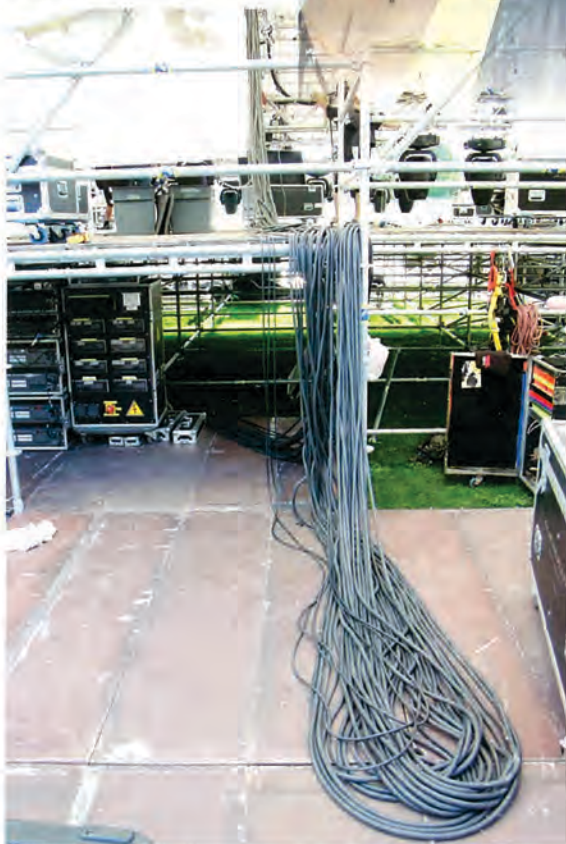


Cabling a European festival

Angelo Tordini of Reference Laboratories is famous as a pioneer of high quality cables, but what effect does his expertise have when applied to a four decade old festival in Italy?

FOR ALMOST 40 YEARS, AN ancient town in the hills of central Italy has transformed itself for 10 days each July. Perugia welcomes tens of thousands of visitors for the annual Umbria Jazz Festival, which has become one of the largest music events not just in Italy, but in the world. With it come the challenges of hosting multiple stages in a mediaeval and architecturally sensitive location, where getting the sound right for critical ears is as rewarding as it is challenging. It's fortunate for the festival therefore, that its technical partner is a man who will accept nothing but the best when it comes to audio quality.

That man is Angelo Tordini, who is perhaps better known as the owner of the Ancona-based cable manufacturer, Reference Laboratory. The consummate professionalism he demands when putting his name against any cabling set-up is matched only by his passion for live sound, which first ignited when he heard the Beatles play A Hard Day's Night. As the chorus confirms, Mr Tordini



Cabling being fed on stage
(Above right) Protected trunking for the lighting, AC and audio multicores from FOH to stage

and his handpicked dream team are prepared to work like dogs in order to get the sound right for the artists, the audiences and, of course, themselves.

Prior to a three year break between 1979 and 1981, the Umbria Jazz Festival concerts were staged in the towns of Perugia, Todi, Gubbio, Spoleto and Terni. However, the locals tired of the litter and the associated problems that came with the free ticket performances, and forced the event to take an unscheduled break. From 1982 onwards, the festival was anchored down in Perugia where paid-for ticketing promoted a rebirth catering to a more upmarket audience. As a result, big names were enticed to play, including BB King, Eric Clapton, Miles Davis, Dizzy Gillespie, Herbie Hancock, Keith Jarrett and Carlos Santana. While the larger acts perform their sets at the outdoor 4,500-seat Arena Santa Giuliana, a large contingent of rock and roll, world music, Cuban salsa and African tribal musicians play in Perugia's streets and squares. Mr Tordini's commitment extends to

the Carducci Gardens and Piazza IV Novembre further up the winding hill from the Arena Santa Giuliana.

Mr Tordini became involved soon after the festival returned from its hiatus, and in the years since he has added much needed technical expertise to the performances that cater for more critical ears. His knowledge of cables has been fundamental in getting all aspects of the production right, overlooking nothing.

