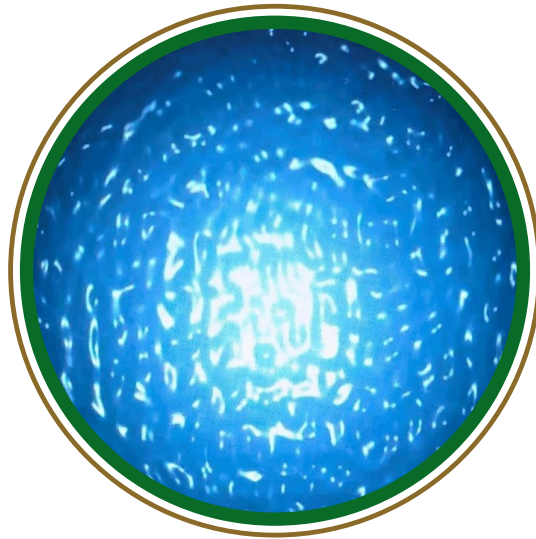




STARGATE P4X

SGC DIALING COMPUTER

User Setup & Configuration Manual

VIPER DYNAMICS LLC | AARON CERALDI

v2.0.24 · 4" 720×720



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1 What's in the Box

- **Stargate P4X** — 3D-printed enclosure with a 4-inch round 720×720 colour DSI display, touch, and speaker

IMPORTANT

Power the device with any standard **5V USB-C** charger, computer port, or power bank. The P4X has no battery of its own. Cable and supply are not included.

2 Device Overview

The Stargate P4X is a self-contained wall / desk clock that joins your home **2.4 GHz** Wi-Fi and shows one of three visual modes on its 4-inch round LCD. Settings live on a built-in web page (the **Gate Dialing Console**). No app is required. Once configured, Wi-Fi and settings survive power cycles.

This hardware has a **capacitive touch panel** and a **speaker**. You can open the iris from the glass, play the SG-1 theme on boot, and run a real alarm sound — or do all of that from a phone browser.

CLOCK

Analog hands on the Stargate face. Every N minutes the iris opens, the event horizon plays, then the clock returns.

CONTINUOUS STARGATE

Always-on wormhole puddle. On the interval the gate collapses, holds black, then kawooshes open again.

PHOTO FRAME

Your photos — local JPEG uploads or a public shared album — cycling on a timer you set.

TOUCH

Tap the centre to open or close the iris. All setup is in the Gate Dialing Console.

Three display modes plus touch. Changing Mode in the web UI applies immediately — no reboot.

NOTE

This radio is **2.4 GHz only**. A 5 GHz-only network name will not join. Use a 2.4 GHz SSID, or the 2.4 GHz side of a dual-band router.

3 First-Time Setup

When powered on for the first time (or after a self-destruct / combined firmware+media flash), the P4X creates its own temporary Wi-Fi hotspot. After the intro sequence the round screen shows the SGC logo, **SGC DIALING COMPUTER**, the portal address, and the hotspot name.

Hotspot name	Stargate-Clock-Setup
Password	none (open network — no lock icon)
Config page	http://192.168.4.1

NOTE

Setup is only in the browser. Until Wi-Fi is saved, every **5 minutes** the setup text drops away, the screen waits one second, the iris opens, the wormhole loops twice, the iris closes, and the setup screen returns.

3.1 Connecting from iPhone (iOS)

- **Open Settings → Wi-Fi.** Wait a few seconds for networks to populate.
- Select **Stargate-Clock-Setup**. It appears without a lock icon.
- Dismiss the “No Internet” alert. Tap **Stay Connected** or **Use Without Internet**.

- Open Safari and go to <http://192.168.4.1>

TIP

iOS often drops open networks that have no internet. Stay on Stargate-Clock-Setup until you have tapped **Initiate dialing sequence**.

3.2 Connecting from Android

- Open **Settings** → **Network & Internet** → **Wi-Fi** (some phones: **Connections** → **Wi-Fi**).
- Tap **Stargate-Clock-Setup** (open network) → **Connect**.
- When Android says “Connected, no internet,” choose **Yes / Use this network as-is**.
- Open Chrome and go to <http://192.168.4.1>

TIP

After you save a new Wi-Fi network the device reboots onto that network. Rejoin your normal Wi-Fi, then finish setup at <http://P4X-XXX.local> — the unique hostname and LAN IP appear on the Viper Dynamics boot splash.

