

Sportsound® Rack SSR-100

Operation Manual

DD2746938

Rev 3 – 21 November 2016

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Section 1: Introduction

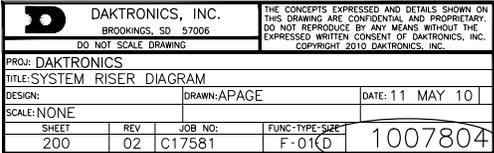
This manual explains the operation of the Sportsound® Rack (SSR) 100. For additional information regarding the safety, installation, operation, or service of this system, refer to the telephone numbers listed in Section 6. This manual is not specific to a particular installation. Project-specific information takes precedence over any other general information found in this manual.

IMPORTANT SAFEGUARDS

- Read and understand all instructions before beginning the installation process.
- Do not drop the control equipment or allow it to get wet.
- Do not disassemble control equipment or electronic controls of the system; 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. This keeps equipment protected from power spikes and lightning.
- Never yank the power cord 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. Arrange the cord with care so that it will not be tripped over.
- Inspect control equipment 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.
- Keep equipment covered when possible to protect from dust and debris.

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 D-1007804**. All references to drawing numbers, appendices, figures, or other manuals are presented in bold typeface. Any drawings referenced in a particular section are listed at the beginning of it as shown below:



DAKTRONICS, INC. BROOKINGS, SD 57006		THE CONCEPTS EXPRESSED AND DETAILS SHOWN ON THIS DRAWING ARE CONFIDENTIAL AND PROPRIETARY. DO NOT REPRODUCE BY ANY MEANS WITHOUT THE EXPRESSED WRITTEN CONSENT OF DAKTRONICS, INC. COPYRIGHT 2010 DAKTRONICS, INC.	
DO NOT SCALE DRAWING			
PROJ: DAKTRONICS			
TITLE: SYSTEM RISER DIAGRAM			
DESIGN:		DRAWN: APAGE	
SCALE: NONE		DATE: 11 MAY 10	
SHEET	REV	JOB NO:	FUNC-TYPE-SIZE
200	02	C17581	F-01(D)
			1007804

Drawing Number

Figure 1: Drawing Label

Reference Drawing:

System Riser Diagram **Drawing D-1007804**

All drawings referenced in this manual are found in **Appendix A**.

Daktronics identifies manuals by the DD or ED number located on the cover page. For example, this manual would be referred to as **DD2746938**.

Daktronics has a searchable knowledgebase of common questions and troubleshooting tips: www.daktronics.com/support

Visit the Daktronics Support YouTube channel to learn how to properly operate Sportsound racks: www.youtube.com/DaktronicsSupport



1.2 Daktronics Nomenclature

Most display components have a white label that lists the part number (Figure 2). Part numbers will also appear on certain drawings. If a component is not found in the Replacement Parts List in Section 5 use the label to order a replacement. Section 6 describes the Daktronics Exchange Policy and the Repair & Return Program. Refer to these instructions if replacing or repairing any display component.

0P-1127-0024
SN: 2465
02/19/12 Rev. 1

Figure 2: Part Label

Main Component Labels	
Part Type	Part Number
Individual circuit board	0P-XXXX-XXXX
Assembly; a collection of circuit boards	0A-XXXX-XXXX
Wire or cable	W-XXXX
Fuse	F-XXXX
Transformer	T-XXXX
Metal part	M-XXX
Fabricated metal assembly	0S-XXXXXX
Specially ordered part	PR-XXXXX-X

Accessory Labels	
Component	Label
Termination block for power or signal cable	T <u>BXX</u>
Grounding point	E <u>XX</u>
Power or signal jack	J <u>XX</u>
Power or signal plug for the opposite jack	P <u>XX</u>

Section 2: SSR-100 Components

2.1 Overview

Reference Drawing:

Schematic/Layout; Sportsound Rack 100**Drawing B-1190379**

Figure 3 displays the various announcer’s rack components that are visible after removing the protective covers. Refer to **Drawing B-1190379** in **Appendix A** for rack component and connection locations as well as a detailed wiring schematic.



Figure 3: SSR-100 Components (covers removed, optional equipment shown)

#	Component	Reference	Supplementary Manual
1	Audio Mixer	Section 3.2	Rane MLM82S Operators Manual
2	Wireless Receiver System	Section 3.3	Shure® QLX-D® Wireless System User Guide
3	I/O Panel w/ On/Off Switch	N/A	N/A

All supplementary manuals are listed in **Appendix B**.

2.2 Standard Equipment

Audio Mixer

The Rane MLM82S (Figure 4) features four balanced mono Mic/Line Inputs (XLR) with 15 VDC phantom power and signal/overload indicators. Each of the four Mic/Line Inputs may be assigned to A, A+B or B Outputs. Other features include:

- Four balanced stereo line inputs (TRS) with 12 dB of line gain
- Two balanced Outputs (XLR)



Figure 4: Audio Mixer

Announcer's Interface

The Daktronics Announcer's Interface (Figure 5) includes one (1) balanced MIC output, one (1) balanced AUX input, and headphone jacks; headphone volume control knob; and momentary or continuous microphone activation buttons. Microphone and headphones are provided.



Figure 5: Announcer's Interface Kit

Laptop Interface

This portable, durable balanced audio converter allows connection of a laptop or mp3/music player into pro-level mixers (Figure 6). Other features include:

- 1/8" (3.5 mm) male input
- Balanced XLR male output
- Adjustable output volume control
- Black powder-coated aluminum chassis



Figure 6: Laptop Interface

2.3 Optional Equipment

Wireless Microphone System

The Shure® QLX-D® is a professional UHF wireless microphone system. Dual receivers in the audio rack allow operation of two wireless transmitters simultaneously (Figure 7). Over 60 compatible channels per frequency band and up to 17 compatible systems per 6 MHz TV channel are available. Automatic Frequency Selection technology detects the clearest frequencies in the area. Other features include:

- Lockable settings
- Battery power gauges
- Effective Range: 328' (100 m) under optimal conditions
- Audio Frequency Response: 20Hz to 20kHz, ± 2 dB
- Total Harmonic Distortion: $< 0.1\%$
- RF Sensitivity: -97 dBm at 10-5 BER



Figure 7: Wireless Microphone & Bodypack Transmitter w/ Mute Switch

High Gain Antenna Kit

The Shure® PA805 (Figure 8) is a directional antenna for increased range and reduced interference. The “gain” of this antenna enables it to receive signals from a greater distance than at typical “whip” type antenna. The antenna allows for increased performance of wireless microphones with 6 db of gain. The directional antennas may be located up to 50' (15.2 m) away from the announcer’s rack.



