A SURVEY OF FREQUENCY MODULATION BROADCAST PROGRAMMING POLICY IN NORTH CENTRAL OHIO

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ABSTRACT

A SURVEY OF FREQUENCY MODULATION
BROADCAST PROGRAMMING POLICY
IN NORTH CENTRAL OHIO

By William C. Hight

The number of independent commercial frequency modulation stations is increasing rapidly in this country. It appears that the majority of these stations are broadcasting program formats based upon "quality" concepts that are designed for adult audiences. Since this type of programming is dissimilar to much of established amplitude modulation broadcasting, which largely follows the "formula" approach, the problem of this thesis has been to determine whether or not the new frequency modulation concept has been causing shifts in programming policy on the part of long established "formula" operations. The nature and direction of any apparent shift in programming policy became the second problem of the thesis.

The writer conducted a survey, consisting of personal interviews and written questionnaires, in one specific geographical area of the United States. The area selected was the northern portion of the state of Ohio. This area included a representative number of long established AM and FM stations and several new independent FM operations.

Studies of population proved that this region contained elements common to average areas of the United States.

In December of 1960, the writer visited twenty-two of thirty-eight broadcasting operations in the survey area. An average of one hour was spent at each station. During this visit the writer discussed various aspects of each station's programming philosophy with station managers, and program directors. The stations were given a printed questionnaire which covered each station's estimated audience, its programming, its commercial philosophy, and its personnel structure. This questionnaire was later mailed to the writer.

The results of the personal interview and questionnaire studies were combined and then compared with findings obtained from existent national and local surveys of the same general type. The result of this comparison shows definite shifts in programming policy on the part of a significant number of "formula" operations. These shifts are in the direction of better music and "quality" approaches to total programming policy.

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By

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INTRODUCTION

The Problem

Interest in the field of broadcasting in the United States has increased rapidly since the end of the Second World War. Major attention has been focused in the area of television. Because of its visual aspect, television has gained more rapidly than its companion forms of public communication, amplitude modulated radio and frequency modulated radio.[1] Of these latter services, amplitude modulation is the oldest.[2] After a period of uncertainty during the advent of television, amplitude modulation assumed a fairly well defined role in relation to television.[3] Instead of being replaced by television, its role generally was changed to provide the types of service that television could not do as well. These services included more immediate news coverage, and more community centered programs.

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[1] Hereafter, the abbreviations "AM" and "FM" will be used to denote amplitude modulation and frequency modulation respectively.

[2] Amplitude modulation as a system of broadcasting is also called "standard broadcasting." And the two terms will be used interchangeably in this paper.

[3] When it became apparent that television would assume commercial status as a communication medium, there was some question as to whether or not amplitude modulation radio could, or would, remain.

Thus, the "format" of news, weather, and sports emerged.[4]

During this period a new and radically different form of radio broadcasting was being developed. The words "frequency modulation" proclaimed the introduction of a new radio system of improved tonal quality, free from static, and far superior to standard broadcasting in terms of frequency response.

The problem became one of where to fit FM into an already complex nationwide broadcasting picture. Standard frequency broadcasters hedged their positions by applying for frequency modulation licenses. Most of them admittedly did so only to guard their standard broadcasting operations while frequency modulation developed. However, in recent years there has been a definite increase in the number of independent broadcasters who have applied for frequency modulation "only" licenses. This new breed of station seems to be capitalizing on the inherent advantages of the frequency modulation system by developing programming concepts distinct from standard and television broadcasters. The traditional news, weather, and sports format is missing. These new broadcasters speak of "good music," news in depth, and

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[4]Hereafter, this type of "format" radio will also be referred to as "formula radio."

attitudes of conscientious public service.[5]

This thesis will attempt to present a picture of the independent FM station of today in terms of this "better programming" concept and at the same time will attempt to analyze this new format's impact on the already existent stylized format of the AM broadcasting station.

The Hypothesis

Because of a constant increase in the number of "frequency modulation only" operations in the United States in recent years and, because of the large number of these stations that endorse "better music" programming formats, there is currently emerging a shift in programming policy and concept on the part of standard AM and AM/FM duplicating stations. Furthermore, this shift is away from the news, weather, and sports format; and is in the direction of the frequency modulation "better music" and news in depth format.

Organization

Chapter One presents a brief history of frequency modulation as a system of broadcasting. This is followed by a discussion of major programming trends on a nationwide

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[5]This type of broadcasting will be referred to as "quality music," "good music," "quality broadcasting," or "better programming," in the remainder of this paper.

scale, in order to furnish a perspective for the results of the Ohio study.

The results of a personal interview and questionnaire survey conducted by the writer appears in Chapter Three. These results set forth the state of frequency modulation and standard broadcasting in north central Ohio. This geographical area was selected for intensive study in the area of station programming.

Finally, in Chapter Four, an attempt is made to draw together the information presented and to reach some conclusions regarding the current status of FM and AM broadcasting. This chapter will also point to other areas that will require further study for the future development of frequency modulation.

Sources

The sources of information for this study include: the station reports gathered through personal interviews; direct correspondence with such organizations as the Institute of Radio Engineers, the National Association of Broadcasters, the National Association of Frequency Modulation Broadcasters, the Radio Club of America, and personal letters from John H. Bose of Columbia University; Annual Reports of the Federal Communications Commission, the Communications Act of 1934 as amended, and Pike and Fischer's Radio Regulation.

A number of books, journals, and periodicals were consulted along with selected portions of an unpublished manuscript, Broadcasting and Government, by Walter B. Emery. A complete listing of the works consulted along with supplementary listings will be found in the bibliography that follows Chapter Four.

Limitations

The history of frequency modulation in Chapter One is not intended to be a complete and exhaustive one. It simply outlines some major developments that contributed to present day FM broadcasting.

The personal research done by the writer was limited to the geographical area of northern Ohio, as indicated in Chapter Three.

The study is limited to FM broadcasting and is not concerned with television.

Programming is the principal concern of the study. However, consideration is given to some other areas of station operation such as finance, enginnering, sales, and personnel since these relate to programming. No attempt is made to study these other areas except as they may affect programming policies and concepts.

The names of stations and persons connected with them covered in the study are not revealed, in view of their right of privacy.

CHAPTER I

A HISTORY OF FREQUENCY MODULATION BROADCASTING

It would be well at the outset of this work to trace briefly the developments that led to significant interest in FM as a form of broadcasting. It will be the purpose of this chapter to review in capsule form the history of frequency modulation as a system of broadcasting information and entertainment.

Since the inception of standard or AM broadcasting, one of the chief sources of complaint on the part of the radio listener has been the frequent and often intense presence of interference more commonly called "static." Radio engineers knew that this interference was caused by waves that were essentially the same as the waves generated by standard AM transmitters. The problem, then, was to find either a way to change the basic wave of the AM transmitter, or to find a method for removing the unwanted static waves from the desired amplitude modulated signal.[6] Many ideas

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[6] A wave is composed of a number of cycles. Each cycle has two dimensions, height called the amplitude and length called the frequency or wave length. A detailed analysis of wave characteristics is beyond the scope of this paper. Of importance is the fact that in AM transmission the amplitude of the cycle is varied while the frequency is held constant. Static is produced in the same manner. For a more detailed explanation see: Herbert M. Watson, Herbert E. Welch, and George S. Eby, Understanding Radio (New York: McGraw-Hill, 1951), pp. 17-28, 613-616.

were proposed and each met with little if any concrete result. By the latter 1920's, it was generally assumed that the only means by which static could be eliminated from radio reception was by changing the basic characteristics of the transmitter signal. Frequency modulation was the answer, but little was done to promote its acceptance.

The reasons behind this apparent reluctance to pursue investigation along the lines of FM transmission were fairly obvious. During the period from 1900 to 1910, research in the field of broadcasting was carried on largely by independent investigators, or by small groups of scientists located at various universities.[7] These individuals were to a great degree free to pursue their own avenues of study and interest. However, it soon became apparent that radio was destined to achieve practical and commercial significance. Thus, the large companies and corporations such as the Radio Corporation of America, General Electric, Westinghouse, and American Telephone and Telegraph began active research in the field. Therefore, investigation and experimentation became more centralized within the business and corporate framework. Such research began to lose much of its spark and originality. And, this trend was destined to grow as the development of

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[7]W. Rupert MacLaurin, Invention and Innovation in the Radio Industry (New York: Macmillan Co., 1949), p. 153.

radio became more and more closely tied to the economic factors of profit and loss in the market place.[8]

With research centered in big business and dependent upon the profit motive, the larger companies turned their attention to problems of an immediate nature. Ways had to be found to stabilize the frequency of AM transmitters because of the increase in the number of stations. The tubes for these transmitters had to be developed and refined. And, whole areas related to studio acoustics, microphones, and sound equipment needed experimentation and development. So it was, that early broadcasting developments in the 1920's were concentrated in the areas of improving a system of transmission already demonstrated to be salable to the public.[9]

The problem of static was momentarily overlooked by a large segment of the broadcasting industry. Had frequency modulation research been left entirely to the large companies, it is questionable whether FM would have progressed as fast as it did.[10] Fortunately, during the late thirties and early forties, there was a man who developed the basic technical

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[8] Ibid.

[9] Ibid., p. 161.

[10] There are many other factors involved that have direct connection with the growth of FM as an industry, Supra, pp. 6-10.

foundation of FM as we know it today. This man was Edwin Howard Armstrong. He was a devoted radio engineer, and he showed an almost unbelievable ability to pursue areas of research that others thought fruitless. As a result of early experiments conducted at Columbia University where he was a professor of electrical engineering, he obtained patents on regenerative, superheterodyne, and super-regenerative circuits that furnished the funds for his later studies.[11]

His major goal was the elimination of static. And, his solution to this problem lay in the designing of a new type of wave, one that would resist the wave forms created by static. The obvious answer was frequency modulation. Since static caused a wave that varied in amplitude as did the AM transmitting wave of all broadcasting stations then in operation, a wave that held the amplitude constant was the only answer. The FM wave did this by varying the distance between its cycles rather than by varying its amplitude.[12]

As stated previously, frequency modulation theory was not new. It had simply been discredited as impractical up until the time of Mr. Armstrong's experiments. Through a

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[11]Lawrence Lessing, Man of High Fidelity: Edwin Howard Armstrong (Philadelphia: J. B. Lippincott Co., 1956), pp. 16-17.

[12]Understanding Radio, pp. 612-626.

long process of trial and error, Armstrong was finally able to develop a system of FM transmission and reception. This occurred in the latter part of 1933. He then approached the engineering department of the Radio Corporation of America, since it had the facilities for testing his principles extensively. These tests lasted about two years. At the end of this period, the RCA engineers dismissed the whole issue of frequency modulation on five different counts: (1) that allegedly FM was a direct line-of-sight method of communication and would not work beyond the horizon; (2) that the cost of changing existing AM transmitters, as well as the higher cost of FM receivers, would make the system prohibitive; (3) that if the FM channels were to be moved to a higher frequency range on the spectrum, the same freedom from noise and static would result as was demonstrated by the FM system; (4) that the system was wasteful of limited spectrum space in that it required a much wider channel for its operation than that used for AM transmission; and (5) that the general public did not want the superior sound system that FM seemed to present.[13] In a final blow, David Sarnoff, then president of RCA, decided to back the experiments then being conducted in

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[13] E. H. Armstrong, "Frequency Modulation and Its Future Uses," Annals of the American Academy of Political and Social Science, ed. Herman S. Hettinger, CCXIII (Philadelphia: 1890-1960), p. 156.

the area of television.[14]

Although Armstrong was quite disheartened by RCA's failure to endorse his system of frequency modulation, he was determined to push its development on his own. He received a license to experiment in the high frequency spectrum and proceeded to construct, at his own expense, a transmitter at Alpine, New Jersey, located some eighteen miles north of New York City.[15] During the time that the Alpine station was under construction, Armstrong secured the services of a friend, C. R. Runyon, who operated an amateur station in Yonkers, New York. Through combined efforts they converted Runyon's station for FM operation, and they began to demonstrate the system to any and all interested parties.[16]

Armstrong had a sense of the dramatic and used this to capitvate the attention of those who might conceivably give impetus to the furtherance of frequency modulation. Such an example of this ability of showmanship was witnessed by some seven hundred members and guests of the Institute of Radio Engineers on November 6, 1935. Armstrong delivered a

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[14]Lessing, pp. 224-27.

[15]Armstrong, Annals of the American Academy of Political and Social Science, CCXIII, p. 156.

[16]Ibid.

paper to this group, entitled "A Method of Reducing Disturbances in Radio Signaling by a System of Frequency Modulation," as they met for their monthly meeting at the Engineering Societies Building in New York City. During the course of the paper, Armstrong outlined the methods used to transmit and receive frequency modulated signals. Further, he described the practical realization of his theories as proven by the experimental transmission between NBC facilities in the Empire State Building and various receiving points. Near the close of his presentation there suddenly was revealed a complex of receiving equipment and the audience was presented with a carefully planned demonstration of actual FM broadcasting. Armstrong's friend, C. R. Runyon in Yonkers, transmitted frequency modulation signals to the meeting, signals totally free from external noise and static.[17]

Interest in the new system mounted and the management of the Yankee Network, operators of a chain of AM stations throughout New England, as well as station WDRC in Hartford, Connecticut, became interested. The Yankee Network built an experimental FM transmitter on top of Mount Washington while WDRC established transmitters at Paxton, Massachusetts,

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[17]Institute of Radio Engineers, Proceedings of the Institute of Radio Engineers (New York: 1913-1960), XXIII, Pt. I, pp. 1421-1422.

and Meriden, Connecticut. In all, a dozen or more enterprising broadcasters applied for construction permits to experiment with FM.[18] Armstrong's own station at Alpine, W2MN, began its broadcasts in 1939 and began to relay programs and make tests throughout the New England area.[19] Frequency modulation had begun as a medium of broadcast service. There were to be many further obstacles, but the technical ground work had been laid, and as stated by T. A. M. Craven:

> Ultimately frequency modulation broadcasting will be the principal means of transmitting entertainment and information by sound to the public.
>
> Undoubtedly, adjustments in our present manner of thinking and living will have to be made. However, these new developments in communication will become essential tools for the life of the future.[20]

Adjustments in current thinking did have to be made. The success of the Alpine, Paxton, Meriden transmitters caused a deluge of applications for Federal Communications Commission experimental construction permits.[21] This increase in the

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[18]Armstrong, Annals of the American Academy of Political and Social Science, CCXIII, p. 156.

[19]Lessing, pp. 235-36.

[20]T. A. M. Craven, "Radio Frontiers," Annals of the American Academy of Political and Social Science, ed. Herman S. Hettinger (Philadelphia: 1890-1960), CCXIII, pp. 126-27.

