

GUIDE TO

THE QASAR TONY FURSE ARCHIVE

IN THE POWERHOUSE MUSEUM

96/382/2

Jill Chapman
2012

CONTENTS

Biographical Note	3
Series List	5
Series Descriptions and Item Lists	6 -

TONY FURSE ARCHIVE COLLECTION

96/382/2

Born in Sydney in 1938 Tony Furse was passionate about electronics from an early age. His interest in all things technological led to him using the electronics and communications equipment available from army disposal stores in the post World War II period to create his own inventions which ranged from crystal sets to high voltage generators.

In the late 1950s, Furse's interest in creating electronic music had resulted in his earliest invention, an electronic clarinet. This clarinet, which could be played with one hand, was made by converting a secondhand clarinet into a working electronic instrument powered by a car battery. Played using a keyboard-like attachment, electric solenoids were used to cover and uncover the holes.

Curious about the nature of harmonics, Furse began looking at the different sounds produced by electronic organs (which used signals produced by radio valves). He wondered why, among the range of sounds available, there was no option to produce percussive or string sounds. His subsequent research included reading an English translation of the work by German physician and physicist Hermann Helmholtz, 'On the Sensations of Tone as a Physiological Basis for the Theory of Music' 1, which talked of the two extremes of sound, from noise at one end to musical tones at the other. Also inspiring for Furse at the time were the American acoustical engineering pioneer Harry F. Olson's 'Elements of Acoustical Engineering' (1957) and American musicologist, Charles A. Culver's book, 'Musical Acoustics' (1956).

While Furse spent the 1960s and the early '70s working as an electronics engineer in the computer industry, in his spare time he was still applying his technical skills to the creation of electronic music.

A major breakthrough came for Furse when in 1964 he read an article written by James, Potok and Oxley titled 'Repetitive Function Synthesizer and Spectrum Display'. The article, which mentioned 'digital sampling' and a device that made this possible, enabled Furse to develop the first 'all digital waveform synthesiser'.

His attempts in the early 1960s to build the equivalent of today's microcomputers had involved using too many transistors to make it a viable concern - it was only in the mid 1960s, when the appearance of integrated circuits, (capable of holding increasingly large numbers of transistors within a chip) made his research more affordable, that Furse's research took off. But although the 'proto digital waveform generator' that Furse had invented and used from 1966 to 1969 allowed him control over harmonics, the sound produced still fell short of his idea of a realistic reproduction of actual instruments.

Leaving his job in early 1972 to concentrate on further developing his inventions, Furse set up his own company, Creative Strategies Pty Ltd, which he operated from his home in Sydney's Neutral Bay. His first invention was an 'analogue/digital hybrid synthesiser' which he named Qasar 1. As well as breaking new ground in its design, another attractive feature of the synthesiser was its affordability. To market this invention, Furse enlisted the help of David Bross, a computer salesman and talented keyboard player, who, after quickly mastering the Qasar 1 synthesiser, joined Creative Strategies as a company director.

Another person instrumental in providing support for Furse at this time was Don Banks, the noted composer of jazz, classical music and electronic music who, following a number of years studying and working in England, had returned to Australia in 1972. The following year he was appointed head of composition studies at the Canberra School of Music, setting up the School's electronic music studio. He took an interest in Tony Furse's next invention, a 'digital/analogue hybrid sound synthesiser' named the Qasar II, operated by a keyboard control panel, which had been developed with the assistance of a grant from the Australian Council for the Arts-Banks purchased the Qasar II for the School of Music.

Furse's next project was an all-digital synthesiser, which he named the Qasar M8 (Multimode 8) synthesiser. In addition to a keyboard, Furse had developed a graphics display which, with the use of a light pen, allowed the operator to create an instrument or voice using waveforms. After having made a deal with the large American electronics company, Motorola to use their programme development system, Furse was able to develop the MUSEQ 8 sequence playing system. The idea was that the MUSEQ 8 system, when used in conjunction with his M8, could be used by composers of all kinds of music, not just electronic, for the composition and the performance of music. Another major innovation with the M8 synthesiser was Furse's use of two 8-bit Motorola 6800 microprocessors in an unusual parallel configuration which greatly speeded up data input and output.

In late 1974, following the success of Furse's lecture and demonstration of the Qasar M8 in Canberra before an audience from the Canberra School of Music, the Australian National University and the College of Advanced Education, Don Banks, who realised the potential of Furse's invention for the School of Music, requested a similar model be made for the School's electronic music studio. Furse continued to work on the prototype making use of the latest technology by incorporating floppy disk storage using the newly released 8 inch floppy disks. The disks worked differently from tape recorded music in that a piece of music could be reorchestrated without altering the data on the disk.

In mid 1976, Furse ended up selling the prototype to the Canberra School of Music. He continued to write software for the M8, making several trips to Canberra for this purpose, also incorporating software written by software expert Bruce Williams.

It had also been around this time that Furse came into contact with synthesiser enthusiast Kim Ryrle (who in 1971 had created a magazine called Electronics Today International, ETI), and his business partner, electronics designer Peter Vogel. They had also been trying to design a synthesiser which could reproduce natural and acoustic sounds as well as musical instruments.

To this end Ryrie and Vogel had formed a company in December 1975 which was named Fairlight Instruments after the Fairlight ferry that crossed the harbour in front of the basement workshop of Ryrie's grandmother where they had been carrying out their early experimental work. Impressed with Furse's digital synthesiser (to date they had only been able to develop an analogue synthesiser which didn't produce the results they were after) they approached him with a deal for manufacturing the synthesisers and marketing the computer as a separate entity.

From 1976 Furse worked with Fairlight on the project, which included producing circuit boards from the circuit board schematics and reconfiguring the synthesiser's keyboard resulting in the production of a totally redesigned version of the synthesiser which was known initially as the M8 CMI (Multimode 8 Computer Musical Instrument). In early 1979 Tony Furse, with less involvement in the project, signed a licence agreement with Fairlight, allowing them the use of his intellectual property for both the synthesiser and the computer.

The Fairlight CMI, which included a 73 note keyboard, two 8 inch floppy disk players, a monitor and light pen used four Motorola microprocessors and was able to perform 8 different sounds at once.

Released onto the world market in 1979 the 'Fairlight' synthesiser, which was capable of playing any sound at all, was an instant hit with composers and recording artists, among them Stevie Wonder, Peter Gabriel, Paul McCartney, Jean Michel Jarre, Kraftwerk and Herbert von Karajan of the Berlin Philharmonic Orchestra.

Thus Furse's technology for the Qasar M8 formed the basis of what was to become known as the Fairlight CMI (Computer Musical Instrument). In 1987 he was awarded the CSIRO's Medal for Research Achievement for the invention of CMI technology.

1 First published in 1863, English translations of the book's various German editions appeared between 1875 and 1912)

Written by archivist Jill Chapman using material from the Qasar/Tony Furse archive and the listed websites:
96/382/2-9/9 Qasar/Tony Furse archive:

- 1] article Computers that make waves, Jim Farber, p.64 Rolling Stone, USA edition, Jan 1980
 - 2] article Computer music in/concert in high places, Helen Meredith, Pacific Computer Weekly, 30 Oct-5 Nov 1981
 - 3] article Australian synthesiser cracks the world market, Neville Williams, Electronics Australia, August 1982 pp.30-32;
www.soundonsound.com/sos/apr/99/articles/fairlight
[www.k.m.i.9000.tripod/kmi_cmi.htm#general info](http://www.k.m.i.9000.tripod/kmi_cmi.htm#general%20info);
- www.enerd.com/fairlight/fairlightstory 'Fairlight -The Whole Story', Audio Media magazine, January 1996
wikipedia;
www.Egrefin.free.fr/eng/fairlight/fairhist.php;

Reg. Number	Series Title	Date
96/382/2-1	Sketch of electric clarinet	1958, 1970s
96/382/2-2	Patent Applications	1973
96/382/2-3	Correspondence	1973-1990
96/382/2-4	Circuit Diagrams	1974-1979
96/382/2-5	Reports, Proposals and Talks	1974-1990
96/382/2-6	Draft documentation	1974-1977
96/382/2-7	Documentation and Schematics of M8 (QASAR Multimode 8) Hardware, Firmware and Software	c1975-1980
96/382/2-8	Early software for the M8 (QASAR Multimode 8) Synthesiser	c1974-1977
96/382/2-9	Newspaper and Magazine Clippings	c1973-1986
96/382/2-10	Computer software and firmware for CMI M8 Programmes and Experiments, Sydney, Australia	c1978-1980
96/382/2-11	Brochure, Fliers and Poster	1974-1988
96/382/2-12	'Original Hand Built Prototype Cards'	c.1975-1976

TONY FURSE ARCHIVE COLLECTION

96/382/2-1

Registration Number:	96/382/2-1
Series Title:	Sketch of electric clarinet
Date Range:	1958, 1970s
Physical Characteristics:	Pages (2), one photocopied, with handwritten information in pencil and pen
Description:	Sketch (2) of electric clarinet, Tony Furse, Sydney, New South Wales, Australia, 1958, c.1970s These are the original pencil sketch by Tony Furse and a later photocopy of the sketch of Tony Furse's electric clarinet, which he invented in 1958.
Arrangement:	Chronological
Dimensions:	
Box Number:	1

Series Title:

Item Number	Item Title	Box
96/382/2-1/1	<p>Sketch, pencil on paper, electric clarinet, Tony Furse, Sydney, New South Wales, Australia, 1958</p> <p>This is Tony Furse's original sketch for a one handed clarinet from which he developed a prototype. See 96/382/2-5/18:19 for further information about this invention.</p>	1
96/382/2-1/2	<p>Sketch, photocopy, with pen annotations, of Tony Furse's electronic clarinet, Tony Furse, Sydney, New South Wales, Australia, c.1970s</p> <p>This is a photocopy of Tony Furse's original 1958 sketch (96/382/2-1/1) for a one handed clarinet. Several numbers are written in pen on the page. See 96/382/2-5/18:19 for further background to this invention.</p>	1

TONY FURSE ARCHIVE COLLECTION

96/382/2-2

Registration Number:	96/382/2-2
Series Title:	Patent Applications
Date Range:	1973
Physical Characteristics:	Printed paper
Description:	<p>Patent Applications, Tony Furse, Sydney, New South Wales, Australia, 1973</p> <p>These are copies of the Patent Applications (3) submitted by Anthony Gordon (Tony) Furse, at the time Director of Creative Strategies Pty Limited, to the Australian Commissioner of Patents, for three inventions of his relating to electronic musical instruments, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 1973</p> <p>These patent applications are for a 'Digital Complex Sound Spectrum Synthesiser', 'A Digitally Controlled Pitch Generator for Electronic Musical Instruments' and 'A Musical Instrument Keyboard Digitiser/Encoder'.</p>
Arrangement:	Chronological
Dimensions:	
Box Number:	1

Series Title:

Item Number	Item Title	Box
96/382/2-2/1	Patent application No. PB 5660/7, photocopy, Commonwealth Government, for "Digital Complex Sound Spectrum Synthesiser", invented by Tony Furse, Sydney, New South Wales, Australia, 8 November 1973 At the time Tony Furse was Director of Creative Strategies Pty Limited.	1
96/382/2-2/2	Patent Application No. PB 5964/73, photocopy, for 'A Digitally Controlled Pitch Generator for Electronic Musical Instruments' invented by Anthony Gordon (Tony) Furse, Tony Furse, Sydney, New South Wales, Australia, 3 December 1973 At the time Tony Furse was Director of Creative Strategies Pty Limited.	
96/382/2-2/3	Patent Application No. PB 5965/73, photocopy, for 'A Musical Instrument Keyboard Digitiser/Encoder' invented by Anthony Gordon (Tony) Furse, Sydney, New South Wales, Australia, 3 December 1973 At the time Tony Furse was Director of Creative Strategies Pty Limited.	1

TONY FURSE ARCHIVE COLLECTION

96/382/2-3

Registration Number:	96/382/2-3
Series Title:	Correspondence
Date Range:	1973-1990
Physical Characteristics:	Loose papers with handwritten, typed and printed information
Description:	<p>Correspondence, Tony Furse, Sydney, New South Wales, Australia, Oct 1973- May 1990</p> <p>This is correspondence between Tony Furse and a number of individuals, institutions and organisations concerning the funding, development, marketing and promotion of his electronic music inventions - the QASAR I, QASAR II, QASAR M8 (Multimode 8) and QASAR Polyphon 8 synthesizers, and (along with Fairlight) the CMI (Computer Musical Instrument).</p> <p>Correspondence with the Australian Council for the Arts (from May 1975 the Australia Council) deals mainly with Furse's grant applications and ongoing reporting as part of the grant acquittal process - see also 96/382/2-5 for copies of reports mentioned in the letters. Other matters include Furse's participation in the Council's Young Composers' Training Scheme.</p> <p>Furse's correspondence with educational institutions such as the University of Adelaide's Music Department, the State Conservatorium of Music (Sydney) and the Canberra School of Music covers such matters as requests for demonstrations, performances and advice on Furse's electronic musical instruments - in the case of the Canberra School of Music, ongoing correspondence between Furse and composer Don Banks (at one stage a member of the Australian Council for the Arts' Music Board), who was head of the School's department of composition studies up to 1977, concerns the setting up of the School's electronic music studio and its purchase of the Qasar Multimode 8 synthesiser from Furse.</p> <p>Some letters are to and from Furse in his capacity as Manager and then Director of Creative Strategies Pty Ltd, the company he formed in early 1972 to manufacture and distribute his range of electronic musical instruments based on a computerised synthesiser. Correspondence between Creative Strategies and the Australian finance industry and electronics and musical firms is largely to do with business proposals sent in a bid to secure financial backing or sales. Letters are also from, and addressed to, David Bross, when he was Director of the Company.</p> <p>Correspondence also covers Furse's participation in the ABC's (Australian Broadcasting Commission) 'All About Music' programme (1974), the 'Australia 75' Festival of Creative Arts and Sciences in Canberra (1975) and the AMC's Australian National Composers' Conference with his lecture and demonstration, the 'Qasar to Fairlight' story, given with composer Robert Douglas at Sydney's Powerhouse Museum (1988). Attachments which are referred to by Furse on a fax sheet (dated 4 May 1990) as having been sent to Anna Cater prior to the filming of an interview with him for A Beyond International Group and Discovery Channel co-production 'Invention' are 96/382/2-5/19 and 96/382/2-5/20.</p>
Arrangement:	Chronological
Dimensions:	
Box Number:	1

Series Title:

Item Number	Item Title	Box
96/382/2-3/1	<p>Letter, from Don Banks of Canberra School of Music to Tony Furse, Australia, 15 November 1973</p> <p>Distinguished Australian composer Don Banks, who was appointed Head of Composition and Electronic Music Studies at the Canberra School of Music in October 1973, was also responsible for the setting up of its Electronic Music studio. It was in this capacity that he came into contact with Tony Furse, purchasing Furse's M8 synthesiser for the School and becoming a mentor to Furse in his electronic music work.</p>	

TONY FURSE ARCHIVE COLLECTION

96/382/2-4

Registration Number:	96/382/2-4
Series Title:	Circuit Diagrams
Date Range:	1974-1979
Physical Characteristics:	A3 sized circuit diagrams (some with attached pages) in the form of tracing paper, diazo prints and photocopies, with handwritten or printed information and annotations in pencil, pen and texta.
Description:	<p>Circuit Diagrams, pencil on tracing paper, diazo prints and photocopies, some with annotations, for QASAR synthesisers invented by Tony Furse, Tony Furse, Sydney, New South Wales, Australia, 1974 - 1979</p> <p>These are circuit diagrams for the QASAR MKI and QASAR II synthesisers (96/382/2-4/1:2) and the QASAR M8 (Multimode 8) synthesiser, which were invented by Tony Furse. Also here are Block diagrams for the QASAR II (96/382/2-4/1/12, 96/382/2-4/2/8), QASAR M8 (96/382/2-4/4) and the QASAR Polyphon 8, Furse's eight voice synthesiser (96/382/2-4/3). Included among the QASAR Multimode 8 circuit diagrams are drawings for the QASAR QDOS System (96/382/2-4/8/15:16).</p> <p>96/382/2-4/11/1:7 are circuit diagrams for QASAR Systems 'Intellegent (sic) Keyboard Unit' and 'Double Density Floppy Disk Controller'.</p> <p>The diazo prints and photocopied diagrams, most with revisions in pencil and pen (made between 1974 and 1975), appear to be working drawings.</p> <p>See also 96/382/2-7/10 for more copies of QASAR Multimode 8 circuit diagrams.</p>
Arrangement:	According to format and then roughly by drawing number.
Dimensions:	
Box Number:	F1, F2

Series Title:

Item Number	Item Title	Box
96/382/2-4/1	<p>Circuit Diagrams, pencil on tracing paper, for QASAR MK1 and QASAR II synthesisers, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 1974 □ 1975</p> <p>These are circuit diagrams, some with revisions, for the QASAR I and QASAR II synthesisers, which were invented by Tony Furse. The drawings and revisions are by 'AGF' Anthony Gordon (Tony) Furse. These drawings (from which diazo prints were made 96/382/2-4/2/1:10) have incorporated a number of revisions, made in 1974 and 1975.</p> <p>A number of these drawings with the last two numbers '01' appear to have been renumbered - on the diazo prints, which were taken from these drawings, the final two numbers for the corresponding drawings are '00'.</p> <p>Also included here are block diagrams for the QASAR II synthesiser (96/382/2-4/1/12:13).</p> <p>Creative Strategies Pty Ltd was the company formed by Tony Furse in early 1972 to manufacture and distribute his range of electronic musical instruments based on a computerised synthesiser.</p>	F1
96/382/2-4/1/1	<p>Circuit Diagram, pencil on tracing paper, titled QASAR MK1 Keyboard Logic 1, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 1 February 1974</p> <p>Drawing No. Q1/001/01. Revisions to the diagram are dated 23/3/74.</p>	F1
96/382/2-4/1/2	<p>Circuit Diagram, pencil on tracing paper, titled QASAR MK1 Keyboard Wiring, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 1 February 1974</p> <p>Drawing No. Q1/002/01. Revisions to the diagram are dated 23/3/74.</p>	F1
96/382/2-4/1/3	<p>Circuit Diagram, pencil on tracing paper, titled QASAR MK1 Keyboard Logic 2, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 5 February 1974</p> <p>Drawing No. Q1/003/01. Revisions to the diagram are dated 22/3/74.</p>	F1
96/382/2-4/1/4	<p>Circuit Diagram, pencil on tracing paper, titled QASAR Keyboard ROM Programming & Octave Designation, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 7 February 1974</p> <p>Drawing No. Q1/004/00.</p>	F1
96/382/2-4/1/5	<p>Circuit diagram, pencil on tracing paper, titled QASAR MK1 Pitch & Waveform Generator Logic 1, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 9 February 1974</p> <p>Drawing No. Q1/005/01. Revisions to the diagram are dated 22 March 1974.</p>	F1
96/382/2-4/1/6	<p>Circuit diagram, pencil on tracing paper, titled QASAR MK1 Pitch & Waveform Generator Logic 2, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 11 February 1974</p> <p>Drawing No. Q1/006/01. dated 11 February 1974, checked 22 March 1974.</p>	F1
96/382/2-4/1/7	<p>Circuit diagram, pencil on tracing paper, titled QASAR MK1 Waveform Generator Panel Wiring, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 12 February 1974</p> <p>Drawing No. Q1/007/01. Revisions to the diagram are dated 22 March 1974.</p>	F1
96/382/2-4/1/8	<p>Circuit diagram, pencil on tracing paper, titled QASAR II Contour Generator Logic, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 18 February 1974</p> <p>Drawing No. Q1/008/01. Revisions to the diagram are dated 5 February 1974.</p>	F1
96/382/2-4/1/9	<p>Circuit diagram, pencil on tracing paper, titled QASAR MK1 Glissando Logic 1,</p>	F1

Item Number	Item Title	Box
	Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 19 February 1974	
	Drawing No. Q1/009/01. Revisions to the diagram are dated 23 March 1974.	
96/382/2-4/1/10	Circuit diagram, pencil on tracing paper, titled QASAR II Filter (Low Pass), Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 19 February, 1975	F1
	Drawing no. Q1/010/00	
96/382/2-4/1/11	Circuit diagram, pencil on tracing paper, titled QASAR II Power Supply, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 19 February 1975	F1
	Drawing no. Q1/011/00.	
96/382/2-4/1/12	Block diagram, pencil on tracing paper, titled QASAR II Block Diagram (Sheet 1 of 2), Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 18 February 1974	F1
	Drawing No. Q1 100-01. Revisions to the diagram are dated 25 July '54 (sic). See also 96/382/2-5/6 report titled 'QASAR II' which includes a description of its block diagram.	
96/382/2-4/1/13	Block diagram, pencil on tracing paper, titled QASAR II Block Diagram (Sheet 2 of 2), Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 18 February 1974	F1
	Drawing No. Q1 101-00.	
96/382/2-4/1/14	Circuit diagram, pencil on tracing paper, titled QASAR II Control Panel Legends, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 22 January 1975	F1
	Drawing no. QII A001-00.	
96/382/2-4/1/15	Circuit diagram, pencil on tracing paper, titled QASAR II Miscellaneous Artwork, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 1 February 1975	F1
	Drawing no. QII A002-01 with revisions dated 3 February 1975.	
96/382/2-4/1/16	Circuit diagram, pencil on tracing paper, titled QASAR II Keyboard Control Panel, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 22 January 1975	F1
	Drawing no. QII M001-00.	
96/382/2-4/1/17	Circuit diagram, pencil on tracing paper, titled QASAR II Miscellaneous Metalwork, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 1 February 1975	F1
	Drawing no. QII M002-00.	
96/382/2-4/2	Circuit Diagrams, diazo prints, with pen and pencil annotations, for QASAR MK1 and QASAR II synthesisers, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 1974-1975	F1
	These are circuit diagrams, for the QASAR I and QASAR II synthesisers, which were invented by Tony Furse. The drawings and revisions are by 'AGF' Anthony Gordon (Tony) Furse. Most of these diazo prints (made from original pencil drawings on tracing paper - see 96/382/2-4/1/1:17) have been annotated in pencil and pen and appear to be working drawings. Also here are block diagrams for the QASAR II synthesiser (96/382/2-4/2/8).	
	Creative Strategies Pty Ltd was the company formed by Tony Furse in early 1972 to manufacture and distribute his range of electronic musical instruments based on a computerised synthesiser.	
96/382/2-4/2/1	Circuit Diagram, annotated diazo print, titled QASAR MK1 Keyboard Logic 1, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 1 February 1974	F1
	Drawing No. Q1/001/00. Revisions to the diagram are in pencil and red, blue and black pen.	

Item Number	Item Title	Box
96/382/2-4/2/2	<p>Circuit Diagram, annotated diazo print, with attachments (2), titled QASAR MK1 Keyboard Logic 2, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 5 February 1974</p> <p>Drawing No. Q1/003/00. Revisions to the diagram are in pencil and red, blue and black pen. Two small pages with pencil diagrams are attached.</p>	F1
96/382/2-4/2/3	<p>Circuit Diagram, annotated diazo print, titled QASAR Keyboard ROM Programming & Octave Designation, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 7 February 1974</p> <p>Drawing No. Q1/004/00. The diagram is annotated in pencil and red, blue and black pen.</p>	F1
96/382/2-4/2/4	<p>Circuit diagram, annotated diazo print, with attachments (2), titled QASAR MK1 Pitch & Waveform Generator Logic 1, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 9 February 1974</p> <p>Drawing No. Q1/005/00. The diagram is annotated in pencil and red, blue and black pen. Two small pages with rough handdrawn diagrams in pencil and pen are attached to the circuit diagram.</p>	F1
96/382/2-4/2/5	<p>Circuit diagram, annotated diazo print, titled QASAR MK1 Pitch & Waveform Generator Logic 2, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 11 February 1974</p> <p>Drawing No. Q1/006/00 dated. Annotations to the diagram are in pencil and red, blue and black pen.</p>	F1
96/382/2-4/2/6	<p>Circuit diagram, annotated diazo print, with attachment, titled QASAR MK1 Waveform Generator Panel Wiring, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 12 February 1974</p> <p>Drawing No. Q1/007/00. Annotations to the diagram are in pencil and blue pen. A small page titled 'Reverb & Phones AMPS' with pencil diagrams is attached to the diagram.</p>	F1
96/382/2-4/2/7	<p>Circuit diagram, annotated diazo print, with attachment, titled QASAR MK1 Glissando Logic 1, Tony Furse, Creative Strategies P/L, Sydney, New South Wales, Australia, 19 February 1974</p> <p>Drawing No. Q1/009/00. Annotations to the diagram are in pencil and blue and black pen. An exercise book page with a pencil diagram is attached to the circuit diagram.</p>	F1
96/382/2-4/2/8	<p>Block diagram, annotated diazo print, with attachment (1), titled QASAR II Block Diagram (Sheet 1 of 2), Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 18 February 1974</p> <p>Drawing no. Q1 100-01 with revisions in red pen dated 21 July 1974. Attached is a diazo print, Drawing no.Q1 101-00, titled QASAR II Block Diagram (Sheet 2 of 2) which is also annotated in red pen. These drawings were originally stapled together.</p>	F1
96/382/2-4/2/9	<p>Circuit diagram, annotated diazo print, with attachments (3), titled QASAR II Control Panel Legends, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, January- February 1975</p> <p>Drawing no. QII A001-00 annotated in pencil, blue pen and printed numbering.</p> <p>Attached are 2 diazo prints, Drawing nos. QII A002-01, titled QASAR II Miscellaneous Artwork, dated 1 February 1975 (with revisions in pencil and black pen dated 3 February 1975) and QII M002-00, titled Miscellaneous Metalwork, dated 1 February 1975. Also attached is a piece of cardboard with a printed section of the control panel's artwork. These attachments were originally joined by paperclip.</p>	F1
96/382/2-4/2/10	<p>Circuit diagram, diazo print, titled QASAR II Keyboard Control Panel, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 22 January 1975</p> <p>This is drawing no. QII M001-01.</p>	F1
96/382/2-4/3	<p>Block diagram, diazo print, titled QASAR Polyphon 8, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 18 May 1974</p>	F2

Item Number	Item Title	Box
	Drawing No.QP8 100-00. See also 96/382/2-5/8, report titled QASAR Polyphon 8, for a general description of Furse's eight voice synthesiser.	
96/382/2-4/4	Block diagram, pencil on tracing paper, titled QASAR M8 Block Diagram (1 of 1), Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, 14 July 1974	F2
	Drawing No.QM8 100-00. See also 96/382/2-5/6 report titled 'QASAR M8 Description of Block Diagram'.	
96/382/2-4/5	Circuit diagrams, diazo prints, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1975	F2
	Most of these diagrams are annotated in pencil and pen. Several are faded. These are circuit diagrams relating to the QASAR Multimode 8 synthesiser, which was invented by Tony Furse. (see also 96/382/2-4/4 for the QASAR M8 Block Diagram and 96/382/2-4/6:10 and 96/382/2-7/10 for more QASAR Multimode 8 Circuit Diagrams.)	
96/382/2-4/5/1	Circuit diagram, annotated diazo print, with attachment (1), titled Memory Interface Board 6800 Dual Processor Version, QASAR Multimode 8, Tony Furse, 30 November, 1975	F2
	Drawing no. QM8 001-01 with annotations in pencil and pen. (drawing is faded).	
	Attached is a diazo print, Drawing no. QM8 001-00 titled Memory Interface Board (slot 14) dated 6 July 1974. Written across this drawing in pen is 'Obsolete Interdata Computer'.	
96/382/2-4/5/2	Circuit diagram, annotated diazo print, titled Pitch Generator Module (slot 15), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, July □ August 1974	F2
	Drawing no. QM8 002-00 with annotations in pencil and pen.	
96/382/2-4/5/3	Circuit diagram, annotated diazo print, with attachment (1), titled Octave Divider Module (slot 16), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, July- August 1974	F2
	Drawing no. QM8 003-00 with annotations in pencil, pen and texta.	
	Attached is a photocopied circuit diagram, Drawing no.QM8 023-00 titled Decoding for Octave Divider (slot 16) (003), with pen and pencil annotations, dated 14 November 1974.	
96/382/2-4/5/4	Circuit diagram, annotated diazo print, titled Channel Assign & Mod Synch (slot 17), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 10 July 1974	F2
	Drawing no. QM8 004-00 with annotations in pencil and pen.	
96/382/2-4/5/5	Circuit diagram, annotated diazo print, titled Modulus Counters & WF Address MUX (slot 18), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 11 July 1974	F2
	Drawing no. QM8 005-00 with annotations in pencil and pen.	
96/382/2-4/5/6	Circuit diagram, annotated diazo print, with attachment (1), titled Memory Request & Address Computing Logic (slot 19) (sheet 1 of 2), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 7 August 1974	F2
	Drawing no.QM8 006-00 with pen and pencil annotations. Attached is a sheet of graph paper with a labelled pencil diagram headed 'Modification for Dual 6800 Processors'.	
96/382/2-4/5/7	Circuit diagram, annotated diazo print, titled Memory Request Detector & Address Computing Logic (slot 19) Sheet 2 of 2, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 9 August 1974	F2
	Drawing no. QM8 007-00 with annotations in pencil and pen.	
96/382/2-4/5/8	Circuit diagram, annotated diazo print, titled Offset Register High 4 Bits (slot 21), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 10 August 1974	F2
	Drawing no. QM8 008-00 with annotations in pen.	

Item Number	Item Title	Box
96/382/2-4/5/9	Circuit diagram, annotated diazo print, titled Offset Register Low Byte (slot 20), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 10 August 1974 Drawing no. QM8 009-00 with annotations in pen.	F2
96/382/2-4/5/10	Circuit diagram, annotated diazo print, titled Waveform Memory (1k) (slot 23) (sheet 2 of 2), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 12 August 1974 Drawing no. QM8 010-00 annotated in pencil.	F2
96/382/2-4/5/11	Circuit diagram, annotated diazo print, titled Waveform Memory (1k) (slot 23) (sheet 2 of 2), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 12 August 1974 Drawing no. QM8 010-00 annotated in pencil and pen.	F2
96/382/2-4/5/12	Circuit diagram, annotated diazo print, titled Waveform Generator & Modulator (slot 24), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 12 August 1974 Drawing no. QM8 012-00 with annotations in pencil and pen.	F2
96/382/2-4/5/13	Circuit diagram, annotated diazo print, titled Master Pitch & Octave Generator (slot 14), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 28 August, 1974 Drawing no. 013-00 with annotations in pencil and pen.	F2
96/382/2-4/5/14	Circuit diagram, annotated diazo print, titled Card Cage Power Supply & Extractor Fan Housing, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 13 September 1974 Drawing no. QM8 M001-00 with annotations in pencil and pen.	F2
96/382/2-4/5/15	Circuit diagram, annotated diazo print, with attachment (1), titled Card Cage Power Supply & Extractor Fan Housing, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 13 September 1974 Drawing no. QM8 M001-00 revised 26 September 1974 with annotations in red pen. Attached is a small page headed 'Heatsink brackets for WBF 002/4 Heatsink' with pencil diagrams annotated in pen.	F2
96/382/2-4/5/16	Circuit diagram, annotated diazo print, titled Audio Switch Matrix Board A (slot 33), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 21 September 1974 Drawing no. QM8 014-00 with annotations in pen.	F2
96/382/2-4/5/17	Circuit diagram, annotated diazo print, titled Audio Switch Matrix Board B (slot 34), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 21 September, 1974 Drawing no. QM8 015-00 with annotations in pen.	F2
96/382/2-4/5/18	Circuit diagram, annotated diazo print, titled Power Supply Regulators, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 29 September 1974 Drawing no. QM8 016-00. On the reverse of the circuit diagram is a pencil sketch headed 30A Regulator.	F2
96/382/2-4/5/19	Circuit diagram, annotated diazo print, titled DC Logic Supply, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 21 October 1974 Drawing no. QM8 017-00. On the reverse of the circuit diagram is a pencil diagram.	F2
96/382/2-4/5/20	Circuit diagram, diazo print, titled Loudness Profile Assignment Logic, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 22 October 1974 Drawing no. QM8 018-00.	F2
96/382/2-4/5/21	Circuit diagram, annotated diazo print, titled Loudness Vector Generators &	F2

Item Number	Item Title	Box
	Counters, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 10 November 1974	
	Drawing no. QM8 019-00 with annotations in pen.	
96/382/2-4/5/22	Circuit diagram, annotated diazo print, titled Loudness Vector Length Counters, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 10 November 1974	F2
	Drawing no. QM8 020-00 with annotations in pen.	
96/382/2-4/5/23	Circuit diagram, annotated diazo print, titled Latched Loudness Controls, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 13 November 1974	F2
	Drawing no. QM8 021-00 with pen and pencil annotations.	
96/382/2-4/5/24	Circuit diagram, annotated diazo print, titled Loudness Vector Slope Generators Board B, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 13 November 1974	F2
	Drawing no. QM8 022-00 with pen and pencil annotations.	
96/382/2-4/5/25	Circuit diagram, annotated diazo print, titled Loudness Vector Slope Generators Board A, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 14 November 1974	F2
	Drawing no. QM8 023-00 with pen and pencil annotations.	
96/382/2-4/5/26	Circuit diagram, annotated diazo print, titled Central Processor Module (sheet 1 of 3) Timing & Memory Control Logic, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 25 August 1975	F2
	Drawing no. QM8 026-00 with annotations in pencil and pen. The drawing is faded and unreadable in parts.	
96/382/2-4/5/27	Circuit diagram, annotated diazo print, titled Central Processor Module Timing, QASAR Multimode 8, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 30 August 1975	F2
	Drawing no. QM8 030-00 with annotations in pencil and pen. On the reverse of the circuit diagram is information in pencil headed 'PAGR F Debug etc'.	
96/382/2-4/5/28	Circuit diagram, annotated diazo print, titled Memory Interface Board 6800 Dual Processor Version, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 30 November 1975	F2
	Drawing no. QM8 001-01 with annotations in pencil.	
96/382/2-4/5/29	Circuit diagram, annotated diazo print, titled Central Processing System Control & Display Panel, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 9 November 1975	F2
	Drawing no. QM8 035-00 with annotations in pencil.	
96/382/2-4/6	Circuit diagrams, annotated photocopies, QASAR Multimode 8, drawings labelled 'Old', Tony Furse, Sydney, New South Wales, Australia, 1974□1975, 1977	F2
	Written at the top of these diagrams in blue pen is the word 'Old'. (see also 96/382/2-4/4 for the QASAR M8 Block Diagram and 96/382/2-4/5,7:10 and 96/382/2-7/10 for more QASAR Multimode 8 Circuit Diagrams.)	
96/382/2-4/6/1	Circuit diagram, annotated photocopy, titled Memory Interface Board 6800 Dual Processor Version, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 30 November 1975	F2
	Drawing no. QM8 001-01 with annotations in pencil, red and blue coloured pencil and blue pen. Written at the top of the circuit diagram in blue pen is 'Old'.	
96/382/2-4/6/2	Circuit diagram, annotated photocopy, with attachment (1), titled Memory Interface Board 6800 Dual Processor Version, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 30 November 1975	F2
	Drawing no. QM8 001-01 with annotations in pink pen and 'Old' written in blue pen at the top of the drawing.	
	Attached is a photocopied circuit diagram, Drawing no. QM8 013-00 titled Master	