Figure 8: Directional Antenna

Single-Muff Headset

The professional single-muff headset (Figure 9) may be used in place of the standard announcer’s interface wired microphone and headphones. Other features include:

- Ambient noise attenuation
- Neodymium magnet system for high reproduction precision
- Soft, circumaural ear pads
- Cardioid condenser microphone



Figure 9: Single-Muff Headset

USB Audio Interface

The Radial® Engineering USB-Pro™ (**Figure 10**) provides an interface from laptop computers to balanced outputs. Other features include:

- 24-bit, 96 kHz quality audio
- Two balanced XLR outputs (left and right)
- 3.5mm TRS headphone output
- Ground lift and mono-sum switches



Figure 10: USB Audio Interface

2.4 Signal Cables

Cable specifications are as follows:

- 5' (1.5 m) XLR cable for auxiliary audio input (part # W-1627)
- 15' (4.6 m) XLR cable between announcer's interface and rack (part # W-2074)
- 25' (7.6 m) XLR cable from rack to fiber box or wall plate (part # W-1560)

Notes:

- Keep unbalanced cable lengths under 6' (1.8 m) to prevent unwanted noise from being picked up. Use appropriate converters, such as the LTIBLOX Laptop Interface, to convert to balanced cables (**Figure 11**) for longer cable runs if necessary.
- Run audio cables away from power cables to prevent noise.
- Audio cables must be kept separate from current loop (scoreboard control) signal cables.



Figure 11: Balanced/Unbalanced Cable Comparisons

Section 3: Setup & Operation

3.1 Setup

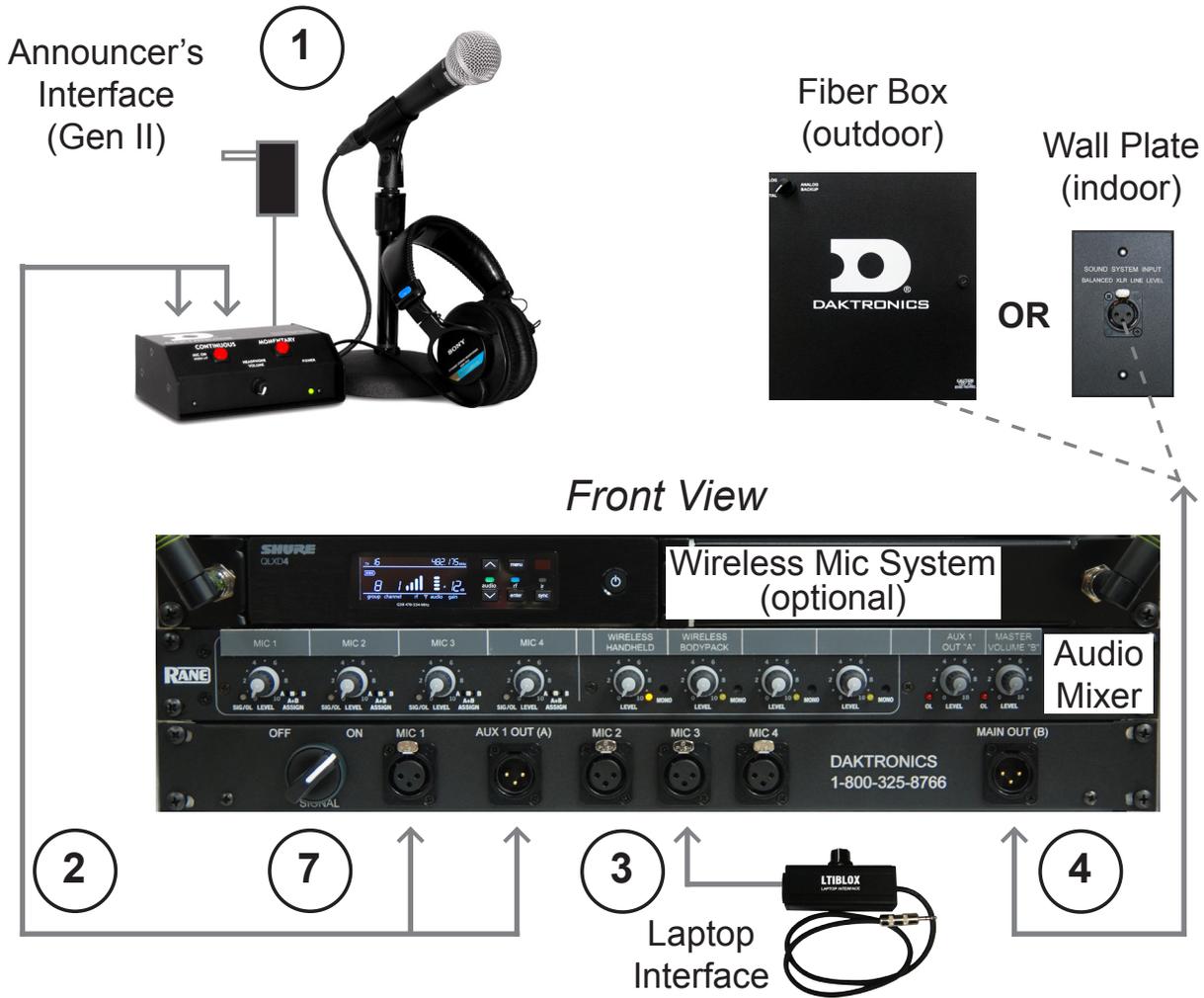
Before Beginning: Place the rack on a flat, sturdy surface. Remove the front and rear cover pieces by releasing all latches; set the covers aside. Refer to the steps below and **Figure 12**.

1. Announcer's Interface setup is described below. For more information, refer also to the quick guide (DD3083838) shipped with the device.
 - a. Connect the 2' (610 mm) XLR cable between the microphone and the **MIC 1 INPUT** jack.
 - b. Connect headphones to the 1/4" or 1/8" jack.
 - c. Connect the provided 12 VAC wallpack transformer to the power input jack, and then plug the other end into a standard 120 VAC outlet. Use the tab above the power jack as a strain relief for the power cord.
2. Connect the 15' (4.6 m) XLR cable from **MIC 1 & AUX 1** on the announcer's interface to **MIC 1 & AUX 1 OUT (A)** jacks on the front of the rack.
3. Connect one end of the 2' (0.6 m) or 5' (1.5 m) XLR cable to the LTIBLOX Laptop Interface and the other end to **MIC 2**. The 3.5 mm plug may be connected to the headphone jack of a laptop or MP3 player.
4. Connect the 25' (7.6 m) XLR cable between the **MAIN OUT (B)** jack on the front of the rack and the **SYSTEM AUDIO** jack on the bottom of the fiber box. If there is no fiber box, the cable will typically connect to a wall plate junction box instead.
5. Locate the 3-prong power cord in the rear of the rack and plug into a standard outlet. Ensure the fiber box (if included) also has power.
6. Turn on the power strip.
7. Switch the **SIGNAL** to **ON**.

