



# VIDEO PRODUCTS

MAINTENANCE GUIDELINES

# CUSTOMER SERVICE

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# 1-866-343-6018

AVAILABLE: 24/7/365

## Support@Daktronics.com

### Customer Service Representative

- Schedule on-site service
- Order parts
- Provide communication & status updates for daily service needs.

### Technical Operation Center

- Display Hardware & Control System Technicians are available
- With an internet connection, can remotely link in to diagnose issues.

### Online Service Request Form

You can also fill out **Daktronics Online Service Request form**. Access this and other frequently asked questions at our Service and Support website: [www.daktronics.com/support](http://www.daktronics.com/support).

### Before Contacting Us

Please be prepared to provide your name, venue, priority code, or a case number you already have open.

### Routing Your Call

To expedite your call, please select from the following menu options when calling.

**\*If your account has been assigned a priority code, enter it now.**

- 1** Press 1 to speak to a customer service representative.
- 2** Press 2 to speak with a Technician.
  - Press 1 if you have been working with a technician and would like to continue that work.
  - Or Continue to hold:
    - Press 1 for Hardware.
    - Press 2 for Control Systems.



Visit [WWW.DAKTRONICS.COM/SUPPORT](http://WWW.DAKTRONICS.COM/SUPPORT) for manuals and other support information.



## CUSTOMER SERVICE ROLES

Review the variety of resources in place to assist you. The descriptions below will help you know which group to contact depending on your need.

### Customer Service Representative



- Helps by answering your calls.
- Helps to ensure that all of your service cases are managed effectively.
- Arranges to have the proper technicians and parts on site when needed.
- Helps to organize your pre-season work.
- Can help to provide a quote for a product or service.

### Technical Help Desk



- Helps to answer your technical questions.
- Will help to diagnose technical issues for you.
- Can help you to understand what parts you need for your system.

### Application Engineer



- Works with you to help you maximize the usage of your system.
- Works with your to understand your system and help to make application recommendations.

### Account Service Manager



- Serves as your point person to ensure things are running smoothly for you and that you are taken care of.
- Will work with you to understand your service needs and develop the right solution for your business.

# LIVE EVENTS SERVICE PORTFOLIO

	 ESSENTIAL	 ENHANCED	 PREMIER
Service Coordination (24/7/365)	YES	YES	YES
<b>PERFORMANCE SERVICES</b>			
Parts Repair/Replace/Exchange/Shipping	Standard	Expedited	Expedited
Technical Phone Support	YES	YES	YES
System Checks			
On-site (annual)	Upgradable	YES	YES
On-Site Field Services			
Response within 24 Hours of Notification	Billable	Upgradable	YES
On-site Response between 24-48 Hours of Notification	Billable	YES	N/A
Available Service between 48-72 Hours of Notification	Billable	N/A	N/A
On-site Parts Inventory Management	N/A	YES	YES
<b>ADD-ON SERVICES</b>			
On-site Pre-Event Display Hardware Check	N/A	Upgradable	YES
On-site Display Hardware Event Support	N/A	Upgradable <sup>2</sup>	YES
Display Cleaning	Upgradable	Upgradable	Upgradable
System Updates and Upgrades: Hardware, Software, Firmware	Upgradable	Upgradable	Upgradable
Field/Camera Calibration	Upgradable	Upgradable	Upgradable
Hoist Inspection	Upgradable	Upgradable	Upgradable
Sound System Inspection	Upgradable	Upgradable	Upgradable
<b>PROFESSIONAL SERVICES</b>			
Educational Programs			
Traditional (systems use and operation training)	Upgradable	Upgradable	Upgradable
On-line (software training)	Upgradable	Upgradable	Upgradable
Systems Consulting (system applications engineering)	Upgradable	Upgradable	Upgradable
Production/Management (event or special event)	N/A	Upgradable	Upgradable
Content & Network Management <sup>3</sup> (media networks packages)	N/A	Upgradable	Upgradable

**Notes**

<sup>1</sup> System Checks are defined as display and system optimization including filter changes, power and signal wiring inspection, internal cabling checks, pixel and module checks, front-end system checks for software updates, virus scans and file/hard drive cleaning.

<sup>2</sup> On-Site Event Support is available for Enhanced customers in conjunction with pre-event checks.

<sup>3</sup> Content & Network Management includes customizable account management (account services), systems setup and configuration, system turn-on/-off, content creation and coordination, content/network scheduling, schedule playback reporting.

# RETURN MATERIAL AUTHORIZATION (RMA)

## FOLLOW PROPER PROCEDURES TO SAVE TIME & MONEY

To get these parts checked in and processed quickly, we ask all customers **to complete the following steps when returning a part:**



### 1. CALL

Call the LE Customer Service number, 866-343-6018 (International Customers +1-605-696-3292).

