



*Radio
& Religion*



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& Religion**

Written by

The Staff

*Radio Department
Radio—Television Commission
of the
Southern Baptist Convention*

Dr. Jimmy R. Allen, President

Scripture quotations, unless otherwise indicated, are from the King James Version, the Living Bible, and the New American Standard Bible.

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The Radio Staff - Biography

Dedication

To those broadcast pioneers who have come before us, paving the way for our efforts; and, to those who will come after us, continuing our task of spreading the Gospel to every man on Earth; but most of all, to our Lord and Savior Jesus Christ, we respectfully dedicate this work.

Who Are We?

This book is a collection of ideas and essays assembled by (and, for the most part, written by) the production and engineering staff of the Radio department of Southern Baptists' Radio and Television Commission. The Commission is the largest producer of syndicated radio programming in the world, with more than 6000 broadcasts weekly as of this writing. The Commission is unique, as are many of the production techniques described in this book. In fact, many were developed at the Commission to meet our specific needs. Each of our programs has its own requirements; each of our producers has his favorite procedures. If the style and form of these chapters seems somewhat varied, it is because they reflect the variety of our staff. Yet, we hope that you will find a useful common thread here.

Man Alone . . . Man In His Own World

Edwin S. Malone III

"And who knoweth whether thou art come to the Kingdom for such a time as this."

Esther 4:14

Man alone. Man is his own world. Our problem -- to touch and communicate with him. This begins the chapter for the greatest opportunity that Christians have today.

Planners for the future are telling us strange and wondrous things.

Fortune Magazine, in its September, 1966 issue predicted that by the year 2030, the number of Americans living in or near cities will double. That means the necessity for sixty million new dwelling places, adding to the already confusing pattern of community disintegration. Whether we believe it or not, electronic amplification of the gospel to these new areas is the only hope Christians have of serving them in Christ's name.

In addition, plans are being made now for gigantic apartment complexes, high-speed trains, world-wide satellite broadcasting. The world, as Marshal McLuhan, has said is becoming a global village.

One thing certain, we should be planning now for the spiritual needs of this emerging global village.

The most frightening task faced today in the field of religious communications is the task of putting words and sound together in such a way as to compel those who listen to look and those who look to listen. That's been the problem through the ages. Perhaps the most articulate person ever to proclaim the glad good news of salvation by grace was the Apostle Paul. And he admitted readily that his was a problem of communication.

The beautiful words from Esther seem to stand out in this period of time. "And who knoweth whether thou art come to the Kingdom for such a time as this."

God has provided electronic evangelism for such a time as this. Let's look at the case for electronic evangelism and its importance in these times.

Electronic evangelism can be defined as any ethical use of radio and television to proclaim salvation by grace through faith in Jesus Christ. But that is not enough to say about it. We must tell those who do not know: what is meant by salvation?

What is meant by grace? What is meant by faith? Who is the one we refer to as the Lord Jesus Christ?

This is our goal...what is the case for electronic evangelism? First, the population explosion. World population is increasing at a rate of more than 50 million a year. This is equal to the population of France. We are not reaching them. A like number is born or converted to false religions, and the rest to paganism.

Jesus cared. He said, "Come unto me all ye." So we can conclude our commentary on the population explosion by saying that we are losing the fight to the world by at least 45 million people a year. That's the case for electronic evangelism. There's more...

There are three curtains that exist in our world. Behind the iron curtain dwell nearly 400 million people. Behind the bamboo curtain more than 3 quarters of a billion people. Behind the nylon curtain--who knows how many, but the number is increasingly great.

Behind the iron curtain, no missionary may be sent...no Bibles may be sent...no tracts may be distributed.

Behind the bamboo curtain, not even American newsmen are allowed, much less missionaries or Bibles.

Behind the nylon curtain...this is another area altogether.

Have you ever tried to visit in an exclusive high-rise apartment building? It's a trying experience--and so far no solution has been found. If the people do not want to hear, if they resent the appearance of Christian witnesses, how do they break through?

All of these figures that we have been given make the Christian cry out in desperation ... How? ... How?

We realize that only through radio and television can they be reached. How thankful to God we ought to be for that talented and versatile workhorse of electronic communication. For to and through the iron and bamboo curtains radio waves can be sent. To the high-rise apartment, ghetto, and neighborhood residence, we can send the voice of radio and the picture of television. These can get by the peephole in the drapes, the closed circuit television system, the two-way speakers, electronically operated doors, and the neighborhood dogs.

This is our case for electronic evangelism. More than two billion people who are lost in the blackness of darkness forever--unless we can reach them with the blessed truth that a savior gave himself to a merciless death on a roman cross so that they too might know the peace that passeth all understanding...so that they too might become heirs of God and joint heirs with Jesus Christ.

What are our possibilities?

The answer is: go where the people are. It should be obvious to everyone that opening of the church doors is not a guarantee that people will come in. We must devise programs that will attract people. So we broadcast the transcendently marvelous news of the crucified, risen, reigning and returning of God by choosing the right formats, the right stations, and the right time. Paul said, "I am made all things to all men that I might by all means save some."

Where do we start?

We start where the people are--one person at a time...one man alone.

There are millions of people in the black desert of ignorance where the fissures of a parched earth have never been touched with the water of life. Others are in the fetid, miasmatic jungle of superstition, knowing of gods, but unrelieved by the sweet breath of life, bearing the gospel message of God's saving Grace.

Still others are in the superficial gardens of self-serving agnosticism, pleased to believe that if there is a God, He will not care if they don't know about Him.

Yet others are in the deadly outcountry of open rebellion, surfeiting themselves on sin's most succulent morsels - and consoling themselves with the pernicious sub-doctrine that God is dead.

Millions more linger in the ghostly halfway house of indifference, unmindful of the Christ who redeemed them those years ago.

Multitudes more inhabit the treacherous island of self-righteousness, smug in their conviction that surely they possess an innate goodness that enables them to spurn the blood of sacrifice of Golgotha.

And then there are those who believe fearfully, yet persist in their sin, entranced by the fashion of this world, walking aimless and uncertain among the lights and allurements of satan's habitation.

These are the people who need to hear what you and I have to say about this man called Jesus.

But there are people who have a haunting hunger for Godliness but have never heard of the Savior. They are like the old African chief who said:

"We know somebody walks up and down out there at night, but we never talk about it."

How do we tell him "God was in Christ, reconciling the world unto Himself?"

How do we tell him that the somebody who walks up and down out there at night is the same somebody who said, "Behold, I stand at the door and knock: If any man hear my voice, and open the door, I will come in to him, and will sup with him and he with me"?

Never before has the modern age had the opportunity to talk to man wherever he is. With the population changing, the face of the community in this twentieth century, there must be a way to reach this man as radio and television programs cannot be designed and produced to reach into the cracks and crevices of this America--then our country is almost certainly lost to the Kingdom of God.

This is the reason for your electronic message and its existence today.

Christians operate on the belief that God intends for every means available to be used in bringing men to Christ. Thus, every program is conceived within the framework of that divine compulsion.

We preach Christ to the nations, and we do so in as many ways and forms as we know how to devise. Some are direct, some are oblique, but all are designed to reach men with the gospel or to create an atmosphere where the word may be carried and heard later by more receptive, less prejudiced hearts, and that's important, too!

We have no pulpit we can ever call our own and no assembled audience to listen to our message--only a pre-recorded program, no more. Yet, by the grace of God a Christian makes broadcasts which reach hearts and call them to Christ.

We pioneer for God, following where He leads; not always sure, but always searching; not always confident, but always convinced; not always expertly as we would wish, but always from the deepest sense of commitment to our peculiar and unique ministry.

We must preach through agriculture, through music, through story-telling, drama, science, cartoons, documentaries, controversy, conversations, and through any other of a multitude of ways and means that have appeared or are sure to appear.

We predict that the next "Age" to be listed in the social, cultural and economic history of man may be called the "Transistor Age" or the "Electronic Age." We predict that its impact on man's future will be as great as, or greater than, the industrial revolution, the atomic age, or even the space age.

In each of those, man was reaching out, but in this one he is touching his soul through his eyes and ears. In this new age of man's technological growth, up to this moment its potential is still unmeasured. But this we know--we now stand on the threshold of a boundless future in God's plan of redeeming this world and reconciling it to himself.

PILOT OF THE AIRWAVES

PILOT OF THE AIRWAVES,
HERE IS MY REQUEST.
YOU DON'T HAVE TO PLAY IT,
BUT I HOPE YOU'LL DO YOUR BEST.

I'VE BEEN LISTENIN' TO YOUR SHOW ON THE RADIO
AND YOU SEEM LIKE A FRIEND TO ME.

CALL THE RECORD OF YOUR CHOICE, I DON'T MIND.
I'D BE HAPPY JUST TO HEAR YOUR VOICE.

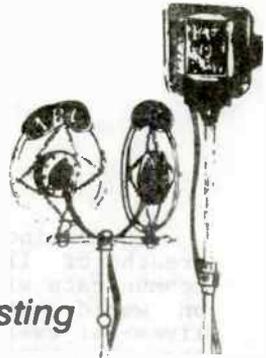
SAYING: THIS IS FOR THE GIRL
WHO DIDN'T SIGN HER NAME.
GUESS SHE NEEDS A DEDICATION JUST THE SAME.

PILOT OF THE AIRWAVES,
HERE IS MY REQUEST.
YOU DON'T HAVE TO PLAY IT,
BUT I HOPE YOU'LL DO YOUR BEST.

I'VE BEEN LISTENIN TO YOUR SHOW ON THE RADIO
AND YOU SEEM LIKE A FRIEND TO ME.

CHARLIE DORE
ACKEE MUSIC, INC.

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The History of Broadcasting

Edwin S. Malone III

"To Everything there is a season, and a time to every purpose under Heaven."

Ecclesiastes 3:1

The media explosion is on us. It is in the here and now. And it's not going to go away. We live in a turned on, tuned in world. This is the electronic age. We are on the cutting edge of something that man does not even begin to realize can happen. Data transfusion from all over the world, to our homes. If we are to win the world to Christ, if we are to make an impact on the Christian faith, it's got to be through the media. Things are changing faster than we can realize. The technical advances are far greater than we can understand.

If we, who are in the Christian Broadcasting field, are not ready to get out on the cutting edge and to produce programming that will be a part of that--then we've lost one of the major facets that we have to witness for Christ. Moses was given a rod by God to go part the waters and lead the people out of bondage to freedom. We have been handed that same rod. It just happens to be made out of aluminum and happens to have some wires stretched across it, but it's an antenna. And that same antenna that we've been given by God can part the waters of all kinds of problems. It can bring the people out of ghostly half-way houses where they live where the allurements of all the world have caused them to get involved. It can part the waters of indifference between people. We have been given that rod. That's why media ministry is so important--because if a Christian doesn't take hold somebody else will and it will not be the forces that we want. But somebody will take ahold of it whether it's for good or for bad. They will use it.

Ever since God touched man and breathed the breath of life into him, He has been trying to communicate with him. Now with a tuned in, turned on world; with electronics in every place in our lives--at every signal post of our lives--we have the opportunity to broadcast even beyond Jerusalem. Just think what the Apostle Paul would have done if he had had radio or television. He went out to reach a world for Christ. A radio program--in one week reaches hundreds of times more people than Paul reached in his entire life. The burden of making the medium work for us is tremendously important.

From the very beginning, man has always wanted to communicate with each other. From the very time that God reached down from Heaven and communicated with Adam, man has been out to communicate with each other. In some instances, he has done a magnificent job. People who lived in Biblical times could never have imagined or dreamed that there would be something upon the horizon of history that would make it possible for man to communicate as broadly as can the electronic media. Men in the Middle Ages never dreamed that there would be a time when you could command people by visual and audio effects. We must use the past as a prologue to the future.

"Radio broadcasting is still so young that its history can fall into one person's lifetime, and television is much younger.

Most Americans may spend more time with radio and television than they do at any other activity, including working and sleeping, and most Americans get most of their news from television."¹

In the United States the first practical telegraph was invented by Samuel Finley Breese Morse. In 1832 he learned from a fellow passenger on board ship returning from Europe about the electromagnet and work being done on electrical signaling for railways in England. Morse worked on electrical telegraphy for the next three years. In 1836, Morse modified the device to emboss the paper with dots and dashes. These were elements in what is now called "Morse code."

In 1840, Morse secured a patent on the system. The first official message, "What hath God wrought," was sent on May 24, 1844.

The forms of communication such as the Pony Express died when the first transcontinental telegraph line opened in 1861.

In England, Julius Reuter, who began a "Pigeon post" in the 1850's to provide market prices to businessmen, adopted telegraphy and expanded his reports into a general news service for newspapers.

"Interest in what was to become broadcasting actually got started about 20 years before Marconi's experiments, soon after Alexander Graham Bell unveiled his invention of the telephone in 1876. Bell himself used the phone--which differs from radio broadcasting in that the electronic messages are sent directly by wire from transmitter to receiver--in demonstrations of his invention. Interestingly, he always included music in his program. In one of these demonstrations in 1876, Evangelist Dwight L. Moody delivered a sermon and Ira Sankey sang a hymn--no doubt the first religious service delivered in one location and heard at another."²

Guglielmo Marconi's early experiments and initial commercial installations used the spark gap transmission pioneered by Heinrich Hertz in the 1880's.

"Wireless at that stage in 1894 was an electrical jigsaw puzzle. Marconi put together an induction coil, the Hertz wave emitter, the Righi spark-gap, a telegraph key, batteries and Branly coherer. And he hoped that the combination might enable him to send and receive signals across his father's estate." His efforts paid off the next year when, from three-quarters of a mile across the family compound, he heard cricketlike sounds, signaling, in effect, the beginning of wireless communication.

"From a boy I was always interested in physics and in electric phenomena generally," wrote Marconi in later years, "and in the summer of 1894 I read of the experiments and results of Hertz in Germany. I was also acquainted with the works of Lord Kelvin and with the theoretical doctrines of Clerk Maxwell. I experimented with electrical waves, as I considered that line of research very interesting. During these tests or experiments I thought that these waves, if produced in a somewhat different

manner--that is, if they could be made more powerful, and if receivers could be made more reliable, would be applicable for telegraphing across space to great distances."3

Theodore and Francois Puskas linked telephone subscribers in Budapest to a central unit that provided a news and music service. However, this "Telephonic Newspaper," which ran from 1893 until at least the middle 1900's used wire or cable, not radio--in a process called-rediffusion still used in a number of countries. This was the birth of cable television (CATV), but it was not broadcasting by radio to the general public.

"Following Marconi in the procession of contributors to the development of radio was Lee De Forest, the son of a preacher in Council Bluffs, Iowa. In 1906 De Forest invented the three-element electron tube which he called the audion, which opened the door to modern tele-communications. The experimental work of Reginald A. Fessenden became well known about 1905. While Marconi was concentrating on the wireless transmission of telegraph-like signals, Fessenden--a Canadian--was interested in voice transmission. But to accomplish this he insisted that the wave sent out must not be an interrupted wave or series of bursts like Marconi's but a continuous wave upon which the human voice would be superimposed as variations and modulations. This heretical deviation from Marconi's principles eventually became the foundation of radio. By 1901 Fessenden had succeeded in superimposing a voice on such a wave. But to really perfect this system he needed an alternating current generator. He was able to convince General Electric to reluctantly assign a Swedish-born engineer to help him build this alternator. Finally the needed equipment was installed in Fessenden's laboratory at Brant Rock, Massachusetts.

On Christmas Eve, 1906, Fessenden, known as the "American Marconi," tested his facilities with what was probably the first religion-oriented wireless broadcast. From his facilities in Brant Rock, he broadcast a Christmas Eve program featuring himself on the violin, playing "O Holy Night." He sang a few bars of another song, then read a Scripture portion from the Gospel of Luke. Then a woman's voice, on a

phonograph recording, sang Handel's "Largo." Finally, Fessenden wished his audience a Merry Christmas. His audience consisted of many, very surprised ship operators off the Virginia coast. Imagine the surprise of these toughened sailors, far from home, as the first human voices emanated from their earphones."⁴

By 1912, radio was a hobby. There were more than a thousand such hobbyists in the United States, most of them interested primarily in communicating with fellow amateurs, almost exclusively by Morse code, and not in broadcasting.

"Perhaps the strongest claim to being the first to broadcast intentionally to a general audience, was Charles D. "Doc" Herrold who operated the College of Engineering and Wireless in San Jose, California. In 1915, during the San Francisco Exposition, the station broadcast six to eight hours a day with De Forest apparatus receiving its transmissions at the convention site. De Forest later said that Herrold's station "can rightfully claim to be the oldest broadcasting station of the entire world..." When the Radio Act of 1912 was passed, Herrold's station was licensed and operated until World War I, when all amateur stations were closed down. Herrold resurrected the station in December 1921 or January 1922 under the call letters KQW. KQW later sold and moved to San Francisco, still broadcasts as 50,000 watt KCBS, with a legitimate claim as the descendant of the first broadcasting station in the United States."⁵

"David Sarnoff, some years after his outstanding service at the Marconi station in New York during the Titanic disaster, had been promoted to commercial manager of American Marconi. In a 1916 memo to Edward J. Nally, general manager of the firm, he proposed:

...a plan of development which would make radio a "household utility" in the same sense as the piano or phonograph. The idea is to bring music into the house by wireless. ...The problem of transmitting music has already

been solved in principle and therefore all the receivers attuned to the transmitting wavelength should be capable of receiving such music. The receiver can be designed in the form of a simple "Radio Music Box" and arranged for several different wave-lengths, which should be changeable with the throwing of a single button...The box can be placed on a table in the parlor or living room, the switch set accordingly and the transmitted music received. There should be no difficulty in receiving music perfectly when transmitted within a radius of 25 to 50 miles...The same principle can be extended to numerous other fields, as, for example, receiving for lectures at home which can be made perfectly audible; also events of national importance can be simultaneously announced and received.

Although Sarnoff's memo was filed and forgotten for years, public interest in radio was exhibited by more than 8,500 licensed amateurs."⁶

Following World War I, the country drifted until the "normalcy" of the Harding administration starting in 1921. The new mobility of the automobile, adding congestion to the cities and creating the suburbs, expanded the immediate horizons of Americans. It took them to where things were happening. At the same time, the motion picture shattered barriers of time and distance and showed ordinary audiences a new, faster life outside their immediate surroundings.

The period became known as the Roaring Twenties. It was against this background of national change that radio broadcasting began.

War regulations were lifted in 1919, and radio stations reverted to individual operators. One of these was KOW, operated by the Second Baptist Church of San Jose, California. The church had bought the station of "Doc" Herrold. In a short time the church sold KOW to a commercial operator, though it retained the right to broadcast each Sunday for 20 years.

There are numerous other claims to the title of "oldest station in the United States," each with its supporters. Some are little known: KWV, Pittsburgh, overshadowed by KDKA, has never pushed for recognition. WRUC, Union College, according to a 1970 article, signed on on October 14, 1920.

The first broadcast, held on election night, November 2, 1920, came from a 100 watt transmitter in a tiny makeshift shack atop a Westinghouse manufacturing building at East Pittsburgh. The election returns, courtesy of a telephone connection with the Pittsburgh Post, were broadcast to an estimated few thousand listeners, including some people at a Pittsburgh country club, over Westinghouse-supplied loudspeakers. The broadcast started at 6 p.m. and continued until the following noon, even though candidate James M. Cox had earlier conceded the presidential election to Senator Warren G. Harding. The next evening KDKA broadcast only from 8:30 until 9:30. The transmitter was soon relocated and increased in power, but the studio remained on the roof for months in somewhat more spacious, airy, and sound-controlled quarters: a tent. When the tent blew down in a gale, it was erected inside providing the necessary acoustic control.

"Two months later, on January 2, 1921, KDKA scored another first, broadcasting a church service from Pittsburgh's Calvary Episcopal Church. Robed station engineers, one Jewish and one Catholic, manned the radio equipment as the Rev. Lewis B. Whittemore delivered the first sermon to be broadcast by a commercially licensed station."⁷

Radio broadcasting appeared to grow slowly for the first year or so after KDKA went on the air. By January 1, 1922, the Department of Commerce had authorized only 30 broadcasting stations; and only 100,000 receivers were sold during 1922.

In 1922, radio fever hit the United States. More than 600 stations went on the air that year. Many operated from hotels, trading publicity for free room; but, since the hotel often was the tallest building in town, at least it was thought then to be an excellent location from antenna towers. Most studios had little equipment. A piano was a must, as was a microphone. Burlap served as sound control for years. Phonograph records were played on a conventional acoustic phonograph with a microphone stationed before the open doors.

The advertising heard in the early 1920's was what we would call institutional, with no mention of price and sometimes even place of sale. Announcers described their products glowingly but generally, often postponing mention of the sponsor's name until the end. Increasingly, the sponsor attached its name to the performers or the program, as the A & P Gypsies, the Cliquot Club Eskimos, and the Lucky Strike Hour.

In the 1920's, many artists were glad to appear for publicity value alone. Dance bands provided "potted palm" music, named for the decor of the hotel ballrooms in which they played. One of the first to be broadcast by remote pickup was the Vincent Lopez group, which had a weekly 90-minute program on WJZ in 1921. For years the radio audience instantly recognized the salutation "Lopez speaking."

WLS' (Chicago) "Barn Dance" country and western music program began in 1924, and lasted for many years. Of the big bands that were becoming popular, many had begun as small groups and built their reputations over radio, such as Lawrence Welk's, which had started in the 1920's in Yankton, South Dakota.

Vaudeville--or traveling stage music, comedy and acrobatic acts--inspired several kinds of programs. The motion picture already had damaged the profitability of organized stage vaudeville circuits, and radio pushed it into its grave as talented performers gave up the nomadic life for broadcasting.

Al Jolson and Eddie Cantor were two of the vaudeville and variety people who had switched to radio by the end of the 1920's, although "big name" comedy-variety programming didn't start on the networks until 1933.

Some stayed with one station and became well known, like Billy Jones and Ernie Hare, who began broadcasting on WEAJ in mid-1923 and became known over the first few years as the Happiness Boys (Happiness Candy), the Interwoven Pair (Interwoven Socks), and the Tastee Loafers (a baking company). Called radio's first real comedy team, the Happiness Boys appealed through a combination of light comedy, music and topical comment.

Probably the best-known special news coverage of the mid-1920's was WGN's (Chicago) broadcasts from the 1925 Scopes "monkey" trial in Dayton, Tennessee. The famous confrontations between Clarence Darrow for the defense and William Jennings Bryan for the prosecution were carried live to Chicago audiences, reputedly costing the station \$1,000 a day in personnel, lines and other items.

Religious radio started when the U.S. Army Signal Corps (apparently unconcerned about separation of church and state) broadcast a church service in Washington, D.C., in August, 1919.

KDKA was probably the first private station to broadcast religious services when, on January 2, 1921, broadcast a religious service or talk each week, usually on Sunday.

"Sharp forks of lightning flashed across the mid-summer night's sky. Window-rattling thunder responded from the banks of black clouds, turned an ominous purple and brown by the constant lightning barrage."

Inside a Methodist church in Jackson, Michigan, on a July night in 1922, an evangelist stood before a crude radio microphone, struggling to be heard above the storm. It was his first try at preaching the gospel over the radio.

Thirty-six miles away in Ann Arbor, the owner of one of the first crystal sets scanned the broadcast spectrum hoping to pick up WWJ, the first commercial station in Michigan. Through the snapping and crackling of the troubled atmosphere, he could just barely make out the voice of

Evangelist John E. Zoller.

"This is my first radio broadcast," Mr. Zoller said, "and I know the weather is such that it may be hard for you to listen, but if there is a backslider out there, or an unsaved person who accepts Christ as his personal Savior tonight, will you write and let me know?"

Four days later, the Methodist preacher got a letter from a man in Ann Arbor.

"It was hard for me to hear you because of the storm," he wrote, "but I accepted the Lord Jesus as my Savior."

"When I read this letter," Mr. Zoller says, "at once I asked God to open the door so I could broadcast the gospel."⁸

The pioneers of gospel broadcasting blazed the trail for the gospel across this new frontier opened by scientific discovery and development...the radio.

One warm day in June 1922, the phone rang in Paul Rader's Chicago Gospel Tabernacle office. Mayor William H. Thompson was on the other end. He was also the operator of WHT, one of Chicago's first stations with studios atop the City Hall Building in the downtown Loop.

"As one of the first stations in town," Dr. Clarence Jones says, "WHT was a toy--a gimmick for publicity for the mayor, but to Paul Rader it was God's gift to the unchurched."

An ex-prizefighter, Rader didn't often shy from a new challenge. On June 17, 1922, Rader took a brass quartet, including Clarence Jones (later cofounder of HCJB), up to Mayor Thompson's penthouse radio studio.

"You just get ready and point your instruments at the hole there in the side of the box," a technician instructed the mystified musicians, "and when I say 'play,' you play..."⁹

By 1928, network broadcasting had come into its own, with NBC organized into two semi-independent "Red" and "Blue" networks. The Columbia Broadcasting System also began operations that year, and by 1930 the "Breakfast Brigade" with Paul Rader and his Tabernacle musicians filled an hour each morning coast-to-coast on CBS.

"On Christmas Day 1923, Dr. R. R. Brown of Omaha, Nebraska, was asked to broadcast a special service to Captain Donald MacMillan and his crew at the South Pole.

By 1925, an estimated 100,000 listened each week to the "World Radio Congregation," and Dr. Brown was called the "Billy Sunday of the Air" by a Texas publication. Testimonies from farm families who listened when muddy roads prevented them from getting to church and from congregations without pastors who met around the radio for their Sunday morning sermon showed Dr. Brown the importance of carrying on such a broadcast."¹⁰

"In 1924, another gospel broadcast inaugurated a lengthy radio ministry. Charles E. Fuller had accepted Christ six years earlier as a result of the preaching of an old classmate of his at Pomona College (California)--Paul Rader. Shortly after entering the ministry, Charles Fuller went to a Bible conference in Indianapolis. There he substituted for a radio preacher and was profoundly moved by that first experience before a microphone.

"On the train home," Dr. Fuller said, "God spoke to me very definitely about the radio ministry."

Returning home to Placentia, California, he arranged to broadcast his morning and evening services on a small 100-watt station in Santa Ana.

"Our program was very well received, though," Fuller said. "We got 30 letters shortly after we began."

In 1933, he resigned his pastorate in Placentia to devote all his time to gospel broadcasting, arranging for Sunday morning and evening programs on KGER, Long Beach. Odds seemed to be against him. On March 10, a disastrous earthquake paralyzed southern California. When Dr. Fuller arrived at the studio for his first broadcast over KGER, nobody was being allowed into the building.

