

Britain, France, Italy and West Germany to publicize Canada's manufacturing capacity in this field.

Members of the mission also hope to establish agents in the countries they visit and to look into the possibilities of joint ventures, licensing and cross-licensing arrangements. They will explain the advantages of Canadian medical equipment and demonstrate Canadian products and methods.

The group will meet with government officials, importers, wholesalers and distributors to discuss export marketing of Canadian medical and hospital equipment. They hope to gain firsthand knowledge of the preferences and business methods of European importers.

One member of the mission, Dr. W.B. Shute of Ottawa, an obstetrician and gynaecologist, has been invited to speak to the medical faculties and students of Oxford and several other prominent universities during the tour. He is the inventor of the Shute Parallel Forceps.

ELECTRONIC MUSIC

A new electronic music-machine developed by the National Research Council of Canada represents another Canadian advance in the field of electronic music.

Known as the "Serial Sound-Structure Generator", the machine is one of a "family" of devices to aid composers in the composition of music by electronic methods. It was developed by Dr. Hugh LeCaine of the Radio Astronomy Section of NRC's Radio and Electrical Engineering Division and the Electronic Music Studio of the University of Toronto.

The Generator is not a composing machine for programming extended musical compositions in real time. Rather, it is a device for examining and applying serial logic to various qualities of the electronic music texture. The output of the Generator is electronic sound, which must be subjected to artistic choice and then cast in extended musical time using the techniques of what has been called the "classic studio". The primary function of the Generator is to control the succession of sound events.

The inside of the Serial Sound-Structure Generator is a mass of transistors; outside there are many coloured buttons which change octaves and pitch, and a tiny light flashes for every "note" that sounds. By switching dials, the composer can produce all possible combinations of the chosen qualities. He can listen to the still unwritten music score and test the electronic notes for duration, intensity, tone-colour, attack, and decay.

A simplified version of the machine went on display to the public for the first time in the Man and Music pavilion at Expo 67.

Dr. LeCaine, one of North America's leading authorities on electronic music, says electronic music permits composers to experiment with any rhythm, pitch or tone-colour they like, and to break out of the conventional system. It is not, however, an actual kind of music, but simply a technique for making music.

OTHER INVENTIONS

Another of Dr. LeCaine's contributions to electronic music is a composition called "Dripsody". A reviewer in *High Fidelity Magazine* describes the composition as follows:

"The whole composition is based upon the single sound produced by the fall of a drop of water. This is developed in all manner of ways - plain and fancy scales, played with a neat, pearly perfection any piano virtuoso might envy; bell tones of several kinds; long sustained pure tones; and mixtures of these several elements. The work is particularly useful as an introduction for the lay listener, who is always interested in the sources of the sounds employed by electronic composers and in their manipulation."

A second machine developed by Dr. LeCaine controls a number of sounds from a chart prepared by the composer. The sounds may be individual sine waves, groups of sine waves, or recorded complexes.

The apparatus was used at the electronic music studio of McGill University in the preparation of two electronic music compositions by Canadian composer Istvan Anhalt. The compositions were commissioned for Expo 67.

WEST INDIAN SEASONAL WORKERS

Manpower and Immigration Minister Jean Marchand has announced that Canada will again this summer admit agricultural labourers from Jamaica, Barbados, and Trinidad and Tobago to help Ontario farmers grow, harvest and can their fruit and vegetables. The announcement came after a meeting of the Canada Agricultural Manpower Committee, at which it was indicated that about the same number of seasonal workers would be needed this year as last year. The number of Caribbean workers last summer was 1,077.

Most of the conditions for the admission of seasonal workers will be the same as last year. The minimum wage-rate however, will be \$1.45 an hour, and the minimum weekly average pay, \$58. Two years ago, when the seasonal movement began, the minimum hourly wage was \$1.25. Since that time, Ontario farmers have raised considerably the wages paid to Canadian workers, and the increase in the minimum for West Indian workers is in proportion to this change.

The programme will operate from May 1 to October 31, as it did last year. The maximum period a worker may remain in Canada is four months; the minimum, six weeks. Employers must pay the return fare from Jamaica to Toronto, provide adequate accommodation, and pay the prevailing hourly or piece-work rate if higher than the minimum of \$1.45 an hour.

Mr. Marchand said that his Department would co-operate with employers who hire independently seasonal workers in other Commonwealth or French Caribbean territories, if the same terms were met as those stipulated for the Government organized scheme.