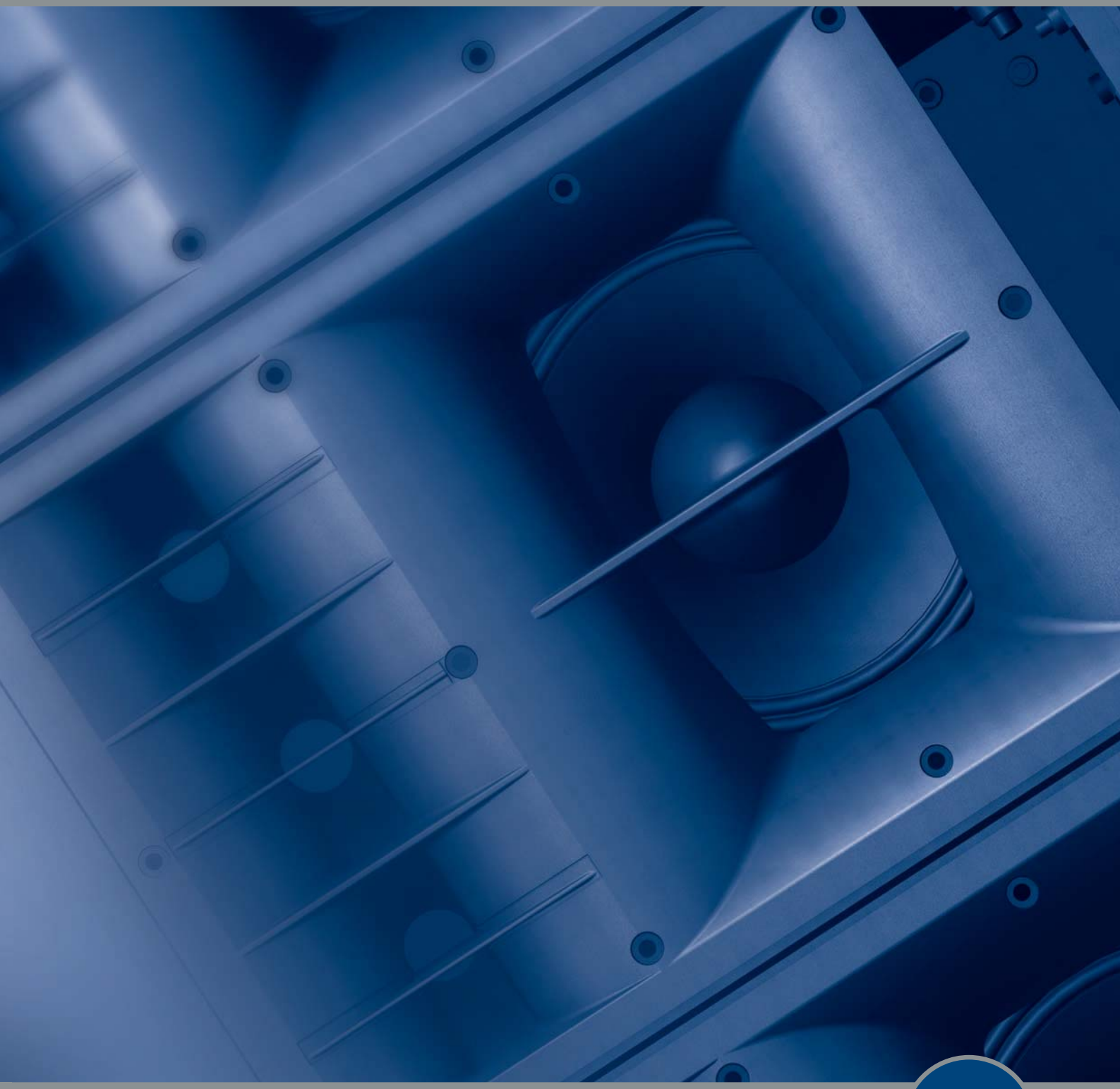
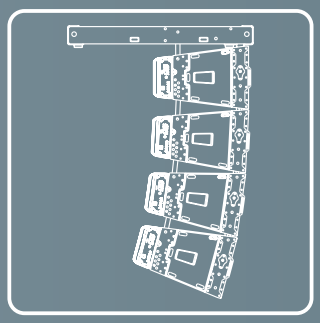
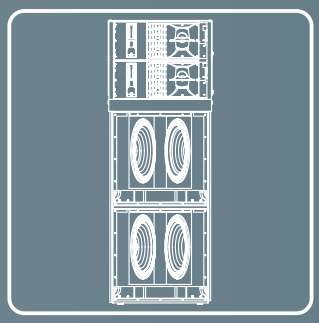
HIGH DEFINITION
TOURING AND THEATRE

