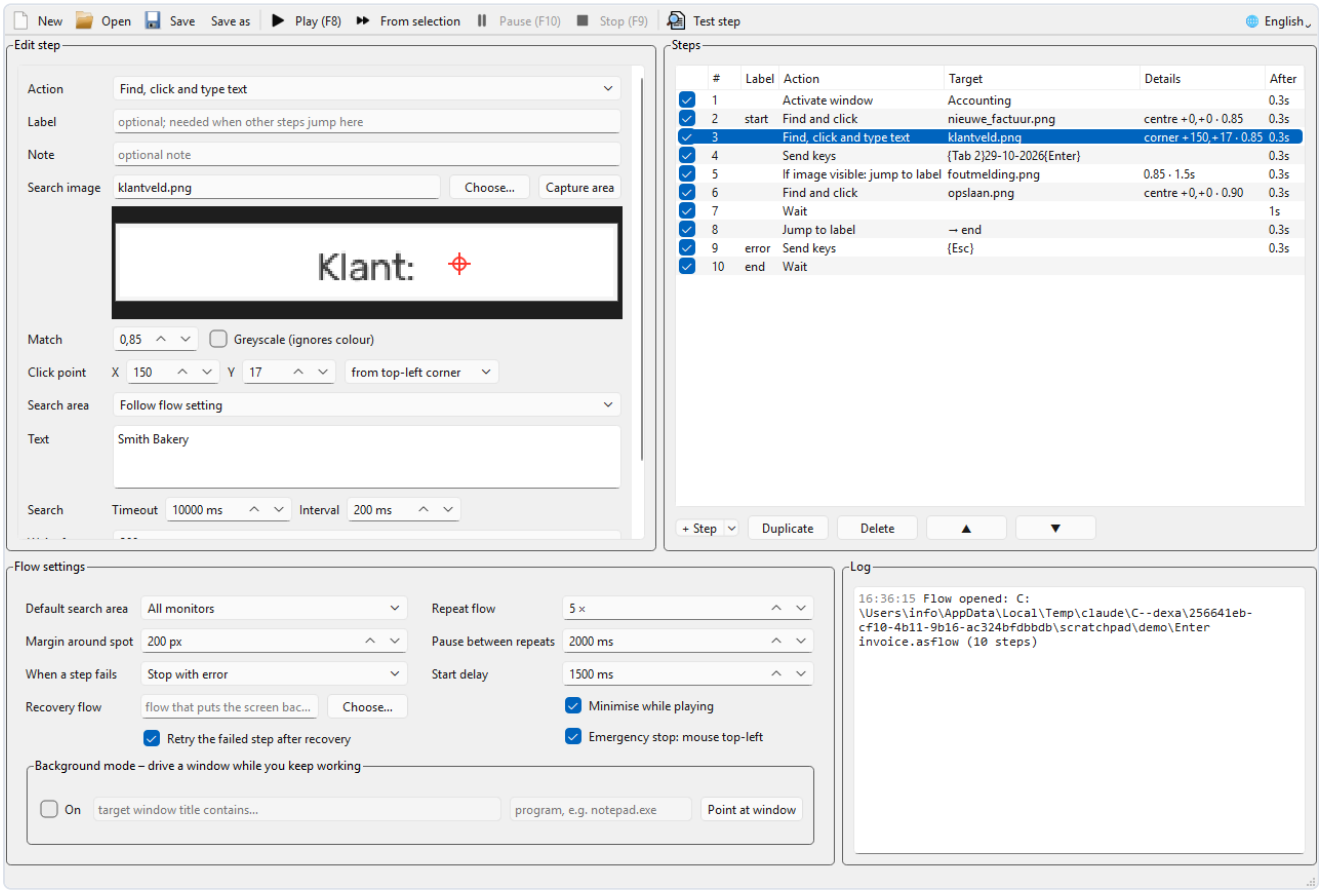
Automation Studio 3

Manual

Let your computer do the boring, repetitive jobs: the program finds buttons and fields on the screen, then clicks and types for you.



Version 3 · Windows 10 and 11 · October 2026

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> **English or Dutch**
> Automation Studio speaks English and Dutch. Choose the language with the 🌐 button at the top right of the toolbar; the program restarts in that language. *Automatic* follows the language of Windows.

1. What does Automation Studio do?

With Automation Studio you build a **flow**: a list of steps the computer carries out for you. A step says, for example, *"find this button on the screen and click it"* or *"type this text"*. You point out buttons and fields by taking a small picture of them. During playback the program looks for that picture on the screen, so it still works when a window has moved or a button sits somewhere else.

