| REV NO. | . |
|---|---|
| 2 7 7 A 3 8 5 4 | |
| CONT ON SHEET 2   SH NO. 1 | |

TITLE

Test Specifications

FIRST MADE FOR   44C331828-G01

REVISIONS

STANDING INSTRUCTIONS

FOR

VOLTS/HZ

PRINTED CIRCUIT BOARD

FOR

GENERREX SYSTEM

44C331828-G01

Distribution:

1  Q.C. Engineering
1  Engineering
1  Test Area

3EL1

4QA1

1RA2

4EK1

DL13

PRINTS TO

| MADE BY | | APPROVALS | | DIV OR DEPT. | |
|---|---|---|---|---|---|
| RK Gerlitz   790109 | | ℐℓ Preun 1/10/79 | Drive Systems | | 2 7 7 A 3 8 5 4 |
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FF-803 WF (11-77)
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| 277A3854 | | Test Specifications | |
| CONT ON SHEET 3   SH NO. 2 | | FIRST MADE FOR 44C331828-G01 | |

**REVISIONS**

I. Test Equipment Required

   A. Printed Circuit Board Test Setup – 44C931365

   B. Adaptor – Amp. Mod. II 30 Pin

   C. Cable – Power Supply

   D. Patchboard – PB-1

   E. Drawings

       44C306930             Elementary
       44C331828-G01      Assembly
       44C931365             Elementary of Universal Power Supply

II. Connection

   A. Connect the Amp. Mod. II adaptor cable to PL1 on the Universal Tester (UT).

   B. Connect the power supply cable to PL3 on the UT, to PL1 on the UPS, and to the power supplies per markings.

   C. Insert patchboard PB-1 in carrier of Universal Tester and close.

   D. Connect DC voltmeter to BJ-1 red (+) and black (-).

   E. Connect H.P. function generator to BJ-11.

   F. Install a 28 volt 40 ma lamp in "L18".

III. Wire Check

| Pin | To | Test Point | Pin | Resistance (Ohms) |
|---|---|---|---|---|
| 21 | | 2TP | | 95K to 105K |
| 4 | | 1TP | | 0 |
| 8 | | | 18 | 9K to 11K ① |

   Visually Check

| 29R | | | | 10K ohms |
| 40R | | | | 8.06K |

IV. Setup

   A. Turn all switches to OFF or Normal on both the UT and UPS.

   B. Turn all power supplies to zero on the UT and all variacs to zero on the UPS.

   C. Apply power to test stand.

3EL1
4QA1
1RA2
4EK1
DL13

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| CONT ON SHEET 4   SH NO. 3 | | FIRST MADE FOR  44C331828-G01 | |

**REVISIONS**

D.  Install board under test to adaptor.

V.  Electrical Test       *+24v TO PIN 7  24v COM TO PIN 9*

A.  Close "SW-1" and "SW-34", depress "LPB-1" and then set "PS-1" to
    24 ±0.5 VDC at BJ-1.

> NOTE:  Should it become necessary to remove all DC power from the PCB,
>        open "SW-1".

B.  Depress "LPB-2" and adjust "PS-2" to 15 ±0.15 VDC.  *+15v TO PIN 1  COM PIN 3*

C.  Depress "LPB-3" and adjust "PS-3" to 15 ±0.15 VDC.  *-15v TO PIN 5  COM PIN 3*

D.  Adjust 2P, wiper (+) to 1TP (-) to -5.0 ±0.05 VDC.

E.  With all variacs on the Universal Power Supply (UPS) set to zero
    (completely CCW), apply power to the UPS.

F.  Close 3∅ power switch on the UPS.  Connect an AC voltmeter to UPS L-N
    voltage jacks and set the 3∅ voltage to 17 ±0.17 VAC for each ∅.  This
    can be accomplished by setting the 3∅ variac approximately 1/3 turn CW
    and then turning the respective 1∅ variacs CW until 17 volts is obtained.  *17v AC*
    Use PB-1̶, PB-2̶, and PB-3̶ for ∅1, ∅2, and ∅3 respectively.  *CONNECT 3 PHASE VOLTS*
        4      5        6  ①   *FROM FIXTURE U188515 TO PIN 11, 15, 17, COM TO 3*