4 Gate Dialing Console

Open a browser to <http://192.168.4.1> (first-time setup) or <http://P4X-XXX.local> (after Wi-Fi is configured). The page is titled **Gate Dialing Console** — green-on-black, matching the SGC look. Changing **Mode** switches the screen immediately. Most other settings apply when you tap **Initiate dialing sequence**, without a reboot. Changing Wi-Fi credentials is the exception: that one save reboots so the clock can join the new network.

4.1 Wi-Fi Setup

Tap **SCAN SUBSPACE** to list nearby 2.4 GHz networks, then pick one from the dropdown. For a hidden network, check **Hidden Subspace Frequency** and type the SSID. Enter the password, or leave the password blank to keep the one already saved.

PRIVACY

Credentials are stored in on-device flash and are never shown on the page.

4.2 Time & Timezone

Once on Wi-Fi the device syncs time via NTP (default pool.ntp.org). **Automatic timezone** is on by default: after joining your network the P4X estimates timezone from your public IP (including daylight-saving rules) and shows the detected location under the dropdown (for example America/Chicago).

Uncheck **Automatic timezone** to pick a city from the list, enter a custom POSIX timezone, or point NTP at a different server. Automatic re-detects on each Wi-Fi connect.

NOTE

The analog clock needs a successful NTP sync. If the hands look wrong, wait up to a minute on first join, then confirm timezone on the console. A VPN or CGNAT path can pick the wrong city — lock a zone if that happens.

4.3 Mode Selection

Clock	Analog Stargate face with hour, minute, and red second hand. Default everyday mode.
Continuous Stargate	Always-on event-horizon puddle. No clock hands.
Photo Frame	Local JPEG slideshow or a public gallery URL, cover-scaled to 720×720.

TIP

The mode dropdown applies on the display as soon as you pick it — no reboot. Your choice is stored so it comes back after a power cycle.

4.4 Gate Re-establish Interval

How often the scheduled gate animation runs, in minutes (1–60, default **38**). The P4X fires when the local clock's minute is a multiple of this interval.

- **Clock** and **Photo Frame**: iris opens → event-horizon puddle → iris closes → back to the face or photo.
- **Continuous Stargate**: wormhole collapse → 5 seconds of black → kawoosh reopen. If the iris was sealed (touch or alarm), the interval instead plays iris-open-from-black then kawoosh.

4.5 Alarm Clock

Enable the alarm and set a 24-hour time, sound file, and volume. Unlike the Mini, the P4X **has a speaker**. At the set time the iris closes (interrupting a puddle if one is showing), the chosen file plays, and the sealed iris stays up for **60 seconds** or until you tap the glass. Clock and Photo Frame then resume; Continuous Stargate reopens the iris.

Default sound is [sgc_alarm.wav](#). Upload extra WAV or MP3 files from the console. The alarm fires in **Clock mode** once the device has NTP time. It does not fire in Continuous Stargate or Photo Frame.

NOTE

Use **Test** on the console to preview a sound at the current volume. Alarm volume is independent of intro-music volume.

4.6 Intro Music

When enabled, the Stargate SG-1 theme plays on every power-on together with the boot animation. Uncheck the box on the console to silence startup audio. The change takes effect on the next power-on.

4.7 Photo Frame Slideshow

Visible on the console at all times; photos appear on the LCD only when Mode is **Photo Frame**. Source is **Local images** or a **Gallery URL**. Slideshow interval is in seconds (default 30). Both sources also run the scheduled gate cycle on the re-establish interval.

Local: pick a JPEG. The browser cover-crops it to 720×720 before upload. Each file is capped around 1 MB; total local photos share the remaining LittleFS space (about 20 MB class). Refresh list, delete individual files, or upload another. An empty slideshow shows the closed iris. Local files stay on the device if you switch to Gallery URL and back.

Gallery URL: a *public* shared-album link (anyone-with-the-link). Google Photos (photos.app.goo.gl), an iCloud Shared Album, a JSON list `{"images":["https://...jpg"]}`, one URL per line, or a single JPEG URL. Images are requested at 720×720 cover-crop. **Test gallery** resolves the album immediately; **Clear URL** empties the field. The album list refreshes on the interval you set (5–180 minutes, default 30).

