MONASH UNIVERSITY
Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION

JULY 1991

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MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

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JULY 1991

Notes on Inventory and Appendix

1. The inventory lists and files items in order of an arbitrarily allocated Inventory Number (Inv. No.). Major items or those requiring a significant space for description are listed one to a page, in vertical format. Inv. Nos 001 to 100 have been allocated for such items, with Nos 32 to 100 currently unused.

   Other items have (generally) been listed in a horizontal tabular format, under common headings for items of the same category and location. All items of the same category therefore do not necessarily have consecutive Inv. Nos.

   The Table of Contents shows each of the categories used in the tabulations, and lists with each the Inventory Number of all items in that category. Where appropriate the same inventory number may appear in more than one category.

   This arrangement of the inventory should allow additional items and/or categories to be easily added in the future.

2. The Appendix provides copies of existing information on an item, such as display cards, test reports, etc. It does not include copies of any instruction manuals or more voluminous documentation stored with the item Reference to a display card, etc. in the Inventory indicates that a copy of the card is included in the Appendix. Information in the Appendix is filed in Inv. No. order.

3. Each item in the inventory (except in the individual display cabinets) has a small self-adhesive label marked ' Museum' and the Inventory Number.

4. The inventory **does not** include the radio transmitting and receiving valves in the HV Lab, the wall cabinets or elsewhere.

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION

JULY 1991

TABLE OF CONTENTS

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION

JULY 1991

TABLE OF CONTENTS

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	001
Location	HV Lab
Item	Cambridge Portable Potentiometer Workshop Pattern
Serial No.	L-336022
Other marks	See Source/History
Manufacturer	Cambridge Instrument Company Ltd. 12 Grovenor Place, London SW1.
Date of Manuf.	1957
Description	Cat. No. 44226 (with potential source) Wooden cased. Ranges X1 0-20mV smallest slide-wire div. = .0.01mV X5 0-100mV smallest slide-wire div. = 0.05mV
Condition	Operation not checked. Galvo free. Std. cell not checked. One case latch needs adjusting. Otherwise in good condition.
Source/History	**Label: –** Commonwealth of Australia. Department of Supply Plant No. DSL 205
Rec. Action	Inspect internally (std. cell) and minor clean-up.
Comments	In its time, the popular precision thermocouple emf measuring device. Suitable for display.

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	002
Location	HV Lab
Item	Ediswan Testing Set (DC)
Serial No.	62359 (on instrument)
Other marks	–
Manufacturer	–
Date of Manuf.	–
Description	Wooden case, hinged lid, compartment with lid housing three shunts 150A, 75A, 15A & two sets potential leads. Four inch mirror scale 0-150, subdivisions value 5, knife-edge pointer. Separate terminals for Amps, Volts & Millivolts, Volts/Amps c/o switch. ranges 30/150/300/600 Volts, .15/75/150 Amps (w. shunts), 300 Millivolts.
Condition	Operation not checked. Good condition. Shunts slightly corroding.
Source/History	–
Rec. Action	Clean & repaint shunts
Comments	–

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	003
Location	HV Lab
Item	Kelvin bridge ratio arms
Serial No.	L241060
Other marks	See Source/History
Manufacturer	Cambridge Instrument Company Ltd. London and Cambridge
Date of Manuf.	–
Description	For Measurement of low resistance values Calibrated in Ohms Absolute Current 30A continuous, 100A maximum X = Ratio ¥ (R =r) Terminals X current X potential Ratios × .01, .05, .1, .5, 1, 5, 10, 50, 100 R (plug) .008. .006, .004. .002. 0 r (slide) .003--,.0001 smallest division = 1/10 × .0001
Condition	Operation not checked. Appearance good.
Source/History	**Label:–** Department of Supply Plant No DSLM 4679
Rec. Action	–
Comments	Suitable for display

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	004
Location	HV Lab
Item	Portable Sub-Standard Dynamometer Voltmeter
Serial No.	303330
Other marks	Original hand lettered Works Test Certificate inside lid, dated 9 August 1928.
Manufacturer	Nalder Bros & Thompson Ltd. 97a Dalston Lane London
Date of Manuf.	1928
Description	Wooden case with lid. Six inch mirror scale, 0 – 300, knife edge pointer. terminals – common/300V/600V, press key. 300V range-resistance 6480Ω temp coeff. 0.02%/degC, 600V range-resistance 12960Ω temp coeff 0.01%/degC. Scale marked 'BS Sub-Standard'.
Condition	Operation not checked. Appearance good.
Source/History	–
Rec. Action	Polish panel & brassware
Comments	Suitable for display.

