

Basic Electronics

Vol. 6

1959

American Composers Alliance Bulletin

Fall 1953

Otto Luening (on cover)

(photocopy of Luening article filed already)

Religious Music of India

Ethnic Folkways P 431

liner notes

Fylkingen International Bulletin

catalog of text-sound compositions

1969 Stockholm

History of the twentieth Century

1970 No. 122

London

Music and Artists

June-July 1972

contemporary music

"Take One"

Vol. 1, No. 10

June 1968

The National Gallery of Canada Engagement
Calendar

1965

nothing written

Electronic Music Reports

No. 4

Institute of Sonology - Holland

Electronic Music Reports No 3

No. 3

Institute of Sonology - Holland

Electronic Music Reports

No. 2

The Institute of Sonology, Holland

The Journal of Music Theory

Wansdronk

"On the Mechanism of Hearing"

Philips Research Reports. No. 1, 1962

Interface

Vol 1 No. 2 1972

Interface

Vol. 2 No. 1 1973

Interface

Vol. 2 No. 2 1973

Interface

Vol. 3 No. 1 1974

Interface

Vol. 3 No. 2 1974

Journal of Music Theory

1963: 7: 1

The Score

Feb. 1958

Interface

Vol. 1 No. 1 1972

BMI - The Many Worlds of Music

Summer 1970

Electronic Music Special

21

Electronic Music Reports

No. 1

Institute of Sonology - Holland

Numus West

~~XXXXXXXX~~ No. 4, 1973

Feature - Computers and Music

23

24

Numus West
No. 1, 1972

Numus West
No. 3, 1973
feature: Valen

Numus West
No. 7 1975

Electronic Music Review
No. 6 April 1968

Electronic Music Review
No. 7 1968

Electronic Music Review

No. 4 1967

29

30

Electronic Music Review

No. 5 1968

The Unesco Courier

November 1962

"New Horizons in Music"

31

31

Montreal '68

Vol. 5 No. 5

(McGill Studio pp. 28-31)

33

Electron Vol 5, No. 5 May - 1968

Synthesis

Vol. 1, No. 1 1970

34

International Science-Art Newsletter

No. 4

August 1969

35

36

The Journal of the Acoustical Society of America

cumulative Index

Vols. 11-20

The Journal of the Acoustical Society of America

Cumulative Index Vols. 1 - 10

42

Numus West

No. 5 1974

feature: John Cage

Répertoire International des Musiques
Experimentales

39

41

The Canadian Composer

No. 22, October 1967

interview with Norma Beecroft, at UTEMS

Manna

review of contemporary poetry

Toronto

No. 2 1972

The British Pavilion at Expo 67

brochure

Terre des Hommes

Expo 67

brochure

Music Educators Journal

Washington D.C.

Vol. 55 No. 3, 1968

Tin and Irs Uses

No. 92 1972

Tin Research Institute, England

Queen's In Pictures

boom of photos of Queen's University

no date

Canadian Music Centre Newsletter

December 1965

Canadian Music Centre Newsletter
October 1965

International Science and Technology

February 1964

New York

Queen's Alumnae Review

Jan-Feb 1978

TRANSFER

3 Boxes to Queens 5"
Science Collection + 5"
+ 12"

contact in Ottawa: Arthur Covington

TRANSFER

2 boxes
to Museum of Science
Technology

c/o Mr. Ernie De Coste

991 - 3083

1 boîte de
6"
boîte de
12"

2

1979-17

Hugh LeCaine

1

two 10-inch reels, copy of broadcast on
CBC stereo, "Two New Hours"
June 3, 1979

broadcast in honour of Hugh Le Caine

unidentified recording

ten-inch reel

electronic tones, no date or playback
speed shown

2

3

interview of Hugh Le Caine

7 inch reel of tape
ca. 20 minutes in length

interview by James Montgomery, prepared

for use in a radio programme "Offending
the Audience", ca. 1975

4

REVUELTAS
Sensemaya, Cuauahnahuac

MOSSOLOV
Iron Foundry

CHABRIER
Espana

LP Westminster W-Lab 7004

5

ANRE JOLIVET

Concerto for Ondes Martenot and Orch.,
Concerto for Harp and Chamber Orch.

LP

Vega XWN 18360

HANS WURMAN

"The Moog Strikes Bach..."

LP

RCA LSC-3125

1

PIERRE HENRY

"Variations pour une porte et un
soupir"

LP

Philips 836.898 dsy

ELLIOT CARTER

String Quartets Nos. 1 & 2

LP

Nonesuch H-71249

9
ARNOLD SCHOENBERG

String Quartet No. 3

LP

Alco records

10
ARNOLD SCHOENBERG

String Quartet No. 2

LP

Alco records

11
"Highlights of Vortex"

various composers

LP

Folkways FSS 6301 1959

12
Les Concerts Du Domaine Musical

Webern, Nono, Stockhausen, Boulez

Lp

Petit Theatre Marigny, 1956 season

13
"Music of Equatorial Africa"

LP

Ethnic Folkways Library

J. S. BACH

The Orgelbuchlein, Finn Videro

Lp

The Haydn Society 1953

WILLIAM SCHUMAN
Symphony No. 7

NED ROEM
Third Symphony

LP

Turnabout/ Vox Contemporary Composers

15
WILLIAM SCHUMAN
Symphony no. 9

VINCENT PERSICHETTI
Sinfonia: Janiculum

Ormandy/ Phil. Orch.

Lp

RCA LSC 3212

16

"Spot light on Keyboard"

2 Lps/ Booklet

Vox DL 362 1955

"Missa Luba"

2 Lps

Philips PCC 606 1965

RICHARD STRAUSS_

Also sprach Zarathustra op. 30

LP

DGG 136001

Aeolian-Skinner Organ Co. demon-
stration record

"Vol. 1- The American Classic Organ"

LP

Volume 1 of 3

Aeolian-Skinner Organ Co. demon-
stration record

"Vol. II- Organ Literature"

LP

Volume 2 of 3

Aeolian-Skinner Organ Co. demon-
stration record

"Volume III- Organ Recital"

LP

Volume 3 of 3

Pablo Casals

"Encores by Casals"

LP

RCA Victor LCT1050

ALBAN BERG

Lyric Suite for String Quartet
String Quartet, Op. 3

LP

Turnabout TV 4021

ANDREW LLOYD WEBBER & TIM RICE

"Jesus Christ Superstar"

2 Lps

Decca DXSA 7206 1970

"Canada" series

Electro-acoustic music by Joachim,
Pedersen, Coulombe-St-Marcoux, Huse.,
Longtin, Lecaine, Paul.

12" LP

Radio Canada Internationale

ISTVAN ANHALT

"Foci", "Cento"

Ensemble Instrumental De Montreal

LP

Radio Canada Internationale
"Canada" series

SWAHILI language course record

LP

HERBERT EIMERT

Introduction, Etude on Sound Mixtures,
Five Compositions, Glockenspiel

DGG (10") LP 16132

KARLHEINZ STOCKHAUSEN

"Studie I", "Studie II",
"Gesang der Junglinge I"

DGG (10") LP 16 133

ERNST KRENEK:

"Spiritus intelligentiae sanctus"

GOTTFRIED MICHAEL KOENIG:

"Sound Figures"

10"

DGG LP 16134

Moog 900 Series Electronic Music
System- Demonstration record

Walter Carlos demonstrates

10"

extra copy

WILLIAM BYRD

"Mass for four voices"

10"

London LPS 301 1950

Sound effects record: rifle shots,
marching, racing cars.

10"

Major Records

SONNY STITT

"Favorites-- Volume One"

10"

Prestige PRlp 126

"Chinese Classic Music"

10" 33rpm

Folkways Records 1951

Arp Soloist Demonstration record

"Peer Gynt"

Old Vic Theatre Company

8" 33rpm 'homemade'

Duodisc label

"The Wild Sounds of New Music"

Various composers incl. Partch, Reich,
Berio.

7" at 33rpm

Columbia Masterworks Bonus record, BTS17
1970

"COMPUTER SPEECH"

"Computer produced speech- examples
of synthesized speech developed by
Bell Laboratories"

7" at 33rpm

1963

PIERRE HENRY

"Spatiodynamisme 1" (1954)/
"Spatiodynamisme 2" (1963)

7"

Edition Du Griffon

DIMI 1 (possibly demonstration?)

"Inventio-Outventio"/ "Mika Aika On"

7"

Musica DSS 1, 1970

GORAN SUNDQVIST

"D21 In Memoriam D22"

7"

Saab- Univac demonstration record,
1969-1980.