"The police let me in, though, when I told them why I wanted to enter and when they saw the Bible tucked under my arm," Fuller said.

For a time, though, even that seemed to have been a mistake.

"During the broadcast there was an aftershock, and I could see the transmitter swaying back and forth outside the window as I spoke," he recalled. "I said out loud, 'Look out!'" There was a volume of mail after that broadcast indicating that many had heard my comment--at least we found out that people were listening."

As if an earthquake weren't enough, a couple of days later President Roosevelt closed all the banks in the nation, making things difficult for a week-old broadcast dependent on volunteer donations to keep on the air. Yet he was able to make it. His "Pilgrim Hour" on Sunday mornings from 11:00 to 12:00 a.m., usually attended by about 300, and his evening services, geared primarily to the unsaved, continued on KGER from 1933 to 1935.

Additional half-hour programs were broadcast in 1933 over KFI, Los Angeles, and KNX, Hollywood--both 50,000-watt stations.

In 1935, Charles Fuller decided to try an hour broadcast over powerful KNX, which could be heard in 11 western states, western Canada and Alaska. The Sunday he arrived for his first hour-long program from the huge Hollywood studios, he found a sparse 50 people in the auditorium. For music, he asked for volunteers from the audience, and a 12-voice choir rehearsed quickly for the first hour-long "Old Fashioned Revival Hour."¹¹

"One of the first religious broadcasters to go on a nationwide network hookup on a regular basis was Donald Grey Barnhouse. In 1927, he had come to pastor the Tenth Presbyterian Church in Philadelphia on one condition--that the church change the format of its Sunday evening service to a vespers and that these vesper services be broadcast.

From 1928 to 1932, Dr. Barnhouse was heard every Sunday evening across the nation on CBS. This vesper service format continued until 1949 when the Philadelphia pastor inaugurated the "Bible Study Hour." Dr. Barnhouse began an exhaustive verse-by-verse study of Romans in 1956 that was to take him five years to complete on the "Bible Study Hour." He died in November, 1961, shortly after he had finished the study."¹²

"In Texas, Dr. T. Myron Webb, who had prepared himself for the medical profession, began to broadcast health lectures in 1930. A born-again Christian, he had a burden for lost souls from the beginning, but according to Mrs. Webb, he tried to bargain with God. "I'll minister to the physical needs of the people," he said. "Someone else can minister to their spiritual needs."

Yet soon after he had begun broadcasting his health lectures, he saw the tremendous impact of radio. He decided then to use broadcasting for the spreading of spiritual medicine. On June 26, 1930, on an Amarillo station, he launched a gospel broadcasting ministry that was to span 34 years.

Moving to Enid, Oklahoma, in 1934, Dr. Webb started broadcasting a Sunday afternoon Bible class known as "Back to the Bible," on KCRC, Enid. Several hundred people began attending the classes and over the years became somewhat of a congregation, even holding their own Wednesday night prayer meetings.

It was in 1934 that a young preacher--Theodore H. Epp--three years out of seminary met Dr. Webb and was greatly challenged by the potential of radio. The first radio message Mr. Epp ever delivered was on Dr. Webb's program in November, 1934.¹³

Radio drama did not become very popular until the 1930's and 1940's. Probably the first play broadcast on radio was "The Perfect Fool," which was having a successful run on Broadway with Ed Wynn in the lead. Probably the first play designed for radio was called "When Love Wakens" (note the "W-L-W"), written and directed by Fred Smith, program director of WLW (Cincinnati) in April, 1923.

Until late 1920, just before KDKA's first broadcast, all receivers were homemade. Some, like the crystal set, were cheap and simple--all it took was some wire and an oatmeal box to wind it on, a purchased piece of galena or other crystal and cat's whisker to probe it with, and a pair of earphones.

In the fall of 1920, commercially manufactured radios became available, principally in large department stores. The Westinghouse "Aeriola Jr." was a crystal set that cost \$25, and the "Aeriola Sr." was a tube set for \$60.

In 1926, "battery-eliminator" or plug-in models reached the market to the delight of everyone except the battery manufacturers and households with no electricity. A simple connection to house current eliminated 30 or 40 pounds of batteries and a maze of wiring.

By the end of 1921, about one in every 500 American households had a radio receiver; by 1926, one radio receiver had been sold for every six households.

All in all, radio was a common household device by 1926.

The rapid shift from boom to crash of the economy had important effects on radio's growth and role. Most of the changes in broadcasting that took place during this period were begun before 1930, and were merely consolidated after that year, paralleling the changes in the nation's social fabric.

By the late 1920's, radio transmitters could send out a clean signal that would stay on its assigned frequency, and directional antennae that would limit interference with nearby stations were to be designed in later years.

In planning studios, new stations were beginning to rely on architects to improve sound quality instead of using cut-and-dry burlap-covered walls still common in smaller stations. The carbon microphone, with its narrow-frequency response began to give way in the 1930's to the dynamic microphone, and the condenser microphone.

In the depression, and partly because of it, advertising became the accepted means of support for radio stations and the expanding networks.

"Radio became an accepted medium of mass advertising in 1928 because: (1) coast-to-coast network coverage carried programs to 80 percent of the nation's homes; (2) far less mutual interference and reduced time-sharing--down to a fraction of an hour per day in some cases--made listening more enjoyable; (3) better and less expensive radio receivers led to larger audiences; (4) the first scientific radio listener research was underway; (5) potential advertisers recognized radio's commercial role and value as a result of successful campaigns; (6) major national advertising agencies

showed increasing interest in radio; and (7) the public accepted advertising on networks in 1927-1928."¹⁴

The Depression pushed down many of the last barriers to direct advertising. Radio's first really professional variety show, which started in October 1929, was the Fleischmann Yeast program, featuring the young crooner Rudy Vallee. Popular from the start, it remained with the same sponsor for a decade. Hillbilly and country-western variety also started early, with Dutch Masters Minstrels appearing in 1928-1929 and the even more famous National Barn Dance reaching a national audience late in 1933.

In 1931-1932, one of the early big stars, "Banjo Eyes" Eddie Cantor, began a comedy-variety series that drew high ratings for more than ten years. The next season saw a parade to the network microphones of soon-to-be-famous radio comedians, many of whom were former vaudevillians. Al Jolson, famous as the singer in the early Hollywood talkie "The Jazz Singer"; George Burns and Gracie Allen, a husband and wife team; Ed Wynn, fresh from "The Perfect Fool" on Broadway; Jack Benny; Fred Allen, who was to maintain a fake feud with Benny for years; the Marx Brothers, best known for their movies; and Jack Pearl, who created on radio the German tall-tale teller, Baron Munchausen--all appeared in their own network shows for the first time that year. Most of these comedians lasted on radio for a decade or more, Burns and Allen and Benny each for more than thirty years on radio and then television. Each added his or her own bit to radio's traditions; Wynn's program, for instance, introduced studio audiences to provide reaction to liven the program and distract Wynn from the frightening microphone. Comedy shows all had orchestras and typically used "second bananas" (a burlesque team) or "sidekick" foils (or "straight men") but relied most heavily on comedy sketches and monologues.

Of all radio program types, drama had the slowest start; broadcasting theatre to an unseeing audience was difficult for both actors and audience.

The first ethnic program, in 1929, was the immensely popular "Rise of the Goldbergs," written by Gerturde Berg, who also starred as "Molly," as even her friends came to call her over the years. This program built around the doings of an urban Jewish family, helped establish the idea of a continuing cast in a different situation each week. The first program from the West Coast was the supremely popular "One Man's Family," which originated in San Francisco in April 1932. Serial drama established a daytime standard of several 15-minute programs--three at first, five later--a week in 1932-1933.

Freeman F. Gosden and Charles J. Correll, who had started together in vaudeville, created a blackface routine in return for free meals from a small station in a Chicago hotel. The Chicago Tribune's station, WGN then hired the pair for nearly 600 episodes of their "Sam 'n' Henry" act over the next two years.

Thriller drama--action, western, crime, and suspense--began about the same time. The first was "Empire Builders," a semi-informative show sponsored by a railroad and heard only in the Midwest in its first (1928-1929) season. In 1930, the western came to radio with "Death Valley Days," and anthology of tales introduced by a host, which retained its format in television a quarter-century later. In 1931, the crime program began with "Sherlock Holmes," which remained on network radio for many years with different casts, straying far from the Arthur Conan Doyle original. The classic crime drama was "The Shadow," whose chief character, Lamont Cranston--played at one time by Orson Welles--was a "wealthy young man-about-town" who had a "hypnotic power to cloud men's minds so they cannot see him."

A different kind of drama began in 1931 when the weekly news magazine "Time" created a radio program. Each program contained the three or four most easily dramatized events of the week before, with actors selected to sound as much as possible like the personages they portrayed. The program's signature, announcer Westbrook Van Voorhis's impressive vocal "Time...marches on!" became a catch phrase.

Prior to 1930, the public could hear Frederick William Wile, David Lawrence and H. V. Kaltenborn in separate once-a-week news commentaries and expected radio to inform it in times of high public interest of tension. This was demonstrated by the attention listeners gave to bulletins that were issued on Charles Lindberg's solo airplane flight across the Atlantic. But regular hard news broadcasting, as it is known today, did not exist until Lowell Thomas began a 15-minute newscast five times a week on NBC-Blue in fall 1930--which was aired until early 1976. The networks had no daytime newscasts during this period.

In its coverage of the Lindbergh baby kidnapping in 1932, radio showed a new responsibility. The networks scrapped evening schedules for several days to bring details--although NBC had waited a day, thinking the news too sensational for even brief bulletins. Coverage of the 1932 presidential campaign strengthened this feeling.

Harry Emerson Fosdick began a long-running Protestant program, which became "National Vespers" on NBC-Blue in 1929. "The Catholic Hour" appeared a year later. Of a different order, though still professing to be a religious program, were the CBS commentaries of Catholic priest Charles E. Coughlin. Broadcasting from his Shrine of the Little Flower in Royal Oak near Detroit, Michigan, beginning late in 1930, the program grew out of a regional broadcast first aired in 1926. Discussing economics and politics as well as his religious views, the "radio priest" backed Roosevelt fervently until F.D.R. was elected and his policies had crystallized. Then Father Coughlin turned against F.D.R. and became a notorious "rabblouser."

In the last half of the 1930's, most full time radio stations broadcast at least 12 hours a day, and many for 18 hours or more.

The FCC's March 1938 survey of programming showed that 53 percent was devoted to music, 11 percent to talks and dialogues, 9 percent to drama, 9 percent to variety, 9 percent to news, 5 percent to religion and devotion, 2 percent to special events, and 2 percent to miscellaneous.

Prestige series included the "Columbia Workshop" of experimental drama on CBS, started late in 1936, and the more conventional "Lux Radio Theater."

Annrc.: "Ladies and gentlemen, I have a grave announcement to make. Incredible as it may seem, both the observations of science and the evidence of our eyes lead to the inescapable assumption that those strange beings who landed in the Jersey farmlands tonight are the vanguard of an invading army from the planet Mars."--Orson Welles' "War of the Worlds" broadcast October 30, 1938, on CBS.

Welles at twenty-three was the guiding light behind a new CBS series in Fall, 1938, the "Mercury Theatre on the Air." As writer, director and star, he built up a company of actors whose names were famous for decades: Joseph Cotton, Agnes Moorhead, Everette Sloan, Ray Collins. His Sunday evening, October 30, 1938, Halloween program probably ranks as the most famous single radio show ever presented. It was an adaptation of Welles and Howard Kock of H. G. Wells' science fiction story "War of the Worlds." The location was changed to northern New Jersey, the time was moved to the present, and even more important, the narrative was changed to reflect radio's format. Listeners who tuned in to the program's beginning, or who listened carefully to the between-announcements, understood these circumstances. But those who tuned in late--and many had a habit of listening to the first few minutes of ventriloquist Edgar Bergen and his dummy Charlie McCarthy on NBC before tuning over to CBS for the play--were due for a surprise. The program in progress seemed to feature a band performing in a hotel. A few moments later, an announcer broke in with a "news bulletin" saying that a gas cloud has been observed on the planet Mars. Then back to the music; another interruption, asking observatories to keep watch; more music; an interview with a "noted astronomer" on the

possibility of life on Mars (unlikely); more music--and, suddenly, a bulletin saying that a large meteorite had fallen in the vicinity of Grovers Mill, New Jersey. The pace built in a series of news bulletins and on-the-spot reports of the opening of the cylindrical "meteorite," the emergence of the Martians, the assembly of Martian war machines the rout of U.S. military forces, and government reaction. Reports of casualties, traffic jams, transmissions from hapless military pilots, ominous breaking off of on-the-spot reports, the later report of the "death" of the field reporter, and use of familiar names and places--all gave it reality. As the Martian war machines headed toward New York to discharge their poison gas over the city--to the sounds of fleeing ocean liners, the last gasps of a newsman atop the broadcasting studio, and the cracked voice of a solitary ham radio operator calling "Isn't anybody there: Isn't anybody?--many listeners did not wait to hear the mid-program announcement that it was all a hoax. By 8:30, thousands of people were praying, preparing for the end, and fleeing from the Martians.

Welles was amazed but only slightly abashed at the program's impact. The FCC let it be known that it would not consider "scare" programs and formats as broadcasting in the public interest. This drama showed better than any other program or episode the impact of radio on society--"if it was on the radio, then it must be true."

In the late 1930's, individual radio stations across the country began to offer news programs varying in length and depth. By late 1939, CBS had 14 fulltime employees in European capitals, headed by Murrow in London, Eric Sevareid in Paris and William L. Shirer in Berlin.

Programs aimed at children included "Jack Armstrong--The All-American Boy"; "Tom Mix," a cowboy-adventure program; "Captain Midnight" and "Hop Harrigan" both with pilot-heroes; "Terry and the Pirates," based on the Milton Caniff comic strip.

Radio reported the sudden disasters--the Morro Castle, floods, the assassination of Louisiana populist Senator Huey P. Long in 1935--and slow political change--Hitler rearming Germany, war

clouds gathering in the Far East, then in Spain, and finally throughout Europe as Germany lit the match of World War II. In 1936, the King of England used the radio to tell the world directly that he was giving up the throne for the "woman I love."

The war increased news broadcasting in America. Popular local station programs included man-on-the-street interviews and call-in interview programs.

December 7, 1941, was a Sunday, and across the country people were wading through the newspaper, going for a day's outing or Christmas window shopping, or just relaxing. At 2:30 p.m., eastern standard time, NBC-Red was about to broadcast a "University of Chicago Roundtable" program while NBC-Blue was in the middle of a Foreign Policy Association talk. A labor talk sponsored by the CIO had just finished on CBS, and the weekly New York Philharmonic broadcast would begin at 3:00 p.m. Listeners tuned in for the interim program were startled to hear newsman John Daly cut in at 2:31 with "The Japanese have attacked Pearl Harbor, Hawaii, by air, President Roosevelt has just announced. The attack was also made on naval and military activities on the principal island of Oahu."

On Monday, December 8, 1941, President Roosevelt went to Congress to request a declaration of war on Japan. At 12:40 p.m., Speaker Sam Rayburn introduced the President, who delivered his famous "Yesterday, December 7, 1941, a date which will live in infamy..." speech as millions of Americans listened on radio. That evening Roosevelt spoke to more than 62 million listeners, the largest audience for a single radio program up to that time.

American broadcasting rapidly switched to a wartime footing. The major role of radio was to report the war's progress. On-the-spot coverage, increased by more than 1,000 hours a year to 1943.

Radio's first intensive reporting of a President's death in office came on April 12, 1945, when Franklin D. Roosevelt, just starting his fourth term, died of a stroke in Georgia. First reports came from network reporters around 5:45 p.m. In the middle of a children's adventure program, one character departed from the script to say "Just a minute, kids -- President Roosevelt just died" --

followed by a few seconds that seemed like minutes until the news announcer confirmed the report. Within two hours of the first radio flash of the President's death, stations were reporting national and international reaction. Radio listeners heard four days of repeated news. When Arthur Godfrey reported the funeral procession moving down Washington's Pennsylvania Avenue on CBS, listeners heard him break into tears at the end as he quickly turned the program over to a studio announcer.

Radio and television news today--despite all our experiences since World War II--reflects the traditions that developed in the 1941-1945 period, when broadcast journalism came of age.

The seven years from late 1945 to early 1952 mark the transition of American broadcasting from a small radio system dominated by four networks to a far larger AM-FM radio and television system in which networks concentrated on television and left radio stations to their own programming resources.

Generally speaking, the public has taken little notice of technical controversies. But, in the 1945-1953 period, large corporations vying for a vast potential market in improved phonograph records drew considerable public attention. At the same time, magnetic tape recordings entered the home entertainment market. The transistor, invented in 1948--was still in the laboratory, as industry wrangled over standards for recording and television.

For nearly fifty years, the 78-rpm record had been a mainstay of home entertainment and broadcasting music. Many stations also used 16-inch 33 1/3-rpm "electrical transcriptions" for syndicated 15-minute programs but still had to depend on commercially available 78's for much of their daily musical programming.

In the late 1940's, magnetic recording arrived on the domestic professional and consumer market.

No startling new types of programming appeared in the immediate postwar years. Television helped instigate the radio "talent raids" of 1948-1949.

The late 1940's saw development of the musical clock format of music, weather, time checks -- hence the format's name -- news on the hour, and commercials. A local disc jockey ad-libbed chatty

background material.

The 1950's had many fads--the Davy Crocket Craze, inspired by a television show; tail fins on Detroit cars; hula hoops; silly putty; rushing home from school to catch the five-minute episode of "Crusader Rabbit"; Evangelists Billy Graham and Oral Roberts on television; the sack dress; rock 'n' roll music; telephone booth stuffing; swooning over pop singer Elvis Presley. People had more leisure time, and television quickly became the most popular way to spend it. The 1952-1960 period in nearly every way was an age of television.

With radio networks no longer providing programs or income to local stations, by the late 1950's radio stations had to use their own resources for the first time since the 1920's. Most stations followed the networks with a music and news format, soon known as standard (later MOR -- middle - of - the - road), which usually meant trying to program a bit of something for everyone, with emphasis on vocal and orchestral popular music.

While a majority of radio stations followed an MOR format in the 1950's, a new trend was developing. Freed from the restraints of network shows and schedules, and seeking ways of attracting listeners in markets with increasingly competitive radio stations, stations in several cities began to specialize in a particular kind of music. This was not new; there had been classical music stations, usually FM, and in some rural areas, country - and - western (C&W) music stations. Now stations in markets with a substantial black population began to program to that audience with "rhythm and blues." There were perhaps 20 such stations in 1952 and about 50 by the end of the decade. Stations that went to a background orchestral "good music," or wallpaper, format with little or no talk frequently were engaged in storecasting, and were among the first to adopt automation for assembling and playing the day's programming.

Station owner Todd Storz in Omaha and theater and station owner Gordon McLendon in Dallas are often given credit for originating what quickly was to become known as Top 40 radio by the late 1950's. Storz tried the idea as early as 1949, bringing it to full force by 1953-1954. He operated in major markets while McLendon adopted the format in smaller and medium-sized markets because the formula was relatively inexpensive.

"Before Gordon McLendon launched his attack on the business with all the subtlety of General Patton, radio in Dallas was ... well, dying.

"Listeners were deserting the big stations in droves for the novelty of television, which offered many radio favorites, but added pictures. More importantly, along with the listeners, the advertisers were jumping ship. There were those sage voices who were predicting the end of radio.

"But Gordon McLendon wasn't listening. He was in Palestine, Texas, playing with paltry KNET, a 1000 watt station. A year later, he moved to Dallas and purchased KLIF, which served Oak Cliff (hence the catchy call letters) with a 1000 watt signal so weak you could hardly hear it east of the Trinity River. The station didn't even broadcast at night.

"McLendon had big plans, but Dallas broadcasting big shots just laughed at this hick son of a two-bit movie theater owner from Paris, Texas. But they learned--just like McLendon's competitors learned--when he crossed the Trinity with KLIF and set Dallas broadcasting market on its ear.

"In the process, this sharp-nosed young hustler who called himself 'The Ol' Scotchman' would rejuvenate popular radio across the country with a format he invented: a format called Top Forty.

"Many of today's program directors and station formats are patterned after KLIF. Ron Chapman (major domo of KVIL Radio in Dallas) worked there during the Sixties and he sets a McLendon style for KVIL that is copiously copied throughout the city.

"Everyone learned a lot from the man," Chapman says. "He changed the business like it will never be changed again."¹⁵

Essentially, McLendon and Storz created a tightly-controlled, fast-paced format that usually involved playing each hour a certain number of what program directors, disc jockeys, and a growing number of "tip sheet" newsletters expected to become hits, three or four "top ten" tunes as measured by record sales, an old favorite--as time went on, "old" might mean anything out more than a few months--and fast-paced orchestrals and vocals. The tunes were divided by spot commercials, frequently delivered by the disc jockey, weather forecasts, time announcements, and news on the hour. Strong station identification became more important than selling the network or a local program. The jingle, used extensively for commercials in the past, was revived to give a station a specific image. Identity built on call letters, frequency location on the dial, or key talent, was constantly repeated until listeners knew it by heart. Directly tied to station identification were the station's on-air staff, who grew from mere announcers into disc jockeys, (DJ's) or, after station publicity people got involved, personalities. Their stock in trade was to create a specific approach to the music, intermixed with talk, jokes and comments usually delivered at a rapid pace with little or no "dead" air space or silence.

Thus was born "formula" or "Top 40" or "rock" radio in 1952-1954.

For most of the 1950's, the important thing was combining records and radio to create instant events in the minds of listeners--the task of the disc jockey. The first star was Bill Haley and his Comets, who mixed country and western with the new rhythm. In 1956, the first rock superstar

arrived--Elvis Presley, a former C & W singer whose career rose dramatically after he appeared on the Ed Sullivan television show. Viewers of the show heard little singing as the girls in the audience screamed with excitement, reminding many of the similar reaction to Frank Sinatra at his concerts a decade earlier. Formula format continued with modifications as the mainstay of radio for many years.

The country and western boom came on the heels of rock 'n' roll popularity. After 1957, C&W records were heard on many stations, and C&W specialty stations began to appear in the Northeast, heretofore out of reach for country stars and songs whose "natural" audience was in the South and Midwest.

AM radios in the 1950's were smaller than earlier sets and, in the latter part of the decade, truly portable.

In 1960-1961, most broadcasting equipment--home receivers and station and studio equipment--used electronic tubes similar in principle to those manufactured in the 1920's. The invention of the transistor by scientists in the Bell Labs in 1948 did not have an effect on broadcasting until the early 1960's. Transistors permitted more compact construction, cooler operation and thus longer life, and use of much less electric power. By the late 1960's, transistors were giving way to even more compact successors, which were direct outgrowths of the nation's space research.

Until the late 1960's, the trend in AM radio was toward increased specialization of formats. A new all-news format spread to a few of the largest markets in the 1960's. Telephone call-in programs, discussions, interviews, news and public affairs were the hallmark of radio without music.

Stations continued to specialize in music, although the Top-40 station, together with what had been rock music, slowly changed its sound. The music of the Beatles dramatically changed the sound of popular music after 1964; and after the Vietnam War became an issue in 1965-1966, college students' folk music turned into songs of protest. Singers were identified as much with their cause as with their music, and emphasis shifted from "sound,"

music and beat, to an appreciation of lyrics.

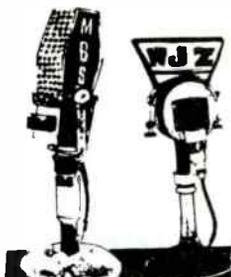
Stations in the 1960's increasingly specialized in particular kinds of music. Some stations concentrated on programming music and other content by and for blacks, especially in the larger markets with sizeable black populations, even though almost all licensees were white. Country and Western music spread from its southern home to the rest of the country, including the supposedly sophisticated Northeast. By the 1970's, every major market had at least one C&W operation. Other stations specialized in rock, the most popular; middle-of-the-road; "golden oldies."

Nonmusical entertainment programming did not disappear. Catering to nostalgia buffs, returns of old radio drama comedy programs appeared, first on stations appealing to college students in evening hours and then spreading to other stations for an hour or so a week at different hours of the day. In 1973, NBC began to broadcast repeats of "X-Minus-One", a series of science fiction dramas from the early 1950's. Mutual offered several old shows, and a few specialty companies bought up broadcast rights to old series--"The Lone Ranger," "The Shadow," and some comedies--to syndicate them on tape to local stations. National Public Radio, the radio arm of CPB, funded several radio drama workshops, including one specializing in the use of stereo in radio drama. Beginning in 1974, CBS broadcast "Mystery Theatre," and hour-long original drama each night. Hosted by actor E. G. Marshall, the series provided the first network outlet for writing and acting talent in radio in more than two decades and was a success with listeners and advertisers alike. A child-oriented "Adventure Theatre" followed two years later.

"Old radio" sound of another sort was the fare of the "golden oldie" stations of the 1970's, which based their appeal on the replaying of hit music from the past--six months to a decade or two. These stations generally aimed at adults in the advertiser-designed ages between eighteen and thirty-five who had listened to this music on radio as teenagers.

Having survived the onslaught of television in the fifties, sixties, and seventies, radio entered the eighties in a reborn state that seems to have left it immune to future shocks of any kind. "Radio's golden age may well be over," said the magazine called Next, "but something like a silver age beckons." Listeners and advertisers alike have discovered that radio does many things better than television (network or cable) and does it all for a cheaper price. Since 1967, reports Adweek magazine, radio's cost-per-million in reaching its audience has gone up less than television, magazines, or newspapers. Radio's audience is universal. There are almost 500 million radios in the U.S., six for every household. Radios are in alarm clocks, joggers' headphones, cars, boats, teenagers' rooms, in tiny transistorized models on the beach and in the Boom Boxes slung over shoulders of big city blacks and Hispanics.

Every day is a new day. So, don't touch that dial...Stay Tuned!



Radio . . . Religion . . . and Southern Baptists

Alfred E. Smith, Jr.

"Then I heard the Lord asking, 'Whom shall I send as a messenger to my people? Who will go?' And I said, 'Lord, I'll go! Send me.'"

Isaiah 6:8

In 1938, the United States was still in the middle of the Depression, Franklin Roosevelt was president, and religion was about to take a step that would revolutionize the gospel witness. It was this year that the Southern Baptist Radio and Television Commission was formed.

