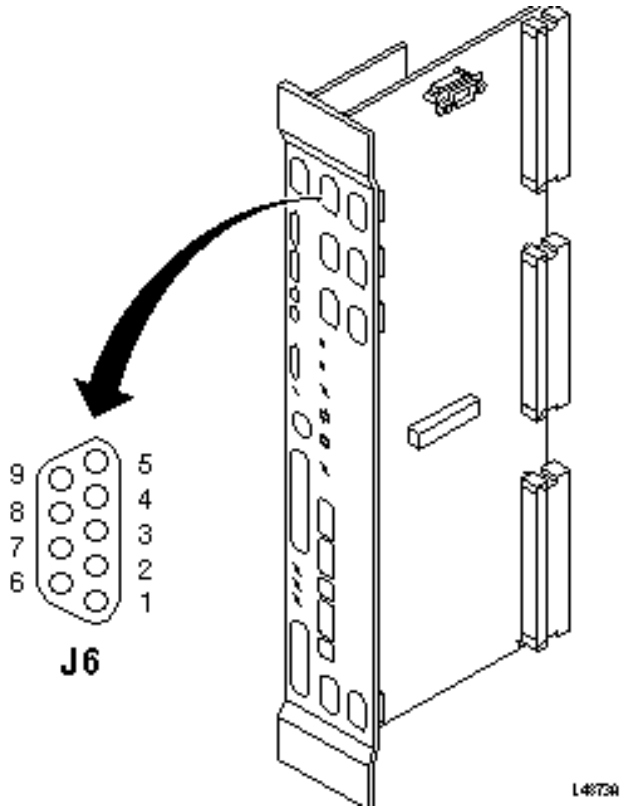
TABLE OF CONTENTS

Description

TYME-DAC test will send some basic waveforms, generated locally from the SPU, out from the IPG serial port through the TYME II board D/A converter. The scope will be connected to J6 (Gating) pin 1, pin 2, pin 3, and pin 4. The waveforms will consist of linear ramping pattern (sawtooth) of different frequencies. Unexpected rugged steps and spikes would indicate TYME-DAC malfunction.

