

30-NODE KIT

WIRE TRELLIS

GROW A LIVING WALL

INSTALL + MULTIPLE LAYOUTS

30+2 NODES | 150 FT CABLE

5/64 IN (2 MM) WIRE

PLAN · INSTALL · GROW

THE DETAILS THAT MAKE INSTALLATION EASIER

01

NUMBERED STICKERS

Mark all 30 points before drilling.

02

FLEXIBLE LAYOUTS

9 examples - create many more.

03

CLEAN-CUT TIP

Tape first for cleaner wire ends.

IMPERIAL FIRST | METRIC IN PARENTHESES



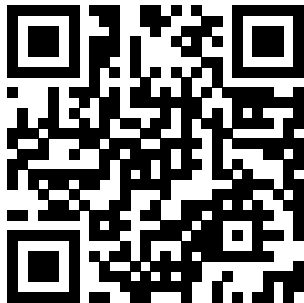
01

Contents

First installation: prepare with pages 3-8, then follow the 7 steps on pages 9-15.

Installation resources

English



Video · Manual · Calculator

Scan with your phone's
built-in camera.

Or visit alukema.com
to learn more.

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Check before installation

For plant support only. Never use for climbing, fall protection, lifting, swings, hammocks, pet tethering, children's play equipment or hanging heavy loads.

- 01

Detect utilities

Check that there are no electrical, water, gas or communications lines in the wall.
- 03

Wear protection

Wear safety glasses and cut-resistant gloves. Use a stable ladder when working at height.

- 02

Match the wall

The supplied anchors do not suit every substrate. Drill 1 test hole first.
- 04

Stop if abnormal

Stop if the wall is hollow-sounding, cracked or loose, or if its material is unknown.

02

Check the contents

Lay out all parts and check items A-M. Do not start if anything is missing or damaged.

Code	Part	Quantity	What to check
A	Crosshead hub assemblies	32	30 for installation + 2 spares; for approx. 5/64 in (2 mm) cable.
B	Wire rope	150 ft	150 ft (45.72 m)
C	Plastic expansion anchors	32	30 for installation + 2 spares; only for compatible solid substrates.
D	Metal washers	32	30 for installation + 2 spares; used with the hub fasteners.
E	PVC cable end caps	128	Cover cut ends to reduce the risk of scratches and fraying.
F	Plant ties	1 small bundle	Tie loosely to guide growth; do not constrict stems.
G	Masonry drill bit	1	For compatible masonry substrates; check the diameter first.
H	Hex key	1	Tightens the hub set screws.
I	Universal wrench	1	Adjusts the locknut and hub orientation.
J	Numbered positioning stickers	1 sheet	Numbers 01-30 + 6 blank spares; packed with the kit.
K	Cut-resistant gloves	1 pair	Random size; packed with the trellis kit.
L	Dedicated cable cutter	1	Included tool; wrap the cut point with tape, then cut in one stroke.
M	Manual / Layout tool	1 of each	Layout-tool calculations are for material estimates only.

Keep tools within reach before starting

Included: cut-resistant gloves + dedicated cable cutter

You supply: power drill | tape measure / level | pencil / chalk line | tape | small hammer | vacuum / hole brush | stable ladder | safety glasses



03

Hubs and wall selection

Locate the load-bearing structural substrate first. Stop if the material is unknown or the wall is loose.

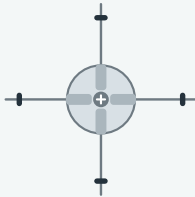
Actual product and dual-unit dimensions



Inch scale | overall length approx. 3.6 in

Centimeter scale | overall length approx. 9.1 cm

Crosshead hub: front view



- Connects straight cable segments in up to 4 directions.
- Cable must sit fully in the slots and be clamped by the screw.
- PVC caps only protect cut ends; they do not secure the cable.
- Use only the matching approx. 5/64 in (2 mm) cable.