[21]Armstrong, Annals of the American Academy of Political and Social Science, CCXIII, p. 157.

number of applications for the then few experimental frequency bands caused the Federal Communications Commission to suspend further license grants until a study could be conducted to determine actual need for frequencies. Reports were prepared covering the relative merits of FM as well as the areas where problems were apparent.[22] Then on March 18, 1940, the Federal Communications Commission began hearings on the frequency modulation problem.[23] In June of the same year, the Commission adopted a series of rules and regulations as well as a code of engineering practice with which to govern the yet infant industry.[24]

Previously assigned allocations for television were transferred to FM. The spectrum between forty-two megacycles and fifty megacycles thus became the FM allocation area. This block of frequencies was divided into forty channels each 200 kilocycles in width. The first five, between forty-two megacycles and forty-three megacycles, were set aside for non-commercial experimental operations, while the remaining thirty-five channels were made available for commercial development.[25]

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[22] U. S. FCC, Sixth Annual Report, No. 6, pp. 16-17.

[23] Ibid., p. 66.

[24] Ibid., p. 67.

[25] Ibid., pp. 65-66.

The Federal Communications Commission further divided these thirty-five channels into three classifications. Twenty-two channels were reserved for urban population centers of less than 25,000 persons. And, the remaining seven channels were set aside for stations serving areas that were generally rural in nature.[26] Call letters were assigned, prefixed by W or K, followed by two numbers to indicate frequency assignment of the station. The numbers were followed by additional letters indicating the geographical location of the station.[27] This scheme prevailed until 1943 when the Commission began to assign FM call letters under the present system.[28]

Through scientific research the system of frequency modulation had achieved status in the eyes of the government. The Federal Communications felt that since FM could serve the same relative coverage area as that of AM, and do it with reduced power, there could now be broadcast service in all areas of the nation. Further evidence indicated that even

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[26] Ibid., pp. 67-68.

[27] Ibid., p. 69.

[28] At present all AM and FM radio stations in this country are assigned calls that consist of letters only. These may be either three or four letters in length and begin with the letter W if the station is located east of the Mississippi River, or K if the station is located west of the Mississippi. See (U. S., FCC, Radio and Television Primer, INF Bulletin No. 2, 1956, p. 5).

where FM stations operated on the same frequencies, little, if any, interference would result because of a rejection characteristic inherent to the FM system.[29]

Also, the AM broadcasters contested heatedly for rights to certain frequency assignments which lent themselves to better coverage characteristics. Since FM channels all have essentially the same coverage contour characteristics, this problem could be eliminated. It was felt that this equality might turn the broadcasters' attention more toward the direction of competition in the area of programming service:

> If the stations of a community are at a parity in coverage, their competition of necessity must be limited to program service; and the resulting improvement in programs, once frequency modulation is in general use, may be one of its most significant results.[30]

Even with these encouraging developments, the system of frequency modulation faced the problem of convincing the public, the problem of amplitude modulation receivers without special converters, and the problem of securing enough advertising or other means of support to assure its success.

The Second World War intervened and all commercial production of FM equipment for private use stopped. This

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[29] Sixth Annual Report, No. 6, pp. 66-67.

[30] Herman S. Hettinger, "Organizing Radio's Discoveries for Use," Annals of the American Academy of Political and Social Science, ed. Herman S. Hettinger (Philadelphia: 1890-1960), CCXIII, p. 178.

meant that only a limited audience could receive frequency modulation signals during the war years.[31]

Near the end of the war in 1945, frequency modulation suffered another setback. Due to constant pressure by television interests and an apparent skywave interference problem on the forty-two to fifty megacycle band, the Federal Communications Commission shifted the FM band to its present location between eighty-eight and one hundred and eight megacycles.[32] This provided 100 channels, the first twenty of which were assigned to non-commercial educational broadcasting. Again, different classifications of stations were established. Two major divisions were identified by the Commission and given labels, "class A stations" and "class B stations." The class A stations were designed to render service to communities, cities, or towns, and to their surrounding rural areas. These communities, cities, and towns were not to be principal urban areas in a particular geographical region.[33] The class B stations were designed to furnish service to principal metropolitan districts and cities including the surrounding rural areas, or to serve rural areas

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[31]U. S., FCC, Radio and Television Broadcast Primer, INF Bulletin No. 2, 1956, p. 8.

[32]Ibid.

[33]Pike and Fischer, Radio Regulations, I, sec. 3.203 (a), (b), p. 53:392.

removed from large centers of population.[34] Both classes of stations were allowed the option of duplicating programming of AM stations if both types of licenses were held by the same broadcaster.[35]

This final change outmoded existing transmitting equipment. A greater harm, however, resulted from the fact that all receivers were outmoded because of the shift in frequencies. This last setback could well have caused FM to fail, but as is so often true, when a system is technically superior it will in time be accepted.

The growth in the number of FM stations has risen steadily since the 1945 shift. In June of 1947, only about 238 FM stations were on the air. While as of January, 1960, some 688 FM stations were authorized and on the air.[36]

Today, there are approximately 445 FM stations in operation, without AM affiliates, on an independent basis

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[34] Ibid., sec. 3.204 (a), (b), p. 53:393-53:394.

[35] The exception was made, however, that stations which duplicated AM programs on their FM channels had to devote a minimum of one hour per day to separate and distinct programs on FM only. This rule was passed in order that FM could develop programs that would take advantage of the superior frequency characteristics of FM transmission. See (U. S., FCC, Sixth Annual Report, No. 6, p. 68).

[36] "Number of Stations: 1922-1960," Broadcasting Yearbook, 1960, p. F-62.

throughout the United States.[37] Of further importance to the growth and future of the frequency modulation industry was another ruling by the Commission in 1955 which enables stations to provide subsidiary services, such as background music for business use.[38] This service is accomplished by a technical process called multiplexing which allows the station to broadcast a regular program schedule over a main channel, and at the same time use a sub-channel to carry some form of secondary service such as background music. The subsidiary service cannot be received by a normal FM receiver.[39]

This, then, is a brief history of frequency modulation. It is still a young industry, one that has sustained what would seem to have been more than its share of setbacks. The remainder of this study will indicate present trends of frequency modulation in terms of its programming and its effects upon amplitude modulation stations.

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[37]The cited figure is based upon a page by page analysis of all broadcasting stations in the section on radio stations in the 1960 Broadcasting Yearbook. This number does not include AM stations with FM authorizations even though they may operate separately. See pp. A-107 to A-255.

[38]Radio Regulations, I, sec. 3.266 (b), p. 53:473.

[39]Receivers, usually leased from the stations, are placed in stores and other places of business. These receivers pick up the multiplexing station's sub-channel signal. The station can, therefore, gain revenue from two sources, the sale of advertising over its main channel and the sale of background music over its sub-channel.

CHAPTER II

PRESENT FREQUENCY MODULATION BROADCASTING IN AMERICA

The State of the Industry

After FM became a technical reality, the major problem became that of making the system financially self-supporting. Although most persons close to the industry indicate growing trends for FM, there is one notable weakness. Very little has been done in the area of audience research and FM promotion. This chapter will attempt to outline the present FM situation on a nationwide scale.

FM Organizations

There are three important groups now engaged in FM programming production. These groups include: (1) the QXR-FM network owned by WQXR in New York City; (2) International Good Music Incorporated, known as the Heritage system; and (3) the Concert Network Incorporated. Each of these organizations furnishes taped music services to numbers of stations throughout the country.

The QXR network has twenty-five affiliated stations in the eastern part of the country. This live network carries approximately eight to ten hours of programming per day.

International Good Music Incorporated's Heritage

system is completely automated with special playback units installed at each station in the network. Programming consists of eighteen hours of taped concert music per day. There are pre-taped breaks for the insertion of local programming such as news or sponsored messages.

At present the Concert Network Incorporated consists of seven stations. However, expansion is planned on a taped basis in the near future.[40]

Three groups are acting as major national representatives for FM outlets. These include: (1) Walker-Rewalt Company, Incorporated; (2) Good Music Broadcasters Incorporated; and (3) Fine Music Hi-Fi Broadcasters Incorporated. These organizations represent the national advertising interests of twenty-nine, twenty-two, and seventeen FM stations respectively.[41]

One other organization is of special interest. It is the National Association of Frequency Modulation Broadcasters (NAFMB). As the successor to the Association of FM Broadcasters, previously formed by the National Association of Broadcasters, this group was organized in September of 1959. The group raises its operating funds from member stations.[42]

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[40]"FM Reaches for the Honey," U.S. Radio, July 1960, pp. 30, 38.

[41]Ibid.

[42]"New FM Group States Organizational Meet," Broadcasting, September 14, 1959, pp. 47-48. Also see: "FM Sounds Battle Cry," Broadcasting, September 28, 1959, p. 104.

Presently, the NAFMB conducts the organization of its national trade and promotional activities from headquarters in San Diego, California. This association, although hampered by the lack of funds, attempts to promote FM through publications and conventions. The National Association of Broadcasters works closely with the NAFMB.[43]

FM Stations

Table One indicates the total number of authorizations issued by the Federal Communications Commission for FM commercial broadcasting stations. Column (1) indicates the totals as of February 27, 1961. This was the latest FCC figure at the time this thesis was completed. Columns (2) and (3) show the totals at approximately the same dates in 1959 and 1960. Column (4) presents the totals for AM radio stations for the same date as column (1).

FM Equipment

Cost as a prohibitive factor to the construction of FM stations, and the purchase of FM receivers is decreasing. Collins Radio Company presents the following information: (1) the purchase of FM equipment, by existing FM stations and by new operations, totals $3,000,000 per year; (2) one-third

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[43]"A Dramatic Spurt in FM Development," Broadcasting, February 20, 1961, pp. 78-79.

of the existing FM stations intend to spend $10,635 on equipment in 1961; and (3) additions and replacements of equipment at FM stations will average $2,335,000 during the next twelve months, and $1,880,000 during each of the next five years.[44]

TABLE 1

SUMMARY OF COMMERCIAL BROADCASTING

Type of Authorization	FM (1)[a]	FM (2)[b]	FM (e)[b]	AM (4)[a]
Licensed, on air	773	543	644	3,526
Construction permits, on air	68	37	36	31
Construction permits, not on air	189	127	170	132
Applications for new stations	122	69	100	799

[a]These figures were taken from "Summary of Commercial Broadcasting," Broadcasting, February 27, 1961, p. 87. See current issue of Broadcasting for up-to-date figures.

[b]These figures were taken from "FM Units Double in Two-Year Period," Broadcasting, February 20, 1961, p. 80.

Furthermore, U.S. Radio, based upon information supplied by equipment manufacturers, estimates that costs for equipping a one kilowatt class A station, exclusive of studio gear and buildings, would average $10,000. This figure is doubled for

[44]"FM Broadcast Equipment Trends," U.S. Radio, July, 1960, p. 34.

a five kilowatt class B station, and the figure increases with higher powered transmitter operations.[45]

Transmitting equipment is available from all major companies in various power ranges. Much of this equipment is designed for remote or automated operation, with provision for multiple or bi-channel sound.

The production of FM receiving sets is also on a definite increase both in volume and price range. The total number of sets has doubled over the last two years with about 1,700,000 units on the retail market in 1960. In addition to FM receivers for home use, car tuners are beginning to sell.[46] This increase of receiving equipment has also caused a drop in the price of such equipment. A number of manufacturers now are offering FM sets at prices near $25.00. Table Two presents a partial listing of the car and home FM radios available today.[47]

Advertising

Due to a lack of accurate information regarding FM set penetration, audience composition, and FM listening habits; national advertisers have been slow to use FM as a sales tool.

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[45] Ibid.

[46] Broadcasting, February 20, 1960, p. 78.

[47] U. S. Radio, July 1960, p. 35.

The advertising agencies feel that the medium has a definite future, but they hesitate to sell time to their clients until significant proof of audience has been established. Therefore, advertising on FM remains a local situation.[48]

TABLE 2

NEW FM RECEIVERS ON THE MARKET

Manufacturer	Model No. of Receiver	Suggested List Price
Motorola	FM-900[a]	$ 125.00
"	FM-B-1	49.95
"	AM-FM B-2	59.95
"	AM-FM B-3	79.95
Westinghouse	FM-715T5	39.95
"	AM-FM 75IN7	59.95
"	AM-FM 764N7	79.95
"	AM-FM 777N7	129.95
RCA Victor	FM 1F1	39.95
"	AM-FM 1XF1	54.95
"	AM-FM 1XF3	79.95
Philco	FM 995	44.95
"	AM-FM 996	59.95
"	AM-FM 997	69.95
General Electric	AM-FM T145	49.95
"	AM-FM T135	50.95
"	AM-FM 210	79.95
"	AM-FM T150	99.95
Granco Products	ARC-60[a]	Under $75.00
"	FM 601	27.95
"	FM 605	38.95
"	AM-FM 701	39.95
"	AM-FM Clock 705	49.95
"	AM-FM-SW	185.00
Zenith	FM D720	49.95
"	AM-FM C725	74.95
"	AM-FM C730	84.95
"	AM-FM C835	114.95
"	AM-FM C845	129.95
Sarkes Tarzian	FM	29.95
Blaupunkt	Frankfurt[a]	137.50
"	Koln[a]	185.00

[a]These are car radios.

[48]U. S. Radio, reports that the average FM station billings are 82.3% local and 17.7% national, p. 30.

If FM is to become a national medium of communication, it must direct its attention to the national advertiser. Mild success has been achieved in this area. Some large companies that have bought FM advertising during the past year are: Steinway Pianos, Hamilton Watch Company, Chrysler Imperial, Esso, Air France, KLM Airlines, BOAC Airlines, Pan American Airlines, Tuborg Beer, Lowenbrau Beer, Time Magazine, Columbia Records, Zenith, Westinghouse, General Electric, Harper's Magazine, and Standard and Poor. The amount of this advertising is comparatively small, however, when considered on a national basis.[49]

Programming

Since the beginning of FM broadcasting, the medium has been thought of as a source of high quality programs. At one time classical music was dominant on FM. More and more, however, variety is becoming the keynote. One interconnected group of FM stations analyzes programming as follows: (1) forty-four percent good music; (2) fifteen percent popular music; (3) thirty-three percent symphonic music; (4) six percent religious programming; (5) two percent special events; and (6) an average of twenty-five minutes of news per day.[50]

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[49] U. S. Radio, July, 1960, p. 27. And, "Why Don't Stations Tell How Good They Are?," Broadcasting, February 20, 1961, p. 88.

[50] "FM Day has 18 Hours with Peak in Afternoon," Broadcasting, February 20, 1961, p. 86.

Another study recently done presents a more complete picture. U. S. Radio ran a questionnaire survey of all FM and AM operations in the country. A sixty percent return was received. The results of this survey indicate that instrumental music is the one element that shows up consistently in the programming of almost all FM stations. The stations averaged eighty-two percent instrumental and eighteen percent vocal music.[51]

The content of programming for each of the stations in the U. S. Radio survey is shown in abbreviated form. By analyzing these programming formats it can be seen that the typical FM "only" operation broadcasts a combination of classical, semi-classical, concert, good instrumental, broadway, and historical folk music, plus news, and in a number of cases commentary.[52]

In connection with commentary and editorialization, Broadcasting ran a survey of FM "only" operations in 1960 to determine the extent of editorialization. Of a 282 station sample, they found that 19.1 percent editorialize. Of this figure, only 2.8 editorialize on a daily basis.[53]

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[51] U.S. Radio, July 1960, p. 26.