1- PROCEDURE

1. Disconnect any cable connected to TYME II board J6. See Illustration 1-1.

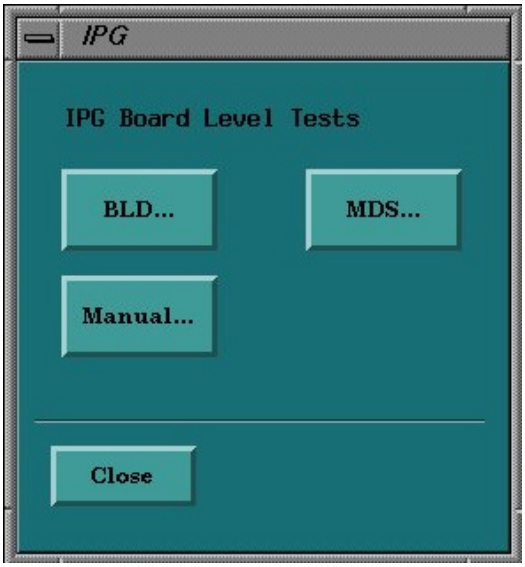


TYME II BOARD J6
ILLUSTRATION 1-1

2. Select the Service icon from the Signa main menu.

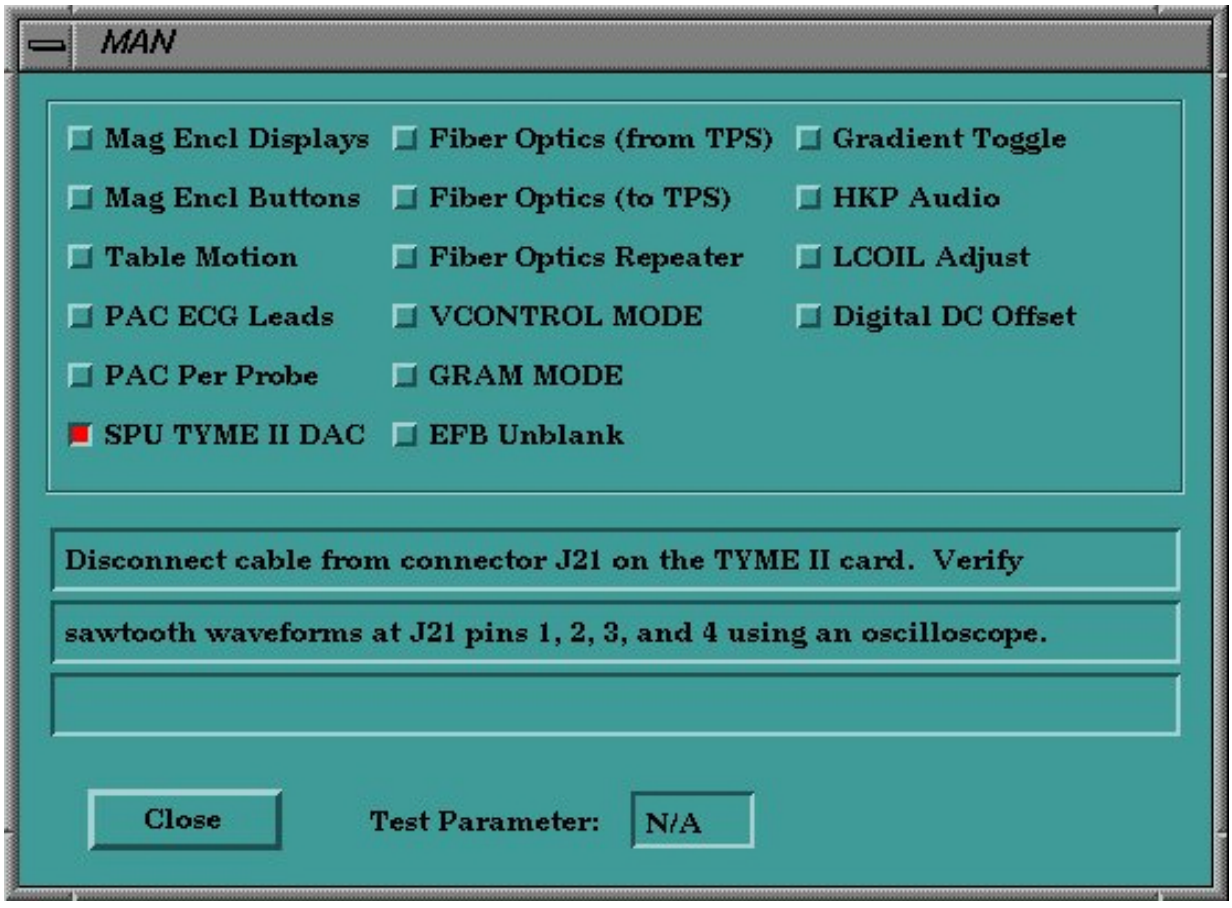
3. Touch **[Diagnostics]** and **[Start…]** in the Service Desktop Manager to open Diags Main menu. Select **[IPG]** from Diagnostics Menu .

4. From the IPG menu Select **[Manual…]**. See Illustration 1-2



IPG MENU
ILLUSTRATION 1-2

5. Select **[SPU TYME II DAC]** from the Manual IPG Diagnostics Menu. See Illustration 1-3.



MANUAL IPG DIAGNOSTICS WINDOW
ILLUSTRATION 1-3

Note

The message that appears in the three previously empty lines below the test options ***may be inaccurate***. The cable from connector *J6* (if any) should be disconnected and waveforms verified from *J6* pins (see Illustration 1-1 above).

6. Connect oscilloscope ground to a suitable grounding point and probe pins 1,2,3, and 4 of J6. (See Illustration 1-1 above).

