# Split feeds for Sport

There are occasions when we have football commentary that we cannot stream online or an event that we just want streamed online leaving the usual station output going to the hospital. With the closure of some hospital patient entertainment systems, we may have two streams, one public and the other private for the hospital intranet. It's all about having different audio sources and routing them to where they should be going to.

Transmission chain.

The routing of audio from studios to "on air" forms the transmission chain. The studio output will go through various audio processing and amplifiers until it reaches its final destination whether that be the streaming server or hospital amplifier.

Normally the studio audio will go to a studio switcher. This could be a simple manual switch or something rather more complex such as a matrix router.

Below is a simple flow chart of switching between two studios to the on-air feed:
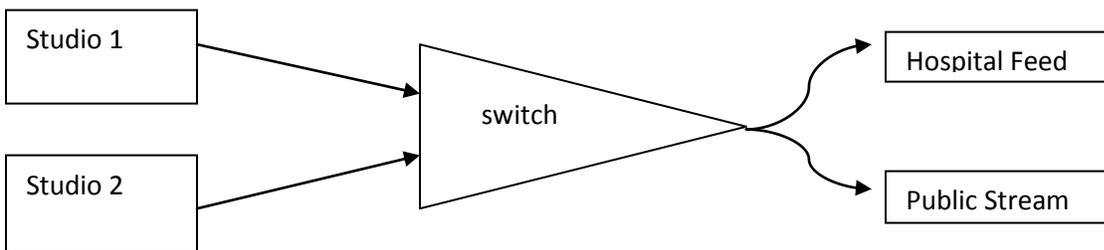
Note there are no audio processors or distribution amps included in the basic block diagram above.

A more complex transmission chain would include compressor/limiters, distribution amps, silence detectors and broadcast audio processors. Obviously a lot will depend on budget but one of the most effective bits of kit would be a limiter or compressor/limiter that will help with the raw studio audio. If you don't have the budget for an Optimod™ or BW™ audio processor, a Behringer™ Compressor/Limiter is well worth the money to make your audio listenable!

At Radio Broadgreen the two main studios feed a Behringer Compressor/Limiter before going to the audio studio switcher. The on-air feed is then sent to a distribution amplifier and on to the hospital feed/logging PC/streaming PC/etc…
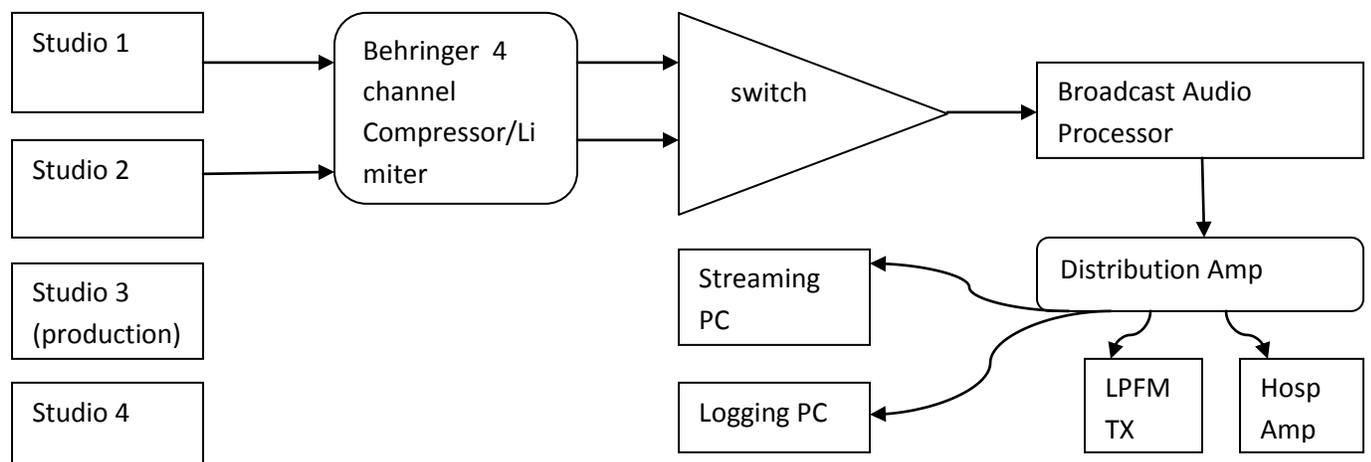
Streaming Options

So now we have the basic layout to feed our selected studio to "on-air", we have an issue with sport. The live commentary cannot be broadcast online for legal reasons and so we can broadcast to the hospital but have to stop it from going to the stream.

