

A PROPOSAL FOR THE ESTABLISHMENT OF A  
LOW-POWER, FREQUENCY MODULATED,  
EDUCATIONAL RADIO STATION AS  
EXEMPLIFIED BY OKLAHOMA  
BAPTIST UNIVERSITY

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THESIS

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By

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## CHAPTER I

### THE PURPOSE OF THE PROPOSAL

#### Introduction and Source of the Problem

Since the approval of low-power frequency modulation educational stations by the Federal Communications Commission in 1948, many college and university administrators have followed with unusual interest the establishment of stations of this kind. Many of these educators felt that this new low-power broadcasting was the answer to their particular problems. Oklahoma Baptist University stands among those whose administrators have utilized this means of broadcasting.

In 1953, station KBGC was initiated as a ten-watt FM educational station. In 1956, after only one license period, the station allowed its license to expire.<sup>1</sup> Presently, through the efforts of the liberal arts dean and this writer, a new interest has been kindled in establishing and relicensing the station. Since the initiation of a general survey course in radio and television, many students and members of the faculty have also become interested in the prospect and are most willing to cooperate.

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<sup>1</sup>Letter from J. D. Trimble, engineer in charge, Federal Communications Commission Field Engineering Bureau, Dallas, Texas, May 27, 1966.

In order to reveal as much information as possible about the establishment of educational FM stations, their organization and management, it was proposed that an investigation be made into the prospects and possibilities of the nature of the medium and its educational uses. Since the procedures for low-power educational FM broadcasting were initiated by the Federal Communications Commission in 1948,<sup>2</sup> many policy revisions have been made in the entire industry, both commercially and educationally. Now that equipment and procedures are more sophisticated than they were then, it is assumed that new research and study will update the existing knowledge in this vital educational area.

It is believed that not only will the following study have some value to the administrators of Oklahoma Baptist University; but, at the same time, it should be of value generally to others attempting to build and license an educational station. The procedures and practices resulting from the study may well be adapted by other educational institutions.

While there have been several competent books published regarding all phases of commercial broadcasting, there have been none that have dealt with the problems confronting the educational broadcaster in his attempt to

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<sup>2</sup>Federal Communications Commission, "Noncommercial Educational FM Broadcast Stations," Rules and Regulations, Subpart C (Washington, 1948), p. 35.



initiate a campus station. Specifically, there have been none published regarding the denominational institution. The object of the study is to provide information of a general nature to the educational broadcaster, with Oklahoma Baptist University as the particularized model.

#### Statement of the Problem

The purpose of this study was to investigate the various aspects of low-power frequency modulation educational broadcasting and to formulate from the findings a guide for the establishment of stations on campuses as exemplified at Oklahoma Baptist University. It is hoped that this report will provide detailed information of interest and value to that university, its staff, its present and future scholars, and to other schools and individuals interested in building an educational broadcast facility.

#### Scope of the Study

In the investigation, several questions arose. An attempt will be made in the following chapters to give clear answers to these specific questions:

1. How will the station be organized?
2. What will be a good programming policy?
3. How much space will be needed for studios and offices?
4. How much and what kind of equipment will be needed?
5. How will the station be financed?

6. How will the station serve the denominational constituency?
7. How will the station benefit the college and the community?
8. How will the station obtain a license to broadcast?

In considering the establishment of a broadcast facility, one should be aware of the incidental questions which will arise from time to time. Some such questions may be enumerated as follows:

1. Will the investment and time required really benefit the students, the school, and be of public service?
2. Who will actually operate the station? Who will direct the activities?
3. What shall be the purpose of the school station? Will it teach radio to the students? Will it be a public service station and broadcast classroom work to be taken by the listener? Will it have enough power to reach the area under consideration?

The educational station will depend upon three things if success is to be achieved: (1) stable financing, (2) listener potential, and (3) genuine interest among its students, faculty members, and the public. When it is reasonably certain that these criteria have been met, then it may be assumed that all of the foregoing questions will be answered satisfactorily.

Radio in education has proven to be a valuable teaching tool. Henry points out that:

Some educators have found in radio another tool to add to their battery of teaching devices. Others have recognized it as a course of study in itself, capable of capturing and challenging the interest of the students.<sup>3</sup>

It seems plausible, therefore, for the student to understand as fully as possible all of the implications of this important tool, both as an industry and as an educational aid. To this end the educational station should be enjoined to provide the facilities and the experiences of broadcasting.

It is proposed herein, therefore, that the school set up a plan whereby it may have the basic facilities for broadcasting and teaching broadcasting. It is further proposed that the school may plan and feel reasonably certain that its broadcast operation will function smoothly and give full service of value; and, that it may give and receive the benefits of educational broadcasting on limited funds if necessary.

A common misconception about broadcasting, which often-times keeps schools out of the field, is that in order to be worthwhile it must also be expensive. This comes from misinformation and misguided ideas about broadcasting. Many times institutions are sold equipment that they do not need.

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<sup>3</sup>William G. Henry, Jr., "Small-Scale Radio Activity: A Survey of 10-Watt Educational Stations," Audio-Visual Instruction, VII (May, 1962), 294.

This not only causes the cost to be unnecessarily high, but also leads to some animosity toward the industry and the manufacturers. Consequently, in this study, an attempt is made to set down the basic requirements for the particular school named. Other schools may readily adapt this information to their particular needs. It is believed that these basic items of equipment will serve in putting the station "on the air" in the manner which best fits its needs.

The previously enumerated questions will be answered in the next several chapters according to need and finances available. It is assumed that some source of additional finances for incidental expenses, etc., will have to be located. In this respect, Chapter V will attempt to give some information as to how this obstacle can be met and overcome.

The remaining chapters will attempt to resolve the other questions. If no clear resolution is obtained, then at least some indication toward that end may be achieved.

This study is a combination of research and the author's own experiences with a particular institution and with the field of commercial broadcasting. Much of the materials come from periodicals, books, educational journals, public documents, trade journals, letters, surveys, personal interviews, and letters from other educational institutions having met and overcome difficulties similar to those encountered by this study.

The following pages are the result of a situation arising, as Whitney put it, ". . . out of a recognized need to clear up a status of doubt and uncertainty caused by a feeling that a blind alley or a blocked path confronts human experience."<sup>4</sup>

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<sup>4</sup>Frederick L. Whitney, The Elements of Research (New York, 1947), p. 18.

## CHAPTER II

### STATION OBJECTIVES AND PROGRAM POLICIES

The purpose of this chapter is to show, for study and guidance, the objectives and policies which are outlined for KBGC. While the station will be both educational and entertaining in nature, it still should reflect the moral and spiritual atmosphere of the sponsoring denominational institution. Eshelman reported in 1965 that objectives and policies of church-affiliated stations should reflect the aims of the college.<sup>1</sup>

Since the Federal Communications Commission does not state specifically what the policies of the noncommercial station should be, then it behooves the station to set its own policies, leading from the school and station's objectives.<sup>2</sup> The station proposes to follow the institution's statement of purposes, the main portions of which are outlined as follows:

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<sup>1</sup>David Eshelman, "About College FM Stations," NAEB Journal, XXIV (Fall, 1965), 38.

<sup>2</sup>Federal Communications Commission, Rules and Regulations, Subpart C (Washington, 1964), Sec. 3.503, states that "each station may . . . transmit educational, cultural, and entertainment programs to the public." This is the only policy statement on programming.

Oklahoma Baptist University readily recognizes and fully acknowledges its unique character and function in the academic, social and religious spheres. . . . We, the Trustees of this educational and religious institution, reaffirm our resolution and determination that Oklahoma Baptist University achieve the goals for which it was established.

The purpose of Oklahoma Baptist University is to fulfill the will of God. Oklahoma Baptist University . . . sets as its main objective the fulfillment of His Will and Way in the education of young men and women.

To this end, we set forth the following statements of purpose, as guide lines in accomplishing these specified objectives.

1. That the purpose of Oklahoma Baptist University is to educate people for dedicated Christian leadership within our churches, denomination, and the full scope of human activity.
2. That the purpose of Oklahoma Baptist University is to encourage the development of Christian character and Christian conduct.
3. That the purpose of Oklahoma Baptist University is to develop socially responsible citizens.

Oklahoma Baptist University seeks to equip its students with a basic knowledge of American institutions which deal with our historical, political, social, scientific, and religious heritage, to produce good citizens concerned with perpetuating the best in our American tradition, especially human liberties and the democratic way of life; and, with an awareness of changing world conditions, to produce leadership in the promotion of civic, national, and international understanding and good will.

4. That the purpose of Oklahoma Baptist University is to make the finest contribution possible to the local community and throughout the world.
5. That the purpose of Oklahoma Baptist University is to emphasize the cultural value of the Arts and Sciences.

. . . In keeping with its purpose as a college of liberal arts, undertakes to teach its students to appreciate and enjoy literature, art,

music, and other cultural activities, to understand the phenomena common to our physical environment, and utilize scientific habits in their manner of thinking, in their communication of thought, and in the scriptural revelation.

6. That the purpose of Oklahoma Baptist University is to achieve a high level of scholastic excellence.
7. That the purpose of Oklahoma Baptist University is to provide vocational and professional training.
8. That the purpose of Oklahoma Baptist University is to develop strong bodies and healthful habits of living.
9. That the purpose of Oklahoma Baptist University is to develop individuals into poised and refined Christian men and women.

In order to accomplish this aim, effort is made to maintain a proper balance between its academic and extra-curricular offerings; and to develop and utilize a broad, scientific program of personal guidance. . . .<sup>3</sup>

It may be noted from the foregoing quotation that the station will be reflecting objectives which are much like those of any liberal arts college. The one exception is perhaps that of inclining very much toward a Christian education. In this respect, the station will reflect those images of morality and good character which are inherent in such an educational design.

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<sup>3</sup>William E. Neptune, editor, Faculty Handbook (Shawnee, Oklahoma, 1965), App. I. (n. p.)



### Objectives

KBCC should observe and work toward the following objectives as it seeks to become a service to the school and the community which it will serve. These objectives have been successful for many college stations as they have sought to provide broadcast services to their respective academic and geographic communities.<sup>4</sup>

1. The station should reflect the aims of the university. This objective has already been named and discussed. Various observers have found it to be of first importance in their discussions, however.<sup>5</sup> As an educational station, KBCC's goals for service to the campus and the local community should promote an exceptional image of the institution by providing a kind of "second service" which will perhaps fill the void left by the commercial stations.<sup>6</sup> The second service, or educational broadcasting, has undergone several definitions of purpose. These definitions have changed somewhat over the years to keep pace with the electronic media, but they have always included such words as "expanding,"

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<sup>4</sup>Eshelman, Op. Cit.

<sup>5</sup>Lowell G. Perry, The Administrative Problems of the 10-Watt Educational FM Station, National Association of Educational Broadcasters Research Report No. 3 (Urbana, 1954), p. 3.

<sup>6</sup>Sydney W. Head, Broadcasting in America (Boston, 1956), p. 407.

"supplementing," and "enriching."<sup>7</sup> This means, then, that it is fitting that the educational station whose principles are directly associated with these ideas should be a part of the institution's structure. In other words, the station and its personnel should be key factors in the educational structure of the school and community. To further strengthen the case for this particular objective, Herbert Seltz says:

The educational broadcaster presents sounds . . . associated with a universe of ideas, which, with notable exceptions, are not the prime concern of the country's . . . commercial stations. Educational broadcasting stations are not all cut from the same mold. In large measure they reflect the aims and philosophies of their parent or supporting institutions.<sup>8</sup>

2. The station should provide a training ground for students. The elements of this objective shall be taken up in Chapter IX, which deals with the training of station personnel. A word about the elements of classroom "enrichment" may be inserted here, however. The station should serve the academic community by broadcasting "in school" programs of an educational nature. Such programs may be from syndication, from the NAEB tape network, or produced by the station, utilizing the valuable services of the professors.

3. The station should seek to serve the surrounding community. It may do this by offering programs of an

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<sup>7</sup>Herbert W. Seltz, "Educational Stations," The Bulletin of the National Association of Secondary School Principals, L (October, 1966), 194.

<sup>8</sup>Ibid., 194-195.

"educational, cultural or entertainment nature."<sup>9</sup> These programs will perhaps not have the majority audience, but those persons who do listen should be assured of the very highest quality in music, information and any form of entertainment features which it might present.

4. The station should seek to develop taste for good music and good programming.

5. The station should seek to provide good public relations for the sponsoring institution. This objective ranked fourth in Perry's survey of stations in 1954,<sup>10</sup> and there is nothing in the literature to suggest that a high ranking has not been maintained since that time.

In discovering the areas of image improvement which will be broadcast to the adjacent community, it seems plausible that the institution and its radio facility will strike out in a united effort to achieve the purposes of the university as they have been stated and as they will be reflected by the station in achieving its own objectives.

#### Program Policies

The station should naturally program in the "public interest, convenience or necessity." This is the prime rule laid down by the Federal Communications Commission, which authorizes the issuance of station licenses. It is further recommended that the station should practice those attitudes

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<sup>9</sup>Federal Communications Commission, Op. Cit.

<sup>10</sup>Perry, Op. Cit.

and qualities that are inherent in all stations which subscribe to high standards and ideals. To these ends the station would do well to adopt the principles of the National Association of Broadcasters' code, particularly that part of the Radio Code which states:

(We believe:) That we should make full use of man's store of knowledge, his talents and his skills and exercise critical and discerning judgement concerning all broadcasting operations to the end that we may, intelligently and sympathetically:

Observe the proprieties and customs of civilized society;

Respect the rights and sensitivities of all people;

Honor the sanctity of marriage and the home;

Protect and uphold the dignity and brotherhood of all mankind;

Enrich the daily life of the people through the factual reporting and analysis of news, through programs of education, entertainment, and information;

Provide for the fair discussion of matters of general public concern;

Engage in works directed toward the common good; and

Volunteer our aid in times of stress and emergency.<sup>11</sup>

In addition, the station should set policies by which to guide itself in the specific areas of (1) news, (2) editorializing, (3) public issues, (4) religious programs, and (5) education and culture. KBGC will seek to maintain policies in these areas as they are defined by Lawton:

News. News should be factual, fair, unbiased, and balanced. Newsmen and news sources should be dependable. Morbid details and the creation of panic should be avoided. News dramatizations and commentaries should be identified as such.

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<sup>11</sup>Radio Code of the National Association of Broadcasters, cited in Sydney W. Head, Broadcasting in America (Boston, 1956), p. 450.

Editorializing. The radio code states that opportunities should be provided for qualified divergent opinions.

Public Issues. Discussion programs should be identified as such, and the participants should be responsible individuals or groups. . . . The radio code urges that equality of opportunity be given for differing views.

Religious Programs. A schedule of religious programs should be well balanced, and the discussions should deal with broad issues.

Education and Culture. The . . . code says that managers should affirmatively seek out such programs, and the . . . code urges cooperation with qualified groups.<sup>12</sup>

Since music, as a part of the entertainment, educational and cultural function of the station, makes up the bulk of the station's schedule, perhaps some statements about programming policy in this area should be considered separately.

#### Music Programming

In order to refrain from imitating commercial stations, the educational broadcaster should (1) not make use of the "foreground treatment," wherein the announcer always sounds excited and breathless; (2) not place strong emphasis on the youthful element of the audience, wherein the announcer has an immature air and personality and caters to the teen-age symbolism, or attempts to dictate musical taste for the station by catering to the musical offerings made to youthful audiences; (3) make no use of gimmicks, that is, promoting stunts or contests in order to buy the audience; and (4) have

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<sup>12</sup>Sherman P. Lawton, The Modern Broadcaster: The Station Book (New York, 1961), p. 36.

some stated policy about the length of time for music programs and the program content.

The foregoing statements are based upon a belief that the "campus station should not attempt to do what commercial stations are already doing. . . .<sup>13</sup> Commercial stations must cater to the whims of the audiences which they attract.<sup>14</sup> This is not so in the educational station.<sup>15</sup> Rather, it has the option of experimenting with and making sound policies in musical programming. Certainly those minority groups who are faithful adherents to FM stations do not wish to have the same programming pushed at them which they can get on the commercial AM stations. Consequently, the station may be serving its music function in a better manner if it adopts the "middle-of-the-road" music programming policy as defined by Lawton:

Although they [middle-of-the-road stations] find this term difficult to define, they avoid classical music on the one hand, and hillbilly and the more extreme popular tunes on the other. Some of them talk about "nothing further over than show tunes," by which they mean they would include in their schedules tunes from musicals which have been liked for so many years that they have become classics of their kind, but they wouldn't include concert music. Memory tunes, the less

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<sup>13</sup>Josh P. Reach, "A Radio Station for the Campus Community," College Radio, IV (November, 1966), 21.

<sup>14</sup>William McCavitt, "Educational Radio: A Star on the Rise," Pennsylvania School Journal, CXIV (April, 1967), 389.

<sup>15</sup>Ibid.

extreme jazz, and even some of the western songs might find a place in their schedules.<sup>16</sup>

In adopting such a policy, it may be wise for the educational broadcaster to keep in mind the main group to whom he is directing his musical programming--faculty, students, and community FM enthusiasts. Certainly, then, he should not exclude classical music. After all, some of his best live music will come from the various performing groups on the campus, including orchestras, symphonic bands, and chorales.

