

The Cooling Code

28 honest ways to cool your home without running the AC all summer — shade, night air, white roofs, thermal mass and water. Real numbers, most under \$30.

✓ 28 methods, by category

✓ Cost, savings & limit for each

✓ No gadgets, no hype

Most methods under \$30 · Many free · Stack them to cut your cooling 30–60%



This is the offline PDF. For the live version and the companion Earth Tube calculator, visit

oldwaysrestored.com/cooling-manual

Air conditioning is one way to cool a house. It is not the only way, and for most of human history it wasn't the way at all. Homes stayed livable through brutal summers using shade, air, water, and the cool of the night — methods that still work, cost little, and never show up on your power bill.

This manual is the honest collection of them: **28 methods, organized by what they actually do** — block heat, release heat, bank the cool, cool with water, cool with shade, and cool yourself. Each one tells you the real cost, the honest savings, the effort, and exactly where it works and where it doesn't.

"You don't cool a house with one big move. You stack a dozen small honest ones — and the meter stops spinning."

How to use this manual — stack small wins

No single method cools a whole house. The magic is stacking: shade the windows, flush at night, expose your mass, run a fan where you sit — and together they do what an AC does, for a fraction of the cost. Start with the free habits, add the cheap blocks, reach for the bigger projects only where they pay. Here's the order that works:

Step**Do this first**

- | | |
|---------------------------|---|
| 1. Free habits | Fix your window schedule and start night flushing. Costs nothing, changes everything. |
| 2. Cheap blocks | Shade west/south windows, coat the roof white. Biggest bang for small money. |
| 3. Comfort layer | Fans done right, cool your sleep, move heat-making chores out of the house. |
| 4. Bigger projects | Whole-house fan, attic system, evaporative cooler, shade trees — where they pay. |

THE HONEST CLIMATE RULE

Dry climate with cool nights? Night flushing, thermal mass, and evaporative methods are gold. Hot and humid with warm nights? Those three barely work — lean instead on shade, white roof, insulation, and fans. Each method below tells you which camp it's in.

YOUR COOLING LIBRARY — JUMP TO ANY GUIDE**Volume I · Earth Tube Build Files**

The \$300 ground-cooling build + calculator

Volume II · The Cooling Code

You are here — 28 methods

★ The Complete Vault

All 3 volumes in one 50-page archive

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The 28 methods

1 Block the heat — stop it getting in

1. Exterior window shade

BEST FOR
All climates

💰 \$15–120/window

📊 Up to 80% of a window's heat

🔧 Easy

WHY IT WORKS

Sunlight pouring through glass is the single biggest source of unwanted heat in most homes — a sunny window behaves like a small electric heater you can't switch off. The instant that light passes through the glass it converts to heat trapped inside, and interior blinds can only re-radiate it back into the room. The only way to truly stop it is to block the sun on the OUTSIDE of the glass, before it ever becomes indoor heat.

WHAT TO EXPECT

A well-shaded west window can stop 70–90% of the solar heat that would otherwise enter. In a sunny room, that often means the difference between a space that's unusable by 4pm and one that stays comfortable — frequently a 5–10°F swing in that room alone on a hot afternoon.

HOW TO DO IT — STEP BY STEP

1. Identify your worst windows: stand inside each sun-facing window mid-afternoon and feel the radiant heat. West and southwest are almost always worst, then east, then south.
2. Choose your shade: exterior solar screens (block 70–90%, ~\$20–60/window), roller shades, awnings, or a simple exterior bamboo blind for renters.
3. Mount it on the OUTSIDE of the window — on the frame, a bracket, or a tension rod outside the glass. Outside placement is the entire point.
4. Prioritize by sun: do all west and southwest windows first, then east, then south. North windows rarely need it.
5. Test the result: feel the inside glass before and after on a hot day — the temperature drop is the heat you're no longer paying to remove.

WHAT IT COSTS

DIY exterior solar screen fabric runs about \$20–40 per window; ready-made exterior roller shades \$40–120; a fixed awning \$80–400. Renters: outside-mounted bamboo or reflective shades for \$15–30 do most of the job.

✓ DO IT RIGHT

On a hot afternoon, feel the air an inch off the inside of a sunny window versus a shaded one. That temperature gap is exactly what you're currently paying the AC to undo, window by window.

⚠ WATCH OUT

Interior curtains and blinds are NOT a substitute — the heat is already through the glass and they only slow its release into the room. If you do only one thing, get the shade OUTSIDE.

2. The white (reflective) roof

BEST FOR
Sunny climates

💰 \$0.50–2/sq ft

🌡️ 2–5°C indoors, roof –50°F

🔧 Medium

WHY IT WORKS

Your roof is the most sun-beaten surface on the entire property. A dark roof can reach 150–190°F under summer sun and radiate that heat downward through the attic into your top-floor rooms for hours after sunset. A high-albedo (highly reflective) surface bounces most of that sunlight straight back to the sky instead of soaking it up — the same reason a white shirt is cooler than a black one.

WHAT TO EXPECT

Documented results are dramatic: a reflective white coating can cut the roof's surface temperature by up to 50°F and lower indoor temperatures by 2–5°C (roughly 4–9°F). On a top floor or under a flat roof, it's one of the largest single drops you can buy, and it runs at zero cost forever afterward.

HOW TO DO IT — STEP BY STEP

1. Confirm roof type: flat or low-slope roofs are the easiest and highest-payoff candidates for a coating.
2. Clean the roof surface thoroughly so the coating bonds — sweep, wash, let it dry.
3. Patch any cracks or seams first with compatible sealant.
4. Roll or spray on a bright-white elastomeric roof coating in two coats, following the product's dry-time between coats. A weekend DIY job for a typical roof.
5. For a pitched shingle roof, you can't coat it the same way — instead choose the lightest shingle color you can live with at your next re-roof, or look into rated 'cool roof' shingles.