"ELECTRONIC POPULAR MUSIC"

"Colonel Bogey"/ "Song of the second
Moon"

7"

Philips 315 538 NF

MUS 107

Accession # 1979 - 17

draft finding aid 23/09/09
- supersedes previous
finding aid

New container 1 – contents of old box #1

contents of old box #2 (“Correspondence 1967-1970”)

New container 2 – contents of old box #2 (beginning with “Correspondence 1970”

contents of old box #3 (“Recherches au Temps Perdu” to “notebooks, 1934”)

New container 3 – contents of old box #3 (beginning with “Short stories 1934”)

contents of old box #4 (up to and including “concert programmes, chronological, 1959-1974)

New container 4 – contents of old box #4 (beginning with “Quarterly reports related to NRC lab”)

contents of old box #5 (up to and including “Simon Fraser, Music Class, 1966)

New container 5 – contents of old box #5 (beginning with “Science in Music, 1967”)

contents of old box #6 (up to and including “class at University of Toronto, 1966”)

New container 6 – contents of old box #6 (beginning with “class at University of Toronto, 1966”)

contents of old box #7 (up to and including “US patents”)

New container 7 – contents of old box #7 (beginning with “US patents”)

contents of old box #8 (up to and including “Unpublished Secondary Sources – Chong”)

New container 8 – contents of old box #8 (beginning with “Unpublished Secondary Sources – Collins”)

contents of old box #9 (up to and including “Unpublished Secondary Sources – Pulfer”)

New container 9 – contents of old box #9 (beginning with “Unpublished Secondary Sources – Risset”)

contents of old box #10 (up to and including “Published Secondary Sources – J”)

New container 10 – contents of old box #10 (beginning with “Published Secondary Sources – H to K”)

contents of old box #11 (up to and including “Film scripts by Le Caine”)

New container 11 – contents of old box #11 (beginning with “Film scripts by Le Caine”)

- contents of old box #13 (up to and including "Press Clippings – Arel")
- New container 12 – contents of old box #13 (beginning with "Press Clippings – Beckwith")
contents of old box #14
contents of old box #15 (up to and including "Equalizer")
- New container 13 – contents of old box #15 (beginning with "Circuit file")
- New container 14 – contents of old box #16
contents of old box #17 (up to and including "Components, 1954")
- New container 15 – contents of old box #17 (beginning with "Xener Diode 703")
Grant appraisals done for Canada Council (see p. 12 of finding aid)
- New container 16 – "File cards with notes and references made by Le Caine" (see p. 11 of finding aid)
annotated xeroxes of books
- New container 17 – "File cards with notes and references made by Le Caine" (see p. 11 of finding aid)
annotated xeroxes of books
- New container 18 – patent specifications
- New container 19 – scrapbook/notebook
writings and works by other composers
- New containers 20 to 23 – miscellaneous
- New container 24 – diploma
- New container 25 – copy of score of *Symphony for Orchestra* by István Anhalt, with dedication to Le Caine.
- New container 26 – score of score of *Pymfs, l'ombre de l'ombre de l'ombre de l'...* by Myke Roy.

MUS 107

1979-17

Accession #

HUGH LE CAINE

FINDING AID

prepared by Gayle Young

Hugh Le Caine, 1914-1977, was trained in both physics and music. He was aware from early in his youth that through electronics, physics and music could be linked, ~~and~~ ^{He} built several experimental instruments beginning in his high school years.

In 1954 he began to work full time at the National Research Council in Ottawa on a new project devoted to the development of new electronic instruments for use by composers of electronic music. He composed several pieces using his own equipment, several of which are now available on the LP recording "Hugh Le Caine, Compositions and Instrument Demonstrations, 1945 to 1972".

Le Caine participated in and influenced the formative years of electronic music, ~~and~~ ^{His} instruments spanned many "phases" or "trends", the more important of which are voltage control systems, Musique Concrête, multiple sine wave generation and computer music. In many of these developments he did important pioneering work.

Materials of a scientific nature have been sent to the ~~Weldon~~ Library at Queen's University in Kingston.

HUGH LE CAINE

FINDING AID

prepared by Gayle Young

BOX 1

CORRESPONDENCE

filed chronologically, each letter with filing card

① 1943 to 1966

BOX 2

(as above)

1967 to 1976

phone messages and memos, NRC, 1973-74

BOX 3

JOURNALS AND DIARIES

| | |
|--|----------|
| ? Recherches au Temps Perdu | 1,2,3 |
| ① Yearbook, 1928-30 | 4 |
| ① notes on inventions, 1928 | 5 |
| information on Lindbergh | 6,7,8,9 |
| ① notebooks, 1934 | 10 |
| short stories 1934 | 11 |
| ① Tor. Conservatory syllabus (with 3x Le Caine photo) | 12 |
| ① Viggo Kihl, notebook | 13 |
| concert programmes and notes | 14 |
| ① California, 1949, maps, journal | 15 |
| California, 1949, letter to mother | 16 |
| ① acoustic charts | 17 |
| journals, 1955-56; 1957-58 | 18 |
| calendar, 1960 | 19 |
| articles on heart surgery | 20 |
| calendar, 1972 | 21 |
| trips, 1975 (journal) | 22,23,24 |
| travel records (NRC) | 25,26,27 |

108-1-11A 2 ↓

BOX 4

Writings by Le Caine (each with file card, except 23-~~27~~^{to end}) "Measurements on Non-Linear Dielectrics," 1953

Le Caine publications:

- ① 1. The electron Cyclotron, 1950 ← insert:
- Electronic Music, 1954 (2 versions)
- A Touch Sensitive Organ..., 1955 (2 versions)
- Electronic Music, 1956
- Touch Sensitive Organ, 1959

- 2. A Tape Recorder for Use..., 1963 (2 versions)

- 3. Electronic Music, 1965
- Synthetic Means 1964 (from book)

- 4. Some applications of Electrical Level Controls, 1967
- ...The Serial Sound Structure Generator, 1967
- ...Serial Sound Structures, 1969
- The Sonde..., 1970

- 5, 6, 7, Le Caine publications through NRC
- 8, Le Caine, biographical outlines
- 9, NRC policy statements, press releases
- 10, Honorary doctorates, information and programmes
- ④ 11, Brochures related to Le Caine
- 12, brochures related to others
- ① 13, 14, 15, 16 concert programmes, chronological, 1959 to 1974
- 17 Quarterly reports related to NRC lab
- 19 Thoughts on lectures, notes on RCA synthesizer
- 20, 21 Notes on Negative...
- 22 Studio guide for UTEMs
- 23, 24, 25 misc notes by Le Caine, no dates or titles
- 26 Misc. notes titled "historical"
- 27 Notes on Herb, Organization of Behavior
- ① 28 tax bill for house
- 29 photo enlarger, 1952
- 30 travel guides, postcards (Niagara Fall, Expo 67, U. of Alberta)
- ① 31 motorcycle
- 32 pocket map of SE Ontario
- 33 memberships and registration cards
- 34 NRC staff lists (74); EMR Advisory Council

NEW Box 4 ↓

no file cards

- 35 Red Feather Appeal
- 36 card re. G. Ciomaga
- 37. musical inst. fair, London 1965
- 38. info. on pipe organs
- 39. NRC computer system.

personal)
+ misc.

Le Caine page 3 Box 5
LECTURE NOTES, 1954 to 1972 (each with file card)

- 1 Music lecture notes, and demonstration notes, 1954
- 2 Touch Sensitive Keyboard, 1956
- 3 Musical Sounds, 1957
- 4 testing of Jubilee Auditorium, Alberta, 1957
- 5 Electronic Music, 1959, with John Bowsher
- 6 A Tape Recorder...; ~~and~~ (Talk at Electronic Music Concert, 1959) - use separate
line
- 7 Sound Shaping, 1959
- 8 Talks on electronic Music, 1960
- 9 Semaine Internationale, 1961
- 10 Electronic Music, Stratford, 1961
- 11 Electronic Music as I See It, 1962 ;
Circuitry Problems..., 1963
- 12 Music Talk to students, 1964
- 13 Music, 1966
- 14 Simon Fraser Public Lecture, 1966
- 15 Simon Fraser, Music Class, 1966
- 16 Science in Music, 1967
- 17 Radio-Metronome, 1967
- 18 Television - Venture, 1967
- 19 AES talk, (rough Note) 1967
- 20 Commercial Keyboard Instruments, 1968
- 21 Journees de Musique Contemporaine, 1969
- 22 Telecommunications and The Arts, 1970
- 23 AES talk (general notes) 1970
- 24 Halifax, 1970
- 25 (lecture) 1970
- 26 Seminar, 1970
- 27 Man-Computer Communications, 1971
- 28 Electronic Music, Saskatoon, 1972

↑↑ NEW BOX 4

BOX 6

Lectures, papers, conferences, 1973-76

- 1 Convocation address, Fanshawe College, London, 1973
- 2 Convocation address at University of Toronto, 1973
- 3 introduction to Peter Jermyn and Sackbut, 1973
- 4 Man-Machine communication, 1973
- 5 Computer Film Festival. 1974; address to Queen's, 1974
- 6 CAUSM conference, Edmonton, 1975
- 7 Designing a Musical Instrument, ca. 1975
- 8 notes on electronic music, ca. 1970-75
- 9 "I'm passing over the years..." ca. 1970-75
- 10 notes on computer music system, ca. 1970-75
- 11 Sound Sources of Technology, ca. 1975-76
- 12 to 20 class at University of Toronto, 1966
(lecture notes, course description, some student work)
- 21 to 31 class at McGill studio, 1968-69
(lecture notes, course outlines, assignments, correspondence)

BOX 7

Patents

No file cards; all patents in chronological order.

Computer input should be: inventor, date, patent number.