[52] "FM Station Key," U. S. Radio, July, 1960, pp. 45-54. A significant number of FM stations program only one type of music, for example, the all jazz music station.

[53] "Extent of Editorializing on Radio and TV Stations," Broadcasting Yearbook, 1960, p. F-79.

The State of the Audience

Evidence of Penetration

Two audience research groups have made studies relative to the amount of penetration that FM has made in this country. One of these, the Hooper organization, reports that over a period covering the last half of 1959 and the first half of 1960, twenty-one markets have reported FM stations in regular AM surveys. Table Three lists the twenty-one markets and the percentage of shared audience listening to FM. This report has considerable significance because the samples used were not shaped in any way to seek out the FM listener.[54]

TABLE 3

HOOPER EVIDENCE OF FREQUENCY MODULATION PENETRATION

Metropolitan Market	FM % of Shared Aud.	Metropolitan Market	FM % of Shared Aud.
Albany, N. Y.	1	Los Angeles	2
Allentown, Pa.	1	Pittsburgh	1
Bakersfield, Calif.	1	Sacramento, Calif.	2
Chicago	3	San Bernadino-Riverside, Calif.	3
Cleveland	1	San Diego	1
Denver	1	San Francisco	1
Detroit	4	Syracuse, N. Y.	1
Houston	3	Washington, D. C.	1
Kansas City, Mo.	4	Toledo, Ohio	1
Lansing, Michigan	1	Wilmington, Del.	1
Lincoln, Neb.	1		

[54] "Hooper Evidence," U.S. Radio, July, 1960, p. 26.

In terms of FM set penetration, the results of sixteen recent Pulse surveys are perhaps the most enlightening. These surveys were conducted in 1959 and 1960, and the results were compiled by the NAFMB. They show: (1) that 56.6 percent of all FM homes in the country are listening to FM sometime each week; and (2) that 51.3 percent listen every day. Table Four presents the Pulse figures for FM set penetration and the total number of FM homes in a number of major metropolitan markets. The average penetration figure is 43.5 percent.[55]

The Frequency Modulation Listener

Two audience research groups have, through various surveys, defined the nature of the FM audience. Pulse is one of these organizations and its study presents the picture of the FM listener as shown in Table Five.[56]

The other research group is Alfred Politz Media Studies. It reports the following facts about the FM audience:

> Almost twice as many high-income families as mass media: 43% of FM families have an annual income of over $7,000 compared to only 27% of the mass audience.

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[55] "Penetration Pushes Past 40% Mark," Broadcasting, February 20, 1961, p. 84.

[56] "16 Pulse's," U. S. Radio, July, 1960, p. 27. Also see "FM Listening Survey," U. S. FM, February, 1961, p. 7. This is a similar study done by the Sacramento, California, FM Broadcasters.

TABLE 4

FREQUENCY MODULATION RECEIVING SET PENETRATION IN MAJOR METROPOLITAN MARKETS

Market	% of Market Penetration	Total Number Of FM Homes
New York	57.1	2,481,561
Los Angeles	48.7	1,802,246
Chicago	41.9	791,491
Philadelphia	36.3	435,600
San Francisco	47.3	416,665
Boston	49.9	334,779
Washington	41.0	232,437
Pittsburgh	27.6	178,185
Cleveland	34.1	171,420
Portland	46.1	128,803
Buffalo	33.4	117,447
San Diego	36.4	116,578
Houston	29.8	106,421
Cincinnati	29.8	91,774
Kansas City	29.6	91,114
Miami	31.7	87,330
Providence	35.1	85,422
Milwaukee	22.1	76,432
Minneapolis-St. Paul	16.9	74,833
Rochester	33.1	66,789
Denver	37.4	62,431
New Orleans	24.1	59,806
Albany	33.1	57,246
Dallas	20.7	55,186
San Antonio	17.1	28,134

TABLE 5

PULSE'S FREQUENCY MODULATION
AUDIENCE

FM Listeners who are	-	College Graduates	37.0%
		High School Graduates	33.5%
		Some College	12.4%
		Some High School	8.9%
FM Listeners who are between the ages of	-	19 and 35	25.5%
		35 and 50	37.0%
		Over 50	35.0%
		Under 18	3.5%
FM Listeners with incomes between	-	$ 7,500-$10,000	21.4%
		$10,000-$15,000	14.4%
		$ 5,000-$ 7,500	28.4%
		$ 3,000-$ 5,000	15.2%
		$ 2,000-$ 3,000	4.2%
		Over $15,000	4.0%
		No Answer	12.2%
FM Listeners who are	-	Professionals	29.0%
		White Collar	20.1%
		Laborers & Technician	28.6%
		Miscellaneous	22.3%
Those who listen in the	-	Living Room	47.3%
		Bedroom	22.8%
		Kitchen	14.0%
		Den	8.2%
		Other	7.7%
Those who listen between	-	6 AM and 9 AM	16.0%
		9 AM and Noon	13.0%
		Noon and 6 PM	23.0%
		6 PM and 9 PM	45.0%
		9 PM and Midnight	20.0%

One-third more college-educated heads of households; 49% of FM heads of households have a college education (only 33% of all heads of households have attended college).

One-third more professional, managerial, sales or clerical heads of households; 54% of FM family heads are in this category (only 40% of the total population are thus occupied).

One-third more two-car families; 32% of FM households own two cars (compared to 23% of all households).

Almost three times as many automatic clothes dryer and food freezer owners; 43% of FM households own dryers; 49% own freezers (only 16% and 18%, respectively, of all households own these major appliances).

One-fourth more households which made home improvements; 53% of FM households made some home improvements last year (compared to only 40% of the mass audience).

One-fourth more larger households; 58% of FM households contain three or more people (compared to 46% of non-FM households).[57]

What the Listener Wants to Hear

Very little research has been conducted in order to determine the type of programming that the FM audience wants to hear. To this date, there have been no national studies in this area. There are numerous local and regional reports available that outline listener tastes, but these cannot be assumed to be useful on a national scale. The writer includes

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[57]"Audience Too Is Superior, Politz Reports," Broadcasting, February 20, 1959, p. 92.

two local reports for the sake of general information.

In San Antonio, Texas, a November, 1959, Pulse study indicated that the FM audience preferred music to other forms of programming. Preference percentages of the audience were: (1) 40.3 percent favored popular music, (2) 22.2 percent preferred classical music, (3) 21.4 percent wanted soft instrumental music, (4) 16.3 percent wanted semi-classical music, and (5) 7.4 percent favored jazz music.[58]

Station KING in Seattle, Washington, made a study to determine the preferred type of musical programming in 1959. This is perhaps one of the best local area studies because of the size of the sample taken. A total of 100,000 questionnaires were mailed to Seattle homes. Over 10,000 were returned and 9,250 were found to be completely usable. Each respondent was required to indicate his like or dislike for five classes of music. These classes were: current hits with raucous rock and roll beat, such as Elvis Presley recordings (marked Type I); current hits excluding rock and roll beat such as the Kingston Trio (marked Type II); familiar standards with easy melodies such as "Moonglow" and "Blue Moon" (marked Type III); unfamiliar tunes and familiar tunes in arrangements difficult

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[58]"Shorter Hair in Vogue in San Antonio," Broadcasting, February 20, 1961, p. 86.

to realize, such as "Quincy Hoopers" by Les Elgart (marked Type IV); and, million-seller records excluding rock and roll such as "Secret Love" and "Ebb Tide" (marked Type V). The results are shown in Table Six for three groups: the total sample, the age group from twelve to sixteen years, and the age group from twenty-two to thirty-nine.[59]

TABLE 6

KING-FM MUSICAL PROGRAMMING SURVEY

Class	% Strongly Dislike	% Dislike	% Indifferent	% Like	% Strong Like	
I	3	7	15	39	36	
II	4	10	21	39	26	18,500
III	9	13	20	33	25	responses
IV	15	27	31	21	6	
V	33	21	15	17	15	
I	2	4	11	31	52	
II	7	9	11	25	49	Age
III	7	13	22	34	24	
IV	10	22	32	23	11	12-16
V	25	33	26	13	3	
I	2	5	13	39	42	
II	2	5	16	43	34	Age
III	11	15	22	34	19	
IV	10	23	32	27	8	22-39
V	43	23	15	14	5	

[59]"At Last A Reliable Music Survey," Broadcasting, October 12, 1959, pp. 33-38.

CHAPTER III

THE DIMENSIONS OF THE STATION SURVEY

The Area of the Study

The geographical limits of the station survey in this study are illustrated by the map on page forty-three. This is an area covering some four thousand square miles between the cities of Toledo and Cleveland in an east to west direction, and in a sourthern direction from Lake Erie for approximately sixty miles. Sandusky, Ohio, was selected as the geographical center of the survey as it lies between the largest centers of population and industry in the northern Ohio area.

The Population

In Table Seven the counties within the area of the study are listed. Also listed in this table are: (1) the total population of each county; (2) the percentage of the total population increase over a ten year period; (3) the percentage of the total population living in urban, rural non-farm, and rural farm areas;[60] (4) the average number of persons per household; (5) the total number of radio homes per county; and (6) the percent of radio penetration per

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[60]People in "rural non-farm" areas do not engage in farming activities.

TABLE 7

A SUMMARY OF POPULATION CHARACTERISTICS AND RADIO PENETRATION FOR THE COUNTIES IN THE NORTH CENTRAL OHIO AREA[a]

County	Total Pop.	% Inc. 1940-1950	% Urban	Rural Non-Farm	% Rural Farm	Persons / Home	Total Radio Homes	% Radio Pen.
Ashland	33,040	10.9	50.9	24.1	25.1	3.20	11,100	96.9
Crawford . . .	38,738	8.9	64.3	14.4	21.3	3.19	13,500	97.4
Cuyahoga . . .	1,389,532	14.2	98.1	1.7	0.2	3.31	473,400	97.5
Erie.	52,565	21.7	60.7	29.0	10.3	3.23	18,700	96.9
Geauga.	26,646	37.1	....	63.7	36.3	3.60	8,800	92.8
Hancock	44,280	8.5	59.0	19.1	21.8	3.12	16,200	97.2
Huron	39,353	13.1	46.9	26.9	26.2	3.34	13,000	97.4
Lorain	148,162	31.8	69.3	22.3	8.4	3.45	56,000	97.3
Lucas	395,551	14.9	89.3	8.2	2.5	3.25	139,500	97.3
Medina	40,417	22.3	32.3	39.7	31.4	3.33	14,700	96.4
Ottawa	29,469	21.0	18.8	61.1	20.1	3.32	10,300	97.4
Richland . . .	91,305	23.6	64.1	24.2	11.6	3.31	31,000	96.8
Sandusky . . .	46,114	12.4	51.2	28.0	20.9	3.30	17,600	96.9
Seneca	52,978	9.2	58.5	20.0	21.4	3.34	17,000	97.4
Summit	410,032	20.8	85.9	12.0	2.1	3.37	145,800	97.5
Wayne	50,716	16.2	39.1	34.3	26.5	3.48	18,200	95.3
Wood	59,605	15.1	43.5	35.7	20.8	3.33	19,300	97.1
Wyandotte . . .	19,785	3.0	38.7	25.9	35.4	3.31	6,300	97.2

[a]At the time of the study the source listed in footnote number 61 was the latest available. Therefore, judgment should be used in applying them to present day analysis.

county. From this data, four counties appear to be highly urban in nature. This is because a large center of manufacturing or industry lies within each of them. These centers of industry are: Cleveland in Cuyahoga County, Lorain and Elyria in Lorain County, Toledo in Lucas County, and Akron in Summit County.[61] It will be seen that all of the other counties show an average or better than average population of rural farming families. A great deal of this northern Ohio area is used for agricultural purposes. The land south from the lake is flat and quite suitable for the growth of nearly all major agricultural crops native to the north central states.

Rural non-farm and urban populations indicate an expected clustering effect in and near the industrial centers. Also, all the counties display considerable population increases during the period from 1940 to 1950. The county of Wyandotte, a highly agricultural and rural area, is the only exception.

The figures for radio penetration indicate average coverage in comparison to national norms. However, it must be kept in mind that these figures are based on amplitude modulation receiving sets. The writer could not find information

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[61]The source of Table Seven was: U. S. Bureau of the Census, U. S. Census of Population: 1950, II, "Characteristics of the Population," Pt. 35, Ohio, chap. B, p. 55. The columns headed "Total Radio Homes" and "% of Radio Penetration" were taken from: Broadcasting Yearbook, 1958, pp. 49-51.

relative to the penetration of frequency modulation sets within the specific area of this study.

Table Eight presents statistics relating to the populations of the principal cities in the counties mentioned above. It will be noted that the cities of highest industry have the least number of persons over sixty-five years of age. And, these cities also have the highest percentage of non-white citizens. The table also indicates total populations, the magnitude of the labor force, and statistics indicating income levels within each city.[62]

With this examination of the nature of the population in the northern Ohio study area, the following conclusions would seem to emerge: (1) that industry and professional interests control the major share of the area's population; (2) that, however, there is a better than average farm representation; (3) that all areas seem to be growing in terms of population; (4) that nearly all of the homes in the area receive AM stations; (5) that near the centers of population there is a marked increase in the number of persons in the labor force; and (6) that minority audiences are evident in all areas in varying degrees.

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[62]See footnote "a" in Table Eight for the source of the indicated information.

City	Total	% Inc.	Median	% Over Age 65	% Non White	No. in Labor Force	Median Income	% Less $2,000 Income
Ashland	14,267	14.7	32.4	12.1	0.4	6,363	2,952	31.7
Bucyrus	10,327	6.2	34.4	13.5	0.4	4,207	2,520	39.4
Cleveland	914,808	4.2	32.5	7.8	16.3	413,916	3,153	27.5
Sandusky	29,375	18.1	32.8	10.1	6.1	13,264	3,099	27.2
Findley	23,845	17.9	32.9	12.1	0.8	9,852	2,837	35.2
Lorain	51,202	16.0	30.9	7.2	4.9	22,584	3,333	18.2
Elyria	30,307	20.6	32.2	9.1	6.3	13,089	3,302	23.8
Toledo	303,616	7.5	33.8	9.4	8.3	133,683	3,484	23.9
Medina	5,097	16.9	34.6	11.9	2.6	2,229	3,196	27.8
Mansfield	43,564	17.3	32.9	9.2	5.0	20,225	3,269	25.4
Fremont	16,537	12.4	32.5	10.2	2.3	7,118	3,034	28.3
Tiffin	18,952	17.7	31.2	11.7	0.4	7,516	2,756	36.3
Akron	274,605	12.2	31.4	6.7	8.7	118,608	3,232	24.3
Wooster	14,005	21.3	30.8	11.4	1.2	5,951	2,430	42.4
Bowling Green . .	12,005	67.0	23.8	8.3	0.3	3,957	918	68.1
Upper Sandusky .	4,397	12.5	34.9	15.6	---	1,766	2,420	37.2
Cleveland Heights	59,141	7.5	39.7	11.2	0.8	26,275	4,959	17.4
Fostoria	14,351	6.7	31.3	10.1	2.9	6,054	3,139	24.9

Broadcast Stations in the Survey Area

At the time the personal interview survey was conducted, there were thirty-eight separate AM, AM and FM, and FM broadcasting stations located within the geographical area of the study. They are listed by call letters in Table Nine, along with their locations, type of operation, and FM frequencies.

