter> again to exit the function.

Interval Time

The interval time is the time between each segment.

Display	Action	
INTERVAL TIME: MM:SS* MM:SS = minutes, seconds	Press <interval time="" •=""> to display the current value of interval time on the bottom line of the LCD. Enter the interval time using the number keys on the keypad and press <enter> to accept the time. If the interval time is set to 00:00, no interval time will be equalted.</enter></interval>	
DISPLAY INTERVAL 1-YES 2*NO * = current setting	This setting determines whether the interval count will be displayed on the scoreboard. Press <1> to display the interval time on the scoreboard. Press <2> to disable interval time display. The interval time will be displayed only on the controller. Notes: Regardless of this setting, the value saved in interval time will be counted down between segments. Set the interval time to 0:00 if no interval between segments is desired. When the interval time is being displayed, the segment number on the scoreboard flashes to indicate that the time displayed is interval time.	

Copy Range

This key sets a range of segments to a specific time value.

Display	Action
COPY: MM:SS * SEG XX TO YY	Press <copy range="" •=""></copy> , enter the time to be copied using the number keys on the keypad, and then press <enter></enter> to move to the next field.
MM:SS = minutes, seconds XX = starting segment value YY = ending segment value	Enter the first and last segments that will have this time. When the last segment in the copy range is set, the menu will be exited.
	Once completed, all segments from XX to YY (inclusive) will be set to the specified time.

Auto Stop

This key is the auto stop function of the console.

Note: To set the console to stop after the last segment in the series is completed, the auto stop at each segment setting must be set to **NO**.

Display	Action
STOP AT EACH SEG 1-YES 2*NO * = current setting	Press <1> to set the controller to stop after each segment is completed and wait for the <start> key to proceed with the next segment. Press <2> to set the controller to automatically begin the next segment when each segment is completed. The controller will prompt for the auto stop at last segment setting:</start>
STOP AT LAST SEG 1*YES 2-NO	Press <1> to set the controller to stop when the last segment has been completed.
* = current setting	Press <2> to set the controller to start over at the first segment when the last segment is completed.

Warning Time

Display	Action
WARNING TIME MM:SS*	Press <warning time="" •=""></warning> , enter the time in minutes and seconds and press <enter></enter> .
MM:SS = minutes, seconds	Enter 00:00 for no warning time (default).
	When the warning time is reached, the segment number flashes until the main clock reaches zero.

Current Segment +1

Display	Action
	Press <current +1="" segment=""></current> to increment the segment number. The segment number and segment time will immediately update on the LCD.
CURRENT SEGMENT: EDIT NN*	To manually change values, first press <edit></edit> then <current +1="" segment=""></current> to display the current setting. Enter the correct number using the keypad and
NN = current setting	press <enter></enter> to save.

Reset Current Segment

Press **<RESET CURRENT SEGMENT>** to reset the segment time to the value specified by the current segment. The segment number will remain at the current value.

Reset to First Segment

Press **<RESET TO FIRST SEGMENT>** to reset the segment number and segment time to the values saved as the first segment.

Note: The **Reset to First Segment** function is disabled while the clock is running.

Section 11: Tennis Operation

Sport Insert: LL-2607

Code: 08

The sport insert drawing is located in **Appendix B**. If an insert is lost or damaged, a copy of the insert drawing can be used until a replacement arrives. Refer **Section 4.1** for information on starting the console and **Section 5.3** for additional All Sport application keys.

11.1 Court Selection

Multiple wireless handheld controllers may be connected to a single wireless Base Station in the Tennis application. Each connected handheld controller will operate a specific court, and the controller number for the handheld is selected when powered up.

Display	Action
ENTER CONTROLLER NUMBER NN*	Enter the controller number for the court that this particular handheld will operate and then press <enter></enter> .
NN = current setting	Typically, controller 1 would run court 1, controller 2 would run court 2, and so on. Some systems may be set up differently.
ERROR - NUMBER TAKEN	If the controller number entered has already been selected, the error message at left will display. Select another number.
ERROR - INVALID NUMBER	If the controller number entered is too high, the error message at left will display. Select another number.

11.2 Tennis Keys

Serve

Display	Action
TOP SERVE ON	Press the appropriate TOP or BOTTOM <serve></serve> key to turn the serve indicators ON or OFF for the respective player/team.

Game +1

Display	Action
GAMES WON +1 SET X TOP Y	Press the appropriate TOP or BOTTOM <game +1=""></game> key to increment the number of games won in the current set for the respective player/team.
GAMES WON EDIT SET X TOP Y	To manually change values, first press <edit></edit> then <game +1=""></game> to display the current setting. Enter the correct number using the keypad and press <enter></enter> to save.
X = current set Y = current games won	

Point

Display	Action
	Press the appropriate TOP or BOTTOM <point></point> key to increment the total points for the respective player/ team. The current point values will immediately update on the LCD. The points will increment as 15, 30, 40 AD or GA. If Tie Break scoring mode is selected, the points will increment by 1.
TOP=NN* BOT= EDIT TOP	To manually change values, first press <edit></edit> then <point></point> to display the current setting. Enter the correct number using the keypad and press <enter></enter> to save.
NN = current setting	, , , , , , , , , , , , , , , , , , ,

Reset Game

Press **<RESET GAME>** to reset the player points values for the current game.

Tie Break

Press **<TIE BREAK>** to set the mode of scoring to **Tie Break** mode. In **Tie Break** scoring mode, points for each player are incremented by one when the **<POINTS>** key is pressed.

Note: Tie Break scoring mode may only be selected when both player point values are 0. To change scoring mode back to normal, use the **<RESET GAME>** key.

TOD/Game

This key toggles the controller between displaying **Game Time** or **Time of Day** (TOD). It also allows the user to change the time of day.

Display	Action
SET TIME OF DAY 12HR HH: MM: SS* HH:MM:SS = hours, mins, secs	Press <tod game=""></tod> to set the Time of Day. Enter the correct number using the keypad and press <enter></enter> to save. The time of day clock is now displayed, if the scoreboard has that capability.

Set +1

Display	Action
	Press <set +1=""></set> to increment the current set number. The new set number and games won values will immediately update on the LCD.
SET EDIT	To manually change values, first press <edit></edit> then <set +1=""></set> to display the current setting. Enter the correct number using the keypad and press <enter></enter>
NN = current setting	to save.
INVALID SET PLEASE RE-ENTER	If the set number entered is invalid, the error message at left will display. Enter another set number.

Matches Won (Alternate Function)

Display	Action
MATCHES WON EDIT TOP NN*	Press <alt></alt> and then the appropriate TOP or BOTTOM <matches won=""></matches> key to edit the matches won for the respective player/team. Enter the correct number using the keypad and press <enter></enter> to save.

Reset Match (Alternate Function)

Display	Action
PRESS ENT TO START NEW MATCH	Press <alt></alt> and then <reset match=""></reset> . Press <enter></enter> to confirm resetting the current match.
	All set scores and the current game score will be cleared, and the set number will be set to 1.

Next Match (Alternate Function – DakTennis Only)

Display	Action
NEXT MATCH SELECTED	Press <alt></alt> and then <next match=""></next> to tell the DakTennis [™] software to switch to the next match. The LCD will show that the next match was selected.

Winner (Alternate Function – DakTennis Only)

Display	Action
TOP WIN	Press <alt></alt> and then <winner></winner> for the respective TOP or BOTTOM player to tell the DakTennis™ software to set the player as the winner if currently off or clear the winner if currently on. The LCD will show the status of the winner being set ON or OFF.

For more information, refer to the **DakTennis Version 3 Installation & Operation Manual** (DD1965926), available online at www.daktronics.com/manuals.

Section 12: Sand Volleyball Operation

Sport Insert: LL-2607

Code: 09

The sport insert drawing is located in **Appendix B**. If an insert is lost or damaged, a copy of the insert drawing can be used until a replacement arrives. Refer **Section 4.1** for information on starting the console and **Section 5.3** for additional All Sport application keys.

12.1 Court Selection

Multiple wireless handheld controllers may be connected to a single wireless Base Station in the Sand Volleyball application. Each connected handheld controller will operate a specific court, and the controller number for the handheld is selected when powered up.

Display	Action
ENTER CONTROLLER NUMBER NN*	Enter the controller number for the court that this particular handheld will operate and then press ENTER> .
NN = current setting	Typically, controller 1 would run court 1, controller 2 would run court 2, and so on. Some systems may be set up differently.
ERROR - NUMBER TAKEN	If the controller number entered has already been selected, the error message at left will display. Select another number.
ERROR - INVALID NUMBER	If the controller number entered is too high, the error message at left will display. Select another number.

12.2 Sand Volleyball Keys

Note: On the sport insert and LCD, "TOP" = HOME and "BOT" = GUEST on a scoreboard.

Serve

Display	Action
TOP SERVE ON	Press the appropriate TOP or BOTTOM <serve></serve> key to turn the serve indicators ON or OFF for the respective team.

Point

Display	Action
TOP= 1 SET BOT= 0 1	Press the appropriate TOP or BOTTOM <point></point> key to increment the total points for the respective team in the currently selected set. The current point values will immediately update on the LCD. The points will increment by 1.
SCORE EDIT TOP NN*	To manually change values, first press <edit></edit> then <point></point> to display the current setting. Enter the correct number using the keypad and press <enter></enter> to save.
NN = current setting	

Set +1

Display	Action
TOP=21 0 SET BOT=18 0 2	Press <set +1=""></set> to increment the current set number. The new set number will immediately update on the LCD. The scores will be set to 0 for each team, if they do not already have points entered for the set.
SET EDIT NN NN = current setting	To manually change values, first press <edit></edit> then <set +1=""></set> to display the current setting. Enter the desired number using the keypad and press <enter></enter> to save. After selecting a previous set number, use the
INVALID SET PLEASE RE-ENTER	<point> keys to edit that set's scores. If the set number entered is invalid, the error message at left will display. Enter another set number.</point>

Reset Game/Reset Match

Display	Action
PRESS ENT TO START NEW MATCH	Press <reset game=""></reset> followed by <enter></enter> to confirm resetting the current match. This is typically performed after completion of the final set.
	All scores will be cleared, and the Set number will go back to 1.

TOD/Game

This key toggles the controller between displaying **Game Time** or **Time of Day** (TOD). It also allows the user to change the time of day.

Display	Action
SET TIME OF DAY 12HR HH: MM: SS* HH: MM: SS = hours, mins, secs	Press <tod game=""></tod> to set the Time of Day. Enter the correct number using the keypad and press <enter></enter> to save. The time of day clock is now displayed, if the scoreboard has that capability.

Matches Won (Alternate Function)

Display	Action
MATCHES WON EDIT TOP NN*	Press <alt></alt> and then the appropriate TOP or BOTTOM <matches won=""></matches> key to edit the matches won for the respective team. Enter the correct number using the keypad and press <enter></enter> to save.