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	005
Location	HV Lab
Item	Reflecting light spot galvanometer
Serial No.	163305
Other marks	Works test Certificate (test date 26-3-63) & Instruction sheet in galvo case. See also Source/History,
Manufacturer	H. Tinsley & Co. Ltd. Werndee Hall South Nortwood SE25
Date of Manuf.	1963
Description	Portable wooden case internally reflecting light spot galvanometer Type SR4/45. Double light spot (high/low sensitivity). Scale 5 – 0 – 5 cm, 1mm divisions. Resistance 10 oημ, periodic time 2 secs, sensitivity 245 mm/μA. Lamp 6V, with 230v transformer & flex.
Condition	Operation not checked. Appearance excellent.
Source/History	**Label:–** Monash School of Engineering No 63/739A
Rec. Action	–
Comments	Suitable for display

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	006
Location	HV Lab
Item	DC Resistance Standard
Serial No.	3862/1960
Other marks	See Source/History
Manufacturer	H W Sullivan London
Date of Manuf.	1960 ?
Description	Black metal case with fibre top panel, air cooled. 0.1 ohm Absolute Units. manganin. Max. Current 3 Amps.
Condition	Operation not checked. Appearance good except stick-on label needs cleaning off.
Source/History	Dymo label 05-512-1972 **Label:–** Monash School of Engineering No. 138 79/0365
Rec. Action	General clean up
Comments	Suitable for display

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	007
Location	HV Lab
Item	Weston Foot-Candle Meter
Serial No.	None
Other marks	See Source/History
Manufacturer	Weston Electrical Instrument Corp. Newark N.J. USA.
Date of Manuf.	–
Description	2 1/2 inch scale, 0-50, 0-250, 0-500, Foot Candles Range switch 'LOW' 'MED' 'HIGH', centre OFF. Black case with lid, swing up PE cell. Directions in lid.
Condition	Operates. Appearance good.
Source/History	**Label:–** Monash Electrical Engineering
Rec. Action	Polish case
Comments	Suitable for display

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	008
Location	HV Lab
Item	Heavy Current Bridge Arm
Serial No.	1529106
Other marks	Cat No 43000. See also Source/History
Manufacturer	Leeds and Northrup Co. Philadelphia, Pennsylvania
Date of Manuf.	–
Description	Plug Values 0, .001, .002, .003, .004, .005, .006, .007, .008, .009 Slide 0–110 with vernier 0-5-10
Condition	Flexible lead needs attention, otherwise good.
Source/History	Black Dymo label 05-501-1935 Red Dymo label 055/1/103 **Label:–** Monash School of Engineering 138 79/0363 EQ 138-0402 Elec. Eng.
Rec. Action	Fix leads.
Comments	Suitable for display

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	009
Location	HV Lab
Item	Cambridge Electric
Serial No.	Case C601982 Recorder C578277 Electronic Chassis C533798
Other marks	–
Manufacturer	Cambridge Instrument Company Ltd. London and Cambridge
Date of Manuf.	–
Description	Wooden cased. vacuum tube operated. 12 tubes inc. 6 × 6V6GT. heated stylus recording on 4 cm width treated paper chart. No leads, no accessories, no electrodes, no instruction manual. Canvas carrying cover.
Condition	Good except for lack of leads etc.
Source/History	–
Rec. Action	–
Comments	Not relevant to possible display themes. Not much interest without accessories etc.