Typical uses:

- re-typing data into a program that has no import function;
- repeating the same task dozens of times (exporting reports, filling in forms);
- waiting until a program is done before carrying on;
- driving a program **in the background** while you keep working yourself (see chapter 10).

> **Good to know**
> Automation Studio does exactly what you would do with mouse and keyboard. It does not read data from programs and cannot do anything that you could not or may not do yourself.

2. Installing and starting

What you need

- Windows 10 or 11 (64-bit);
- the file `AutomationStudio.exe` (about 100 MB). No Python or other software is needed.

Starting

1. Put `AutomationStudio.exe` in any folder, for example `Documents\Automation Studio`. There is nothing to install.
2. Double-click the file. The first start takes a few seconds: the program unpacks itself first.
3. Does Windows show **"Windows protected your PC"**? Click **More info** and then **Run anyway**. The message appears because the program is not digitally signed.

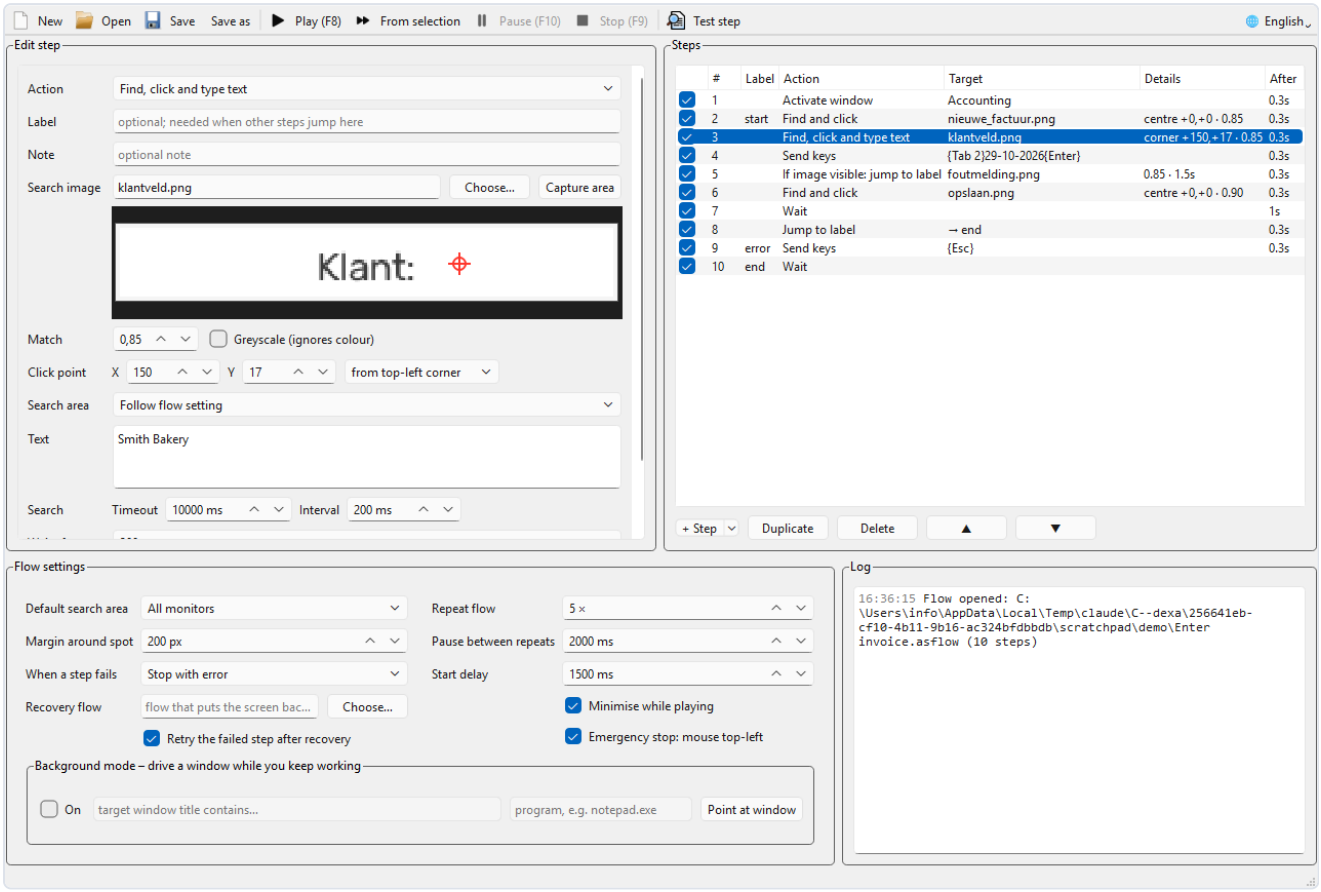
You can also open a flow directly: drag an `.asflow` file onto `AutomationStudio.exe` or onto the open window.

