

Daktronics recommends powering up and testing all display equipment approximately four hours before an event to address any issues. This document covers the startup and shutdown procedures for most installations. Some site-specific practices may vary from this document.

## Startup

1. Verify uninterruptible power supplies (UPSs) and racks are powered on.
2. Turn on displays (power to the sign may be controlled at a breaker or a switch box located in the rack).
3. Turn on all DI-6000s/VP-6000s. It will take approximately 2 minutes for the computer to boot and an additional 30 seconds for every card in the system. Verify the status lights on the back are green before moving to the next step.
4. Turn on all VIP-5060s/VIP-5160s and wait 2 – 3 minutes. (Indicator lights will blink on the front of the VIP-5160 when ready).
5. Turn on all peripheral equipment such as Daktronics Scoring-Timing Interfaces (DSTI), Venus® Control Suite, video production systems, All Sport® controllers, stats computers, signal converters, etc.
6. Turn on all DMP-8000 computers.
7. Turn on all Show Control System (SCS) computers. Once the computer is ready, open Display Studio. Verify the status light is green.
8. Verify the SyncBack application runs on the backup DMP-8000s, and the backup and primary systems are mirrored.
9. Check for any working auxiliary feeds, such as All Sport® controller, cameras, DakStats®, DSTI, real-time data (RTD), Data Studio (JSON), etc. Messages may display at this time.
10. Execute any display initialization or startup scripts.
11. Verify the backup system by switching from the Primary to the Backup. This may involve either switching the A/B interface or using the appropriate user interface (Display Studio buttons) to switch between Primary and Backup equipment.

## Shutdown

1. Blank content on the displays utilizing a Blank button in Display Studio.
2. Turn off power to displays, if possible.
3. Turn off all signal converters.
4. Turn off all DI-6000s/VP-6000s by tapping the front power once and allow the device to shut down. Do not hold down the button or remove power to shut down.
5. Turn off all VIPs.
6. Shut down all DMP-8000s from the start menu on each computer.
7. Close all program windows on the Show Control System (SCS) computers and shut down.
8. Close all program windows on DSTI or Venus® Control Suite (VCS) computers and shut down.
9. Turn off all related peripheral equipment.

## Routine Maintenance

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

### Daily

- Install antivirus/anti-spyware definition updates if connected to the internet. Windows® Defender antivirus software is qualified to be compatible with Daktronics products and protects computers from both viruses and spyware. Contact Daktronics if wanting to use an antivirus other than Windows® Defender.
- Store extra copies of your content in a separate location.

### Weekly

- Daktronics recommends restarting the DMP, auxiliary, and data computers once a week. Video processors do not require a weekly reboot.
- Windows® machines normally push automatic updates on Tuesdays at 3AM. Ensure computers are turned on for these updates to occur. If the system is shut down during these updates, they will push the next time the system is powered up. Perform any updates at a convenient time that is not immediately prior to an event.
- Perform a full system scan with the antivirus/anti-spyware utility.

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, 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 climate and power are to be controlled by customer. The normal operating temperature should be 65° – 75° Fahrenheit (18° – 24° Celsius). Operating humidity should be less than 80 percent non-condensing. Storage temperature should be between 40° – 95° Fahrenheit (5° – 35° Celsius). Storage humidity should be less than 95 percent non-condensing. The control room power should be from clean, dedicated circuits. Each rack requires two 20-amp circuits terminated with NEMA 5-20R receptacles. One 20-amp circuit is required for each desk where workstations are 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.

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.