WHAT IT COSTS

Elastomeric white roof coating runs about \$0.50–2.00 per square foot in materials — a 1,000 sq ft flat roof is roughly \$500–2,000 in product, and far less if you do the labor yourself. It also extends roof life by reducing heat-expansion cracking, so it pays back twice.

✓ DO IT RIGHT

A white coating doesn't just cool the house — it reduces the daily heat-expansion stress that cracks and ages roofing, so you're buying cooler rooms AND a longer-lasting roof in one move.

⚠️ WATCH OUT

You give up a little free solar warmth in winter. In any cooling-dominated climate the summer win dwarfs that; in a heating-dominated northern climate, weigh it before coating.

3. Attic insulation + ceiling air-sealing

BEST FOR
All climates

💰 \$300–1,500

📅 Large, year-round

🔧 Medium

WHY IT WORKS

A summer attic routinely hits 130–150°F. That heat attacks your living space two ways: it conducts down through the ceiling, and it pours directly through every gap — around recessed lights, the attic hatch, plumbing stacks, and wiring penetrations. Insulation slows the heat that conducts; air-sealing stops the heat that leaks through holes. You genuinely need both, and most homes are short on each.

WHAT TO EXPECT

Bringing a under-insulated attic up to a deep level and sealing the leaks typically cuts both summer heat gain and winter heat loss noticeably — many homes see a real, lasting drop in how hard the AC works on hot afternoons, plus a smaller heating bill all winter. It's one of the few methods that pays in both seasons.

HOW TO DO IT — STEP BY STEP

1. Pick a cool morning — attics are dangerous in afternoon heat.
2. Air-seal FIRST: caulk and spray-foam around every penetration (light fixtures, vents, pipes, wires), weatherstrip the attic hatch, and cover any open gaps to the living space below.
3. Then add insulation on top to a deep level (aim for R-49+ in hot climates) — blown-in or batts.
4. Keep insulation off and around non-IC-rated recessed lights using rated covers so they don't overheat.
5. Maintain soffit airflow — don't block the vents at the eaves when you add insulation.

WHAT IT COSTS

DIY air-sealing is cheap — \$50–150 in caulk and foam captures most of the leak benefit. Adding blown-in insulation runs roughly \$300–1,500 for a typical attic depending on size and depth; many utilities offer rebates that cut this substantially.

✓ DO IT RIGHT

Do the air-sealing yourself on a mild day before you spend a cent on insulation — sealing the leaks first is cheap and captures a surprising share of the total benefit on its own.

⚠ WATCH OUT

Never bury non-IC-rated recessed lights or certain fixtures in insulation — they can overheat and become a fire risk. Use rated covers made for the purpose.

4. Radiant barrier in the attic

BEST FOR
Hot, sunny climates

💰 \$0.15–0.50/sq ft

📉 Cuts radiant attic heat sharply

🔧 Medium

WHY IT WORKS

Most attic heat travels as radiant energy — invisible heat beaming down from the scorching underside of the roof deck. A reflective foil layer bounces that radiant heat back up before it loads the attic and your ceiling, exactly like the foil sunshade you put behind a car windshield.

WHAT TO EXPECT

In a hot, sunny climate a radiant barrier can meaningfully lower attic temperatures and the ceiling heat reaching your rooms — most effective on homes with big cooling bills and lots of direct roof sun. In mild or cloudy climates the benefit is small.

HOW TO DO IT — STEP BY STEP

1. Buy radiant-barrier foil (perforated, to let moisture through) sized for your roof area.
2. Staple it to the underside of the roof rafters, shiny side facing DOWN into the attic air gap.
3. Leave an air gap facing the reflective surface — it only works with air space in front of it.
4. Alternatively, lay a foil-faced product over the top of existing attic-floor insulation, foil side up.
5. Keep it clean during install — dust kills reflectivity.

WHAT IT COSTS

Radiant barrier foil is cheap at roughly \$0.15–0.50 per square foot; a typical attic is \$150–500 in materials for a DIY install. Pairs best with insulation rather than replacing it.

✓ DO IT RIGHT

Pair it with insulation rather than instead of it: the barrier stops radiant heat, the insulation stops conductive heat. Together they cover both paths the attic uses to cook your ceiling.

⚠ WATCH OUT

It needs an air gap to work and must stay dust-free — dust settling on the foil destroys its reflectivity over a few years. Of little value in mild or overcast climates.

5. Light-colored exterior walls

BEST FOR
Sunny climates

🎨 Paint cost only

📊 A few degrees on hot walls

🔧 Medium

WHY IT WORKS

Dark walls absorb solar heat and conduct it slowly inward, so a sun-facing wall keeps radiating warmth into the room for hours after sunset. A light, reflective color sends much of that sunlight back instead of storing it — the wall simply runs cooler all day.

WHAT TO EXPECT

On its own this is a modest effect — a few degrees on the hottest walls — but it's nearly free if you're already repainting, and it stacks well with roof and window measures for a cumulative result.

HOW TO DO IT — STEP BY STEP

1. Time it with a repaint you're doing anyway so the only added cost is color choice.
2. Choose lighter, more reflective tones — especially for the west and south walls that take the most sun.
3. Favor matte/reflective finishes over dark glossy ones.
4. Don't bother spending extra effort on the shaded north side.

WHAT IT COSTS

Effectively free if you're repainting regardless — it's just a color decision. As a standalone repaint, normal exterior painting costs apply, so most people simply fold it into scheduled maintenance.

✓ DO IT RIGHT

Lighter AND more matte reflects best. Concentrate on west and south walls where the sun load is highest; the north side barely matters.

⚠ WATCH OUT

A small effect by itself — treat it as a free bonus you capture during a repaint, not a primary cooling project to fund on its own.