> **Programs running as administrator**
> Windows does not let a normal program control a program that runs with administrator rights. If you need to automate such a program, run Automation Studio as administrator too (right-click → **Run as administrator**).

Screens and scaling

The program works with multiple monitors and with any Windows scaling (100 %, 125 %, 150 % …). If you change the scaling or resolution after capturing pictures, capture them again: at a different scale buttons look slightly different.

3. The main window



The main window with an example flow, “Enter invoice”. Step 3 is selected; its settings are on the left.

Part	What it is for
Toolbar (top)	Open and save flows, play, pause, stop and **Test step**.
Steps, right	The list of steps, run from top to bottom. The tick box switches a step off temporarily. Drag to change the order. The **After** column shows the wait after each step.
Edit step, left	Settings of the selected step. Changes apply immediately; there is no “Update” button. If something is missing, a red warning appears at the bottom.
Flow settings, bottom left	Settings for the whole flow: repeats, error handling, background mode.
Log, bottom right	What happened during playback, with time, location found and score per step. Settings and log are always both in view; drag the divider to change their widths.
🌐, top right	Switch between English and Dutch.

Below the step list are the buttons **+ Step** (the arrow lets you pick the action straight away), **Duplicate**, **Delete** and ▲ ▼ to move steps. Hold `Ctrl` / `Shift` to select several steps at once.

The toolbar buttons are **New**, **Open**, **Save**, **Save as**, **Play**, **From selection**, **Pause**, **Stop** and **Test step**.

A ● before the name in the title bar means there are unsaved changes.

4. Your first flow in 8 steps

As an example, let's make Notepad type a sentence and save the file. Open Notepad before you begin.

1. Click **New**. You get an empty flow.
2. Click the arrow next to **+ Step** and choose **Activate window**. Under **Window title** enter `Notepad` (part of the title is enough).
3. Add a step **Find, click and type text**. Click **Capture area**, or press `Ctrl`+`G`. The screen freezes; drag a rectangle around a recognisable part of the text area, for example the top-left corner with its border.
4. The picture appears in the preview. The red cross is the **click point**; click in the preview to move it.
5. Under **Text** type: `Hello, Automation Studio typed this.`
6. Add a step **Send keys** with the text `^s` (`Ctrl`+`S`, save).
7. Select step 2 and press `F5` (**Test step**). The program searches for the picture once and draws a frame around the location it found, with the score. Nothing is clicked.
8. Save the flow with `Ctrl`+`S` and press `F8` to play it. After the start delay (1.5 seconds by default) the flow begins. You can always stop with `F9`.

> **Tip: choose a good picture**
> Capture a *small* but *unique* piece: a button caption, an icon or a label next to a field. Avoid parts that change, such as the contents of a text box, a blinking cursor or a button that lights up when the mouse is over it.

5. All actions

Searching the screen

Action	What happens
Find and click	Finds the picture and left-clicks the click point.
Find and double-click	Same, with a double-click.
Find and right-click	Same, with the right mouse button (for a context menu, for example).
Find and move mouse	Moves the mouse to the click point without clicking, for example to open a menu that reacts to hovering.
Find, click and type text	Clicks the click point and then types the text literally.
Find, click and send keys	Clicks and then sends a key sequence such as `^a{Delete}` (see chapter 7).
Wait until image appears	Waits until the picture is visible, for example until a window has loaded. If that does not happen within the timeout, the step fails.
Wait until image disappears	Waits until the picture is gone, for example a "Loading…" message.
If image visible: jump to label	If the picture shows up within the timeout, the flow continues at the given label. If not, it simply moves on to the next step. This step never fails.

