### Audyssey MultEQ app



### The next generation room acoustic calibration

# Audyssey MultEQ app – general

- Audyssey room acoustic calibration delivers outstanding results matching the electronic, speakers and room acoustic for the best home cinema experience
- D&M is a long time partner of Audyssey
- Together we developed the unique Audyssey MultEQ app which offers extended calibration options exceeding the Audyssey tools built into our AVRs
- Audyssey MultEQ app is designed for Enthusiast and Professionals



# Audyssey MultEQ app – general

- The Audyssey MultEQ app will guide the user through the measurement and calibration process by detailed in app explanation
- No more additional equipment needed than the microphone delivered with the AVR
- Compatible with all 7ch network AVRs launched in the season 2016 (a firmware update to latest firmware is required for all products in order to work with the app): AVR-X1300W, AVR-X2300W, AVR-X3300W, AVR-X4300H, AVR-X6300H NR1607, SR5011, SR6011, SR7011, AV7703
- Available from the App Store and Google play for €19.99 from April 2017 onwards



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Audyssey MultEQ App HOW DOES IT WORK?

### Audyssey MultEQ app – Home Screen

- Start a new measurement and calibration by tapping on "+" in the "Create New" field
- Open an existing calibration result (Curve) to modify and upload to the AVR
- With EDIT files can be renamed or deleted



### Audyssey MultEQ app – new measurement

- Clicking the PLUS on the home screen will scan the network to find available AVRs
- Select one AVR to start the measurement and calibration process



### Audyssey MultEQ app – Speaker set up

• Edit the speaker setup to match the available speakers in the room to optimize calibration procedure

#### • Note:

The basic power amp assignment and speaker type of Height speakers, etc. cannot be changed within the app  $\rightarrow$  this needs to be done in the AVR menu first



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### Audyssey MultEQ app – preparation

- The app will guide the user to connect the mircrophone delivered with the AVR and how to install it by the use of a tri-pod or the paper rocket
- No need to purchase any extra equipment. All needed comes with the AVR.



### Audyssey MultEQ app – preparation

- App indicates the 8 speaker positions and where to start
- After each measurement the app offers the option to redo the calibration or move to the next position
- As a minimum 3 measurements are required.

#### Cancel

New

#### getting data from AVR - 20

Place the microphone at ear level at the 2nd listening position (no more than 2ft(60cm) away from the 1st position. You can continue when the data for the previous measurement has been downloaded from the AVR.



### Audyssey MultEQ app – measuring

• Measurement in progress



### Audyssey MultEQ app – options

- After the measurement is completed the user can do further settings
  - Dynamic EQ
  - Dynamic Volume
  - LFC (where applicable)

Cancel	New	Next
Enable additional Audyssey techno	logies :	
Audyssey Dynamic EQ preserves the probalance between high and low frequence maintains even surround envelopment a master volume is adjusted.	oper cies and Dynamic EQ is the	
Audyssey Dynamic Volume adjusts the c range to maximize the impact of the con night listening.	lynamic Dynamic Volume	
Audyssey LFC stops low bass frequencie traveling through walls without sacrificin enjoyment in the listening room.	es from LFC g bass	

### Audyssey MultEQ app – save as...

- Finally the result can be stored in this case as "6011-2"
- More than one measurement results can be stored
- An icon with the name will be shown on the home screen for each measurement

Cance					Ne	ew					Done
Enter a name for the data file : 6011-2											
	"2"										
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### Audyssey MultEQ app – Home screen

- An icon with the name will be shown on the home screen for each measurement
- In a next step the curve can be selected and modified before uploading to the AVR



### Audyssey MultEQ app – upload to AVR

- Finally the result can be send by clicking top left upload icon
- Options are
  - Send to AVR
  - Share via iCloud (in iOS case)
  - Send by mail
  - Move to....