Game +1, Tie Break, Next Match, Winner

These keys are not used for Sand Volleyball mode.

Section 13: Basketball Operation

Sport Insert: LL-2632

Code: 10 (Use Code 20 for optimized server/client operation.)

The sport insert drawing is located in **Appendix B**. If an insert is lost or damaged, a copy of the insert drawing can be used until a replacement arrives. Refer **Section 4.1** for information on starting the console and **Section 5.3** for additional All Sport application keys.

13.1 Basketball Keys

Home/Guest Score +1, +2, (+3, -1)

Display	Action
HOME SCORE + 1 NNN	Press the appropriate HOME or GUEST <score +1=""></score> or <score +2=""></score> key to increment the total number of points for the respective team by the value on the key.
HOME SCORE + 3 NNN	To increment the score by 3, press <alt></alt> and then <score +3=""></score> .
HOME SCORE - 1 NNN	To decrement the score by 1, press <alt></alt> and then <score -1=""></score> .
HOME SCORE EDIT NNN* NNN = current setting	To manually change values, first press <edit></edit> then any <score></score> key to display the current setting. Enter the correct number using the keypad and press <enter></enter> to save.

Fouls +1

Display	Action
HOME FOULS + 1	Press the appropriate HOME or GUEST <fouls +1=""></fouls> key to increment the fouls value for the respective team.
HOME FOULS EDIT NN* NN = current setting	To manually change values, first press <edit></edit> then <fouls +1=""></fouls> to display the current setting. Enter the correct number using the keypad and press <enter></enter> to save.

Possession

Display	Action
HOME POSSESSION LIGHT ON	Press <poss></poss> to light the appropriate indicator. Each press will turn on the opposite team's possession light.

Period +1

Display	Action
PERIOD +1 NN	Press <period +1=""></period> to increment the current period number.
PERIOD EDIT N *	To manually change values, first press <edit></edit> then <period +1=""></period> to display the current setting. Enter the correct number using the keypad and press <enter></enter> to save.
NN = current setting	10 0040.

Set TOD (Alternate Function)

Display	Action
SET TIME OF DAY 12HR HH: MM: SS* HH:MM:SS = hours, mins, secs	Press <alt></alt> followed by <set tod=""></set> to set the Time of Day. Enter the correct number using the keypad and press <enter></enter> to save. The time of day clock is now displayed, if the scoreboard has that capability.

1/10 SEC (Alternate Function)

Display	Action
TIME MM:SS.T # H- 0 G- 0 MM:SS.T = minutes, seconds, tenths of a second	Press <alt></alt> followed by <1/10 SEC> to toggle the 1/10 second setting of the clock. The clock on the LCD will show time to tenths of a second.

Bonus (Alternate Function)

Display	Action
HOME BONUS LIGHT 1-ON-1	Press <alt></alt> followed by the appropriate HOME or GUEST <bonus></bonus> key to turn on the 1-ON-1 bonus light.
HOME BONUS LIGHT 2-SHOT	Press <alt></alt> followed by the same <bonus></bonus> key a second time to turn on the 2 SHOT bonus light.
HOME BONUS LIGHT OFF	Press <alt></alt> followed by the same <bonus></bonus> key a third time to turn on the bonus light OFF.

Section 14: Football Operation

Sport Insert: 0G-1031603

Code: 61, 62

The sport insert drawing is located in **Appendix B**. If an insert is lost or damaged, a copy of the insert drawing can be used until a replacement arrives. Refer **Section 4.1** for information on starting the console and **Section 5.3** for additional All Sport application keys.

14.1 Football Keys

Home/Guest Score +1, +6, (+3, -1)

Display	Action
HOME SCORE + 6 NNN	Press the appropriate HOME or GUEST <score +1=""></score> or <score +6=""></score> key to increment the total number of points for the respective team by the value on the key.
HOME SCORE + 3 NNN	To increment the score by 3, press <alt></alt> and then <score +3=""></score> .
HOME SCORE - 1 NNN	To decrement the score by 1, press <alt></alt> and then <score -1=""></score> .
HOME SCORE EDIT NNN* NNN = current setting	To manually change values, first press <edit></edit> then any <score></score> key to display the current setting. Enter the correct number using the keypad and press <enter></enter> to save.

Ball On

Display	Action
BALL ON EDIT	Press <ball on="" •=""></ball> to set the yard line of the ball. Enter the correct number using the keypad and press <enter></enter> to save.
NN = current setting	

Football Operation 53

Down +1

Display	Action
DOWN +1 N	Press the <down +1=""></down> key to increment the down number. The value increments from 1 to 4 then repeats.
DOWN EDIT	To manually change values, first press <edit></edit> then <down +1=""></down> to display the current setting. Enter the correct number using the keypad and press <enter></enter>
N = current setting	to save.

TOL -1

Display	Action
HOME TOL - 1 N	Press the appropriate HOME or GUEST <tol -1=""></tol> to decrement the number of Time Outs Left (TOL) for the respective team. By default, each team starts the game with 3 time outs.
HOME TOL EDIT N* N = current setting	To manually change values, first press <edit></edit> then <tol< b=""> -1> to display the current setting. Enter the correct number using the keypad and press <enter></enter> to save.</tol<>

To Go

Display	Action
TO GO EDIT	Press <to go="" •=""></to> to set the distance to go until first down. Enter the correct number using the keypad and press <enter></enter> to save.
NN = current setting	

Possession (Alternate Function)

Display	Action
HOME POSS LIGHT ON	Press <alt></alt> followed by the appropriate HOME or GUEST <poss></poss> key to light the possession indicator for the respective team. A second press will turn the indicator off, as will turning on the opposing team's indicator.

54 Football Operation

QTR +1

Display	Action
QUARTER +1 N	Press <qtr +1=""></qtr> to increment the current quarter number.
QUARTER EDIT N *	To manually change values, first press <edit></edit> then <qtr +1=""></qtr> to display the current setting. Enter the correct number using the keypad and press <enter></enter>
N = current setting	to save.

Football Operation 55

Section 15: Remote Start/Stop Operation

Sport Insert: 0G-319079

Code: 98

The sport insert drawing is located in **Appendix B**. If an insert is lost or damaged, a copy of the insert drawing can be used until a replacement arrives. Refer **Section 4.1** for information on starting the console and **Section 5.3** for additional All Sport application keys.

15.1 Remote Start/Stop Keys

Start

Display	Action
REM START/STOP CLOCK OFF	When the clock is stopped, the LCD will show the clock status on the bottom line as OFF.
CLOCK START CLOCK RUN	Press <start></start> and the top line of the LCD will briefly show the function, and then the clock status will change to RUN.

Stop

Display	Action
REM START/STOP CLOCK RUN	When the clock is already running, the LCD will show the clock status on the bottom line as RUN.
CLOCK STOP CLOCK OFF	Press <stop></stop> and the top line of the LCD will briefly show the function, and then the clock status will change back to OFF.

Manual Horn/Reset

Depending on the current jack the Base Station is connected to on the All Sport 5000 controller, this key will have different functions:

- When connected to the J4 (main clock) jack, the key functions as a manual horn.
- When connected to the J7 (shot/play clock) jack, the key functions as a timer reset.

For more information about Remote Start/Stop setups, refer to **Drawing B-319037** in **Appendix A**.

Section 16: Goal Judge Operation

Sport Insert: LL-2663

Code: 99

The sport insert drawing is located in **Appendix B**. If an insert is lost or damaged, a copy of the insert drawing can be used until a replacement arrives. Refer **Section 4.1** for information on starting the console and **Section 5.3** for additional All Sport application keys.

Note: When using the RC-100 as a Goal Judge console, operators should disable the auto power off setting (Power Save Mode). Refer to **Section 4.4**.

16.1 Goal Judge Keys

Goal Light On/Off

Display	Action
GOAL JUDGE GOAL KEY PRESSED	Press <goal light="" off="" on=""></goal> to turn the goal lights ON if they are off, or OFF if they are already on.

For more information about goal judge setups, refer to Drawing A-317405 in Appendix A.

Section 17: CAN Handheld Operation

This section describes operation details specific to CAN (Controller Area Network) handheld operations. CAN handheld functionality is used when handheld operation is controlled by a device on the CAN network such as the OmniSport 2000 timing console. Refer to **Drawing A-230608** in **Appendix A** for typical CAN setup information.

17.1 Common CAN Handheld Operation

Display	Action
WAITING FOR EXTERNAL CONTROL	When the message at left is shown on the LCD, the Base Station is waiting to be connected to an external device on the CAN network. When a CAN device is detected, the LCD will update to show application-specific information.

17.2 Diving & Synchronized Swimming Operations

Sport Insert: LL-2606

Refer to the Judge's Console section of the **OmniSport 2000 Timing Console Operations Manual (ED-13312)** for application-specific operation instructions.

17.3 Rodeo Operations

Sport Insert: LL-2608

Refer to the Judge's Console section of the **OmniSport 2000 Rodeo Timer Operations Manual (ED-14843)** for application-specific operation instructions.

Section 18: Troubleshooting

18.1 Handheld Controller Error Messages

Display	Cause/Solution		
NO SEVER FOUND ON CHANNEL NN	The wireless handheld could not find a server on the specified channel.		
NN = current setting	 Make sure the wireless Base Station is powered on, and is set for the specified channel. 		
	Make sure the handheld is within minimum and maximum range limits (refer to Section 2).		
ENT TO RETRY CLEAR SETS CHAN	 Press <enter></enter> to retry the connection (if the handheld was just moved in range or the wireless Base Station has been correctly configured). 		
	 Press <clear> to set the channel number to a different channel and retry.</clear> 		
NO RESPONSE ON CHANNEL NN	The wireless handheld <i>did</i> find a server on the specified channel, but the server did not respond.		
NN = current setting	Make sure the handheld is within minimum and maximum range limits (refer to Section 2).		
	Cycle power to the wireless Base Station and retry the connection.		
	Make sure that there are no other wireless Base Stations within range on the same channel. Try a different channel if necessary.		
ENT TO RETRY CLEAR SETS CHAN	 Press <enter></enter> to retry the connection (if the handheld was just moved in range or the wireless Base Station has been correctly configured). 		
	 Press <clear> to set the channel number to a different channel and retry.</clear> 		
ERROR - THIS CHANNEL IN USE	The message at left is displayed if another wireless handheld controller is currently connected to the Base Station and the application does not permit multiple handheld units.		
	Power off any other unused handheld units on the same channel in the area (refer to Section 4.1).		

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Display	Cause/Solution	
	Although multiple wireless handheld controllers may be connected to a single Base Station, the following applications allow only one handheld device to be connected at a time: Baseball Basketball Clock/Score Football Goal Judge Play Clock/Pitch Timer Remote Start/Stop Segment Timer Volleyball	
LOW SIGNAL STRENGTH	The Base Station has stopped responding to the wireless handheld. This could mean any of the following scenarios are true: • The Base Station was turned off or has lost power. • The Base Station was changed to a different channel. • The Base Station and handheld are too far away or too close (refer to Section 2).	
PRESS CLEAR FOR CONFIG MENU		
	If all of these problems have been checked and the handheld still shows Low Signal Strength, cycle power on both the handheld and Base Station.	

