



VIDEOPRO

VideoPro — Play and Update Graphics

Document: VP-CONNECT-DATA

Revised: 2026-07-13

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Play and update graphics

Start here to put graphics on air and control what they show.

Most workflows start with a title design from the Library. Play it as-is, change its values by hand, prepare several versions with the Values Grid, or connect it to a live data source so the graphic updates automatically. VideoPro can read from scoreboards, spreadsheets, weather services, presentation software, Zoom meetings, and other sources.

Start here

New to VideoPro graphics? Work through these in order.

01 [Play a graphic](#)

02 [Customize a graphic's values](#)

03 [Prepare multiple variations](#)

04 [Drive a graphic from a spreadsheet or file](#)

05 [Drive a graphic with a Data Controller](#)

06 [Write your own Data Controller](#)

Already know what should update the graphic? Open the [Data Controller catalog](#) and choose the matching source.

Choose a data path

Use the path that matches where your data comes from.

- **Typed values** — change values by hand in the [Live Values tab](#).
- **Prepared variations** — use the [Values Grid](#) to prepare rows you can switch between during a show.
- **Spreadsheet, CSV, Google Sheets, XML, or JSON** — use [Tables](#), usually [Tables: Row](#), to drive standard graphics from records you control.
- **Scoreboard, weather, presentation software, meeting, chat, or other live source** — use a Data Controller from the [catalog](#).
- **Custom source** — [write your own Data Controller](#).

Some online sources require sign-in. If VideoPro asks you to authenticate, see [Authenticate your Internet Accounts](#).

What's in this section

- **Play and update graphics step by step** — the six-part path above: play a graphic, customize its values, prepare variations, then connect live data.
- **Tables** — drive graphics from data you manage: spreadsheets, CSV files, Google Sheets, XML, and JSON. Start with **Tables: Row** for ordinary one-record-at-a-time graphics; use **Tables: Block** for multi-row graphics.
- **Data Controller catalog** — connect specific live sources, including Scoreboard Tool, Scorebird, hardware scoreboards, WeatherCast, ProPresenter, EasyWorship, Zoom, Teams, social/chat, and more.
- **Legacy data controllers** — the pre-Tables Spreadsheet, JSON, and XML controllers, kept for compatibility with existing projects.

Related sections

- If you haven't yet decided how VideoPro connects to the rest of your production — which output it feeds, and whether it keys graphics over external video — start with [Choose how VideoPro fits your production](#). That decision shapes the output and alpha settings behind everything you play here.

- If the graphic itself needs editing before you connect values to it, see [Design & customize graphics](#).
 - If you're standing up a full venue (sports, worship, hybrid event), see [Solution Recipes](#) for end-to-end playbooks that combine graphics, data, Program Out, and control surfaces.
 - If data is connected but nothing is updating on air, see [Troubleshooting](#) and the **Data isn't updating** decision tree.
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[Play and update graphics step by step](#)

Follow this six-step path to play your first graphic, change what it shows, prepare variations, and then connect live or custom data.

This is the recommended path for operators who are new to VideoPro. Each step builds on the previous one. Steps 1–3 are taught in full here. Steps 4–6 introduce the workflow and link to the deeper chapters for Tables, Data Controllers, and custom integrations. Work through the steps in order the first time, then return to any step as needed.

[What's in this chapter](#)

- [1. Play a graphic](#) — use this when you have never played a graphic in VideoPro before.
- [2. Customize a graphic's values](#) — use this when you need to change the text, scores, or names on a graphic by hand.
- [3. Prepare multiple variations](#) — use this when you need several versions of the same graphic ready to take.
- [4. Drive a graphic from a spreadsheet or file](#) — use this when your content lives in CSV, Excel, Google Sheets, XML, or JSON.
- [5. Drive a graphic with a Data Controller](#) — use this when a Data Controller in the catalog matches your source.

- [6. Write your own Data Controller](#) — use this when none of the built-in Data Controllers match your source and you need a custom integration.

Related

- [Play and update graphics — section overview](#)
 - [Tables](#) — continue from step 4.
 - [Data Controller catalog](#) — continue from step 5.
-

1. Play a graphic

By the end of this step, you'll have a graphic on air: no data, no customization, just play on and play off. Every other VideoPro graphics workflow builds on this one.

Before you start

You should already have VideoPro installed and activated, and the application open on the standard playout layout. If the panels look unfamiliar, see [Tour the VideoPro interface](#). The four panels that matter for this step are:

- **Library** — the catalog of ready-made title designs on the left.
- **Project List** — the show list that drives playback.
- **Preview** — shows the selected graphic before it goes to Program.
- **Program Monitor** — shows what VideoPro is sending to Program.

Find a title design in the Library

- 01 In the Library, browse the folders until you see a design that looks useful: a lower third, a full-screen title, or anything else. The goal is to get a graphic on air, not to pick a final design.
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02 Move the pointer over the thumbnail. The design animates in the **Preview** panel, so you can preview designs without dropping anything into the project.

03 Move from one thumbnail to the next and watch the Preview update. When you find a title design you like, leave the pointer on it for a moment to see how it plays in and out.

Drop it into the Project List

01 Drag the thumbnail from the Library and drop it on the **Project List**. VideoPro adds a row for the graphic. The row shows the graphic's name and a **Play** button.

02 The graphic is now part of your show. Nothing is on air yet; you've staged it, not played it.

03 If you change your mind, right-click the row and remove it. You can add as many graphics as you want and rearrange them by dragging rows up and down.

Play it on

01 Click the **Play** button on the graphic's row in the Project List. VideoPro animates the graphic on; you'll see it appear in the **Program Monitor**.

02 The Program Monitor shows what VideoPro is sending to Program. If Program Out is connected to a display, switcher, virtual webcam, or other destination, that destination receives the Program output. Connecting Program Out is a separate setup; see [Output graphics to a display](#) when you're ready.

03 The graphic's row now shows the **Play** button in red. Click the red **Play** button to take the graphic off air. The icon stays a play arrow; it does

not change into a stop button.

Play it off

- 01 Click the same row's red **Play** button. The graphic animates out and the Program Monitor returns to whatever was underneath: black, another graphic, or the current video source.
- 02 The sequence is **play on, on air, play off, clear**. Most live operation in VideoPro is a variation on it.

Try a couple more

Drag two or three more title designs into the Project List. Play each one on, watch it in the Program Monitor, play it off. You can play multiple graphics at once (a lower third **and** a bug, for example); each row is independent. Whether they overlap, replace each other, or stack depends on how each graphic was designed.

When you're comfortable with play on and play off, move on to changing what the graphic **says**.

What you just did

You used the **Library**, **Project List**, **Preview**, and **Program Monitor** to choose a title design, add it to your show, put it on air, and take it off. You didn't open Properties, connect a Data Controller, or enter any values. Next, you'll customize what the graphic shows.

Next step

2. Customize a graphic's values (Live Values): open the **Properties** panel and edit the graphic's text, images, and colors in **Live Values**.

1. Play a graphic: Related

- [Tour the VideoPro interface](#)
 - [Library panel](#)
 - [Project List panel](#)
-

2. Customize a graphic's values

By the end of this step, you'll be able to take a graphic from the Library, change what it shows, and play it live with your edits. You'll also see how value changes can update a graphic while it is on air.

The graphics in the Library aren't fixed designs; they're templates with variables you control.

The mental model: variables

A **variable** is a named field in a graphic that you can change — a piece of text, an image, a color, or a number. When a designer builds a graphic, they leave these fields open and give each one a name, such as **Name**, **Title**, **Team Color**, or **Logo**. A lower third might expose a Name, a Title, an accent color, and a logo image.

You don't open the Designer to change a variable. The graphic's variables appear as editable fields in the **Properties** panel, on its **Live Values** tab, and the **Preview** panel displays the graphic with whatever values you set, so you can watch each change as you make it. The same named fields can later be filled automatically by a Data Controller, which supplies values to the variables whose names match.

2. Customize a graphic's values: Before you start

You should already know how to drag a graphic from the Library to the Project List and play it on. If not, walk through [1. Play a graphic](#) first.

Pick a graphic and stage it

- 01 In the **Library**, find a graphic with editable text. A lower third or a full-screen title is the easiest to start with.
- 02 Drag it from the Library into the **Project List**. VideoPro adds the graphic to the show.
- 03 Click the graphic to select it. The **Properties** panel updates to show its properties.

Open the Live Values tab

- 01 In the **Properties** panel, click the **Live Values** tab.
- 02 The Live Values tab lists the graphic values you can edit: text fields, image slots, color pickers, numeric values, dropdowns.
- 03 Scroll the list. The names come from the graphic design, so they're usually descriptive: **Speaker Name**, **Lower Third Title**, **Team Color**, **Logo**.

Edit a value and watch the Preview

- 01 Click into the first text field, for example **Speaker Name**. Type a new value.
- 02 As you edit, the **Preview** panel shows the change immediately. When the graphic is on air, the same change also updates the **Program Monitor**.
- 03 Try a few more fields. Change a color with the color picker; the Preview swaps it in. Drop a new image into an image slot; the Preview shows the new image in place.

NOTE

TIP: You can also edit text directly in the Preview. Click a text element in the Preview panel, type your change, and the matching value in the Live Values tab updates too.

Play it live with your changes

- 01 Click the graphic's **Play** button in the Project List. The graphic animates onto the **Program Monitor** with the values you've set. Your edits are now on air.
 - 02 After the graphic is on air, the Program Monitor shows the live result. The Live Values tab stays available, so you can keep editing the graphic's values.
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Edit values while the graphic is on air

You can keep editing Live Values while the graphic is on air. With the graphic still playing on the Program Monitor, return to the **Live Values** tab and change a value — type a new name, or pick a different color. As soon as you commit the change, the on-air graphic updates. If the designer set up animations for that value, the change animates rather than snapping — a name swap might fade and slide; a score might tick up.

VideoPro uses the same behavior whether you type a value by hand or a Data Controller supplies it. If the graphic includes update animations, the value change can animate while the graphic stays on air.

Auto Update and Manually Update

By default, a committed change goes on air immediately — **Auto Update**. The mode button above the values shows the current mode.

NOTE

NOTE: Manually Update is available only in VideoPro Broadcast. In other editions, the graphic is always on Auto Update.

Switch the mode button to **Manually Update** when you want to stage a change and check it in the Preview before it reaches Program. Two buttons appear next to the mode button: one sends the values to Program without an update animation, the other sends them and plays the graphic's update animation.

When you're done editing, click the graphic's red **Play** button to play it off. Your edits stay with the graphic; the next time you play it on, the same values come back.

2. Customize a graphic's values: What you just did

You took a Library graphic, changed its values in the **Live Values** tab of the **Properties** panel, and played it live. You also saw how values can update while the graphic is on air. Next, you'll set up **several variations** of the same graphic in advance, instead of editing a single graphic between every play.

2. Customize a graphic's values: Next step

3. Prepare multiple variations (Values Grid): set up multiple variations of one graphic in a spreadsheet-style grid and switch between them during the show.

2. Customize a graphic's values: Related

- 1. Play a graphic
 - Properties panel
 - Preview panel
-

3. Prepare multiple variations

By the end of this step, you'll be able to take a single graphic, such as a lower third or score card, and prepare several variations of it ahead of time. During the show, you can quickly switch to the version you need instead of editing values between every take.

The classic case: same lower third, five different speakers. Instead of cluttering your Project List with five copies of the same graphic, you keep one graphic with five rows of values. Same graphic, different values on screen each time.

The mental model: rows are variations

Where step 2's **Live Values** tab showed you one set of values for the graphic, the **Values Grid** tab lets you prepare multiple rows of values:

- The far-left **Index** column identifies each row. VideoPro adds it so every row has a number or key for quick recall.
- The remaining **columns** come from the graphic's **Update Live** variables: **Name**, **Title**, **Color**, **Headshot**, or whatever the design exposes for live updates.
- **Rows** are variations: one row per speaker, one row per sponsor, one row per upcoming game.

You set up the rows once. During the show, select the row you need and send that variation to Program through the same graphic.

3. Prepare multiple variations: Before you start

You should be comfortable with step 2: dragging a graphic into the Project List, finding the **Properties** panel, and editing values in the Live Values tab. The Values Grid is the next tab over.

Stage a graphic

- 01 In the **Library**, find a graphic you want to use repeatedly with different content. A lower third is the canonical example, but anything with a clear set of variables works: a sponsor bug with a logo and tagline, an upcoming-segment slate with a title and time, or a player intro with name, number, and position.
 - 02 Drag it into the **Project List** and select its row. The **Properties** panel updates for this graphic.
-

Open the Values Grid tab

- 01 In the **Properties** panel, click the **Values Grid** tab. It sits next to **Live Values**.
 - 02 A small spreadsheet appears. The far-left column is the **Index** column, which VideoPro adds for quick row recall; the remaining columns come from the graphic's Update Live variables. The exact columns depend on which variables the graphic was designed with. For the full column model and the Recall Keypad, see [Values Grid tab](#).
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Fill in your first few rows

- 01 In row 1, type the values for your first variation: **Name:** Dana Marsh , **Title:** Producer , **Accent:** your team blue. The **Preview** panel updates to match row 1 as you go.
 - 02 To add a second row, right-click a row header at the left edge of the grid and choose **Insert Row Above**.
 - 03 Fill row 2 with a second variation: **Name:** Riley Chen , **Title:** Director , and an accent color of your choice.
-

- 04 Keep going until you have a row per variation you expect to use. Five rows for five speakers, ten rows for a roster, or whatever the show needs.

WARNING

WARNING: Import Data overwrites the grid. The **Import Data** button replaces every existing row with the contents of the imported file. It can read CSV, XLSX, XML, or JSON, but there is no merge or append option. Save your project first if the grid already holds rows you want to keep.

Select a row and play it on

- 01 Click row 1 in the Values Grid to select it. The **Preview** updates to show what row 1 will look like on air.
-
- 02 Click the graphic's **Play** button in the **Project List**. The graphic plays on the **Program Monitor** using row 1's values.
-
- 03 To change variations mid-show, select a different row in the Values Grid (row 2, for example). How the new row reaches Program depends on the update mode you saw in step 2: in **Auto Update** (the default), the change goes on air immediately, and animations defined by the graphic's designer animate the swap (the name slides, the headshot crossfades). In **Manually Update**, the new row's values show in the Preview first; send them to Program with the update buttons — without or with the update animation.

Edit a row while it's on air

The Values Grid stays editable while the graphic is on air, and the update mode controls when edits reach Program. With row 2 playing on the Program Monitor:

- 01 Click into row 2's **Title** cell and type a correction: **Director** becomes **Producer-Director**.

- 02 In **Auto Update**, the on-air graphic updates immediately, with whatever animation the designer set up for that variable. In **Manually Update**, check the change in the Preview, then send it with the update buttons.

- 03 The row's values persist, so the next time you select row 2 the corrected title comes back.

This is the same live-update behavior you saw in step 2, applied to whichever row is currently driving the on-air graphic.

When to use step 3 vs step 4

Use the Values Grid when:

- The variations are known ahead of the show (a published lineup of speakers, a fixed sponsor list, a confirmed roster).
- You'll edit them by hand if anything changes.
- You want them stored with the project file.

If the variations come from a spreadsheet, CSV file, Google Sheet, XML file, or JSON file that you maintain elsewhere (a Google Sheet your team updates, a CSV the stats crew exports), use the Tables controller instead. That's [step 4](#).

3. Prepare multiple variations: What you just did

You set up multiple variations of one graphic in the **Values Grid** tab of the **Properties** panel, selected rows during playback, and edited row values live. One Project List graphic now does the work of several separate graphic rows, and your show stays tidy.

3. Prepare multiple variations: Next step

4. Drive a graphic from a spreadsheet or file: point the same kind of variation list at an external CSV, Excel, Google Sheets, XML, or JSON file so the show data lives where the rest of your team already updates it.

3. Prepare multiple variations: Related

- 2. Customize a graphic's values
 - Values Grid tab
 - Operate the Values Grid live
-

4. Drive a graphic from a spreadsheet or file

By the end of this step, you'll understand how to point a graphic at an external spreadsheet or data file so the file controls what the graphic shows. A team member updates a roster, schedule, or leaderboard outside VideoPro, and VideoPro uses those values on air.

Where step 3 stored variations inside the project, this step keeps them in a file (or a Google Sheet) that lives outside VideoPro, closer to where your team already works.

When to choose this step

Pick Tables when:

- You already maintain the data somewhere — a Google Sheet, an Excel workbook, a CSV export, an XML file, or a JSON file.
- Several people need to edit the data without opening VideoPro.
- The dataset is broadly tabular: rows are items (students, players, race entries, sponsors, songs), columns are fields.

If your data is being fetched live from a dedicated source (a scoreboard system, a presentation app, a weather service), use a Data Controller instead. That's [step 5](#). Tables works best when the source can be treated as rows and columns.

The two flavors: Row vs Block

VideoPro includes two Tables controllers. Start with **Tables: Row** unless the graphic needs to show several records at once:

- **Tables: Row** drives a graphic from one record at a time: a lower third for one speaker, a player intro card for one athlete, a sponsor bug for one sponsor.
- **Tables: Block** drives a graphic from several records at once: a leaderboard with the top 10, a roster card with five players, a schedule slate with the next four games.

Match the controller to the graphic. A graphic with one set of fields (**Name**, **Title**, **Headshot**) usually wants **Tables: Row**; a graphic with repeated sets of fields (**Player 1**, **Player 2**, **Player 3**) usually wants **Tables: Block**.

Basic setup

- 01 Drag a graphic from the **Library** into the **Project List**. For Tables: Row, pick something with a small set of variables (one record's worth). For Tables: Block, pick a leaderboard-style or roster-style graphic.
- 02 In the **Project List**, find the **Data Controller** column for the graphic's row.
- 03 Click the column and choose **Productivity** → **Tables: Row** (or **Tables: Block**) → **New Input**. VideoPro adds the controller and opens its panel.
- 04 The Tables panel opens to **Load New Data**. **Browse** for a local file (CSV, Excel, JSON, XML, plain text, SQLite), **Create CSV** to start one inside

VideoPro, or **Open URL** to fetch a web URL or Google Sheets link. If the source requires sign-in, VideoPro prompts you during setup.

