

SI-FP-FW87-D C -01924
Electronic Music

MONO

FOLKWAYS RECORDS FM 3436

FOLKWAYS FM 3436

Dripsody (H. LeCaine) (2:00)
Dance R 4 $\frac{4}{3}$ (M. Schaeffer) (3:10)
Summer Idyl (A. Walter, H. Olmick, Schaeffer) (6:40)
Noesis (R. Atkin) (7:15)
Fireworks (V. Stephen) (2:00)
The Orgasmic Opus (Stephen) (4:45)
Collage (J.D. Robb) (5:25)
Pinball (J.E. Ivey) (6:00)
Inferno (V. Grauer) (6:30)

electronic music

DESCRIPTIVE NOTES ARE INSIDE POCKET

COVER DESIGN BY RONALD CLYNE

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FOLKWAYS FM 3436

electronic music

ELECTRONIC MUSIC STUDIO • UNIVERSITY OF TORONTO

The Electronic Music Studio of the University of Toronto is the first such studio in Canada, and the second on the North American Continent. It was founded approximately five years ago in the Faculty of Music of the university by Dr. Arnold Walter, chairman of the department, with the technical guidance of Dr. Hugh Le Caine, of the National Research Council of Ottawa. Since opening its doors for the first time, the EMS, as it is called, has grown from a small experimental studio with a minimum of equipment to a fully equipped sound studio, where not only experimentation with new sounds is carried out, but where young composers

can be and are being trained to work in this new medium of sound and music.

The first staff members were Dr. Arnold Walker, Professor Harvey Olnick, and Dr. Myron Schaeffer who headed the activities of the studio.

For a detailed description of the equipment used in the Electronic Music Studio of the University of Toronto see "The Electronic Music Studio of the University of Toronto" by Myron Schaeffer, *Journal of Music Theory*, Spring 1963-7-1; Yale School of Music Publication.

PROGRAM NOTES

DRIPSODY - HUGH LE CAINE

Side I, Band 1

Dripsody, Hugh Le Caine, 1955
An Etude for Variable Speed Recorder.

This record was made from the sound of the fall of a single drop of water. The original tape record, about half an inch long, was copied at various speeds to produce sounds having fundamental frequencies from 45 CPS to 8,000 CPS.

The rhythmic figures which imitate the rhythms of dripping water were written down in musical notation and set up on tape by splicing together prints of the right pitch. The records so obtained were combined in a variety of ways. The first sound heard on the disc is the unaltered original record.

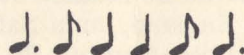
DANCE R4 ÷ 3 - MYRON SCHAEFFER

Side I, Band 2

Dance R4 ÷ 3, Myron Schaeffer, 1961

This composition was composed with the use of the "Hamograph" (see "The Hamograph, A New Amplitude Rhythm Control Device," *IRE Transactions on Audio* - Volume 10, Number 1, Jan. - Feb. 1962)

which makes it possible to maintain the same tempo and to vary the pitch. A single rhythmic figure has been used throughout which results from four and three equal tones sounded within the same metric scheme.



gives a numerical value of 3+1+2+2+1+3. These proportions give a symmetrical rhythm which has been presented by sine tones of varying pitch.

SUMMER IDYL - ARNOLD WALTER, HARVEY OLNICK, MYRON SCHAEFFER, 1959

Side I, Band 3

Summer Idyl, Arnold Walter, Harvey Olnick,
Myron Schaeffer, 1959

A study in contrasting sonorities originally created for television. The design is three part - ABA with the returning A section corresponding to the initial section, but with the material presented in reverse. The melodic contours were realized through the "Multitrack" tape recorder designed and built by Dr. Hugh Le Caine. (See "A Tape Recorder for Use in Electronic Music Studios," *Journal of Music Theory*, Spring 1963, Volume 7, Number 1, Yale University, New Haven, Conn.)

Side I, Band 4

Side II, Band 1

Noesis, Robert Aitkin, 1962

Fireworks, 1-55, Val Stephen

The four principal sections of the work contribute to the over-all dynamic form of the whole; the use of identical materials - generated wave forms and white noise - serves as a unifying factor. Concrete material, where it occurs, serves as random coloring to heighten or diminish dramatic tension. Climaxes are created by increasingly more complex rhythmic and dynamic features.