TIP

Private Google Photos links will not resolve — share the album with “anyone with the link.” Square or near-square photos fill the round LCD best. Videos in an album are skipped.

4.8 Brightness

Auto day / night brightness is on by default. After the clock is on your Wi-Fi it estimates location from the public IP (same lookup as timezone) and uses sunrise/sunset to pick a day or night level. If location is unknown it falls back to 07:00–19:00 local time.

Day defaults to **90%**, night to **50%**. Both sliders run from **22%** to 100% — the panel hardware is off below 22%. Uncheck Auto to use a single manual level instead. Changes apply immediately; tap **Initiate dialing sequence** so they survive a power cycle.

NOTE

A VPN or CGNAT path can pick the wrong city (and therefore the wrong sunrise). Lock timezone and set day/night levels by hand if the auto switch feels early or late.

4.9 Save & Self-Destruct

Initiate dialing sequence writes the form. The device restarts *only* if you changed the Wi-Fi network or password. Mode, photos, gallery test, timezone, interval, alarm, intro music, and brightness apply without a reboot — tap Initiate dialing sequence so they survive a power cycle.

Initiate self destruct asks for confirmation, then erases `config.bin` (Wi-Fi, timezone, mode, interval, alarm, gallery URL) and restarts on the [Stargate-Clock-Setup](#) hotspot. Uploaded local photos stay on the filesystem until you delete them from the slideshow list.

WARNING

A full firmware + media update from the web UI also replaces the animations and wipes saved Wi-Fi, settings, and uploaded photos. After that update, join **Stargate-Clock-Setup** and run first-time setup again. A firmware-only update leaves media and settings in place.

5 Touch

The P4X has a capacitive round touch panel. Wi-Fi, timezone, mode, alarm, brightness, photos, and firmware are all set in the Gate Dialing Console in a browser.

Centre tap

Clock / Photo Frame: open the iris. The wormhole loops until you tap again, or for 5 minutes, then closes. Continuous: close the iris; tap the closed iris to reopen.

TIP

If a centre tap is ignored, wait until the current clip finishes the frame — the gate polls touch between frames.

6 Display Modes

Clock Mode

The Stargate face with 12 glyphs and analog hands (white hour and minute, glowing red second). On the re-establish interval the iris opens, the event-horizon puddle plays, the iris closes, and the live clock returns. Recommended everyday mode. Centre-tap opens a 5-minute wormhole.

Continuous Stargate Mode

A looping event-horizon puddle fills the round LCD — no clock hands. On the interval the wormhole collapses, holds black for five seconds, then kawooshes open again. Centre-tap seals the iris; tap the closed iris to reopen.

Photo Frame Mode

- Each photo shows for the slideshow interval (default 30 seconds).
- Local source: JPEG stills stored on the device, cover-cropped to 720×720. After the last photo the cycle repeats.
- Gallery source: photos stream from the public album while the P4X is online, and the album is re-fetched on the gallery refresh timer.
- The scheduled gate cycle still runs; afterwards the current photo returns. Centre-tap still opens the iris.

7 Boot Sequence & Screen Guide

No Wi-Fi saved (first boot or after self-destruct): intro music (if enabled) and the full activation sequence, then the AP screen so a phone can join. Every five minutes of idle setup the text drops away for a second, the iris opens, the wormhole loops twice, the iris closes, and the setup screen returns.

Wi-Fi saved: Viper Dynamics logo, unique hostname `P4X-XXX.local`, LAN IP, and firmware version (for example `v2.0.24`) for about 3–6 seconds, then kawoosh → puddle. Clock and Photo Frame close the iris and show their face; Continuous Stargate stays on the puddle. Write down the hostname from this splash.

AP / setup screen	SGC logo, “SGC DIALING COMPUTER”, portal 192.168.4.1, hotspot name.
Hostname splash	Viper Dynamics logo, unique .local address, LAN IP, and firmware version.
Analog clock	Clock mode — current local time on the Stargate face.
Event-horizon puddle	Continuous mode, a centre-tap open, or the scheduled cycle.
Closed iris	Idle between cycles, alarm, or a closed Continuous gate.
Photo	Photo Frame — local still or gallery frame, cover-scaled to 720×720.

