

MITREPLAN PROJECT PLANNER

Install or repair plasterboard



- An easy-to-follow guide to achieving a perfect result.
- Outlines all the tools you will need for the job.
- Includes a materials checklist.

PLEASE NOTE:

Before starting this project or buying any materials, it is worth your time to read all steps thoroughly first to be sure you understand what is required.

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MIGHTY HELPFUL™ MITRE 10

A collection of hand tools including a tape measure, hammer, folding ruler, hand saw, reciprocating saw, nail set, pry bar, paintbrush, and shovels.

Measuring tape
Pencil
Keyhole saw
Hand saw
Trimming knife
Claw hammer
Sanding float
Straightedge
Paint brush
Broad knives –
150mm and
250mm wide
Mitre box –
(for cutting cornice)

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Know your terms

Then you'll understand better and the job will be easier. Here's a quick glossary.

NOGGINGS: horizontal members of the wall frame that sit between the studs and about halfway up the wall.

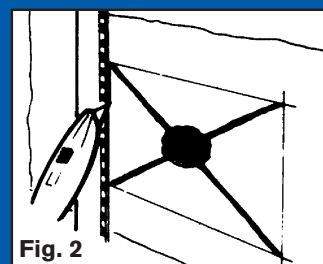
BATTEN: a timber member fixed under the ceiling joists to make the joists level.

CORNICE: the plaster finishing bead that hides the joint between ceiling and walls.

If you're making a lot of alterations to your house, you will probably have to pull out cupboards and partitions, remove fixings and strip off old wall coverings. And if you find that the old plaster underneath is loose, moves when you press it or is badly cracked, complete replacement may be the only answer.

You'll only waste time and money by painting, papering or tiling over damaged plaster. And the end result is usually disappointing and doesn't last very long.

But with the right tools – and the right advice from Mitre 10 – installing smooth new plasterboard walls and ceilings is well within your skills. And you'll get a kick out of saying 'I did it myself'.



The most common plasterboard size is 2400 x 1200mm, but a number of other sizes are available to match different stud spacings. Edges along the length of the boards are recessed so they can be joined with joint cement and tape for a smooth, even finish.

Step 2: Frames

For a first rate job, make sure the studs or joists are level before fixing. If noggings stick out beyond the face of the main frame, your plasterboard won't sit flat. Where ceiling joists are too far apart for the plasterboard to span, or joists are not level, battens may be necessary. In this case, the size of the batten depends on the distance it has to span. For 10mm thick plasterboard, battens can be up to 450mm apart.

Mark the sheet to the length required. Hold a straightedge along the line to be cut and score through the paper face with the trimming knife. Place along an edge and snap off the offcut (Fig. 1). This will leave the paper intact on the other side, so turn the board over and cut the paper with your knife.

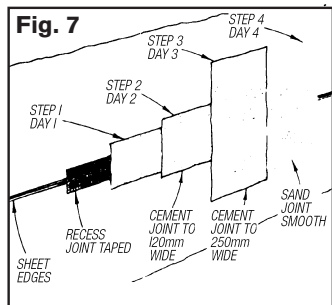
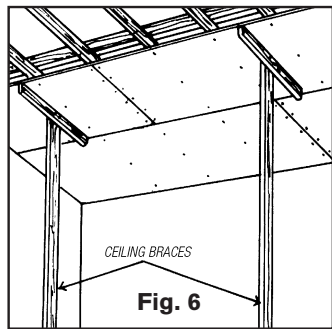
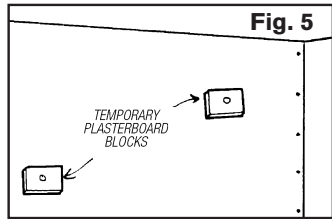
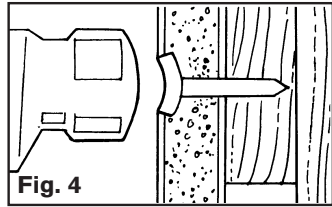
For openings for electrical outlets, switches, etc., draw a pattern of the hole to be cut (Fig. 2). Use your hammer to punch a hole in the centre and cut along the diagonal lines to the corners with a keyhole saw. Cut through the face of the paper and carefully break away. Please note, for wired-in electrical fittings, a qualified electrician should be called to disconnect and reconnect them.

You really need a friend to help you do this. Or, you can make a pair of ceiling braces from lengths of 90 x 45mm pine and about 20mm longer than the floor to ceiling height (Fig. 6). Or hire a wall board lifter. This makes positioning the sheets very easy for two people.