6. Awnings & overhangs sized to the sun

BEST FOR
All climates

💰 \$80–400

🏠 Blocks summer sun, keeps winter sun

🔧 Medium

WHY IT WORKS

The summer sun rides high in the sky; the winter sun stays low. A correctly-sized overhang or awning on a south window uses that seasonal difference automatically — it shades out the steep summer sun but lets the low winter sun reach in for free heat. It's the oldest trick in solar design and it needs no moving parts on the south side.

WHAT TO EXPECT

A properly sized south overhang blocks most direct summer sun on that glass while still admitting winter sun — a genuine year-round win. On east and west windows, where the sun is low, you'll need adjustable shade to get the same effect.

HOW TO DO IT — STEP BY STEP

1. For south windows, size a fixed overhang to your latitude — a rough rule for much of the US is overhang depth \approx window height \times 0.5.
2. Build or mount the overhang above the window so its shadow covers the glass at midday in summer.
3. For east and west windows, install retractable or adjustable awnings instead — the low morning/evening sun slips under any fixed overhang.
4. Deploy west awnings for the brutal late-afternoon hours and retract them otherwise.

WHAT IT COSTS

A fixed overhang is carpentry/materials cost, often \$100–400 DIY. Retractable fabric awnings run roughly \$80–300 each for manual models. Both are one-time costs that work every summer after.

✓ DO IT RIGHT

South-facing windows: a fixed overhang is set-and-forget. East and west windows: go retractable, so you can pull shade for the worst hours and stow it the rest of the day.

⚠ WATCH OUT

An overhang sized wrong does almost nothing — too shallow and it won't shade summer, too deep and it blocks winter sun. Match the depth to your latitude.

2 Let the heat escape — move it out

7. Night flushing (the backbone method)

BEST FOR
Dry climates, cool nights

 Free

 Can do most of the cooling in dry climates

 Easy daily routine

WHY IT WORKS

Your house and everything in it — walls, floors, furniture — soaks up heat all day. If you trap that heat by keeping windows shut through the night, it's still there in the morning and you begin the next day hot. Night flushing dumps it: once the outdoor air finally drops below your indoor temperature, you open up and let cool night air carry the day's stored heat out of the structure. Done right, you wake to a cool house that takes hours to heat back up.

WHAT TO EXPECT

In a dry climate with cool nights, a good flush can drop indoor temperatures 10–15°F overnight and keep the house comfortable well into the next afternoon — it can do the majority of your cooling for free. This is the single highest-impact method in the whole manual where the climate fits.

HOW TO DO IT — STEP BY STEP

1. All day: keep windows closed and shaded so the house stays as cool as possible and doesn't absorb daytime heat.
2. Evening: watch for the cross-over — the moment outdoor temperature drops below indoor (an indoor/outdoor thermometer makes this obvious).
3. Then open windows wide on OPPOSITE sides of the house — ideally low on the cool side, high on the warm side, to set up a sweeping flow.
4. Add a window fan pulling cool air in (and/or one exhausting warm air out) to dramatically speed the flush.
5. At dawn, before the outdoor air climbs back above indoor, close everything up again to trap the cool.

WHAT IT COSTS

Free. The only optional spend is a \$15–40 box or window fan to accelerate it, and a \$10 indoor/outdoor thermometer so you know exactly when to open and close.

✓ DO IT RIGHT

Track your bedroom temperature for a week as you do this — watching each morning start a few degrees cooler is what turns the routine into a habit you'll actually keep.

⚠ WATCH OUT

In hot-humid climates with warm nights it barely works and can drag muggy air inside. This is a dry-and-temperate-climate method — believe your thermometer over your hopes.

8. Cross-ventilation

BEST FOR
Breezy climates

Free

Real comfort gain on breezy days

Easy

WHY IT WORKS

Air takes the path of least resistance. Open a window on the windward side and another on the opposite leeward side, and the outdoor breeze flows straight through the house, sweeping heat and stale air out with it. It's the difference between a stuffy sealed box and a breezy porch.

WHAT TO EXPECT

On a breezy day with cooler outdoor air, cross-ventilation can make a room feel dramatically fresher and several degrees more comfortable almost instantly — it's free and immediate whenever the outside air cooperates.

HOW TO DO IT — STEP BY STEP

1. Identify the prevailing breeze direction for your site (often it shifts cooler in the evening).
2. Open a window on the windward side (inlet) and another on the opposite leeward side (outlet).
3. Make the inlet smaller than the outlet — this speeds the air up where you feel it, like a thumb over a hose end.
4. Put the inlet low and the outlet high to also carry off rising warm air.
5. Keep interior doors open so the through-path isn't blocked.

WHAT IT COSTS

Completely free — it uses windows you already have. A small fan in the inlet or outlet (\$15–40) extends it to still, windless evenings.

✓ DO IT RIGHT

A small inlet paired with a large outlet accelerates the breeze right through the living space. Aim the inlet window at wherever people actually sit.

⚠ WATCH OUT

Only helps when the outdoor air is cooler than (or at least not hotter than) inside. During peak afternoon heat, close it down or you'll just import hot air.

9. Stack-effect (chimney) ventilation

BEST FOR
Two-story / tall homes

Free-\$300

Steady passive airflow, no fan

Easy

WHY IT WORKS

Hot air rises. If you give it a high exit and a low cool-air entry, it sets up a continuous self-driving current — warm air escapes up top, pulling cooler air in down low. The house breathes on its own, no fan and no electricity, exactly the way a chimney drafts smoke upward.

WHAT TO EXPECT

In a two-story home or one with a tall stairwell or roof vent, the stack effect provides a steady, gentle, free air exchange all evening — modest but continuous, and it costs nothing to run.

HOW TO DO IT — STEP BY STEP

1. Open low windows on a shaded, cool side of the house for the inlet.
2. Open high windows upstairs — or a stairwell window, roof vent, or cupola — for the outlet.
3. Maximize the vertical distance between low inlet and high outlet; taller gaps pull harder.
4. Feed the low inlet with the coolest air available (shaded side, near plants or water).
5. Keep the internal path open — stairwell doors, etc. — so air can rise freely.