Item Number	Item Title	Box
	Pitch & Octave Generator, QASAR Multimode 8, dated 28 August 1974 with annotations in pink pen. Written at the top of this circuit diagram in blue pen is 'Old'.	
96/382/2-4/6/3	Circuit diagram, annotated photocopy, titled Memory Request & Address Computing Logic (slot 19) (sheet 1 of 2), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 7 August 1974	F2
	Drawing no. QM8 006-00 with annotations in pencil and red coloured pencil. Written at the top of the circuit diagram in blue pen is 'Old'.	
96/382/2-4/6/4	Circuit diagram, annotated photocopy, titled Memory Request Detector & Address Computing Logic (slot 19) (sheet 2 of 2), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 9 August 1974	F2
	Drawing no. QM8 007-00 with annotations in red coloured pencil. Written at the top of the circuit diagram in blue pen is 'Old'.	
96/382/2-4/6/5	Circuit diagram, annotated photocopy, with attachment (1), titled Memory Request & Address Computing Logic (slot 22) (sheet 1 of 2), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 7 August 1974	F2
	Drawing no. QM8 006-00 with annotations in pink pen. Written at the top of the circuit diagram in blue pen is 'Old'.	
	Attached is a photocopied circuit diagram, Drawing No. QM8 007-00 titled Memory Request Detector & Address Computing Logic (slot 22) (sheet 2 of 2), QASAR Multimode 8 dated 9 August 1974 with annotations in pink pen. Written at the top of this circuit diagram in blue pen is 'Old'.	
96/382/2-4/6/6	Circuit diagram, annotated photocopy, titled Offset Register High 6 Bits (slot 21), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1977	F2
	Drawing no. QM8 008-00 drawn 10 August 1974 revised 10 March 1977 with annotations in black pen, pencil and red coloured pencil. Written at the top of the circuit diagram in blue pen 'Old'.	
96/382/2-4/6/7	Circuit diagram, annotated photocopy, titled Waveform Memory (1k) (slot 23) (sheet 1 of 2), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 12 August 1974	F2
	Drawing no. QM8 010-00 with annotations in blue and black pen and red pencil. Written at the top of the circuit diagram in blue pen is 'Old'.	
96/382/2-4/6/8	Circuit diagram, handdrawn in black pen and red coloured pencil, untitled, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977	F2
	This is similar to Drawing no. QM8 011-00 titled Waveform Memory (2k) which was the second part of QM8 010-00.	
	Later versions of QM8 010-00 and QM8 011-00 are among the circuit diagrams in the folder titled 'M8 Latest' (96/382/2-4/10/10). Written at the top of the circuit diagram in blue pen is 'Old'.	
96/382/2-4/6/9	Circuit diagram, annotated photocopy, titled Master Pitch & Octave Generator (slot 14), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 28 August 1974	F2
	Drawing no. QM8 013-00 with annotations in red pencil and blue pen. Written at the top of the circuit diagram in blue pen is 'Old'.	
96/382/2-4/6/10	Circuit diagram, annotated photocopy, with attachment (1), titled Light Pen Interface & Video Synch Logic, QASAR Multimode Eight, Tony Furse, Sydney, New South Wales, Australia, 30 March 1977	F2
	Drawing no. QM8. Written at the top of the circuit diagram in blue pen is 'Old'.	
	Attached is a photocopy of a different circuit diagram which is also Drawing no. QM8, also titled Light Pen Interface & Video Synch Logic and dated 30 March 1977. Written at the top of this circuit diagram in blue pen is 'Old'.	
96/382/2-4/7	Circuit diagrams, photocopies, QASAR Multimode 8 drawings labelled 'Obsolete', Tony Furse, Sydney, New South Wales, Australia, 1974- 1977	F2

Item Number	Item Title	Box
	Written across these circuit diagrams in pink text is 'Obsolete'. Originally drawn by AGF (Tony Furse) in 1974 most of these drawings were revised by 'DK' in July 1977. (see also 96/382/2-4/4 for the QASAR M8 Block Diagram and 96/382/2-4/5:6,8:10 and 96/382/2-7/10 for more QASAR Multimode 8 Circuit Diagrams.)	
96/382/2-4/7/1	Circuit diagram, annotated photocopy, titled Waveform Generator & Modulator (slot 24), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1977	F2
	Drawing no. QM8 012-00 drawn 12 August 1974 revised 28 July 1977. Written across this circuit diagram in pink text is 'Obsolete'.	
96/382/2-4/7/2	Circuit diagram, annotated photocopy, titled Audio Switch Matrix Board A (slot 33), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1977	F2
	Drawing no. QM8 014-00 drawn 21 September 1974 revised 28 July 1977. Written across this circuit diagram in pink text is 'Obsolete'.	
96/382/2-4/7/3	Circuit diagram, annotated photocopy, titled Audio Switch Matrix Board B (slot 34), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1977	F2
	Drawing no. QM8 015-00 drawn 21 September 1974 revised 28 July 1977. Written across this circuit diagram in pink text is 'Obsolete'.	
96/382/2-4/7/4	Circuit diagram, annotated photocopy, titled Loudness Vector Generators & Counters, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1977	F2
	Drawing no. QM8 019-00 drawn 10 November 1974 revised 29 July 1977. Written across this circuit diagram in pink text is 'Obsolete'.	
96/382/2-4/7/5	Circuit diagram, photocopy, titled Loudness Vector Length Counters, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1977	F2
	Drawing no. QM8 020-00 drawn 10 November 1974 revised 28 July 1977. Written across this circuit diagram in pink text is 'Obsolete' with 'File' written in red pen at the top.	
96/382/2-4/7/6	Circuit diagram, photocopy, titled Latched Loudness Controls, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1977	F2
	Drawing no. QM8 021-00 drawn 13 November 1974. Written across this circuit diagram in pink text is 'Obsolete'.	
96/382/2-4/7/7	Circuit diagram, photocopy, titled Loudness Vector Slope Generators Board B, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1977	F2
	Drawing no. QM8 022-00 drawn 13 November 1974 revised 29 July 1977. Written across this circuit diagram in pink text is 'Obsolete'.	
96/382/2-4/7/8	Circuit diagram, photocopy, titled Loudness Vector Slope Generators Board A, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1977	F2
	Drawing no. QM8 023-00 drawn 14 November 1974 revised 29 July 1977. Written at the top of this circuit diagram in pink text is 'Obsolete'.	
96/382/2-4/8	Circuit diagrams, photocopies, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1977	F2
	These are circuit diagrams relating to the QASAR M8 (QASAR Multimode 8) synthesiser invented by Tony Furse. Among these diagrams Drawing nos. QM8 031-04, QM8 032-04, QM8 033-04 and QM8 034-04 (96/382/2-4/8/15:16) are circuit diagrams relating to the QASAR QDOS System. (see also 96/382/2-4/4 for the QASAR M8 Block Diagram and 96/382/2-4/5:7,9:10 and 96/382/2-7/10 for more QASAR Multimode 8 Circuit Diagrams.)	
96/382/2-4/8/1	Circuit diagram, photocopy, titled Pitch Generator Module (Slot 15), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974 - 1977	F2
	Drawing no. QM8 001-00 drawn 8 July 1974 revised 16 August 1977.	

Item Number	Item Title	Box
96/382/2-4/8/2	Circuit diagram, annotated photocopy, titled Channel Assign & Mod Synch (slot 17), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 10 July 1974 Drawing no. QM8 004-00 with an annotation in red pen.	F2
96/382/2-4/8/3	Circuit diagram, annotated photocopy, titled Modulus Counters & WF Address MUX (slot 18), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 11 July 1974 Drawing no. QM8 005-00. Written at the top of this drawing in red pen is 'File'.	F2
96/382/2-4/8/4	Circuit diagram, annotated photocopy, titled Offset Register Low Byte (slot 20), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 10 August 1974 Drawing no. QM8 009-00. Written at the top of this drawing in red pen is 'Check'.	F2
96/382/2-4/8/5	Circuit diagram, annotated photocopy, titled Loudness Vector Generators & Counters, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1977 Drawing no. QM8 019-00 drawn 10 November 1974 revised 29 July 1977. Written at the top of this drawing in red pen is 'File'.	F2
96/382/2-4/8/6	Circuit diagram, annotated photocopy, titled Loudness Vector Generators & Counters, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974-1977 Drawing no. QM8 019-00 drawn 10 November 1974 revised 29 July 1977 with annotations in black pen. Written at the top of this drawing in black pen is 'P.C. Version'.	F2
96/382/2-4/8/7	Circuit diagram, photocopy, titled 16k Byte Memory Module sheet 2 of 2, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1975-1978 Drawing no. QM8 024-01 drawn 23 August 1975, revised 1976 and 23 February 1978.	F2
96/382/2-4/8/8	Circuit diagram, photocopy, titled 16k Byte Memory Module sheet 2 of 2, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1975-1978 Drawing no. QM8 024-02 drawn 23 August 1975, revised 1975 and 7 September 1977. Attached is a photocopy, Drawing No. QM8 25-01 titled 16k Byte Memory Module (sheet 2 of 2), QASAR Multimode 8, drawn 23 August 1975 revised 15 August 1976, with annotations in pencil.	F2
96/382/2-4/8/9	Circuit diagram, photocopy, titled 16k Byte Memory Module sheet 1 of 2, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1975-1977 Drawing no. QM8 025-02 drawn 23 August 1975, revised 1975 and 7 September 1977.	F2
96/382/2-4/8/10	Circuit diagram, annotated photocopy, with attachments (3), titled Central Processor Module sheet 1 of 3, Timing & Memory Control Logic, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1975-1977 Drawing no. QM8 026-00 drawn 25 August 1975, revised 15 September 1977 with annotations in pencil. Attached are photocopied Circuit Diagrams (3) : Drawing No. QM8 027-00 titled Central Processor Module (sheet 2 of 3) Clock Drivers, CPUs & Decoders, QASAR Multimode 8, drawn 27 August 1975 revised 15 September 1977; Drawing No. QM8 028-00 titled Central Processor Module (sheet 3 of 3) Bus Drivers & Interrupt Level MUX, QASAR Multimode 8, drawn 28 August 1975 revised 15 September 1977; Drawing No. QM8 031-01 titled Central Processor Module Interrupt Latch Clock Option, QASAR Multimode 8, drawn 25 October 1975 revised September 1977;	F2
96/382/2-4/8/11	Circuit diagram, photocopy, titled Central Processor Module sheet 1 of 3, Timing & Memory Control Logic, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1975-1977 Drawing no. QM8 026-00 drawn 25 August 1975, revised 15 September 1977.	F2

Item Number	Item Title	Box
96/382/2-4/8/12	Circuit diagram, photocopy, titled Central Processor Module (sheet 2 of 3), Clock Drivers, CPU's & Decoders, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1975-1977 Drawing no. QM8 027-00 drawn 25 August 1975, revised 15 September 1977.	F2
96/382/2-4/8/13	Circuit diagram, photocopy, titled Central Processor Module (sheet 3 of 3), Bus Drivers & Interrupt Level MUX, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1975-1977 Drawing no. QM8 028-00 drawn 28 August 1975, revised 15 September 1977.	F2
96/382/2-4/8/14	Circuit diagram, annotated photocopy, titled Central Processing Unit Pinouts, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, drawn 28 August 1975 Drawing no. QM8 029-00 with annotations in blue pen.	F2
96/382/2-4/8/15	Circuit diagram, photocopy, with attachments (3), titled Central Processor Control Module RAM/ROM/PROM Decoders & Refresh Logic, (sheet 1 of 4), QASAR QDOS System, Tony Furse, Sydney, New South Wales, Australia, 1975-1977 Drawing no. QM8 031-04 drawn 28 October 1975, revised 1976, 1977, 25 October 1977. Attached are 3 circuit diagrams (photocopies) : Drawing No. QM8 032-04 titled Central Processor Control Module PROM/ROM, ACIA, PIA Connections (sheet 2 of 4), QASAR QDOS System, 29 October 1975 revised 1976, 1977, 25 October 1977. Drawing No. QM8 033-04 titled Central Processor Control Module Terminal Interface & Manual Controls (sheet 3 of 4), QASAR QDOS System, 7 November 1975 revised 1976, 1977, 25 October 1977 (with pencil annotations) Drawing No. QM8 034-04 titled Central Processor Control Module Interrupt Priority Logic & Data Buffers (sheet 4 of 4), 2 January 1976, revised 1976, 16 September 1977.	F2
96/382/2-4/8/16	Circuit diagram, photocopy, with attachments (3), titled Central Processor Control Module RAM/ROM/PROM Decoders & Refresh Logic, (sheet 1 of 4), QASAR QDOS System, Tony Furse, Sydney, New South Wales, Australia, 1975-1977 Drawing no. QM8 031-04 drawn 28 October 1975, revised 1976, 1977, 25 October 1977. Attached are 3 circuit diagrams (photocopies) : Drawing No. QM8 032-04 titled Central Processor Control Module PROM/ROM, ACIA, PIA Connections (sheet 2 of 4), QASAR QDOS System, 1975 - 1977. Drawing No. QM8 033-04 titled Central Processor Control Module Terminal Interface & Manual Controls (sheet 3 of 4), QASAR QDOS System, 1975-1977 Drawing No. QM8 034-04 titled Central Processor Control Module Interrupt Priority Logic & Data Buffers (sheet 4 of 4), 1976-1977	F2
96/382/2-4/8/17	Circuit diagram, photocopy, titled Central Processing System Control & Display panel, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 9 November, 1975 Drawing no. QM8 036-01. (96/382/2-4/8/18 is a second copy of this drawing)	F2
96/382/2-4/8/18	Circuit diagram, photocopy, titled Central Processing System Control & Display panel, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 9 November, 1975 Drawing no. QM8 036-01. (96/382/2-4/8/17 is a second copy of this drawing)	F2
96/382/2-4/8/19	Circuit diagram, annotated photocopy, with attachment (1), titled Synthesiser Interrupt Priority Logic Loudness Vector, Loudness Zero, WFG Zero Crossing (sheet 1 of 2), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 9 December, 1975 Drawing no. QM8 036-00 with annotations in pencil, red coloured pencil and blue and black pen. At the top of the drawing in black pen is written 'Master'. Attached is Drawing no. QM8 037-00, photocopy, titled Synthesiser Interrupt Priority Logic Mask Latches and Address Decoders (sheet 2 of 2), QASAR Multimode 8, 4 August 1976 with annotations in pencil, red coloured pencil, and blue and black pen. At the top of the drawing in black pen is written 'Master'.	F2

Item Number	Item Title	Box
96/382/2-4/8/20	<p>Circuit diagram, annotated photocopy, with attachment (1), titled 32 Channel Timer (sheet 1 of 2), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1975-1976</p> <p>Drawing no.QM8 038-00 drawn 28 December 1975 revised 15 August 1976. At the top of the drawing in blue pen is written 'Original'.</p> <p>Attached is Drawing no.QM8 039-00, photocopy, titled 32 Channel Timer (sheet 2 of 2), QASAR Multimode 8, dated 8 January 1976.</p>	F2
96/382/2-4/8/21	<p>Circuit diagram, annotated photocopy, with attachments (3), titled Floppy Disk Controller/Formatter, sheet 1of 4, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 27 January 1977</p> <p>Drawing no. QM8. At the top of the drawing in blue pen is written 'Canberra'.</p> <p>Attached are 3 circuit diagrams, (photocopies): Drawing no. QM8 (with pencil annotations) titled Floppy Disk Controller/Formatter, sheet 2 of 4, QASAR Multimode 8, 1977 Drawing no. QM8 (with pencil annotations) titled Floppy Disk Controller/Formatter, sheet 3 of 4, 1977 Drawing no. QM8 titled Floppy Disk Controller/Formatter, sheet 4 of 4, 1977</p> <p>(See 96/382/2-4/8/22 for copies of these 4 drawings, one with slight variations. See also 96/382/2-4/6/10 for 2 further photocopies of circuit diagrams, also numbered QM8)</p>	F2
96/382/2-4/8/22	<p>Circuit diagram, photocopy, with attachments (3), titled Floppy Disk Controller/Formatter, sheet 1 of 4, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 27 January 1977</p> <p>Drawing no. QM8. Attached are 3 circuit diagrams, (photocopies): Drawing no. QM8 titled Floppy Disk Controller/Formatter, sheet 2 of 4, QASAR Multimode 8, 1977 Drawing no. QM8 titled Floppy Disk Controller/Formatter, sheet 3 of 4, QASAR Multimode 8, 1977 Drawing no. QM8 titled Floppy Disk Controller/Formatter, sheet 4 of 4, QASAR Multimode 8, 1977</p> <p>(See 96/382/2-4/8/21 for copies of these 4 drawings, one with slight variations. See also 96/382/2-4/6/10 for 2 more photocopies of circuit diagrams, also numbered QM8)</p>	F2
96/382/2-4/9	<p>Circuit diagram, pencil on tracing paper, titled Central Processor Control Module Interrupt Priority Logic & Data Bus Buffers (sheet 4 of 4), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1975-1976</p> <p>Drawing no. QM8 034-01 drawn 9 November 1975 revised 16 August 1976.</p>	F2
96/382/2-4/10	<p>Manila folder labelled 'M8 Latest' containing photocopies of QASAR Multimode 8 circuit diagrams with attachments, Tony Furse, Sydney, New South Wales, Australia, c.1978</p> <p>These are photocopies of QASAR Multimode 8 circuit diagrams, which were drawn or revised between 1974 and 1978, some with attached typed pages headed "M8 Synthesiser Motherboard Buss connection" with data relating to slot numbers 1 to 26 of the synthesiser.</p> <p>The circuit diagrams were originally drawn by 'AGF' (Tony Furse) between 1974 and 1976 with one drawing by 'DK' in 1978. Most have revisions made between 1977 and 1978 by 'AGF' (Tony Furse), 'KIR' (Kim Ryrie), 'DK' or 'CT'. (see also 96/382/2-4/4 for the QASAR M8 Block Diagram and 96/382/2-4/5:9 and 96/382/2-7/10 for more QASAR Multimode 8 Circuit Diagrams.)</p>	F2
96/382/2-4/10/1	<p>Circuit diagram, photocopy, with attachment (1), titled Memory Interface Board 6800 Dual Processor Version, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978</p> <p>Drawing no.QM8 001-01. Attached is Drawing no. QM8 013-00 titled Master Pitch & Octave Generator, (photocopy).</p>	F2
96/382/2-4/10/2	<p>Circuit diagram, photocopy, with attachment (1), titled Pitch Generator Module (slot 26), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia,</p>	F2