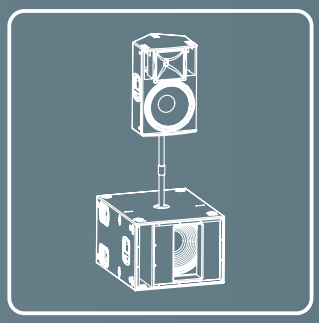


the rules of sound

RCF







RCF TT+ HIGH DEFINITION TOURING AND THEATRE

RCF TT+ represents another prominent chapter in the long history of RCF sound systems. Whether a speaker system is designed for live sound, large concert situations or permanent installed theatre, the paying customer now expects a level of audio fidelity and intelligibility of such a standard unsurpassed by previous generations.

This requirement has fostered the need for audio professionals to be able to offer a range of speaker systems combined with dedicated processing and amplification technologies that are superior in acoustic performance and control technology.

RCF TT+ offers ready to use solutions and tools in true active high definition speaker systems.

Solutions and tools

The TT+ line consists of five different true active models, conceived and designed for specific applications.

- Extremely compact dimensions
- Maximum output efficiency in sound pressure levels
- Minimum mechanical weight ratio
- High power RCF Precision neodymium transducers
- High technology switching power supplies with class D amplifiers
- High quality analogue audio inputs, state of the art floating point DSP technology
- Baltic Birch plywood cabinets

RCF TT+ HIGH DEFINITION TOURING AND THEATRE

Innovation, Integration, Intensity

INNOVATION - Our research and engineering faculty can today offer innovative projects with finite control of each detail, from the loudspeaker voice coil wire to the highly efficient extended dynamic amplifier topology. There are many different ingredients that go into creating quality products and systems. These include computer aided simulation software to assist the understanding of transducer behaviour and amplifier operation and the relationship of dynamics and transient response. RCF utilises over thirty state of the art software packages to identify magnetic circuits, voice coil dynamics, suspension linearity, horn dispersion simulation, crossover filters, amplifier thermal behaviour etc.

INTEGRATION - RCF is one of only a few loudspeaker manufacturers worldwide who have the ability to completely design and manufactures transducers, speaker systems and amplification and control electronics. Our 50 plus years heritage in audio combined with our state of the art research and development and manufacturing processes allows us to seamlessly integrate all the ingredients to design and build TT+.

Waves

New horn designs for the entire line. Precision waveguides for the line array midrange and compression drivers. Solid aluminium structures for compact two way systems.

Structures

Baltic Birch plywood cabinets. High quality steel mechanical fittings. Aluminium die cast handles. Powder coated grilles. Heavy duty epoxy paint finishes on cabinet structures.

RCF Precision Transducers

For over five decades RCF professional woofers have represented the ultimate performance, the highest power handling and the most advanced technology. Thanks to high energy magnetic designs, complex cooling systems and specifically developed new technologies, our neodymium transducers put themselves at the same, unsurpassed level.

Technology and craftsmanship: at RCF each professional compression driver is precision built using the most advanced moulding and assembly technologies and our experienced dedication and attention.

INTENSITY - The design philosophy for the new TT+ series is based upon offering the sound engineer solutions and tools that are ready to use. Key factors are the ability to sustain very high power with highly efficient sound pressure levels. Intense sound levels are created with extremely high definition and extended dynamic range. Modern construction materials result in mechanical weight ratios that are light for practical flying and portability.

