DSP8000 XE DIGITAL ACTIVE LOUDSPEAKER

1. How can I tell if a DSP8000 XE is in Standby mode?

When the loudspeaker is in Standby mode, the Meridian badge on the front of the loudspeaker lights up blue.

2. How do I bring a DSP8000 XE out of Standby mode?

The DSP8000 XE comes out of Standby mode when it receives an appropriate communication signal from another Meridian product. This signal is received on the SpeakerLink input socket of the loudspeaker and is produced when the rest of the system is brought out of Standby. When this happens, the front panel LED will change from blue to white. If the DSP8000 XE has its IR receiver switched on, it can also be brought out of Standby by using a source command sent from a Meridian System Remote.

3. Do I need to configure the loudspeakers in all use-cases?

DSP8000 XE loudspeakers are factory configured so that the SpeakerLink connections are active and ready to be connected to other Meridian products. This means that, in many system scenarios, no additional configuration of the loudspeakers required.

4. Can any DSP8000 XE have its IR receiver activated?

Only the Master loudspeaker within the system can use its IR receiver. Refer to the user guide for how to establish which loudspeaker takes the role of Master.

5. What is the IA21 Analogue Input Module for?

The IA21 is designed to allow the DSP8000 XE to be fed from an analogue pre-amplifier or an analogue source which features a volume control. It connects to the SpeakerLink input of the loudspeaker, which provides power to the module from the loudspeaker. When the loudspeaker is powered up, the IA21 configures the DSP8000 XE so that the module and loudspeaker adopt the same external functionality as an analogue active loudspeaker. This includes setting the loudspeaker gain to an appropriate fixed level and disabling the loudspeaker's internal volume control. The other audio inputs (Digital Input, Optical Input and USB Audio) and the IR receiver are also disabled. Because of this, the IA21 should not be used with the loudspeaker in any other system applications.

6. Which of Meridian's unique DSP technologies are unavailable when using the loudspeakers with the IA21 analogue input modules?

Image Elevation, Image Focus and Image Focus Plus are not supported when the IA21 is connected to the loudspeaker.

The following technologies are supported with or without IA21: Digital Precision, True Time, True Link, Q-Sync, Bespoke Signal Mapping, FFA, E3 Bass, Pro-Active Bass, Pro-Active Thermal and Perfect Balance.

7. What is the Meridian B-Link module for?

When used in conjunction with the Meridian Control app, the B-Link performs the following tasks:

- It allows access to set-up menus for the configuration of the loudspeaker during installation. Such installation settings are stored in the loudspeaker's non-volatile memory, so they are retained even if the B-Link is disconnected.

- It provides an intuitive interface for control of the loudspeakers from a smartphone or tablet; to adjust the volume level, to switch the loudspeakers on and off, and to access other settings, such as treble and bass.

In addition, the B-Link can act as a high-quality source of audio streamed wirelessly from a Bluetooth device such as a smartphone, tablet or computer.

8. How do I switch the IR receiver on or off?

This is done using the Meridian Control app in conjunction with the B-Link module. The module must be connected to the Master loudspeaker's SpeakerLink input. The app is then used to set the loudspeaker to be Controller within the "Comms" section of its configuration menus. This activates the IR receiver. Once the setting is made, it is stored in non-volatile memory. If the B-Link is no longer required, it can be disconnected and put to one side.

9. The DSP8000 XE has eight drive-units. How are various drive-units fed?

The tweeter and mid-range drivers on the head unit take care of treble and mid-range with each unit being fed from their own dedicated amplifier. The bass-drives are each fed with by their own amplifier. The uppermost two pairs of bass-drives receive the whole range of bass frequencies. However, the lowest pair is fed with only the very lowest bass frequencies in order to give the loudspeaker its tremendous bass extension and power.

10. Is FFA (Full Frequency Alignment) enabled on the loudspeakers by default?

Yes. By default, the loudspeakers have FFA enabled and the internal switch for FFA is set to change only if a loudspeaker receives the relevant command on its SpeakerLink input. This is determined in the "Audio Menus" section within the configuration for the loudspeaker. Configuration is accessed using the Meridian Control app in conjunction with the B-Link module. By default, "Enable FFA" is set to "Set via SpeakerLink" which means "do as instructed over the SpeakerLink connection." This setting can be changed to "Always On" or "Always Off" which switches FFA to be enabled or disabled irrespective of any command received over SpeakerLink.

11. I am trying to connect a pair of DSP8000 XEs, but the product which is going to feed them has only one SpeakerLink output socket. What do I do?

The pair of loudspeakers can be connected in a "daisy-chain" arrangement. The input of one loudspeaker should be connected to the SpeakerLink output on the controller-product. The output of this loudspeaker is then connected to the input socket on the other loudspeaker.

12. In a two-channel system which is "star-wired" with SpeakerLink cables, which loudspeaker should be wired as Master – the left or right?

Either loudspeaker can be set as Master – it just needs to be connected to the "Master" socket on the product feeding the loudspeakers. The only consideration to be taken into account is that only a Master loudspeaker can be configured to accept IR commands. If IR control through the loudspeakers is a requirement, it may be that the physical location of the loudspeakers means that one is better positioned than the other in regard to "line-of-sight" for reception of IR from the user's remote control.