In 1938, under the impetus of Dr. Samuel P. Lowe, a pastor in Meridian, Mississippi, at the time, a seven member investigating committee was formed, with Dr. Lowe as chairman, to investigate the possibility of incorporating radio into the Southern Baptist program.

In those early days, even as now, the Radio Committee was concerned about quality programming. In 1940, Committee members told the Convention in Baltimore that the quality of Baptist broadcasts had become a matter of concern. They reported meeting with the presidents of the Southern Baptist seminaries to deal with the possibilities of training young preachers in "the important field of building effective radio messages and programs."

It was not until January 5, 1941, however, that the first broadcast of "The Baptist Hour" took place over seventeen stations in the south. Dr. M. E. Dodd, pastor of the First Baptist Church, Shreveport, Louisiana, was the first speaker. The church's choir and pastor had gathered. The time was early Sunday morning. Telephone lines from the church to radio station KWKH and then to seventeen stations in eleven states comprised the modest network.

The Radio Committee received \$10,000 from the Convention in 1941--\$5,000 from undivided receipts from the Cooperative Program (the general financial support for all Convention activity), and \$5,000 from the Sunday School Board. This produced thirteen programs on seventeen stations for a total of 221 "Baptist Hour" programs. The initial effort cost \$5,750.

In 1942, Dr. Lowe was appointed full-time director of the radio services of the Southern Baptist Convention. The headquarters for the Radio Committee was also established in Atlanta, Georgia.

In 1949, "The Baptist Hour" went on the air weekly in 132 stations of the American Broadcasting Company's network. It was heard in twenty-one states. In 1951, it found permanent footing and began to be transcribed and circulated to independent stations for free public service broadcasting.

In 1952, Dr. Lowe, now the Radio Commission's first director, died, and in August, 1953, Paul M. Stevens, pastor of the First Baptist Church, Ada, Oklahoma, became director. In June, 1955, the Commission moved to Fort Worth, Texas and the Commission began to take advantage of the technological tools available to tell every person in the world about Jesus.

More than just "The Baptist Hour" has hit the airwaves since that historic moment in 1941. In 1959, the program "Master Control" could be found on the radio dial. In 1967, "Powerline," the Commission's wonder story of success; and in 1969, "Country Crossroads" made their appearance. These programs were new, innovative and very much of a gamble, as far as religious radio programs were concerned. They were mixing the secular fields of music and personality with that of the gospel of Jesus Christ.

Many other radio programs have been added since this time. A new age for the Southern Baptist Radio and Television Commission is about to unfold. In 1979, Dr. Jimmy R. Allen became President of the Commission. He is about to launch the crusade of telecommunication ministry on an even greater journey. In 1983, the American Christian Television System (ACTS), will begin a nationwide satellite

network that will broadcast religious programs to a system of stations throughout the United States.

The many varieties of religious programs produced by the Commission are sent to nearly 6,000 stations and fifteen foreign countries. The various programs try to take the message of the gospel to a different personality of listener.

"Powerline" is aimed at listeners who enjoy contemporary rock and roll music, and "Country Crossroads" for those that enjoy the country and western sound. "Powerline" uses "top 40" song hits as a springboard for religious messages and has been highly praised by the industry and well accepted by listeners. "Country Crossroads" with its co-hosts, Fort Worth disc jockey Bill Mack and Jerry Clower of the Grand Ole Op'ry, has also been a runaway success.

Other programs such as "Master Control" feature an interview talk format with adult contemporary music interspersed between interviews. "Black Beat" is targeted at teen and young adult blacks. "Streams in the Desert" is aimed at adults with an upper income and educational level who enjoy the "beautiful music" program of easy listening. "Sounds of the Centurymen" tries to capture the adult of thirty years or older who enjoys soft religious music. There is also "Horizontes," a spinoff of "Powerline," that features the weekly billboard hits of Spanish music and is totally broadcast in the Spanish language.

There are still the more traditional radio shows such as "At Home With the Bible" which features music, interviews, and a ten minute segment discussing Biblical texts. Dr. Frank Pollard, a noted Bible scholar, is the host and the entire radio spectrum is the targeted audience. And as always, "The Baptist Hour," using the traditional preaching format is as strong as ever.

Since the beginning, the personnel at the Radio-TV Commission have been individuals of vision. As the years have progressed, so has the variety and personality of the individual shows. Nostalgia is fine but becomes monotonous and ineffective when set alone and constantly repeated. The shows of "Powerline" and "Country Crossroads" were a result of needs of society with an

opportunity. That opportunity was a type of music popular at the time.

To understand the creative process of the religious programs of the Commission one must understand that the overriding goal of every program is to present the gospel of Jesus Christ, an art form in itself when one thinks of its beauty, uniqueness, expression, creativeness, and response. Existing and successful radio formats and music are used in order to appeal to all listeners and subtly interject the message of salvation through Christ. In a sense, this is a definite method of imitation.

By imitating the various successful radio programs and not always using the traditional religious format of the "Sunday morning worship service," the Commission has opened new avenues for approaching listeners with its message. Dr. Paul Stevens felt that another reason for the denomination's success in broadcasting is because "the Radio and Television Commission has set a course designed to imitate the ministry of Jesus Christ. Christ secularized his gospel by shunning the confinements of the synagogues and the temple. He met his congregation on hillsides and seashores. They listened to him as they mended their nets, fished, or farmed. It was the perfect picture of what would happen when man began to use radio to speak for him."

As Da Vinci had to take his thoughts and "paint" the "Mona Lisa" and Michelangelo "mold" his "David," the Commission needs to "produce" its particular radio program. The interviews, the particular songs, the religious spot announcements become as the various colors used by the painter. The production studio and the editing machines and consoles become the brushes. The painter is now the producer and the final price of art will be on a vinyl canvas playing at 33 revolutions per minute.

In order to get quality art, one must have a quality artist. The Commission has hired some of the best disc jockeys in the secular world to host many of their programs. Though Christians, these men have been involved successfully for years in the world of secular radio. Men such as Jon Rivers who by market researchers in 1979 was ranked first with the young people in the Dallas/Fort Worth area hosts

the shows "Powerline," "Streams in the Desert," and "The Baptist Hour." Jack Bishop of KLIF does "Black Beat." Bill Mack and Jerry Clower host "Country Crossroads." Mariano Garcia hosts "Horizontes." All of these men are professional speakers and radio personalities who have been successful not only with the various religious programs, but just as important the competitive secular world. Each host becomes a personality within the program. His method of interviewing, the inflections of his voice, and the professional nature in which he handles himself becomes the mode of expression for the particular program.

The Commission also hires a professional staff of writers and producers to work with the hosts on the various shows. The writers become important as they are the originators of the emotional message that this art form wants to exhibit. It is their words which are to exhibit feelings and emotions which create the response which will be the ultimate judge of the work.

The producer is really the painter. The writer, host, recording artist, guest, etc., produce the ingredients and can be looked at as the business men who sold Da Vinci his paints to produce the "Mona Lisa." It is the producer that, once he has all his supplies, must put it all together. The overall success of the program rests squarely in his hands.

At last count, there were 8,800 radio stations in the U.S. It is felt that there will be more than 10,000 radio stations in America before the end of the century. By imitating today's radio, the Commission can successfully take advantage of a proven and highly successful medium.

The radio programs of the Southern Baptist Radio and Television Commission are trying to bring forth basically one kind of action. It may happen in many different ways, but the radio programs want their listeners to examine their spirituality and to accept the salvation of Jesus Christ if they have not already. The topics of many programs demonstrate that they want to get down to the basic problems of life. These topics range from teenage kids going through life coping with everything from pimples to fat, to adults handling homosexuality and rape.

Edwin S. Malone, Director of Radio Production, at the Commission describes radio as "the theatre of the mind." Radio can create a picture within a listener's mind that cannot be found on any painter's canvas or exhibited in any museum. An art form touches everyone differently. It has not only changed many lives, but also saved them.

As in any art form, the religious radio programs at the Commission are changing and advancing. As the Radio and Television Commission looks to the future, it looks to a shining age of electronic communications. The number of communication satellites already in the sky is increasing rapidly. These satellites can relay radio and television signals transmitting the message of God's love to all the world. These programs could even help the modern missionary movement. Though no mechanical device can ever take the place of flesh and blood missionaries, it can multiply the effectiveness of existing and future reinforced missionary forces on the field to the point where they can "cover" much greater territory and larger masses.

The American Christian Television System (ACTS) Network will help send radio using satellites as a tool for evangelism. The RTVC has signed a lease on Southern Pacific's Spacenet I Satellite to carry ACTS programming and the agency is developing a strategy to meet the mammoth opportunities this satellite will create.

The Southern Baptist Radio and Television Commission has chosen for itself the great group of the unchurched as its congregation. The message is as old as the Ancient of Days. The method is as modern as tomorrow's electronic invention.

Formats

Dennis J. Seely

"Then the Lord said: Broadcast this message in Jerusalem's streets -- go from city to city throughout the land and say, Remember this agreement that your fathers made with God, and do all the things they promised him they would."

Jeremiah 11:6

Any discussion of radio must include the all-important topic of radio formats. While these various formats may appear to be relatively simple and obvious on the surface, it is important to fully understand the complete ramifications of the various radio formats.

The radio station owner is faced with a highly competitive business where just one percent of the market can mean thousands and thousands of dollars. The correct selection of programming -- formats -- to reach the largest potential listening audience is the single most important decision the successful broadcaster makes.

In most cases, the station operator will do extensive research to examine the public's attitude about the current market conditions -- which areas of the radio spectrum are being under served and those which have saturated the market. The decisions made about format selection and programming are the ones which will determine whether or not the station is profitable or loses money.

This leads to another very important point...radio stations (except for specifically licensed nonprofit facilities) are businesses whose primary function is to provide the owner with a fair return on his investment. Oftentimes, it is easy to lose sight of the fact that businesses which provide entertainment (i.e. radio, television, movies, theme parks, etc.) first and foremost--businesses.

While the devotion and public interest of a few broadcasters should not be discounted, it is absolutely essential to understand from the beginning that generally speaking the station function is 1) make a profit and 2) serve the public needs.

Now, it is possible to undertake a more thorough study of the various radio formats. With the highly fragmented nature of this business it is important to understand that these are general terms. There are hybrid formats, off shoots, slightly modified formats and of course, formats that are new and improved.

To begin this study, it is helpful to understand the history of radio and the type of programming that existed when radio was in it's infancy.

Early in the days of radio, when there were only a couple of radio stations in a market, that one station had a broad general appeal to all the listeners in town. However, through the years additional stations were licensed to serve the public and with increased competition came the evolution of more and more radio formats.

Radio executives knew that the best way to attract an audience was to appeal to a specific segment of the listening public. Such an approach would be much more successful than attempting to compete head on with a broad based station. Thus came the evolution of the various radio formats.

The Early Days of Radio

In the early days of radio, the programming was a broad mixture of talk, dramas, comedy, live music and similar type of mishmash programming. People were much more likely to tune in to a particular radio program such as the Jack Benny program, Amos 'N Andy or any of the many others. It was this same type of program tune-in that evolved into television.

With the introduction of television coupled with the numerous new radio stations which had been licensed by the federal government, the evolution of radio formats began in the early 1950's. The mass appeal of traditional radio began to falter, and

broadcasters began searching for an alternative program mix.

The Various Formats

Middle of the Road (MOR) -- Music for this format is going to cover all time periods, no hard rock. In most instances, MOR stations will be full service facilities (see below). Primary audience 35+

Full Service Radio -- Full service radio is often attached to MOR stations, Country stations, or Adult Contemporary stations. Full service indicates that the station has a significant commitment to news and information. Such stations will have well known personalities, extensive news and weather reports, traffic reports, and similar types of features. Full Service can be an important addition to virtually any format targeted to an adult audience.

Country -- Today's modern country radio station has become slicker in the past ten years. The "Western" has been dropped from the country, and musical selections have much more polish and mass appeal than before. While "oldies" and traditional country numbers may be played from time to time, such stations are largely void of the twangy sound of bygone years. Country music programmed stations are very strong throughout the south and southwest, and recent research has proven that the country listener should not necessarily be stereotyped as blue collar/lower income. Primary audience 25-54, 25+

Adult Contemporary -- A contemporary blend of modern popular music with some oldies. Usually some personalities and talk aimed at an adult audience. Music play list can include some cross over country, but usually no hard rock. Target audience 18-49/25-49.

Mellow or Soft Rock -- An off shoot of adult contemporary, mellow or soft rock stations will concentrate on music which has a softer sound, and in most cases, there will be little or no personality involvement. Limited news. Usually stations with this type of programming will have a stronger female audience than male audience. Target audience 25-49.

Contemporary Hit -- Contemporary Hit radio (previously Top 40, etc.) is a format with a highly restricted music play list. Oftentimes uses high profile personalities limited amount of news. Target audience: Teens / 18-24 / 18-34.

Album Oriented Rock (AOR) -- Album Oriented Rock stations play selections from the hottest artists with a percentage of oldies by the same artists. Historically, there has been about 60% oldies to 40% current material, however, there is a current trend to use a significantly larger percent of newer music. The AOR format is highly competitive and the listeners are often very fickle changing from one station to another. AOR stations traditionally draw a much larger male than female audience.

New Music -- New Music stations are a derivative of the AOR format..but their musical emphasis is on "new wave" artists. The music and the stations have created quite a stir in many circles and the format is yet to be proven as a commercial success. Target 12-24.

Beautiful Music/Easy Listening -- Easy Listening or Beautiful Music stations broadcast pleasant soothing music, including instrumental versions of popular songs, showtunes, a very limited number of commercials, short news breaks. The emphasis is on music with minimum interruptions. Target 35+.

Oldies -- There has been a growing interest in oldies stations. Most such stations broadcast on the AM band. Such formats usually have a small but loyal audience. One type of oldies is "Music of your Life" which is big band music from the 40's and

early '50's. Such a format obviously attracts a 35+ audience. A more recent trend in oldies is classic rock. Playing classic rock music from the early 60's through the mid-seventies the target for such a format is primarily 25-34.

Black -- There are several sub formats under the broader "black" heading. Jazz, disco, dance music and rhythm and blues all qualify under this broader heading. Each of these various formats attract a generally black audience, however the dance music and disco stations are much more salt and pepper, appealing to a considerably broader audience base.

Ethnic -- Ethnic radio stations broadcast to particular ethnic groups. Spanish, Chinese, etc. are common ethnic stations depending on the area of the country. These stations reach a very identifiable section of the population that is more comfortable with their native tongue.

All News -- As the name implies All news Radio stations broadcast just that...all news. Usually the station will have a broad base of professional and collegiate sports. Target (usually heavier male than female) 25+.

Talk/Information -- Talk and information stations usually have a strong news commitment in addition to open phone lines which allow the listener to call in and express their viewpoints on the air. Talk/information stations (usually AM) are extremely popular in many markets. Target 25+.

Classical -- The music broadcast on classical stations is described in the title itself. There are only a limited number of classical stations in the country and reach a small but very loyal and upscale audience. Target 25+.

Religious/Christian -- Religious/Christian radio stations fall in two very distinct categories: nonprofit and for profit. Non profit stations usually owned by a church related organization usually broadcast a number of teaching and

informational programs in tandem with contemporary Christian music. For profit stations may rely on a more traditional programming mix of music and commercial spots, however, they may also specialize in selling blocks of air time to various religious groups.

The Importance

There is a great deal of importance in understanding the target and type of programming for each of these various formats. Whatever your mission may be in using radio it will be important for you to know the type of audience the station has, what the programming people will find to be complementary to their work and that which they believe might be offensive to their listening audience.

Consider for a moment the case of the AOR station...a very tightly-structured format. You are having a revival and want to run a really high-pressure spot like:

"You are listening to the music of the devil on this radio station...you very well may be on your way to hell...Repent before it is too late...come to the revival at the 32nd Baptist Church of Yourtown."

Chances are excellent that the station will refuse to run such a spot...despite the fact that you have cash in hand to buy the spot.

The reasons for their refusal would be based on the fact that such a spot would have a good chance of alienating their audience, causing them to tune in to another radio station. AOR and Easy Listening stations in particular are very careful about the type of spots they air, not just religious but in all categories. This does not mean that you must make your spot rock and roll in order to get on the station...but rather that you must keep in mind the audience to which the station is programmed. Your role in using that facility must then be compatible with the rest of their on-the-air sound.

Age -- and other Demographics

As you explore the various uses of radio for your ministry, keep in mind the type of audience the individual station has. Promoting a teen and college night at the church may be appropriate on an AOR or Contemporary Hit formatted station, but not on an oldies station.

Family night is absolutely correct on an adult contemporary station, but wasted on an AOR station. The point is simple..understand the type of people you are going after and use those stations which most closely identify with your goals. Do not get caught in the trap of saying..."Well there are lost souls from 8 to 80 so let's use them all." That is not the way radio works. You must know who you are after in a very specific sort of way, and then utilize this very powerful medium from there.

Summary

Radio is an extremely powerful medium. It offers the dedicated minister a limitless number of possibilities for the teaching of God's Word in both a very direct and in a more subtle manner. But this type of broadcast ministry can be effective only if you have a complete and thorough understanding of radio. Understand the limits and the bounds, the strengths and weaknesses of radio, and be prepared to use each to the very fullest.

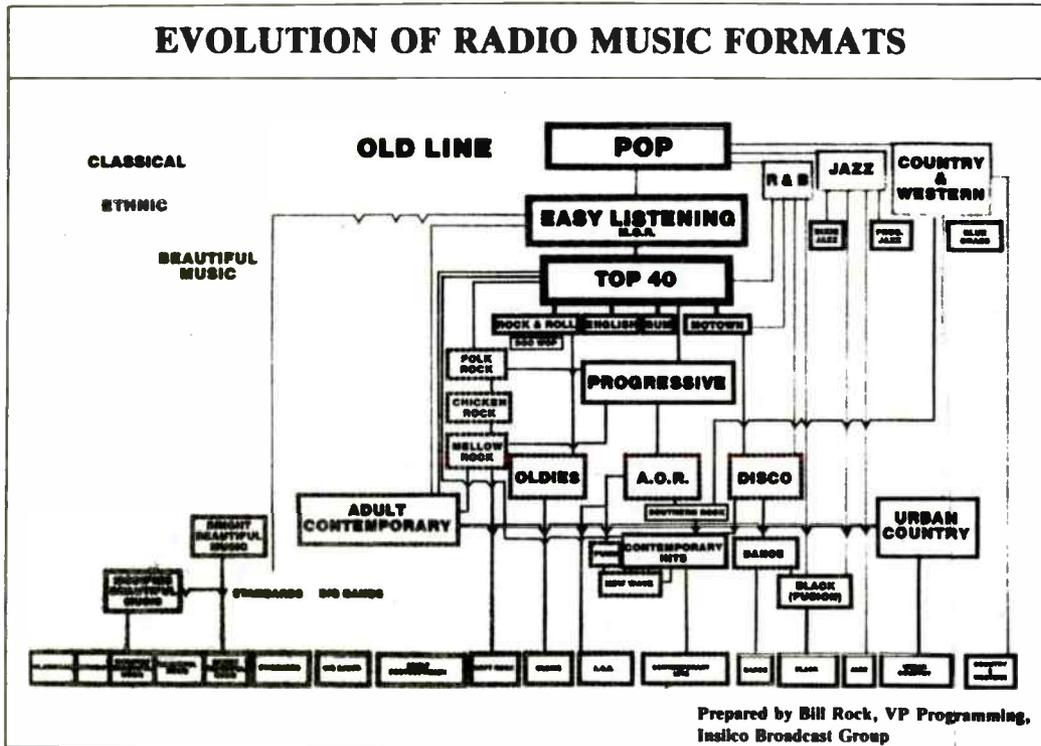
Understanding the formats, their audience and other demographic characteristics will help you in selecting the manner in which you can best use the radio to tell the Good News!

AUDIENCE SKEW OF VARIOUS FORMATS

	Teens (12-17)	18-24	25-34	35-44	45-54	55-64	65+
FORMAT							
<i>MOR</i>				=====	=====	=====	=====
<i>News/Talk</i>			=====	=====	=====	=====	=====
<i>Country</i>			=====	=====	=====	=====	=====
<i>Adult Contemporary</i>		=====	=====	=====	=====		
<i>Mellow/Soft Rock</i>		=====	=====	=====	=====		
<i>Contemporary Hit</i>	=====	=====	=====				
<i>AOR</i>	=====	=====					
<i>New Music</i>	=====	=====					
<i>Easy Listening</i>				=====	=====	=====	=====
<i>Oldies</i>				=====	=====	=====	=====



EVOLUTION OF RADIO MUSIC FORMATS



Prepared by Bill Rock, VP Programming,
Inslico Broadcast Group

Markets

Dennis J. Seely

"And then He told them, 'You are to go into all the world and preach the Good News to everyone, everywhere.'"

Mark 16:15

Why is it important to know the characteristics of the market that a radio station faces? And, why is that station's position in the market important?

"There's a reason radio station managers get nervous during the Arbitron rating periods each year: Every share point can be worth half a million dollars in annual advertising revenues. Careers rise and fall at the placement of a decimal point. Good numbers can mean a raise. Bad numbers mean it's time to pack. And often, that can affect everyone from the general manager to the mail clerk."¹

When people think of different markets, they often think of the place where they would like to live. For example, one person might want to live in San Diego because of the mild winters, another in New York because they love the big city, yet another in Muleshoe because they love the open prairies of west Texas.

There is much more to the term "markets," however, when you begin applying radio standards to them. Market 1 is very different than market 100. Not just in geographic makeup, but also in demographics...the age of the people, their backgrounds, their lifestyle. For the broadcaster, these are the key elements to understand. For each and every one will play an important role in assisting the station's owner to have a successful radio property.

In the same vein, the person who wishes to use radio as a ministry or as an extension of another ministry will be much more successful if the characteristics of the market and the way the radio stations seek to meet those characteristics are understood.

Sources of Market Information

In beginning a discussion of radio markets it is important to first explore the various sources of information that are available.

These sources of information are available in a variety of places including the library, media library and oftentimes through a nearby radio station.

STANDARD RATE AND DATA SERVICE (SRDS) is a compilation of facts and information about every commercial radio station in the country. This book which is published monthly will tell the reader complete information. (See exhibit A)

From this typical listing for KLIR radio in Denver, Colorado, the reader can discern the station's call letters, address, telephone number. The station's personnel from vice president and general manager to the program director.

The facilities section outlines the technical specifications of the station. In this example, KLIR is broadcasting from an antenna which is 500 feet above the average terrain with one hundred thousand watts* of power; at 100.3 mhz on the FM dial. In addition, they broadcast in stereo twenty-four hours a day.

The listing in addition provides general information about the station's advertising cost and acceptance policies. The rates are oftentimes guidelines and the potential purchaser of broadcast time should be aware of the highly competitive and negotiable nature of broadcast rates.

*FM Stations generally broadcast with 3000, 50,000 or 100,000 watts of power. With an FM station "line of sight" type of broadcasting, the height of the antenna often plays as important factor in the stations coverage as the actual power. AM stations generally broadcast with 1000, 2500, 5000, 10,000 or 50,000 watts of power. While the height of the antenna has no actual coverage significance for an AM station, the dial position does. The lower the dial position the better. For example, 5000 watts at 570 will provide a signal highly superior to 5000 watts at 1480.

ARBITRON RATINGS are another source of information, and provide specific information about an individual station's share of the market.

Within the covers of an individual Arbitron market report is a wealth of information about the audience of a radio station.

This information will include facts about the change in size of the station's audience and how the audience is changing (i.e. getting older, or younger.) Various tables will tell whether the station has more men than women, and the ages of the people who listen to the station.

A complete discussion of understanding Arbitron ratings is beyond the scope of this text, however it is strongly suggested that the person planning to purchase radio broadcast time, become familiar with the ratings for the various stations in that market.

The Competitive Nature of Radio Markets

The radio industry has become one of the most fiercely competitive businesses anywhere. The highly competitive nature of the radio industry is intensified by the large number of participants. Some businesses for example have a limited number of major companies.

The person wishing to purchase a car basically chooses General Motors, Ford, Chrysler, American Motors, or one of four or five imports. Yet that same person has an almost infinite number of choices in selecting a radio station.

In major markets where the leading radio station may command no more than 5 or 6 percent of the total available market, it becomes clear how very competitive the radio industry can become.

Gone are the days when one or two radio stations dominated the radio listening of city or town. While one station might dominate more than fifty percent of all the radio listening in the 1950's, such is no longer the case. Not by a very long shot.

In New York City today, there are sixty-seven commercially rated radio stations...and not one commands more than five percent of the total market. (In other words, given one-hundred people,

New York City's most popular radio station will reach no more than five of those people. The other 95 will be listening to an assortment of other stations in the market.)

Market Characteristics

In addition to the competitive nature of the individual radio stations, it is important to remember that there is a great deal of difference between the various radio markets. Two markets may be as completely different as is humanly imaginable.

Compare for example San Francisco, New York, Austin and Louisville, Kentucky. In New York City, there are in excess of 67 radio signals, and no station commands more than 5% of the market. In San Francisco, there are more than 48 signals and no station commands more than 8% of the market. Yet, in Austin, Texas there are only 18 signals and in Louisville, Kentucky where three radio stations command almost forty percent of listening in the market.

The demographic characteristics of various markets may vary significantly. Understanding these differences is crucial. These factors can include the racial makeup, age, economic climate, and numerous other such characteristics would make up this demographic study.

To illustrate the differences of these markets, consider Miami, Florida. Thirty-four percent of the market is Hispanic and another 15% is black. Yet, in Seattle-Everett, Washington has only 3% blacks and 2% Hispanics.

In considering age, 38% of the adult population is over 55 years of age, and 19% is between the ages of 25 and 34. Compare this to San Diego, California where only 26% of the market is over 55, but more than 25% of the population is between 25 and 34.

These various demographic characteristics may seem like a big to do over very little...but such is not the case. Broadcast ministry which is right for Los Angeles may be totally wrong for San Antonio. While a ministry in Miami or Phoenix may be targeted to the markets large retired population, the same type of emphasis would probably be less successful

in San Diego which has a relatively young population.

Radio listening characteristics can also vary significantly by region of the country. For example, take country radio stations. Country programmed radio stations do exceptionally well throughout the south and southwest. In Houston, over twenty percent of all radio listening is to a country radio station. Yet in New York City less than 4% of the listening is to country radio stations.