Quick wall assessment

Solid concrete / Solid brick	Suitable	Check hole diameter and depth. Drill and clean 1 test hole first.
Timber posts / Wood studs / Fence posts	Suitable	Screw the supplied one-piece pointed fastener directly into solid wood. Drill a pilot hole first; do not use a plastic plug.
Plaster / Tile / Exterior cladding	Suitable: through finish	Pass through the finish and anchor into the structural substrate behind it. Seal the penetration.
Hollow brick / Hollow block	Separate anchors	Use anchors designed for hollow substrates.
Insulated walls / Aged or cracked walls	Professional help	Have bridging and waterproofing details designed, or choose a different location.

Stop structure and drilling principles

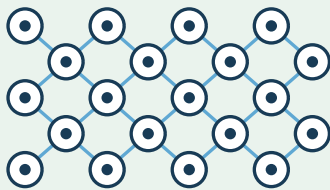
The nut and stop structure adjust and lock the crosshead position. Set a consistent wall clearance on site according to the wall, plants and cable routing; no single clearance value is specified. Base drilling on the supplied fasteners.

04

Choose your layout

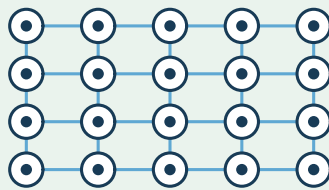
Combine straight-line layouts. Consider wall size, plant growth and openings; beginners should start with page 6 or 7.

Diamond grid | Recommended 1



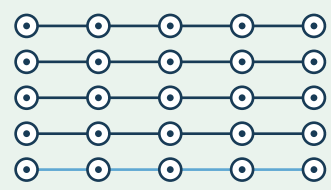
Jasmine, clematis, decorative flower walls

Square grid | Recommended 2



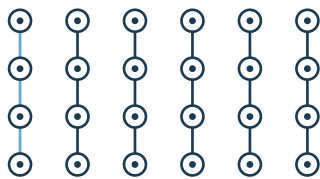
General use; training in multiple directions

Horizontal lines | Recommended 3



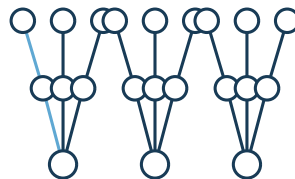
Climbing roses; fruit-tree training

Vertical parallel lines



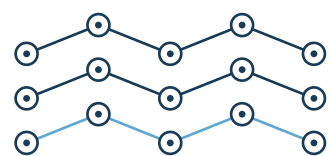
Narrow walls; lightweight vines

Sectioned fans



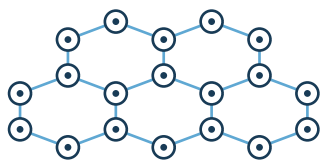
Climbing roses; spreading left and right

