

CR-134158

PATIENT ASSIST DEVICE PARTS LIST

by

Melvin A. Schrader
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NAS

Contract ~~13-3702~~ 9-13582

Project No. 13-3702-001

Southwest Research Institute
San Antonio, Texas 78284

Prepared for

NASA Lyndon B. Johnson Space Center
Houston, Texas

29 October 1973



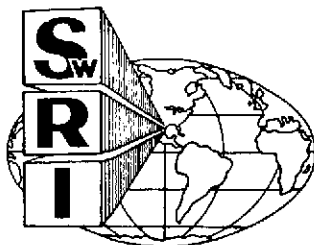
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(NASA-CR-134158) PATIENT ASSIST DEVICE
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PATIENT ASSIST DEVICE PARTS LIST

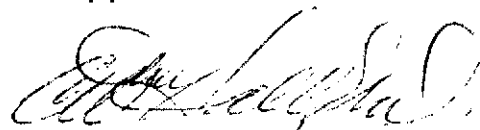
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Approved:



C. William Hall, M.D., Director
Department of Bioengineering

INTRODUCTION

1. Scope

This manual contains a complete parts list for the Patient Assist Device.

2. Explanation of columns is given below.

a. Reference No. - Column 1

The reference number applied to a component in the schematic diagram in Figure 4 appears in this column.

b. Description - Column 2

Reference name and qualifiers appear in this column.

c. Remarks - Column 3

Remarks of interest concerning reference items appear in this column. SwRI sketches referred to in this column are included immediately following the parts list.

Contractor Southwest Research Institute

Nomenclature PATIENT ASSIST DEVICE

Order No. Contract No. NAS 9-13582

Date Oct. 12, 1973

REF. NO.	DESCRIPTION	REMARKS
C ₁	Capacitor, Tantalum, 100 μ fd, 10%, 20 VDC	Kemet Series T110
C ₂	Capacitor, Tantalum, 100 μ fd, 10%, 20 VDC	Kemet Series T110
C ₃	Capacitor, Tantalum, 100 μ fd, 10%, 20 VDC	Kemet Series T110
C ₄	Capacitor, Tantalum, 100 μ fd, 10%, 20 VDC	Kemet Series T110
C ₅	Capacitor, Silver Mica, 560 pfd., 5%	Kemet Series T110
C ₆	Capacitor, Ceramic Disc, .01 μ fd., 20%, 50 VDC	Kemet Series T110
C ₇	Capacitor, Ceramic Disc, .01 μ fd., 20%, 50 VDC	Kemet Series T110
C ₈	Capacitor, Ceramic Disc, .01 μ fd., 20%, 50 VDC	Kemet Series T110
D ₁	Diode, Signal, Silicon, 1N4448	
D ₂	Diode, Signal, Silicon, 1N4448	
D ₃	Diode, Signal, Silicon, 1N4448	
D ₄	Diode, Signal, Silicon, 1N4448	

Contractor Southwest Research Institute

Nomenclature PATIENT ASSIST DEVICE

Order No. Contract No. NAS 9-13582

Date Oct. 12, 1973

REF. NO.	DESCRIPTION	REMARKS
F1	Fuse, AGC-5 (installed in 3AG fuse extractor post no. 342004)	
F2	Fuse, AGC-5 (installed in 3 AG fuse extractor post no. 342004)	
F3	Fuse, AGC-5 (installed in 3AG fuse extractor post no. 342004)	
F4	Fuse, AGC-5 (installed in 3AG fuse extractor post no. 342004)	
F5	Fuse, AGC-5 (installed in 3AG fuse extractor post no. 342004)	
F6	Fuse, AGC-5 (installed in 3AG fuse extractor post no. 342004)	
F7	Fuse, AGC-5 (installed in 3AG fuse extractor post no. 342004)	
F8	Fuse, AGC-5 (installed in 3AG fuse extractor post no. 342004)	
F9	Fuse, AGC-5 (installed in 3AG fuse extractor post no. 342004)	
F10	Fuse, AGC-5 (installed in 3AG fuse extractor post no. 342004)	
F11	Fuse, slo-blo, 3AG 5A (installed in 3AG fuse extractor post no. 342004)	
IC ₁	Integrated Circuit, SN74123N	Texas Instruments
IC ₂	Integrated Circuit, SN74123N	Texas Instruments
IC ₃	Integrated Circuit, SN7474N	Texas Instruments