Item Number	Item Title	Box
	1974-1978	
	Drawing No. QM8 002-00. Attached is a page (photocopy) with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 26 Board Q-002.	
96/382/2-4/10/3	Circuit diagram, photocopy, with attachment (1), titled Octave Divider Module (slot 25), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 8 July 1974	F2
	Drawing no. QM8 003-00. Attached is a page with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 25 Board Q-003.	
96/382/2-4/10/4	Circuit diagram, photocopy, with attachment (1), titled Channel Assign & Mod Synch (slot 24), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, 1974	F2
	Drawing no. QM8 004-00. Attached is a page with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 24 Board Q-004.	
96/382/2-4/10/5	Circuit diagram, photocopy, with attachment (1), titled Modulus Counters & WF Address MUX (slot 23), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 005-00. Attached is a page with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 23 Board Q-005.	
96/382/2-4/10/6	Circuit diagram, photocopy, with attachment (1), titled Modulus Counters & WF Address MUX (slot 23), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 006-00. Attached are: Circuit diagram (photocopy) Drawing no. QM8 007-00 titled Memory Request Detector & Address Computing Logic (slot 22) (sheet 2 of 2) and Pages (2), photocopies with typed data, headed M8 Synthesiser Motherboard Buss Connection Slot 22A Board Q-006 and M8 Synthesiser Motherboard Buss Connection Slot 22B Board Q-006.	
96/382/2-4/10/7	Circuit diagram, photocopy, with attachment (1), titled Offset Register High 6 Bits (slot 21), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 008-00. Attached is a page with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 21 Board Q-008.	
96/382/2-4/10/8	Circuit diagram, photocopy, with attachment (1), titled Offset Register Low Byte (slot 20), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 009-00. Attached is a page with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 20 Board Q-009.	
96/382/2-4/10/9	Page, photocopy, with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 19 Board NYU, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 010-00. Attached are: Circuit diagram (photocopy), Drawing no. QM8 011-00 titled Waveform Memory (2k) (sheet 2 of 2) and Page with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 18 Board Q-010.	
96/382/2-4/10/10	Circuit diagram, photocopy, with attachments (2), titled Waveform Memory (2k) (slot 18) (sheet 1 of 2), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 010-00. Attached are: Circuit diagram (photocopy), Drawing no. QM8 011-00 titled Waveform Memory (2k) (sheet 2 of 2) and Page with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 18 Board Q-010.	
96/382/2-4/10/11	Circuit diagram, photocopy, with attachment (1), titled Waveform Generator Modulator (slot 17), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2

Item Number	Item Title	Box
	Drawing No. QM8 012-00. Attached is a page (photocopy) with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 17 Board Q-012.	
96/382/2-4/10/12	Circuit diagram, photocopy, with attachment (1), titled Audio Switch Matrix Board A (slot 2), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 014-00. Attached is a page (photocopy) with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 2 Board Q-014.	
96/382/2-4/10/13	Page, photocopy with typed data, with attachments (6), headed M8 Synthesiser Motherboard Buss Connection Slot 3 Board NYU, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Attached are pages (6), (photocopies) headed: M8 Synthesiser Motherboard Buss Connection Slot 4 Board NYU; M8 Synthesiser Motherboard Buss Connection Slot 5 Board NYU; M8 Synthesiser Motherboard Buss Connection Slot 6 Board NYU; M8 Synthesiser Motherboard Buss Connection Slot 7 Board NYU; M8 Synthesiser Motherboard Buss Connection Slot 8 Board NYU; M8 Synthesiser Motherboard Buss Connection Slot 9 Board NYU.	
96/382/2-4/10/14	Circuit diagram, photocopy, with attachment (1), titled Audio Switch Matrix Board B (slot 1), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 015-00. Attached is a page (photocopy) with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 1 Board Q-015.	
96/382/2-4/10/15	Circuit diagram, photocopy, with attachment (1), titled Loudness Profile Assignment Logic (slot 16), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 018-00. Attached is a page (photocopy) with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 16 Board Q-018.	
96/382/2-4/10/16	Circuit diagram, photocopy, with attachment (1), titled Loudness Vector Generators & Counters (slot 14), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 019-00. Attached is a page (photocopy) with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 14 Board Q-019.	
96/382/2-4/10/17	Circuit diagram, photocopy, with attachment (1), titled Loudness Vector Length Counters (slot 13), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 020-00. Attached is a page (photocopy) with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 13 Board Q-020.	
96/382/2-4/10/18	Circuit diagram, photocopy, with attachment (1), titled Latched Loudness Controls (slot 15), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 021-00. Attached is a page (photocopy) with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 15 Board Q-021.	
96/382/2-4/10/19	Circuit diagram, photocopy, with attachment (1), titled Loudness Vector Slope Generators Board B (slot 10), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 022-00. Attached is a page (photocopy) with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 10 Board Q-022.	
96/382/2-4/10/20	Circuit diagram, photocopy, with attachment (1), titled Loudness Vector Slope Generators Board A (slot 11), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978	F2
	Drawing no. QM8 023-00.	

Item Number	Item Title	Box
96/382/2-4/10/21	Attached is a page (photocopy) with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 11 Board Q-023.	F2
96/382/2-4/11	<p>Circuit diagram, photocopy, with attachments (2), titled Sythesiser Interrupt Priority Logic Loudness Vector, Loudness Zero, WFG Zero Crossing (slot 12) (sheet 1 of 2), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1978</p> <p>Drawing no. QM8 036-00. Attached are: Circuit diagram (photocopy) Drawing no. QM8 037-00 titled Synthesiser Interrupt Priority Logic (slot 12) Mask Latches and Address Decoders (sheet 2 of 2), and Page (photocopy) with typed data headed M8 Synthesiser Motherboard Buss Connection Slot 12 Board Q-037.</p>	F2
96/382/2-4/11/1	<p>Circuit Diagrams and a list, relating to the 'Intellegent Keyboard Unit' and 'Double Density Floppy Disk Controller' developed by Tony Furse, QASAR Systems, Sydney, New South Wales, Australia, 1978-1979</p> <p>These are 3 sets of QASAR Systems circuit diagrams relating to the 'Intellegent (sic) Keyboard Unit' and 3 sets of QASAR Systems circuit diagrams and a list relating to the 'Double Density Floppy Disk Controller'. All drawings are by AGF (Tony Furse). The circuit diagrams are made up of sets of original drawings in pencil on tracing paper, sets of photocopies of these drawings, and sets of photocopies of the drawings with annotations.</p> <p>Circuit diagrams relating to the 'Intellegent (sic) Keyboard Unit' (1978) comprise original pencil diagrams on tracing paper (4), photocopies of these original diagrams (4) and photocopies of the diagrams with annotations (4).</p> <p>The remaining circuit diagrams and the list relate to the 'Double Density Floppy Disk Controller' (1979) and comprise original pencil diagrams on tracing paper (5), photocopies of these original diagrams (5) and photocopies of these circuit diagrams with annotations (5) - a photocopied list headed 'Floppy Controller Parts' contains data relating to the Double Density Floppy Disk Controller circuit diagrams.</p>	F2
96/382/2-4/11/2	<p>Circuit diagram, pencil on tracing paper, with attachments (3), titled Intellegent Keyboard Unit Processor/ROM/Options (sheet 1 of 4), QASAR Systems (General), Tony Furse, Sydney, New South Wales, Australia, 24 April 1978</p> <p>Drawing no. IKB 001-00. Attached are 3 circuit diagrams, pencil on tracing paper : Drawing no. IKB 002-00 titled Intellegent Keyboard Unit 64 Key Matrix Assembly (sheet 2 of 4), QASAR Systems (General), 22 April, 1978 Drawing no. IKB 003-00 titled Intellegent Keyboard Unit Data Ports & Miscellaneous Logic (sheet 3 of 4), QASAR Systems (General), 24 April 1978 Drawing no. IKB 004-00 titled Intellegent Keyboard Unit (Memory Map) (sheet 4 of 4), QASAR Systems (General), 24 April 1978</p>	F2
96/382/2-4/11/3	<p>Circuit diagram, photocopy, with attachments (3), titled Intellegent Keyboard Unit Processor/ROM/Options (sheet 1 of 4), QASAR Systems (General), Tony Furse, Sydney, New South Wales, Australia, 24 April 1978</p> <p>Drawing no. IKB 001-00. Attached are 3 photocopied circuit diagrams : Drawing no. IKB 002-00 titled Intellegent Keyboard Unit 64 Key Matrix Assembly, QASAR Systems (General), 22 April, 1978 with annotations in black pen. Drawing no. IKB 003-00 titled Intellegent Keyboard Unit Data Ports & Miscellaneous Logic, QASAR Systems (General), 24 April 1978 with annotations</p>	F2

Item Number	Item Title	Box
	<p>in blue pen.</p> <p>Drawing no. IKB 004-00 titled Intellegent Keyboard Unit (Memory Map), QASAR Systems (General), 24 April 1978.</p>	
96/382/2-4/11/4	<p>Circuit diagram, pencil on tracing paper, with attachments (4), titled Double Density Floppy Disk Controller Data Bus Logic (1 of 5), QASAR Systems, Tony Furse, 21 February 1979</p> <p>Drawing no.QM8 FC3-00.</p> <p>Attached are 4 circuit diagrams, pencil on tracing paper :</p> <p>Drawing no. QM8 FC3-00 titled Double Density Floppy Controller Address Decode and F.D.C. Chip (2 of 5), QASAR Systems, 22 February 1979</p> <p>Drawing no. QM8 QFC3-00 titled Double Density Floppy Controller DMA Logic & Bus Control (3 of 5), QASAR Systems, 26 February 1979</p> <p>Drawing no. QM8 QFC3-00 titled Double Density Floppy Controller Write Precomp Logic & Clock (4 of 5), QASAR Systems, 23 February 1979</p> <p>Drawing no.QM8 QFC3-00 titled Double Density Floppy Controller Data Recovery Logic (5 of 5), QASAR Systems, 9 January 1979</p> <p>The 5 circuit diagrams 96/382/2-4/11/5 are copies of these diagrams. Circuit diagrams 96/382/2-4/11/6 are revised versions of these diagrams. 96/382/2-4/11/7, the list titled Floppy Controller Parts, contains data relating to these diagrams.</p>	F2
96/382/2-4/11/5	<p>Circuit diagram, photocopy, with attachments (4), titled Double Density Floppy Disk Controller Data Bus Logic (1 of 5), QASAR Systems, Tony Furse, Sydney, New South Wales, Australia, 21 February 1979</p> <p>Drawing no.QM8 FC3-00.</p> <p>Attached are 4 circuit diagrams, photocopies:</p> <p>Drawing no. QM8 FC3-00 titled Double Density Floppy Controller Address Decode and F.D.C. Chip (2 of 5), QASAR Systems, 22 February 1979</p> <p>Drawing no. QM8 QFC3-00 titled Double Density Floppy Controller DMA Logic & Bus Control (3 of 5), QASAR Systems, 26 February 1979</p> <p>Drawing no. QM8 QFC3-00 titled Double Density Floppy Controller Write Precomp Logic & Clock (4 of 5), QASAR Systems, 23 February 1979</p> <p>Drawing no.QM8 QFC3-00 titled Double Density Floppy Controller Data Recovery Logic (5 of 5), QASAR Systems, 9 January 1979</p> <p>These 5 circuit diagrams are copies of 96/382/2-4/11/4. Circuit diagrams 96/382/2-4/11/6 are revised versions of these diagrams. 96/382/2-4/11/7, the list titled Floppy Controller Parts, contains data relating to these diagrams.</p>	F2
96/382/2-4/11/6	<p>Circuit diagram, photocopy, with attachments (4), titled Double Density Floppy Disk Controller Data Bus Logic (1 of 5), QASAR Systems, Tony Furse, Sydney, New South Wales, Australia, 21 February 1979</p> <p>Drawing no.QM8 FC3-00.</p> <p>Attached are 4 circuit diagrams, photocopies:</p> <p>Drawing no. QM8 FC3-00 titled Double Density Floppy Controller Address Decode and F.D.C. Chip (2 of 5), QASAR Systems, 22 February 1979</p> <p>Drawing no. QM8 QFC3-00 titled Double Density Floppy Controller DMA Logic & Bus Control (3 of 5), QASAR Systems, 26 February 1979</p> <p>Drawing no. QM8 QFC3-00 titled Double Density Floppy Controller Write Precomp Logic & Clock (4 of 5), QASAR Systems, 23 February 1979</p> <p>Drawing no.QM8 QFC3-00 titled Double Density Floppy Controller Data Recovery Logic (5 of 5), QASAR Systems, 9 January 1979</p> <p>These 5 diagrams are revised versions of circuit diagrams 96/382/2-4/11/4:5. 96/382/2-4/7, the list titled Floppy Controller Parts, contains data relating to these diagrams.</p>	F2
96/382/2-4/11/7	<p>List, photocopy, titled Floppy Controller Parts, Tony Furse, Sydney, New South Wales, Australia, 1979</p> <p>This is a handwritten list with the catalogue numbers of the parts, and the quantity of each of these parts, used in the QASAR Systems Double Density Floppy Disk Controller.</p> <p>A column headed 'Parts' lists the catalogue numbers for the parts.</p> <p>Further columns titled 'Sheet 5', '4', '3', '2' and '1', corresponding with each of the 5 circuit diagrams numbered QM8 FC3-00 (see 96/382/2-4/11/4:6), list quantities next to each part number (these numbers also appear on the circuit diagrams).</p> <p>Two final columns are headed 'total' and 'spare'.</p>	F2

TONY FURSE ARCHIVE COLLECTION

96/382/2-5

Registration Number:	96/382/2-5
Series Title:	Reports, Proposals and Talks
Date Range:	1974-1990
Physical Characteristics:	Manilla folder containing typed, handwritten and photocopied documents.
Description:	<p>Manilla folder with the handwritten title 'Australia Council & Associated Events' containing typed transcripts and draft transcripts (20), some photocopied, some with handwritten annotations, Tony Furse, Sydney, New South Wales, Australia, 1974 - 1990</p> <p>These transcripts and draft transcripts were written by Furse in association with the funding, development and promotion of his electronic musical instruments or synthesisers and other aspects of computerised music with which he was involved. Most were submitted to the Australian Council for the Arts (from May 1975 the Australia Council) as part of the funding acquittal process and cover electronic instruments invented by Tony Furse including the QASAR I, QASAR II, QASAR M8 (Multimode 8), QASAR Polyphon 8 synthesizers, and (along with Fairlight) the CMI (Computer Musical Instrument). A report promoting the musical sequence programming system, MUSEQ, and a transcript of Furse's talk on the history of the QASAR and CMI electronic musical instruments given at the Australian National Composers' Conference held at the Powerhouse Museum in 1988, are also here. See also 96/382/2-3 for correspondence associated with the reports.</p>
Arrangement:	Chronological
Dimensions:	
Box Number:	1

Series Title:

Item Number	Item Title	Box
96/382/2-5/1	Report, draft, titled 'The QASAR Synthesiser' by Tony Furse, Sydney, Australia, c.1974 This typed report, with handwritten annotations and corrections, describes the design objectives and key features of Furse's Qasar synthesiser. In its finished form the report may have been an attachment to a grant application.	1
96/382/2-5/2	Report, draft, carbon copy, titled 'Report to the Australian Council for the Arts on Synthesiser Project by A.G. Furse', Anthony Gordon (Tony) Furse, Sydney, New South Wales, Australia, 26 July 1974 The final version of this report was submitted by Tony Furse to the Music Board of the Australian Council for the Arts as part of the funding acquittal process for the grant he received to develop a synthesiser. This report lists the 3 provisional patents received by Furse, performances to date using the Qasar I and parts of the Qasar II synthesisers and a brief overview of the future commercial viability of Furse's synthesisers, along with planned projects. Reference is also made to descriptions and block diagrams for 'QASAR II' (96/382/2-5/4), 'QASAR M8' and 'QASAR Polyphon 8' as being attached to the report. These are included separately among these reports/proposals with the exception of block diagrams for Qasar II which are drawing nos. Q1 100.00 and Q1 101.00 (96/382/2-4/1/12:13). (See also 96/382/2-3 for correspondence relating to the grant application and 96/382/2-2 for copies of the provisional patents mentioned).	1
96/382/2-5/3	Report, draft, photocopy, titled 'Report to the Australian Council for the Arts on Synthesiser Project by A.G. Furse', Anthony Gordon (Tony) Furse, Sydney, New South Wales, Australia, 26 July 1974 This is a copy of a report submitted by Tony Furse to the Music Board of the Australian Council for the Arts as part of the funding acquittal process for the grant he received to develop a synthesiser. This report lists the 3 provisional patents received by Furse, performances to date using the Qasar I and parts of the Qasar II synthesisers and a brief overview of the future commercial viability of Furse's synthesisers, along with planned projects. Reference is also made to descriptions and block diagrams for 'QASAR II', 'QASAR M8' and 'QASAR Polyphon 8' as being attached to the report. These are included separately among these reports/proposals with the exception of block diagrams for Qasar II which are drawing nos. Q1 100.00 and Q1 101.00 (96/382/2-4/1/12:13, 96/382/2-4/2/8). (See also 96/382/2-3 for correspondence relating to the grant application and 96/382/2-2 for copies of the provisional patents mentioned)	1
96/382/2-5/4	Report, typed, titled 'QASAR II', Tony Furse, Sydney, New South Wales, Australia, July 1974 This report, which was listed as an attachment to 'Report to the Australian Council for the Arts on Synthesiser Project by A.G. Furse' (96/382/4-3:4) contains a general description of the Qasar II synthesiser invented by Furse, with a description of its block diagram and a list and descriptions of the synthesiser's features. The block diagrams referred to are drawing nos. Q1 100.00 and Q1 101.00 (see 96/382/2-4/1/12:13, 96/382/2-4/2/8). (96/382/2-3 contains correspondence relating to the grant application and other references to the QASAR II synthesiser, which was sold to The Canberra School of Music).	1
96/382/2-5/5	Report, copy, (8 pages), titled 'QASAR Multimode 8 Synthesiser', Tony Furse, Sydney, New South Wales, Australia, July 1974 Listed as an attachment to 96/382/2-5/3:4 this report comprises a general description of the QASAR Multimode 8, with such information as 'current synthesiser techniques', the computerised synthesiser, software, hardware, the systems available, 'available options' with prices and 'programming languages and systems'.	1

