TAS3103EVM STARTER GUIDE

Digital Audio

ABSTRACT

This guide is provided to assist the user in executing the initial setup steps required to use the TAS3103EVM. The configuration example used to present the initial steps is a stereo application using S/PDIF to input the audio into the TAS3103EVM.

1 TAS3103EVM Connections

The connections to the TAS3103EVM are shown in Figure 1.

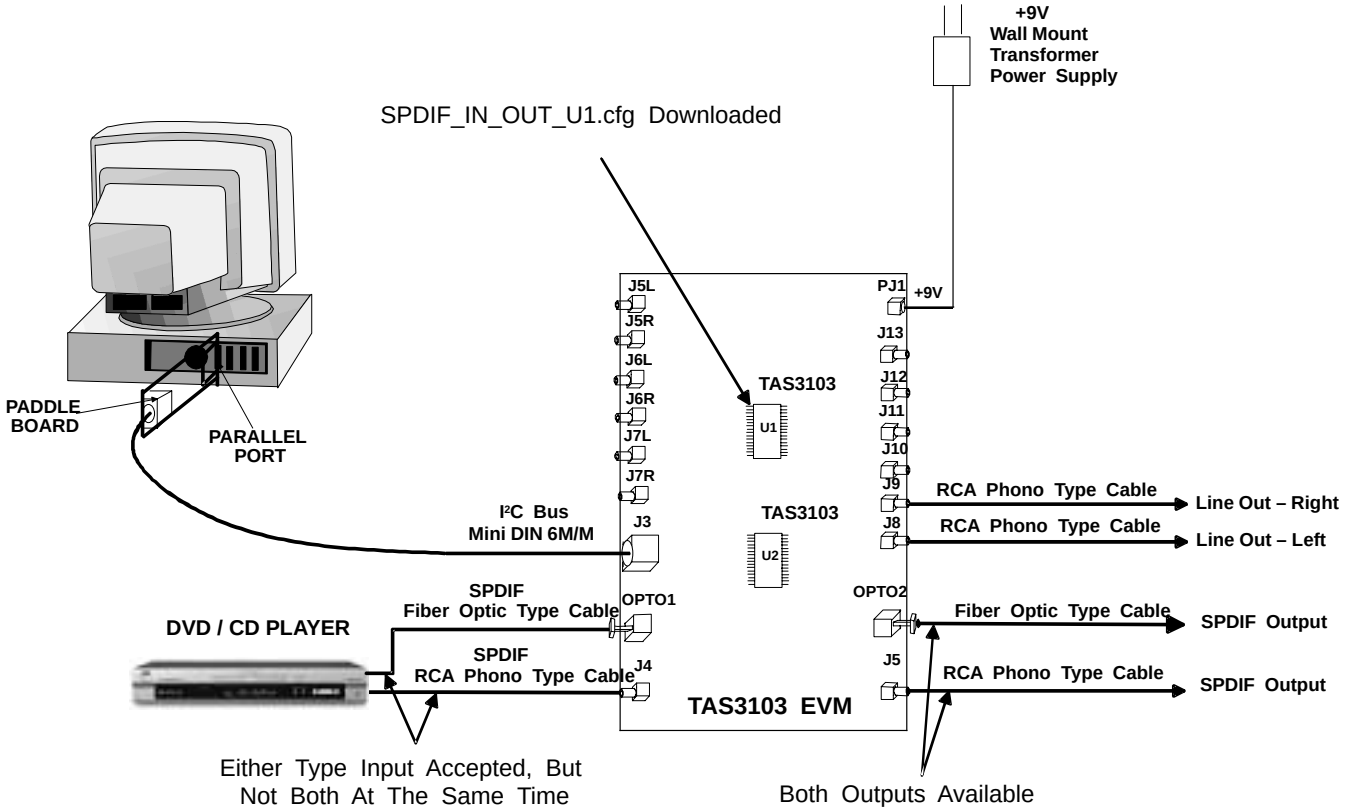

Figure 1. TAS3103EVM Connections

To communicate with the TAS3103EVM, the supplied paddle board must be attached to the parallel port of the PC, and the parallel port must be configured as an LP1 port. The supplied Mini DIN cable can then be used to connect the paddle board to J3 of the TAS3103EVM. The S/PDIF input can be supplied to the TAS3103EVM either electronically (J4) or optically (OPTO1), but both inputs cannot be active concurrently. The supplied 9V / 800 ma power module is connected to PJ1. (Some supplied modules may have higher current ratings, but 800 ma is adequate).

The switch settings for S/PDIF stereo input are given in the following tables.