WHAT IT COSTS

Free if you're just using existing high and low windows. Adding an operable skylight, roof vent, or cupola to create a high outlet runs roughly \$150–300+ but turns the whole house into a permanent passive chimney.

✓ DO IT RIGHT

Stairwells and two-story voids are natural chimneys — use the highest opening you have as the outlet and the coolest low window as the inlet.

⚠ WATCH OUT

Needs a real height difference and a genuinely cool low-side source to work well. A single-story house with no high vent has a weak stack and will see little effect.

10. Whole-house fan

BEST FOR
Dry climates, cool nights

💰 \$150–600

🔄 Replaces AC on many evenings

🔧 Medium install

WHY IT WORKS

It's night flushing with a turbocharger. Mounted in the ceiling below the attic, a whole-house fan pulls cool evening air in through your open windows and blasts the hot indoor and attic air out through the roof vents — exchanging the entire air volume of the house every few minutes.

WHAT TO EXPECT

In a dry climate it can cool a whole house in 15–20 minutes for pennies of electricity, and on many evenings it replaces the air conditioner entirely. It's the powered, faster version of the free night flush.

HOW TO DO IT — STEP BY STEP

1. Choose a central ceiling location, usually a hallway, with attic space above and adequate roof venting.
2. Confirm your attic has enough exhaust venting for the fan's airflow (or add vents) so the hot air has an easy exit.
3. Install the fan unit in the ceiling (a moderate DIY job, or a few hours for an electrician/handyman).
4. To use: in the evening once it's cooler outside than in, open several windows and run the fan.
5. Add an insulated cover for winter so it doesn't become a heat leak.

WHAT IT COSTS

The fan itself runs about \$150–600; professional installation adds a few hundred more if you don't DIY. Running cost is a few cents an hour — a fraction of central AC.

✓ DO IT RIGHT

Run it in the evening and early morning when outdoor air is coolest, and open enough window area to feed it — too few windows open makes it strain and roar.

⚠ WATCH OUT

Useless during the heat of the day (it would pull hot air in). It needs cool outdoor air to work, and it should be sealed/insulated in winter or it leaks heat.

11. Working attic ventilation

BEST FOR
All climates

💰 \$50–400

📐 Cuts ceiling heat load

🔧 Medium

WHY IT WORKS

A sealed, baking attic dumps its heat straight down through your ceiling. Letting that superheated air escape up high — and pulling cooler air in down low — keeps the attic and the ceiling beneath it far cooler. It's a core part of treating the roof and attic as one cooling system.

WHAT TO EXPECT

Good continuous venting noticeably lowers peak attic temperature, which reduces the heat radiating down into your top-floor rooms. Best results come when it's combined with insulation and a radiant barrier as a complete attic package.

HOW TO DO IT — STEP BY STEP

1. Set up continuous passive airflow: intake vents low at the soffits/eaves, exhaust vents high at the ridge.
2. Make sure insulation isn't blocking the soffit intakes.
3. For active pull at no running cost, add a solar-powered attic fan up high.
4. Combine with attic insulation (stops conduction) and a radiant barrier (stops radiant) for the full effect.
5. Check that intake and exhaust are balanced so air actually moves through.

WHAT IT COSTS

Adding or improving soffit/ridge venting runs roughly \$50–250 in materials for DIY; a solar-powered attic fan is about \$150–400 and runs free off the sun.

✓ DO IT RIGHT

Continuous soffit-to-ridge venting moves air with zero power. A solar attic fan adds extra muscle on the very hottest days, also for free.

⚠ WATCH OUT

Venting alone won't rescue a poorly insulated ceiling — do it as one part of the attic system, never as a substitute for insulation and sealing.

12. Exhaust fans on the heat spikes

BEST FOR
All climates

 Free (already installed)

 Quick targeted relief

 Easy

WHY IT WORKS

Cooking and bathing dump concentrated heat and humidity into the house at the worst possible times. Your existing bathroom and kitchen exhaust fans vent that straight outside before it can spread — and on the hottest afternoons they can pull out the warmest air, which collects near the ceiling.

WHAT TO EXPECT

A targeted, immediate tool rather than a whole-house solution — it removes the heat and humidity spikes from cooking and showering at the source, keeping them from making the whole house feel muggy and hot.

HOW TO DO IT — STEP BY STEP

1. Run the kitchen range hood (vented outside) whenever you cook, and leave it on a few minutes after.
2. Run the bathroom exhaust fan during and after every shower to remove the humidity burst.
3. On a brutal afternoon, briefly run upstairs exhaust fans to pull out the hottest trapped air near the ceiling.
4. Confirm the fans actually vent outdoors, not just into the attic.

WHAT IT COSTS

Free — these fans are already installed in most homes. The only cost is being deliberate about using them at the right moments.

✓ DO IT RIGHT

They're most valuable for killing the humidity spike from cooking and showering before it spreads and makes the entire house feel close and warm.

⚠ WATCH OUT

They pull conditioned air out too, so use them in bursts rather than running constantly if you're also running the AC.

3 Bank the cool — thermal mass & timing

13. Expose & charge your thermal mass

BEST FOR

Dry climates, big day-night s

Free

Flattens the daily swing, 6–8 hr delay

Easy

WHY IT WORKS

Dense materials — concrete, tile, brick, stone — absorb and release heat slowly. A thick masonry wall can delay outdoor heat reaching you by 6–8 hours, so the afternoon's peak doesn't arrive inside until evening, when it's cooler anyway. Cooled by night air, that same mass stays cool into the next afternoon and quietly absorbs the room's heat. It's a temperature flywheel you may already own.

WHAT TO EXPECT

Where you have exposed mass and a dry climate with big day-night temperature swings, this noticeably flattens the indoor temperature curve — fewer afternoon peaks, more stable comfort — for free.