18.2 Base Station Errors

IN RANGE LED On Start-up

The IN RANGE LED (**Figure 10**) flashes several times at start-up while the server Base Station searches for other Base Stations on the same channel within range. If another server Base Station is found, this LED will flash continuously, indicating that only one server Base Station is allowed on a given channel.

General Base Station Failures

The wireless Base Station uses the on-board LEDs (**Figure 10**) to indicate failure status. When a failure occurs, the CL/RS232 TX, CL/RS232 RX, IN RANGE, and CAN TX LEDs all flash in a repetitive pattern to indicate the failure type. The LEDs will flash on for a long period of time, followed by a series of short flashes that give the error type. This sequence will repeat 5 times, after which the Base Station will reset.

If an error sequence is being displayed on the LEDs, first cycle power to the wireless Base Station by disconnecting power for several seconds and then reconnecting. If the problem persists, please contact Daktronics Customer Service (refer to **Section 1.2**).

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Obtaining Base Station Status Information

When connected to a wireless Base Station in any All Sport function, the wireless handheld can obtain status information about the Base Station. This information includes the Base Station channel, firmware revision number and date, and whether or not the Base Station is synchronized to another Base Station in the area.

Display	Action
UN.N MMM DD YYYY NoSync Chan:CC	Press <alt></alt> followed by <connect></connect> to display Base Station status information.
N.N = firmware revision	Press any key to return to normal operation.
MMM = month DD = date YYYY = year CC = channel number	Note: If the Base Station is synchronized to another Base Station via a sync group, the bottom left corner of the LCD will display "Sync:" followed by the sync group number. Refer to Section 3.3 .

18.3 Replacing Handheld Battery

To verify the battery is replaceable, look at the revision number on the back of the unit (**Figure 28**). If the assembly is **REV 7** or higher (after August 30, 2007), the battery may be replaced in the field. Units built before this date must be sent to Daktronics to have a new battery installed.



Figure 28: Manufacturing Date & Revision Number

After verifying the correct revision number, follow the steps below to replace the battery.

- 1. Remove the two Philips screws (one on the top and one on the bottom).
- **2.** Separate the bottom half of the case from the top half.
- **3.** Disconnect the 2-pin battery power cable from the main circuit board, and remove the battery from the retaining clips (**Figure 29**).
- **4.** Install new battery (Daktronics part # BT-1032) into the retaining clips and connect the 2-pin cable.
- **5.** Close the case and tighten the screws.
- **6.** Charge the battery as needed before first use.

Note: Please return used batteries to a battery recycling center or battery retailer for proper disposal.

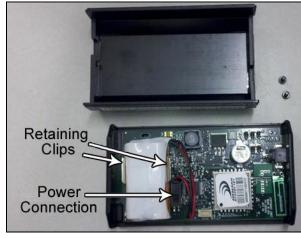


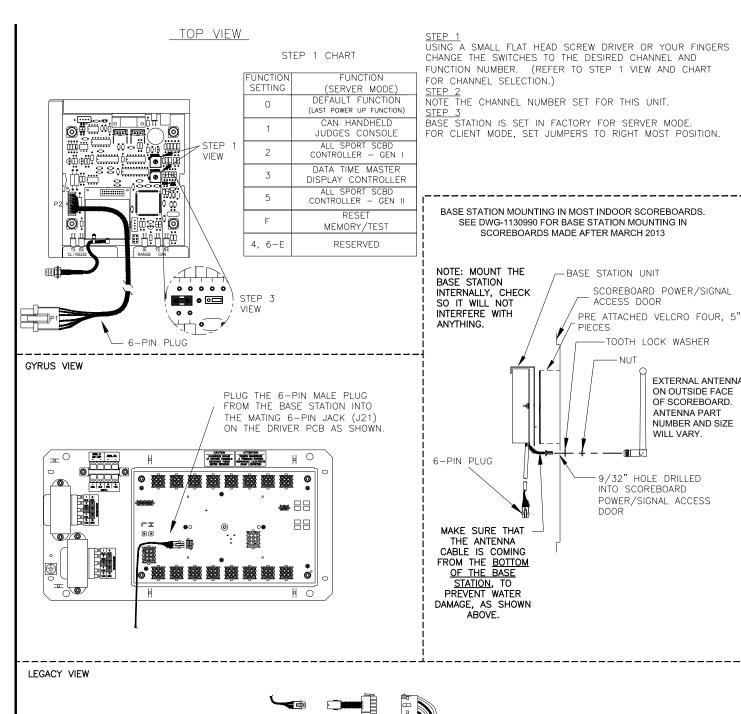
Figure 29: Handheld Unit, Cover Removed

Troubleshooting 65

Appendix A: Reference Drawings

Drawing Title	Drawing Number
Base Station: Indoor Installation	A-227465
System Riser Diagram; RC-100, Baseball/Tennis	
System Riser; RC-100, Rodeo/Diving/Sync Swimming	A-230608
System Riser; Tennis; Indoor Multi-Court, DakTennis, CG	B-231298
Charging Station, Specifications & Operation	A-231674
System Riser; Tennis; Multi-Court, RC-100 Direct	B-233254
Base Station: Outdoor Installation	A-236394
System Riser Diagram: RC-100- MS-2013	A-244926
System Riser Diagram; DakTennis, Video Control	A-251996
System Riser; Tennis; Indoor/Outdoor Single Court, RC-100	A-252412
Base Station: DistaView Scoreboard Installation	A-2 66717
System Riser; Tennis; Outdoor Multi-Court DakTennis, CG	B-281236
Riser Diagram; Goal Indicator System w/ RC 100	A-317405
System Riser Diagram; RC-100 Server/Client Line	
System Riser, RC-100 Game/DOG Clock Remote St/St	B-319037
System Riser; Tennis; DakTennis & Remote Base Station	A-1040167
System Riser; Tennis. Multi-Court, DakTennis, Radio, CG	B-1077063

Reference Drawings 67



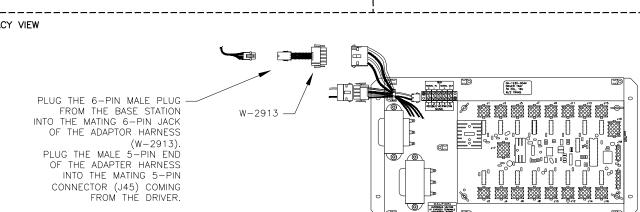
EXTERNAL ANTENNA ON OUTSIDE FACE

OF SCOREBOARD. ANTENNA PART

NUMBER AND SIZE

WILL VARY.

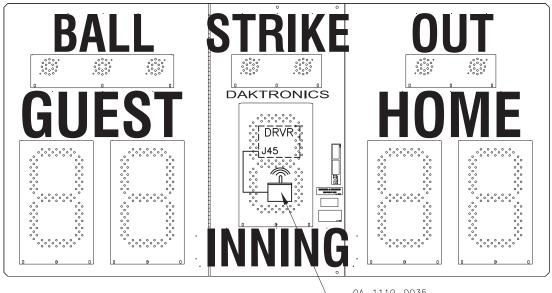
THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON



						ROOKINGS	. SD	57006	DO NOT REPRODUCE	BY ANY MEANS WITHOUT THE		
REV	DATE:	UPDATED VIEWS TO INCLUDE NEW GYRUS DIGIT DRIVER AND ADAPTER HARNESS	BY:				DO NO	T SCALE [) DRAWING	3		CONSENT OF DAKTRONICS, INC. 111 DAKTRONICS, INC.
04	17 FEB 15	UPDATED FUNCTION CHART AND TITLE BLOCK	BJG		PROJ:RC-100							
03	24 AUG 11	OFBATED FONCTION CHART AND THEE BLOCK	JJL		TITLE: BASE STAT	ION: I	NDO	OR INSTAL	LATION			
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01	02 MAR 05		000	l	ı	l 04	IP1	110	F-∩7-Δ	///400		

DAKTRONICS, INC.

NOTE: THIS DETAIL SHOWS A BA-515. ACTUAL RC-100 SCOREBOARD RECEIVER BASE STATION MAY BE IN A DIFFERENT LOCATION DEPENDING ON DISPLAY TYPE.



0A-1110-0035 FUNCTION SETTING = 5

NOTE: RC-100 SCOREBOARD RECEIVER BASE STATION IS LOCATED BEHIND THE FRONT ACCESS PANEL OF DISPLAY.

NOTE:
THE WIRELESS BASE STATION COMES PRE—SET TO CHANNEL 1. HOWEVER, CHANNELS 1—15 CAN BE

FUNCTION TABLE

FUNCTION NUMBER	DESCRIPTION
0	DEFAULT FUNCTION (LAST POWER UP FUNCTION)
1	CAN HAND HELD (JUDGES) CONSOLE
2	BASEBALL/TENNIS SCOREBOARD CONTROLLER GEN I (ALLSPORT)
3	DATATIME/DATAMASTER DISPLAY CONTROL
5	BASEBALL/TENNIS SCOREBOARD CONTROLLER GEN II (ALLSPORT)



0A-1110-0053 INSERT: LL-2605 (BASEBALL) CODE 03 INSERT: LL-2607 (TENNIS) CODE 08

						BROOKING	NICS, INC. s, sd 57006	DRAWING ARE CONFIDEN	SED AND DETAILS SHOWN ON THIS ITIAL AND PROPRIETARY. DO NOT MS WITHOUT THE EXPRESSED AKTRONICS, INC.
						T SCALE DR	AWING	COPYRIGHT 2012	DAKTRONICS, INC.
REV 03	DATE: 27 APR 12	UPDATED RC-100 HANDHELD PART NUMBER UPDATED BOARDER AND TITLE BLOCK	BY: JFL		PROJ:RADIO LINK		AGRAM: RC-100		
		ADDED FUNCTION 5 GEN II		1	DESIGN:		DRAWN: RTAG	TOW	DATE: 29 DEC 04
02	15 JAN 07		JRA	JRA	SCALE: NONE				
		MODIFIED TEXT	0.40		SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	230530
01	18 JUL 05		CMG		l	03	P1110	R-01-A	23U33U I

SYNCHRONIZED SWIMMING



0A-1110-0053 DIVING INSERT: LL-2606 RODEO INSERT: LL-2608



0A-1110-0053 DIVING INSERT: LL-2606 RODEO INSERT: LL-2608



0A-1110-0053 DIVING INSERT: LL-2606 RODEO INSERT: LL-2608

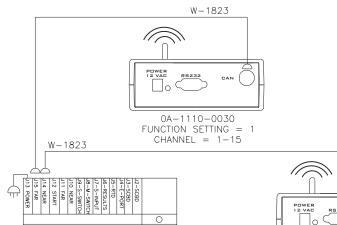


0A-1110-0053 DIVING INSERT: LL-2606 RODEO INSERT: LL-2608

NOTE:

UP TO 18 RC-100 CONTROLLERS CAN BE USED AT ONCE (9 RC-100 CONTROLLERS PER BASE STATION).