Power

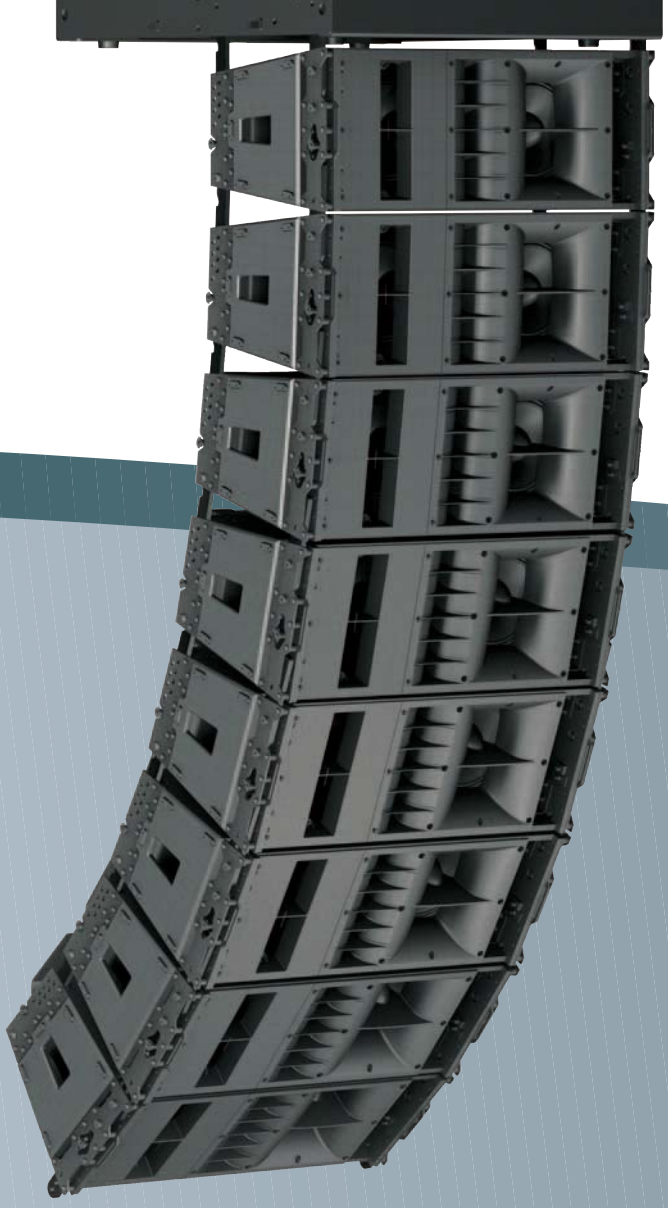
Powerful switching power supplies. Low distortion and natural class D amplifiers. Huge energy reserves in capacitor buses.

Control

Unique audio quality from an RCF exclusive premium analogue input board. Maximum flexibility and control from a newly designed 96Khz, 24 bit floating point DSP.

Integrity

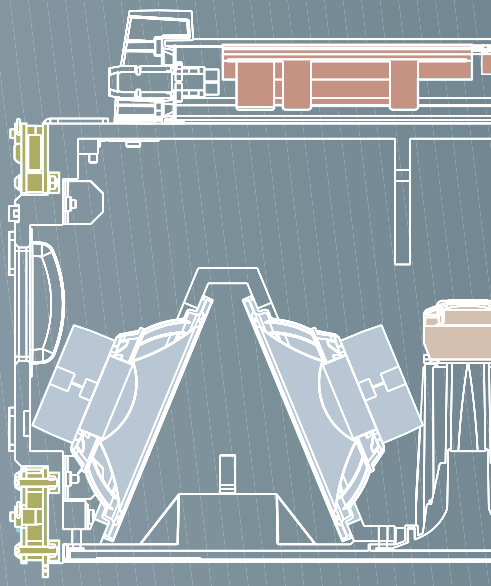
Advanced designs. High quality materials. Precise manufacturing. Careful assembly. Extensive quality control procedures. RCF's solid audio heritage.



TTL33-A

LINE ARRAY MODULE

- Wide, constant directivity, coverage angle
- 6 x high power neodymium transducers
- 3 x high power class D amplifiers
- 96 kHz, 24 bit, floating point DSP



Digital processing

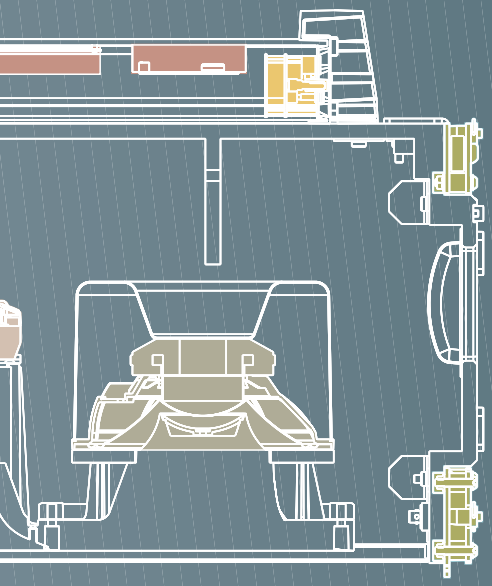
The integrated digital processor is based on a state of the art 24 bit, floating point DSP running at 96 KHz sampling rate. The calculation capacity largely exceed the processing needs and the DSP is never pushed to the limit. Crossover and equalization of the 6 transducers, limiter, system presets: high pass, air absorption and cluster size corrections.