Therefore, the specimen station, KBGC, shall evolve the policy of adapting a "middle-of-the-road" concept to suit its needs and situation. It shall facilitate its musical programming, as it will all of its programming, with experimentation. Such service will necessitate providing a wide variety of music, scheduling according to the day and the time of the day or evening.

#### Statement of Policy

In order to seek fulfillment in carrying out the aims of Oklahoma Baptist University, and in keeping with the objectives of its station, the following policies should be affirmed as guidelines in the development of programming and general station operation.

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<sup>16</sup>Lawton, op. cit., p. 59.

1. The station will cooperate with the institution fully by reflecting the objectives that have been set forth by the Board of Trustees.

2. Any news items shall be presented in such a manner that the gathering, editing, and presentation will adhere to the NAB Radio Code. By the same token, all sporting events shall receive accurate and fair coverage, with the sportscasters following the rules of good sportsmanship.

3. The station shall evolve concepts on religious broadcasting which shall follow closely the policies of the NAB Radio Code. That portion of the Code is in keeping with the underlying beliefs of the sponsoring institution. It states that:

Radio, which reaches men of all creeds and races simultaneously, may not be used to convey attacks upon another race or religion. Rather it should be the purpose of the religious broadcast to promote spiritual harmony and understanding of mankind and to administer . . . the religious needs of the community.<sup>17</sup>

The religious programming should strive, not only to be spiritual, but also to be positive and constructive, and applicable to everyday life. It should stimulate and strengthen those who hear it.

4. The station will urge that all discussions have an appeal to the public and shall provide an opportunity for several speakers to examine timely issues.

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<sup>17</sup>Lawrence R. Campbell, Harry E. Heath and Ray V. Johnson, A Guide to Radio and TV Writing (Ames, 1950), p. 75.



5. The station shall provide services in public information and will seek to contribute to the public character thereby.

6. All persons who appear on the air shall use language which is in keeping with the proprieties and customs of civilized society. Particularly, there shall be no use of profane or obscene language.

7. The station shall provide educational services to include any in-school broadcasts deemed worthy and necessary by a curriculum committee, and shall beam other programs of an informational or educational nature to the general public. In so doing, it shall utilize the best means available to produce high quality programs that will be of interest to the listeners.

8. The station's faculty management shall establish any rules that are deemed necessary for the handling of equipment, admittance to rooms, announcing or board duties, engineering duties, discipline, specific functions of the staff, and general and specific regulations governing any other phases of overall station operation.

9. Proper logs pertaining to the operation of technical equipment and broadcast schedules shall be maintained, and proper identifications and announcements shall be given as set forth by the Federal Communications Commission.

10. No commercial announcements shall be made. No remuneration for services shall be accepted by the station

and no group or individual shall expect any sort of commercial announcement within any kind of program. The FCC rules are most specific in this area. Stations may, at their own discretion, announce the names of organizations or individuals who provide services or programs to the station free of charge. The station may expect to do this as it sees fit. However, no remuneration to staff members will be tolerated.

#### Standards of Practice

All of the foregoing policies represent an area of station operation that is not touched on by many stations.<sup>18</sup> Eshelman reported in 1965 that the majority of stations in his survey did not return any specific policies and that many had none at all.<sup>19</sup> In order for KBGC to continually stay out of such grouping, it shall seek to reinforce the above policies and to conform to the following standards of practice.

1. The students and faculty members who operate the station shall be required to exercise their best judgment in all areas of production, programming, announcing, engineering, writing, and management.

2. The station personnel shall maintain a professional attitude in keeping with the standards of ethics and good

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<sup>18</sup>Eshelman, op. cit., 35.

<sup>19</sup>Ibid.

practices of the NAB Radio Code and the denomination which underwrites the station, for it should "serve the students who work on it by giving them the opportunity to learn . . . professional standards."<sup>20</sup>

The standards of good practice for the station should be in agreement with the stated purposes of the institution. They should reflect the objectives and policies of the station which arise from the institutional purposes, and they should always confront the student and the community with educational situations, whether in the form of entertainment or educational programs.

It is hoped that the foregoing objectives and policies for KBGC will aid in fulfilling such standards.

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<sup>20</sup>Leo Martin, "How Creative Are You?" College Radio, IV (November, 1966), 11.

## CHAPTER III

### TOP LEVEL STATION ORGANIZATION

Just as a commercial station has a top level organization, so also should the educational station. The commercial station has an owner (or owners) who heads a governing body for the property. This body of men is usually a board of directors to whom the station manager and his staff are responsible. In educational radio, it has been found that, "for the most part, . . . the individual low-power station is responsible to a governing body composed of . . . administrators in the school it serves."<sup>1</sup> In the same respect, Resler has stated that the entire operation is usually responsible to the school's board of trustees.<sup>2</sup> It follows, therefore, that the top level table of organization should descend from the board of trustees, through the school administration, and thence to the actual station organization.

The degree of control will naturally vary from school to school, and will also vary from complete control to no

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<sup>1</sup>William G. Henry, Jr., "Small-Scale Radio Activity: A Survey of 10-Watt Educational Stations," Audio-Visual Instruction, VII (May, 1962), 296.

<sup>2</sup>Statement by Ansel H. Resler, professor, University of Oklahoma, Norman, Oklahoma, May 9, 1967.

definite control.<sup>3</sup> It seems that to have no definite control could result in confusion, whereas control at all levels would readily contribute to the smooth and efficient operation of the station.

It should be the duty of Oklahoma Baptist University to see that necessary control is established and that lines of communication are kept open. This should be done for two reasons: (1) to insure that KBGC does run smoothly, and (2) to aid the station as it seeks to promote the school and to assist in fulfilling its obligations as an educational institution.

In order to have such control at the top level of administration, and for the purposes of Federal Communications review, the following table of organization is offered.

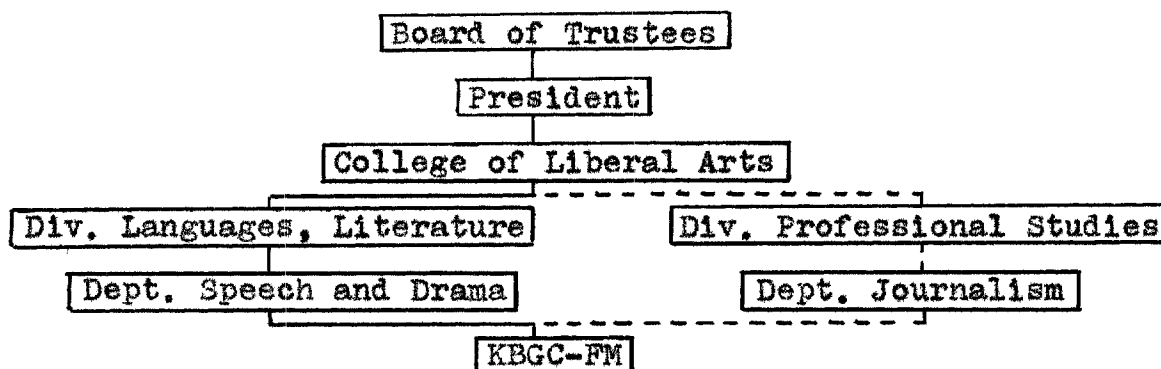


Fig. 1.--Table of top level organization for KBGC-FM

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<sup>3</sup>Lowell G. Perry, The Administrative Problems of the 10-Watt Educational FM Station, National Association of Educational Broadcasters' Research Report No. 3 (Urbana, 1954), p. 7.

### Control and Authority

The highest office in the plan of organization will be the Board of Trustees. The control and authority which it possesses is outlined as follows:

Oklahoma Baptist University, a senior institution chartered by the State of Oklahoma, consists of two colleges, the College of Liberal Arts and the Warren M. Angell College of Fine Arts. It is supported by the Baptist General Convention of Oklahoma and is responsible through the President to the Board of Trustees, whose Members are elected by that convention.<sup>4</sup>

Since this high office is the topmost in authority and control over the university, it seems likely that it should exercise the last word in any matters pertaining to the station.

### The President

Immediately under the authority of the Board of Trustees is the President of the University. His powers and control are invested as follows: "The affairs of The Oklahoma Baptist University shall be administered by a President of the University who shall be elected by the Board of Trustees. . . ."<sup>5</sup> Since the board chooses quite judiciously, it seems plausible that the President could judge any matters which appear to be in conflict with stated school philosophy.

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<sup>4</sup>Oklahoma Baptist University Bulletin, 1965-1967 (Shawnee, Oklahoma, 1965), p. 20.

<sup>5</sup>William E. Neptune, editor, Faculty Handbook (Shawnee, Oklahoma, 1965), App. A, Sec. 11.

### College of Liberal Arts

This division of the academic community is responsible to the office of the President, and is administered by a Dean. Immediately responsible to him are the divisional chairmen.<sup>6</sup> Two such divisions shall be considered in the overall organization of KBGC at the topmost level. They are (1) the Division of Languages and Literature, and (2) the Division of Professional Studies.

Division of Languages and Literature.--This division is responsible to the Dean for all departments of academic disciplines within its jurisdiction. One such department is Speech and Drama, under whose immediate jurisdiction the station will operate.

Division of Professional Studies.--This division is also responsible to the Dean of the College of Liberal Arts, as already outlined. It is included because the Department of Journalism comes under its jurisdiction. It should be noted that Journalism will not administer the station directly. There will be, however, a certain amount of cooperation between the two departments, and thus between the two divisions.

Immediate control.--The Department of Speech and Drama shall have immediate control and authority over the station because the faculty members most closely associated with it will come from this department. It is expected that the

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<sup>6</sup>Ibid., Sec. 3.1.

Department of Journalism shall carry a role of secondary importance because its faculty will serve in a cooperative capacity--teaching and advising on matters of news.

#### Associated Areas of Interest

The third Allerton Seminar on broadcasting suggests that if the station is to be used for educational purposes it should be made aware of the expressed needs of the educational institution.<sup>7</sup> The report explains several methods for the station's obtaining information in the following way:

The expressed needs of the school . . . community are determined in a variety of ways and may be funneled to the radio station in a variety of organizational patterns. They may come from the . . . administrators, teachers, [and] student[s]. A radio committee with representatives from . . . each area of instruction may be the device employed. A curriculum committee may be the source.<sup>8</sup>

It does not seem appropriate for the topmost level of organization to include such committees. However, recognizing the need for cooperation among all areas of the school, it may be important for the station to work with all interested groups in any of the ways suggested by the Allerton report.

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<sup>7</sup>Report of the Third Allerton Seminar (Urbana, 1952), p. 16.

<sup>8</sup>Ibid.



## CHAPTER IV

### ORGANIZATION OF STATION DEPARTMENTS

Contained in this chapter are several organizational plans and charts which may apply directly or with some modification to any educational station. The various departments will be considered separately so that it may be seen how best to organize them, according to need. In many cases, individual responsibilities are considered separately in order to define the actual functions of each.

It should be pointed out that only by taking into account all of the details of the proposed station may a workable plan be derived. For this reason, much flexibility has been incorporated into the organizational plans presented here. This is done in the hope that these plans may not be construed as the absolute answers to organization, but as a guide to answering the station's individual desires and needs.

In the search for an organizational plan which would be satisfactory to the station's policies and needs, it would be well to remember that the basic organization of any station is somewhat standard, as Chester, Garrison and Willis point out:

While the particular organizational details may vary according to the size and type of station,  
. . . the procedures and jobs to be done are such that

the basic functional organization of a station is fairly well standardized throughout the country.<sup>1</sup>

## Administration and Production

### Management

The management of a station is generally handled by one person (responsible to his superiors) who has authority for completing most matters concerning the station's operation. Since he is endowed with such authority, he should possess high leadership qualities and should have a fair knowledge of the industry. This presupposes that the station manager will be a faculty member who must rely on the administration for guidance in handling difficult matters. It has been shown that seventy-one managers who reported from two-hundred four educational stations are faculty members as well as advisors to the stations.<sup>2</sup> It appears, therefore, that someone on the faculty should have the responsibility.

It is also the responsibility of the manager to make sure that all of the subordinate jobs are carried out properly. To this end he must use tact and diplomacy, for the personnel will be students in a learning situation.

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<sup>1</sup>Giraud Chester, Garnett R. Garrison and Edgar E. Willis, Television and Radio (New York, 1963), p. 222.

<sup>2</sup>William G. Henry, Jr., "Small-Scale Radio Activity: A Survey of 10-Watt Educational Stations," Audio-Visual Instruction, VII (May, 1962), 296.

### Program Department

The program director and his staff are charged with the responsibility of maintaining the quality of programming which will best represent the station. The program director's duties entail overseeing the work of everyone in the department and seeing that the programming (and all of its attendant facets) runs smoothly. It is also part of his duties to arrange and organize each day's broadcasting so that a variety of programs will be provided.

The director of programming usually supervises the following divisions: (1) announcing, (2) sports, (3) news, and (4) music.<sup>3</sup> He also keeps a close check on the quality of production and the structural balance of programming.

The announcer.--It is the responsibility of the announcer to make announcements, act as master of ceremonies, play records, introduce programs, and to generally promote the image of the station. He must have a pleasing voice and a good command of the language. In many instances he must have a command of the elements of foreign language pronunciations in order to introduce classical music or pronounce names in the news. On this point there has been some argument in favor of never Anglicizing foreign names or objects.<sup>4</sup> It seems obvious,

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<sup>3</sup>Chester, Garrison and Willis, op. cit., p. 224.

<sup>4</sup>Statement by Bill Mercer, instructor, North Texas State University, Denton, Texas, March 2, 1967.

however, that language usage makes such statements unrealistic for the most part. In addition to the foregoing traits, the announcer should have a good imagination and a flair for showmanship.

These qualities are not always evident in young announcers. But, then, these deficiencies can be pointed out and perhaps corrected in the educational station.

News staff.--The personnel of the news staff have the responsibility of adequately and accurately gathering and reporting all important news and sporting events. They are immediately responsible to a designated department head, who is then responsible to the program director. When the news staff works independently of the program department, then it is responsible to the station manager.

Music department.--Music has a most important place in today's radio programming. Formerly, all large stations had a musical director who selected all of the music for the station's programming. In addition, these persons usually conducted the studio orchestra at stations which could have them. Not too long ago nearly every station had its own string band or a piano or organ.<sup>5</sup> Since the advent of television, however, the music used is on recordings. It may be pointed out, however, that in an educational station

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<sup>5</sup>Waldo Abbott, Handbook of Broadcasting (New York, 1941), p. 278.

there may be a need for someone to select many of the musical offerings, particularly those in the classical or semi-classical category. Certainly someone (usually the program director) should monitor or check to see that particular popular recordings are not played too frequently.

Continuity department.--This division is normally one of wide scope within the station framework. It is here that announcements and scripts are conceived and written. This is a creative function in the operation, and judicious care should be taken in choosing personnel for these positions. The staff, as a rule, is composed of one chief writer (continuity director) and several assistants.

Since low-power educational stations cannot be commercial, there is no place for the scores of commercials that one would ordinarily hear on commercial stations. However, more scripts are prepared at educational than at commercial stations "because there are more live programs."<sup>6</sup>

Traffic department.--The staff in the traffic department is responsible for scheduling and preparing the daily program logs and work sheets under the supervision of a chief of traffic or the program director himself. In the daily activity of preparing schedules, logs, and various other forms for the continued operation of the station, the traffic personnel play a quite active part.

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<sup>6</sup>Sherman P. Lawton, The Modern Broadcaster: The Station Book (New York, 1961), p. 11.

### Engineering Department

This department is usually composed of a chief engineer and a few technicians. They are licensed by the Federal Communications Commission, and are capable of seeing that the station's equipment meets the Commission's requirements and specifications. It is a part of their job to be trouble shooters and to make any necessary adjustments in equipment so that the station does not go off frequency or otherwise interfere with other stations' signals. The engineers make periodic readings of the various meters to see if the equipment is operating in compliance with the Commission's standards.

According to the Commission's Rules and Regulations, any person who holds a valid third class radiotelephone license may turn on the equipment and make the necessary metering checks.<sup>7</sup> However, a first class radiotelephone operator must be on call for any repairs or major adjustments.<sup>8</sup>

Oklahoma Baptist University is fortunate in having a first class radiotelephone operator on the teaching staff who has consented to assist in setting up the station and maintaining the equipment after it is on the air.<sup>9</sup> It seems

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<sup>7</sup>Henry, op. cit.

<sup>8</sup>Ibid.

<sup>9</sup>Statement by Gale C. Thorsen, engineer, WKY-TV, Oklahoma City, Oklahoma, March 21, 1967.

logical for the station management to encourage students to get third class restricted licenses so that someone may be on duty at all times when the station is on the air.

#### Promotion Department

This is in some instances a relatively small but vital office in the station's staff. The promotion manager and his staff are responsible for carrying out station promotions in order to build the image of the station. It makes and schedules on-the-air promotions, keeps personal data sheets of all staff members, keeps public relations information, submits stories to newspapers and journals, and keeps a history of the station.<sup>10</sup>

#### Suggested Organizational Plans For the Station

Three plans for organization of the various departments are included in this section. The first is patterned for a large station with a staff of perhaps thirty to thirty-five persons. The second plan is for the station of medium size employing about fifteen staff members. The third, the minimally staffed station, is patterned for the basic operation of the station with only a limited staff and budget.

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<sup>10</sup>Statement by Casey Cohlme, promotion manager, WFAA-TV, -AM, -FM, Dallas, Texas, May 15, 1966.

