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DOLITTLE



Lyngdorf MP-60

Surround Sound Processor

Doug Blackburn

The Danes at Lyngdorf are back with their new MP-60 surround sound processor that updates their previous MP-50 processor (reviewed in *Widescreen Review* September 2017)—sort of. Lyngdorf actually had two MP-50 models, the one I reviewed two years ago and an interim model with some updates to keep it reasonably current. Both MP-50 models were limited to decoding 12 channels, even though they had 16 outputs. The MP-60 can decode 16 discrete channels. That allows up to 7.4.5 channels (five height, four subwoofers or two subwoofers and two wide loudspeakers, or other options, and up to five Immersive Sound (height-layer channels) or possibly 9.2.5 with width loudspeakers at ear level for Dolby Atmos and DTS:X and their post-processing upmixers. A “standard” no-frills Immersive Sound system with four height loudspeakers would be a 7.1.4 system for Dolby Atmos or DTS:X, but using the Auro-3D loudspeaker layout allows you to get the best from all three Immersive Sound formats. For the purposes of this review, I’m going to ignore the MP-50 upgrade configuration since there won’t be a lot of owners of the MP-50 upgrade who would find the MP-60 to be a big enough upgrade to commit to it. Those who really need the MP-60 are those who don’t already have an MP-50 upgrade and who need the updates available in the MP-60, like 16 channels of decoding or the optional AES3 and AES67 input/output options (\$1,000 each). eARC was on the MP-50 upgrade, so if you have the original MP-50, the MP-60 will get you up to Dolby Digital Plus on the eARC channel, a worthwhile update over the previous maximum Dolby Digital format with its typical 12:1 compression while DDP is closer to 6:1 compression.

The MP-50 struck me as being the least-expensive processor with top-tier performance, and the MP-60 slots right in there, especially with the sonic upgrades this new version brings with it. The other big driver for the MP-60 will be the support for DTS:X Pro as soon as certification is achieved this year. DTS:X Pro supports up to 32 loudspeakers. Appearance-wise, the MP-60 looks the same as the MP-50 with anodized black aluminum panels and sections

of black glass on the front panel. The MP-60 and MP-50 appear to share the same chassis, same dimensions, same exterior styling, and even weigh the same.

The MP-60 isn’t the most configurable processor and doesn’t have the most channels, but it has a *lot* of flexible configuration capability. And with those mega-configurable processors in the \$20,000 to \$30,000+ price range, you really need a strong reason to have one in your system. If you need to tri-amp loudspeakers... the MP-60 isn’t for that. It can bi-amp the front left and right channels but that’s the only multi-output-per-channel option. There are four optional circuit boards, AES 3 and AES67 in either inputs or outputs or mix and match. These pro cinema options go for \$1,000 each, so \$2,000 if you want an input and an output.

The MP-60 shines at room correction and EQ options that can be used in endless varieties and combinations. Room correction is performed with Lyngdorf’s own RoomPerfect that is pre-installed in the MP-60. You do not need a computer to set up an MP-60 system, as with some other room-correction systems. There’s more about RoomPerfect later.

Voicing Filters

The EQ options are very comprehensive. The voicing feature is an EQ “overlay” that can be placed “on top” of RoomPerfect’s room-correction adjustments. Your voicing filter could be customized for music or movies (as are two of the included voicing filters), or for any other purpose. You could have a voicing for one person in the main seat and another voicing for a half-full theatre space and another for a completely full theatre space. Each voicing filter can have as many as eight independent filters associated with it. Those independent filters can be high-shelf, low-shelf, high-pass, low-pass, or parametric. After you select the filter type, you can set the available variables like center frequency, Q, and gain. The Web interface shows a graph of your EQ and voicings so you

Lyngdorf MP-60 Surround Sound Processor

can see what your changes have achieved. Voicings can be saved to a memory card and loaded into a different MP-60 in the event you have multiple installations that will use the same voicings/filters.