As previously stated, the writer was limited by time and travel conditions. It, therefore, became an impossible task to visit all thirty-eight of the broadcasting operations. A timetable was organized that allowed the writer to visit twenty-two stations. These stations are listed in Table Ten.

The selection of these twenty-two stations was made on the basis of each station's willingness to co-operate with the survey, and on the basis of the writer's ability to schedule his personal visits within the time allowed for the trip.

Of the twenty-two stations visited, eight were FM only operations, five were AM and FM with separate programming, six were AM and FM operations with duplicated programming, and three were AM and FM operations that both duplicated and separated their programming. Also, three of the eight FM

TABLE 9

BROADCASTING STATIONS IN THE NORTH CENTRAL OHIO SURVEY AREA[a]

County	City	Station Call Sign	Type of Operation	Frequency Assignment
Ashland	Ashland	WNCO	AM & FM	101.3 mc.
Crawford	. . . .	. . .	. . . . .	. . . . .
Cuyahoga	Berea	WBWC	FM	88.3 mc.
Cuyahoga	Cleveland	KYW	AM & FM	105.7 mc.
Cuyahoga	Cleveland	WABQ	AM & FM	106.5 mc.
Cuyahoga	Cleveland	WCRF	FM	103.3 mc.
Cuyahoga	Cleveland	WDOK	AM & FM	102.1 mc.
Cuyahoga	Cleveland	WERE	AM & FM	98.5 mc.
Cuyahoga	Cleveland	WGAR	AM & FM	99.5 mc.
Cuyahoga	Cleveland	WLK	AM & FM	100.7 mc.
Cuyahoga	Cleveland	WJW	AM & FM	104.1 mc.
Cuyahoga	Cl. Heights	WJMO	AM	. . . . .
Cuyahoga	Cl. Heights	WCUY	FM	92.3 mc.
Erie	Sandusky	WLEC	AM & FM	102.7 mc.
Geauga	Newberry	WNOB	FM	107.9 mc.
Hancock	Findley	WFIN	AM & FM	100.5 mc.
Huron	. . . .	. . .	. . . .	. . . . .
Lorain	Elyria	WEOL	AM & FM	107.3 mc.
Lorain	Lorain	WWIZ	AM	. . . . .
Lucas	Toledo	WMHE	FM	92.5 mc.
Lucas	Toledo	WOHO	AM	. . . . .
Lucas	Toledo	WSPD	AM & FM	101.5 mc.
Lucas	Toledo	WTDS	FM	91.3 mc.
Lucas	Toledo	WTOD	AM	. . . . .
Lucas	Toledo	WTRT	FM	99.9 mc.
Lucas	Toledo	WTOL	AM & FM	104.7 mc.
Medina	Barberton	WDBN	FM	94.9 mc.
Ottawa	. . . .	. . .	. . . .	. . . . .
Richland	Mansfield	WCLC	AM	. . . . .
Richland	Mansfield	WMAN	AM	. . . . .
Sandusky	Fremont	WFRO	AM & FM	99.3 mc.
Seneca	Fostoria	WFOB	AM & FM	96.7 mc.
Seneca	Tiffin	WTTF	AM	. . . . .
Summit	Akron	WADC	AM	. . . . .
Summit	Akron	WAKR	AM & FM	97.5 mc.
Summit	Akron	WAPS	FM	89.1 mc.
Summit	Akron	WCUE	AM & FM	96.5 mc.
Summit	Akron	WHLO	AM	. . . . .
Wayne	Wooster	WWST	AM & FM	104.5 mc.
Wood	Bowl. Green	WBGU	FM	88.1 mc.
Wood	Bowl. Green	WHRW	AM	. . . . .
Wyandot	. . . .	. . .	. . . .	. . . . .

TABLE 9 (Continued)

[a]Source for this table was: Broadcasting Yearbook, 1960, pp. A-204-A-210.

TABLE 10

BROADCASTING STATIONS IN THE NORTH CENTRAL OHIO AREA INCLUDED IN THE SURVEY

Station Call Sign	Location (City)	Programming
KYW	Cleveland	AM/FM Separated
WCRF	Cleveland	FM Only
WDOK	Cleveland	AM/FM Separated
WERE	Cleveland	AM/FM Separated
WGAR	Cleveland	AM/FM Duplicated & Separated
WHK	Cleveland	AM/FM Duplicated
WJW	Cleveland	AM/FM Duplicated
WCUY	Cleveland Heights	FM Only
WLEC	Sandusky	AM/FM Duplicated
WNOB	Newberry	FM Only
WFIN	Findlay	AM/FM Duplicated & Separated
WSPD	Toledo	AM/FM Duplicated
WTDS	Toledo	FM Only
WTRT	Toledo	FM Only
WTOL	Toledo	AM/FM Separated
WDBN	Barberton	FM Only
WFRO	Fremont	AM/FM Duplicated
WFOB	Fostoria	AM/FM Duplicated & Separated
WAKR	Akron	AM/FM Separated
WAPS	Akron	FM Only
WCUE	Akron	AM/FM Duplicated
WBGU	Bowling Green	FM Only

stations were educational broadcasting operations.[63]

The map on page forty-four indicates the location of each station visited and the primary coverage area that each station serves with its frequency modulation signal.[64]

The Method of the Study

A preliminary set of questions in terms of the hypothesis stated in this thesis was designed. This set of questions was discussed with various persons in the field of broadcasting, to determine its validity in relation to the stated hypothesis, and to determine its probable impact upon the broadcasters at the various stations to be visited. The suggestions of these

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[63]The tables in this study will indicate this breakdown of the 22 stations with the following abbreviations: "FM Only" will indicate those stations broadcasting frequency modulation signals only; "AM/FM Dup." or "Dup." will indicate those stations broadcasting the same signal on both amplitude modulation and frequency modulation; "AM/FM Sep." or "Sep." will indicate those stations broadcasting one signal over amplitude modulation and a different signal over frequency modulation; and "AM/FM Dup & Sep." or "Dup. & Sep." will indicate stations that by both duplicated and separated processes at various times throughout the day furnish program service. The educational stations will be indicated where necessary by the use of footnotes contained in the tables. In the remainder of this report the stations in the survey will be termed as stated above in four classes.

[64]The coverage radius for each FM station was determined by evaluation of its antenna height, transmitter power, and the information of coverage supplied by the person or persons questioned during the interviews. Mr. Willis M. Green, the chief engineer for WSWM-FM in East Lansing, Michigan, supplied the writer with mathematical source tables for the exact calculation of coverage radii.

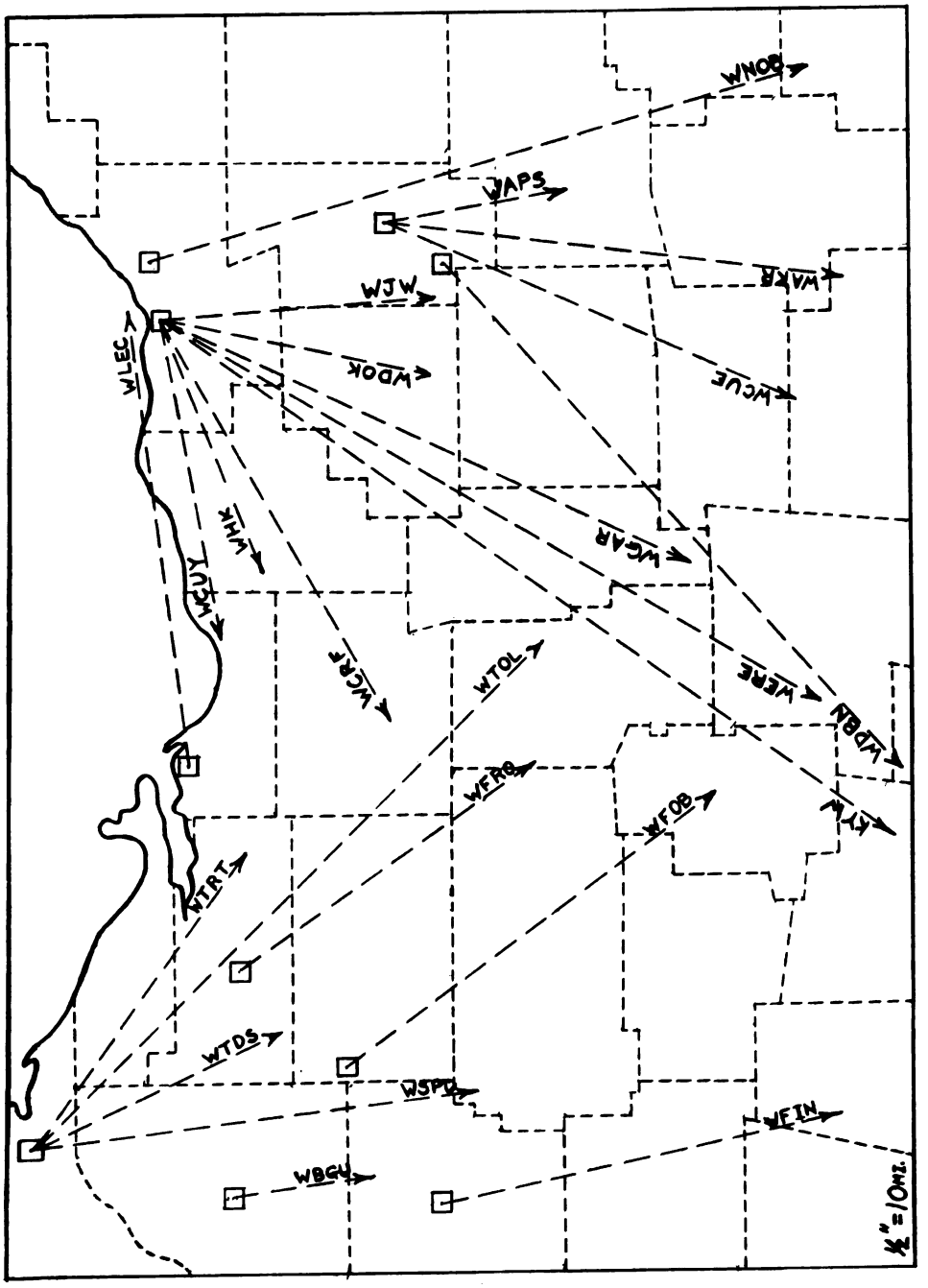

Fig. 1. - Map of the North Central Ohio Area

persons were considered and the preliminary set of questions was revised accordingly.[65]

Two questionnaires were finally developed.[66] The first of these had two pages constructed in the form of a rough working outline. It covered the general areas of programming policy with respect to music, news, sports, weather, public service, and specialized programming. Also included were questions relating to the areas of commercial sales philosophy, the concept of a station's audience, and a number of questions regarding technical operation. This questionnaire was designed for use as a working guide by the writer during his personal visits to each station.

The second questionnaire consisted of a set of thirty-one questions relating to specific areas of programming, station operation, personnel, audience listening and buying habits, and additional technical data. The questions on this form were of the short answer variety. This questionnaire was designed to gather additional information at a time other than during the personal interview. It was to be left, along with

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[65]Dr. Walter B. Emery, Professor of TV and Radio at Michigan State University; and Mr. John P. McGoff, President of Mid-State Broadcasting Corporation, East Lansing, Michigan, were asked to examine the preliminary questions.

[66]Samples of the questionnaires appear in Appendix A.

return mailing materials, with each station. It is interesting to note that of the twenty-two stations contacted, twelve completed and returned the second questionnaire.[67]

In the following pages the results gathered from the two questionnaires are combined. It will be indicated when results are taken only from the material in the second questionnaire. This is done to minimize any possible effect resulting from the use of the twelve sets of answers as against the cases where twenty-two sets of answers were available.

During the time that the questionnaires were being prepared, all thirty-eight of the stations in the North Central Ohio area were contacted by mail to see if they would be willing to participate in the survey.[68] Twenty-two of the stations made replies and all were favorable. The time for the personal interviews was determined through additional correspondence. In some cases it was deemed advisable to set interview dates when the writer actually would be in the area.

The interview trip was conducted between the dates of December 19 to December 23, and December 27 to December 30, 1960.

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[67] These twelve stations included: five FM Only operations, five Separating stations, and two Duplicating stations.

[68] A sample of the letter forms used to contact the stations will be in Appendix B.

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The Results of the Survey

Coverage Area

When the question was asked as to the area covered by each FM station, the writer met with mixed replies. The FM "Only" stations were most aware of their geographical area of coverage. However, the combined stations, notably in the large cities, were generally unsure of their coverage areas. When no coverage area was clearly defined, the answer seemed to be "forty or fifty miles," or "we reach Canton on one side and Sandusky on the other." Coverage limits for all stations are on file with the Federal Communications Commission, but this information had apparently not reached the sales or production departments of the stations. Such a situation seemed to reflect the individual station's lack of interest in frequency modulation.

The information gathered from the survey regarding coverage area of frequency modulation operations is listed in Table Eleven. It would be safe to say that all areas covered by this study could easily receive at least one strong signal from a commercial frequency modulation station.[69]

Two questions in the survey attempted to determine the picture that each station held in terms of its own frequency

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[69] Supra., p. 44.

modulation audience.[70] Table Twelve shows the spread of replies relative to the educational level of each station's audience. And, Table Thirteen indicates the income spread indicated by each station for its audience.

TABLE 11

APPROXIMATE COVERAGE RADII FOR FREQUENCY MODULATION STATIONS IN THE SURVEY

Item	Coverage Radius	Item	Coverage Radius
Station 1[b]	15[a]	Station 12	50
Station 2[b]	20	Station 13	50
Station 3[b]	30	Station 14	50
Station 4	30	Station 15	50
Station 5	30	Station 16	50
Station 6	30	Station 17	65
Station 7	35	Station 18	75
Station 8	35	Station 19	75
Station 9	40	Station 20	80
Station 10	45	Station 21	85
Station 11	50	Station 22	100

[a]All figures under the "Coverage Radius" columns are expressed in miles, based upon comments by station personnel.

[b]These are educational FM Stations.

[70]These questions were included in the second questionnaire. Additional material was gathered from the first questionnaire and the personal interviews.

