This guide explains the front-end equipment setup of a standard Daktronics video display with a 4-input rack and the Daktronics Show Control System. For more information about Show Control System installation, registration, or operation, refer to the documentation provided with the software.

Refer to Drawing B-3265449 for rack specifications, Drawing C-3432281 for rack schematics, and Drawing C-3475604 for typical control room layout. Site-specific diagrams may also be available; these will take precedence over any general instructions found in this guide. Contact the Daktronics Standard Order Project Manager (SOPM) or Standard Order Project Coordinator (SOPC) to ask if any site-specific drawings exist for the project.

**Equipment Setup**

1. Unpack all items, verify everything from the Bill of Materials (BOM) is included, and arrange in the control room in a suitable location.

2. Place the control rack at the desired location, ensuring it is within 100' of the Show Control operator station.

3. Place the Show Control (HP TouchSmart®) computer OR laptop at the operator location.

4. Connect the supplied 100' Cat5 network cable between the Show Control computer network jack and the router located in the rack.

   **To Show Control Computer**

   **Note:** An Internet (WAN) connection into the network router in the rack is recommended for remote troubleshooting by Daktronics technicians.

5. Place one 22" ViewSonic monitor at the Replay operator location and the other 22" ViewSonic monitor at the TriCaster switcher operator location. Both monitors should be within 25' of the control rack.

6. Install the camera junction box within 25' of the rack. Up to 4 camera inputs are supported.

   **Note:** If using the optional Control Room Headset Kit, the headsets will also connect to this box. Refer to Telex documentation.

7. Locate the TriCaster switcher unit from the rear of the rack, and make the following connections:

   a. Connect 25' RG-6 BNC cables from CAM1-CAM4 on the junction box.
      - For Standard Definition (SD) inputs, connect to **Y VIDEO IN 1-4**.
      - For High Definition (HD) inputs, connect to **SDI VIDEO IN 1-4**.

   b. Connect the 25' HDMI-to-DVI cable between the **HDMI** (Multiview output) jack and the **DVI IN** jack on the 22" Replay operator monitor.

   c. Connect the 25' DVI-to-DVI cable between the **DVI-D** jack and the **DVI IN** jack on the TriCaster operator monitor.

   d. Connect a 1/8"-to-1/4" adapter into the TriCaster operator monitor audio cable, and then plug the adapter into the **PHONES** jack. The other end of the audio cable connects to the monitor's **AUDIO IN** jack.

   e. Connect the 25' USB cable from an available **USB** port on the TriCaster to the Tripp Lite USB hub (USB #1).

   f. If there is an audio system, connect a 25' XLR cable between the **AUDIO OUT 1a** jack and an available input on the audio mixer.
8. Place the USB hub at the Replay operator location and connect as follows:
   a. Plug the supplied mouse, keyboard, TimeWarp*, and Launchpad Mini* devices into the USB hub ports.
   b. Plug the power cord into the power jack.

   *These will be used by the Replay operator. Set them by the monitor (step 5).

9. Plug power cords for all devices (control rack, Show Control computer, monitors, etc.) into standard wall outlets.

10. If there is an audio system, Connect a 25’ XLR cable between the LTIBLOX (ACV #1) unit and an available input on the audio mixer. This is a balanced mono audio output from the Digital Media Player (DMP).

   **Note:** In case the audio system is more than 25’ from the video rack, 100’ of audio cable and 3-pin XLR connectors are also supplied.

11. In the TriCaster Live Production screen, click the gear symbol (⚙️) next to each active CAMERA # to access the Input Settings tab. Under Connection, ensure the proper setting is selected for the camera and display type in use:

   • SD cameras with 4:3 display = 480i, 4:3 (Composite)
   • SD cameras with 16:9 display = 480i, 16:9 (Composite)
   • HD cameras with 16:9 display = 720p (SDI)

12. Connect fiber optic cable (50/125 μm multi-mode) between the control rack and the display:

   • For outdoor displays, route fiber optic cable from the fiber patch panel in the rack to another fiber patch panel at the display location.
   • For indoor displays, route fiber optic cable from the fiber patch panel in the rack to the display, and then terminate the cable internally.

   Refer to the display manuals for more information on signal connection.

**Standard Power-up Sequence**

If these steps are not followed in order every time, components may appear to fail! Refer to DD3074600 for additional startup and shutdown procedures.

1. Power on the display.
2. Power on the VIP unit.
3. Power on the DMP unit.
4. Power on the TriCaster unit.
5. Power on the Show Control computer.

**Standard Power-down Sequence**

1. Power off the display.
2. Power off the Show Control computer.
3. Power off the TriCaster unit.
4. Power off the DMP unit *(press power switch for only 1 second).*
5. Power off the VIP unit.
4 Video Input System Quick Start Guide - FY17

Optional Extender Kit
In situations where 25’ of cable between components is not long enough, an extender kit (part # 0A-1453-0172) is available to increase the range to 100’. Refer to the instructions below and Drawing B-3351459.

1. Unpack the TriCaster Extension Kit, and identify the Black Box LOCAL extender unit and Tripp Lite LOCAL extender unit.