RoomPerfect™

RoomPerfect is Lyngdorf's room/system correction/adjusting system. It is quite different than most room-correction systems... whether they are embedded in the product or run from an external computer and downloaded to the products. Most room-correction systems focus on the time/phase and frequency domains. RoomPerfect adds impulse and power response as elements of the corrections applied. Furthermore, RoomPerfect is not focused on linearizing frequency response with a specific target curve as most room-correction systems are. RoomPerfect "assumes" your system employs well-designed loudspeakers and subwoofers. A lot of what RoomPerfect does is remove the room's influence on how the sound of the loudspeakers is changed by the room so you get to hear more "loudspeaker sound" and less "room sound." This is accomplished through the use of impulse and power response, overlooked sonic properties that other room-correction systems don't use or don't use well.

The differences in what RoomPerfect does with its measurements are what makes RoomPerfect work so well. There is a focus position measurement done as the first measurement in the RoomPerfect process. This focus position measurement should be done at your optimum listening/viewing seat. Subsequent measurements of the room should be done at least five feet apart and at different heights and positions within the room. For these measurements, the omni microphone is placed in a vertical orientation to capture sound from every channel and for capturing reflected (room) sound. RoomPerfect "learns the room" through those measurements. It compares the direct sound of the loudspeakers with the sound you hear that includes nearly as much reflected sound energy as directly radiated sound energy. This allows RoomPerfect to understand what the room does and what the loudspeakers produce without influence of the room. RoomPerfect may also be one of the few systems that measures subwoofers and loudspeaker channels *together* as well as separately. This allows for more precise integration of sound from the loudspeakers and subwoofer(s). Some other room-correction systems provide different results if you run their measurement process a second time. So how do you know, which result is correct if the correction process isn't consistent? The engineers at Lyngdorf were well aware of what other room-correction systems were doing, and they set out to intentionally *not* do what the others are doing.

To do the initial setup, you enter actual measured distances to loudspeakers and use Lyngdorf's provided calibration microphone, cable and stand. You then run measurements with a number of different microphone locations in the room. It takes a bit more than one hour to get RoomPerfect to over 90 percent familiarity with the room. When that is done, RoomPerfect calculates the needed response changes, channel by channel, and sets all that up in MP-60 for future use. The installer/integrator will certainly run and set up RoomPerfect and Voicings, but these are also things that can be done by a savvy owner as their system evolves over time. Or the installer/integrator can alter settings as needed when system changes are made over the years.

I was very impressed with RoomPerfect during the MP-50

Features

- Supports UHD, HDR, 3D, HDMI 2.0b, HDCP 2.2, Bt.2020, eARC*, CEC
- Supports up to 16 channels*, up to 4 can be subwoofers
- Supports Dolby Atmos, Dolby Surround, and previous Dolby audio formats
- Supports DTS:X, DTS Neural:X, DTS Virtual:X* and previous DTS formats
- DTS:X Pro support expected in 2020
- IMAX Enhanced support coming soon via update
- Supports Auro-3D, AuroMatic, Auro-2D*
- Internal support for HDBaseT output for long HDMI runs with Ethernet cable
- Proprietary RoomPerfect room correction with supplied mono measurement microphone, cable, and stand
- Ethernet LAN RJ45: Gigabit speed
- HDMI Inputs: 8, up to 4Kp60 with HDR or Dolby Vision
- HDMI Outputs: 2 plus one HDBaseT output (HDMI over Ethernet)
- Media Player Support: Internet Radio (vTuner); Airplay, Spotify Connect; Roon Endpoint (pending certification); DLNA support of FAT32 media storage; UPNP support
- Other Video Inputs/Outputs: none
- Other Digital Audio Inputs: 3 digital coax, 4 optical digital
- Analog Audio inputs: none
- USB: 2 Type A for music playback or software update; 1 "square" USB for music playback
- Supports Zone B
- SD memory card or USB device can backup all settings
- Analog Audio Outputs: 16 XLR connectors, line level
- Front panel connections: none
- 12V Triggers: 1 in, 4 out
- Optional bi-amp of front left and right loudspeakers
- Rear panel on/off switch
- Create up to 32 voicings with up to 8 filters each
- Built-in apps: RoomPerfect
- In the box: MP-60; microphone; microphone cable; microphone stand, IR/RF remote control; rack mount; power cord
- Upscales lower resolutions to UHD, does not downscale UHD to lower resolutions
- Silent operation (no cooling fan)
- RS-232 port (control)
- Supports Control over IP, Web interface, remote support via Ithiji, 3 IR remote (wired); Control4
- IEC power cord socket
- Easily change sound from optimized for one seat or optimized for all seats
- Lyngdorf phone app for controlling the MP-60, iOS and Android
- Passes all HDR formats (HDR, HDR-10, HDR-10+, HLG, Dolby Vision)
- 24-bit, 192 kHz digital audio processing from all inputs except digital optical at 24-bits, 96 kHz
- Pro Cinema optional add-on circuit boards and i/o connections: AES3 Input (DCI); AES3 Output (compatible with Meridian 271 or similar); AES67 input; AES67 output; order as needed; inputs and outputs are separate options)