Plan A: Large Staff

This plan calls for thirty to thirty-five people to staff the station. The advantages of having a large staff are numerous. It allows for a longer broadcast day, less strain on the personnel (as they follow their studies), and more voices can be heard on the air, thus giving the station a variety of "sound."

Many colleges employ this type because of these advantages. WCCR of Purdue University is an example:

. . . An unpaid staff of over one hundred men and women run the station and its one hundred thirty hours a week. We maintain and train a staff of about thirty announcers each year, as no one person can spend too much time with this extra-curricular activity.<sup>11</sup>

Another example is the network comprised of three stations-- WAMF at Amherst, WMUA at the University of Massachusetts, and WCSA at Smith College. These stations were hooked up as the Pioneer Broadcasting System, and employ three hundred fifty-one students to operate the facility.<sup>12</sup>

Plan A calls for a program director to be responsible not only for the usual functions, but also for production of any tapes, programs, or other creative functions.

Traffic and general services division is responsible for the typing of logs and for scheduling of all programs.

<sup>11</sup>Phillip J. Kisner, "Carrier-Current Radio," Radio and Television News, LII (May, 1955), 35.

<sup>12</sup>\_\_\_\_\_, "Nestling Network," Newsweek, XXXV (April, 1950), 48.



In addition, this department may be called upon to perform general secretarial work.

Another division (which could be added later if necessary), the creative and research planning section, would work toward building the station's image and to discover listener reaction, and also to finding new and better ways of satisfying the listener's wants and needs in programming.

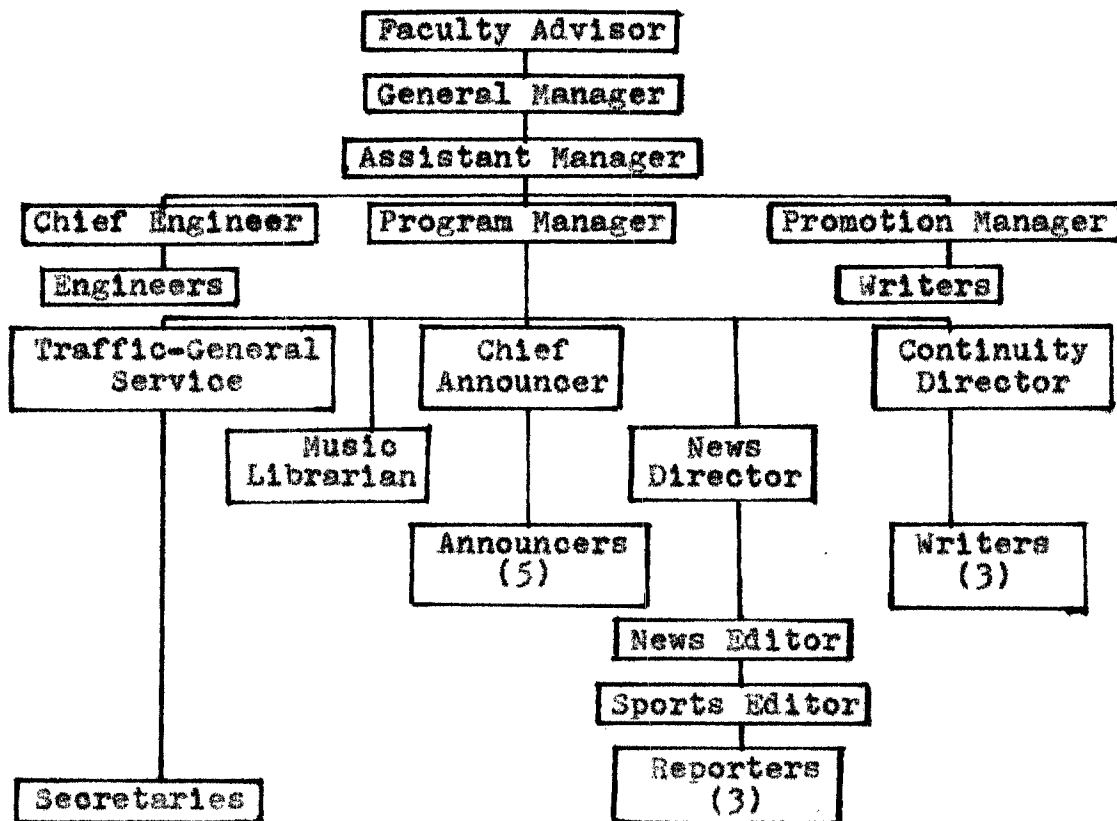


Fig. 2--Plan A: Large Staff<sup>13</sup>

<sup>13</sup>Thorsen, op. cit.

Plan B: Medium Staff

This plan provides for nine to fifteen persons on the staff, depending upon how many announcers and engineers are available or are required. This plan is usually used in conjunction with two hundred fifty or five hundred watt AM commercial stations.<sup>14</sup> An example of this is KGFF-AM, Shawnee, Oklahoma, which employs ten persons. This type of organization is usually linked with the "sales-centered" operation.<sup>15</sup> The fact that it is sales-minded does not exclude the plan from being acceptable to noncommercial stations, however.

Here, the faculty advisor is the overseer of the entire operation, and may rightly be called the station manager. The general manager is usually a student who does almost the same thing as the faculty advisor. However, he exercises more day-to-day control.

The program director is responsible for all production and on-the-air work, and possibly some public relations work. He is also responsible for all continuity.

The general secretary is responsible for typing the log, scheduling programs requested by the program director, and doing general secretarial work.

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<sup>14</sup>There are examples of AM commercial stations on some campuses. WNAD-AM, University of Oklahoma, is one which started in this manner and which has grown to 1,000 watts of power.

<sup>15</sup>Lawton, op. cit., pp. 78-79.

The news director and the engineer are responsible for their entire fields respectively. If it is deemed necessary, then perhaps extra persons may be added as they are needed.

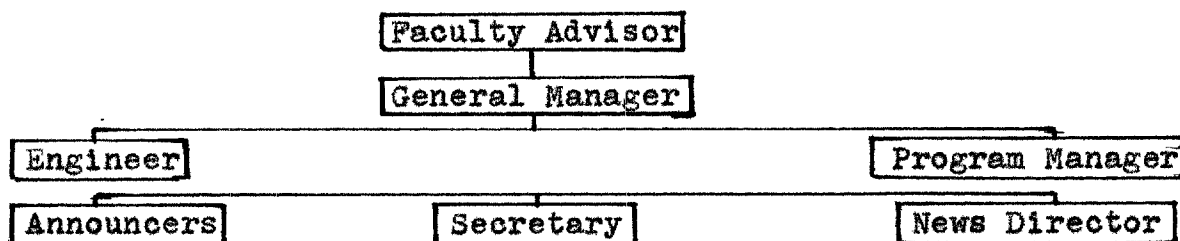


Fig. 3--Plan B: Medium-size staff<sup>16</sup>

#### Plan C: Minimal Staff

The minimum number of persons required to operate a station can be as few as five to ten, depending upon the circumstances of the broadcast day and the academic load of the personnel concerned. The least practicable number of staff members is five--a manager, engineer, and three announcers who may also double as engineers or writers. This number presupposes a very short broadcast period, both daily and by the week.

This small number can be sufficient for the operation of the station. However, as the station grows so should the number of staff members. KBGC formerly operated with a staff of six people; but due to long broadcast periods and lack of funds the operation ceased after its initial license period.<sup>17</sup>

<sup>16</sup>Mitchell V. Charnley, News by Radio (New York, 1948), p. 79.

<sup>17</sup>Statement by Jack O. Purdue, professor, Oklahoma Baptist University, Shawnee, Oklahoma, March 23, 1967.

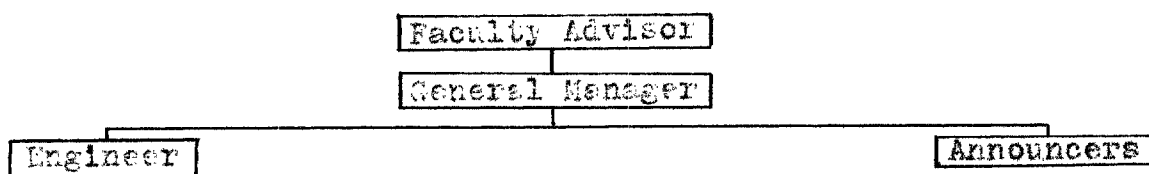


Fig. 4--Plan C: Minimum Required Staff<sup>18</sup>

Plan for Oklahoma Baptist University

It seems feasible that the following plan of organization should be an effective one initially for Oklahoma Baptist University. The first paragraph of this chapter suggested that any plan which is standardized may be altered to suit the needs of the individual station. Therefore, the following plan is a slight modification of the previously described plan A. It allows for a minimum of thirteen staff members exclusive of secretaries, news reporters, and continuity writers. However, as this proposal is being prepared, many more students than this number have shown an interest; and it is presumed that the other staff jobs may be filled adequately.

It has been substantiated that the faculty advisor should perhaps serve (at least initially) as the general manager. In this respect, then, it is advised that the faculty member assigned to KBGC also serve as the general manager.

It may be observed also that a professor of journalism will serve as the news director. This has evolved from the

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<sup>18</sup>Ibid.

fact that he will teach news writing and reporting classes as a cooperative effort between the two representative departments. The station will plan to utilize the services of journalism students in the news department of the station as they become available.

Certainly these two important positions on the staff will be filled by students whenever the advisor deems worthy students ready of the jobs.

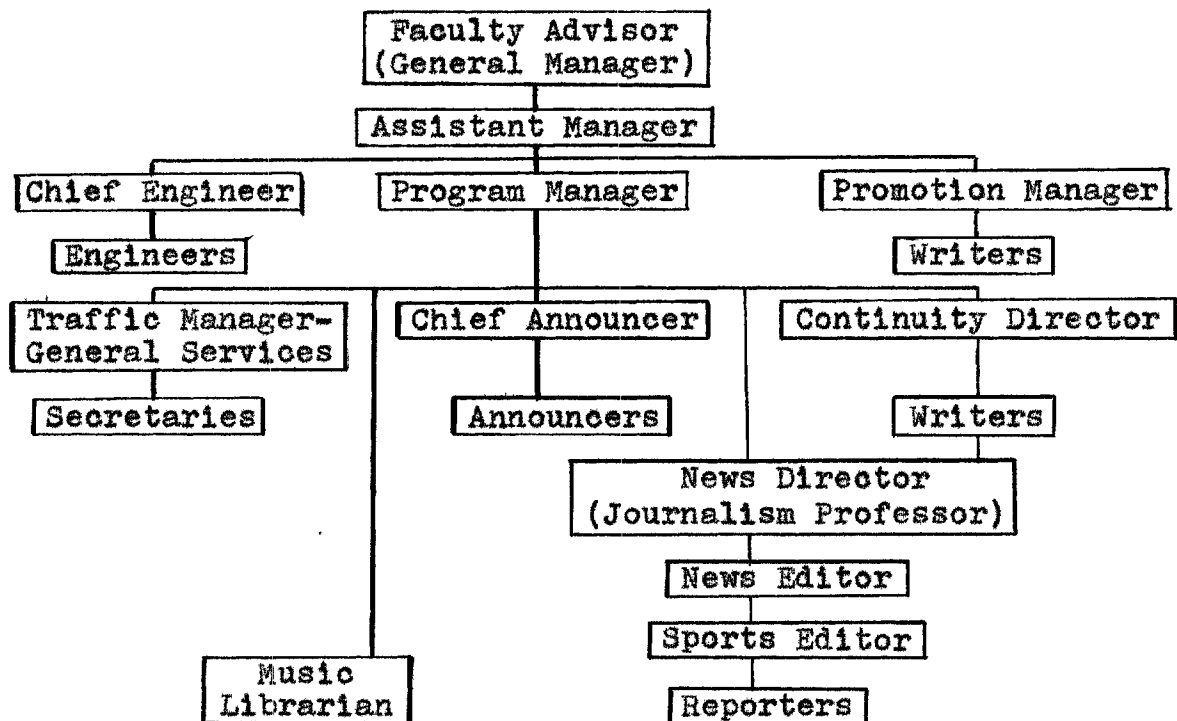


Fig. 5--Organizational plan for Oklahoma Baptist University.

#### Maintaining a Staff for the Station

The problem of maintaining a staff can only be solved as the individual station sees fit. For many stations, the problem of finance could make any remuneration for the student's

time prohibitive. In this case the advisor could make station work a part of class requirements. There are two other feasible plans which might be considered and which will not make any hardship on an overstrained budget. They are (1) the sponsoring department might expand its curricular offerings to include laboratory courses in broadcasting. This would necessitate the student's spending a certain amount of time in the studios in order to fulfill his laboratory requirement. (2) To organize a workshop or a club wherein all interested students could serve in the various positions on a rotating basis. It may be well to recognize that such a set-up as this could not be on a strictly voluntary basis because many students later lose interest and drop out. The latter plan might, however, encourage interested students outside the department to become involved and this could perhaps add to the existing staff of interested personnel.

It should be borne in mind that there are many ways in which to organize an educational station. The prospective licensee should look at all means before he decides which method will best suit his needs and still remain within his budget's reach. As has been pointed out, there are many imaginative ways in which to attack this problem and arrive at a workable solution without expending large sums of money. Whatever the station decides to do in this area, it should keep in mind the continuity of operation and its smooth and efficient running.

## CHAPTER V

### FINANCING AND BUDGET

The station administrator should be well enough informed on the probable value of a broadcast system to discuss its financial requirements with those who establish financial priorities for the school.<sup>1</sup>

This appears to be one of the biggest problems that the educational broadcaster will encounter. He must have some knowledge of the initial costs of building and the cost of maintaining the station on a yearly basis. Not only must he present this information to his administration, but he must also present it to the Federal Communications Commission in the original license application.<sup>2</sup>

The station administrator should be interested in financial and budgetary problems in the following areas: (1) the transmitter, (2) the antenna system, (3) studio technical equipment, (4) acquiring land, and (5) acquiring, constructing or modifying buildings.<sup>3</sup> These areas are those on the

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<sup>1</sup>Donald G. Emery, "The Administrator's Role," The Bulletin of the National Association of Secondary School Principals, L (October, 1966), 179.

<sup>2</sup>Federal Communications Commission, Application for Authority to Construct or Make Changes in a Noncommercial Educational TV, FM, or Standard Broadcast Station, Form 340 (Washington, 1966), III, 1.

<sup>3</sup>Ibid.

application form which will have to be substantiated by the signers of the application. They should also serve as guidelines for proposals to the administration relating to the acquisition of finances.

With these considerations in view, perhaps the following information will clear up some areas of doubt in the broadcaster's mind. The discussion will be concerned with (1) the initial cost of construction and equipment, (2) annual budgets, and (3) sources of financing.

#### Initial Costs

Observers have found that the original costs of constructing and equipping a station run from \$2,500 to \$10,000.<sup>4</sup> Henry gives \$6,200 as a mean figure.<sup>5</sup> The figure which the individual station may arrive at will depend, of course, upon its situation and finances. Generally, however, the station should make its estimates from the information given on the preceding page.<sup>6</sup>

Assuming that there will be little or no cost for modifying housing space, KBGC should anticipate spending \$4,000,

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<sup>4</sup>James L. Mead, "The School Radio Station," The Bulletin of the National Association of Secondary School Principals, L (October, 1966), 202.

<sup>5</sup>William G. Henry, Jr., "Small-Scale Radio Activity: A Survey of 10-Watt Educational Stations," Audio-Visual Instruction, VII (May, 1962), 296.

<sup>6</sup>Federal Communications Commission, op. cit., p.2.



or perhaps less, initially. This price includes all of the necessary technical apparatus, installed, that will be needed at the outset. The largest single expense will be for a new transmitter to replace the existing instrument, which is damaged beyond good repair. The figure quoted is based upon needed equipment shown in the following Table I.

TABLE I  
EQUIPMENT NEEDS FOR KBGC

| Type               | Number Needed | Manufacturer          | Price Each | Total      |
|--------------------|---------------|-----------------------|------------|------------|
| Transmitter        | 1             | Gates<br>BFE10-C      | \$1,550.00 | \$1,550.00 |
| Spare Tube<br>Kit  | 1             | Gates                 | 42.00      | 42.00      |
| Microphone         | 1             | Collins<br>M-40       | 72.50      | 72.50      |
| Microphone         | 2             | Shure<br>300          | 90.00      | 180.00     |
| Microphone         | 5             | Electro-<br>Voice 664 | 85.00      | 425.00     |
| Desk Stand         | 3             | Gates                 | 10.00      | 30.00      |
| Floor Stand        | 2             | Gates                 | 17.70      | 25.40      |
| Boom Stand         | 1             | Gates                 | 48.00      | 48.00      |
| Tape<br>Recorder   | 1             | Ampex<br>602-2        | 625.00     | 625.00     |
| Monitor<br>Speaker | 2             | Collins<br>XII        | 149.95     | 299.90     |
| Total              | . .           | . . .                 | . . .      | \$3,297.80 |

The prices for these items of equipment are taken from the specifications which are discussed in Chapter VI. They represent the least expensive, good quality equipment of the various manufacturers listed.

#### Budget

Henry's survey showed that the annual cost of operation ranged from \$125 to \$7,000, with a mean operation cost of \$2,200.<sup>7</sup> This included all paid student help, office supplies, and technical maintenance. Excluded is the salary of the faculty and advisors, whose income is derived from the regular faculty salary fund.

