HOMEOWNER REPAIR GUIDE

DRYWALL INSTALLATION

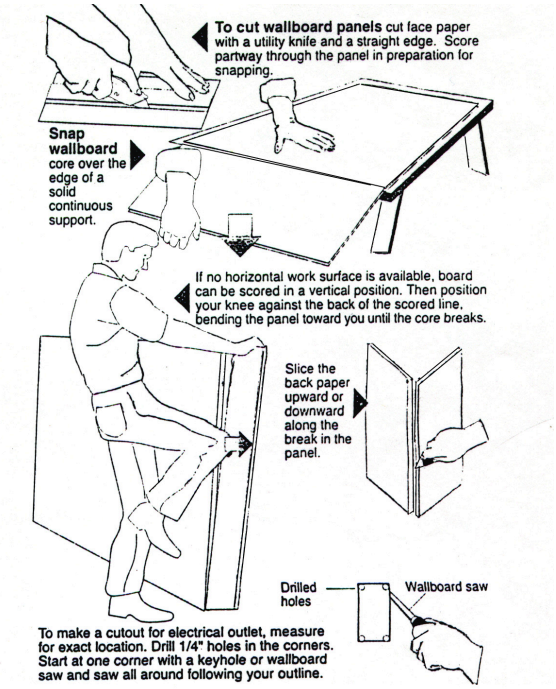
Drywall is the ceiling and wall material used for about 90% of all new home interiors. It is also used frequently for repair or remodeling of plaster walls. Drywall is made from gypsum, and comes in sheets from 4' x 8' to 4' x 16', with a paper coating on both sides. It is a fairly simple, inexpensive material to use, and with a few pointers you can get some very good results with little or no experience.

MEASURING AND CUTTING

The first thing to remember about using drywall is that accurate measuring is very important. To cut drywall to the size you need, use a **utility knife**, with a **straight edge** as a guide. Since drywall cuts easily, very little physical strength is required. The drywall doesn't need to be cut all the way through; you cut through the paper and into the drywall on one side, snap the drywall along your cut, and then cut through the paper on the other side with your knife *(see illustration).* Use a **surform plane** (rasp) to smooth a rough-cut edge. To make a small hole or cut-out in the center of a sheet (i.e., for a switch or outlet), a **drywall saw** or **key-hole saw** works well.

ATTACHING THE DRYWALL

After cutting the drywall to the size and shape you need, it's time to attach it to the wall. You can use three different methods: nails, glue, or screws. Some people still utilize drywall nails, but most find that drywall screws are quicker, easier and less likely to back out or vibrate loose. Although glue can be used by itself, it's a slow method, so glue is more frequently used in combination with nails or screws to attach the drywall more securely.



Scoring, snapping and cutting drywall

Both screws and nails need to be sunk slightly below the surface, so they can be covered later with plaster to conceal them. With nails, you'll have a small dimple or crater around the head from the hammer strike; and with screws, you'll have a small hole where the head has been driven into the drywall. (Screws are best installed with a specially designed **drywall screw gun** or a **drill with a drywall bit** that sinks the head to the appropriate depth.) Space your nails or screws about 8" on center throughout the sheet of drywall, driving them into the wood studs or framing and keeping them about 1/2" away from the edges of the sheet. Finish by lightly running the edge of a putty knife across the surface to check that none of the nail or screw heads extend above the drywall; if you get the "chattering" noise of metal on metal, drive the head deeper into the drywall.

TAPING AND JOINT COMPOUND

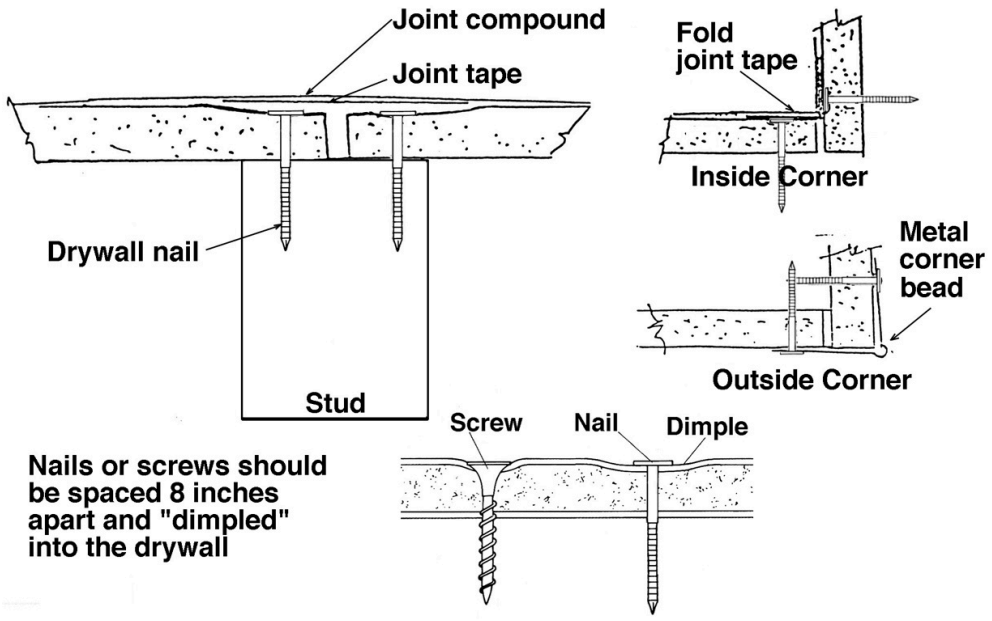
After you fasten the sheets to the walls, you'll need to hide the seams and nail heads. The joints between sheets of drywall should be covered with a layer of tape and several coats of a plaster-like material known as "**joint**