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	010
Location	HV Lab
Item	Rotary Transformer
Serial No.	See nameplate data
Other marks	**Nameplate Data:–** Transformer rotary – HT 11 watts No 1A.ZA42170 Output 310/365 volts 0.03 amps Serial No NBA 54181/114
Manufacturer	Newton Bros (Derby) Ltd.
Date of Manuf.	–1962?
Description	Double commutator motor / generator. Input voltage not stated. In unsealed carton, refer In. No. 011 for carton details.
Condition	Excellent.
Source/History	Ex REME.
Rec. Action	–
Comments	Suitable for display

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	011
Location	HV Lab
Item	Rotary Transformer
Serial No.	In sealed carton
Other marks	See description
Manufacturer	See Inv. No. 010
Date of Manuf.	1963 ?
Description	In carton with heat sealed coating. Item similar to Inv. No. 010. Labels on carton are:–
Condition	Original carton, sealing intact.
Source/History	REME.
Rec. Action	–
Comments	Suitable for display

1. Z1.ZA 42170
Transformers Rotary
HT 11w No. 1A
PPQ.1
2. Primary Standard
December 1962
P & P BLD4
SIG
3. Not to be opened until required for operational use
4. Inspected by REME 7 Feb. 1964

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	012
Location	HV Lab
Item	Aislometer
Serial No.	625
Other marks	–
Manufacturer	State Electricity Commission of Victoria
Date of Manuf.	–
Description	Uncalibrated electrostatic voltmeter for use in live insulator testing. two Ebonite insulators with spring wire contacts, mica window for viewing vane deflection. Used with live stick. Compare with cylindrical carrying case.
Condition	Poor. One mounting screw broken off.
Source/History	Ex SECV.
Rec. Action	SECV could probably repair, but no action proposed unless item fits a display theme.
Comments	–

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	013
Location	HV Lab
Item	Watthour Meter
Serial No.	815105
Other marks	–
Manufacturer	Electricity Meter Manufacturing Co. Pty. Ltd. Sydney & Melbourne.
Date of Manuf.	Is almost a current design.
Description	House service pattern in black moulded case, mounted on panel with connecting leads. Type BAZ 5-20 amps, volts 230, Phase 1, Wire 2, 50 Hz. Revs per Kwh 800. Pointer type dials, direct reading in Kwh.
Condition	Good.
Source/History	No property markings.
Rec. Action	–
Comments	Not a significant item.

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	014
Location	HV Lab
Item	AC-DC Potentiometer
Serial No.	10237
Other marks	**On wooden cover:–** Dr. C.V. Drysdale's Alternating and Continuous Current Potentiometer Patent Sole manufacturers H. Tinsley & Co. London SE **On Unit:–** Tinsley's Universal Potentiometer H. Tinsley & Co. London SE
Manufacturer	See above
Date of Manuf.	Estimated as early 1900's
Description	The instrument comprises the standard Tinsley DC potentiometer of the time, with a phase shifter, Weston dynamometer voltmeter, selection and change-over switches and terminal panels for connection of galvanometers, DC and AC measuring and supply voltages. Measures voltage as magnitude and phase from reference voltage.
Condition	Needs major recondition. Ebonite panels encrusted, brass corroding. Knobs/Keys broken, rheostat marked NBG etc.
Source/History	–
Rec. Action	Recondition to operating condition and display.
Comments	Possibly the most technically significant or the measuring instruments in the collection.

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	015
Location	HV Lab
Item	Induction Coil
Serial No.	–
Other marks	Screws and spring marked "Castle"
Manufacturer	–
Date of Manuf.	–
Description	Wooden case 12.5 × 7.5 × 6.3 cm
Condition	Needs polishing.
Source/History	–
Rec. Action	–
Comments	Not of particular interest.

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	016
Location	HV Lab
Item	Morse Key
Serial No.	61261
Other marks	–
Manufacturer	Signalling Equipment Ltd. Potters Bar, MIDDX.
Date of Manuf.	–
Description	Key with buzzer and two bars on wooden base.
Condition	Needs polishing.
Source/History	–
Rec. Action	–
Comments	Not of particular interest.