TABLE 12

THE BROADCASTERS' PICTURE OF THE EDUCATIONAL LEVEL OF THEIR AUDIENCE

Educational Level of Audience	Replies by Stations			
	FM Only	AM/FM Dup.	AM/FM Sep.	AM/FM Dup. and Sep.
All levels	1[d]	2	1	0
High School	2	2	1	1
Some College	2	1	1	4
College[a]	1	0	0	0
Special[b]	2[d]	0	0	0
No Idea[c]	0	1	0	0

[a]Includes persons with four or more years of a college education.

[b]Persons in school situations such as students.

[c]Includes broadcasters' that have no idea as to the educational level of their audiences.

[d]Indicates educational stations.

TABLE 13

THE BROADCASTERS' PICTURE OF THE INCOME LEVEL OF THEIR AUDIENCE

Income of Audience	Replies by Stations			
	FM Only	AM/FM Dup.	AM/FM Sep.	AM/FM Dup. and Sep.
All levels	2[a]	2	0	0
$5,000 & Under	0	3	1	1
$5,000 to $10,000	4	0	1	4
Above $10,000	1	0	1	0
No idea	1	1	0	0

[a]Educational stations.

These two tables point to an interesting area for thought. The FM "only," and the AM and FM stations with separate programming appear to have audiences higher than average both in terms of educational background and income level. On the other hand, the AM and FM stations with duplicated programming, or duplicate and separate programming, indicate that their audiences are of a mass or middle class nature in terms of education and income. This would seem to substantiate a belief held by the writer that stations having both facilities were influenced in their decisions to separate their programming because of a belief that there are differences in audience composition.

Generally, the survey results picture the frequency modulation audience as lying in the middle to upper-middle educational area with education past the high school level. Incomes tend to vary, but seem to be generally above the $5,000 bracket. However, this is only based upon the broadcaster's remarks.

Evidence indicated to the writer that little was known about the true composition of the frequency modulation audience and that most of the comment expressed in the above tables was of a speculatory nature. Comments were frequent to the effect that "no research has been done in this area." One frequency modulation independent station said:

> Based on an educated guess, our listener is in the middle of the middle-upper class, he is thirty-five years old, owns his own home, has a two to three year old car, two children, and a college education.[71]

On the subject of listener interest and response to frequency modulation, the results were highly one-sided, as Table Fourteen will show. All but three of the stations answered this question indicating that they thought FM listening was on an increase. Typical comments included:

> More mass attention to album programs and the demand for the unusual.
>
> More people are talking about frequency modulation and they are buying sets.
>
> Great increase!
>
> Introduction of foreign language instruction stepped up our audience.[72]

Significantly, all of the stations indicating increases in listening, were serving large centers of urban population. The smaller semi-rural broadcasters noted little change. These results bear some weight in terms of credibility as they are based upon letters, phone calls, and receiver sales. All these items could be measured by the station in question.

Availability of Receiving Equipment

The twelve stations returning the second questionnaire

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[71] Source is withheld.

[72] Ibid.

were asked to estimate the availability or supply of FM receivers on the market in their respective locations. Eight indicated that receivers were in good, if not plentiful supply. Three indicated that there was a fair or adequate supply of receivers in their market area. One station indicated that receivers were not in good supply. One note of caution was apparent, however. Broadcasters pointed out that quality and price do not necessarily go together in terms of frequency modulation receivers.

> It is not easy to buy high quality frequency modulation receivers when most of them have amplitude modulation sections also.[73]

TABLE 14

THE BROADCASTERS' PICTURE OF INCREASE IN LISTENER RESPONSE TO FREQUENCY MODULATION

Listener Response to FM	Frequency of Broadcasters' Response Concept
Increase	12
Stays the Same	1
Decrease	0
Don't Know	2
No Answer[a]	7

[a]This classification is included because the table is based upon answers to the second questionnaire and comments on the first questionnaire. Therefore, many stations did not answer the question.

[73]Ibid.

These same stations were asked to indicate the brand names of the receivers that were selling best in their areas. Table Fifteen indicates the names of receivers most often mentioned. This also correlates with the broadcasters' warning about the quality of inexpensive receivers, as one of the receivers mentioned lies in the low price bracket.[74]

TABLE 15

THE BROADCASTERS' CONCEPT OF FREQUENCY MODULATION RECEIVER SALES

Receiver Type	Frequency
Granco	6
Zenith	7
Motorola	2
Sarkes	1
Norelco	1
Westinghouse	1
Arvin	1
Blaupunkt	1
Pilot	1

General Programming Philosophy

Station Personality

Each of the twenty-two stations was asked to make a statement that would express its general programming philosophy. This statement was to include a definition of the personality

[74] The Granco line of receivers lies in a lower price bracket than the others mentioned. However, most manufacturers include at least one model of FM receiver at a price under $40.00.

or "image" that each station attempted to create in the minds of its listening audience. Table Sixteen shows the breakdown of replies.

TABLE 16

STATION PERSONALITY AS A PROGRAMMING PHILOSOPHY

Personality of Station	Replies by Stations			
	FM/Only	AM/FM Dup.	AM/FM Sep.	AM/FM Dup. & Sep.
Quality Music for Adults[a]	3	1	1	1
Music as a Background[b]	0	0	2	1
Middle of the Road[c]	0	4	1	1
Top 50, News & Sports[d]	0	1	1	0
Educational Broadcasting	3	0	0	0
All Jazz Show	1	0	0	0
Religious Programming	1	0	0	0

[a]Includes instrumental, classical, and most LP music, no top 40.

[b]These stations don't try to sell FM extensively. They provide easy listening music for listeners to use while doing other activities.

[c]These stations program to the largest possible audience, using all types of mass audience programming.

[d]These stations use the AM format of news, weather, and sports.

The distinction between the first two types of programming philosophy listed in the table is somewhat unclear. The difference is one of emphasis. Those stations listed under

"Quality Music for Adults" have developed their formats in a conscientious attempt to attract a higher level of listener. There is positive direction behind their programming policy. Those stations listed under the "background music" are doing much the same type of programming but are emphasizing AM broadcasting and the "formula" approach while using FM without specific program design or direction. These were the stations showing little listener interest as reflected in Table Eight. It will be noted that two frequency modulation "only" operations have developed the "better music" format further and are programming to specialized minority audiences with religious and jazz musical formats. Also interesting is the clustering of the AM and FM duplicating stations in the area listed as "middle of the road." These stations adhere very close to the "format" but tend to do more in the area of good music than do the "top forty" stations.[75] Finally, the "top forty" stations listed are interesting for two reasons; first, they both follow closely the "format" with tight and fast production; and second, they both serve the same major market and both indicate that

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[75]The term "top forty" station refers to a station using the same programming principles as that of the "formula" station (see footnote 3), with the exception that the "top forty" station programs the top rock and roll music current in any given listening area.

they are the number one station in terms of audience.

Unique Programming Characteristics

These same twenty-two stations were asked to indicate any unique program features in their operations which gave them advantages over their competitors. Table Seventeen lists the answers given and the frequency of mention. Most frequently mentioned was the area of special feature programming unobtainable on other stations in the same market. Some of these programs mentioned were: especially written information programs about subjects of national or international importance, live musical concerts, sports unobtainable elsewhere, and specially written formats for recorded music programs. The five stations listed under "little competition" included two educational stations.

Tightness of Production

Another facet of the emerging FM "only" station is its use of a rather relaxed type of production. That is, the whole continuity of the program format moves evenly from musical selection to musical selection, or announcement to news feature without any serious attempt to remove dead air space between elements. Also, the announcements and all speech elements in the format are voiced in a calm, unhurried manner. One station stated this relaxed type of production as follows:

> Its the opposite of the station where the announcer sounds as if he's standing on the top of a chair shouting at the microphone with one hand on a sixty second laundry detergent commercial and the other full of teletype news copy.[76]

TABLE 17

STATIONS' UNIQUENESS IN RESPECT TO COMPETITION

Characteristic of Uniqueness	Frequency of Mention
We serve as a listening background for our audience as it carries on its daily function	4
We carry features that are unobtainable elsewhere in our area	6
We use appeals that are designed for a mature adult mind	3
We have no repetitive programming	1
We use block programming for various listening groups throughout the day	1
We work for a "Number One" station reputation	2
We have little or no competition	5
We use Hosts instead of DJ's to introduce the music	2

Three classifications of production tightness were included in the first questionnaire. The first type was called

[76]Source is withheld.

"tight and fast-paced" which most closely fits the production typified by the rock and roll or "top forty" station that programs a great many spot commercials. This type of production is hurried, loud, and rather frantic in nature. The second type was assigned the title of "tight but not frantic." This type of production sounds very professional. There are few lapses of dead air, the announcers deliver their messages calmly in a smooth and efficient manner. Each segment of programming moves to the next in a steady flow. Music is often used during the announcements along with many musical cross fades and special audio effects.

The third classification of production tightness was designated as "loose and relaxed." Under this form of production, dead air time is accepted if not demanded by the specific station. Announcements are again calm and smoothly delivered. But, the over-all rhythm of production is slower than the second form of production tightness. Pauses are frequent. Table Eighteen presents these three classifications along with the breakdown of replies received from the stations in the survey.

It is evident from the table that at least in northern Ohio, all the commercial FM "only" operations follow production techniques that are relaxed and offer the listener the direct opposite of the "top forty" formula operation. Also apparent

is a trend toward professionalism of production evidenced by the large number of replies under the category of "tight but not frantic." Care should be used when attempting to define trends or shifts toward or away from the indicated relaxed production approach. This information shows the present situation and not the future or the past, in one limited area of the country.

TABLE 18

STATIONS' STYLES OF PRODUCTION

Style of Production	Replies by Stations			
	FM Only	AM/FM Dup.	AM/FM Sep.	AM/FM Dup. & Sep.
Tight and Fast	0	2	3	0
Tight but not Frantic	3[a]	5	2	2
Loose and Relaxed	5	1	0	0

[a]Educational Stations.

The Use of Networks

Two questions were asked in an attempt to determine the extent of station membership or affiliation with networks or organizations having specific FM interests. Since only the twelve stations answering the second questionnaire supplied this information, the results are by no means conclusive. However, of the twelve stations, only one indicated membership

in an actual FM network and this network is a regional one, the QXR network in New York.[77] This would seem to indicate a lack of status for frequency modulation as a nationwide broadcasting system. Many stations indicated affiliation with one or more organization. Among those mentioned were: the National Association of Broadcasters, the National Association of Educational Broadcasters, the National Association of Frequency Modulation Broadcasters, the Mutual Broadcasting System, the Columbia Broadcasting System, the National Broadcasting Company, and the American Broadcasting Company. These facts regarding membership and affiliation were gained from two items in the second questionnaire. It is believed that the insufficient information gained relating to network and association membership was due to the structuring of the questionnaire as they were not designed to research this subject.

Hours of Station Operation

Since fourteen of the stations surveyed possessed both AM and FM licenses, some discussion of the average number of hours is in order.[78] Seven of the amplitude modulation operations

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[77] See the most recent issue of the Standard Rate and Data Service under the section on radio networks for a more detailed explanation.

[78] Supra, footnote 40.

were on the air twenty-four hours per day. Three were daytime operations. The remaining four stations operated on AM for an average of eighteen to twenty hours per day.

Table Nineteen indicates the average number of hours per day that each of the twenty-two stations broadcast on either amplitude modulation or frequency modulation.

TABLE 19

STATION HOURS OF OPERATION

Stations by Programming	Number of Hours of Operation[a]		
	On FM	On AM	FM Sep.
Station 1, FM Only[b]	7	....	.....
Station 2, FM Only[b]	6 1/2	....	.....
Station 3, FM Only[b]	....	....	.....
Station 4, FM Only	9	....	.....
Station 5, FM Only	17 1/2	....	.....
Station 6, FM Only	17	....	.....
Station 7, FM Only	8	....	.....
Station 8, FM Only	18	....	.....
Station 9, Sep.	18	24	.....
Station 10, Sep.	24	24	.....
Station 11, Sep.	19	20	.....
Station 12, Sep.	16	19	.....
Station 13, Sep.	12	24	.....
Station 14, Dup.	18	18	.....
Station 15, Dup.	12	Daytime	.....
Station 16, Dup.	8	Daytime	.....
Station 17, Dup.	19 1/2	19 1/2	.....
Station 18, Dup.	13	24	.....
Station 19, Dup.	24	24	.....
Station 20, Dup. & Sep.	19	24	7
Station 21, Dup. & Sep.	18	24	.....
Station 22, Dup. & Sep.	16	Daytime	4

[a] Based on an average week.

[b] Educational stations.

The table shows: (1) that two of the commercial independent FM stations broadcast only limited program schedules; (2) that generally, the stations that separate their programming, broadcast nearly the same number of hours by frequency modulation as they do on amplitude modulation; (3) that the stations duplicating and separating their programming seem to be attempting some degree of FM "only" broadcasting.[79]

The AM and FM duplicating, and duplicating and separating stations were further asked if they were considering additional or complete separation of programming in the near future. Of the nine stations in these two categories, seven answered that they were not considering further separation. The most frequent reasons for this reply were: (1) that the cost of additional equipment and personnel was prohibitive; and (2) that FM had not yet proved its salability. The two remaining stations had no comment relative to this matter.

Specifics of Programming Policy

In addition to the area of general programming philosophy, the questionnaires asked a number of questions about specific types of programs.

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[79]The personal interviews indicated great interest in the area of FM Only broadcasting.

Total Programming Formats

The second questionnaire requested each FM station to check from a list the specific types of programs currently in the station's schedule. Each was also asked to indicate the program types that had proven to be the most salable in recent months. Table Twenty indicates the break-down of answers to these questions.

The column headed "% Time Salable" represents the degree that each of the items of programming format proved to be salable in relation to the number of times that each was mentioned. Admittedly, these percentages are highly unreliable due to the extremely small numbers used in the survey. However, the writer found from the personal interviews with the ten stations not included in the table that formats and salability tended to hold fairly constant. Further, the twelve stations represented in the table formed a near cross section of the four types of operations studied.[80] Therefore, it would seem justifiable to include the column "% Time Salable" and to make at least a general statement about salability. Based upon frequent mention in the "In The Format" column of Table Fourteen, the broadcast stations in this geographical area seem to find instrumental and standard music,

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[80] Supra, footnote 40.

TABLE 20

SPECIFIC AREAS OF PROGRAMMING

Programming Areas	In the Format	Usually Salable	% Time Salable
Classical Music	8	2	25.0
Semi-Classical Music	9	2	22.2
Popular LP's[a]	5	3	60.0
Jazz	6	2	30.0
Broadway & Film Music	6	3	50.0
Popular 45's[b]	3	2	66.7
Folk Music[c]	5	2	40.0
Hillbilly Music[c]	0	0	00.0
Live Music	2	1	50.0
Sports	5	2	40.0
Local Events	3	0	00.0
Talks[d]	7	1	14.3
Drama	4	1	25.0
News	11	6	54.5
Weather	8	44	50.0
Religion	6	2	33.3
Stereo Music	2	0	00.0
Farm	3	2	00.0
Political	3	2	66.6
Educational[d]	6	0	00.0
Other	2	1	50.0

[a]Includes instrumentals and standards.