compound," often referred to in the trades as "mud." (When purchasing joint compound, you'll probably find the pre-mixed type easiest to use. Look for a type marked as "EZ Sand" and "Dust Control" on the label.)

You won't need to use tape to hide the nail or screw heads, but each one should be covered with several thin coats of joint compound. It will take three thin layers of regular joint compound to achieve the correct finish; if you use a "light" version, two coats may be sufficient.

> **DON'T RUSH IT**
>
> ***You can't cover the joints properly in one coat, nor can you rush the process.*** Each coat must dry completely (about 24 hours) before the next one is applied.

Apply **drywall tape** over each seam – either paper tape embedded in a layer of joint compound, or self-adhesive fiberglass mesh tape. To protect corners and give you a straight edge, you can use **corner bead**; there are several types, some flexible self-adhesive mesh and other more rigid versions that need to be imbedded in joint compound and/or nailed in place. An alternative for inside corners is to fold drywall tape along the center spine and imbed it in the corner the same way that you do over joints, placing half the tape on each wall of the corner and pressing it in place with a **corner taping blade**. Regardless of the type of corner protection used, cover the material with joint compound and spread it with the corner taping blade to make the edges blend in. If your corner bead is nailed or screwed in place, you don't need to tape over the heads, but cover each one with the three coats of joint compound.



Taped joints, inside and outside corners, and "dimpled" nails and screws

FINISHING COATS

1. **First coat.** After taping, apply the first layer of joint compound over all the joints and over each nail or screw head, using a 10-inch or wider putty knife (better known as a "**taping blade**") to apply a thin coat of compound – just enough to cover the tape.

2. **Second coat.** After this coat is dry, apply another thin coat, a bit wider than the first. When this second coat is dry, sand it to remove any irregularities, using a damp **drywall sponge** or drywall screen on a **hand-held drywall sander**. You can also use an **electric drywall sander** made especially for this purpose; a shroud attached to a power vacuum will reduce the amount of dust you'll need to clean up later. You'll save a lot of work if you take care to make the joints as smooth as possible while the compound is wet. Don't count on heavy sanding later – that's the hard way.

3. **Third coat.** After sanding the second coat, apply the third coat as before, a bit wider yet. You may need to sand lightly after this final coat, also. Then, wipe all dust off the walls with a damp rag.

4. **Prime.** Cover the wall with one coat of **PVA primer**, followed by a coat of a **high-pigment water-base primer** (like Kilz™) before painting or installing wallpaper.

> **PROTECT YOUR TOOLS**
>
> Don't use a regular electric sander for this job, because plaster dust will ruin its motor in short order!

DRYWALLING A CEILING

Drywalling a ceiling can be challenging. There are several ways to make the job easier. First, plan to have at least one helper; it's quite difficult for one person to nail or screw a drywall sheet above their head. (Some drywall installers put a sponge inside a stocking cap, so they can hold the sheet in place with their head and have both hands free.) You may also consider using ¼" drywall for the ceiling; the material is considerably lighter, and you don't need as much strength and rigidity as you do for a wall.

CONTROLLING DUST AND DRYING

You will note that this process is likely to generate a lot of dust, which tends to spread quickly to other parts of the house. In addition to the techniques described above, you can attach plastic at the doorways of the room, to keep the dust contained. You can buy the sheeting pre-cut as a kit, or purchase rolls of plastic and cut it yourself. (You don't need to buy the heavy-weight plastic; the lighter-weight rolls are less expensive and are sufficient for the job.)

There's another way to set up the space that will make the job go easier. Set up two fans – one in the doorway blowing in, and the other in a window blowing out. This will increase air circulation and help the joint compound dry more quickly. Just make sure that you don't have any air blowing directly on the wall – you don't want the "mud" to dry too fast and crack.

> **PATIENCE IS THE KEY**
>
> Finally, remember – patience is the key to making the job turn out nicely. You can't rush the taping process, and you need to let each layer of joint compound dry fully before applying the next. If you take your time, you'll develop your skills as you go and have a finished project that you will be proud of.

Home Repair Resource center

Home Repair Resource Center empowers homeowners to maintain their homes for sustainable and diverse communities.

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