|  |  |
| --- | --- |
| *Title* | *ISC Whitening Chassis Test Data Form* |
| *Author* | *R. Abbott, Caltech* |
| *Date* | *16 March 2015* |
| *Hardware Version* | *D1002559 containing PCB D1001530-v5* |

# Overview

The form is a companion to T100291, ISC Chassis Manual Test Procedure and is used to record data taken on individual ISC Whitening Amplifier circuit boards (D1001530), or a pair as contained within the overall whitening amplifier chassis (D1002559).

# Data Section

## Component Identification

Record serial numbers of items tested per Table 1below

Table 1 Initial Data

|  |  |
| --- | --- |
| **Item** | **Result** |
| Date |  |
| Tested By |  |
| Chassis Serial Number (if applicable) |  |
| Board 1 Serial Number |  |
| Board 2 Serial Number (if applicable) |  |
| Overall Test Result (Pass or Fail) |  |

# DC Measurements

Measure the DC parameters per the test procedure and record the results in the following table.

Table Overall DC Measurements

|  |  |  |  |
| --- | --- | --- | --- |
| **Quiescent Current Draw (mA)** | **Measured Value** | **Pass** | **Fail** |
| +15V Supply Voltage |  |  |  |
| -15V Supply Voltage |  |  |  |
| +15V Supply Current |  |  |  |
| -15V Supply Current |  |  |  |
| Front and Rear LED Functionality |  |  |  |

# Transfer Functions

Measure the transfer functions per the test procedure and record the results in the following table.

Table , Measured Transfer Functions (channel 1)

| **Gain State** | **Gain at 10Hz** | **Phase at 10Hz** | **Gain at 1kHz** | **Phase at 1kHz** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |  |  |
| 3dB |  |  |  |  |  |  |
| 6dB |  |  |  |  |  |  |
| 12dB |  |  |  |  |  |  |
| 24dB |  |  |  |  |  |  |
| 45dB (all DC gain) |  |  |  |  |  |  |
| 1st Filter only |  |  |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |  |  |
| Everything On |  |  |  |  |  |  |

Table Measured Transfer Functions (channel 2)

| **Gain State** | **Gain at 10Hz** | **Phase at 10Hz** | **Gain at 1kHz** | **Phase at 1kHz** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |  |  |
| 3dB |  |  |  |  |  |  |
| 6dB |  |  |  |  |  |  |
| 12dB |  |  |  |  |  |  |
| 24dB |  |  |  |  |  |  |
| 45dB (all DC gain) |  |  |  |  |  |  |
| 1st Filter only |  |  |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |  |  |
| Everything On |  |  |  |  |  |  |

Table Measured Transfer Functions (channel 3)

| **Gain State** | **Gain at 10Hz** | **Phase at 10Hz** | **Gain at 1kHz** | **Phase at 1kHz** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |  |  |
| 3dB |  |  |  |  |  |  |
| 6dB |  |  |  |  |  |  |
| 12dB |  |  |  |  |  |  |
| 24dB |  |  |  |  |  |  |
| 45dB (all DC gain) |  |  |  |  |  |  |
| 1st Filter only |  |  |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |  |  |
| Everything On |  |  |  |  |  |  |

Table Measured Transfer Functions (channel 4)

| **Gain State** | **Gain at 10Hz** | **Phase at 10Hz** | **Gain at 1kHz** | **Phase at 1kHz** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |  |  |
| 3dB |  |  |  |  |  |  |
| 6dB |  |  |  |  |  |  |
| 12dB |  |  |  |  |  |  |
| 24dB |  |  |  |  |  |  |
| 45dB (all DC gain) |  |  |  |  |  |  |
| 1st Filter only |  |  |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |  |  |
| Everything On |  |  |  |  |  |  |

Table Measured Transfer Functions (channel 5)

| **Gain State** | **Gain at 10Hz** | **Phase at 10Hz** | **Gain at 1kHz** | **Phase at 1kHz** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |  |  |
| 3dB |  |  |  |  |  |  |
| 6dB |  |  |  |  |  |  |
| 12dB |  |  |  |  |  |  |
| 24dB |  |  |  |  |  |  |
| 45dB (all DC gain) |  |  |  |  |  |  |
| 1st Filter only |  |  |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |  |  |
| Everything On |  |  |  |  |  |  |

Table Measured Transfer Functions (channel 6)

| **Gain State** | **Gain at 10Hz** | **Phase at 10Hz** | **Gain at 1kHz** | **Phase at 1kHz** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |  |  |
| 3dB |  |  |  |  |  |  |
| 6dB |  |  |  |  |  |  |
| 12dB |  |  |  |  |  |  |
| 24dB |  |  |  |  |  |  |
| 45dB (all DC gain) |  |  |  |  |  |  |
| 1st Filter only |  |  |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |  |  |
| Everything On |  |  |  |  |  |  |