V-shaped zigzags



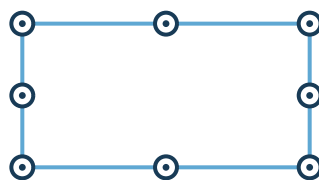
Honeysuckle; lightweight vines

Hexagonal honeycomb



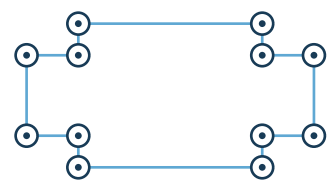
Clematis; decorative compositions

Rectangular outer frame



Four outer sides only; open inside

Around doors and windows



Straight segments turn around openings

Square grid vs. rectangular outer frame

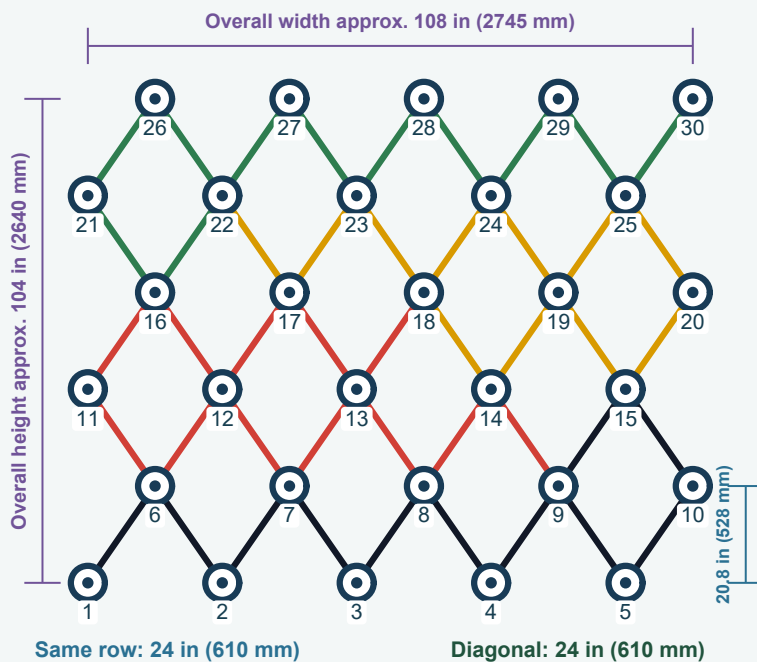
A square grid has intersecting horizontal and vertical cables inside, with nearly square cells. A rectangular outer frame surrounds only the four sides and leaves the inside open. These are different cable routes.

05

Layout 1: 30-node diamond

For beginners: use runs A-D. Install and check one run before starting the next.

5 columns × 6 staggered rows



Recommended dimensions

Adjacent diagonal segment

24 in (610 mm)

Vertical row spacing

20.8 in (528 mm)

Staggered offset

12 in (305 mm)

Finished width × height

108 × 104 in (approx. 2745 × 2640 mm)

Net cable length

90 ft (27.43 m)

Total pre-cut length

103.5 ft (31.55 m)

Recommended: runs A-D, tensioned one at a time

Pre-cut 25.3-27.6 ft (7.71-8.41 m) | 4 runs total

- A** 1→6→2→7→3→8→4→9→5→10→15→9
Pre-cut: 25.3 ft
- B** 9→14→8→13→7→12→6→11→16→12→17→13→18
Pre-cut: 27.6 ft
- C** 18→14→19→15→20→25→19→24→18→23→17→22
Pre-cut: 25.3 ft
- D** 22→16→21→26→22→27→23→28→24→29→25→30
Pre-cut: 25.3 ft

First installation: do not route the whole spool at once

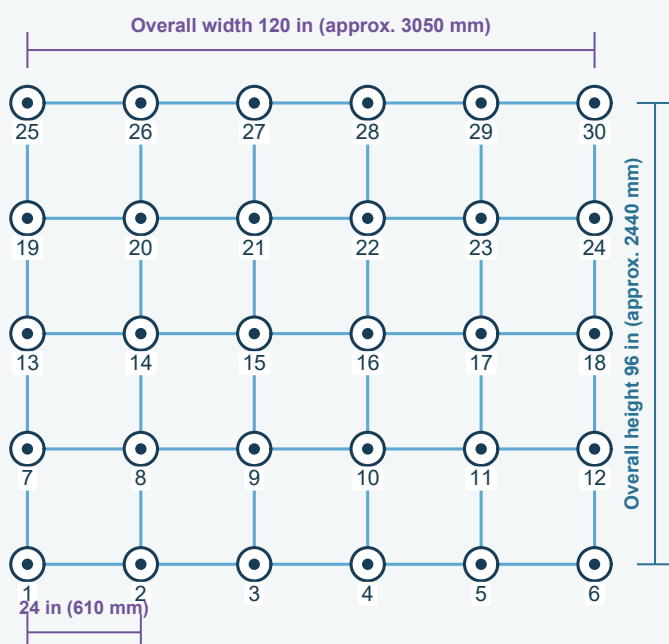
Install A → B → C → D in sequence. After each run, lightly secure it, check the route and remove slack before starting the next. Four separate runs make correction and progressive tensioning easier.

06

Layout 2: 30-node square grid

Fit 5 horizontal cables first, then 6 vertical cables. Cut and install one cable at a time.

Node numbers and cable routes



Use 11 continuous straight cables: 5 horizontal first, then 6 vertical. Do not use 49 short cable segments.