CHANNELS 1-15 CAN BE USED, HOWEVER THE TWO BASE STATIONS MUST BE SET TO DIFFERENT CHANNELS. EACH BASE STATION AND ITS RESPECTIVE RC-100 CONTROLLERS NEED TO BE SET TO THE SAME CHANNEL.



D

W - 1823

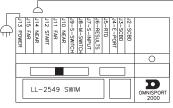
FUNCTION TABLE

FUNCTION NUMBER	DESCRIPTION
0	DEFAULT FUNCTION
	(LAST POWER UP FUNCTION)
1	CAN HAND HELD (JUDGES) CONSOLE
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5	BASEBALL/TENNIS SCOREBOARD CONTROLLER GEN II (ALLSPORT)

DIVING/RODEO

FUNCTION TABLE

FUNCTION NUMBER	DESCRIPTION
0	DEFAULT FUNCTION
	(LAST POWER UP FUNCTION)
1	CAN HAND HELD (JUDGES) CONSOLE
2	BASEBALL/TENNIS SCOREBOARD CONTROLLER GEN I (ALLSPORT)
3	DATATIME/DATAMASTER DISPLAY CONTROL
5	BASEBALL/TENNIS SCOREBOARD CONTROLLER GEN II (ALLSPORT)



LL-2549 SWIM

OA-1110-0030 FUNCTION SETTING = 1CHANNEL = 1-15

0A-1110-0030 FUNCTION SETTING = CHANNEL = 1-15

NOTE: UP TO 9 RC-100 CONTROLLERS CAN BE USED AT ONCE.

CHANNELS 1-15 CAN BE USED, HOWEVER THE BASE STATION AND ALL RC-100 CONTROLLERS MUST BE OPERATING ON THE SAME CHANNEL.



0A-1110-0053 DIVING INSERT: LL-2606 RODEO INSERT: LL-2608



0A-1110-0053 DIVING INSERT: LL-2606 RODEO INSERT: LL-2608



0A-1110-0053 DIVING INSERT: LL-2606 RODEO INSERT: LL-2608

DO NOT SCALE DRAWING



0A-1110-0053 DIVING INSERT: LL-2606 RODEO INSERT: LL-2608

7	DAKTRONICS, INC.
	BROOKINGS SD 57006

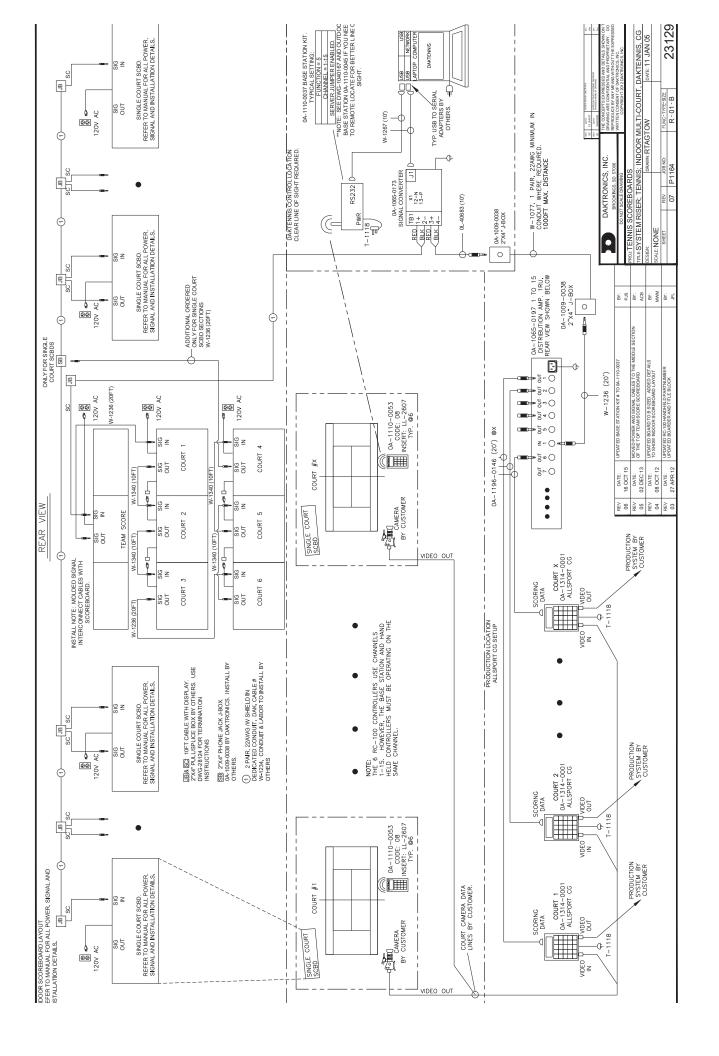
THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC.

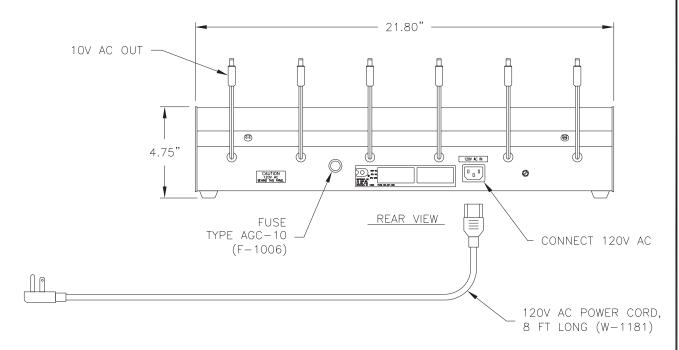
COPYRIGHT 2012 DAKTRONICS, INC.

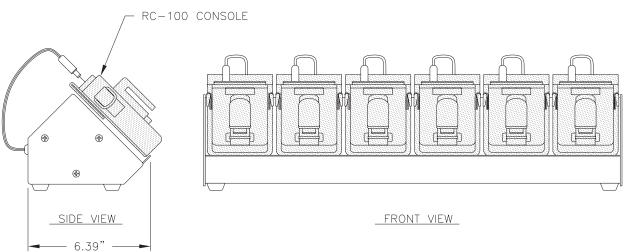
PROJ: KA	וטוּ	υı	_11	٧r

		DT4.0T0144	
TITLE: SYS	STEM RISER: RC-10	0- RODEO/DIVING/SYNC SW	/IMMING

REV		UPDATED RC-100 HANDHELD PART NUMBER	BY:		DESIGN:		DRAWN: RTAGT	OW	DATE: 30 DEC 04	
02	27 APR 12	UPDATED BOARDER AND TITLE BLOCK	JFL		SCALE: NONE					
		FUNCTION 5 GEN II			SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	000000	1
01	15 JAN 07		JRA	JRA		02	P1110	R - N1 - A	230608	ı







THE RC-100 CHARGING STATION WILL PROVIDE POWER TO CHARGE THE BATTERY IN UP TO SIX RC-100 CONSOLES AT ONE TIME.

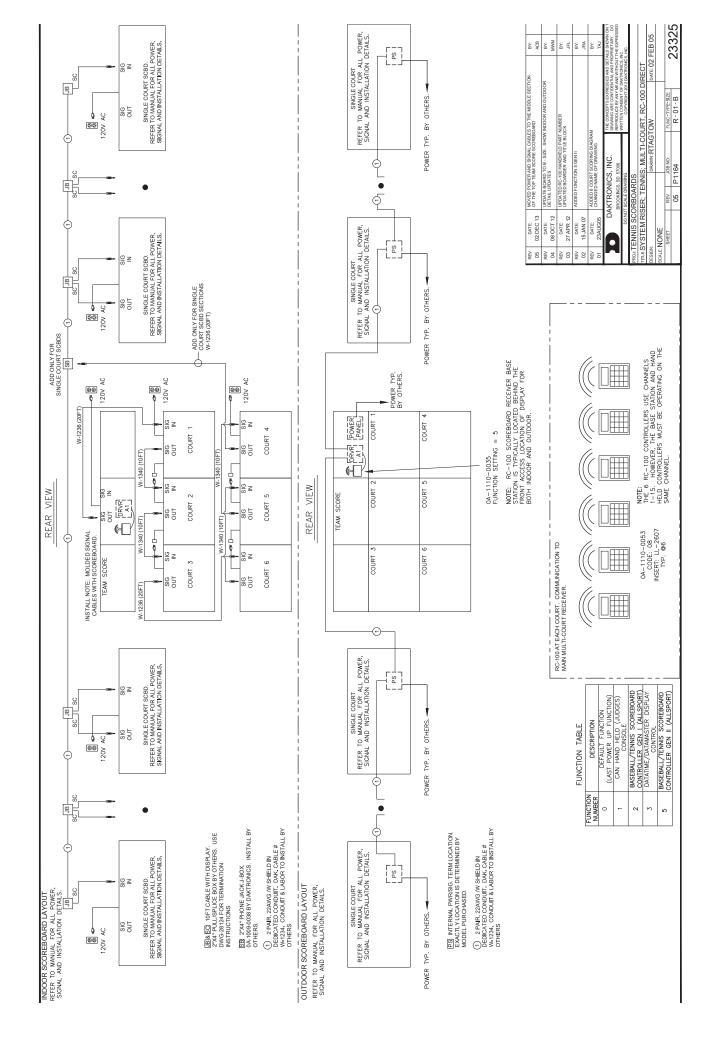
PLACE RC-100 CONSOLES FACE DOWN ON THE FRONT OF THE CHARGING STATION.
PLUG THE CORDS INTO THE POWER JACKS ON THE CONSOLES.
CONNECT THE 120V AC POWER CORD INTO THE JACK IN THE BACK OF THE CHARGING STATION.

THE CONSOLES CAN REMAIN CONNECTED TO THE CHARGING STATION AFTER CHARGING IS COMPLETE. THE BATTERY IN THE RC-100 IS NOT FIELD REPLACEABLE. IF A BATTERY FAILS, CONTACT DAKTRONICS FOR REPLACEMENT SERVICE.

CHARGING STATION WEIGHT: ABOUT 10 LBS, WITHOUT RC-100 CONSOLES. MAX. POWER CONSUMPTION: 100 WATTS.

DESCRIPTION

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	DAKTRONICS, INC. BROOKINGS, SD 57006
	PROJ: RC-100 CONSOLE
	TITLE: CHARGING STATION, SPECIFICATIONS & OPERATION
	DES. BY: AVB DRAWN BY: A VANBEMMEL DATE: 14 JAN 04
BY APPR.	REVISION APPR. BY: 1=5 1110-R04A-231674



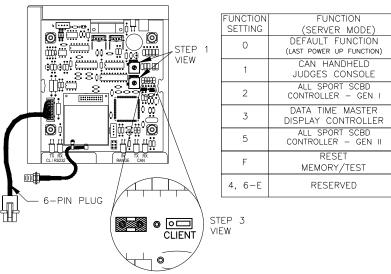
STEP 1
USING A SMALL FLAT HEAD SCREW DRIVER OR YOUR FINGERS
CHANGE THE SWITCHES TO THE DESIRED CHANNEL AND FUNCTION
NUMBER. (REFER TO STEP 1 VIEW AND CHART FOR CHANNEL
SELECTION.)

