Technical support advisory 051018a

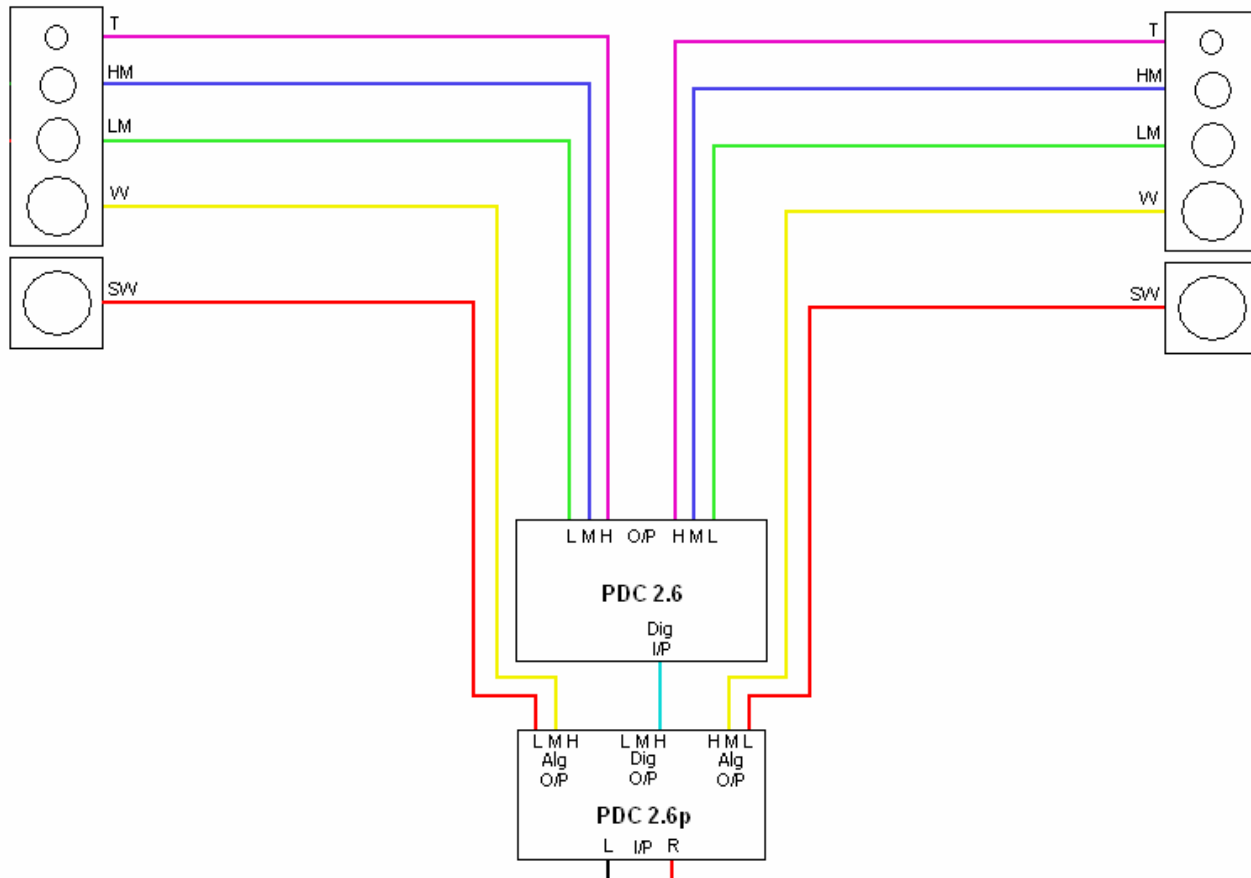### Using multiple PDC 2.6 for correcting 4 and 5 way speakers

This document is intended to provide information for PDC 2.6 users on how to configure multiple PDC 2.6 devices for 'active' use with speakers that are greater than 3-way.

Requirements:-
- Document is valid with version 2.0 Calibration software
- PDC 2.6 installation manual for software v2.0
- 1 x PDC 2.6(P) (digital out option preferred).
- 1 x PDC 2.6(P) standard.

Procedure:-
This document assumes that the reader has experience with DEQX Calibrated™ technology and can measure, correct and configure a 2-way or 3-way speaker using active linear phase crossovers within DEQXcal.

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Connection: -
Connect the PDCs, amplifiers and speakers as shown above (4-way speaker with stereo subwoofers).

If using 5-way speakers, use the same connection schematic as above.
If using 4-way speakers with a MONO subwoofer, connect as above but only one subwoofer.
If using 4-way speakers simply ignore the subwoofer connections above.

The PDC that controls the tweeter, high-mid and low-mid is called the 'SLAVE' PDC, the PDC that controls the subwoofer, woofer and SLAVE is called the 'MASTER' PDC.

Connect the measurement microphone and PC the SLAVE PDC.

Measurement configuration: -
Measure the left tweeter, high-mid and low-mid as a 'Tri-amp'.
Don't move the microphone (will advise you when), continue to the 'Calibrate wizard', choose your crossover points, create a correction filter and do a 'verification measurement'.
When you are happy that the response for the top three speakers is flat, create a PDC configuration with the correction filter loaded into each speaker (left AND right) for Profiles 1, 2 and 3 (you can make the bypass profile a 3-way crossover only if you like) and upload to the PDC.
Go to the TOOLS menu, and select OPTIONS. Disable the remote control.
Select the input you plan to use (preferably digital if the MASTER PDC has digital out), select profile 1 and make sure there is no signal on the input and turn the fader up to full.
Unplug the microphone and PC from the SLAVE PDC (don't move the microphone) and plug them into the MASTER PDC.

IMPORTANT: - If the SLAVE PDCs input is DIGITAL and it is connected to the DIGITAL output of the MASTER PDC, the volume control of the MASTER PDC MUST BE SET TO DIGITAL. To do this, go to the 'PDC Control Panel' and check that the 'Output Selection' is set to 'BOTH', and the 'Analog Volume' button is GREY.

Now measure the left speaker as a 'Bi-amp'; the 'SLAVE PDC' is treated as a 'tweeter' and the woofer as normal, a woofer.
Choose your crossover point, create a correction filter and do a 'verification measurement'.
When you are happy that the response for the '4-way' is flat, create a PDC configuration with that correction filter loaded into each speaker (left AND right) for Profiles 1, 2 and 3 (you can make the bypass profile a 2-way crossover only if you like) and upload to the PDC.

You can move the microphone now if you want; if you wish to measure the right speaker, you can repeat the process for the right speaker. The microphone MUST use the EXACT distances that where used on the left speaker; also when you create the correction filters, just don't create the right one and add it in, create a new correction template and filters from the left AND right measurements at the same time.

That should be it for a four way speaker. If you plan to use a 4 way with subwoofer or a 5 way, the final step is to, add the subwoofer. This is done on the master PDC and instructions on 'incorporating a subwoofer' are in the manual.