# **DAKTRONICS** CONTROL SYSTEM STARTUP & SHUTDOWN PROCEDURES

## Market Standard Systems

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 market standard systems. Sitespecific practices may vary from this document.

## Startup

- 1. Verify uninterruptible power supplies (UPS) 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 the primary NovaStar sender box (SBC #1) and wait 2 3 minutes for boot up.
- 4. Turn on any peripheral equipment such as Daktronics Scoring-Timing Interfaces (DSTI), Venus Server, video production systems, All Sport® controllers, stats computers, signal converters, etc.
- 5. Turn on any DMP-8000's or auxiliary media players.
- 6. Turn on all Show Control System (SCS) computers. Once the computer is ready, open Display Studio. Verify the status light is green.
- 7. Verify the SyncBack application runs and the backup and primary system are mirrored.
- 8. 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.
- 9. Execute any display initialization or startup scripts.

### Shutdown

- 1. Blank displays.
- 2. Turn off power to displays, if possible.
- 3. Turn off all signal converters and A/B interfaces.
- 4. Turn off the NovaStar sender box(s).
- 5. Turn off the DMP from the start menu on each computer.
- 6. Close all program windows on the Show Control System (SCS) computers and shut down.
- 7. Close all program windows on DSTI computers and Venus Server and shut down.
- 8. Turn off any related peripheral equipment.



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#### 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.
- Run the SyncBack program after new content is loaded onto the system.
- Store extra copies of your content in a separate location.

#### Weekly

- Restart the DMP, auxiliary, and data computers weekly. Sender boxes don't require a weekly reboot.
- Windows® 10 machines push automatic updates on Tuesdays at 3AM. Ensure computers are turned on for these updates; if the system is shutdown, they will push the next time the system is powered up.
- Perform a full system scan with the antivirus/anti spyware utility.
- Run CHKDSK (do not select option for recovery of bad sectors) repeatedly until the corresponding Windows® logon entry in the event viewer shows no inconsistencies.

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. Normal operating temperature should be 65 – 75 °F (18 – 24 °C) with humidity less than 80 percent non-condensing. Storage temperature should be between 40 – 95 °F (5 – 35 °C) with humidity 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 workstation desk. 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.