Market Size

Obviously, various radio markets can vary considerably in terms of population as well. The accompanying exhibit 2 illustrates the difference in size in the top 125 radio markets. New York, for example, has over 13 million people over twelve years old, while Greenville - New Bern, the 125th market has only 230,00 total people.

While the sheer magnitude of the larger markets seems overwhelming, the person considering the use of radio should not be blinded by their size. The largest markets are the ones which are the most difficult to obtain air time for programs and the ones where spot announcements of 30 or 60 seconds are the most expensive. It is not uncommon for one sixty-second spot to cost in excess of \$500 in the top five markets!

In addition, these larger markets are very research-oriented and oftentimes very careful about their own air sound. This care is best illustrated by knowing that in the largest markets, one-tenth of one percent can mean as much as one million dollars in revenue.

This should not be interpreted as a discouragement from the need in these larger markets. Chances are that the Good News of Christ is needed more in New York City for example, than anywhere else in America. But the person contemplating the use of broadcast media in such a market should be well aware of the competitiveness and difficulties of the market.

Smaller markets which have a more relaxed atmosphere will in most cases offer greater availabilities for both programs and lower costs for spot announcements. This, of course, is in direct proportion to the market's competitiveness and size.

Summary

When you prepare to use radio in a market, just as you might prepare other elements of your ministry in a particular city...it is important to understand the backgrounds of the people to which you are to minister. If you go to Shiner or Yoakum, Texas you would likely find a large German heritage population. In San Antonio, a large Mexican population. In Los Angeles, a large oriental population. Bryan-College Station has the lowest unemployment, Laredo the highest. The per capita income in Lake Jackson may be fourth in the nation, and Clute may be the 275th.

All of these items are areas you need to know about your market. Your message about the good news of Jesus Christ won't vary a bit..but the manner and methodology you employ to tell that news will.

Population Rankings

Standard Radio Markets

Metro Survey Area
Total Persons 12 +
Population Estimates

Rank	Market	Total Persons 12 + Metro Population
1	New York	13,483,800
2	Los Angeles	7,965,500
3	Chicago	6,344,900
4	San Francisco	4,475,900
5	Philadelphia	3,915,600
6	Detroit	3,543,200
7	Boston	2,880,600
8	Houston-Galveston	2,603,500
9	Washington, DC	2,565,200
10	Dallas-Ft. Worth	2,513,300
11	Miami-Ft. Lauderdale-Hollywood	2,445,300
12	Nassau-Suffolk (Long Island, NY) (See Market Rank #1*)	2,165,000
13	St. Louis	1,931,300
14	Pittsburgh	1,909,000
15	Baltimore	1,835,200
16	Seattle-Everett-Tacoma	1,794,300
17	Minneapolis-St. Paul	1,756,900
18	Atlanta	1,706,600
19	Anaheim-Santa Ana-Garden Grove (Orange County, CA) (See Market Rank #2**)	1,652,200
20	San Diego	1,608,500
21	Cleveland	1,558,000
22	Tampa-St. Petersburg	1,438,200
23	Denver-Boulder	1,391,800
24	Phoenix	1,329,100
25	Milwaukee-Racine	1,296,300
1-25 Total		72,292,000
26	Providence-Warwick-Pawtucket	1,208,200
27	Cincinnati	1,147,600
28	San Jose (See Market Rank #4***)	1,105,600
29	Kansas City	1,096,000
30	Portland, OR	1,063,800
31	Riverside-San Bernardino-Ontario	1,062,000

*The Nassau-Suffolk Metro area is within the New York Metro area.

**The Anaheim-Santa Ana-Garden Grove Metro area is within the Los Angeles Metro area.

***The San Jose Metro area is within the San Francisco Metro area.

The population estimates for these markets are not reflected in the population totals.

KLIR
1050
DENVER

Christal



A Division of Duffy Broadcasting

Studio Code 4 225 4261 728 Ext 62270-222
KLIR, Inc.
6655 W. Jewell Ave., Denver, CO 80226. Phone 303-822-
9300

PROGRAMMING DESCRIPTION

KLIR MUSIC. Programmed for mass appeal to adults 18-49 with primary emphasis on 25-34. MUSC: contemporary hits & adult appeal hits of the 70's. NEWS at 6:55 & 30, AM drive. Contact Representative for further details. Rec'd 9/18/82.

1. PERSONNEL

Vice-Pres & Gen'l Mgr.—Low Campbell
General Sales Manager—Don Nelson
Program Director—Lisa Anthony
Business Manager—Dan Talora

2. REPRESENTATIVES

The Christal Company, Inc.

3. FACILITIES

ERP 100,000 w/ circular polarized. 100.3 mhz. Stereo.
Operating schedule: 24 hours daily, MST.
Antenna ht: 500 ft. above average terrain.

4. AGENCY COMMISSION

15% time only, 10% of month.

5. GENERAL ADVERTISING

See coded regulations
General: 1a, 2a, 3a, 4a, 4d, 5, 6a, 7a, 8
Rate Protection: 10a, 15b
Basic Rates: 20a, 21a, 23a, 24b, 25c, 29b, 33b
Contracts: 40a, 42a, 43, 45, 46, 47a, 48
Comb: Cont. Discounts: 60a, 62d
Cancellation: 70a, 70c, 71a, 72
Prod. Services: 60

Affiliated with Christal Radio Network

TIME RATES

ES—Rec'd 2/14/83

6. SPOT ANNOUNCEMENTS

GRID:	M-F 5:30-10 AM				
	I	II	III	IV	V
1 min	150	145	140	135	130
1 min	M-F 10 AM-3 PM				
1 min	145	140	135	130	125
1 min	M-F 3-8 PM				
1 min	140	135	130	125	120
1 min	SAT & SUN 6 AM-7 PM				
1 min	120	110	100	80	60
1 min	M-F 8 PM-1 AM				
1 min	80	80	70	60	50
1 min	M-F 5-9:30 AM				
1 min	60	50	40	30	20

30 sec: 80% of 1 min.

7. PACKAGE PLANS

TAP—1/4 5:30-10AM, 1/4 10AM-4 PM, 1/4 4-8 PM, 1/4
8 PM-1 AM/WROD

GRID:	I II III IV V				
	1 min	148	130	128	118

Radio Rates and Data

Rank	Market	Total Persons 12+ Metro Population	Rank	Market	Total Persons 12+ Metro Population
78	El Paso	379,400	32	Buffalo	1,021,200
79	McAllen-Brownsville	378,600	33	New Orleans	971,100
79	Harrisburg	378,600	34	Norfolk-Portsmouth-Newport News-Hampton	966,500
81	New Haven-West Haven	372,000	35	Sacramento	954,500
82	Johnson City-Kingsport-Bristol	371,300	36	Indianapolis	953,300
83	Mobile	360,400	37	Columbus, OH	900,800
84	Chattanooga	357,000	38	San Antonio	871,000
85	Bridgeport	352,600	39	Rochester, NY	804,500
86	Charleston-North Charleston, SC	349,500	40	Hartford-New Britain	794,400
87	Columbia, SC	345,500	41	Louisville	743,200
88	Wichita, KS	338,200	42	Memphis	742,800
89	Bakersfield	336,400	43	Salt Lake City-Ogden	734,900
90	Canton	335,600	44	Nashville-Davidson	720,700
91	Sarasota-Bradenton	332,500	45	Birmingham	708,600
92	Worcester	324,600	46	Greensboro-Winston Salem-High Point	705,800
93	York	323,800	47	Oklahoma City	685,100
94	Little Rock-North Little Rock	322,500	48	Dayton	681,000
95	Quad Cities (Davenport-Rock Island-Moline)	316,400	49	Albany-Schenectady-Troy	669,100
96	Beaumont-Port Arthur-Orange	313,900	50	Toledo	649,900
97	Ft. Wayne	310,600			
98	Shreveport	307,800		26-50 Total	20,856,000
99	Peoria	302,400		1-50 Total	93,148,000
100	Lancaster	302,100			
	51-100 Total	21,096,900			
	1-100 Total	114,244,900			
101	Stockton	297,600	51	Honolulu	639,000
102	Spokane	289,200	52	Jacksonville	622,800
103	Lakeland-Winter Haven, FL	279,900	53	Orlando	613,100
104	Des Moines	279,800	54	Tulsa	582,300
105	Madison	276,100	55	Northeast Pennsylvania (Wilkes Barre-Scranton)	552,400
106	Augusta, GA	273,500	56	Allentown-Bethlehem-Easton	546,600
107	Reading	269,300	57	Akron	545,100
108	Lexington-Fayette	266,900	58	Richmond	540,900
109	Jackson, MS	264,300	59	Charlotte-Gastonia	534,100
110	Utica-Rome	262,300	60	Syracuse	527,600
111	Colorado Springs	260,400	61	West Palm Beach-Boca Raton	525,700
112	Corpus Christi	260,300	62	Grand Rapids	497,800
112	Huntington-Ashland	260,300	63	Springfield-Chicopee-Holyoke	494,200
114	Evansville	259,900	64	Greenville-Spartanburg, SC	485,200
115	Huntsville, AL	255,200	65	Tucson	468,900
116	Binghamton	249,300	66	Omaha-Council Bluffs	461,400
117	Pensacola	243,200	67	Raleigh-Durham	460,200
118	Salinas-Seaside-Monterey	242,200	68	Austin, TX	459,200
119	Appleton-Oshkosh	241,000	69	Wilmington, DE	441,100
120	Daytona Beach	239,500	70	Youngstown-Warren	438,600
121	Melbourne-Titusville-Cocoa, FL	238,200	71	Fresno	432,900
122	Eugene-Springfield	236,200	72	Flint	419,400
123	Kalamazoo-Portage	233,800	73	Knoxville	409,800
124	South Bend	232,600	74	Baton Rouge	409,600
125	Greenville-New Bern-Washington	230,900	75	Las Vegas	402,300
			76	Lansing-East Lansing	389,900
			77	Albuquerque	385,100



People who were uneasy about the power of radio found new grounds for worry in the meteoric rise of Father Charles E. Coughlin of Royal Oak, Michigan, who captured the imagination of millions of Americans in the dark years of the Depression with his vague talk of “social justice.”



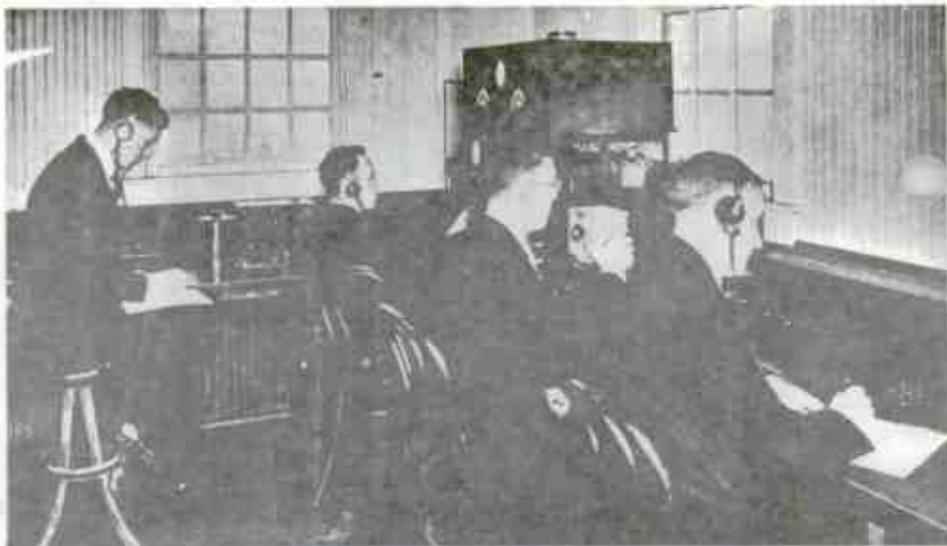
An afternoon religious service broadcast by KDKA in 1923.



Dr. S. Parkes Cadman, noted Brooklyn clergyman and nationally syndicated columnist, pioneered in a regular weekly religious series over NBC in 1928.



"The great commoner," William Jennings Bryan, broadcast a sermon from Point Breeze Presbyterian Church in Pittsburgh over KDKA in 1922.



KDKA's broadcasting history began on November 2, 1920. This picture shows the station's entire staff and equipment set to broadcast the Harding-Cox elections.



1921—The world's first broadcasts of Sunday church services originated from the Calvary Episcopal Church, Pittsburgh, Pa., and featured music by the Boy's Choir pictured here. Radio Station KDKA inaugurated this type of programming on January 2.



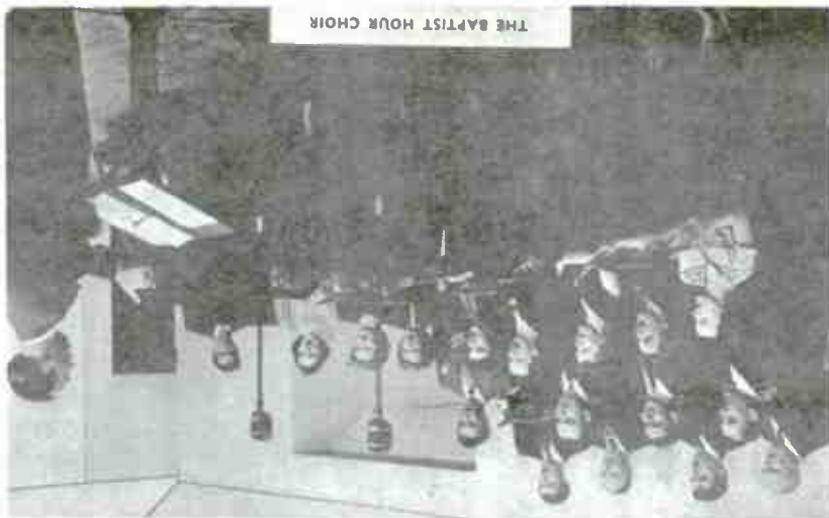
1585 Ponce de Leon Avenue, NE
Atlanta Georgia
First home of the Radio Commission



6248 Camp Bowie Blvd., Fort Worth, Texas—second home of Radio-TV Commission



6350 West Freeway, Fort Worth, Texas—present home of the Radio-TV Commission



THE BAPTIST HOUR CHOIR



CONTROL ROOM

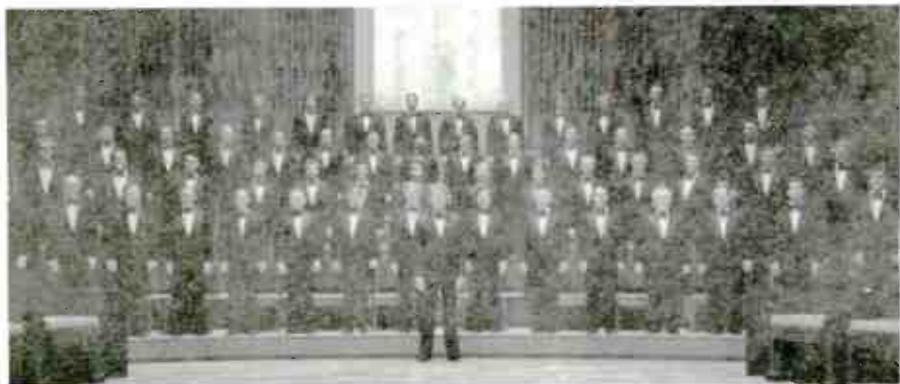


THE STUDIO

Yesterday

World Radio History

Today





Engineering for Radio

Gene Coldwell

"So also you, unless you utter by the tongue speech which is clear, how will it be known what is spoken? For you will be speaking into the air."

I Corinthians 14:9

Radio has been described elsewhere in this book as an art form, and indeed it is. But it is one of the most technologically complex art forms around today. And, the better you understand the technical side of our art, the better your practice of it will be.

Radio is also like many other technical fields in that it has its own language, its own special set of terms. Just developing an understanding of the ideas behind those terms can help a great deal. Also, radio engineers believe that in order to describe something well, you must be able to measure it. So, units of measurement play an important part in engineering descriptions.

Let's follow the broadcast chain for a moment as an imaginary spot commercial is broadcast. An announcer stands in a studio before a microphone, reading a the copy. His voice is recorded on tape. Next, that tape recording is mixed with background music from a record to form the completed commercial, again recorded on open-reel magnetic tape. Next, that tape is dubbed (meaning "duplicated") to a tape cartridge. The cartridge is then played "on the air" from a tape "cart" machine in the control room, through the "console" to the "STL", (studio-transmitter link) to the transmitter. The sound travels as an "electromagnetic wave" to your radio, where it is reconverted to sound. The process is really quite amazing. Considering all that the signal must go through, the realism and quality of the result is remarkable.

Now, the large number of steps in the process also means that there is a large opportunity for something to go rong. Remember Murphy's Law! So, as we talk about the equipment used in all of these

steps, it will be helpful to know what's happening to the sound, and how to measure it, so we can tell if it's right or wrong.

A Word About Sound

To the engineer or physicist, sound is nothing more than a vibration of air. It has two important qualities, loudness, or amplitude, and pitch, or frequency. Of course, there are many other qualities to sound, but these are the fundamental ones. We will see why later. The pitch is measured in cycles (vibrations) per second. One cycle per second is called one Hertz, after Heinrich Hertz. (Remember him from the history section?)

The average person can hear sounds which range in frequency from about 20 Hertz to about 15,000 to 20,000 Hertz. As we get older, the upper frequency limit of our hearing slowly decreases. (Mine used to be about 18,000 Hz.; it is now about 16,000 Hz.). But, it is not necessary to hear the full range of sound to understand speech. Only the range between about 300Hz. and 3500 Hz is essential to understanding. Adding to the range increases the quality, or richness of the sound we hear. In order to sound good, music requires a wider range than speech. Sound with an inadequate low frequency range is "tinny"; and sound with insufficient high frequency content is "muffled" or "muddy".

Of special note is the fact that the high frequency ranges contribute much to the intelligibility and naturalness of speech. Consonants show the loss sharply if high frequencies are missing

The FCC has established maximum frequency ranges for radio broadcasting, based on many considerations. They are 8,000 Hertz (called 8 kilohertz, or 8kHz.) for AM and 15kHz for FM. Thus music sounds quite a bit better on your FM radio, and FM is the band for music.

The situation for sound amplitude is a bit more complicated. Although people can determine pitch quite accurately (some even have "perfect pitch"), they can only determine relative loudnesses. We evaluate the loudness of all sounds on a sliding scale. And that scale is not linear, it is

logarithmic. (If you don't remember logarithms from your high school or college math, don't panic. But it would help a bit to haul out the old book and refresh yourself.) The unit of sound level measurement is also an electrical measure -- because it only measures ratios, not absolute amplitudes. This unit is the decibel, or dB. The "Bel" part of the name comes from sound pioneer Alexander Graham Bell. The "deci" part is a prefix meaning "one tenth". The Bel, soon after its introduction was found to be a bit cumbersome for everyday use. The decibel soon became the accepted unit.

Formally, the decibel is defined like this:

$$G(\text{dB}) = 10 \text{ Log } (P2/P1)$$

where

G is the gain or loss in decibels

P1 and P2 are power levels for two sounds, or electrical signals, or whatever.

The result of all of this is that when the sound or amplifier power is doubled, the sound level increase is 3 dB -- no matter whether the change is from 1 to 2 watts or 100 to 200 watts. And, incidentally, a 1 dB change in sound level is just barely detectable by most people.

Finally, it's time to talk about a few ideas and measurements concerning electricity.

Electrical ideas can be understood well by an analogy to the flow of a fluid in a pipe. Then, the wires in a circuit are thought of as pipes, and our transistors and other gadgets are thought of as control valves. In fact, the English call vacuum tubes valves!

If we pursue this analogy, we recall that a flow of fluid in a pipe has two important and related characteristics. They are pressure and flow rate. They are related by the resistance to the flow of the pipe or system. Now, in an electrical system, the quantity which corresponds to pressure is called potential difference or voltage, and the quantity which corresponds to flow rate is called current. The resistance of the pipe corresponds to a

quantity called impedance. Potential difference is measured in volts, current in amperes, and impedance in ohms. Mathematically, their relationship can be expressed as follows:

$$V = I \times Z ,$$

where V is the potential difference in volts
I is the current in amperes, and
Z is the impedance in ohms

This relationship is known as Ohm's law and it is one of the most fundamentally important in all of engineering.

Summary

Radio is intimately linked with engineering; it is not possible without it. The ideas introduced in this chapter will be extended throughout this book. Your understanding of them will stand you in good stead as you begin to use the tools of the medium.



The Microphone

Gene Coldwell

"Give the winds a mighty voice: Jesus saves! Jesus saves! Let the nations now rejoice!"

Owens

Any broadcast process ultimately starts sometime with a microphone. And, good microphone knowledge is valuable to any producer. Therefore, that's where we'll start, too.

Two important characteristics of a microphone are ruggedness and fidelity. Of course, ruggedness is more important in a field microphone than one used in the studio, but fidelity is important in any microphone. A high fidelity microphone should faithfully reproduce the sound it "hears" as an electrical signal, without adding or subtracting anything on its own. Its frequency response should be uniform; it should not favor either bass or treble tones. It should not in any way distort the electrical replica of the sound.

Classification Of Microphones

A third property of a microphone, which may well outweigh the others in certain cases, is the microphone's directional characteristic. This characteristic is used to divide microphones into two broad categories: omnidirectional (or non-directional) and directional. The directional category is further subdivided into groups of cardioid, bidirectional, and hypercardioid.

All of these terms refer to how well a microphone "hears" sounds arriving from different directions. Figure 6-1 shows representative patterns for these five types. The graph shows the microphone's sensitivity as a function of angle of arrival of the sound.

The other broad classification scheme for microphones is based on their mechanical functioning. Many of these mechanical types are available in more than one pattern style. But it is often possible to ascribe general characteristics of fidelity and ruggedness to these mechanical types.

Microphone Types - General Characteristics

CARBON - In this microphone, a movable diaphragm has one contact, and this contact works in a small chamber with a fixed contact. In the space between the contacts, there is carbon dust. The vibration of the diaphragm by sound causes the carbon between the contacts to have a variable impedance, which can be used to create an electrical signal. (Recall Ohm's law to see how.)

Carbon mikes are among the least expensive, and most plentiful types. They are plentiful because they are used in most telephones. But, they have high distortion, and severely limited frequency response. They are not generally suitable for broadcast radio work.

DYNAMIC - This microphone has a lightweight metal or plastic diaphragm with a small coil of wire attached to it. The coil is suspended by the diaphragm near a magnet. When sound waves move the diaphragm, a tiny electrical voltage is generated. The process is similar, except for the size of the signal, to power generation.

Most broadcast mikes are dynamic. They have good fidelity, can be quite rugged, and come in a variety of patterns. Several popular broadcast dynamic mikes include:

Electro-Voice 635A (The standard for field interviews. good quality, breath-blast resistant, and virtually indestructable. Omnidirectional.)

Shure SM-58 (Popular with vocalists. General purpose cardioid)

Electro-Voice RE-20 (Cardioid designed especially for the radio studio.)

Sennheiser MD-421 (Also a good studio mike)

RIBBON - In this type, a small foil ribbon is vibrated by the sound, again in a magnetic field. (The microphone is essentially a variation of the dynamic type.) Because the mass of the ribbon is small, it can respond more easily to sound. Thus, the microphone is more sensitive, and has higher quality. But, it is often more fragile.

Representative types of ribbon mikes are:

- Beyer M 500 (Exceptionally rugged)
- RCA 77 DX (A broadcast studio standard for many years)
- Shure Model 330 (Moderate in price, compact size)

CONDENSER - This is the Rolls Royce of microphone types. A high D.C. voltage is applied to a gold-foil coated polyester diaphragm. When sounds vibrate the diaphragm, small changes in the electric field around the diaphragm occur. These may be amplified and converted to an electrical signal. Because the signals are so tiny, an amplifier must be located right at the microphone element.

Generally, condenser microphones have the highest quality, are the most fragile, and are the most costly of microphones. The necessity of a fairly high voltage for "polarizing" the condenser, and the amplifier, require the connection of an external power supply. Thus, they are often cumbersome and not portable. But, in the last few years, two developments have occurred which have dramatically reduced the price and complexity of these microphones.

First is the invention, by the Japanese, of the electret, a permanently polarized condenser element. It eliminates the need for the high polarizing voltage. The second is the development of small, battery operated microchip amplifiers.

The result has been a cost reduction of these microphones of as much as tenfold. In fact, very good electret condenser microphones can now be purchased for under \$50, and a \$15 cassette recorder mike today may actually exceed the performance of a \$100 broadcast dynamic of a few years ago.

MICROPHONE TECHNIQUES

Cardioid or Omni? - Generally, omni type microphones have the best fidelity and widest range. But if background noise or feedback is a problem, a high-quality cardioid may be the better choice. This is particularly true if the mike is doing double duty as a sound system mike as well, or if the appearance of the mike is objectionable, as in a TV

appearance of the mike is objectionable, as in a TV or stage setting.

Miking a group such as an ensemble, choir or orchestra. - Be sure that the mike is far enough away that it does not image individuals, but gets a blended sound. This usually requires a cardioid. If you have the luxury of advance planning, use the patterns in Figure 6-2 to guide you in placement. A good rule of thumb is to place the mike as far away as the group is wide. In many cases, you'll have to use more than one mike to do the job. Be certain that the mikes are closer to the sources than they are to each other. Otherwise, the slight timing differences in sounds reaching two different mikes which are subsequently mixed together will cause an unpleasant "barrel" sound.

As a by-product of the above, for a soloist or single speaker, there should be only one mike. If there are two mikes on the lectern, for example, one should be OFF. Don't use a lectern mike and a lavalier at the same time.

Proximity Effect - Most Cardioid microphones exhibit the so-called proximity effect; that is, they emphasize lower frequencies when used at close range (six inches or less). Vocalists and radio announcers make this effect work for them. It gives the voice a richer, more intimate and pleasing quality. Cardioid ribbon mikes such as the 77 DX are famous for this quality.

Sound Reflections - If a performer is some distance from a mike, above a hard floor or stage, the reflected sound is picked up by the mike as is the direct sound (Figure 6-3). The result is similar to the two-mike problem above. Since the reflected sound travels farther than the direct wave, it arrives out of time, and causes the same problem - a hollow, barrel effect. The solution looks offbeat, but it works well. The mike is placed at floor level, pointing at the floor. Now, the direct and reflected waves arrive at the same time. As an added advantage, the mike is nearly invisible. This is most effective in theatrical situations. Shure makes a special stand for suspending a mike just off the floor, and Electro Voice makes a foam "Mike Mouse" for the same purpose. If the floor is only moderately reflective, a piece of clear acrylic

sheet about two feet square placed under the mike will help.