First, glue the ceiling joists the same way as you did the wall studs. Then nail the recessed edges along the centre of the sheet wherever it crosses a joist. For butt joints, ends of sheets and around service openings, nail every 150mm. Where you are going to fit cornice later, nail ends of sheets every 300mm along the ceiling joists.

First make sure the surfaces of the studs are clean and free from oil, grease and dust to ensure a good bond.

Apply dollops or stud adhesive about 25mm round by 13mm thick to the studs, starting approximately 225mm from where the edge of the sheet will go and about the same distance apart (Fig. 3). Be careful that the adhesive dollops aren't at the points where you're going to nail. Nailing through the adhesive will force the nails to stand above the surface of the board when the adhesive dries and shrinks. Another 'no-no' – don't put adhesive on the studs where



butt joints or corners occur. Put enough adhesive for one sheet at a time. Any more and adhesion would be lost as the glue may form a skin.

Place the plasterboard sheet into position against the wall. It should fit to within 15-30mm from the ceiling. Nail the recessed edges to the studs, then cut the edge, and any inside or outside angles. Use one nail every 150mm and around doors, windows and openings, nail every 300mm. Proper plasterboard nails are 'cupped' so they sit just below the surface without breaking the paper surface (Fig. 4). You'll be covering them later with plaster for invisible fixing. Use temporary plasterboard backs to make sure the board is pressed hard against the studs (Fig. 5) and leave 24 hours for the adhesive to dry. Leave a 10mm gap at floor level to allow for any house movement. External metal corner beads are nailed at 300mm intervals along each side.

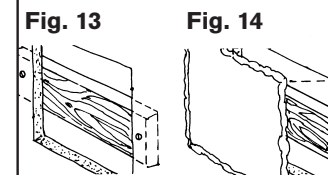
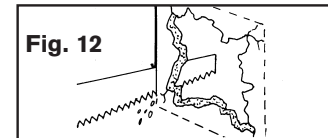
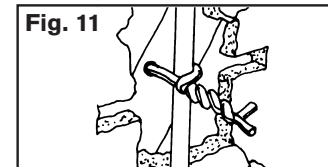
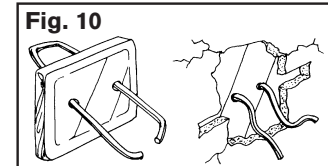
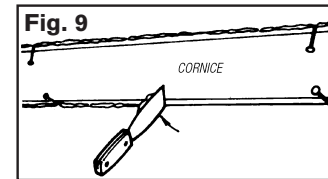
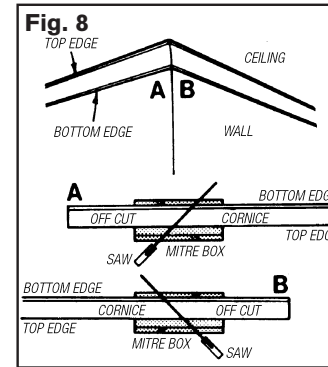
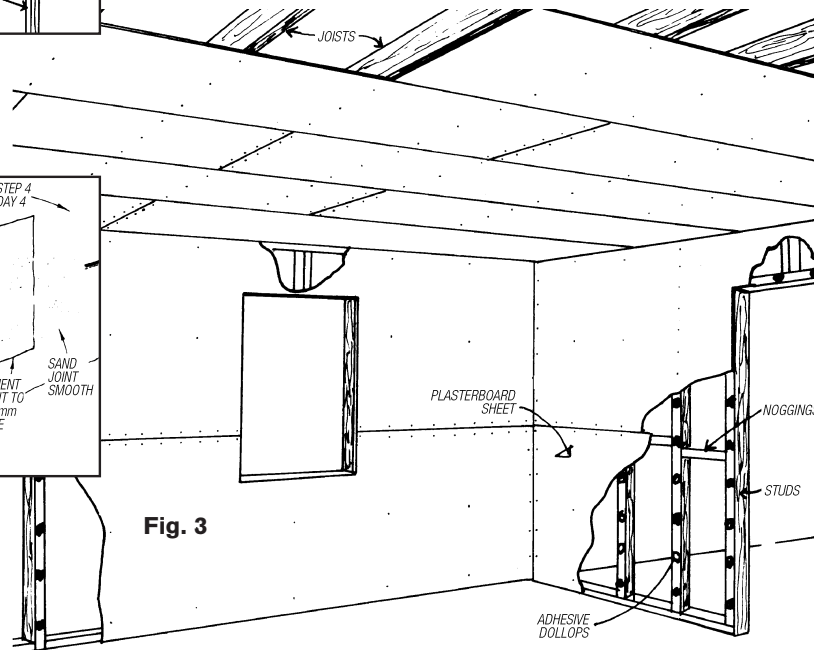
Step 6: Making neat joints

When all the boards are nailed they must be 'taped and bedded' for a smooth surface.

