

Radio Station Trivia

Engineering a radio station in the 60s

by Jay Graydon

As a kid, I became interested in electronics and recording. My father would take me to record sessions, his many TV shows and his radio shows. When hanging out at the record sessions, I would question the engineers until I was told to shut up. A young kid thirsting for knowledge — such a great education!

In 1960, I was eleven years old and my father had a morning radio show on KDAY radio. 1580 on the AM radio dial. In those days, most all Disk Jockey's engineered their show. On Saturdays, my Dad allowed me to engineer the show — I loved the gig!!! He would sit in front of a mic near the front of the console and I was seated behind the controls!

The reason I write this is to explain how radio shows were engineered in that era.

The electronic set up consisted of a console, four turntables, two mono Ampex tape machines, and three mics. One mic for the person at the console (not needed in my case), the mic for my Dad (typically for someone being interviewed), and a mic in another room for the guy that read the news.

Playing Records On The Air

There are two ways to cue up a record. One is for a tight start and the other for a loose start. A tight start would be used if the verbal introduction needed to tie into the song start and the loose start would typically be used if coming off a commercial, news, etc.

Note that the turntables have a circular felt pad which sits on the turntable rubber. The vinyl record sits atop the felt. The felt allows the engineers to slip the record. This will make sense as you read on.

For either technique, on the console, the playback mode is set to "CUE" mode as to start. This starts the turntable motor and allows the engineer to hear the record "OFF AIR" meaning the signal is only being

heard over the control room monitor speaker (mono in the era I speak of).

Tight slip start

- 1) While in cue mode, the turntable arm needle would be placed into the record groove starting place.
- 2) At the exact start point of the song, the engineer puts a finger on the record as to stop the motion and then moves the record backwards as to find the exact beginning point of the song.
- 3) The engineer then rotates the disk backwards 1/4 turn while continually holding the finger on the disk. The turntable is rotating and the felt allows the slippage.
- 4) With the other hand, the engineer switches that turntable mode on the console to "AIR" (AIR means the turntable is now ready to be heard over the airwaves).
- 5) When time to play the song on air, when releasing the held finger, the disk no longer slips as it makes solid contact with the felt and gets up to speed before 1/4 turn reaches the song start.

Dead start (loose start)

- 1) While in cue mode, the needle would be set into the groove.
- 2) At the exact start point of the song, the engineer puts a finger on the record as to stop the motion and then moves the record backwards as to find the exact beginning point of the song.
- 3) At that point, the engineer moves the record back 1/2 turn with a finger still held on the disk. The turntable is rotating and the felt allows the slippage.
- 4) With the other hand, the engineer switches that turntable mode on the console to OFF. This stops the turntable from rotating. When the turntable stops rotating, the finger is released.
- 5) When time to play the song on air, the engineer simply switches the turntable to "AIR" mode. The 1/2 backwards turn allows enough time for the record to get up to speed before it is heard.

Between songs, the Dick Jockey's mic needs to be opened. There is a switch on the console to put ON AIR but before doing so, always best to tell the Disk Jockey the mic will now be switched to AIR. Obviously, as soon as the Disk Jockey is finished speaking, the mic is switched to OFF AIR.

Playing Commercials, etc. On The Air

Commercials, radio station identification tunes, etc., were recorded on tape (1/4 inch tape at a speed of 15 IPS). The engineer constantly refers to a log sheet that shows the commercial name (whatever), its time version (15 seconds, 30 seconds, etc.), and the time of day when to play.

This gets tricky as the engineer needs to hunt for the location on tape. Here is the process.

- 1) The engineer is always one commercial (anything on tape as mentioned on the log) ahead of the process as there are at least two tape machines.
- 2) On the console, the tape machine used is set to "CUE" mode as to start. This allows the tape machine to be heard without going on air.
- 3) The odds are good the tape was not edited in order so as to find the needed spot, the engineer notes the commercial on the log sheet.
- 4) Each commercial (also called "spot") is separated by a few feet of white paper leader. The engineer looks at the tape box to find how many leaders are in front of the commercial to be played.
- 5) A few ways to find the leader location but the sure way to find is to rewind the tape to the beginning and fast forward while counting the leaders as they go by.
- 6) After finding the spot, the engineer plays the tape as to make sure the correct spot is located.
- 7) Now time to cue up the spot. I do not remember how much leader space was needed before the beginning of the spot. I'll guess that it was at least two reel turns. In that case, the engineer would manually grab both reel hubs and turn back to full reel turns.
- 8) At that point, the spot is cued up. When needing to go on air, the engineer switches the tape machine to AIR a few seconds before and hits the play button.
- 9) As soon as the spot is completed, the engineer switches the tape machine OFF AIR and then hits stop. The following needs to be considered as well.

One of three things will need to be set up before the commercial is over.

- 1) If another commercial will follow, the 2nd tape machine will need to be cued up and will follow the same procedure as the above almost no DEAD AIR space.

- 2) If the Disk Jockey will introduce the following song, the Disk Jockey's mic needs to be switched ON AIR near commercial end. As soon as the commercial is over and the tape machine is switched OFF AIR, the next record to be played will have been cued up and then most likely be started in a DEAD start mode. Only two hands so that would be the logical move.
- 3) If a record will be played directly after the commercial, the same goes meaning the DEAD start would make things easier.

In this era, radio stations are much easier to navigate. Commercials, songs, station Identification, etc. are recorded on tape cartridges. Pop them into a tape drive and hit the play button as needed. Ok, more to it than that but the 60's era was major work for the engineer — non-stop work until the news was read. About five minutes on the hour to take a leak and as to play it safe, the engineer had cued up at least one record and commercial.