Features new to MP-60

Specifications—Lyngdorf MP-60 Surround Sound Processor

Dimensions: 17.7W x 5.8H x 14.6D (inches)

Weight: 19 (pounds)

Power requirement: 100-240VAC 50/60 Hz

Power consumption: not specified

Frequency response: 20 –20,000 Hz +/-0.5 dB

Max. THD from 20 –20,000 Hz: 0.005%

Designed In: Denmark

Manufactured In: Denmark

Warranty: 2 years

MSRP: \$12,499; optional boards \$1,000 each

Manufactured By:

Steinway Lyngdorf

600 Congress Avenue 14th floor

Austin, Texas 78701

Phone: 212 588 9330

Email: usa@steinwaylyngdorf.com

Web site: lyngdorf.com

review, and it sounds every bit as good today as I remember from two years ago. In fact, a few weeks into the review I put in a center channel loudspeaker that has been bouncing around from closet to closet since we moved into this house seven years ago. It gets moved around because I can't throw away something that works, you never know when you might need it. But this center channel loudspeaker never sounded very good, so it does less damage in a closet than it does in a system. I put it in the system and re-ran RoomPerfect (another 60-plus minutes). Once you have RoomPerfect "done" and you like the result, you can leave it on all the time, or you can turn it on and off as you wish. With no RoomPerfect correction that center channel loudspeaker sounded just as bad as always with distinct problems in both male and female speaking voice frequency ranges. Dialogue is mumbly and opaque compared to good center channel sound. Music just kind of lays there about as interesting as 30-year-old wallpaper. After RoomPerfect, this lamentable center channel loudspeaker sounded like a different product. Perhaps not something I'd want in *my* theatre system but not the annoyance it was without RoomPerfect. Dialogue was fine and music was at least passable. Not top shelf, but it's miraculous that RoomPerfect could make this center channel loudspeaker sound at least acceptable instead of get-that-out-of-here! RoomPerfect may just be the technological edge that moves (or *should* move) Lyngdorf and Steinway Lyngdorf processors to the top level of the processor sound-quality list. The MP-60 may not be alone at the top level of performance, but it is unique in its level of performance versus cost.

Using The MP-60

I had a bit of an electronic pop sound coming from the system early in the review cycle each time I changed channels or skipped forward/back using the DISH Hopper 3 DVR. Lyngdorf said that cable/satellite/streaming boxes may not have well-engineered grounding systems.

There is no headphone jack on the MP-60 and no Bluetooth or Wi-Fi.