Please have your Site ID on hand to avoid delays.



### 2. SET-UP CASE

Provide the part number and serial number obtained from the defective or unused part.

Note which display, and the approximate location of the defective part within that display, when failure was noticed.

Your Customer Service Representative will enter information in service system and provide RMA number.



### 3. PACKAGE AND SHIP

Include the following information on a note and securely attach to the defective or unused part:

Case number provided by your Customer Service Representative

Description of what is wrong with the part along with notification of which display the part was removed from and approximate location of the defective part within the display when failure was noticed.

Package defective or unused part adequately for shipment.

Ship to Daktronics Customer Service at the following address:

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

Reference the Case Number on all shipping documentation.

### When parts are returned without following the proper procedure to identify them, the following outcomes result:

The part can be lost.

The repair process takes longer.

Orders are slowed down.

Customers don't receive their credit.

The above situations arise whether the part is a defective part, defective exchange, or unused part. We check, and repair as needed, all parts before returning them to the customer or process returns for credit.

**NOTE:** Extreme delays will be caused by not shipping to the appropriate location or failing to clearly mark the reference number.

If you have any questions, please contact 866-343-6018

# EXCHANGE PROGRAM PROCEDURE

## Exchange Program Procedure

The Daktronics Exchange Program is a quick, convenient service for replacing key components in need of repair. The exchange program is rooted in the understanding and agreement that once Daktronics sends a replacement unit, the failed part will be returned to Daktronics to be repaired and placed into the inventory for another customer's use. Customers can use this service to reduce their equipment's downtime by following the guidelines below.

Daktronics Technical Support follows a professional troubleshooting process to diagnose and solve equipment problems on the phone with the customer and determines the necessary replacement part to ship to the customer.

The customer must return the failed part upon receiving the replacement part by using the same box and wrapping in which the replacement part arrived. The customer must then fill out and attach the enclosed UPS shipping document (keeping the copy for records) and return the part to Daktronics. The customer must ship the defective equipment back to Daktronics within two weeks of the ship date. If Daktronics does not receive the equipment back within this time period, it will be assumed that the customer is purchasing the replacement part and the customer will be invoiced for the value of the

new part (since the new exchange part is initially billed at a discount contingent upon the return of the failed component). Upon receiving the second invoice, the customer will have two additional weeks to return the part. If Daktronics does not receive the part within two weeks of the second invoice, the customer must pay the second invoice and will not be credited for the return of the failed part. If the customer returns the exchange equipment within two weeks after they receive the second invoice, the customer will be credited for the amount on the second invoice.

Daktronics provides the Exchange Program to help its customers get the most from their Daktronics products. Please call Daktronics Customer Service at 1-866-343-6018 for more information regarding the Exchange Program or any other Daktronics service

*Note: To avoid a second invoice, please return the defective part as soon as possible. Daktronics reserves the right to refuse returned equipment that has been misused or damaged due to accident, abuse, negligence, lightning, flood, or other acts of nature*



# CARING FOR YOUR LARGE SCREEN DISPLAY

## Basic Tips for Maintaining Your Display

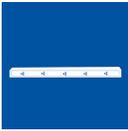
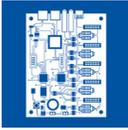
As a dynamic communications vehicle, Daktronics displays are engineered to offer more than 100,000 hours of system drive time. Nevertheless, like any vehicle, displays require periodic inspections and routine care to reach that 100,000 hour mark. The chart below offers some basic tips for keeping your display system in top shape, along with warning signs for individual components that may require service. For a comprehensive checklist, reference **Display Checks** on **page 11**.