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	017
Location	HV Lab
Item	Standard Scale
Serial No.	3699
Other marks	NPL62637 See also Source/History
Manufacturer	Societe Genevoise D'Instruments De Physique Geneve Suisse
Date of Manuf.	About 1947?
Description	40 inch 58% Nicket Steel Scale, one inch graduations, H Section, 40.5 × 0.93 × 0.93 inches. Housed in wooden case. Case marked with maker's name & Type H-131, No. 3699 T68°F. Scale marked:– Acier Nickel 58%. 20°C No. 3699. NPL62637.
Condition	Excellent.
Source/History	**Label:–** C of A Dept of Supply DSLM 2373 Copies of reports from NSL to DSL 1-7-58 and 17-8-64 with reference to NPL test of 10-12-1947. Hand written letter dated 4-4-75 from NML to Aeronautical Research Labs on stability of the scale. Refer Appendix, Inv. No. 017.
Rec. Action	Preserve reports & letter.
Comments	Suitable for display

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	018
Location	HV Lab
Item	Quartz Crystal
Serial No.	1261
Other marks	–
Manufacturer	Bright Star Radio Glen Iris Vic. Made in Australia
Date of Manuf.	–
Description	Two pin Frequency KC 7177
Condition	Battered Looking.
Source/History	–
Rec. Action	None
Comments	Not of particular interest

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	019
Location	HV Lab
Item	Quartz Crystal
Serial No.	–
Other marks	–
Manufacturer	–
Date of Manuf.	–
Description	Two pin Frequency 3560 k/c
Condition	Battered looking
Source/History	–
Rec. Action	None
Comments	Not of particular interest

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	020 (balance) 020A (Accessory box)
Location	**Main Unit:–** Ground floor, under stairs, Bldgs. 4-6, in individual display case. **Accessories:–** HV Lab.
Item	Kelvin Balance & Accessories
Serial No.	1037
Other marks	–
Manufacturer	–
Date of Manuf.	–
Description	Refer copy of display card under Inv No 020 in Appendix.
Condition	Balance excellent. Reconditioned for display. Accessories need clean-up.
Source/History	–
Rec. Action	Clean-up accessories
Comments	A significant item.

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	021
Location	ground floor, under stairs Bldgs. 4-6, in individual display case.
Item	Kelvin Moving Iron Ammeter
Serial No.	–
Other marks	–
Manufacturer	–
Date of Manuf.	–
Description	Gravity controlled movement, range 0-500 Amps, direct acting, mounted on section of bus-bar. Arranged to be mounted with bus-bar vertical. Refer Inv No. 021 in Appendix for details of display card and copy of Patent.
Condition	Excellent. reconditioned for display
Source/History	–
Rec. Action	–
Comments	Interesting early item

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	022
Location	Ground floor, under stairs Bldgs. 4-6, in individual display case.
Item	DC Generator
Serial No.	–
Other marks	1080
Manufacturer	Elwell Parker Ltd., W'hampton.
Date of Manuf.	1880
Description	Refer Inv. No. 022 in Appendix for display card details
Condition	Excellent. Reconditioned for display.
Source/History	–
Rec. Action	–
Comments	Interesting item

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	023
Location	Ground floor, under stairs Bldgs. 4-6, in individual display case.
Item	Telegraph Receiver for unattended operation.
Serial No.	43
Other marks	–
Manufacturer	H W Sullivan London
Date of Manuf.	–
Description	Paper tape and ink recording. Refer Inv No. 023 in Appendix for display card details.
Condition	Excellent. Reconditioned for display
Source/History	–
Rec. Action	–
Comments	Interesting item

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	024
Location	Ground floor, under stairs Bldgs. 4-6, in individual display case.
Item	Core memory for Burrough's 5500 Digital Computer.
Serial No.	–
Other marks	–
Manufacturer	–
Date of Manuf.	–
Description	Refer Inv. No. 024 in Appendix for notes and copy of display card.
Condition	Excellent.
Source/History	–
Rec. Action	–
Comments	Would be better displayed as part of an appropriate theme.

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	025
Location	Ground floor, under stairs Bldgs. 4-6, in individual display case.
Item	Universal digital Tachometer
Serial No.	43
Other marks	–
Manufacturer	Hours project designed and manufactured by a fourth year electrical Engineering student.
Date of Manuf.	–
Description	Refer Inv. 025 in Appendix for further details. Exhibit is accompanied by photograph of a workshop made 'Production' unit.
Condition	Good
Source/History	
Rec. Action	
Comments	Could form part of a theme display