13. In a two-channel system which is wired in a "daisy-chain" arrangement, which loudspeaker should be wired as Master – the left or right?

If a Meridian product is feeding the loudspeakers from a single SpeakerLink output then the loudspeaker directly connected to the source product must be set as Master. For convenience of wiring, this usually leads to the loudspeaker which is nearest to the source product being set to Master. However, it is perfectly okay to set the more-distant loudspeaker as Master as long as the cabling is arranged accordingly. IR control is possible only on the Master loudspeaker, not the Slave. So, if IR control is a requirement and one of the loudspeakers is better positioned than the other in regard to "line-of-sight" for reception of IR from the user's remote control, then this loudspeaker may need to be made Master regardless of which is nearest to the source product.

14. In a two-channel system, how should the channel selector switch be set?

The loudspeaker on the left (when viewed from the listening position) should be set to "Left or Centre" and the loudspeaker on the right should be set to "Right". The switch is required because the SpeakerLink lead feeding the loudspeaker carries both left and right audio channels. The switch "tells" the loudspeaker which channel to pick up from the lead. This is true even when each loudspeaker is fed with a dedicated SpeakerLink lead.

15. How should the channel selector switch be set in a Meridian surround-sound system?

Loudspeakers in use as main-left, side-left, rear-left or centre channels should be set as "Left or Centre". Set the switch to "Right" for loudspeakers in use as main-right, side-right or rear-right channels.

16. What is the purpose of the L+R position on the channel selector switch on the loudspeaker?

This sets the loudspeaker to play a balanced mix of left and right audio, allowing a single loudspeaker to reproduce all the audio present in a stereo recording. It provides a useful option for systems using multiple loudspeakers where the listening area does not have clearly defined left and right loudspeaker positions. This also allows a single DSP8000 XE to be used on its own.

17. Why do I have to set the loudspeakers to Left, Right or Centre even when they are being fed with an independent SpeakerLink leads?

In a Meridian system, digital audio is distributed in pairs of channels. This seems obvious when a pair of loudspeakers is "daisy-chained" However, it is also true when a system is "star-wired"; each SpeakerLink lead always has the ability to carry two channels of audio. Therefore, each loudspeaker must be configured to pick up and play back the correct channel from the lead. Even in cases when there is no sound present in a channel, such as when there is no subwoofer defined in a surround system, the lead connected to the centre-channel still carries digital silence in the unused channel. Set the loudspeaker to pick up the wrong channel and it will play back this silence.

18. Should I use mains conditioning equipment with the loudspeakers?

No. Meridian Digital Active loudspeakers feature internal protection which, when activated, can demand high current from the mains supply in order to blow the fuse within the product. This is a deliberate aspect of their design and is a key safety feature. If, under these conditions, anything inhibits the current required to blow the fuse, the loudspeaker will be exposed to circumstances for which it was not designed. Such circumstances could result in catastrophic damage. It may be thought that this can be avoided by using a mains conditioner which boasts a current rating which is higher than that required to blow the loudspeaker's fuse. However, the possibility of the mains conditioner itself developing a problem needs to be considered. If a problem in the conditioner restricts its current delivery capabilities, and then the loudspeaker suffers a failure as described above, the fuse may not blow resulting in catastrophic damage.

19. What happens to digital signals received by the loudspeakers which have sampling rates of 44.1kHz or 48kHz?

These signals are upsampled to 176.4kHz and 192kHz respectively within the loudspeaker.

20. What happens to digital signals received by the loudspeakers which have sampling rates of 88.2kHz or 96kHz?

These signals are upsampled to 176.4kHz and 192kHz respectively within the loudspeaker.

21. What amplification is used in the DSP8000 XE?

The Ultrasonic tweeter and Evo mid-range driver are each fed by a Class-AB amplifier capable of 150W into 4Ω. Each of the six Subsonic bass-drives are fed from a pair of Class-D amplifiers, with each pair capable of 240W into 4Ω.

22. What is the power consumption of the DSP8000 XE?

Each loudspeaker uses a maximum of 1250W.

23. Which audio inputs on the DSP8000 XE are enabled by default?

Only the SpeakerLink input is enabled. By default, the loudspeaker has all twelve sources available within the Meridian Comms system assigned to the SpeakerLink input.

24. How do I enable and assign the various audio inputs on the DSP8000 XE?

The Master loudspeaker can be configured to have its audio inputs assigned to different sources within the Meridian comms system. This is done using the Meridian Control app in conjunction with the B-Link module.

25. What does the “Factory Reset” button do?

Pressing this button sets the loudspeaker back to its factory defaults. This includes assigning all sources to the SpeakerLink input.

26. Can the DSP8000 XE be used to play back MQA material?

Yes, when fed from a Meridian MQA decoder, the DSP8000 XE renders MQA material. Thanks to the use of Meridian’s True Link technology, such a system maintains the authentication aspect of MQA throughout the signal path.

26. Can I use the co-axial digital audio input on a DSP8000 XE which is a Slave speaker?

Yes, the loudspeaker can be configured using the Meridian Control app to use its co-ax digital input instead of receiving audio via its SpeakerLink input. This feature is supported on firmware v1.0.13 or later.