P300 Linking Documentation

3/13/2018

Master/Slave Designation:

- Choose one P300 as your "Master" and label accordingly
    - The P300 Master will be responsible for connectivity to Hard/Soft Codecs and mobile calls
    - The P300 Master will be responsible for connectivity to the speakers for local reinforcement

    - The P300 Master will be responsible for sending AEC reference to the P300 Slave.

- The other P300 will be the "Slave", label it accordingly.
    - The P300 Slave will receive and utilize the AEC reference sent from the P300 Master in order to perform Acoustic Echo Cancelation.

Dante Routing:

- Route microphone channels to Dante Inputs 1-7 of the P300 Master
    - Dante Input 8 of the P300 Master shall be reserved for the Automix output of the P300 Slave

- Route Dante output 1 of the P300 Master to Dante input 9 of the P300 Slave
    - This will be how the "Virtual AEC Reference" gets from P300 Master to P300 Slave

- Route the remaining microphone channels to Dante Inputs 1-8 of the P300 Slave

- Route Dante output 1 of the P300 Slave to Dante input 8 of the P300 Master
    - This will be how the Automixed P300 Slave signal gets to the P300 Master Automixer.

- If using any microphones for reinforcement:
    - The microphones should be routed to Dante microphone input channels of either the Master P300 (channels 1-7) or Slave P300 (channels 1-8).
        - This will allow the signals to be a part of the Automixer and ultimately sent to the far end.
    - The same microphones should also be routed to Dante input channels 9-10 of the P300 Master
        - These microphones will be sent directly to the reinforcement system in the room.

@Dante®

Filter Transmitters

Filter Receivers

Dante Transmitters

Dante Receivers

	MXA910-1-d	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8	Automix Out	MXA910-2-d	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8	Automix Out	MXWAPT4-d	Channel 1	Channel 2	Channel 3	Channel 4	P300-Master-d	Virtual AEC Reference	To Speakers	P300-Slave-d	Slave Automix Output	Dante Output - 2
MXA910-1-d																															
MXA910-2-d																															
MXWAPT4-d																															
P300-Master-d																															
Dante Input 1	✓	✓																													
Dante Input 2	✓		✓																												
Dante Input 3	✓			✓																											
Dante Input 4	✓				✓																										
Dante Input 5	✓					✓																									
Dante Input 6	✓						✓																								
Dante Input 7	✓																					✓									
Slave Automix	✓																													✓	
HandHeld-PA-1	✓																						✓								
HandHeld-PA-2	✓																							✓							
P300-Slave-d																															
Dante Input 1	✓											✓																			
Dante Input 2	✓												✓																		
Dante Input 3	✓													✓																	
Dante Input 4	✓														✓																
Dante Input 5	✓															✓															
Dante Input 6	✓																✓														
Dante Input 7	✓																	✓													
Dante Input 8	✓																						✓								
Virtual AEC Reference	✓																									✓					
Dante Input 10																															

Automixer Parameters

- Utilize the default Automixer values
- If the microphone type is predominantly MXA910 or MXA310, the user can set Mic Optimization Mode to MXA910 or MXA310 respectively. This should be done for both the P300 Master and P300 Slave if applicable.

Filtering (Mic Optimization Filters/EQ Contours)

- Enable Mic Optimization Filters/EQ Contours on arrays (910 and/or 310)
  - Turn **OFF** the Mic Optimization Filters/EQ Contours in the PEQ block following the Automixer of both the P300 Master and Slave. (These Mic Optimization Filters/EQ Contours become enabled automatically when selecting a Mic Optimization Mode within the Automixer.
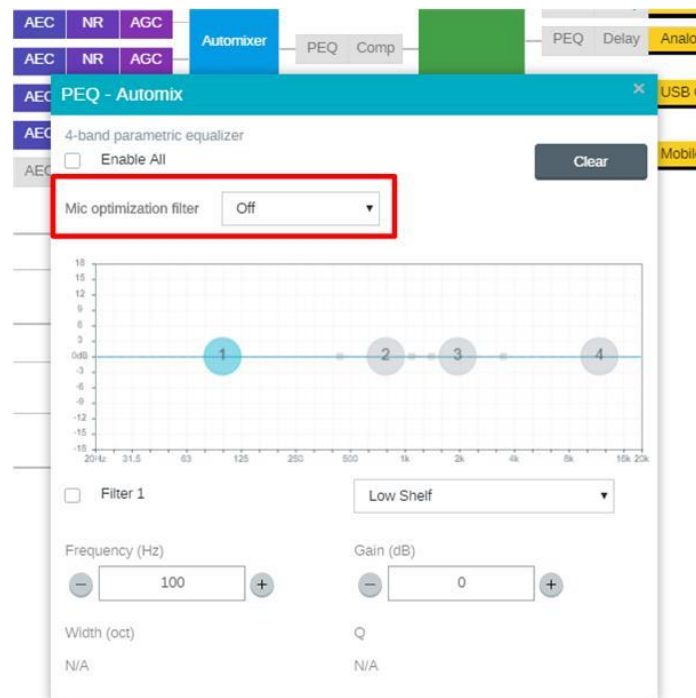
- For other miscellaneous microphones, (boundaries, goosenecks, handhelds, body packs) apply EQ on input channels of the respective P300.

