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SOUTHWEST RESEARCH INSTITUTE 8500 Culebra Road, San Antonio, Texas 78284

Department of Electronic Systems Research

DOCUMENT NO. ETP-1

## ENGINEERING TEST PROCEDURE

## FOR THE

## PATIENT ASSIST DEVICE

(NASA-CR-134125) ENGINEERING TEST PROCEDURE FOR THE PATIENT ASSIST DEVICE (Southwest Research Inst.) 28 P HC CSCL 09A G3/09 22859

Contract No. NAS9-13582

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PRICES SUBJECT TO CHANGE

ENGINEERING TEST PROCEDURE FOR THE PATIENT ASSIST DEVICE

Contract No. NAS9-13582

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# CHANGE LOG

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## ACCEPTANCE TEST PLAN FOR PATIENT ASSIST DEVICE

### I. INTRODUCTION

The Patient Assist Device will be tested with the aid of a Load Test Board which contains ten 100-watt lamps, each of which is in a separate circuit. Each lamp is labeled according to the number of the power channel to which it is connected.

Single-pole, single-throw momentary action toggle switches will be used for patient actuation during testing. Three such switches are required for Patient Assist Device control. One is labeled "ADDRESS" and is activated to sequentially select power channels in ascending or descending numeric order. The "count up" or "count down" mode of successive channel selection is determined by the "DIRECTION" switch. This patient switch is activated to reverse the direction of count.

The third patient switch is activated to switch the power "on" or "off" in an addressed channel. The switch is labeled "POWER".

During testing, each lamp on the Load Test Board will be plugged into the correspondingly labeled AC socket on the rear panel of the Patient Assist Device.

The "POWER" push button switch on the front panel of the Patient Assist Device is depressed to turn "ON" power to the device. The push button lens includes hidden legend "ON" which is visible when "POWER" is supplied to the unit. Depressing this "POWER" switch resets the logic circuitry in the device such that no connected load (in this case, on the Load Test Board) is supplied power, channel "1" is addressed and "COUNT UP" is the selected numeric sequence.

Each power channel controlled by the Patient Assist Device is denoted by a separate button indicator on the front panel of the Patient Assist Device. Indicator lenses are labeled with the applicable channel number. When a channel is addressed, its indicator lens is lighted. Below each channel indicator is another button indicator with a hidden legend "ON". The legend is visible and the lens of this indicator is lighted when power is supplied to an electrical load in the applicable power channel.

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Thus when the "POWER" push button is depressed, the channel "1" indicator is lighted since the unit logic is reset to address channel "1". All other channel indicators are not lighted and power is not supplied to any of the ten possible lamp loads.

No "ON" legends are visible beneath the channel designations on the front panel.

The "COUNT UP" legend is visible and the "COUNT DOWN" legend is hidden to indicate the initial numeric address sequence.

The remaining front panel indicator is a push button indicator with a visible legend "CLEAR". The lens of this indicator is momentarily lighted when the Patient Assist Device logic is reset either by depressing the "POWER" button to switch "ON" power to the device or by depressing the "CLEAR" button.

The test procedure presented in the attached form permits a complete functional testing of the Patient Assist Device by activation of patient switches and observation of front panel indicators on the device and load lamps on the Load Test Board.

#### II. TEST PROCEDÜRES

- 1. Connect power to the Patient Assist Device.
- 2. Depress "POWER" push button to switch "ON" DC power to the logic section and indicator lamps of the Patient Assist Device.

The "ON" legend located under the "POWER" legend is visible when the power is supplied to the Patient Assist Device.

The "CLEAR" lens is momentarily lighted when the "POWER" switch is depressed.

The "COUNT UP" legend is visible.

The "1" channel is addressed as denoted by the lighted lens with legend "1".

No other lenses are lighted on the front panel of the unit.

NOTE: The following tests are performed by operating appropriate patient switches. When operating these switches, care must be taken to release a switch within a second of time following the initial contact with the switch. This time period may be adjusted differently to suit patient requirements. However, the one second period is normally preferred.

If the switch is not released during the one second time period, undesired results may occur upon release since switch chatter may retrigger the switch logic. The purpose of the one second time period is to permit switch release without retriggering the switch logic.

Also, no switch should be reactivated within a one-second period from a previous switch activation.

These criteria do not reflect a design deficiency of the Patient Assist Device. On the contrary, they are designed to meet the capabilities of a patient.

3. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "1". The "ON" legend of a lens directly under the lens labeled "1" is visible and that lens is lighted.

The load lamp labeled "1" on the Load Test Board is lighted.

4. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "1".

The "ON" legend under the lens labeled "1" is hidden and that lens is not lighted.

The load lamp labeled "1" on the Load Test Board is not lighted.

5. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "2".

The "2" channel is addressed as denoted by the lighted lens labeled "2" .

6. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "2".

The "ON" legend of a lens directly under the lens labeled "2" is visible and that lens is lighted.

The load lamp labeled "2" on the Load Test Board is lighted.

7. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "2".

The "ON" legend under the lens labeled "2" is hidden and that lens is not lighted.

The load lamp labeled "2" on the Load Test Board is not lighted.

8. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "3".

The "3" channel is addressed as denoted by the lighted lens labeled "3" .

9. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "3".

The "ON" legend of a lens directly under the lens labeled "3" is visible and that lens is lighted.

The load lamp labeled "3" on the Load Test Board is lighted.

10. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "3".

The "ON" legend under the lens labeled "3" is hidden and that lens is not lighted.

The load lamp labeled "3" on the Load Test Board is not lighted.

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11. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "4".

The "4" channel is addressed as denoted by the lighted lens labeled "4".

12. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "4".

The "ON" legend of a lens directly under the lens labeled "4" is visible and that lens is lighted.

The load lamp labeled "4" on the Load Test Board is lighted.

13. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "4".

The "ON" legend under the lens labeled "4" is hidden and that lens is not lighted.

The load lamp labeled "4" on the Load Test Board is not lighted.

14. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "5".

The "5" channel is addressed as denoted by the lighted lens labeled "5" .

15. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "5".

The "ON" legend of a lens directly under the lens labeled "5" is visible and that lens is lighted.

The load lamp labeled "5" on the Load Test Board is lighted.

16. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "5".

The "ON" legend under the lens labeled "5" is hidden and that lens is not lighted.

The load lamp labeled "5" on the Load Test Board is not lighted.

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17. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "6".

The "6" channel is addressed as denoted by the lighted lens labeled "6".

18. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "6".

The "ON" legend of a lens directly under the lens labeled "6" is visible and that lens is lighted.

The load lamp labeled "6" on the Load Test Board is lighted.

19. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "6".

The "ON" legend under the lens labeled "6" is hidden and that lens is not lighted.

The load lamp labeled "6" on the Load Test Board is not lighted.

20. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "7".

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The "7" channel is addressed as denoted by the lighted lens labeled "7" .

21. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "7".

The "ON" legend of a lens directly under the lens labeled "7" is visible and that lens is lighted.

The load lamp labeled "7" on the Load Test Board is lighted.

22. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "7".

The "ON" legend under the lens labeled "7" is hidden and that lens is not lighted.

The load lamp labeled "7" on the Load Test Board is not lighted.

23. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "8".

The "8" channel is addressed as denoted by the lighted lens labeled "8" .

24. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "8".

The "ON" legend of a lens directly under the lens labeled "8" is visible and that lens is lighted.

The load lamp labeled "8" on the Load Test Board is lighted.

25. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "8".

The "ON" legend under the lens labeled "8" is hidden and that lens is not lighted.

The load lamp labeled "8" on the Load Test Board is not lighted.

26. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "9".

The "9" channel is addressed as denoted by the lighted lens labeled "9".

27. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "9".

The "ON" legend of a lens directly under the lens labeled "9" is visible and that lens is lighted.

The load lamp labeled "9" on the Load Test Board is lighted.

28. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "9".

The "ON" legend under the lens labeled "9" is hidden and that lens is not lighted.

The load lamp labeled "9" on the Load Test Board is not lighted.

29. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "10".

The "10" channel is addressed as denoted by the lighted lens labeled "10".

30. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "10".

The "ON" legend of a lens directly under the lens labeled "10" is visible and that lens is lighted.

The load lamp labeled "10" on the Load Test Board is lighted.

31. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "10".

The "ON" legend under the lens labeled "10" is hidden and that lens is not lighted.

The load lamp labeled "10" on the Load Test Board is not lighted.

32. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "1".

The "1" channel is addressed as denoted by the lighted lens labeled "1".

33. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "1".