Lay the sticky side of the tape along the recessed joint and smooth firmly by hand. Cover the tape with a thin layer of jointing cement to a width of 100mm using the 150mm broadknife (Fig. 7).

Allow this to dry – it usually takes 24 hours. Then fill the area with cement to a width of 120mm until it's level with the surface of the board. When this coat is dry use the 250mm broadknife to spread the cement to a width of 250mm. Soften the outer edges with a water-moistened paint brush. Tilt one corner of the broadknife and smooth the edges of the cement leaving about a 1.5mm hump over the middle. After 24 hours, sand level and smooth with the 180 grit sandpaper.

Treat butt joints in the same way, except set the second coat of cement to 300mm wide and the third to 550mm wide. Outside corners edged with metal corner bead need a third coat of 250mm width on each face.



For inside corners, cut the tape to the exact length and lay from the top down. Place the centre of it into the angle and smooth firmly. Spread cement 100mm down one side only. After 24 hours, do the same on the other side, giving it a further 24 hours drying time. All nail indentations are covered with three coats of cement and sanded smooth when dry.

Step 7: Putting up cornice

Mitre cut the cornice to the exact length using your mitre box, always keeping the wall edge uppermost on the outer side of the box (Fig. 8). To ensure an equal fit on both walls and ceilings, measure and mark down 55mm from the ceiling. Starting with the shorter lengths, apply 10mm wide beads of cornice cement along the back edge of the cornice and press firmly into the wall and ceiling angle (Fig. 9). Remove surplus cement and clean with a damp brush or sponge. Remove nails once adhesive is dry.

So you see, even if you've never done anything like this before, you can get professional results by doing it yourself. And doing it yourself – and saving money – is what this MitrePlan is all about.

Repairing plasterboard

Unsightly holes often occur in plasterboard walls of old and new homes alike, especially when lively children are about. Or structural movement may cause cracks to appear. Fixing even large holes and cracks is simple with the range of modern filling compounds available today, many already pre-mixed and ready to use. Your Mitre 10 store will be happy to help you pick the right one for the job you have in mind.

For small cracks and holes use the edge of a stripping knife to remove any loose material. Brush out so there's no dust left. Using a filling knife, press the filler into the crack or hole, leaving it a little higher than the surrounding surface for shrinkage. When dry, sand to make the surface flush. Small but deep holes are best filled in two or three layers.

Larger holes may need some sort of backing to support the filling while it sets. A tin or plastic lid, larger than the hole, is a good improvisation. Drill two holes in it and loop a wire through it (Fig. 10). Cut slots in the plaster and slide the backing in holding onto the wire.

Twist the wire around a piece of dowel or wood to hold firmly in place (Fig. 11). Now apply your filler, leaving the centre below the wall surface. When dry, cut off the wire and apply the finishing layer of filling.

For even larger holes, you'll need a plasterboard offcut that is slightly bigger than the hole, so damaged plasterboard can be cut away. Place your offcut over the hole and run a pencil around it. Cut out the marked shape on the wall (Fig. 12). Next, cut a strip of timber about 200mm wider than the hole you've cut in the wall. Drill holes in the plasterboard and screw the timber in place (Fig. 13). Countersink the screws in the plaster. Spread some contact glue on the timber and filling compound around the edges of the patch and ease into place until the glue grips (Fig. 14). Allow to dry before filling any remaining cracks and screw holes.

MIGHTY HELPFUL HINTS TO MAKE THE JOB EASIER

- When carrying a sheet of plasterboard, grip it at each side at about shoulder height and tilt back the top so you can walk without kicking it – if you allow it to tilt forward, it may pull you over.
- Use offcuts of 10mm plasterboard to keep your wall sheets 10mm clear of the floor. This gap allows for house settlement.
- Ask a friend to give you a hand when doing the ceiling.
- Use a plasterboard sealer before painting for best results. It makes both the board and cemented surfaces equally porous. A flat finish paint is best for hiding any imperfections.
- If wallpapering, an oil based sealer ensures that you'll be able to remove the wallpaper later if you wish without damaging the surface of the plasterboard.
- Put a temporary nail on the wall mark about 200mm from each corner to support the ends of a long piece of cornice while fixing it.
- Don't nail over glue joints – when the glue dries it shrinks, forcing the nails to stand above the surface of the board.
- When mixing cornice cement, put a small amount of clean water in a bucket and add the cement to it a bit at a time for a consistent, creamy mix. Lemon juice can be added to the cement to retard its setting time.

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