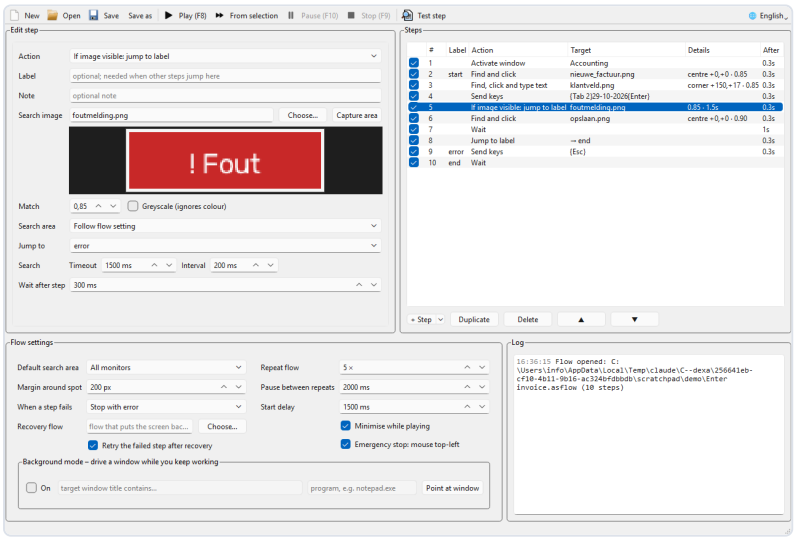
Windows, keyboard and other

Action	What happens
Click window coordinate	Finds a window by title (and optionally program) and clicks a fixed spot inside it. Use **Point at spot** to choose the spot. Handy when there is nothing recognisable to see.
Double-click window coordinate	Same, with a double-click.
Activate window	Brings a window to the front. Put this step at the start of a flow so the right program is active.
Type text	Types text in the active field. Works with every character (é, €, ß …), whatever your keyboard layout.
Send keys	Sends keys and shortcuts, such as `{Tab 3}` or `!{F4}`.
Scroll	Turns the mouse wheel where the mouse is. Positive = up, negative = down.
Wait	Waits a fixed time (set under **Wait after step**).
Jump to label	Continues at another step. See chapter 8.
Start program	Starts a program, document or website. Under **Text** enter a path or command, for example `notepad.exe`, `C:\Reports\week.xlsx` or `https://example.com`.

6. Step settings

Which fields you see depends on the chosen action.

Field	Explanation
Label	A name for this step, so other steps can jump to it. Optional.
Note	Your own remark; has no effect on playback.
Search image	**Capture area** takes a new picture of the screen; **Choose…** uses an existing PNG file.
Match	How closely the picture must match, from 0.50 to 1.00. **0.80–0.90** usually works well. Lower finds more, but also finds the wrong thing sooner. The log and **Test step** show the actual score.
Greyscale	Ignores colour. Useful when a button changes colour (on hover, for example) or with a different colour theme.
Click point	Where inside the found picture to click: X/Y from the centre or from the top-left corner. Click in the preview to pick the point. This lets you capture a label and click in the field *next to* it.
Search area	**All monitors**, **Active window**, or **Around the captured spot**: only search near where you captured the picture (much faster, and less chance of a wrong hit). By default a step follows the flow setting.
Search: Timeout	How long to search or wait at most (10 seconds by default).
Search: Interval	Pause between two search attempts (200 ms by default).
Wait after step	Pause after the step is done, so the program has time to react (300 ms by default).
On failure	What happens when the step fails: follow the flow setting, stop, skip the step, run the recovery flow or jump to a label.



An “If image visible” step: if an error message appears within 1.5 seconds, the flow jumps to the label `error`.

7. Text and keys

With **Type text** and **Find, click and type text** everything is typed literally. With **Send keys** and **Find, click and send keys** you use key notation. It is the same as AutoHotkey's, so old flows keep working.

Character	Means
`^`	Ctrl
`!`	Alt
`+`	Shift
`#`	Windows key

Example	Does
`^c`	Ctrl+C (copy)
`^+s`	Ctrl+Shift+S
`!{F4}`	Alt+F4
`#r`	Windows+R

A modifier applies only to the next key. Special keys go between braces:

Notation	Key
`{Enter}` `{Tab}` `{Esc}` `{Space}`	Enter, Tab, Escape, space
`{Backspace}` `{Delete}` `{Insert}`	Backspace, Delete, Insert
`{Up}` `{Down}` `{Left}` `{Right}`	Arrow keys
`{Home}` `{End}` `{PgUp}` `{PgDn}`	Home, End, Page Up/Down
`{F1}` … `{F24}`	Function keys
`{Numpad0}` … `{NumpadAdd}`	Numeric keypad
`{Tab 3}`	Repeat a key 3 times
`{Ctrl down}` … `{Ctrl up}`	Hold a key down and release it again
`{^}` `{!}` `{+}` `{#}` `{{}` `{}}`	Type the character itself

Example: `{Tab 2}29-10-2026{Enter}` moves two fields on, types the date and presses Enter.