- 1 French patent
- 2 British patent
- 3, 4 Canadian patents to Le Caine
- ② 5, 6 US patents to Le Caine
- 7 US patent to Dave Rocheleau
- 8 Canadian patent to Art Hudson
- 9 to 13 Le Caine notes on interesting patents, means or organization
- 14 to 43, US patents in chronological order

↓ NEW Box 7

BOX 8

~~XXXXXX~~ Notes on Compositions (no file cards)

- 1 Xerox of Krenek book, with notes
- 2 early recording jackets
- 3,4 notes on compositions (in groups)
- 5 Absolute Zero
- 6 Dripsody
- 7 This Thing Called Key
- 8 99 Generators
- 9 Invocation
- ③ 10 rules and graphs to determine tape lengths (durations)
- 11 Study No. 1 for Player Piano and Tape
- 12 Do Not Go Gentle
- 13 Textures
- 14 A Noisome Pestilence
- 15 The Burning Deck
- 16 Nocturne
- 17 Music at Expo
- 18,19 Mobile

NOTES ON INSTRUMENTS (with file cards)

- 20 Free Reed Organ
- 21 to 27 Sackbut Notes
- 28 Coded Music
- 29 to 31 Touch Sensitive Organ Notes
- 32 to 35 Multi-track notes and manual

~~COMPLETE SET OF "ELECTRONOTES" (a newsletter, 1972-74) in two binders~~

UNPUBLISHED SECONDARY SOURCES A to C (with file cards)

- 36 Bechthold
- 37-39 Chong
- 40 Collins
- 41 D to G
- 42 H to K
- 43 Hiller

↑ Box 7
↓ Box 9

Le Caine, page 6

BOX 9

UNPUBLISHED SECONDARY SOURCES (CONT'D) H to Z (with index cards)

- 1 Howe
- 2-4 Keonig
- 6 L to N
- 7-8 Laske
- 9-10 Mathews
- 11 Mezei
- 12 P
- 13-14 Pellegrino
- 15 Pulfer
- 16 Risset
- 17 S and T
- 18-19 Tanner
- 20 U to Z
- 21 Vercoe
- 22 Winham
- 23 Walter
- 24 Warfield

11
13
3

BOX 10

PUBLISHED SECONDARY SOURCES (with index cards)

- 1 NDWR original German publication
- 2 to 7 NDWR translations published by NRC
- 8 to 11 NRC translations in addition to NDWR Source
- 12 A to BOD
- 12 Bow to Bz
- 13 C
- 14 D
- 15 Davies
- 16 Douglas

Le Caine, page 7

BOX 10 CONT D

- 17 F
- 18 G
- 19 J
- 20 H to K
- 21 L
- 22 Mc to Mn
- 23 Mo to Mz
- 24 N to O
- 25 P to Q
- 26 R
- 27 S to Sn
- 28 St to Sz
- 29 T
- 30 U to Z
- 31 Appendix: Obituary articles
- 32 Appendix: Articles by Gayle Young
Memorial Concert Programme, 1978

BOX 11

PERSONAL INTERESTS (with file cards)

- 1 to 9 information, articles, copies of books about Africa
- 10 to 15 Short stories by Le Caine
- 16 to 20 Film scripts by Le Caine
- 21 to 26 notes about films, about film courses
- 24 b - short film by Le Caine
- 27 Satirical sketches
- 28 Reading lists, notes on books
- 29 list of words
- 30 list of composers
- 31 - ~~32~~ Info. on Hayden work at Nat. Sc. Library
- 32 Visual Art Reproductions

BOX 12

PHOTOGRAPHS

- 1 list of NRC photos at Public Archives of Canada (from G.Y.)
- 2-6 NRC photos
- 7-12 General subject photos
- 13 Norman McLaren method of sound generation
- 14 snap shot album, 1927
- 15 file of contact prints, made by Le Caine

BOX 13

PRESS CLIPPINGS. Le Caine (with file cards)

- 1 1954-60
- 2 1960-67
- 3 1968
- 4 1969-74
- 5 1975-77
- 6 separate NRC folder, 1955 to 1959
- 7 separate NRC folder, March to October, 1970
- 8 separate NRC folder, 1963-74
- 9 large album of press clippings

PRESS CLIPPINGS' (others; no file cards)

- 10 Adaskin
- 11 Arel
- 12 Beckwith
- 13 Bress
- 14 Boulez
- 15 Cage
- 16 Freedman
- 17 Honneger
- 18 Ivey
- 19 Kendall
- 20 Ligeti
- 21 Luening
- 22 Nordheim
- 23 Oram
- 24 Robb
- 25 Rosenboom
- 26 Schafer
- 27 Stockhausen
- 28 Subotnick
- 29 Termen
- 30 Vercoe
- 31 Xenakis
- 32-34 Electronic music General

↓ B 12

BOX 14

COMMERCIAL SYNTHESIZERS' Manuals and promotion brochures
(no file cards)

- 1-2 Arp/Tonus
- 3 Buchla
- 4 Digelius
- 5 Digisyntone
- 6-11 EMS/Putney
- 12 EXAR
- 13 Hammond
- 14 Melchor
- 15 Moog
- 16 Motorola Scalatron
- 17 Novasound
- 18 Staccatone
- 19 New Trautonium
- 20 Wurlitzer

2

BOX 15

INSTRUMENTS AND COMPONENTS I (no file cards)

- 1-4 Apparatus up 1954
- 5-7 Equalizer
- 8-20 Circuit file (contents of three binders)
- 21-26 Filter
- 27-28 Ring Counter
- 29 Reverb Device
- 30 Envelope control, 1963
- 31 Level Control Strip
- 32 Adjustable Filter (manual)
- 33-34 Envelope Shaper
- 35 Ring Modulator, 1965
- 36 Two Channel Alternator
- 37 Tone Shifter

NEW Box 12



NEW Box 13

Le Caine page 10

BOX 15 (CONT D)

~~XCXCXCXC~~
~~Conductive Keyboard~~

- 38 Conductive Keyboard
- 39 Spectrogram
- 40 The Chancellor
- 41 Serial Sound Structure Generator
- 42 Sonde
- 43 Sonde, binder No. 2
- 44 Paramus
- 45 Polyphonic Synthesizer
- 46 Flips, 1974
- 47 electronic music projects, list of publications
- 48 description of instruments, ca. 1969
- 49 Brief Notes on Sound Materials
- 50 Notes on Math

BOX 16

INSTRUMENTS AND COMPONENTS II (no file cards)

- 1-3 Recording Heads and Circuits
- 4 FET Amps
- 5-9 OP Amp
- 10-12 Transistor
- 13-15 Voltage Control Generators
- 16 List of words
- 17 Circuit Diagrams for Equalizer
- 18 White Noise Generator
- 19 Tests and Alterations to Ampex Recorder
- 20-22 Electricity

NEW BOX 14.

BOX 17

INSTRUMENTS AND COMPONENTS III (no file cards)

- 1 Electronic Organs
- 2-6 Components, 1954
- 7 Xener Diode 703
- 8 LDR CL 603 AL Clairex
- 9 Reverb Devices
- 10 Introduction to Programming

NEW BOX 15

Le Caine page 11

BOX 17 (CONT D)

- 11-12 Record CCT 1964
- 13 Hammond Transformer Data
- 14-17 Dofides
- 18-19 Misc Components
- 20-22 Tape

NEW BOX 15



OVERSIZE BOX 1 (no file cards)

- ② 1 Wave Generation Charts
- 2 Drawings (spirograph) by Le Caine
- 3 Bell Cylinders
- 4 Map of Gloucester Subdivision
- 5 Brochure for Jaguar
- ③ 6 Recorder Circuits, 1952
- ② 7 Sackbut Circuit Diagrams
- ② 8 Sackbut Keyboard, March 1956
- 9 Sackbut Circuit Diagrams, 1955
- 10 Sackbut Circuits, 1954 and earlier
- ③ 11 Colour photo, Sackbut with Prince Philip and Le Caine
- 12 Score: Lamb Time In Arcady
- 3. 13 Score: Invocation (with fragments)
- 14 Score: Textures
- 3. 15 Score: The Burning Deck
- 4. 16 Record cover for Organ Music by Le Caine
- 3. 17 Multi-track Circuit Diagrams
- 18 list of Units in Multi-track
- 19 Multi-track Circuit Diagrams

BOX WITH LP RECORDINGS AND BOOKS (all with file cards)

SEVERAL REELS OF TAPE (all with file cards)

LARGE NUMBER OF FILE CARDS WITH NOTES AND REFERENCES MADE BY Le Caine

COMPLETE SET OF "ELECTRONOTES" (a newsletter published between 1972 and 1974)

LOOSE ITEMS

Scrapbook of News clippings, 1929

① Journal, including "ideas" and inventions, 1930-34

3 large sheets with photos glued to them

Scrapbook of California Trip, 1949

Score for Stockhausen Zeitmasse No. 5

Score for Stockhausen Electronic Studies II and III

liner notes for Folkways Guide to Electronic Music (xerox)

Score for Harry Somers Louis Riel

Score for Istvan Anhalt Cento

Score for Istvan Anhalt Symphony for Orchestra, signed. (1959)

Score for John Bowsher Suite for Trumpet, Horn and Trombone
Rolled-up Score for Pousseur Elektra

GRANT APPRAISALS DONE FOR CANADA COUNCIL

CONFIDENTIAL?