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	026
Location	Cabinet, stairwell Bldgs 4-6 landing Gnd to 1st floor.
Item	Tangent Galvanometer
Serial No.	–
Other marks	–
Manufacturer	Maison Callaud Societe Electrique de l'Ouest 8 Rue Ducommier NANTES
Date of Manuf.	1903-04
Description	Approx. 25 cm dia galvanometer in wooden case with hinged lid. 6 zinc-carbon glass jar cells mounted under galvanometer and switched into circuit by 7 position switch. 6 spare glass jar cells housed in case net to galvanometer. Refer also Inv. No. 026 in Appendix for descriptive card.
Condition	Good. Reconditioned for display.
Source/History	–
Rec. Action	–
Comment	–

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	027
Location	Cabinet, stairwell Bldgs 4-6, landing Gnd to 1st floor
Item	Ruhmkroff Induction Coil
Serial No.	–
Other marks	–
Manufacturer	Made in Melbourne
Date of Manuf.	1910
Description	Coil on wooden base with wooden cover. Refer Inv. No. 027 in Appendix for further details
Condition	Good. Reconditioned for display
Source/History	–
Rec. Action	–
Comment	

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	028
Location	Cabinet, stairwell Bldg 4-6, landing Gnd to 1st floor
Item	Linesman's Detector
Serial No.	39781
Other marks	–
Manufacturer	Edison Swan British Manufacture
Date of Manuf.	–
Description	Galvanometer with astatic magnets, scaled 70-0-70, for use with dial in vertical plane. Terminals I-C-Q connected to a low and a high resistance coil respectively.
Condition	Good. Reconditioned for display.
Source/History	–
Rec. Action	–
Comment	–

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	029
Location	Cabinet, stairwell Bldg 4-6 landing Gnd to 1st floor.
Item	Fuller Calculator (cylindrical slide rule)
Serial No.	Stamped on brass 7892 42
Other marks	See Source/History
Manufacturer	–
Date of Manuf.	–
Description	Cylinder, wood with brass fittings.
Condition	Worn appearance
Source/History	Two labels, one stick n, one loose **Stuck label:–** Property of Commonwealth of Australia MRLM 1437 **Loose label:–** Dept. of Supply DSL M1437
Rec. Action	Recondition as far as practicable.
Comments	Would be an interesting item in a theme display on 'Calculators'

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	030
Location	Wall cabinet, stair well, 2nd floor, building 4
Item	Mechanical Calculator
Serial No.	–
Other marks	–
Manufacturer	–
Date of Manuf.	–
Description	–
Condition	Poor
Source/History	–
Rec. Action	–
Comments	Inspection not possible at this time as key to cabinet missing.

MONASH UNIVERSITY

Department of Electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Inventory No.	031
Location	Wall cabinet, stair well, 2nd floor, building 4
Item	Electronic Calculator
Serial No.	–
Other marks	–
Manufacturer	–
Date of Manuf.	–
Description	Discrete solid state components with neon element digital display tubes
Condition	–
Source/History	–
Rec. Action	–
Comments	Inspection not possible at this time as key to cabinet missing.

MONASH UNIVERSITY
Department of electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Loud Loud Speakers: Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Type	Manufacturer	Date	Cost	Remarks
101	Amplion AR 19 Dragon Wooden horn Elecgtromagnet diaphragm	Alfred Graham & Co Great Britain	?	£5-5-0	Card with response curve
102	RCA103 Paper cone Moving armature	Radio Corporation of America	1927	$35	Ditto
103	'Nightingale Bullphone', Metal horn Electromagnet diaphragm	H. Bullen Holywell lane. London	?	?	Ditto
104	RCA100A	Radio Corporation of America	1926	$30	Ditto. Sold in 1928 for $10 by Hartley's & Aust. Gen Elect.
105	Paper cone Moving coil	Rola Company (Aust) Pty. Ltd. Victoria	?	?	Card with response curve
106	Brown H4 Small horn Reed driven cone	S.G. Brown Ltd. London	1926	30/-	Ditto

MONASH UNIVERSITY
Department of electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Loud Loud Speakers: Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Type	Manufacturer	Date	Cost	Remarks
107	Brown H2 Larger horn Reed driven cone Brown in colour	S.G. Brown Ltd. London	1926	£2-5-0	Card with response curve typical of In. No's 107 & 108.
108	As for Inv No. 107 but black in colour	Ditto			
109	Amphion Dynamic Moving coil	?	?	?	Card with response curve
110	Ideal Blue Spot Moving coil	?	?	?	Ditto
111	Horn type. Black Metal	?	?	?	No data known