STEP 2 NOTE THE CHANNEL NUMBER SET FOR THIS UNIT.

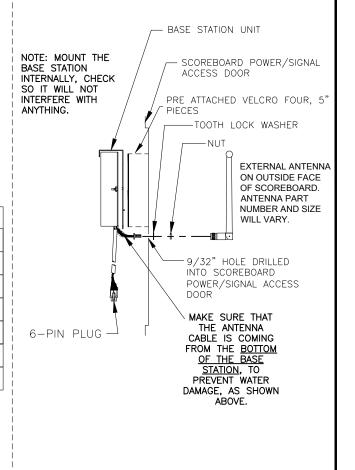
STEP 3

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

STEP 1 CHART

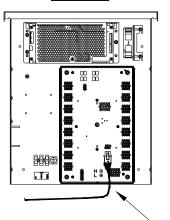


SIDE VIEW BASE STATION MOUNTING DETAILS FOR MOST OUTDOOR SCOREBOARDS



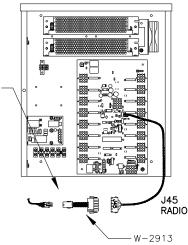
CONNECTING THE BASE STATION WIRE HARNESS FRONT VIEW OF DRIVER ENCLOSURE; LID REMOVED

GYRUS VIEW



PLUG THE 6-PIN MALE PLUG FROM THE BASE STATION INTO THE MATING 6-PIN JACK (J21) ON THE DRIVER PCB AS SHOWN. PLUG THE 6-PIN MALE PLUGFORM THE BASE STATION INTO THE MATING 6-PIN JACK OF THE ADAPTOR HARNESS (W-2913). PLUG THE MALE 5-PIN END

OF THE ADAPTER HARNESS INTO THE MATING 5-PIN CONNECTOR (J45) COMING FROM THE DRIVER.



LEGACY VIEW

D	DAKTRONICS, INC.								
	BROOKINGS, SD 57006								
	DO NOT SCALE DRAWING								

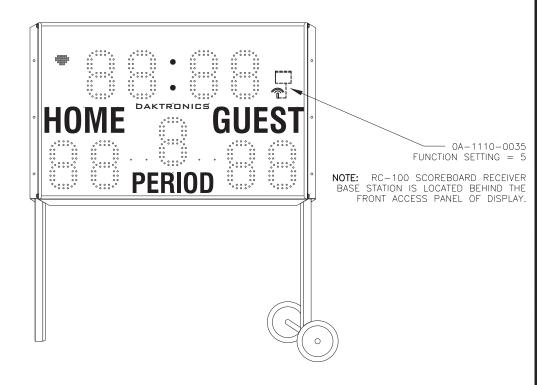
 $PPO I \cdot PC = 100$

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03	18 FEB 15	REMOVED "BEFORE JAN 2007" VIEW ADDED NEW GYRUS VIEW UPDATED BASE STATION VIEWS	BJG	
02	23 AUG 11	ADDED NEW DETAIL TO DRAWING UPDATED TITLE BLOCK AND FUNCTION CHART	JJL	
01	18 JUNE 08	ADDED STEP 1.4 AND DETAIL	AMG	

FR00.INC — 100										
TITLE: BASE STAT	ION: C	UTD	00R	INSTA	LLATION					
DESIGN: MMILLER			DRAWN:,	APAGE		DATE: 1	11	MAR	05	
SCALE: 1=7										
SHEET	REV	j	OB NO:		FUNC-TYPE-SIZE		<u> </u>	7 (7		1
	N3	Þ.	1110		F-∩7-∆	/	∕∵	נומנ	992	+ !

NOTE: THIS DETAIL SHOWS A MS-2013. ACTUAL RC-100 SCOREBOARD RECEIVER BASE STATION MAY BE IN A DIFFERENT LOCATION DEPENDING ON DISPLAY TYPE.



NOTE: THE WIRELESS BASE STATION COMES PRE-SET TO CHANNEL 1. HOWEVER, CHANNELS 1-15 CAN BE USED.

FUNCTION TABLE

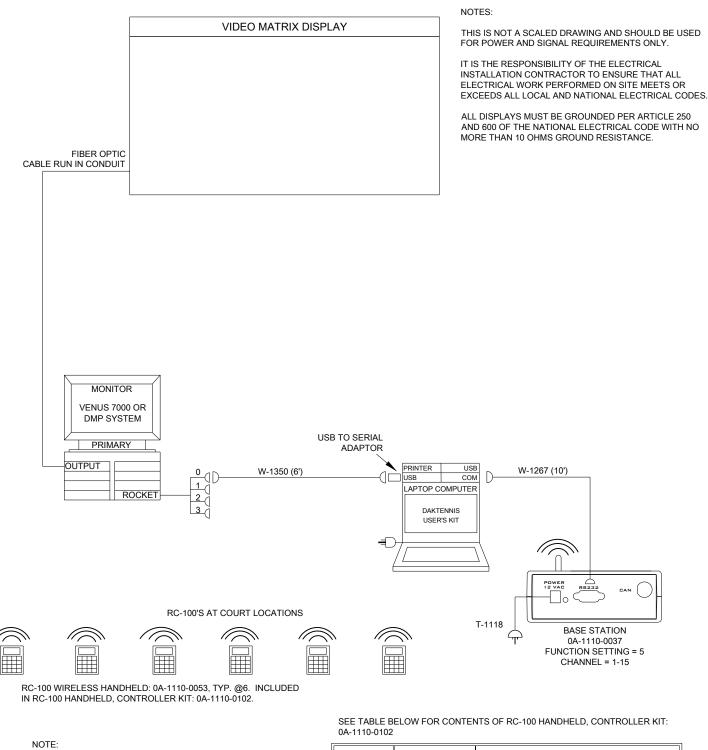
FUNCTION NUMBER	DESCRIPTION	
0	DEFAULT FUNCTION (LAST POWER UP FUNCTION)	
1	CAN HAND HELD (JUDGES) CONSOLE	
2	MS-2013 SCOREBOARD CONTROLLER GEN I (ALLSPORT)	USE BEFORE V2.2 ON HANDHELD UNIT
3	DATATIME/DATAMASTER DISPLAY CONTROL	
5	MS-2013 SCOREBOARD CONTROLLER GEN II (ALLSPORT)	USE AFTER V2.2 ON HANDHELD UNIT



0A-1110-0053

INSERT: LL-2613 (CLOCK/SCORE) CODE 01 INSERT: OG-239304 (VOLLEYBALL) CODE 02 INSERT: LL-2605 (BASEBALL) CODE 03

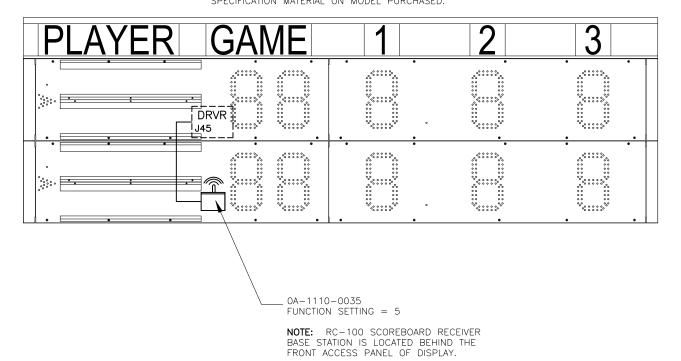
REV 05	DATE: 27 APR 12	UPDATED RC-100 HANDHELD PART NUMBER UPDATED BOARDER AND TITLE BLOCK	BY: JFL				NICS, INC.	DRAWING ARE CONFIDEN	SED AND DETAILS SHOWN ON THIS STIAL AND PROPRIETARY. DO NOT ANS WITHOUT THE EXPRESSED
04	8 FFB 10	MOVED RADIO DETAIL TO CORRECT PLACE ON SCOREBOARD.	EJS			T SCALE DE	-,	WRITTEN CONSENT OF D COPYRIGHT 2012	AKTRONICS, INC. 2 DAKTRONICS, INC.
		ADDED BASEBALL INSERT TO DRAWING	1010.4		PROJ:RADIO LINK	NED DI	100 AM DO 400	NO 0040	
03	16 MAY 07		MWM		TITLE:SYSTEM RIST	SER DIA	AGRAM: RC-100- DRAWN:KBIER		DATE: 11 JUN 05
02	15 JAN 07	ADDED FUNCTION 5 GEN II	JRA	JRA	SCALE: NONE		DRAWN. NDIEN	.DA	DATE: 11 JOIN 03
01	18 JUL 05	MODIFIED TEXT	CMG		SHEET	REV 05	JOB NO:	FUNC-TYPE-SIZE R - 01 - A	244926



THE (6) RC-100 CONTROLLERS USE CHANNELS 1-15, HOWEVER, THE BASE STATION AND HAND HELD CONTROLLERS MUST BE OPERATING ON THE SAME CHANNEL. USE CODE 08 FOR TENNIS.