2. Mount the LOCAL extender units to the rack using provided hook and loop fastener strips.
   a. Cut the hook and loop adhesive into (4) 3” pieces and (2) 1” pieces. Lock pair the cut pieces by lining them up and pressing the strips together to lock.
   b. Attach the (2) 3” hook and loop strips to the Black Box LOCAL unit and the (1) 1” hook and loop strip to the Tripp Lite LOCAL unit.
   c. Attach the units to the rack shelf in location shown on Drawing B-3351459.

3. Place the Tripp Lite REMOTE unit at the Replay operator location, and then make the following connections:
   a. Connect a 100’ Cat5 cable between the REMOTE unit and LOCAL unit.
   b. Connect the 6’ DVI cable between the REMOTE unit and a 22” ViewSonic monitor.
   c. Plug power cords of REMOTE unit and 22” monitor into power jacks, and then plug into standard wall outlets.
   d. Connect the DVI end of the LOCAL unit into the gender change adapter, and then into the 1 meter DVI-to-HDMI cable. Plug the HDMI end of the cable into the HDMI (Multiview) jack on the TriCaster.

4. Place the Black Box REMOTE unit at the TriCaster operator location, and then make the following connections:
   a. Connect a 100’ Cat5 cable between the REMOTE unit and LOCAL unit.
   b. Connect the 3’ DVI cable between the LOCAL unit and the DVI-D jack on the TriCaster.
   c. Connect one end of the included audio cable into the audio IN jack on the LOCAL unit; connect the other end of the audio cable into a 1/8”-to-1/4” adapter, and then plug into the TriCaster PHONES jack.
   d. Connect the supplied USB cable between the LOCAL unit and an available USB port on the TriCaster. This provides power to the unit.
   e. Connect the supplied DVI cable between the REMOTE unit and a 22” ViewSonic monitor.
   f. Plug the supplied mouse, keyboard, TimeWarp*, and Launchpad Mini* devices into the USB ports on the REMOTE unit.
   g. Connect supplied audio cable between REMOTE unit and monitor.
   h. Plug power cords of REMOTE unit and 22” monitor into power jacks, and then plug into standard wall outlets.

*These will be used by the replay operator. Set them by the monitor (step 3).
1. Connect the composite video output to an RCA-to-BNC adapter, and then plug the adapter into **Y VIDEO IN 4** on the rear of the TriCaster.

   **Note:** If a camera is already connected to input 4, it must be unplugged.

2. Connect each audio output (red and white) to an RCA-to-1/4" phone adapter, and then plug the adapters into the **AUDIO IN 4a** and **4b** jacks.

3. In the TriCaster Live Production screen, click the gear symbol (⚙️) next to the AUX 4 Input to access the **Input Settings** tab. Under **Connection**, ensure the proper setting is selected for the display type in use:
   - 4:3 display = 480i, 4:3 (Composite)
   - 16:9 display = 480i, 16:9 (Composite)

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### For More Information

To learn more about the Daktronics Show Control System software, consult the Show Control System User Handbook:

- Press the Windows key [windows] and go to **All Programs > Daktronics > Display Studio > Show Control System User Handbook**.
- From within Display Studio, press the **Display Studio Hub** button and select **Help**.

Watch the following YouTube video for an introduction to Show Control: [www.youtube.com/watch?v=3Q28olggTGo](https://www.youtube.com/watch?v=3Q28olggTGo)

For any other questions, comments, or concerns, please contact Daktronics Support Services:

**United States & Canada**  
Toll Free: 1-800-DAKTRONICS (1-800-325-8766)

**Outside the U.S. & Canada**  
+1-605-697-4000
HEAT LOAD (BTU/HR)  POWER LOAD (WATTS)  WEIGHT (LBS)  WEIGHT (KGS)

RACK TOTAL  946     278    162     73

1 - 20 AMP 120 VAC CIRCUIT
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LOCATION 1
GAME IN PROGRESS & DAKSTATS OPERATION MAY BE LOCATED IN SEPARATE ROOM
MIN COUNTER SPACE REQUIRED = 48"

LOCATION 2
SHOW CONTROL, TRICASTER, & REPLAY OPERATION MAY BE LOCATED IN SEPARATE ROOM
MIN COUNTER SPACE REQUIRED = 72"

LOCATION 3
ANNOUNCER & AUDIO OPERATIONS MAY BE LOCATED IN SEPARATE ROOM
MIN COUNTER SPACE REQUIRED = 24"

TITLE:
PROJECT:
INCHES [MILLIMETERS]
DESIGN:
SCALE:
DIM UNITS:
DATE:
SHEET:

DO NOT SCALE DRAWING

STANDARD VIDEO SYSTEMS
CONTROL ROOM LAYOUT; 4 VID, 1 OR 3 RM, SSR-2/300

22 SEP 16
P1453 F 01 C

9.250
26.000
26.000

NEUTRIK
PUSH

CAM2
HS-2

CAM1
HS-1

CAM3
HS-3

CAM4
HS-4

3475004