HOW TO DO IT — STEP BY STEP

1. Find the mass you already have: concrete slab floors, tile, brick walls, stone.
2. Expose it in summer — pull rugs and carpets off tile and concrete so the surface can absorb room heat.
3. Charge it nightly: pair with night flushing so cool night air cools the mass down.
4. Let the cooled mass absorb the next day's heat — keep the house closed by day so it works on the indoor heat, not the outdoor.
5. Repeat the charge-and-absorb cycle daily through the hot season.

WHAT IT COSTS

Free — it uses mass already built into your home. The only 'cost' is leaving floors bare and committing to the nightly flush that charges them.

✓ DO IT RIGHT

A slab floor or a brick fireplace wall is a cooling battery you already paid for. Bare it in summer and flush it every night to keep it charged.

⚠ WATCH OUT

In humid climates with warm nights the mass never gets cooled at night, so it just stores heat and works against you. This is strictly a dry, swingy-climate method.

14. Master the window schedule

BEST FOR
All climates

Free

Makes or breaks every other method

Daily habit

WHY IT WORKS

This is the highest-leverage free thing in the entire library — and the one most people get exactly backwards. Heat always flows toward cooler: open windows when it's hotter outside and you pour heat in; closed windows by day hold the cool. The schedule — closed and shaded by day, open by night — is the discipline that lets your house keep the cool you worked to capture with every other method.

WHAT TO EXPECT

On its own, simply getting the schedule right can keep a house several degrees cooler through the afternoon at zero cost. More importantly, it's the foundation that makes shade, mass, and flushing actually pay off — without it, they leak away.

HOW TO DO IT — STEP BY STEP

1. Morning: the moment outdoor temperature climbs above indoor (usually mid-morning), close all windows, blinds, and curtains on the sun side.
2. Keep the house sealed and shaded through the heat of the day.
3. Evening: the moment outdoor drops below indoor, open up for the night flush.
4. Use an indoor/outdoor thermometer so you're acting on real numbers, not guesswork.
5. Set two daily phone alarms — 'close up' and 'open up' — until the rhythm is automatic.

WHAT IT COSTS

Free. A \$10 indoor/outdoor thermometer removes all the guesswork about exactly when to open and close.

✓ DO IT RIGHT

An indoor/outdoor thermometer makes the whole thing foolproof: open when outside reads lower than inside, close when it reads higher. That's the entire rule.

⚠ WATCH OUT

One hot day with the windows flung open 'just for some air' undoes hours of careful cooling. The discipline of the schedule is the whole game.

15. Add thermal mass to a light house

BEST FOR
Dry climates

💰 \$50–500

🏠 Smooths swings in a lightweight home

🔧 Medium

WHY IT WORKS

Modern lightweight homes — wood frame, drywall, carpet — have little mass, so they heat up and cool down fast: comfortable for an hour, then hot. Adding mass gives the house a flywheel that absorbs daytime heat and releases it at night when you flush it out, smoothing the swings.

WHAT TO EXPECT

Added mass won't transform a house overnight, but in a dry climate it measurably slows how fast a light room heats up in the afternoon, buying you more comfortable hours before it gets uncomfortable.

HOW TO DO IT — STEP BY STEP

1. Choose your mass: water is the cheapest and densest — it holds more heat per pound than concrete.
2. Place sealed water containers (drums, large jugs) in a utility room, closet, or garage where they can absorb daytime heat.
3. Cool the mass each night by flushing those spaces with cool night air.
4. Alternatively add a tile, stone, or brick feature wall for a more attractive permanent mass.
5. Position mass where it's exposed to room air, not buried in a cabinet.

WHAT IT COSTS

Sealed water containers are nearly free to almost-free (\$0–50 for drums/jugs). A tile or stone feature wall is a bigger project, \$200–500+ depending on size and finish.

✓ DO IT RIGHT

Sealed water containers in a closet make a cheap, effective 'mass battery.' Even a few large jugs help a lightweight room hold its cool noticeably longer.

⚠ WATCH OUT

It only helps if you cool the mass every night with a flush. Skip the nightly flush and the mass just becomes a heat sponge that makes evenings worse.

4 Cool with water — evaporative methods

16. Evaporative (swamp) cooler

BEST FOR
DRY climates only

💰 \$60–400

📉 10–20°F drop in dry air

🔧 Medium

WHY IT WORKS

Evaporating water absorbs a remarkable amount of heat — the same reason sweat cools your skin. In dry air, pulling hot air through a wet pad makes the water evaporate and the air comes out 10–20°F cooler, delivering real cooling for a fraction of an air conditioner's energy. It's how the desert Southwest cooled itself for generations.

WHAT TO EXPECT

In genuinely dry air (humidity under ~40%), a swamp cooler delivers a 10–20°F drop at roughly a quarter of the energy of refrigerated AC. The drier and hotter the day, the bigger the drop you'll feel.

HOW TO DO IT — STEP BY STEP

1. Confirm your climate is dry — check that summer afternoon humidity is regularly under ~40%.
2. Place the cooler so it draws in the driest, hottest outside air available.
3. Crucially, crack a window on the FAR side of the house — evaporative cooling needs air to flow THROUGH and out, carrying humidity away (unlike sealed-up AC).
4. Keep the pads wet and clean; replace them as they mineralize.
5. Run it during the hot, dry afternoon hours for the biggest effect.

WHAT IT COSTS

A portable/window swamp cooler runs roughly \$60–400; whole-house units cost more installed. Running cost is a fraction of AC — mostly just the fan and a little water.

✓ DO IT RIGHT

It works best when humidity is under ~40%. Crack a window on the opposite side so the cooled, humidified air keeps moving through and out — that airflow is what makes it work.

⚠ WATCH OUT

Useless and counterproductive in humid climates — it just adds moisture and makes the air muggier without cooling. Dry air ONLY.

