

## TO ORDER, FOR RADIO

DAVIDSON TAYLOR

COMPOSERS need for their encouragement orchestras, audiences, and money. The agency with the most active orchestras and the largest intelligent audiences is primarily responsible for spurring on the composers of a given period.

Today, the radio broadcasting networks have the orchestras and the money to produce new music. Their daily schedules cover seventeen hours or more of programs. While not consciously directed at creating a demand for new scores, they nevertheless afford opportunity for premieres. And the radio audience exceeds in size and, in constitution, differs from any audience of history.

In America, if a composer has something to say, it is possible for him to say it simultaneously on the air to all the individuals of his nation who are capable of comprehending it. Writing music for the radio becomes, then, a challenge to clarity and cogency on the part of the composer.

The radio music listener is generally either alone or a member of a small group. He has not paid the music the honor of going to a specific place in order to hear it. The music comes to him unbidden and remains by his permission. He is not located in an assigned seat. Various domestic factors compete with the music for his attention. This challenges the composer to be effective, to arrest his hearers' interest and hold it in the face of distraction.

Of course, serious radio listeners will consent to give their undivided attention to music played under proper radio auspices. In such a case the composer has many devoted hearers, each of whom can procure for himself circumstances as favorable to

concentration as those of Ludwig of Bavaria, who listened to new operas alone, reclining in his box at the back of a darkened theatre.

The contact between composer and hearer is singularly direct in radio. If certain topographic aids to attention are absent, practically all visual hindrances to concentration are gone. Only a very slight consciousness of the orchestra or conductor is interposed between the composer and his consumer.

The intelligent musical public has been enlarged through radio, nobody knows how greatly. American composers have gained increasing and deserved respect during the past few years. It is inevitable that radio broadcasting should recognize its responsibility toward these composers. Furthermore, radio finds itself today in a position to offer the composer not only money, an orchestra and an assured audience, but also certain new musical materials in the form of instrumental effects made possible through the microphone—effects which are entirely useless in the concert hall.



It was primarily the latter fact which led the Columbia Broadcasting System to commission six leading American composers to do works especially for the microphone.\* The Columbia Composers' Commission, offered to and accepted by Aaron Copland, Louis Gruenberg, Howard Hanson, Roy Harris, Walter Piston and William Grant Still, is the first substantial gesture made by a broadcasting company to encourage composers to utilize radio as a specific medium.

There have been, in the past, European and American competitions for awards given by radio concerns, but the works produced were intended equally for the studio and the concert hall. There have been desultory commissions of works by radio companies abroad, but these works have also been projected chiefly in terms of conventional orchestration. Several important pieces have been given their first performance through broadcasting means. Of this group one might mention William Walton's new *Symphony*, first done at a concert of the British Broadcasting Corporation, and Carlos Chavez' *Sinfonia India*, for a broadcast over the Columbia network with the composer conducting.

---

\*The works, to be completed by June 1, 1937, must not exceed forty minutes in length, and the instrumentation permitted is as follows: two flutes, two oboes (second doubling English horn) two B-flat clarinets, one bassoon, three saxophones (third doubling bass clarinet) two horns, three trumpets, two trombones, two percussion, one piano, one harp, six first violins, four second violins, two violas, two celli and two basses (second doubling tuba).

Few compositions indeed have sought to utilize studio conditions as a specific musical asset. Such broadcasts as the Sunday afternoon programs by the Philharmonic-Symphony Society have demonstrated that radio can reproduce with a high degree of fidelity scores done in the historic manner. Yet works which have approached the new medium with some feeling for its uniqueness have been heard in this country as far back as April 1931, when Stokowski and the Philadelphia Orchestra broadcast the cantata, *Lindbergh's Flight*, by Kurt Weill. This music, first performed in Baden-Baden in 1929, contains a treatment of voice parts which gives them the advantages of the dynamic perspective afforded by the microphone. *Musique pour Radio*, by Filip Lazar, broadcast quite recently by the Boston Sinfonietta under Arthur Fiedler, seems to be more an attempt at captivating attention through deliberate ingratiating than an effort to think in electro-aural terms. *Station WGZBX* by Philip James, which won the National Broadcasting Company's Orchestral Award in 1932, took advantage of the obvious opportunities for radio satire, and, in one respect at least, employed a specific radio development: namely, it presented the spectacle of Milton J. Cross impersonating a crooner. The sobriquet with which Mr. James signed his composition, *Dum Spiro, Spero*, was perhaps a dual commentary on what he thought of radio's musical state and on the chances for success among five hundred and seventy-three contestants.



