

## RAM Audio V and MDi Series in Russian stadiums

The XXI edition of Football FIFA World Cup takes place in Russia in 2018, and the main 5 stadiums, all around the country, have chosen RAM Audio amps to bring the audio power.

Official Russian distributor of RAM Audio, company Russian Sound Systems, leads by Vladimir Samuskevich, has supplied and installed the complete sound systems in the stadiums.

RAM Audio V12004 and V12044 models, in their fully equipped version, including Ethernet, DSP, Dante, standby and impedance monitoring, are the chosen models to drive line arrays of McCauley speakers.

Besides V series, MDi amps are also installed in VIP areas of the stadiums together with smaller acoustics cabinets of other international brands.

All V amplifiers are controlled from the central control point using the RAM\_OCS software.

A complex structure of amplifiers distributed in different zones of the venues is created for the total control of them, allowing a real time checking of all the McCauley ILA412 and MLA3-2 speakers hanged all around the stadiums.

All DSP presets and configuration were specifically created in situ for these installations, using RAM\_OCS software.

All equipment – RAM Audio power amplifiers, monitoring and signal redundancy systems, media converters, routers and matrixes (BSS), control panels (Midas) – is connected by an optical cable. This allows the ability to control the configuration of all systems by a tablet via Wi-Fi. "You can go anywhere on the field or in the stands to achieve the desired sound", emphasizes Nikolai Usov, head of design and installation department of Russian Sound Systems. Nikolai says: "Computer programs for monitoring each of the devices have already been implemented. Using RAM\_OCS, now each of the amplifiers, located at high heights, can be watched while sitting in the control room. The parameters of each individual device or each group of amplifiers can also be adjusted remotely."

He also comments: "In the programming interface of RAM OCS, we have developed a special window that shows only malfunctions: if something happens, the amplifier number and the nature of the malfunction immediately appear.

Technologies enable the operator to navigate in the environment and make decisions quickly, almost like a surgeon.

You can see a picture of the functioning of the entire system and promptly adjust the overall picture at the expense of other devices and nodes."

## LUZHNIKI STADIUM - MOSCOW

It is the national stadium of Russia. Its total seating capacity of 81.000 makes it the largest football stadium in Russia and one of the largest stadiums in the World. It is the main stadium for FIFA World Cup Russia 2018 which hosts the opening and closing ceremonies and the Cup final matches.

Work to rebuild Luzhnik Stadium for Russian Championship began in 2013. Inside, the stadium has been totally refurbished, and the audio system completely changed and adapted in order to comply with the strict requirements of FIFA organization.



RAM Audio amplifiers installed:

As the main sound system driving 216 units of McCauley ILA412 and MLA3-2, assembled into 22 clusters (amps and cabinets are located at 45 metres above the pitch):

- 54 RAM Audio V12004, with DSP, Dante, Ethernet, standby and impedance monitoring.
- 22 RAM Audio V12044, with DSP, Dante, Ethernet, standby and impedance monitoring.

In VIP areas:

- 17 RAM Audio MDi2-6K.

Figures at Luzhnik stadium are superb: 93 V and MDi amplifiers which make a total of 338 channels of 3000 W each one, so 1.014.000 W, more than 1 million watts of pure RAM Audio power!

## COSMOS ARENA - SAMARA



This stadium is located in the capital city of the Samara oblast (in the southwest of the country), on the Volga River bank. Inspired in a spacecraft, it has just roof and no façade. Cosmos Arena has capacity for 45.000 people and it has been recently renovated, including all sound system.

RAM Audio amplifiers installed:

As the main sound system driving McCauley line arrays:

- 52 RAM Audio V12004, with DSP, Dante, Ethernet, standby and impedance monitoring.
- 22 RAM Audio V12044, with DSP, Dante, Ethernet, standby and impedance monitoring.

In VIP areas:

- 8 RAM Audio MDi2-6K.

## MORDOVIA ARENA - SARANSK

This stadium is located in Saransk, capital city of the Republic of Mordovia.

It is a simple venue, bowl shaped in vivid orange, red and white colours. Stadium has a capacity of 45.000 people and it has also been completely renovated.



RAM Audio amplifiers installed:

As the main sound system driving McCauley line arrays:

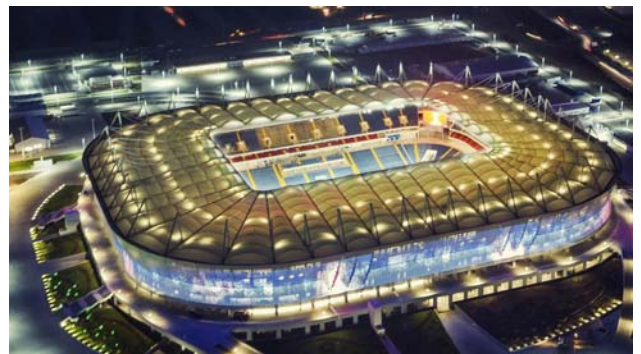
- 24 RAM Audio V12004, with DSP, Dante, Ethernet, standby and impedance monitoring.
- 16 RAM Audio V12044, with DSP, Dante, Ethernet, standby and impedance monitoring.

In VIP areas:

- 3 RAM Audio MDi2-6K.
- 5 RAM Audio MDi8-6K.

## ROSTOV ARENA - ROSTOV-ON-DON

This stadium is located in the capital city of the Rostov oblast (in the southwest of the country), on the interior Azov Sea bank. This stadium has been built to host some of the matches of the FIFA World Cup 2018, inspired in old burial mounds built by nomads in the steppe. Has a seating capacity of 45.000.



RAM Audio amplifiers installed:

As the main sound system driving McCauley line arrays:

- 22 RAM Audio V12004, with DSP, Dante, Ethernet, standby and impedance monitoring.
- 20 RAM Audio V12044, with DSP, Dante, Ethernet, standby and impedance monitoring.

In VIP areas:

- 2 RAM Audio MDi2-6K.

## ARENA BALTIKA - KALININGRAD



This stadium is located in Oktyabrsky Island belonging to Kaliningrad oblast, between Lithuania and Poland, on the Baltic Sea bank.

Arena Baltika stadium has recently been built to host some of the matches of the FIFA World Cup 2018 and has a sliding roof and all around the façade has big screens. Its seating capacity is 35.000.

RAM Audio amplifiers installed:

As the main sound system driving McCauley line arrays:

- 20 RAM Audio V12004, with DSP, Dante, Ethernet, standby and impedance monitoring.
- 20 RAM Audio V12044, with DSP, Dante, Ethernet, standby and impedance monitoring.

In VIP areas:

- 4 RAM Audio MDi2-6K.



**“A total of 3.5 million watts of genuine RAM Audio power, to hear and feel every goal during the World Cup Russia!”**



**RAM OCS**  
Dante