17. The wet-sheet / wet-towel trick

BEST FOR
Dry climates

🏠 -\$0

📊 Several °F in dry air

🔧 Easy

WHY IT WORKS

It's a swamp cooler built from things you already own. A dry breeze passing through a damp sheet evaporates the water and arrives cooler on the other side — free evaporative cooling with a bedsheet and an open window.

WHAT TO EXPECT

In dry heat this can take several degrees off the incoming air for essentially nothing — enough to make a bedroom noticeably more comfortable for sleep on a hot, dry night.

HOW TO DO IT — STEP BY STEP

1. Dampen a sheet or large towel so it's wet but not dripping.
2. Hang it across an open window where a breeze comes in, or directly in front of a box fan.
3. Let the incoming dry air evaporate the moisture and cool as it passes through.
4. Re-wet the sheet as it dries out.
5. For a bedroom, hang it in the window at night for cooler sleep.

WHAT IT COSTS

Essentially free — a sheet or towel and water. A box fan (\$15–40) behind it multiplies the effect on still nights.

✓ DO IT RIGHT

Hang a damp sheet in your bedroom window at night in a dry climate and you get a noticeably cooler sleep for essentially zero cost.

⚠ WATCH OUT

It adds humidity to the room — fine and welcome in dry climates, but it makes humid climates worse and clammy. Don't overdo it.

18. Misting the shaded outdoor space

BEST FOR
Dry climates

💰 \$20–80

📏 Cools outdoor air 10–20°F

🔧 Easy

WHY IT WORKS

Fine water droplets evaporate almost instantly in dry heat, pulling heat from the surrounding air and dropping its temperature sharply. It makes a shaded patio usable in dry heat — and can pre-cool the air right before it enters a window you then draw inside.

WHAT TO EXPECT

On a shaded patio in dry air, a misting line can drop the local air temperature 10–20°F, turning an unusable afternoon space into a comfortable one — and feeding cooler air to a nearby inlet window.

HOW TO DO IT — STEP BY STEP

1. Run a misting line along a shaded porch, pergola, or patio (shade is essential — misting in full sun is far weaker).
2. Use fine misting nozzles so droplets evaporate before they wet everything.
3. Position the line upwind of the door or window you ventilate through.
4. Let the breeze carry the cooled air into the house through that opening.
5. Run it during the hot, dry part of the day.

WHAT IT COSTS

A basic patio misting kit runs about \$20–80. Water use is modest. Pair with shade for the cost to actually pay off.

✓ DO IT RIGHT

Aim it to cool the air feeding your inlet window and you get both an outdoor comfort benefit AND cooler incoming air from a single misting line.

⚠ WATCH OUT

Dry climates only — in humid air the mist just makes everything damp without cooling. It also needs shade to work well.

19. Water features & plants at the inlet

BEST FOR
Dry climates

💰 \$20–200

📏 A few degrees of inlet air

🔧 Easy

WHY IT WORKS

A small fountain, pond, or cluster of well-watered plants cools and freshens nearby air through evaporation and transpiration. Shade plus water is exactly how courtyard homes have cooled their incoming air for centuries.

WHAT TO EXPECT

A finishing touch rather than a primary cooler — it can shave a few degrees off the air entering on the inlet side and makes that air fresher, especially when combined with shade.

HOW TO DO IT — STEP BY STEP

1. Place a water feature or dense, well-watered planting on the shaded, windward side near your air inlet.
2. Group plants together for a stronger combined transpiration effect.
3. Position it so the prevailing evening breeze passes over the water/plants before reaching your inlet window.
4. Keep the plants healthy and watered — the cooling comes from active evaporation and transpiration.

WHAT IT COSTS

A small solar fountain or a cluster of potted plants runs roughly \$20–200 depending on scale. Ongoing cost is just water and plant care.

✓ DO IT RIGHT

Position it on the side your prevailing evening breeze comes from, so it feeds your night flush with pre-cooled, freshened air.

⚠ WATCH OUT

A modest, supporting effect — best as a finishing touch on the inlet side, not something to rely on as a primary cooling method.

5 Cool with shade & landscape

20. Plant a shade tree (the long game)

BEST FOR
All climates

💰 \$30–200/tree

📊 Up to a whole room's cooling load

🔧 Plant once

WHY IT WORKS

A mature, well-placed deciduous tree is the most powerful low-tech cooling you can install. It shades your walls and roof from the summer sun, and the leaves themselves cool the surrounding air through transpiration. When the leaves drop in autumn, the winter sun comes through for free warmth. One big tree on the west side can cut a room's cooling load dramatically.

WHAT TO EXPECT

It's a multi-year payoff that compounds: a young tree helps a little in a few years, and a mature one can shade an entire wall or roof section and noticeably cut that room's cooling load — the single best long-term cooling investment you can make.

HOW TO DO IT — STEP BY STEP

1. Choose deciduous (leaf-dropping) species so you get summer shade AND winter sun.
2. Plant on the WEST and southwest sides first to block the harsh afternoon sun, then south for midday shade.
3. Position for the tree's MATURE size and root spread — keep a safe distance from foundation, roof, and lines.
4. Plant now, even a modest size — it starts helping in a few years and pays more every season.
5. Water it well through establishment so it grows fast.

WHAT IT COSTS

A young shade tree runs roughly \$30–200 depending on size and species, plus your planting effort. The payoff grows every year as the canopy expands — a rare investment that appreciates.

✓ DO IT RIGHT

West side first — that's where the brutal late-afternoon sun lands. A tree there shades the wall, the windows, AND the roof edge all at once.

⚠ WATCH OUT

It's a multi-year payoff, not a this-week fix. Mind the mature root and limb spread relative to your foundation, roof, and utility lines when you choose the spot.