Recommended spacing: 24 in (610 mm)

Nodes: 6 columns × 5 rows = 30

Required: 11 continuous cables

Horizontal H1-H5:
5 cables × 11.5 ft (3.51 m)

Vertical V1-V6:
6 cables × 9.2 ft (2.80 m)

Total pre-cut length:
112.7 ft (34.35 m)

These lengths include a 15% finishing allowance.

One 150 ft (45.72 m) spool is sufficient

Horizontal first: H1-H5

Pre-cut each to 11.5 ft (3.51 m)

H1 01→02→03→04→05→06

H2 07→08→09→10→11→12

H3 13→14→15→16→17→18

H4 19→20→21→22→23→24

H5 25→26→27→28→29→30

Then vertical: V1-V6

Pre-cut each to 9.2 ft (2.80 m)

V1 01→07→13→19→25

V2 02→08→14→20→26

V3 03→09→15→21→27

V4 04→10→16→22→28

V5 05→11→17→23→29

V6 06→12→18→24→30

Installation order

First cut and install only the 5 horizontal cables. Once all are lightly secured, cut and install the 6 vertical cables. Pre-cut lengths already include 15% for finishing both ends; do not shorten them.

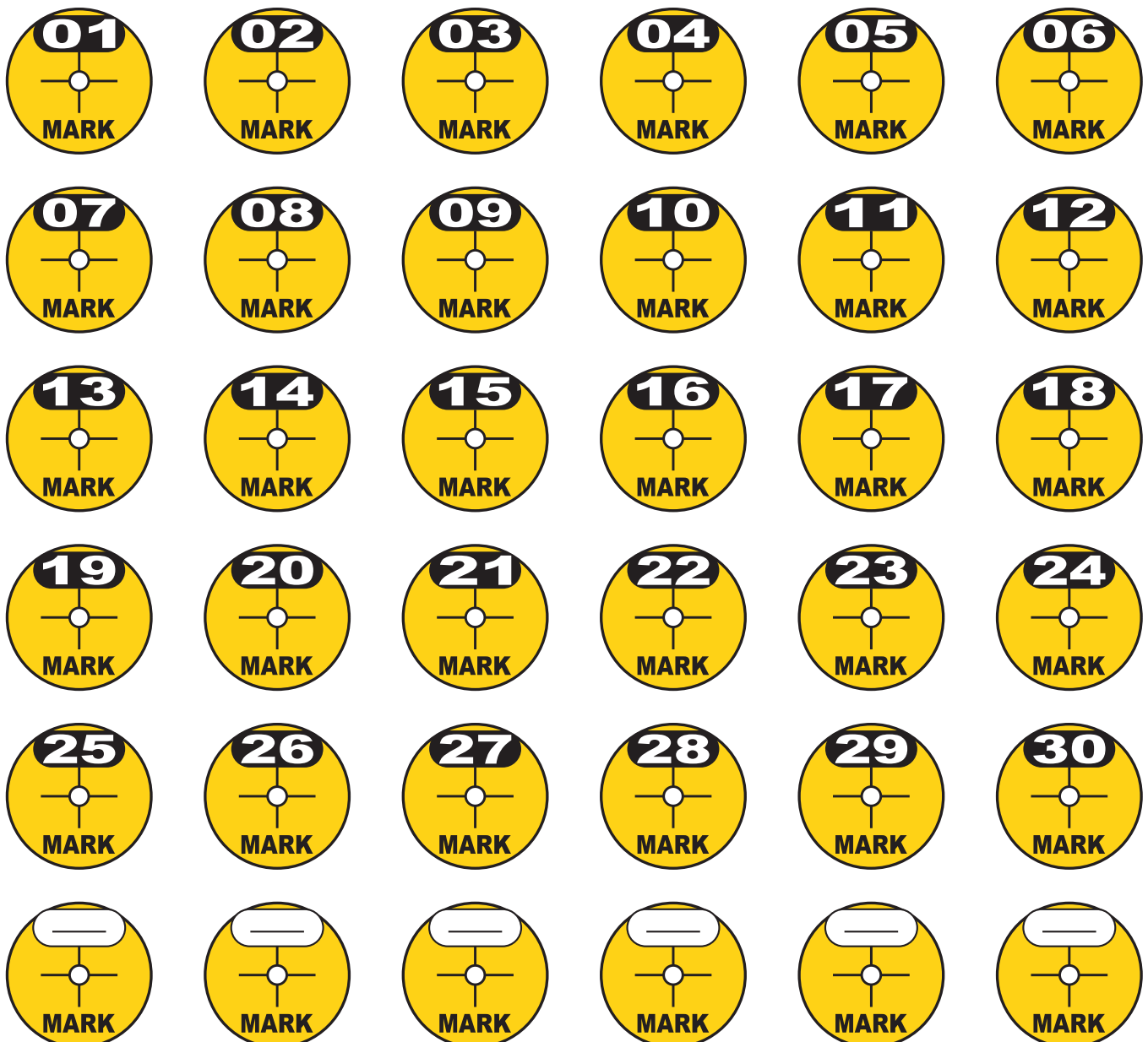
07

30 numbered + 6 spare stickers

Use the supplied stickers directly. Only select Actual size / 100% when printing replacements.

How to use

Use the supplied stickers as they are. If replacements are needed, print at 100% on A4 self-adhesive paper. Apply them by layout number, check width, height, spacing and diagonals, then drill at the center crosshair.