Jean Papineau Couture, 1971

Nil Parent, 1972

David Keane, 1973

Nil Parent, 1973

Kenneth Smith, 1974

Ralph Dyck, 1975

1979-13

NRC

list of photos at PAC (from Gail Young)

NATIONAL RESEARCH COUNCIL
OF CANADA AT OTTAWA

RADIO AND ELECTRICAL ENGINEERING DIVISION PHOTOGRAPHS

(1939 - 1967)

Sent to the National Photography Collection Public Archives of
Canada, Ottawa

Compiled in 1985 by:

J. Akeroyd
Denice Willis

PHOTOGRAPHIC COLLECTION FROM THE DIVISION OF RADIO AND ELECTRICAL ENGINEERING

NATIONAL RESEARCH COUNCIL OF CANADA - COLLECTION II

1942 - 1967

| <u>SUBJECT GUIDE</u> | <u>DATE</u> |
|---|-------------|
| Aids to the Blind and the Handicapped | 1947 - 67 |
| Antenna Research | 1943 - 67 |
| Auroral Research (Including the All-sky Camera) | 1957 - 65 |
| Avalanche Warning System | 1960 - 61 |
| Black Brant Rocket Research | 1962 - 67 |
| Crash Position Indicator | 1956 - 58 |
| Direction Finders | 1943 - 62 |
| Electro-medical Research | |
| Diathermy Tests | 1944 - 54 |
| Cardiac Research | 1951 - 64 |
| Operating Theatre Monitoring | 1957 - 62 |
| Sweat Indicator | 1959 - 60 |
| Bird Telemetry | 1963 |
| Ultrasonics | 1964 - 67 |
| Fetal Recordings | 1965 |
| Electron Accelerator | 1947 - 50 |
| Electronic Music | 1954 - 67 |
| Geiger Counter | 1945 |
| Ground Scatter Studies | 1956 - 59 |
| High Voltage Research | 1946 - 64 |
| Marine Navigation | 1949 - 64 |
| Meteor Research | 1959 - 66 |
| Microwave Research | 1944 - 65 |
| Oscilloscopes | 1942 - 46 |
| pH Monitors | 1947 - 48 |
| Radar WW II | |
| Army - CD | 1942 |
| - CDX | 1942 - 45 |
| - GL III C | 1942 - 48 |
| - MZPI | 1942 - 48 |
| - SLC | 1942 - 43 |

NEGATIVES LISTED BY RADIO AND ELECTRICAL ENGINEERING DIVISION PHOTO NUMBER
AND BY YEAR TAKEN - COLLECTION II

1942

1001
1002 A-B
1003
1005 A -K
1007 A - C
1008 A, C-E,G-K,M
1013 A-N
1017 A-0
1022 A-D
1027
1029 A-B
1031 A-B
1032 A-Z, AA-DD
1034 B-M
1035 A-B
1036 BB,LL-PP
1037 A-D
1038 A-Z (except X), AA-FF
1041
1042 A-D

1943

1043 A-C
1045 A-B
1046 A-D
1047 A-C
1049 A-T, 1-12
1050 A-F
1051 A-F
1053 A-F
1054 A-F
1056 A-R
1057 A-0
1058 1-42
1059 1,2,5,7,8,11,14,33,34,37,
40,42,43
1060 A-B
1064 A-G
1067 AA
1068 VV,WW-ZZ,AAA-BBB
1069
1070 A-F
1072 A-C
1074
1075 JJ, KK, NN, PP, RR, SS
1077

1944

1098 A-E,G-I
1117 A-Z,AA-ZZ,AAA-ZZZ
1141 D-E
1158 B-F
1164 A-F
1166 A-Z,AA-TT (Prints only)
1173 A-Z,AA-UU

1177 A-D
1178 A-P
1183 A-J
1202 A-J
1215 A-B
1218 A-L

1945

1221 A-K
1232 A-N
1233 A-D
1252 A-C
1254 A-C
1257 A-J
1259 A-O
1264 A-Z, AA-QQ
1273 A-E
1275 A-E
~~1276 A-M~~
1288 A-Z, AA-ZZ, AAA-HHH
1299 A-C
1343 A-B
1350 A-K

1948

1901 A-E
1904 A-C
1906 A-F
1910
1917 B-C
1953
1970 A-Y
1988
1990
2001 A-B
2002 A-C
2005
2012
2016
2055
2069 A-G

1946

1376 A-D
1407 A-C
1412 A-B
1428 A-H
1475 C-E
1484 A-E
1523 A-C
1576

1947

1582
1583
1650 A-C
1686 A-N

1949

2127 A-D
2150
2155 A-H
2157 A-F
2167 A-K
2305 A-I
2315 E, G-K, N-P, R
2319
2321 C
2328 A-E
2360 A, D, F

1950

2392 A-G
2401
2432 A-C
2455
2476 A-E
2524 A-H
2553
2561 A-E
2608 A-C
2626 A-B
2634

1951

2763 A-E
2808 A-G
2829 A-D
2832 A-E
2849 A-D
2882 A-G
2902 A-B
2907 B,D,E,G
2908 A-B
2915 A-K
2925
2927
2951 A-E
2969

1952

2996 A-B
3007 A-B,D
3036 A-B
3040 A-K
3041 A-C
3095 A-H,J-W
3120 A-C
3231 A-C
3384 A-D

1953

3416 A-G
3497

1954

3653 A-B
3699 B-E,G-H,J
3702
3728 A-B
3745 A-E
3755 A-K
3819 A-Z,AA
3837 A-D, F-I,K-L
3849 A-B
3858 A-J
3882 D-E
3895 A-E
3907 A-H,J-L
3914 A-B
3963 A-C
3983 A-H
3989 A-B
3993 A-D
4002 B

4027 A-F

1955

4028 A-C
4034
4040
4055 A-D,F-G
4062
4098 A-B
4115 B-C
4130 A-E
4141 A-B
4153 A-B
4167 A-H
4170 A-B
4217 A-D
4228 A-B,E-O
4236 A-I
4241
4259
4270 A-B
4277 A-E
4309
4334 A-E

1956

4396 A-T
4406 A,E-F
4442 A-I
4497 A-E
4498 A-C,E,G
4503 A-C
4516 A-E
4530 A-F
4532 A-B
4545 A-B
4546
4558 A-C
4580 A-E

1956 cont.

4585 A,C
4614 A-L
4619 A-L
4630 A-D
4631
4640 A-D
4664 A-C
4665 A-B,D-G,I-L
4666
4668

1957

4731 A-D
4732 A-D
4734 A-H
4765 A-G
4813 A-E
4875 A-N
4924 A-B
4979
5019
5020 A-B
5062 B,D,F,G-K,N-R
5127 A-B
5159 A-B
5179 A-C
5206

1958

5214 A-I
5218 A-C
5268 A-C
5272 A-C
5276
5285 A-N
5300 A-C
5301 A-D
5315
5317 A-D
5335 A-B
5388 A-D
5414
5416
5425 A-C
5434
5452 A,C
5460
5497
5524 A-C
5528
5544 F
5570 A-B
5576 A-B
5580 A-R
5607 A-B
5609 A-B
5610 A,D,E
5635 A-J
5639 A-E
5643 A-B
5682 A-B
5711 A,P-R,T,U
5716 A-C
5792

1959

5880 A-D
5883 A,D
5887 A-D
5910 A-E
5926
5927
5932
5933 A-C
5934
5941
5952 A-H, K-M,O-R
5957
6018
6019
6020 A-G
6048
6059 A-C
6062 A-C
6064 A-F
6091 A-E
6107
6114 A-F
6139 A-Z, BB
6154 A,E
6201 A-C

(6.)

1960
6240
6249 A-B
6250 A-I
6268
6285 A-B
6304
6324 A-Q
6373 A-D
6376 A-C
6401 A-D
6409 A-B
6424 A-B
6447
6450
6452
6502 A-J
6504 A-D
6507 A-B
6549 B-C, E-G
6555 A-B
6569
6602 B, D-E
6621 A-C
6630 A-D
6635 A
6637 A-K
6660 A-B

1961
6676 A-D
6704 A-C
6754 A-B
6753 A-D
6788 A-I
6789 A-R

1961 cont.

6824 A, I-J
6825
6845 A-B
6853 A, C
6860 A-C
6871 A-E
6872 A-R
6879 A-C
6915 A-E
6940
6961 A-B
6968 A-C
6969 A-D
7025 A-E

1962

7038 A-C
7040
7056 A-C
7058 A-C
7066 A-C
7068 A-E
7077 R
7080 R-G
7099 A-D
7124 A-F
7125 A-F
7133 A
7139

7156 A, C, D

7164 A-D

7179 A-E, G, H, K

7211

7222 A-B

7226 C

7260 A-C

7265 A-D, F-J, M, N

7279 C, D, F-J, L-O, X, Y, NN

7299 A-G

7300

1963

7332 A-F
 7340 A-B,D
 7346 A-B
 7367 A-B
 7396 A,C-I,K,O-S,U
 7415
 7419 A-K
 7476 A-E
 7501 A-H
 7517 A-B
 7529 A,E-M
 7562 A-F,J
 7564 A-B
 7542
 7574 A-C
 7605
 7613
 7650
 7679 A-B
 7680 A-B
 7682 A-J

1964

7718 A-I
 7720 A-D
 7726 A-F,K-M,BB,DD-GG
 7727 A-B
 7771 A-B
 7785 C-D
 7790 A-D
 7792 A-J
 7796 A-D
 7812 A-B
 7823 A-F
 7843 A-B

1964 cont.