SWITCH NO.	SETTING
S1	H
S2	Don't Care
S3	H
S4	L
S5	L
S6	Don't Care
S7	L
S8	H

SWITCH NO.	SETTING
S9	H
S10 (RESET)	Not Active
S11	Don't Care
S12	Don't Care
S13	Don't Care
S14	Don't Care
S18	L

Two shunts (JP11 and JP09) must be installed on the TAS3103 EVM. All other shunts must be removed.

2 Downloading TAS3103 S/PDIF Configuration Coefficients

After completing the hookup of the TAS3103EVM, and having set the switches on the TAS3103EVM as indicated above, apply power to the TAS3103EVM. A red LED by the PJ1 power connector should light, indicating power is present.

Assuming the supplied DAS DCT 2.0 program has already been downloaded off the supplied CD, go to

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Start –> Programs –> Texas Instruments Inc –> DAS DCT 2.0
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The following two panels come up.

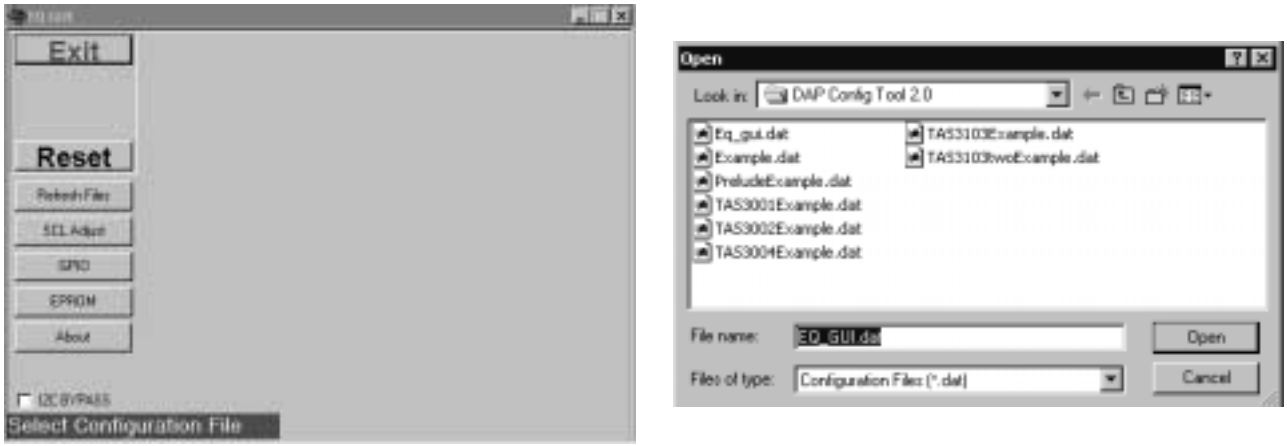

Figure 2. DAS DCT 2.0 Program Panels

On the Open panel, open the default file EQ_GUI.dat. After a time lapse (be patient, it takes time), the EQ GUI panel will open.

I²C Communication Successful

I²C Communication Unsuccessful

Figure 3. I²C Communications

The EQ GUI panel on the left indicates that the attempt to communicate with the TAS3103EVM was successful. If the EQ GUI panel on the right comes up, the communication was unsuccessful. This could be because (1) the TAS3103EVM is not powered up, (2) The I²C cable from the paddle board to J3 on the TAS3103EVM is not connected (or not seated properly at both ends), or (3) the shunt JP11 is not installed (causing the TAS3103-U1 to receive two MCLKs). If the EQ GUI panel on the right appears, click on the Reset button after fixing the problem, and the EQ GUI panel on the right should appear.

When the EQ GUI panel on the right is obtained, click on the Detail GUI A button. The panel entitled 1st 3100 Page 1 appears, and is shown in Figure 4.

