GENERAL ELECTRIC
MOTHER/DAUGHTER
TEST PROCEDURES

The TEST for Mother/Daughter is a four part test.

1.) The first of the test is on the Mother Board.
2.) The second part of the test is the Daughter Board.
3.) The third part of the test is the Mother and Daughter Boards together.
4.) The fourth and final test is to QC the completed assembly of the Mother/Daughter Unit.

TEST EQUIPMENT NEEDED:

1.) OSCILLOSCOPE
2.) METER (DVM)
3.) AC CORD
4.) TEST SET
5.) MOTHER BOARD (NEEDED TO TEST DAUGHTER BOARD)
6.) DAUGHTER BOARD (NEEDED TO TEST MOTHER BOARD)

PART I - MOTHER BOARD

Make sure that U13 is in the board and in the correct direction.

1.) Check the board over for shorts and component orientation
2.) Ohm out the power supplies making sure that the +5, +12, -12 GND are not shorted together.
3.) Apply 110 Volts to - TB1; and make sure the power supplies are correct on TB2
4.) Check the regulated power supply outputs with the following loads with a scope checking for stability also

4.9-5.10 +5 VDC @ 1 8A with a 2.7 ohm 10 watt load.(Varying by no more than 5% on voltage)

11.80-12.20 +12 VDC @ 400mA with a 30 ohm 5 watt load.(Varying by no more than 5% on voltage)

11.80-12.12 -12 VDC @ 200mA with a 60 ohm 3 watt load.(Varying by no more than 5% on voltage)

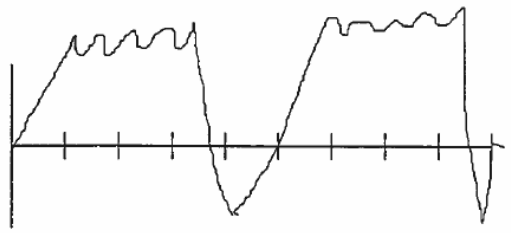
5.) Connect channel 1 to U1 pin 8 and set the scope to trigger or channel 2. The scope settings are 1V/div and .2 sec/div. Connect channel 2 to the +5VDC output. Turn the unit off and turn it back on again. The +5VDC signal should appear instantly, and CLR1 signal on U1 should appear between 200 and 600 milli-sec later.

ERB1 REV -
ENC/RES CONV/MBD MOTHER
BOARD

6.) Connect the scope to TP1 the settings are 1V/div and .2 msec turn the intensity up. A spike should appear every .4 millisecond and the RF 1999 should be a stable signal.

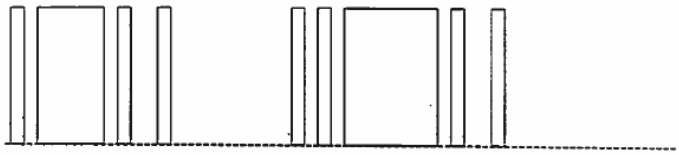
7.) Connect the scope to U1 pin 11 the settings are 1V/div and 50 psec/div. The C1A signal should appear as follows:

C1A



8.) Connect scope to the sine and cosine test points; the settings are 1V/div and .1 msec/div and verify the wave forms to the forms below.

SINE



COSINE - similar to above, will be phase shifted 90 degrees

PART II - DAUGHTER BOARD

Make sure that U7 is in the board and in the correct direction.

1.) Check the board over for shorts, and component orientations.

2.) Holding the board, component side up and connectors to the right. Make sure the top connector is a female/socket connector and the bottom connector is a male/pin connector.

3.) Make sure the jumpers are in the following order:

* Note -- indicates a jumper

PART III - MOTHER - DAUGHTER BOARDS

1.) Plug the Daughter Board into the first connector.
2.) Plug the resolver test unit into the Daughter Board, and apply 110 VAC to the Mother Board.
3.) The 6 LEDS on the unit should respond as follows when the knob is adjusted.

a) (A B $\overline{A}$ $\overline{B}$) should flash on and off (flicker)

b) To make the M - $\overline{M}$ operate set the knob on the black line and turn the knob slightly to either side of the line. When M is on $\overline{M}$ is off and visa-versa.

***Note the knob adjustment is very sensitive to the operation of the M and M signals.**

4.) Disconnect the connector with black wires, the LED1 on the top of the unit should go out. The small LED on the Daughter Board should now be on. Reconnect the connector, the LEDs on the test unit should operate as before, and the small LED on the Daughter Board should go out.

5.) Connect the scope to U21 pin 4 on the Daughter Board the scope settings are 1V/div and .5 usec/div. With the jumper between TC8 and center pin, the scope should show 2 pulses on the pulse signal. Move the jumper to TC4 and the center pin, the scope should show 4 pulses on the C pulse signal.

6.) Turn the power off, disconnect the Daughter Board from the Mother Board, and plug it into the next connector. Turn the power on and verify that the Daughter Board is on. Continue this step until all 4 connectors on the Mother Board have been checked.

PART IV

QC the completed assembly after the metal work has been added.

THIS COMPLETES THE TEST PROCEDURES FOR MOTHER/DAUGHTER GE