MONASH UNIVERSITY
Department of electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Crystal Radio Receivers Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Description	Remarks
112	Rough brown stained wood box, insulating front panel, 17cm W, 27cm D, 19cm H. Single capacitance tuning dial. Enclosed crystal. With pair headphones	
113	Miniature Ebonite case with lid, 9cm W, 12.5cm D, 4.5cm H(closed). Switched tuning coils, pri. 23 steps, sec. 8 steps. Dial for adjusting coupling, trim capacitance. Exposed crystal. With pair headphones	An interesting and complicated mechanical design. Appears professionally made. Origin not known.
114	'Astrophone Deluxe Model' in leatherette covered wooden carrying case, 25cm W, 25cm D, 9.5cm H(closed). Exposed crystal. One dial tuning. With single headphone.	Made by Amlifiers Ltd. PO Reg. No 410. Marked 'BBC' with "Type Approved by Post Master General' in a circle. the only apparent commercially made crystal set in the collection.,
115	Wood case inc front panel, 39cm W, 18cm D, 26cm H Tuning, capacitance with 2 vernier dials & 2 × 4 step coil tapping s/w's. Enclosed crystal. With pair headphones.	Circuit diagram drawn at Monash.

MONASH UNIVERSITY
Department of electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Crystal Radio Receivers Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Description	Remarks
116	Wood case, Bakelite panel, 32.5cm W, 15cm D, 18cm H. Tuning, uncalibrated, 1 dial inductance, 1 dial capacitance, 7 switched coil steps. Enclosed crystal.	No headphones. This and inv. No 115 show a high level of ingenuity in getting the best performance from a crystal set.
117	Portable leatherette covered case, 13cm W, 12cm D, 13.5cm H(Closed). Single capacitor tuning. Plug-in fixed coil. Enclosed visible crystal. With pair headphones.	
118	Flat wooden base with Bakelite panel, 22cm W, 16cm D, 21cm H(over coil). Single tuning capacitor. Enclosed visible crystal. With pair headphones	

MONASH UNIVERSITY
Department of electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Valve Radio Receivers Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Description	Remarks
119	2 valve 1-B409. 1-B406. One inductance, one capacitance tuning dial. Wood cabinet with Bakelite panel, 41cm W, 33cm D, 25cm H. Ext. batteries, A-4B, B-50V. Ext. phones/speaker.	Operational. detail card and circuit diagram drawn at Monash.
120	'The Silvatone Portable' 4 valve 1-A425, 3-A409. One inductance & one capacitance tuning dial, two trim capacitance dials. Wooden black leatherette covered case with battery space, hinged lid with built in loop aerial. O/A 41cm W, 20cm D, 43cm H Voltages A-4.5V, B-90V, C-4.5V. Ext. phones/speaker.	Ditto Made by Airzone Ltd., Sugden Place Melbourne. Supplied by A.J. Veall 247-249 Swanston St. Melbourne
121	2 valve 1-B409, 1-B406. One capacitance tuning dial with concentric trimmer. Stained wooden case, Bakelite panel, 67cm W, 26cm d, 24cm H. Ext. batteries. Ext. phones/speaker	Operational. Detail card and circuit diagram drawn at Monash.
122	3 valve 1-D, 2-E. Two capacitance tuning dials, one with concentric trim capacitance knob. Polished wood case, Bakelite panel, 49cm W, 30cm D, 33cm H. Ext. batteries, A-4V, B-30V. Ext. phones/speaker.	Detail card. Circuit diagram stuck inside case.