Follow the above steps in reverse order to power down the system. Place all accessories in a secure location to avoid damage/theft.

Note: Ensure any optional antennas connected into the jacks off to the sides of the wireless receiver(s) are perpendicular to the rack and angled outward at ~45°, as shown in **Figure 3**.

Alternately, coaxial cable from the optional high gain antenna kit may be connected into these jacks. The antennas should be located within 50' (15.2 m) of the rack, using desktop stands or mounted to the ceiling. Refer to the **Shure® Model PA805 Directional Antenna User Guide** for more information.



Rear View



Figure 12: Rack Setup w/ Announcer's Interface (Gen II)

3.2 Mixer Operation

Basic instructions are described below. For more information about mixer operation, refer to the **Rane MLM82S Operators Manual**.

- Ensure all source equipment is turned on and operational (refer to appropriate pages).
- For each input channel (source) in use, verify the following settings as shown in **Figure 13**:
 - **SIG/OL** light is green; if this light is red, decrease the level
 - **ASSIGN** is set to "A+B" or "B"

Note: Inputs set to "A" will only be heard through the announcer's console headphones. This may be used to listen to each input without interrupting the main mix.

- When the input is in MONO mode, the signal goes to both "A" and "B" outputs. The amber LED illuminates when in MONO mode (**Figure 14**). When not in MONO mode, the input signal goes to the "B" output (as set in the factory).
- Adjust MASTER VOLUME "B" level (**Figure 15**) to achieve the final output. If the OL light is red, decrease the level.

Remember: Bad input = bad output. No adjustment on the mixer can make a poor source sound better. For best results, be sure to use high-quality audio files from your MP3 player or laptop, and set the device to near full volume.



Figure 13: Input Level Adjustment



Figure 14: MONO Input



Figure 15: MASTER Output

3.3 Wireless Mic System Operation (Optional)

Basic instructions are described below. For more information about wireless mic system operation, refer to the **Shure® QLX-D® Wireless System User Guide**.

Note: For systems built prior to November 2014, refer to the **Shure® ULX® Wireless System User Guide** for setup and operation instructions.

Wireless Receiver



Figure 16: Wireless Receiver LCD & Controls

The unit displays the following information (**Figure 16**):

- a. Transmitter Battery Life
- b. TV Channel
- c. Frequency
- d. Group Number
- e. Channel Number
- f. RF Signal Strength
- g. Transmitted Audio Level
- h. Gain Level

Single Receiver

1. **Ensure all transmitters are powered off.** Press the power button to turn on the receiver if it is not already on.
2. Press **menu** until “scan” displays on the LCD.
3. Press **enter** to start frequency scan. When scan is complete, Group and Channel will display on the LCD.

Network Receivers

1. **Ensure all transmitters are powered off.** Turn on all receivers and wait one minute to allow time to connect to the network.
2. Press **menu** on one receiver until group number flashes.
3. Use the arrow buttons to select a group to scan.
4. Press **enter**, wait for channel, and then press enter again.
5. Press **menu** until “network scan” displays on the LCD.
6. Press **enter** twice to deploy channels to other receivers.

Note: Perform a scan on all of the wireless units *just minutes* before the game! If a scan is performed too far ahead of time, frequencies set up by the media later on may interfere with previously configured wireless microphone settings.

Wireless Mic & Bodypack Operation

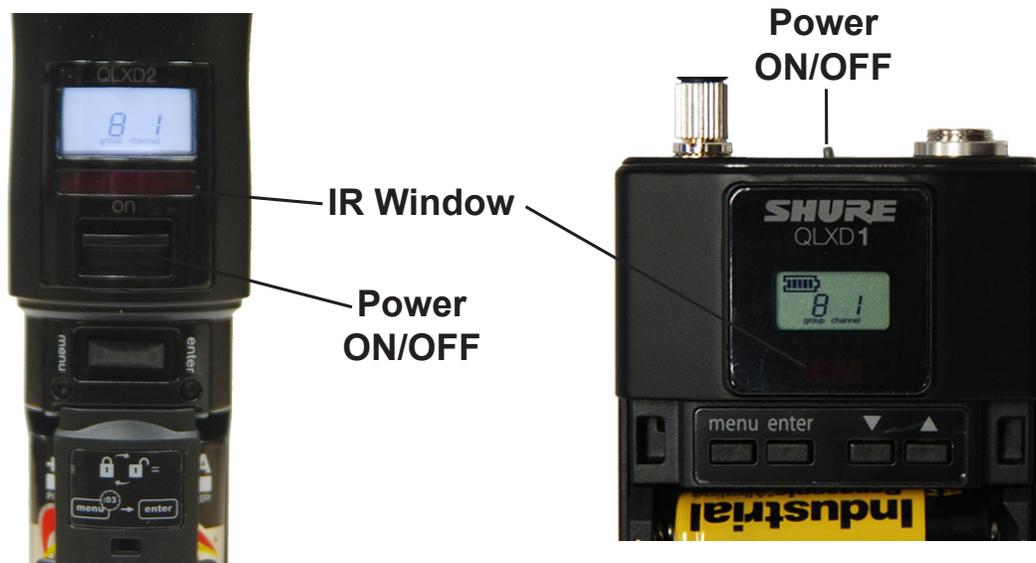


Figure 17: Wireless Mic & Bodypack Controls

1. Open the battery cover. Insert new or fully-charged AA batteries prior to each use, and always have spares on hand.
2. Power on the transmitter device (**Figure 17**).
3. Hold the transmitter device up close to one receiver in the rack, ensuring the infrared (IR) windows are aligned.
4. Press **sync** on the receiver; “good” will display if sync was successful.
5. Repeat steps 1-4 to pair another transmitter device with an additional receiver (if present).

Note: Plug the referee mute switch into the jack on top of the bodypack unit and plug headphones/lapel mic into the referee mute switch.

Verify Reception: With a transmitter and the receiver both turned on and having matching GROUP and Channel numbers, the RF meter on the receiver should be indicating signal. Speak into the microphone and the TX AUDIO meter should indicate signal presence.