7846 A-C
 7852
 7857 A-F
 7877
 7879 A-I
 7897 A-B
 7902 A,C-F,H-L,N,O,Q-Z,AA,EE-GG
 7937 B,C,F,G,L,M
 7940 A-B
 7949 A-D
 7950 A-G
 7993 A-B
 7999 A-H
 8010 I,J,M,P

1965

| | |
|----------------------|----------------------------|
| 8017 B,E,I,P | 8182 A-G |
| 8019 I,O | 8188 A-Z,EE-F WW-ZZ,AA. |
| 8027 | DDD |
| 8035 A-N | 8196 A-F,J-M |
| 8036 D-G | 8197 H-I,L-Z |
| 8040 A-C,V,R,T,W-Y,Z | |
| 8042 A-C | 8198 B,L,P |
| 8046 AA-HH,A-K | 8223 |
| 8050 A-D | 8229 A-B,G,I,! |
| 8054 A-Q | 8253 |
| 8071 B,F | 8200 A-F |
| 8084 | 8202 |
| 8111 | 8209 A-B |
| 8127 A-I | 8212 A-B,F- |
| 8132 A,G-K | |
| 8136 A-B,P | |
| 8139 | |
| 8144 | |
| 8152 A-N | |
| 8157 A-B | |
| 8172 | |

1966

8263 A-C

8279 A,C-D,H-X,BB

8328 A-F

8344 A-L,Q-Z,BB,DD,HH-PP

8351 B-C

8364 A-I

8390 A-Z,AA-ZZ,AAA-CCC

8405 A-D

8410 A-M

1967

8453 A-I

8455 A-J,N,O

8458 A-G

8478 A-B

8550

8562 A-B

1977

9427A

LaCaine photos

1986-800

to

1986-999

HUGH LE CAINE FONDS (MUS107) 1992-31

Preliminary Processing Report

Date of Accession: ²¹ August 1992

Inclusive Dates: 1947 - 1991, n.d.

Description: Biographical documents; press clippings; correspondence; footnotes about Hugh Le Caine; concert programmes and publicity; pamphlet; brochures; periodicals and newsletter; writings; conference and article (by Gayle Young); programme notes; notice of motion; notes; drawings; 2 compositions (by Istvan Anhalt and Bülent Arel); 20 photographs; misc.

Duplicates Removed: 2 cm. of concert programmes; clippings; photocopies of correspondence.

Document Removed: 4 periodicals.

Dimension: 14 cm.

Boxing: November 18 and 19, 1992; 18 folders; 2 boxes (1 upright; 1 flat - small).



Stéphane JEAN
November 22, 1992

HUGH LE CAINE FONDS (MUS 107) 1993-37

Preliminary Processing Report

Date of Accession : May 7, 1993

Inclusive Dates : 1969-1977, n.d.

Description : Correspondence; minutes; notes; diplomas and honours; press clippings; photographs.

Dimension : 2 cm. (textual documents). -- 29 photographs.

Boxing : June 9, 1994; 5 folders; ¹ 2 boxes (1 upright)


Stéphane Jean
June 9, 1994

T

Le Caine with Electronic Sackbut, NRC lab, March 26, 1954
(second 't' was later removed from instrument)
front view

print: b/w; 20 x 25

NRC / Reed photo, No. 3728A

1986 - 800

rear view of the Sackbut, front view of Le Caine, NRC lab,
probably march 26, 1954

print: b/w; 25x20

NRC photo, no file number (probably part of 3728 series)

1986 - 801

*

Front view of Sackbut with Hugh Le Caine, NRC lab, March 26,
1954

print: b/w; 20x25 - three holes punched at top edge

NRC photo no. 3728A (PAC)

1986 - 802

Le Caine with Sackbut (rear view), NRC lab, March 26, 1954

print: b/w; 25 x 20

NRC photo / REED, No. 3728B (PAC)

1986 - 803

Le Caine demonstrating Sackbut for NRC visitors,
side view, NRC lab, Aug, 1954
print: b/w; 25 x 20

NRC photo No. 3882D (PAC)

1986 - 804

Le Caine plays Touch Sensitive Organ, side view, Oct. 12, 1954
NRC lab

print: b/w; 20 x 25

NRC / REED photo, No. 3963A (PAC)

1986 - 805

Le Caine plays Touch Sensitive Organ, side view, NRC lab,
Oct. 12, 1954

print: b/w; 20 x 25

NRC photo, No. 3963B (PAC)

1986 - 806

Le Caine plays Touch Sensitive Organ, NRC lab, Oct. 12, 1954

print: b/w; 20 x 25, 2½ punch holes at upper edge

NRC / REED photo, No. 3963A (PAC)

1986 - 807

Le Caine plays Toucg Sensitive Organ, Oct. 12, 1954,
NRC lab.

print: b/w; 20 x 25, 2 $\frac{1}{2}$ punch holes at upper edge

NRC / REED photo, No. 3963B (PAC)

1986 - 808

Wiring under keys of Touch Sensitive Organ, NRC lab,
Oct. 12, 1954

print: b/w; 20 x 25, 2 $\frac{1}{2}$ punch holes at upper edge

NRC / REED photo, No. 3963C (PAC)

1986 - 809

Touch Sensitive Organ, keyboard wiring, NRC lab, Oct. 21, 1954

photo: b/w; 20x25

NRC photo no. 3963C (PAC)

1986 - 810

Le Caine plays Touch Sensitive Organ, NRC lab, Nov. 1954

print: b/w 20 x 25

NRC / REED photo, No. 3983A (PAC)

1986 - 811

Le Caine plays Touch Sensitive Organ, NRC lab, Nov. 1954

print: b/w; 20 x 25

NRC/REED photo, No. 3983B (PAC)

1986 - 812

Le Caine plays Touch Sensitive Organ, NRC lab, 1954, Nov.

print: b/w 20 x 25

NRC / REED photo, No. 3983C (PAC)

1986 - 813

Hugh Le Caine with Touch Sensitive Organ, side view,
NRC lab, Nov. 16, 1954

print: b/w; 20x25

NRC photo no. 3993A (PAC)

1986 - 814

Le Caine plays Touch Sensitive Organ, NRC lab, 1954, Nov. 16

print: b/w; 20 x 25

NRC / REED photo, No. 3993B (PAC)

1986 - 815

Le Caine plays Touch Sensitive Organ, NRC lab, 1954, Nov. 16

print: b/w; 20 x 25

NRC / REED photo, No. 3993B (PAC)

1986 - 816

Touch Sensitive **Organ** Prototype, front view.
NRC lab, Nov. 16, 1954

print: b/w; 25x20

NRC photo no. 3993C (PAC)

1986 - 817

Le Caine plays Touch Sensitive Organ, NRC lab, 1954, Nov. 16

print: b/w; 20 x 25

NRC / REED photo, No. 3993B (PAC)

1986 - 818

Sample Oscillograms, Touch Sensitive Organ, NRC lab,
ca. 1954.

photo: b/w; 20x25

Nrc photo no. 4034 (PAC)

1986 - 819

chart of weight and volume for touch sensitive key,
ca. 1955

photo: b/w; 16x25

NRC photo (REED) 4334E (PAC)

1986 - 820

Schematic for Touch Sensitive Key, ca.1954

photo: b/w; 17x21

NRC photo no. 4035A (PAC)

1986 - 821

Touch Sensitive Organ, mechanism below keyboard, NRC lab,
1955, Jan. 27

print: b/w; 20 x 25

NRC photo, No. 4062 (PAC)

1986 - 822

Touch Sensitive Organ, keyboard mounting, NRC lab,
1955, May 18

print: b/w; 20 x 25

NRC photo, No. 4141A (PAC)

1986 - 823

Touch Sensitive Organ, view of electrodes under keys,
NRC lab, May 18, 1955

photo: b/w; 20x25

NRC photo no. 4141B (PAC)

1986 - 824

Robb Wave Organ, (probably part of timbre mechanism)
ca. 1955. Le Caine copied the photo for a publication, or
lecture.

print: b/w; 20 x 25

NRC / REED photo, No. 4299A (PAC)

1986 - 825

Description of Robb Wave Organ, ca. 1955

print: b/w; 25 x 20; picture and description of the Wave Organ

NRC / REED photo, No. 4306A (PAC)

1986 - 826

Description of Robb Wave Organ, ca. 1955

print: b/w; 25 x 20; descriptions of Wave Organ

NRC / REED photo, No. 4306B (PAC)

1986 - 827

Touch Sensitive Organ, in piano style cabinet, NRC lab
May 25, 1956

print: b/w; 20 x 25

NRC photo, No. 4498B (PAC)

1986 - 828

Touch Sensitive Organ, piano-style model
NRC lab, May 25, 1956

photo: b/w; 20x25

NRC photo no. 4498B (PAC)

1986 - 829

NRC employee demonstrates piano-styled Touch Sensitive
Organ, May 25, 1956

print: b/w; 20 x 25

NRC photo, No. 4498G (PAC)

1986 - 830

Keyboard for Sackbut, with glide strip (later also used
on Multi-track Tape Recorder), NRC lab, Nov. 2, 1956

print: b/w; 20 x 25

NRC / REED photo, No. 4666A (PAC)