05 Check the values in the **Preview** panel. VideoPro connects matching source columns to matching graphic values by name; use **Link Data** in the Preview panel to change which source field controls a graphic value.

06 Play the graphic on, then choose or advance the row from the Tables panel.

Tables: Block needs additional setup to decide how rows are grouped into blocks. See [Tables: Block Controller](#) for that workflow.

Common examples

- **Speaker lower thirds** — Google Sheet or CSV to **Tables: Row**.
- **Player intro cards** — CSV or Excel to **Tables: Row**.
- **Now-playing or service-order graphics** — Google Sheet to **Tables: Row**.
- **Leaderboards** — Google Sheet or CSV to **Tables: Block**.
- **Rosters and stats slates** — Excel or CSV to **Tables: Block**.
- **XML or JSON feeds** — use Tables when the data can be treated as rows and columns.

Go deeper

The full per-format setup, the Block detection rules, the Row sequencing controls, and the auto-refresh and auto-play options are all in the Tables sibling chapter:

- [Tables overview](#)
- [Drive a graphic with Tables: Row](#)
- [Use XML or JSON with Tables](#)
- [Tables: Block Controller](#)

- [Crawls Controller](#)
- [Leaderboard Controller](#)

Existing projects may use the older Spreadsheet, JSON, or XML controllers; new projects should use Tables unless a legacy workflow is required. See [Legacy data controllers](#).

For operating Tables live during a show (Stream Deck and Companion bindings, mid-show row selection, auto-play behavior under pressure), see [Tables controller with Companion](#).

[4. Drive a graphic from a spreadsheet or file: What you just did](#)

You learned when to use Tables, how **Tables: Row** drives ordinary one-record graphics, and when **Tables: Block** is needed for multi-row graphics. The detailed setup by source type lives in the Tables chapter, one article per workflow.

[4. Drive a graphic from a spreadsheet or file: Next step](#)

[5. Drive a graphic with a Data Controller](#): for scoreboards, presentation apps, weather, meetings, and other sources that have dedicated live controllers.

[4. Drive a graphic from a spreadsheet or file: Related](#)

- [3. Prepare multiple variations \(Values Grid\)](#)
 - [Tables overview](#)
 - [Data Controller catalog](#)
-

[5. Drive a graphic with a Data Controller](#)

By the end of this step, you'll understand how to add a Data Controller to a graphic and let it update on-air content from a live source, such as a

scoreboard system, weather service, presentation app, or Zoom meeting.

The Data Controller handles the source connection: it knows where the data comes from, how to read updates, and which fields can control the graphic's values. Some controllers also handle sign-in or device setup.

5. Drive a graphic with a Data Controller: When to choose this step

Pick a Data Controller when:

- Another system is producing the data: a scoreboard, a sports stats system, a weather feed, a presentation platform, a video conference.
- You want VideoPro to read updates directly from that system instead of from a file you maintain.
- VideoPro includes a controller designed for that source, often with matching graphics.

If you maintain the data yourself in a spreadsheet, CSV file, Google Sheet, XML file, or JSON file, use Tables ([step 4](#)). If the source isn't in the catalog, either build your own ([step 6](#)) or shape the data into a Table.

5. Drive a graphic with a Data Controller: Basic setup

The setup details vary by controller, but most Data Controllers follow the same basic steps. The specifics (sign-in, configuration options, field mappings) live in each Data Controller's page.

01 Drag the matching graphic from the **Library** into the **Project List**. Many Data Controllers include or work best with matching graphics, so the source fields and graphic values already line up: a basketball scoreboard graphic for a basketball scoreboard controller, a weather card for the weather controller.

02 In the **Project List**, find the **Data Controller** column and pick the Data Controller that matches your source (for example **Sports** →

Scoreboard Tool, Weather → WeatherCast, or Worship → ProPresenter). Pick **New Input** to create a fresh instance.

- 01 The Data Controller's panel opens with its own setup: sign in if required, pick a feed, choose a game, select a device, enter a location. Each controller's page explains its exact setup flow. If VideoPro asks you to authenticate an online account, follow the prompt or see [Authenticate your Internet Accounts](#).
- 01 VideoPro connects matching controller fields to matching graphic values when it can. To change or add connections, click **Link Data** in the **Preview** panel and connect the source fields to the graphic values they should control.
- 01 Play the graphic on. As the source changes (a basket is scored, the clock ticks, the song changes in ProPresenter, a participant in Zoom is renamed), the on-air graphic updates, with animations if the designer set them up.

Common Data Controllers

The Data Controller catalog lists the Data Controllers included with VideoPro, with one page for each source. A few that anchor the common workflows:

- [Scoreboard Tool](#) — the built-in per-sport scoreboard Data Controller.
- [Scorebird](#) — connect scoreboard data from a Scorebird NeST device.
- [Hardware scoreboard](#) (Daktronics All Sport and similar) — for venues where the scoreboard speaks serial directly.
- [Sportzcast](#) — connect a Sportzcast Scorebot.
- [StatCrew](#) — drive stats-heavy graphics from StatCrew.
- [Weather \(WeatherCast\)](#) — real-time, location-specific weather updates.
- [ProPresenter](#) and [EasyWorship](#) — worship presentation integrations.
- [Zoom Manager](#) and [Microsoft Teams](#) — meeting workflow integrations.

- [Social / Chat controller](#) — chat overlays from supported platforms.

5. Drive a graphic with a Data Controller: Go deeper

Each Data Controller page walks you through that specific source: sign-in, the options it offers, which fields it produces, and the graphics it pairs with. Most Data Controllers follow similar basic setup steps, but the details belong on each controller's page.

Open the [Data Controller catalog](#) and choose the source you need.

5. Drive a graphic with a Data Controller: What you just did

You learned the basic steps for using a Data Controller: add a matching graphic, choose a controller in the **Data Controller** column, configure the source, check the connections with **Link Data**, and play the graphic. From here, use the controller-specific page for the source you need.

5. Drive a graphic with a Data Controller: Next step

[6. Write your own Data Controller](#): when the catalog doesn't include your source and the data doesn't fit a Tables workflow, use the Data Controller API to build a custom integration.

5. Drive a graphic with a Data Controller: Related

- [4. Drive a graphic from a spreadsheet or file](#)
- [Data Controller catalog](#)
- [Authenticate your Internet Accounts](#)
- [6. Write your own Data Controller](#)

6. Write your own Data Controller

By the end of this step, you'll understand when to build a custom Data Controller: when VideoPro doesn't include a controller for your source, or when an in-house system needs a dedicated live connection to graphics.

This step is for developers. The other steps taught you how to use VideoPro; this one is about extending it.

6. Write your own Data Controller: When to choose this step

Pick this step when you've ruled out the simpler options:

- The source isn't available in the [Data Controller catalog](#). Check the catalog first; a Data Controller you need may already exist.
- The data can't reasonably be shaped into a CSV, Excel, Google Sheets, XML, or JSON source for Tables. Tables covers more cases than you might expect: if your system can export a CSV or JSON feed on a regular interval, Tables is usually the lower-effort path.
- You need the source to appear in the **Data Controller** column dropdown next to the built-in Data Controllers, to offer its own configuration panel, and to push live updates with the same animation behavior as everything else in VideoPro.

If a built-in Data Controller or Tables can handle the source, use step 4 or step 5 instead — it saves development time and is easier to support.

What this looks like

VideoPro exposes a **Data Controller API**. A Data Controller you implement against the API is loaded by VideoPro on startup and appears alongside the built-in Data Controllers: it shows up in the **Data Controller** column dropdown, provides its own configuration panel, declares the fields it produces, and pushes live updates with the same on-air update behavior as the built-ins. When field names match the graphic's values, VideoPro connects them automatically; users can adjust the connections with **Link Data**.

In practice your code reads data from the source — a REST API, WebSocket feed, vendor SDK, serial device, or internal service — and sends VideoPro the fields your graphics need. VideoPro hosts the controller, displays it in the Data Controller workflow, connects its fields to graphics, and renders the on-air updates.

Basic development steps

- 01 **Design the fields first.** List the fields your Data Controller will provide; these are what users connect to graphic values in **Link Data**. Get this right before you write any code; it's harder to change after graphics are built against it.
- 02 **Build a matching graphic** whose value names match the fields your Data Controller provides, so VideoPro can connect them automatically ([Create variables in graphics](#)).
- 03 **Implement the Data Controller** against the API. The API documentation covers the contract, lifecycle hooks, and update mechanism.
- 04 **Test it inside VideoPro:** add it to a graphic, configure it, check **Link Data**, play the graphic, and verify that updates appear correctly on air.
- 05 **Package and distribute** per the API documentation's packaging guidance.

6. Write your own Data Controller: Go deeper

The Data Controller API (class contract, lifecycle, update mechanism, packaging, signing) is documented separately from this help system. Contact NewBlue support for the current API documentation.

6. Write your own Data Controller: What you just did

You learned when a custom Data Controller is the right choice and what the development work involves. The build itself happens in your own codebase, against the Data Controller API, with the API reference open alongside.

6. Write your own Data Controller: Next step

You're at the end of the path. From here:

- Browse the [Data Controller catalog](#) to confirm your source isn't already covered.
- [Re-evaluate Tables](#). If your system can produce a CSV, Google Sheet, XML, or JSON source, Tables is usually less work.
- Contact NewBlue support for the current Data Controller API documentation.

6. Write your own Data Controller: Related

- [5. Drive a graphic with a Data Controller](#)
 - [Tables overview](#)
 - [Create variables in graphics](#)
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Tables

Drive graphics from data you manage — CSV, Excel, Google Sheets, XML, or JSON — using VideoPro's general-purpose Tables controller.

Reach for Tables when your data can be treated as rows and columns, whether it comes from a spreadsheet, CSV file, Google Sheet, XML source, or JSON source. Tables: Row drives one record at a time, such as a player card or lower third — the most common path. Tables: Block drives several records at once, such as a leaderboard, roster, or schedule. This chapter covers the

overview, the Row workflow, XML and JSON specifics, Block, and the specialized Crawls and Leaderboard controllers.

Tables: What's in this chapter

- 01 [Tables overview](#) — what Tables does, when to use it instead of a catalog Data Controller, and how Row and Block differ.

- 02 [Drive a graphic with Tables: Row](#) — the most common workflow: drive standard graphics from a spreadsheet, CSV, Google Sheet, XML, or JSON, one record at a time.

- 03 [Use XML or JSON with Tables](#) — loading notes for XML and JSON feeds, and when the legacy controllers still apply.

- 04 [Tables: Block Controller](#) — several records at once: leaderboards, rosters, schedules.

- 05 [Crawls Controller](#) — a ticker fed from a Tables source.

- 06 [Leaderboard Controller](#) — a ranked list (standings, top scorers) fed from a Tables source.

Note: If you maintain an older project that uses **General > Spreadsheet**, **General > JSON**, or **General > XML**, see [Legacy data controllers](#).

Tables: Related

- [Play and update graphics — section overview](#)
 - [Data Controller catalog](#) — use this instead when a specific live source provides the data, such as a scoreboard, weather service, presentation app, or meeting platform.
 - [Legacy data controllers](#) — pre-Tables Spreadsheet, JSON, and XML controllers.
-

Tables overview

Tables is VideoPro's general-purpose controller for driving graphics from data you manage — a spreadsheet, CSV file, Google Sheet, Excel workbook, XML file, JSON file, plain text file, or SQLite database. Tables turns rows and columns from that source into values your graphics can display.

Tables or a Data Controller from the catalog?

Reach for **Tables** when the data can be treated as rows and columns — rosters, schedules, speaker lists, sponsor rotations, results you type yourself, or data exported from another system.

Reach for a [Data Controller from the catalog](#) when VideoPro has a controller built for a specific live source — a scoreboard, a weather service, presentation software, a Zoom meeting.

Tables: Row or Tables: Block?

Tables comes in two variants. The difference is how many records drive the graphic at once:

- **Tables: Row** — one record drives the graphic at a time. One speaker for a lower third, one player for a stats card, one sponsor for a bug. This is the common path for driving standard graphics from spreadsheet-style data. See [Drive a graphic with Tables: Row](#).
- **Tables: Block** — several records drive the graphic at once. A leaderboard with the top 10, a roster card with five players, a schedule page. See [Tables: Block Controller](#).

Two specialized controllers extend this workflow: [Crawls](#) for tickers and crawls, and [Leaderboard](#) for ranked sports lists.

Where the data can come from

Each Tables controller loads data from the **Load New Data** screen in three ways:

- **Browse** — a local CSV, Excel (`.xlsx`), JSON, XML, plain text, or SQLite (`.db` / `.db3`) file.
- **Create CSV** — start a new CSV from inside VideoPro.
- **Open URL** — a web URL, including Google Sheets links.

Some online sources require sign-in. If VideoPro asks you to authenticate, follow the prompt. For account-based sources, you can also manage saved accounts from **Settings** → **Internet Accounts**. For XML and JSON specifics, see [Use XML or JSON with Tables](#).

Note: A Google Sheets source must be a **native Google Sheet**, not an Excel workbook uploaded to Google Drive. An `.xlsx` file stored in Drive stays an Excel file and can't be loaded as a Google Sheet — even if you can still open it from VideoPro. To use it, open the file in Google Sheets, choose **File > Save as Google Sheets**, and load the resulting Google Sheet.

Tables overview: What's in this chapter

- 01 [Drive a graphic with Tables: Row](#) — the most common workflow: one record at a time from a spreadsheet, CSV, Google Sheet, XML, or JSON.
- 02 [Use XML or JSON with Tables](#) — format-specific loading notes and when the legacy controllers still apply.
- 03 [Tables: Block Controller](#) — several records at once: leaderboards, rosters, schedules.
- 04 [Crawls Controller](#) — tickers and crawls fed from a Tables source.
- 05 [Leaderboard Controller](#) — ranked lists fed from a Tables source.

See also

- [4. Drive a graphic from a spreadsheet or file](#) — the step-by-step introduction.
 - [Legacy data controllers](#) — the pre-Tables Spreadsheet, JSON, and XML controllers.
-

Drive a graphic with Tables: Row

Use **Tables: Row** when each row in a spreadsheet, CSV file, Google Sheet, XML file, or JSON file represents one set of values for a graphic — one speaker for a lower third, one player for a stats card, one sponsor for a bug. Load the data, connect its columns to the graphic, then play through the rows during the show.

For showing several records at once as a group (a leaderboard, a roster), use [Tables: Block](#) instead.

Format your data

Each column heading in your data becomes a source field that can connect to a graphic value, and each row becomes one record:

01 On the first line, enter the field names — for example, `Name,Role` .

02 On each following line, enter the values for one record — for example, `Juan,Producer` .

Don't include blank lines. To use an image from a data column, enter the image's file name (for images in the project's Textures folder) or its full path and file name. To carry a color, enter a hexadecimal value such as `#2F3BE4` .

Add a Tables: Row input

01 Select the graphic's row in the **Project List** and, in its **Data Controller** column, choose **Productivity → Tables: Row → New Input**. VideoPro adds an instance named `Tables: Row.Table 1` (or `... 2`, `... 3`, etc. for additional inputs).

02 The Tables panel opens to the **Load New Data** screen.

You can also create the input on its own — click **Add new item** in the playout window and choose **Productivity → Tables: Row → New Input** — and connect graphics to it afterwards.

Load data

You can load data three ways. VideoPro also keeps a list of recent sources:

- **Browse** — pick a local file. Supported types: CSV, Excel (`.xlsx`), JSON, XML, plain text, and SQLite database (`.db` / `.db3`).
- **Create CSV** — start a new CSV file from inside VideoPro.
- **Open URL** — fetch a web URL. VideoPro detects the content type from the file extension and recognizes Google Sheets URLs.

For **Google Sheets** or **Microsoft Excel** cloud sources, VideoPro prompts you to sign in when needed. Follow the prompt to authorize the account. You can manage saved accounts from **Settings → Internet Accounts** (the Service Accounts panel).

Note: A Google Sheets source must be a **native Google Sheet**, not an Excel workbook stored in Google Drive. If you upload an `.xlsx` file to Google Drive it stays an Excel file, so it can't be loaded as a Google Sheet here — even if you can still open it from VideoPro. To use it, open the file in Google Sheets and choose **File > Save as Google Sheets**, then load the new Google Sheet.

For XML and JSON specifics, see [Use XML or JSON with Tables](#).

Note: Availability: Some data sources require license support. If your license doesn't include a source, VideoPro shows *"Your license does not include ... support"* when you try to load it.

The **Recent** list at the bottom remembers sheets you've previously loaded. Use the **Filter** box to narrow it down. Click a row to reload that sheet, or use the trash icons to remove individual entries (or the **Clear All** trash icon to remove all).

Connect columns to graphic values

VideoPro connects matching source fields to matching graphic values when it can — a source field named `Name` can connect to a graphic value named **Name**. To check or change the connections:

01 Select the graphic in the **Project List**.

02 Open the **Preview** panel and click **Link Data**.

03 Connect each source field to the graphic value it should control.

As Tables: Row advances through records, the connected graphic values update from the selected row.

Tip: If you're building the graphic yourself, give the values clear names in the Designer so they match the column headings in your data.

Working with a loaded sheet

Once a sheet is loaded, the panel shows the sheet rows with a header bar:

- **Back** arrow (top-left) — return to the Load New Data screen.
- Sheet title — the workbook title and the current sheet name.
- **Edit** pencil (cloud sources only) — opens the source sheet in your browser for editing.
- **Refresh** icon (web sources only) — fetch the latest data from the source.

- **Settings cog** — opens the Settings modal.