Additional Tips:

- Perform a group and channel scan to obtain the best available channel for microphones.
- Check that battery levels are adequate to prevent wireless equipment from powering off during use.
- Program one microphone per receiver; multiple microphones on the same channel will cause interference and microphones will drop out.
- Always use quality batteries to prevent battery leaks that can corrode and shorten the life of the equipment.

3.4 Microphone Best Practices

- Keep handheld microphones 4-6 inches (102-152 mm) from the mouth (about the width of a hand).

“P-pops” are loud sounds created by the release of breath when saying letters like “p” or “b”. To avoid P-pops, keep handheld microphones below the mouth, angled toward the nose at a 45° angle. Do not point the front of the microphone straight at the mouth.
- Position headset microphones as close to the mouth as comfortable.
- The referee bodypack kit includes both headset and lapel microphones. In general it is recommended to use the headset mic for best results. If the lapel mic is desired, clip it onto a lapel, as close to the center of the chest as possible.
- The softer or louder the speaker’s voice, move the microphone closer or further away, respectively.
- Never hit or intentionally blow into a microphone as it could quite easily be damaged.

Feedback

Feedback is a high-pitched noise caused when the sound through a speaker is picked up again by the microphone. If there is feedback in the system, it can be removed/reduced with the tips below:

- Practice proper microphone placement. The mic should be as close as possible to the mouth. Use a headset whenever possible; lapel mics are more prone to feedback.
- Practice proper setup of the gain structure throughout the system. Start from the source (wireless mic system) and ensure all levels are good.
- Make sure to use the windscreens on the microphones.
- Try a different mic. Cardioid mics will have a higher gain before feedback than Omni-directional mics. However, Cardioid mics will have more wind noise versus Omni-directional. When it comes to choosing between wind noise or feedback, it's the lesser of two evils to listen to wind noise.
- Be aware of areas prone to feedback, such as from the 20 yard line and in. Communicate to the referee that they shouldn't be making announced calls past a certain point on the field.

Section 4: Maintenance & Troubleshooting

4.1 Maintenance

- Unplug rack (and fiber box, if included) from power during periods of non-use.
- Store equipment in a clean dry place free from moisture, debris, and extreme temperatures.
- Keep announcers rack and equipment covered from dust and debris when not in use.
- Clean equipment annually or as needed using electronic equipment duster and a dry cloth.

4.2 Troubleshooting

This section lists potential problems with the system, indicates possible causes, and suggests corrective action. This list does not include every possible problem, but it does represent some of the more common situations that may occur. If individual components fail to work, refer to troubleshooting sections in the manufacturers' manuals. If the problem persists, please contact Daktronics for assistance.

Symptom/Condition	Possible Cause	Potential Solution
No power lights illuminated on rack equipment	Rack power strip switch is in the OFF position	Flip the rack power strip switch to the ON position
	Rack is plugged into dead wall receptacle	Verify the rack is plugged into live wall receptacle
No audio exiting the rack	SIGNAL switch is in the OFF position	Flip switch to the ON position
	No audio present at mixer	Verify audio source is outputting signal to mixer and gain knobs are set to an appropriate level (mixer signal indicator lights should be illuminated green)
Announcer's interface microphone signal does not appear at mixer	Announcer's interface does not have power	Verify the interface is plugged into live wall outlet
	Announcer's interface is not plugged into appropriate inputs on the rack	Plug announcer's interface into AUX 1 OUT (A) and MIC 1 on front of rack
	Improper mixer slider settings for MIC 1	Adjust MIC 1 level knob
	The announcer's interface "push-to-talk" button is not being pressed	Hold the MOMENTARY button while speaking into the microphone
Announcer only hears self through headphones	Switch on the announcer's interface is set to MIC ONLY	Switch to AUX IN
Announcer hears nothing through headphones	Announcer's interface is not plugged into appropriate inputs on the rack	Plug announcer's interface into AUX 1 OUT (A) and MIC 1 on front of rack
	AUX 1 OUT (A) settings are improperly set on mixer	Check AUX 1 OUT (A) mixer settings
	Announcer's interface HEADPHONE VOLUME is turned down	Turn HEADPHONE VOLUME knob to an appropriate level
Announcer's mic muting circuit does not work	No phantom power from mixer	Ensure 15V PHANTOM POWER button on back of mixer is depressed (Gen I Announcer's interface only)

Symptom/Condition	Possible Cause	Potential Solution
For Wireless		
No signal present at mixer from wireless microphones	The battery is not installed properly in the transmitter	Reinstall the battery properly
	The battery is not providing full power	Charge or replace battery
	The transmitter is not switched to the ON position	Switch the transmitter to the ON position
	The transmitter and receiver are set to different channels	Set to same channel
Interference on wireless equipment	Competing RF equipment within frequency band	<ol style="list-style-type: none"> 1. Scan for clearest group/channel on microphone receiver. 2. Switch wireless receiver and transmitter to an available clear channel. (Section 3.3)
Low audio signal from wireless device	Improper gain adjustment on mixer input	Set proper mixer input gain levels
	Improper gain adjustment on transmitter output	Set proper transmitter output gain levels (refer to Shure® Wireless System User Guide)
Wireless microphone is cutting out	The battery is not providing full power.	Charge or replace battery.
	Transmitter and Receiver Antenna are not in line of sight.	Relocate receiver antenna to be in clear line of sight to field. Note: If signal goes through tinted glass, antennas may need to be relocated outside (High Gain Antenna Kit required).
		Ensure referee is placing transmitter on belt properly. Refer to Referee Mic Best Practice (DD2945863).
	Proper wireless frequency is not selected for the area.	<ol style="list-style-type: none"> 1. Go to http://www.shure.com/americas/support/tools/wireless-frequency-finder 2. Enter the ZIP Code of the facility, select QLX-D as the Wireless Series, and then click Search. 3. Ensure the wireless receiver is set to the proper Group & (Reserved) Channel for the Band in use, and then sync the transmitter(s) to the receiver.
Low wireless signal strength	If all of the above solutions have been performed, order a High Gain Antenna kit to increase signal strength.	