Item Number	Item Title	Box
	See also 96/382/2-2 for correspondence relating to the grant application.	
96/382/2-5/6	Report, draft, (10 pages), titled 'QASAR M8 Description of Block Diagram', Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, July 1974	1
	Listed as an attachment to 'Report to the Australian Council for the Arts on Synthesiser Project by A.G. Furse' (96/382/5-2:3) this report describes the various components of the block diagram for the QASAR Multimode 8 Synthesiser. See also 96/382/2-5/7 and 96/382/2-4/4 for the QASAR M8 Block Diagram.	
	See also 96/382/2-2 for correspondence relating to the grant application.	
96/382/2-5/7	Block diagram, photocopy, titled 'QASAR M8 block diagram (1 of 1)', Creative Strategies Pty Ltd, Tony Furse, Sydney, New South Wales, Australia, 14 July 1974	1
	Drawing no. QM8 100-00. This block diagram is referred in reports titled 'Report to the Australian Council for the Arts on Synthesiser Project by A.G. Furse' (96/382/2-5/2:3) and 'QASAR M8 Description of Block Diagram' (96/382/2-5/6). See also 96/382/2-4/4 for the original block diagram on tracing paper.	
96/382/2-5/8	Report, photocopy, titled 'QASAR Polyphon 8', with an attached Block Diagram for the QASAR Polyphon 8, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, Australia, July 1974	1
	This report for Tony Furse's eight voice synthesiser, contains a general description of the synthesiser and its features. It is listed as an attachment to 'Report to the Australian Council for the Arts on Synthesiser Project by A.G. Furse' (96/382/2-5/2:3). The block diagram 'QASAR Polyphon 8' is a diazo print, drawing no. QP8 100-00 dated 18 May 1974.	
	96/382/2-5/9:11 are further copies of the report, the latter two are draft copies without an attached block diagram.	
96/382/2-5/9	Report, photocopy, titled 'QASAR Polyphon 8', with an attached Block Diagram for the QASAR Polyphon 8, Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, July 1974	1
	This is a draft report, with minor handwritten corrections, for Tony Furse's eight voice synthesiser, comprising a general description of the synthesiser and its features. It is listed as an attachment to 'Report to the Australian Council for the Arts on Synthesiser Project by A.G. Furse' (96/382/5-2:3).	
	96/382/2-5/8,10:11 are further copies of the report, the latter two without an attached block diagram.	
96/382/2-5/10	Report, typed, titled 'QASAR Polyphon 8', Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, July 1974	1
	This is a draft report for Tony Furse's eight voice synthesiser, comprising a general description of the synthesiser and its features. It is listed as an attachment to 'Report to the Australian Council for the Arts on Synthesiser Project by A.G. Furse' (96/382/5-2:3).	
	96/382/2-5/8:9, 11 are further copies of the report, the first two with an attached block diagram of the QASAR Polyphon 8.	
96/382/2-5/11	Report, typed, titled 'QASAR Polyphon 8', Tony Furse, Creative Strategies Pty Ltd, Sydney, New South Wales, July 1974	1
	This is a draft report for Tony Furse's eight voice synthesiser, comprising a general description of the synthesiser and its features. It is listed as an attachment to 'Report to the Australian Council for the Arts on Synthesiser Project by A.G. Furse' (96/382/5-2:3).	
	96/382/2-5/8:9,11 are further copies of the report, the first two with an attached block diagram of the QASAR Polyphon 8.	
96/382/2-5/12	Report, photocopy, made up of two sections titled 'MUSEQ 8 - A General Purpose Musical Sequence Programming System' (12pp) and 'Introduction to Museq Command Structure' (7pp), Tony Furse, Sydney, New South Wales, Australia, c.1975	1

Item Number	Item Title	Box
96/382/2-5/13	<p>MUSEQ was a polyphonic sequencer programming system for the QASAR M8 synthesiser. Information in these reports includes an overview of the various applications of MUSEQ including: uses of the QASAR M8 MUSEQ 8 combination for composers; the various applications of MUSEQ 8 software using 8 inch floppy disks, among them communication via the international User Group Library, programming musical sequences and command uses for the MUSEQ software system using 8 inch floppy disks.</p> <p>See also 96/382/2-5/15:16 transcripts of 'Report to Australia Council on Computer Synthesiser Project 22/2/74 to 16/2/78' for further background to Tony Furse's association with Motorola and the development of MUSEQ 8.</p> <p>Report, draft copy, titled 'Report to Australia Council on Computer Synthesiser Project 22/2/74 to 16/2/78' by Anthony (Tony) G. Furse, Sydney, New South Wales, Australia, 16 February 1978</p>	1
96/382/2-5/14	<p>96/382/2-5/14:15 are photocopies of the final version of the report.</p> <p>Report, photocopy, titled 'Report to Australia Council on Computer Synthesiser Project 22/2/74 to 16/2/78', by Anthony (Tony) G. Furse, Sydney, New South Wales, Australia, 20 February 1978</p> <p>This is a copy of a report submitted to the Australia Council by Tony Furse as part of the funding acquittal process for the grants he received from the Music Board of the Australian Council for the Arts (from May 1975 the Australia Council). Covering the period 1974 and 1978 it is a brief overview of the work he carried out during this period in developing computer synthesisers.</p> <p>In it Furse :</p> <p>Outlines his dealings with the American company, Motorola, in using their programme development system to develop his sequence playing system, MUSEQ-8.</p> <p>Describes his association with Don Banks of the Canberra School of Music which included the sale of the prototype QASAR M8 (Multimode) synthesiser to the School for use in its electronic music studio.</p> <p>Gives an account of the work he carried out in developing the CMI (Computer Musical Instrument) in association with Peter Vogel and Kim Ryrrie of Fairlight Instruments.</p>	1
96/382/2-5/15	<p>The documents listed as attachments are not with this report. 96/382/2-5/15 is another copy of this report.</p> <p>Report, photocopy, titled 'Report to Australia Council on Computer Synthesiser Project 22/2/74 to 16/2/78', by Anthony (Tony) G. Furse, Sydney, New South Wales, Australia, 20 February 1978</p> <p>This is a copy of a report submitted to the Australia Council by Tony Furse as part of the funding acquittal process for the grants he received from the Music Board of the Australian Council for the Arts (from May 1975 the Australia Council). Covering the period 1974 and 1978 it is a brief overview of the work he carried out during this period in developing computer synthesisers.</p> <p>In it Furse :</p> <ul style="list-style-type: none"> - Outlines his dealings with the American company, Motorola, in using their programme development system to develop his sequence playing system, MUSEQ-8. - Describes his association with Don Banks of the Canberra School of Music which included the sale of the prototype QASAR M8 (Multimode) synthesiser to the School for use in its electronic music studio. - Gives an account of the work he carried out in developing the CMI (Computer Musical Instrument) in association with Peter Vogel and Kim Ryrrie of Fairlight Instruments. 	1
96/382/2-5/16	<p>The documents listed as attachments are not with this report. 96/382/2-5/14 is another copy of this report.</p> <p>Funding proposal, photocopy, titled 'Dansatellite' on Digican 83 letterhead, Tony Furse, Sydney, New South Wales, Australia, 19 August 1983</p> <p>Described as 'The first global kinetically generated sound and movement performance to take place in three dimensional skyspace' the proposed project, involving the filming of aerial performance by skiers in Banff Canada with accompanying computer generated music from Australia using the Fairlight CMI, was to be under the artistic direction of Michael Harding in Canada with technical</p>	1

Item Number	Item Title	Box
	direction by Tony Furse in Australia.	
96/382/2-5/17	<p>Report, photocopy, containing information about 'Artbox', used by Tony Furse, Sydney, New South Wales, Australia, c.September 1983</p> <p>Invented by Gottfried Bach of I.P. Sharp Associates, 'Artbox' is described here as 'an intercontinental interactive electronic mailbox system designed to serve the communications needs of artists, art colleges galleries etc. as well as computer-communications buffs'</p>	1
96/382/2-5/18	<p>Lecture notes, (7 pages), typed, titled, 'Some History of the QASAR/CMI Electronic Musical Instruments', Tony Furse, Sydney, New South Wales, Australia, September 1988</p> <p>These are the notes for Furse's lecture and demonstration (with composer Robert Douglas) titled the 'Qasar to Fairlight' story, given at the AMC's (Australian National Composers') Conference in September 1988 at the Powerhouse Museum. Tony Furse combined biographical detail with background information to explain how his interest in electronic music, beginning in the 1950s with his invention of an electronic clarinet, eventually resulted in the invention of several QASAR synthesisers (the QASAR 1, QASAR II and QASAR M8 (Multimode 8)). This in turn led to his part in the development, with Fairlight, of the CMI (Computer Musical Instrument).</p> <p>A second photocopied version of this report (see 96/382/2-5/19) also has photocopies of photographs of the QASAR I, QASAR II and QASAR M8 (Multimode) synthesisers along with drawings for Furse's electronic clarinet and 'proto digital waveform generator' dating from 1958 and the 1960s respectively.</p>	1
96/382/2-5/19	<p>Report, photocopy, titled, 'Some History of the QASAR/CMI Electronic Musical Instruments', Tony Furse, Sydney, New South Wales, Australia, May 1990</p> <p>This report is a photocopied version of 96/382/2-5/18 (Furse's notes for a lecture and demonstration with composer Robert Douglas titled the 'Qasar to Fairlight' story, given at the AMC's Australian National Composers' Conference in September 1988 at the Powerhouse Museum). An additional 7 photocopied pages contain photographs of Furse's QASAR I, QASAR II and QASAR M8 (Multimode) synthesisers and drawings for his electronic clarinet and 'proto digital waveform generator' which date from 1958 and the late 1960s respectively.</p> <p>With 96/382/2-5/20 it was faxed as an attachment to a letter dated May 1990 to Anna Cater of the Beyond International Group (see 96/382/2-2) as background information for an interview with Furse to be filmed for a Beyond International Group and Discovery Channel co-production 'Invention'.</p>	1
96/382/2-5/20	<p>Transcript, photocopy, (8 pages) titled 'QASAR Multimode 8 Synthesiser', Tony Furse, Sydney, New South Wales, May 1990</p> <p>Originally used as notes for a paper given by Tony Furse at the Australian National University, Canberra, this transcript (annotated 'August 84 Paper to ANU' by Furse on its front page) and the report titled 'Some History of the QASAR/CMI Electronic Musical Instruments' (96/382/2-5/19) were faxed to Anna Cater of the Beyond International Group in May 1990 (see 96/382/2-2) as background information for an interview with Furse to be filmed for a Beyond International Group and Discovery Channel co-production 'Invention'.</p> <p>The wording of this transcript is the same as Furse's 1974 report titled 'QASAR Multimode 8 Synthesiser' (96/382/2-5/5).</p>	1

TONY FURSE ARCHIVE COLLECTION

96/382/2-6

Registration Number:	96/382/2-6
Series Title:	Draft documentation
Date Range:	1974-1977
Physical Characteristics:	Graph paper and computer paper with handwritten information in pen and pencil and a sheet of cardboard with handwritten information and 'glued on' printed lettering and numbering.
Description:	<p>Documentation, paper, cardboard, pencil, for the QASAR II synthesiser and the QASAR M8 synthesisers, Tony Furse, Sydney, New South Wales, Australia, 1974 - 1977</p> <p>This is handwritten data, specifications and sketches for the QASAR II synthesiser's keyboard control panel (including a cardboard mockup) and the QASAR (Multimode 8) M8 synthesiser's card cage, control panel and keyboard.</p> <p>The QASAR II and QASAR (Multimode 8) M8 synthesisers were invented by Tony Furse.</p>
Arrangement:	
Dimensions:	
Box Number:	1, F1

Series Title:

Item Number	Item Title	Box
96/382/2-6/1	<p>Computer paper (3), pencil on paper, headed 'Typesetting Legends QII A001-00', Tony Furse, Sydney, New South Wales, Australia, 1974-1975</p> <p>Written on printed '80 Column Punched Card Layout' computer stationery, this is data relating to the QASAR II synthesiser's control panel.</p> <p>See also Circuit Diagram, drawing no. QII A001-00 titled QASAR II Control Panel Legends. (96/382/2-4/2/9)</p>	1
96/382/2-6/2	<p>Computer paper, pencil, page headed 'Typesetting Legends QII A002-01', Tony Furse, Sydney, New South Wales, Australia, 1974-1975</p> <p>Written on printed '80 Column Punched Card Layout' computer stationery, this is data relating to the QASAR II control panel.</p> <p>See also Circuit Diagram, drawing no. QII A002-01 titled QASAR II Miscellaneous Artwork. (96/382/2-4/2/9)</p>	1
96/382/2-6/3	<p>Computer paper, pencil, page headed 'Graticles', Tony Furse, Sydney, New South Wales, Australia, 1974-1975</p> <p>Written on printed '80 Column Punched Card Layout' computer stationery, this page of data relates to the QASAR II control panel.</p> <p>See also Circuit Diagrams, drawing nos. QII A001-00 titled QASAR II Control Panel Legends and QII M001-00 titled 'Keyboard Control Panel'. (96/382/2-4/2/9:10)</p>	1
96/382/2-6/4	<p>Computer paper, pencil, page headed 'Rotary Switch Details', Tony Furse, Sydney, New South Wales, Australia, 1974-1975</p> <p>Written on printed '80 Column Punched Card Layout' computer stationery, this page of data relates to the QASAR II control panel.</p> <p>See also Circuit Diagrams, drawing nos. QII A001-00 titled QASAR II Control Panel Legends and QII M001-00 titled 'Keyboard Control Panel'. (96/382/2-4/2/9:10)</p>	1
96/382/2-6/5	<p>Mock-up of the QASAR II control panel, cardboard, paper, with an annotated coversheet, used by Tony Furse, Sydney, New South Wales, Australia, 1974-1975</p> <p>The sheet of cardboard, to which printed wording and numbers have been glued, is a draft version of the QASAR II Control Panel.</p> <p>A stamp on the coversheet with the printed wording 'ART, CHECK, O.K, W.D. No.' and 'EDMAN WILSON' has been initialled and numbered '2153'. Two pages of handwritten information have been stickytaped to the coversheet.</p> <p>See also Circuit Diagrams, drawing nos. QII A001-00 titled 'QASAR II Control Panel Legends', QII A002-01 titled 'QASAR II Miscellaneous Artwork', QII M001-00 titled 'Keyboard Control Panel' and QII M002-00 titled 'QASAR II Miscellaneous Metalwork' (96/382/2-4/2/9:10).</p>	F1
96/382/2-6/6	<p>Pages (8), pencil, paper, with handwritten data, diagrams and specifications for the QASAR M8 synthesiser, Tony Furse, Sydney, New South Wales, Australia, c.1974</p> <p>This is a page of graph paper headed 'Alloy For Airfilters' with handwritten data and a rough sketch of the front view of the Creative Strategies QASAR M8 (Multimode 8) mainframe with card cage assembly. Attached are exercise book pages (7) with rough pencil and pen diagrams, several with headings which include 'Power Supply Regulator', 'Heatsinks' and 'Ky board Cover Box'.</p>	1
96/382/2-6/7	<p>Pages (16), pencil and red pen, titled 'M8 Mechanical Stuff', with handwritten data, rough sketches and specifications, Tony Furse, Sydney, New South Wales, Australia, c1974-1977</p> <p>This data relates to the QASAR M8 (Multimode 8) synthesiser's mainframe, card cage, control panel and keyboard.</p>	1

Item Number	Item Title	Box
96/382/2-6/8	<p>Piece of cardboard with a pencil diagram on one side labelled 'End Plate Version 1 for Prototype', Tony Furse, Sydney, New South Wales, Australia, 1970s</p> <p>This diagram possibly relates to one of the QASAR synthesisers invented by Tony Furse.</p>	F1

TONY FURSE ARCHIVE COLLECTION

96/382/2-7

Registration Number:	96/382/2-7
Series Title:	Documentation and Schematics of M8 (QASAR Multimode 8) Hardware, Firmware and Software
Date Range:	c1975-1980
Physical Characteristics:	Vinyl wallet, computer printouts, printed brochures, A4 sized circuit diagrams (photocopied) and a handwritten letter. This material has been removed from the wallet and placed in archival folders.
Description:	<p>Vinyl wallet containing computer printouts, printed brochures, photocopied circuit diagrams and a letter relating to the documentation and schematics of hardware, firmware and software for the QASAR Multimode 8 synthesiser, Tony Furse, Sydney, New South Wales, Australia, 1976 - 1980</p> <p>This is documentation relating to the QASAR Multimode 8 synthesiser, which was invented by Tony Furse. Material comprises Motorola Microsystems User Group Library and QASAR Dual Processor Microcomputer System (Fairlight Instruments Pty Ltd) catalogues, annotated computer printouts, a letter and photocopies of circuit diagrams for the QASAR Multimode 8 synthesiser and the QASAR QDOS System.</p>
Arrangement:	By archivist
Dimensions:	
Box Number:	1,2

Series Title:

Item Number	Item Title	Box
96/382/2-7/1	<p>Zip-up wallet, blue vinyl, labelled 'Documentation and Schematics of M8 Hardware and some F/W S/W (the Actual M8 Box)', Tony Furse, Sydney, New South Wales, Australia, 1976 - 1980</p> <p>The labelled page, handwritten in texta and pen, is sticky taped to the front of the wallet. Beneath this page is a plastic pocket containing a small card onto which is printed 'M8'.</p>	2
96/382/2-7/2	<p>Catalogue (13 pages), photocopy, headed 'Motorola Microsystems User Group Library', used by Tony Furse, Sydney, New South Wales, Australia, c1975</p> <p>Contains typed information about the M6800 User Library available on MDOS Diskette or cassette listing the 125 programs available in the M6800 User Group Library.</p> <p>The Motorola Microsystems User Group Library contained example programmes for the Motorola 6800 microprocessors used in the Qasar M8 and later in the CMIs. It was used by Tony Furse and others as reference material when they were writing the software and firmware to run the synthesisers. According to Furse "nothing in it had a direct bearing on the synthesisers ...but it contained programming hints and tricks that helped formulate ways of writing and documenting their programmes".</p> <p>See also 96/382/2-10/1 for floppy disks with MDOS User Group programmes and 'Report to Australia Council on Computer Synthesiser Project 22/2/74 to 16/2/78' (96/382/2-5/14:15) for the background to Furse's association with Motorola.</p> <p>MDOS = Motorola Disk Operating System QASAR M8 = QASAR Multimode 8 synthesiser CMI = Computer Musical Instrument</p>	1
96/382/2-7/3	<p>Printed catalogue titled 'QASAR Dual Processor Microcomputer System' used by Tony Furse, Fairlight Instruments Pty Ltd, Rushcutters Bay, New South Wales, Australia, c.1976-1978</p> <p>This is a glossy catalogue containing looseleaf product leaflets for components making up the QASAR Dual Processor Microcomputer System. Leaflets feature a photograph of the component, its product number, a list of its features, operation information and specifications.</p>	1
96/382/2-7/4	<p>Computer printout, with annotations in pencil and pen, headed 'Page 001 PLAYIT.SA:1 NAM PLAYIT TTL FORMANT AND AMPLITUDE CONTROL LIST INTERPRETER' Tony Furse, Sydney, New South Wales, Australia, c.1974-1979</p> <p>Among the annotations near the top of the page is the wording 'waveform memory from E400 to E800'. The reverse of the page, headed 'E080 □ E08F Loudness Profile Vector Control Regs', comprises handwritten information in pencil.</p>	2
96/382/2-7/5	<p>Computer pages (2), pencil, paper, with numbered lists of data headed 'ROD' and 'DISK DRIVE FND', Tony Furse, Sydney, New South Wales, Australia, c.1975-1979</p>	1
96/382/2-7/6	<p>Computer printouts, (6) with headings in red texta, relating to the QASAR M8 synthesiser, Tony Furse, Sydney, New South Wales, Australia, c.1974-1979</p> <p>The QASAR Multimode 8 synthesiser was invented by Tony Furse.</p>	1
96/382/2-7/6/1	<p>Computer printout (1 page), headed 'PR1 INITIALISATION (Out of Date)' in red texta with annotations in pencil, Tony Furse, Sydney, New South Wales, Australia, c.1974-1979</p>	1
96/382/2-7/6/2	<p>Computer printout (2 pages), headed 'MU SEQ SOURCE FILE' in red texta, Tony Furse, Sydney, New South Wales, Australia, c.1975-1979</p>	1