21. Shade the AC condenser

BEST FOR
Anyone running AC

💰 \$0–60

📊 Up to ~10% AC efficiency

🔧 Easy

WHY IT WORKS

An air conditioner works by dumping your home's heat into the outdoor air at the condenser unit. If that unit is baking in full sun, it has to fight its own heat load and runs less efficiently. Shade it — without choking its airflow — and it dumps heat into cooler air, doing the same cooling for less energy.

WHAT TO EXPECT

Shading the condenser can improve its efficiency by up to around 10%, meaning the same comfort for a bit less electricity. A small, near-free win on equipment you already run.

HOW TO DO IT — STEP BY STEP

1. Provide shade on the unit from the afternoon sun — a tree, a shade screen, an awning, or a strategically placed shrub.
2. Keep at least 2–3 feet of completely clear airflow on every side and above the unit.
3. Aim the shade at the west side, where the late-day sun hits hardest.
4. Never enclose or wrap it — shade the box, never restrict the air it breathes.

WHAT IT COSTS

Often free (relocating a shade or planting a shrub you have) up to about \$60 for a purpose-made shade screen. No running cost, and it slightly lowers your AC bill.

✓ DO IT RIGHT

A deciduous shrub or a simple shade screen on the west side of the unit is plenty — free efficiency on equipment you're already paying to run.

⚠ WATCH OUT

NEVER wrap, cover, or box the unit in. It must breathe freely — restricting its airflow makes it far worse, not better.

22. Cover the west-facing glass

BEST FOR
All climates

💰 \$10–60

📏 Kills the afternoon heat spike

🔧 Easy

WHY IT WORKS

West windows take the low, blazing late-afternoon sun head-on, straight into the room — it's the worst heat of the day and the reason most rooms peak in temperature around dinnertime. Killing that single exposure removes the daily heat spike that drives evening discomfort.

WHAT TO EXPECT

Treating west and southwest glass often eliminates the late-afternoon temperature peak in those rooms — frequently the difference between an evening that's miserable and one that's comfortable.

HOW TO DO IT — STEP BY STEP

1. Identify all west and southwest windows — the late-day sun targets.
2. Add exterior solar screens (best), reflective window film (cheap, renter-friendly), or a temporary outside cover for the worst hours.
3. For renters, interior reflective film or an insulated cellular shade closed before the sun hits is a solid fallback.
4. Treat west first, then east, then leave north alone.

WHAT IT COSTS

Reflective window film runs about \$10–30 per window and is renter-safe; exterior solar screens are \$20–60 and stronger. Either beats doing nothing to west glass.

✓ DO IT RIGHT

Reflective film is a few dollars and renter-friendly; exterior screen is better if you own. Either one beats leaving the west glass bare to the afternoon sun.

⚠ WATCH OUT

Interior film helps but exterior shade is far stronger — whenever you can, stop the heat at the glass surface, not after it's already inside.

23. Climbing vines / living green screen

BEST FOR
All climates

💰 \$20–100

🌿 Shades wall + evaporative cooling

🔧 Medium, grows in

WHY IT WORKS

A trellis of climbing vines on a hot wall does two jobs at once: it shades the wall from direct sun, and the leaves cool the surrounding air through transpiration — a living, self-watering shade screen that keeps the wall surface far cooler than bare exposure.

WHAT TO EXPECT

Once grown in, a green screen keeps a hot west or south wall dramatically cooler to the touch and cools the air in the gap behind it — a natural, attractive shade that improves every season as it fills.

HOW TO DO IT — STEP BY STEP

1. Build or mount a trellis a few inches OFF the hot west or south wall — you want an air gap behind the greenery, not vines stuck to the siding.
2. Plant a fast-growing deciduous climber so it shades in summer and bares the wall for winter sun.
3. Train the vines up the trellis as they grow.
4. Keep the trellis standalone so air moves behind it and the wall stays dry.
5. Give it a season or two to fill in fully.

WHAT IT COSTS

A trellis plus climbing plants runs roughly \$20–100 DIY. Ongoing cost is just water and occasional trimming.

✓ DO IT RIGHT

Keep the trellis a few inches off the wall and standalone — that air gap gives you shade PLUS cooling convection behind the screen, and keeps moisture off the siding.

⚠ WATCH OUT

Keep aggressive vines off siding, gutters, and roof edges — always use a standalone trellis, not the wall itself. It takes a season to fill in.

24. Light-colored hardscape near the house

BEST FOR
Sunny climates

Varies

Lowers reflected/radiated heat

Medium

WHY IT WORKS

Dark patios, driveways, and walls right next to the house absorb sun all day and radiate that heat back at your walls and windows well into the evening — a hidden heat source most people never consider. Lighter nearby surfaces reflect rather than store, cutting that re-radiated load.

WHAT TO EXPECT

A supporting effect that's meaningful right next to the house — lighter hardscape on the south/west sides reduces the heat thrown back at your windows in the evening, helping those rooms cool down sooner.

HOW TO DO IT — STEP BY STEP

1. Identify dark hard surfaces within a few feet of south/west windows and walls.
2. When replacing or building hardscape there, choose lighter paving and finishes.
3. For an existing dark patio against a hot wall, cover it with a light outdoor rug or a shade sail to cut the heat it throws back.
4. Focus only on surfaces close to the house — distant hardscape barely matters.

WHAT IT COSTS

Highly variable — free if it's just a color choice on hardscape you're already redoing, up to normal paving costs for a new surface. A shade sail over an existing dark patio is a cheaper interim fix (\$30–150).

✓ DO IT RIGHT

Concentrate only on the hard surfaces within a few feet of south and west windows — that's where the reflected and re-radiated heat actually reaches you.

⚠ WATCH OUT

A supporting method — meaningful right next to the house, negligible far away. Don't over-invest in it as a primary fix.