	COMPONENT	EST. LIFE	PURPOSE	OPTIMIZE BY ...	SERVICE WHEN ...
	<b>Display Face</b>	10+ years	Combines display modules and sections to create the overall display.	Covering during the offseason to protect from dust and precipitation. Dusting and washing during yearly maintenance checks.	Dust and debris begins to build up on display face. Images appear dull or pixelated. Louvers or module masks become visibly damaged.
	<b>Display Module</b>	10+ years	Combines red, green and blue LEDs to produce video and motion graphics.	Reducing stress on LEDs by running at lower brightness levels at night. Maintaining color uniformity levels by executing field calibration every 1-3 years.	Sections of a display appear to have uneven brightness or color. Colors appear to come in and out, or individual pixels stay stuck on one color
	<b>Data Distributor (DD)</b>	10+ years	Fiber-optic data receiver that receives data from the control system and distributes the it throughout the display via the MultiLine Controller.	Dusting distributor box with compressed air and checking connections once a year. Contacting a service technician for firmware updates	Diagnostics indicate a failed DD component or poor DD connection. An individual column or section of a display exhibits flashing or goes completely dark.
	<b>Multi-Line Controller (MLC) and/or ProLink Router (PLR)</b>	10+ years	Receives data from the front end control system and routes the pixel information to the LED modules in the display	Dusting off PLR/MLC cards with compressed air and checking connections once a year. Contacting a service technician for firmware updates	Diagnostics indicate a failed PLR/ MLC card or poor connection. An individual column or section of a display begins flashing or goes completely dark.
	<b>Power Supply</b>	5-7 years	Delivers power to all display components.	Actively monitoring display power connections through system diagnostics. Checking all power connections during yearly maintenance checks.	Diagnostics indicate that a display section has lost power. The display experiences abnormal power surges
	<b>Cooling Fans</b>	8-10 Years	Direct cool air into the display and hot air out. Draw heat away from modules to protect critical components.	Dusting and inspecting cooling fans once a year. Every couple weeks, conduct a sound inspection for silent or excessively noisy fans.	Diagnostics indicate that a module or display section is overheating. Routine inspections reveal that a fan has become damaged.
	<b>Ventilation Filters</b>	6-12 Months	Prevent dirt and moisture from entering the display and tampering with internal components	Inspecting filters for dust and debris buildup once a month. Replacing filters every 6 to 12 months.	Diagnostics indicate that the display is overheating. A filter becomes visibly clogged with dust and debris.

# CARING FOR YOUR FREEFORM DISPLAY

## Basic Tips for Maintaining Your ProPixel® Display

As a dynamic communications vehicle, Daktronics ProPixel® displays are engineered to offer more than 75,000 hours of system drive time. Nevertheless, like any vehicle, displays require periodic inspections and routine care to reach that 75,000 hour mark. The chart below offers some basic tips for keeping your display system in top shape, along with warning signs for individual components that may require service.

	COMPONENT	EST. LIFE	PURPOSE	OPTIMIZE BY ...	SERVICE WHEN ...
	<b>Freeform Element</b>	10+ years	Combines red, green, and blue LEDs to produce video and motion graphics on the overall display.	<ul style="list-style-type: none"> <li>Covering during the offseason to protect from dust and precipitation.</li> <li>Dusting and washing during yearly maintenance checks.</li> <li>Periodically checking cabling for cracks and ends for corrosion.</li> <li>Reducing stress on LEDs by running at lower brightness levels at night.</li> </ul>	<ul style="list-style-type: none"> <li>Dust and debris begins to build up on display element face. Images appear dull or pixilated.</li> <li>Louvers or display element masks become visibly damaged.</li> <li>Sections of a display appear to have uneven brightness or color.</li> <li>Colors appear to come in and out, or individual pixels stay stuck on one color.</li> </ul>
	<b>Data Distributor (DD)</b>	10+ years	Fiber-optic data receiver that receives data from the control system and distributes it throughout the display via the ProPixel® Line Controller	<ul style="list-style-type: none"> <li>Dusting distributor box with compressed air and checking connections once a year.</li> <li>Contacting a service technician for firmware updates.</li> </ul>	<ul style="list-style-type: none"> <li>Diagnostics indicate a failed DD component or poor DD connection.</li> <li>An individual column or section of a display exhibits flashing or goes completely dark.</li> </ul>
	<b>ProPixel® Line Controller (PLC)</b>	10+ years	Receives data from the DD and routes the pixel information to the LED modules in the display.	<ul style="list-style-type: none"> <li>Dusting off PLC cards with compressed air and checking connections once a year.</li> <li>Contacting a service technician for firmware updates.</li> </ul>	<ul style="list-style-type: none"> <li>Diagnostics indicate a failed PLC card or poor connection.</li> <li>An individual column or section of a display begins flashing or goes completely dark.</li> </ul>
	<b>Power Supply</b>	5-7 Years	Delivers power to all display components.	<ul style="list-style-type: none"> <li>Actively monitoring display power connections through system diagnostics.</li> <li>Checking all power connections during yearly maintenance checks.</li> </ul>	<ul style="list-style-type: none"> <li>Diagnostics indicate that a display section has lost power.</li> <li>The display experiences abnormal power surges</li> </ul>
	<b>Cooling Fans</b>	8-10 Years	Direct cool air into the display and hot air out. Draw heat away from modules to protect critical components.	<ul style="list-style-type: none"> <li>Dusting and inspecting cooling fans once a year.</li> <li>Every couple weeks, conduct a sound inspection for silent or excessively noisy fans.</li> </ul>	<ul style="list-style-type: none"> <li>Diagnostics indicate that a module or display section is overheating.</li> <li>Routine inspections reveal that a fan has become damaged.</li> </ul>
	<b>Ventilation Filters</b>	6-12 Months	Prevent dirt and moisture from entering the display and tampering with internal components	<ul style="list-style-type: none"> <li>Inspecting filters for dust and debris buildup once a month.</li> <li>Replacing filters every 6 to 12 months.</li> </ul>	<ul style="list-style-type: none"> <li>Diagnostics indicate that the display is overheating.</li> <li>A filter becomes visibly clogged with dust and debris.</li> </ul>

