

FRONT PANEL DETAILS (*ESSENTIAL READING*)

Front Panel Switches (Mode Select)

On the left hand side of the front panel there are four switches, labeled A, B, C and D respectively. Each switch has three positions as described below.

Switch A (MODE)

This switch sets the MODE or state of the controller. **NOTE THAT FOR THE COMPUTER TO COMMUNICATE WITH THE CONTROLLER, THIS SWITCH MUST BE IN THE “DOWN - 3” POSITION.**

Down - 3: (TERM) The controller is in “terminal mode” meaning that it is under the control of the PC and Windows Interface connected through the RS 232 connector. In this mode, **NO OTHER** switches (“B”, “C” or “D”) on the front panel have any effect.

Middle - 2: (ANC OFF) The active noise control is turned OFF. The controller is under the control of the front panel switches and the Windows Interface is just used for monitoring inputs, outputs and filter weights. The actual output signals are set by switch “B”.

Up - 1: (ANC ON) The active noise control is turned on. The controller is under the control of the front panel switches and the Windows Interface is just used for monitoring inputs, outputs and filter weights. The state of the adaptive algorithms is controlled by switch “D”.

Note that if the controller is turned on (or the front panel “reset” button pushed) when switch “A” is down (TERM MODE), then a set of default parameters are loaded into the controller that will allow it to function. These can be changed individually by using the Windows Interface or by downloading a stored set from disk or flash memory. If switch “A” is either in the “middle” or “up” positions, then when the controller is turned on, the parameters that have been stored in flash memory will be loaded. If flash memory contains no valid parameters, then the default parameters will be loaded automatically.

Switch B (AOSIG)

This switch sets the control channel output signals when switch “A” is in the middle position (ANC OFF). It has no effect if switch “A” is in the down (TERM) or up (ANC ON) positions

Down - 3: (NONE) No outputs

Middle - 2: (SINE) The sine generator output will be copied to all output channels

Up - 1: (FILT) The outputs will consist of reference signals passed through the digital control filters. This is the same as having the active control system on with both adaptive algorithms (control filter and cancellation path modelling) switched off.

Switch C (SGEN)

This switch sets the state of the signal generator. The frequencies and amplitudes must be set through the PC Interface. The values are stored in flash memory.

Down - 3: (SINE) Sine wave output only.

Middle - 2: (RN) Random noise output only.

Up - 1: (S&RN) Both sine and random noise output.

Switch D (AOALG)

This switch determines the state of the adaptive algorithm when switch “A” is set to up (ANC ON mode).

Down - 3: (ALG) Control filter adaptive algorithm only running

Middle - 2: (ID) System ID adaptive algorithm only running

Up - 1: (BOTH) Both adaptive algorithms running.

Front Panel Light Emitting Diodes (LEDs)

Signal Input LEDs: When the input signal reaches 10% or more of the full scale level, the *green* LED will light. When the input signal is overrange, the *red* LED will light. When the latter happens, the input gain must be turned down or if this is not possible an external signal attenuator must be used.

Signal output LEDs: For the left most output (signal generator, the green LED lit up indicates that the sine generator is operating and the orange LED indicates that the random noise generator is operating.

For all other outputs (control channels 1 to 9 respectively when numbered from the left), the green LED indicates that the channel is enabled (minimum enable state) and the orange LED will be lit if the channel is enabled for active control. If the output channel overloads (Filter weights overloading), the orange LED will go out and the channel is effectively switched off.

Status LEDs: These yellow LEDs are located to the right of the input BNCs on the front panel and are labelled L1.....L8. They indicate some operating states of the controller and also controller overload and malfunction states as described below.

L1: Lights up when ANC is ON (ANC).

L2: Lights up when the control adaptive algorithm is enabled (ALG).

L3: Lights up when the cancellation path identification algorithm is enabled (ID).

L4: Lights up when an overflow of the filter weights has occurred for at least one control channel (COF). This will normally indicate that at least one control channel has been switched off. Check which orange LED is out to find out which one. See end of step 9 in Quickstart in manual for reset procedure (click on “FLUSH” button).

L5: Lights up when an overflow has been detected in the filter weights for at least one cancellation path transfer function. (TFOF). This doesn't necessarily result in a system shut down, but most likely it will eventually trip the control loop which will shut things down, requiring the “FLUSH” button to be clicked on (see end of step 9 in Quickstart in the manual).

L6: Lights up when at least one control channel has been switched off due to an overflow of the control filter weights. See end of step 9 in Quickstart in manual for reset procedure (click on “FLUSH” button).

L7: Lights up when the controller is overtaxed due to too many filter taps selected for the particular controller configuration.

L8: Currently not in use.

Signal Inputs

The signal inputs can be either reference signals or error signals. The user interface signal definition panel is used to define which input signals make up the reference and error signals used in the controller. See pages 7, 17 and 23 in the manual for more details or look for the signal definitions panel in the on-line manual.

Signal Outputs

The left most output is reserved for the signal generator output. The remaining nine outputs correspond to control channel outputs 1 to 9 respectively.

Microphone bias voltages

Electret microphones usually need a bias voltage supplied in the range 1V to 12V. The EZ-ANC II is factory set to supply +5V (suitable for most electrets) on each input. If this is not required, the user can turn the appropriate DIP switch to “OFF”. The DIP switches (one for each input channel) are located on the inside of the front panel with numbers corresponding to the input numbers on the front panel.

RS 232 Connector

This is where the EZ-ANC II box is connected to the PC.

Back Panel

The connector on the back panel is for power for the EZ-ANC II. The standard configuration is for power from 90V to 240V AC at 50Hz or 60Hz. There is an option for an additional variable voltage DC power supply in the voltage range from 10 to 30V.

PLEASE TURN OVER