It is important to note from this information that the station will have to set up an annual budgetary system. It appears to be impossible to run the station with no means of finance.

There appears to be a bright side to the expense of upkeep, however; Eshelman reports that "studio housing . . . , and electrical power are provided in the general college budget and not included in the station operating budget."<sup>8</sup> Quite in keeping is the fact that Mead discovered earlier that maintenance costs very little except for repair parts.<sup>9</sup>

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<sup>7</sup>Henry, op. cit.

<sup>8</sup>David Eshelman, "About College FM Stations," NAEB Journal, XXIV (September-October, 1965), 41.

<sup>9</sup>James L. Mead, "Low-Power Broadcasting," NAEB Journal, XIX (January-February, 1960), 25.

In order to keep the private institution's overall budget from squelching the station's own budget, KBGC should attempt to keep its own operating cost to a bare minimum. As a means of doing so, the station should base its budget request upon the information contained in Table II below.

TABLE II  
BUDGET NEEDS FOR KBGC<sup>10</sup>

| Item             | Number of Weeks | Quantity | Price   | Total     |
|------------------|-----------------|----------|---------|-----------|
| Record Albums    | . . .           | 200      | \$ 1.00 | \$ 200.00 |
| Newswire Service | 36              | . . .    | 42.50   | 1530.00   |
| Office Supplies  | . . .           | . . .    | . . .   | 135.00    |
| Miscellaneous    | . . .           | . . .    | . . .   | 135.00    |
| Total            | . . .           | . . .    | . . .   | \$2000.00 |

From these costs and any other miscellaneous ones, it appears that KBGC should request approximately \$2,000 per year. Should this amount become insufficient, then the station administrator may make a budget adjustment request. The President of Oklahoma Baptist University is empowered by the Board of Trustees to adjust the university's budget at

<sup>10</sup>Based upon a statement by R. C. Norris, professor, Texas Christian University, Fort Worth, Texas, July 12, 1967.

any time during the fiscal year.<sup>11</sup> It appears unlikely at this time that any adjustment would have to be made. The writer of this report recognizes that broadcast activities in KBGC's case will of necessity have very limited funds for some time.

#### Sources of Financing

According to Eshelman's 1965 survey, the largest and most used source of revenue for the station comes entirely from the college budget. The next largest source is from the Speech Department budget, and many stations derive their money from sources such as the student senate.<sup>12</sup> He further demonstrates that stations obtain finances from alumni, friends, rental of records and equipment (record hops), and from feeding FM music to stores.<sup>13</sup> It should be kept in mind that this latter sub-carrier broadcasting requires a different kind of license from the one under consideration in this report.

Many foundations have been called upon to provide support for educational radio, including the Kellogg Foundation, the Fund for Adult Education of the Ford Foundation,

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<sup>11</sup> William E. Neptune, editor, Faculty Handbook (Shawnee, Oklahoma, 1965), Sec. 5.11.

<sup>12</sup> Eshelman, op. cit.

<sup>13</sup> Ibid.

the National Home Library Foundation and the Johnson Foundation.<sup>14</sup>

Federal legislation has included educational radio in many of its recent aid-to-education programs. Among some of the federal agencies through which funds and services may be obtained, the following bureaus are perhaps the best sources.

1. The Office of Education, Department of Health, Education, and Welfare, 400 Maryland Avenue, Southwest, Washington, D. C., 20201. This agency provides grants for educational media through several bureaus. Its Bureau of Research includes such programs as Title IV, the Cooperative Research Act, of the Elementary and Secondary Education Act (school systems may perhaps be interested in this source of funds); and Title III, Strengthening Instruction in Science, Mathematics, Modern Foreign Languages, and Other Critical Subjects; and Title VII, New Educational Media, of the National Defense Education Act. The agency's Bureau of Elementary and Secondary Education administers Title III, Supplementary Educational Centers and Services, and Title V, Grants to Strengthen State Departments of Education, both under the Secondary Act (again, public school systems may have an interest). The Bureau of Higher Education approves grants under such programs as Title VI, Financial Assistance for the Improvement of Undergraduate Facilities; Title I,

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<sup>14</sup>Federal Communications Commission, Educational Radio, Informational Bulletin, No. 21-B (Washington, 1966), p. 11.

Grants for Construction of Undergraduate Academic Facilities; and Title II, Grants for Construction of Graduate Academic Facilities; all under the Higher Education Act.<sup>15</sup>

2. The General Services Administration, Eighteenth and "F" Streets, Washington, D. C., 20235. This administration administers the Federal Property Act, which authorizes donations of surplus property, equipment and land. These may be applied for by "certain nonprofit educational institutions and organizations such as educational radio and television stations."<sup>16</sup>

3. The National Foundation on the Arts and the Humanities, 1800 "G" Street, Northwest, Washington, D. C. It is composed of (1) the National Council of the Arts, the policy-making body for the Endowment for the Arts, which administers grants for projects relating to the performance of major art forms, including radio and television; and (2) the National Council on the Humanities, the policy-making body for the Endowment for the Humanities, which develops and encourages the humanities, including educational radio and television, through research and grants.<sup>17</sup>

Station KBGC, being a nonprofit educational institution, is eligible for many of these foundation and government grants. However, it is in opposition to school policy of

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<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

Oklahoma Baptist University to receive Federal Aid of any sort. Should the station find it necessary to resort to outside aid, application to any of the previously cited foundations would not be considered. However, the Baptist General Convention of Oklahoma has several agencies by which the station could obtain financial support. It might call upon the school Alumni Association, or the student senate, or any of the other means previously cited.

It seems, therefore, that if the station staff is willing to use its collective imagination and to develop a carefully planned budget, it can assume its rightful position in the academic community with no financial fears.

## CHAPTER VI

### EQUIPMENT

It is the intention in this chapter to present some information on broadcast equipment which will be in keeping with the Federal Communications Commission's rules on type-acceptance.<sup>1</sup> The discussion will include only those items of equipment which are of basic necessity to any 10-watt station operation. Just as in any other aspect of the operation, available finance and space will be an important factor in choosing the right equipment to suit each station's needs. It is felt, however, that the following information will give some general knowledge of the latest types of low-cost, efficient and responsive equipment that the beginning station will be required to consider for license application.

For the purposes of Oklahoma Baptist University administrative review, presently owned items of equipment will be indicated.

#### FM Technical Standards

The Commission accepts, but does not recommend, equipment lists from manufacturers for comparison with station application information based upon the following standards:

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<sup>1</sup>Federal Communications Commission, Rules and Regulations, Subpart C (Washington, 1964), Sec. 73.505.



. . . The general design of the FM broadcast transmitting system (from input terminals of microphone amplifier, through audio facilities at the studio, through lines or other circuits between studio and transmitter, and through the transmitter, . . .) shall be in accordance with the following principles and specifications:

(1) The transmitter shall operate satisfactorily in the operating power range with a frequency swing of 75 kilocycles per microsecond, which is defined as 100 per cent modulation.

(2) The transmitter system shall be capable of transmitting a band of frequencies from 50 to 15,000 cycles.

(3) At any modulated frequency between 50 and 15,000 cycles and at modulation percentages of 25, 50, and 100 per cent, the combined audio frequency harmonics measured in the output of the system shall not exceed the root-mean-square values given in the following table:

| <u>Modulating frequency</u> | <u>Distortion per cent</u> |
|-----------------------------|----------------------------|
| 50 to 100 cycles.....       | 3.5                        |
| 100 to 7,500 cycles.....    | 2.5                        |
| 7,500 to 15,000 cycles..... | 3.0                        |

(4) The transmitting system output noise level (frequency modulation) in the band of 50 to 15,000 cycles shall be at least 60 decibels below 100 per cent modulation (frequency swing of  $\pm$  75 kilocycles).

(5) . . . [not necessary to this report]

(6) Automatic means shall be provided in the transmitter to maintain the assigned center frequency within the allowable tolerance ( $\pm$  2000 cycles).

(7) The transmitter shall be equipped with suitable indicating instruments for the determination of operating power and with other instruments as are necessary for the proper adjustment, operation, and maintenance of the equipment.

(8) Adequate provisions shall be made for varying the transmitter output power to compensate for excessive variations in line voltage or for other factors affecting the output power.

(9) Adequate provisions shall be provided in all component parts to avoid overheating at the rated maximum output power.<sup>2</sup>

The Commission gives further evidence that all parts of the equipment must be in accordance with its engineering standards, including the construction. The standards for construction of the equipment are given in part as follows:

(b) Construction.--In general, the transmitter shall be constructed either on racks and panels or in totally enclosed frames protected as required by Article 810 of the National Electrical Code (section 8-192 (a), (b), and (c)). . . .<sup>3</sup>

Although the applicant for a 10-watt FM station has to supply only the name of the manufacturer, type number and rated power,<sup>4</sup> he must know that his equipment meets the above standards in order for the Commission to accept his purchase as air-worthy. Should he use equipment that is not type-approved or type-accepted by the Commission, then he must submit myriad exhibits pertaining to the kind of equipment that will be used, including full schematics on every piece (some stations build their own equipment, and thus become quite involved with false economy in terms of time and effort). In order to comply with the type-acceptance stipulation of the rules, the applicant may, if he desires, order from any

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<sup>2</sup> Ibid., Subpart B, Sec. 73.317.

<sup>3</sup> Ibid.

<sup>4</sup> Federal Communications Commission, Application for Authority to Construct or Make Changes in a Noncommercial Educational TV, FM, or Standard Broadcast Station, Section V-B (Washington, 1966), p. 1.

of the manufacturers listed in the Radio Equipment List which he may inspect at any Federal Communications Commission Field Office.

#### Basic Initial Equipment

James Mead, of Michigan State University, advises that in addition to a transmitter-antenna system, the following basic equipment must be installed before broadcasting can begin. This includes:

1. Mixer console
2. Microphones
3. Turntables
4. Tone arms and cartridges
5. Tape recorders
6. Monitor speakers
7. Spare tubes<sup>5</sup>

In the interest of clarifying any misconceptions that may appear to the purchaser, perhaps a word about ordering equipment catalogs would be in order at this point. It was found that comparison of reputable equipment from all sources was prohibited by the cost of catalogs, and that representative companies sometimes refuse to provide information unless the catalogs are purchased from them, with prices ranging

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<sup>5</sup>James L. Mead, "The School Radio Station," The Bulletin of the National Association of Secondary School Principals, L (October, 1966), 201.

from three to twelve dollars.<sup>6</sup> Consequently, typical specifications were taken from Gates, Collins and Electro-Voice Company catalogs only. These specifications are given in the interest of serving as a means of review to the institutional administrators.

#### Transmitter-Antenna System

The first consideration for equipment purchase is that of discovering what kind of transmitter and antenna the station should utilize. There are several good quality, low-cost transmitters and antennas on the market produced by reputable manufacturers.

Transmitter.--In low-power FM broadcasting, a 10-watt transmitter is all that is necessary at the outset. Eventually, however, the station may wish to purchase more sophisticated and more powerful equipment in order to boost its signal and add to its signal reception.

Station KBGC does not have an operable transmitter at this time. It should therefore consider purchasing one that will meet the specifications of the FCC. The specifications of the Gates Model BFE-10C, which follow, are offered for consideration. The opinion that this item is of good quality at a quite reasonable price has been expressed by the engineer who will supervise the installation of the educational station's equipment.<sup>7</sup>

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<sup>6</sup>Statement by Raymond D. Branson, engineer, KGFF, Shawnee, Oklahoma, February 20, 1967.

<sup>7</sup>Ibid.

## Specifications:

Power output: 10 watts, frequency modulated.

Frequency range: 88 to 108 Mhz.<sup>8</sup>

Stability: 0.001 per cent or better.

Modulation: Direct crystal controlled cascade modulation.

Response: Within 1 db of standard 75 second pre-emphasis curve, or  $\pm 1$  db, 50 to 15,000 Hz.

Frequency swing:  $\pm 75$  KHz with 100 per cent modulation.

Distortion: One per cent or less at 30 to 15,000 Hz.

RF Harmonics: Suppression meets or exceeds all Federal Communications Commission requirements.

Input: + 10 dbm,  $\pm 2$  db at 600 ohms impedance.

Power: 117 volts AC, 50 to 60 Hz, 120 watts.

RF output: 50 ohms with type N connector.

Oscillator: Direct crystal controlled.

Necessary operating temperatures:  $-20^{\circ}$  to  $+50^{\circ}$  Centigrade.

Tube complement: Six 6AU6, three 6J6, three 6201, three 7025, two 0A2, and one each: 12AX7, 6A05, GZ34/-4AR4, 6080, and 6360.

Maximum operating altitude: 7500 feet above sea level.

Current price: Transmitter . . . \$1,550.00

Spare Tube  
Kit (TK-488). . . 42.00

Total . . . . . \$1,592.00<sup>9</sup>

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<sup>8</sup>Statement by Gale C. Thorsen, engineer, WKY-TV, Oklahoma City, Oklahoma, February 22, 1967. "MHz, or MegaHertz, replaces the term megacycles in honor of Hertz, who discovered the 'Hertzian Wave Theory,' or 'radio waves'."

<sup>9</sup>Harris Intertype Corporation, Broadcast and Communications Equipment (Quincy, Gates Radio Company, 1966), p. 50.

Antenna.--KBGC has already resolved the problem of obtaining an antenna. The former facility was supplied with a Westinghouse antenna that was especially designed for use with the then-operable transmitter. The consulting engineer has offered assurance that, with some cleaning and retuning, it can still be used.<sup>10</sup> He again remarked that the Gates FM-11 single-ring antenna would be both efficient and economical should the station desire to purchase a new one. This antenna has an omnidirectional pattern and a power gain of 0.8 decibels.<sup>11</sup> If more effective radiated power is desired, then an excellent choice would be the Gates FM-22, with a power gain of 1.3 decibels. Both are broadband antennas.

Current prices: FM-11 . . . \$150.00  
 FM-22 . . . 400.00

It may be noted that the normal single ring antenna, mounted at a height of one-hundred feet, will give an effective radiated power signal that will range to approximately thirteen miles.<sup>12</sup> It seems probable that this coverage should be adequate for the campus station, even allowing it to reach the surrounding community.

Gates, Collins, and other companies will furnish towers either of the self-supporting or guyed types. It is

<sup>10</sup> Branson, op. cit.

<sup>11</sup> Harris Intertype Corporation, op. cit.

<sup>12</sup> Roger J. Houglum, "How to Get Stated in FM Radio," NAEB Journal, XIX (November-December, 1960), 5.

recommended that type 120 (standard in the industry) be utilized for the educational station.<sup>13</sup> This tower comes in twenty-foot sections, except for the top section, which is constructed to individual specifications. No prices are given in the catalogs, but they may be had upon request from the manufacturers. Any applicable Federal Communications Federal Aviation Administration lighting kits and wiring are also provided with the tower.<sup>14</sup>

#### Mixer Console

The control board or console performs the function of controlling and mixing all signal sources before they are finally transmitted into the ether via the transmission lines and transmitter. All consoles, though different in design detail, are fundamentally similar and include certain minimum features such as (1) on-off switch, (2) monitor gain control, (3) master gain control, (4) VU meter, (5) microphone inputs, (6) turntable inputs, (7) tape inputs, (8) remote amplifier inputs, (9) toggle switches and potentiometers to control the functions of the inputs, and (10) headset jacks.

It was found in the Third Allerton Seminar on educational broadcasting that the following minimum number of

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<sup>13</sup>Collins Broadcast Equipment--1966 (Dallas, Collins Radio Corporation, 1966), p. 35.

<sup>14</sup>Ibid.

console functions were employed by stations in its survey:

Microphone inputs: 4 inputs, keyed and on potentiometers.

Turntable inputs: 2 inputs, keyed individually, and on separate potentiometers.

Tape inputs: 2 inputs, keyed individually but "ganged" on one potentiometer, and switched into it with individual keys.

Remote inputs: 2 inputs, with provisions for keying (one at a time) several into 1 potentiometer.<sup>15</sup>

KBGC is fortunate in that it will not have to purchase a console for its operation. It already has two Gates Studioette models in its possession. They are not new, but they have been described as being in good serviceable condition.

Specifications for the newer models are:

Single channel monophonic consolette.

Mixing channels: total of 4, key selected to program or audition bus. [These are the "potentiometers," or "fader knobs."]

Input circuits: total of 13, into the 4 mixing channels.

Output lines: 1 program, 1 audition, 2 muted speaker, 1 non-muted speaker, 1 turntable cue, 1 remote/tape cue.

Tube complement: 18 easily accessible tubes.

Gain: 63 db to the transmission line and 100 db to the monitor.

Response: Program circuit + 1½ db 30-15,000 Hz, monitor circuit ± 2 db 30-15,000 Hz.

Distortion: 1 percent or less between 30-15,000 Hz at ± 8 dbm output level.

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<sup>15</sup>Report on the Third Allerton Seminar (Urbana, 1952), p. 12.



|                                  |                          |
|----------------------------------|--------------------------|
| Current price: Console . . . . . | \$1,225.00               |
| Spare tube kit. . . . .          | <u>22.50</u>             |
| Total . . . . .                  | \$1,247.50 <sup>16</sup> |

It is interesting to note that the Collins console and spare tube kit is priced at \$2,640. The unit has comparable specifications except that there are not as many mixing channels or input circuits.<sup>17</sup>

#### Microphones

The purpose of the microphone is to pick up the sounds originating from the booths and studios, to transform them into electrical impulses which are fed to the mixer, and thence to the transmission facilities. There are four standard types of microphones available: (1) pressure or dynamic, (2) velocity or ribbon, (3) combination or variable pattern, and (4) the condenser microphone.