# CARING FOR YOUR CONTROL SYSTEM

## Basic Tips for Maintaining Your Control System

As the creative engine of your display system, control components play an equally important role in obtaining an extended system life. Most control components, such as video processors and switchers, are engineered to last a lifetime, PC-based components, such as players and hard drives, need to be upgraded every 3-5 years to keep up with new software and content demands. The chart below offers some basic tips for keeping your control system up-to-speed, along with warning signs for control components that may require service. For a comprehensive optimization and service checklist, reference **Computer Checks** on **page 10**.

COMPONENT	EST. LIFE	PURPOSE	OPTIMIZE BY ...	SERVICE WHEN ...
 <b>Player/PC</b>	3-5 Years	Houses the software and drivers for the control system Stores multimedia for playback on the display. Monitors overall system health.	Backing up important files daily. Cleaning old files and defragmenting hard drives monthly. Checking for Windows updates and running virus sweeps monthly. Contacting a service technician for Daktronics firmware updates. Dusting the inside of the PC with compressed air at least once a year.	PC hard drives exhibit excessive grinding noises when starting and shutting down. PC cooling fans exhibit excessive noise or fail completely. System can no longer handle basic software upgrades. Software lags when executing basic commands.
 <b>Control Software</b>	10+ years	Executes control commands for various control system components. Delivers various multimedia to the display.	Checking regularly for important software and driver updates. Keeping media files in organized directories and folders. Cleaning up old files regularly	Key updates and service packages are released. A newer version of your control software becomes available.
 <b>Peripherals</b>	5-10 Years	Keyboard, mouse and monitor that connect to the player/PC.	Cleaning and dusting peripherals on a monthly basis. Keeping food/beverages away from peripherals. Using power-saving settings on PC monitor to conserve energy.	Peripherals come in contact with food or water. Cabling appears damaged or frayed. Control room demands an upgrade to wireless or touchscreen capabilities..
 <b>Video Image Processor</b>	10+ Years	Processes multimedia feeds for delivery to the display. Switches between different display inputs	Dusting processor box and checking connections during yearly maintenance checks. Contacting a service technician for firmware updates.	Video feeds appear scrambled. Processor no longer communicates with display. Configurations no longer save or restore. Processor doesn't boot up.
 <b>A/B Switch</b>	10+ Years	Switches between the primary display controller (input A) and backup controller (input B) during system malfunctions.	Testing both A and B inputs on a daily basis and before important events. Dusting the A/B box and checking connections during yearly maintenance checks.	Box lags when switching between A and B inputs. Box fails completely when switching. Cabling appears worn or frayed.
 <b>Universal Power Supply (UPS)</b>	5-10 Years	Delivers uninterrupted power to the control rack and its components. Provides power to backup batteries.	Inspecting UPS backup batteries and connections during yearly maintenance checks. Powering down the UPS when the display system is not in use.	System diagnostics indicate abnormal power surges coming from the UPS. UPS backup batteries reach their allotted lifetime.

# CARING FOR YOUR DISPLAY SYSTEM

## Live Events Maintenance Timeline

Since Live Events control systems contain a number of different components that all need to be in perfect sync for a production to succeed, they naturally require a little more attention when it comes to routine maintenance. Keeping a Live Events control system in top shape begins by conducting a comprehensive system optimization training course with all production personnel during which they become acquainted with important manuals and checklists to reference before, during and after each event, as well as important technical support phone numbers. The following table offers a quick reference guide for optimizing a Live Events control system along with important document references for conducting in-depth system checks.

TIME PERIOD	OPTIMIZE BY ...	REFERENCE
	Power up the video/fixed digit display(s) along with control system(s). Set display(s) to "game-time" mode.	
2 Days Before an Event	Conduct a visual inspection of displays for loose modules, fall hazards and debris buildup.	Pre-Event Checklist Pg. 12
The Day of the Event	Conduct a comprehensive control systems check. This check should include the DMPs, VIPs, All Sport® controllers, and the backup systems.  Set up stats program to send simulated game data	
After an Event (For facilities that do not run their display system every day)	Conduct a post-event evaluation. This is a good time to look at any issues that may have come up during the event to verify resolutions and other areas for improvement.  Analyze available system diagnostics and resolving technical issues with a service representative as needed.  Power down the system to conserve energy and extend component lifetime.	Daktronics Technical Training Guide
Every 3 Months	Conduct routine computer and control system checks. Verify that the backup systems have properly backed up content from the primary system. It may also be a good idea to have an offline backup, such as an external hard drive.  Check the operating system for system updates and anti-virus definitions.  Defragment hard drives and clear out old unused files.  Test control hardware and backup systems	Computer Checks Pg. 10
Every 6-12 Months	Conduct a complete inspection of internal and external display components.  Replace display filters that appear clogged or damaged.	Display Checks Pg. 11
Every 1-2 Years	Conduct technical training for on-site maintenance staff.  Check with your local Customer Service Representative for any for display and control system firmware updates.  Discuss computer upgrades with Daktronics service staff.	Daktronics Technical Training Guide
Every 2 Years	Review your multimedia inventory and introduce new design layouts and animations.  Discuss new methods for system optimization with a Daktronics service representative.  Integrate new statistical and control technologies into the display system	Your Daktronics Account Service Manager