Ready to use | Numbers 01-30 + 6 blank spares

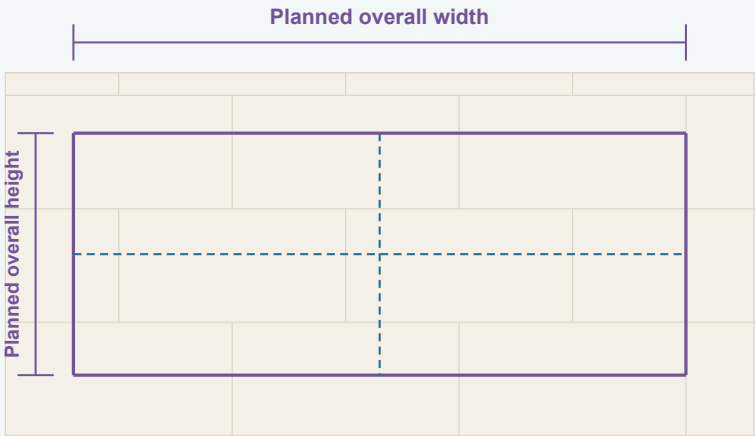
Apply by number. The center crosshair marks the drilling center. Leave stickers in place until all hubs are installed and their positions have been checked.

1 Check the wall and set reference lines

This step: confirm the wall, choose the location and mark the boundaries. Do not drill yet.



Mark an installation window on the wall



Check horizontal and vertical lines and both diagonals

A Structural substrate

Fasteners must engage a reliable structural layer.

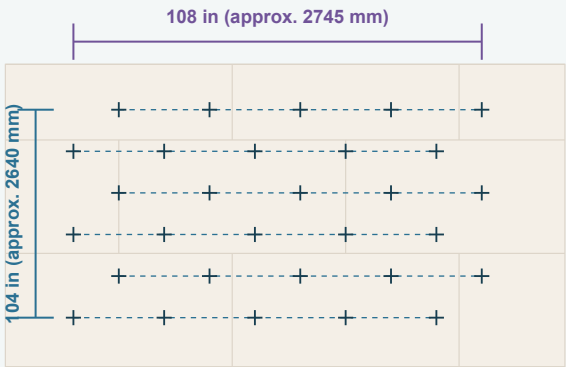
B Detect utilities

Avoid electrical wires, water pipes and gas pipes.

C Working space

Allow space for the ladder, drilling and cable routing.

Diamond example: staggered set-out



Same row: 24 in (610 mm) | Row height: 20.8 in (528 mm)

Alternate rows offset 12 in (305 mm). For a square grid, use the dimensions on page 7.

Complete in order: 1-4

- 1 Choose a pattern**
Select diamond, square grid or another straight-line layout.
- 2 Set boundaries**
Define the left, right, top and bottom edges.
- 3 Set references**
Set horizontal and vertical lines and lightly mark the four corners.
- 4 Recheck**
Check overall width, height and both diagonals.