One microphone manufacturer, Crown, takes advantage of this effect for a whole series of mikes, the "PZM" series. (For "Pressure Zone Microphone"). These mikes should be mounted on a large, flat surface to function effectively. In certain situations, for example, miking a grand piano, they function very well. They also can be mounted on walls for excellent audience response mikes.

Windscreens - A high-quality, sensitive microphone often picks up sounds that we don't want it to: the passing breezes in an outdoor interview, or a speaker's particularly explosive and troublesome "P"'s. For these situations, we employ a windscreen made of fabric or open-cell foam plastic. It prevents the mike from responding to very low frequencies, such as wind noise and plosives. There is a bit of sacrifice in overall quality, usually more than offset by the removal of the distracting sounds. In an emergency, a handkerchief or a sock can be employed.

Another frequent source of unwanted sound is "handling noise". This occurs when vibrations are transmitted to the mike through its case or cord, by careless handling. Mikes such as the Electro Voice RE50 are specially shock mounted to reduce this noise. Careful microphone handling can eliminate the effect in even the poorest mikes. Use two rules: Never shift your grip while the mike is "live", and make a loop in the cord and clamp the loop tightly in your hand as you hold the mike. This will eliminate even stubborn cases.

Final notes for the studio - The studio mike is as sensitive to paper rattles, clothing noises, and other unwanted sound as it is to the announcer's voice. Therefore, these distractions must be kept to a minimum. Heavy paper rattles less; use 24 lb. mimeo if you can. The microphone is also sensitive to the direction of the speaker's voice; avoid looking around, but don't stare at the mike. You may work the mike close, to take advantage of proximity, but if you do, beware of plosives. Use headphones and a good engineer or assistant.

Final Notes for the Field - Headphones are a must, preferably the type that seal out natural sound, so that you can hear exactly what the mike does. Not all background noise is bad; but it must emphasize, not distract from, the main idea. If noise is a problem, use windscreens, shift your location, etc., until the problem is eliminated.

CONNECTORS, CABLES, SIGNAL LEVELS, ETC.

The next item up the broadcast chain is the microphone cable. And here, we encounter an important corollary of Murphy's law: The cable available will have the wrong connectors. A table showing several commonly used audio connectors is shown in Figure 6-4.

Signal Levels - At last, we get to put our knowledge of dB measure to work!

Most microphones have an output level of about -55 dBm, or about 55 dB below our .774 volt reference level (this works out to be about 3 millivolts). Most tape recorders have outputs around -10 to +4 dBm. Thus, if we connect a tape player to an input designed for a mike, there will be major overloading and distortion. And, if a microphone is connected to a high-level input, designed for a tape machine or the like, we'll hardly hear a thing. The input must be matched to the source.

Not only must we match levels, we also must match impedances. But, today, this isn't a major difficulty, because most sources are fairly low impedance devices. The rule is, the source impedance should be lower than the load (input) impedance, in order to prevent line loss and distortion. Thus, low impedance sources are to be preferred. And, high impedance sources have another defect. Because of capacitance in cables, a high impedance source should only be used to drive short cables - less than thirty feet or so. This is usually fine between a recorder and mixer, for example, but is often woefully short for a mike cable. So, low impedance mikes are the preferred type. And, fortunately, most dynamics and all condensers are low impedance.

Audio cables should be shielded to prevent the pickup of unwanted hum, noise, and radio signals. (The shield is a grounded, braided wire jacket which surrounds the signal carrying wire or wires. The best cables have two conductors in addition to the shield. These are called "balanced" cables, and to be used effectively, they must be connected to balanced inputs and outputs. The usual connector is the three-pin "XLR" type.

Recorders



Consoles

Special Effects Gear

Gene Coldwell

Our next stop along the engineering chain is the tape recorder, because tape recording is involved in almost all radio production processes.

The process of magnetic tape recording originated in Germany in the early 1940's. A paper ribbon was coated with iron oxide, which is magnetizable, just like iron itself. An electromagnet was used to magnetize the ribbon as it was spooled past, with speech signals. Later, when this now magnetized ribbon was drawn past another coil of wire, a replica of the original magnetizing signal was produced.

The process remains the same today, but is greatly refined. Instead of a paper base, tough plastics like "Mylar" polyester are used. The oxides used are not only iron, but also cobalt and chromium. As the precision of the manufacturing processes has increased, it has been possible to build smaller machines and tapes: Cassette, Minicassette, and Microcassette.

The workhorse of broadcast production remains the open-reel tape recorder. It operates at speeds of 7.5 and 15 inches per second (ips). Other speeds, from 15/16 to 30 ips may be offered, but to be considered "broadcast", a machine must offer at least these two. Broadcast machines will generally handle reels between 5 inches and 10.5 inches in diameter. The tape is 1/4 inch in width, and either 1.5 or 1 mil in thickness. (One mil is 1/1000 inch.) These machines usually have three "heads"; one each for erase, record, and play functions. The heads are arranged so that the tape first moves past the erase head, then past the record head, and finally past the play head. In this way, the tape quality may be checked by playing the tape as it is being recorded. The recordist hears a slightly delayed replica of the original sound.

In these machines, meters are used to indicate recording and reproduce levels. They are generally calibrated in "VU", or Volume Units, but for our purposes the VU and dB may be considered equivalent. The machine will have one or two "tracks", for mono or stereo use. The machine usually has only line-level inputs, and therefore cannot be directly connected to microphones.

The open-reel machine is the production workhorse because of the editing flexibility that the open-reel format affords, and because of the electronic flexibility that the three-head design affords. But the unchallenged leader for field work is the cassette recorder. Small and light, the cassette recorder is ideal for on-location recordings and interviews. The quality of cassette recorders and cassette tapes has improved dramatically in the last five years. These machines usually have a single microphone input, and automatic recording level controls, although the better models have a manual override and meter. The cassette tapes made by these machines are usually dubbed to open-reel format for editing.

The Console

The piece of equipment used to mix all of the pieces of your show together into a coherent whole is the console. It gets its name because in a broadcast studio it is usually the largest piece of equipment in the control room -- often built into a piece of furniture. It is the key that ties the studio together.

Broadcast consoles usually have between 5 and 16 inputs. These are connected to all of the various pieces of studio equipment: Turntables, cartridge and reel to reel tape machines, as well as microphones and remote lines. Consoles usually have at least three outputs. First is a main program output. Next, there is a second or alternate main output. Finally, there is a cue output. If the console is stereo, then all inputs and outputs will be stereo.

The console also includes other signal processing equipment, such as reverberation, limiting, and equalizing equipment. The input levels are adjusted by means of slide or rotary controls called "pots" (short for potentiometer). Both input and output levels are adjustable by a control marked in dB. The output is always metered; the input may be.

Using the console is an art that requires practice. But it is at the console that the producer finds the highest expression of his creativity.

Special Situations

Special effects equipment, as the name implies, is used to achieve unusual audio effects in unusual situations. Sometimes, it is used to correct defects in recorded material, for example, to remove unwanted hum.

Equalizers:

Equalizers come in two basic types: parametric, and graphic. Both types are used to correct or alter the frequency or tonal characteristics of audio material.

The Graphic Equalizer

The graphic equalizer has usually ten to twenty controls, each controlling a portion of the audio spectrum. Response can be boosted or cut in each range. The range covered per control varies between a full octave for the inexpensive models, to only 1/3 octave for more expensive models.

Uses - If only the portion of the spectrum between 300 and 3500 Hz. is boosted, and the remainder cut, a telephone-like or two-way radio effect is achieved. This can be useful in drama or spots. Also, the graphic equalizer can sometimes be used to correct defects in the quality of a microphone, or room acoustics.

The Parametric Equalizer

The Parametric equalizer is quite different from the graphic type. It has two or three sections which can be tuned to a specific frequency and can be tuned for a very narrow bandwidth. This type of equalizer is useful for removing troublesome single-frequency hums and squeals.

The Limiter

If a very loud signal is received by our microphone, limiting is likely to occur. That is, the output signal will be limited by some portion of the system. If the limiting occurs in a system not

designed for limiting, the result is distortion. Limiters are specially designed to prevent loud transients from causing limiting in a system not designed for it, such as the tape recorder.

Limiting should be applied sparingly. The broadcaster surely will limit all of his program material. If you also limit the material heavily, it may attain an unpleasant "squashed" sound.

FIELD EQUIPMENT

The watchwords for field equipment are lightweight and rugged. The equipment should be lightweight, because it must be hand-carried by you, often for a considerable distance. The equipment must be rugged because it is exposed to all of the environmental dangers of the real world.

Battery operation is a real advantage. This frees you completely from power line dependence. Alkaline cells are the power supply of choice here.

For field interviews, several cassette machines are excellent. For several years, the newsman's standard was the Sony TC-110. Now, there are many excellent models by Sony, Marantz, and Nakamichi. We use the Marantz PMD-220 (formerly designated Superscope C207lp)

If studio tape quality is required in a field situation, there is still only one choice for a machine: the Nagra portable 1/4 inch tape machine, made by Kudelski in Switzerland. There is no finer portable tape machine made.

If a mixer for several mikes is required in the field, there are several choices. Perhaps the most versatile is the Shure M-267. Lightweight and battery operable, this device offers four inputs in a very flexible configuration.

Microphones for the field must be rugged and weather-resistant. A standard is the Electro-Voice 635A, but others, such as the Superscope EC-12 are also in common use. A good built-in windscreen is a "must" in a field microphone.





Writing for Radio

Jim Rupe

"...Write the vision, and make it plain..."

Habakkuk 2:2

Writing for radio is NOT writing. It is speaking on paper. To write for radio, you have to begin again to learn to write. Forget the old rules about writing.

Years of preparation for writing themes, term papers, dissertations, and any structured composition -- have to be put aside to be successful in writing for listening.

Try and forget principles like "EVERYTHING MUST HAVE A BEGINNING, A MIDDLE AND AN END" and try not to pay too much attention to things like parts of speech.

The fact is, that if you remember too many of the rules of good composition, they'll get in your way. What you must have is a good working knowledge of informal, everyday, PRACTICAL, English.

It is intriguing that great men and women, who write their life stories, more often than not have actually TALKED their lives into a tape recorder. A "real" writer will listen to the tapes and then make the comments grammatically correct, putting it all in proper literary style. That may make for good reading --- but if you're a listener, it's not half as interesting as the real life, out loud pronouncements that originally fell from the lips of a human being -- who, although not necessarily talented at "writing reading" -- did a great job of "talking listening." In fact, that's something we're all good at. So, we've all got a head start--we can talk--. Now let's learn how to write "talking."

WHAT'S THE DIFFERENCE BETWEEN THE TWO STYLES -- WRITING AND TALKING?

Record a conversation sometime and then go back and transcribe it verbatim. Look at the sentence fragments. Look at the dangling participles. Notice the lack of proper "verbal" punctuation. The fact is that we don't talk like we write --- just as we don't listen like we read.

Simplicity is necessary when the listener can't go back and re-read the sentence. What is written for radio has to be understood at a single hearing. How do you accomplish that? First, be brief. Keep sentences short. Someone has said that a good rule might be to take your original copy and draw a line through every other word. The temptation in writing (and talking) is to do too much of it. The only problem, or at least the major problem with short sentences, is the tendency for them to have a halting or disjointed sound. It takes some practice to combine both brevity and a smooth flow.

Second, one of the most simple, yet most effective tools toward listenable writing, is to use lots of contractions. This is especially true in the use of personal pronouns. "He'll" instead of "he will". Rather than "you have", use "you've". "Don't", "wouldn't", "can't", "isn't", and on and on it goes. If there are no apostrophes in your copy, there's a pretty good chance it could stand more revision.

Next, avoid the temptation to use topic sentences. Don't try and preview all the important points you're going to cover. Instead, use some attention getter. It should relate to the topic, but that relationship doesn't have to be obvious. How about a religious spot that starts off, "Spinach is disgusting!" Either you agree immediately when you hear it, or you're upset that anyone would make such a sweeping and obviously unfair statement. But the spot goes on to say, "Popeye notwithstanding, I've always felt spinach was created just to give parents something to yell at their children about. (Note the preposition that the sentence ends with.) But last Tuesday (definite point in time, not "recently" or "the other day"), last Tuesday while making my typically unorganized tour of Piggly Wiggly Super Market, I watched no less than three different people, normal in all apparent respects, actually paying good money for the stuff." Then the

spot goes on to remind the listener that although the gospel of Christ is foolishness to many, others have found it to be the secret to meaning and purpose in life.

Of course, what we're talking about is verbal illustration. If you can use colorful verbal illustrations to enhance your points, your listeners will enjoy hearing you and these dashes of color are what he'll take with him. They'll help him remember the main thrust of your message even if they don't recall the specific illustration.

Still another example explaining the nature of God's gift of salvation might be in the offering of a gift of a pencil to another. It is accepted or rejected strictly as the decision of the recipient -- once the offer has been made.

Punctuation marks are both grammatical and verbal. Writing for radio, use the verbal values. Punctuate for sound. If you want a pause or temporary break in thought, use a dash or double hyphen. Don't worry about its grammatical correctness.

Use vivid word pictures. Here you can be even more effective than television in creating incredible scenes in the mind of the listener. Using the word "scamper" would be more effective than the commonplace "ran." He "strolled" -- rather than "walked."

In one of the most effective advertisements for radio ever created, Stan Freburg once filled Lake Erie with hot chocolate, covered it with whipped cream, then had the entire Royal Canadian Air Force tow a huge marischino cherry overhead and drop it right in the middle with a tremendous "plop." (As you write, don't forget the potential you have with sound effects.) You can use words to create amazing images and pictures in a listeners mind. Even now I can feel the darkness described in "God's Trombones" as the narrator talked about it being "black as a hundred midnights down in a cyprus swamp." In a Christmas essay, Wendell Belew described a Christmas eve scene so vividly it made you shiver from the cold and the beauty. "The trees were all spradled out with the weight of the snow and the light shinning made everything look like lumps of pure gold." Other examples: As cold as -- the bathroom

floor on a January morning. As happy as -- a five-year old first waking on Christmas morning. You get the idea.

Become a good listener to all kinds of verbal communication. It'll be one of the most important things you can do to improve your ability to write listenable copy. More importantly, listen closely to the type of station for which you plan to write. Become accustomed to the language that is accepted. Country, rock, beautiful music stations and their listeners all have their own distinctive language styles. Nothing will turn off listeners more quickly than a message obviously out of place because of inappropriate language.

The Wall Street Journal recently published this excellent example of brevity, simplicity, and word pictures:

KEEP IT SIMPLE!

Strike Three.

Get your hand off my knee.

You're overdrawn.

Yes.

No.

You have the account.

Walk.

Don't Walk.

Mother's Dead.

Basic events require simple language. Idiosyncratically euphuistic eccentricities are the promulgators of triturable obfuscation.

WHAT ABOUT CONTENT?

KNOW WHO YOU'RE WRITING FOR !

By now, you're well aware of the demographic strata or radio audiences. Obviously the target audience will effect the style, the word selection, and the subject of your writing. You MUST START OUT WHERE THE LISTENER IS. Try and imagine all of the different things that the listeners might be doing as they were tuned in. It's actually a much easier

chore to try and think of something that someone listening ISN'T doing. And Remember--you're only talking to ONE person. No matter what you've heard, this isn't mass communications -- it's a one-on-one situation. If you're going to get that listener's attention, you have to say something that interests him. Not only do you have to know the demographics of your audience--you have to know the PSYCHOgraphics. Even Aristotle talked about the different interests of young and old -- men and women. Young people he said liked romance, adventure and daydreams while old people liked practical, down-to-earth bread-and-butter stuff. Men, he said, like numbers, gadgets and things. Women love talk, sentiment, and people. Study your audience and then write in the form that is most likely to appeal to them. The more you know about the person you're writing for, the better job you'll do in communicating with him. That doesn't mean that you have to write or say what he wants, but that you communicate what you want in the form most likely to appeal to your audience. Remember that most listeners would rather be entertained than educated. If you can provide that little hint of entertainment, you can educate, inform, and even preach along with it.

HAVE A MAIN POINT SHARPLY IN FOCUS. Don't get sidelined on secondary issues. And don't avoid difficult topics. You CAN make a difference.

HOW DO YOU BEGIN -- WHERE DO THE IDEAS COME FROM ?

First and most important, pray for the guidance of the Holy Spirit. Then study the problem. Try to concentrate on using the rifle effect -- with narrow sights aimed at specific problems or target audiences, instead of dissipating your effectiveness in the shotgun approach. You may actually communicate with fewer individuals, but you'll move those to a much greater degree and the likelihood of life changing decisions will be much greater.

As you begin to actually do your writing, get all the facts you can find and make notes. Almost always, effective writing comes in five stages--

1. Collect material. Magazines, the library,

personal contact and interviews.

2. Spend time working/organizing, trying to come up with an angle or approach.

3. Think Aside. Put it out of your mind while you think of something else. (process of incubation)

4. Inspiration - sudden bright thoughts (often in the middle of the night)

5. Writing and revising

SOME FINAL POSITIVE NOTES ---

Weave your subject into the existing interests of the listener

Let your message "fall" on the listener. Don't beat him to death with it.

When you're successful, continue to experiment with new approaches -- coming back to your successful formula with a new look now and then.

Be accurate.

Be sincere.

SOME MISTAKES TO AVOID

Approaching a subject without sufficient background

Using incorrect facts (destroys credibility)

Talking down (or up) to the listener

Making erroneous assumptions

Trying to do too much in one shot

MUSIC CLEARANCE

Jim Aiken
Stan Knowles

"Sing a new song to the Lord ! Sing it everywhere around the world ! Sing out His praises ! Bless His name. Each day tell someone that he saves. Publish his glorious acts throughout the earth. Tell everyone about the amazing things he does."

Psalms 96:1-3

All music belongs to someone! That's right. It didn't just happen. Somebody wrote it! And if it's on record or tape...the chances are good that it is also published. So what?

What does that have to do with me? What does that have to do with my little church? What has that got to do with anything? Just this...if you reproduce a piece of music onto a piece of tape or on a record for the purpose of playing it on the air, you must get it "cleared." In other words...get permission to use that music. The same thing also applies to the use of music (no matter how generic it may seem to you) on sound tracks, radio spots and filmstrips.

How do I get a piece of music cleared? There are organizations especially in business to oversee this type of activity. They are music clearance agencies. I'm sure you've heard of them by their anacremous names. They are...BMI (Broadcast Music Incorporated), ASCAP (The American Society of Composers, Authors and Publishers), and SESAC (which used to stand for "The Society of European Stage Authors and Composers" but now officially stands for nothing.) These companies are non-profit organizations and exist for the purpose of protecting the rights of songwriters and publishers, and oversee the collection and distribution of mechanical and performance fees ! ASCAP and BMI

clearance pertain to broadcast of recorded music, but not its incorporation into other program material on tape or disc, or film. For this, a "synchronization" license from the publisher is necessary. But, many program producers quite successfully ignore this provision of the copyright law. A letter to the clearing agency, which represents a certain songwriter's and/or publisher's interest, should get you sufficient information concerning clearance. You may also write the publisher for this clearance information. A good policy concerning clearance information in conjunction with any production which includes music (themes included) is to always keep a record of clearance information! That way you will always be able to cover your tracks just in case you are questioned as to the use of a particular piece of music.

Clearance information should be recorded on every script where music is used! That information should include: the title of the song, the name of the artist, the writer or writers, the name of the publishing company, the clearing agency (ASCAP, BMI, etc.), the name of the record company (i.e. RCA), and the number of the album or single from which the musical selection was taken (i.e. LPS-1002.) Then, you may include the time (length of the selection) just for your production purposes! On paper the clearance information should look something like this:

SOUND: IN THE SWEET HAVEN OF REST (JOHNNY CASH)
(WRITERS: J. RUSSET/
B. BARLOWE) APOLLO MUSIC PUBL., LTD. -
RCA LPS-1002 (3:29)

Prior to the passage of the new copyright laws...all original musical compositions were copyrighted for a period of 28 years. After 28 years, the writer could then copyright the selection for another twenty-eight years! After 56 years, that musical composition would automatically revert to which is known as "P.D." which stands for "Public Domain!" In other words...after 56 years...the public owns that piece of music and it could then be recorded, performed on stage etc., without the

performer or producer having to have clearance permission! The current copyright laws change all that and now say that any original musical composition, when properly copyrighted, belongs to the writer or writers for the lifetime of the writer/writers!

Therefore, it behooves "any" individual who plans to use a piece of music other than their own original works...to make sure that it is cleared! It is not out of the realm of possibility that even a church (maybe "you" and "your" church) might be sued for unauthorized use of original musical compositions! Be careful! Be honest!

SOURCES AND ACQUISITION OF MUSIC AND INTERVIEWS

First, let's deal with sources and acquisition of music! Naturally, most of us have record albums, singles and tapes at home which we've purchased or been given over the years! That is "one" source of music. We generally "know" what we have at home on the shelves! Another obvious source is to just go out and "buy" what you need! That's probably the best way, since new albums and singles (not tapes) are fresh and therefore are not scratched! Remember...when transferred to tape (i.e. mixing a song into a program or soundtrack)...a scratch is not a scratch! It is a pop, or a series of pops! Still another source of music is from the artist, if you can talk that artist out of an album or a single, or from his or her agent, or from the P.R. person at the record company! Sometimes this method is not so great unless the production you're doing is of such magnitude that it will benefit the artist and/or the record company!

Now, let's talk about sources of interview materials! First of all...all radio and T.V. programs, or soundtracks do not use interviews! But if yours does...then your number one problem is, "How do I get these interviews?" The place to start, of course, is to determine what type of interviews you need for your particular program or production. If the interviews need to be from the entertainment field, then you need to contact the public relations or management people who work with that particular artist! Call them on the telephone! Talk to the

biggest, most responsible person there who will talk to you! Explain your needs, your production and the importance of it, and very calmly but clearly state your desire to interview that artist! If one uses courtesy when pursuing an interview, no matter what kind it is, people will most often try to help you! If they can't or just won't...don't get ruffled! Thank them anyway, then go back to the drawing board. Maybe you can catch them for an interview sometime when they are going to be appearing at a nearby location for some entertainment or charitable function! At any rate...in this business...patience and persistence pay off!

Interviews with persons involved in "normal, everyday" situations (not show biz) are generally much easier to obtain! However, here too...courtesy and information are both vitally important! Some of the most interesting and informative interviews come from the "work-a-day" folks!

Interviews with country music personalities are easier to obtain than interviews with rock stars...partly because of the magnitude of the situation that has been created around the rock star (i.e. security)! It pays to investigate the accessibility of the type people you are wanting to interview! Some personalities, especially those who have been very famous and are now retired...don't like to give interviews! If that's the case...it's better not to try, and plan something else!

When the possibility of an interview exists at a nearby location such as at a theatre where the "star" is going to be appearing on stage...sometimes you may be able to make a good contact by calling the theatre manager or the person or agency who booked the show into that theatre! You see, sometimes "just being there" affords you the opportunity to come in contact with the "star" and sometimes it will come to fruition that way!

When possible...always call or write and make an appointment to talk with an agent or manager about the possibility of doing an interview or interviews! Calling will sometimes get you the permission you need to do the interview while you're on the phone! At other times you may need to call, find out if you can talk with the agent or manager, and then "be there!" Be there "on time!"

These are just some suggestions as to how you may tap into the source of good interview materials. Obviously, there are other ways. Above all...I think one of the great secrets to ferreting out interviews is to..."be patient, be persistent...and above all...be courteous!"



The Vocal Variety

Stan Knowles

"There are, it may be, so many kinds of voices in the world, and none of them is without significance."

I Corinthians 14:10

In radio or television or media production, there are several categories of speakers. One of these we will call the "expert." The expert is not an announcer, but is the person who is or has been a professional involved in the subject of the program, such as a former quarterback doing "color" on a professional football telecast. The "expert" may be an outstanding gourmet or, in the case of a Christian program--a minister!

Next we have the "actuality" voice. An "actuality" voice is the voice of an "actual person" who is involved in a program, such as "the voice of a person who has been burglarized talking to a reporter!" The "actuality" voice does not have to actually be the real person who was involved. I think the difference comes at the point of deciding what type program you are producing. If it is "news" then I think it should be the actual voice of the involved person. If the program is a dramatization, if it is fictitious in nature..no problem. Substitute an actor or actress.

The next type of voice we'll consider is the "interviewer." You can see by the word itself that this type of voice is almost self-explanatory. The "interviewer" interviews!

The last, and perhaps the most important voice is that of the "announcer." The character and nature of the program or broadcast itself will mostly determine what type of announcer you need to fill the bill! Not all announcers sound like the network breaks on "Sunday Night at the Movies" on television. In reality, some announcers have a very

"thin" sound. Others have a very "big round" sound, while others have a very "mediocre" sound. Some have a "bright personality" sound. Some have a very "matter-of-fact" sound. Analyze your program well. Get opinions from others before choosing an announcer. Decide exactly what you want the announcing portions of your program to sound like...then look for an announcer with that type of voice!

Where do you find an announcer? I guess the best starting place is your radio or your television set! Turn that dial! Listen well! When you hear a voice from your local area that sounds anything like what you have in mind...write down the name (if you can get it), the name of the program, the time you heard it, and the station call letters! Then you can follow up by calling that person at the station, or leave your name and number and have them call back. Make an appointment with the person (if they're interested) and set a time and place for an audition. After you get several auditions (assuming you're sure you have enough), gather the "folks" together, listen to the tapes, and make an "executive decision." "So and so will be our announcer!"

What do I look for in a good announcer? Well, obviously, "the" announcer must have the type voice qualities you need for your particular program. Next, a good announcer is like a good "anything else." A good announcer must take "direction." That's right! It's your program, not his! He must be readily willing to be willing to "take it again" and do it your way. A reluctant or argumentative announcer is a very non - professional person and is obviously in the wrong industry. The best announcers take direction the best and do it happily (your way!)

What if I want to be the announcer? After all...it's my program! Fine! But first you should get another person's opinion as to how the product sounds "with you as the announcer." There is a possibility that you don't sound nearly as good "as you think you do." Now, that's hard to swallow...but oftentimes trues! You must be realistic and open-minded about it. But for the moment let's say that you have sought other opinions and the report

is good. You will do! Or at least, folks like you and "you have potential." Well, I have to admit, if folks like you and you have potential, that is definitely a "starting place."

