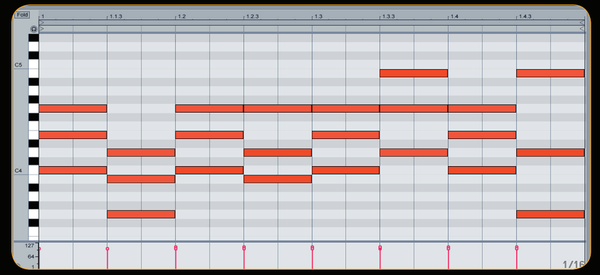
/pads
the backing sound

Pads are to the synth world what the string section is to the orchestra. They primarily occupy a space in the mid-range, adding a rich, tonal bed that 'pads' out the mix. Sounds can range from smooth and warm to shimmering, ghostly textures. Thanks to their strong, but often subtle, mid-range presence, they are ideal for mapping out a track's chord progression and reinforcing the lead.

The simplest pad sounds come from old analogue polysynths like the Roland Jupiter 8. Newer digital synths have a far wider palette for creating exotic textures than the classic analogues, especially wavetable synths, which are ideal for creating interesting moving textures. To make a big pad stack several oscillators in ascending octaves and use subtle amounts of detuning and chorus/ensemble effects on them to create extra width. Saw waves and square waves are both ideal oscillator candidates. Pads tend to fade in (and often out) softly so set the volume attack and release envelopes accordingly.

in theory... inversions

When building a chord it's normal to start with the root note and then place the fifth above. Adding the third in-between – either major or minor – supplies the emotional content. The next step is to experiment with the order of the notes in the chord. Instead of having the lowest note as the root try a different one in the chord, like a G or E in the case of C major. Doing so gives 'inversions' of the standard C chord, all of which sound different. Try placing the lead melody note at the top of a chord and then getting creative with the positions of the notes below. Using inversions allows you to maintain common notes when the chord changes, keeping some held down while others shift. Using inversions opens a whole new range of programming options and allow you to escape from the limitations of standard chords into writing territory in which new possibilities abound.



In this pattern the chord shifts from Cm to G in four different ways, using inversions of the original chord. In bar one, it moves down, keeping the harmony notes in the same order. In bar two the top and bottom notes shift but the central note stays the same. In bar three it moves upwards slightly, keeping the G common. In bar four, the whole chord moves up at the same interval, with the melody note at the top of the chord. If the tone of the pad is thick or buzzy, try spreading out the notes so that the harmony is more clearly defined.

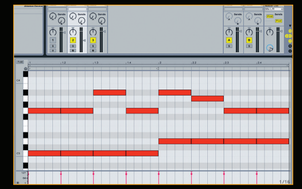
This deep, moody Moby-style pattern is built around a chord progression in the key of Gm. A lower bass part plays the root note of each chord while the upper notes contribute harmonies. It starts with a Bsus4 chord in the first bar, which gives a feeling of slight tension. Then as the Eb slides down to D, and the bass moves to G, it creates a feeling of resolution. When the bass shifts to D at the end, it forms a Gm inversion with the 5th at the bottom. The new feeling of tension sets it up for the next cycle.

/walkthrough analogue anthem pads

1 To make full-frequency anthem pads take two identical sawtooth oscillators and detune them slightly so that they subtly 'breathe'. Add a square wave on the third oscillator an octave above. Set its volume to 50% and the other two to full. Set the amp envelope attack to 0, decay and sustain to 100% and release to 50%.

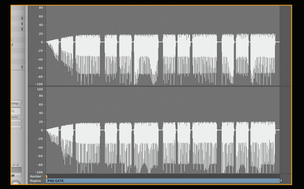
2 Modulate the pulse width of the square wave on osc 3 with a sine-shaped LFO. Set the speed to around 1/4 note and increase the depth until it begins to shimmer. Increase the brightness by adding a little resonance and position the cutoff point somewhere near maximum.

3 Old analogue synths have various unison, chorus and ensemble functions on them which can be activated to get an even wider, more detuned synth sound. Switch on your equivalent and then increase the depth of the pulse width modulation and LFO speed for additional width.



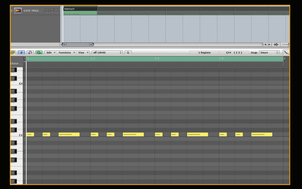
4 Lay down a simple chord sequence which triggers on every beat and follows a C to Gm progression. Stack the root note of the chord at the bottom, followed by the fifth and the octave on top. Add a simple melody line on top for additional character. Make the whole pad throb by adding heavy kick-linked sidechain compression.

/walkthrough gated pads



1 Pad sounds are associated with washy textures, but by adding a noise gate to the signal path, they can become part of the rhythm section. Triggering the noise gate allows you to shape the volume of the pad in tight formation, without re-triggering its own envelopes or interfering with evolving textures essential to the pad's character.

2 With the pad line playing, set up a separate trigger track with a basic synth. Load a preset sound that's short and snappy, with instant attack and decay. Now strap a noise gate across the pad track. Open the noise gate's sidechain function and route the trigger track to the input. Turn the output of the trigger track off so it isn't heard in the mix.



3 Program a note sequence on the trigger track: it doesn't matter what note as it's just a trigger. Treat the length just like a regular Midi note. This will affect the length of time the noise gate stays open for. Start with short 16th notes so that the gate triggers for 32nd note durations. This gives a regular pattern throughout the bar.

4 By default the gate will have a simple on-off shape, so open the attack and/or release to soften the edges and lengthen the decay. The last control worth investigating is the reduction level. It works like a wet/dry mix control. Increasing it will let a little of the original dry signal through. This can be used to soften the gating effect.