Venue: \_\_\_\_\_

Date: \_\_\_\_\_

## Basic Computer Check

- Listen to the system for any hard drives or fans making excessive noise.
- Check the Event Viewer for any application, security and system errors.
- Use the Windows Update feature to update all windows components.
- Update anti-virus definitions.
- Verify that the monitor, keyboard, mouse and KVMs are in good working condition.
- Verify that the systems network is functioning properly. (You are able to see and transfer files to other computers on the network.)
- Check individual drive status.
- Defragment the hard drives (C & D drives). \*\*V-Play® controller should be defragmented at minimum once a week during the season.
- Verify that the external connectors are secured (computer ports, network cables, KVM connections, etc.).
- If computer has filters, take them out and clean them.
- Depending on years of operation, the inside of the computer may need to be cleaned using compressed air

## Show Control

- Ensure the diagnostics hub indicator is green.
- Create backup copy of Nucleus Server database; transport to Daktronics via removable storage.
- Ensure Display Studio – Upgrade license is valid; alert customer if license is nearing expiration.
- Ensure all licences are active with no expiration dates.
- Record Version Number.
- Use Display Studio to play script buttons for displays in the system to verify functionality.
- Create, save, and play content through Content Studio to verify functionality.
- Verify network connectivity between the user station and the DMPs (Digital Media Players).

## Digital Media Player (DMP)

- Run the V7chkRif.exe application to look for any corrupt .avi files and sequences.
- If the system contains a primary and backup computer, verify the sync program is functioning properly.
- Verify video image processor communication and that all settings and configurations have been backed up.
- Back up configuration and registry files and store in a central offline location, such as an external hard drive.
- Delete old sequences, .avi files, scripts, buttons and pages not used anymore, or back them up to an external hard drive for later use.

## Video Image Processor (VIP)

- Verify all incoming video feeds.
- Verify all VIP modes (Video, Overlay, and Chroma).
- Verify control scripts for proper operation.
- Verify V-XPport configuration and operation (if applicable).
- Verify front panel operation (if applicable).
- Test network connectivity.
- Send backup configurations to [contractcoordinator@daktronics.com](mailto:contractcoordinator@daktronics.com).

## Stats/Controllers

- Set up stat system/program/All Sport® controller and simulate a game.
- Verify statistical data is being transmitted/received by appropriate devices (DSTI, DMP, TV Feed ... etc.).
- Verify all external device operation (handheld start/stop, radar guns, shot clock, delay of game clocks, locker room clocks, etc.).
- Verify all back up components are properly functioning.

Venue: \_\_\_\_\_

Date: \_\_\_\_\_

## Display Components

### EXTERNAL COMPONENTS

#### Displays in the Off Mode/Blank

- Inspect displays for any modules that are not properly latched.
- Inspect displays for any pixels or LEDs that are stuck on.

#### Displays in the On Mode

- Inspect displays for any visual problems (flickering, etc.)
- Inspect displays for any pixels or LEDs that are stuck off.
- Inspect displays for any modules or sections that are discolored (calibration).

#### External Visual Inspection

- Inspect backsheets and access panels to verify that they are properly secured
- Inspect load centers/breaker panels and surge suppressors for potential hazards

### FREE FORM ELEMENTS

#### Displays in the Off Mode/Blank

- Inspect elements to ensure proper alignment.
- Inspect displays for any pixels or LEDs that are stuck on

#### Displays in the On Mode

- Inspect displays for any visual problems (flickering, etc.)
- Inspect displays for any pixels or LEDs that are stuck off.

#### External Visual Inspection

- Inspect cabling to ensure proper strain relief
- Inspect cabling for any loose connections to elements or control components
- Inspect load centers/breaker panels and surge suppressors for potential hazards

### INTERNAL COMPONENTS

#### Internal Visual Inspection

- Inspect fiber-optic terminals for signs of damage/corrosion.
- Inspect power terminals for signs of damage/corrosion.
- Inspect modules and other electrical components for excessive dust and dirt build up.
- Inspect display cabinets for signs of water intrusion.