Matrix Mixer Routing:

- P300 Master
  - o Establish an output that will be used as the **Virtual AEC Reference** (Dante Output - 1 in this example)
    - ▪ Route all far end content to this channel when applicable. (USB input, Analog - From Codec, and Mobile Input)
    - ▪ If you have any microphones being used for local reinforcement, do **NOT** include those signals in this Virtual AEC Reference.

  - o Establish an output that will be used for local reinforcement. (Analog Output - 2 in this example)
    - ▪ Route all far end audio content to this channel when applicable. (USB input, Analog input from Codec, and Mobile Input)
    - ▪ Route any microphone signal being used for local reinforcement to this channel.

  - o Establish audio outputs to far end.
    - ▪ Based on the conferencing medium being used, route the Automixer output to the appropriate far end destinations (USB output, Mobile Output, Analog output to Codec)
    - ▪ If planning to facilitate calls from multiple mediums, ensure each destination is receiving audio signal from the other destinations. (For example, USB output should be receiving audio for the Automixer, Analog – From Codec, and Mobile Input)

- P300 Slave
  - o Establish connection to P300 Master (Dante Output 1 in this example)
    - ▪ Route the Automixer output to Dante Output 1

DSP Blocks: (AEC, NR, and AGC)

- P300 Master
  - o For microphone input channels 1-7:
    - ▪ All DSP blocks should be enabled
      - • The AEC reference should be "Virtual AEC Reference"
  - o For microphone input channel 8:
    - ▪ Disable all DSP blocks (This is the Automix of the P300 Slave and will already be processed)
- P300 Slave
  - o For microphone input channels 1-8:
    - ▪ All DSP blocks should be enabled
      - • The AEC reference should be "Virtual AEC Reference"
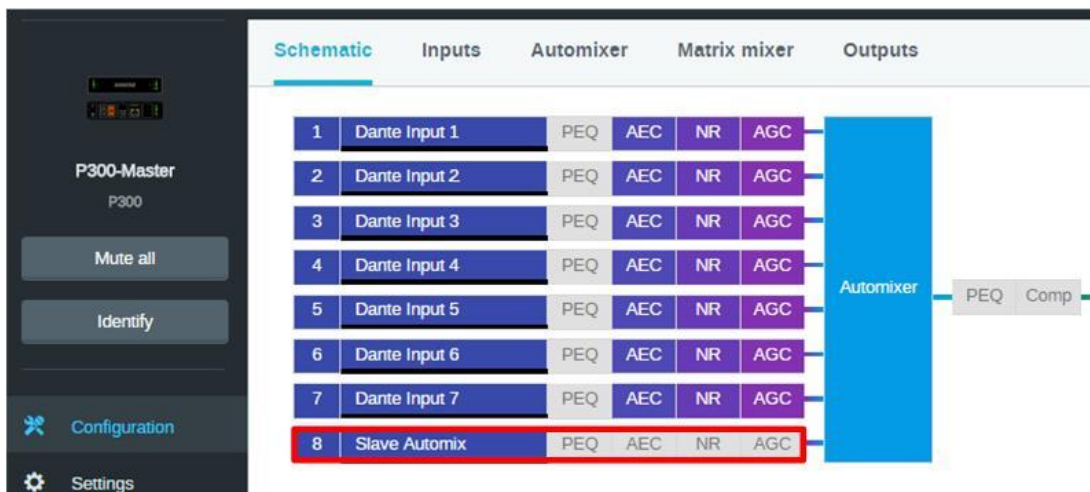
Known Short commings:

- Automix parameters are not global.
    o User must change Automixer settings on each P300 separately.
- Logic functionality
    o Logic signals will not be sent between P300s.