6 Cool the person — cheap personal comfort

25. Use fans the right way

BEST FOR
All climates (with one rule)

💰 \$15–120

📊 Feel 4–6°F cooler

🔧 Easy

WHY IT WORKS

Moving air evaporates the thin layer of moisture on your skin, so you feel several degrees cooler than the actual room temperature — which means you can keep the room warmer (or skip the AC) and still be comfortable. A fan costs pennies an hour against dollars for air conditioning.

WHAT TO EXPECT

A fan can make you feel roughly 4–6°F cooler than the thermometer reads, letting you raise the thermostat several degrees at the same comfort — that gap is direct savings on every cooling hour.

HOW TO DO IT — STEP BY STEP

1. Cool the PERSON, not the room — aim the fan at where people actually are.
2. Turn fans off in empty rooms; a fan does nothing for empty space, it only makes a breeze you feel.
3. Pair with an open window during a night flush to pull cool air across you as you sleep.
4. Raise your thermostat a few degrees to capture the savings the fan's comfort allows.
5. Use the lowest speed that keeps you comfortable to minimize the fan's own motor heat.

WHAT IT COSTS

A box or pedestal fan runs about \$15–60; a quality ceiling fan \$50–120 plus install. Running cost is pennies a day versus dollars for AC.

✓ DO IT RIGHT

A \$20 box fan aimed at the couch or bed lets you raise the thermostat several degrees at the same comfort — that's pure, ongoing savings.

⚠ WATCH OUT

Above ~90°F indoors, a fan blowing directly on you can actually add heat stress rather than relief. In that case, switch fans to EXHAUSTING hot air out of the house instead.

26. Set ceiling fans for summer

BEST FOR
All climates

💰 \$0 (you own it)

📊 A comfort multiplier

🔧 Easy

WHY IT WORKS

A ceiling fan run the right way pushes air down onto you, creating a steady cooling breeze that makes the room feel several degrees cooler — but only if it's spinning the correct direction and only in rooms with people in them.

WHAT TO EXPECT

Set correctly for summer, a ceiling fan adds a noticeable cooling breeze that lets you keep the room warmer at the same comfort — a free multiplier on every other method in the room.

HOW TO DO IT — STEP BY STEP

1. Find the small direction switch on the fan's motor housing.
2. Set the blades to spin COUNTER-CLOCKWISE viewed from below — this pushes air down for a cooling downdraft.
3. Run it only in rooms you're actually using.
4. Stand under it to confirm you feel a clear breeze (if not, flip the direction).
5. Turn it off when you leave the room.

WHAT IT COSTS

Free — you already own the fan. The whole method is flipping the direction switch and using it only where people are.

✓ DO IT RIGHT

Stand directly under it: if you feel a clear downward breeze, it's set right for summer. If not, flip the direction switch on the housing.

⚠ WATCH OUT

A ceiling fan cools people, not air — leaving it running in an empty room just wastes power and adds a touch of motor heat to the space.

27. Cool your sleep (focus the bedroom)

BEST FOR
All climates

💰 \$0–150

🏠 The comfort that matters most

🔧 Easy

WHY IT WORKS

You don't actually need to cool the whole house at night — you need to cool the few hours and few square feet where you sleep. Targeting the bedroom is cheaper and far more effective than fighting the entire house, and good sleep is the comfort people care about most in a heat wave.

WHAT TO EXPECT

Concentrating your effort on the bedroom reliably gets you a comfortable night's sleep even when the rest of the house is warm — the comfort that matters most, for the least money and effort.

HOW TO DO IT — STEP BY STEP

1. Flush the bedroom with cool night air first, then close it to hold the cool.
2. Run a fan across the bed to create a cooling breeze on your skin.
3. Use breathable cotton or linen bedding instead of heat-trapping synthetics.
4. Pre-cool the room before you get in.
5. On the worst nights, add a frozen water bottle at the foot of the bed or (in dry climates) a damp sheet in the window.

WHAT IT COSTS

Ranges from free (flush + existing fan + breathable bedding you own) up to about \$150 if you buy a good fan and new linen bedding.

✓ DO IT RIGHT

Cooling one bedroom well beats cooling the whole house poorly — concentrate your fan, shade, and flush there at night and skip trying to chill empty rooms.

⚠ WATCH OUT

Don't run whole-house AC all night just to fix one hot bedroom — target the room directly and keep the money.

28. Move heat-making chores out of the house

BEST FOR
All climates

Free

Removes a hidden heat source

Easy habit

WHY IT WORKS

Ovens, stovetops, dryers, dishwashers, and even old incandescent bulbs dump real heat directly into your living space — often during the hottest hours, right when you're fighting to keep it cool. Shifting them out or to cooler hours removes heat you'd otherwise have to remove all over again.

WHAT TO EXPECT

Eliminating these hidden indoor heat sources keeps the house from being re-heated as you cool it — a single hot-oven dinner can add 10°F to a kitchen, so moving it out is real degrees saved.

HOW TO DO IT — STEP BY STEP

1. Cook outside (grill) or use a slow cooker, microwave, or no-cook meals on the hottest days — or cook in the cool early morning.
2. Run the dryer and dishwasher late at night when you're flushing heat anyway, or line-dry laundry.
3. Swap any remaining incandescent bulbs for LEDs, which run cool.
4. Unplug or switch off heat-throwing electronics when not in use during peak heat.

WHAT IT COSTS

Free — it's a habit change. LED bulb swaps are a few dollars each and also cut your power bill, paying for themselves.

✓ DO IT RIGHT

A single hot-oven dinner can add 10°F to a kitchen. Grilling outside or eating cold on the worst days is a genuinely free degree-saver.

⚠ WATCH OUT

It's easy to forget how much heat the oven and dryer add — one hot meal or a midday dryer load can undo an entire afternoon of careful shading.

Cool the whole house — then cool it from the ground

This manual handles the air, the shade, and the timing. To add the most powerful single method — pulling cool air from the earth itself — pair it with the Earth Tube Build Guide.

[Open the web version →](#)

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