

still compatible with measurements at variable frequency taken with fixed loads.

Another practical recommendation is to use more than four loads in order to increase the precision by some averaging. This also makes it possible to choose for the construction the points that show the best configuration; for instance, to avoid the use of points that are too close together.

Finally it should be noted that at a single frequency and when the wavelength is known, the quarter-wave

spacing leads to a simpler construction. For variable frequency the measurements take less time when fixed short-circuit positions are used, but the interpretation is slightly complicated.

An obvious requirement when using this method is to have a good control on the frequency. In regions where the measured reflection coefficients vary rapidly with frequency, it may be advisable to go back to a measurement where the frequency is set and the short circuit moved.

Correspondence

WESCON Papers' Deadline Set for May 1

Authors wishing to present papers at the 1957 WESCON Convention to be held in San Francisco, Calif., on August 20-23 should send 100-200 word abstracts, together with complete texts or additional detailed summaries, to the Technical Program Chairman, D. A. Watkins, Stanford Electronics Laboratories, Stanford University, Stanford, Calif., for consideration by the Technical Program Committee. Authors will be notified whether or not their papers have been accepted by June 1.

For the first time this year, an IRE WESCON Convention Record will be published. It will include every paper presented at the 1957 WESCON and will be published immediately following the convention, for national distribution.

The IRE "Affiliate" Plan—A New Venture in Engineering Society Structure and Service

On January 4, 1957, the IRE Board of Directors arrived at a decision which may in time prove to be one of the most far-reaching in its 45-year history. On that date the Board adopted a plan which will enable non-IRE members whose main professional interests lie outside the sphere of IRE activities to become affiliated with certain of the IRE Professional Groups *without* first having to join the IRE itself.

This plan is aimed at those specialists in other fields of science and technology whose work touches upon our own electronics and communications field only in specialized areas. In effect, the IRE is extending the specialized services of its Pro-

fessional Groups to every field of science and engineering.

An outstanding example of where these services are needed may be found in the case of the medical and biological sciences. At the present time some 1400 IRE members enjoy the privileges of membership in the Professional Group on Medical Electronics. And yet there are hundreds, perhaps thousands, of medical doctors, biologists, and others to whom the activities of this Group would be of interest and value. Both they and the Group would benefit from their participation. To require these persons, who have no interest in radio engineering, to join the IRE in order to join the Group is unreasonable, and probably futile as well. In fact, it was largely to provide an answer to this particular problem that the "Affiliate" Plan was first conceived, although it pertains to other fields as well, such as Computers, etc.

The "Affiliate" Plan is admittedly an experiment. So far as is known, no other society has ever tried a similar scheme. The Board of Directors feels strongly that the benefits afforded by the plan justify the risk that some persons who should join the IRE will instead become Affiliates. To minimize this risk, the plan has been carefully worked out along the following lines:

1) Participation in the Plan is at the option of each Professional Group. It is not expected that all Groups will adopt it; only those which feel it serves a need in their particular field.

2) Each Group interested in initiating the "Affiliate" Plan must submit to the Chairman of the Professional Groups Committee a list of accredited organizations which has been selected and approved by its Administrative Committee, for official approval by the IRE Executive Committee.

3) To be an Affiliate of a Professional Group, a person must belong to an accredited organization approved by that Group and the IRE Executive Committee. Moreover, he shall not have been an IRE member during the five years prior to his application. He may affiliate with more than one Group, provided the accredited organ-

ization to which he belongs is recognized by the Groups concerned.

4) The fee for Affiliates shall be the assessment fee of the Group, plus \$4.50. The latter covers IRE subsidies to the Group, Professional Group overhead expenses borne by IRE Headquarters, and 50 cents which is to be rebated to IRE Sections for mailing and meeting costs.

5) An Affiliate will be entitled to receive the TRANSACTIONS of his Group and that part of the IRE NATIONAL CONVENTION RECORD pertaining to his Group. He will be eligible for a Group award, and may attend local or national meetings of the Group by payment of charges assessed Group members.

6) An Affiliate cannot serve in an elective office in the Group or Group Chapter, nor vote for candidates for these offices.

7) An Affiliate may hold an appointive office in the Group or Group Chapter.

8) An Affiliate may not receive any IRE benefits that are derived through IRE membership.

The "Affiliate" Plan is a bold and far-sighted venture; one that recognizes and provides for the rapidly spreading influence of electronics in every walk of scientific and technological life, and one that enables the IRE to further its aims as a professional engineering society—the advancement of radio engineering and related fields of engineering and science.

W. R. G. BAKER, *Chairman*
IRE Professional Groups Committee

Matching the Sides of a Parallel-Plate Region*

One of the simplest forms of electromagnetic wave is a TEM wave propagating between parallel conducting planes which extend laterally to infinity. It is perhaps not

* Received by the PGMTT, December 27, 1956.