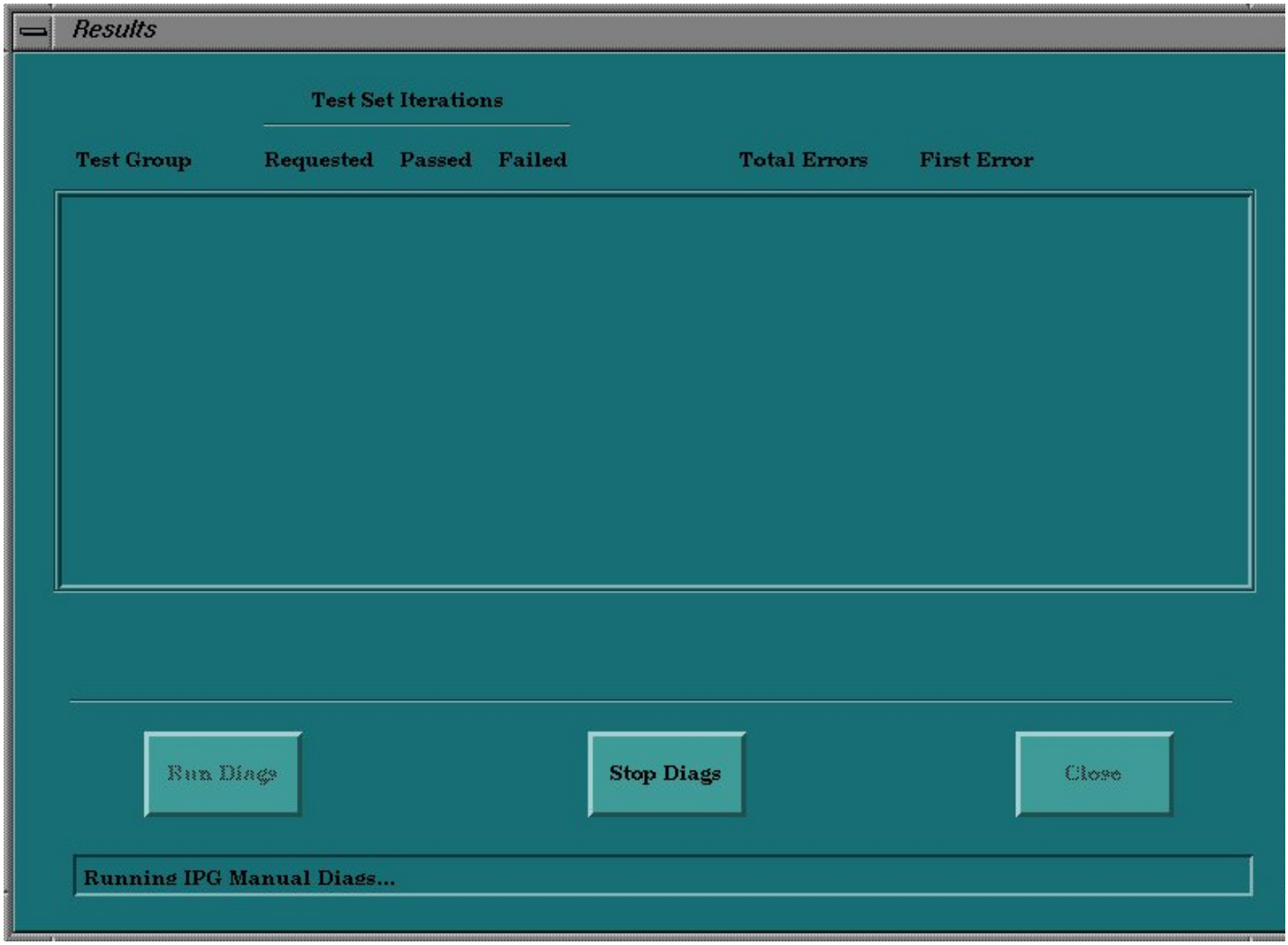
Note

A simple method for probing the four pins at J6 is to bend a paper clip into a straight wire, gently insert it into the appropriate pin, and connect the oscilloscope probe to the end of the paper clip.

7. **[Close]** the Manual IPG Diagnostic Menu (see Illustration 1-2) and **[Close]** the IPG Menu (see Illustration 1-3).