Below the header:

- **Find...** search box with prev/next/clear buttons. VideoPro highlights matching cells and shows the match count.
- **Start Auto Play / Stop Auto Play** — automatically advance through rows at the set interval (default 5 seconds).
- **Start Auto Refresh / Stop Auto Refresh** (web sources only) — automatically reload the source at the set interval (default 30 seconds).

Settings

Click the cog to open **Settings**:

Automation Settings

- **Autoplay interval (seconds):** — how often Auto Play advances to the next row. Minimum 3 seconds.
- **Auto Refresh Interval (seconds):** — how often VideoPro reloads the source. Minimum 2 seconds.
- **Loop Table Playback:** — when on, return to the first row after the last; when off, stop at the end.

Display Settings

- **Allow Text Wrap in Cells:** — wrap long cell values in the panel preview.

You can also use **Select titles to use for playback** — choose **All Connected**, **None**, or specific titles. This is useful when more than one graphic is connected to the same data: you decide which titles Auto Play actually drives.

Tables: Row or Values Grid?

Both hold rows of values for one graphic. Use the [Values Grid](#) when you prepare and curate the rows yourself inside VideoPro. Use Tables: Row when

the rows live in a file, sheet, or feed maintained outside VideoPro — the data refreshes from the source, so the spreadsheet stays the single source of truth.

Multiple windows of the same controller

If the Tables panel is open in more than one place, only one window controls playback and editing. The others show a **Take Control** banner with their controls dimmed. Click **Take Control** to make that window active. Inactive windows still show live state, so you can monitor without disrupting playout.

Drive a graphic with Tables: Row: See also

- [Tables overview](#) — Row vs Block and when to use Tables at all.
 - [Use XML or JSON with Tables](#) — format-specific notes.
 - [Tables: Block Controller](#) — for showing several records at once.
 - [Values Grid tab](#) — rows you curate inside VideoPro.
 - [Crawl Conductor](#) and [Roll Conductor](#) — pair with Tables: Row for timed advancement and motion.
-

Use XML or JSON with Tables

Tables can load XML and JSON sources and present them as rows and columns when the data has a table-like structure. This works best when each record is one object or element and each field is a simple value.

If your XML or JSON is deeply nested, includes multiple record types, or mixes data with metadata, you may need to simplify the source before loading it.

Load an XML or JSON file

- 01 Add a [Tables: Row](#) or [Tables: Block](#) input.
-

- 02 On the **Load New Data** screen, click **Browse** and pick the `.xml` or `.json` file — or click **Open URL** and enter the address of a feed. VideoPro detects the content type from the file extension.
-

- 03 The parsed data appears in the Tables panel as a grid. Check that the columns and rows match what you expect, then connect the source fields to your graphic values as with any other Tables source. Use **Link Data** in the **Preview** panel to change which source field controls each graphic value.

If the grid doesn't show the columns you expect, the most reliable fix is to simplify the feed before loading it: export a flatter structure where each record is one object or element and each field is a simple value, or convert the data to CSV and load the CSV instead.

Row or Block for XML and JSON?

The choice is the same as for spreadsheets — choose based on the graphic, not the file type:

- **Tables: Row** — each record drives one graphic variation at a time. The common case.
- **Tables: Block** — several records drive one graphic at once (leaderboards, rosters).

When to use the legacy controllers instead

Older projects may use the **General > JSON** or **General > XML** menu entries. Those legacy inputs keep working — see [Legacy JSON controller](#) and [Legacy XML controller](#).

One workflow remains legacy-only: sports XML feeds that use a separate **control document** (an XML file that maps title variables to the feed) use the legacy **Sports > XML** path. If your workflow depends on a control document, stay on the legacy input.

For new XML and JSON workflows, use Tables: it reads the same files and adds column sorting, header context menus, and Auto Refresh that the older controllers lack.

Use XML or JSON with Tables: See also

- [Tables overview](#)
 - [Drive a graphic with Tables: Row](#)
 - [Tables: Block Controller](#)
 - [Legacy data controllers](#)
-

Tables: Block Controller

Use **Tables: Block** when one graphic needs to show **several records at once** — a leaderboard with the top 10 finishers, a roster card with five players, a schedule showing the next four games. Tables groups the source rows into blocks; each block fills the graphic, then the next block can be shown.

For showing one record at a time (a lower third, a player card), use [Tables: Row](#) instead.

Add a Tables: Block input

Tables: Block works with graphics designed to show multiple records at once. If you're building the graphic yourself, configure the repeated row layout in the Designer first — see [Leaderboard Conductor](#).

01 Add or select a graphic designed to show multiple records, and in its **Data Controller** column choose **Productivity → Tables: Block → New Input**. VideoPro adds an instance named `Tables: Block.Table 1` (or `... 2`, `... 3`, etc. for additional inputs).

02 The Tables panel opens to the **Load New Data** screen.

You can also create the input on its own from **Add new item** in the playout window.

Tables: Block Controller: Load data

You can load data three ways. VideoPro also keeps a list of recent sources:

- **Browse** — pick a local file. Supported types: CSV, Excel (`.xlsx`), JSON, XML, plain text, and SQLite database (`.db` / `.db3`).
- **Create CSV** — start a new CSV file from inside VideoPro.
- **Open URL** — fetch a web URL. VideoPro detects the content type from the file extension and recognizes Google Sheets URLs.

For **Google Sheets** or **Microsoft Excel** cloud sources, VideoPro prompts you to sign in when needed. Follow the prompt to authorize the account. You can manage saved accounts from **Settings → Internet Accounts** (the Service Accounts panel).

Note: A Google Sheets source must be a **native Google Sheet**, not an Excel workbook stored in Google Drive. If you upload an `.xlsx` file to Google Drive it stays an Excel file, so it can't be loaded as a Google Sheet here — even if you can still open it from VideoPro. To use it, open the file in Google Sheets and choose **File > Save as Google Sheets**, then load the new Google Sheet.

Note: Availability: Some data sources require license support. If your license doesn't include a source, VideoPro shows *"Your license does not include ... support"* when you try to load it.

Block detection

VideoPro needs to know how to group rows into blocks. For a **Tables: Block** input, open **Settings → Block Settings → Block Detection Style** to choose:

- **By Blank Rows** — start a new block at every blank row in the sheet (the simplest approach for spreadsheets that visually group their data).
- **By Row Count** — fixed number of rows per block. Set the count in **Rows Per Block**.

- **By Column Group** — group rows by the value of a chosen column. Set the column in **Column to Group By:**. (Useful for grouping a roster by team, a schedule by week, etc.)
- **Synchronize with Leaderboard** — block size follows the connected graphic's **Leaderboard Conductor** row count. Use this when the graphic determines how many rows fit on screen, not the data.

When the connected graphic uses a Leaderboard Conductor, VideoPro auto-selects **Synchronize with Leaderboard** and shows the conductor's row count next to the **Rows Per Block:** field — e.g. *"Note: The conductor currently has 5 rows out of a maximum 10."*

Note: The separate **Leaderboard Controller** (in the Sports menu) always uses **Synchronize with Leaderboard** and hides the **Block Detection Style** dropdown. See [Leaderboard Controller](#).

Tables: Block Controller: Working with a loaded sheet

The panel shows the sheet with a header bar:

- **Back** arrow — return to Load New Data
- Sheet title and current sheet name
- **Edit** pencil (cloud sources) — open the source sheet in your browser
- **Refresh** icon (web sources) — fetch the latest data from the source
- **Settings** cog

Below the header:

- **Find...** search box
- **Block Mode** switch (when allowed) — toggle block grouping on or off
- Numeric input next to Block Mode — sets **Rows Per Block::** uses automatic block detection
- **Start Auto Play / Stop Auto Play** — advance to the next block on a timer
- **Start Auto Refresh / Stop Auto Refresh** (web sources)

Tables: Block Controller: Settings

Click the cog to open **Settings**:

Automation Settings

- **Autoplay interval (seconds):** — how often Auto Play advances to the next block. Minimum 3 seconds.
- **Auto Refresh Interval (seconds):** — how often VideoPro reloads the source. Minimum 2 seconds.
- **Loop Table Playback:** — return to the first block after the last.

Display Settings

- **Allow Text Wrap in Cells:**
- **Block Mode:** checkbox — alternate way to toggle block grouping on/off.

Block Settings (shown when Block Mode is on)

- **Block Detection Style:** dropdown (see above)
- **Rows Per Block:** numeric (used by *By Row Count and Synchronize with Leaderboard*)
- **Column to Group By:** dropdown (used by *By Column Group*)

Connect block data to a graphic

Tables: Block works with graphics designed to display multiple records at once. Many of these graphics use a **Leaderboard Conductor** in the Designer to define the repeated row layout.

VideoPro connects matching source fields to matching graphic values when it can. To check or change the connections, use **Link Data** in the **Preview** panel.

If you're building the graphic yourself, build the repeated row layout in the Designer and use the Leaderboard Conductor to define how rows fill the graphic — see [Leaderboard Conductor](#) for the Designer-side configuration.

Multiple windows

If the Tables panel is open in more than one place, only one window controls playback and editing. The others show a **Take Control** banner with their controls dimmed. Click **Take Control** to make that window active.

Tables: Block Controller: See also

- [Tables overview](#) — Row vs Block and source options
 - [Drive a graphic with Tables: Row](#) — for showing one record at a time
 - [Use XML or JSON with Tables](#) — format-specific notes
 - [Leaderboard Controller](#) — the sports leaderboard variant
 - [Leaderboard Conductor](#) — the Designer-side companion
-

Crawls Controller

The **Crawls Controller** connects a data source to a graphic that scrolls or rolls each row across the screen — a news ticker, headline crawl, score crawl, credits roll.

Use it with a graphic that has a **Crawl Conductor** or **Roll Conductor**: the controller supplies the rows; the conductor controls the motion.

Add a Crawls input

01 Select the crawl or roll graphic in the **Project List** and, in its **Data Controller** column, choose **General → Crawls: Crawl → New Input**.

02 The controller panel opens to the **Load New Data** screen.

You can also create the input on its own from **Add new item** in the layout window.

Crawls Controller: Load data

You can load data three ways. VideoPro also keeps a list of recent sources:

- **Browse** — pick a local file. Supported: CSV, Excel (`.xlsx`), JSON, XML, plain text, SQLite (`.db` / `.db3`).
- **Create CSV** — start a new CSV from inside VideoPro.
- **Open URL** — fetch a web URL.

For **Google Sheets** or **Microsoft Excel** cloud sources, VideoPro prompts you to sign in when needed. Follow the prompt to authorize the account. You can manage saved accounts from **Settings** → **Internet Accounts** (the Service Accounts panel).

Note: A Google Sheets source must be a **native Google Sheet**, not an Excel workbook stored in Google Drive. If you upload an `.xlsx` file to Google Drive it stays an Excel file, so it can't be loaded as a Google Sheet here — even if you can still open it from VideoPro. To use it, open the file in Google Sheets and choose **File > Save as Google Sheets**, then load the new Google Sheet.

Note: Availability: Some data sources require license support. If your license doesn't include a source, VideoPro shows *"Your license does not include ... support"* when you try to load it.

The **Recent** list remembers sheets you've previously loaded. Use the **Filter** box to narrow it down. Click a row to reload, or use the trash icons to remove entries.

Crawls Controller: Working with a loaded sheet

The header bar:

- **Back** — return to Load New Data
- Sheet title and current sheet name
- **Edit** pencil (cloud sources) — opens the sheet in your browser
- **Refresh** icon (web sources) — fetch the latest data from the source

- **Settings cog**

Below:

- **Find...** search box
- **Start Auto Play / Stop Auto Play** — advance to the next row on a timer. Used only when no Crawl or Roll Conductor is connected.
- **Start Auto Refresh / Stop Auto Refresh** (web sources)

When a Crawl or Roll Conductor is connected

A Crawl's input is usually used with a graphic that has a **Crawl Conductor** or **Roll Conductor**. When one is connected:

- The conductor controls row advancement, so the controller's local Auto Play timer is disabled.
- The conductor requests the next row when it needs more data.
- The controller panel still shows the current row, so you can monitor what's playing.

See [Crawl Conductor](#) and [Roll Conductor](#) for Designer-side setup.

Crawl's Controller: Settings

Click the cog:

Automation Settings

- **Autoplay interval (seconds):** — how often Auto Play advances to the next row. Minimum 3 seconds. Used only when no conductor is driving advancement.
- **Auto Refresh Interval (seconds):** — how often VideoPro reloads the source. Minimum 2 seconds.
- **Loop Table Playback:** — return to the first row after the last.

Display Settings

- **Allow Text Wrap in Cells:**

You can also use **Select titles to use for playback** to choose which connected graphics Auto Play drives.

Connect data to a crawl or roll graphic

Each column heading in your source becomes a source field that can connect to a graphic value. VideoPro connects matching fields to matching graphic values when it can; to check or change the connections, use **Link Data** in the **Preview** panel.

If you're building the graphic yourself, add a **Crawl Conductor** or **Roll Conductor** to the layer in the Designer and connect the values the conductor will display — see [Crawl Conductor](#) and [Roll Conductor](#).

The conductor controls the motion: right-to-left scrolling for a crawl, bottom-to-top rolling for a roll. The **Reverse** parameter flips the direction. When the conductor needs more text, it requests the next row from the controller.

Crawls Controller: Multiple windows

If the Crawls Controller panel is open in more than one place, only one window controls playback and editing. The others show a **Take Control** banner with their controls dimmed. Click **Take Control** to make that window active.

Crawls Controller: See also

- [Crawl Conductor](#) — right-to-left scrolling text (Reverse option flips direction)
 - [Roll Conductor](#) — bottom-to-top rolling text (credits-style)
 - [Drive a graphic with Tables: Row](#) — for one-record-at-a-time graphics without crawl or roll motion
 - [Tables overview](#) — Row vs Block and source options
-

Leaderboard Controller

The **Leaderboard Controller** connects standings, rankings, race results, or other sports data to a leaderboard graphic that shows the top entries one page at a time.

A leaderboard graphic usually uses a **Leaderboard Conductor** to control how many rows appear on each page.

Add a Leaderboard input

01 Add or select a leaderboard graphic in the **Project List** and, in its **Data Controller** column, choose **Sports → Leaderboards: Leaderboard → New Input**.

02 The controller panel opens to the **Load New Data** screen.

You can also create the input on its own from **Add new item** in the playout window.

Leaderboard Controller: Load data

You can load data three ways. VideoPro also keeps a list of recent sources:

- **Browse** — pick a local file. Supported: CSV, Excel (`.xlsx`), JSON, XML, plain text, SQLite (`.db` / `.db3`).
- **Create CSV** — start a new CSV file from inside VideoPro.
- **Open URL** — fetch a web URL. VideoPro detects the content type from the file extension and recognizes Google Sheets URLs.

For **Google Sheets** or **Microsoft Excel** cloud sources, VideoPro prompts you to sign in when needed. Follow the prompt to authorize the account. You can manage saved accounts from **Settings → Internet Accounts** (the Service Accounts panel).

Note: A Google Sheets source must be a **native Google Sheet**, not an Excel workbook stored in Google Drive. If you upload an `.xlsx` file to Google Drive it stays an Excel file, so it can't be loaded as a Google Sheet here — even if you can still open it from VideoPro. To use it, open the file in Google Sheets and choose **File > Save as Google Sheets**, then load the new Google Sheet.

Note: Availability: Some data sources require license support. If your license doesn't include a source, VideoPro shows *"Your license does not include ... support"* when you try to load it.

How rows are grouped into leaderboard pages

The Leaderboard Controller uses the connected graphic's **Leaderboard Conductor** to decide how many rows appear on each page. The controller always uses **Synchronize with Leaderboard**, so the page size follows the row count set in the graphic, and the **Block Detection Style** dropdown is hidden.

As you change the conductor's row count in the Designer, the controller follows. The panel shows *"Note: The conductor currently has N rows out of a maximum M."* next to the row-count field.

For **Tables: Block**, the controller can group rows in other ways — blank rows, fixed row count, or column groups. See [Tables: Block Controller](#) for those options.

Working with the loaded data

After loading a sheet, the panel shows it in a familiar grid layout. The top bar:

- **Back** — return to Load New Data
- Sheet title and current sheet name
- **Edit** pencil (cloud sources) — opens the sheet in your browser
- **Refresh** icon (web sources) — fetch the latest data from the source
- **Settings** cog

Below:

- **Find...** search box (highlights matching cells)
- **Block Mode** switch and row count — the page grouping, which follows the connected Leaderboard Conductor
- **Start Auto Play / Stop Auto Play** — advance to the next leaderboard page on a timer
- **Start Auto Refresh / Stop Auto Refresh** (web sources)

Leaderboard Controller: Settings

Click the cog. Common settings:

- **Autoplay interval (seconds):** — how often Auto Play advances to the next leaderboard page.
- **Auto Refresh Interval (seconds):** — how often VideoPro reloads the source.
- **Loop Table Playback:** — return to the first page after the last.
- **Allow Text Wrap in Cells:**
- **Rows Per Block:** — follows the connected graphic's Leaderboard Conductor row count.
- **Select titles to use for playback** — pick which connected graphics Auto Play actually advances.

Sort order

Sort the loaded leaderboard from the **Leaderboard Controller** grid itself: right-click a column header and choose **Sort Ascending**, **Sort Descending**, or **Clear Sort**. The chosen sort persists in the controller settings, applies to the data sent to the connected graphic, and remains in effect after reloads. Use this to sort by score, time, place, or any other column without editing the source.

You can still pre-sort the source sheet (or, for cloud sources, sort in Google Sheets / Excel) when the source needs to remain ordered for other tools —

VideoPro picks up the source order on refresh and then applies any in-controller sort on top.

Animation order is controlled separately in the graphic, via the Leaderboard Conductor's `Order` variable — see [Leaderboard Conductor](#).

Connect data to a leaderboard graphic

The Leaderboard Controller works with graphics designed to display multiple ranked records. Many leaderboard graphics use a **Leaderboard Conductor** in the Designer to define the repeated row layout.