There are a great many tricks of instrumentation and scoring known to all well-informed radio arrangers, which have been developed in the broadcasting studios and are the common property of radio producers. Serious conductors have discovered that many of these are useful in adapting semi-classical music for the commercial type of broadcast.

This is not the place nor the time, nor am I the author to write a new treatise on instrumentation in relation to the microphone's peculiarities. But certain very general hints as to the effects which may be achieved via radio can be given here.

The principal advantage in orchestrating for radio is that instrumental balance of tone within the ensemble can be controlled

arbitrarily by placing the instruments which are to dominate near the microphone and keeping those instruments which are subordinate farther away. No matter how weak the tone of any of them, it can be used in solo or in choir against almost all prescribed backgrounds by making use of this dynamic discrimination.

Some instrumental tones which are entirely too feeble for the concert hall thereby become available. Furthermore, certain registers hitherto usable only with the most tenuous accompaniment can now be employed against a background of high sonority. The new electrical instruments, afford a rather dubious addition to the orchestral body, and they do not at present depend chiefly upon the musical skill of the performer for their tone-quality.

■  
For the specific effects obtainable before the microphones, let us consider certain instruments briefly, not attempting to indicate their use in combination. It should be borne in mind that bringing an instrument closer to the microphone alters not only its volume but, in many cases, its color.

The lower middle register of a flute may be backed on the microphone by a full open brass choir, and, feeble though that register is, it can be made to stand out above the accompaniment like a bar of silver. Perhaps six flutes would be necessary to obtain the same solo tone in a concert hall, and even then the accompaniment would have to be as light as in Gluck's *Dance of the Blessed Spirits* from *Orfeo*.

The clarinet has a subtone register which is practically inaudible ten feet away from the player. It is a rich and mysterious color, with strong nostalgic connotations, and only the microphone makes the subtone usable. Saxophones, too have a subtone, but this is not so attractive.

The bassoon, recognizably of unusual timbre, may be used not only to reinforce the bass, but as the dominant pigment in a tutti passage. It can combine wit and weight in solo on the microphone.

So far not much has been done with the oboe and English horn except to increase their already sufficient volumes. Experiment however may reveal some specific uses of these woodwinds on

the microphone. At present the narrowness of the band allotted stations for transmission does not permit the broadcasting of a true oboe tone with all its high overtones.

A muted horn, such as that used in the *Oberon* overture, loses its feeling of ethereal remoteness when brought on the microphone, gains instead a sense of menacing imminence.

Trumpets and trombones can be employed with a wide variety of mutes, whose very names are to a large degree unfamiliar to composers in general. Each of these mutes has a specific character and many of them have been developed especially for the microphone. Some have exceedingly small dynamic properties and yet this lack of strength need not handicap the man who writes for them. One might mention the straight mute, wah-wah or Harmon mute, fibre mute, cup mute, Mega mute, solo tone mute and Gabbo mute. But each of these must be heard for its character to be appreciated.

In the percussion section the snare drum must be used sparingly on the microphone. Its exceedingly high frequencies have a tendency to blur the rest of the orchestration. Tympani may be used even more than is common, for their musical intonation, though they should be restricted in volume for rhythm and emphasis. The marimba and vibraphone are especially rich in microphone potentialities. Temple blocks, with their distinctive ceremonial sound, can be assigned a prominent role in radio writing, and so can various other wooden percussion instruments. However, many of the membranes have such subtle differentiation that it is lost on the loud speaker. Tom-toms with definite pitch are now being attempted by some manufacturers. A celesta can be given a heroic role in a radio composition.

Practically all the novelty effects on the harp which have been developed by Carlos Salzedo are available to the radio orchestrator in whatever volume desired. However the mechanical limitations of the modern harp still determine what this instrument may do on the stage or in the studio.

In the string section, a smaller body of instruments may be employed with approximately equal dynamic effect. Bringing these instruments, singly or in groups, closer to the electrical ear, changes their timbre. A powerful group of harmonics can be

made to sound insistently above a ground work of heavy writing for the winds. Violins, played *col legno*, as in *The Swan of Tuonela*, will seem on the microphone to be not an impalpable gray haze, but an oppressive and impenetrable curtain. A muted viola can be made to sound almost like a human voice, or, in other registers somewhat like a far more flexible horn. The force of pizzicato can be greatly increased, and slap bass can be employed for a new type of rhythmic indication.

Naturally these rough and incomplete suggestions, inadequately expressed here in words, will contain some inaccuracies. But they should serve to indicate that the old relationships within the ensemble have been broken down. The orchestrator of the future can scarcely be said to understand instruments if he does not understand the microphone. For the radio has opened up a new field for the American composer to explore.