This composition expresses the brilliant violence of a fireworks display, contrasting with the primitive background of a primeval forest atmosphere.

THE ORGASMIC OPUS - VAL STEPHEN

Side II, Band 2

The Orgasmic Opus, Val Stephen, 0-42

Short, eerie, and finishing with an orgasmic finale.

BIOGRAPHICAL NOTES

DR. HUGH LE CAINE



Hugh Le Caine was born in Port Arthur, Ontario, in 1914. He received the B. Sc. degree in physics from Queen's University, Kingston, Ontario, in 1938 and the M. Sc. degree in 1939. In 1940 he joined the staff of the National Research Council of Canada and worked on the development of radar components throughout the war years.

From 1948 to 1952 Dr. Le Caine studied at the University of Birmingham, England, on a National Research Council grant, and obtained his Ph. D. in physics.

On his return to the National Research Council he made a study of the application of technical knowledge - particularly in electronics - to methods of making music, old and new. The most interesting applications proved to be the new music-making methods discovered by the Musique Concrète group of France in 1948. Dripsody was done while developing instruments for electronic music studios.

DR. MYRON SCHAEFFER



Myron Schaeffer, now deceased, was born in Barberton, Ohio, on November 11, 1908. He received the B. Mus. degree from Oberlin Conservatory of Music, Oberlin, Ohio, in 1930 and the A. B. degree from Oberlin College in 1931. In 1937 he received the Ph. D. degree in Musicology from Western Reserve University, Cleveland, Ohio.

He spent three years doing musicological research in Europe on grants from Western Reserve University and the Belgian-American Educational Foundation. From 1941 to 1945 he was Dean of the College of Arts and Sciences at the University of Panama, Panama City, Republic of Panama, and from 1945 to 1958 he was engaged in lecturing and research in the field of folk music throughout Latin America. In 1958 he came to the faculty of music, University of Toronto, Toronto, Ontario, Canada, to teach musicology and to develop the Electronic Music Studio of the university.

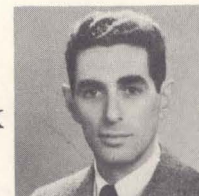
Dr. Schaeffer was also a member of the Acoustical Society of America and of the Audio-Engineering Society.

DR. ARNOLD M. WALTER



Composer, pianist, musicologist, writer, lecturer. Vice-President, Canadian Music Council; Vice-President, Canadian Music Centre; Past President I. S. M. E. (UNESCO); Director, Faculty of Music, University of Toronto.

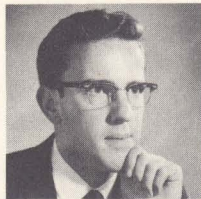
MR. HARVEY OLNICK



Harvey Olnick is a graduate of the Juilliard School of Music, the University of the City of New York, and Columbia University. A Fulbright Fellow for two years while doing research in Italy on early instrumental music, he has contributed to the

Musical Quarterly, the Journal of American Musicological Society, and the Canadian Music Journal. After teaching at Columbia University and Vassar College, he joined the faculty of the University of Toronto, where he presently occupies the first chair of musicology created in the Dominion of Canada.

MR. ROBERT AITKIN



Robert Aitkin, a native of Nova Scotia, is a graduate of the University of Toronto where he majored in composition with John Weinzweig. For the past three years he has been studying electronic

music under the direction of Dr. Myron Schaeffer in the Electronic Music Studio of the university. Mr. Aitkin, a professional flutist, is also a member of the teaching faculty.

DR. VAL T. STEPHEN

The composer is by profession a doctor specializing in anaesthesia. He is also a keen musician, playing both organ and piano. His musical interests vary from Bach to boogie as well as the modern abstract music which you hear on this record.

His interest in electronics has stimulated his interest in electronic music, which is created from everyday sounds and from electronically produced sounds via the medium of magnetic tape.