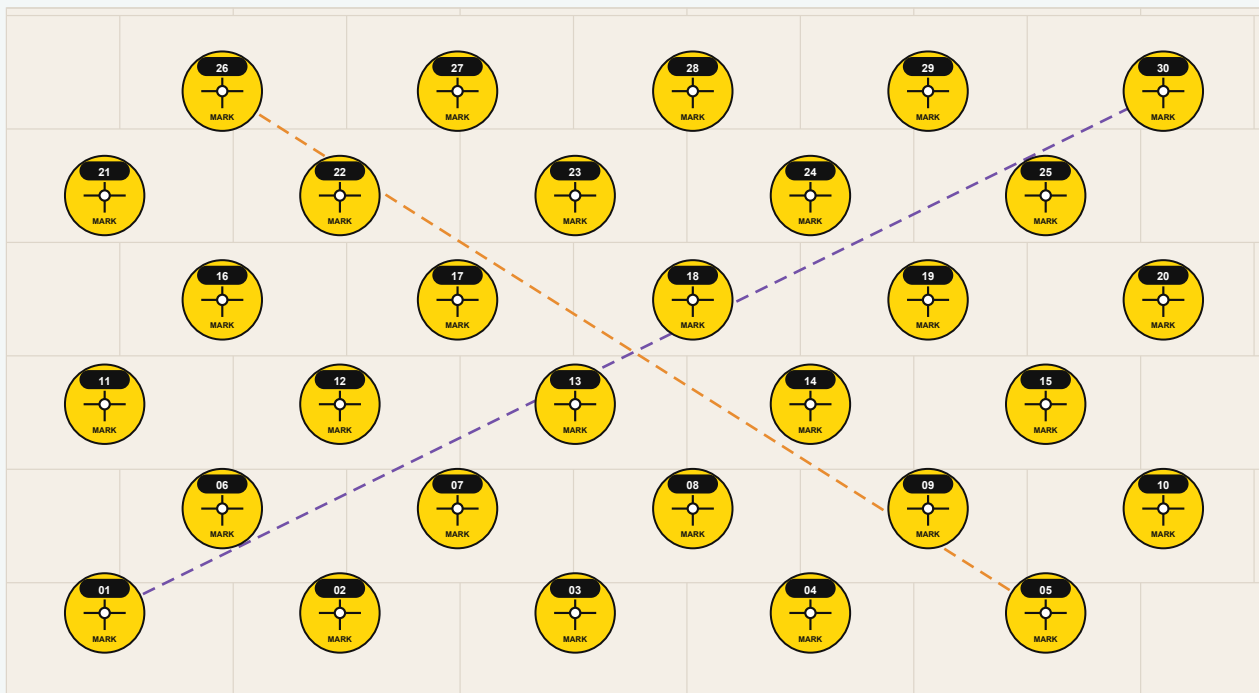
2

Apply stickers 01-30 to the wall

This step: mark the four corners first, then the first row and column, and finally the intermediate points.



Diamond example: supplied numbered MARK stickers



For a square grid, follow page 7. Purple and orange dashed lines are only for diagonal checks; drill at each sticker's center crosshair.



Four corners first

Confirm the pattern boundaries.



First row and column

Establish reference spacing.



Fill intermediate points

Apply one by one, by number.



Step back and check

Look for missing numbers and misalignment.

Do not remove stickers early. Remove them only after all hubs are installed and their positions checked.

3

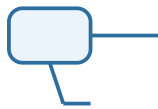
Test-drill, drill and clean the holes

This step: wear safety glasses, drill 1 test hole, then drill the other holes and clean each one.



1

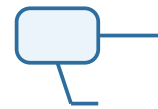
Drill a discreet test hole



Check the drill-bit diameter, hole depth, fastener and wall compatibility. Stop immediately if the bit suddenly breaks into a void or the wall cracks or breaks away.

2

Drill at the sticker center



Align the bit with the MARK crosshair and keep it perpendicular. Do not force a hole at brick edges, cracks, hollow-sounding areas or loose mortar.