An unknown key name such as `{Entr}` shows a red warning on the step. The flow will only start once you have fixed it.

8. Labels, jumps and repeats

Normally a flow runs from top to bottom. Labels let you change that.

1. Give the step you want to jump to a **Label**, for example `error`.
2. Use **Jump to label** to always jump, or **If image visible: jump to label** to jump only when something is on screen.

A step that is ticked off is normally skipped, but it does run when a jump leads to its label. That way you can, for example, switch off error handling that should only run through a jump.

The example flow on the cover does this: if an error message appears after filling in (step 5), it jumps to `error` and presses Escape. Otherwise it saves and jumps to `end`, skipping the error handling.

Repeating

In the **Flow settings** panel, **Repeat flow** sets how often the whole flow runs; **0** means forever, until you press `F9`. **Pause between repeats** waits between two rounds.

Data from Excel or CSV

Want to fill in something different each round, such as a list of customers? Use a data file.

1. Make an Excel (`.xlsx`) or CSV file with the column names in the first row, for example `Customer`, `City` and `Amount`.
2. Choose the file under **Flow settings → Data from Excel or CSV**. For Excel you can pick the sheet. You see how many rows there are and which columns.
3. In a text field, put the column name between double braces, for example `{{Customer}}` in **Type text**, or `{{City}}{Tab}{{Amount}}{Enter}` in **Send keys**. This also works in the window title and in **Start program**.

The flow then runs once per row; **Repeat flow** is ignored. With **Row … to …** you do part of the file, for example from row 15 when an earlier run stopped halfway. The log shows which row is running. A column name that does not exist gives a red warning on the step.

> **Tip: numbers and dates**
> Dates are typed as `dd-mm-yyyy` and numbers with the Windows decimal separator. To control exactly how a value looks, format the cell as text in Excel.

When a step fails

A step fails when the picture is not found within the timeout or a window does not exist. What happens next is set per step (**On failure**) or for the whole flow (**When a step fails**):

Choice	Result
Stop with error	The flow stops and shows why, including the best score it found.
Skip step	Carries on with the next step.
Jump to label	Continues at the given label (per step only).

Run recovery flow	Runs a separate flow that puts the screen back into a known state, for example by closing all windows and reopening the program. With **Retry the failed step after recovery** the step is tried once more afterwards.

9. Playing and the run settings

Playing

Button	Key	Does
Play	`F8`	Plays the flow from the start.
From selection	–	Starts at the selected step. Handy while building.
Pause	`F10`	Pauses; press again to resume.
Stop	`F9`	Stops immediately.
Test step	`F5`	Searches the selected step once and marks the spot, without clicking.

`F8`, `F9` and `F10` work anywhere in Windows, even when Automation Studio is not the active window. During playback a floating status bar shows which step is running.

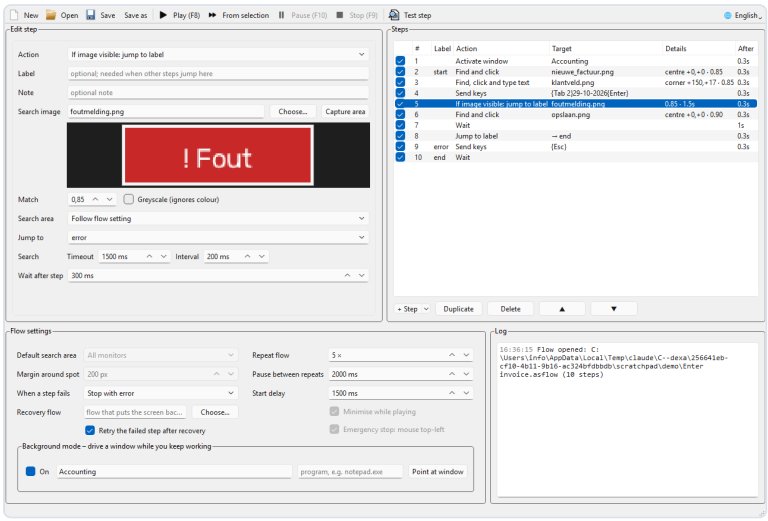
> **Emergency stop**
> Getting out of hand? Move the mouse all the way into the **top-left corner of the main screen**. The flow stops at once, even if `F9` does not get through.