Microphones are also classified by their pick-up of sound. Chester, Garrison and Willis give the pick-up characteristics as being

. . . (1) Non-directional or a 360-degree area of pick-up, (2) unidirectional or a pick-up of one "live" side, (3) bidirectional or a figure 8 pick-up area, two opposing sides being alive, and (4) polydirectional, in which the area of pick-up can be adjusted in various ways.<sup>18</sup>

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<sup>17</sup>Collins Broadcast Equipment--1966, p. 72.

<sup>18</sup>Giraud Chester, Garnett R. Garrison and Edgar E. Willis, Television and Radio (New York, 1963), p. 241.

The following discussions and specifications will conform to the criteria of the Third Allerton Seminar. The survey made by the participants showed that the number of microphones per station ranged from four to thirteen, with a mean of eight.<sup>19</sup> Eight microphones appeared to be the minimum number required by most small station operations.<sup>20</sup> Based on these assumptions, it is recommended that KBGC attempt to provide six to eight microphones selected from the following types. The station should follow the advice of the Seminar, which states: "Cheap equipment cannot be recommended, and . . . standard professional equipment or its approved equal should be specified."<sup>21</sup>

Pressure or dynamic.--These microphones have principles which make them non-directional in pick-up area. They are recommended for round-table discussions and interview programs.<sup>22</sup> The specifications are

(1) Gates Model G-200:

Frequency response: 60 to 13,000 Hz.

Impedance: 150 ohms, balanced.

Output level: -55 db.

Polar pattern: non-directional.

<sup>19</sup>Report on the Third Allerton Seminar, p. 11.

<sup>20</sup>Ibid.

<sup>21</sup>Ibid.

<sup>22</sup>Chester, Garrison and Willis, op. cit., p. 241.

Diaphragm: acoustalloy.

Cable: 18 feet, 2-conductor, shielded, synthetic rubber jacketed, broadcast type.

Current price: Microphone . . . \$45.50  
 Desk Stand . . . 7.80  
 Total . . . . . \$53.30<sup>23</sup>

(2) Collins Model M-40:

Impedance: 50 ohms or 200 ohms, selectable.

Frequency response: 40 to 20,000 Hz.

Output level: -59 db.

Polar pattern: essentially non-directional.

Cable: 20 feet, 3-conductor, plastic jacketed.

Desk stand included.

Current price . . . \$72.50<sup>24</sup>

(3) Electrovoice Model 636:

Frequency response: 60 to 13,000 Hz.

Output level: -58 db.

Polar pattern: non-directional.

Impedance: "high" and "low", by changing one wire.

Cable: 16 feet [no specifications].

Current price: Microphone . . . \$72.50  
 Desk stand . . . 10.00  
 Total . . . . . \$82.50<sup>25</sup>

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<sup>23</sup> Harris Intertype Corp., op. cit., p. 144.

<sup>24</sup> Collins Broadcast Equipment--1966, p. 93.

<sup>25</sup> Electro-Voice Corporation, Broadcast and General Purpose Microphones (Buchanan, Michigan, 1967), p. 4.

Velocity or ribbon.--This microphone has high fidelity characteristics which make it quite practical for music reproduction, and other general studio work. It has the bidirectional characteristic, offering "on beam" and dead sides, which make it especially important for radio dramatics.<sup>26</sup>

Specifications:

Shure model 300:

Type: moving ribbon.

Frequency response: 40 to 15,000 Hz.

Impedance: 30/50, 150/250, and high.

Output level: -59 db.

Cable: 20 feet [no specifications] .

Current price: Microphone . . . \$90.00

Boom stand . . . 48.00

Floor stand . . 17.70<sup>27</sup>

This microphone is offered by both Gates and Collins at the same price. Electro-Voice offers none at all.

Combination or variable pattern.--This microphone is of the cardioid type. When discrimination against unwanted sound from the back is desired, then the dynamic element is used for a unidirectional pick-up. For this reason, it is excellent as a sports microphone or for the rostrum. It may also be used as an omnidirectional (non-directional) microphone

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<sup>26</sup> Chester, Garrison and Willis, op. cit.

<sup>27</sup> Harris Intertype Corp., op. cit., p. 145.

for music, announce, or general studio pick-up.

Specifications:

(1) Gates Model G-300:

Frequency response: 40 to 15,000 Hz.

Impedance: 150 ohms, balanced.

Output level: -55 db.

Polar pattern: cardioid.

Cable: 18 feet, two-conductor, shielded, synthetic rubber jacketed broadcast type.

Current price: \$53.50<sup>28</sup>

This microphone may be mounted on either a floor or a boom stand for studio use. The prices for such stands have already been quoted.<sup>29</sup>

(2) Electro-Voice Model 664:

Frequency response: 40 to 15,000 Hz.

Impedance: Dual Hi-Z and Lo-Z, Changed by moving one wire in cable connector.

Output level: -58 db.

Polar pattern: cardioid (but without variable function).

Cable: 16 feet [no specifications].

Current price: \$85.00.<sup>30</sup>

Condenser.--This microphone comes in various directional patterns, does not distort under sudden blasts of sound, and

<sup>28</sup>Ibid., p. 144.

<sup>29</sup>Supra., p. 62.

<sup>30</sup>Electro-Voice, Inc., op. cit., p. 3.

has perhaps the best frequency response. In addition to its excellent broadcast uses, it is widely used in making high-fidelity recordings. Although the specifications for the Altec version of this microphone are not available, Altec is the chief manufacturer of these instruments in the United States.<sup>31</sup> The only specifications available to this report come from the Gates Company catalog, and they are for the German Neumann model.

Specifications:

Type: pressure gradient, condenser.

Frequency response: 20 to 16,000 Hz.

Impedance: 30/50 or 150/250 ohms.

Output level: -48 db.

Power requirements: 110/127/220 volts, 50 to 60 Hz.

Current price: Microphone and power supply  
with cable . . . . \$360.00<sup>32</sup>

It is perhaps obvious that only the more affluent stations could afford such equipment. It is felt that, due to economic conditions, KBGC should not consider such a purchase. However, the following microphone installations should be desirable to the station for an efficient operation.

1. Studio.--One dynamic microphone for interviews, and two velocity microphones for musical and dramatic groups should be utilized.

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<sup>31</sup> Chester, Garrison and Willis, op. cit., p. 242.

<sup>32</sup> Harris Intertype Corp., op. cit., p. 145.

2. Control room.--One permanent microphone of the cardioid type should be installed because of its extraneous noise cancellation characteristics.

3. News booth (small studio).--One cardioid type should be installed for the same reason as in number two. This microphone could be used wherever demanded.

4. Remotes.--Three cardioid types should be provided for this purpose because of their variable pattern pick-ups. It should be noted that three will be used in the Chapel of Oklahoma Baptist University for remote broadcasts originating there--one for the rostrum, and two for the choir loft.

These areas of utilizations call for a total of eight microphones. However, the number can be reduced by the interchanging of microphones to fit various functions.

#### Turntables

KBGC already has on hand two Rek-O-Kut twelve inch turntables with preamplifiers. These instruments are new and have been unpacked only for inspection. The specifications and price sheets have been lost, but the consultant engineer advises that the equipment is of good broadcast quality. This means that it probably conforms somewhat to the specifications of the following brands.

(1) Collins Model TT-900:

Motor: synchronous.

Speeds: 33 1/3 and 45 rpm.

Speed regulation: less than 1/12 rpm for full speed.

Speed regulation: 0.05 per cent.

Wow limit: 0.2 per cent.

Flutter limit: 0.2 per cent.

Rumble: -36 db.

|                |                  |                        |
|----------------|------------------|------------------------|
| Current price: | Turntable . . .  | \$185.00               |
|                | Playback arm . . | 52.00                  |
|                | Preamplifier . . | <u>115.00</u>          |
|                | Total . . . . .  | \$352.00 <sup>33</sup> |

(2) Gates Model CB-88:

Motor: hysteresis synchronous.

Speeds: 33 1/3, 45 and 78 rpm.

Speed regulation: 33 1/3, 1/8 rpm; 45, 1/6 rpm;  
78, 3/4 rpm.

Wow limit: 0.1 per cent maximum.

Rumble: 33 1/3, -45 db; 45, -40 db; 78, -35 db.

|                |                      |                        |
|----------------|----------------------|------------------------|
| Current price: | Turntable . . . . .  | \$275.00               |
|                | Playback arm . . . . | 52.00                  |
|                | Preamplifier . . . . | <u>104.00</u>          |
|                | Total . . . . .      | \$431.00 <sup>34</sup> |

It seems plausible that the station should use two turntables in order to play transcriptions back-to-back.

The playback arms are supplied with adequate cartridges for broadcast purposes.<sup>35</sup>

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<sup>33</sup>Collins Broadcast Equipment--1966, pp. 79-80.

<sup>34</sup>Harris Intertype Corp., op. cit., pp. 112-114.

<sup>35</sup>Supra., p. 53.



### Tape Recorders

In addition to the turntable, the tape recorder is an indispensable item to the station's operation. Specifications for representative types of tape recorders are as follows.

(1) Ampex Model 602-2:

Mode: full track record and playback.

Meters: one four-inch VU meter.

Heads: separate record, erase and playback.

Drive: synchronous motor.

Monitoring: full monitoring for record or playback.

Reel sizes: 5, 7 and 8 inch reels.

Recording speeds:  $7\frac{1}{2}$  inches per second.

Frequency response: 40 to 15,000 Hz.

Signal-to-noise ratio: 52 db.

Inputs: 2 on each channel, individual gain controls.

Output:  $\pm 4$  dbm into 600 ohms, balanced or unbalanced.

Current price from Collins or Gates Companies:

\$625.00<sup>36</sup>

(2) Magnecord Model 1020:

Tape speeds: 3.75 and 7.5 inches per second.

Flutter and wow limits: 0.25 per cent at 3.75 ips, and 0.2 per cent at 7.5 ips.

Reel sizes: 5, 7, and 8 inch reels.

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<sup>36</sup>Harris Intertype Corp., op. cit., p. 153.

Frequency response: 45 to 18,000 Hz.

Signal-to-noise ratio: 53 db at both speeds.

Inputs: balanced bridge, unbalanced bridge, and auxiliary bridge.

Output: 150/600 ohm balanced, auxiliary unbalanced to line.

Heads: full-track erase, record and half-track playback.

Meters: VU type [no dimensions] . .

Current price from Collins or Gates Companies:

\$748.00<sup>37</sup>

If a less expensive instrument is required, then a good choice would be the Wollensak model 5710 tape recorder. Even though it is not a broadcast machine, it could, if necessary, be modified for use in the station.<sup>38</sup>

#### Specifications:

Mode: monaural.

Tape speeds: 1 7/8, 3 3/4 and 7 1/2 inches per second.

Reel size: takes up to 7 inch reels.

Frequency response: 40 to 17,000 Hz at 7 1/2 ips,  
50 to 10,000 Hz at 3 3/4 ips.

Inputs: utility and microphone.

Output: preamplifier and general purpose.

Heads: half-track record, monitor and playback.

Power: 117 volts AC, 60 Hz.

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<sup>38</sup>Branson, op. cit.

Controls: power-activated push buttons.

Current price: \$159.95<sup>39</sup>

### Monitor Speakers

These speakers should be situated in both the studio and the control room. A minimum of one in each location could be satisfactory. Most authorities agree that they are essential to the station operation.<sup>40</sup> While the VU meter on the control room console can register only the volume, the operator and engineer, through mixing of microphones and turntables or any other combination, effect the balance and quality of broadcasting by "ear" judgment.<sup>41</sup> Thus the monitor becomes an item of importance both to the operator and the engineer. The use of such a system ultimately, indirectly, becomes important to the overall station operation.

#### Specifications:

##### (1) Gates system:

Speaker system: 12 inch Radax speaker, diffraction horn high frequency driver, and special crossover.

Frequency response: 30 to 20,000 Hz.

Sensitivity rating: 49 db.

Power capacity: 20 watts.

<sup>39</sup> Burstein-Appleby Company, Radio-TV Electronics: 1967 Annual Catalog, No. 671 (Kansas City, Missouri, 1967), p. 34.

<sup>40</sup> Chester, Garrison and Willis, op. cit., p. 247.

<sup>41</sup> Ibid.

Impedance: tapped transformer accomodates 16,  
150 or 600 ohms.

Current price: \$165.00<sup>42</sup>

(2) Collins Model XII:

Speaker system: 12 inch low frequency driver speaker connected to two cone-type high frequency drivers, through a fixed acoustical tuning arrangement.

Frequency response: 40 to 15,000 Hz.

Power capacity: 20 watts.

Sensitivity rating: 43 db.

Impedance: 8 ohms.

Current price: \$149.95<sup>43</sup>

Spare Tube Assortment

It should be reasonable to assume that a major assortment of equipment basic to the station's operation would be the spare tubes. One must realize that tubes do not have an extremely long life expectancy. In the event of a tube failure, many stations have provisions for continued operation through some kind of "shunting" method. If no provision can be made for such contingencies, then normally there would be only a short period of non-broadcasting while the necessary tube changes are made. Ordinarily, tube failures are the most frequent causes of lost air time or equipment breakdown.<sup>44</sup>

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<sup>43</sup>Collins Broadcast Equipment--1966, pp. 97-98.

<sup>44</sup>Thorsen, op. cit.

Tubes for the low-power FM station may be purchased at a reasonable price, and should have some provision for their purchase and upkeep in the station's budget. Prices for spare tube kits have been covered where they are applicable elsewhere in this chapter.<sup>45</sup>

#### Miscellaneous Equipment

If the station desires, and time and money become more readily available, there are several other more sophisticated items of equipment on the market which will enhance the technical operation of the station. Mead gives several of these items as being

1. limiters (peak leveler, expander)
2. Patch system (jack panel, terminal blocks).
3. rack cabinets.
4. warning light system.
5. cabinets [storage] and work tables.
6. intercom system.
7. test equipment.
8. control room clock.<sup>46</sup>

Actually, all of these items are desirable, but are unnecessary to the beginning station operation. However, they may become necessary items as time goes by and as the station assumes more responsibilities and needs more efficiency.

All of the foregoing information is considered by many engineers<sup>47</sup> and educational broadcasters<sup>48</sup> to be essential

<sup>45</sup> Supra., pp. 55, 58.

<sup>46</sup> Mead, op. cit.

<sup>47</sup> Branson, op. cit.

<sup>48</sup> Mead, op. cit.

in obtaining operational broadcast equipment. It is not intended that this information is the only kind applicable to the individual station's needs or budgetary allowances. It is rather intended as a guide from several sources to help in the purchase of basic equipment necessary to put the station on the air.

## CHAPTER VII

### STUDIO PLANS

An important step in the planning of the educational station is that of arranging for studio space and any offices that are needed. The size and arrangement of these facilities depend of course upon the individual problems. The participants of the Third Allerton Seminar on educational broadcasting made several observations about the amount of space needed for the facility, and its arrangement. The criteria which resulted from this seminar shall be applied where needed in surveying the requirements of the facility. Specifically, the station should consider (1) housing recommendations, (2) control rooms and studios, (3) storage space, (4) offices, and (5) any miscellaneous items of importance.<sup>1</sup>

#### Housing

The following recommendations are of a general nature and they apply to that aspect of planning which will entail location and housing of the station if that aspect has not been provided for in new building plans.

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<sup>1</sup>Report of the Third Allerton Seminar (Urbana, 1952), p. 10.

- A. Centralize the stations quarters in the school community
  1. in the central administration building
  2. in a centrally located school if the station is for a school system .
- B. If in a school building, establish its separate identity from the school and arrange entrances and exits to avoid conflict with the general activity of the school.
- C. Provide for expansion of studios, control rooms, offices and storage by reserving more space than you need immediately.<sup>2</sup>

Taking each in turn, KBGC finds the following information to be of value, particularly as it has applied each of the foregoing recommendations.

1. The station can be constructed in a centrally located place, but it is quite inconvenient to have it in the administration building. This building is already filled with offices and even classrooms. It seems much more likely that the station can be placed in the same building with the Speech Department, which is centrally located on the campus. In addition, the transmitting antenna is already moored on the roof of the building.

2. Shawnee Hall, which houses the Speech Department, in addition to being centrally located, has potentially the best arrangement for separate entrances and exits for the station. The space which now houses the Speech offices could very well become the station quarters. In fact, the former

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<sup>2</sup>These criteria are quoted from the foregoing Third Allerton Seminar (Urbana, 1952), p. 10.



station was housed at this site. The space has two entrance doors that are at the end of the building and away from the main entrance to the building. Since the institution is making plans to build more space, then perhaps the present offices could be moved to another location in the building. Or perhaps the school would be willing to consider building or remodeling for the studio and office space quarters. However, funds may not be available for such a project, in which case the former plan would be the better one.

3. The same area has a potential also for expansion. Presently, the English Department has its own mimeographing machine in an ante-room adjoining the Speech offices. This space could eventually be utilized as either a small studio or as a control room.