Section 5: Replacement Parts

5.1 SSR-200 Components

Part Description	Part Number
Announcer's Interface	0A-1534-0093
Announcer's Interface; Push-to-Talk	A-3698
Desk Microphone Stand	A-1954
Headphones, 1/4" Phone	A-1962
Dynamic Vocal Microphone	A-2790
Wallpack Transformer, 12VAC; 6' Cord	T-1118
2' XLR Cable	W-1917
15' Cable, Announcer Box to Mixer	W-2074
Rane MLM82S Mixer	A-1960
6 Outlet Power Strip	A-2840
LTIBLOX Laptop Interface	A-2755
Cable, 25' XLR M to F	W-1560
Cable, 5' XLR M to F	W-1627
Cable, 2' XLR M to F	W-1917

5.2 Optional Components

Part Description	Part Number
High Gain Antenna Kit	0A-1340-0325 (2)
Desk Microphone Stand	A-1954
Microphone Stand, Flange Mount	A-2888
13" Gooseneck	A-2889
Passive Directional Antenna, 470-952 MHz	A-3124
50' Coaxial Antenna Cable w/ BNC	W-2476
Referee Headset Microphone	A-1972
Single Muff Microphone Headset	A-2382
USB Audio Interface	A-2493
Referee Mute Switch	A-3122
Referee Lapel Microphone	A-3589
Wireless Receiver For Band G50	A-3590
Wireless Receiver For Band H50	A-3591
Wireless Receiver For Band J50	A-3592
Wireless Handheld For Band G50	A-3593
Wireless Handheld For Band H50	A-3594
Wireless Handheld For Band J50	A-3595
Wireless Bodypack For Band G50	A-3596
Wireless Bodypack For Band H50	A-3597
Wireless Bodypack For Band J50	A-3598
Wireless Accessories	
Passive Antenna Combiner	A-3121
Black Cloth Pouch for Bodypack	A-3123

Section 6: Daktronics Exchange and Repair & Return Programs

6.1 Exchange Program

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

Before Contacting Daktronics

Identify these important numbers:

Model Number: _____

Job/Contract Number: _____

Date 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 which is 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.

6.2 Repair & Return Program

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

1. **Call or fax Daktronics Customer Service.**

Refer to the appropriate market phone number in the chart 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 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

6.3 Daktronics Warranty & Limitation of Liability

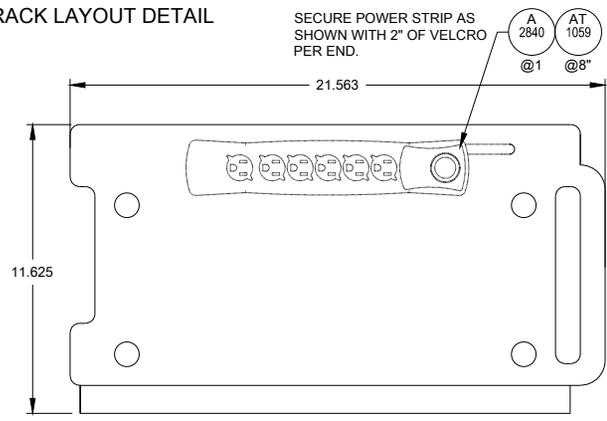
The Daktronics Warranty & Limitation of Liability is located in **Appendix C**. The Warranty is independent of Extended Service agreements and is the authority in matters of service, repair, and display operation.

Appendix A: Reference Drawings

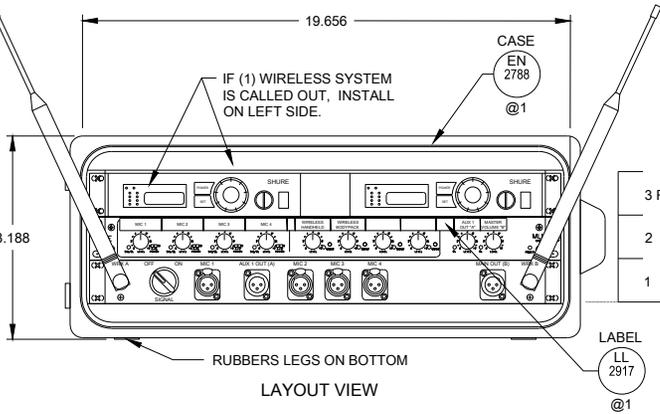
Refer to Section 1.1 for information regarding how to read the drawing number. These drawings are listed in alphanumeric order. Any contract-specific drawings take precedence over the general drawings.

<i>Drawing Title</i>	<i>Drawing Number</i>
Schematic/Layout; Sportsound Rack 100 (<i>prior to November 2014</i>).....	B-1143675
Schematic/Layout; Sportsound Rack 100.....	B-1190379

RACK LAYOUT DETAIL

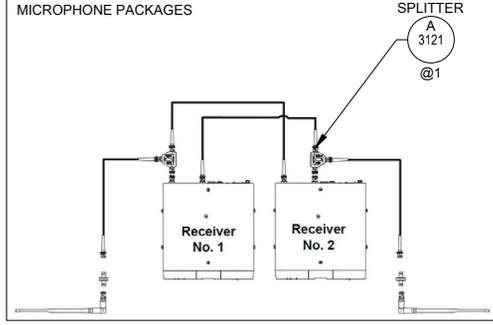


TOP VIEW

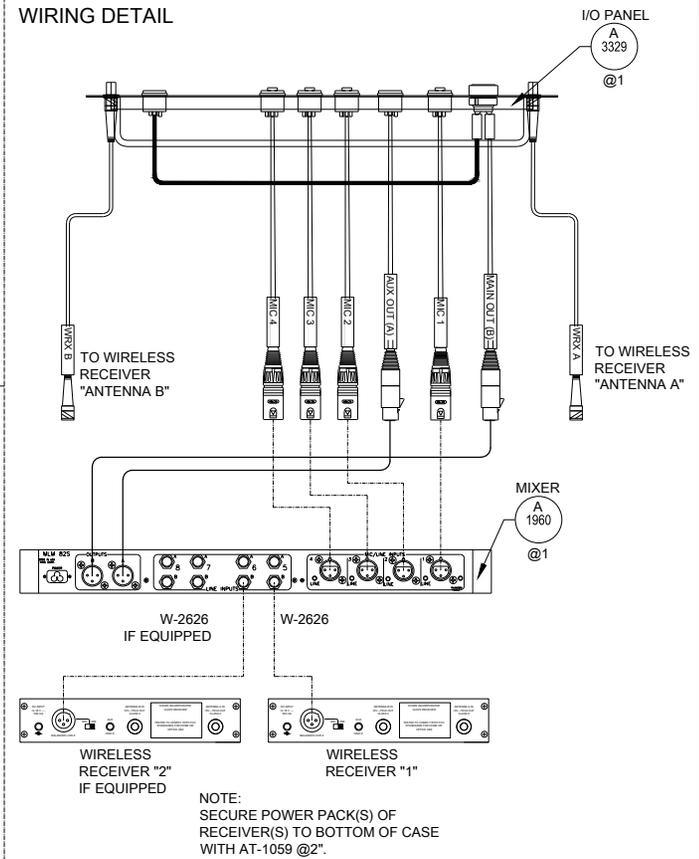


LAYOUT VIEW

NOTE:
SPLITTER KIT TO BE INSTALLED IN DUAL WIRELESS MICROPHONE PACKAGES



WIRING DETAIL



MICROPHONE PACKAGE CROSS REFERENCE

- A-3115 - WIRELESS BODYPACK PACKAGE - G3
- A-3116 - WIRELESS BODYPACK PACKAGE - J1
- A-3117 - WIRELESS BODYPACK PACKAGE - M1
- A-3118 - WIRELESS HANDHELD PACKAGE - G3
- A-3119 - WIRELESS HANDHELD PACKAGE - J1
- A-3120 - WIRELESS HANDHELD PACKAGE - M1