First, you must realize that God created you and in doing so he made you "different" from anyone else on the face of the earth! Therefore, the sooner you realize that you are not Johnny Olson or Don Pardo, or any of the other fine network announcers, that you are "yourself" and that you are "unique", the better off you'll be! Perhaps the very best advice any professional person ever got was... "Be yourself!" Listen to your voice on a tape recorder. Listen to it! Now, listen some more! What do you hear? I mean, what do you really hear? "Know thyself and know thy voice!" That's the King James version of "Know who you are...and exactly what kind of equipment you have to start with." Only when you know this can you develop your voice and your style.

Developing the voice! There are four basic elements to the human voice! They are: volume, pitch, quality, and rate. First, let's talk about volume. We all know what volume is. It is the result of the amount of air that is pushed from the diaphragm up through the larynx or vocal chords and out through the mouth. The "volume" may be "loud" or "soft" or any degree in between. When working on a "stage" one must "project!" In other words, speak loudly (with a big volume) so that people can hear all over the auditorium. However, "studio work" such as a radio program, or a television show calls for a "normal" to a "normal-soft" volume. Broadcasting requires an opposite approach to the stage or theatrical presentation. In broadcasting, "you normally do not project!" Instead, the microphone picks up the voice, translates the air molecules into electrical impulses, which are then modulated (formed) and transmitted out through the air or transferred onto recording tape. Remember, "do not project ." " Do not yell engineer do the work!" By the way, the volume is the direct result of the amount of air taken into the lungs and the lungs' strength and ability to push that air up through the voice-box. Therefore, if you are to be an announcer, you should learn proper breathing.

This is accomplished by learning to breathe through the diaphragm and not through the mouth.

Next let's consider "pitch." Pitch is the variation of the sound which is produced from the diaphragm and larynx. In other words, some sounds are higher, some are lower, and there is a myriad of "mid-range" pitches. We also refer to the variation in sound (or pitch) as "inflection." If one has a natural bent toward being very "monotone" in his or her speech patterns, inflection must be learned, otherwise, that person will never become an announcer. An announcer must have a voice that is both "pleasing" and "interesting." A voice that is monotone is neither pleasing nor interesting. A good source for further information is a book entitled How To Be A Disk Jockey by Dan Ramsey. It devotes a portion of an entire chapter to this subject. Practice varying your pitch levels particularly at the beginning of each sentence. With practice you should soon notice a marked difference and a much more interesting set of speech patterns! Also, your tape recorder will tell you the difference!

Quality! To a certain extent, you can't do much about the quality of your speech because it is basically controlled by the equipment you were born with! That's what we mean when we say, "Some people were just blessed with a great voice, I guess!" That's very true. Looks like we're stuck with what God gave us. However, there are some things we can do to improve our voice quality, partly knowing how sounds are formed and how we can use our "voice-equipment." First, you must know that the mouth cavity is a resonator and that resonator and the lips and teeth are the basic ways we form sounds. One important element in the formation of proper sounds is the use of the lower jaw. The use of the lower jaw when speaking (or the lack of it) varies according to geographical location. In the northern part of the United States where temperatures are generally much colder, much more activity is required by the body which also includes a more rapid speech pattern and the use of the extended lower jaw. Conversely, in the south, characterized by warm to hot temperatures, the natural tendency is to speak with the jaw "hanging."

Sometimes it is referred to as a "lazy jaw." This is not meant to be derogatory, but rather describes the condition which causes an "I" sound to come out "IIIII" instead of "eye," which is the preferred pronunciation. Climatological conditions also explain the reasons northerners speak with a "hard 'r'" sound such as "RRRRR" and southerners say, "AAAAHHHHH!" As I've already said, one must use the lower jaw to properly pronounce words. So, if we're not used to doing that, how do we accomplish it? A good exercise is first very consciously move the lower jaw back and forth, side-to-side. Now practice extending the jaw forward and then bringing it back to its natural position. All of a sudden you are aware you have a lower jaw. Next, remember that you have a lower jaw and that you are to use it. Extend the lower jaw to the forward position, and keeping there (which of course is not natural), begin to speak. Feels odd huh? Sure it does! But remember, you're discovering, maybe for the very first time, how to use the lower jaw in speaking. It's constant use can become a habit...a "good" habit! A "necessary" speech habit for the professional talker. Also, it is important that you know that in order for words to be formed the tongue must first be placed in one of several positions in the mouth cavity, frontal, middle or back. The frontal position is just behind the teeth, the middle is the tip of the tongue touching the middle of the roof of your palate, while the back position is the top of the tongue touching the back of the palate. It's more easily understood by the use of three sounds, each representing a different position for speech, "I," "E," and "A." The "I" is the same sound as the "I" in the word "IT." The "E" is the "E" sound in the word "egg!" While the "A" is the same as the "A" in the word "at." For example, the word "egg" is not pronounced "igg," nor is it pronounced "agg" or "aigg" as it is sometimes said. Rather, it is the "ehhh" sound, so we say, "How would like your egg?"

Now, let's discuss rate. Rate is just what it says it is. It is the rate at which one delivers words and phrases. Somewhere between 120 and 140 words per minute is the rate at which most people speak. The lower number is the rate at which most people speak in everyday conversation, while 140 or

more is the number generally used in broadcast work. A good thing to remember is...just as an announcer speaks properly so most of his listeners can understand, the same applies to the rate of delivery of words and phrases. Now, it is true that announcers are called on to deliver speech at different rates of speed (or words per minute) depending on what he is reading. For example, a news story is read in one style, a sporting event in another, while a commercial for a ladies' boutique is done in quite a different manner. The bottom line is...regardless of the material to be delivered, it must be rendered so that everyone listening can understand, otherwise the announcer has not communicated. After all, communication connotes not only transmitting a message, but that message must also be received and understood. If not, you fail to communicate!

Finally, I think when we speak of announcers, much of the time we are actually speaking of a narrator, a person who guides us through a presentation orally, painting word pictures as we go.

As you have probably already guessed, one could go on until infinity talking about announcers, announcing, narrators, interviewers, etc. However, I think it will suffice at this point to say that, since most all texts on broadcasting are antiquated--and have always been--just remember the few things we discussed such as rate, volume, pitch and quality, then arm yourself with an "N.B.C. Handbook of Pronunciation," do as much outside reading as you can to stay half-way enlightened, and pray a lot!

Recommended reading:

How To Be A Disc Jockey by Dan Ramsey - TAB Books, Inc. - c.1981.

N.B.C. HANDBOOK OF PRONUNCIATION by James F. Bender for the National Broadcasting Company - Thomas Y. Crowell Company - c. 1955.



Interviewing

Charles Ries

Aldo Ruiz

... then you shall investigate and search out and inquire thoroughly...

Deuteronomy 13:14

Conducting an intelligent, intelligible, interesting, informative, or entertaining interview requires both skill and good judgment. Good interviews do not just happen. They must either be planned or they must result from adequate experience on the part of the interviewer. The purpose of this guide is to point up some of the imperatives involved in obtaining a successful interview.

Choosing the Interviewee

The first imperative is that the subject must have something to say. This is not meant to imply that only the great and near great in their chosen fields make interesting interview subjects. An articulate farmer may discuss soil conservation, the overall agriculture problem or government control over the acreage of a specific crop in a manner that will entertain and inform. The distinction lies precisely at this point: the public may listen to a familiar story from a celebrity simply because of his prominence; but the unknown must have a new story to tell.

A vivid example of the celebrity is Colonel Jim Irwin. His presence on radio or television following his journey to the moon continued to awe and inspire listeners because his was the presence of greatness. He had achieved what no other American had ever achieved. And he was heard over and again with avid interest, lest some hitherto unrevealed detail of his flight be missed. When he repeated the story already known by virtually every person in the country the aura of greatness was sufficient to hold attention.

In the main, the day-to-day interviewer must find someone with a story that has not been told as he will tell it. The possibilities are unlimited. Apparently the American public is interested in practically everything. Today the scientist is in the forefront of the news. Space scientists are particularly desirable as interview subjects. But there are other fields where a considerable concentration of interest may be found. Medical research always has a story to tell. And there are vast unexplored areas in the fields of political science, economics and literature.

People with unusual hobbies; people who have had significant experiences; religionists; people with strong opinions and personalities to match--all have something to say. The interviewer's problem is getting them to say it in an appealing manner.

Choosing the Time

Far and away the best policy in seeking an interview is to suit your timetable to the convenience of the subject. That ideal, however, is not always easy to maintain. Often the subject will be operating on a tight schedule and the interview will have to be sandwiched in between other activities. A New York interviewer recites the difficulties he encounters in obtaining interviews in the nation's greatest metropolis. Among the problems he lists are crowded schedules, broken appointments and expense. A union electrician's fee must be paid backstage--even when he uses his battery-operated transistor recorder!

Choosing the time, then, may well be a major obstacle to be faced in securing a good interview. While it may be temporarily rewarding to bulldoze your way into someone's room or office for an interview, greater rewards will accrue from simple courtesy and genuine respect for people's rights. Be aggressive but never exceed the bounds of good taste.

Choosing the Questions

A cardinal rule to remember in any interview is to begin at the beginning. Never ask the climactic question first--unless the interview hinges on a single detailed answer. Keep the questions short. Long, involved questions may confuse the subject and send him off in a different direction from the one pre-determined. If at all possible, arrange a talk-through which will pre-determine the course of the questioning. During this talk-through outline the questions in order and stay with that order as closely as possible unless some spontaneous spark by the subject indicates a departure.

Never ask questions which would embarrass the guest.

Never ask a question which will require only a "yes" or "no" answer. The object is to induce the subject to keep talking.

Never presume upon an answer. The interviewer should conduct the interview in such a way that the subject is permitted to do all of the answering. Under no circumstances should the interviewer begin a question with the statement, "Now, Dr. Blank, we know you're doing some unusual research in the field of veterinary medicine for beef cattle. Tell us about it." Far better to phrase the question so the veterinarian proffers the information himself.

Interviewer: "Dr. Blank, are you engaged in research of any kind?"

The question gives the veterinarian an opportunity to describe what he is doing and subsequent questions can easily determine whether the work is unique or routine.

Stop when the interview is over. Unless the point is critical, never pad for time. In all too many cases, such procedure can do no more than take the edge off what has already been said.

Conducting the Interview

The interviewer should cultivate the art of being deferential. The subject is always the authority, and consequently must be the dominant personality--if this ideal can be contrived. It is true, of course, that some subjects are rather pale

and colorless and may not communicate well. The objective in such cases is to establish the person's importance and authority in his field in the very outset. Brief reminders during the course of the interview may not be amiss. And it is mandatory that the fact be emphasized at the end of the session.

Show a personal interest in what the subject has to say. Indicate that interest by tone of voice, but never by saying, "I see." To say, "I see," leaves the impression that the interviewer is pretending to have at that moment discovered a new fact. And the listener can spot that sort of verbal posturing the moment the words are uttered.

Do not step on the subject's lines. Be sure he has finished answering a given question before cutting in. This can be managed without dead air if you listen carefully and watch the subject's facial expression.

Admittedly there are important people with an interesting story to tell who have a great deal of difficulty relaxing enough to tell it while recording the interview. This is the interviewer's problem. How do you get a person to loosen up and talk freely? There are several devices which may be used successfully. One suggestion is to ascertain the subject's points of personal interest--family, hobbies, friends, charities, religion, fields of service apart from his profession or vocation--and ask a question or two about one of these.

Laughter is an incomparable relaxer. If possible, draw some humorous anecdote from the subject. Or share some pertinent humorous experience during the talk-through. Be careful to note whether the subject has a well-developed sense of humor before attempting to evoke laughter, however, else this device may prove embarrassing.

Be informal. If the interviewer is at ease the subject is likely to experience less tension.

Be conversational. An interview is an attempt to extract interesting, informative, even useful facts from an authority for the benefit of those who listen. A conversational style on the part of the interviewer will often prevent a pedantic style on the part of the subject.

Do not overdo the close. Show the subject your gratitude but avoid repetitious expressions of thanks. A simple, "Thank you very much, General Wilson," will do. Under no circumstances allow yourself to use such expressions as, "It's been such a great pleasure and privilege to have you on our show, General Wilson. Many, many thanks for your generosity in consenting to appear with us here today." There are three reasons for avoiding such effervescence. The first is the impression the interview has made on the listener. He is the sole judge of its merit and nothing the interviewer can say will help the matter. The second reason for confining the close to a simple genuine "thank you" is that effusiveness at this point will detract from the climax of the interview. It must be remembered that the interview content is what you are trying to sell. Finally, the prestige of your program is involved. Never let it appear that your guest condescended to be interviewed. The impression to be left with the listener is that your program is of sufficient importance to merit the appearance of any person, no matter how high his station in life may be.

Always explain to the subject the kind of program he will be heard on, and tell him the name of the organization producing it. Some people may object to appearing on a program produced by a religious organization or a specific denomination.

There are, in the main, five interview categories. They are: unusual hobbies; important occupations; novel undertakings, such as that represented by the architect who built a palatial residence entirely underground; celebrities; and personal Christian testimonies.

Choose celebrities carefully to avoid bringing embarrassment--and even reproach to the program later on. Show business personalities especially should be carefully selected.



Joe Lusk
Jack Norris
Eddie Reed
Kirk Teegarden

Mixing, Mastering, Monitoring

"Commit your work to the Lord, then it will succeed."

Proverbs 16:3

HOW SOUND GETS ON TAPE:

Recording is the process by which sound is taken from a source and impressed on the oxide surface of a plastic tape, by means of electrically induced magnetic fields. It is with the use of the TAPE RECORDER that this process is achieved.

In today's high-tech world of multi-track recordings, digital recordings, record pressing, and even recording for video, the basics are the same.

TYPES OF TAPE:

Due to the competition in the magnetic tape industry, many formulations have been created for higher quality recordings.

Magnetic tape is a plastic ribbon coated with a magnetizable substance which is usually Ferric Oxide. In open reel tapes, there are two basic oxide classifications in use. Ordinary Ferric Oxide, and the so-called "high energy" formulations which are usually Ferric Oxide "doped" with materials such as cobalt.

A "high energy" tape allows higher quality recordings, due to a higher level tolerance before distortion.

The strength of the recording tape is determined by the thickness and makeup of the plastic ribbon. There are three types of plastic in use for the manufacturing of the tape. Acetate, polyester, and poly vinal chloride.

There are three gauges of tape in use in the recording industry: .0015 inch, .001 inch and .0005 inch, called one and one half mill, one mill and one half mill, respectively. The recommended size for most recording applications is the one and one half mill. Recording machines have the tendency to

stretch the thinner gauged tape when:

A) The machine is stopped from a rewind or fast forward mode.

B) The machine is put into the play mode from rewind or fast forward.

C) The machine is switched from rewind to fast forward and vice versa.

Most "state-of-the-art" machines now, can/will compensate for the sudden changes in motion and/or tension, and will not damage cre and one half mill tape. However, extreme care is required with thinner gauge tape, even on the "state-of-the-art" machines.

RECORDING LEVELS - PEAKS - DISTORTION - AND BALANCE:

The input level of any source must be monitored with the VU meter. This meter is measured off in "volume units," which is roughly equivalent to decibels.

The most suitable level during recording is between "-3" and "0", with the "0" being the peak. The peak is where the level reaches its highest average point. Most of the "high energy" formulated tapes will tolerate a higher than "zero level." However, a level of more than +2 will probably cause distortion. It is normal for the needle to read in the red, but never for a sustained period.

Distortion occurs when a signal is overdriven. This will produce ragged sounding high frequencies and is not suitable for broadcast.

Recordings may be classified as mono, stereo or multitrack.

Mono (short for monophonic) recordings have a single channel. Most radio networks are mono; until recently, all AM radio stations were mono. Only one VU meter is necessary. Mono recordings are the simplest to make.

Stereo (stereophonic) recordings are two channel recordings. Because you have two ears, when you listen to a two-channel recording, you can subconsciously reconstruct in your mind the placement of the original sources - instruments in an orchestra, for example. This is the stereo phenomenon.

Stereo recordings convey placement in two ways: the difference in levels between the right and left channels, and also the time differences between the channels. (These time differences are quite small, measured in thousandths of a second.) Thus, the problem of recording a stereo source is complicated in two ways - the level differences, and the time differences.

Since there are two channels, there are two meters. They must be approximately balanced. But, because of the level differences, they will never be precisely the same for true stereo material. Many consoles have "pan pots" that can be used to vary the relative amounts of a signal on the two channels, creating a pseudo-stereo effect. But, the best stereo effect is obtained though time difference, sometimes called "phase difference."

These phase differences can also cause difficulties for the recordist, especially if the material is also to be reproduced in mono. (The mono signal is usually just the sum of the left and right signals.) If the signals on the left and right channels are of about the same amplitude, but of opposite phase, the mono signal will disappear. This is disastrous for the broadcaster. The signal will be reproduced fine on stereo receivers, but ordinary radios will only give a weak, disorted replica of the signal.

Before leaving the subject, we should also note that most recorded music today, and most FM broadcast stations are stereo.

Multitrack recordings are used in the production process, especially in the recording studio for record production. These multitrack recordings are always mixed down to two tracks for broadcast or other release. (There has been limited and mostly unsuccessful experimentation with four-channel release.)

Multitrack recorders are available with 8, 16, 24, and 32 channels. (Watching 24 VU meters at the same time is quite a trick.) Basically, the operation of the machines is the same as that of the professional two-track stereo machines. Each of the channels can be made to record independently, at will. Recording on any channel may be started or stopped while the tape continues to roll. Also, each channel can select between record or reproduce signal output. With many stereo machines, and most multitrack machines, a switch labelled "cue" allows the record head to be used as a playback head for the purpose of synchronization of material recorded on one track with new material.

USING THE OPEN-REEL MACHINE

Hints and Kinks - Familiarize yourself with the threading pattern of the tape machine you will be using. Many recordings have been rendered useless by a mis-threaded machine.

Check your control settings. Things to check are these:

Tension or Torque adjustment: Should be LOW for standard 5 inch and 7 inch reels, and HIGH for large-hub 7 inch, and for 10.5 inch reels. Stretched, ruined, tape and sloppy operation is the usual result of setting these controls incorrectly.

Record Safety Switch: SAFE for playback, and READY for recording. If this switch is set to SAFE, a recording cannot be made, even if the record button is depressed and the record light is on. There is usually a safety switch for each channel on multi-channel machines.

Meter Switch: INPUT for recording, REPRO for playback.

Speed - Set to the speed you want. Vari-speed, if present, should be OFF for recording.

Equalization Selector: Set to match the speed you are using. On many machines, this is linked to the

speed selector and not separately adjustable. But, if it is separate, it must match the speed.

USING THE CASSETTE RECORDER

Hints and Kinks. - Start by using the very best cassette you can afford. The small machines are much more limited by the quality of the tape you use than are the open-reel machines. Avoid the C-120 tapes; they are too thin, and jam easily.

Use manual record level, if you can. Watch the meter carefully, because the smaller tapes are not so tolerant of overload.

Use headphones, to hear what the mike hears.

Be sure to check your batteries before an important interview. Alkaline cells are worth the extra cost; they have a much longer life, and continue to perform better as they become exhausted. They do not fail suddenly.

Use A. C. adapters with caution. Some may introduce hum into the recording. Make a test recording before you use the adapter in a critical situation, and evaluate it carefully.

AUDIO TAPE EDITING FOR RADIO

Audio tape editing is invaluable in preparing any type of radio production. Tape editing is almost an art form and any competent production person must know and be able to use the skills of editing for a polished product.

It's been said, the razor blade is "the producer's best friend." Editing is the ability to cut out a word, phrase, or mistake and splice the cut ends together again so that the production is natural and mistake-free.

Most professional tape machines will have a similar layout of the essential parts; head bridge of head shell, capstan and roller guides. The machine referred to in this section is the MCI JH110B, which is used in the radio studios at the

Radio and Television Commission. This section will deal primarily with 1/4" audio tape editing.

GETTING STARTED

Before the actual process of editing can begin, one needs the proper elements. These elements, aside from the tape machine, include: a single edge razor blade, splicing tape, leader tape and an editing block. (See Fig. 1)

Editing will be easier if the tape speed is 15ips. At this faster speed the recorded material is spread out more on the tape and it is easier to find the desired cutting place. A dub to 15ips can be made if the original is a 7-1/2ips, or if the original is to be saved. It is a very good idea to have a safety copy of anything you edit. Accidents do happen and you may need to start all over. So, save your original and edit the 15ips copy.

There are several schools of thought concerning tape editing. One uses a grease pencil to mark the tape before cutting. While this system works, well, it has its drawbacks. The grease pencil might coat the playback head if care is not taken when marking. For some, this method is more time-consuming.

The technique most widely used by RTVC producers is accomplished by pinching the tape just to the right of the headshell. The thumbnail leaves a mark on the tape which is lined with a predetermined point on the editing block. A slight pinch will not effect the tape output. This technique is both clean and time efficient.

Most production-type machines will have an editing block permanently installed so each edit will be exactly the same as the last. If a temporary block is being used, a system for marking the block must be set up for cutting accuracy. This is accomplished by measuring the distance from the middle of the playback head to the right side of the headshell. Leader tape can be used for measuring the distance by marking the tape with a grease pencil at the playback head and a thumbnail print at the headshell. Once this is done, put the tape into the block and mark the block accordingly. (See Figs. 2&3)

CUT AND SPLICE

The actual process of editing is now ready to take place. This begins by determining what is to be edited, or deleted. In editing voice lines this task is easier to accomplish because the mistakes have been marked on the script. In editing interviews, music or miscues the principles are the same.

Start by finding the beginning point of the segment which is to be edited. Make the first thumbnail imprint at this point. Play the tape to the next edit point and make another thumbnail imprint. Re-wind the tape to the first nail imprint, place the tape in the editing block and make your first edit by cutting the tape. Place the tape from the feed reel back in between the pinch roller and the capstan. Press the button marked "edit". The "edit" button places the machine in a mode where the take up reel remains stationary while the tape passing through the pinch roller and capstan will spill on the floor. When the second edit point is reached, push the "stop" button, place the tape in the edit block and make your edit. Push the two cut ends together and place a piece of splicing tape over the joint. Rub the splice firmly with the thumb of index finger to assure adhesion. Remove the tape from the editing block by pulling upward on both ends simultaneously. Place the tape back in the tape machine and audition the edit before moving on.

There are a few helpful hints to remember when editing. Never throw anything away until you are pleased with the edit. Occasionally, the edit point will not sound natural, or a syllable of sound will be clipped. By saving the deleted portion until after listening to the edit, time can be saved by not having to look for a particular piece of tape in a pile off the floor. Be careful when cutting the tape with the razor blade. Cut the tape only and not fingers. Do not make edits too tight or too loose. The edited material should sound natural. Editing is a learned skill and takes time to become proficient. And, of course, no two people edit exactly the same way.

There are many short cuts and techniques. A basic knowledge of diction, consonant sounds and vowel sounds is helpful. Developing a system of how to use pauses, breaks and breaths is also needed. Aside from the basic procedures described here, there are no cut and dried rules. Only after hours of actual hands on experience are the procedures and techniques learned.

MIXING

Anytime you hear a program, commercial, public service announcement, phonograph recording, church service or any production on the radio, most if not all have been mixed together to make the finished product. Mixing is the blending together of the production's elements. It's like comparing mixing in the studio to mom in the kitchen mixing the batter for a cake. All the right ingredients must be put in and in just the right amounts to make the finished product a success.

After all the elements have been gathered for the production, it's time to head for the studio. Depending on what elements are to be used, the machines are loaded. This could be reel to reel, turntables, cassettes, even a microphone if a voice is added at the time of mixing. Setting a level is the next step. This means playing each element and setting the volume that is best for the production. All productions are different so there is no standard volume to be used. The human ear is the best critic.

For instance, if background is to be used, then a low or soft volume is needed so as not to distract from the main source which could be a voice or interview, etc. If music is to be the main portion of the production, then a strong or zero level is best. One rule of thumb to remember is to keep the levels fairly constant throughout the recording. A good way to lose a listener is to have some parts too hot in volume and some too low. Once the levels are set to the right volume, they can be mixed together.

At this point, it must be said, the best way to learn about mixing is to actually get in the studio and do it first hand. But in brief, the master machine is put in the record mode. Then each element of the production is added at the right time. Some elements will be recorded at the same time or sequeing might be employed. That means conveniently moving from one source to another without disturbing the flow of the recording. Depending on what type of production is being mixed, one will learn there are many shortcuts, tricks and terms that can make any production a success. Like taking a bite of Mom's chocolate cake and knowing she mixed the ingredients just right, the human ear can have just as much delight hearing a well-mixed audio production.

MASTERING

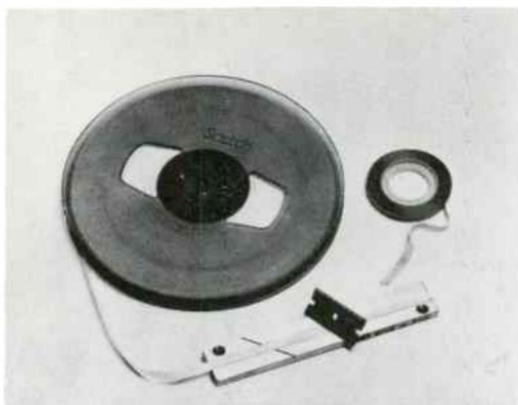
Mastering is the process of transferring your working master to a final broadcast quality copy or copies.

Now before the mastering process can begin, it is of vital importance to use a cotton swab and alcohol to clean the record and playback heads along with the pinchrollers. Cleaning these components will assure you of a better quality product by preventing such problems as sound drop-outs due to dirty heads and tape slippage caused by dirty pinch rollers.

Now you are ready to begin mastering. Be sure that all machines are loaded with broadcast quality mastering tape and that all machines are in the record mode, except for the machine being used as a playback machine.

The overall audio processing or fine tuning is usually done during the mastering process. For example, this is the time when you ride your levels for balance whether or not you are recording in mono or stereo. Second, you can use equalization or EQ to boost or adjust your high, midrange or low frequencies. The third process that can be used is reverb or echc. Reverb can be added to make a richer and fuller sounding copy especially on your voice lines. However, you should never reverb a record that has already been reverbed because it can lessen the quality of your master.

When dealing with the recording speed it is important to remember that most radio stations need the National Association of Broadcasters speed of 7-1/2 inches per second. For our high speed duplication process we generally use a speed of 7-1/2 inches per second. Now, when preparing a master tape for disc or record pressing, remember that the general speed is 15 inches per second. A general rule to remember is the higher the speed of your master tape, the higher the quality.



