

ASIO Audio Setup

Windows sound card drivers are limited to 2 channels and recording and playback do not work simultaneously. In the time taken to switch between recording and playback data is lost and so both must be set to the Focusrite or the ultrasound and audio will not be correctly synchronised.

ASIO drivers allow for more than two channels. Speech Audio, Ultrasound sync pulses, Video sync pulse and EMA sync pulses can all be recorded on separate channels of Focusrite Scarlett 4i4. Or another analogue signal such as EGG may be recorded instead of one of these streams. AAA can record up to 8 channels but a Scarlett 16i16 would be required to increase the available input channels to 6. The 16i16 has 2xmicrophone inputs and 4x Line inputs. This unit has not been tested and requires an external power supply.

The Audio Dialog

Connect the Focusrite Scarlett (solo or 4i4) BEFORE starting AAA.

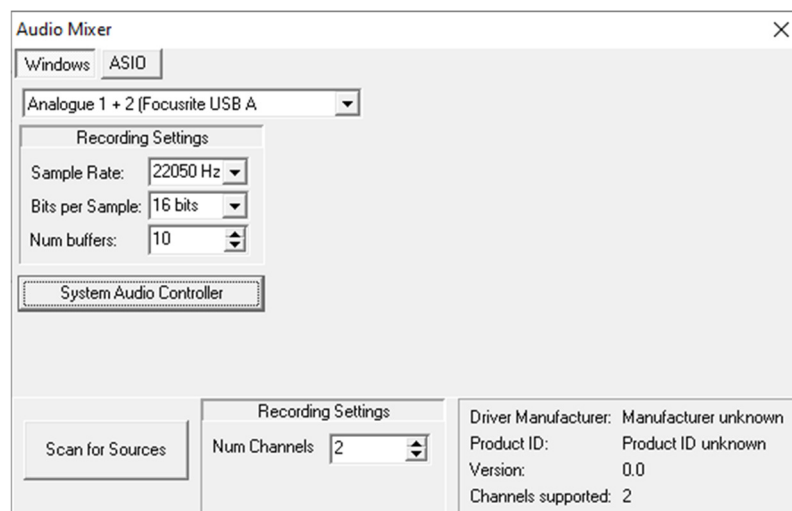
By default the Focusrite Windows drivers will be selected.

To select ASIO, select the ASIO tab. In the dropdown box select ASIO USB. ASIO drivers will not be visible if the Focusrite is not connected.

If using a 4i4 then select the channels to be recorded which may include channels 3&4 as well as 1 &2. With the Solo there will only be the choice of channels 1&2.

If the Focusrite is accidentally disconnected then you must close AAA, reconnect it and restart AAA.

The Windows tab



The Windows tab is largely the same as in previous AAA releases.

It should default to **Analogue 1 + 2(Focusrite USB A** when the Focusrite is connected.

Sample rate can be set to 22050Hz and greater

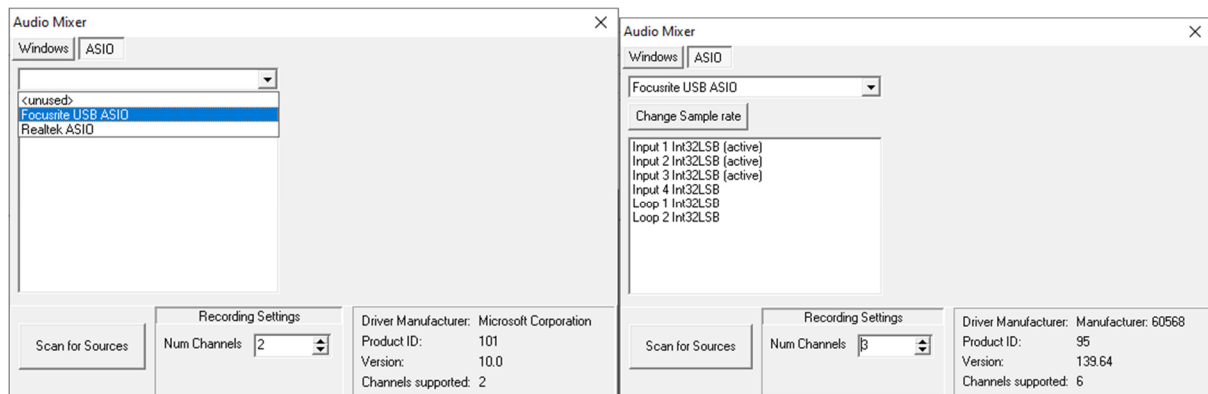
Bits per sample should always be 16

Num buffers allows for lags in audio recording without losing data. The default 10 buffers should be adequate.

System audio controller allows the playback device to be set.

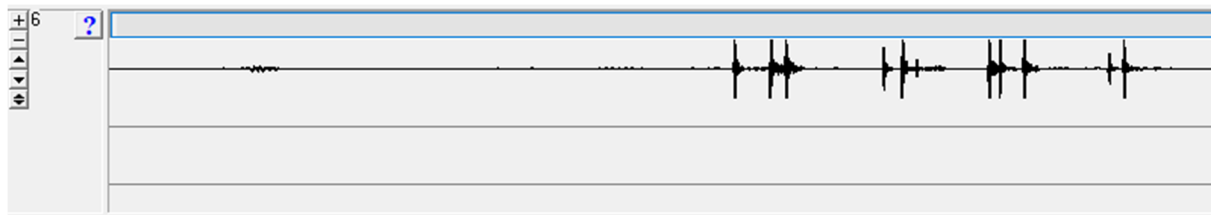
Num Channels can be set to 1 (mono) or 2 (stereo). Windows does not permit more than 2 channels

The ASIO tab



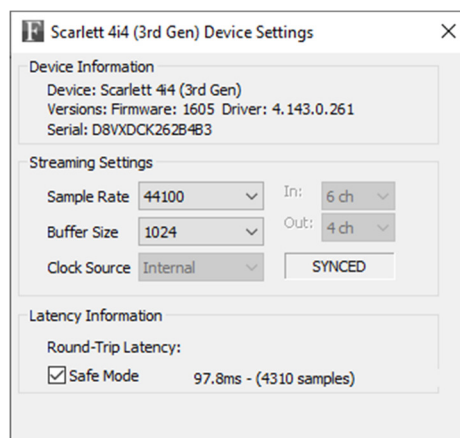
From the dropdown box, select Focusrite USB ASIO. The available Channels will appear. The Scarlett 4i4 has 4 available channels.

Use the Num Channels to select more channels e.g. 3 channels in the example above. The wave display will then show 3 channels.



Click **Change Sample Rate** if you wish to increase the rate using the Focusrite control panel. The lowest rate is 44100 Hz.

DO NOT change the buffer size. AAA will not work with any other buffer size.



Benefits of using 4i4 with 3 channels.

- Audio assigned to channel 1.
- Ultrasound sync pulses assigned to Channel 2
- Video Sync pulse assigned to Channel3
- No need to delay the start of the ultrasound recording

Benefits of using 4 i4 with 4 channels

- EMA sync signal can be assigned to channel 4 or another analogue data stream can be recorded e.g. EGG