- 3 R.U. WIRELESS RECEIVER (S)
- 2 A-1960 / ANALOG MIXER
- 1 A-3329 / I/O PANEL

NOTE:
SECURE POWER PACK(S) OF RECEIVER(S) TO BOTTOM OF CASE WITH AT-1059 @2".

COMPONENT SETTINGS

COMPONENT	LOCATION	SETTING	VIEW
A-1960 - MIXER	BACK PANEL - MIC/LINE INPUTS	ALL (4) BUTTONS SET TO "MIC" LEVEL (OUT POSITION)	
		PHANTOM POWER ON (IN POSITION)	
	FRONT PANEL - MIC/LINE INPUTS	A-B ASSIGN	
	FRONT PANEL - STEREO LINE INPUTS	"MONO" (LIGHT ILLUMINATED) "USE SMALL SCREWDRIVER"	
WIRELESS RECEIVER(S)	BACK PANEL	ALL FRONT KNOBS	
		SET TO "LINE" LEVEL	

ASSEMBLY NOTES:

1. INSTALL CLAMPING NUTS SUPPLIED WITH CASE. START WITH TOP HOLE, SKIP A HOLE, INSTALL TWO NUTS, SKIP A HOLE, INSTALL TWO NUTS, SKIP A HOLE, INSTALL LAST NUT. REPEAT FOR BOTH SIDES.
2. INSTALL RACK MOUNT COMPONENTS AS SHOWN USING THE SUPPLIED HARDWARE WITH CASE.
3. SINGLE WIRELESS RECEIVER: INSTALL ON LEFT SIDE. USE BRACKETS AND HARDWARE THAT ARE SUPPLIED WITH RECEIVER FOR MOUNTING. PLACE SUPPLIED ANTENNA HOLE PLUGS IN SUPPLIED PLATE ON SINGLE RECEIVER ASSEMBLIES.
4. ATTACH ENGRAVED LABEL TO UPPER MOST PART OF MIXER AND SO THAT LETTERING ALIGNS WITH KNOBS. DO NOT COVER DIAL SETTING NUMBERS. SEND ANY ADDITIONAL LABELS WITH ASSEMBLY.
5. USE PRINTED LABELS ON CABLES THAT COME WITH I/O PANEL AS GUIDE TO PROPER CONNECTIONS TO MIXER.
6. PLUG W-2626 FROM RECEIVER BALANCE LOW Z TO MIXER AS SHOWN.
7. USE CABLE TIES AND LACER BAR ON I/O PANEL TO NEATLY ROUTE ALL CABLES TO COMPONENTS.
8. INSTALL POWER STRIP AS SHOWN AND PLUG ALL POWERED COMPONENTS IN.
9. MOUNT RECEIVER TRANSFORMER TO BOTTOM OF RACK. "DO NOT ATTACH TO MIXER."
10. CLEAN UP ANY/ALL CABLES SO INSIDE OF RACK IS NEAT AND ORDERLY.
11. INSTALL ANTENNAS SUPPLIED WITH WIRELESS SYSTEM ON I/O PANEL. USE TWO WASHERS PER ANTENNA.
12. ENSURE ALL COMPONENTS ARE SET TO THE PROPER COMPONENT SETTINGS LISTED.
13. POWER ON ALL EQUIPMENT, AND TEST FOR PROPER FUNCTIONALITY. REFER TO WORK INSTRUCTION FOR PROCEDURE.
14. PLACE WIRELESS TRANSMITTER EQUIPMENT IN THEIR SUPPLIED CASES.
15. FOLD DOWN ANTENNAS AND SECURE LID ON CASE.
16. PACKAGE ASSEMBLY AND LOOSE PARTS. USE SAME PACKAGE AS CASE GETS SHIPPED IN FOR MAIN RACK.

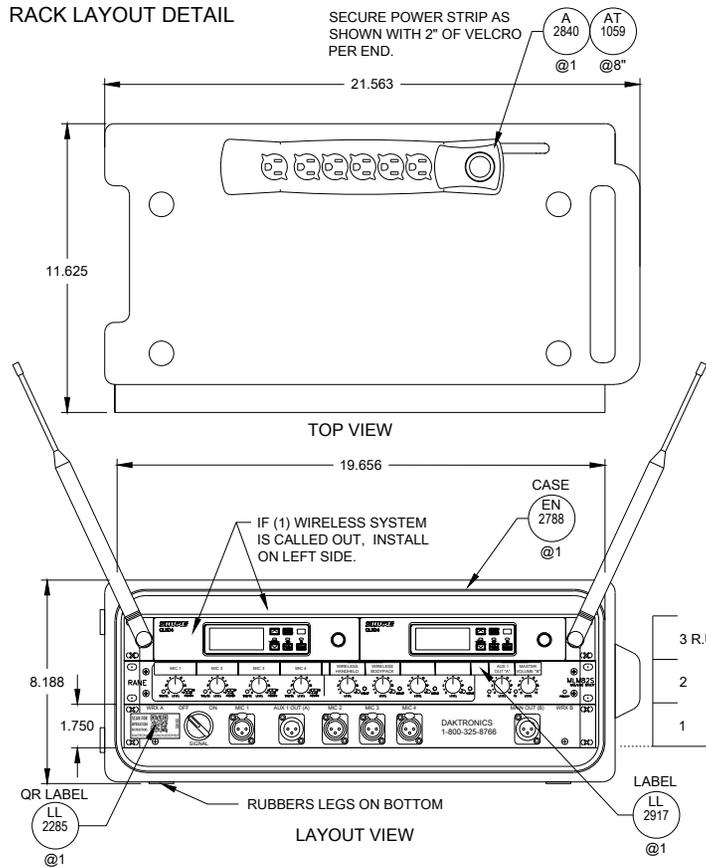
REFERENCE PACKETS:

