



L-R: Rolins Roy, Rolins Arcoustics; Tatjagata Barua, Modi Digital; Remesh Gopalan Kaivala, Lara Interiors and Acoustics; and Harshil Pathak, KMMC

Academy award

Indian musical maestro A R Rahman – ARR Sir to his legions of co-workers and colleagues – has opened a second music school alongside a Dolby 7.1.4 studio. **Caroline Moss** reports from KM Music Conservatory (KMMC) Mumbai

WHEN I VISITED A R RAHMAN'S KMMC IN CHENNAI A

decade ago, I was struck by the well-equipped, beautifully designed teaching spaces resonating with music and talent. So it was good news that my first post-pandemic visit back to Mumbai would include a visit to Rahman's newly opened conservatory and recording studio.

While on a much smaller scale than the Chennai school, the passion, dedication and commitment to passing on musical knowledge to a cohort of promising (not to mention lucky) students remains the same. Like most of Rahman's studio projects, technical systems design, equipment supply and integration was handled by Modi Digital. The Chennai-based company's connection with the maestro goes back to the 1980s when company founder, Vijay Modi, began to handle his audio

requirements, a role that was taken on from 2002 by his son, Aditya Modi.

"As a musician and as a mentor, ARR Sir wanted this to be a safe space for budding musicians from all over India, so they would feel connected to the essence of Indian musical culture," explains Tathagata Barua, Modi Digital's Mumbai-based regional sales manager, emphasising the Indian tradition of studying closely with a master, or guru, to learn a profession.

The facility is divided across the ninth floor of a commercial premises between KMMC and Panchatan, Rahman's own domain housing his recording studio, four production suites, a lounge and private workspaces for himself, his sister Fatima Rafiq and current collaborators.

Plans to open the academy in 2020 were, inevitably, derailed by the pandemic. Some workshops in October 2022 finally got things moving followed by the first intake of students in early 2023. First up were six-month certificate programmes in piano, guitar and vocals, followed by courses in music theory and composition, while a one-year diploma course in music production started in June. This includes piano skills, songwriting, musicianship and basic sound engineering, enabling students to work independently in the KM Studio at the heart of KMMC. The studio is home to a fairly simple setup including a pair of JBL 708P studio monitors with a PreSonus Eris Sub 8 subwoofer, an Avid Pro Tools Carbon interface, AKG microphones and headphones and Behringer headphone amps, in a control room overlooking a large live recording space which can accommodate multiple instruments and choirs.

Much of the teaching takes place in two Mac rooms on opposite sides of a corridor, each equipped with eight iMacs, two pairs of JBL 708P studio monitors, a 75-inch Samsung smart 4K TV, an Audinate Dante AVIO adapter, a Behringer Flow 8 digital mixer and Shure and Sennheiser microphones. A 60-capacity lecture hall hosts classes in Western music, theory and piano, and is equipped with two more pairs of JBL 708Ps and a Behringer



Much of the teaching at KMMC takes place in the Mac rooms



One of Panchatan's four identical production pods



The KMMC studio's live recording space with large windows into the control room



A R Rahman's transparent acrylic grand piano

Flow 8. Five soundproofed booths, three equipped with pianos, are also available for students to practise production techniques and instruments.

The Arena, a large outdoor terrace opening into an indoor space, connects the KMMC and Panchatan sides of the building. This is used as a breakout space for study groups and for end-of-term live performances, with sliding doors preventing sound leaking into the neighbourhood.

On the opposite side of the floor is Panchatan, the centrepiece of which is a 7.1.4 Dolby Atmos studio which Rahman uses for his own projects while in Mumbai. The studio assistant here is Harshil Pathak, who studied Western classical vocals at KMMC in Chennai before moving into the technical side of the music industry, studying at SAE in Melbourne for a further two years.

"I was always very interested in knowing how things worked," he says, explaining that his combination of classical and technical training is invaluable in the studio. "ARR Sir wants his engineers to know about musical notation so that they can communicate well with chamber musicians or anybody coming from a Western or Indian classical background, in order to be a better communicator. When setting up the studio, Modi Digital explained everything to me very well, so I learned how to work in this tight and fast-paced environment. Sir always comes in with creative ideas and plans, and he doesn't want anything technical to stop his workflow. He likes people to learn about the latest technology – plugins,