3

Vacuum or brush out dust



Vacuum repeatedly or use a hole brush until no loose powder remains. Dust reduces the friction of expansion anchors.

4

Test-fit each fastener



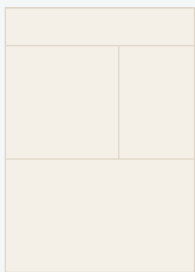
The fastener should enter smoothly and lock securely. Do not force a fix if the hole is oversized, loose or too shallow.

If you encounter metal, utilities, voids, cracks or severe edge damage: stop and reassess the location and anchoring method.

4

Install the one-piece metal hubs

This step: point toward the wall, crosshead outward. Install in sequence and check with a gentle pull.



Structural wall



Threaded point faces into the wall

Crosshead faces outward

1

Fit suitable fasteners

Use matching expansion anchors in solid walls. In structural solid wood, screw the supplied one-piece pointed fastener directly into a pilot hole; do not use a plastic plug.

2

Fit the metal washer

The washer must sit flat against the wall, without a gap, debris or a folded sticker edge underneath.

3

Screw in the one-piece hub

Hold and screw in the complete hub without dismantling the crosshead. Keep wall clearance and cross-slot orientation consistent.

4

Tighten and gently pull-check

Tighten in two passes. Gently push, pull and twist. The hub must not wobble, pull out or cause the wall surface to crumble.

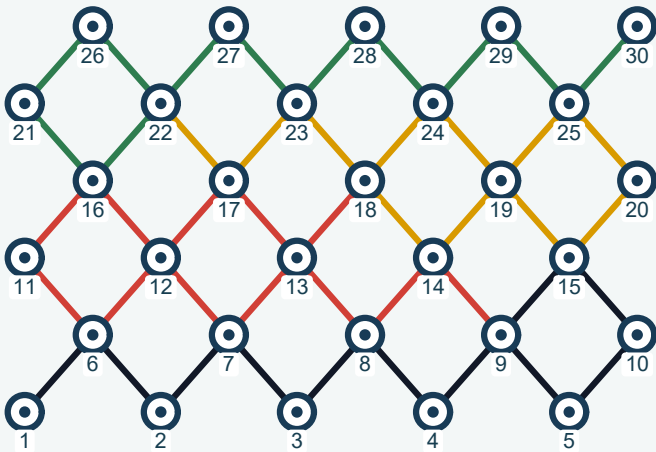
5

Confirm the route and prepare cable

This step: check the route and prepare cable to the cut lengths on page 6 or 7. Tape before cutting.



Diamond: 4 high-contrast cable runs



A Black	1→...→9	B Red	9→...→18
C Yellow	18→...→22	D Green	22→...→30

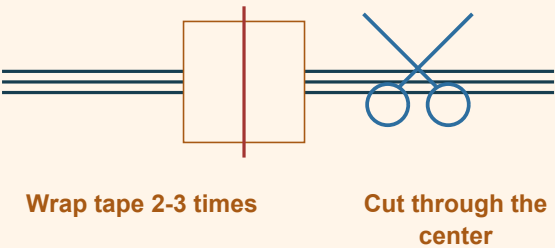
4 things before you start

- Keep the A-D diamond routes in view.
- Uncoil the cable and remove twists and knots.
- Wear cut-resistant gloves and safety glasses.
- Prepare only this run; leave enough finishing allowance.

Diamond plan: 4 runs A-D

Black → Red → Yellow → Green

Before cutting: bind the cable strands with tape



Use the supplied cable cutter to cut in one stroke. This reduces fraying and makes the cable easier to place in the hub slots. Tape is only a cutting aid; it does not replace hub clamping or PVC end caps.

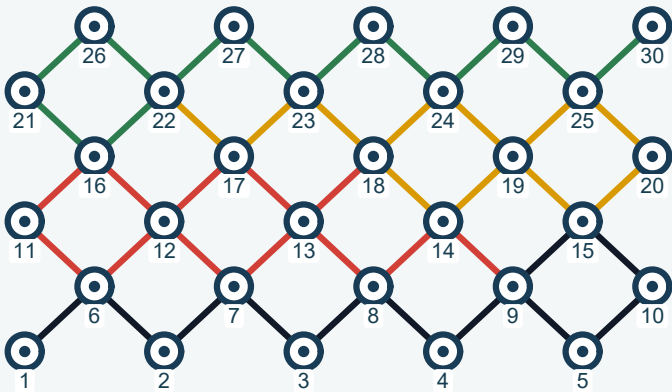
6

Route cable in numbered order

This step: route one run or cable at a time. Lightly secure each hub and check the next number.