1986 - 831

Sackbut Keyboard, new design, NRC lab, Nov. 2, 1956

print: b/w; 20 x 25

NRC / REED photo, No. 4666B (PAC)

1986 - 832

Prototype Multi-track Tape Recorder, NRC lab, Feb 19, 1957.

print: b/w; 25x20

NRC photo no. 47⁶⁵~~56~~G (PAC)

1986 - 833

Multi-track Tape Recorder, tape drive assembly
NRC lab, Feb. 19, 1957

photo: b/w; 25x20

NRC photo no. 4765A (PAC)

1986 - 834

Multi-track Recorder control panel, NRC lab, Feb. 19, 1957

print: b/w; 20 x 25

NRC photo, No. 4765C (PAC)

1986 - 835

wave generator, close-up view, NRC lab, ca. 1958-59

print: b/w; 25x20

NRC photo no. 5682B (PAC)

1986 - 836

control system for Multi-track Tape Recorder,
hand drawn schematic, May 18, 1955

photo (of drawing) b/w; 20x25

NRC photo no. 5639C, (PAC)

1986 - 837

Oscillator bank demonstrated by Le Caine (r) with
Dr. Arnold Walter (l) and Thomas Meyer (c), NRC lab ca. March 3,
1959.

print: b/w; 20x25

NRC photo No. 5811A

1986 - 838

NRC lab with assorted equipment, including 108 oscillator bank.
(l to r:) Thomas Meyer, Arnold Walter, John Bowsher, Hugh Le
Caine. NRC lab, March 3, 1959

print: b/w; 20x25

NRC photo No. 5811B (PAC)

1986 - 839

NRC lab, with Oscillator bank at left (l to r: ~~XXXXXX~~
Thomas Meyer, Arnold Walter, John Bowsher, Hugh Le Caine)
NRC lab, 1959, March 2

print: b/w; 20 x 25

NRC photo, No. 5811B (PAC)

1986 - 840

NRC lab, (l to r: Meyer, Walter, Bowsher, Le Caine)
1959, March 3

print: b/w; 20 x 25

NRC / REED photo, No. 5811C (PAC)

1986 - 841

Multi-track tape drive assembly, NRC lab, 1959, May 21.

print: b/w; 25 x 20

NRC photo, No. 5927 (PAC)

1986 - 842

Multi-track Tape Recorder, model sent to U. of Toronto
studio for its opening, June, 1959.

print: b/w, 20 x 25

NRC / REED photo, No. 6119 (PAC)

1986 - 843

Multi-track Tape Recorder installed at U. of Toronto
studio, June, 1959.

print: b/w; 20 x 25

NRC / REED photo, No. 6119 (PAC)

1986 - 844

Marked chart ~~XX~~ paper ~~XXX~~ used to control output of
Spectrogram, NRC lab, ca. summer, 1959.

print: b/w; 20 x 25

NRC / REED photo, No. 6502-G (PAC)

1986 - 845

marked chart paper used to control output from Spectrogram.
NRC lab, ca. summer 1959

print: b/w; 20 x 25

NRC / REED photo, No. 6502-G (PAC)

1986 - 846

Chart used to control output from Spectrogram
NRC lab, ca. 1959

photo: b/w; 20x25

NRC photo 6631 (PAC)

1986 - 847

Multi-track Tape Recorder, second model sent to U of
Toronto studio, ca. may 1961

print: b/w; 20 x 25

NRC / REED photo, No. 6789-H (PAC)

1986 - 848

René Farley with fourth (or third) version of the
Multi-track Tape Recorder, NRC lab, ca, May 1961

print: b/w; 20x25

NRC photo no. 6789N (PAC)

1986 - 849

Marked shart paper used to control Spectrogram,
NRC lab, ca. summer 1959

print: b/w; 20 x 25

NRC (Radio)photo, No. 6921A (PAC)

1986 - 850

Marked chart paper used to control Spectrogram, ca.
summer, 1959

print: b/w; 20 x 25

NRC (Radio)photo, No. 6921B (PAC)

1986 - 851

Marked chart paper used to control Spectrogram, ca.
summer, 1959

print: b/w; 20 x 25

NRC (Radio)photo, No. 6921C (PAC)

1986 - 852

11

Marked chart paper used to control Spectrogram, ca.
summer, 1959

print: b/w 20 x 25

NRC (RADIO) photo, No. 6921D (PAC)

1986 - 853

Marked chart paper used to control Spectrogram,
ca. summer, 1959

print: b/w; 20 x 25

NRC (Radio) photo, No. 6921E (PAC)

1986 - 854

Multi-track Tape Recorder drive mechanism for
multiple tapes, NRC lab, 1962, May 18

print: b/w; 20 x 25

NRC photo, No. 7155A (PAC)

1986 - 85⁵

Multi-track Tape Recorder, drive assemble for multiple
tapes, NRC lab, 1962, May 18

print: b/w 20 x 25

NRC photo, No. 7155B (PAC)

1986 - 85⁶

control panel using finger conductivity, NRC lab,
ca. 1962, May 18

print: b/w; 20 x 25; image $9\frac{1}{2}$ x $17\frac{1}{2}$

NRC / REED photo, No. 7156 (PAC)

1986 - 857

Multi-track Tape Recorder, pressure-sensitive keys
used to control volumes of six channels of sound, NRC lab,
ca. 1962, May 18.

print: b/w 20 x 25

NRC photo, No. 7669C (PAC)

1986 - 853

MULTi-track control panel section. controls initial
output levels of each of ten channels.
NRC lab, May 5, 1964

print: b/w; 20 x 25; image 5 x 23

NRC photo, No. 7800B (PAC)

1986 - 859

Spectrogram, interior circuits and other controls.
NRC lab, 1966, June 28

print: b/w; 20 x 25

NRC photo, No. 8364A (PAC)

1986 - 860

Spectrogram with chart paper, NRC lab, June 28, 1966

print: b/w; 25x20

NRC photo no. 8364E (PAC)

1986 - 861

Spectrogram with unmarked chart paper roll, NRC lab
1966, June 28

print: b/w; 25 x 20

NRC photo, No. 8364F (PAC)

1986 - 862

Printed Circuit Keyboard
NRC lab, Feb. 7, 1967

photo: b/w; 20x25

NRC Photo no. 8455A (PAC)

1986 - 863

Printer circuit keyboard demonstrated by NRC employee,
NRC lab, 1967, Feb. 6

print: b/w; 20 x 25

NRC photo, No. 8455F (PAC)

1986 - 864

Hugh Le Caine with fifth Multi-track Tape Recorder,
NRC lab, Feb. 6, 1967

print: b/w; 20x25

NRC photo no. 8455-N (PAC)

1986 - 865

Tone Mixtyre Generator, device for studios using voltage
control, NRC lab, 1967, Feb. 6

print: b/w; 20 x 25

NRC photo, No. 8456 (PAC)

1986 - 866

Serial Sound Structure Generator, prototype, NRC lab,
1967, Feb. 7.

print: b/w; 25 x 20

NRC photo, No. 8456A (PAC)

1986 - 867

Voltage-controlled Filter, NRC lab, Feb. 7, 1967

print: b/w; 20x25

NRC photo no. 8456AA (PAC)

1986 - 868

Serial Sound Structure Generator
Rear view, NRC lab, Feb. 7, 1967

photo: b/w; 25x20

Nrc photo no. 8456B (PAC)

1986 - 86⁹

Serial Sound Structure Generator, two prototypes,
operated by Dave Rocheleau, NRC lab, 1967, Feb. 7.

print: b/w; 25 x 20

NRC / REED photo, No. 8456C (PAC)

1986 - 870

Dave Rocheleau with Serial SoundStructure Generator
prototype, NRC lab, Feb. 7, 1967

print: b/w; 20x25

NRC photo no. 8456C (PAC)

1986 - 871

Serial
~~XXXXXXXX~~ Sound Structure Generator, as it was displayed
at Expo 67, operated by Le Caine, NRC lab, Feb. 7, 1967

print: b/w; 25 x 20

NRC / REED photo, No. 8456E (PAC)

1986 - 872

Hugh Le Caine with the Serial Sound Structure Generator
as it was displayed at Expo 67, NRC lab, Feb. 7, 1967

print: b/w; 20x 25 - crack in centre

NRC photo no. 8456F (PAC)

1986 - 873

Serial Sound Structure Generator as it was displayed
at Expo 67, with panels of explanation and headphones,
NRC lab, 1967, ca. May, 1967

print: b/w; 20 x 25

NRC / REED photo, NO. 8456-G (PAC)

1986 - 874

Colour~~ed~~ panels designed by Ann Daniels for Serial
Sound Structure Generator, NRC lab, 1967, May 31

print: b/w; 25 x 20

NRC / REED photo, No. 8516P (PAC)

1986 - 87.5

Sonde, interior circuitry, rear view, NRC lab, 1968, Sept. 3

print: b/w; 20 x 25

NRC / REED photo, No. 8691C (PAC)

1986 - 876

Sonde sine generator, NRC lab, Sept 3, 1968

photo: b/w; 25x20

NRC photo no. 8691D (PAC)