8. Select **[Run Diagnostics]** from the Diagnostics Main menu.

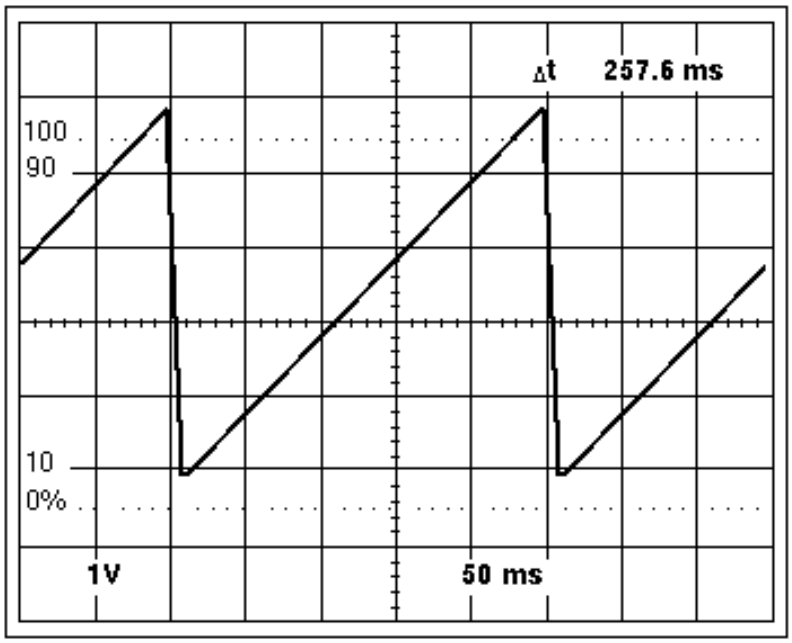
9. Wait for TPS to reset and the Results box to display “Running IPG Manual Diags” as in Illustration 1-4 (IPG boards with a LCD status indicator will display “TYME DAC” when the system is ready for waveform verification to proceed).



RESULTS WINDOW
ILLUSTRATION 1-4

11. Verify 'sawtooth' waveforms per appropriate Illustration:

- J6, Pin 1 - Illustration 1-5
- J6, Pin 2 - Illustration 1-6
- J6, Pin 3 - Illustration 1-7
- J6, Pin 4 - Illustration 1-8