Settings for the whole flow

Setting	Explanation
Default search area	Search area for steps set to “Follow flow setting”.
Margin around spot	How many pixels around the captured spot are searched with “Around the captured spot” (200 by default).
When a step fails / Recovery flow	See chapter 8.
Repeat flow / Pause	Number of rounds (0 = forever) and the pause between them.
Start delay	Wait after pressing Play, so you can let go (1.5 s by default).
Minimise while playing	Automation Studio gets out of the way during playback, so it does not cover anything.
Emergency stop: mouse top-left	Turns the top-left-corner emergency stop on or off. Leave it on.

10. Background mode

Normally Automation Studio takes over your mouse and keyboard. In **background mode** it drives one program directly, while you carry on working in other programs.



Background mode on, with “Accounting” as the target window. Settings that do not apply are greyed out.

Switching it on

1. In the **Flow settings** panel, under **Background mode** tick **On**.
2. Click **Point at window** and click the program to be driven. Title and program name are filled in.
3. Check every search step with **Test step** (`F5`) and play the flow.

How it works

- The image is read from the window's own memory, so the window may lie behind other windows;
- clicks and keystrokes are sent as messages straight to the window. Your mouse, keyboard and active window stay free;
- if the window is minimised, it is restored without being brought to the front.

Limitations

Whether this works depends on the program. Always try it with **Test step** first.

Kind of program	Works?
Classic Windows programs	**Usually well**: Win32, WinForms, many Delphi and VB programs, older accounting and point-of-sale software.
Browsers, Electron, Java, Qt, games	**Often not**: they ignore the messages or return a black image. You get a clear message when that happens.
Shortcuts with Ctrl/Alt/Shift	**Often not**, because programs read the real state of those keys. Plain text, Enter and Tab do work.
Programs running as administrator	**Only** if Automation Studio also runs as administrator.

Your program does not work in background mode?

Use normal mode in a separate environment, such as **Windows Sandbox** or a virtual machine (Hyper-V). There the flow can use the mouse without getting in your way.

11. Files and folders

What	Where
Flow	An `.asflow` file, wherever you save it.
Pictures of a flow	In the folder `<name>_afbeeldingen` (Dutch for “images”) next to the flow. They are copied there automatically when you save. When you copy the flow to another PC, take that folder with you.
Pictures not yet saved	`%LOCALAPPDATA%\AutomationStudio`
Logs	`%LOCALAPPDATA%\AutomationStudio\logs`, one file per day.

Old flows from the AutoHotkey version

Open an `.ias` file with **Open**. Steps, pictures and settings are carried over; the old “colour variation” is converted to a match value. Then save the flow as `.asflow`.

Sharing flows

A flow works best on a PC with the same screen scaling and theme as where the pictures were captured. On another PC you can find low scores with **Test step** and capture the picture again.

12. Troubleshooting

“not found within 10000 ms (best score 0.72, needed 0.85)”

- Is the best score **just below** the limit? Lower the match a little (to 0.80, for example) or switch on **Greyscale**.
- Is the score **very low**? Then the element really is not on screen, or it looks different. Capture the picture again, smaller and without changing parts.
- Is it somewhere else than when you captured it, and are you using “Around the captured spot”? Then choose **All monitors**.

It clicks in the wrong place

- The picture appears more than once on the screen. Capture a larger or more unique piece, raise the match, or narrow the search area.
- Check the red cross (click point) in the preview.

It goes too fast

Increase **Wait after step**, or better: add a **Wait until image appears** step, so the flow waits until the program is really ready.

Text does not arrive properly

Some programs drop characters when typing is too fast. Split the text over a few steps with a short wait, or use **Send keys** with `{Tab}` to move between fields.

F8, F9 or F10 do nothing

Another program already uses that key as a global shortcut. The log says so at start-up. Use the buttons or the emergency stop instead.

Where can I see what happened?

In the **Log** panel and in `%LOCALAPPDATA%\AutomationStudio\logs`. Every step is listed there with the location found and its score.

13. Keyboard shortcuts

Anywhere in Windows	
`F8`	Play
`F9`	Stop
`F10`	Pause / resume
Mouse to top-left	Emergency stop

File	
`Ctrl` + `N`	New flow
`Ctrl` + `O`	Open
`Ctrl` + `S`	Save
`Ctrl` + `Shift` + `S`	Save as

Editing steps	
`F5`	Test step
`Ctrl` + `G`	Capture area
`Insert`	New step
`Ctrl` + `D`	Duplicate
`Ctrl` + `↑` / `↓`	Move step up / down
`Del`	Delete (in the step list)
`Esc`	Cancel area capture