G.  Depress "PB-20" on the UPS.  (Applies 3∅ voltage to UT).
                                         *METER PIN 20  COM PIN 3,4*

H.  Place "RS-2" to position 2 (connects BJ-12 pin 20 to 4).  The
    voltage at BJ-12 should be   0  ±0.1 VDC.

I.  Close SW-30.  (Applies 3∅ voltage to board pins 11, 15, 17 to 3).

J.  Close SW-19.)   (Connects a 2.5K resistor pins 19-4).  Place RS-1 to
        1  2   3← ①
    positions 8̶4̶, 9̶, and 1̶0̶.  BJ-10 shall read 17 ±0.2 VAC in each position.
    Readjust ∅1, ∅2, and ∅3.  Balance variacs if necessary.  *CHECK FOR 17VAC AT*
                                                              *PINS 11, 15, 17*

K.  Measure the pulses at the collector of 7Q with an oscilloscope.
    They should be equally spaced 2 to 2.5 milliseconds deviation and
    14 ± 1 volt amplitude.

                ①                                              *PIN 20*
L.  ~~Adjust 2P completely CW.~~  Adjust 1P from CCW to CW position.  BJ-12
    shall vary from ~~+5.9~~ ~~+0.2~~ to ~~-8.55~~ ~~+0.2~~ VDC.
              ② -5.5 ± 1.0    7.8 ± 1.1

M.  Adjust 1P for -6 ±0.06 VDC at "BJ-12".  *PIN 20*

N.  Open switch 30 and release PB-20 on the UPS.  Turn all variacs to zero.
                         *REMOVE 3 PHASE INPUTS*

| |
|---|
| 3EL1 |
| 4QA1 |
| 1RA2 |
| 4EK1 |
| DL13 |

**PRINTS TO**

| MADE BY RK Gerlitz   790109 | APPROVALS JR Purser 1/10/79 | Drive Systems | DIV OR DEPT | 2 7 7 A 3 8 5 4 |
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|---|---|---|---|
| 2 7 7 A 3 8 5 4 | | Test Specifications | |
| CONT ON SHEET  Fnl  SH NO.  4 | | FIRST MADE FOR  44C331828-G01 | |

*CONNECTS GEN TO PIN 17* *FREQ*

O.  Place "RS-1" to position 3.

*HOOKS UP GEN*    *SHORTS PIN 12 TO PIN 3*    *SHORTS PIN 15 to PIN 3*  (14)

P.  Close SW-28.    Place "SW-2" down and close "SW-7".

*RMS*

Q.  Adjust oscillator output for 10.5 ±0.2 volts AC at 180 ±1 Hz at *PIN 17* "BJ-10".

R.  BJ-12 shall read -6.0 +0.05 VDC.  *PIN 20*
   *PIN 20*

S.  Adjust oscillator frequency to 90 +0.1 Hz.  "BJ-12" shall read -3 +0.05 *PIN 20*
   VDC.  *REMOVE 15 TO 3*

T.  Open "SW-7".    Jumper pin 17 to pin 3
   Repeat Q,R,  and S with "RS-1" in position 2.  *INPUT SIG GEN TO 16*

U. Open "SW-2".    Close "SW-17".  Place "RS-1" to position 1 and repeat
   Q,  R,  and S.  *YOU CAN CONNECT LAMP PIN 18 TO PIN 7 OR METER PIN 18 TO PIN 10 - 24V GOES TO 0 AT 150 Hz*

V. Place "SW-18" down.  Increase frequency from 90 to 180 Hz.  "L18"
   shall energize at 150 ± 3 Hz.  Adjust 2P to meet limit.

W. Return "RS-1" to OFF and "BJ-12" shall be 0.0 +0.2 VDC

X.  Open SW-1, then all remaining switches on UPS and UT or return to
   normal.  Turn all variacs to zero (CCW).

| REVISIONS |
|---|
| BVII6038V  6/21/79 |
| T |
| 3EL1 |
| 4QA1 |
| 1RA2 |
| 4EK1 |
| DL13 |
| PRINTS TO |

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