### COOLING SYSTEM

#### External Visual Inspection

- Listen for any damaged or not working cooling fans
- Inspect filters to verify that they are clean and properly secured.
- Inspect fan intakes for any excess dirt and debris build up
- Verify AC condensers and blowers are properly functioning.
- Verify AC filters have no excess dirt and debris build up.
- Verify AC drain lines are clear of debris.

Venue: \_\_\_\_\_

Date: \_\_\_\_\_

## SET UP

### Display Setup

- Send Display Calibration
- Initialize Display

### Full Video Mode

- Test Video on Displays
- Test Video Inputs

### Full Venus Mode

- Run Test Patterns on Displays
- Run Animate Sequences

### Full Overlay Mode

- Test Video on Displays
- Run Test Patterns & Animations

### Display Windows

- Open and Test Display Windows
- Run Test Patterns/Animations/Video

## DISPLAY INSPECTION

- Visually inspect displays for unlatched modules and debris (displays blank)
- Visually inspect ad panels for proper illumination (blank, flickering, calibration, etc.).
- Inspect displays for any potential fall hazards
- Inspect display cooling systems (A/C, fans) for proper operation
- Inspect rotating and illuminated ad panels for proper operation

## CONTROL SYSTEMS

- Check event viewer for any system or application errors
- Verify the mirroring programs are configured & running properly
- Verify control systems are receiving and displaying RTD data (scoreboard feed, req, OOT, CLK)
- Verify content is being played on primary & backup systems - RTD play sequence
- Verify health status of hard drives
- Verify operations of all backup systems

## CONTROL SYSTEMS

- Check event viewer for any system or application errors
- Verify the mirroring programs are configured & running properly
- Verify control systems are receiving and displaying RTD data (scoreboard feed, req, OOT, CLK)
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- Verify health status of hard drives
- Verify operations of all backup systems

# SERVICE PACKAGES

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Daktronics offers different service packages for you to choose from, all with upgradable options depending on your unique needs. Additional services are available for purchase or by upgrading your service package level.

Please contact your Accounts Service Manager at: **1-866-343-6018**.



## ESSENTIAL PACKAGE

### Account Services Coordination 24/7/365

Daktronics customer service representatives are responsible for setting up on-site service and ensuring the proper receipt and shipment of parts.

### Parts Coverage by way of:

- Daktronics Rapid Parts Exchange Program Daktronics will send replacement components same day or next on all non-configured components.
- Daktronics Repair and Return Program.
- Replacement of non-repairable electronic components
- Shipping from Daktronics to site.

### Available Service: Between 48-72 Hours On-Site Response Time (Billable)

All service agreement customers shall receive priority over non-service agreement customers.

### UPGRADEABLE OPTIONS

#### Annual Systems Check

Routine annual maintenance checks.  
•Defined as display and system optimization including filter replacement for all video/message center products when applicable.

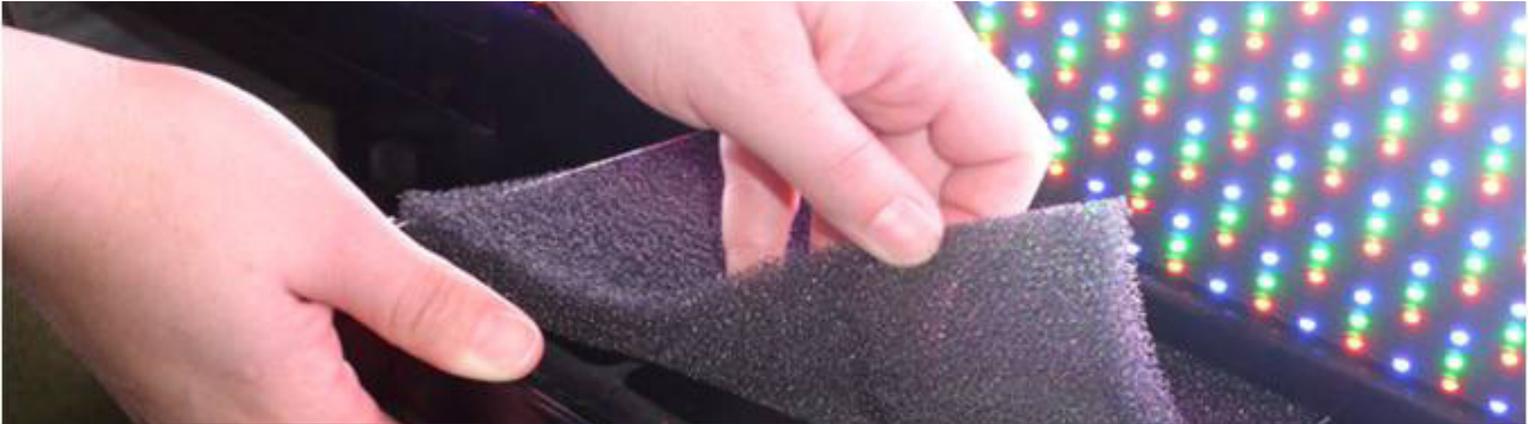
Also included:

- Power and signal wiring inspection.
- Internal cabling checks.
- Pixel and module checks.
- Front-end systems checks for software updates.
- Virus scans.
- File/Hard drive cleaning.