There were occasional handshake issues with a VIZIO

Quantum X 2019 TV ("no signal" messages), but projectors from Epson, Sony, and Optoma had no trouble with handshakes. After a firmware update just a few days ago, the problems with the VIZIO TV got so bad I had to connect each source directly to the TV. All the source components worked fine with the TV and without the MP-60 in the middle. It's difficult to believe we still encounter these HDMI issues 16 years into HDMI. It is all handshaking, and it's all about timing of responses and the order of the data transmitted. Cables don't change anything as long as they are good cables. How can we view an entire 2.5-hour movie with almost 25 million pixels per frame, 24 frames per second, and not have a single visible error in video or a single audible error in audio, BUT we can't complete a 2-second handshake efficiently so every possible combination of products can "understand" each other? Having this problem for 6 months is inexcusable. Having this problem for 16 years in one form or another is almost incomprehensible. It's difficult to blame hardware manufacturers. They can only use "known good" code and hardware for HDMI. When the handshake fails, it can be almost impossible to determine what device is upsetting the apple cart without HDMI test equipment. Why can't failed handshakes just result in the device, like the MP-60, sending the original video signal (resolution and frame rate) with no changes? Why can't we manually enter TV capabilities, processor capabilities, disc player capabilities, and assign those to each input so handshakes can be bypassed if they fail? There have been 16 years to fix this handshake stuff. Would somebody please do something to stop it for good? It's not just Lyngdorf/ VIZIO combos with handshake problems. Handshake problems have come up with a Marantz processor, a Denon AVR, Onkyo AVR, and Integra processor. But only with certain other components, not with everything that's connected to them. Those were all 2017 to 2020 models and some random video display or another... far from always a VIZIO display. The Marantz processor had problems while using a Hisense H9F TV, for example, but three projectors all were fine with the Marantz processor. HDMI is still too capricious to be a reliable consumer electronics interface—shame on everybody involved in creating the HDMI standard, it shouldn't be this difficult or time consuming to make HDMI fool-proof.

Sound

It's great really. Too much time has passed since the MP-50 was here two years ago for me to be able to say with certainty that the MP-60 sounds better. If I had one of each, I might be able to pick up some subtle differences. The MP-50 was very natural and unobtrusive sounding... until the soundtrack would get energetic, then the MP-50 upped the ante with precision sound at higher playback levels while retaining subtle detail in music, dialogue, and effects. The MP-60, for example, produced some of the most solid-sounding effects ever heard in this room. At the end of the opening credits in *Terminator 2*, you hear what is probably a synthesized sound that comes across as a muscle-bound 400-pounder hitting a 500-pound anvil as hard as possible with a 50-pound sledgehammer. The MP-60 makes that sound seem as solid as you would expect it to be if you were hearing it just 8 feet away from you in real life. It's metallic, it's a sharp hard impact, and it damps itself out very quickly. Lesser processors don't get all the solidity and room presence of this sound so it loses some room presence and impact. The MP-60 treats even subtle sounds that way. Birds are very specifically located if placed that way in

“The MP-60 Conveys The Emotion And Nuance Of The Music As Well As Any Processor I’ve Heard At Any Price.”

the soundtrack, but crickets and other ambient sounds have a diffuse “all-around-you” feeling. Audiophiles looking for analog stereo inputs will have to look elsewhere as the MP-60 has no analog stereo inputs. That was fine with me. None of the DACs I still have sound better than the decoding done by the MP-60.

