The diminished 7th

Take a diminished triad and **stack one more minor third on top**. Now every gap in the chord is the same size — and that one fact gives it every strange property it has. Written **B°7** or **Bdim7**.

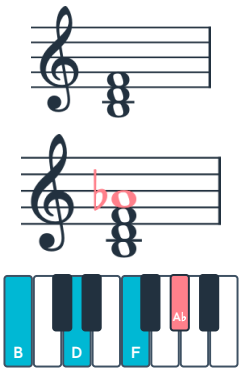
THREE SMALL THIRDS, ONE ON TOP OF ANOTHER

The diminished triad **B–D–F** is two minor thirds. Add a third one above F and you land on **A♭**.

Spell it in thirds and it has to be A♭, not G♯ — a seventh chord is built B, D, F, A, and this A is **flattened twice over** from the major scale. Same key on the piano, different name on the page.

B → D D → F F → A♭

every gap: 3 half steps



THE CHORD WITH NO BOTTOM

Turn it upside down and nothing changes. Move the bottom note to the top and you get **another diminished 7th** — the gaps are still all the same, so the ear cannot tell which note is the root. Follow the cyan B as it climbs.
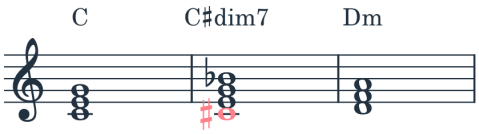


Four inversions, four identical-sounding chords.

Because of that, **there are only three diminished 7th chords in the whole of music**. Start on C, C♯ or D and you get all of them; start on E♭ and you are back to the C one, just rearranged.

ITS DAY JOB: THE CHROMATIC STEP-UP

Because it belongs to no key, it can sneak between two chords that do. Slide a diminished 7th in **half a step below** the chord you are heading for and it pulls you there.



C → C♯°7 → Dm. The coral C♯ belongs to neither chord — it is a stair-step between them.

You have already met one: the **F♯°7** that turns Joplin's *The Entertainer* around (Handout 208, page 4). Bach's Prelude in C uses all three, in bars 12, 14 and 22 (Handout 377); Burgmüller's Ballade leans on one in bars 8 and 10 (Handout 382).

Try it Play **B–D–F–A♭**, then move every finger **up three half steps** and play again. Same chord. Do it twice more and you are back where you started. Then try the sneaky one: play C major, **slide every finger up one half step into C♯°7**, and land on D minor.

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