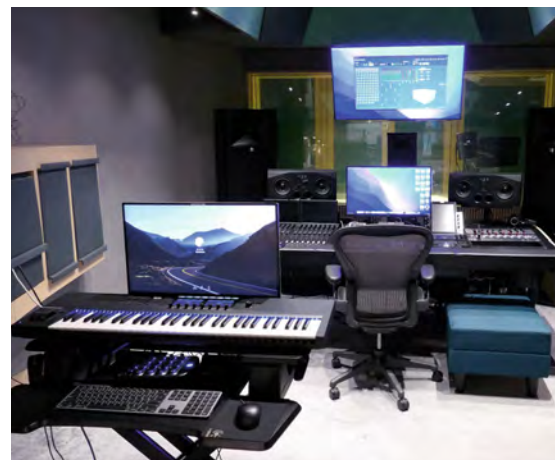
new gadgets and so on. He always likes to be ahead of the curve, and we have to be on our toes all the time so that his flow is not interrupted. It's very, very fast-paced, and there is no schedule – he needs the solutions quickly, so I need to be technically sound. I need to know everything, and not just audio. For example, if the coffee machine is not working, I need to know how to repair it!"

Domestic appliance maintenance aside, Dolby Atmos was also new to the engineer. "I hadn't worked with the format before, and I'm still learning," admits Pathak who, aside from his role as studio assistant, also lectures on audio over at KMMC and will be teaching music theory, mixing and mastering on the new one-year course.

A pair of JBL M2 master reference monitors form the main L-R channels of the 7.1.4 system, with a JBL 708i monitor as the centre channel. Four more JBL 708i monitors act as surround speakers and another four are mounted on the ceiling as overhead channels. The subwoofer is a Genelec 7380AP, and a pair of Adam A77X nearfield monitors are also provided. The system is driven by Crown DCi 8|600N and DCi 4|600N power amplifiers and controlled by a JBL Intonato 24 monitor management tuning system.

The studio is based around an Avid S6 control surface with MTRX interface, Pro Tools HDX and a Focusrite RedNet PCIe Dante audio card. Classic recording gear is represented by a Manley Voxbox channel strip and Neve 1073PX remote-controllable preamps. A Doepfer LMK4+ 88-key master keyboard controller, a Hear Technologies Pro Hear Back Pro Four monitor mix system with Dante and MADI cards and eight AM12 gooseneck microphones, AKG K812 headphones, AKG C414 XLII condenser mics and an AKG Drum Set Session I drum mic set are also on hand. And sharing the control room is Rahman's impressive Kayserburg transparent acrylic grand piano.

Panchatan also has four identical production pods, each equipped with a pair of JBL 705P monitors, a PreSonus Monitor Station V2 monitoring controller, a Universal Audio Apollo Solo interface and a range of accessories including AKG and



Panchatan's control room with 7.1.4 Dolby Atmos setup

Audio-Technica headphones, ART Headamp 6 headphone amplifiers, Samsung 43-inch monitors and Doepfer LMK4+ 88-key master keyboards. The neighbouring Qutub Lounge provides a space to relax and doubles as an occasional work area installed with PreSonus Eris E8 XT monitors and a Temblor T 10 subwoofer, a JBL Bar 9.1 wireless soundbar with Dolby Atmos and an LG Smart UHD TV. All areas are networked via Dante, interconnecting the entire facility and allowing easy transfer of recordings and data.

Acoustics, AV design, spatial ergonomics, studio furniture design and lighting were handled by Modi Digital in partnership with Rolins Acoustics and Lara Interiors and Acoustics. The team retained some of the existing interior walls and realigned services across the floor according to usage. Isolation between the academy



Harshil Pathak at the Avid S6 housed in Rolins Acoustics' custom-built desk

and the Panchatan studio zone was also provided. Some clever tricks have been employed to create buffer zones: for example, a machine room has been constructed near a central interior shaft that travels the height of the building to create a buffer, while an external glass fire escape door in the Panchatan studio has been covered with soundproof material and signposted for easy access when needed.

The concrete floor, built on a gradient, needed levelling as there was a 30cm discrepancy between opposite corners of the Panchatan control room. And the HVAC ducting – a common challenge in studio construction requiring precious ceiling space – was complicated by the presence of structural beams. Rolins Roy, principal designer of Rolins Acoustics, contributed to the ergonomics by designing some slick studio furniture and storage, including a custom desk to house the S6 and outboard gear, with a cable management system and a mechanism to raise and lower the centre speaker.

The pride of the teams that pulled off this beautiful, complex project during a global pandemic, and are now seeing it used by the maestro and his protégés, is tangible. The so-called Mozart of Madras now has a fitting home in Mumbai.

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