

Isomet Studio GUI: Tone buffer(s) mode

One or more tables of 256 frequencies/amplitude/phase* (F/A/P) values.

- Columns display the Frequency, Amplitude and Phase values. This is repeated for each of the 4 channels.
- Rows display the buffer entry. Up to 256 max lines per buffer.
- Frequency dependent Phase/Amplitude compensation look up table (LUT) may be applied.

Array values can be entered directly into the GUI array or copied from an Excel spread sheet.

Example: Tone Buffer Mode

Create Buffer with 16 tones on 2 channels.

Channel 1: Linear frequency increments, 150-90MHz

Channel 1: Linear amplitude slope : 100 – 70%

Channel 2: Static frequency increments, 120MHz

Channel 2: Static amplitude : 55%

No Compensation LUT applied

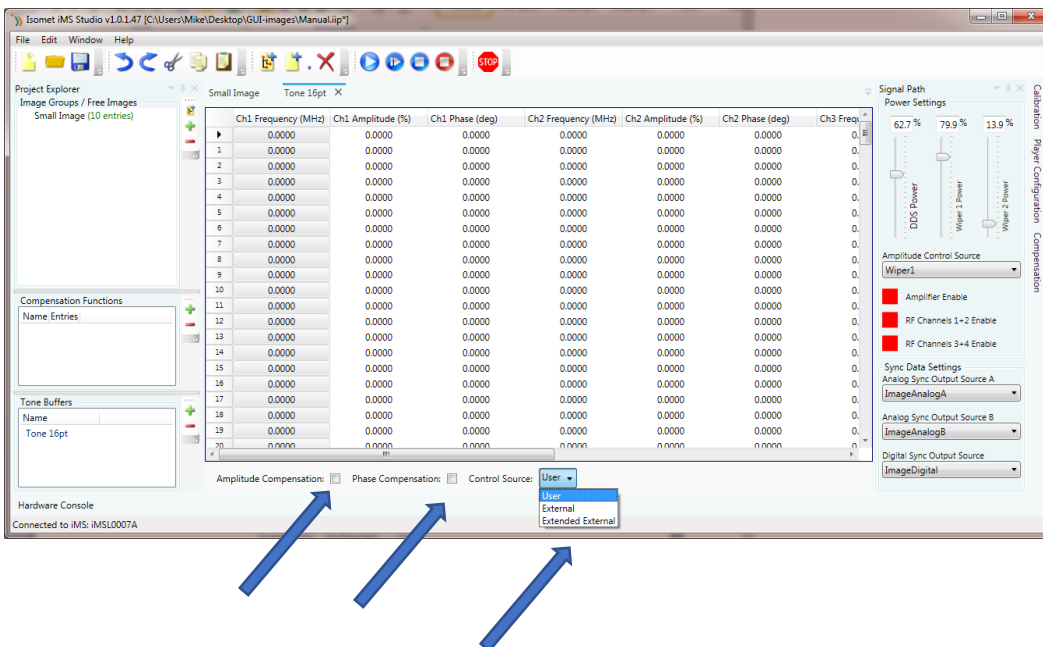
iMS4 only. No connected power amps.

Tones are selected using the GUI software (USER)

Example not appropriate for beam steered AO deflectors e.g. D1384

- 1: Click in the Tone Buffer window, bottom left of main window . Edit the name if desired. or click “ + ” to add another buffer file. A Tone Buffer tab is created

The input array will fill with 256 rows = 256 x 4 channel F/A/P data points
Not all 256 need be used.



In this example we are not applying compensation table.

AN250414: Isomet Studio - Running Tone Buffer example

8: Set power levels

In this example for iMS4 (rev-D, -E)

DDS power = 86%

Channel Wipers
Ch1, Ch2 = 78.9%
Ch3, Ch4 = 82.6%

(Only required if amplifier connected to iMS4 rear panel control connector J5)

Signal Path Power Settings

86.1% 78.9% 78.9% 82.6% 82.6%

Ch1 Ch2 Ch3 Ch4

Int Int Int Int

DDS

Synch Phase Pairs

Amplifier Enable

RF Channels 1+2 Enable

RF Channels 3+4 Enable

X/Y Channel Delay

X: Y:

X (1+2) 1.00 μs Y (3+4) 0.50 μs

Channel Phase Control

9: Start output

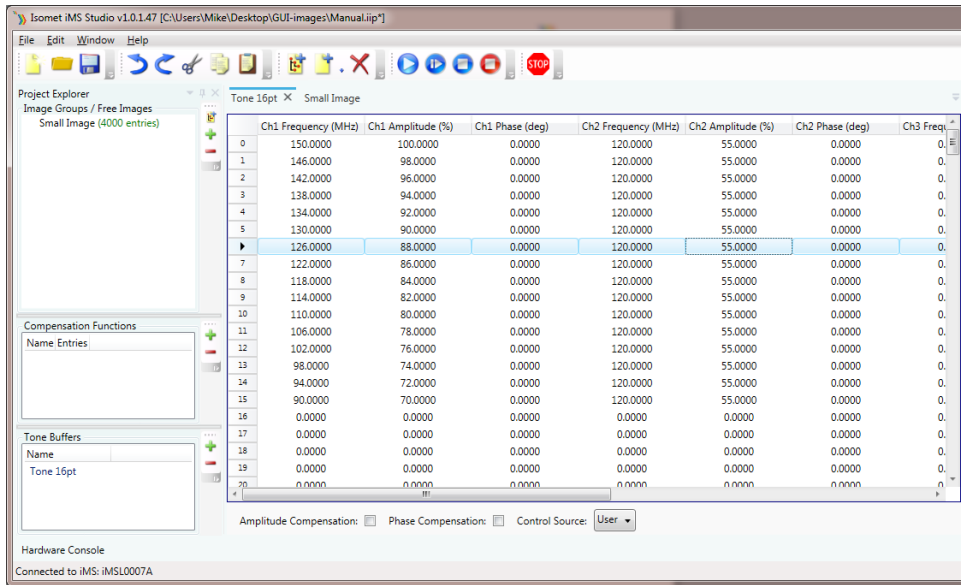
oup [--sequence--]

h1 Amplitude (%)	Ch1 Phase (deg)	Ch2 F
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AN250414: Isomet Studio - Running Tone Buffer example

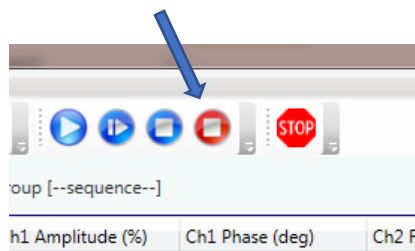
10: Tone Selection, GUI control

Click on then desired Row to output that frequency set



11: To disable output

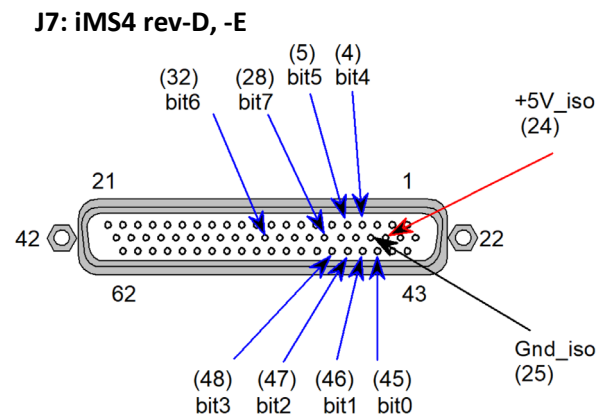
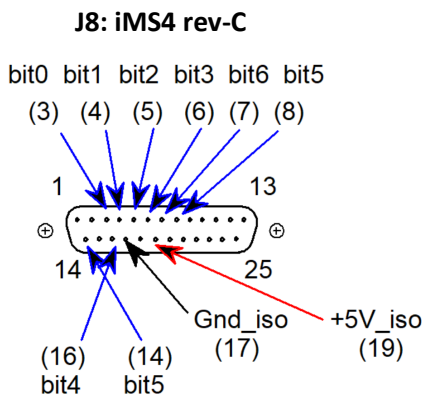
Click as shown



12: Tone Selection, external control

Select **Extended Control** (disregard **External**).

View into iMS4 panel connector



Unless the non-isolated option is requested at time of order, the iMS4 interface for external digital signals is isolated. A dedicated 5V supply is required on connector J7 (or J8).

Unterminated inputs float to logic high