'I normally spend three weeks preparing for the festival and another two weeks on site,' he confirmed. His five week investment accrues no direct incoming revenues, but instead helps him to promote Adamson speakers and Audix microphones (brands that Reference Laboratories exclusively distribute in Italy) together with his well respected catalogue of cable solutions. 'When I first started here 25 years ago, the main requirement from an audio point of view was to get the best from the main stage,' he recalls. 'As technical partners of Umbria Jazz, we have to rent the Adamson speakers in, so it actually costs us money to stage the productions. However, we're allowed to correctly market the Reference cables in a booth near the Carducci Gardens, which informs musicians and festival goers as to which cable to use for their various needs and cable quality in general. We must have educated a few people last year as we actually sold 300 ready-made cables. We want to teach musicians how to get the best out of their instruments, whilst telling retailers to sell cables based on quality rather than price.'

Unique cabling solutions

The main stage in the Arena Santa Giuliana was prepared almost two weeks in advance of the Allan Harris Quintet's opening performance, marking the start of the 10 day festival on Friday 9 July. Scaffolding towers and stages, wooden decking to preserve the grass playing surface underneath and security fences were initially erected and assembled. Once completed, Milanese production company Audiolux drafted its crack team of PA, lighting and backline technicians to Perugia, leaving the set-up in the hands of a team whose expertise extends right down to local stage-hands. Under the supervision of both Mr Tordini and Reference Laboratories' Alberto

Francesconi, the 25-strong crew has developed innovative techniques that have drawn critical acclaim.

Fundamental to this is Mr Tordini's insistence that each performer requires a unique cabling solution. 'If a band is playing with the wrong instrument or backline cables, then they can never get that performance back. We therefore talk to all the engineers and artists in advance to ensure that their sets are fully prepared in advance. Unfortunately, cabling is not considered in the same way as a microphone or a line array system, and that is down to a lack of education. That's where we address the balance and make sure that the sound from the musician's hands to the listeners' ears is as it should be. A guitarist will take a Fender into the studio for a certain job and a Gibson for another, because they're different. The same considerations must be made with cables.'



Incognito live at the Arena/Santa Giuliana



The T21's are protected – just in case the heavens open



Angelo Tordini beside the Adamson T21 and Spektrix lip-fill speakers

The RMC01 is the number one choice of cable for many musicians, whether it be for pianists or drummers or for lead vocalists. Continuing the theme, Mr Tordini explains that when a rock guitarist uses the red Reference Labs RICS01R cable, it focuses on the frequencies around the 800Hz range, which is particularly well suited for rock. Equally, it could be an acoustic ensemble, which would benefit from the RIC01A cable, or a specific vocal using the RIC01S model. 'However, I would recommend an RICS01 cable to the same guitarist for studio situations, because of interference and other variances that affect a live set-up. For live use we have employed the RIC01 from 1992 to the present day as it is an unbeatable reference point, providing the best signal, offering flexibility but at the same time can handle the physical stress of a heavily used stage such as this.'

Mr Tordini cares passionately about the musicians who put their trust in the bespoke set-up he has initiated with such success. 'If there were no musicians with a sensitive ear, I could never judge the real quality of what I do on my own. We test a lot of cables,

but at a festival such as this it is wonderful to be able to get feedback from so many artists and engineers using them. For me, nothing is comparable to the ear of a good musician.

'In 2009, for example I had a good chat with Tuck and Patti during their sound check and I immediately realised the quality of the musician in Tuck Andress. His attention to detail when replying to my questions enabled me to understand his needs better when using Reference cables and he ultimately took a delivery in his American studio. The same is applicable for sound engineers as we have an entire range of cables dedicated to transporting signals in for both studio and live applications. Professional sound engineers are of great importance in what we do.'