PART ID	ASSEMBLY#	DESCRIPTION AND OPERATOR INFO
	0A-1000-1079	CD; SOFTWARE, ALL SPORT MANUALS
	0A-1110-0053	RC-100 WIRELESS HANDHELD G2
	EN-1995	RC-100 BLACK, SOFT CARRY CASE
	T-1118	TRANSFORMER; 12VAC; WALLPACK 6' CORD
RC-100 INSERT KIT	LL-2806	RC-100 TENNIS INSERT USE CODE 08

REV	DATE:	UPDATED BASE STATION KIT # TO 0A-1110-0037	BY:	D/	KTRO	NICS, INC.		SED AND DETAILS SHOWN ON THIS
05	16 OCT 15		PJS			S, SD 57006		ITIAL AND PROPRIETARY. DO NOT ANS WITHOUT THE EXPRESSED
REV	DATE:	UPDATED RC-100 INSERT PART # TO LL-2806. ADDED	BY:		T SCALE DE		WRITTEN CONSENT OF DAKTRONICS, INC.	
04	20 MAY 13	RC-100 CONTROLLER KIT TABLE.	SMB	DO NO	I SCALE DE	KAWING	COPYRIGHT 2012	2 DAKTRONICS, INC.
04	20 IVIA 1 13		SIVIB	PROJ:TENNIS SCO	DEBO	APD		
REV	DATE:	UPDATED BORDER AND GENERAL DETAILS WITH NEW	BY:	FIGURE SCOTEBOARD				
		INFORMATION		TITLE:SYSTEM RISER DIAGRAM: DAKTENNIS. VIDEO CONTROL				
03	09 OCT 12		MWM			<u> </u>	-,	
REV	DATE:	UPDATED RC-100 HANDHELD PART NUMBER	BY:	DESIGN: RTAGTOW		DRAWN: TJOHN	ISON	DATE: 24AUG05
	07.400.40	UPDATED BOARDER AND TITLE BLOCK		SCALE: NONF				
02	27 APR 12		JFL	SCALE: NOINE				
		CORRECTED WIRE PART #		SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	054000
01	30 JUL 08		KZB		06	P1164	F - 10 - A	251996



NOTE:
THE WIRELESS BASE STATION COMES PRE-SET TO CHANNEL 1. HOWEVER, CHANNELS 1-15 CAN BE

FUNCTION TABLE

FUNCTION NUMBER	DESCRIPTION
0	DEFAULT FUNCTION (LAST POWER UP FUNCTION)
1	CAN HAND HELD (JUDGES) CONSOLE
2	BASEBALL/TENNIS SCOREBOARD CONTROLLER GEN I (ALLSPORT)
3	DATATIME/DATAMASTER DISPLAY CONTROL
5	BASEBALL/TENNIS SCOREBOARD CONTROLLER GEN II (ALLSPORT)



0A-1110-0053 INSERT: LL-2607 (TENNIS) CODE 08

				DAKTRONICS, INC. BROOKINGS, SD 57006			THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON TO DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED.		
						-,	WRITTEN CONSENT OF D		
			DO N	OT SCALE DI	RAWING	COPYRIGHT 201:	2 DAKTRONICS, INC.		
				PROJ:TENNIS SC	OREBO	ARDS			
				TITLE:SYSTEM RI	SER; TI	ENNIS; INDOOR	OUTDOOR SINC	SLE COURT, RC-100	
REV	DATE:	UPDATED RC-100 HANDHELD PART NUMBER	BY:	DESIGN:		DRAWN: TJOHNSON		DATE: 29AUG05	
02	27 APR 12	UPDATED BOARDER AND TITLE BLOCK	JFL	SCALE: NONE					
		UPDATED FUNCTION SETTING AND TABLE.		SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	050440	
01	22 OCT 09	ALSO ADDED NOTE ABOUT SCOREBOARD.	EJS		02	P1164	R - N1 - A	252412	

TOP VIEW

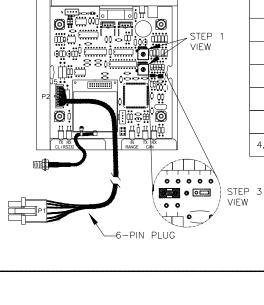
STEP 1 CHART

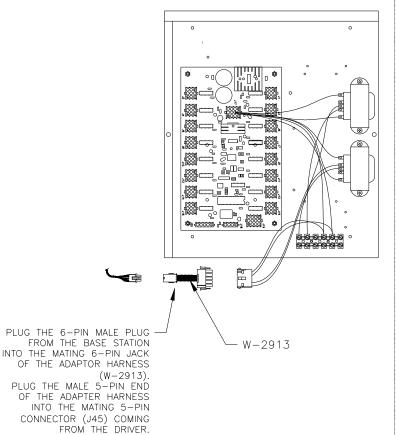
FUNCTION	FUNCTION
SETTING	(SERVER MODE)
0	DEFAULT FUNCTION (LAST POWER UP FUNCTION)
1	CAN HANDHELD JUDGES CONSOLE
2	ALL SPORT SCBD CONTROLLER — GEN I
3	DATA TIME MASTER DISPLAY CONTROLLER
5	ALL SPORT SCBD CONTROLLER – GEN II
F	RESET MEMORY/TEST
4, 6-E	RESERVED

STEP 1 USING A SMALL FLAT HEAD SCREW DRIVER OR YOUR FINGERS CHANGE THE SWITCHES TO THE DESIRED CHANNEL AND FUNCTION NUMBER. (REFER TO STEP 1 VIEW AND CHART FOR CHANNEL SELECTION.) NOTE THE CHANNEL NUMBER SET FOR THIS UNIT.

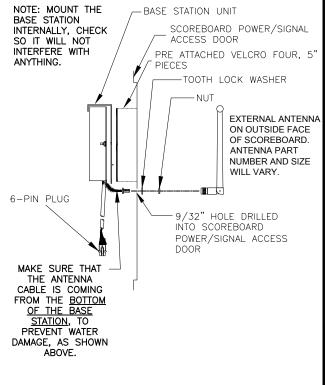
STEP 3 BASE STATION IS SET IN FACTORY FOR SERVER FOR CLIENT MODE, SET JUMPERS MODE.

TO RIGHT MOST POSITION.





BASE STATION MOUNTING DETAILS FOR MOST OUTDOOR SCOREBOARDS.



DAKTRONICS, INC. BROOKINGS, SD 57006

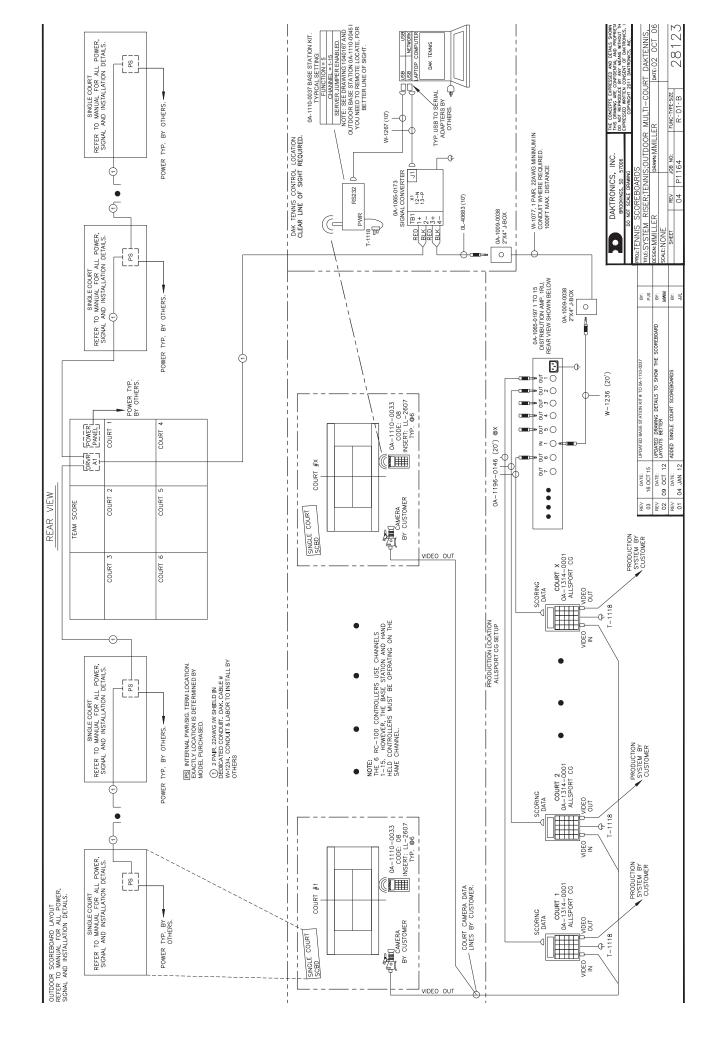
					DO NO	T SCALE DR	AWING	
		LIDDATED VIEWO TO INCLUDE DADIO ADADTED	T		PROJ: RC-100			
REV 04	DATE: 13 MAR 15	UPDATED VIEWS TO INCLUDE RADIO ADAPTER HARNESS	BY: KCS		TITLE:BASE STATI	ON: DIS	STAV	/IEW SCOR
	10 10 10	ADDED FUNCTION 5			DESIGN:			DRAWN: APAC
03	12 APR 10		KZB	SCALE: 1 = 7				
		ADDED STEP 1.4 AND DETAIL.			SHEET	REV		JOB NO:
01	18 JUN 08		AMG			∩4	P11	110

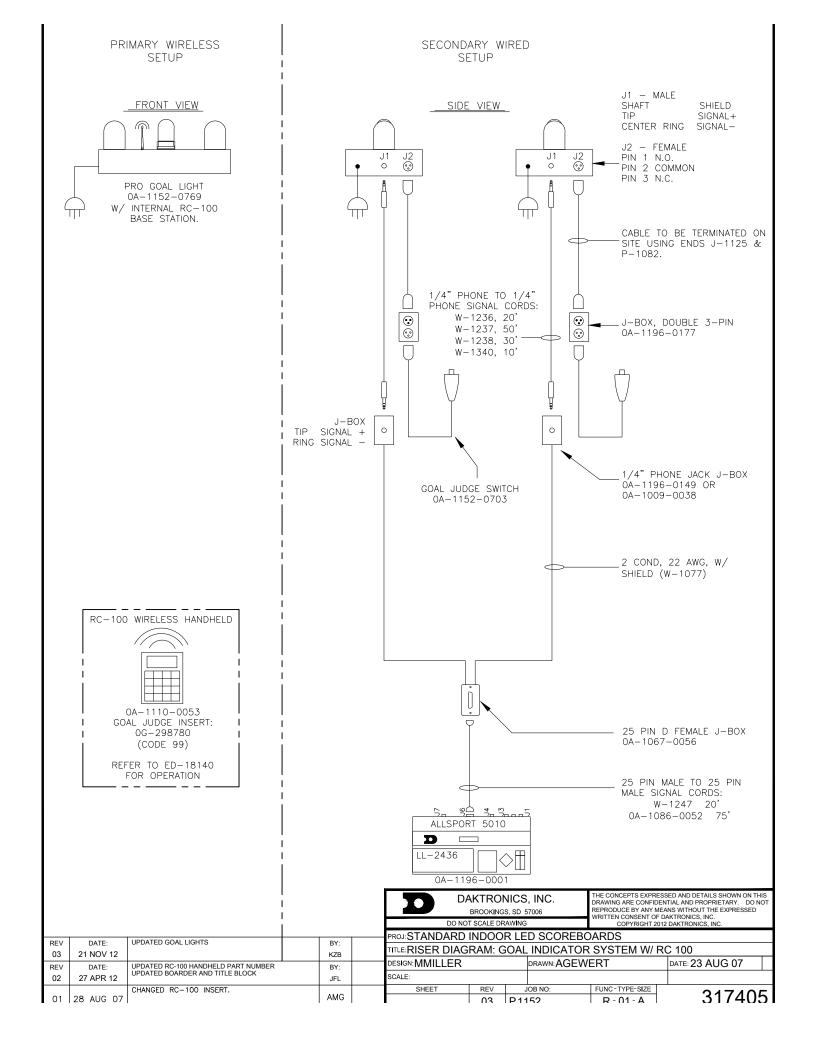
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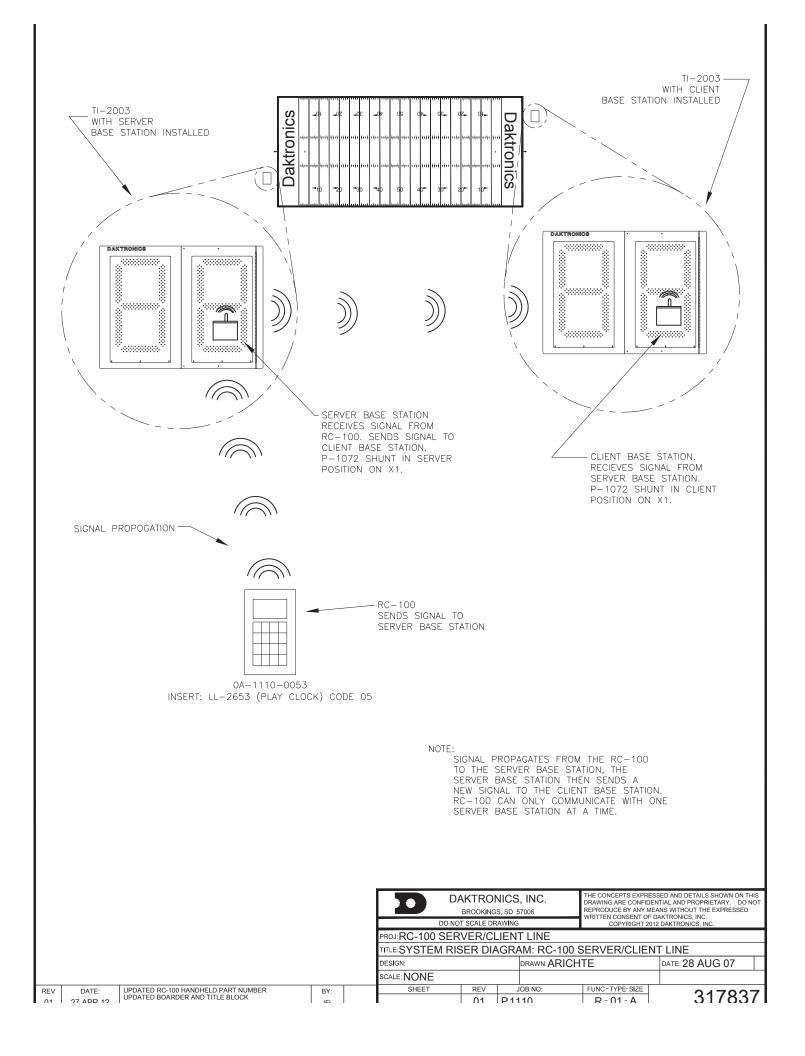
FUNC-TYPE-SIZE	000747					
AGE	DATE: 14 MAR 06					
REBOARD INSTALLATION						