VideoPro connects matching source fields to matching graphic values when it can. To check or change the connections, use **Link Data** in the **Preview** panel.

If you're building the leaderboard graphic yourself, configure the repeated row layout in the Designer with the Leaderboard Conductor — see [Leaderboard Conductor](#) for Designer setup.

Leaderboard Controller: Multiple windows

If the Leaderboard Controller panel is open in more than one place, only one window controls playback and editing. The others show a **Take Control** banner with their controls dimmed. Click **Take Control** to make that window active.

Leaderboard Controller: See also

- [Leaderboard Conductor](#) — the Designer-side companion that drives the leaderboard layout
 - [Tables: Block Controller](#) — for non-sports graphics that show several records at once
 - [Drive a graphic with Tables: Row](#) — for one-record-at-a-time graphics
 - [Tables overview](#) — Row vs Block and source options
-

Legacy data controllers

These controllers predate the modern [Tables](#) system but remain in VideoPro so existing projects continue to open. Avoid creating new inputs with them — start new work with Tables.

Important: These pages document the legacy Qt/C++ controllers reached via **General > Spreadsheet**, **General > JSON**, **General > XML**, and the **Productivity > Google Sheets**, **Microsoft Excel**, and **Google Slides** entries (plus the **Sports >** siblings). The flow uses an older selector dialog that is distinct from the Tables controller's unified **Load New Data** panel.

Legacy data controllers: What's in this chapter

- [Legacy Spreadsheet / CSV controller](#) — when an existing project uses **General > Spreadsheet**.
- [Legacy JSON controller](#) — when an existing project uses **General > JSON** or **Sports > JSON**.
- [Legacy XML controller](#) — when an existing project uses **General > XML** or **Sports > XML**.
- [Legacy Google Sheets controller](#) — when an existing project uses **Productivity > Google > Sheets**.
- [Legacy Microsoft Excel controller](#) — when an existing project uses **Productivity > Microsoft > Excel**.
- [Legacy Google Slides controller](#) — when an existing project uses **Productivity > Google > Slides**.

When to migrate

For any new project, prefer [Tables](#). The Tables controller:

- Reads CSV, Excel (`.xlsx`), JSON, XML, plain text, and SQLite from one **Browse** button.

- Adds in-controller column sorting, header context menus, and a recent-source list.
- Auto-refreshes web sources on a timer.
- Handles Google Sheets and Microsoft Excel Online with OAuth.

Existing projects that already use the legacy controllers do not need to be migrated immediately — the inputs continue to load. Plan migration to Tables when convenient.

Legacy data controllers: Related

- [Tables overview](#)
 - [Play and update graphics — section overview](#)
-

Legacy Spreadsheet / CSV controller

Important: This page documents the **legacy** Spreadsheet controller (registered as **General > Spreadsheet**). It is retained so existing projects continue to open. For new projects, use [Tables: Row](#) or [Tables: Block](#) — the unified Tables controller reads the same CSV and XLSX files and is the supported path forward.

VideoPro can display data from XLSX and CSV files in graphics through the legacy Spreadsheet controller. This page describes how to connect a spreadsheet to a graphic with the legacy controller and how to structure the data files — the file formats also apply to spreadsheets you load through Tables.

Add a legacy Spreadsheet input

- 01 In VideoPro's playout interface, open a project (if a project isn't already open) and select a graphic in the Project List.

Tip: Open the Library panel and drag a title design to your channel first if you don't

have one yet.

- 01 Click the **Select a Datasource** cell in the Data Controller column and choose **General > Spreadsheet > New Input**. (The same controller is also registered as **Productivity > Spreadsheet** — the workflow is identical.)

Tip: If you previously connected a spreadsheet and want to reuse it, select it from **General > Spreadsheets** instead. To remove a Data Controller from a graphic, open the **Preview** panel, click **Link Data**, right-click the controller's name, and choose **Remove Input**.

- 01 When prompted, either select an existing file or create a new one:

Select an existing XLSX or CSV file

1. Ensure the file is formatted as described in [Create spreadsheet data files](#).

1. Click **Select file**, then find and open the file. The data appears in the Spreadsheet panel.

Create a new spreadsheet file

1. Click **New Input**.

1. Enter a descriptive file name and save the file somewhere you will remember. VideoPro saves it as a CSV and shows placeholder data based on the graphic's variables.

1. Open the new file in a spreadsheet or text editor, enter your variable names and values (see below), and save. VideoPro picks up the changes automatically.

- 01 Click **Link Data** in the **Preview** panel, then drag a spreadsheet variable onto an element in the graphic. Repeat for each variable you want connected.

- 02 Click a line or block of data in the Spreadsheet panel to show that data in the graphic.

Create spreadsheet data files

Structure the file to match the graphic. Use **basic** data files for designs with few text objects (a lower third) where you show one line at a time. Use **block** data files for graphics with many text objects where you show or hide groups of data together.

Create basic data files

- 01 Open an XLSX or CSV file in a spreadsheet editor or text editor.
- 02 On the first line, enter the variable names. In a text editor, separate them with commas — for example, `Name,Role` .
- 03 On each following line, enter the values for one record — for example, `Juan,Producer` .

Important: Don't include blank lines in basic data files.

Example in a spreadsheet editor:

Example in a text editor:

- 01 Save the file. If it's already connected to a graphic, the changes appear in the Spreadsheet panel automatically.

Create block data files (Broadcast only)

With VideoPro Broadcast, create a block data file for graphics with many text objects, or when you need to show or hide multiple lines (blocks) together.

Note: Block mode is not supported within Google Sheets.

01 Open an XLSX or CSV file.

02 On the first line, enter the word **index**, then the variable names — for example, `Index,Name,Role`. The index names blocks of data — you can select a block by that name with [Instant Search](#) — and it does not appear in the rendered graphic.

03 On the next line, leave a blank line (or enter three commas, `, , ,`, in a text editor).

01 For each block: on the first line after the blank, enter a short name for the index plus the values — for example, `nb,Todor,CEO`. On subsequent lines of the same block, leave the index column empty and enter the values — for example, `,Travis,VP`.

01 To add another block, leave a blank line (or `, , ,`) and repeat.

01 Save the file.

Tip: Add image variables to spreadsheet files

Enter the image's file name, or its full path and file name:

- Windows: `C:\Documents and Settings\company\images\logo.jpeg`
- macOS: `Macintosh HD/Users/abc/Documents/Images/logo.jpeg`

If you enter only a file name (such as `logo.png`), VideoPro looks for it in the **Textures** folder of the installation directory and the project's directory. Enter the full path for images stored anywhere else.

Note: The path must end with the image's file name and extension or VideoPro cannot recognize the image. JPEG has been the most reliable format. If an image displays as a white box, check the path formatting, or move the image into the Textures folder.

Tip: Add color variables to spreadsheet files

Enter a hexadecimal value (for example, #2F3BE4) for each color you want to carry as a variable. Connect it to a color variable in the graphic the same way as any other column.

Operate spreadsheet data during a show

Select data in basic data files

- 01 Select the spreadsheet-connected graphic in the Project List to view it in the Preview panel.

- 02 If the Spreadsheet panel lists more than one spreadsheet input, expand the input that is connected to the graphic you selected.

- 03 Click a line in the Spreadsheet panel to display that line's information in the graphic.

Select and hide data in block data files (Broadcast only)

- 01 Select the spreadsheet-connected graphic in the Project List to view it in the Preview panel.

 - 02 If the Spreadsheet panel lists more than one spreadsheet input, expand the input that is connected to the graphic you selected.

 - 03 Click anywhere in a block of data in the Spreadsheet panel to display that block in the graphic.
- 01 To turn specific blocks, lines, or parts of lines off and on (all data is on by default), do any of the following:
 - Click the **Block** button near the top-left corner of a data block to turn the whole block off and on.
 - Click the **Line** button next to a line to turn the line off and on.

- Click a **cell** in a data block to turn that cell off and on.

Automatically play spreadsheet data

When a graphic is connected to a spreadsheet input with multiple lines or blocks of data, VideoPro can display each line or block in succession during playback.

- 01 If you connected blocks of data and want to hide some of it, turn the unwanted data off first (see the previous section).

- 02 Click the **Auto Play** button in the Spreadsheet panel for the input connected to the graphic.
- 01 Enter a number in the **Delay** field — the seconds each line or block displays during playback.

- 02 Click the **Play** button on the graphic's row in the Project List. VideoPro automatically displays and rotates through each line or block of data in the file.

Migration to the new Tables controller

If you maintain a project that currently uses **General > Spreadsheet**, you can switch to [Tables: Row](#) or [Tables: Block](#) without changing the data file: choose **Productivity > Tables: Row > New Input**, click **Browse** to pick the same XLSX or CSV file, and re-link the variables to your graphic. The Tables grid adds column sorting, header context menus, Auto Refresh, and Google Sheets / Excel Online support that the legacy controller does not.

Legacy Spreadsheet / CSV controller: See also

- [Legacy data controllers](#) — chapter overview
- [Tables overview](#) — the modern Tables controller
- [Legacy JSON controller](#) and [Legacy XML controller](#) — sibling legacy feeds

Legacy JSON controller

Important: This page documents the **legacy** JSON controller (the Qt/C++ `CSVFileReaderHandler` registered as **General > JSON** and **Sports > JSON**). It is retained so existing projects continue to open. For new projects, use [Tables](#) — the unified Tables controller reads JSON via **Browse** or **Open URL** in **Load New Data** and is the supported path forward. The legacy JSON menu entry may be removed in a future release.

VideoPro Broadcast and Sport can display data from incoming JSON feeds, such as Scoreboard OCR and other sources that write real-time data to JSON files. This data can be assigned to design elements such as text and updated in real time.

Add a legacy JSON input

- 01 In VideoPro's playout interface, open a project (if a project isn't already open) and select a graphic in the Project List.

Tip: Open the Graphics Library panel and drag a graphic from the library to your channel. To customize existing variables or create new ones, see [Create variables in graphics](#).

- 01 Click the **Select a Datasource** cell in the Data Controller column and choose **General > JSON > New Input** (or **Sports > JSON > New Input** if a sports-graphic input list is open).

- 02 A dialog box prompts you to either select a JSON file from your computer or enter a URL that hosts your JSON data.

- Enter the **URL** of the JSON file on your local network or FTP location, or click the **Select file** button and pick a local JSON file.

Tip: FTP syntax: The URL form is `ftp://username:password@server.com/path/file.json`. You can also use an IP address after `@` instead of a hostname.

01 The JSON data and its variables appear in the **Link Data** sidebar in the **Preview** panel. Click **Link Data** in the **Preview** panel to view the JSON input and variables.

02 Click and drag a JSON variable onto an object in the graphic. Repeat this step for each variable you want to include in the graphic.

Tip: To disconnect a variable from an object in your graphic, right-click the variable in the **Preview** panel and choose **Disconnect variable**.

The JSON data is now visible in the graphic. VideoPro updates the graphic as the underlying data changes.

How VideoPro reads JSON

The legacy JSON handler auto-flattens the document into a table by heuristic. There is no JSONPath, jq, or dotted-key query language — you cannot ask for a specific node by selector.

- An array of objects is read as rows; each object's fields become columns.
- The parser defaults to **400 keys** maximum and a **max depth of 3**. Heavily nested or oversized documents may not produce the columns you expect.
- If the generated columns are not what you want, reshape the feed upstream (export a flatter JSON) or convert to CSV/XLSX and load through the modern Tables controller.

Refresh behavior

How VideoPro picks up new data depends on the source:

- **Local files** — VideoPro watches the file via the OS file-change events and reloads automatically when the file is rewritten.
- **URL / FTP sources** — VideoPro fetches once at load. Click the **Refresh / Reload** control in the input's settings to pull a fresh copy, or use the input's Auto Refresh interval if exposed for that source.

Legacy JSON controller: Migration to the new Tables controller

If you maintain a project that currently uses **General > JSON**, you can switch to [Tables: Row](#) or **Tables: Block** without changing the source file: choose **Productivity > Tables: Row > New Input**, click **Browse** to pick the same JSON file, and re-link the variables to your graphic. The Tables grid then exposes column sorting, header context menus, and Auto Refresh that the legacy handler does not.

Legacy JSON controller: See also

- [Legacy data controllers](#) — chapter overview
 - [Tables](#) — modern Tables controller
 - [Legacy XML controller](#) — sibling article for XML feeds
-

Legacy XML controller

Important: This page documents the **legacy** XML controller (the Qt/C++ `CSVFileReaderHandler` registered as **General > XML** and **Sports > XML**, plus the related `XMLFileReaderHandler` for sports-XML control documents). It is retained so existing projects continue to open. For new projects, use [Tables](#) — the unified Tables controller reads XML via **Browse** or **Open URL** in **Load New Data** and is the supported path forward. The legacy XML menu entry may be removed in a future release.

VideoPro Broadcast and Sport can display data from incoming XML feeds, such as Scoreboard OCR and other sources that write real-time data to XML files. This data can be assigned to design elements such as text and updated in real time.

Add a legacy XML input

- 01 In VideoPro's playout interface, open a project (if one isn't already open) and select a graphic in the Project List.

Tip: Open the Graphics Library panel and drag a graphic from the library to your channel. To customize variables, see [Create variables in graphics](#).

- 01 Click the **Select a Datasource** cell in the Data Controller column and choose **General > XML > New Input** (or **Sports > XML > New Input** if a sports-graphic input list is open).

- 02 A dialog prompts you to either select an XML file from your computer or enter a URL hosting your XML data.

Enter the **URL** of the XML file on your local network or FTP location, or click **Select file** and pick the XML file.

Tip: FTP syntax: The URL form is `ftp://username:password@server.com/path/file.xml`. You can also use an IP address after `@` instead of a hostname.

- 01 The XML data and its variables appear in the **Link Data** sidebar in the **Preview** panel. Click **Link Data** to view the XML input and variables.
- 02 Click and drag an XML variable onto an object in the graphic. Repeat for each variable you want to include in the graphic.

Tip: To disconnect a variable, right-click it in the **Preview** panel and choose **Disconnect variable**.

The XML data is now visible in the graphic. VideoPro updates the graphic as the underlying data changes.

How VideoPro reads XML

The legacy XML handler auto-flattens the document into a table by heuristic. There is no XPath, attribute selector, or `text()` selector — you cannot ask for a specific node by selector.

- Repeated elements are read as rows; an element's children and attributes become columns.

- The parser defaults to **400 keys** maximum and a **max depth of 3**. Heavily nested documents (sports XML with deep schedule trees, league-wide rosters, multi-day stats) may not produce the columns you expect.
- For sports feeds that ship with a **control document** (a separate XML that maps title-variable placeholders to XPath-like expressions), use the **Sports > XML** menu entry — the dialog accepts both the control document and the live data file.
- If the generated columns are not what you want, reshape the feed upstream (export a flatter XML) or convert to CSV/XLSX and load through the modern Tables controller.

Legacy XML controller: Refresh behavior

How VideoPro picks up new data depends on the source:

- **Local files** — VideoPro watches the file via the OS file-change events and reloads automatically when the file is rewritten.
- **URL / FTP sources** — VideoPro fetches once at load. Click the **Refresh / Reload** control in the input's settings to pull a fresh copy, or use the input's Auto Refresh interval if exposed for that source.

Legacy XML controller: Migration to the new Tables controller

If you maintain a project that currently uses **General > XML**, you can switch to **Tables: Row** or **Tables: Block** without changing the source file: choose **Productivity > Tables: Row > New Input**, click **Browse** to pick the same XML file, and re-link the variables to your graphic. The Tables grid then exposes column sorting, header context menus, and Auto Refresh that the legacy handler does not.

The control-document workflow for sports XML feeds remains specific to the legacy **Sports > XML** path. If your project depends on a control document, keep the legacy input until product publishes a Tables-side equivalent.

Legacy XML controller: See also

- [Legacy data controllers](#) — chapter overview
- [Tables](#) — modern Tables controller
- [Legacy JSON controller](#) — sibling article for JSON feeds

Legacy Google Sheets controller

Important: This page documents the **legacy** Google Sheets controller (registered as **Productivity > Google > Sheets**). It is retained so existing projects continue to open. For new projects, use [Tables: Row](#) or [Tables: Block](#) — the unified Tables controller opens Google Sheets through **Open URL** or the cloud picker and is the supported path forward.

VideoPro can display data from a Google Sheets file in graphics through the legacy Google Sheets controller. This page describes how to link sheet data to a graphic and play out rows.

Connect Google Sheets data to a graphic

- 01 In VideoPro's playout interface, open a project (if a project isn't already open) and select a graphic in the Project List.
- 02 Click the **Select a Datasource** cell in the Data Controller column and choose **Productivity > Google > Sheets > New Input**.

Tip: To remove an input from a graphic, open the **Preview** panel, click **Link Data**, right-click the data source name, and choose **Remove input**. **Note:** Multiple graphics can read from the same Google Sheets file — separate tabs of one workbook, for instance. Playing out or in from the Google Sheets controller panel affects **all** connected graphics, so use the play controls in the Project List instead when you share a file this way.

- 01 Sign in to your Google account. First-time sign-in goes through **Settings > Internet Accounts**; once signed in, the controller uses that

account without prompting again.

02 The controller's tab in the Properties panel displays the folders from your Google Drive that contain sheets. Browse to the sheet you want to connect.

01 Selecting a sheet displays all its rows. This interface is where you control and play out data rows.

02 Click the red icons to link data columns. A preview of your graphic opens — hovering over variable-enabled elements shows a bounding box with the variable's name and type. Click an element to link the column to that variable.

Important: Variable names do not have to match data column names for a link to be established.

01 Linked columns show a green link icon. Rows of the sheet now behave as instances of data: clicking the play button on any row updates the graphic with that row's information.

Tip: Use the **Find** search tool to quickly locate information in your sheet. Matching keywords highlight the cells where that information exists.