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INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Crystal Radio Receivers Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Description	Remarks
123	3 valve 1-184d, 1029d, 1-?. Two capacitor tuning dials. brown painted sheet metal case with loose lid, 44cm W, 28cm D, 22cm H. Ext. batteries, voltages not known. Ext. phones/speaker.	No detail card or circuit diagram. Operational?
124	'Crosley 51' 2 × UX201A valves. Tuning – switched & variable inductance & variable capacitance. Wooden case, ebonite panel, 28cm W, 14cm de, 15cm H. Ext. batteries A-4V, B-45V, C-4V. Ext Phones/speaker.	Operational. Detail card and circuit diagram drawn at Monash. Made 1924 by Crosley radio Corporation, Cincinnati, USA. Original cost $45.50 (inc separate audio amp.
125	'Monarch Baby' 1-12B8GT, 1-23L7GT, 1-23L7GT valves. 2 gang tuning, dial with station identification. Brown moulded plastic case, 22cm W, 14cm D, 15cm H. Mains operated 240V AC. 5 inch internal speaker.	Operational. details card but no circuit diagram. Made 1939-40 by Eclipse Radio Pty. Ltd. South Melbourne

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Item. Valve Radio Receivers Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Description	Remarks
126	'The Unidyne' Model 1A 1 valve Type? (with spare) Lever adjusted tuning & reactance coils. Horizontal wooden base, Bakelite panel 30/.5cm W, 20cm D, 19cm H. Batteries 2-D cells. With pair headphones.	Vintage look-a-like made 1972. Detail card but no circuit diagram. Operational?
127	Wooden cabinet, rounded top, 45cm W, 25cm D, 52cm H. Five valve 3 × 224, 1 × 245, 1 × 280, 8 inch speaker.	Circuit diagram drawn at Monash stuck inside cabinet. No display card. **Located in Research Manager's Office**
128	Astor Mickey, white moulded cabinet. Four valves 6A8G, 6B8G, 6V6G, 5Y3G. Serial No KL1607	**Located in Hv lab**
129	No used	

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Item: Radio Accessories Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Description	Remarks
130 131 132 133 134	Tuning coils. Five coils of various sizes with fixed windings	
135 136 137 138 139	Tuning coils. Five coils with adjustable coupling of various types.	An interesting range of designs.
140	Calibrated dial.	
141	Small knob.	
142 143 144	Porcelain egg insulators Two white, one green	Used for support of outdoor aerial wires

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INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Radio Accessories Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Description	Remarks
145 146	Two coupling transformers.	
147	Plug in coil mount.	
148	Neutrodyne coil kit of three coils, in original carton.	Marked 15/-. Made by Airzone, Sydney, under license to Hazeltine Corporation, for home constructors.
149 150 151	Three small mica capacitors.	
152 153	Two grid leaks. Glass tube enclosed resistors mounted on capacitor.	

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INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Valve Radio Receivers Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Description	Remarks
154 155 156 157 158 159 160 161 162 163	Ten glass enclosed resistors of various makes and values	
164 165 166	Three small tins with crystals.	
167	Halies detector in original box.	Price 5/8. Prov. Patent 26791-24
168	Rod or crystal in glass container.	

Department of electrical and Computer Systems Engineering

INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Radio Accessories Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Description	Remarks
169	Sealed crystal.	
170 171 172 173 174	Enclosed adjustable crystals.	
175	'Neutron Crystostat' enclosed adjustable crystal	
176	'Lissenstat Minor' enclosed adjustable crystal.	
177 178 179	Three resistors? – one with screw ends, marked 'XL' one similar in mounting brackets, one with large spring chips.	
180	Crystal and catswhisker mounting, crystal exposed.	
181	Crystal mount (loose)	
182 183 184 185	Four catswhisker holders (loose)	

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INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Cell/Chargers to 1st floor **Location: Cabinets, stair-well bldg 4-6 landing Gnd**

Inv. No.	Description	Remarks
186	Bottle type Bichromate Cell. Two flat carbon electrodes with one flat zinc electrode between. Cylindrical glass bottle 8.5cm diameter, with moulded cap, brass terminals and rod for raising zinc electrode. Overall height 25cm, 33cm with electrode raisded. EMf is 2.03 volts	Electrolyte typically – 2 parts Sulphuric Acid (by weight) 1 part Bichromate of Potash, 12 parts water. Cell has fairly constant voltage, low resistance and high current capacity. Zinc consumed by local action when cell not at work and must be raised. Electrolyte initially orange, with bluish tint when exhausted.
187	Battery Charger, transformer with glass electrolytic cell rectifier on metal base 14× 7 cm, 13cm high overall. Nameplate:– Balkite Trickle Charger Serial No. 6677. Fansteel Products Co. Inc., North Chicago, ILL. Pat USA May 27 1924. AC V 210-230, 50-60 cycles, Watts 14. Rate Amps 0.65-0.5. Batteries 4-6 V.	Electrolytic cell has moulded cap holding electrodes. Cap marked – Balkite rectifier Type C-5A. Electrode material not known but typically aluminium in solution of ammonium sulphate or magnesium in a solution of one of the alkaline flourides. Return electrode is usually lead. External leads cut short.