- 0A-1756-0006 SSR-100-1H-G3
- 0A-1756-0007 SSR-100-1H-J1
- 0A-1756-0009 SSR-100-2H-G3
- 0A-1756-0010 SSR-100-2H-J1
- 0A-1756-0012 SSR-100-1H-1B-G3
- 0A-1756-0013 SSR-100-1H-1B-J1
- 0A-1756-0017 SSR-100-1B-G3
- 0A-1756-0018 SSR-100-1B-J1

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DO NOT SCALE DRAWING			
PROJ: SPORTSOUND SYSTEMS			
TITLE: SCHEMATIC/LAYOUT: SPORTSOUND RACK 100			
DESIGN: DTREML	DRAWN: DTREML	DATE: 15 JUL 13	
SCALE: 1=5			
SHEET	REV	JOB NO.	FUNC-TYPE-SIZE
	01	P1756	E-10-B
			1143675

REV	DATE	UPDATED DRAWING PER MANUFACTURING REDLINES	BY:
01	25 SEP 13		DMT

RACK LAYOUT DETAIL



SECURE POWER STRIP AS SHOWN WITH 2" OF VELCRO PER END.

A 2840 @1
AT 1059 @8"

TOP VIEW

LAYOUT VIEW

IF (1) WIRELESS SYSTEM IS CALLED OUT, INSTALL ON LEFT SIDE.

CASE EN 2788 @1

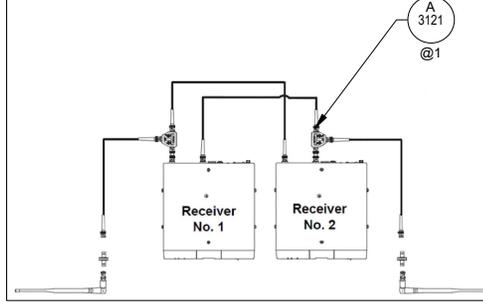
- 3 R.U. A-3590, A-3591, A-3592 / WIRELESS RECEIVER (S)
- 2 A-1960 / ANALOG MIXER
- 1 A-3329 / I/O PANEL

RUBBERS LEGS ON BOTTOM

QR LABEL LL 2285 @1

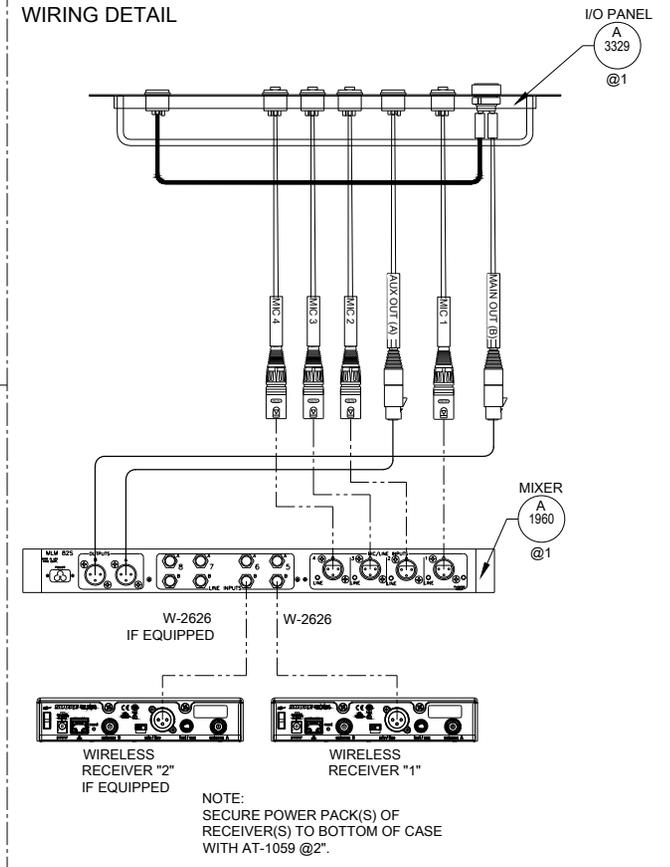
LABEL LL 2917 @1

NOTE: SPLITTER KIT TO BE INSTALLED IN DUAL WIRELESS MICROPHONE PACKAGES



SPLITTER A 3121 @1

WIRING DETAIL



I/O PANEL A 3329 @1

MIXER A 1960 @1

W-2626 IF EQUIPPED

W-2626

WIRELESS RECEIVER "2" IF EQUIPPED

WIRELESS RECEIVER "1"

NOTE: SECURE POWER PACK(S) OF RECEIVER(S) TO BOTTOM OF CASE WITH AT-1059 @2".

COMPONENT SETTINGS

COMPONENT	LOCATION	SETTING	VIEW
A-1960 - MIXER	BACK PANEL - MIC/LINE INPUTS	ALL (4) BUTTONS SET TO "MIC" LEVEL (OUT POSITION)	
		PHANTOM POWER ON (IN POSITION)	
	FRONT PANEL - MIC/LINE INPUTS	A-B ASSIGN	
	FRONT PANEL - STEREO LINE INPUTS	"MONO" (LIGHT ILLUMINATED) *USE SMALL SCREWDRIVER*	
	ALL FRONT KNOBS	ALL SET TO "0"	
WIRELESS RECEIVER(S)	BACK PANEL	SET TO "LINE" LEVEL	

ASSEMBLY NOTES:

1. INSTALL CLAMPING NUTS SUPPLIED WITH CASE. START WITH TOP HOLE, SKIP A HOLE, INSTALL TWO NUTS, SKIP A HOLE, INSTALL TWO NUTS, SKIP A HOLE, INSTALL LAST NUT. REPEAT FOR BOTH SIDES.
2. INSTALL RACK MOUNT COMPONENTS AS SHOWN USING THE SUPPLIED HARDWARE WITH CASE.
3. SINGLE WIRELESS RECEIVER: INSTALL ON LEFT SIDE. USE BRACKETS AND HARDWARE THAT ARE SUPPLIED WITH RECEIVER FOR MOUNTING. PLACE SUPPLIED ANTENNA HOLE PLUGS IN SUPPLIED PLATE ON SINGLE RECEIVER ASSEMBLIES.
4. ATTACH ENGRAVED LABEL TO UPPER MOST PART OF MIXER AND SO THAT LETTERING ALIGNS WITH KNOBS. DO NOT COVER DIAL SETTING NUMBERS. SEND ANY ADDITIONAL LABELS WITH ASSEMBLY.
5. PRINT DD2843610 ON LL-2285 AND APPLY TO LEFT END OF A-3329 I/O PANEL.
6. USE PRINTED LABELS ON CABLES THAT COME WITH I/O PANEL AS GUIDE TO PROPER CONNECTIONS TO MIXER.
7. PLUG W-2626 FROM RECEIVER BALANCE LOW Z TO MIXER AS SHOWN.
8. USE CABLE TIES AND LACER BAR ON I/O PANEL TO NEATLY ROUTE ALL CABLES TO COMPONENTS.
9. INSTALL POWER STRIP AS SHOWN AND PLUG ALL POWERED COMPONENTS IN.
10. MOUNT RECEIVER TRANSFORMER TO BOTTOM OF RACK. *DO NOT ATTACH TO MIXER.*
11. CLEAN UP ANY/ALL CABLES SO INSIDE OF RACK IS NEAT AND ORDERLY.
12. INSTALL ANTENNAS SUPPLIED WITH WIRELESS SYSTEM ON I/O PANEL. USE TWO WASHERS PER ANTENNA.
13. ENSURE ALL COMPONENTS ARE SET TO THE PROPER COMPONENT SETTINGS LISTED.
14. POWER ON ALL EQUIPMENT, AND TEST FOR PROPER FUNCTIONALITY. REFER TO WORK INSTRUCTION FOR PROCEDURE.
15. PLACE WIRELESS TRANSMITTER EQUIPMENT IN THEIR SUPPLIED CASES.
16. FOLD DOWN ANTENNAS AND SECURE LID ON CASE.
17. PACKAGE ASSEMBLY AND LOOSE PARTS. USE SAME PACKAGE AS CASE GETS SHIPPED IN FOR MAIN RACK.

REFERENCE PACKETS:

0A-1756-0022	SSR-100-1H-G50	0A-1756-0028	SSR-100-1H-1B-G50
0A-1756-0023	SSR-100-1H-H50	0A-1756-0029	SSR-100-1H-1B-H50
0A-1756-0024	SSR-100-1H-J50	0A-1756-0030	SSR-100-1H-1B-J50
0A-1756-0025	SSR-100-2H-G50	0A-1756-0031	SSR-100-1B-G50
0A-1756-0026	SSR-100-2H-H50	0A-1756-0032	SSR-100-1B-H50
0A-1756-0027	SSR-100-2H-J50	0A-1756-0033	SSR-100-1B-J50

REV	DATE	EC-22053 ADDED NOTE TO PRINT DD2843610	BY: CJB
01	26 JUL 16		
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PROJECT: DAKTRONICS AUDIO SYSTEMS			
TITLE: SCHEMATIC/LAYOUT; SPORTSOUND RACK 100			
DATE:	11 SEP 14	DIM UNITS:	INCHES (MILLIMETERS)
SCALE:	1=5	DO NOT SCALE DRAWING	
DESIGN:	D TREML	JOB NO.:	P1756
DRAWN:	KSCHNABEL	FUNC - TYPE - SIZE:	E - 10 - B
			SHEET 01
			REV 1190379

Appendix B: Supplementary Manuals

Manuals for all standard and optional components are shipped along with the audio system.

- If any product manuals are missing, lost, or damaged, visit the manufacturer's website or perform a web search for the component model number.
- When viewing a digital copy of this manual (available at www.daktronics.com/manuals), click on the appropriate manufacturer link below to view a component's manual. If the link is broken, visit the manufacturer's website or perform a web search for the component model number.

Component	Model Number	Manufacturer / Manual
Audio Mixer	MLM82S	Rane www.rane.com
Wireless Receiver System	QLX-D	Shure www.shure.com
	ULX <i>(prior to November 2014)</i>	Shure www.shure.com
Directional Antenna	PA805	Shure www.shure.com
USB Audio Interface	USB-Pro	Radial Engineering www.radialeng.com

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 and End User agree 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 (the "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 End User 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 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 End User 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 End User and shall ship such items DDP End User's designated facility; otherwise, End User shall pay transportation charges to return the Equipment back to the End User 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. End User 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. Unless otherwise expressly provided, this Warranty does not impose any duty or liability upon Daktronics for partial LED pixel degradation. Notwithstanding the foregoing, in no event does this Warranty include LED pixel degradation caused by UV light. This Warranty does not 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, OR ACCURACY OR QUALITY OF DATA. OTHER ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY DAKTRONICS, ITS AGENTS OR EMPLOYEES, SHALL NOT CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF THIS LIMITED WARRANTY.

THIS LIMITED WARRANTY IS NOT TRANSFERABLE.

2. Exclusion from Warranty Coverage

This Warranty does not impose any duty or liability upon Daktronics for any:

A. 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, End User assumes all risk of loss or damage, agrees to use any shipping containers that might be provided by Daktronics, and to ship the Equipment in the manner prescribed by Daktronics;

B. damage caused by: (i) the improper handling, installation, adjustment, use, repair, or service of the Equipment, or (ii) any physical damage which includes, but is not limited to, missing, broken, or cracked components resulting from non-electrical causes; altered, scratched, or fractured electronic traces; missing or gauged solder pads; cuts or clipped wires; crushed, cracked, punctured, or bent circuit boards; or tampering with any electronic connections, provided that such damage is not caused by 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) improper power including, without limitation, 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;

DAKTRONICS WARRANTY & LIMITATION OF LIABILITY

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

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

F. 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 End User and are not part of the contract of sale;

G. 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. replenishment of spare parts. In the event the Equipment was purchased with a spare parts package, the parties acknowledge and agree that the spare parts package is designed to exhaust over the life of the Equipment, and as such, the replenishment of the spare parts package is not included in the scope of this Warranty;

I. security or functionality of the End User's network or systems, or anti-virus software updates;

J. performance of preventive maintenance;

K. 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;

L. incorporation of accessories, attachments, software or other devices not furnished by Daktronics; or

M. 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 claims asserting or based on (a) loss of use of the facility or equipment; lost business, revenues, or profits; loss of goodwill; failure or increased cost of operations; loss, damage or corruption of data; loss resulting from system or service failure, malfunction, incompatibility, or breaches in system security; or (b) 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, injury to property or any damages or sums paid 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 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. The End User'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 End User (which may be the Purchaser) of the Equipment and no attempt to extend the Warranty to any subsequent user-transferee of the Equipment shall be valid or enforceable without the express written consent of Daktronics.

5. 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. The parties consent to the application of the laws of the State of South Dakota to govern, interpret, and enforce each of the parties' 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 End User's protection, in addition to that afforded by the warranties set forth herein, End User 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).