Digital power

The TTL33-A is powered by a 750 watt switching power supply and 3 digital amplifiers: 500 watt mid-bass , 500 watt midrange and 250 watt compression driver. Very high output, extremely low distortion and natural sound . All the amplifiers and digital processing are housed in an aluminum extrusion external to the cabinet for best heat dissipation.

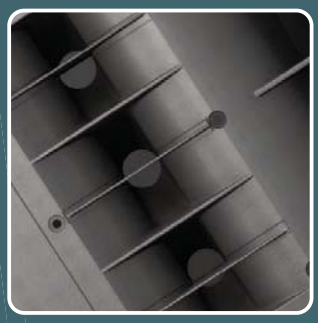
Small like a "mini" array that sounds bigger than a "compact"

Advanced technologies, knowledge, experience, continuous engineering effort and dedication were able to bring us to a unique result: the TL33-A. Active, ultra compact, wide dispersion, line array module that sets a new standard in touring and theatre sound reinforcement.



Compression drivers

A new compression driver unit has been developed in RCF specifically for array applications. The best ratio between the size of the diaphragm and the overall diameter and the very small total size makes the ND1411-MT a unique driver for application in line on straight horns. TTL33-A houses 3 of them for perfect HF control.



Controlled mid-bass

Two light and reliable neodymium 8", in a band pass loading configuration, provides a tight and loud mid-bass. Thanks to a careful acoustic design the sensitivity in the 100 Hz region is almost double than typical, same size, designs.

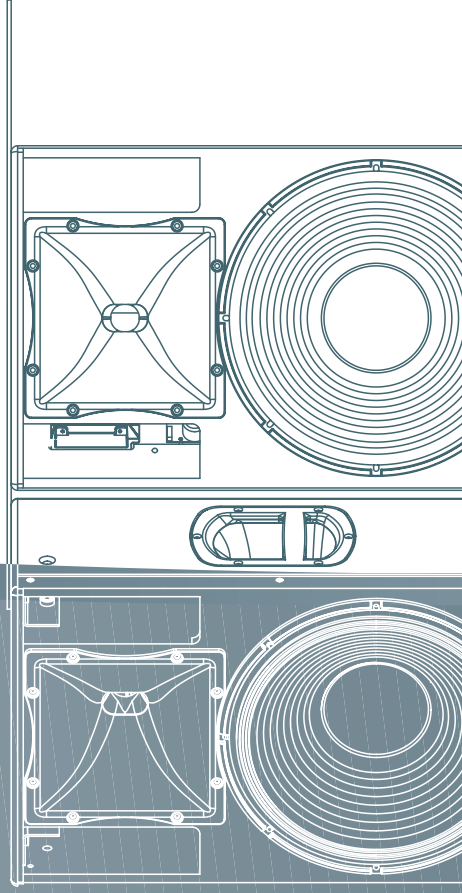
High output midrange

A fast and accurate horn loaded 8" takes care of the midrange frequencies. Powerful neodymium magnet, aluminum die cast basket, aluminum back can in direct contact to the rear plate for best heat dissipation.

Reliable mechanics

Laser cut high quality steel bars and precision machining for an easy to use and reliable mechanics. Thanks to the very light weight of the cabinet building the cluster is very simple, fast and effortless.

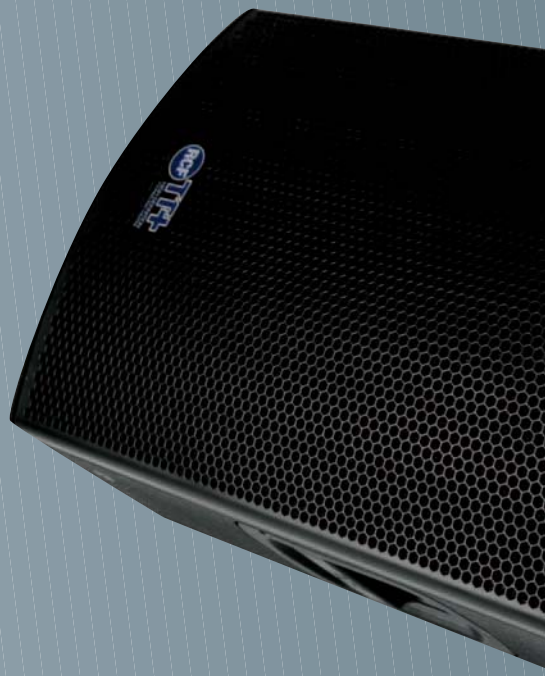
TT22-A
TT25-A
HIGH OUTPUT 2 WAY SPEAKERS



TT22-A

The TT22-A is the most flexible and powerful tool in its class. An extremely careful acoustic design, plus the highest quality transducers and the powerful amplifier makes this system the perfect solution for live sound situations to playback and monitoring.