Table Measured Transfer Functions (channel 7)

| **Gain State** | **Gain at 10Hz** | **Phase at 10Hz** | **Gain at 1kHz** | **Phase at 1kHz** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |  |  |
| 3dB |  |  |  |  |  |  |
| 6dB |  |  |  |  |  |  |
| 12dB |  |  |  |  |  |  |
| 24dB |  |  |  |  |  |  |
| 45dB (all DC gain) |  |  |  |  |  |  |
| 1st Filter only |  |  |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |  |  |
| Everything On |  |  |  |  |  |  |

Table Measured Transfer Functions (channel 8)

| **Gain State** | **Gain at 10Hz** | **Phase at 10Hz** | **Gain at 1kHz** | **Phase at 1kHz** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |  |  |
| 3dB |  |  |  |  |  |  |
| 6dB |  |  |  |  |  |  |
| 12dB |  |  |  |  |  |  |
| 24dB |  |  |  |  |  |  |
| 45dB (all DC gain) |  |  |  |  |  |  |
| 1st Filter only |  |  |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |  |  |
| Everything On |  |  |  |  |  |  |

# Noise Measurements

Measure the output noise per the test procedure and record the results in the following table.

Table Measured Noise Parameters (Channel 1)

| **Gain State** | **Noise at 10Hz (dBVrms/√Hz)** | **Noise at 1kHz (dBVrms/√Hz)** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |
| 3dB |  |  |  |  |
| 9dB |  |  |  |  |
| 21dB |  |  |  |  |
| 45dB |  |  |  |  |
| 1st Filter only |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |
| Everything On |  |  |  |  |

Table Measured Noise Parameters (Channel 2)

| **Gain State** | **Noise at 10Hz (dBVrms/√Hz)** | **Noise at 1kHz (dBVrms/√Hz)** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |
| 3dB |  |  |  |  |
| 9dB |  |  |  |  |
| 21dB |  |  |  |  |
| 45dB |  |  |  |  |
| 1st Filter only |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |
| Everything On |  |  |  |  |

Table Measured Noise Parameters (Channel 3)

| **Gain State** | **Noise at 10Hz (dBVrms/√Hz)** | **Noise at 1kHz (dBVrms/√Hz)** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |
| 3dB |  |  |  |  |
| 9dB |  |  |  |  |
| 21dB |  |  |  |  |
| 45dB |  |  |  |  |
| 1st Filter only |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |
| Everything On |  |  |  |  |

Table Measured Noise Parameters (Channel 4)

| **Gain State** | **Noise at 10Hz (dBVrms/√Hz)** | **Noise at 1kHz (dBVrms/√Hz)** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |
| 3dB |  |  |  |  |
| 9dB |  |  |  |  |
| 21dB |  |  |  |  |
| 45dB |  |  |  |  |
| 1st Filter only |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |
| Everything On |  |  |  |  |

Table Measured Noise Parameters (Channel 5)

| **Gain State** | **Noise at 10Hz (dBVrms/√Hz)** | **Noise at 1kHz (dBVrms/√Hz)** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |
| 3dB |  |  |  |  |
| 9dB |  |  |  |  |
| 21dB |  |  |  |  |
| 45dB |  |  |  |  |
| 1st Filter only |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |
| Everything On |  |  |  |  |

Table Measured Noise Parameters (Channel 6)

| **Gain State** | **Noise at 10Hz (dBVrms/√Hz)** | **Noise at 1kHz (dBVrms/√Hz)** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |
| 3dB |  |  |  |  |
| 9dB |  |  |  |  |
| 21dB |  |  |  |  |
| 45dB |  |  |  |  |
| 1st Filter only |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |
| Everything On |  |  |  |  |

Table Measured Noise Parameters (Channel 7)

| **Gain State** | **Noise at 10Hz (dBVrms/√Hz)** | **Noise at 1kHz (dBVrms/√Hz)** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |
| 3dB |  |  |  |  |
| 9dB |  |  |  |  |
| 21dB |  |  |  |  |
| 45dB |  |  |  |  |
| 1st Filter only |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |
| Everything On |  |  |  |  |

Table Measured Noise Parameters (Channel 8)

| **Gain State** | **Noise at 10Hz (dBVrms/√Hz)** | **Noise at 1kHz (dBVrms/√Hz)** | **Pass** | **Fail** |
| --- | --- | --- | --- | --- |
| 0dB |  |  |  |  |
| 3dB |  |  |  |  |
| 9dB |  |  |  |  |
| 21dB |  |  |  |  |
| 45dB |  |  |  |  |
| 1st Filter only |  |  |  |  |
| 1st & 2nd Filter |  |  |  |  |
| 1st, 2nd & 3rd Filter |  |  |  |  |
| Everything On |  |  |  |  |