Note: If the connected sheet has been edited, use the refresh button to pull the changes into VideoPro. The controller polls Google Sheets every 30 seconds for changes.

Playout controls

Start Auto Play

The controller can play through each row of your sheet automatically while the graphic is live. The **Start Auto Play** button toggles the feature; the setting to its right sets the delay in seconds before the next row displays. Linked elements animate out before the next set of information animates in.

Manual playout

The far-right columns of the sheet handle manual playout. The top **Play next** icon plays the next line — select the second row, click **Play next**, and the third row plays.

Clicking the play button on any row plays that row. Clicking play on another row queues the previous row to animate out before the selected row animates in.

Legacy Google Sheets controller: Migration to the new Tables controller

To move a project to the modern path, add a [Tables: Row](#) input, open the same Google Sheet through **Open URL** (paste the sheet's link) or the cloud picker after signing in, and re-link the columns to your graphic. Tables adds column sorting, header context menus, and configurable Auto Refresh.

Legacy Google Sheets controller: See also

- [Legacy data controllers](#) — chapter overview
 - [Legacy Microsoft Excel controller](#) — the OneDrive sibling
 - [Tables overview](#) — the modern Tables controller
-

Legacy Microsoft Excel controller

Important: This page documents the **legacy** Microsoft Excel controller (registered as **Productivity > Microsoft > Excel**). It is retained so existing projects continue to open. For new projects, use [Tables: Row](#) or [Tables: Block](#) — the unified Tables controller opens Excel files locally and Excel Online through the cloud picker, and is the supported path forward.

VideoPro can display data from a Microsoft Excel workbook in graphics through the legacy Excel controller. This page describes how to link workbook data to a graphic and play out rows.

Connect Microsoft Excel data to a graphic

01 In VideoPro's playout interface, open a project (if a project isn't already open) and select a graphic in the Project List.

02 Click the **Select a Datasource** cell in the Data Controller column and choose **Productivity > Microsoft > Excel > New Input**.

Tip: To remove an input from a graphic, open the **Preview** panel, click **Link Data**, right-click the data source name, and choose **Remove input**. **Note:** Multiple graphics cannot read from the same Excel file. Data links from an Excel file always belong to the first graphic it was connected to.

01 Sign in to your Microsoft account via **Settings > Internet Accounts**. The **Open in Browser** button opens the controller in a local browser — the same URL works from any other machine on your network to use the controller remotely.

01 The controller's tab in the Properties panel displays the folders from your OneDrive that contain workbooks. Browse to the workbook you want to connect.

01 Selecting a workbook displays the rows of the sheet. Use this interface to control and play out rows.

Note: Excel uses Microsoft Graph webhooks for near-instant updates when the source workbook changes — typically faster than polling-based sources.

01 Click the red icons to link data columns. A preview of your graphic opens — hovering over variable-enabled elements shows a bounding box with the variable's name and type. Click an element to link the column to that variable.

Important: Variable names do not have to match data column names for a link to be established.

- 01 Linked columns show a green link icon. Rows now behave as instances of data: clicking the play button on any row updates the graphic with that row's information.

Tip: Use the **Find** search tool to quickly locate information in your sheet. Matching keywords highlight the cells where that information exists.

Legacy Microsoft Excel controller: Payout controls

Legacy Microsoft Excel controller: Start Auto Play

The controller can play through each row automatically while the graphic is live. The **Start Auto Play** button toggles the feature; the setting to its right sets the delay in seconds before the next row displays.

Legacy Microsoft Excel controller: Manual payout

The far-right columns of the sheet handle manual payout. The top **Play next** icon plays the next line; the play button on any row plays that row.

Legacy Microsoft Excel controller: Migration to the new Tables controller

To move a project to the modern path, add a [Tables: Row](#) input and open the same workbook — **Browse** for a local `.xlsx`, or the cloud picker for Excel Online after signing in — then re-link the columns to your graphic.

Legacy Microsoft Excel controller: See also

- [Legacy data controllers](#) — chapter overview
 - [Legacy Google Sheets controller](#) — the Google Drive sibling
 - [Tables overview](#) — the modern Tables controller
-

Legacy Google Slides controller

Important: This page documents the **legacy** Google Slides controller (registered as **Productivity > Google > Slides**). It is retained so existing projects continue to open.

VideoPro can display slides from a Google Slides project in graphics. This page describes how to link a Slides project to a graphic and play through its slides.

Connect a Google Slides project to a graphic

- 01 In VideoPro's playout interface, open a project (if a project isn't already open) and select a graphic in the Project List.

Note: The Google Slides controller requires at least one **image variable** on the graphic — the slides display through that variable. To add one, see [Create variables in graphics](#).

- 01 Click the **Select a Datasource** cell in the Data Controller column and choose **Productivity > Google > Slides > New Input**.

Tip: To remove an input from a graphic, open the **Preview** panel, click **Link Data**, right-click the data source name, and choose **Remove input**. **Note:** Multiple graphics cannot read from the same Google Slides file. Data links from a Slides file always belong to the first graphic it was connected to.

- 01 Sign in to your Google account via **Settings > Internet Accounts** if you have not already. A message confirms the link between VideoPro and your Google account.
-

- 02 The controller's tab in the Properties panel displays the folders from your Google Drive that contain Slides projects. Browse to the project you want to connect.

- 01 Select a slide to render it and animate it onto your graphic. Selecting any other slide animates out the previous slide and animates in the selected one.

Legacy Google Slides controller: Playout controls

The **Play next** button advances through the project's slides in order. Using **Play next** on the final slide plays out the slide and the entire graphic.

Legacy Google Slides controller: See also

- [Legacy data controllers](#) — chapter overview
 - [Legacy Google Sheets controller](#) — the spreadsheet sibling
-

Data Controller catalog

The browsable list of every Data Controller VideoPro ships, one page per source.

Start with the overview page below — it explains what a Data Controller is, when to reach for one instead of Tables, and the operations that work the same way across the whole catalog. Then pick the page for your specific source.

Data Controller catalog: What's in this chapter

- [How Data Controllers work](#) — read this first. It frames every other page in the catalog.
- [Authenticate your Internet Accounts](#) — use this when a Data Controller asks you to sign in via the Service Accounts panel.
- [Connect Scoreboard Tool data to a graphic](#) — the built-in Scoreboard Tool.
- [Connect Scorebird data to a graphic](#) — Scorebird device.
- [Connect a hardware scoreboard via serial port](#) — physical scoreboards.
- [Connect a custom clock to a graphic](#) — game-clock feeds.
- [Connect Sportzcast data to a graphic](#) — Sportzcast scoreboard feed.
- [Connect Stat Crew statistical data to a graphic](#) — Stat Crew live stats.

- [Connect DataLink feed data to a graphic](#) — DataLink sports feed.
- [Connect ProPresenter to VideoPro](#) — worship/presentation.
- [Connect EasyWorship to VideoPro](#) — worship/presentation.
- [Authenticate Zoom](#) — sign in to Zoom once for all Zoom controllers.
- [Connect Zoom Meeting](#) — single Zoom meeting on air.
- [Connect Zoom Manager \(Meeting Workflow\)](#) — full meeting-workflow control.
- [Connect Microsoft Teams](#) — Teams meeting source.
- [Connect the Chat Controller in Zoom](#) — Zoom chat to lower-thirds.
- [Social Chat Controller](#) — pull social-media chat onto air.
- [Connect weather updates with WeatherCast](#) — live weather with no setup.

Data Controller catalog: Related

- [Play and update graphics — section overview](#)
 - [Tables](#) — use this instead when you own the data as a file.
-

How Data Controllers work

A Data Controller is a VideoPro component that fetches live data from a specific source and delivers it to your graphics. Pick a graphic, pick a Data Controller, and VideoPro keeps the graphic in sync with the source: no manual entry, no copy-paste, no scripting.

This page explains what a Data Controller is, when to use one (versus [Tables](#)), and the operations that work the same way across the entire catalog. Read it once before wiring up a specific Data Controller; every catalog page assumes you've read this.

When to reach for a Data Controller (not Tables)

VideoPro offers two ways to drive a graphic with live data: Tables and Data Controllers.

- **Tables** reads structured data from a file you provide: CSV, XML, JSON, Excel, Google Sheets. Use Tables when you own the data and can express it as rows and columns.
- **Data Controllers** connect to a source that actively produces data: a scoreboard on the field, a presentation app running next door, a weather service on the internet, a Zoom meeting in progress. Use a Data Controller when the source owns the data and you need to follow it in real time.

The line is "where does the data live?" If it lives in a file you maintain, Tables. If it lives in a system that's already running, a Data Controller.

The shape of a Data Controller

Every Data Controller in the catalog follows the same pattern:

- 01 You select it** from the **Data Controller** column drop-down on a graphic in your Project List.
- 02 It opens a configuration panel** with the inputs it needs: a hostname, a credential, a sport selection, a meeting ID. Every Data Controller's panel is custom to its source, but the shape is the same: enter the connection details, validate the connection, you're done.
- 03 It auto-links to a matching graphic** where possible. If you add a basketball scoreboard Data Controller to a basketball graphic from the Library's **Inputs** section, the variables already line up.
- 04 It runs in the background** once configured. You play the graphic on, the Program Monitor shows it, and the Data Controller pushes updates as the source changes.

Operations that work the same across the catalog

These are the operations you'll perform with every Data Controller, so they're worth learning once.

Select a Data Controller

In the Project List, find the **Data Controller** column for your graphic and click the drop-down. Data Controllers are grouped by category (API, Gaming, General, Productivity, Social, Sports, Weather, Worship, plus API Examples for sample handlers) and listed by source. Select the one you need; its configuration panel opens automatically.

Link Data – remap which Data Controller variable drives which graphic variable

Auto-linking handles the common case (basketball Data Controller into basketball graphic). When the variables don't line up automatically (a soccer scoreboard with a generic lower third, or a custom design with non-standard variable names), open **Link Data** on the left side of the Preview. VideoPro shows the Data Controller's available variables on one side and the graphic's variables on the other; drag to connect them. The graphic updates live as you wire each link.

Manage credentials – the Service Accounts panel

Data Controllers that talk to third-party services (Zoom, Microsoft Teams, Google, Slack, Twitch, Facebook, LinkedIn, YouTube) need to authenticate. VideoPro centralizes credential management in one place so you authenticate once and every Data Controller that needs that account just works.

The menu path is **Internet Accounts**; the panel that opens is the **Service Accounts panel**. The two names refer to the same surface: **Internet Accounts** is how you get there, and **Service Accounts** is what you see at the top of the panel once it's open. Authenticate each service here, and every Data Controller that uses it picks the credentials up automatically.

For the step-by-step procedure, see [Authenticate your internet accounts](#).

The same panel also holds shared, persistent accounts at the project level (a venue's organizational Zoom account, a worship team's shared ProPresenter login) for deployments that need credentials separate from the operator's personal sign-in. Most operators don't need this; it's a setup-time tool.

Find your Data Controller

Each Data Controller has its own page in the catalog with the specifics for its source: connection steps, what data it produces, how to handle source-specific failure modes. Open the catalog list in the navigation, or jump directly:

- [Weather](#)
- [Sportzcast / Scorebot](#)
- [StatCrew](#)
- [ProPresenter](#)
- [EasyWorship](#)
- [Zoom Meeting](#)
- [Social Chat](#)

How Data Controllers work: Next step

If you have not yet wired any data into a graphic, start with the step-by-step path: [5. Drive a graphic with a Data Controller](#) walks through one complete setup end-to-end, then sends you back here to pick your specific source.

How Data Controllers work: Related

- [Tables overview](#) — the data-in-a-file alternative
 - [Authenticate your internet accounts](#)
 - [Play and update graphics — section overview](#)
-

Authenticate your Internet Accounts

VideoPro has been adding more integrations with popular third-party applications and services, many of which need user authentication.

To make managing these accounts easier and improve your overall user experience, we've introduced a global **Service Accounts** panel (reached via **Settings > Internet Accounts**). The Service Accounts panel provides a consolidated view, which is helpful for authenticating all internet credentials at once and for checking the status of your accounts. This panel centralizes account setup for our newest updated integrations, allowing Data Controllers to share and persist credentials to avoid multiple logins.

- [Setting up your Service Accounts panel](#)
- [Convenience Paths](#)

Setting up your Service Accounts panel

01 Select **Settings > Internet Accounts**.

01 Click **Connect** to authenticate an account.

When you click the **Connect** button in VideoPro, it will open an external browser with the login page for the associated service (e.g., Facebook). The external browser is necessary because many services no longer allow embedded browsers for logging in. This development ensures a more secure login process.

01 Once the login is complete, close the browser page and return to VideoPro.

Upon successful authentication, the **Connect** button next to the targeted service will turn red and be labelled as **Logout**.

Note: Click **Logout** to remove authentication from an account. Logging out will clear the credentials for the associated service.

Convenience Paths

Where it makes sense for convenience, we provide shortcuts for authenticating an account. For example, inside the Zoom dialogues we provide quick access to account login/logout. This helps keep your workflow running smoothly.

Note: The authentication will automatically attempt to refresh credentials. If you haven't used VideoPro for many days, your credentials may expire, requiring you to log in again. In such cases, the authentication system will automatically remove the expired credentials.

Connect Scoreboard Tool data to a graphic

VideoPro Broadcast and Sport products feature in-app scoreboard controllers for baseball, basketball, football, hockey, lacrosse, soccer, and volleyball. You can connect a controller to a graphic and control the scoreboard data from within VideoPro or an Internet browser.

- [General setup](#)
- [Baseball](#)
- [Basketball](#)
- [Football](#)
- [Ice Hockey](#)
- [Lacrosse](#)
- [Soccer](#)
- [Volleyball](#)

Note: Scoreboard controllers are not available in VideoPro Present.

General

- 01 In VideoPro's playout interface, open a project (if one isn't already open) and select a graphic in the Project List.

Tip: Want to create a new graphic? Open the Graphics Library panel and drag a design from the library to your channel, or select **File > New > Graphic** to add an empty graphic template.

- 01 Choose **Select a Datasource > Sports > Scoreboard Tool** and select a sport to add the Scoreboard Tool input to the graphic. The Scoreboard Tool input appears as a tab in the **Layer Properties** panel and in the Project List.
- 01 Click the **Link Data** button in the Preview panel to view the Scoreboard Tool Data Controller and variables.

- 02 Click and drag a Scoreboard Tool variable onto a design element in your graphic. Repeat for each variable.

Tip: To disconnect a variable, right-click a variable in the **Preview** panel and choose **Disconnect variable**.

- 01 Use the Scoreboard Controller in the Scoreboard Tool panel to drive variables in your scoreboard graphic.

Tip: To control the scoreboard from your Internet browser instead of VideoPro's Scoreboard Tool panel, click **Open in Browser**.

NOTE

Troubleshooting flashing digits

If you experience flashing digits when two clock variables are running, smooth this out by:

- 01 Editing the graphic in the Designer.
- 02 Selecting each clock layer.
- 03 Going to the Properties panel > **Variables** > **Variable Settings**.
- 04 Clicking the **Animate in/out** checkbox.
- 05 Repeating for each clock layer that is flashing.
- 06 Saving changes in the Designer.

Baseball

- 01 Add one of the Baseball Scoreboard templates to the Graphic Layers panel.
- 02 Select a Datasource for that graphic: **Sports** > **Scoreboard Tool** > **Baseball/Softball**.
- 01 Pre-designed variables are pre-linked. Edit and link additional variables if desired. See [Create variables in graphics](#).
- 01 In the Scoreboard Tool Panel, open **Settings** in the upper right.

Settings

SETTING	FUNCTION
Swap Teams	Toggle between Home-above-Visitor and Visitor-above-Home layouts in the controller panel.
Visitor Full Name / Home Full Name	Enter the full names of both teams. Link them via the Linked Data column.
Show Help Text	Yes displays help text at the bottom; No hides it.
Show Inning Prefix	Yes displays Top/Bottom of inning; No displays the inning number only.
Alert Duration (seconds)	How long Run / Home Run alerts display.
Message Duration (seconds)	How long the Message displays.

Controls

CONTROL	FUNCTION
Visitor / Home	Short-form team names. Link a Short Name variable to the design element via Linked Data.
Logo	Browse to import team logos.
Color	Choose team colors via color wheel or RGB/HSL/HEX entry.
Run	Manually enter Runs or use +1 / -1. Pre-connected visibility variable.
Hit	Manually enter Hits or use +1 / -1.
Error	Manually enter Errors or use +1 / -1.
HR	Click HR for a Home Run. Triggers the alert variable.
Base Diamonds 1, 2, 3 / Advance / Clear	Click bases or use Advance / Clear.
Balls	Click 0-4 when a ball occurs.
Strikes	Click 0-3 when a strike occurs.
Outs	Click 0-3 when an out occurs.
Inning	+/- to advance innings. The At Bat indicator follows. Click Final to clear the inning.
At Bat	Reflects the current inning's team at bat.
Message	Type a message for the graphic.
Reset	Reset the scoreboard.
Show QR	Scan from a mobile device to operate the controller remotely (on the same network).

Basketball

01 Add a Basketball Scoreboard template to the Graphic Layers panel.

02 Select **Sports > Scoreboard Tool > Basketball** as the data controller.

01 Pre-designed variables are pre-linked.

01 Open **Settings**.

Settings

SETTING	FUNCTION
Swap Teams	Toggle layout.
Visitor / Home Full Name	Full team names.

SETTING	FUNCTION
Show Help Text	Yes/No.
Shot Clock Default	Shot clock default in seconds.
Game Clock Default	Game clock default (Min:Sec).
Halftime Clock Default	Halftime clock default.
Overtime Clock	Overtime clock default.
Default Timeouts	Default number of timeouts.
Period Mode	Quarters or Halves.
Alert Duration	Alert display time in seconds.
Message Duration	Message display time in seconds.