I almost constantly used Auro-3D post processing for everything on DISH and streaming services. Some streaming programming with Dolby Atmos soundtracks would not decode properly with Auro-3D post processing, so I had to change the post processing option to “none” and use Dolby Atmos decoding to get worse sound than I would have had if I’d been able to *not* use Dolby Atmos and just decode the Dolby TrueHD 7.1 and use Auro-3D/AuroMatic to get Immersive Sound. Dolby admitted doing this over a year ago on more 4K UHD Disc titles before removing whatever they did that blocked Auro-3D post processing from Atmos soundtracks. This was my first encounter with having to disable Auro-3D for Dolby Atmos streaming soundtracks. I thought this might have happened one time with a Dolby Digital Plus soundtrack also, but I couldn’t find the program to go back and recheck. At any rate, Dolby is not supposed to be blocking any sort of post processing. I would expect that this will disappear at some point, so you should eventually be able to enjoy the benefits of Auro-3D/AuroMatic on all non-Auro-3D soundtracks. The only exceptions I make are when Editor Gary gives a disc an Immersive Sound score of 4 or higher with a Dolby Atmos or DTS:X soundtrack... in those cases I will use the native decoding. But a Dolby Atmos soundtrack with a “3” or lower score on Immersive Sound will always sound better if you decode the Dolby TrueHD or DTS-HD Master Audio then post-process with Auro-3D/AuroMatic for Immersive Sound.

Music sounds fantastic with the MP-60 running the system. The MP-60 conveys the emotion and nuance of the music as well as any processor I’ve heard at any price. The low electronic noise floor means subtle detail, right down to members of the orchestra wind and reed sections drawing breath for the next bars of music, remains audible in the mix. You even hear the strings raising bows just before they begin playing. All the detail, like keys on wind instruments being exercised, pages of the score being turned, heighten the illusion of reality in your room. If it is on the recording, the MP-60 lets it right through. High-res digital music with 24 bits and 88.2 to 192 kHz sample rates sounds like the cleanest analog sound you’ve ever heard. It is a literal pleasure, especially with a bourbon, scotch, or tequila over nice clear ice, to listen to music with the MP-60. You could make it your displeasure by putting on some obnoxious music, I suppose. But I don’t know many people who think they need better sound quality for their hairy death metal fix. On the other hand, if you are listening to Chet Atkins and Mark Knopfler play “Why Worry,” you really want an MP-60 rolling out

the tuneful notes. Both of Editor Gary’s recordings made with *The BBB Featuring Bernie Dresel* (drummer, band leader) with stereo, multi-channel, and Immersive Sound options in Auro-3D sounded as much like live music in my theatre room as anything I’ve played back on any system. The MP-60 convinces you that real 3D music is happening in your space at that very moment... as long as everything else in the system is performing at a similar level.

There really isn’t a lot to say about movie sound, aside from saying it’s essentially impeccable. The MP-60 does everything for movie sound you want a processor to do, and while you can screw up the sound with bad combinations of settings that’s not something you’ll have issues with if you use RoomPerfect. The MP-60 reproduces the full range of frequencies all the way down to 10 Hz beginning at the end of the opening credits of *Edge Of Tomorrow* with compelling power and force. The MP-60 with RoomPerfect and a good soundtrack is a marvelous entertainment experience. Music is more compelling, whether classical instruments, acoustic, or electronic. All of it retains the soul of the performer and composer and it flows into the room. Even during battle scenes of mayhem or chases, the music overlay is just wonderful, even with sobering events unfolding on-screen. When a sentimental European movie broke out in the chorus from “Vltava” (aka “The Moldau”) by Smetana, it was a wonderful cinematic interlude to hear the lovely melody over beautiful photography of the area.

Whenever there is a Lyngdorf processor in the system, I find myself compelled to view concert videos of almost any good performance. *Alan Parsons Symphonic Project Live in Columbia* was a musical bon bon for an old progressive rock fan. Combining forces with a live symphony orchestra, the Alan Parsons Project band played their usual assortment of electronic keyboards, electric guitars, drums, and a wide range of other instrumental “enhancements.” It is a lovely combination of symphonic and melodic prog rock. Steve Hackett’s (ex-Genesis) *The Total Experience Live* combines some of the cleanest and sharpest concert video with the sound of Hackett’s electric and acoustic guitars. With well-recorded sound and the clarity of the visuals, this was one of the more entertaining music-related videos seen recently. This music-forward entertainment becomes seriously engrossing when the production values and performances are excellent and the MP-60 is handling the sound. Frankly, you can’t get sound this good at a live event, nor can you see the performers as well.