1986 - 877

Sonde, interior wiring and circuitry, rear view,
NRC lab, 1968, Sept. 3

print: b/w; 25 x 20

NRC / REED photo, No. 8691F (PAC)

1986 - 878

Canadian Music Council conference at National Arts
Centre, ~~XXXXXX~~ display of NRC instruments in lobby.
Also, photo panels of ~~other~~ other instruments.
NAC lobby, 1970, May

print: b/w; 20 x 25

NRC / REED photo, No. 8831L (PAC)

1986 - 879

Photo paNEL FROM DISPLAY IN National Arts Centre lobby,
1970, May

print: b/w; 25 x 20

NRC / REED photo, No. 8831-0 (PAC)

1986 - 880

Sackbut keyboard circuitry, NRC lab, 1971, March

print: b/w; 20 x 25

NRC photo, No. 8991A (PAC)

1986 - 881

Sackbut keybaord circuitry, NRC lab, 1971, March

print: b/w; 20 x 25

NRC photo, No. 8991B (PAC)

1986 - 882

last prototype of Sackbut, NRC lab, March 1971

print: b/w; 20x25

NRC photo no. 8991D (PAC)

1986 - 883

D

Sackbut interior circuitry, NRC lab, 1971, March

print: b/w; 20 x 25

NRC photo, No. 8991G (PAC)

1986 - 884

Sackbut interior circuitry, rear view, NRC lab, 1971, March

print: b/w; 20 x 25

NRC photo, No. 8991H (PAC)

1986 - 885

Sackbut controls, close-up view, NRC lab, March 1971

photo: b/w; 20x25

NRC photo no. 8991L (PAC)

1986 - 886

Norman McLaren, visual means of sound generation
for film, National Film Board, ca. 1953

print: b/w; 20 x 25

NFB photo, No. 73572 (PAC)

1986 - 887 (1970-1975)

A group of experts appraise the acoustics of the new
Jubilee Auditorium in Calgary, Alberta. Arnold Walter 5th
from right; Hugh Le Caine 9th from right. ca 1957.
MURRAY ADASKIN 8th FROM RIGHT.

print: b/w; 20x25

Alberta Government Photo.

1986 - 888

(photo 889 moved to end, as part
of sequence of Mc Laren photos)

Hugh Le Caine demonstrates Sackbut for Dr. Sukarno
of Indonesia, NRC lab, 1956, June.

print: b/w; 20 x 25

NFB photo, No. 76762 (PAC)

1986 - 890

Portrait of Le Caine, 3/4 profile, NRC lab, ca. 1973

print: b/w;25x20

NRC photo, no file number (PAC)

1986 - 891

NRC lab with partly built Multi-track tape recorder
in foreground, ca. 1955

print: b/w; 20x25

photo by Le Caine

1986-892

kitchen/work room at Le Caine's home studio, probably
Skead Road, ca. 1953.

print: b/w; 20x25

photo by Le Caine
1986-893

greenhouse in the roof of 857 Skead (Blair) Rd, Le Caine's
hone/studio, ca. 1955.

~~XXXX~~ print: b/w; 20x25

photo by Le Caine
1986-894

work room/^{it}~~k~~~~XX~~chen of Le Caine's studio/home, Blair Road,
ca. 1955

print: b/w; 20x25

photo by Le Caine

1986 - 895

cover for Sackbut Recording, a photographed drawing
June, 1946.

print: b/w; 21x28

photo by Le Caine

1986-896

2 Division Street, Toronto, the building in which the
U. of Toronto studio was first opened, 1959.

print: b/w; 20x25

photo by Le Caine

1986-897

building in which first studio opened, 1959

print: b/w; 20x25

photo by Le Caine

1986-898

building in which first studio opened, 1959

print: b/w; 20x25

photo by Le Caine

1986-899

First Electronic Music ~~XXX~~ studio, work bench, with
Myron Schaeffer, 1959

print: b/w; 20x25

photo by Le Caine

1986-900

First electronic music studio, with ~~M~~ Myron Schaeffer
at the Multi-track Tape Recorder, 1959

print: 20x25, b/w

photo by Le Caine

1986-901

~~M~~

Multi-track Tape Recorder at Univ. of Toronto studio,
1959

print: b/w; 20x25

photo by Le Caine

1986-902

Myron Schaeffer at the Multi-track Tape Recorder, 1959

negative: b/w; 6x6

photo by Le Caine

1986-903

series of six negatives of first studio

negatives: b/w; 6x6

photos by Le Caine

1986-904

series of seven snapshots^{ts} of first electronic music
studio (plus one negative taken from newspaper)

prints: b/w 8x8

photos by Le Caine

1986-905

second studio at U. of Toronto, in Edward
Johnson Building basement, ~~1965~~
ca. 1965

print: b/w 20x25

photo by Le Caine

1986-906

studio at U, of Toronto, Edward Johnson Building,
ca. 1965

print: b/w; 16x18

photo by Le Caine

1986- 907

unidentified instrument at UTEMS

print: col; 8x12

photo probably by Le Caine

1986-908

New Multi-track installed at Edwards Johnson Building
studio, U of Toronto

print: col; 8x12

photo probABLY BY LeCaine

1986-908

Studio at Edward Johnson Building, U of Toronto,
ca. 1968-9.

negatives (four): b/w; 11x15

photos ~~XXXX~~ probably by LeCaine (given to G. Young by H, Aubrey)

April/82

1986-909

Hugh Le Caine operating movie camera with instruments in
the background, NRC lab, ca. 1968

print: col; 20x25, with lettering

photo probably by Le Caine

1986-910

Dave Rocheleau and René Farley with instruments in the
background, NRC lab, ca. 1968

print: col; 20x25 with lettering

photo by Le Caine, part of film made on Serial Sound
Structure Generator, stills as title shots.

1986-911

Anne-lore Thompson /Daniels/, with instruments in
background and foreground, NRC lab, ca. 1968

print: col; 20x25 with lettering

photo by Le Caine

1986-912

Dave Rocheleau, with instruments in background, NRC lab,
ca. 1968

print: col; 20x25

photo by Le Caine

1986-913

electronic music studio at Edward Johnson Building,
U. of Toronto, ca. 1969

print: b/w; 20x25

photo probably by Le Caine

1986-914

Serial Sound Structure Generator, as displayed at Expo 67

print: col; 25x20

photo probably by NRC staff

1986-915

coloured panels of Serial Sound Structure Generator (SSSG)
designed by A. Daniels

2 attached prints: col: 25x10

photographer unknown

1986-916

coloured panels of SSSG designed by A. Daniels, ca. 1968

print: col; 25x20

unknown source

1986-917

4 examples of colour panels for SSSG designed by A. Daniels,
ca. 1968

print: col; 25x20 (4 attached images)

unknown source

1986- 918

panels designed by A. Daniels, possible for wall near
SSSG display at Expo 76, ca. 1967

print: col; 20x25

Canadian Government Photo Centre

1986-919

panels designed by A, Daniels, b/w duplicate of 1986-919

print: b/w; 20x25 (edges torn)

unknown source

1986-920

SSSG with coloured panels, demonstrated by NRC emplotee,
NRC lab, ca. 1968

print: col; 25x20

probably NRC staff photographer

1986-921

The audience of Columbo Plan delegates listening to
Le Caine's instruments, NRC auditorium, ca. 1957.

print: b/w 20x25

Capital Press Service Photo

1986-922

Le Caine demonstrates Touch Sensitive Organ for
Columbo Plan delegates, NRC lab, ca. 1957

print: b/w; 20x25

Capital Press Service Photo

1986-923

Touch Sensitive Organ played by G.D.L. White of New
Zealand, part of Columbo Plan delegation, names of other
listeners listed on reverse of photo. NRC lab, ca. 1957

print: b/w; 20x25

Capital Press Service photo

1986-924

Le Caine demonstrates the Sackbut for Prince Philip and
accompanying delegation, August, 1954.

Nrc lab.

print: b/w; 20x25

Fednews photo

1986-925

Le Caine demonstrates the Sackbut for Prince Philip
and accompanying delegation, NRC lab, Aug, 1954.

print: col; 24x19, with card BACKING TORN AT CORNERS.

RCAF photo RCS 442

1986-926

The 1971 model Sackbut, NRC lab, 1971

negative used for printing, b/w; 10x15

based on NRC photo

1986-927

Peter Jermyn demonstrates the 1971 Sackbut, appears to be
at a Trade Fair, ca. 1972.

print: col; 12x17

photographer unknown

1986-928

Peter Jermyn demonstrates the 1971 Sackbut, with information panels in background, probably one of the demonstrations sponsored by the National Museum of Science and Technology, ca. 1972.

8 snapshots,
prints: col; 8x8

probably taken by Le Caine

1986-929

the listeners at demonstration of Sackbut, ca. 1972
(same event shown in 1986-929)

5 snapshots
prints: col; 8x8

probably taken by Le Caine

1986-930

Peter Jermyn playing the Polyphonic synthesizer,
NRC lab, ca. 1972.

4 snapshots
prints: col; 8x8

probably taken by Le Caine

1986-931

Canadian Music Council Exhibit at National Arts Centre
lobby, May, 1970.