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		66	
Send to AVR			00
Share Link via iCloud			
Send a Copy			Ê
Move to			$\rightarrow$
	Cancel		

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Audyssey MultEQ App
The tuning options

### Audyssey MultEQ app – Home screen

- The newly stored measurement result, 6011-2, is shown on the home screen
- After selecting the 6011-2 curve and option screen will open



### Audyssey MultEQ app – Options

- Below tuning options are accessible
- All changes made can be stored by clicking Done or Save under a new name or send to AVR by clicking the symbol on top left corner
- On the next slides all options will get explained in detail



### Audyssey MultEQ app – Speaker Detection Results

- Overview of Size, Distance and Level measured
- Every speaker setting can be edited

Done ?	Speaker Detection	Edit	
Location	Туре	Distance(m)	Level(dB)
Front Left	Satellite	0.57	-10.00
Front Right	Satellite	0.52	-9.50
Center	Satellite	0.57	-9.00
Surround Left	Satellite	0.00	0.00
Surround Right	Satellite	0.74	-7.00
Subwoofer 1 DENON®	Subwoofer	18 00	-7 50

### Audyssey MultEQ app – Sound Correction Result

- Visualisation of frequency response per speaker BEFORE and AFTER
- Slide to right or left to navigate for different speaker



### Audyssey MultEQ app – Target Sound Options

- Select the High Frequency Roll Off to balance audio easily
- Roll Off 2 reduces engery in high frequency area to soften audio reproduction



# Audyssey MultEQ app – Midrange Compensation

- Midrange Compensation, also known in the Audyssey world as Midrange Dip, optimises the frequency response in the area of 2kHz where midrange driver and tweeter of a speaker have often their crossover frequency set
- The 2kHz frequency area is where vocals are present and midrange compensation can help to make them sound more pleasant
- Customer can choose to switch it ON / OFF, which was so far only possible with Audyssey Pro calibration kit



### Audyssey MultEQ app – Midrange Compensation

- In below frequency response the Midrange Compensation is set to ON.
- A about 4dB dip is shown at a frequency of 2kHz
- If the customer has different type of speaker and don't want to have the dip at 2kHz, but for example 4kHz, he can switch the Midrange Compensation OFF and adjust the the frequency response using the Curve Editor.



### Audyssey MultEQ app – Curve Editor

- The Curve Editor shows the frequency response of a speaker in the measured room after the MultEQ correction
- The curve can be displayed and adjusted by the customer for L/R speaker pairs like L/R Front, and individual speakers like Center or Subwoofer
- Indivual adjustment can be made and saved by pressing done. Clear all will set the curve back to the measured result. Undo will just clear the last change made.



### Audyssey MultEQ app – Curve Editor

- Changes can be made by touching a specific point on the curve and moving the finger up or down. Original curve will be shown as reference in green.
- Center frequency and dB value will be shown at this moment.
- For making fine adjustment around a specific frequency the user can zoom in to have more detailed resolution.



### Audyssey MultEQ app – Frequency Range Rolloff

- The Frequency Range Rolloff limits the MultEQ to work up to a customer defined frequency
- Slider can be moved from the right end of the graph to the left until desired frequency is reached
- This feature will be used if customer only wants to correct the lower frequency area of his speaker, but don't want any correction in the mid to upper area, as he is happy with the performance here already



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Audyssey MultEQ App Managing Curves

### Audyssey MultEQ app – Upload to xxx

- Via the home screen the curves can be sent / saved by clicking top left upload icon
- Options are
  - Send to AVR (any stored curve can be sent, not only just measured once)
  - Share via iCloud (iOS) // Google Drive (Android)
  - Send by mail
  - Move to....

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Move to	)				$\rightarrow$
			Cancel		

### Audyssey MultEQ app – Download from xxx

- With a click on the top left "+" a new context menu opens
- A new calibration can be started by "Create New Curve"
- Existing curves can be loaded from other media as iCloud, Google Drive, Dropbox and more



### Audyssey MultEQ app – Edit

- With a click on EDIT an existing curve can be...
  - Deleted (bin symbol)
  - Copied (+ symbol with double frame)
  - Renamed (touch name)