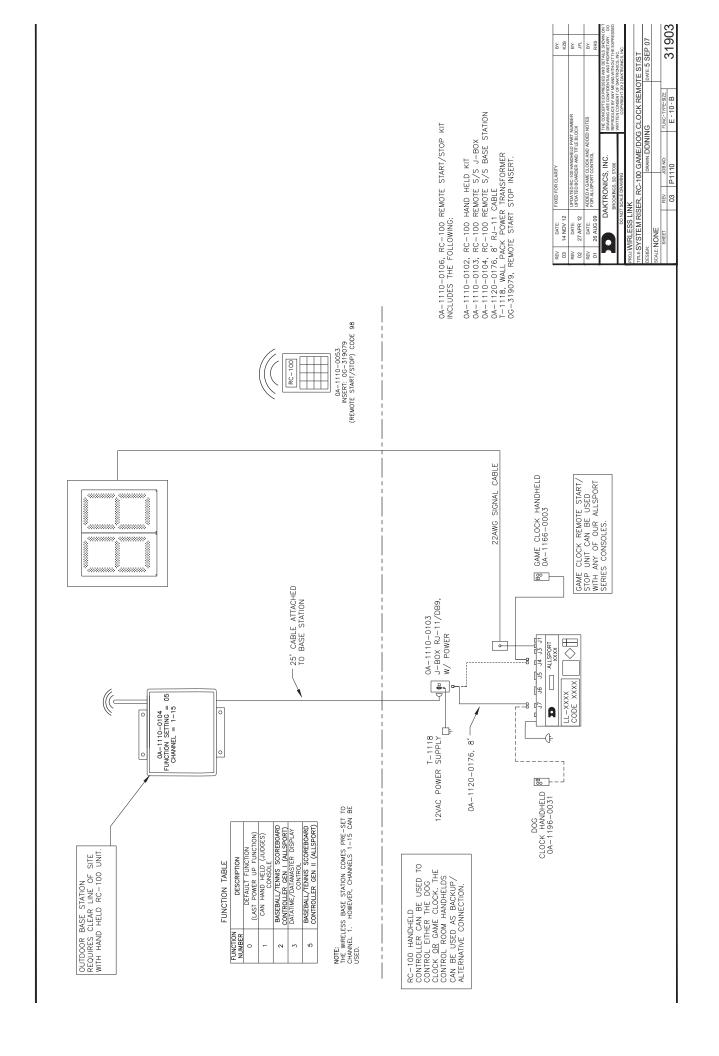
F - 07 - A

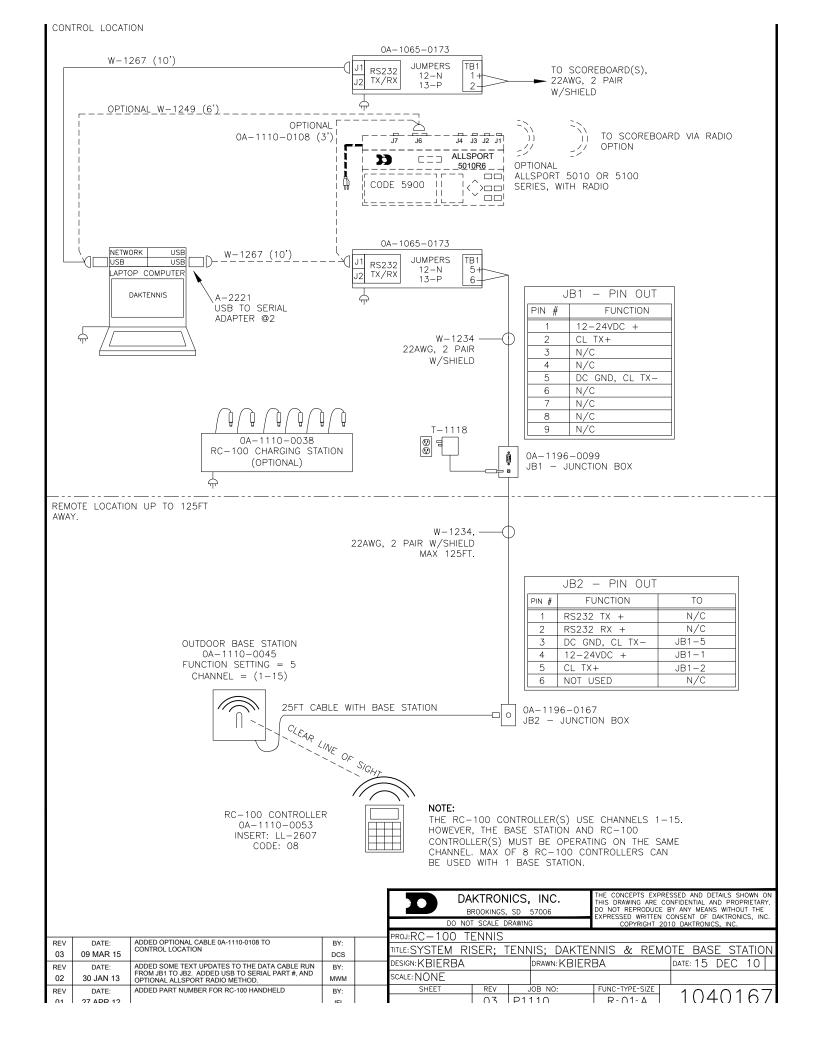
266717

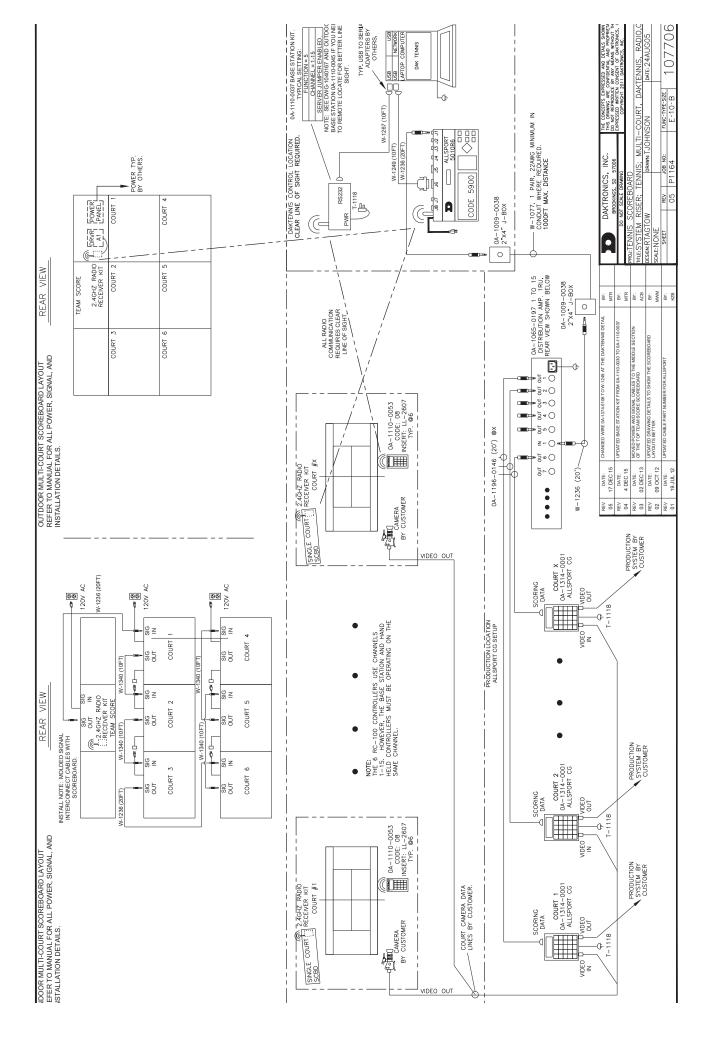








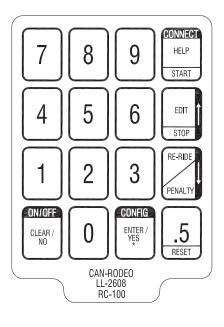




Appendix B: Sport Inserts

Drawing Title	Drawing Number
Insert; LL-2608, RC-100, Rodeo	A-231529
Insert: LL-2605- RC-100- Baseball	A-231530
Insert; LL-2607, RC-100, Tennis	A-231531
Insert; LL-2606, RC-100, Judges Console	A-231532
Custom Insert; Volleyball, RC-100	A-239304
Insert; LL-2613, RC-100 Clock/Score	A-239307
Insert; LL-2613 Back, RC-100 Segment Timer	A-247621
Insert, LL-2632, RC-100, Basketball	A-253583
Insert; LL-2653, RC-100 Play Clock	A-280870
Insert; LL-2663, RC-100 Goal Judge	A-298780
Insert: Custom- RC-100- Start/Stop Remote	A-319079
Insert; Custom, RC-100, Football	A-1031603

Sport Inserts 69



REV.