Item Number	Item Title	Box
96/382/2-7/6/3	Computer printout (4 pages), headed 'MUSEQ DETAILS' in red texta, Tony Furse, Sydney, New South Wales, Australia, c.1974-1979 Near the top of the first page is printed 'MUSEQ: SEQUENCER FOR M8 MK.1'	1
96/382/2-7/6/4	Computer printout (10 pages), headed 'OSC. TEST' in red texta, Tony Furse, Sydney, New South Wales, Australia, c.1974-1979 At the top of the first page is printed 'Page 001 Mus Test Routine for Oscillator'.	1
96/382/2-7/6/5	Computer printout (28 pages), headed 'MONITOR ROM' in red texta, Tony Furse, Sydney, New South Wales, Australia, c.1977 At the top of the first page is printed 'Page 001 Montr Exbug Compatible Console Monitor Version #01 "Q" '. There are several pencil annotations on page 03.	1
96/382/2-7/6/6	Computer printout (26 pages), headed 'VIDEO ROM' in red texta, Tony Furse, Sydney, New South Wales, Australia, c.1979 The printout comprises two sets of data, one 14 pages, the other 12 pages. At the top of the first set's front page is printed 'Page 001 VRAMDR Character Generator ROM Data...'. Near the top of the second set is printed 'Page 001 Musak Obsolete Music Keyboard Interface (Kinny Style) 14-08-79'.	1
96/382/2-7/7	Computer printout (12 pages), headed 'QEQU' in red texta, Tony Furse, Sydney, New South Wales, Australia, 1977 Near the top of page 001 is printed 'QDOS VERSION 2.0 : SYSTEM EQUATE FILE : OCTOBER 30, 1977'	1
96/382/2-7/8	Computer printout (12 pages), headed 'MQEQU' in red texta, Tony Furse, Sydney, New South Wales, Australia, 1977 Near the top of page 001 is printed 'QDOS VERSION 2.0 : SYSTEM EQUATE FILE : OCTOBER 30, 1977'	1
96/382/2-7/9	Letter, pen on paper, to 'Wombat' from Peter, Tony Furse, Sydney, New South Wales, Australia, 10 May 1980 The letter contains technical advice. 'Wombat' is John Crocker of the Canberra School of Music. Peter is Peter Vogel of Fairlight Instruments. On the reverse of the letter is a small pencil sketch.	1
96/382/2-7/10	Circuit diagrams (43), photocopies, for the QASAR M8 synthesiser, Tony Furse, Sydney, New South Wales, Australia, c.1979 These are photocopies (A4 size) made from A3 sized QASAR M8 (Multimode 8) Synthesiser circuit diagrams which were originally drawn by AGF (Tony Furse) between 1974-7 [with one drawing by PV (Peter Vogel) dated 1979], some of the diagrams incorporating revisions made by Tony Furse, 'DK' or Peter Vogel between 1976 and 1979. These copies have been dated to c.1979 to reflect the approximate date that the photocopies were made. Several of these photocopies have also been annotated in pencil. See 96/382/2-4/4:10 for the original QASAR Multimode 8 circuit diagrams. Included among these diagrams are the QASAR M8's block diagram (96/382/2-7/10/1) and QASAR QDOS SYSTEM circuit diagrams (96/382/2-7/10/21:24).	1
96/382/2-7/10/1	Circuit diagram, photocopy, titled QASAR M8 Block Diagram, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing No. QM8 100-00. See 96/382/2-4/4 for the original 1974 block diagram.	1
96/382/2-7/10/2	Circuit diagram, photocopy, with pencil annotations, titled Pitch Generator Module (Slot 15), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing No. QM8 002	1
96/382/2-7/10/3	Circuit diagram, photocopy, titled Channel Assign and Mod Synch (Slot 17), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1

Item Number	Item Title	Box
	Drawing No. QM8 004	
96/382/2-7/10/4	Circuit diagram, photocopy, titled Waveform Generator and Modulator (Slot 24), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 014. Drawn 1974. Revised 1977.	
96/382/2-7/10/5	Circuit diagram, photocopy, with pencil annotations, titled Audio Switch Matrix Board A (Slot 33), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 014-00. Drawn 1974. Revised 1977.	
96/382/2-7/10/6	Circuit diagram, photocopy, titled Audio Switch Matrix Board B (Slot 34), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 015-00. Drawn 1974. Revised 1977.	
96/382/2-7/10/7	Circuit diagram, photocopy, titled Power Supply Regulators, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 016-00. Drawn 1974.	
96/382/2-7/10/8	Circuit diagram, photocopy, titled DC Logic Supply, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 017-00. Drawn 1974.	
96/382/2-7/10/9	Circuit diagram, photocopy, titled Loudness Vectors Generators & Counters, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 019-00. Drawn 1974.	
96/382/2-7/10/10	Circuit diagram, photocopy, titled Loudness Vector Length Counters, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 020□00. Drawn 1974. Revised 1977.	
96/382/2-7/10/11	Circuit diagram, photocopy, titled Latched Loudness Controls, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 021-00. Drawn 1974.	
96/382/2-7/10/12	Circuit diagram, photocopy, titled Loudness Vector Slope Generators Board B, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 022-00. Drawn 1974.	
96/382/2-7/10/13	Circuit diagram, photocopy, titled Loudness Vector Slope Generators Board B, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 022-00. Drawn 1974. Revised 1977.	
96/382/2-7/10/14	Circuit diagram, photocopy, titled Loudness Vector Slope Generators Board B, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 022-00. Drawn 1974. Revised 1977.	
96/382/2-7/10/15	Circuit diagram, photocopy, titled Loudness Vector Slope Generators Board A, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 023-00. Drawn 1974.	
96/382/2-7/10/16	Circuit diagram, photocopy, with pencil annotation, titled Central Processor Module (Sheet 1 of 3) Timing & Memory Control Logic slot 17, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 026-00. Drawn 1975. Revised 1977. The wording 'slot 17' is an annotation in pencil.	
96/382/2-7/10/17	Circuit diagram, photocopy, with pencil annotation, titled Central Processor Module (Sheet 2 of 3) Clock Drivers, CPU's & Decoders slot 17, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 027-00. Drawn 1975. Revised 1977. The wording 'slot 17' is an annotation in pencil.	
96/382/2-7/10/18	Circuit diagram, photocopy, with pencil annotation, titled Central Processor Module (Sheet 3 of 3) Bus Drivers & Interrupt Level Mux slot 17, QASAR	1

Item Number	Item Title	Box
	Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	
	Drawing No. QM8 028-00. Drawn 1975. Revised 1977. The wording 'slot 17' is an annotation in pencil.	
96/382/2-7/10/19	Circuit diagram, photocopy, titled Central Processor Module Timing, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 030-00. Drawn 1975.	
96/382/2-7/10/20	Circuit diagram, photocopy, titled Central Processor Module Interrupt Latch Clock Option, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 031-01. Drawn 1975. Revised 1977.	
96/382/2-7/10/21	Circuit diagram, photocopy, with pencil annotation, titled Central Processor Control Module Ram/Rom/Prom Decoders & Refresh Logic, sheet 1 of 4, slot 18, QASAR QDOS System, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 031-04. Drawn 1977. The wording 'slot 18' is an annotation in pencil.	
96/382/2-7/10/22	Circuit diagram, photocopy, with pencil annotation, titled Central Processor Control Module Prom/Rom, Acia, Pia Connections sheet 2 of 4, slot 18, QASAR QDOS System, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 032-04. Drawn 1975. Revised 1977. The wording 'slot 18' is an annotation in pencil.	
96/382/2-7/10/23	Circuit diagram, photocopy, with pencil annotation, titled Central Processor Control Module Terminal Interface & Manual Controls, sheet 3 of 4, slot 18, QASAR QDOS System, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 033-04. Drawn 1975. Revised 1977. The wording 'slot 18' is an annotation in pencil.	
96/382/2-7/10/24	Circuit diagram, photocopy, with pencil annotation, titled Central Processor Control Module Interrupt Priority Logic & Data Buffers (sheet 4 of 4) slot 18, QASAR QDOS System, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 034- 04. Drawn 1975. Revised 1977. The wording 'slot 18' is an annotation in pencil.	
96/382/2-7/10/25	Circuit diagram, photocopy, titled Central Processing System Control & Display Panel, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 036-01. Drawn 1975.	
96/382/2-7/10/26	Circuit diagram, photocopy, titled Central Processing System Control & Display Panel, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 036-01. Drawn 1975.	
96/382/2-7/10/27	Circuit diagram, photocopy, titled Synthesiser Interrupt Priority Logic Mask Latches and Address Decoders, Sheet 2 of 2, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 037-00. Drawn 1975. Revised 1977.	
96/382/2-7/10/28	Circuit diagram, photocopy, titled 20 AMP Regulator (5 volts), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 040-00. Drawn c.1976.	
96/382/2-7/10/29	Circuit diagram, photocopy, titled General Wiring AC/DC, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 042-00. Drawn 1976.	
96/382/2-7/10/30	Circuit diagram, photocopy, titled CRT Display Video Generation, Sheet 1 of 2, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979	1
	Drawing No. QM8 045-01. Drawn 1976. This drawing has been photocopied back to front from the original drawing on tracing paper.	

Item Number	Item Title	Box
96/382/2-7/10/31	Circuit diagram, photocopy, titled Keyboard Control Unit Power Supply, (sheet 3 of 3), QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing No. QM8 045-00. Drawn 1976.	1
96/382/2-7/10/32	Circuit diagram, photocopy, titled CRT Display Control Logic, Sheet 2 of 2, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing No. QM8 046-00. Drawn 1976.	1
96/382/2-7/10/33	Circuit diagram, photocopy, titled Floppy disk Controller/Formatter, Sheet 1 of 4, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing No. QM8. Drawn 1977.	1
96/382/2-7/10/34	Circuit diagram, photocopy, titled Floppy Disk Controller/Formatter, Sheet 2 of 4, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing No. QM8. Drawn 1977.	1
96/382/2-7/10/35	Circuit diagram, photocopy, titled Floppy Disk Controller/Formatter, Sheet 3 of 4, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing No. QM8. Drawn 1977.	1
96/382/2-7/10/36	Circuit diagram, photocopy, titled Floppy Disk Controller/Formatter, Sheet 4 of 4, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing No. QM8. Drawn 1977.	1
96/382/2-7/10/37	Circuit diagram, photocopy, titled Light Pen Interface & Video Synch Logic, Sheet 1 of 3, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing No. QM8□148□00. Drawn 1977. Revised 1979.	1
96/382/2-7/10/38	Circuit diagram, photocopy, titled Light Pen Interface & Video Synch Logic, Sheet 2 of 3, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing No. QM8□148□01. Drawn 1977. Revised 1979.	1
96/382/2-7/10/39	Circuit diagram, photocopy, titled Light Pen Interface, Mode Selection, Ext Synch, Sheet 3 of 3, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing No. QM8- 148- 02. Drawn in 1979 by Peter Vogel.	1
96/382/2-7/10/40	Circuit diagram, photocopy, titled CRT Graphics Display Synch Separator & Synch Regenerator, Sheet 2 of 4, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing is not numbered. Drawn 1977. Revised 1978.	1
96/382/2-7/10/41	Circuit diagram, photocopy, titled CRT Graphics Display Video Generation Logic, Sheet 2 of 4, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing is not numbered. Drawn 1977. Revised 1978.	1
96/382/2-7/10/42	Circuit diagram, photocopy, titled CRT Graphics Display Select Logic & Data Control, Sheet 3 of 4, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing is not numbered. Drawn 1977. Revised 1978.	1
96/382/2-7/10/43	Circuit diagram, photocopy, titled CRT Graphics Display VRAM Addressing Logic, Sheet 4 of 4, QASAR Multimode 8, Tony Furse, Sydney, New South Wales, Australia, c.1979 Drawing is not numbered. Drawn 1977. Revised 1978.	1

TONY FURSE ARCHIVE COLLECTION

96/382/2-8

Registration Number:	96/382/2-8
Series Title:	Early software for the M8 (QASAR Multimode 8) Synthesiser
Date Range:	c1974-1977
Physical Characteristics:	Looseleaf cardboard folder containing annotated computer printouts and loose pages. Loose annotated computer printouts.
Description:	<p>Software for the M8 (QASAR Multimode 8) synthesiser, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>These are annotated computer printouts - some with attached pages of data - of early programmes relating to the QASAR Multimode (M8) Synthesiser, which was invented by Tony Furse and sold to the Canberra School of Music. This software, and the various improvements to it, became the starting nucleus for the CMI software. Although the CMI had a different audio channel card system, the user interface remained the same and used the same CPU, graphic and light pen concepts and the original software 'window' paging concept created for the M8. (Information supplied by Tony Furse).</p> <p>CMI = Computer Musical Instrument CPU = Central Processor Unit M8 = QASAR Multimode 8 synthesiser</p>
Arrangement:	
Dimensions:	
Box Number:	2

Series Title:

Item Number	Item Title	Box
96/382/2-8/1	<p>Looseleaf folder with pink cardboard covers and the word 'Synthesiser' handwritten on its spine, containing computer printouts - some with handwritten annotations - and loose inserted pages (5) of handwritten data, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>A handwritten 'post-it note' on the folder's cover reads 'very first M8 software'. This is the software that was used to run the M8 before it went to the Canberra School of Music. It was the starting point for changes both Fairlight and Tony Furse made while the M8 was there for the years before it was replaced with a CMI. This software, and the various improvements to it, became the starting nucleus for the CMI software.</p> <p>CMI = Computer Musical Instrument M8 = QASAR Multimode 8 synthesiser</p>	2
96/382/2-8/2	<p>Computer printouts (18) with coded headings handwritten in red text, containing early software for the M8 (Multimode 8) synthesiser built by Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>These printouts are numbered 1 to 18 in pen and contain much of the same information as 96/382/2-8/1.</p>	2
96/382/2-8/2/1	<p>Computer printout, (15 pages) labelled 'INPSM/INPOM' in red text and '1 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>Each page is headed 'INPUT DATA INPUT ROUTINES'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/2	<p>Computer printout, (6 pages), labelled 'TABSB/TABOB' in red text and '2 of 18' in blue pen on the first page, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of the first page is printed 'Tabu8 Main Scan'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/3	<p>Computer printout, (29 pages) labelled 'MACB8/VDMSB/VDMOB' in red text and '3 of 18' in blue pen on the first page, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of the first page is printed 'VDMain Mainline for Graphics Video System.' This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/4	<p>Computer printout, (5 pages) labelled 'LOGS2/LOG02' in red text and '4 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of each page is printed 'LOGTAB'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/5	<p>Computer printout, (20 pages) labelled 'WAVS5/WAV05' in red text and '5 of 18' in blue pen on the front page, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of each page is printed 'BUILDH COMPUTE A WAVEFORM FROM HARMONICS AND PHASES'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/6	<p>Computer printout, (9 pages) labelled 'MPKS6/MPK06' in red text and '6 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of each page is printed 'MATHPK MULTIPLY DIVIDE AND SCALING SUBROUTINES'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/7	<p>Computer printout, (12 pages) labelled 'GESSB/GESOB' in red text and '7 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of each page is printed 'GENSCL GENERATES A MUSICAL SCALE AS NTH ROOT OF X'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2