Immersive Sound Formats

The MP-60 supports Dolby Atmos, DTS:X, and Auro-3D Immersive Sound formats. Each of these has an upconversion

option that fills, say, your 7.1.5 sound system regardless of how many channels were in the original content. Stereo converts to 7.1.5 and ditto for 5.1, 6.1, and 7.1 original movie soundtracks. All of these upconverters do a very different job at making various non-Immersive Sound tracks and music into immersive entertainment. So far, the pecking order has not changed. Dolby Surround has never sounded good to me, and it still sounds like an afterthought rather than sounding like something useful. I find Dolby Surround unusable. DTS Neural:X is the equivalent processing from DTS. It does a better-sounding job than Dolby Surround. But it's not very "musical" sounding when processing music, and while what it does is fine, it doesn't put realistic Immersive Sound into the height layer channels. Then there is the magic of Auro-3D. It used to have a dedicated AuroMatic mode that was like Dolby Surround or DTS Neural:X. But today's versions of Auro-3D can be left in Auro-3D mode all the time if you have an Immersive Sound setup. If you play Auro-3D content, it is properly processed with Auro-3D. Everything else is upconverted to your number of channels transparently. There is a new Auro-2D mode that upconverts all sources to 7.1 sound if you have no Immersive Sound/height loudspeakers and assuming you have a 7.1.4 or 7.1.5 system already. If you have a 5.1 system, Auro-2D will convert stereo up to 5.1 and convert 7.1 soundtracks down to 5.1. Auro-3D and Auro-2D both sound great. If you have an Immersive Sound system, Auro-3D/AuroMatic is the only post processing I like better than unprocessed sound, and Auro-2D gives me the best upconversion from stereo to 5.1 sound that I've heard. I prefer stereo music playback with Auro-3D/post processing more than the original stereo. Nothing else comes close.

We are now several years into movies being available with Immersive Sound, and enough movies have come out that we know good Immersive Sound can come from any of the three competing formats. Dolby Atmos, DTS:X, and Auro-3D all work fine. All can be very impressive and entertaining. But it takes humans running the mix to make that happen, and many movies still have no budget for human intelligence creating the immersive soundtrack. Way too many Dolby Atmos soundtracks come from what sounds like running the original 5.1 or 7.1 sound through Dolby Surround

(which has not ever sounded good to me, so far in the Immersive Sound era), to create a 7.1.4 soundtrack that is then encoded as Dolby Atmos. The results are dismal. That's why Editor Gary's Immersive Sound scores in disc reviews are so important. DTS:X is also popular in the U.S. for Immersive Sound movie soundtracks on discs, but they have the same issue with budgets for 4K UHD disc production... so they may often use DTS Neural:X to decode a 5.1 or 7.1 soundtrack to 7.1.4, and encode those channels as though they were "real" so the disc can tout a DTS:X soundtrack, even though there's a better than 50-50 chance that the result will be disappointing. The MP-60 breaks no new ground, Lyngdorf can only reproduce what is on the disc and offer any optional post processing for Immersive Sound. If you are like me, you'll put your MP-60 in Auro-3D mode and only change the setting if you encounter a soundtrack that does not process correctly with the automatic AuroMatic processing it would receive.

Conclusion

As the predecessor MP-50 processor produced some of the best movie and music sound I had experienced two years ago, the MP-60 brings at least that level of musicality, dynamics, and room correction. I give RoomPerfect room correction much of the credit for the overall outstanding sound quality the MP-60 produces. It is, so far, a unique tool that provides Lyngdorf with strong product performance and identity because of that performance. Without RoomPerfect, the MP-60 would be a very good surround processor. With RoomPerfect, the MP-60 produces the best sound quality heard for the lowest cost so far. You get SOTA surround sound performance for much lower cost than with other top-tier contenders. Very highly recommended. **WSR**

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