#### Display Cleaning

#### Hoist Inspection

#### Field Camera Calibration



## ENHANCED PACKAGE

### Account Services Coordination 24/7/365

Daktronics customer service representatives are responsible for setting up on-site service and ensuring the proper receipt and shipment of parts.

### Daktronics Parts Coverage by way of

- Daktronics Exchange Program - Daktronics will send replacement components same day or next on all non-configured components.

- Daktronics Repair and Return Program.

Replacement of non-repairable electronic components.

### On-Site Labor to diagnose and/or repair failed components

- Between 24-48 hours on-site response time.

- Service scheduled via customer service representatives.

- Two-way shipping of failed parts.

### Annual Systems Check

- Routine annual maintenance checks.

Defined as display and system optimization including filter replacement for all video/message center products when applicable

Also included:

- Power and signal wiring inspection.

- Internal cabling checks.

- Pixel and module checks.

- Front-end systems checks for software updates.

- Virus scans.

- File/hard drive cleaning.

### On-site Spare Parts Management

- Ensure a safe and secure storage area.

- Maintain and ensure functionality of spare electronic components.

- Ship failed electronic components from site to Daktronics corporate offices

## UPGRADEABLE OPTIONS

### Display Cleaning

### Unlimited On-Site Labor: 24-Hour Response

### Hoist Inspection

### Field Camera Calibration

### Event Support

- On-Site Pre-Event Support.

Daktronics technician on-site for systems check 2 days before selected events.

- Game-Day On-Site Event Support.

Daktronics technician on-site 2 hours prior to gates opening and stay the duration of events.

- Event support technician for display system.



## PREMIER PACKAGE

### Account Services Coordination 24/7/365

Daktronics customer service representatives are responsible for setting up on-site service and ensuring the proper receipt and shipment of parts.

### Daktronics Parts Coverage by way of

- Daktronics Exchange Program - Daktronics will send replacement components same day or next on all non-configured components.
- Daktronics Repair and Return Program.  
Replacement of non-repairable electronic components.

### On-Site Labor to diagnose and/or repair failed components

- 24 hours on-site response time.
- Service scheduled via customer service representatives.
- Two-way shipping of failed parts.

### Annual Systems Check

Routine annual maintenance checks.  
Defined as display and system optimization including filter replacement for all video/message center products when applicable.

Also included:

- Power and signal wiring inspection.
- Internal cabling checks.
- Pixel and module checks.
- Front-end systems checks for software updates.
- Virus scans.
- File/hard drive cleaning.

### On-Site Spare Parts Management

- Ensure a safe and secure storage area.
- Maintain and ensure functionality of spare electronic components.
- Ship failed electronic components from site to Daktronics corporate offices.

### Event Support

- On-Site Pre-Event Support (if applicable).  
Daktronics technician on-site for systems check 2 days prior to selected events.
- Game-Day On-Site Event Support.  
Daktronics technician on-site prior to gates opening and stay the duration of events.
- Event support technician for display system.

## UPGRADEABLE OPTIONS

### Display Cleaning

### Hoist Inspection

### Field Camera Calibration

# CONTROL SYSTEM START UP & SHUT DOWN

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## Startup

1. Verify uninterruptible power supplies (UPS) and racks are on.
2. Turn on displays (power to the sign may be controlled at a breaker or be located in the rack).
3. Turn on all DMP-7000 computers. Wait until the shell window opens and the world graphic spins on all computers.
4. Ensure all A/B interfaces are on and on the proper input.
5. Turn on all VIP 4060s/VIP 5060s and wait 2 – 3 minutes for boot up.
6. Turn on all DMP-8000 computers.
7. Turn on all Show Control System (SCS) computers. Once computer is booted up, open Display Studio. Verify the status light is green.
8. Turn on any peripheral equipment such as Daktronics Scoring-Timing Interfaces (DSTI), Video Production Systems, AllSport Controllers, stats computers, signal converters, etc.
9. Turn on all VIP 4400s/VIP 4500s and wait 2 – 3 minutes for boot up.
10. After all video inputs are powered on, turn on any DI-6000s (if included) by using the switch in the front.
11. Execute any display initialization scripts or other necessary scripts.
12. Verify the SyncBack application runs and the backup system successfully mirrors the primary.
13. Check for any working auxiliary feeds, such as All Sport controller, cameras, DakStats, DSTI, real-time data (RTD), etc. Messages may display at this time.
14. Check the A/B interface operation by switching from the primary input to the backup.