Reference Laboratories' RPC31 cable

His conversations with artists and engineers alike have allowed him to design not only customised cables but models aimed at the mass market. For 2009, Reference Laboratories launched a cable specifically for the Umbria Jazz Festival. 'I always believed that Jazz guitarists should have a cable that could highlight the way they play. As such we developed such a cable, for which Umbria Jazz granted us the exclusive use of the brand, precisely for this genre - the Umbria Jazz Cable. Many musicians don't understand the qualities of the cables we produce, so we just leave them to try at their convenience. Once used, it doesn't take an electronics expert to understand the difference between ours and normal non-specific cables.'

On stage, the RMLC03 is preferred for its mechanical properties on short 5m to 6m lengths from the instruments to the backline amplifiers, while RMC16TP (twist pitch) cables are preferred for longer lengths thanks to their increased copper content. 'They don't lose signal in the higher frequencies,' insists Mr Tordini. For every set change, there is a change of cabling for all the musicians on stage, all fed through a floor recess

below into awaiting neat trays. Meticulous planning beforehand ensures that the changeovers over the 10 nights run efficiently, with all of the cables identified by markers. RSC8 eight-channel microphone

cabinets together with Spektrix fills constituted the FOH system, boosted by 12 T21 quad 21-inch subwoofers run in cardioid mode. The PA system was powered by some 42 Lab.gruppen IP6400 and



A GrandMa lighting desk is outfitted with a new RDMX08AC cable to the dimmers



Dimmer and lighting power racks

3400 amplifiers and processed by a number of XTA Electronics DP224 and DP446 processors.

But the tweaks didn't end there as even the data cabling was modified to become more efficient. The XTA processors were connected with RDMX01 DMX 2 x 0.34mm data cable, in which the Audiocore software performed more efficiently. Furthermore, the GrandMa lighting console hadn't been overlooked, having been connected with a new RDMX08/AC model, which integrated eight DMX, a Cat5e and three AC power cables within a 5mm diameter PVC jacket.

Having initially drafted in a digital console in 2001 - much to the shock of many traditional analogue engineers - Mr Tordini proved that by employing digital technology there was no degradation in the sound. Set changes, as

demonstrated with the Yamaha PM5D consoles used at the monitor position during the 2010 festival, are also much more efficient with presets. Between the FOH mix positions and the stage, 64-channel audio, lighting and data multicores were run in Cablecross trunks protecting against damage from audience members and vehicles.

Festival founder and Umbria Jazz Clinic Chairman Carlo Pagnotta is now a close friend of Mr Tordini. 'Since Angelo was put in charge of the Santa Giuliana Arena we've not heard any audio problems, faults or badly staged shows, as used to happen before. Even the Americans, who often bring their own sound engineers, congratulate us for the Arena's audio. Whilst Angelo has been in the technical organisation of Umbria Jazz, he continues to improve the manner in which the audio reaches the audience, although it is always impeccable.'

If all this activity wasn't enough, Reference Laboratories also supplies the cabling, backline, drum sets and speaker systems to 11 classrooms, an outdoor stage and two indoor theatres for the Berklee Summer School clinics at Umbria Jazz.

'I normally go to sleep at 2am and get about four hours sleep - but that's enough for me,' admits Mr Tordini. Although these adrenalin-filled, hot summer days are long, the personal gratification they bring is immense. For the musicians onstage, the engineers both at front of house and on monitors, the students and above all the masses that congregate on Perugia for 10 days, no one leaves the festival untouched by the quality of the audio.

'When the right cables have been used, the crowd listens while the musicians and the sound engineers improve their performances.' Mr Tordini's all encompassing influences are evident at every turn in the signal chain, as he continues to thoroughly research, evaluate and practise what's best for each and every user and listener alike.

www.referencelaboratory.com
www.umbriajazz.com



The many on stage performers are fed bespoke cabling via a recess in the stage below



subwoofers arranged in cardioid mode



Lab.gruppen amplifiers and XTA DSP processors located under the stage 1 right area to serve the right hand speaker system