Order No. Contract No. NAS 9-13582

Date Oct. 12, 1973

REF. NO.	DESCRIPTION	REMARKS
IC ₄	Integrated Circuit, SN7400N	Texas Instruments
IC ₅	Integrated Circuit, SN74192N	Texas Instruments
IC ₆	Integrated Circuit, SN75452	Texas Instruments
IC ₇	Integrated Circuit, SN7442N	Texas Instruments
IC ₈	Integrated Circuit, SN7402N	Texas Instruments
IC ₉	Integrated Circuit, SN7402N	Texas Instruments
IC ₁₀	Integrated Circuit, SN7402N	Texas Instruments
IC ₁₁	Integrated Circuit, SN75452	Texas Instruments
IC ₁₂	Integrated Circuit, SN75451	Texas Instruments
IC ₁₃	Integrated Circuit, SN75451	Texas Instruments
IC ₁₄	Integrated Circuit, SN75451	Texas Instruments
IC ₁₅	Integrated Circuit, SN75451	Texas Instruments
IC ₁₆	Integrated Circuit, SN75451	Texas Instruments
IC ₁₇	Integrated Circuit, SN7474N	Texas Instruments

Contractor Southwest Research Institute

Nomenclature PATIENT ASSIST DEVICE

Order No. Contract No. NAS 9-13582

Date Oct. 12, 1973

REF. NO.	DESCRIPTION	REMARKS
IC ₁₈	Integrated Circuit, SN7474N	Texas Instruments
IC ₁₉	Integrated Circuit, SN7474N	Texas Instruments
IC ₂₀	Integrated Circuit, SN7474N	Texas Instruments
IC ₂₁	Integrated Circuit, SN7474N	Texas Instruments
IC ₂₂	Integrated Circuit, SN7404N	Texas Instruments
IC ₂₃	Integrated Circuit, SN7404N	Texas Instruments
IC ₂₄	Integrated Circuit, SN75452	Texas Instruments
IC ₂₅	Integrated Circuit, SN75452	Texas Instruments
IC ₂₆	Integrated Circuit, SN75452	Texas Instruments
IC ₂₇	Integrated Circuit, SN75452	Texas Instruments
IC ₂₈	Integrated Circuit, SN75452	Texas Instruments
J1	Connector, Printed Circuit, 47 pin	ELCO No. 00-7015-047-217-002
J2	Connector, 9 pin	Winchester M9S

Contractor Southwest Research Institute

Nomenclature PATIENT ASSIST DEVICE

Order No. Contract No. NAS 9-13582

Date Oct. 12, 1973

REF. NO.	DESCRIPTION	REMARKS
J3	Socket, AC, 3-wire	Waber Electronics No. 3011
J4	Socket, AC, 3-wire	Waber Electronics No. 3011
J5	Socket, AC, 3-wire	Waber Electronics No. 3011
J6	Socket, AC, 3-wire	Waber Electronics No. 3011
J7	Socket, AC, 3-wire	Waber Electronics No. 3011
J8	Socket, AC, 3-wire	Waber Electronics No. 3011
J9	Socket, AC, 3-wire	Waber Electronics No. 3011
J10	Socket, AC, 3-wire	Waber Electronics No. 3011
J11	Socket, AC, 3-wire	Waber Electronics No. 3011
J12	Socket, AC, 3-wire	Waber Electronics No. 3011
K1	Relay, Solid State, Zero Voltage Turn on, Switches 5A, 140 VAC	Teledyne Relays No. 601-1103
K2	Relay, Solid State, Zero Voltage Turn on, Switches 5A, 140 VAC	Teledyne Relays No. 601-1103
K3	Relay, Solid State, Zero Voltage Turn on, Switches 5A, 140 VAC	Teledyne Relays No. 601-1103