Should the above plan not be acceptable, then the following one may have more suitability. Since the antenna is moored on the roof of the building already, it is proposed that a structure adjoining it be constructed at a minimal cost. It has been observed that the superstructure of the building roof is strong enough to hold such a housing. The housing could be constructed from lightweight aluminum or some similar product, utilizing the simple one-piece beam structure. The interior could be partitioned as necessary and sound-proofed with acoustical tile. The author has been advised

that such a building can be made available, and that it should suit the purposes of station quarters.<sup>3</sup>

#### Control Rooms and Studios

Many educational radio stations have started in closets or storage rooms. Actually, a minimal operation can be achieved in a limited space. It is much more satisfactory, however, if a proper facility can be provided from the beginning. Depending upon individual space problems and financial requirements, the actual space for housing the station may be provided for as indicated in the foregoing discussion.

The next item of importance is the arrangement and treatment of studios and control rooms.

It is economical to solve certain acoustical problems as far in advance as possible. Studio and control room windows should be double glassed and nonparallel. Mead states that a five per cent slant should be sufficient for acoustical purposes.<sup>4</sup> Heat and vent ducts should be sound treated with absorbent linings. Doors into all studios should be soundproofed, or protected by a sound lock. Studio walls should be acoustically treated, and should not be

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<sup>3</sup>Statement by Kenneth Eyer, director of physical plant, Oklahoma Baptist University, March 23, 1967.

<sup>4</sup>James L. Mead, "The School Radio Station," The Bulletin of the National Association of Secondary School Principals, I (October, 1966), 200.

parallel to opposite walls. The ceilings should be covered with acoustical tile. If possible, the floors should be carpeted. Finally, the whole structure should be located away from noisy areas, such as streets, shops, play areas (tennis courts, etc.), or gymnasiums.

Surveys and experiences of other broadcasters show that the station should start with at least two studios.<sup>5</sup> This plan may or may not be feasible, depending upon the previously cited factors of finance and space. It seems feasible for KBGC to utilize two studios initially. It is believed that there will be enough space in the present building or that the space can be made available in a new structure. One of the studios could be for storage of records, for rehearsal, or for production taping.

The control rooms should be planned for possible expansion. At the outset it must be large enough to house the transmitter, console, turntables, and any other pieces of equipment that may be deemed necessary to the operation. The transmitter is housed in the control room because it is really not large enough to utilize a separate space. The transmitter equipment is usually designed to be installed in the control room where any necessary plate readings may be read easily and quickly by the operator.<sup>6</sup> The equipment

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<sup>5</sup>David Eshelmen, "About College FM Stations," NAEB Journal, XXIV (Fall, 1965), 34.

<sup>6</sup>Vernon Perry, "Equipment for an Educational Radio Station," The Catholic School Journal, LII (February, 1952), 41.

in the control room should be so arranged that all movement will be facilitated easily and orderly.

Following is a diagram of a control room-studio arrangement which has proven to be quite satisfactory at many educational stations.<sup>7</sup>

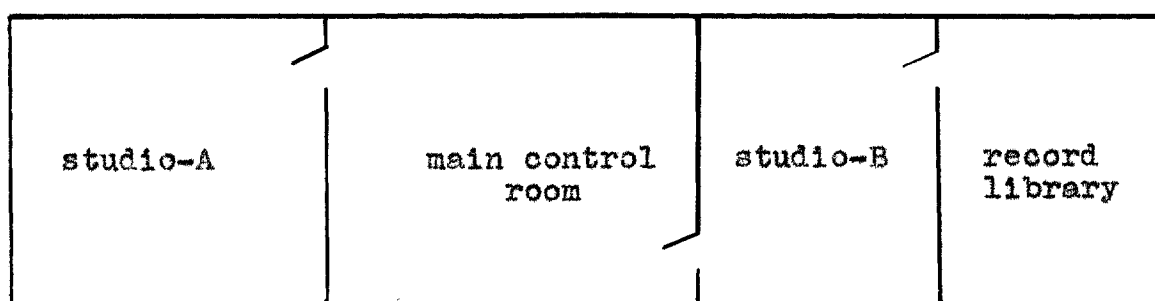


Fig. 6.--Typical studio and control room

It may be observed that there is direct access to both studios from the control room. The walls between each have double-glassed windows. Although it is not shown, there is outside access to each studio and the control room. In this situation, the record library has a turntable with which to audition records. Whichever studio is not live may be scheduled for rehearsals. Each room in the scheme has adequate floor space for present and future needs. The particular studio facility shown was renovated from several old classrooms. If KBCC is unable to utilize the existing space as it was (and structurally, still is), then it may become

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<sup>7</sup>M. McCabe Day, "WVSH Covers the Fifties," NAEB Journal, XIX (May-June, 1960), 67.

appropriate for the institution to consider such a plan in building a separate housing.

#### Storage Space

Adequate storage space is important both for equipment and transcriptions. As already shown, the record library may serve both for storage and for auditioning the records. However, as the station grows, the record library might possibly become another studio or even a radio workshop. In this case one of the planned storage rooms would become the future record library.

Storage space immediately adjacent to the studios and control rooms should have provisions for microphones, sound effects (mechanical), music stands, chairs, etc. Storage for microphones might easily consist of cabinets with fabric linings, whereas the other items would have to be put in a separate room. If the room is not available, then it may become necessary that studios be utilized for such purposes. It should be borne in mind that such items have a tendency to be noisy when dropped or clattered about. In this case, it would be wise to have some kind of racks or bins for the storage.<sup>8</sup>

#### Offices

Offices should be separate from studio space, but preferably adjacent. It has been suggested that private offices

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<sup>8</sup>Perry, op. cit., 42.

be provided for as many key personnel as possible.<sup>9</sup> This, however, could very well prove to be impossible. It is noted that the faculty advisor will in all likelihood have a private office, but such a facility is usually provided at the departmental level. It would be quite convenient if the office could be very close to the station facilities.

All secretarial and clerical office space should be provided for the station exclusively.<sup>10</sup> Here the space should be arranged in the original plans for the station, even if it is one large workroom. There must be space for the routine work of such personnel as well as space for the persons in programming and other functions. At some stations a large room is provided for all of these workers.<sup>11</sup>

#### Space for Miscellaneous Items

The broadcaster should always look ahead as much as he can in his planning. Perhaps closets and other means of storing miscellaneous items should have some consideration, for such space may house additional transmitter equipment at a later date.

The foregoing information pertains to space requirements and arrangement. Many observers have utilized some of the

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<sup>9</sup>Third Allerton Seminar, p. 11.

<sup>10</sup>Ibid.

<sup>11</sup>Ibid.

means described with success.<sup>12</sup> Based upon such authoritarian judgment, there seems little reason to suppose that KBGC could not do the same.

If money is not readily available for construction of the facility in its entirety, then the building of some portions of it "can constitute a valuable educational experience for the student body. . . ." <sup>13</sup> Given the opportunity, the students as well as the advisors may become possessed with a zeal toward the construction of a broadcast facility.

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<sup>12</sup>Eshelman, op. cit.

<sup>13</sup>Mead, op. cit., 202.

## CHAPTER VIII

### PROGRAMMING

#### The Programming Function

In order for the station personnel to better understand programming, they should first have some awareness of its scope and nature. KBGC should have some basis for studying and formulating its programming. The following criteria, developed by Chester, Garrison and Willis, should serve as excellent guides. These authors maintain that programming (1) is of vast proportions, (2) is continuous, (3) is competitive, (4) is costly, (5) is complex, (6) seeks stability, (7) is speculative, and (8) is reliant upon many sources for its creative talent.<sup>1</sup>

It seems appropriate at this point to break down each criterion into simple explanations and see how it will apply to the proposed station.

#### The Vast Proportions of Programming

In their book, Chester, Garrison and Willis explain what "programming . . . is of such vast proportions that it is difficult to convey its size accurately."<sup>2</sup> An example of the

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<sup>1</sup> Giraud Chester, Garnett R. Garrison and Edgar E. Willis, Television and Radio (New York, 1963), pp. 52-55.

<sup>2</sup> Ibid., p. 52.



enormous complexity of size is the commercial broadcast facility. During 1963, they say, there were more than six hundred television stations on the air. They explain the situation as follows:

. . . Each of them . . . plan [sic] a program schedule for every day of the week; many stations program fifteen to eighteen hours a day and some more. The national television . . . networks program from nine to fifteen hours a day and offer these programs to affiliated stations. . . . A single television network presents more than 6,000 different programs in the course of a single season. Counting both network and local offerings . . . , literally tens of thousands of different programs are broadcast each day throughout the country.<sup>3</sup>

Thus can be seen the vast size of programming in the commercial field of broadcasting. It may be noted that educational broadcasters do not have to contend with programming on so vast a scale. However, the bulk of programming is large enough for many to be concerned with this criterion.

Many of the nation's educational stations program every day of the week. Some program from fifteen to eighteen hours a day just as the commercial stations do. The eight educational stations representing various universities in Oklahoma each program daily at the present time.<sup>4</sup> The educational networks and program packaging agencies offer programs to these and other stations, thus relieving them

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<sup>3</sup>Ibid.

<sup>4</sup>Harold Nivin, "10th Survey of Schools Offering Radio-TV Courses," Journal of Broadcasting, X (Summer, 1966), 245.

of the responsibility and necessity of producing programs for several hours during the broadcast day.

KBGC will not be concerned with the vast proportions in programming for some time. It is anticipated that the station will operate on a limited time basis until such time that monies and facilities become more plentiful. At a later point, this chapter will discuss the programming and time relationships. The facility will take advantage of free program packaging services and round out the remainder of its schedule with locally produced material. The latter portion of this statement agrees with the station policy, which will allow for student training in the several aspects of broadcasting. It will be important, however, for the station to note the enormity of programming for future reference.

#### Continuity of Programming

The programming function is continuous. It is a reliable fact that stations do not go on the air just to broadcast only one or two programs at a time. It has been pointed out that "once they sign on . . . , with few exceptions they program without interruption until sign-off . . . . It is the fact that programming is continuous that develops audience flow from one program to the next."<sup>5</sup>

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<sup>5</sup>Chester, Garrison and Willis, op. cit.

### The Competitive Nature of Programming

In the constant search to find and develop "hit" programs, every station competes with other stations in the same geographic area.<sup>6</sup> There is no other FM station in the vicinity in which KBGC intends to broadcast, either commercial or educational. Since this is so, the station will not be burdened by any competition. It has been shown that individual stations which can operate if they attract only a minority of the audience often choose to schedule programs with specialized appeal, and this often proves to be very effective.<sup>7</sup> As far as the educational station is concerned, the programming may be made effective by the use of this method, particularly as the audience understands the nature of high-fidelity FM broadcasting. In addition, as mentioned earlier, there are several sources from which the educational broadcaster may choose programming material which will be suitable to his needs in fulfilling his obligation to his specialized minority audience.

### The Costliness of Programming

Programming, especially in commercial radio, can become costly in time, effort, money, and creative ability.<sup>8</sup>

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<sup>6</sup> Albert R. Kroeger, "The Many Worlds of Local TV," Television Magazine, XXII (August, 1965), 108.

<sup>7</sup> Ibid.

<sup>8</sup> Chester, Garrison, and Willis, op. cit.

This is not necessarily so for the educational station, because most of them operate on very small yearly budgets.<sup>9</sup> It has been shown that the average yearly cost, including programming materials, of running the educational station is \$2200.<sup>10</sup>

While maintaining quality shows, such as Arthur Godfrey's personality show, is prohibitive to the non-commercial station; still they are not completely out of the question. Many famous personalities may be heard free of charge on educational stations because they wish to contribute their services without payment of fee. Many good programs featuring fine talent, humor, music, and lectures are furnished by foundations, institutional services, and the government. Certainly music can be broadcast without tremendous cost, for many of the recording companies send promotional copies of records to almost all stations, both educational and commercial.

#### The Complexity of Programming

Programming does not have to be so complex for the educational station as it does for the commercial station. The commercial stations have complexities in programming because of the interrelationships with all of the other

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<sup>9</sup>William G. Henry, Jr., "Small-Scale Radio Activity; A Survey of 10-Watt Educational Stations," Audio-Visual Instruction, VII (May, 1962), 296.

<sup>10</sup>Ibid.

"functions and operating processes of broadcasting";<sup>11</sup> that is, the availability of the numerous persons and pieces of equipment and studios involved.<sup>12</sup> As stated before, this function does not have to be as complex for the educational station because it does not have to clear for so many people, the equipment, and the air time.

#### Programming Seeks Stability

The educational station should strive to seek the same stability of programming that the commercial station does. Chester, Garrison and Willis tell us that "programming tends to seek stability in . . . schedules that will develop listening habits with the public . . ." <sup>13</sup> Since the educational station seeks to build audiences, it should follow this sound advice. It should not have the same concerns in trying to develop a complex program structure which will cost large sums of money, however. The educational station is not trying to compete with other stations which program for mass audiences.

#### Sources of Creative Talent

The commercial ranks in broadcasting draws creativity from all possible sources. We are constantly

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<sup>11</sup> Chester, Garrison and Willis, op. cit., p. 54.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

reminded that "programming . . . must continually seek new program ideas and develop new program forms of broadcasting if it is to hold its own in the public imagination."<sup>14</sup> While this is true for the commercial broadcasters, it does not necessarily have to be so for the non-commercial station. It may be observed that the very nature of educational broadcasting suggests the source of the many creative talents which are needed to carry out the diverse areas of programming. KGBC should strive to find and develop students who may show some skills in the various areas of broadcasting. Certainly it should take advantage of every opportunity afforded to teach and guide the students of broadcasting toward a better understanding of the creative side of the medium.

#### Programming is Speculative

The eighth function of programming, speculation, is described by Chester, Garrison and Willis as being akin to a Hollywood or Broadway venture.<sup>15</sup> They say that "there are no sure rules for predicting which program ideas will result in programs which the public will like."<sup>16</sup> . . . Programming deals with indefinable and intangible aspects of audience appeal."<sup>17</sup>

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<sup>14</sup>Ibid.

<sup>15</sup>Ibid.

<sup>16</sup>Ibid.

<sup>17</sup>Ibid., p. 55.

KBGC will not be interested in the broad speculative aspects of programming. It will rather be interested in producing programs which will be both stimulating and entertaining. The station will not seek to make popular appeals; for, as McCavitt says, ". . . it can experiment with programs without fear of losing a sponsor if the program doesn't win public favor."<sup>18</sup> It shall not be concerned with ratings. It will, however, be concerned with quality.

It may be interesting to note that the educational station does not have to adhere strictly to these eight functions of programming. However, there are some aspects that may be worth taking into consideration: (1) that programming may eventually have vast proportions, (2) that programming is continuous, and (3) that it is reliant upon creative talent from several sources. It may also be pointed out that perhaps eventually the station will be concerned with all of the functions, as outlined.

#### Types of Programming

The rules for the regulation of programs are not as stringent as they once were. Prior to the middle 1950's, each station had to subscribe to the "Blue Book"--a publication of the Federal Communications Commission which

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<sup>18</sup>William McCavitt, "Educational Radio: Star on the Rise," Pennsylvania School Journal, CXV (April, 1967), 389.

laid down the criteria by which it ruled on acceptable programming. However, since 1961, the Commission has for all practical purposes dropped its efforts to require stations to meet the "Blue Book" standards.<sup>19</sup>

The Commission is still concerned with programming, and still attempts to regulate as much as its powers will allow. In 1965, the Commission adopted a new form to be used in applications for radio facilities. The form is concerned with only three categories: (1) news, (2) public affairs, and (3) other programs, exclusive of entertainment and sports.<sup>20</sup>

The educational station does not have to program as rigidly as these rules may imply, but it should attempt to follow the rules as closely as possible. Not only will such adherence to them keep legal disturbances to a minimum, but it will also develop a keen observance of them in the students of broadcasting.

In the interest of programming in the "public interest, convenience or necessity," the educational station should attempt to do its experimenting and actual programming within the rules of the Federal Communications Commission's "balance."

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<sup>19</sup>Harrison B. Summers, "The Regulation of Programs," The Bulletin of the National Association of Secondary School Principals, L (October, 1966), 27.

<sup>20</sup>Ibid., 29.



The specimen station shall strive to do this while staying within the framework of the following program types. Perhaps some explanation of these types will give KBGC and others a better view of such a framework.

### News

Because of the great audience for news broadcasts and the public faith in the reliability of broadcast news, it is essential that news broadcasters have a high sense of responsibility and the intellectual equipment required for . . . journalism.<sup>21</sup>

From this statement, it becomes apparent that the gathering and dissemination of news should be of great importance to the educational broadcaster. True, the station is a place for learning, but it is also a place wherein the novice news broadcaster must exercise a close proximity to professionalism. Here, then, is an area where a station may be fortunate in having a trained journalist available. He would be indispensable in teaching the young newscaster the many elements of journalism. Such a person could also advise the station on matters pertaining to broadcast news.

KBGC should plan to utilize the existing facilities of the institutional journalism department, and the services of its teaching staff. The station should feel free to call upon the journalism instructor to teach and guide the station as it seeks to gather and report news.

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<sup>21</sup>Chester, Garrison and Willis, op. cit., p. 393.

It will be noted that the top level organization of the station calls for the cooperation of the journalism department in the overall planning of station activities.