Controls

CONTROL	FUNCTION
Visitor / Home	Short names.
Logo	Team logo upload.
Color	Team color picker.
Score	Enter score or use +1 / +2 / +3 / -1.
TOL (Timeouts Left)	Tracks remaining timeouts; Timeout button deducts.
Possession	Indicates which team has the ball.
Game Clock	Start / Reset / Hide.
Shot Clock	Start / Reset / Hide.
Period	+/- to advance periods. OT button for overtime. Final closes the game.
Message	Custom message.
Reset	Clear the scoreboard.
Show QR	Operate from a mobile device.

Football

01 Add a Football Scoreboard template.

02 Select **Sports > Scoreboard Tool > Football**.

01 Pre-designed variables are pre-linked.

01 Open **Settings**.

Settings

SETTING	FUNCTION
Swap Teams	Toggle layout.
Visitor / Home Full Name	Full team names.
Short Play Clock Default	Short play clock in seconds.
Long Play Clock Default	Long play clock in seconds.
Hide Play Clock Until	Hide play clock until N seconds.
Game Clock Default	Game clock default (Min:Sec).
Halftime Clock Default	Halftime clock default.
Overtime Clock Default	Overtime clock default.
Default Timeouts	Default timeouts.
Alert Duration	Alert duration in seconds.
Message Duration	Message duration in seconds.

Controls

CONTROL	FUNCTION
Visitor / Home	Short names.
Logo	Logo upload.
Color	Team colors.
Score	Manual entry or +6 / +1 / +2 / +3 / -1.
TOL	Timeouts Left.
Touchdown	Adds 6 points and triggers an alert.
Possession	Ball possession indicator.
Game Clock	Start / Reset / Hide.
Play Clock	Start / Reset / Hide.
Play Control	Start, Down (long play clock), Dead (short play clock).
Down & Distance	1st/2nd/3rd/4th down + yards. Click Update.
Period	+/- with OT and Final buttons.
Message	Custom message.
Penalty	Hit Flag for a penalty alert.
Reset	Clear the scoreboard.
Show QR	Mobile control.

Ice Hockey

01 Add an Ice Hockey Scoreboard template.

02 Select **Sports > Scoreboard Tool > Ice Hockey**.

01 Pre-designed variables are pre-linked.

01 Open **Settings**.

Settings

SETTING	FUNCTION
Swap Teams	Layout toggle.
Visitor / Home Full Name	Full team names.
Game Clock Default	Game clock default.
Intermission Clock Default	Intermission clock default.
Overtime Clock Default	Overtime clock default.
Alert Duration	Alert duration in seconds.
Message Duration	Message duration in seconds.

Controls

CONTROL	FUNCTION
Visitor / Home	Short names.
Logo	Logo upload.
Color	Team colors.
Shots	Track shots on goal with +1 / -1.
Score	+1 / -1 entry.
Timeout	Triggers a visibility variable until cleared.
Empty Net	Triggers a visibility variable until cleared.
Home / Visitor Penalty 1 / 2	Penalty clock with 2/5-min presets.
Game Clock	Start / Reset / Hide.
Period	+/- with OT.
Penalty Status	Populates Power Play, 4-on-4, etc., based on active penalties.
Message	Custom message.
Reset	Reset the scoreboard.

CONTROL	FUNCTION
Show QR	Mobile control.

Lacrosse

01 Add a Lacrosse Scoreboard template.

02 Select **Sports > Scoreboard Tool > Lacrosse**.

01 Pre-designed variables are pre-linked.

01 Open **Settings**.

Settings

SETTING	FUNCTION
Swap Teams	Layout toggle.
Visitor / Home Full Name	Full names.
Show Help Text	Yes/No.
Gender	Select gender for the correct scoreboard variant.
Timeouts Default	Default timeouts per team.
Game Clock Default	Game clock default.
Halftime Clock Default	Halftime clock default.
Overtime Clock Default	Overtime clock default.
Play Clock Time	Play clock default.
Green Card Time	Green-card penalty default.
Yellow Card Time	Yellow-card penalty default.
Red Card Time	Red-card penalty default.
Alert Duration	Alert seconds.
Message Duration	Message seconds.

Controls

CONTROL	FUNCTION
Visitor / Home	Short names.
Logo	Logo upload.
Color	Team colors.

CONTROL	FUNCTION
Timeouts	+1 / -1; Time button deducts and stops clock.
Score	+1 / -1 or Goal button.
Possession	Ball possession indicator.
Penalty Clock GRN / YLW / RED	Starts a penalty clock and Man Down indicator.
Game Clock	Start / Reset / Hide.
Play Clock	Start / Reset / Hide.
Period	+/- with OT and Final.
Penalty Indicator	Display a Green / Yellow / Red card alone without a clock.
Message	Custom message.
Reset	Reset.
Show QR	Mobile control.

Soccer

01 Add a Soccer Scoreboard template.

02 Select **Sports > Scoreboard Tool > Soccer**.

01 Pre-designed variables are pre-linked.

01 Open **Settings**.

Settings

SETTING	FUNCTION
Swap Teams	Layout toggle.
Visitor / Home Full Name	Full names.
Length of Period	Default period length.
Overtime Clock Default	Overtime clock default.
Halftime Clock Default	Halftime clock default.
Clock Counts Down	Toggle countdown direction.
Alert Duration	Alert seconds.
Message Duration	Message seconds.

Controls

CONTROL	FUNCTION
Visitor / Home	Short names.
Logo	Logo upload.
Color	Team colors.
Score	+1 / -1 or Goal button.
Game Clock	Start / Reset / Hide.
Additional Time	Add stoppage time.
Period	+/- with OT / Final.
Penalty	Green / Yellow / Red card alerts.
Message	Custom message.
Reset	Reset.
Show QR	Mobile control.

Volleyball

01 Add a Volleyball Scoreboard template.

02 Select **Sports > Scoreboard Tool > Volleyball**.

01 Pre-designed variables are pre-linked.

02 Open **Settings**.

Settings

SETTING	FUNCTION
Swap Teams	Layout toggle.
Visitor / Home Full Name	Full names.
Show Help Text	Yes/No.
Winning Score	Total points needed to win a game.
Alert Duration	Alert seconds.
Message Duration	Message seconds.

Controls

CONTROL	FUNCTION
Visitor / Home	Short names.

CONTROL	FUNCTION
Logo	Logo upload.
Color	Team colors.
Game 1-5 / Games Won	Enter or +1 / -1 each game's score. Auto-advances on Winning Score.
Serve	Possession indicator for serve.
Penalty	Yellow / Red card alerts.
Message	Custom message.
Reset	Reset.
Show QR	Mobile control.

Connect Scorebird data to a graphic

VideoPro Broadcast and Sport can connect to a Scorebird NeST device and display real-time information. This article covers connecting your NeST, defines a few Scorebird terms, and lists common troubleshooting steps.

- [Connect your Scorebird NeST to VideoPro](#)
- [Scorebird Terms to Know](#)
- [Troubleshooting](#)

Connect your Scorebird NeST to VideoPro

Two connection modes are available, requiring slightly different information based on the NeST device you own.

Note: It is recommended that you start your Scorebird game before connecting within VideoPro if you want your variables automatically selected. You can always manually select them if you start the game after connecting.

- 01 In VideoPro's playout interface, open a project (if one isn't already open) and select a graphic in the Project List.

Tip: Want to create a new graphic? Open the Library panel and drag a design from the library to the Project panel. If you create a new graphic from the library's Designs

section, add the Scorebird Data Controller to your graphic.

01 Choose **Select a Datasource > Sports > Scorebird** and select a sport to add the Scorebird Data Controller to the graphic.

01 The **Scorebird Data Controller** can be accessed from a tab within the **Layer Properties** panel.

02 Click **Show Settings** to access the inputs to enter your Scorebird NeST information.

Two connection modes are available:

- **Connect to Scorebird Server** — for the older **NeST 2.0** device. You need the **NeST ID (serial number)** on the device. The Identity Pool key is auto-fetched (you no longer need to supply it).
- **Direct connection to local NeST v3 Device** — for the newer **NeST 3.0** device. This local mode only requires the **IP address (network address)** of the device.

Note: Select **Switch to Local Connection** if you are using the **Direct connection to local NeST v3 Device** mode.

01 Click **Connect** to allow VideoPro to retrieve live data from your NeST.

02 If the connection is successful, green "Connected" text appears under the Save Settings button.

01 Scroll down to audit the data being fetched from the NeST device in real time.

Tip: Having trouble setting up your NeST device? Watch [Scorebird's setup video](#).

01 To verify the selected data is connected to your graphic correctly, click the **Link Data** button in the Preview panel to display all variables available to connect.

- 01 Connected variables appear in bold. Drag and drop a variable to a design element, or right-click the variable name to assign it. See [Create variables in graphics](#).

Once your graphic is customized, test by playing from your Project List to send the graphic live.

Note: When data arrives from the NeST / Scorebird ecosystem, it overrides whatever is in the graphic. The **Lock** button forces a variable to never update from new Scorebird data — useful for team names and colors when Scorebird data may be wrong or out of date.

Scorebird Terms to Know

- **NeST ID (Scorebird)** — the serial number of your NeST device.
- **API Key (Scorebird)** — like a password, assigned to you by Scorebird. Contact your Scorebird representative if you don't have one.
- **Reload Game Info (Scorebird)** — if the Data Controller was opened before the game went live, click this to load active game data like team names and colors. Only applies to **Connect to Scorebird Server** mode.

Troubleshooting

- Can't connect / red "not connected" text / scores not updating:
 1. Click **Reload Game Info**.
 1. Double-check your essential settings via **Show Settings** and save them again.
 1. Right-click on the page and choose **Reload**.
 1. Check your internet connection by visiting your Scorebird account from a browser on the VideoPro computer.
- If your NeST device is sending data to Scorebird but VideoPro isn't getting it, contact [NewBlue Support](#).

- If your NeST device is not sending data to the Scorebird website, contact [Scorebird](#). See also [Scorebird Documentation](#).

Connect a hardware scoreboard via serial port

VideoPro Broadcast and Sport can connect to a hardware scoreboard console (such as the Daktronics All Sport 5000 and other supported vendors) and retrieve real-time serial data for on-air graphics. This article walks through the cabling and connection steps.

Note: While this article uses Daktronics for the example, the Hardware Scoreboard Data Controller supports multiple protocol families. The same workflow applies to other supported vendors — pick the matching menu entry.

Required items

- A Mac or Windows machine with VideoPro Sport or Broadcast installed. The machine needs an available USB-A port (an adapter or USB hub is fine).
- The scoreboard console (e.g., Daktronics All Sport 5000).
- A **Daktronics Port Expander**.

Note: We recommend obtaining this adaptor from [serialtools.tv](#).

- A **USB-to-RS232 cable**.

Note: An adapter with the FTDI chipset is required. **Important:** Serial data can only effectively travel 50 feet before you begin to lose data. Keep cable length under 50 feet.

Connect the hardware

- 01 Connect the male end of the Daktronics Port Expander to the All Sport 5000's **I/O PORT**.
-

- 02 The Daktronics Port Expander has a female RS232 port. Connect the male end of the USB-to-RS232 cable here.
- 01 Connect the USB end of the cable into the VideoPro machine.

Set up the Data Controller

- 01 Launch VideoPro and add a scoreboard graphic to a channel from the **Layers** list.
- 02 Open the Data Controller dropdown for the corresponding graphic layer and navigate to **Sports > Hardware Scoreboard > Daktronics >** (or the matching vendor entry for your console).
- 03 The Data Controller appears as a tab in the **Layer Properties** panel.
- 04 In the Data Controller, use the dropdown in the top-right corner to select a source to read serial data from.

The dropdown lists any ports that VideoPro has detected.

- 01 The Data Controller interface lists available data variables for the selected sport. Variables populate in real time as the console sends data.

Important: This Data Controller supports only a single serial source at a time. Use one sport Data Controller per VideoPro session to avoid data variable conflicts.

Supported vendors

The Hardware Scoreboard Data Controller speaks the following scoreboard protocols. Use the menu entry that matches your console:

PROTOCOL	TYPICAL CONSOLES
Daktronics RTD	Daktronics consoles using their RTD (Real-Time Data) feed

PROTOCOL	TYPICAL CONSOLES
Daktronics CG	Daktronics consoles using the CG character-generator feed
Trans-Lux Fair-Play	Trans-Lux / Fair-Play consoles
Tissot	Tissot timing consoles
White Way	White Way scoreboards
OES	OES (Outdoor Electronic Sales) consoles
Varsity	Varsity scoreboards
Farmtek	Farmtek scoreboards

Protocols appear in the menu when their entitlements are licensed. If your console is missing from the list, contact NewBlue support; many Daktronics-compatible feeds (CG and RTD) cover non-Daktronics consoles that emulate those protocols.

Connect a custom clock to a graphic

VideoPro enables you to include custom clocks in your designs, which you can control from within VideoPro or an Internet browser. Complete the steps in this article to connect your design to a custom clock for a sports graphic.

- 01 In VideoPro's playout interface, open a project (if a project isn't already open) and select a graphic in the Project List.

Tip: Want to create a new graphic? Open the Graphics Library panel and drag a graphic from the library to your channel. If you create a new graphic with a clock-specific design from the library's Inputs section, your graphic is already connected to a clock input, so go to step 3.

- 01 Choose **Select a Datasource > General > Clocks > Custom Clock** to add the Clocks input to the graphic. The Clock input appears as a tab in the **Layer Properties** panel and in the Project List.

- 02 Enter a name for the first custom clock in the Clocks panel.

01 Click **Settings** and complete the following in the Settings dialog:

1. Enter a **Default Time**.

1. Select a **Format**.

1. Select the **Direction** the clock will run.

1. Click **Save**.

01 Click **Reset** to update the clock based on the settings you entered.

02 To create additional clocks, click **Add New** and repeat steps 3-5.

03 Click the **Link Data** button in the Edit / Preview panel to view the Clocks input and variables.

04 Click and drag a Clocks variable onto an object in your graphic. Repeat for each variable you want.

Note: Troubleshooting: If you are having issues, edit the graphic and select the layer you linked the clock to. Check the Variables tab and ensure **Text Variable** is checked, as well as **Pattern Variable**. Also, check that the correct variable is listed in the dropdown menus.

Tip: To disconnect a variable, right-click a variable in the **Preview** panel and choose **Disconnect variable**.

Your clock is now set up. You can control the clock with the buttons in the Clocks panel, or click **Open in Browser** to control it from an Internet browser.

Connect Sportzcast data to a graphic

VideoPro Broadcast and Sport can connect to a Sportzcast Scorebot device and display real-time information from the supported sports: **Baseball, Football, Basketball, Volleyball, Hockey, Soccer, Wrestling, and Tennis.**

- 01 In VideoPro's playout interface, open a project (if one isn't already open) and select a graphic in the Project List.

Tip: Want to create a new graphic? Open the Library panel and drag a design from the library to the Project List. If you create a new graphic with a Sportzcast design from the library's Inputs section, your graphic is already connected to a Sportzcast input, so go to step 3.

- 01 Click the **Select a Datasource** cell in the Data Controller column and choose **Sports > Sportzcast** > the sport you want, to add the Sportzcast input to the graphic.

The Sportzcast data appears as a tab in the Properties panel.

- 01 In the Sportzcast panel, enter your Sportzcast User email or Unique Integration Name.

Note: If you have multiple integrations you may need to use the Unique Integration Name. Find it at sportzcast.net/Support: **Sign In > User Info > Integrated Devices > Unique Integration Name**.

- 01 Hover over the **Choose Server or enter IP address** link and click. Select a server or enter an IP address. If you are using a virtual bot from your Sportzsuite, enter `scorebot.sportzcast.net`.

-
- 02 Enter your **Bot Number**.

-
- 03 If you need to change the channel to a number other than 0, enter the **Channel** number.

-
- 04 Click **Connect**.

NOTE

Troubleshooting

If you are having issues connecting, confirm all information is entered correctly in your Sportzsuite account at sportzsuite.net.

Sportzcast provides a token, per account, for only one machine. It will fail until the token is cleared from their database. If you have used your scorebot with VideoPro on another system, or with another NewBlue user on the same system, you will need to reset the token.

Sign In > User Info > Integrated Devices > Reset.

01 Click **Link Data** in the Edit / Preview panel to view the Sportzcast input and variables.

02 Click and drag a Sportzcast variable onto an object in your graphic. Repeat for each variable.

Tip: To disconnect a variable, right-click it in the Edit / Preview panel and choose **Disconnect variable**.

The Sportzcast data is now visible in your graphic and updating in real time.

NOTE

Troubleshooting flashing digits

If you experience flashing digits when two clock variables are running, smooth this by:

01 Editing the graphic in the Designer.

02 Selecting each clock layer.

03 Going to **Properties > Variables > Variable Settings**.

04 Clicking the **Animate only for in/out** checkbox.

Connect Stat Crew statistical data to a graphic

VideoPro Broadcast and Sport can connect to the Stat Crew database and display incoming statistical data in graphics. Each sport in the menu offers about 20 per-graphic-shape entries (Game Open, Break Score, Lower Third, Top Players, Multiplayer 1/2/3, Player/Team Matchup, etc.), each binding a different variable set.

Note: This feature is not available in VideoPro Present.

- [Single Player Stats](#)
- [Multiplayer Stats on the Same Team](#)
- [Comparing Stats from both Teams](#)

Single Player Stats

01 If you plan to use images in your graphic, ensure the following:

- Images live in a Textures folder next to the `nbt1proj` file. (Create the folder if absent.)
- Images are in that folder **before** opening the project file in VideoPro.
- Images are named `lastnamefirstinitial.png`.

01 In VideoPro's playout interface, open a project (if one isn't already open) and select a graphic in the Project List.

Tip: For best results, use a graphic that matches the name of the data controller template (e.g., Ivory Corner Info pairs with the Corner Info Stat template).

01 Under the Data Controller column, choose **Add source > Sports > Stat Crew Stats** and select a sport, team, and the type of data you want.

The data appears as a tab in the Layer Properties panel.