[b]Includes the top 40 tunes.

[c]Folk Music is a broad area including music of historical significance from all lands. Hillbilly music borders on modern rock and roll.

[d]Talks may deal with civic and political events and debates, while educational programs are primarily those designed to instruct, for example, school course work.

broadway and film music, sports, news, and weather most salable. Note that classical and semi-classical music, although frequently mentioned, tend to be less frequently sold.

Musical Programming

Each station was asked to indicate its specific policy with respect to the programming areas of music, sports, news and weather.

In the area of musical programming, each station indicated the type of music used most extensively. Table Twenty-one depicts the breakdown of replies.

TABLE 21

SPECIFIC AREAS OF MUSICAL PROGRAMMING

Musical Areas	Frequency of Mention
All music is Classical and Semi-Classical in nature	3[a]
All Top 40 and Popular music, no Classical or Semi-Classical	3
Middle of the road, uses all types of music, but little Classical	5
Popular LP's and Instrumentals, No Top 40 or Classical	2
Classical, Semi-Classical, Instrumentals, Popular LP's, and Standards, no Top 40	8[b]
All Jazz	1

[a]Includes two educational stations.

[b]Includes one educational station.

The statistics in Table Twenty-one indicate the definite use of "good music" by a majority of the stations.[81] Second in musical popularity is the station that programs all types of music. And, by so doing, such a station attempts to attract the widest possible audience.

All but two of the stations in the survey were asked to give the approximate percent of total air time devoted to music.[82] The answers of the twenty stations presenting this information appear in Table Twenty-two.

TABLE 22

AMOUNT OF TIME PROGRAMMED WITH MUSIC

Amount of Musical Time	Frequency of Mention
25%	1[b]
60%[a]	3
100%[a]	16

[a]Percentages are approximate.

[b]One educational station. Two educational stations did not reply.

It becomes apparent that major emphasis is placed in the area of music by almost all of the broadcasting stations

[81]Supra., p. 2.

[82]The two stations not supplying the information were educational stations.

in the geographical area studied. If Table Twenty-one and Table Twenty-two are compared, it can be seen that this musical emphasis bears a relatioship to the musical programming philosophy of the stations studied.

It is interesting to note that although the major emphasis in radio broadcast programming lies in the area of music, only in a few instances was there a separate person in the station who was designated as a music director with chief responsibility and authority in this area. The writer would judge on the basis of his personal interview, and on the basis of ten direct replies, that approximately one station in four assigned a person on the station staff the duty of programming music consistent with the station's stated programming policy. All too often this area seems to be left to the discretion of each announcer or operator, with little station direction to support the musical choices made.

Sports Programming

Twenty of the stations were engaged in some form of sports broadcasting. Two areas of such broadcasting were studied in the survey: (1) play-by-play broadcasts of athletic contests; and (2) the reports of sport events, stories, and scores. Only four of the twenty stations were engaged in active play-by-play coverage, while fifteen of the stations reported

at least some use of the second form of sports programming.

In the case of play-by-play sports broadcasting, the stations in single station markets tended to broadcast local high school and college games more frequently than professional or national contests, while the stations having considerable competition and located in the larger markets tended to broadcast more professional and national sports. One such Cleveland station originates broadcasts of the Cleveland Indians professional baseball games to stations in the Ohio area by means of FM transmission.[83]

Emphasis on play-by-play sports coverage as contrasted to simple reporting of sporting scores is shown in Table Twenty-three.

TABLE 23

RELATIONSHIP OF PLAY-BY-PLAY SPORTS BROADCASTING TO BROADCASTS OF SPORTING REPORTS

Emphasis on Sports Broadcasting	Frequency of Mention
Heavy on Play-By-Play and Reports	4
Heavy on Play-By-Play and Light on Reports	1[a]
Heavy on Reports and no Play-By-Play	2
Light on Reports and Play-By-Play	5
No sports coverage	5[b]

[a]This station originates professional sporting contests for a network in the northern Ohio area.

[b]Includes two educational stations.

[83]Source is withheld.

News Programming

In order to analyze the treatment of news, and the philosophy of news at various stations, the writer attempted to define news programming under four conditions: (1) the extent that news is included as a part of the format of a station; (2) the most frequent source of news information used by each station; (3) the area of news most heavily emphasized; and (4) the type of treatment most frequently used to deliver the news.

These four areas of inquiry are summarized in Tables Twenty-four through Twenty-seven.

TABLE 24

EXTENT OF NEWS PROGRAMMING[a]

Amount of News Programming	Frequency of Mention[b]
More than once per hour	9
Once per hour or less	2
Only two or three times per day	5
No news done	3[c]

[a]News programming includes all types of news programs, special reports, and documentaries.

[b]Three stations gave insufficient information. Two of these were educational stations.

[c]Includes one educational station.

TABLE 25

SOURCES OF NEWS INFORMATION[a]

Source of News Information	Frequency of Mention
Networks	5
Wire Services	14
Local Sources	10

[a]Three stations gave insufficient information. Two of these were educational stations.

TABLE 26

BROADCASTERS' MOST EMPHASIZED AREA[a] OF COVERAGE

Emphasized Area	Frequency of Mention
Local	4
Local and State	4
Local and National	3
National	2
All Areas	3

[a]Three stations are not included because of lack of information and three because they carry no news. The latter three were educational stations.

TABLE 27

TYPE OF NEWS TREATMENT MOST OFTEN USED[a]

Treatment of News	Frequency of Mention
On-the-spot reports[b]	9
Editorialization	6
News programs in depth[c]	6
Rewritten wire service	9
Spot summaries	8

[a]Notice that one station may use more than one of the above treatments. Four stations are excluded because of lack of information and/or educational interest.

[b]Includes the techniques of tape recording and beeper telephone.

[c]Includes the use of network and special feature programming.

General conclusions to be drawn from this analysis of news programming are: (1) that the amount of news programming done by stations in the North Central Ohio area most often is either extensive or quite infrequent; (2) that wire services and local sources are most often used to gather news stories; (3) that local news coverage seems most important; and (4) that most stations rewrite their wire service news, depend heavily on on-the-spot local news techniques, and use frequent spot summary news reports.

The writer considers it important to point out that in Table Twenty-four the high figure under "More than once per hour" is due in part to stations that duplicate AM "format" programming on their FM facilities. As a general rule, the stations listed under "Only two or three times per day" tended to be FM "only" operations.

The same qualifications should be made in connection with Table Twenty-seven. Stations still most concerned with their AM operations were most often included under the listings of "On-the-spot reports" and "spot summaries." Frequency modulation "only" stations, and stations concerned with the developing role of their FM authorizations most often marked the heading "News programs in depth."

The items in Tables Twenty-five and Twenty-six as well as those items in Table Twenty-four and Twenty-seven not mentioned in the preceding paragraph, were listed about evenly by all four types of stations.

Weather Programming

The programming of weather forecasts and road condition programs was also taken into consideration. The writer decided to separate this area from news programming in order to ascertain whether or not weather programming differed from news programming. The stations were, therefore, asked to

indicate the quantity and type of weather reporting that they most often used. Tables Twenty-eight and Twenty-nine indicate the spread of replies.

TABLE 28

THE EXTENT OF WEATHER PROGRAMMING[a]

Frequency of Weather Programming	Frequency of Mention
More than once per hour	6
Once per hour	3
Two or three times per day	4
No weather reporting	3[b]

[a]Six stations are excluded by reason of lack of information.

[b]Includes three educational stations.

Six stations did not include enough information to justify their placement in Tables Twenty-eight and Twenty-nine. It should be remembered, when analyzing these tables, that the stations were asked to indicate the weather sources and types most often used. It is entirely possible that many of the stations use all of the above listed types of weather sources and types of weather programming.

TABLE 29

TYPE OF WEATHER TREATMENT MOST OFTEN USED[a]

Treatment of Weather	Frequency of Mention
Government Weather Station Reports	3
Local road conditions	6
Local lake conditions[b]	2
Local forecasts	11

[a]Six stations are excluded by reason of lack of information.

[b]Included due to the number of stations serving areas along the shore of Lake Erie.

Specialized Programming

In addition to the four types of programming previously mentioned, many of the stations indicated various other program types that did not fit into these four classifications. All the special program types mentioned by the stations in the survey are listed in Table Thirty along with their frequency of mention. The writer has indicated by the three columns in the table the extent to which these specialized programs are broadcast.

Four of the thirteen stations listing extensive public service programming justify their answers through the use of spot announcements only. The remaining stations use spots but

also carry programs of an informational nature. Some of the public service programs mentioned by stations included: city council meetings; United Fund appeal programs; and two network programs, the Georgetown University Forum, and Focus on Careers. It was quite obvious to the writer that the definition of "public service" covered quite a wide area in the minds of the broadcasters at the stations listed.

TABLE 30

EXTENT OF PROGRAMMING IN SPECIAL AREAS[a]

Program Type	Frequency of Mention		
	Carried Often	Carried Sometimes	Not Carried
Farm Programming	6	1	12
Foreign Language and Racial Programs	2	1	16
Programs for Persons Over Age 65	0	1	18
Religious Programs	8	1	10
Health Programs	1	1	18
Women's Programs	1	1	17
Children's Programs	1	0	18
Public Service Programs	13	4	2
Drama	4	2	12

[a]Only the nineteen commercial stations are included in this table.

It should be added that the large figures in the "not carried" column of Table Thirty do not necessarily indicate

that stations have never programmed in these areas. The table does indicate the present programming policies in the study area. Frequency modulation "only" stations tend to do less in all of the areas mentioned with the possible exception of public service programming. However, when the FM "only" stations did indicate that they carried programs for special audiences they seem to spend more time in the production of them than do any of the other types of stations.

Stereophonic Programming

During the past few years the public has seen the rapid rise of bi-channel sound, most commonly called "stereo." There has been considerable interest in the development of audio equipment designed for the home. Such equipment has extremely high reproductive ability. More recently, "stereo" sound on high quality phonograph recordings has made the average person conscious of a better type of music available for home entertainment. Broadcasters realizing that the listening public was beginning to demand better sound quality found FM to be the answer to the problem of high-fidelity radio. Frequency modulation gave sound quality that compared favorably to commercial phonograph records, but this did not solve the problem of bi-directional sound. Both the government and the broadcasting industry envisioned various methods for the

broadcasting of stereophonic sound by means of air waves. The most obvious solution was to split the sound source and broadcast each half over a separate broadcasting station. The equally obvious problem that this system created was the need for the listener to have two receivers, and the use of two separate broadcasting stations to accomplish one broadcasting service. In 1955, the Federal Communications Commission authorized the use of sub-channels in the FM portion of the electromagnetic spectrum.[84] This meant that by an electronic process called multiplex, one frequency modulation station could send two separate signals to one home receiver.[85] These developments made possible the broadcasting of stereophonic programs of high fidelity quality on one broadcasting channel.

The writer included questions designed to define the extent of stereophonic broadcasting experiments in the area of the survey. The sound questionnaire asked each station if it was broadcasting stereophonic programs, and the method that was used. Table Thirty-one indicates the result.

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[84] Supra, p. 19.

[85] The home receivers must have a multiplex adapter in order to receive such signals.

TABLE 31

FREQUENCY OF STEREOPHONIC PROGRAMMING[a]

Treatment of Stereo Broadcasting	Frequency of Mention
Broadcast Stereo Programs	4[b]
Do not Broadcast Stereo Programs	8

[a]Only the twelve stations answered the second questionnaire are included in this table.

[b]All four of these stations broadcast in stereo with AM companions.

Of the stations indicating that they did not broadcast stereophonic programs, three indicated interest in the process and expressed the desire to experiment in the area. Recently, standards of multiplexing for stereophonic broadcasting have been set by the Federal Communications Commission.[86]

Table Thirty-one shows that few stations are now conducting stereophonic experiments but that interest is definitely rising. Note that the four stations broadcasting stereophonic programs are using amplitude modulation companions and not multiplex methods. Several stations that answered only the first questionnaire indicated definite interest in bi-channel programming. Two of these stations were conducting regular experiments.

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[86]"Finally, FCC Okays Stereo," Broadcasting, April 24, 1961, pp. 65-66.

Subsidiary Channel Music Services

Sub-channel operation by frequency modulation stations may be used for other purposes than stereophonic broadcasting. It is possible to program such services as uninterrupted music on a FM sub-channel which can be received by receivers that pick up only the sub-channel signal. Such a service can furnish background music to various business institutions. However, the writer found that none of the broadcasting stations with frequency modulation licenses in the North Central Ohio area were engaged in such activities. Lack of interest or competition from other background music services were the most frequent reasons.

Frequency Modulation Programming

One final area of programming activity was studied. The second questionnaire inquired regarding the existence of FM program guides in the survey area. Many FM stations across the country publish pamphlets listing their schedules of programming. In addition to current program information, many guides include listings of cultural events taking place in their respective communities. The survey attempted to ascertain the existence of these guides as well as their frequency of publication, their cost, and their content.

Coupled with the question of program guides, the writer asked each station if the local newspaper published

the station's FM program schedule. And if so, to what degree did the station feel that such publication was sufficient. Table Thirty-two presents this information.

It can be said that at least in this geographical locale few guides are published. Those stations that do publish guides do so as a free service. Newspapers generally do carry FM program schedules, and their coverage of station programming is generally acceptable. It must be remembered that the broadcaster's opinion is no doubt biased, and in those cases where newspaper coverage is indicated as "poor," other factors may be involved.

General Commercial Philosophy

Five areas of questioning are to be included under the major heading of General Commercial Philosophy. These areas include: (1) an analysis of the general philosophy of each station with regard to its commercial messages; (2) a study of the limitations or restrictions in regard to the selection of sponsors; (3) a review of the products most frequently advertisied by the station; (4) a study of rate cards and the percentage of time sold to local, regional, and national advertisers; and (5) a listing of the methods of promotion used most frequently by commercial FM stations.

TABLE 32

BROADCASTERS' USE OF PROGRAM GUIDES
AND NEWSPAPER PROGRAM SCHEDULES[a]

Stations by Programming	Program Guide and Newspaper Schedule Statistics							
	Has Pgm. Guide	Pub-lished	Cost of Guide	Adver-tising	Addi-tional Features	Profit Lose Even	Sch. in Paper	Paper Cover-age
Station 1, FM Only	Yes	4/yr.	Free	No	No	.....	...	...
Station 2, FM Only	No	.....	....	...	...	.....	Yes	Poor
Station 3, FM Only	No	.....	....	...	...	.....	Yes	Good
Station 4, FM Only[b]	Yes	1/mo.	Free	No	No	.....	Yes	Fair
Station 5, FM Only	Yes	2/mo.	Free	Yes	No	lose	Yes	Fair
Station 6, Sep.	Yes	1/wk.	15/copy	Yes	Yes	.....	Yes	Good
Station 7, Sep.	No	.....	....	...	...	.....	Yes	Good
Station 8, Sep.	No	.....	....	...	...	.....	Yes	Fair
Station 9, Sep.	No	.....	....	...	...	.....	Yes	Poor
Station 10, Sep.[a]	No	.....	....	...	...	.....	Yes	Fair
Station 11, Dup.	No	.....	....	...	...	.....	Yes	Poor
Station 12, Dup.	No	.....	....	...	...	.....	Yes	Good

[a]Planning to begin a guide.