Editing Tools: Editing Block, leader tape, razor blade, and splicing tape.



Illustration depicts method of marking editing block by measuring edge of head shell of recorder to left side of playback head.

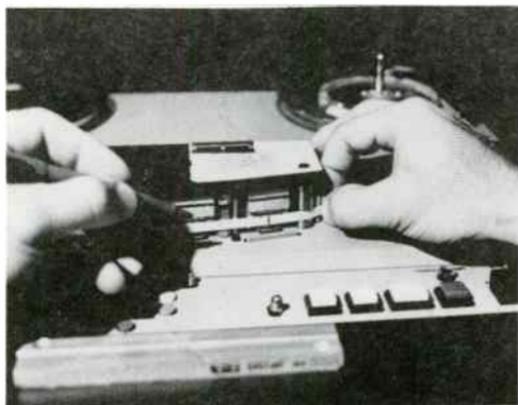


Illustration depicts marking tape with grease pencil at exact point of desired edit cut.





Radio Unique / Religious Radio

The Staff

"...and everyday, in the temple and from house to house, they kept right on teaching and preaching Jesus as the Christ."

Acts 5:42

There should be a great deal more to broadcasting the church worship program than simply turning on the microphone and continuing with the usual program. When time is purchased or given for such a broadcast, the church's responsibility to the station and the listening audience should be recognized. Time and thought, prayer and planning should be vital ingredients in the preparation of the service. The minister and his colleagues assume a rather awesome obligation when they undertake the task of filling an hour of valuable air time. Prayer without planning is impotent. Planning without prayer is impoverishing.

Establishing a regular time each week for working out details of the broadcast will go a long way toward ensuring a smooth, well-balanced program. Each person who has anything to do with the program should be in attendance. If practical, have the station engineer who will be on duty during the broadcast be present for the conferences. Where that is not possible, advise the station's chief engineer, in writing or in person, of any deviation from the regular schedule. Submit music clearance sheets, containing titles, names of authors and publishing companies, several days in advance of the broadcast so that proper clearance may be obtained. By submitting the list early in the week, the church committee will be in a position to make intelligent substitutions where clearance for the original selections cannot be obtained.

Taking up the Slack

Members and visitors within the church walls constitute a captive audience. They can reasonably be expected to remain through the benediction. But the radio audience is bound neither by courtesy nor loyalty. Any listener may turn his set off or change stations without embarrassment. To hold a listening audience requires proper attention to the order of service. And first attention should be given to taking up the slack.

Tightening up the service so that it flows smoothly and establishes continuity necessitates the elimination of time-consuming, repetitive announcements. There are, of course, times when it is imperative to make an announcement which could not be anticipated for the bulletin. And there are instances when a particular announcement wants special emphasis. On the whole, however, we may take for granted that the congregation can and will read.

The Choice of Music

The choice of music for the worship hour broadcast should be made with three factors in mind: (1) message and music should carry out a single theme; (2) the radio listener should be considered; (3) the music should be such that the congregation can participate readily. Many of those who do not now attend church grew up in homes where regular church attendance was a part of family life. The strains of a familiar hymn may well serve to generate a nostalgia that will bear positive fruit.

Pastor and music minister alike will bear in mind that the sequence of musical selections is of considerable importance to a well ordered service.

How to Begin

The question of how to begin the broadcast demands careful consideration. Since the early days of broadcasting the worship service the instrumental prelude has been standard practice in many churches. There appears, however, to be a valid

reason for abandoning the practice. Churches are never built to be broadcast studios. Consequently, poor acoustics virtually undetected by the congregation may distort the music to the point that it is offensive to the radio listener. Improper microphone placement and less than professional musicianship determining factors in excluding the instrumental prelude from the broadcast. The prelude may serve well to help create an atmosphere of reverence and worship before the broadcast begins.

There are two suggestions for beginning the broadcast: with the choir singing a call to worship or the congregation singing a lively hymn with a message of hope and encouragement. The choice remains with the pastor and his associates. If the service is somewhat informal, a congregational hymn would be an acceptable opening. If there is a semblance of formality, the call to worship by the choir is preferable.

The Offertory

The question of what to do with the time during the offertory seems to have but one satisfactory answer -- an anthem by the choir. An instrumental offertory poses the prospect of irritating extraneous noises -- foot-scraping, coughing, throat-clearing, book-dropping, whispered asides too near the microphone. These noises are reduced to something less than a menace to the broadcast when the choir sings an anthem while the ushers receive the offering. Timing the anthem to last until the ushers have finished and sat down should not be too difficult to contrive.

The minister can utilize the offertory time to speak directly to the radio audience. It should be remembered, however, that the anthem will be from two and a half to three minutes long. Using that time effectively will require careful planning.

Whether another special musical number follows the offertory anthem is purely a matter of choice.

The Invitation

Churches which issue an invitation and which broadcast the service must solve the problem of making the invitation effective to those in the congregation who should register decisions and those in the radio audience who have a determination to make. The problem here is to make each listener feel that he is being addressed personally.

When the minister leaves the pulpit he leaves the listening audience unless there is a microphone placed near where he will stand while the invitation continues. Such placement allows the minister to step close to the microphone and address the radio listeners during each stanza of the invitation hymn.

The minister must watch the clock if the invitation is included in the broadcast. Being taken off the air in the middle of a stanza or sentence is an inconclusive and frustrating way to end a program. Whatever good may have been accomplished could well be dissipated, or at least partially nullified, by such an abrupt close.

The Evangelistic Program

"Knowing therefore the terror of the Lord, we persuade men." That, by all means, should be the aim of the evangelistic program. But before men can be persuaded, they must be reached.

And reaching people with an evangelistic message is perhaps the most difficult of all radio. But it is a pursuit that must never be abandoned.

There are, of course, opportunities to sound an evangelistic note on virtually every type of religious program, but we generally regard the evangelistic format as that of song, Scripture, prayer and sermon. This is the formula which has prevailed since the beginning of religious radio and there is little likelihood that it will ever be completely abandoned. So the important consideration is to present the message of the Gospel in the most attractive frame possible. Suggestions for producing a program that will merit the attention of station executives include:

Using the best music obtainable;

Following the script;

Writing the message;

Rehearsing.

The suggestion that the message be written in full will undoubtedly meet with opposition from ministers who feel that a sermon manuscript circumvents the power of the Holy Spirit to interpolate. The answer to that objection is a question that has to be reckoned with: cannot the Holy Spirit lead the minister while he writes the message? "Holy men of old" wrote as the Spirit directed. We shall reach no such heights, but we can seek His leadership as we prepare. There is little inspiration in the halting "and uhs" of ad libbing.

The approach to the evangelistic program is different from that of the worship service broadcast from the church. There is only the broadcast audience to consider, which makes for a more intimate atmosphere throughout the program. So speak personally, warmly, conversationally, remembering the housewife in the kitchen, the salesman in the car. Each is an audience of one.

The Devotional Program

Preparation for broadcasting a devotional program is, unfortunately, all too often sketchy and haphazard. Perhaps this occurs because of poor habits developed during participation in a rotating program where the radio station provides time to the ministerial association for each member to conduct the program for a week.

Two serious problems often result from this plan. One problem is the forgetful minister who fails to appear for his assignment. The choice of something to use for a fill and the responsibility for explanations fall on the program director or the announcer, neither of whom may be endowed with spiritual insight to choose wisely what shall be done with the time. The overall result is often poor programming and disappointment for the

listener. The minister sharing time for a devotional broadcast should make every effort to honor his commitment, arrange to have someone take his place, or tape the program in advance.

The second problem is the apparent indifference to responsibility on the part of some ministers. A warmed-over, fragmentary version of a Sunday sermon is not the answer. The devotional program should never be made into a little church service. It should be what the name suggests -- a time of meditation, inspiration, devotion, worship, dedication or thanksgiving. Two other elements may also be incorporated in the message with good results: instruction and evangelism. The ever-increasing number of religious radio programs is indicative of a thirst for scriptural knowledge. A well-taught Bible lesson can instruct and simultaneously create an atmosphere of worship and inspiration.

The element of evangelism can be injected into a devotional message quite subtly by referring to the manner in which one assumes the responsibilities of a Christian. More than that would change the nature of the production.

Planning a Series

If a sustained series is being planned -- thirteen weeks or longer -- establishing a theme, or series of themes, and plotting the series at least six weeks in advance will prove highly profitable. By the end of the third week a limited evaluation of listener response will help in making further plans.

Give Attention to Details

Prepare the message carefully. Radio has developed a following in recent years which includes large numbers of people who are attracted by talk programs. Hence, no specific time length is advised. One all-important point must, however, be borne in mind. If what you have to say is not relevant, conversational, compassionate, and so well said as to be compelling, a half minute is too long.

By all means, avoid theological jargon. Keep your language simple, your sentences short, your illustrations graphic, and your figures of speech uncomplicated.

Write your message and read it to somebody before you read it on the air.

If music is used on the program keep the selections short. Mainly, hymns with a stately, majestic tempo and a worshipful theme are best for the devotional radio production, but the cardinal rule here is that music must always be subservient to the message.

An Audience of One!

You are not addressing a congregation when you deliver a devotional message on radio. You are talking to an audience of one -- one housewife going about her daily chores, one man in his automobile, one shut-in. Ours is a day of incredible tensions. Multitudes are hurt, lonely, doubting, fearful, and embittered. The housewife and the man in the automobile may be in greater spiritual need than the shut-in. Speak to your audience of one confidently but never patronizingly.

Communicate courage to the discouraged. Apply the balm of Scripture to the hurt. Commend the companionship of Christ to the lonely. Convey a message of assurance to the doubting. Verify the promises of the Bible to the fearful. And remind the embittered that "Christ also hath loved us, and hath given himself for us as an offering and a sacrifice to God for a sweet smelling savor."

On the Spot

Spot radio is rapidly coming into its own as a vehicle for transmitting a religious message, publicizing religious events and calling attention to the merits of a given church or church organization. Whereas the once lowly spot was regarded as an adjunct to newspaper advertising to herald a local revival, it is now being recognized as a significant form of religious broadcasting.

Normally spot radio comes in lengths of 20, 30, and 60 seconds, but in recent years religious broadcasters have become aware of what commercial broadcasters have known for a long time--that the 10 second spot can often accomplish more than a quarter-hour program. Without production gimmicks 10 seconds can carry a total of 25 words. And from time immemorial 25 words have been sufficient to complete a mail-order contest. Anyone old enough to read has probably seen something like this: "Complete this sentence in 25 words or less, 'I like Mrs. Gunklehagar's Apple Studel because--.'" Twenty-five words can say a great deal. For example:

A trying time is not time to quit trying.
If you've been tempted to give up, try a
visit to First Baptist Church.

"Those who live in the Lord never see each
other for the last time." You're invited
to form lasting friendships at Calvary
Baptist Church.

Long ago someone said, "How lovely are the
faces of those who talk with God." Prayer
is part of every service at Bethany
Baptist Church.

The greatest extravagance is wasted time.
Learn to live life more profitably by
regular church attendance. You'll be
welcome anytime at Anchor Road Baptist
Church.

An unknown writer observed that the devil
has no happy old men. The members of
Temple Baptist Church don't believe he has
any happy young men.

The 20 second spot is, of course, considerably
more flexible. It allows from 50 to 55 words
without production aids. If production aids are
used--and they are advisable where practical--the
length of the text will be determined by the sound
effects or music. A brief musical introduction and

close can be used by reducing the text to 35 words. The sound of a symphony orchestra tuning can be established in 5 or 6 seconds, leaving time for a maximum of 40 words. The implication of such a spot would be that when life is out of tune harmony can be restored by rededication or a conversion experience.

Thirty seconds will accommodate 75 to 80 words. Here is an example of the kind of production that can be done in 30 seconds:

SOUND: BODY FALLING DOWNSTAIRS, VICTIM GROANING 7 second sequence

VOICE: If you're having trouble keeping your balance lately maybe it's because you lack that spiritual plus that gives life its solid, stable quality and direction. A good place to find that plus for your life is First Baptist Church. You'll find our pastor and congregation eager to help you. Remember...you're never a stranger at First Baptist Church.

SOUND: MUSIC PAD : 4 seconds.

If that type of production aid seems a bit too heavy-handed for a church spot, consider the sound of a creaking ship churning sluggishly through the water and the hook line, "Are you finding the going a bit heavy these days...?" Or the sound of a car laboring uphill and the hook line, "Are you finding life an uphill battle every day?" Bear in mind, however, that the only reason for using sound effects at all is to catch and hold the listener's attention. Practically any device, sophisticated or unsophisticated, that will accomplish that purpose is worthy of consideration.

One minute is sufficient to permit a wide variety of spot types. Effective use of musical introductions and backgrounds can produce excellent results. A case in point is a series of spots produced for Richville Baptist Chapel, Richville, New York.

SOUND: MUSIC THEME Up 11 secnds and under voice...

VOICE: Thomas Carlyle describes our existence as "One life; a little gleam of time between two eternities; no second chance for us forever more." 10 seconds

SOUND MUSIC STING 3 seconds

VOICE: That sounds pretty final, but it's not quite all of the truth. Many people have made that little gleam of time between two eternities a bright beacon so others could find their way. And that's what the folks at Richville Baptist Chapel have in mind. Special services will be held March 31st through April 7th. Guest speaker Wendell Todd will present timely messages on vital topics nightly at 7:30 and Sunday morning at 11. Richville Baptist Chapel is located on Highway 11, Richville, New York. 30 seconds.

SOUND: MUSIC THEME Up softly 6 seconds and out...

To add variety, multiple voices may be used if care is exercised in selecting the voices. The contrast should be sufficient for each to project a distinct personality, yet neither should completely overwhelm the other.

Care should also be taken in writing for multiple voices. Nothing on radio is more irritating than clumsy lines delivered by inexperienced readers. That is not to say none but professionals should read for radio. Even the professional had to start as an amateur. It is to say that lines should never be read live or recorded for broadcast until they are being delivered without benefit of script. That takes a bit of doing, but it can be achieved. Anyone can learn to read conversationally. And that is always the need in religious broadcasting. The low-key approach is far and away superior to the hard sell line.

The Christian message is a positive message and must be presented positively. But that is no indication the voice should be raised to an unnatural pitch--as it frequently is in the pulpit.

The advantages of the spot over longer time segments for religious radio? For one thing, spot radio can be purchased in prime time (drive time) early and late without doing serious injury to the budget. Another significant consideration is the fact that religious spots need never be relegated to the Sunday ghetto--which can seldom be said of longer program types.

Spot radio will be heard. The listener who will not abide a five minute devotional is not likely to tune out a minute spot, no matter how heavily freighted it may be with religion.

Spot radio may be produced locally if: (1) you have something relevant to say; (2) you say it with short, pungent, conversational sentences; (3) production meets or exceeds the standards of the local station.

Avoid triteness, such as the frayed introductory relic, "You are invited to attend..."

If there are questions still unanswered, write the Radio and Television Commission, or consult your local station executive.

Religious News

There is usually a need for a religious news program in virtually every community large enough to support a radio or television station. But such a program presents problems not encountered in the production of any other type of broadcast.

The first consideration is, what is news?

The late Dr. Willard G. Bleyer summed it up this way, "News is anything timely that interests a number of readers"--in this case, listeners or viewers--"and the best news is that which has the greatest interest for the greatest number."

What is religious news?

Specifically it is a significant activity or pronouncement in the field of religion.

Because of his prominence as an international evangelist, Billy Graham is regarded as an authority in the field of religion. When he makes a statement the report is carried by the news services here and overseas.

Any church-related activity designed to improve social or spiritual conditions in a given community is news. Here, however, make the distinction between the regular program of the church and some special undertaking. In some communities the organization of a mission by one of the established churches may be news. Building programs, revival services, training courses, and anniversaries may also rate attention, if the stories are kept in the proper perspective. Annual meetings of associations, synods, councils, conferences, or other bodies comprising more than one church make news.

One of the difficulties in gathering and editing religious news is the problem of determining where news ends and promotion begins. In a measure all religious news is promotional. When a denominational leader makes a statement for the press the by-product is publicity for his denomination. Such promotion is taken for granted. But there are instances when local individuals or groups may attempt to take advantage of the news editor and promote a person or a cause of the detriment of a comprehensive newscast. Careful screening of the news will reduce the likelihood of this mistake.

Local religious news sources are ministerial associations, and officials of the individual churches. Go directly to the source. By the time an item appears on the church page of the local newspaper, it is of little broadcast interest.

For those who wish to include national and international religious news, the following sources are available:

Religious News Service 43 West 57th Street New York, New York

Church Broadcasting Associates P. O. Box 186 San Anselmo, California

Local Radio Wire Services Denominational and Interdenominational Agencies

The Panel Discussion

In the main, the purpose of a religious radio panel show should be to introduce new truth and to enlarge upon truths already known. Many truths known to Christians are utterly foreign to non-Christians, but there is a

basic reservoir of religious facts common to most people in the United States. This reservoir provides a sound basis for a religious panel show.

There is a much greater interest in religious subjects than the irreligious would like to admit. For example, most people will readily confess a belief in a Supreme Being, however vague they may be in their definition of him.

Most people believe in some kind of retribution for wrong. This perhaps is the best reason for the hackneyed aphorism, "We make our own heaven or hell here on earth."

An intelligent panel discussion can offer proof that the Bible is "profitable for doctrine, for reproof, for correction, for instruction in righteousness."

So the question arises: how to start?

First, select a moderator. It cannot be over-emphasized that the choice of a panel moderator is critical. He alone will be charged with the responsibility of carrying the program.

He must control the panel members.

He must start the discussion and then keep it from getting out of hand.

His personality must contribute to the continuity of the program, but must never get in its way.

He must be able to appraise the panel members accurately.

He should be witty enough to enliven the program occasionally.

He must help preserve an atmosphere of spontaneity.

He must never pretend to be a know-it-all. Posturing is readily detected, but genuine enthusiasm is contagious and easily projected. If a panel member comes up with a new idea, recognize it and explore it.

Choosing the Panel

If the choice of a moderator is critical, choosing panel members is also of utmost importance. There are several qualifications which must be taken into account. Panel members must be able to communicate. They must know what they are talking about, but they must never be patronizing.

The voices of panel members should offer enough contrast to make identification easy for the listener. Names should be mentioned frequently during the broadcast, but do not overdo it.

Subjects for Discussion

Subject matter for panel discussions wants careful attention for the simple reason that such discussions can easily degenerate into a monotonous parroting of theological cliches. Here are some questions which could reasonably be expected to hold listener interest:

Does ignorance of God's laws excuse those who break them?

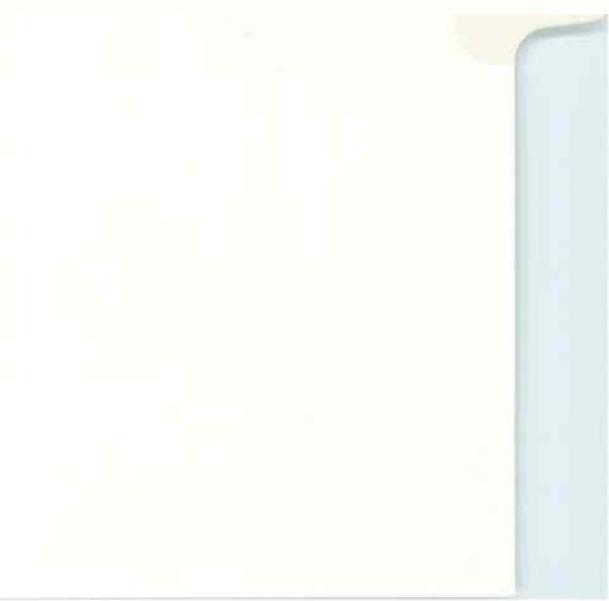
Is it ever a safe rule to let your conscience be your guide?

Does it make any difference what a man believes so long as long as he is sincere?

What has religion to do with a person's social or business life?

The sources of questions for a religious panel program are many, and apparently inexhaustible. So long as the world stands, the mind of man will be perplexed by questions about things spiritual. Every area of life provides questions. The Bible provides the answers.

RADIO: PUTTING IT ALTOGETHER





Is There A Place For Me?

Stan Knowles

"...but join with me in suffering for the gospel according to the power of God, who has saved us, and called us with a holy calling."

II Timothy 1:8-9

There is and has always been, the idea that the broadcasting business (and the entertainment industry, of which it is a part) is one of those "ultimate jobs." Many people look at the glamour of it and are so enamoured with the possibility of becoming a part of it that they fail to delve into it deeply enough to know the why's and wherefore's of it. And even in "Christian broadcasting," there remain many very common misconceptions...including the pay-scale.

First, broadcasting is a business or a profession, as other jobs are. It is neither altogether glamorous nor altogether dull. However, it has for the creative, imaginative person, many wonderful mountaintop experiences.

Outside of the fact that in Christian broadcasting the Lord is really our boss, the same types of backgrounds (schooling and training) apply to both Christian and secular broadcasting.

When one first begins to seriously think about being in broadcasting, almost immediately the questions begin to come. Should I enroll in a "school of broadcasting?" Should I go to college? Or...I have a friend who got into broadcasting while he was in high school. Do I need any training at all?

First, I have to qualify the following statements by saying that they are MY opinions. But they are based on twenty-five years of broadcasting experience. Let me begin by saying that, to be in broadcasting, it is necessary to have schooling and training! Back in the late 50's and early 60's when what we call the "50's Rock Era" was coming of age, many small radio stations across America came up with the idea that the best disc jockey for rock

music would be the teenager who knew all the records and danced to them regularly at sock-hops, etc. Therefore, the broadcasting industry opened its doors to a new kind of employee, the high-schooler, with no training or background whatsoever, who was hired mostly because he had learned how to "run the board" and because he hung around the station all the time! This practice did immense damage to the industry because lots of folks got the idea that "You don't have to go to school or college to be a 'jock,' you just do it."

Wrong! You don't just do it! Not only must one have a general knowledge of the electronic workings of the business; they must foremost know "everything about everything!" Now, that sounds facetious I know, but it's my way of saying that you must keep up with what is going on around you at all times to be an effective broadcaster. It's important that you keep abreast of the news: local, regional, state, national and international. This, of course, encompasses politics, economics, sociology, religion, sports, ethnical happenings, tragedy, scientific progress, women's news (which many times is overlooked by broadcasters), and a myriad of topics. Now, obviously, one can't really know "everything about everything." But I use that phrase to emphasize the point that a person engaged in the creative side (writer or "on-the-air" personality) of broadcasting must have a general knowledge of everything in order to be able to respond at even a moment's notice. (Example: impromptu interviews)

So: what do I recommend? A "school of broadcasting" or a college? If you can, go to college! If finances are a problem, and they are for most of us, go to a nearby junior college. Then, after taking all the required prerequisites, transfer to a senior college or university, where you can then "sink your teeth" into your major, which should be a degree program that has to do with "Speech-Radio" or "Speech-Broadcasting" or "Speech-Radio and T.V." What I am saying is, go for a degree in broadcasting that emphasizes Speech. And that's important! Most colleges and universities in the United States have never quite understood the importance of a "Speech-Broadcasting"

curriculum. Instead they place great emphasis on their journalism departments. That, my friend, shows the total lack of understanding by our nation's educators. "Journalism" is not "broadcasting." I'll say it again. "Journalism" is not "broadcasting." And conversely, "broadcasting" is not "journalism."

Upon making such a crass statement, the first thing I usually hear is, "How can you say that? Look at all the news on television and on radio. And you have the gall to stand flat-footed and say that 'broadcasting' and 'journalism' are not the same?" Running the risk that you may not read further, let me say it again! "Broadcasting" is not "journalism."

Journalism is really newspaper gathering and reporting. They have their place. And that place is "in-depth" news reporting. Not so in the broadcasting business! In radio and television news, immediacy is of the utmost importance! You're not going to hear any more news than is absolutely necessary on radio and T.V. because there is not time. If you want to know what really happened, in detail, you'll have to read the newspaper! It is not the function of radio and television to give you all the details. And you'll never get this type of reporting through the electronic media. Therefore, I would admonish any and all colleges and universities to note the differences, not only in formats, but also in news style (and they are different), and then very carefully design a curriculum for Journalism and a separate one for Broadcasting. There! Enough of that!

So what? What if I do go to college? What do I study when I get there? First, make sure that you counsel with a faculty advisor and let this person know that you plan to pursue a career in broadcasting. Being careful to heed the advice, keep in mind that you will need a lot of English. So, don't go to college with the idea that the sooner you get out of those terrible English classes, the happier you'll be! Instead, look at every single hour of classroom instruction as an opportunity to learn. Obviously, by now, you know that I recommend speech courses, and all the language courses you can digest. And by all means,

take radio and television courses. That's your major! Oh, and one word of caution. Don't make the mistake in radio and television studies of "skipping" or omitting things you don't particularly care for. Example: It may well be that your favorite type of music is country or rock. That's okay, but don't fail to study at least a general survey, classical music, its composers, conductors and artists. There is nothing worse than mispronouncing the names of people, places or works!

College? How boring! I want to do it now! Naturally, everyone wants to do it now. No one wants to wait. A good note: You may not have to wait! Many colleges and universities have their own radio and/or T.V. stations on campus. These "educational" facilities are there for two purposes. One is to help educate the listening public. But the most important reason they are in existence on campuses is to afford the student broadcaster an opportunity to gain practical experience while he learns in the classroom. These stations are invaluable and can and should be used for working-experience credits on future job applications and resumes. The other possibility of "doing it now, while you're learning" is the fact that local radio and/or television stations in the vicinity of the campus or campus town, at one time or another need help. And there's a good chance that you may be able to become part of the staff...IF (note the "if" very carefully) you are willing to do anything! In other words, you may be studying to be an announcer or program director, and you discover upon applying that the local T.V. station needs an audio-man. Obviously, they don't need your dulcet pear-shaped tones! They need a man to switch the mikes on and off, to turn knobs, etc. Now, I realize that such a job is well below the dignity of any announcer, but remember - you are also a student! So, my advice is...take it! And above all, don't tell them how to run the station. They were doing that before you showed up. You're a learner. You are a grateful learner. Keep your mouth shut and learn! You may wonder how the work of an audio-man relates to announcing. Don't worry...I'll promise you...it relates!

