

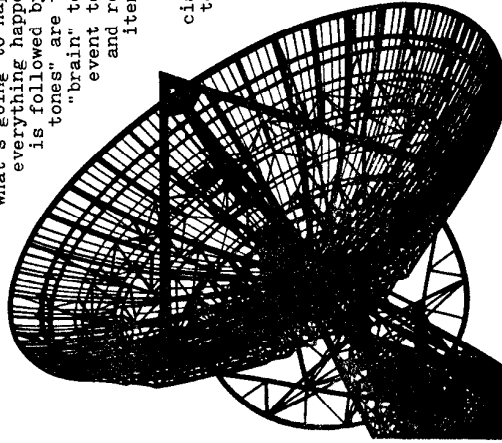
America's Newest Way To Run A \$ Station

by Ed Ryan

At 6:00 am, Monday, August 31, 1981, a new programming concept was broadcast to the public for the first time over radio station KBRJ in Boise, Idaho. On that morning, KBRJ became the first station anywhere to receive all its programs, except for commercials, via satellite microwave transmission. From the Chicago suburb of Mokena, Illinois, to the satellite hovering in orbit above earth, to KBRJ... a distance approaching 100,000 miles (see below) ... in a mere quarter of a second, came the voices of newsmen, actualities, music, and live radio announcers, all in a format structured so carefully the audience would not know it wasn't coming out of the KBRJ offices.

Thus began satellite radio programming, which as of this writing is heard on some four to five dozen stations across America, and soon will be on many more, coming from many programming services. At the present time, late October of 1981, only one system is on the air, the "Satellite Music Network", a division of Burkhart-Abrahms Program Consultants. It is this system that this article will be built around.

In order to understand how the satellite system works, it is first necessary to briefly describe the workings of a standard automated radio station. Regardless of the package used, most all automated stations operate on a system of "trip tones" and the use of a central "brain", for example, a computer. The "brain" is fed regularly with a program telling all the machines what's going to happen when and for the most part, everything happens in sequence. Event #1 happens and is followed by event #2, #3, and so on. The "trip tones" are the cues the machines send to the "brain" to tell it that it's time for the next event to start, and via a series of relays and related electronic hardware, the next item starts. "Trip tones" are subaudible tones added onto each piece of information, be it news, music commercial, whatever. These tones also serve to stop the event playing once the event after it has started... that is, if everything works right. So, the whole process goes: Event #1 plays. When it comes to an end, the trip tone plays (remember, you can't hear it), the "brain" "hears" this tone, sees what the next event is supposed to do, and fires (starts) event #2, and event #2 comes to an end. When event #2 ends, the whole thing is repeated and it's on to event #3. Our automated friend that says creative things like, "that was Carole King" is on its way.



To be most blunt about it, satellite radio stations are like automated ones, except that there's a real live human being somewhere pushing those ol' "trip tones". The advantage from a programming standpoint is not the live button pusher, rather the button pusher's live mouth. This button pusher (most people know them as "disk jockeys") has the advantage of being able to talk about many more things than regular automation systems can. There are some good ones, but what tape can talk about the great dinner out with the wife and kids the night before, or chat with Larry Gatlin on the phone, or keep you up to date on the murder of a key world figure? However, since the satellite network is also a "package" of sorts, being fed to many radio stations, it also has the disadvantage of having to be somewhat "generic". That's not an easy thing to do either, when you're live. You can't talk about the town, the weather, local establishments, highways, or streets, and the time is given as before or after "the hour". We'll get back to how the satellite is set up to avoid making a radio station sound like something in (Editor's note: it's actually more like 45,000 miles, since communications satellites in synchronous orbit are 22,600 miles above the earth.)

Printed courtesy of GMDKA

12

a can with a white label and black letters a little later. For now, let's revisit our friends, the "trip tones".

The Satellite Music Network is designed to be able to send six different tones, for six different programming functions. How a station decides to wire itself and use them is its own discretion. The intent is for them to signal various things to happen in the hour. Since transmission is in stereo, the whole tone system need only use two different tones: 25KHz right, left; 35KHz right, left; and 25L 35R, and 35L 25R. Again, depending on how the station is set up, the trip tones either automatically tell the "brain" to go to the next event or tell the person at the station who watches for pretty colored lights that it's time to insert a local programming item manually. An automation system uses several different programming "sources", and the satellite programming is treated as another one of these sources, tripping other items at the appropriate times, with these items at the local station tripping themselves and ultimately back to the satellite.

Now for how the whole thing comes together to make these folks in Chocogoland sound like they are folks in your own back yard. As mentioned, owing to the many stations broadcasting the same material simultaneously, announcer patter necessarily has to be "generic". The key element is what each station does locally when the satellite trip tones are sent. The Satellite Music Network's Playwheel (they call it a "flex clock") has several breaks programmed into each hour, two of which are "mandatory" and the rest of which are "optional" breaks (stop sets, commercial play times, whatever you know non-music programming as) that a station can do what it wishes with. The two "mandatory" breaks are periods in the hour in which the network goes silent and, in order to avoid very long periods of dead air, it is mandatory that you fill them with something: on the obvious level, commercials or PSAs, and weather, past that (here comes localization) station promos, local news, jingles, remote broadcasts, contests, and anything else that mentions who the heck you are. It is to the station's advantage to get its name in front of the people as many times as it can. All well and fine, but there's only two mandatory breaks an hour, where else can the station promote itself? The answer is the optional breaks (you saw that coming). As at the start of mandatory breaks, Satellite fires trip tones at the start of optional breaks, too, and the station has its option of either switching back to the local studio for filling with any of the above suggested items or whatever else it wishes to use. Of just letting the network go on its merry way with music. In order for all the affiliates to get back on the network on time, at the end of the optional break comes ten seconds of fill music and then back to normal. Yes, the fill music is optional, too, and the trip tone is fired before it also, so you can take the optional break's record and break away for your own ten second weather/jingle/something, or you can take the optional break and end with the ten seconds of fill music, or take both, or take neither. That's the beauty of the system, you can play with those options any way your heart desires. When exercising your options, you do, however, need to keep in mind that those breaks (in fact, ALL of them) are precisely and exactly timed, and thus so must your filling elements... or you'll rejoin the network at a point other than the start of the new item, and nobody likes to hear the last ten seconds of a record or have the first minute of the next one chopped off, right? There IS one other "mandatory break" we left off here for simplicity, that being the top of the hour ID...

On the technical end, simply explained: for best results, the Satellite affiliate station needs a satellite receiving dish, a receiver tuned to the satellite's frequency, and a decoder to get those trip tones to do what the station wants them to do. From the decoder, the programming can get fed directly into the station's equipment and if it's set up right, voila! one radio station! Problems occur two periods a year, when the sun passes directly over the center of the dish, in March and October, thus causing "solar fade". The noise power of the sun blocks out the signal from the satellite. It is suggested the station have some alternate programming available in these and other emergencies.

What the new satellite programming services can offer a station depends on each station; for those already automated, it offers a live, more friendly and personal alternative to automation. For those in smaller markets, it offers a professional-sounding station staff, newsmen, announcers, and all, a staff that is generally better than what's available locally. (Just TRY to get a staff in McCall, Idaho, that sounds like Chicago, Illinois!) And for the larger station, it offers a sound comparable to the rest of the market at a fraction of the cost. For whatever reason a station or broadcast enthusiast or listener does or doesn't like this new development in technology, it remains certain that the inexpensive, relatively trouble free satellite radio concept will become a definite factor and role-player in radio's future.

13