[b]Educational stations.

Commercial Messages

Under this heading the writer includes an analysis of each station's treatment of commercial messages with respect to the intended impact upon an audience. This is accomplished in terms of the quantitative use of different approaches to message delivery such as soft sell, the hard sell, and the institutional type of commercial.[87] Table Thirty-three presents this information for each station along with the maximum length of each station's message; the maximum number of commercial messages per hour; whether or not these messages are clustered together or separated; whether or not production techniques such as sound effects, echos, or music are used; and whether or not each station makes use of pre-taped or live commercial delivery.

From the information in Table Thirty-three, it could be said that generally all the FM "only" stations surveyed used the soft sell sales message, had only six or less of these messages per hour, and tended to deliver them by means

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[87]Soft sell commercials establish listener interest through calm delivery, tasteful choice of wording, and a relaxed style. Frequently they are done without the aid of production techniques. Hard sell commercials feature rapid delivery, and wording that expresses a high degree of emotion. The institutional commercial does not attempt to sell a product. Rather, it attempts to establish a reputation or "good name" for an advertiser. The lines of distinction between these types of commercials are often mixed. The above definition presents a general rule.

TABLE 33

BROADCASTERS' GENERAL COMMERCIAL PHILOSOPHY[a]

Stations by Programming	Statistics of General Commercial Philosophy						
	Soft Hard Inst.	Max. Length /Comm.	Max. Comm. /hr.	Cluster or Sep.	Prod. Tech. Used	Taped or Live	Will accept Commercial Copy If:[b]
Station 1, FM Only	Soft	60sec.	6	Cluster	Yes	Tape	For quality products
Station 2, FM Only	Soft	60sec.	2	Sep.	No	Both	For quality products
Station 3, FM Only	Soft	60sec.	6	Cluster	No	Tape	In good taste
Station 4, FM Only	Soft	60sec.	4	Sep.	No	....	Caters to our audience
Station 5, FM Only[c]	....	.....	..	....	..	....	.....
Station 6, Sep.	Inst.	60sec.	4	Sep.	Some	Both	In good taste
Station 7, Sep.	Soft	.....	3	....	...	....	For quality products
Station 8, Sep.	Hard	60sec.	14	Sep.	Some	....	.....
Station 9, Sep.	Soft	60sec.	6	....	No	Live	Follows station format
Station 10, Sep.	All	60sec.	25	....	Yes	Tape	For quality products
Station 11, Dup.	All	60sec.	12	Sep.	Some	Both	Follows station format
Station 12, Dup.	All	60 sec.	10	....	Yes	Tape	In good taste
Station 13, Dup.	Hard	60 sec.	17	Sep.	Yes	Both	Follows station format
Station 14, Dup.	All	60sec.	12	Sep.	Some	Both	In good taste
Station 15, Dup.	Soft	30sec.	20	Sep.	No	Live	In good taste
Station 16, Dup.	All	60sec.	12	Cluster	Some	Both	In good taste
Station 17, Dup. & Sep.	Soft	60sec.	6	Sep.	Some	Live	Has adult appeal
Station 18, Dup. & Sep.	Soft	60sec.	6	Sep.	Yes	Tape	It is believable
Station 19, Dup. & Sep.	All	60sec.	12	Sep.	Some	Both	In good taste

[a] Three educational stations are not included.

[b] Most stations claim to follow the NAB code in regard to commercial material.

[c] Non-commercial station broadcasting religious programming.

of live voice without using production techniques. The AM and FM duplicating stations tended to use hard sell or combinations of all types of commercials. They broadcast at least ten such messages per hour while relying heavily on production aids. Similar statements can be made for AM and FM stations that either separate their programming or duplicate and separate their programming.

The column in Table Thirty-three headed "accept commercial copy if" is included to indicate each station's policy in regard to the acceptance of sponsors and sponsor's messages. Note that in most cases those stations using the soft sell approach accept commercial copy on more definite grounds than simply "in good taste."

Products Advertised on Frequency Modulation

In an attempt to determine the type of product most often advertised by FM services, the writer asked each of the stations returning the second questionnaire to state the products most frequently advertised. Table Thirty-four shows the listing of their replies. No attempt was made to separate the stations by type of authorization.

Even though the table is based on only a limited number of replies, it is evident that FM advertisers tend to be those of better than average quality or reputation.

TABLE 34

PRODUCTS MOST FREQUENTLY ADVERTISED BY FREQUENCY MODULATION BROADCASTING IN NORTHERN OHIO[a]

Type of Product	Frequency of Mention
Automobiles	4
Music stores and Hi-Fi equipment	4
Television repair	1
Clothes	1
Real Estate	1
Restaurants	1
Beer and fine wines	2
Air travel	1
Furs	1
Jewelry	1
Light and power companies	2
Dairies	1
Banks	1

[a]Based on the twelve stations answering the second questionnaire.

In connection with the type of product most often advertised, seven stations indicated a breakdown of their accounts in terms of percentage of time sold to local, regional, and national advertisers. Table Thirty-five shows these percentages. The one station indicating a high percentage of national accounts placed all of its advertising through agencies while the others relied heavily on local sales staffs.

TABLE 35

PERCENT OF TIME SOLD TO LOCAL, REGIONAL, AND NATIONAL ACCOUNTS BY NORTHERN OHIO BROADCASTERS[a]

Stations Responding	Percent of Time Sold		
	Local Accounts	Regional Accounts	National Accounts
Station 1	98.0%	02.0%	00.0%
Station 2	100.0%	00.0%	00.0%
Station 3	05.0%	10.0%	85.0%
Station 4	100.0%	00.0%	00.0%
Station 5	80.0%	10.0%	10.0%
Station 6	90.0%	00.0%	10.0%
Station 7	90.0%	00.0%	10.0%

[a]Only seven stations answered with information sufficient enough to be included. This information was gathered by the second questionnaire.

Frequency Modulation Promotion

Off-the-air station promotion and publicity are areas handled in a great number of ways. The writer includes the listing in Table Thirty-six for purposes of illustration only. Only the twelve stations answering the second questionnaire are included, and they were only requested to indicate the method of promotion most often used.

TABLE 36

METHODS USED BY NORTHERN OHIO FREQUENCY MODULATION BROADCASTERS FOR OFF-THE-AIR STATION PROMOTION[a]

Type of Promotion	Frequency of Mention
Newspaper ads	6
Billboards	3
Mailers and leaflets	3
Automobile cards	2
Appearance at local events	3
AM Crossplugs	2
Press Releases	9

[a]Includes only the twelve stations answering the second questionnaire.

Station Personnel

To complete a study of the broadcasting stations in the North Central Ohio area, the writer felt that some indication of station personnel and job responsibility was of importance. Through an analysis of the staff of a broadcasting station, much could be determined about the relative importance of FM as a system of broadcasting. Therefore, the second questionnaire included a question designed to report the frequency of times that stations indicated the presence of certain jobs both in their AM and FM operations.

Table Thirty-seven presents this information. The first twelve stations listed in the table were the ones returning the second questionnaire. The writer includes the

remaining ten stations along with his judgment of their personnel structures gained through the personal interviews. The letter "X" in the table indicates that the particular job is filled by a person having responsibility to FM "only," while the letter "B" indicates job responsibility to both AM and FM operations. The letter "N" indicates that no one fills the job description.

TABLE 37

INDICATIONS OF STATION PERSONNEL AT THE BROADCASTING STATIONS IN THE SURVEY[a]

Stations by Programming	Gen. Mgr.	Pub. Dir.	Secretary	Comm. Mgr.	Copy Writer	Salesmen	Pgm. Dir.	Traffic Mgr.	Announcers	Pt. Time Ann.	Engineers
St. 1, Sep.	.	B	X	B	B	B	X	X	X	.	.
St. 2, Sep.	B	B	B	B	B	B	B	B	B	.	B
St. 3, FM Only[b]	X	X	X	.	.	.	.	.	X	.	X
St. 4, FM Only[b]	B	.	B	B	.	B	X	.	X	.	B
St. 5, FM Only	X	.	.	.	X	X	.	.	X	.	X
St. 6, Sep.	B	.	B	B	B	B	B	.	B	.	B
St. 7, Sep	B	.	B	B	B	B	B	.	B	.	B
St. 8, Dup	.	.	.	.	.	.	.	.	.	.	.
St. 9, FM Only[c]	X	.	X	.	.	.	X	X	X	.	X
St. 10, Sep.	B	.	B	B	B	B	X	.	.	X	B
St. 11, Dup.	B	.	.	B	B	B	.	B	B	.	B
St. 12, FM Only	X	.	.	.	X	X	X	.	X	.	X
St. 13, FM Only[c]	X	.	X	.	.	.	.	.	X	.	X
St. 14, Dup. & Sep.	B	.	B	.	.	B	.	.	B	.	B
St. 15, Dup.	B	.	B	.	B	B	.	.	B	.	B
St. 16, Dup.	B	.	B	.	.	B	B	B	B	.	B
St. 17, Dup. & Sep.	B	.	B	.	.	B	.	.	B	.	B
St. 18, Dup. & Sep.	B	.	X	.	.	B	X	.	X	.	B
St. 19, Dup.	B	.	.	.	.	.	.	.	B	.	B
St. 20, Dup.	B	.	B	.	B	B	B	.	B	.	B
St. 21, FM Only	X	.	X	.	.	X	X	.	X	.	X
St. 22, FM Only[c]	X	.	X	.	.	.	.	.	X	.	X

[a]The information found in this table was gathered from the second questionnaire and the personal interviews. Thus, stations 1-12 above are accurately pictured as they answered the second questionnaire. The remaining stations are pictured based on the author's conception of their staff division.

[b]This station is owned by an AM station and the two shape parts of the same staff.

[c]Educational stations.

[d]In this table the "B" indicates that a station uses one man to fill a position in both an AM and an FM operation. The "X" indicates that a station uses a man to perform a position in relation to the FM operation of the station only.

CHAPTER 4

SUMMARY AND CONCLUSIONS

Contrasts in Broadcasting

Under this heading, the writer will describe the personality of each of the four classes of broadcasting operations considered in the survey.

The Frequency Modulation "Only" Station

In the survey area, the programming of this type of station is definitely classified under the term "better music."[88] The FM independent presents the new approach to the sound of radio. Production is smooth. Segments of programming move from one to another without hurry. A loose and relaxed atmosphere is evident when listening to these stations.[89] In most cases the speech elements and commercial materials used are delivered without the use of special production techniques such as sound effects or musical backgrounds.[90]

The "soft sell" approach is used almost exclusively for the delivery of commercial messages. Usually the products

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[88] Supra, p. 2.

[89] We are considering only the commercial FM "only" stations. See Table Eighteen.

[90] Supra, Table Thirty-three.

advertised are those most frequently purchased by persons in the higher income groups. Further, there are few of these commercial messages delivered per broadcast hour.[91]

All the independent FM operations base their programming philosophies on musical elements.[92] This musical programming is characterized by an emphasis on instrumental music with a definite attempt to avoid the music of "top forty" or rock and roll nature. Musical types most frequently programmed include: classical; semi-classical; instrumental, usually of an easy listening background nature; popular long playing recordings, featuring all-time favorite songs; and recordings by vocal groups and individual singers of well known or lasting reputation. In most cases this music is broadcast with little or no commentary. Frequently, the listener will only hear the station's announcer during periods of commercial announcement or at station breaks.[93]

News, sports, and weather are less frequently programmed by the FM "only" station. Usually, sports and weather are integrant parts of regular newscasts. Most FM "only"

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[91] Ibid.

[92] Supra, pp. 53-56, and Table Sixteen.

[93] Supra, p. 63.

stations broadcast news reports only two or three times per day. These reports are generally well written and carry a definite element of news in depth. The content of these programs is composed of news of a national rather than a local nature.[94]

Special programs such as children's musical shows, women's programs, and public service reports, are seldom carried by these stations. However, in several cases special programs are carried, and when this is true, the programs tend to be quite carefully designed and produced with definite goals.[95]

The FM "only" broadcasters picture their audience as one with at least a high school education, but more probably, some college training. The average family income is estimated to be between five and ten thousand dollars per year.[96]

Finally, the FM "only" operation is characterized by a small station staff. Usually, each person fills many different roles. Low operating budgets mean that the most economical methods must be used.[97]

This is the picture of the FM independent station in north central Ohio. It is very much like the typical FM

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[94] Supra, pp. 69-72.

[95] Supra, pp. 74-76.

[96] Supra, pp. 49-50.

[97] Supra., p. 89.

"only" operation anywhere in the United States, although there are exceptions.[98]

The Station with Duplicated and Separated Programming

This type of station may separate its programming during the day for various reasons. In some cases, the AM license only permits daytime operation and, therefore, the FM license permits the station to continue in the evening hours. More frequently, however, is the station that duplicates only the more complex programs such as news, while separating other programming during the majority of the schedule.

The programming philosophy of these stations for their FM operation tends to follow the same format described for the FM "only" operation but to a somewhat lesser degree.[99] They seem to be aware of the developing role of FM as a "quality" medium, but in many cases are not convinced that the system has yet attracted sufficient public interest to warrant its development.

Production is typically tight without the loose dead air pauses frequent in FM. However, the frantic "formula" pace is absent.[100] In several cases, this less frantic production

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[98] Supra, pp. 26-27.

[99] Supra, p. 54, and Table Sixteen.

[100] Supra, p. 59.

approach is being used on AM as well as FM indicating a shift in programming philosophy. The broadcasters indicated their concern with the AM "formula," and their desire to do something more in the public interest.

Musical programming again follows the FM pattern with less emphasis on classical and semi-classical selections. The "top forty" approach is not used. And, like FM "only," the major portion of broadcast time is music.

News, sports, and weather follow AM formulas but seem more refined than the "top forty" station. These stations may use frequent newscasts on AM, but tend to duplicate them less frequently on FM.

Quite often these stations will use separated programming to carry special interest or public service programs. Such programs are broadcast on FM but not on AM, thus furnishing a service to the public without disrupting normal AM scheduling. City government meetings would be a good example of such programming. As the penetration of FM receivers increases, this practice might seem justified as a minority audience service. However, at present, this writer considers such programming philosophy to be of a somewhat questionable nature in terms of program service. It seems to be an easy way to satisfy the Federal Communications Commission requirements, and at the same time to maintain the station's

income through better selling types of programming such as news.

These stations are definitely shifting their commercial philosophies away from the hard sell sales message.[101] This is true of both their AM and FM operations. The soft sell message, few messages per hour, and strict codes of copy acceptance are becoming standard qualities of these stations.