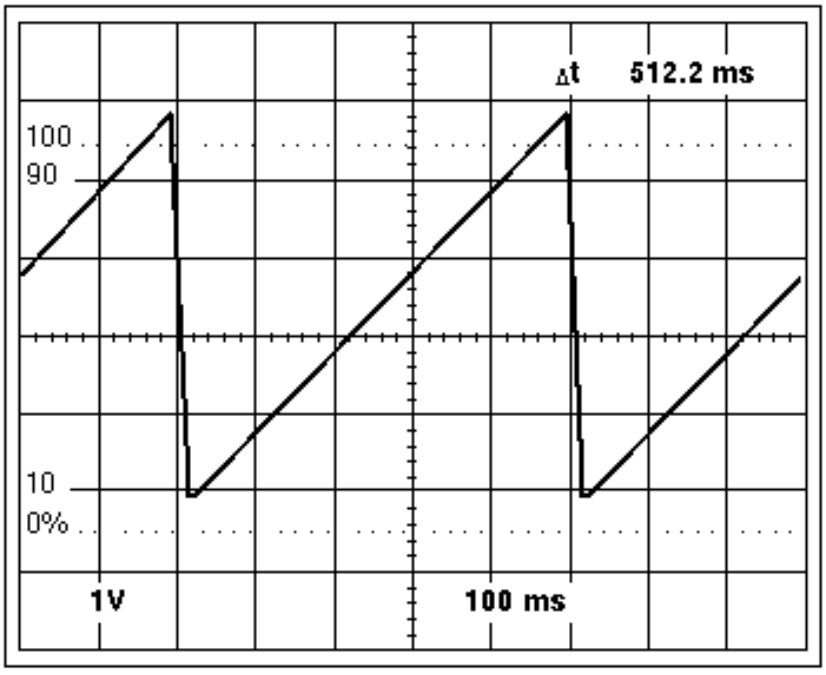
J21 Pin - 1

Scope Channel: 1
50 ms/div
1V/div

Trigger:
Auto/Normal

L1647A

WAVEFORM AT J6 PIN 1
ILLUSTRATION 1-5



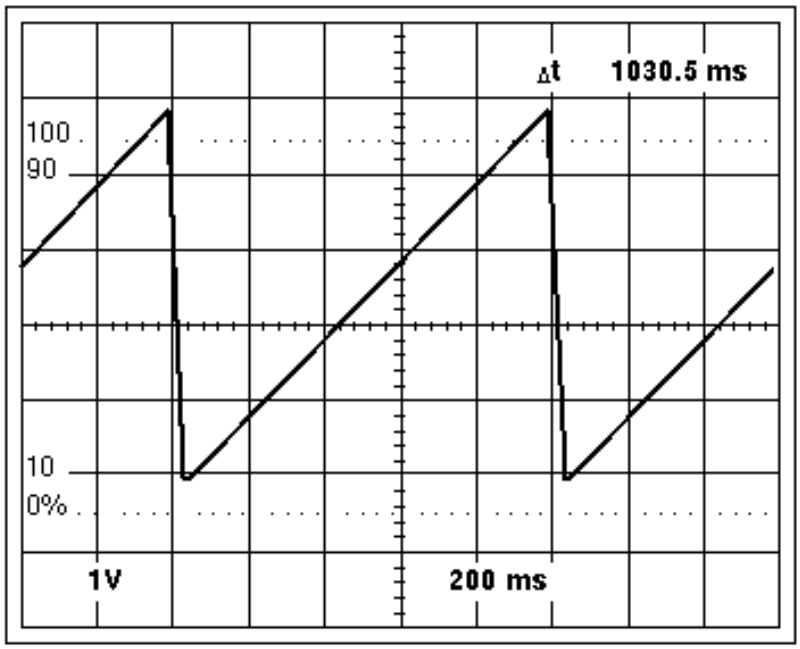
J21 Pin - 2

Scope Channel: 1
100 ms/div
1V/div

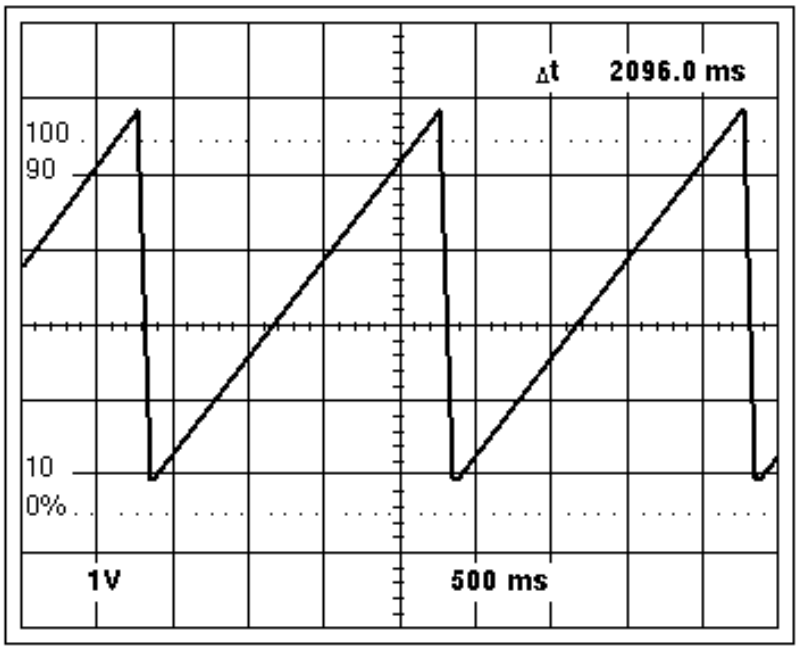
Trigger:
Auto/Normal

L1648A

WAVEFORM AT J6 PIN 2
ILLUSTRATION 1-6



WAVEFORM AT J6 PIN 3
ILLUSTRATION 1-7



WAVEFORM AT J6 PIN 4
ILLUSTRATION 1-8

Note

These are very low frequency waveforms. Note timebase setting.

2- SYSTEM RESTORATION

1. Touch **[Stop Diags]** soft key and **[Close]** in Results window (see Illustration 1-5) and **[Quit]** in the Diagnostics Main Menu. TPS will reset.
2. Disconnect oscilloscope probe and reconnect cable to J6 (if any).

REVISION HISTORY

REV	DATE	AUTHOR	PRIMARY REASONS FOR CHANGE
0	June 2, 1998	J. Saperstein	Initial Conversion from Toolbook to Word.
1	June 17, 1998	J. Saperstein	Update for current Horizon system.
2	Oct 13, 1999	M. Keber	Added correct proprietary heading to document; updated illustration numbers per style guide.