Contractor Southwest Research Institute		Nomenclature PATIENT ASSIST DEVICE	
Order No.	Contract No. NAS 9-13582	Date	Oct. 12, 1973
REF. NO.	DESCRIPTION	REMARKS	
K4	Relay, Solid State, Zero Voltage Turn on, Switches 5A, 140VAC	Teledyne Relays No. 601-1103	
K5	Relay, Solid State, Zero Voltage Turn on, Switches 5A, 140 VAC	Teledyne Relays No. 601-1103	
K6	Relay, Solid State, Zero Voltage Turn on, Switches 5A, 140 VAC	Teledyne Relays No. 601-1103	
K7	Relay, Solid State, Zero Voltage Turn on, Switches 5A, 140 VAC	Teledyne Relays No. 601-1103	
K8	Relay, Solid State, Zero Voltage Turn on, Switches 5A, 140 VAC	Teledyne Relays No. 601-1103	
K9	Relay, Solid State, Zero Voltage Turn on, Switches 5A, 140 VAC	Teledyne Relays No. 601-1103	
K10	Relay, Solid State; Zero Voltage Turn on, Switches 5A, 140 VAC	Teledyne Relays No. 601-1103	
L1	Indicator, Pushbutton, Lighted(with legend "1" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C21B31-CYL with lamp ASA No. 656	
L2	Indicator, Pushbutton, Lighted(with legend "2" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C21B31-CYL with lamp ASA No. 656	
L3	Indicator, Pushbutton, Lighted(with legend "3" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C21B31-CYL with lamp ASA No. 656	

Contractor Southwest Research Institute

Nomenclature PATIENT ASSIST DEVICE

Order No. Contract No. NAS 9-13582

Date Oct. 12, 1973

REF. NO.	DESCRIPTION	REMARKS
L4	Indicator, Pushbutton, Lighted (with legend "4" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C21B31- CYL with lamp ASA No. 656
L5	Indicator, Pushbutton, Lighted (with legend "5" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C21B31- CYL with lamp ASA No. 656
L6	Indicator, Pushbutton, Lighted (with legend "6" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C21B31- CYL with lamp ASA No. 656
L7	Indicator, Pushbutton, Lighted (with legend "7" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C21B31- CYL with lamp ASA No. 656
L8	Indicator, Pushbutton, Lighted (with legend "8" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C21B31- CYL with lamp ASA No. 656
L9	Indicator, Pushbutton, Lighted (with legend "9" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C21B31- CYL with lamp ASA No. 656
L10	Indicator, Pushbutton, Lighted (with legend "10" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C21B31- CYL with lamp ASA No. 656

Contractor Southwest Research Institute

Nomenclature PATIENT ASSIST DEVICE

Order No. Contract No. NAS 9-13582

Date Oct. 12, 1973

REF. NO.	DESCRIPTION	REMARKS
L11	Indicator, Pushbutton, Lighted (with legend "ON" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C23B31
		CYK with lamp ASA No. 656
L12	Indicator, Pushbutton, Lighted (with legend "ON" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C23B31
		CYK with lamp ASA No. 656
L13	Indicator, Pushbutton, Lighted (with legend "ON" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C23B31
		CYK with lamp ASA No. 656
L14	Indicator, Pushbutton, Lighted (with legend "ON" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C23B31
		CYK with lamp ASA No. 656
L15	Indicator, Pushbutton, Lighted (with legend "ON" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C23B31
		CYK with lamp ASA No. 656
L16	Indicator, Pushbutton, Lighted (with legend "ON" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C23B31
		CYK with lamp ASA No. 656
L17	Indicator, Pushbutton, Lighted (with legend "ON" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C23B31
		CYK with lamp ASA No. 656