Item Number	Item Title	Box
96/382/2-8/2/8	<p>Computer printout, (8 pages) labelled 'DPØS2/DPØ02' in red texta and '8 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of the first page is printed 'SYNTHESISER DISPLAY PAGES'. Thereafter each page is headed 'DISPLAY PAGE XX'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/9	<p>Computer printout, (15 pages) labelled 'DP2SC/DP20C' in red texta and '9 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of the first page is printed 'SYNTHESISER DISPLAY PAGES'. Thereafter each page is headed 'DISPLAY PAGE XX'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/10	<p>Computer printout, (10 pages) labelled 'DP3SF/DP30F' in red texta and '10 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of the first page is printed 'SYNTHESISER DISPLAY PAGES'. Thereafter each page is headed 'DISPLAY PAGE XX'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/11	<p>Computer printout, (13 pages) labelled 'DP4S9/DP409' in red texta and '11 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of the first page is printed 'SYNTHESISER DISPLAY PAGES'. Thereafter each page is headed 'DISPLAY PAGE XX'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/12	<p>Computer printout, (13 pages) labelled 'DP559/DP509' in red texta and '12 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of the first page is printed 'SYNTHESISER DISPLAY PAGES'. Thereafter each page is headed 'DISPLAY PAGE XX'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/13	<p>Computer printout, (5 pages) labelled 'KEFSH/KEFOH' in red texta and '13 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of each page is printed 'KEYBD MUSICAL KEYBOARD HANDLER (POLYPHONIC)'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/14	<p>Computer printout, (8 pages) labelled 'DVRS3/DVRO3' in red texta and '14 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of each page is printed 'DRIVER PLAYIT ROUTINE DRIVERS'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/15	<p>Computer printout, (12 pages) labelled 'PLASØ/PLAØØ' in red texta and '15 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of each page is printed 'PLAYIT FORMANT AND AMPLITUDE CONTROL LIST INTERPRETER'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/16	<p>Computer printout, (4 pages) labelled 'FMNSH/FMNOH' in red texta and '16 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of each page is printed 'FORMAN INITIALISATION FORMANT LIST'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/17	<p>Computer printout, (5 pages) labelled 'INIS8/INIO8' in red texta and '17 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of each page is printed 'INITR SYNTHESISER INITIAL REGISTER SETTINGS'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/2/18	<p>Computer printout, (13 pages) labelled 'LOXSJ/RF4ØØ ROM #2' in red texta and '18 of 18' in blue pen, Tony Furse, Sydney, New South Wales, Australia, c.1974-1977</p> <p>At the top of each page is printed 'FDCDVR WESTERN DIGITAL FD1771-1 F.D.C DRIVERS'. This is early software for the M8 (QASAR Multimode 8) synthesiser.</p>	2
96/382/2-8/3	<p>Computer printout, (12 pages), containing a programme headed 'DEBUG O2' with several pen and pencil annotations, Tony Furse, Sydney, New South Wales,</p>	2

Item Number	Item Title	Box
	Australia, c.1974-1976	
	"This was the firmware programme that resided in 'read only' memories on the CPU debug card. It started when the power was turned on to the synthesiser and contained programmes to help debug new programmes and to 'boot' the computer and synthesiser software."1	
	A revised version of this program by Tony Furse dated 14/3/77 is contained within the folder 96/382/2-8/1 beginning with the pages headed 'DEB02 DE2S2/DEZ02' in red text. CPU= Central Processor Unit	
	1 Email, Tony Furse to archivist, Aug 2007.	
96/382/2-8/4	Computer printouts (3) with cello and clarinet formant lists, Tony Furse, Sydney, New South Wales, Australia, c.1975-1979	2
	These are experimental settings for synthesiser voices attempting to emulate a cello and a clarinet. They probably relate to the M8 (QASAR Multimode 8) synthesiser, invented by Tony Furse.	
96/382/2-8/4/1	Computer printout, (2 pages), with the printed title, 'Cello Cello Formant Lists' and the heading 'CLOS1/CLOO1 CELLO' in red text, Tony Furse, Sydney, New South Wales, Australia, c.1975-1979	2
	These are experimental settings for synthesiser voices attempting to emulate a cello. 96/382/2-8/2 is another copy of this printout. They probably relate to the M8 (QASAR Multimode 8) synthesiser.	
96/382/2-8/4/2	Computer printout, (2 pages), with the printed title 'Cello Formant Lists' and the heading 'CLOS1/CLOO1' in red text, Tony Furse, Sydney, New South Wales, Australia, c.1975-1979	2
	These are experimental settings for synthesiser voices attempting to emulate a cello. 96/382/2-8/1 is another copy of this printout. They probably relate to the M8 (QASAR Multimode 8) synthesiser.	
96/382/2-8/4/3	Computer printout, (2 pages), with the printed title 'Clarinet Clarinet Formant List' and the heading 'CLFS5/CLFO5 CLARINET' in red text, Tony Furse, Sydney, New South Wales, Australia, c.1975-1979	2
	These are experimental settings for synthesiser voices attempting to emulate a clarinet. They probably relate to the M8 (QASAR Multimode 8) synthesiser.	
96/382/2-8/5	Computer printout, (14 pages), with pencil annotations and sketches and the printed title 'PLOT GRAPHICS PLOTTING PRIMITIVES', Tony Furse, Sydney, New South Wales, Australia, c.1975-1979	2
	This was a suite of programmes to enable graphs to be plotted on the M8 and CMI VDU screen. They document the functions and calling sequences a user programme can call upon to plot graphs on the VDU screen. They probably relate to the M8 (QASAR Multimode 8) synthesiser.	
96/382/2-8/6	Computer printout, (1 page), with pen and pencil annotations and the printed title 'Page 001 FORMANT INITIALISATION FORMANT LIST', Tony Furse, Sydney, New South Wales, Australia, c.1975-1979	2
	This is probably software relating to the M8 (QASAR Multimode 8) synthesiser. Annotations to the computer printout are in pencil. On the reverse of the printout are instructions, handwritten in blue pen, beginning with the words 'Maximum formant address' and referring to waveforms.	

TONY FURSE ARCHIVE COLLECTION

96/382/2-9

Registration Number:	96/382/2-9
Series Title:	Newspaper and Magazine Clippings
Date Range:	c1973-1986
Physical Characteristics:	Newspaper and magazine cuttings, some photocopied, some annotated.
Description:	Newspaper and magazine clippings, some photocopied, relating to Tony Furse, synthesisers, including the Fairlight synthesiser, and computer music in general, collected by Tony Furse, Sydney, New South Wales, Australia, c1973-1986
Arrangement:	Chronological
Dimensions:	
Box Number:	1, F1

Series Title:

Item Number	Item Title	Box
96/382/2-9/1	Newspaper clipping, article, 'Sydney engineer has computer-synthesiser' by Ken McGregor, collected by Tony Furse, The Australian Financial Review, Australia, 1973	1
	Newspaper clipping, article, 'Sydney engineer has computer-synthesiser' by Ken McGregor, collected by Tony Furse, The Australian Financial Review, Australia, 1973	
	96/382/2-9/2 is another copy.	
96/382/2-9/2	Newspaper clipping, article, 'Sydney engineer has computer-synthesiser' by Ken McGregor, collected by Tony Furse, The Australian Financial Review, Australia, 1973	1
	Newspaper clipping, article, 'Sydney engineer has computer-synthesiser' by Ken McGregor, collected by Tony Furse, The Australian Financial Review, Australia, 1973	
	96/382/2-9/1 is another copy.	
96/382/2-9/3	Newspaper clipping, article 'At last, a musical instrument to make all of the others obsolete' by David Tredenick, collected by Tony Furse, newspaper unknown, Australia, c.1973	1
	Newspaper clipping, article 'At last, a musical instrument to make all of the others obsolete' by David Tredenick, collected by Tony Furse, newspaper unknown, Australia, c.1973	
	Article about the invention of the timbron by the University of NSW's Professor Karbowski, Dr Holmes, Bob Palmer and Roger Covell.	
96/382/2-9/4	Newspaper clipping, article 'Sydney men invent the timbron' by Peter Mahoney, collected by Tony Furse, The Sun Herald, Sydney, New South Wales, Australia, 27 Jan 1974	1
	Newspaper clipping, article 'Sydney men invent the timbron' by Peter Mahoney, collected by Tony Furse, The Sun Herald, Sydney, New South Wales, Australia, 27 Jan 1974	
	About the invention of the timbron by the University of NSW's Professor Karbowski, Associate Professor Holmes and Roger Covell.	
96/382/2-9/5	Newspaper clipping, article, 'Looking for Australia's synthetic composers' by Gail Holst, collected by Tony Furse, Nation Review, Australia, 1-7 Feb, 1974	1
	Newspaper clipping, article, 'Looking for Australia's synthetic composers' by Gail Holst, collected by Tony Furse, Nation Review, Australia, 1-7 Feb, 1974	
	Article about electronic music, comparing the synthesisers being developed by Tony Furse and Roger Covell (of the University of NSW) respectively and their suitability for the composition of electronic music.	
	96/382/2-9/6 is another copy.	
96/382/2-9/6	Newspaper clipping, article, 'Looking for Australia's synthetic composers' by Gail Holst, Nation Review, Australia, 1-7 Feb, 1974	1
	Newspaper clipping, article, 'Looking for Australia's synthetic composers' by Gail Holst, Nation Review, Australia, 1-7 Feb, 1974	
	Article about electronic music, comparing the synthesisers being developed by Tony Furse and Roger Covell (of the University of NSW) respectively and their suitability for the composition of electronic music.	
	96/382/2-13/5 is another copy.	
96/382/2-9/7	Newspaper clipping, article 'The sound of music - computer version' by Nancy Berryman, collected by Tony Furse, (possibly)The Sun Herald, Sydney, New South	1

Item Number	Item Title	Box
	<p>Wales, Australia, 1974</p> <p>Newspaper clipping, article 'The sound of music - computer version' by Nancy Berryman, collected by Tony Furse, (possibly) The Sun Herald, Sydney, New South Wales, Australia, 1974</p> <p>Article about Australian composer Dr James Penberthy and his work with computer music in collaboration with Dan Chadwick.</p>	
96/382/2-9/8	<p>Newspaper clipping, article 'Matsushita Signs Marketing Agreement - Japan added to Fairlight music machine market' by Douglas Moore, collected by Tony Furse, The Australian, Australia, 15 June 1982</p> <p>Newspaper clipping, article 'Matsushita Signs Marketing Agreement - Japan added to Fairlight music machine market' by Douglas Moore, collected by Tony Furse, The Australian, Australia, 15 June 1982</p> <p>Article about Australian company, Fairlight's Computer Musical Instrument (CMI) .</p>	1
96/382/2-9/9	<p>Journal and newspaper articles (7), photocopies, about computer music, six about Fairlight Instruments Pty Ltd's CMI (Computer Musical Instrument), one about the 'Kollege Computer' used by conductor, Herbert Von Karajan, collected by Tony Furse, various journals, Australia / U.S.A. / Germany, 1980 -1982</p> <p>Journal and newspaper articles (7), photocopies, about computer music, six about Fairlight Instruments Pty Ltd's CMI (Computer Musical Instrument), one about the 'Kollege Computer' used by conductor, Herbert Von Karajan, collected by Tony Furse, various journals, Australia / U.S.A. / Germany, 1980 -1982</p> <p>Photocopied onto both sides of four A4 pages the articles are:</p> <p>1] 'Australian synthesiser cracks the world market' by Neville Williams, pp.30-32, Electronics Australia, Australia, August 1982 About the Fairlight CMI, its background and technical capabilities, including Tony Furse's role in its development.</p> <p>2] 'Computers that make waves - Digital synthesizers take to the road' by Jim Farber, Rolling Stone, U.S.A., Jan 1980</p> <p>3] 'Computer music in /concert in high places' by Helen Meredith, Pacific Computer Weekly, Melbourne, Victoria, Australia, 30 Oct -5 Nov 1981 About an electronic music concert at the High Court of Australia by the Canberra School of Music with an account, by electronics lecturer, Dan Senn, of the background to the School's use of QASAR synthesisers and the Fairlight CMI and its association with Tony Furse and later Peter Vogel and Kim Ryrie of Fairlight.</p> <p>4] 'Er ist neun Musiker/It is Nine Musicians', article in German with English translation by 'gr', journal unknown, Hamburg, Germany, 1 April 1980 About Herbert von Karajan's conducting of Wagner's Parsifal on the Kollege (Colleague) Computer.</p> <p>5] Newspaper cutting, article, photocopy, 'CMIs: Japanese Want Them' by Michael Perry, The Sun, Sydney, Australia, c.1982 About Fairlight Instruments Pty Ltd, the Fairlight CMI (Computer Musical Instrument) and Fairlight's marketing agreement with Japan's Matsushita Electric Company.</p> <p>6] 'Tokyo dances to our tune' by Susan Ring, Daily Commercial News, Australia, 19 May 1982 About Fairlight Instruments Pty Ltd and its sales agreement with Japan's Matsushita Electric Trading Co. to sell Fairlight synthesisers in Japan.</p> <p>7] 'Tune to the Future Melody - machine makes music', Daily Mirror, Sydney, Australia, 16 December 1981</p>	1
96/382/2-9/10	<p>Newspaper cutting, article 'The Star-Maker' by Paul Clarke, p.10 The Sun, collected by Tony Furse, Sydney, New South Wales, Australia, 20 Feb 1986</p> <p>Newspaper cutting, article 'The Star-Maker' by Paul Clarke, p.10 The Sun, collected by Tony Furse, Sydney, New South Wales, Australia, 20 Feb 1986</p> <p>Article about the Fairlight CMI (Computer Musical Instrument) mentioning the musicians who have used it.</p>	F1

TONY FURSE ARCHIVE COLLECTION

96/382/2-10

Registration Number:	96/382/2-10
Series Title:	Computer software and firmware for CMI M8 Programmes and Experiments, Sydney, Australia
Date Range:	c1978-1980
Physical Characteristics:	Cardboard boxes (4) containing labelled 8 inch floppy disks, a handwritten letter and annotated computer printouts.
Description:	<p>Computer software and firmware for CMI M8 Programmes and Experiments, Tony Furse, Sydney, New South Wales, Australia, c. 1978-1980</p> <p>These are 8 inch floppy disks - some with accompanying printouts - and loose computer printouts."The disks were time snapshots of work in progress for CMI M8 and pieces of unrelated administrative and utility software that would run on the computer called the ROM1 that was made out of M8 parts for Remington Office Machines. (Around 50 were made as business computers to be sold to businesses by Remington). "1 Tony Furse was the inventor of the M8 synthesiser, which was the forerunner to the CMI, which was developed by Fairlight Instruments Pty Ltd in association with Furse.</p> <p>Several of the floppy disks (96/382/2-10/1/1:5) relate to MDOS User Group programmes. The international user society was an optional second level of global communication. Any current financial member of the user society would have a 'user number' and password to gain access to the user group global library which was held in a large computer memory bank. The user would dial a local access number, place the handset of the phone on an acoustic coupling device joined to their synthesiser for use or playing at their convenience. The user library consisted of a technical section, a help section and a music section. Several disks also contain QDOS programmes: QDOS was a modified version on MDOS that had been 'ported' to run on Tony Furse's Dual CPU system and disk controller that was used in the M8 and the CMI. 2</p> <p>"This software and firmware were backup copies of work in progress. It embraced CMI M8 programmes and experiments each disk appearing to be related to a particular project. There are a wide variety of functions and experiments in these disks."3</p> <p>QDOS = Qasar Disk Operating System MDOS = Motorola Disk Operating System CPU = Central Processor Unit M8 = QASAR Multimode 8 synthesiser CMI = Computer Musical Instrument</p> <p>See also 96/382/2-7/2 'Motorola Microsystems User Group Library' catalogue and 96/382/2-5/15:16 'Report to Australia Council on Computer Synthesiser Project 22/2/74 to 16/2/78' re Furse's association with Motorola.</p> <p>1, 2, 3 Information supplied to archivist by Tony Furse, email, August 2007</p>
Arrangement:	None discernible
Dimensions:	
Box Number:	1

Series Title:

Item Number	Item Title	Box
96/382/2-10/1	Box, cardboard, labelled 'Dual C.P.U. 6809/00 S.N. Q089 R1-01021' in black text, containing labelled Verbatim brand 'flexible disks' (6), Tony Furse, Sydney, New South Wales, Australia, c.1975-1980 These are 8 inch floppy disks, five of which relate to MDOS User Group programmes, the other containing QDOS graphics programmes. MDOS = Motorola Disk Operating System QDOS = Qasar Disk Operating System CPU = Central Processor Unit	1
96/382/2-10/1/1	Flexible disk, (1 of 6), Verbatim brand, labelled 'MDOS User Group 1-25', Tony Furse, Sydney, New South Wales, Australia, 1976-1980 This is an 8 inch floppy disk. MDOS = Motorola Disk Operating System	1
96/382/2-10/1/2	Flexible disk, (2 of 6), Verbatim brand, labelled 'MDOS User Group 26-50', Tony Furse, Sydney, New South Wales, Australia, 1976-1980 This is an 8 inch floppy disk. MDOS = Motorola Disk Operating System	1
96/382/2-10/1/3	Flexible disk, (3 of 6), Verbatim brand, labelled 'MDOS User Group 51-75', Tony Furse, Sydney, New South Wales, Australia, 1976-1980 This is an 8 inch floppy disk. MDOS = Motorola Disk Operating System	1
96/382/2-10/1/4	Flexible disk, (4 of 6), Verbatim brand, labelled 'MDOS User Group 76-90', Tony Furse, Sydney, New South Wales, Australia, 1976-1980 This is an 8 inch floppy disk. MDOS = Motorola Disk Operating System	1
96/382/2-10/1/5	Flexible disk, (5 of 6), Verbatim brand, labelled 'MDOS User Group 91-12', Tony Furse, Sydney, New South Wales, Australia, 1976-1980 This is an 8 inch floppy disk. MDOS = Motorola Disk Operating System	1
96/382/2-10/1/6	Flexible disk, (6 of 6), Verbatim brand, labelled 'QDOS Graphics Stuff', Tony Furse, Sydney, New South Wales, Australia, 1976-1980 QDOS was a modified version on MDOS. It ran on Tony Furse's Dual CPU system and disk controller that was used in the M8 and the CMI. QDOS = Qasar Disk Operating System MDOS = Motorola Disk Operating System CPU = Central Processor Unit CMI = Computer Musical Instrument	1
96/382/2-10/2	Lidded cardboard box, 'IBM Diskette 1' brand, (1 of 2), containing labelled flexible disks (12) and computer printouts (8), Tony Furse, Sydney, New South Wales, Australia, c.1978-1980 These are 8 inch floppy disks (eight with accompanying printouts), which are backup copies of work in progress relating to M8 (QASAR Multimode 8 synthesiser) and CMI (Computer Musical Instrument) programmes and experiments. Each disk appears to be related to a particular project. The disks, which contain a range of functions and experiments, are probably only related in creation time. This is similar to the material in 96/382/2-10/3	1
96/382/2-10/2/1	Flexible disk, 'IBM diskette 1', labelled 'HINDE SOUNDS' in felt tip pen, Tony Furse, Sydney, New South Wales, Australia, c.1978-1980 This is an 8 inch floppy disk. The written label is faded.	1
96/382/2-10/2/2	Flexible disk, 'IBM diskette 1', labelled 'COMPILER MAILIST' in black felt tip pen, Tony Furse, Sydney, New South Wales, Australia, c.1978-1980	1