COLLAGE - J. D. ROBB

Side II, Band 3

Collage is one of the earliest of the 52 compositions on tape which I have thus far composed. It was put together in the summer of 1964, when I was a member of a seminar that was held at the Electronic Laboratory of the University of Toronto, and it had its first public performance at a concert at that university on August 12th of that year under the title of Torontoniana. A second public performance took place at the University of New Mexico on February 9, 1965, under the present title of Collage. In this composition I made use of various instruments that were available at that magnificently equipped laboratory, including the multitrack tape recorder designed by Dr. Hugh Le Caine of the Canadian National Research Laboratory in Ottawa. * Since it was my first work composed with the aid of techniques of electronic composition which I learned from the late Myron Schaeffer of the Toronto laboratory I have dedicated it to his memory.

* My piece Collage was primarily a splicing job.

Born in Minneapolis, Minnesota, Mr. Robb attended public schools there and went on to Yale University where he was a pupil of Horatio Parker. At Yale he studied piano, was a member of the Glee Club and was graduated in 1915 with a B. A. degree. In 1916 under a program set up by Yale University, Mr. Robb spent the year as a Teaching Fellow in China. Although he preferred a career in music, he felt he could not make a living as a composer, so he enrolled in the Law School of the

University of Minnesota. However he continued to follow music as an avocation while pursuing his law studies.

He became an eminently successful lawyer, but continued to dabble in music, and slowly gained recognition in important musical circles.

In 1941 he accepted an offer to serve as professor of music at the University of New Mexico. When faced with the decision as to which meant more, law or music, he chose the latter as having more permanent value. His position at the university ignited the explosion of his musical talent and he quickly rose to Dean of the College.

Upon his retirement from the university in 1957, Mr. Robb turned to composing in earnest as well as authoring books on music.

Robb's latest enthusiasm is for something he terms "a new domain of musical sound, with tones produced through electrical computers."



PINBALL - JEAN EICHELBERGER IVEY

Side II, Band 4

Pinball is entirely derived from sounds recorded from pinball machines. Using the facilities of the Electronic Music Studio at Brandeis University, Mrs. Ivey modified and reassembled these sounds to form new pitches, rhythms, and timbres. This was done by standard tape techniques such as change of speed, splicing, and reversal, as well as by the use of filters, reverberation, and ring modulation. Composed in 1965, Pinball has been performed both as an independent concert piece and as the score for an art film by Wayne Sourbeer: Montage V, How to Play Pinball.

Jean Eichelberger Ivey, a native of Washington, D. C., has composed not only electronic music but also orchestral, choral, and chamber music, as well as vocal and instrumental solos. She holds master's degrees from both Peabody Conservatory and the Eastman School of Music, and has studied electronic music at the University of Toronto. She has given piano recitals in Europe, Mexico, and the United States; and has been on the faculty of Peabody Conservatory and several American colleges.



JEAN EICHELBERGER IVEY IN ELECTRONIC MUSIC STUDIO OF BRANDEIS UNIVERSITY (WORKING ON "PINBALL")

INFERNO - VICTOR GRAUER

Side II, Band 5

Inferno has the quality, when listened to under the proper conditions, of seeming to enter the body forcibly and becoming a part of one's being. It has dramatic aspects, and is a complex piece, difficult to discuss.

Victor A. Grauer, born in Poughkeepsie, New York, 1937, studied at Syracuse University (B. Mus.), Wesleyan University (M. A.), and UCLA. His two principal interests are music composition and ethnomusicology. He has done specialized work in American Indian music and Hebrew chant; while at UCLA he participated in study groups in the music of India, the Philippines, and Java. In the summer of 1961 he worked in collaboration with Alan Lomax to produce the Cantometrics System for rating recorded performances of world folk song. In February, 1963, he left UCLA - where he was preparing for a doctorate in ethnomusicology - to work as musicologist on the Cantometrics research project, directed by Alan Lomax under a grant from the National Institute for Mental Health. This project is a continuation of the research that he and Mr. Lomax were doing in the summer of 1961. The project is an attempt to understand the folk and primitive music of the world in the most profoundly human sense, and, to this end, has concerned itself with ethnology, linguistics, sociology, psychology, kinesics, etc., as well as musicology.

His work on this project and his personal contact with Alan Lomax have influenced his compositional style to such a degree that he cannot separate his identity as an ethnomusicologist from his identity as a composer. His experience, possibly unique for a composer, of listening to and living with field recordings of music from almost every corner of the world, on a day-to-day basis, for about three years, has made him more aware of what music can do and what can be done in music.