The "ON" legend of a lens directly under the lens labeled "1" is visible and that lens is lighted.

The load lamp labeled "1" on the Load Test Board is lighted.

34. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "1".

The "ON" legend under the lens labeled "1" is hidden and that lens is not lighted.

The load lamp labeled "1" on the Load Test Board is not lighted.

35. Activate the patient "DIRECTION" switch to switch the sequence of addresses to a "COUNT DOWN" mode.

The "COUNT DOWN" legend is visible.

The "1" channel remains addressed as denoted by the lighted lens with legend "1".

36. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "10".

The "10" channel is addressed as denoted by the lighted lens labeled "10".

37. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "10".

The "ON" legend of a lens directly under the lens labeled "10" is visible and that lens is lighted.

The load lamp labeled "10" on the Load Test Board is lighted.

38. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "10".

The "ON" legend under the lens labeled "10" is hidden and that lens is not lighted.

The load lamp labeled "10" on the Load Test Board is not lighted.

39. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in channel "9".

The "9" channel is addressed as denoted by the lighted lens labeled "9".

40. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "9".

The "ON" legend of a lens directly under the lens labeled "9" is visible and that lens is lighted.

The load lamp labeled "9" on the Load Test Board is lighted.

Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "9".

9

The "ON" legend under the lens labeled "9 " is hidden and that lens is not lighted.

The load lamp labeled "9" on the Load Test Board is not lighted.

42. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "8".

The "8" channel is addressed as denoted by the lighted lens labeled "8".

43. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "8".

The "ON" legend of a lens directly under the lens labeled "8" is visible and that lens is lighted.

The load lamp labeled "8" on the Load Test Board is lighted.

44. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "8".

The "ON" legend under the lens labeled "8" is hidden and that lens is not lighted.

The load lamp labeled "8" on the Load Test Board is not lighted.

45. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "7".

The "7 " channel is addressed as denoted by the lighted lens labeled "7 ".

46. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "7".

The "ON" legend of a lens directly under the lens labeled "7" is visible and that lens is lighted.

The load lamp labeled "7" on the Load Test Board is lighted.

47. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "7".

The "ON" legend under the lens labeled "7" is hidden and that lens is not lighted.

The load lamp labeled "7" on the Load Test Board is not lighted.

48. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "6".

The "6" channel is addressed as denoted by the lighted lens labeled "6".

49. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "6".

The "ON" legend of a lens directly under the lens labeled "6" is visible and that lens is lighted.

The load lamp labeled "6" on the Load Test Board is lighted.

50. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "6".

The "ON" legend under the lens labeled "6" is hidden and that lens is not lighted.

The load lamp labeled "6 " on the Load Test Board is not lighted.

51. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "5".

The "5" channel is addressed as denoted by the lighted lens labeled "5".

52. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "5".

The "ON" legend of a lens directly under the lens labeled "5" is visible and that lens is lighted.

The load lamp labeled "5" on the Load Test Board is lighted.

53. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel " 5".

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The "ON" legend under the lens labeled "5" is hidden and that lens is not lighted.

The load lamp labeled " 5" on the Load Test Board is not lighted.

54. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "4".

The "4" channel is addressed as denoted by the lighted lens labeled "4".

55. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel " 4 ".

The "ON" legend of a lens directly under the lens labeled "4" is visible and that lens is lighted.

The load lamp labeled "4" on the Load Test Board is lighted.

56. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "4".

The "ON" legend under the lens labeled "4" is hidden and that lens is not lighted.

The load lamp labeled "4" on the Load Test Board is not lighted.

57. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "3".

The "3" channel is addressed as denoted by the lighted lens labeled "3".

58. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "3".

The "ON" legend of a lens directly under the lens labeled "3" is visible and that lens is lighted.

The load lamp labeled "3" on the Load Test Board is lighted.

59. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel " 3".

The "ON" legend under the lens labeled ".3" is hidden and that lens is not lighted.

The load lamp labeled "3" on the Load Test Board is not lighted.

60. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "2".

The "2" channel is addressed as denoted by the lighted lens labeled "2".

61. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "2".

The "ON" legend of a lens directly under the lens labeled "2" is visible and that lens is lighted.

The load lamp labeled "2" on the Load Test Board is lighted.

62. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "2".

The "ON" legend under the lens labeled "2." is hidden and that lens is not lighted.