Diamond: install A → B → C → D



- A

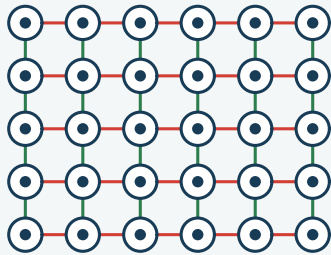
1→6→2→7→3→8→4→9→5→10→15→9
- B

9→14→8→13→7→12→6→11→16→12→17→13→18
- C

18→14→19→15→20→25→19→24→18→23→17→22
- D

22→16→21→26→22→27→23→28→24→29→25→30

Square grid: 11 continuous cables



Horizontal first: H1-H5
01→02→03→04→05→06
Complete all 5 rows in order.

Then vertical: V1-V6
01→07→13→19→25
Complete all 6 columns in order.

Repeat the same actions at every hub

1

Loosen the set screw

Loosen only enough to let the cable enter the slot.

2

Seat the cable fully

Do not rest it on the slot opening or hub edge.

3

Follow the next number

Check the previous point whenever the route turns.

4

Lightly secure; remove slack

Do not apply final tension immediately.

7 Tension, lock and finish

This step: tension alternately, lock, trim the ends and fit caps. Do not fully tension in one pull.



1

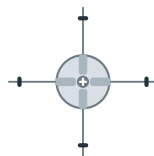
Remove slack alternately



Make small adjustments. For diamonds, alternate between A-D. For grids, work horizontally then vertically and recheck alternately.

2

Lock securely



Once the cable is fully seated, tighten the screw and gently pull to check for slipping. The hub and wall must not move.

3

Tape, cut and cap



Wrap the cut point with 2-3 turns of tape. Cut in one stroke with the supplied cutter, then fit a PVC end cap.

Check final tension

OK Correct

Visually straight, with slight give under hand pressure. Hubs and wall stay still.

! Too loose

The middle sags noticeably or touches the wall, or a plant pulls on only one hub.

! Too tight

Guitar-string tension, tilted hubs, wall cracks or unusual noises.

After installation: tie, inspect and recheck

1. Cap every cut end with PVC; leave no frayed strands or sharp ends.
2. Tie stems loosely with plant ties, leaving room for growth.
3. Confirm the cable pattern is correct and hubs and wall do not move.
4. Recheck after 24 hours, then periodically as the plants grow.



Troubleshooting

Release tension in the affected area before addressing wall, hub or cable problems.

Problem	Possible cause	Action
Hub wobbles	Anchor does not suit the substrate; hole oversized or not cleaned.	Unload the area. Replace with suitable anchors or relocate to a reliable structural point.
Cable slips	Cable not fully seated; set screw not tight; incompatible size.	Release tension and reseal. Check approx. 5/64 in (2 mm) compatibility and replace damaged parts.
Cable frays	Unsuitable cutting tool, repeated bending or excessive crushing.	Replace that run. Wrap with tape and make one clean cut with a dedicated cable cutter.
End cap falls off	Tail too short, wrong cap size or frayed cable.	Trim the end again and fit a suitable cap. Do not use tape as a permanent substitute.
Wall cracks / Water leakage	Excessive tension, failed anchoring point or unsealed penetration.	Unload immediately and stop using. Repair the wall and reinstall only after professional approval.
Uneven plant load	Stems concentrated in one area; ties not adjusted in time.	Prune and spread stems across several cables to reduce the pull on a single point.

Do not hide problems by tightening further

If hubs move, the wall cracks, anchors loosen or cable keeps slipping, release tension immediately and stop using the system. Repair the substrate or select the correct anchoring solution before reinstalling.