The snare drum

A great snare drum sound can really drive a mix. If you start to listen critically to a lot of dance, rock, metal, modern country, pop, funk, and other kinds of popular music you will notice the next loudest thing to the vocals is typically the snare drum. No matter how much is going on in a great mix you will always be able to identify every snare drum hit cutting through the sonic landscape. This article gives you pointers on which frequencies to boost to make that snare drum shine and suggests some common compressor settings to bring your drum to life. There is also some advice for using a dual mic arrangement on the snare drum.

The snare drum *big four*: pulse, smack, wires, head

These terms should become part of your snare drum vocabulary. This should get us on the same page for talking about the mix recipes.

Pulse describes the part of the snare drum that smacks you in the chest and makes you want to dance. Another good word for this part of the sound is *body*. You can often get some extra pulse out of the drum boosting as low as 100Hz but that can start to affect the kick drum and bass sounds so I like to look a little higher. You can get some clean pulse out of your snare drum by looking in the 200-400Hz area. I like using a regular peaking band of eq to boost the pulse. A Q setting (bandwidth) of about 1.0 should be fine. If you don't get quite enough pulse out of the snare drum you can try making the band a bit wider (lower Q, higher bandwidth).

Smack should work in conjunction with the *pulse* to really help identify the snare drum hit within the mix. Some other common descriptions would be *bang* or *crack*. You will find most of your snare drum's *smack* around 900Hz-2.0kHz. A peaking band works well here and I will often reduce the bandwidth (Q) to 1.5 or so. A narrower bandwidth here can help pinpoint the *smack* without taking up too much space in the already crowded and vital midrange frequencies.

Wires are exactly what they describe. The snare wires under the drum help to give it much of its characteristic buzz. The snare wires can be found in the 3-5kHz region. A narrower bandwidth can work well here just as in the *smack* band (see above). While bringing out the snare wires can help the drum sound very exciting, you will have to be careful not to overdo it. This frequency can get buzzy and fatiguing in a hurry. Be sure to evaluate the sound of the drum the way it sounds in your recording. Many snare drums will naturally accentuate the wires enough that you won't have to boost them. If you have recorded your snare using a dual mic technique (see below) then you might do all the boosting of wire sounds on the bottom snare mic.

Head is just what it sounds like, the head of the drum. Imagine the sound of a snare played with a brush. That swishing sound of the brush is the timbre I mean when talking about the *head* sound of the snare drum. Played with brush or stick, your snare drum still makes a head sound in the 6-10kHz range. Boosting this frequency can give a lot of extra texture to your snare drum sound. A peaking band will often do plenty of work for you but you can try high shelving band too.

Snare drum big four quick eq chart

More pulse (body) +4dB at 200Hz
More smack (bang) +3dB at 2kHz
More wires (buzz) +6dB at 5kHz
More head (texture) +6dB at 7kHz
To eliminate kick drum bleed and rumble use a high pass band at 80Hz

Snare drum eq recipes

Start here for subtle snare drum shaping with mild cut through

- Band 1: 150Hz high pass
- Band 2: +3dB at 200Hz
- Band 3: +4dB at 4.0kHz
- Band 4: +4dB at 7.0kHz

Start here for a solid, traditional snare drum sound

- Band 1: +5dB at 250Hz
- Band 2: +6dB at 2.0kHz
- Band 3: +4dB at 5.0kHz
- Band 4: +8dB at 10kHz

Start here for a snare drum sound with a thick body and smooth top

- Band 1: +6dB at 180Hz
- Band 2: +4dB at 250Hz
- Band 3: -4dB at 800Hz (adds clarity)
- Band 4: +6 at 3.0kHz
- Band 5: +8 at 7.0kHz

Start here for a deep and punchy snare drum sound

- Band 1: 80Hz high pass
- Band 2: +9dB at 200Hz
- Band 3: +3dB at 2.5kHz
- Band 4: +1dB at 3.5kHz
- Band 5: +8dB at 8.0kHz

Snare drum compression

I don't like to get too crazy compressing a snare drum. Typically a light compression can be used just to even out the dynamics a bit. A good snare drum player will already play with great dynamics that will really help the song come alive so don't squash the life out of the performance by using too much compression.

Reduction level is the amount your snare drum is being compressed. All good compressors have some kind of meter or way to gauge your signal reduction. This will sometimes be labeled gain reduction or will just be a meter that seems to work backwards, going down or showing negative values on each drum hit. You should be able to see the reduction increase (more into the negative range) as you lower the threshold of the compressor. I like to get 3-6dB of gain reduction for subtle snare drum compression. Reduction level is not adjusted directly. It is adjusted by lowering the threshold control until you are getting your desired reduction level.

Snare drum compressor recipes

Start here for light snare drum compression

- Ratio: 4:1
- Attack: 4ms
- Release: 200ms
- Threshold: adjust for 3-6dB gain reduction

Start here to increase the sustain for a thicker snare drum sound

- Ratio: 6:1
- Attack: 1ms
- Release: 200ms
- Threshold: adjust for 6-10dB gain reduction

Snare drum mic

Shure SM57 **price check**
No home studio mic cabinet is complete without a few of these classic microphones. They are inexpensive and sound great on everything, including snare drums. Spend some time in pro studios watching bands lay down tracks and you'll see more than one snare drum with an SM57 on it. You really can't go wrong with a snare and SM57 combination for your home recordings.

AKG D220 **price check**
This mic is a great alternative if you are looking for something just a little different in the same price range that still sounds great. The D220 is not as versatile with non-drum instruments but is still a great mic for your home studio if you record drums regularly.

Snare drum bottom mic eq and compressor recipe

A cool trick to try is putting two mics on the snare, one on top and one on the bottom. Be sure to record them on separate tracks. The bottom snare drum mic will capture a lot of the *wire* sound of the snares and give you independant mix control of that sonic element. Using an SM57 on top and another on bottom works well, or you can mix a D220 on top and keep an SM57 on the bottom. I treat the bottom mic a bit differently in the mix, using extreme compressor and eq settings. You will still want to use the top mic as your *main* snare drum sound but you can mix in a variable amount of the bottom mic to your personal taste.

Start here for eq on a bottom snare drum mic

- Band 1: 50Hz high pass
- Band 2: +6dB at 200Hz
- Band 3: +15dB at 5kHz

Start here for compression on the bottom snare drum mic

- Ratio: 10:1
- Attack: 1ms
- Release: 200ms
- Threshold: adjust for 10-15dB gain reduction