The load lamp labeled "2" on the Load Test Board is not lighted.

63. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "1".

The "1" channel is addressed as denoted by the lighted lens labeled "1".

64. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "1".

The "ON" legend of a lens directly under the lens labeled "1" is visible and that lens is lighted.

The load lamp labeled "1" on the Load Test Board is lighted.

65. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "2".

The "2" channel is addressed as denoted by the lighted lens labeled "2".

66. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "3".

The "3" channel is addressed as denoted by the lighted lens labeled "3".

67. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "3".

The "ON" legends of lenses associated with Channels "1" and "3" are visible and those lenses are lighted.

The load lamps labeled "1" and "3" on the Load Test Board are lighted.

68. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "4".

The "4" channel is addressed as denoted by the lighted lens labeled "4".

69. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "5".

The "5" channel is addressed as denoted by the lighted lens labeled "5".

70. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "5".

The "ON" legends of lenses associated with channels "1", "3", and "5" are visible and those lenses are lighted.

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The load lamps labeled "1", "3", and "5" on the Load Test Board are lighted.

71. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "6".

The "6" channel is addressed as denoted by the lighted lens labeled "6".

72. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "7".

The "7" channel is addressed as denoted by the lighted lens labeled "7".

73. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "7".

The "ON" legends of lenses associated with Channels "1", "3", "5", and "7" are visible and those lenses are lighted.

The load lamps labeled "1", "3", "5" and "7" on the Load Test Board are lighted.

74. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "8".

The "8" channel is addressed as denoted by the lighted lens labeled "8".

75. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "9".

The "9" channel is addressed as denoted by the lighted lens labeled "9".

76. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "9".

The "ON" legends of lenses associated with Channels "1", "3", "5", "7", and "9" are visible and those lenses are lighted.

The load lamps labeled "1", "3", "5", "7", and "9" on the Load Test Board are lighted.

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The "ON" legends of lenses associated with Channels "2", "5", "7", and "9" are visible and those lenses are lighted.

The load lamps labeled "2", "5", "7", and "9" on the Load Test Board are lighted.

84. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "4".

The "4" channel is addressed as denoted by the lighted lens labeled "4".

85. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "4".

The "ON" legends of lenses associated with Channels "2", "4", "5", "7", and "9" are visible and those lenses are lighted.

The load lamps labeled "2", "4", "5", "7" and "9" on the Load Test Board are lighted.

86. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "5".

The "5" channel is addressed as denoted by the lighted lens labeled "5".

87. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "5".

The "ON" legends of lenses associated with Channels "2", "4", "7" and "9" are visible and those lenses are lighted.

The load lamps labeled "2", "4", "7" and "9" on the Load Test Board are lighted.

88. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "6".

The "6" channel is addressed as denoted by the lighted lens labeled "6".

89. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "6".

The "ON" legends of lenses associated with Channels "2", "4", "6", "7", and "9" are visible and those lenses are lighted.

The load lamps labeled "2", "4", "6", "7", and "9" on the Load Test Board are lighted.

90. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "7".

The "7" channel is addressed as denoted by the lighted lens labeled "7".

91. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "7".

The "ON" legends of lenses associated with Channels "2", "4", "6" and "9" are visible and those lenses are lighted.

The load lamps labeled "2", "4", "6" and "9" on the Load Test Board are lighted.

92. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "8".

The "8" channel is addressed as denoted by the lighted lens labeled "8".

93. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "8".

The "ON" legends of lenses associated with Channels "2", "4", "6", "8" and "9" are visible and those lenses are lighted.

The load lamps labeled "2", "4", "6", "8" and "9" on the Load Test Board are lighted.

94. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "9".

The "9" channel is addressed as denoted by the lighted lens labeled "9".

95. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "9".

The "ON" legends of lenses associated with Channels "2", "4", "6", and "8" are visible and those lenses are lighted.

The load lamps labeled "2", "4", "6", and "8" on the Load Test Board are lighted. 96. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "10".

The "10" channel is addressed as denoted by the lighted lens labeled "10".

97. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "10".

The "ON" legends of lenses associated with Channels "2", "4", "6", "8", and "10" are visible and those lenses are lighted.

The load lamps labeled "2", "4", "6", "8", and "10" on the Load Test Board are lighted.

98. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "1".

The "1" channel is addressed as denoted by the lighted lens labeled "1".

99. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "1".

The "ON" legends of lenses associated with <u>Channels</u> "1", "2", "4", "6", "8" and "10" are visible and those lenses are lighted.

The load lamps labeled "1", "2", "4", "6", <u>282</u>, and <u>210</u> on the Load Test Board are lighted.

100. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "2",

The "2" channel is addressed as denoted by the lighted lens labeled "2".

101. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "2".

The "ON" legends of lenses associated with Channels "1", "4", "6", "8", and "10" are visible and these lenses are lighted.

The load lamps labeled "1", "4", "6", "8", and,"19% on the Load Test Board are lighted chied. 102. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "3".

The "3" channel is addressed as denoted by the lighted lens labeled "3".

103. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "3".

The "ON" legends of lenses associated with Channels "1", "3", "4", "6", "8", and "10" are visible and those lenses are lighted.

The load lamps labeled "1", "3", "4", "6", "8", and "10" on the Load Test Board are lighted.

104. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "4".

The "4" channel is addressed as denoted by the lighted lens labeled "4".

105. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "4".

The "ON" legends of lenses associated with Channels "1", "3", "6", "8", and "10" are visible and those lenses are lighted.

The load lamps labeled "1", "3", "6", "8", and "10" on the Load Test Board are lighted.

106. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "5".

The "5" channel is addressed as denoted by the lighted lens labeled "5".

107. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "5".

The "ON" legends of lenses associated with Channels "1", "3", "5", "6", "8" and "10" are visible and those lenses are lighted.

The load lamps labeled "1", "3", "5", "6", "8", and "10" on the Load Test Board are lighted.

108. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "6".

The "6" channel is addressed as denoted by the lighted lens labeled "6".

109. Activate the patient "POW ER" switch to switch power "off" to the electrical load in channel "6".

The "ON" legends of lenses associated with Channels "1", "3", "5", "8", and "10" are visible and those lenses are lighted.

The load lamps labeled "1", "3", "5", "8", and "10" on the Load Test Board are lighted.

110. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "7".

The "7" channel is addressed as denoted by the lighted lens labeled "7".

111. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "7".

The "ON" legends of lenses associated with Channels "1", "3", "5", "7", "8" and "10" are visible and those lenses are lighted.

The load lamps labeled "1", "3", "5", "7", "8", and "10" on the Load Test Board are lighted.

112. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "8".

The "8" channel is addressed as denoted by the lighted lens labeled "8".

113. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "8".

The "ON" legends of lenses associated with Channels "1", "3", "5", "7", and "10" are visible and those lenses are lighted.

The load lamps labeled "1", "3", "5", "7", and "10" on the Load Test Board are lighted.

114. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "9".

The "9" channel is addressed as denoted by the lighted lens labeled "9".

115. Activate the patient "POWER" switch to switch power "ON" to the electrical load in Channel "9".

The "ON" legends of lenses associated with Channels "1", "3", "5", "7", "9", and "10" are visible and those lenses are lighted.

The load lamps labeled "1", "3", "5", "7", "9", and "10" on the Load Test Board are lighted.

116. Activate the patient "ADDRESS" switch to acquire control of power supplied to the electrical load in Channel "10".

The "10" channel is addressed as denoted by the lighted lens labeled "10".

117. Activate the patient "POWER" switch to switch power "off" to the electrical load in Channel "10".

The "ON" legends of lenses associated with Channels "1", "3", "5", "7", and "9" are visible and those lenses are lighted.

The load lamps labeled "1", "3", "5", "7", and "9" on the Load Test Board are lighted.

118. Activate the patient "DIRECTION" switch to change the addressing sequence to a "COUNT DOWN" mode.

The "COUNT DOWN" legend is visible.

119. Depress the "CLEAR" push button on the front panel of the Patient Assist Device.

The "CLEAR" lens is momentarily lighted when the push button is initially depressed.

The "COUNT UP" legend is visible.

The "1" channel is addressed as denoted by the lighted lens with legend "1".

All "ON" legends directly under numerically labeled lenses are hidden.

No load lamps on the Load Test Board are lighted.

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## III. SUMMARY

The test procedure presented in this document completely tests the functioning of the Patient Assist Device. All modes of operation are included in the test.

Patient activated switches may be chosen for use with this device as desired. These switches, however, must be single-pole, single-throw, momentarily-on switches.