



What it does

- Keeps SmartSDR, Flex DAX IQ, SmartSDR CAT, and CW Skimmer working together from the selected Flex slice.
- Adds optional N1MM+ call fill from matching CW Skimmer spots.

Required software

- Microsoft .NET 8 Windows Desktop Runtime for the small/framework-dependent release.
- SmartSDR connected to the Flex radio.
- Flex DAX, SmartSDR CAT, and CW Skimmer installed and working.
- N1MM Logger+ installed and open only if using call fill.

#	Control	Purpose
1	Find Flex	Finds the radio. If multiple radios are found, select the correct one from the Detected Radio drop-down.
2	Target Slice	Selects the Flex slice to follow, usually A.
3	Flex API Port	Normal Flex API port, usually 4992.
4	DAX IQ Channel	Must match the DAX IQ stream used by CW Skimmer.
5	Skimmer Telnet Port	Used for spot/click communication with CW Skimmer.
6	CW Pitch Hz	Typical CW pitch is 700 Hz.
7	Launch CW Skimmer	Starts CW Skimmer when Start Bridge is clicked.
8	Close Skimmer on exit	Closes CW Skimmer when the bridge exits, if checked.
9	N1MM Call Fill	When checked, the bridge can place a matched decoded callsign into the N1MM+ call field.
10-12	Start / Save / Copy / Debug / DX / N1MM	Start bridge control, save or copy the log, show or hide panes, and open N1MM settings.

First setup

- Start SmartSDR and connect to the Flex radio.
- Open or select the operating slice, usually Slice A.
- Assign a DAX IQ channel to the slice or panadapter you want CW Skimmer to use.
- Start Flex Skimmer Bridge and click Find Flex.
- Confirm Target Slice, DAX IQ Channel, Skimmer Telnet Port, and CW Pitch.
- Leave Launch CW Skimmer checked if you want automatic startup.
- Click Start Bridge. Click Save after the setup works.

Daily operation

- Click a CW trace in SmartSDR or CW Skimmer to tune or follow.
- Use Show DX to view captured CW Skimmer spots.
- Single-click a DX spot to select it; double-click to tune it.
- Use Tune Selected to tune the highlighted spot.
- Use N1MM Call Fill only when N1MM Logger+ is open and you want the bridge to fill the call field.
- Use Save or Copy when you need the log.

Status line

- The top status line should show the local Flex radio address, selected slice, DAX IQ channel, Skimmer Telnet port, and CW pitch.
- This is the fastest confirmation that the selected path is correct.
- Good working sign: the bridge follows or tunes CW traces from either side, and DX spots appear when CW Skimmer is decoding.

Do not change during normal use

- Do not change DAX IQ assignments while the bridge is running. Stop, change, then start again.
- Do not switch slices without confirming Target Slice and DAX IQ Channel.
- Do not manually change CW Skimmer setup unless troubleshooting.

Normal startup order

1 SmartSDR on

2 DAX IQ active

3 CW Skimmer ready

4 Find Flex

5 Start Bridge

6 Operate

What N1MM Call Fill does

- When N1MM Call Fill is checked, a CW Skimmer click can fill the N1MM+ call field with the matched decoded callsign.
- The bridge sends text only. It does not press Enter, does not trigger ESM, and does not log the contact.
- The call fill is meant to reduce typing during CW operating while leaving final control with the operator.

How matching works

- The bridge looks for a recent CW Skimmer decoded spot near the clicked frequency.
- Default match window is 150 Hz.
- Default spot age is 120 seconds.
- The duplicate guard prevents repeated fills of the same recent call too quickly.
- master.scp is auto-loaded from the usual N1MM+ SupportFiles folder when found.

N1MM Settings

Setting	Default	Allowed / purpose
Spot age limit seconds	120	How old a decoded Skimmer spot may be and still be used for call fill. Can be raised up to 600 seconds / 10 minutes.
Frequency match window Hz	150	How close the clicked frequency must be to a recent decoded spot.
Duplicate guard seconds	2.0	Blocks repeated fill attempts for the same recent call within the guard time.
N1MM button	-	Opens the N1MM Call Fill Settings window. Use Save after setting values you want to keep.

N1MM+ operating notes

- Start N1MM Logger+ before using call fill. The bridge can detect the N1MM+ entry window directly, and may also use N1MM+ UDP RadiolInfo when available.
- Clicking a CW Skimmer trace or matching spot can fill the call field only if a recent decoded call matches the frequency and age settings.
- If the N1MM+ window is not found, the bridge logs what it would have filled but does not type into another program.
- If a call does not appear, check that N1MM Call Fill is checked, N1MM+ is open, CW Skimmer is decoding, and the decoded spot is within the age and frequency window.



#	Item	Use
13	Tune Selected	Tunes the selected DX spot.
14	Clear	Clears the visible DX spot list.
15	Selection note	Single-click selects; double-click tunes the selected spot.
16	DX spot list	Shows UTC time, frequency, call, dB, WPM, and decoded text.
17	Debug log	Shows bridge events. Use it only when troubleshooting.
18	Hide DX / Hide Debug	Collapses the selected pane and shrinks the window.

Saved files

Folder: %LOCALAPPDATA%\FlexSkimmerBridge\Logs

Debug log from Save:

FlexSkimmerBridge_YYYYMMDD_HHMMSS.log

Tuned DX spot ADI export:

DxSpots_Tuned_YYYYMMDD_HHMMSSZ.adi

Troubleshooting

Problem	What to check
No radio found	Confirm SmartSDR is running and the radio is on the same local network. Try Find Flex again or enter the local Flex IP manually.
More than one radio found	Use the Detected Radio drop-down and select the correct radio before starting.
No DX spots	Confirm CW Skimmer is decoding and the Telnet port matches the bridge setting.
Trace tuning wrong	Confirm Target Slice and DAX IQ Channel match the actual slice or panadapter used by CW Skimmer.
N1MM call not filled	Confirm N1MM Call Fill is checked, N1MM+ is open, and the clicked signal matches a recent decoded spot.
Need diagnosis	Click Show Debug, reproduce the problem, then Save or Copy the log before closing the program.