8 Firmware Update

On the Gate Dialing Console, tap the **Firmware Update** link at the bottom of the page. The page shows the version currently installed (this manual matches [v2.0.24](#)).

8.1 Check and Install from Viper Dynamics

Set **Mode** to Clock and Save first. Stay on the same Wi-Fi as the clock, with the console open in a browser.

- Tap **Check for updates**.
- If an update is available, tap **Install from Viper Dynamics**. Do not close the browser or unplug the clock.
- The screen may go dark or flicker. When the install finishes the clock reboots on its own. The boot splash shows the new version. Wi-Fi, settings, and photos stay.

NOTE

Install from Viper Dynamics updates the software only. It does not replace the animations, and it does not clear Wi-Fi or photos.

8.2 If you were sent an update file

Use this only for a file sent to you for this clock. Choose it on the Firmware Update page.

- A software update leaves photos, Wi-Fi, and settings in place.
- A full update also replaces the gate animations and audio, and clears Wi-Fi, settings, and uploaded photos. After that, join **Stargate-Clock-Setup** and run first-time setup again.

WARNING

Stay on the same Wi-Fi as the clock. Do not unplug it while the update is writing. If the progress bar stalls, switch Mode to Clock and try again. A full update takes several minutes.

9 Returning to Configuration

Once on your home Wi-Fi, open:

<http://P4X-XXX.local>

The suffix **XXX** is derived from the device MAC, printed on the boot splash. Phone or computer must be on the same Wi-Fi. You can also use the IP shown on that splash (or in your router's client list).

TIP

If .local fails on Windows, install Bonjour Print Services for Windows, or use the raw IP. Need help? Scan the quick-start QR or visit <https://www.viperdynamics.llc/support>.

10 Troubleshooting

Problem	Solution
Screen is black / no display	Check the USB-C cable and 5V charger. Try another port or brick.

Problem	Solution
Stargate-Clock-Setup hotspot doesn't appear	Wait up to 45 seconds after power-on. Cycle power. The hotspot starts when no Wi-Fi is saved, or after Initiate self destruct / a combined update.
Config page won't load at 192.168.4.1	Stay on Stargate-Clock-Setup (dismiss "no internet"). Refresh. Only 2.4 GHz radios can join the setup AP.
Won't join home Wi-Fi	2.4 GHz only. Dual-band routers often present a strong 5 GHz signal with the same name — move closer or use a dedicated 2.4 GHz SSID.
Clock shows the wrong time	Needs internet. Wait up to 60 seconds for NTP. Check Automatic timezone, or pick a city / POSIX zone on the console.
P4X-XXX.local not found	Same Wi-Fi as the device. Use the IP from the boot splash. Windows may need Bonjour.
Touch does nothing	Wait for the current clip. Centre-tap is Clock / Photo Frame to open, Continuous to close.
Photo upload fails	JPEG only; the browser resizes to 720×720. Delete unused stills if the filesystem is full. Pause the gate (the page does this automatically on current firmware).
Gallery URL finds no photos	Album must be public (anyone with the link). Use Test gallery. Set Mode to Photo Frame and Save so the gate displays them.
Gallery says Could not parse Google Photos album	The share link is private, expired, or not an album. Create a new "anyone with the link" album and Test gallery again.
Alarm made no sound	Enable the alarm, pick a WAV/MP3, raise volume, and stay in Clock mode with valid NTP time. Use Test on the console.
Firmware Update stuck or fails	Switch Mode to Clock, stay on the same Wi-Fi, and do not unplug the clock. Try Check for updates again.
Check for updates finds nothing	Confirm the clock is online, then try again later.
Update finished but settings are gone	A full update clears Wi-Fi and settings. Join Stargate-Clock-Setup and run first-time setup again. Install from Viper Dynamics keeps them.
Screen too dim / too bright	Open the console. Auto day/night is on by default (22–100%). Raise Day or Night, or uncheck Auto and set a manual level.
Need to start over / change Wi-Fi from scratch	Initiate self destruct on the console (erases settings, returns to the setup hotspot), or update SSID/password and Initiate dialing sequence (that one change does reboot).

■ STARGATE P4X ■

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