Finally, these broadcasters indicate their audience for FM and AM are much the same as those of the FM "only" operation.[102]

The writer concludes that these stations are attempting to develop a new concept of programming philosophy based upon the "quality" approach.

The Station with Separate Programming

This group of broadcasting operations is somewhere between the duplicating and separating station, and the duplicating station in terms of program philosophy.

These broadcasters picture their audience in broader terms, indicating a mass audience with income and education ranging from lowest to highest levels.[103] Their operations

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[101] Supra, Table Thirty-three.

[102] Supra, pp. 47-50.

[103] Ibid.

cover a content range from quality music for adults to the "formula" operation.[104] Production is usually tight and in many cases fast, directly following the "formula" approach.[105]

Again, music is the basic element of programming, but it tends to be middle of the road in nature. That is, it contains virtually all types of musical fare with little emphasis given to either classical or "top forty." There are exceptions to this rule. One station uses its FM for background music of the "quality" type, and another station programs music of current popularity excluding rock and roll.

Sports programming generally consists of brief reports. However, one station in a large market uses its FM for the broadcasting of play-by-play sports of a professional nature. It is the originating station for a sports network consisting of stations in the Ohio area.[106]

News and weather coverage is handled by frequent brief reports utilizing local on-the-spot sources. Little news in depth is attempted.

Again, special programs are usually carried on FM only. Public service programming is largely based upon the use of

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[104] Supra, Table Sixteen.

[105] Supra, Table Eighteen.

[106] Supra, pp. 67-68.

frequent spot announcements rather than specially constructed programs. The commercial messages of these stations follow mixed philosophies covering the range from hard sell copy to institutional messages. No definite trend is apparent.[107]

These stations do not seem to be developing definite "quality" concepts as a general class. However, certain individual operations are attempting FM approaches through more refined program formats. The shift is not as apparent as it was in the case of the duplicating and separating stations, but it is present. One station has tried a "quality" FM approach and found it to be unsalable.

The Station with Duplicated Programming

Stations in this category show little if any interest in "quality" program concepts. They indicate audiences of lower average income and education than do any of the other three classes of stations.[108] And, the total programming philosophy caters to a middle of the road approach, with music to fit the largest possible audience.[109] All aspects of programming tend to follow the AM "formula." These are the

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[107] Supra, Table Thirty-three.

[108] Supra, pp. 49-50.

[109] Supra, pp. 53-56

"format" stations catering to the teen-age audience with "top forty" music and fast paced production.

One station in this grouping proved to be a notable exception. Located in a major makret, this station programs almost exactly like the FM "only" operation using "quality" concepts. The station indicates successful operation after only a few months of such operation.

Analysis of the Survey

The Area Selected

The writer feels that the geographical area selected for this study is justifiable because of the following reasons: (1) the area contains both agricultural and urban populations in average percentages relative to the national population, thus providing a typical audience; (2) the area contains three large centers of urban industry, providing a wide range of occupational samples; (3) the area includes all income and educational groups, as well as institutions of higher learning; (4) due to the centers of industry, the sample includes many minority ethnic groups; and (5) the geographical size of the area justifies the development of programming concepts relative to the Ohio area while at the same time providing a significant basis for national comparisons.[110]

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[110] Supra, pp. 35-39.

The Stations Selected

The survey is valid in terms of the broadcasting industry because: (1) the sample includes 57.9 percent of all broadcasting stations within the geographical limits of the study; (2) the sample includes significant percentages of each of the four types of broadcasting stations studied; (3) two stations were visited in large cities for every station studied in a small city or rural market, thus placing added emphasis on centers of population; and (4) ownership of the stations visited ranged from single individuals to corporate control, thus expressing a wide range of programming philosophy.[111] The sample included three educational stations, but they do not limit the commercial validity of the total sample as they were all FM "only" operations, and five other commercial FM "only" stations were visited.

In cases where information is presented based upon the twelve stations returning the second questionnaire, there is some question as to the validity of the information. However, these cases have been indicated in the text, where significant. Further, the twelve station sample includes a representative number of stations from the four classes of operations studied.

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[111] Supra, pp. 40-43.

Solution of the Hypothesis

It has been shown that the number of authorizations for commercial FM licenses is steadily rising.[112] In fact, a check of the license grants listed in Broadcasting Magazine over recent months reveals that FM license applications outnumber those for AM facilities.[113] Therefore, it can be said that the number of FM stations in this country is growing rapidly.

From an analysis of the programming concepts of the FM "only" stations in this survey, it can be said that generally such stations use "quality" concepts of programming. This statement can be further substantiated by an analysis of the 342 FM stations questioned in the recent U. S. Radio national survey, where the same conclusions were evident.[114]

Based upon the information gained from the AM and FM stations visited by the writer, it is apparent that definite shifts are developing in programming philosophy in a direction away from the once standard AM radio "formula."[115] The study, therefore, confirms the hypothesis that there is definitely

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[112] Supra, Table One.

[113] See "Summary of Commercial Broadcasting" in current issue of Broadcasting Magazine.

[114] U. S. Radio, July, 1960, pp. 45-54.

[115] Supra, pp. 90-99, and Chapter Three.

an emerging shift toward the "better music" format on the part of a significant number of AM and FM combined broadcasting operations.

General Comments and Suggestions For Further Research

The Questionnaires

Although the writer spent considerable time preparing the two questionnaires, it became evident during the interviews and the writing of this paper that certain areas of station policy could have been studied in greater detail. If the study were to be continued, for example, more definite information regarding network and organization affiliation could be gathered. It would be significant to develop in greater detail the membership characteristics of stations with such groups as the National Association of Broadcasters and the National Association of Frequency Modulation Broadcasters. Also, an interesting analysis could be made of the number of stations that use such services as tape programs from colleges and universities, or the news reporting service of organizations such as the Radio Press.

A deeper study into the area of musical programming might reveal such points as the ratio of instrumental music to vocal music. Fortunately, the first questionnaire was

designed to enable the writer to adapt to some of the above areas as he visited the stations.

It was evident that the second questionnaire was aimed at commercial stations. Therefore, the educational broadcasters felt that their participation in the survey would be of little value. The writer feels that this situation could have been avoided by the use of a third questionnaire designed especially for the educational station and used in place of the second questionnaire. This extra form would omit the questions pertaining to the commercial aspects of broadcasting. Other areas investigating the public service programming of such stations could have been included. It would be interesting to study the methods by which educational stations co-operate with commercial outlets, and the type of programs if any, produced by educational stations for commercial use.

General Observations for Further Study

Three areas for further study warrant mention. First, it would be interesting to present each broadcaster in the area with the information contained in such studies of national FM as Pulse and Hooper reports mentioned earlier, and to match the national norms found in these reports to each broadcaster's concept of his own station's situation.[116] In other words,

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[116] Supra, pp. 28-32.

let the broadcaster draw the contrast between local and national FM as the writer has done in this paper.

Second, a larger study could include AM "only" and television stations, as well as advertising agencies, sponsors, and outside groups. In such a study, the above groups might indicate other factors that place pressure on the AM and FM broadcaster as he formulates his programming philosophy.

And, third, the question could be asked: "What happens to FM programming if and when AM programming fully develops the better music or quality format?" Will FM stations specialize; develop network connections; or rely on stereophonic, multiplex, or background music services? Although this is not an immediate area of concern to the independent FM station, it does present a possibility for the future if present trends continue.

APPENDIX A

Reproduced here are the two questionnaires used for the North Central Ohio Broadcasting station survey.

Questionnaire 1

_____(Station Sign)_____(Frequency)

_____(Location) Has AM and FM? _____

Is Programming Duplicated? _____What % of Time?_____

AUDIENCE:

How do you picture your audience and its needs in terms of your FM service?

What are your general programming policies with regard to this audience? (How do you serve this audience?)

How are you unique with respect to competition?

MUSIC:

What are your general programming policies with respect to music?

What percent of your broadcast time per day is music?_____

What type of music do you play? What is the percentage of time?

Classical_____	_____
Semi-Classical_____	_____
Show tunes & Broadway_____	_____
Popular LP's_____	_____
Popular 45's_____	_____

Do you intermix classifications of music, or separate into different shows?

NEWS:
What is your general policy in respect to news?

What percent of your broadcast day is news?
Do you:

Editorialize_____
Rewrite wire service copy_____
Use On-the-Spot reports_____
Stress local news _____, state_____, national_____, or international_____ the most?

SPORTS:
What percent of your broadcast day is sports?

What is your general policy with respect to sports?

Do you use:

Reports only_____
Play-by-play coverage only_____
Both_____(to what extent?)

WEATHER:
Do you use:

Local sources_____
Wire service_____
What type of reports do you broadcast?

How often?

PUBLIC SERVICE:
What is your general policy with respect to public service broadcasting?

Do you use spot announcements?_____

Do you use special programs? _____

SPECIALIZED AUDIENCE PROGRAMS:

Do you broadcast special programs for:	How often?
Farmers_____	_____
Ethnic groups_____	_____
Age groups_____	_____
Religious organizations_____	_____
Other_____	_____

COMMERCIAL MESSAGES:

Do you have a commercial department?_____

Is your sales philosophy based upon?

Hard sell_____

Soft sell_____

Institutional messages _____

Are your commercials designed for each advertiser?

What is the maximum length of each commercial?_____

How many messages do you broadcast per hour?_____

Are they broadcast back-to-back or separated?_____

Do you use production techniques or straight voice?_____

What production techniques are used?

Do you use pre-taped commercials?_____ What percent of the time?_____

PRODUCTION:

What type of production does your station follow?

Do you have a network affiliation?

Questionnaire 2

1. Call letters_____ Frequency_____
   City of license (FM)_____
   Primary service ares (radius in miles)_____

2. Do you have AM also?_____ Date that AM began_____
   Do you duplicate AM and FM?____ How many hours per day?___
   What are the hours of AM operation?_____

3. What hours do you broadcast FM alone?_____

4. What is your FM service? (Please check)
   (a) Commercial broadcast only_____Date started_____
   (b) Multiplex_____Date started_____
   (c) Non-commercial educational_____Date started_____
   (d) Public subscription_____Date started_____
   (e) Other (indicate)_____

5. If you do not now multiplex, do you plan to in the near future? (yes)_____ (no)_____ (don't know)_____

6. In the following question a "network" is two or more stations involved in the simultaneous daily relay of programs.

   Are you a member of an FM network?_____
   If "yes," what network_____

7. Are you a member of any other FM organizations?_____
   If "yes" what organization(s)_____

8. How do you picture your FM audience in terms of:
   Its educational level:
   High school_____, Some college_____,
   All levels_____, College (4 yrs)_____,
   Other_____.

   Its income level:
   $5,000 and under_____, $5,000 to $10,000_____,
   Above $10,000_____, All levels_____,
   Other_____.

   Are there minority sub-groups in your audience?_____

9. What changes have you noticed in FM listening and response during the past year?_____
   _____
   Has FM listening increased_____, decreased_____, no change_____.

10. What is the current situation in your area in respect to the availability of FM receivers? In good supply _____, in fair supply_____, in poor supply_____.

11. What makes of FM receivers have been selling best in your area?_____.

12. Are AM "only" broadcasters in your area more interested in applying for FM facilities than in the past? (yes)_____ (no)_____ (undecided)_____.

13. (AM/FM duplicates only)
Do you plan complete separation of your FM and AM programming in the near future? (yes)_____ (no)_____ (undecided)_____.

14. (AM/FM duplicates only)
Do you plan more duplication in the near future? (yes)_____ (no)_____ (undecided)_____.

15. Do you have an FM program guide? (yes)_____ (no)_____.
If "yes," how often is it published?_____
What is the cost?_____
Do you accept advertising in it?_____
What features besides your own programming does it contain?_____

Do you profit, lose, or break even on it?_____

16. What off-the-air publicity do you engage in?_____

17. Please indicate in column 1, the composition of your format. Check each of these types of programs appearing in your format for any average month. Place a check in column 2 if these features have proven salable during the past several months. If you duplicate programming, please place a check in column 3 by those program types carried on FM only.

	(1)	(2)	(3)
Classical music			
Semi-classical			
Jazz			
Instrumental			
Show Music			
Folk Music			
Popular 45's			
Hillbilly music			
Sports			
Current local events			
Drama			
News			
Weather			
Religion			
Educational talks and discussion			

	(1)	(2)	(3)
Live music	_____	_____	_____
Stereo music	_____	_____	_____
Farm	_____	_____	_____
Political	_____	_____	_____
Other_____	_____	_____	_____

18. Do you broadcast in stereo on your FM? (yes) _____ (no)_____.
If "yes," how?
With AM companion_____
With other FM station_____
With other AM station_____
With FM multiplex_____

19. Do you plan to broadcast in stereo in the near future?_____

20. What types of products do you advertise the most on FM?

21. Please describe one or two outstanding success stories in FM "only" sales.

22. Do you limit the type of sponsor that advertises on your FM? (yes)_____ (no)_____
How?_____

23. Do you have both a national and a local rate card for FM? (yes)_____ (no)_____.

24. What percent of your commercial time is actually sold to: (national accounts)_____ (regional accounts) _____ (local accounts) _____.

25. What percent of commercial time actually sold is placed through advertising agencies?_____

26. Are your sales messages hard,direct, soft, return sales, institutional sales oriented? _____
How?_____

27. (Multiplexers)
Is your background music service: (holding its own) _____, (losing money)_____, (making a profit)_____.

28. Do local newspapers print your programs? (yes)_____, (no)_____.
If "yes," is their coverage on the whole: (good)_____, (fair)_____, (poor)_____.

29. Do you send out press release regularly? (yes)_____ (no)_____.

30. Please indicate the composition of your business staff.
How many persons are employed in your FM operation_____

In your FM operation, do you have: (please check)

General Manager	_____	(If the person serves
Publicity director	_____	AM and FM circle your
Secretary	_____	check).
Commercial Mgr.	_____	
Copywriter	_____	
Salesmen	_____	
Program director	_____	
Traffic Manager	_____	
Announcers	_____	
Engineers	_____	
Part-time anncrs.	_____	

31. Please use the rest of this form for your additional comments.

APPENDIX B

November 3, 1960

Mr. Theodore Niarhos
W D B N
R. D. 1
Seville, Ohio

Dear Mr. Niarhos:

The department of Radio and Television at Michigan State University is conducting a survey of broadcasting stations in north central Ohio. The objectives of the survey include: the determination of general and specific policies with respect to programming by the stations in the area, the determination of each station's audience, and other general points related to programming.

The results of the survey will be used for academic purposes only, and will be made available to participating stations on request. I will conduct this survey during the time between December 19, 1960, and January 2, 1961. If you would like to take part in this survey please indicate on the enclosed card the dates and times best for an interview at your station. I would be happy to speak with either the station manager or the program director.

My thanks for your time and interest in our project, and I will hope to hear from you at your earliest convenience.

Sincerely,

William C. Hight
Staff Instructor

WCH:dh

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