Many community radio services like to use Icecast, BUTT or some other way of streaming to their hosting server. I still like to use Winamp/Shoutcast as it has the ability to switch from "line input" to "Winamp". At Radio Broadgreen there is a loop of music with an announcement stating that the "current live programme is unavailable online due to sports commentary restrictions". A simple click of the Shoutcast DSP and the studio is no longer being streamed.
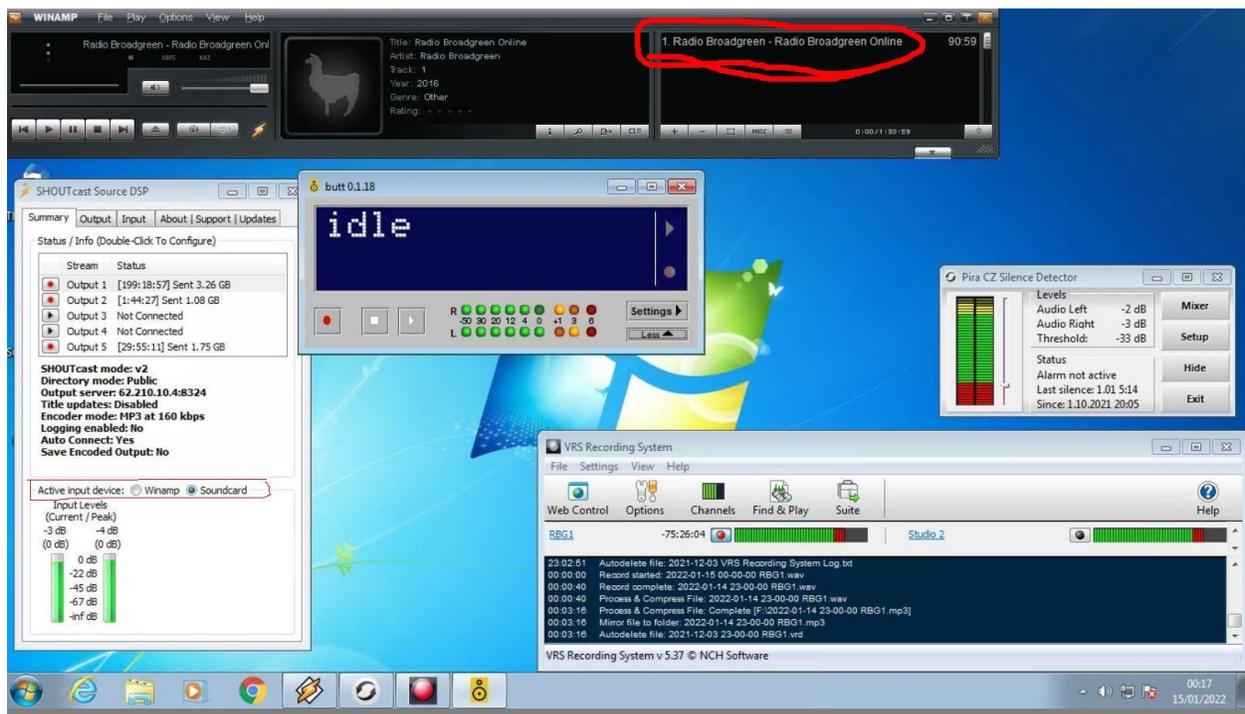
You may notice in the picture above the Streaming PC is also the Logging PC (recording station output) and has the Piza Silence Detector. It also has BUTT (Broadcast Using This Thing) – more about that below…..

Besides the main station stream, Radio Broadgreen also operates a low bit-rate "Sport Stream". This has been used for long cricket commentaries without affecting regular programmes (and annoying some presenters by cancelling their shows).

This can be done as studio 2 is also connected to the streaming PC via a digital interface. The BUTT streamer is set up to connect to the Sports Stream with audio from the digital interface (studio 2). Studio 2 can now broadcast a separate programme from our regular service to a spate stream (or to the main stream if studio 1 is broadcasting to the hospital only).

Switching Matrix.

A more complex system would be to route all audio through a digital audio interface and have this controlled by a switching matrix. This would be particularly useful if you broadcast to different hospitals/clinics or even DAB.

A complex switching matrix can cost £1,000s but there is an alternative available via VB. Voicemeeter™ is a series of virtual "mixing desks" that also have Macro Buttons that can be assigned to due various things including routing audio.

You will require an expensive audio interface with enough audio inputs/outputs but the picture above will give you an idea of putting a studio to a particular feed....