#### Public Affairs

It is the purpose of all radio stations to build programs of service to the public whether for pure entertainment or for information.<sup>22</sup> Public affairs programming seeks to "inform, stimulate, educate, and cultivate responsible outlooks on national and community projects and activities."<sup>23</sup>

The educational station should strive to make its facilities available for discussions, religious programs, controversial issues, interviews, talks, and other programs which will be of a public affairs nature. It is suggested that KBGC particularly program in these directions in order to fulfill its responsibility of serving the "public interest."

#### Entertainment Programming

The educational station has an obligation to program in the "public interest, convenience or necessity," and as part of the obligation it has a duty to function as a medium for entertainment. Although the station is not commercial, it will have a difficult time if it does not maintain an audience, even if it is a minority one. The management and the

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<sup>22</sup> Chester, Garrison and Willis, op. cit., p. 63.

<sup>23</sup> Ibid.

administrative officials must look at the operation with a practical eye. If the station does not maintain a sufficient audience, then the funds for operation may not seem justified. Consequently the station must give some service to the audience in the form of entertainment in order to round out its programming and to help maintain a critical and appreciative one. Such an audience as that which the educational station looks for is best described by Chester, Garrison and Willis. Their idea for an "integrated education and entertainment" approach is given as follows:

It has been said that people obtain their greatest satisfaction from programs that not only entertain them but also give them a feeling of having been enriched by the experience. . . . In many popular entertainment programs a conscious effort is made to integrate items of some educational significance, whether it be an operatic aria in a popular music program or a commentary on college activity in connection with the pick-up of a football game. Such educational efforts, while they reach large audiences, often suffer from the complete lack of system in presentation and represent only a miscellaneous kind of education. With careful treatment, however, integrated education and entertainment on a large scale over a substantial period of time can leaven popular tastes and create a demand for better things.<sup>24</sup>

As these men suggest, it should not be the station's policy to program only instructional or strictly educational programs constantly. Rather, the station should round out its schedule with some other forms of program material; most of which could very well be of an "integrated" nature.

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<sup>24</sup> Ibid.

Having this information in mind, the next thing to consider would be the various program types to which the station could subscribe.

Features.--It is known that many specialized programs are relatively simple in structure and utilize a bare minimum of personnel. According to Chester, Garrison and Willis, some examples are:

(1) Those featuring a commentator who presents . . . advice and news in the general areas of . . . health and beauty, and news of interest to women; (2) stories for children [not to be dealt with]; . . . and (3) non-spot news features programs high-lighted by unusual or human-interest stories, hobbies, and social or scientific advances. The latter are similar to magazine digest articles or Sunday newspaper features. . . .<sup>25</sup>

1. Women's features ordinarily utilize a woman broadcaster as hostess, narrator or interviewer. The subject of these shows is not exclusively homemaking, as might be imagined, but include such things as social and political topics, topics on juvenile delinquency, book reviews, and interviews. "Of course, the lighter side of the news and human interest features are not neglected."<sup>26</sup>

Since Oklahoma Baptist University has a Department of Home Economics, it would be wise to program in this area. It is believed that there would be an opportunity for a cooperative effort between the station and this department in researching, editing, and presenting news of interest to women

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<sup>25</sup>Ibid., p. 413.

<sup>26</sup>Ibid., p. 414.

on the campus and in the surrounding community. Certainly, there is much to be said for the fact that such an area of programming will be able to use the services of the women who are associated with the station.

2. Almost every station has its own means of presenting non-spot news features. While the educational station is somewhat restricted to its immediate locality, it still may take the listener, via tape recording and telephone loop to places where local events are happening. Many times the audiences are interested in a commentary on news happenings and public events. In this category, then, the station has an opportunity to call upon local and visiting civic and governmental leaders, authorities, educators, and eye-witnesses for the depth of coverage which would be of interest. As has been suggested by Chester, Garrison and Willis, this kind of broadcasting could lend itself to spot news features which highlight unusual or human-interest stories, hobbies, and social or scientific advances.<sup>27</sup>

The specimen station should, in view of these facts, anticipate programming some non-spot news features. It may make use of its facilities for interviewing local dignitaries, authoritative professors, visiting dignitaries, and other persons who may add some insight to coverage of current events of interest.

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<sup>27</sup>Ibid., p. 413.

3. Sports broadcasts usually reach the largest audiences. This fact has been well known for many years. As far back as 1941 Waldo Abbott saw the importance of sportscasting:

. . . The type of broadcast which attracts the largest number of listeners is a running account of a sports event which is taking place at the very moment that the news comes over the air. Examples are broadcasts of football, baseball, hockey, and basketball games, tennis and golf matches, track meets, boxing bouts, boat races, and wrestling matches.<sup>29</sup>

The campus of Oklahoma Baptist University becomes frenzied with the sporting fever each year during the basketball season. For the past three years it has sent its team to the finals in the NAIA championship play-offs. The first two of these years saw the Bison team of the university bring home the championship. Last year, the team won second place in the tournament. It would be advantageous, therefore, for the campus station to set forth some means to broadcast the games of its team.

To provide for such broadcasts would be no great problem, nor would it have to be costly. The station could have a telephone loop run from the fieldhouse to the studio. The usual price for such an installation is twenty-five dollars, and the rental fee is three dollars semi-annually thereafter.<sup>30</sup>

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<sup>29</sup>Waldo Abbott, Handbook of Broadcasting (New York, 1941), p. 61.

<sup>30</sup>Letter from KUVY, University of Oklahoma, Norman, Oklahoma, March 22, 1967.

Delayed broadcasts and sports interviews should not be overlooked, either. Such activities may be brought about by using the station's tape recorder.

Along with its other far-reaching duties, the news department of the station will be responsible for sports news. The sports section of this department, even when there is no live sports program taking place, should be busy preparing sports programs when a news summary is scheduled and reported either as a separate entity or as a part of a news program.

4. It may be well for the novice educational station programmer to take Chester, Garrison and Willis's advice to use the "integrated education and entertainment" approach in rounding out the program schedule. Perhaps the most important aspect of this approach is that of programming a well-rounded music schedule. KBGC should take advantage of the opportunity to program a variety of music to include that which is tasteful as well as the popular. In so doing, it should plan to use show tunes, semi-classical and classical works. In this way the station can integrate some cultural and stimulating music into its work of educating while entertaining.

There are several means of providing music programs. Notable among them are (1) transcriptions, (2) live, local talent, and (4) tape network programs.

The station, as a rule has to build its transcription library over a period of time. In order to do this it may

subscribe to transcription library services, buy records outright, or utilize promotional records which are sometimes sent free of charge by the record companies.

An example of a library service is Record Source International. This organization will send fourteen records each week at a reduced cost.<sup>31</sup> For instance, a long-playing album which retails for \$4.95 may be purchased from them for \$1.95.<sup>32</sup>

As previously mentioned, some companies will send promotional records free of charge. Two such companies are presently sending albums and singles to KBGC. They are M-G-M and Verve record companies.

In addition to transcribed music programming, there is also much opportunity to use live talent. The amount of such programming varies from station to station. It has been suggested that stations with small staffs may capitalize on area and school organizations.<sup>33</sup> Such could very well be the case with KBGC. Oklahoma Baptist University is fortunate in having a fine music department. From this department come several very good choruses. The chief chorus, the Bison Chorale, is known widely throughout the nation, and has taken several overseas tours during recent years. Such groups will

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<sup>31</sup> Statement by Dan C. Corley, announcer, KGFF, Shawnee, Oklahoma, July 8, 1967.

<sup>32</sup> Ibid.

<sup>33</sup> Chester, Garrison and Willis, op. cit., p. 455.



prove to be an asset in KBGC's musical offerings. The station should also plan to utilize the symphonic band and some of the amateur folk-music groups on the campus.

It may be interesting to note how closely the results of a campus survey follow the ideas and ideals of the foregoing approach to musical programming. The following table shows the preferences in music programs as a result of the survey. The survey was made in conjunction with a class project for the university's course in radio and television. The questionnaire was handed to students during a required chapel program in March, 1967. One thousand were distributed, and nine-hundred eighteen were returned.

TABLE III  
MUSIC PREFERENCE

| Music Type          | Number Reporting | Preference Order |
|---------------------|------------------|------------------|
| Popular             | 918              | 1                |
| Semi-classical      | 843              | 2                |
| Folk                | 760              | 3                |
| Classical           | 675              | 4                |
| Contemporary        | 656              | 5                |
| Jazz                | 563              | 6                |
| Rock 'n Roll        | 364              | 7                |
| Country and Western | 147              | 8                |

Although popular music leads the other types, it should not receive the usual heavy emphasis at KBGC. In keeping with the program policy on scheduling music, and in keeping with the integrated approach, such music should be scrutinized

carefully for its suitability to the campus environment and to see that selections will not receive too many plays during particular broadcast periods.

It is interesting to note that the remainder of the preferences are in keeping with the proposed practices of music programming. It appears that, presently, these types shall receive time in proportion to the preferences.

In addition to utilizing live talent and transcriptions, the station should take advantage of free music program services which are offered by sources such as the French Broadcasting Corporation, Canadian Broadcasting Corporation, Radio Nederland, South African Radio Service, Broadcasting Federation of America, Radio Sweden, and the British Broadcasting Corporation.<sup>34</sup>

#### Program Schedule

In a survey of educational FM stations throughout the country, Henry attempted to determine the amount of time which was being devoted to various program types. Based upon a seventy-one per cent return of his questionnaire, he determined that program time was being distributed as follows:

|                           |                   |
|---------------------------|-------------------|
| Music . . . . .           | 60%               |
| Miscellaneous . . . . .   | 7%                |
| News . . . . .            | 7%                |
| Weather, sports . . . . . | 7%                |
| Educational . . . . .     | 8%                |
| Other . . . . .           | 11% <sup>35</sup> |

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<sup>34</sup>David Eshelman, "About College FM Stations," NAEB Journal, XXIV (September-October, 1965), 38.

<sup>35</sup>Henry, op. cit., 298.

He noted that program schedules of educational stations followed very closely those of commercial FM stations, with a quite large percentage given over to music.<sup>36</sup>

In comparison, the KBGC schedule devotes somewhat less time to music in order to allow additional time for other program types. It should be kept in mind that KBGC intends to integrate some cultural and educational elements into its music programming. The program time is distributed as follows:

TABLE IV  
KBGC PROGRAM TIME DISTRIBUTION

| Type            | Hours per Week | Per Cent of Total Time |
|-----------------|----------------|------------------------|
| Music           | 10             | 50                     |
| Miscellaneous   | 4              | 20                     |
| News            | 2              | 10                     |
| Weather, sports | 2              | 10                     |
| Educational     | 2              | 10                     |

Table V, following, shows that KBGC intends to make use of its facilities for public affairs, curriculum enrichment and religious programs. The table is also intended to serve as a tentative program schedule for the purposes of studying and formulating formats and structuring personnel schedules.

<sup>36</sup>Ibid.

TABLE V

## KBGC PROGRAM SCHEDULE, MONDAY THROUGH FRIDAY

| Time (P. M.) | Type of Program |
|--------------|-----------------|
| 6:00         | News            |
| 6:04         | Weather, Sports |
| 6:08         | Music           |
| 6:30         | Music           |
| 7:00         | News            |
| 7:04         | Weather, Sports |
| 7:08         | Education*      |
| 7:30         | Music           |
| 8:00         | News            |
| 8:04         | Weather, Sports |
| 8:08         | Miscellaneous** |
| 8:30         | Music           |
| 9:00         | News            |
| 9:04         | Weather, Sports |
| 9:08         | Miscellaneous   |
| 9:30         | Music           |
| 10:00        | Sign-off        |

\*Curriculum enrichment.

\*\*Religious, discussion,  
and interviews.

The preceding discussion represents several aims to which the educational station may subscribe within the framework of its policies and available finances. Most of the material covered makes reference to the least expensive programming materials which are presently available to the new station with a modest budget. With some imagination and forethought the educational programmer should have no difficulty in maintaining quality programming on a small budget and still program "in the public interest, convenience or necessity."

## CHAPTER IX

### TRAINING OF STATION PERSONNEL

It is intended that the inauguration of broadcast activities on the campus should serve some purpose other than that of being a toy or providing a purely entertaining service. In the case of KBGC, the purpose is to provide a service to the college and community. In addition, the station should be a training laboratory for the extension of speech and drama courses. Perhaps the foremost area of instruction should be that of training persons who may become interested in broadcasting as a career.

There are stations who use an apprenticeship system in training their personnel.<sup>1</sup> It seems significant, however, that such a system may not provide all of the training in the various areas necessary to a well-rounded program for the students as well as the station staff. Many observers have found that the station would be best served if all of the student personnel have equal opportunity to train in all facets of station operation.<sup>2</sup>

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<sup>1</sup>John B. Pegram, "WKCR's Story," NAEB Journal, XIX (May-June, 1960), 86.

<sup>2</sup>Charles F. Hunter, "Improving the Broadcast Curricula," College Radio, IV (October, 1966), 45.

A review of the literature of educational broadcasting indicates that there are two kinds of training for the serious student. One kind is that of curricular training wherein the student is exposed to a core of studies related to the medium, and which involves the use of the station facilities as a laboratory. The other type of training involves the use of a "radio workshop."

#### Curricular Training

Charles Hunter of Northwestern University has described a broadcast curriculum which seems to be in keeping with those of many colleges and universities offering courses and degrees. He speaks of the responsibility of the educator and the facilities to the development of the student when he outlines the following criteria for broadcast education:

The student should have

1. a thorough understanding of the history and theory of mass communications media, and the way they relate to contemporary living;
2. a knowledge of the fundamental skills of broadcasting with a proficiency in at least one;
3. a knowledge of the fine arts (broadcasting leans too heavily on words, music, and drama to ignore this);
4. an ability to solve problems with the available evidence and an ability to recognize sham, deceit, and non-sequiturs as they occur in broadcasting . . . ; and,
5. finally, we believe there should be an inclination for the creative, which manifests itself in so many ways in the broadcasting environment.<sup>3</sup>

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<sup>3</sup>Hunter, op. cit.

According to Robinson and Kerikas, a satisfactory broadcasting course "includes information and theory plus practical experience to develop skills."<sup>4</sup> Following is a list of broadcast courses which may readily involve the student in both theory and laboratory skills. This list constitutes a minimum of subject areas as established by the Radio-Television-Film Interest Group of the Speech Association of America.<sup>5</sup>

1. Introduction to broadcasting
2. Radio-television announcing
3. Broadcast writing
4. Radio production
5. Television production
6. Radio-television news reporting and writing
7. At least two supplementary courses in writing, advertising, programming, history of broadcasting, station management, communications theories, cinematography, and educational television.<sup>6</sup>

These areas indicate possible content for instruction, which may have to be adjusted to the various conditions of each institution's situation.

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<sup>4</sup>Karl F. Robinson and E. J. Kerikas, Teaching Speech: Methods and Materials (New York, 1963), p. 482.

<sup>5</sup>J. Clark Weaver, "Broadcasting Curricula in Higher Education," The Bulletin of the National Association of Secondary School Principals, I (October, 1966), 184.

<sup>6</sup>Ibid., 184-185.

Oklahoma Baptist University currently offers a new course in the Speech Department entitled "Radio and Television," which serves as an introductory course. At the same time, it is a terminal course in broadcasting. With the institution of a radio station, and perhaps eventually some kind of television facility, many other course offerings can be added to the curriculum.

In addition to the aforementioned course, the school should try to add the following courses to its list of offerings, which are at present minimal:

1. Announcing for radio and television.
2. Writing (continuity) for radio and television.
3. Radio production.
4. News writing and reporting for radio and television.

This course would be a cooperative offering for both broadcasting and journalism credit. It would be beneficial to the broadcast activity in that it meets the minimum requirements of the Speech Association of America.

5. Supplementary courses to include: advertising, programming, history of broadcasting, station management, theories of communications, and some specialized television courses if minimum facilities or mock-ups could be arranged.

The courses in communications theory, advertising and those involving journalism may quite readily be taught by someone in the Journalism department. There is one such person, well-qualified, at Oklahoma Baptist University who is both capable and interested.



Not only would a curricular environment provide formal classroom activity for the student, but he would have the opportunity to learn from his fellows. Berry sums up this idea in the following comments:

Much of the learning which takes place is the result of the knowledgeable people working in close association with him. He learns from others. . . . If the student staff member desires more information concerning the technical side of station operation, he usually finds himself within asking distance of a station technician, who at most times is knowledgeable of station operation. . . . An engineer who is employed by a college or university is usually willing to help students in their understanding of station operation.

There is also the benefit of learning some of the techniques of good announcing from some of the more experienced announcers on the station.<sup>7</sup>

The staff should take every advantage of the station's equipment in order to make themselves proficient in its use. In many colleges the facilities are used as part of the required laboratory experience of the student.

It seems quite probable that the student will profit by curriculum training, and that by utilizing the laboratory experience that the station may give him, he in turn may prove to be very valuable to the station. It may be wise for the station to place him on some sort of probationary status until he proves himself capable of operating the equipment satisfactorily and capable of presenting a good image to the listening audience. Here it is assumed that the student will

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<sup>7</sup>William R. Berry, "The Rewards of College Radio," College Radio, IV (October, 1966), 39.

not make any unnecessary blunders or commit any other calamitous errors on the air. After all, one must assume that some students will not have the same dexterity or talent that others might exhibit.