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INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Cell/Chargers Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Description	Remarks
188	Battery Charger, transformer and vacuum tubes. In cylindrical pressed metal case, 14cm diameter, 15cm high. Nameplate:– Philips Battery Charger No. 450 Made in Holland. 235-245 V, 40-100Hz Charge 1-3 cells (2-6 volts)at a rate of about 1.3 A 'Valves 451 and 452 must be used'	Case needs clean up and refinishing.

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INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Lamps/Fittings Location: Cabinets, stair-well bldg 4-6 landing 1st to 2nd floor

Inv. No.	Description	Remarks
189	Siemens carbon filament lamp in original packing.	
190	Cosmos drawn wire filament lamp in original packing.	
191 192 193 194 195 196 197 198 199 200 201 202 203 204	14 house service pattern lamps of carbon, straight wire and coiled wire filaments mounted in various stands and fittings	Inv. Nos. 203, 204 have 4 pin radio valve type bases, only suitable for base down operation. Suggests these are Barretters rather than straight wire filament lamps.

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INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Lamps/Fittings **Location: Cabinets, stair-well bldg 4-6 landing Gnd to 1st floor**

Inv. No.	Description	Remarks
205 206 207	3 unmounted house service pattern lamps.	
208	Philips Australia 1000w, 240-250v, lamp. Giant Edison screw base.	Contemporary production.
209 210	12v, 32CP automotive type lamp, small BC base, with socket Ditto, no socket.	
211	32v, 1000w high power aviation lamp. Westinghouse USA V1/428160. Two copper cylindrical contacts. Mounted in stand.	
212	Rotary wall switch, porcelain and brass	
213	Bayonet double adaptor, porcelain and brass	

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INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Electrostatic Equipment Location: Cabinets, stair-well bldg 4-6 landing Gnd to 1st floor

Inv. No.	Description	Remarks
214	Glass plate electrostatic machine for generating electrostatic charge. Glass plate 23 inches diameter.	Descriptive card
215	Universal discharger – pair of metal tongs with insulating handle.	Descriptive card
216	Clamp for puncturing cards with an electric spark.	Descriptive card
217	Gold leaf electroscope.	Descriptive card
218	Crooke's tube – mounted on stand.	Descriptive card
219	Insulated stand – wooden top glass legs	Descriptive card
220	Part of carbon arc lamp	Descriptive card
221 222	Handle of universal discharger Ditto	Descriptive card

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INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Valve Radio Receivers Location: Cabinets, stair-well bldg 4-6 landing Gnd to 1st floor

Inv. No.	Description	Remarks
223	Skeleton Leyden jar – dismountable interior and exterior metalwork.	No specific card
224	Leyden jar with diamond patterned foil/	Reference on general card on Leyden jars
225 226 227 228 229	Leyden jars with plain fixed foil – various sizes.	General descriptive card
230	Small wooden box with two terminals and sliding contact.	No card. Function not known.
231 232	4cm dia. cloth covered metal plate with wooden handle 5cm ditto	No card

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INVENTORY of GRAHAM BEARD MEMORIAL COLLECTION – JULY 1991

Item. Valve Radio Receivers Location: Cabinets, stair-well bldg 4-6 landing Gnd to 1st floor

Inv. No.	Description	Remarks
233	Small candlestick on cigar box. .2 contacts in box.	No card
234	Cylindrical glass tube 5cm dia. 9.5cm long on wooden base. Brass cap with vent and electrodes top and bottom	Function no known. No card
235	Volta Meter. Cylindrical glass bowl 11cm dia. with 2 electrodes in bottom, mounted on wooden base.	Descriptive card.
236	Slide wire unit scaled 0-17 (cm) with pointer instrument scaled 25-0-25. No 6951, lamp socket and switch and key.	Function not known. No card. Instrument movement and range selector know both jammed.
237	Small glass flask with metal top.	Function not known. No card.