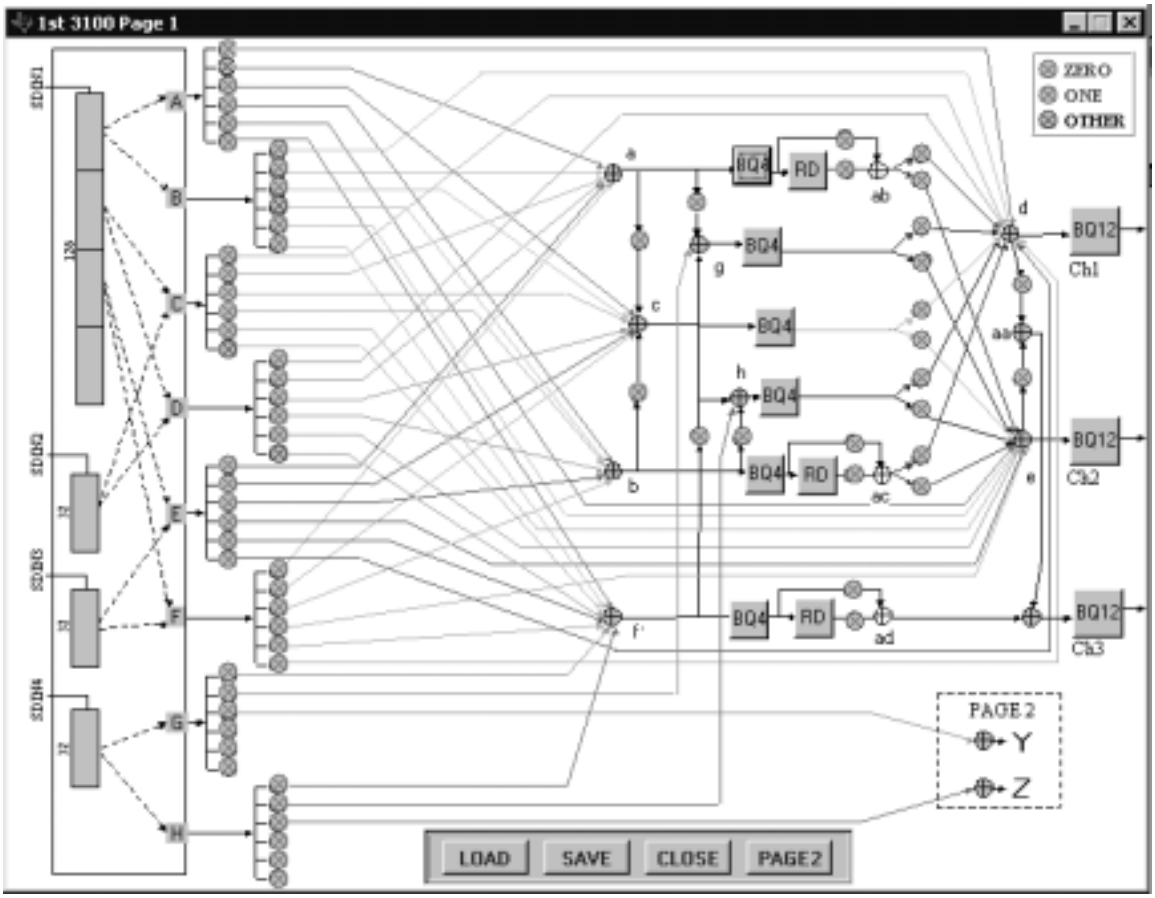

Figure 4. 1st 3100 Page 1 Panel

Click on the LOAD button. The Open panel, shown in Figure 5, appears. Select the file SPDIF_IN_OUT_U1.cfg and click on the OPEN button. This file sets the coefficients in TAS3103-U1 to receive and pass through (without any processing being applied) the S/PDIF audio data. As indicated in the first figure, the stereo output is available on both S/PDIF output ports (analog or optical) and on the two line out ports J8 (left channel) and J9 (right channel).

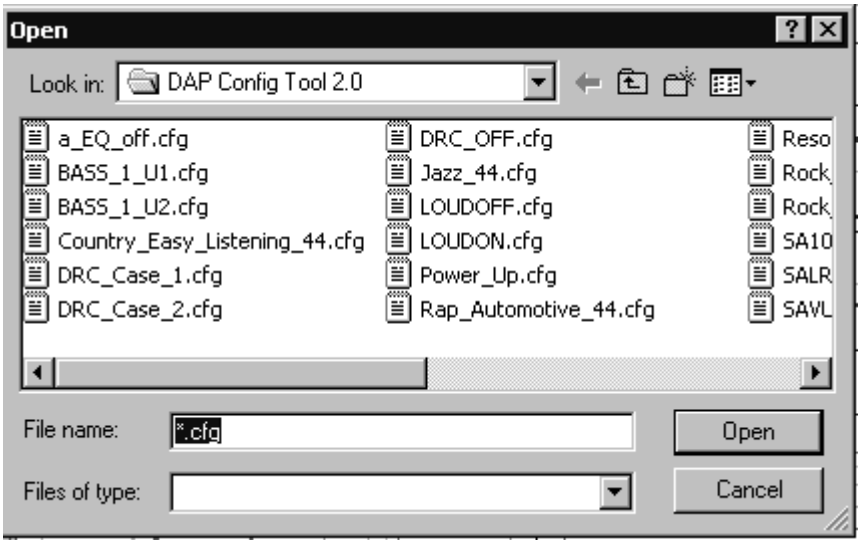

Figure 5. Open Panel

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