DATE

DESCRIPTION

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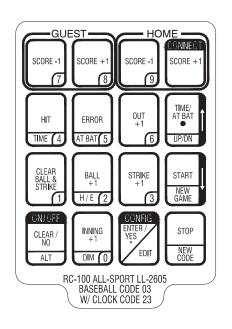
DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: HANDHELD WIRELESS CAN SYSTEM

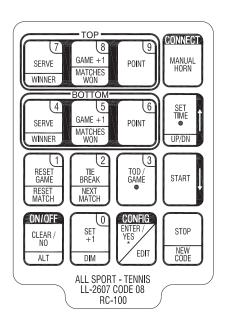
TITLE: INSERT; LL-2608, RC-100, RODEO

DES. BY: GWITCHE DRAWN BY: GWITCHE DATE: 12 JAN 05

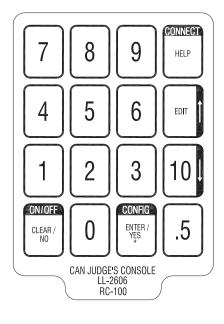
REVISION APPR. BY: 1 1 1 1 0 - E 0 7 A - 2 3 1 5 2 9



	DAKTRONICS, INC. BROOKINGS, SD 57006 DO NOT SCALE DRAWING	THIS DRAWING ARE C DO NOT REPRODUCE EXPRESSED WRITTEN	ESSED AND DETAILS SHOWN ON ONFIDENTIAL AND PROPRIETARY. BY ANY MEANS WITHOUT THE CONSENT OF DAKTRONICS, INC. 10 DAKTRONICS, INC.	
REV	BY: CRD BY:	PROJ:HANDHELD WIRELESS CAN S TITLE: INSERT: LL—2605— RC—100 DESIGN: GWITCHE DRAWN: GV	SYSTEM D- BASEBALL	DATE: 12 JAN 05
02 27 JUN 08	JMC BY:	SCALE: 1 = 1 SHEET REV JOB NO: 0.3 P1110	FUNC-TYPE-SIZE F-Ω7-Δ	231530



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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: HANDHELD WIRELESS CAN SYSTEM

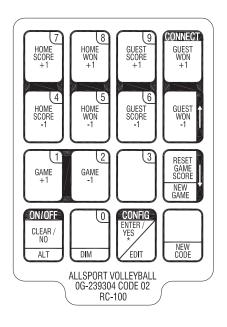
TITLE: INSERT; LL-2606, RC-100, JUDGES CONSOLE

DES. BY: GWITCHE DRAWN BY: GWITCHE DATE: 12 JAN 05

REVISION APPR. BY:

OO SCALE: 1 = 1 1 1 1 0 - E 0 7 A - 2 3 1 5 3 2

REV. DATE DESCRIPTION BY APPR.



REV.

DATE

DESCRIPTION

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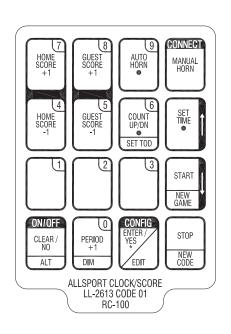
DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ:

TITLE: CUSTOM INSERT; VOLLEYBALL, RC-100

DES. BY: DRAWN BY: GWITCHE DATE: 14 APR 05

REVISION APPR. BY: 1 1 1 0 - V 0 7 A - 2 3 9 3 0 4



ADDED "SET TOD" ALT FUNCTION TO 6 KEY

31 MAR 06

01

DJU

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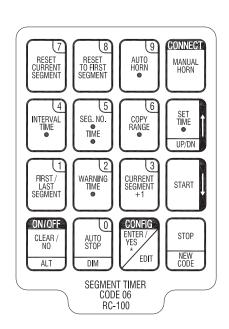
DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ:

TITLE: INSERT; LL—2613, RC—100 CLOCK/SCORE

DES. BY: DRAWN BY: GWITCHE DATE: 15 APR 05

REVISION APPR. BY: 1 1 1 1 — D 7 7 A - 7 7 7 7



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DAKTRONICS, INC. BROOKINGS, SD 57006

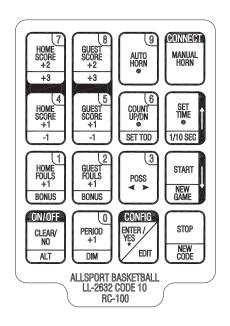
PROJ: HANDHELD WIRELESS CAN SYSTEM

TITLE: INSERT; LL-2613 BACK, RC-100 SEGMENT TIMER

DES. BY: DRAWN BY: DULSCHM DATE: 14 JUL 05

DES. BY:
REVISION APPR. BY:

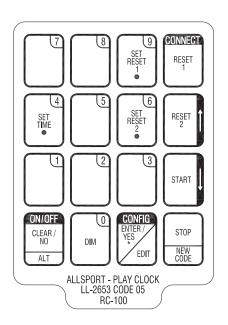
1110-0071-017601



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DAKTRONICS, INC. BROOKINGS, SD 57006

	ADDED NUMBER KEYS 1-9		PROJ: HANDHELD WIRELESS CAN SYSTEM	
02	31 MAY 06	JMC	TITLE: INSERT; LL-2632, RC-100, BASKETBALL	
01	ADDED "SET TOD" ALT FUNC TO COUNT UP/DN	DJU	DES. BY: DULSCHM DRAWN BY: JCOSE DATE: 29 DEC 0	5



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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ: HANDHELD WIRELESS CAN SYSTEM

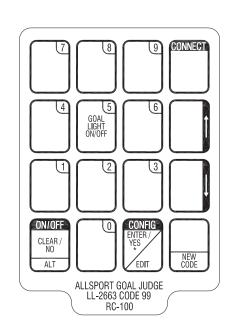
TITLE: INSERT; LL-2653, RC-100 PLAY CLOCK

DES. BY: DULSCHM DRAWN BY: DULSCHM

REVISION APPR. BY:

1110-5071-020270

DATE: 04 AUG 06



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DAKTRONICS, INC. BROOKINGS, SD 57006

PROJ:

TITLE: INSERT; LL-2663, RC-100 GOAL JUDGE

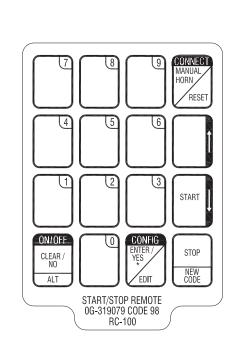
DES. BY: JCOSE

DRAWN BY: JCOSE

DATE: 08 MAR 07

REVISION APPR. BY:

1110-0071-009790



THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS, INCLUDING ELECTRONICALLY WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2009 DAKTRONICS, INC. DAKTRONICS, INC. DAKTRONICS, INC. DAKTRONICS, INC. DAKTRONICS, INC. DATE: 0.7006

PROJ:

TITLE: INSERT: CUSTOM— RC—100— START/STOP REMOTE

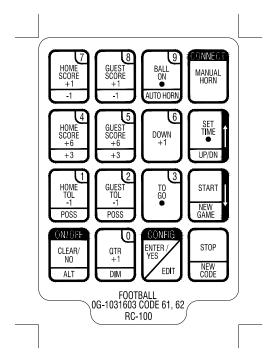
DES. BY: JCOSE DRAWN BY: JCOSE DATE: 0.7 AUG 0.7

ADDED RESET TO MANUAL HORN KEY

DJU

REVISION APPR. BY:

1110-0071-310070



				DA	KTRON	IICS, INC.		SSED AND DETAILS SHOWN ON DIVIDENTIAL AND PROPRIETARY.
				В	ROOKINGS,	SD 57006		BY ANY MEANS WITHOUT THE CONSENT OF DAKTRONICS, INC.
				DO NO	T SCALE D	RAWING		10 DAKTRONICS, INC.
		ADDED CODE CO TO DECODIDATION	1 1	- PROJ:HANDHELD	WIREL	ESS CAN SYS	ГЕМ	
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03	25 MAR 13		DJU		JOTOWI	, , , , , , , , , , , , , , , , , , , 		07 CED 10
REV	DATE:	ADDED EDIT_TO ENTER KEY	BY:	— DESIGN: BCARSRU		DRAWN: DULS	JHM	DATE: 07 SEP 10
02	12 NOV 10	ADDED NO TO CLEAR KEY ADDED MANUAL TO HORN KEY	DJU	SCALE: $1 = 1$				
REV	DATE:	MOVED AUTO HORN ALT FUNCTION FROM	BY:	SHEET	REV	JOB NO:	FUNC-TYPE-SIZE	1071007
∩1	22 SED 10	HORN KEY TO BALL ON KEY	PIII		Λ3	P1110	F-∩7-Δ	1001600

Appendix C: Daktronics Warranty and Limitation of Liability

DAKTRONICS WARRANTY & 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. Unless otherwise defined herein, all 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. This Warranty does not include on-site labor charges to remove or install these components. 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. All such items shall be shipped by Purchaser DDP Daktronics; designated facility. If returned Equipment is repaired or replaced under the terms of this warranty, Daktronics will prepay ground transportation charges back to Purchaser and shall ship such items DDP Purchaser's designated facility; otherwise, Purchaser shall pay transportation charges to return the Equipment back to the Purchaser and such Equipment shall be shipped Ex Works Daktronics designated facility. 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 the 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.

EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS WARRANTY, TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, DAKTRONICS DISCLAIMS ANY AND ALL OTHER PROMISES, REPRESENTATIONS AND WARRANTIES APPLICABLE TO THE EQUIPMENT AND REPLACES ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACTY OR QUALITY OF DATA. 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. <u>Exclusion from Warranty Coverage</u>

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 improper installation, 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, humidity control, or other environmental conditions outside of the Equipment's technical specifications such as extreme temperatures, corrosives and metallic pollutants, 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;



DAKTRONICS WARRANTY & LIMITATION OF LIABILITY

- 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 any salesperson, dealer, distributor or agent, 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;
- H. Any performance of preventive maintenance;
- J. Third-party systems and other ancillary equipment including without limitation front-end video control systems, audio systems, video processors and players, HVAC equipment, batteries and LCD screens;
- K. Incorporation of accessories, attachments, software or other devices not furnished by Daktronics; or
- L. Paint or refinishing the Equipment or furnishing material for this purpose.

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.

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.

6. 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).