### Radio Workshops

If the advisor has no class time available for radio instruction, he must turn to co-curricular training.<sup>8</sup>

Thomas Rishworth, who is perhaps the first innovator in workshop training, points out that it is available to almost every school and is adaptable to its needs, equipment, students, and teaching personnel.<sup>9</sup> Armand Hunter, long a pioneer in this field, best describes the value of workshop training in the following manner:

. . . The radio workshop finds its chief function as a laboratory for the development of practical skills. As such, it provides an outlet for all professional training activities; it serves as a proving ground of the student's abilities; and it becomes the chief medium wherein the experience, the knowledge, and the training necessary for future professional application are acquired. In other words, the radio workshop becomes the point of synthesis for all of the practical training courses in the curriculum. It brings the students and instructors together in a learning process . . .; and through the process of planning, writing, producing, and broadcasting programs, it develops the highest professional standards and performance criteria.<sup>10</sup>

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<sup>8</sup>Robinson and Kerikas, op. cit., p. 483.

<sup>9</sup>Judith C. Waller, Radio: The Fifth Estate, 1st ed. pp. 438-442, cited in Robinson and Kerikas, op. cit., p. 483.

<sup>10</sup>Armand Hunter, quoted in Judith C. Waller, Radio: The Fifth Estate (Boston, 1950), p. 439.

### Organizing a Workshop

In the organization of a radio workshop, Robinson and Kerikas consider the following aspects to be of importance.

(1) Membership. (2) Sponsorship. (3) Meeting time.  
(4) Rules and internal organization. (5) Policy on programs.  
(6) Areas of student activity and performance. (7) Sequence of study and work.<sup>11</sup>

Perhaps some explanation of each of these aspects may be beneficial to those who would wish to utilize the workshop as a training method.

Membership.--"The membership in the radio workshop should be open to all students who are interested in learning about radio broadcasting."<sup>12</sup> This is particularly true if the project is just starting. Eventually, perhaps, the workshop could be more selective in its acceptance of members; perhaps even to the point of accepting only broadcasting majors or minors. These assumptions are based on the premise that the sponsor "should invite everyone and then base restrictions on later schedules."<sup>13</sup>

Sponsorship.--Sponsorship of the workshop should be intrusted to the faculty member who originally attempts to

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<sup>11</sup>Robinson and Kerikas, op. cit., p. 485.

<sup>12</sup>Ibid.

<sup>13</sup>Ibid.

set up the broadcast activity. If he so desires, he might call upon the services of representatives of other areas who may have an interest in radio as an educational tool. It is suggested that he limit their assistance to certain designated times, rather than to ask them to act as permanent sponsors.<sup>14</sup> In certain instances, such as those encountered by KBGC, it may be wise to utilize the services of any cooperating departments as often as possible.

Meeting time.--Since the workshop situation arises from a lack of regular classroom time, an outside-of-class meeting period would have to be provided. It may be better to have regularly scheduled meetings, but they could be held, as Robinson and Kerikas point out, "as often as the workshop program and after-school activities permit."<sup>15</sup>

Rules and internal organization.--It has been pointed out in an earlier chapter that perhaps a club could be formed in order to maintain a staff for the station. While this endeavor may not prove satisfactory in providing a stable station organization, it may prove useful in a workshop situation.<sup>16</sup> Total administration should be maintained by the sponsor. However, organization and rules could be placed in the hands of the students.

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<sup>14</sup>Ibid.

<sup>15</sup>Ibid.

<sup>16</sup>Ibid.

Policy on programs.---This area of the workshop should have careful thought. It is not enough to just start producing programs. The students should have some conception of what programming entails, and what the good qualities and policies of programming are. Certainly the organization should observe the regulations promulgated by the school or station administration. While some responsibility could go into the hands of the students, there should at the same time be a great deal of control exercised by the director of the venture. It should be remembered that the station will be "on the air," and that the best quality of programming obtainable should be broadcast.

Areas of student activity and performance.---Each student should have equal opportunity to accept the responsibility of working in each phase of station operation. Some students may wish to "specialize." However, they should be encouraged to take part in all of the various activities. In this way, each will at least be exposed to the various phases of radio production.

Sequence of study and work.---It is recognized that there may be as many approaches to this segment as there are sponsors. For many who are not experienced in the study and teaching of broadcasting, some guides may be helpful. Such guides are set forth here for consideration, as given by Robinson and Kerikas:

. . . The first meetings should acquaint the group with the radio medium. It will be possible to combine certain study functions with those of performance and production after the workshop has operated for a time. . . . Early in the semester, auditions should be held for each member of the workshop. Everyone can be heard and a file kept of the persons according to ability to interpret, and according to pitch, quality, loudness, and time in voice, with appropriate descriptions of any special characteristics that would make the voice distinctive or useful in radio. If possible, recordings can be made of these auditions and kept for analysis and study by members of the workshop. These later can be compared and contrasted with other performances of the same students. A general policy to follow after the workshop is under way is to integrate all the information, theory, and technique in a given project or in a series of shows, following a certain theme, purpose, educational goal, character, institution, movement, or some other objective.<sup>17</sup>

These authors suggest that many activities for sponsors and students will further enhance the program. The sponsor will certainly be aware of the many opportunities which will present themselves for the enhancement of his program of workshop activities. A suggestion for several group and individual activities may be found in any of the better books concerned with broadcast education. An outline of many easily approachable activities is given in Robinson and Kerikas's book, Teaching Speech: Methods and Materials, pages 478-479.

It may be seen that there are at least two, and perhaps more, methods in which to train the station personnel. Obviously any means used which will get the job done adequately can be used. It is up to the sponsor or faculty advisor to select the best means available to his particular situation.

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<sup>17</sup>Ibid., pp. 478-479.

## CHAPTER X

### SOME FINAL CONSIDERATIONS

Three additional areas remain to be considered. They are (1) the retention of consultants, (2) license application procedure, and (3) proposed changes in the rules for noncommercial educational stations.

#### Consultants

In order to start construction of a new station, a "Construction Permit" must be obtained from the Federal Communications Commission. There are usually three methods of making application for this document. They are (1) the retention of a consulting attorney, (2) the retention of a consulting engineer, and (3) the filing of forms as completed by the station personnel.<sup>1</sup>

#### Attorneys

Many stations prefer to utilize the services of an attorney who practices before the Federal Communications Commission in completing all the forms which are necessary for station licensing. This is particularly true for commercial stations. The nature of the commercial medium is so

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<sup>1</sup>Roger J. Houglum, "How to Get Started in FM Radio," NAEB Journal, XIX (November-December, 1960), 5.

complex and competitive that it becomes necessary for the individual station to retain the services of an attorney to represent it in all Commission hearings. A broadcaster will usually pay a fee of approximately \$1,000 for such services, plus individual fees for any exigencies which may arise during the application processing.<sup>2</sup> Unfortunately, the fees for these services are astronomical to the modestly budgeted station. Consequently, many stations are forced to waive the service. It has been suggested that they are not really necessary to the application of educational station licenses because of the noncommercial nature of its services.<sup>3</sup>

#### Engineers

The second approach to completing the necessary application forms is to retain a consulting engineer. Such a person specializes in all facets of license application and installation of equipment. His fees for such services approximate those of the consulting attorney.<sup>4</sup> While such services are highly desirable, they are not essential to the application for an educational license.<sup>5</sup>

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<sup>2</sup>Statement by Raymond D. Branson, engineer, KGFF, Shawnee, Oklahoma, July 8, 1967.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

<sup>5</sup>Houglum, op. cit.



The high cost of engineering help may be circumvented by utilizing the services of someone on the technical staff of the local radio or television station. In this instance, the engineer will have had some previous experience in preparing the necessary forms and exhibits for the application. His fees are usually not exorbitant. If he is interested in education for broadcasting, as the KBGC consultant is, then he may charge nothing at all. The usual fee for a local engineer's services may vary from two to three hundred dollars.<sup>6</sup>

#### Alternate Approach

The third approach does not entail as much expense as may be expected in the two preceding procedures. It does, however, mean that the person preparing the forms must have an extensive background in radio. It may even mean that he holds a valid first class radiotelephone license.<sup>7</sup> This approach suggests that the person charged with the construction and operation of the station complete all the necessary forms and exhibits himself.<sup>8</sup>

Since the personnel of KBGC do not possess these requisites, they should attempt to utilize the services of their consulting engineer in making all of the necessary application preparations. It is estimated that such a procedure will

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<sup>6</sup>Ibid.

<sup>7</sup>Ibid.

<sup>8</sup>Ibid.

facilitate the processing of the application for the station license.

#### Licensing Procedure

The first step in the licensing procedure is to complete the "Application for Authority to Construct or Make Changes in a Noncommercial Educational TV, FM, or Standard Broadcast Station," Form 340, showing all the information and exhibits that are required. This form must be submitted in triplicate to the Secretary, Federal Communications Commission, Washington, D. C., 20554. Expeditious processing of the application is dependent upon the "good order . . . and the completeness and preciseness of the information."<sup>9</sup> It behooves the applicant, therefore, to take judicious care in preparing the application for a construction permit.

Applications are generally processed in the order in which they are received. They are reviewed in their engineering, legal, and financial aspects by the Broadcast Bureau. This bureau, under delegated authority, can act upon routine applications and make reports to the Commission regarding policy or other particular considerations in an application.<sup>10</sup>

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<sup>9</sup>Federal Communications Commission, Educational Radio, Informational Bulletin, No. 21-B (Washington, 1966), p. 7.

<sup>10</sup>Ibid., pp. 7-8.

The applicant must give local public notice as he prepares his forms for a construction permit. This is done by making announcements over the local station (if any) and by advertising in the local newspaper.<sup>11</sup> Such a move affords interested persons an opportunity to comment to the Commission about the application. The applicant must also maintain a public file in his respective community.<sup>12</sup>

If the applicant has no engineering or other conflicts, has no valid protests, is qualified, and meets other requirements, then the construction permit is granted.

When construction of the facility is completed in accordance with the permit, the permittee may make equipment tests after due notification from the Commission.<sup>13</sup> At this point, application for the license may be made, accompanied by the measurements of equipment performance.<sup>14</sup> In addition to forwarding the foregoing material, the permittee may make application for "Program Test Authority." The program test authority is contingent upon approval of the equipment test measurements. If the Commission is satisfied

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<sup>11</sup>Federal Communications Commission, Broadcast Application and Hearing Procedures, Informational Bulletin, No. 1-B (Washington, 1966), p. 3.

<sup>12</sup>Federal Communications Commission, Educational Radio, 7.

<sup>13</sup>Ibid.

<sup>14</sup>Ibid.

with the measurements, it will issue the Authority which, in effect, gives the permittee authority to begin regular station operation and programming.<sup>15</sup> This authority comes in the form of a telegram, which must be displayed at the transmitter, along with any other official documents.<sup>16</sup> The license itself should arrive several months later.<sup>17</sup>

#### Proposed Rule Changes

On November 14, 1966, the Federal Communications Commission issued a "Notice of Inquiry in the Revision of FM Broadcast Rules," asking for comments from interested parties concerning various alternatives for assigning stations in the educational FM band, 88-92 Mhz. Such a revision of the rules calls for the deletion of low-power, ten-watt stations.<sup>18</sup> Should the revision become effective, Class D (ten-watt) stations would have to become Class A stations,<sup>19</sup> with a minimum power of one hundred watts.<sup>20</sup>

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<sup>15</sup>Ibid.

<sup>16</sup>Houglum, op. cit., 8.

<sup>17</sup>Ibid.

<sup>18</sup>"FCC Inquiry Strongly Criticized," College Radio, IV (February, 1967), 4.

<sup>19</sup>Educational FM Broadcast Channels: Notice of Inquiry Allocation and Technical Standards," Federal Register, XXXI (November 19, 1966), 14756.

<sup>20</sup>Federal Communications Commission, Rules and Regulations, Subpart B (Washington, 1964), Sec. 73.211.

Presently, the proposal is still on the docket, and the Commission is issuing licenses on an individual basis.<sup>21</sup> It may, however, be wise to keep such information at hand for future reference. This is particularly true if the prospective broadcaster is making plans which do not include immediate construction and licensing.

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<sup>21</sup>Letter from E. E. Angle, frequency coordination engineer, Point Mugu, California, July 5, 1967.

## CHAPTER XI

### CONCLUSION

This report has attempted to answer some of the questions relating to the nature and means of establishing a low-power, noncommercial educational radio station. It has arisen from a need to supplement the existing literature, which only treats the subject superficially. The foregoing information is intended to serve as a general guideline for the establishment of campus radio stations as exemplified by Oklahoma Baptist University. Such a proposed guide hypothesizes that a broadcast facility may be established and maintained, with viable results, for a reasonable financial consideration.

In order to support such an hypothesis, the report has formulated and discussed some principles by which the specimen station, KBGC, may reasonably assume its proper place in the academic community on a limited budget. It has attempted to find what others are doing in this area, and to define the basic areas of responsibility that such an undertaking might involve.

The information put forward is based upon findings in several pertinent areas which may have a profound effect upon the establishment of a station by an individual or a group. These areas are (1) station objectives; (2) high

echelons of organization; (3) station level organization; (4) finance and budget; (5) basic types of equipment; (6) planning for space requirements; (7) programming functions and goals; (8) methods of training personnel; and (9) some new developments by the Federal Communications Commission, along with license application procedure and processing.

The section on station objectives, Chapter II, is concerned with finding policies which are suitable to the individual station. Investigation showed that, in KGBC's case, such objectives and policies evolve from the parent institution's aims and goals. It was found that the station should make its practices conform to those of all organizations which subscribe to high ethical and moral standards, particularly those of the National Association of Broadcasters' Radio Code. In order to avoid the pitfall of copying commercial stations, the facility should strive to utilize educational and experimental programming. This stipulation is inherent in the station's license to broadcast.

Chapter III discusses the higher echelon of organization. Since most church-affiliated schools exercise tight control over their several branches, it is ascertained that a higher level of organization should be provided than that of the station organization. It is proposed that such an organization would take the normal route from the institution's

Board of Trustees, through the administration, and thence through the actual station organization.

An analysis of various station organizational structures is contained in Chapter IV. From this analysis, the report establishes a table of organization which will be flexible and effective.

Perhaps the most important area of interest to the prospective broadcaster is that of finance and budget. Chapter V treats this subject, seeking to answer questions pertaining to basic initial costs and annual operating expenses. This chapter also cites several sources from which additional monies may be obtained.

Technological changes in broadcasting equipment have made much of the existing literature obsolete. The newer, more sophisticated materials have brought about many changes in the technical aspects of broadcasting. As a result, the educational broadcaster will be faced with a wide field of equipment from which to choose. It is felt that this is an area where advice from the literature may not endure for long periods of time. Chapter VI discusses what appears to be the present basic types of equipment necessary to an initial installation. It draws from the Federal Communications Commission's Rules and Regulations in an attempt to define the kinds of equipment which the Commission will accept for licensing. Comparisons are made from several sources in order to show which items of equipment may be obtained for the lowest practical price.



Space for studios and offices, along with miscellaneous space requirements, is described in Chapter VII. Under specific consideration are areas such as (1) station location, (2) control rooms and studios, (3) storage space, (4) offices, and (5) space for prospective expansion.

Chapter VIII presents several programming functions and goals to which the station might subscribe within its framework of policy and available finances. Reference is made to inexpensive kinds of good quality programming materials which are presently available. This portion of the report stresses that the educational station programmer has an obligation to maintain high quality programming, and to program in the "public interest, convenience or necessity."

A discussion of two prominent methods for training station personnel follows in Chapter IX. The advantages and disadvantages of both curriculum and workshop training are enumerated. It was found that both methods are quite satisfactory.

Although many prospective educational broadcasters have individual problems, they seem to agree that those which follow have some universality. Adequate discussions of them have yet to be made in the literature. They are (1) retention of consultants, (2) license application procedure, and (3) proposed rule changes for educational broadcasting. It is in the latter category that this report may make claim to a real contribution. Chapter X proceeds

to examine such a proposed rules revision, and to explain the effect it will have on educational stations.

In addition, this chapter maintains that fees for consulting engineers and attorneys are quite high for educational stations. It shows that stations do not necessarily need such services, and explains that alternate methods will suffice in the preparation for broadcast licensing.

Investigation revealed that many stations have not been fully informed about the license application procedure and its processing. In this respect, Chapter X describes such procedure and processing in some detail.

This report is not meant to present a panacea for all of the ills which may befall the prospective educational broadcaster. It is, rather, an attempt to produce some guidelines for station establishment. The report recognizes that interested individuals or institutions will have problems peculiar to their own situations. Consequently, it is hoped that the foregoing information will serve as a source of discovering the means to overcome obstacles placed in the path of establishing an efficiently operable broadcast facility.

In addition to presenting material which may be of general benefit to other individuals or institutions, this report has attempted to point out specific information which will be of particular interest to the institution under study, Oklahoma Baptist University. It is hoped that such

information will be beneficial to that institution as it begins to construct and operate an educational radio station.

The study was limited in several of its aspects by a lack of recent research and literature on the subject. Consequently, it is suggested that more research should be done in the area of educational radio. This suggestion is made in agreement with Hilliard, who notes that "research and dissemination are the keys . . . to the use of educational radio. It has been many years since information about educational radio has been as available as for ETV."<sup>1</sup>

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<sup>1</sup>Robert L. Hilliard, "New Directions in Educational Broadcasting," Audio-Visual Instruction, XI (January, 1966), 15.

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