After college, here I am! It's startling to anyone who has shed blood and tears over the books, and who has burned the midnight oil finally to walk out "alive" and with a diploma, saying "Well, here I am! Take me!" only to discover that nobody cares. What a revelation! Here's where you stop and analyze things and ask yourself, "Where did I go wrong?" or "Am I okay and the rest of the world is fouled up?" Here, you must understand that the earth, as small as it is, is still very large, and that there are others on it besides you! What a revelation! But how true. There are others. Therefore, your perspective must be..."I thought that I was a somebody, but now I realize that I am a nobody." This is a great perspective, because it is really only from this vantage point that one begins to discover who he or she really is. Now that I realize that I am a nobody, I have nothing to lose and everything to gain! So, where do I start? Start at the bottom. It would be lovely to start with NBC or one of the other major networks. But the ladder of success is like a real ladder. You always start at the bottom. To make a "flying leap" for the top rung may work...but chances are it won't! If you leap and miss, you're pretty sure to get banged up by the time you reach the starting point, which is the bottom! An excellent way to begin is to start at a 500-watt radio station (or a 1000-watter) in or near your home town. Even there, don't expect the manager's job just because you have a college degree in broadcasting. Start at the bottom. Tell the manager that you don't mind pulling the 5 o'clock Sunday morning sign-on shift! You're willing to do anything just to work at that station! Chances are good that as soon as the current "5 o'clock shift" man quits, which usually doesn't take very long, you're in. Now you've got your foot in the door. Be glad! Because the broadcasting business is part of the entertainment business. And everyone knows that the entertainment business is the proverbial "brass ring." How do you get on it? Nobody knows! And nobody can tell anybody else how to catch the brass ring. What I'm trying to say is, once you've got your foot in the door of broadcasting, you're in! Now that you're in, work hard, don't watch the clock, and by all

means take your coat off and stay awhile.

How long do I stay at the 500-watter? I realize that you're only looking at your first real commercial venture into the broadcasting business as just a stepping stone. And this is probably right. You certainly don't want to stay there the rest of your life! (Unless of course you plan eventually to be the manager or to own part of the station, which isn't bad.) But, assuming that you are a "purist" announcer, and you know how announcers are - once an announcer, always an announcer - now let's see, who said that? Was it Shakespeare or was it Rochmananoff? Well, I don't remember which one said it. And besides, I can't even pronounce "Rochmananoff!" I guess I must have been doing something else the day the class studied those guys. Oh well, I probably won't ever have to use that anyway. Whatever you do, stay at the small station at least two years. Due to the influx of non - trained teeny - bopper O. J. T. (on - the - job - training) announcers from the fifties and sixties, the broadcasting profession is overloaded with a type of employee known as the "drifter." Now, you may never actually hear this word used while you're in the business, but I'll promise you if you'll just ask the station manager for a definition of a "drifter," he can and will give you one. And you'll soon discover that whatever you are or are not in this business, you don't want to be labeled a "drifter." This unofficial title denotes a person who, though he or she may have talent, is not dependable, is not stable, cannot be counted on. And believe me, your reputation in the business has an unusual habit of preceding you to your next destination. What one does not want in this business is a resume listing twelve jobs in ten years. Sooner or later, when it may really count the most, you know that this type of reputation will let you down...hard!

How does a Christian fit into the broadcasting business? What about beer commercials and things like that that I've been taught not to be involved with as a Christian? If I work for the station and the station schedules them on the log, what then? My advice is this. As a Christian, we're not to compromise! Before you accept a job at any station,

simply ask the station manager or personnel manager whether or not the station airs such commercials. If he or she says yes, then just tell him that you are a Christian and the only basis on which you'll accept the job is that you will not play a pre-recorded beer commercial on the air, nor will you read such a spot either on tape or live, on the air. And beer commercials are not the only pitfalls for a Christian in the broadcasting industry. There are other questionable practices, such as fortune-teller spots, palm reader spots, and some self-proclaimed faith-healers who use the electronic media as a pulpit and money-gathering source. As a Christian broadcaster, I say, "No! Don't do it!" You can always go to another small station, talk it over with the management, and make your decision there.

As a Christian in the broadcasting field, doesn't God expect me to work only at a Christian radio or television station? Maybe! And maybe not! My rule of thumb is this. If God told you to work at a Christian radio or television station, then do it. But if he didn't tell you to ... consider this:

Practically all the listeners and viewers of "Christian" broadcasting facilities are already Christians or they wouldn't be listening to that station!

Now, please don't misunderstand me. The Christian radio and television stations all have their places. They have their ministries. But while many of them emphasize that they are programming for the "lost people," in reality the "lost people" are mostly not the ones who are watching or listening to them. They are tuned in to the secular radio and television stations. So, my contention is if God didn't tell you to work in a Christian radio or T.V. station, He is giving you the option either to work in Christian broadcasting or in secular broadcasting. And believe you me, the Lord needs more people in secular broadcasting than He does in Christian broadcasting. He needs Christian disc jockeys, Christian station managers, Christian program directors (who can influence

programming for Him), Christians writers, Christian engineers, and the list goes on and on. The need is great in the secular broadcasting stations for Christian people, because those are the kind of stations non-Christian people are listening to!

Through it all, I want to emphasize that if God is for you, who can be against you! Now let's see, who said that? Well, for all the funning and quaint observations, the important points are these. If you think you want to be in broadcasting, look beneath the glamour and varnish and recognize that it's hard work. If you still think it's for you, then plan to go to school and do it the right way. Be willing to work the most menial tasks in broadcasting and you'll probably get your foot in the door. Work hard and don't take short-cuts! They don't pay off in the end. Stay at it and show everybody tht you're not a nobody. You're a somebody! And paramount to the whole issue of being a broadcaster is the fact that as a Christian, God wants to, can and indeed will help you through college, help you find a station, help you stay in the business, and help you live a Christian life before others, while you're in the business!



Media Ministries

Jim Hughes

Jerry Jones

"Get all the advice you can and be wise the rest of your life. Man proposes, but God disposes."

Proverbs 19:20-21

There has never been a time in the life of Southern Baptists when there was a greater opportunity for young people to devote their lives to fulltime ministry. I refer to the Ministry of Media. The day we begin broadcasting the ACTS Network, with the flip of a switch, at least 400 separate entities will need media staff.

Probably as many as 300 will be directly related to the local church. These churches will be the receiving point of the satellite feed and many will have full production facilities from day one. This means there is a need for people who can write, direct, announce, light, edit, counsel, and in general become a Media Minister.

This person will need to be a generalist. In addition to the skills mentioned above, this person will need to be an administrator and have enough technical skill to keep a full studio on the air. The person may have to double in another staff position such as music, education, youth or recreation.

For the first time in Southern Baptist life, we are literally creating positions by virtue of the startup of both BTN and ACTS. No longer can churches wait until they are "big enough"...they must move within a matter of months to take advantage of this opportunity. This also means that people who are interested in church-related media positions must prepare themselves for the obvious demands that will be upon them.

It is conceivable that by the end of 1985, over 1000 churches will be in need of media staff.

Broadcast Services Department

The Radio and Television Broadcast Services department functions as a service department for any Southern Baptist entity that needs a special service for a media ministry.

The Broadcast Services department consultants and producers work with churches, associations, state conventions, boards, agencies and other denominational bodies as assigned in accordance with the Radio and Television Commission's program statement.

Representation for the Radio and Television Commission is provided to the broadcast industry, and assistance is given to Southern Baptists in their efforts to grasp the potential which lies in Radio and Television for the spread of the gospel.

The consultants are available and will travel, when requested, to a specific location to speak with those who wish help in planning, writing and producing radio or television programs or spots. After consulting, the producer will create a script for approval, come to the church location and produce the spots or program and after post production, will deliver the finished product to the church or station as directed by the client.

If requested to do so, the consultant or producer will work closely with TimeRite, the time buying department of the Radio and Television Commission. Through this special department, the best buys can be determined by utilizing research data which will give the client the best buy for the money. The Radio and Television Commission will rebate 7-1/2% to the client, any budget placed through TimeRite. This helps a local church to realize the maximum stewardship of any money spent with the broadcast media.

The Broadcast Services department contacts churches, associations, state conventions, boards and agencies outlining the function of the RTVC and how it can serve them in reaching media goals. The Broadcast Services department cultivates radio and television station personnel to hold and improve current public service time segments and to secure such time on new stations in conjunction with the marketing department. Most all departments at the

Radio and Television Commission interrelate with others to produce the best results for our denomination.

The consultants travel frequently and often cover state Baptist conventions and Associational meetings when possible.

With the advent of the ACTS Network, new responsibilities have been added to the Broadcast Services Department. The consultants work with churches, Cable operators, low and full power television stations to bring the ACTS Network to every community in the country. Many local and state consultations have resulted in widespread interest by churches and Cable operators in all areas of the country.

Sample program tapes, ACTS demo tapes and media information tapes have been produced and are available for the local church personnel or Cable personnel to view.

The Broadcast Services department has helped to formulate a group of church people interested in or now engaged in the broadcast of their worship services or other programming. This group is MIB (Ministers in Broadcasting). The group meets on occasion to fellowship and to impart helpful information to others of like interests.

The Broadcast Services department has pretaped radio and television spots for local church use, or custom spots can be produced. Often, custom spots are required for a revival. Any Southern Baptist entity interested in spreading the gospel through radio or television, is invited to call upon the Broadcast Services department of the Radio and Television Commission for any consultation and production aid.



The Future Trend

Edwin S. Malone III

"The heavens are telling of the glory of God; and their expanse is declaring the work of his hands. Day to day pours forth speech, and night to night reveals knowledge."

Psalm 19:1-2

Our world is going through more changes each year than changes that transpired from the beginning of recorded man to the Ars Nova period. With such changes taking place every day of our life, man is faced with telescoping his mind to the future.

Gloria Wasserman, an American Educator, has stated: "Today's extravagance becomes tomorrow's necessity." It is incumbent on modern man to be constantly aware of their future. We cannot escape it....for we are very much apart of it.

It is predicted by Futurists that the majority of people will be "better off" in the year 2000 than we are today. From "Encounters with the Future", it is stated that "we'll feel better, we'll look better and we'll live longer."

Telescoping into the future, one must remember that the education system is no longer able to keep up the fast moving technology. Throughout the history of education, the system has been able to prepare man to meet the various needs of mankind....arts, humanities, science. The system provided the tools of past, present and future. But with the advent of massive technological advances, the education system can only provide the background, philosophy, and general tools of the art. The individual must transpose this education into the practical methods of the advancing technology.

Mankind has moved from the Industrial Age to the Information Age. And we are standing on the threshold of this new age.

Dr. Jimmy R. Allen, President of the Radio and Television Commission has stated that we are "Living in a time of parenthesis."

"In his provocative book Megatrends, John Naisbitt analyzes the directions of American society in our information age and concludes that we are living between eras. Emerging from the industrial age into the information age is a trend that has been noted by more than one social observer and futurologist. Naisbitt marks the year 1956 as the symbolic milestone of the end of an era of industrial economy. He points out that in that year, for the first time in American history, white-collar workers in technical, managerial and clerical positions outnumbered blue-collar workers. From that time on, the die was cast toward a new era. Yet, we are unwilling to embrace that new direction gladly. We cling to the past and are indeed, in our social thinking, politically, economically and philosophically, trying to hang on to yesterday.

It's perfectly normal to cling to the known and fear the unknown. Indeed, it's a tragic mistake to abandon yesterday's lessons while embracing tomorrow's uncertainties. Yet the dynamics of change are at work in more profound ways than we're able to know. Those of us who are in the communications business are in the heart of that. The day - by - day pressures simply to meet the gargantuan appetites for entertainment and information make it difficult for us to get a perspective on what's really going on in our lives and in our world. We're like the man who found himself submerged in the task of fighting the crocodiles and forgot that his original intention was to drain the swamp."

Our world is changing from the old to the new. We are caught between two eras.

"The year - 1957 - marked the beginning of the globalization of the information revolution: The Russians launched Sputnik, the missing technological catalyst in a growing information society. The real importance of Sputnik is not that it began the space age, but that it introduced the era of global satellite communications.1

Satellites have turned the earth inward, upon itself.

"Today's shuttle can orbit a 65,000 pound payload, 355 times the size of Sputnik and many, many times more sophisticated. In the past, the complex parts of a satellite system had to be in the ground station functions -- and ground stations will now fit on the rooftops of houses.

"The Space Shuttle has a lot more to do with the globalized information economy than it will ever have to do - in our lifetimes - with space exploration."²

"When President Lincoln was shot, the word was communicated by telegraph to most parts of the United States, but because we had not links to England, it was five days before London heard of the event. When President Reagan was shot, journalist Henry Fairly, working at his typewriter within a block of the shooting, got word of it by telephone from his editor at the SPECTATOR in London, who had seen a rerun of the assassination attempt on television shortly after it occurred."³

Now, more than 100 years after the creation of the first data communication devices, we stand at the threshold of a mammoth communication revolution. The combined technologies of the telephone, computer, and television have merged into an integrated information and communication system that transmits data and permits instantaneous interactions between persons and computers.

"There are no passengers on spaceship Earth," Marshall McLuhan said. "We are all crew." Hence the popular dictum "Thinking globally, acting locally."

"Sir Arthur Clarke says the two great inventions that first moved the United States along economically were the telegraph (later the telephone) and the railroad.

"Similarly, two recent inventions have played the key role in transforming the planet into a global economic village: the jet airplane and the communication satellite."⁴

Dr. Jimmy R. Allen continued his editorial in the Beam Magazine, stating, "Living in a parenthesis time gives us an extraordinary challenge. To discern the best of yesterday while fashioning the dynamic flow of tomorrow is an exciting and thrilling task.

Those who have given themselves to Jesus Christ as Lord have been engaging in that task through the centuries. We cling to the fact that He stands over time and processes. The writer of the book of Hebrews says Jesus Christ is the same yesterday, today and forever. It is an exclamation of faith. We want to preserve what's best and eternal, but clinging to forms and structures rather than to essence makes us victims of the past. Many are perceiving religious leaders and broadcasters as people who are clamoring to move back into the Middle Ages. Not so. We are seeking to be in touch with the original intentions of God in fashioning this world. Indeed, we are seeking to take what God showed us in the first century and apply it to every century. Some principles of human behavior and relationships never change.

"Staying on top of the mountain of information and discerning with a surfer's skills the tidal waves of the future lead us to agree with Naisbitt's conclusion. 'In the time of the parenthesis, we have extraordinary leverage and influence -- individually, professionally, and institutionally -- if we can only get a clear conception, a clear vision of the road ahead. My God, what a fantastic time to be alive.'"

FOOTNOTES

Chapter 1, HISTORY OF RADIO AND RELIGION

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9. Ibid., pp. 60-61.
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Chapter 21, FUTURE OF RADIO

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page 12.

2. Ibid., page 12.

3. Ibid., page 23

4. Ibid., page 58.

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Radio Sign Language

Much of the sign language so vital to putting a program together in the past has fallen into disuse. It is simply not needed as much when programs for radio are pre-taped. They are, however, pretty much uniform wherever they are used. To be sure of what you see, it would be advisable to check with the director to determine whether there is any variation from the following.

1. WATCH FOR CUE ...point to eye
2. CUE ...any signal, verbal or visual, which indicates action by performer
3. SPEED UP PACE ...extend index finger and rotate hand clockwise rapidly
4. STRETCH OR SLOW ...Place finger tips together and pull hands apart horizontally
5. COME TOWARD MIKE ...move hands toward body palms in
6. BACK AWAY FROM MIKE ...push hands away from body-palms out
7. DECREASE VOLUME ...lower hand palm down
8. INCREASE VOLUME ...raise hand palm up
9. ON THE NOSE ...show on schedule. Indicate by placing forefinger on nose
10. OKAY, GOOD ...make circle with forefinger and thumb
11. MOVE RIGHT ...swing left hand in flagging motion
12. MOVE LEFT ...swing right hand in flagging motion
13. MINUTES TO GO ...indicate by number of fingers held up or by cue cards with numbers in large figures
14. 1/2 MINUTE TO GO ...crook index finger or use cue card
15. CUT ...use fist or slash index finger horizontally near throat

A GLOSSARY OF RADIO TERMS

- ACROSS THE BOARD .A program presented five days a week at the same hour.
- AD-LIB ...Speech or action that has not been scripted or rehearsed.
- AFFILIATE...Station having a program contract with a network.
- AFTRA ...American Federation of Television and Radio Artists (talent union).
- AGMA ...American Guild of Musical Artists (union).
- AGVA ...American Guild of Variety Artists.
- ANN. OR ANNCR. ...Abbreviation for announcer.
- ASCAP ...American Society of Composers, Authors and Publishers, a music licensing agency.
- AUDIO ...Sound.
- AUDITION ...Console channel used to preview recording material.
- BACK TIMING ...Timing a program from end to beginning to determine where and when certain elements begin and end. Keeps program in balance and on time.
- BALANCE ...Audio: proper mixing of different sounds
- BAND ...Range of radio frequencies within two definite limits. Hence, standard broadcast extends from 550 to 1600 kiloHertz (kilocycles).
- BG ...Background. Means fade music under and hold as a background audio effect.
- BLASTING ...Putting too much volume into the microphone. Causes distortion.
- BMI ...Broadcast Music, Incorporated. Music licensing agency.
- BOOM ...piece of equipment to raise or lower a microphone.
- CLIENT ...Person or agency purchasing time on radio or television.

CLOSED ...Program delivered to special
CIRCUIT receivers but not broadcast to the
public.
CONTINUITY. (1) Logical sequence of events.
(2) Material presented between
shows.
(3) Department in charge of
continuity writing.
CONTROL ...Room adjacent to studio from which
ROOM the show is coordinated.
COPY ...All material to be read on the air.
CREDITS ...List of persons involved in the
creation and performance of a radio
program.
CUT-IN ...Insertion from another program
source.
DEAD ...Equipment that is turned off, not
operating.
DIRECTOR ...Coordinator of all production
elements before and during telecast,
whether live or taped.
DRY RUN ...Rehearsal without microphone.
DUB ...Tape of a sound track.
DUBBING ...Transcribing a sound track from one
medium to another.
EDITING ...Cutting audio tape to remove
unwanted portions and fastening
wanted portions together.
ET ...Electrical transcription produced
exclusively for radio and
television stations.
FACT SHEET..List of items to be covered during
broadcast.
FEED ...Transmission from one program
source to another, as network feed
to station, or remote feed to
station.
FILL ...Additional program material in case
show runs short.
FORMAT ...Type of radio script giving
general information about
organization of a show. Degree of
detail will be determined by
nature of program. An outline
with scripted intro and close.

FULLY ...Radio script containing all lines
 SCRIPTED of a show and major audio effects.
 HOT ...Refers to microphone turned on.
 or a signal with excessive level.
 ID ...Station identification or jingle
 in program.
 INTERCOM ...Communication system used by
 studio and control room personnel.
 IN THE CAN..Radio recording. Prerecorded show
 on audio tape.
 JACK ...Female microphone or ear connector.
 KILL ...Delete parts of spoken word or
 action.
 LAVALIER ...Small microphone worn around neck.
 LAPEL MIKE
 LEVEL ...Voice volume level measured in
 voltage.
 LIVE ...Show heard on receiving sets as it
 originates.
 LOG ...Complete record of day's program
 schedule. Includes exact time of
 all segments down to the second.
 MASTER ...Control board to which all studios
 CONTROL are connected and from which all
 programs are relayed.
 NAB ...National Association of Broadcasters.
 NABET ...National Association of Broadcast
 Engineers and Technicians.
 ON THE NOSE.On Time.
 PACE ...Progress of program in terms of
 speed.
 PICKUP ...Origination of sound on radio.
 PREEMPT ...One program replacing another,
 usually replacment of a regular
 series episode by a one-time show.
 Replacement of any show by another.
 PRODUCER ...Person who creates or originates a
 show and who is usually responsible
 for all matters of finance.
 REMOTE ...Radio show originating outside the
 studio, usually at some distance.
 RUN THROUGH.Short rehearsal, mainly to
 establish positions of performers.
 SAG ...Screen Actors Guild.

SESAC ...Society of European Stage Authors
and Composers, a music licensing
agency.
SIGNATURE...Symbol or sound that identifies a
radio show.
SPOT ...A commercial, a radio advertisement.
STATION ...Identification of radio station by
call letters, or call letters and
BREAK channel number.
STRETCH ...Slow the pace. Indcates show ahead
of schedule.
TALENT ...Collective term for all radio
performers. Also used as short for
talent fee.

THE RADIO STAFF

JIM AIKEN, a native of Texas, received his BS degree in Radio-Television-Film from the University of Texas at Austin in 1973. After working with radio stations for several years, he joined the staff of the RTVC in 1978 as the producer of Master Control. His work on Master Control has been honored by Religion in Media in 1981 and 1982 with presentation of the Silver Angel Award and 1983 finalist in the International Radio Festival of New York.

GENE COLDWELL, a native of Texas, received the BS degree in Electrical Engineering from the University of Texas at Arlington in 1969, and the MS degree in 1974. After brief stints at NASA and Texas Instruments, he returned to UTA to head its Instructional Television Services and to teach Electrical Engineering there. He joined the staff of the Radio-Television Commission in 1981 as the technical engineer assigned to the Radio Department. He has been associated with Institute for Electrical and Electronic Engineering and the Society of Broadcast Engineers.

STAN KNOWLES, a native of North Carolina, received a BA degree in Speech-Radio from Baylor University in Waco, Texas. He has been a writer, announcer, program director, and television producer for the United States Air Force and commercial radio and television stations. In 1967, he joined the staff of the Radio-Television Commission as a producer. As producer of Country Crossroads, he has been honored by the Country Music Association and the Silver Angel Award from Religion in Media. He is associated with the Country Music Association and the Nashville Song Writers Association.

JOE LUSK, a native of Iowa, received a BA degree in Applied Music from Sioux Falls College, Sioux Falls, South Dakota in 1970. He did graduate studies in opera and voice at Drake University in Des Moines,

Iowa in 1972-73. He joined the staff of the Radio-Television Commission in 1974 and has served as a Producer of At Home With The Bible, Pendulum for ABC Network, Sounds of the Centurymen, and The Baptist Hour. He has been associated with the American Guild of Musical Artists and the Gospel Music Association. In 1982, he was honored by Religion in Media with an Award of Merit.

EDWIN S. MALONE, a native of Texas, received a BA degree in Speech with emphasis in Radio-Television from Southern Methodist University in Dallas, Texas. He has been associated with production, advertising and public relations firms in radio and television. In 1965, he joined the staff of the Radio and Television Commission and is Director of Radio Production. He has been associated with the National Radio Broadcasters Association and the National Association of Broadcasters. He has been honored as a member of Pioneer Broadcasters of New York and the Pacific Pioneer Broadcasters, National College of Radio Arts Crafts and Sciences. He is a member of the National Press Club and the Society of American Travel Writers. He has been honored with the Faith and Freedom Award from Religious Heritage of America.

JACK NORRIS, a native of Texas, has received a BA degree in Radio-Television-Film from North Texas State University in Denton, Texas. During his senior year of studies at NTSU, he joined the staff of the Radio-Television Commission in 1976 as producer of The Baptist Hour, Master Control and Streams in the Desert. In 1981, he created a contemporary Christian music program called On Track. He is a member of the Gospel Music Association. In 1982, he was awarded a Gold Medal at the first International Radio Festival of New York for Hosanna, USA and the Silver Angel Award from Religion in Media.

EDDIE REED, a native of Texas, joined the staff of the Commission in 1979. He has served in numerous

capacities, including the role of Associate Producer for Powerline, The Beat and On Track. He has also served as the producer for the radio version of At Home With the Bible. As an accomplished writer and poet, he provides material for programming which has been honored by Religion in Media with an Award of Excellence.

CHARLES RIES, a native of Texas, received a Bachelor of Music degree from Howard Payne University in Brownwood, Texas, and a Master of Church Music degree from Southwestern Baptist Theological Seminary in Fort Worth, Texas. In 1979, he joined the staff of the Radio-Television Commission as a producer of Master Control and Streams In The Desert. In 1982, he was honored with a Silver Angel for Master Control and Living Words for Christmas and in 1983, a finalist in the International Radio Festival of New York.

ALDO E. RUIZ, a native of Colombia, South America, is attending Texas Christian University in Fort Worth, Texas, studying for a Radio-Television-Film degree. He has been on the staff of the Radio-Television Commission since 1974. He has worked as an announcer and disc jockey on several radio stations. He produces the Spanish language programs, Momentos de Meditacion and Control Central. In 1981, he created a rock Spanish program for young people called Horizontes. In 1981, he was awarded a Silver Angel Award from Religion in Media for Horizontes and in 1982, a finalist in the International Radio Festival of New York. He has been associated with National Association of Spanish Broadcasters.

HUGO RUIZ, a native of Colombia, South America, received a B.Ph. and B.Lit. in Spanish Literature and Philosophy from Barranquilla College in Barranquilla, Colombia. He received the B.Th., M.Ed., and MRE degrees from the Seminario Bautista de Cuba Occidental in Havana and Southwestern Baptist Theological Seminary in Fort Worth, Texas.

In 1967, he joined the staff of the Radio-Television Commission as writer, editor and speaker on several language programs. He serves as language coordinator. He has been associated with the National Association of Spanish Broadcasters and is an active Pastor of a local church.

JIM RUPE, a native of Missouri, received a BA degree in Communication and Bible from Oklahoma Baptist University in Shawnee, Oklahoma. In 1963, he joined the staff of the Radio-Television Commission as a script writer and producer. He serves as associate administrator of Radio productions. He is a member of The Aviation and Space Writers Association, The Society of American Travel Writers, The National Press Club, The Country Music Association, and The National Academy of Recording Arts and Sciences. He has received the Faith and Freedom Award from Religious Heritage of America, George Washington Honor Medals from the Freedom Foundation, a Gabriel Statuette, and a Silver Angel Award from Religion In Media.

DENNIS J. SEELY, a native of Texas, received a BS degree in Advertising Communications from the University of Texas in Austin, Texas. He has been active in the advertising and public relations field. He has been associated with sales for commercial radio stations. He is an Account Executive with Christal Radio in Dallas, Texas. He is a member of the Board of Directors of the Association of Broadcast Executives in Texas.

KIRK TEEGARDEN, a native of Texas, received a BFA degree in Radio-Television-Film from Texas Christian University in Fort Worth, Texas. He hosted "The New Look" TV show and has been an announcer for several radio stations. In 1972, he joined the staff of the Radio-Television Commission as the producer of Powerline. In 1974, he was instrumental in the creation of a black oriented program called Soulsearchers (now called The Beat) and serves as its producer today. In 1983, he was honored with a Silver Angel Award from Religion in Media.