Item Number	Item Title	Box
	This is an 8 inch floppy disk.	
96/382/2-10/2/3	Flexible disk, 'IBM diskette 1', unlabelled, Tony Furse, Sydney, New South Wales, Australia, c.1978-1980	1
	This is an 8 inch floppy disk. Its handwritten pen label, 'Main Backup *** ', has been crossed out.	
96/382/2-10/2/4	Flexible disk, 'IBM diskette 1', labelled 'ALL *** 24.5.78' in pencil, Tony Furse, Sydney, New South Wales, Australia, 1978	1
	This is an 8 inch floppy disk. An accompanying computer printout has the printed heading 'Drive: 1 Disk I.D. : QDOS0205' with 'ALL 24.5.78' handwritten in black felt tip pen.	
96/382/2-10/2/5	Flexible disk, 'IBM diskette 1', labelled 'ALL BACKUP 25.5.78' in pencil, Tony Furse, Sydney, New South Wales, Australia, 1978	1
	This is an 8 inch floppy disk. With the disk is an annotated computer printout with the printed heading 'Drive: 1 Disk I.D. : QDOS0205' and 'ALL BACKUP 25.5.78' handwritten in black felt tip pen.	
96/382/2-10/2/6	Flexible disk, 'Memorex markette', labelled 'M8 SYSTEM- CSM 12.3.79' in blue biro, Tony Furse, Sydney, New South Wales, Australia, 1979	1
	This is an 8 inch floppy disk. An accompanying computer printout has the printed heading 'Drive: 1 Disk I.D. : QDOSSYS' with 'M8 SYSTEM-CSM 12.3.79' handwritten in black felt tip pen.	
96/382/2-10/2/7	Flexible disk, 'IBM diskette 1', labelled 'MAIN ZZ BACKUP 31.3.79', Tony Furse, Sydney, New South Wales, Australia, 1979	1
	This is an 8 inch floppy disk. An accompanying computer printout has the printed heading 'Drive: 1 Disk I.D. : QDOSSYS' with 'MAINZZ BACKUP 31.3.79' handwritten in black felt tip pen.	
96/382/2-10/2/8	Flexible disk, 'IBM diskette 1', labelled 'MUSEQ SYSTEM', Tony Furse, Sydney, New South Wales, Australia, c.1978-1980	1
	This is an 8 inch floppy disk. With the disk is an annotated computer printout headed 'Drive: 1 Disk I.D. : QDOSSYS' with 'MUSEQ SYSTEM' handwritten in black felt tip pen.	
96/382/2-10/2/9	Flexible disk, BASF FlexidyDisk sleeve containing 'diskette No 5' labelled 'M8 OVERLAYS' in black texta, Tony Furse, Sydney, New South Wales, Australia, c.1978-1980	1
	This is an 8 inch floppy disk. With the disk is an annotated computer printout with the printed heading 'Drive: 1 Disk I.D. : QDOSSYS' and 'M8 OVERLAYS' handwritten in pencil.	
96/382/2-10/2/10	Flexible disk, 'Memorex markette', labelled 'M8 Resident Source' in black felt tip pen, Tony Furse, Sydney, New South Wales, Australia, c.1978-1980	1
	This is an 8 inch floppy disk. With the disk is an annotated computer printout with the printed heading 'Drive: 1 Disk I.D. : QDOS210' and 'M8 RESIDENT SOURCE', handwritten in pencil.	
96/382/2-10/2/11	Flexible disk, 'Memorex markette', labelled 'M8 Resident Source' in black felt tip pen, Tony Furse, Sydney, New South Wales, Australia, c.1978-1980	1
	This is an 8 inch floppy disk. With the disk is an annotated computer printout with the printed heading 'Drive: 1 Disk I.D. : CMIFIRMW' and 'M8 FIRMWARE' handwritten in pencil.	
96/382/2-10/2/12	Flexible disk, 'Memorex markette', labelled 'CMI single sided system QDOS3 May 1980' in black felt tip pen, Tony Furse, Sydney, New South Wales, Australia, 1980	1
96/382/2-10/3	Lidded cardboard box, 'IBM Diskette 1' brand, (2 of 2) containing labelled flexible disks (11) and computer printouts (8), Tony Furse, Sydney, New South Wales, Australia, c.1978-1980	1
	These are 8 inch floppy disks (six with accompanying printouts), which are	

Item Number	Item Title	Box
	backup copies of work in progress relating to M8 (QASAR Multimode 8 synthesiser) and CMI (Computer Musical Instrument) programmes and experiments. The two loose printouts appear to be graphics programmes. Each disk appears to be related to a particular project. The disks, which contain a range of functions and experiments, are probably only related in creation time. This is similar to the material in 96/382/2-10/2	
96/382/2-10/3/1	Flexible disk, 'IBM diskette 1', with the title 'SOUNDS' handwritten in pencil, Tony Furse, Sydney, New South Wales, Australia, 1978-1980	1
	This is an 8 inch floppy disk. An accompanying computer printout has the printed heading 'Drive: 1 Disk I.D. :' with 'SOUNDS' handwritten in black felt tip pen.	
96/382/2-10/3/2	Flexible disk, 'IBM diskette 1', with the title 'SPORT' handwritten in black felt tip pen, Tony Furse, Sydney, New South Wales, Australia, 1978-1980	1
	This is an 8 inch floppy disk. An annotated computer printout with the disk has the printed heading 'Drive: 1 Disk I.D. :' and 'SPORT' handwritten in pencil.	
96/382/2-10/3/3	Flexible disk, 'Memorex markette' brand, labelled 'System Disk-QDOS Ø2. Ø1 & MAINZ Z M8 SYSTEM 14-Ø3-79' in black felt tip pen, Tony Furse, Sydney, New South Wales, Australia, March 1979	1
	This is an 8 inch floppy disk. An accompanying computer printout has the printed heading 'Drive: 1 Disk I.D. : QDOSSYS' and 'M8 SYSTEM' handwritten in pencil.	
96/382/2-10/3/4	Flexible disk, 'Memorex markette' brand, labelled 'System Disk- QDOS Ø2. Ø1 & MAINZ Z M8 SYSTEM 14-Ø3-79' in black felt tip pen, Tony Furse, Sydney, New South Wales, Australia, March 1979	1
	This is an 8 inch floppy disk. An accompanying computer printout is headed 'MUSEQ BACKUP 1-4-79' in black felt tip pen with the printed title 'Drive: Ø Disk I.D. : QDOSSYS'.	
96/382/2-10/3/5	Flexible disk, 'IBM diskette 1', labelled 'MUSEQ SYSTEM BACKUP 6.4.79', in pencil, Tony Furse, Sydney, New South Wales, Australia, April 1979	1
	This is an 8 inch floppy disk. An accompanying computer printout is headed 'Drive: 1 Disk I.D. : QDOSSYS' with 'MUSEQ SYSTEM' handwritten in pencil.	
96/382/2-10/3/6	Flexible disk, 'IBM diskette 1', labelled 'M8 BITS & PIECES' in pencil, Tony Furse, Sydney, New South Wales, Australia, 1978-1980	1
	This is an 8 inch floppy disk. An accompanying computer printout has the printed title 'Drive: 1 Disk I.D.: M8' with 'M8 BITS & PIECES' handwritten in pencil.	
96/382/2-10/3/7	Flexible disk, 'IBM diskette 1', labelled 'SYNTH' in pencil, Tony Furse, Sydney, New South Wales, Australia, 1978-1980	1
	This is an 8 inch floppy disk.	
96/382/2-10/3/8	Flexible disk, 'IBM diskette 1', labelled 'VECTOR' in blue pencil, Tony Furse, Sydney, New South Wales, Australia, 1978-1980	1
	This is an 8 inch floppy disk.	
96/382/2-10/3/9	Flexible disk, 'Memorex markette' brand, labelled 'QDOS 2.01 with BASIC COMPILER RUN.CM etc. May 1980' in black felt tip pen, Tony Furse, Sydney, New South Wales, Australia, May 1980	1
	This is an 8 inch floppy disk.	
96/382/2-10/3/10	Flexible disk, 'IBM diskette 1', labelled 'SYSTEMDISK- BACKUP', in black felt tip pen, Tony Furse, Sydney, New South Wales, Australia, 1978-1980	1
	This is an 8 inch floppy disk.	
96/382/2-10/3/11	Flexible disk, labelled 'GRAPH's see QBLURB. SA -> JOHN C.', Tony Furse, Sydney, New South Wales, Australia, 1978-1980	1
	This is an 8 inch floppy disk. John C. is probably John Crocker of the Canberra School of Music.	
96/382/2-10/3/12	Computer printout (3pp), headed 'PAGE 001 GBLURB. SA:1 Graphics Package as it stands 2 Aug. - Nick', Tony Furse, Sydney, New South Wales, Australia, c.1978-1980	1

Item Number	Item Title	Box
96/382/2-10/3/13	Computer printout (2pp), with pencil annotations, headed 'Drive: 1 Disk I.D. :GWORK', Tony Furse, Sydney, New South Wales, Australia, c.1978-1980	1
96/382/2-10/4	Cardboard box (white), addressed to Mr John Crocker, Canberra School of Music, from Fairlight Instruments Pty Ltd containing IBM 'Diskettes' (2) and a letter, Australia, March 1980 According to the letter the 'floppies' (8 inch floppy disks) were to be used for graphics software, most probably with the M8 (QASAR Multimode 8) synthesiser, which was built by Tony Furse and sold to the Canberra School of Music. The letter, on Canberra School of Music letterhead, is from 'Wombat' (John Crocker) to Tony Furse.	1
96/382/2-10/4/1	Letter, handwritten, on Canberra School of Music letterhead, to 'tony' from 'Wombat', Canberra School of Music, Canberra, A.C.T., Australia, 5 March 1980 The letter reads in part, "tony: Floppies for graphics software (and any other little trick you may have up your sleeve)". Tony is Tony Furse. 'Wombat' is John Crocker of the Canberra School of Music. This software request probably relates to the M8 (QASAR Multimode 8) synthesiser, which Tony Furse built and sold to the Canberra School of Music.	1
96/382/2-10/4/2	Flexible disk, (1 of 2), 'IBM Diskette 1', used for software with the M8 (QASAR Multimode 8) synthesiser, Tony Furse, Sydney, New South Wales, Australia, March 1980 This is an eight inch floppy disk, probably one of the 'floppies' (along with 96/382/2-10/4/3) referred to by John Crocker (Wombat) in his letter to Tony Furse (96/382/2-10/4/1).	1
96/382/2-10/4/3	Flexible disk, (2 of 2), 'IBM Diskette 1', used for software with the M8 (QASAR Multimode 8) synthesiser, Tony Furse, Sydney, New South Wales, Australia, March 1980 This is an eight inch floppy disk, probably one of the 'floppies' (along with 96/382/2-10/4/2) referred to by John Crocker (Wombat) in his letter to Tony Furse (96/382/2-10/4/1).	1
96/382/2-10/5	Computer printout, (1 page), annotated in pencil, with the printed title 'Page 001 FM FM GENERATOR EXPERIMENT', Tony Furse, Sydney, New South Wales, Australia, c.1978-1980 Next to coded information are instructions which include 'set address for CPU1 vector', 'Take CPU2 back to monitor' and 'Point to waveform memory'. CPU= Central Processor Unit	1
96/382/2-10/6	Computer printout, (1 page), annotated in pencil, with the printed title 'Page 001 NAME PROGRAMME TITLE', Tony Furse, Sydney, New South Wales, Australia, c.1978-1980 Among the printed data is the wording 'First 32 Bytes used by QDOS' and 'Musak'. Handwritten pencil data on the printout with coded information next to wording which includes 'Reset video', 'Print char in A', 'Issue CR/LF to' and 'Print String Inx', appears to be various computer instructions. QDOS= QASAR Disk Operating System	1

TONY FURSE ARCHIVE COLLECTION

96/382/2-11

Registration Number:	96/382/2-11
Series Title:	Brochure, Fliers and Poster
Date Range:	1974-1988
Physical Characteristics:	Printed paper
Description:	<p>Brochure, fliers and a poster re electronic music, Tony Furse, Sydney, New South Wales, Australia, 1974-1988</p> <p>This is printed promotional material relating to QASAR Synthesisers, the Fairlight CMI (Computer Musical Instrument) and the Digicon 83 International Conference on the Digital Arts.</p>
Arrangement:	Chronological
Dimensions:	
Box Number:	1

Series Title:

Item Number	Item Title	Box
96/382/2-11/1	<p>Flier, printed, headed 'Lindsay Bourke and the Bluehaven Choir' promoting a programme of events held at the Sydney Town Hall, Sydney, New South Wales, Australia, 11 July 1974</p> <p>The flier, which doubles as a concert programme, lists 2 films and a choral performance, each with musical accompaniment. The sound for one of the films, 'World Harmonics', was provided by electronic organ and the QASAR Synthesiser (which was invented by Tony Furse) played by Lindsay Bourke.</p>	1
96/382/2-11/2	<p>Foldout colour brochure, titled 'The Fairlight CMI Computer Musical Instrument', Fairlight Instruments Pty Limited, owned by Tony Furse, Sydney, New South Wales, Australia, c.1979</p>	1
96/382/2-11/3	<p>Printed flyer, promoting the 'Digicon 83 International Conference on the Digital Arts', held British Columbia, Canada, collected by Tony Furse, Sydney, New South Wales, Australia, August 1983</p> <p>Among the seminars offered was digital music. Printed on this flyer is a 'cut-out' section for those wanting to send off for more information about the conference. The conference was co-sponsored by the University of British Columbia and the Department of Communications, Canada.</p>	1
96/382/2-11/4	<p>Printed flyer, titled 'Powerhouse New Music - New Instruments', Powerhouse Museum, Sydney, New South Wales, Australia, September 1988</p> <p>Held in conjunction with the Australian Composers Conference, this programme, held at the Powerhouse Museum, enabled an audience to see and hear composers play the instruments they had invented. Tony Furse and composer, Robert Douglas told the 'Qasar to Fairlight' story and gave a demonstration on the Museum's CMI (computer musical instrument).</p>	1
96/382/2-11/5	<p>Poster, black and white, titled 'The New Standard The Fairlight CMI', Fairlight Instruments Pty Ltd, Sydney, New South Wales, Australia, c 1979 -1981</p> <p>This poster, which was given to Tony Furse by Fairlight in about 1981, features a photograph with a candelabra, a music keyboard and a computer.</p>	1

TONY FURSE ARCHIVE COLLECTION

96/382/2-12

Registration Number:	96/382/2-12
Series Title:	'Original Hand Built Prototype Cards'
Date Range:	c.1975-1976
Physical Characteristics:	Circuit boards made of plastics, including thermosetting plastic, solder and metals, including copper and gold. These cards were removed from an envelope which was labelled 'Original Hand Built Prototype Cards' by Tony Furse. A smaller envelope and 3 'post-it notes', also with labels by Furse, identify the individual prototype cards.
Description:	<p>Prototype cards (4), metal, plastic, used in the M8 built by Tony Furse, Tony Furse, Sydney, New South Wales, Australia, c.1975-1976</p> <p>These prototype cards were handbuilt by Tony Furse and used in the M8 (QASAR Multimode 8) synthesiser which he built and sold to the Canberra School of Music. They were prototypes for the PCBs (Printed Circuit Boards) which were later used in the M8 Furse built and the Fairlight copy of the M8.</p>
Arrangement:	None discernible
Dimensions:	
Box Number:	2

Series Title:

Item Number	Item Title	Box
96/382/2-12/1	<p>Handbuilt prototype card, labelled 'Original Dual Processor CPU Module', Tony Furse, Sydney, New South Wales, Australia, c.1975-1976</p> <p>Used in the M8 (QASAR Multimode 8 synthesiser) built by Tony Furse, this handbuilt prototype card "was the original prototype dual processor CPU card for the Qasar M8. It was made on a prototyping circuit board that had places to put lots of integrated circuit packages and hand wire them together for all the electrical interconnections needed. After testing and proof of concept, the design this card prototyped became a proper printed circuit board (PCB) with the interconnections etched in copper tracks. This card was used as the CPU in the original M8". 1</p> <p>CPU = Central Processor Unit M8 = QASAR Multimode 8 synthesiser</p> <p>1 Email, Tony Furse to archivist, August 2007.</p>	2
96/382/2-12/2	<p>Handbuilt prototype card, labelled '32 Channel Timer Card' for the QASAR M8, Tony Furse, Sydney, New South Wales, Australia, c.1975-1976</p> <p>Used in the M8 built by Tony Furse, "this card was a prototype multi-channel timer that allowed timers to be created for the synthesiser and sequencer software functions of the M8 which could be synchronised to a common time-base whose speed could be made faster and slower thus considerably decreasing the complexity of programmes needed to keep all the voices of a piece of music in synchronism as the tempo of the music is made faster or slower. This was part of the original M8 but was removed by Fairlight."1</p> <p>M8 = QASAR Multimode 8 synthesiser CMI = Computer Musical Instrument</p> <p>1 Information supplied to archivist by Tony Furse, August 2007.</p>	2
96/382/2-12/3	<p>Handbuilt prototype card, labelled '1st Prototype PE 512 X 256 Graphics Card' for the QASAR M8, Tony Furse, Sydney, New South Wales, Australia, c.1975-1976</p> <p>"The user interface of the M8 and CMI used a TV monitor driven by a card that could create a TV image composed of 256 lines of 512 dots. The 'on' or 'off' state of each of the dots created the required image. This card was the hand-wired prototype Graphics card that proved the concept would work."1 It was used in the M8 built by Tony Furse,</p> <p>M8 = QASAR Multimode 8 synthesiser CMI = Computer Musical Instrument</p> <p>1 Email, Tony Furse to archivist, August 2007.</p>	2
96/382/2-12/4	<p>Handbuilt prototype card, 'Original Debug Module with ROM/RAM and Serial Port' for the QASAR M8, Tony Furse, Sydney, New South Wales, Australia, c.1975-1976</p> <p>"This was another proof-of-concept prototype card that ultimately became a printed circuit board for the M8 and later the CMI. This card contained the read-only memories, communications ports and other miscellaneous functions needed by the Dual Processor CPU card".1</p> <p>M8 = QASAR Multimode 8 synthesiser CMI = Computer Musical Instrument CPU = Central Processor Unit PCB = Printed Circuit Board</p> <p>1 Information supplied by Tony Furse, email to archivist dated August 2007.</p>	2