The Milky Way on a phone

Print it, fold it, take it out with you.

Fragments of the Universe
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THE TWO THINGS THAT DECIDE THE NIGHT

A tripod

Night photography holds the shutter open for several seconds, and anything hand-held moves in that time. A small tabletop tripod is enough. Bonus: many phones only unlock their longest exposures once they are sure the phone is completely still.

A dark sky

From a city the skyglow is brighter than the Milky Way, and no amount of editing recovers what the phone never saw. An hour out of most cities is usually enough, and the difference is dramatic.

YOUR PHONE, BY MAKE

iPhone

Lens
Main wide lens, not the ultra-wide or the zoom. Biggest sensor, fastest aperture.

Up to iPhone 16
The moon icon appears in the dark. On a tripod the exposure slider runs to about 30 seconds. Drag it to maximum and tap the shutter.

iPhone 17 series
The slider is gone. Night mode is Off, Auto or Max. Choose Max: up to 30s on a tripod. Auto will not give you a long exposure.

ProRAW
Turn it on if your model offers it. It records a file you can brighten properly afterwards.

Samsung Galaxy

Pro mode
Manual shutter to 30 seconds, plus manual ISO and focus. Enough for both subjects.

The hidden astro mode
Download Expert RAW from the Galaxy Store. Open it, tap the settings icon, turn on Special photo options. An astrophotography icon then appears.

If you cannot find it
It only shows at 12MP resolution. Listed for S22 and S23 series onwards.

Star trails
Hyperlapse mode, speed 300x, then a star trails toggle appears. Set resolution to UHD.

Pixel and other Android

Pixel
Night Sight, on a tripod, then leave it alone. It relabels itself as astrophotography and offers up to about four minutes, stacking frames internally.

Everything else
Most Android phones have a Pro mode somewhere in the camera app. 30 seconds is plenty for both subjects.

Worth ten minutes
Go through every mode in your camera app before deciding your phone cannot do this. The useful one is rarely on the front screen.

IF YOUR PHONE HAS A PRO MODE, SET THIS

ISO	SHUTTER	WB	FOCUS	FORMAT	TIMER
3200	**20"**	**4000K**	**Infinity**	**RAW**	**3s**
Until the sky looks grey rather than black, then back off a step	Long enough for a meteor, short enough to repeat often	Consistent colour across every frame of the night	The step most people skip. Slide it all the way by hand	Real latitude to lift the shadows afterwards	Stops the tap itself shaking the phone

No manual mode? You lose very little. Night mode on a tripod, fired again and again, gets you most of the way there.

HOW LONG AN EXPOSURE EACH OPTION GIVES YOU ON THE NIGHT

Pixel astro mode tripod detected, automatic	**~4 min**
Manual camera app full manual, RAW, iOS or Android	**60s**
Samsung Expert RAW Pro mode, manual ISO	**30s**
iPhone Night mode on a tripod, no manual control	**30s**
Any phone, handheld the phone cannot hold still enough	**3s**

Longer is not always better. Four minutes gives a lovely Milky Way, but the stars will have visibly moved across the frame. Twenty to thirty seconds, repeated over and over, is the sweet spot for most people.

- **Clean the lens**
  A fingerprint you would never notice by day turns every bright star into a smeared halo.
- **Keep it firing**
  Take frame after frame for an hour or two. Every one is a Milky Way exposure, and a meteor either lands in one or it does not.
- **Frame something solid**
  A rock, a dune ridge, a tree line, a friend looking up. Two minutes on composition pays for the whole session.
- **Screen down, red light on**
  Eyes take about twenty minutes to adapt and a bright screen undoes that in a second.
- **Power bank, and watch for dew**
  Long exposures drain a phone fast. If everything suddenly looks soft, wipe the lens.

IF THERE IS A METEOR SHOWER ON

Keep exposures short

Twenty to thirty seconds, not four minutes. A meteor in a short frame stands out; in a long one it is swamped by skyglow.

Take lots of frames

One is a lottery ticket, thirty is a decent chance. A couple of hours is how people come home with the shot.

Aim off to one side

Meteors radiate out from one patch of sky. Near it they look like short stubs, so point somewhere high and dark away from it.

Nothing is wasted: every frame is also a Milky Way exposure, so a quiet night for meteors still gives you the galaxy.

The full guide, with examples

Full walkthrough with example images, plus the camera version of this guide for when you want to go further than the phone can take you.

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