- 01 Navigate to the Stat Crew Stats controller tab and select your Stat Crew XML file or enter its path/URL. Browse to the file from your local disk if needed.
- 01 Enter the Hex codes for Home and Visitor team colors if desired and click **Save**.

Important: If the status light in the top-right corner is green, your XML is connected. If red: - Your XML is not connected — reload or re-enter the path. - Your XML is connected but isn't returning the expected sport data — connect to a different XML file or input.

- 01 The selected data item populates under the chosen team. Select the player to highlight in the **Player** dropdown.
- 01 Use the gear icon to open **Variable Settings** and select the stats to represent in your graphic.

Tip: Troubleshooting: The dropdown tends to populate at the top of the controller. Scroll up if you don't see it.

- 01 If there are missing data links, click **Link Data** in the **Preview** panel to view the input variables.

-
- 02 Click and drag a Stat Crew Stats variable onto an object in your graphic, or right-click to select the design object.

Note: To verify which variable label maps to which team or player, reference the Live Values tab. Test by manually adjusting the data in the input box.

- 01 Repeat for each variable you want.

Note: To make manual changes live to your XML, save the XML so the changes are reflected in VideoPro. See [Legacy XML controller](#) for the older **General > XML / Sports > XML** menu flow, or [Tables](#) to switch a project to the new Tables controller.

Multiplayer Stats on the Same Team

This workflow connects Stat Crew data from a single team for multi-player comparisons or single-team showcases.

- 01 Ensure your textures folder is set up as described in the Single Player Stats section above.

- 02 Open a project and select a graphic in the Project List.

Tip: For best results, use a matching graphic template (e.g., Acrylic Headshot 3).

- 01 Under Data Controller, select **Add source > Sports > Stat Crew Stats > Sport > Team > Multiplayer 1**.

- 01 Navigate to the Stat Crew Stats controller tab and select your XML file.

Important: Verify the status light is green.

- 01 Select the gear icon next to the team to configure data assignments.

- 01 Use the **Players** dropdown to select the players to highlight.

- 02 Use the **Stats** dropdown to select the stats.

- 01 Click **Link Data** in the **Preview** panel to connect any missing links.

- 02 Drag-and-drop or right-click to link each variable.

Tip: Troubleshooting: If the graphic goes white after connecting or re-assigning variables, click **Edit Graphic** in the Designer, highlight the affected layers, navigate to **Properties > Style**, and ensure variable is unchecked under Color Style. Save and return.

- 01 To link images, click on the image design element in the Preview panel

and assign the file location.

Comparing Stats from both Teams

This workflow compares Stat Crew data across both teams in the game for matchup graphics.

01 Set up your textures folder as described above.

02 Open a project and select a graphic in the Project List.

Tip: For best results, use a matching graphic template (e.g., Acrylic Player Comparison).

01 Under Data Controller, select **Sports > Stat Crew Stats > Sport > Game > Player Matchup** (or matching data type).

01 Navigate to the Stat Crew Stats controller tab and select your XML file.

Important: Verify the status light is green.

01 Navigate to **Game > Player Matchup** to select the players from each team's dropdown.

02 Select the gear icon next to **Player Matchup** to configure stats.

03 Use the **Stats** dropdown to select the stats.

04 Click **Link Data** in the **Preview** panel and connect any missing variables.

05 Drag-and-drop or right-click to link each variable.

01 Repeat for each variable.

Note: To make manual changes live to your XML, save the XML.

Connect DataLink feed data to a graphic

VideoPro Broadcast and Sport can connect to a NewTek TriCaster's DataLink database over the network and display incoming data in graphics. Complete the steps in this article to connect to a DataLink feed.

Note: DataLink discovers TriCaster devices via NDI source enumeration and then fetches data over the TriCaster HTTP DataLink endpoint (`http://v1/datalink`). Click **Scan** in the controller dialog to enumerate NDI-visible TriCasters and pick yours from the **Select Device** dropdown. If the device does not appear after **Scan**, verify that NDI discovery is reachable on the network (some VLANs and firewalls block NDI multicast) and that LivePanel access is enabled on the TriCaster.

- 01 In VideoPro's playout interface, open a project (if a project isn't already open) and select a graphic in the Project List.

Tip: Want to create a new graphic? Open the Graphics Library panel and drag a graphic from the library to your channel.

- 01 Choose **Select a Datasource > Sports > NewTek DataLink** and select a sport to add the NewTek DataLink input to the graphic.

The NewTek DataLink data appears as a tab in the **Layer Properties** panel and in the Project List.

- 01 Select your TriCaster device from the dropdown in the NewTek DataLink tab. If your TriCaster doesn't appear, click **Scan** to check for devices on your network.

Important: Disable the LivePanel password. This setting is in the Administration Tools on your TriCaster.

- 01 Click the **Link Data** button in the Preview panel to view the NewTek DataLink data source and variables.
-

- 02 Click and drag a NewTek DataLink variable onto an object in your graphic. Repeat for each variable you want.

Tip: To disconnect a variable, right-click a variable in the **Preview** panel and choose **Disconnect variable**.

The data for your DataLink input is now visible in your graphic and is updated in real time.

Connect ProPresenter to VideoPro

VideoPro integrates with ProPresenter to broadcast your ProPresenter playlist as live graphics to a supported video switcher for live stream. You can control playout from VideoPro or from ProPresenter on the same network. A full broadcast can run at the same time as ProPresenter is broadcasting to your congregation in-house.

Note: Supported ProPresenter versions: 6, 7, and 7.9+.

- [Prepare your Graphics in VideoPro](#)
- [Set ProPresenter Settings for Connection](#)
- [Connect a Graphic Layer to your ProPresenter Playlist](#)
- [Configure your ProPresenter Playlist](#)

Prepare your Graphics in VideoPro

- 01 Open a new project in VideoPro.
- 01 Navigate to the House of Worship folder in the Library.
- 01 Drag and drop your desired graphics into the Project List.

Note: If a graphic needs to overlay another full-screen graphic (a lower third or bug), place the overlaying graphic above the full-screen graphic in the Project List.

Set ProPresenter Settings for Connection

Connect ProPresenter to your local network used by VideoPro. ProPresenter Remote must be enabled with a password for VideoPro to authorize.

- 01 Open your ProPresenter project.
- 01 In the top navigation bar, go to **ProPresenter > Preferences > Network**.
- 01 Check **Enable Network**. Enter your network name and Port/IP Address if not auto-populated. If prompted by Windows Defender or Mac Security, allow access.
- 01 Check the three boxes next to **ProPresenter Remote, Controller, and Enable Stage App**.

- 02 Type a password of your choice for both **Controller** and **Stage**.

ProPresenter is now prepared for VideoPro to connect as a data source. Close the Preferences panel.

Connect a Graphic Layer to your ProPresenter Playlist

We recommend using the countdown graphic at the top of your Project List (not required).

Note: Close your Graphics Library panel for more workspace. Reopen it via **View > Graphics Library**.

- 01 In VideoPro, go to the Data Controller column of the graphic layer you wish to connect, and select **Select a Datasource > Worship > ProPresenter > ProPresenter**.

- 01 The ProPresenter tab opens in your Layer Properties panel. Enter the Name and Port under Network Settings. An IP address can be used if necessary.
- 01 Enter the passwords chosen in ProPresenter for **Controller** and **Stage**.
- 01 Click the button to connect to ProPresenter.

ProPresenter is now connected. The Controller property options appear where you can choose a Playlist and control your Clock Segment Countdown.

Note: For help, click the gear icon within the ProPresenter Controller tab and press the **Help** button. You can also view the entered passwords here for verification.

Configure your ProPresenter Playlist

- 01 Select the graphic in your Project List that is connected to ProPresenter and navigate to the ProPresenter tab in the Layer Properties panel.
- 02 Select your active Playlist from the dropdown.
- 01 Your presentations with slides populate below the Clock Segment Countdown. Configure one or multiple slides using shift/ctrl-click; right-click > **Enter Config Mode**.
- 01 Once in Config Mode, you can shift/ctrl-click to select multiple slides of the same type that connect to the same graphic layout.
- 02 Select your Slide Type from the dropdown.
- 01 Select the linked graphic from the dropdown list of Layer Panel graphics. If your graphic isn't listed, add it from the Graphic Library and reload the ProPresenter Controller tab (right-click > **Reload**).
- 02 Press Escape or **Exit Config Mode** to save.

- 01 A checkmark appears in the upper-right corner of each configured slide. Click any configured slide to play it in the Program Monitor from the ProPresenter Controller tab or from your ProPresenter interface.

Note: Press the gear icon to view Network Settings and Passwords, or to access the ProPresenter Controller help.

Connect EasyWorship to VideoPro

VideoPro integrates with EasyWorship to broadcast your EasyWorship schedule as live graphics to a supported video switcher for live stream. You can control playout from either VideoPro or EasyWorship on the same network. A full broadcast can run at the same time as EasyWorship is broadcasting to your congregation in-house.

- [Prepare your Graphics in VideoPro](#)
- [Set up Remote Connection between EasyWorship and VideoPro](#)
- [Configure your EasyWorship Playlist](#)

Tip: Troubleshooting: EasyWorship has a default setting displaying Live Output, which can block controls on your system.

If the Live Output screen is blocking access to VideoPro, disable it by going to **Live > Uncheck Show Live Output**.

Connect EasyWorship to VideoPro: Prepare your Graphics in VideoPro

- 01 Open a new project in VideoPro.
- 02 Navigate to the House of Worship folder in the Library.
- 01 Drag and drop your desired graphics into the Project List.

Note: If you have any graphic that needs to overlay another full-screen graphic (such as a lower third or bug), place the overlaying graphic above the full-screen graphic in the Project List.

Set up Remote Connection in EasyWorship

Enable the Remote Connection in EasyWorship to your local network used by VideoPro.

01 Open your EasyWorship schedule.

02 Go to **Remote > EasyWorship Remote > click Off** to turn it **On**.

Note: You may be prompted to download Bonjour Services. If not, and you don't see VideoPro in your devices menu, download [Bonjour Print Services](#).

01 Within EasyWorship, the VideoPro device will appear under **Remote > Devices**.

02 Choose **Pair** to allow a connection from EasyWorship to VideoPro.

Note: When pairing, EasyWorship exposes a **View Only** vs. **Full Control** permissions choice. Choose Full Control to allow VideoPro to drive playlist playback; choose View Only to monitor without control.

01 In VideoPro, go to the Data Controller column of the Graphic layer you want to connect, and select **Select a Datasource > Worship > EasyWorship > EasyWorship**.

EasyWorship is now connected as a data source. Your EasyWorship schedule appears in the EasyWorship Controller tab in the Layer Properties Panel.

Tip: Close your Graphics Library panel for more workspace. Reopen it via **View > Graphics Library**.

Configure your EasyWorship Playlist

Now that you have enabled your EasyWorship Controller, configure your slides using the Master Control.

- 01 Select the graphic in the Layers list that is connected to EasyWorship and navigate to the EasyWorship tab in the Layer Properties panel.
-
- 02 Your presentations with slides populate below the controls. Choose **Configure Slides** or right-click > **Enter Config Mode** to open the Slide Configuration panel at the bottom.
-
- 01 Select a slide, or multiple slides of the same type, that will be connected to the same graphic layout in VideoPro.
-
- 02 Select your Slide Type from the dropdown for the type of information the graphic should portray.
-
- 01 Select the Linked Graphic from the dropdown list. If you don't see your graphic, add it to your Layers list from the Graphic Library, then reload the EasyWorship Controller tab (right-click > **Reload**).
-
- 02 Press Escape or **Exit Config Mode** to save the Configuration. You can **Reset All Slides** at any time in the Configure Slides Panel.

A checkmark appears in the upper-right corner of each configured slide. You can now click any configured slide to play it in the Program Monitor from your EasyWorship interface.

Authenticate your Zoom account

If you plan to **host** a meeting from VideoPro, **send** Program Out into Zoom, or pull **Live Q&A** answers from a meeting, you must sign your Zoom account into VideoPro first. Joining an existing meeting as a participant does not require authentication.

For the rest of the Zoom workflow — joining a meeting, bringing participants in as live video, sending VideoPro's Program back into Zoom — see [Connect to a Zoom Meeting](#).

Before you authenticate (macOS only)

On macOS, give VideoPro **and** the Zoom desktop client the system permissions they need before you start. Otherwise the sign-in succeeds but media won't move.

01 Go to **System Settings > Privacy & Security**.

02 Open **Accessibility** and check both VideoPro and Zoom.

01 Open **Screen Recording** and check both VideoPro and Zoom.

For more on macOS first-run permissions, see [macOS first-run permissions](#).

Sign your Zoom account into VideoPro

01 With your project open in VideoPro, go to **Conferencing > Zoom: Host New Meeting** or **Zoom: Join Existing Meeting....** Either choice opens the Zoom panel; the menu item just decides which workflow opens next.

01 Click **Login** in the Zoom panel.

01 Your default browser opens a Zoom OAuth page. Enter your Zoom credentials.

01 Tick the box that allows Zoom to use the system shared access preferences and click **Allow**.

02 When the OAuth flow succeeds, the browser asks you to return to VideoPro. The Zoom panel updates to show your account and the **Login** button is replaced by **Logout**.

The authentication persists in VideoPro until you click **Logout** — you do not need to re-authenticate every meeting. If your Zoom account changes (different organization, expired refresh token), the Zoom panel returns to the unauthenticated state and you'll be prompted to **Login** again.

When authentication is required vs. optional

WORKFLOW	AUTH REQUIRED?
Join a public meeting as a participant; receive participant video/audio	No
Join a meeting that requires Zoom authentication	Yes
Host a meeting from inside VideoPro	Yes
Send Program Output to Zoom (as virtual camera + mic)	Yes
Pull Live Q&A answers into a graphic	Yes

Authenticate your Zoom account: Related

- [Connect to a Zoom Meeting](#) — the meeting workflow once you're signed in.
- [macOS first-run permissions](#) — the general macOS permission story.
- [Output graphics as a Virtual Webcam](#) — the lower-friction alternative if you only need to push your Program into a Zoom call as a camera source.

Connect to a Zoom Meeting

Once your Zoom account is authenticated, this article covers the live meeting workflow: joining a meeting, choosing whether to pull participants in or push your Program out, bringing participants in as Live Audio/Video sources, and leaving cleanly.

For the one-time sign-in step, see [Authenticate your Zoom account](#). For Zoom chat as a Data Controller, see [Connect the Chat Controller in Zoom](#).

- [Join a meeting from inside VideoPro](#)
- [Bring participants in as Live Audio/Video](#)

- [Send Program Output back into Zoom](#)
- [Leave the meeting](#)

[Join a meeting from inside VideoPro](#)

01 Have your host start the Zoom meeting from a separate system.

Important: Ask the host to start the meeting with the **Camera ON**.

01 With your project open in VideoPro, go to **Conferencing > Zoom: Join Existing Meeting....**

01 In the Zoom panel, enter the **Meeting ID** and (if required) the **Password**.

01 Enter your **Display Name**. This is the name participants see in the call.

Note: To sign into a Zoom account from this dialog (required for any meeting that needs Zoom authentication, or any meeting you want to host), click **Login** in the **Connection Details > Zoom Account** row. Your browser opens the OAuth flow described in [Authenticate your Zoom account](#).

01 Pick how VideoPro should interact with the meeting:

- **Receive Audio/Media from Zoom** — pull participant video and audio into VideoPro as Live Audio/Video sources.
- **Send Program Output to Zoom** — push VideoPro's Program (video + audio) into the meeting as a virtual camera and microphone.

Note: You cannot do both at once.

- **Open Zoom Monitor** — tick to also open the regular Zoom client window alongside VideoPro. Required for Zoom Webinars; otherwise optional but often helpful for monitoring chat and host controls.

01 Click the blue **Join Zoom Meeting** button.

The connection state appears in the top-right of the VideoPro toolbar and at the bottom-right of the VideoPro window:

The host typically needs to **Admit** you before the meeting begins:

Bring participants in as Live Audio/Video

After choosing **Receive Audio/Media from Zoom**, VideoPro prompts the host to allow recording. This is what authorizes VideoPro to receive each participant's individual video and audio stream — the meeting is not actually being recorded to disk.

01 Ask the host to click **Allow Recording**.

Note: If the host doesn't respond, a warning explains that the host hasn't enabled recording yet.

Warning: If the host denies recording, the meeting continues but VideoPro cannot capture per-participant video and audio.

01 Once the host accepts, every participant sees a "this meeting is being recorded" notification. Again — no actual recording file is being written; this is the consent surface for VideoPro to pull individual streams.

Note: In this case, the meeting is **not actually** being recorded to a file; instead it simply means that the video and audio from participants is being captured by VideoPro.

01 The meeting status advances to **Connected**.

01 Add a participant as a Live Audio/Video source. At the bottom of the Project List click **Add new item** (or right-click the Project List) > **Live Audio/Video** > **Zoom** > pick a participant.

That participant's video shows up in the Video Switcher and their audio shows up in the Audio Mixer.

- 01 To use a participant inside a PiP or other in-graphic video element, select the design element in the Preview panel and right-click > **Zoom** > pick a participant.

Once participants are in, operate them like any other Live Audio/Video source. See [Use the Switcher panel](#).

Send Program Output back into Zoom

If you chose **Send Program Output to Zoom** on the join dialog, VideoPro appears in the meeting as a virtual camera + microphone source whose feed is VideoPro's Program Out. Anything you play on air in VideoPro appears to participants as the camera feed.

You can also stream out via RTMP at the same time. See [Streaming with VideoPro](#).

If you opened a local Zoom client at the same time (via **Open Zoom Monitor**), your graphics will appear mirrored to **you** — Zoom applies a Mirror My Video transform on the self-view by default. They appear correctly to participants. To verify what participants see, turn off the mirror in Zoom:

- 01 **Settings > Video.**

- 01 Go to **Advanced > Background & Effects** and untick **Mirror My Video**.