Contractor Southwest Research Institute		Nomenclature PATIENT ASSIST DEVICE	
Order No.	Contract No. NAS 9-13582	Date	Oct. 12, 1973
REF. NO.	DESCRIPTION	REMARKS	
L18	Indicator, Pushbutton, Lighted (with legend "ON" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C23B31	
		CYK with lamp ASA No. 656	
L19	Indicator, Pushbutton, Lighted (with legend "ON" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C23B31	
		CYK with lamp ASA No. 656	
L20	Indicator, Pushbutton, Lighted (with legend "ON" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C23B31	
		CYK with lamp ASA No. 656	
L21	Indicator, Pushbutton, Lighted (with legend "COUNT UP" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C23B31	
		CYK with lamp ASA No. 656	
L22	Indicator, Pushbutton, Lighted (with legend "COUNT DOWN" in 7/64" type size)	Microswitch Pushbutton Indicator No. 4C21B31	
		CYK with lamp ASA No. 656	
P1	Connector, printed circuit, 47 pin	Elco No. 00-7021-047-000-001	
P2	Connector, 9 pin	Winchester M9P	

Contractor Southwest Research Institute

Nomenclature PATIENT ASSIST DEVICE

Order No. Contract No. NAS 9-13582

Date Oct. 12, 1973

REF. NO.	DESCRIPTION	REMARKS
PS ₁	Power Supply, regulated, +5VDC, 2.2A	Acopian No. A5NT220
PS ₂	Power Supply, regulated, +28VDC, 1.25A	Acopian No. A28NT125
R1	Resistor, fixed, composition, 36K Ω , 5%, 1/4W	
R2	Resistor, fixed, composition, 20K Ω , 5%, 1/4W	
R3	Resistor, fixed, composition, 20K Ω , 5%, 1/4W	
R4	Resistor, fixed, composition, 20K Ω , 5%, 1/4W	
R5	Resistor, fixed, composition, 1K Ω , 5%, 1/4W	
R6	Resistor, fixed, composition, 1K Ω , 5%, 1/4W	
R7	Resistor, fixed, composition, 1K Ω , 5%, 1/4W	
R8	Resistor, fixed, composition, 1K Ω , 5%, 1/4W	
R9	Resistor, fixed, composition, 1K Ω , 5%, 1/4W	
R10	Resistor, fixed, composition, 1K Ω , 5%, 1/4W	
R11	Resistor, fixed, composition, 1K Ω , 5%, 1/4W	

Contractor Southwest Research Institute		Nomenclature PATIENT ASSIST DEVICE	
Order No.	Contract No. NAS 9-13582	Date	Oct. 12, 1973
REF. NO.	DESCRIPTION	REMARKS	
R12	Resistor, fixed, composition, 1K Ω , 5%, 1/4W		
R13	Resistor, fixed, composition, 1K Ω , 5%, 1/4W		
R14	Resistor, fixed, composition, 1K Ω , 5%, 1/4W		
R15	Resistor, fixed, composition, 1K Ω , 5%, 1/4W		
R16	Resistor, fixed, composition, 1K Ω , 5%, 1/4W		
S1, L24	Switch, Pushbutton, Lighted (with legends "POWER" and "ON" in 7/64" type size)	Microswitch Pushbutton Switch No. 4A21BFA31 CRJ with lamp no. ASA 656	
S2, L23	Switch, Pushbutton, Lighted (with legend "CLEAR" in 7/64" type size)	Microswitch Pushbutton Switch No. 4A21BEA31 CGL with lamp no. ASA 656	
S3*	Switch, Miniature, Light Force (with 2-3/8" lever as external actuator)	Cherry no. E22-85HX	
S4*	Switch, Miniature, Light Force (with 2-3/8" lever as external actuator)	Cherry no. E22-85HX	
S5*	Switch, Miniature, Light Force (with 2-3/8" lever as external actuator)	Cherry no. E22-85HX	

* These switches are patient activated and may be replaced by other SPST momentary action switches to