## Shutdown

1. Blank Displays.
2. Turn off power to displays, if possible.
3. Turn off all signal converters.
4. From the Start Menu on the computer, shutdown all DMP-7000 and DMP-8000 computers.
5. Close all program windows on the Show Control System (SCS) computers and shut down.
6. Close all program windows on DSTI computers and shut down.
7. Turn off all VIP 4400s/VIP 4500s and VIP 4060s/VIP 5060s.
8. Power down the DI-6000's by pushing the button in the front.
9. Turn off any related peripheral equipment.

## Routine Maintenance

Do not perform maintenance or install upgrades immediately prior to an event.

### Daily

- Install anti-virus/anti-spyware definition updates if connected to the Internet. AVG® antivirus software is qualified

to be compatible with Daktronics products and protects computers from both viruses and spyware. Free and enhanced versions of the software are available from AVG®.

- Run the SyncBack program after new content is loaded onto the system.
- Keep extra copies of your content on a separate hard drive or via the cloud.

# CONTROL SYSTEM START UP & SHUT DOWN

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## Weekly

- Perform a full system scan with the anti-virus/anti-spyware utility.
- Run V7ChkRif.exe on the DMP-7000 systems to locate any corrupt files. If the systems frequently create sequences or schedules, run the check more often.
- Run CHKDSK (do not select option for recovery of bad sectors) repeatedly until the corresponding Windows® logon entry in the Application Event Viewer shows no inconsistencies.
- Run DEFRAG on the D: drive of any DMP-7000 computers to improve performance.

*Note: DO NOT DEFRAG the C: drive of a DMP-7000, and DO NOT DEFRAG DMP-8000 computers.*

Daktronics control systems are for display operations only. The following can adversely affect the operation of these control systems: checking personal email, browsing the web, downloading files or installing unauthorized applications, instant messaging, playing games, etc. Additionally, Daktronics recommends not installing the control system on Windows® domains, as domain policies can adversely affect the performance of the control system.

The control room is to be climate controlled by customer. Normal operating temperature should be between 65 and 75 degrees Fahrenheit. Normal operating humidity should be less than 80 percent non-condensing. Storage temperature should be between 40 and 95 degrees Fahrenheit. Storage humidity should be less than 95 percent non-condensing. It is the responsibility of the customer that all control room power is from clean, dedicated circuits. Each rack requires two 20 amp circuits terminated with NEMA 5-20R receptacles. One 20 amp circuit preferably from the same power feed is required for each desk where workstations are to be placed. It is the responsibility of the electrical installation contractor to ensure that all electrical work performed on-site meets or exceeds all local and national electrical codes. Daktronics is not responsible for the quality of the power delivery system to the control system. Because each installation is unique,

Daktronics offers these instructions as guidelines only. Daktronics, Inc. assumes no liability if installation steps have been omitted or other necessary procedures are not included. When viewing the rack from the rear, all power should run on the left and the signal on the right. Do not allow the signal and power to run parallel with one another.

## Uninterruptible Power Supplies

Daktronics recommends that uninterruptible power supplies (UPSs) remain powered at all times. If powered off, they need to be powered up monthly to charge the batteries. Additionally, maintain them in a climate-controlled environment. Refer to the owner's manual from the manufacturer for further information. The UPS is not intended to be a means to power on/off the contents of a rack.

# ALL SPORT PRE-EVENT CHECKLIST

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## Preseason/Periodic Check

- Inspect signal cable from console to wall j-box. Verify that the signal cables are labeled, dressed, and in good condition.
- Inspect antenna connections
- Inspect All Sport J-Box's for signs of corrosion and damage
- Verify all segments are illuminating on scoreboard with all on test code
  - If this is not known, refer to **What are "all on" or test codes for All Sport consoles?**
  - The test pattern will allow you to locate any LED's that are not lighting up or are stuck on. After inspecting, return to normal use by entering your in-game code.
  - If your All Sport is not communicating, verify your radio broadcast and channel settings. Refer to this article for more: **Scoreboard is blank, All Sport radio cannot connect, using wrong broadcast and channel settings.**
- Verify All Sport works at all All Sport J-boxes.

## Prevent Check

- Verify control console power-up.
- For RC-100's, verify the battery is charged per Daktronics recommendations.- **Recharging Recommendations for RC-100 Handhelds**
- Verify All Sport sport specific code and insert used with system.
  - **What All Sport Code should I use for my scoreboard?**
- Verify all keypad buttons are working properly: Score +1,+3, timeouts, etc..
- Verify the handheld start/stops work properly.
- Verify horn operation
- Verify the menus options are set up properly: Qtrs/periods/half, etc.
- Verify All Sport works will all peripheral devices: Clocks, Radar Guns, E.O.P. Lights