Tip: Zoom updates sometimes reset Background & Effects defaults. If audio or video stops behaving as expected mid-show, recheck the Zoom client's Video settings.

Leave the meeting

There are two ways to leave a Zoom meeting from VideoPro:

01 Click **Leave Zoom Meeting** in the top-right of the toolbar, or go to **Conferencing > Zoom: Leave Meeting**.

01 The host closes the meeting. VideoPro leaves automatically.

Warning: After leaving the meeting, every Zoom Live Audio/Video source in your project shows an error. If you rejoin the same meeting, the sources reconnect automatically — no need to add them back.

Tip: You can save a Zoom-bound project to disk and reload it intact. You will always have to manually rejoin the meeting; the meeting state itself is not persisted in the project file.

Connect to a Zoom Meeting: Related

- [Authenticate your Zoom account](#) — the one-time sign-in step.
- [Connect the Chat Controller in Zoom](#) — bring Zoom chat into a graphic.
- [Zoom Manager](#) — the multi-meeting / multi-participant control surface.

Connect Zoom Manager (Meeting Workflow)

VideoPro introduces a type of project item named a **Workflow**. Workflows offer tailored experiences for varying situations. They serve as dynamic interfaces for setting and presenting data and provide effective control over VideoPro's actions. The Meeting Workflow was designed to streamline the integration of participants into live productions. It proves particularly helpful when your production includes participants from different sources such as conferencing services like Zoom or Microsoft Teams.

- [Add a New Meeting](#)
- [Set up your Participants](#)
- [Integrating Participants into Graphics](#)
- [Define Meeting Details](#)

Add a New Meeting

To add a new Meeting Workflow (you only need one):

- 01 First, you will want to have your meeting source set up and running. See [Zoom Integration Setup](#) or [Connect Microsoft Teams](#) for details on setting up a meeting for VideoPro to connect to.
- 02 Choose **Receive Audio/Media from Zoom** under Zoom Connectivity.
- 01 In VideoPro, click **Add new item** at the bottom of the Project panel.
- 01 Select **Workflow > People**. (The Meeting Workflow has been renamed to **People**.)
- 02 Select the People Workflow object in your Project panel.
- 03 Ensure that the Properties panel is visible in the playout interface (**View > Properties** | F3). When Properties are showing, the Meeting Workflow's Meeting controls will be presented in the Properties panel.

The Meeting Workflow has two selectable views:

- **Participants**
- **Meeting Details**

Set up your Participants

The Participants view is an interface for filling in details about participants in your production. Along the left side of the view, you have a list of Speaker objects (Speaker1, Speaker2, etc.). Additional Speakers can be added via the **New Additional Speaker** button at the bottom of the panel.

A Speaker is an instance of something that we call a *LiveObject*. A LiveObject is like a box for our variables. It groups them together, so we can manipulate them collectively rather than individually.

The Speaker object groups properties that relate to a meeting participant. You can manually type in values to assign them to various speakers, or you can assign them using the Participants table. The participants table will populate itself with values from your active Zoom meeting.

Tip: If your values do not populate automatically, try interacting with any of the text input boxes by clicking into one.

01 Select the participant of interest and click **Assign**.

01 Select a Speaker object to assign to (e.g., Speaker 1).

VideoPro will query the active meeting for details about the selected participant and use those values (e.g., name, display name, video feed) to automatically configure the target Speaker object. Speaker objects in this view are color coded to help with identification.

Tip: You can manually override the values in a Speaker object if you need to customize some values. For example, if we want to append "(Developer)" to "Adam", we can type in the field to add this.

Integrating Participants into Graphics

As mentioned earlier, the Meeting Workflow works with Speaker objects. Values are created inside of the Speaker objects available as variables for linking with your graphics design elements.

01 In the Link Data panel, select **Show Links** to make published objects visible below **Shared: Objects**.

02 The objects can then be expanded, and individual fields can be accessed for linking.

If you were to reassign Naomi to Speaker2, all the linked values would automatically update. This is the power of the LiveObject system; it simplifies handling groups of related values.

Define Meeting Details

The Meeting Details view is used for setting values in the **Active Meeting Details** object. This object will be automatically updated by the active Zoom meeting unless you choose to override the values.

01 In the Meeting Details tab, click in the text box for **Meeting Title**. VideoPro will auto-populate the Meeting Title and Meeting Host of the connected meeting.

02 To edit those values within VideoPro, select **Override Zoom Values** and replace the text.

The ActiveMeetingDetails object can be connected to graphics similar to the Speaker objects.

Connect Microsoft Teams

VideoPro can add live video sources from your Microsoft Teams meetings via NDI. In addition, the Virtual Webcam output feature can be delivered directly into your Teams meeting as well.

Warning: You must have the business version of the Teams App installed on your system for the NDI feature to be available. The personal Microsoft Teams App does not include the settings necessary for this workflow. Please make sure you are operating within the business version when starting your meeting.

- [Setting up Teams Meeting Participants as a Live Video Source](#)
- [Output via Virtual Webcam to your Teams Meeting](#)

Setting up Teams Meeting Participants as a Live Video Source

VideoPro will be able to source the Teams Meeting live video via NDI which will need to be enabled in your Teams settings.

Important: The NDI feature in Teams requires a paid Microsoft account (consumer Office365 does not seem to count). You may need to contact a Microsoft admin to allow access to the Production Capabilities feature if not permitted.

- 01 Open Microsoft Teams and navigate to your Settings menu.
-
- 02 Select **App Permissions** on the sidebar and toggle on **Production Capabilities**.
- 01 Start your Teams meeting and go to your settings or **More** menu > **Streaming** > **Broadcast over NDI**.
- 01 Open your VideoPro project and either choose **Add new item** or right-click in your Project List to select **New** > **Live Audio/Video** > **NDI** > name of the meeting participant.

Your Teams meeting participant should now be showing as a live video source in your Project List, Video Switcher, and Preview panel.

- 01 In the Properties panel, a Live Video tab will propagate with your source name and a checkbox option to **Use in Switcher/Mixer**.

Tip: To lock on for downstream keying, toggle off the video switcher for the **Lock on for downstream keying** checkbox to appear in the **Layer Properties** panel, then enable it.

You should now see your live video source with a lock symbol in your Project List and playing live in your Program Monitor.

Output via Virtual Webcam to your Teams Meeting

To integrate your VideoPro graphics into Teams, use the Virtual Webcam output.

- 01 In your Program Monitor, select the dropdown menu with the default setting of **No Monitor** > choose **Virtual Webcam**.

Or you can go to **Program Out** > **Virtual Webcam**.

- 01 In your Teams meeting, open the three-dot **More** menu in the top toolbar or right-click anywhere on the screen > select **Switch Camera**.

Your VideoPro graphics will now reflect in your Teams meeting when played on-air.

Connect Microsoft Teams: See also

- [Setting up Teams Meeting Participants as a Live Video Source](#)
 - [Set Up Live Video Switching](#)
 - [Set up transitions](#)
 - [Create Shot Layouts](#)
-

Connect the Chat Controller in Zoom

As part of our Zoom integration, we offer the ability to connect your Zoom Chats into your VideoPro broadcast. There is the option to filter and search the incoming messages to customize your broadcast.

- [Establishing connection with Zoom Chats](#)
- [Create a curated list of your messages](#)
- [Set up Autoplay for your messages](#)

Establishing Connection with Zoom Chats

- 01 Add your Chat graphic from the Library into your Project List and connect to your Zoom meeting.
-
- 02 Under the Data Controller column of your chat graphic, select **Select a Datasource > Productivity > Chat > Chat** or **Social > Chat > Chat**. This will open your Zoom Chat controller in the Properties panel. Any messages will automatically populate in the Chat panel.

- 01 Press the **Play** button to send the message text to your graphic. The message will then show as slightly greyed out as an indication that it has already been played.
- 01 You have the option to hide the message or delete it from the message list to optimize your screen space.

Creating a curated list

- 01 This is an option if there are two operators or the controller is open from the browser.
- 02 Press the two-column option to open the second column as your chat queue.
- 03 Select the checkbox for any message in the first column that you would like to add to your message queue.
- 01 Then play the comments from your curated list.

Set up Autoplay for your messages

- 01 Press the Gear icon in the upper right corner of the Chat panel.
 - 02 Toggle Autoplay on and enter the amount of seconds to play per item. Now, any message that is added to your chat queue will play automatically for the set amount of seconds entered per item.
 - 03 Toggle on the Loop option to autoplay the entire queue again after the last message has been played.
 - 01 Press **Start** and the chats will play for the time set and loop continuously.
-

Social Chat Controller

The Social Chat Controller pulls live chat messages from multiple platforms and routes them to your graphics. Supported platforms include Twitch, YouTube, Facebook, and X (Twitter) via NewBlue's proxy. Additional platforms are coming. You can filter and search incoming messages to customize your broadcast.

- [Establishing connection with Chats](#)
- [Set up Facebook comment settings](#)
- [Configure your sources](#)
- [Create a curated list of your messages](#)
- [Set up Autoplay for your messages](#)

Establishing connection with Chats

- 01 Add your Chat graphic from the Library into your Project List.
- 02 Under the Data Controller column of your chat graphic, select **Add Source > Productivity > Chat > Chat** or **Social > Chat > Chat**. This opens the Chat controller in the Properties Panel.
- 01 The first time you connect, you will be prompted to authenticate. Go to **Settings > Internet Accounts** to open the Service Accounts panel, select the service, and follow the instructions to sign in.

Continue with [Set up Facebook comment settings](#) or [Configure your sources](#).

Set up Facebook comment settings

If you are connecting to Facebook, you have the option to include comments from any of the pages managed by your account.

Note: Facebook has placed some limitations on content that is available based on the

specific permission privileges of an administrator. VideoPro can:

- receive the photos, videos, and text content of posts and comments posted to **a page you administer**.
- access the content of **your own posts on your own timeline**. You cannot see anything posted by someone else on your timeline, including comments on your own posts at this time.

01 Select the various pages and user/posts you would like to include in the chat controller.

Configure your sources

Once you have established a connection to all accounts you'd like to include in your Chat controller, configure each source within the Chat panel.

01 In the Chat Panel, choose any of the Service options to pull from.

01 Select the source for that service.

Select all pages and timelines you would like to pull comments from.

01 Select each post you would like to include comments from and click **Return to Messages**.

01 Messages will automatically populate in the Chat panel. You have the option to search in X by `from:` for specific comments.

Note: X/Twitter API only supports 'incomplete' data — from our testing, about 30% of posts are not recognized as high enough priority in search per the X algorithm.

01 Press the **Play** button to send the message text to your graphic. The message will then show as slightly greyed out, indicating it has been played.

You have the option to **Hide** the message or **Delete** from the message list to optimize screen space.

Note: If you delete messages that you want to play again, you will need to re-add the source for them to re-populate.

Social Chat Controller: Creating a curated list

- 01 This is an option if there are two operators or the controller is open from the browser.
- 02 Press the two-column option to open the second column as your chat queue.
- 03 Select the checkbox for any message in the first column to add it to your message queue.
- 01 Play the comments from your curated list.

Social Chat Controller: Set up Autoplay for your messages

- 01 Press the gear icon in the upper right corner of the Chat panel.
 - 02 Toggle **Autoplay** on and enter the number of seconds to play per item. Any message added to your chat queue will play automatically for the set duration.
 - 03 Toggle on the **Loop** option to autoplay the entire queue again after the last message has been played.
 - 01 Press **Start** and the chats will play for the set time and loop continuously.
-

Connect weather updates with WeatherCast

Use WeatherCast to fill weather graphics automatically with real-time, location-specific data. WeatherCast is included in VideoPro Broadcast and available as an add-on for VideoPro Sport. Complete the steps in this article to connect the WeatherCast Data Controller to your graphics.

- [Setting up Current Weather Display](#)
- [Setting up a Multi-Day Forecast](#)
- [Setting up a Multi-Hour Forecast](#)
- [Showcasing Multiple Locations](#)

Setting up Current Weather Display

- 01 In VideoPro's [layout interface](#), navigate to the Library > **Weather** to access all of our pre-made weather-themed graphic templates. Drag and drop a **Single Day** or **Weather Bug** graphic into your Project List and select to highlight.
- 01 From the Project List, locate the Data Controller column for the graphic layer you want to add the WeatherCast to. Select **Select a Datasource > Weather > WeatherCast > Current**.
- 01 The **WeatherCast** Data Controller will appear as a tab in the Layer Properties panel and under the Data Controller column in the Project List for that graphic. In addition, the graphic's input and its variables appear in the Live Values tab in the same panel.

Tip: You can move the WeatherCast tab to another location on the interface by dragging from the top of the panel to hover over the seam of the desired location. Once the panels slide to make room, you can drop to redock.

- 01 In the WeatherCast panel select your desired language from the dropdown and click **Add Location** in the input box on the top right of

the panel to open a search window.

- 01 Type city, country, or zip code of your desired location which should auto-populate options based on your entry > Select Location > click **Done** to close the window. Allow WeatherCast a moment to retrieve and populate real-time data. You should now see the selected location listed along with details in the WeatherCast panel.

Tip: To add multiple cities to your broadcast, simply repeat for amount of locations desired > click **Done** to close the window.

- 01 Toggle on **Use Metric** in the lower-left of the WeatherCast control row (below the location list, alongside the language dropdown, Auto Play toggle, Add Location button, and trash can), if metric displays are desired.
- 01 Click the **Link Data** button in the Preview panel to view the WeatherCast input and variables. (If the input's variables aren't visible, expand the list by sliding the size of the sidebar to the right or resizing the panel from the 3 dots along the seams.)
- 01 Click and drag a WeatherCast variable onto an object in your graphic. Repeat this step for each variable you want to include in your graphic. For the Current Day weather display, the variables available to connect to the graphic include:

- Condition
- Temperature
- Feels Like
- Hour
- Humidity
- Icon
- Cloud

- Precipitation
- Pressure
- Time
- Wind
- Wind Direction
- Location
- Country
- Date Time
- Latitude
- Local Time
- Longitude
- Region
- Timezone

Tip: To disconnect a variable from an object in your graphic, right-click that variable in the Edit/Preview panel and re-select to uncheck that variable.

The data in your WeatherCast input should now be visible in your graphic and updated in real time. Test by playing live and viewing in your Program Monitor.

Tip: If you run into any issues with your Data Controller not connecting properly, showing white, or disconnection, try right-clicking anywhere in the panel and select **Reload**. You can also reconnect in the Data Controller column by selecting **None** first, then reconnecting WeatherCast.

Setting up a Multi-Day Forecast

- 01 In VideoPro's playout interface, navigate to the Library > **Weather** to access all of our pre-made weather-themed graphic templates. Drag and drop one of the multi-day weather graphics into your Project List and select to highlight.

- 01 From the Project List, locate the Data Controller column for the graphic layer you want to add the WeatherCast to. Select **Select a Datasource > Weather > WeatherCast > Daily**.
 - 01 The WeatherCast Data Controller will appear as a tab in the Layer Properties panel and under the Data Controller column in the Project List for that graphic.
 - 01 In the WeatherCast panel select your desired language from the dropdown and click **Add Location**.
-
- 02 Type city, country, or zip code of your desired location, select location, and click **Done**. See [Showcasing Multiple Locations](#) for adding multiple cities.
 - 01 Click the **Link Data** button in the Preview panel to view the WeatherCast input and variables.
-
- 02 Click and drag a WeatherCast variable onto an object in your graphic. Link only the variables under **Day+00** for the first day, **Day+01** for the second day, **Day+02** for the third day, etc.

For the daily weather display, the variables available to connect to the graphic include:

- Condition
- Temperature
- Chance of Rain
- Chance of Snow
- Date
- High
- Low
- Icon

- Weekday
- Wind

01 In the WeatherCast panel, select the first weekday you would like to showcase to populate in your graphic.

The data in your WeatherCast input should now be visible in your graphic and updated in real time.

Setting up a Multi-Hour Forecast

01 In VideoPro's playout interface, navigate to the Library > **Weather**. Drag and drop the **6 Hour Weather** graphic or another template of your choice into your Project List and select to highlight.

01 From the Project List, locate the Data Controller column. Select **Select a Datasource > Weather > WeatherCast > Hourly**.

01 The WeatherCast Data Controller will appear as a tab in the Layer Properties panel.

01 Select your desired language and click **Add Location**.

02 Type city, country, or zip code, select location, and click **Done**.

01 Click the **Link Data** button in the Preview panel.

02 Click and drag a WeatherCast variable onto an object in your graphic. Variables under **Hour+00** are for the current hour, **Hour+01** for 1 hour from current, **Hour+02** for 2 hours from current, etc.

For the hourly weather display, the variables available include:

- Condition
- Temperature
- Chance of Rain

- Cloud
- Feels Like
- Hour
- Humidity
- Icon
- Is Day
- Is Night
- Precipitation
- Pressure
- Time
- UV
- Visibility
- Weekday
- Wind

The data in your WeatherCast input should now be visible in your graphic and updated in real time.

Showcasing Multiple Locations

01 Repeat steps 1–4 for any of the desired Current, Daily, or Hourly graphic displays as described in the previous sections.

02 Type city, country, or zip code of your desired location, select location, click **Return**, repeat for the amount of locations desired, then click **Done**.

01 Continue with the remaining steps as described in the previous sections.

- 02 When complete, select each city in the WeatherCast panel that you would like to be displayed. You also have the option to toggle on **Auto Play** and set the desired amount of seconds to display the data for each location.

The data in your WeatherCast input should now be visible in your graphic and updated in real time.

Behavior notes

- **Hourly** exposes 12 hours by default; **Daily** exposes 10 days by default.
- When a graphic with a Crawl or Roll conductor is bound to a WeatherCast input, the **Auto Play** control is replaced with **Auto Plays with** — the conductor drives the cadence.
- Only one open WeatherCast instance is the "controlling" instance at a time. Other open instances show a **Request Control** banner; click it to take control and let the previous controller release.