6 snapshots showing the exhibition being set up.

prints: col; 8x8 (negative numbers written AT BOTTOMS)

probably taken by LeeCaine

1986-932

Canadian Music Council Exhibit at National Arts Centre
lobby, May, 1970

(l to r:) 2 Serial Sound Structure Generators with coloured
panels, 4-track recorder, Sonde from UTEMS, 2-track recorder.
4 snapshots.

prints: col; 8x8 (negative numbers written at bottoms)

probably taken by Le Caine

1986-933

Canadian Music Council Display at N.A.C. lobby,
May, 1970.

negatives; col; 35mm (5 strips)

PROBABLY TAKEN BY Le Caine

1986-934

Coloured panels of SSSG, with unidentified collages
ca, 1973

negatives; col; 35mm (5 strips)

probably taken by Le Caine

1986-936

Coloured panels of SSSG, ca. 1970
2 snapshots

prints: col; 5x8

source unknown

1986-937

detail shot of coloured panel for SSSG, ca. 1970

print: col; 13x10

source unknown

1986-938

Le Caine, wearing nightcap, ca. 1974

2 snapshots

prints: b/w; 6x5

source unknown

1986-9389

Le Caine with motorcycle, ca. 1947

print: b/w; 11x6

source unknown

1986-940

Le Caine's motorcycle alone, ca. 1947

print: b/w; 6x11

photo probably by Le Caine

1986-941

Le Caine sitting on porch with friend (unidentified) *ca. 1947*

print: b/w; 6x11

source unknown

1986-942

Le Caine with friend (unidentified) and car or truck tire *ca 1947*

print: b/w 11x6

source unknown

1986-943

Le Caine, portrait, ca. 1947

print: b/w; 10x7

source unknown, possible self-portrait

1986-944

*

Le Caine, portrait, ca. 1947

print, b/w 10x7

source unknown, possible self-portrait

1986-945

Le Caine, portraits, ca. 1947, 2 copies
similar poses, varied exposures

prints, b/w 10x7

possible self-portraits

1986-946

Le Caine, portrait, ca ~~1952~~ 196-?

print; b/w; 18x12

possibly NRC photo

1986-947

Le Caine portrait, ca. 1973

print: b/w; 16x10

probably NRC photo

1986-948

diagrams and photos of historical instruments:
photos of Ondes Martenot,
schematic of Magnetic Musical Apparatus, P. Schaeffer
schematic of Telharmonium, T. Cahill

line negatives, b/w; 15x10

used in publications by Le Caine

1986-949

seven diagrams of acoustic phenomena, used for lectures and publications: Resolving power of the ear, delay of tone recognition, flute harmonics, vowel formants, hearing range, harmonics of trumpet, violin, clarinet, diagram of art forms. (taken from books, etc.)

line negatives, b/w; 15x10

used for classes probably

1986-950

schematic of voice acoustics, resonation, etc.

print: b/w; 25x20 (print of line neg)

word "vocoder" written in margins

1986-951

d

series of diagrams of acoustic phenomena, numbered.

(25 slides numbered 1 to 20 with some lettered, as in 15b;

6 extras without numbers)

glass mounted slides, used in lectures, most of them
taken from books.

31 glass mounted slides: b/w; 35 mm

used for lectures

1986-952

Coloured panels of Serial Sound Structure Generator,
ca. 1968.

7 slides of details

slides: col; 35 mm

possibly taken by Le Caine

1986-953

Le Caine's paintings and drawings of musical subjects,
used for lectures, ca. 1970.

6 slides

slides: col; 35mm (glass mounted)

slides made of drawings by Le Caine

1986-954

instruments at NRC lab, unidentified (THREE)

no dates, ca. 1970

slides: col; 35mm (2 are glass mounted)

probably photographed by LeCaine

1986-955

Ondes Martenot, photo taken from recording jacket,
used for lectures

slide: b/W; 35mm

glass mounted

1986-956

Example of early liturgical art involving representation
of musical instruments, taken from book, used for
lectures, ca. 1970

slide: col; 35 mm

glass mounted

1986-957

Exhibition at Expo 67, with Serial Sound Structure
Generator and wall mural, Montreal, 1967.
Shows users with headphones.

slide, col; 35 mm

photo taken by Le Caine

1986-958

"Lab, pre-desk" written on margins. Shows shelves and
crowded work bench, NRC lab, ca. 1958-64

slide: col; 250x250 mm

photo taken by Le Caine

1986-959

work bench with reel of film, labelled "How It Was".
Also, reel of recording tape. Le Caine did make a short
film by this title, ca. 1965.

slide: col; 2.5x2.5 ("lab" written in margin)

photo by Le Caine

1986-960

Control panel of last Multi-track Tape Recorder
showing sliders and printed circuit keys.
NRC lab, ca. 1965.

slide: col; 2.5x2.5 ("lab" written in margin)

photo by Le Caine

1986-961

1971 model of Sackbut on display, with tape recorder
and information panel. location unknown, ca. 1972

slide: col; 2.5x2.5

photo probably by Le Caine

1986-962

File of photographs and diagrams, compiled by Le Caine.
Consists of file cards, with contact prints glued to
them, with NRC photo file reference numbers, and usually
with explanation of subject. Also, cards with lists and
comments, no contacts.

file cards with b/w contact prints

assembled by Le Caine

1986-963

Schematic for Sackbut Keyboard

ca. 1953

line negative: b/w; 12x16

used as part of patent deposition

1986-964

Le Caine at physics lab of Queen's University, Feb. 10, 1938

print: b/w; 9x5

photographer unknown, written on reverse: details of
exposure and "SCIENCE - 99⁴⁴/100 % pure".

1986-965

Le Caine with motorcycle and nephew ^{Douglas} Creighton,
ca. 1953 (location unknown)

print: b/w 6x10

photographer unknown

1986-966

Le Caine with motorcycle
location unknown, ca. 1953

print: b/w; 10x6

photographer unknown

1986-96~~6~~7

portrait of Le Caine, ca. 1947, possibly self portrait

print: b/w; 21x16

photographer unknown

1986-968

"Colossal Dahliæflowered Zinnias"

Le Caine standing among huge flowers,
(Le Caine is said to have installed a cardboard blow-up
of a self-portrait in the roof garden of his home/studio and
re-photographed the assembly.)

Ottawa, ca. 1954

print, b/w; 12x17 (flowers and figure coloured by hand)

produced by Le Caine

1986-969

Le Caine demonstrates Sackbut for Prince Philip during a
vists to Ottawa, August, 1954.

side view of Sackbut

print: b/w; 20x25

Fednews photo

1986-970

building in which first electronic music studio
was installed, 2 Division Street, Toronto, part of U. of
Toronto campus, 1959

print: b/w; 8x8

photo taken by Le Caine

1986-971

The garden behind the home/studio at Skead (new Blair)
Road, Ottawa, ca. 1956.

print, b/w; 25x20

photo by Le Caine

1986-972

Norman McLaren sound generation method for film
(caption enclosed) ca. 1953

print: b/w 20x25

NFB photo 73589

1986 - 976

Le Caine (c) demonstrates the Multi-track Tape Recorder
for Istvan Anhalt (l) and Helmut Blume (r) at McGill
studio, ca. 1967.

print: b/w; 20x25

NRC/REED photo no. 7912 C

1986-973

The ceremonies for the naming of Harrison-Le Caine
Hall at Queen's University, Nov. 1974
(Dr. and Mrs. Le Caine (r); Dr. and Mrs Harrison (l))

print: b/w; 20x25

photographer unknown

1986-974

Le Caine with motorcycle, in yard of home, Ottawa, 1974

print: b/w; 25x20

photographer unknown

1986-975

Le Caine with motorcycle, in yard of home, Ottawa, 1974
with helmet

print: b/w 25x20

photographer unknown

1986-976

assembly of photographs taken at McGill studio,
made for display at Can. Music Council conference, May, 1970

print: b/w; 25x20

NRC/REED photo no. 8831 P

1986-977

Norman McLaren
selecting card to generate sound on film
(caption enclosed)

print: b/w; 20x25

NFB photo no. 73572

1986-978

Norman McLaren selecting card to produce
Sound on film

print: b/w; 20x25

NFB photo No. 73574

1986 - 979

NORMAN McLaren's visual means of sound generation for film,
N.F.B. ca. 1953 (caption enclosed)

print: b/w; 20 x 25

NFB photo, No. 73579 ~~(1986)~~

1986 - ~~979~~ ~~980~~ 980

Norman McLaren method for generating sound on film

print: b/w; 20x25

NFB photo No. 73583

1986- 981

Norman McLaren method for generating sound on film
(caption enclosed)

print: b/w; 20x25

NFB photo 73585

1986- 982

Norman McLaren method for generating
sound on film
(caption enclosed)

print: b/w; 20x25 (2 copies)

NFB photo 73586

1986 - 983

Norman McLaren's visual means of sound generation for
film, N.F.B., ca. 1953 (caption enclosed)

print: b/w 20 x 25

NFB photo, No. 73587 (~~73587~~)

1986 - ~~884~~ ~~73587~~ 984

~~Norman~~ →

Norman McLaren, method for generating sound on film
(caption enclosed)

print: b/w 20x25

NFB photo no. 73588

1986 - 985

5 juin 2001

Fiches manquantes :

935

987 - 999



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HUGH LE CAINE FONDS

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Box Number/Numéro de boîte

1 (with accession 1993-37)

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