- 750 Watt switching amplifiers
- Wide, constant directivity, coverage angle
- High power neodymium transducers
- High quality analog input board
- Soft limiter and RMS protection
- Maximum output per size available on the market



TT25-A

The TT25-A offers the highest performance from an active 2 way system. The incredible high output and dynamics, the extreme linearity and accuracy, plus the compact size makes the TT25-A the ideal professional speaker for sound reinforcement, live performance and events.

- 1500 Watt switching amplifiers
- Wide, constant directivity, coverage angle
- High power neodymium transducers
- High quality analog input board
- Soft limiter and RMS protection
- Maximum output per size available on the market

High output at premium sound quality

We started the design of our TT+ compact speakers with a clear idea in mind: maximum high quality audio SPL within the smallest weight and size. With our state of the art neodymium transducers, premium quality analog processing and powerful class D amplifiers we reached and surpassed our original goals.

High frequencies

Our newly designed "thick aluminum body" horns offer the best dissipation to neodymium compression drivers. When our pure titanium compression driver are assembled, all the horn becomes the surface of dissipation for the heat generated from the voice coil. The same coverage angle at all frequencies, compact size and strong, resonance free, mechanical structures for accurate voice and transparent sound. Designed for 90° rotation.

Low frequencies

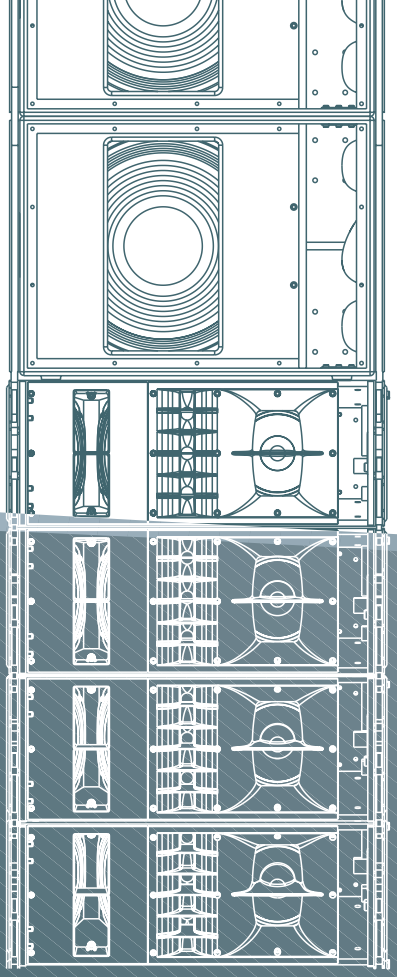
3" voice coil woofers cannot handle the power, 4" voice coil woofers are too slow for two way systems... so we purposely invented 'RCF 3.5" size', high energy, mid-bass: best balance between low end capability and midrange clarity and control. All this in only 5 kilograms.

Power and control

The massive amount of class D power is driven from a very accurate analog input board: perfect linearity and audio quality, soft peak limiter, rms limiter, high pass and side coupling options. Premium sound quality at maximum output.

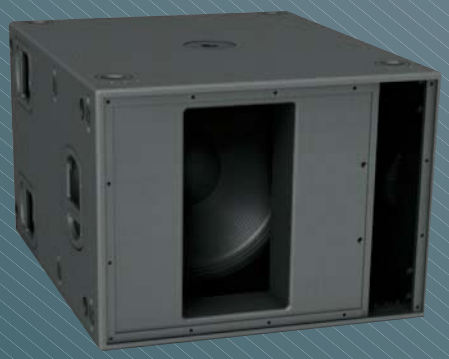
Suspension

High quality detachable fly tracks fittings on both sides of the cabinet offer horizontal, vertical and coupled suspended orientations



TTS18-A
TTS28-A

HIGH POWER SUBWOOFERS



TTS18-A

The TTS18-A is a very high output, compact, bandpass subwoofer. Ideal in combination with TT+ 2 way systems or used in multiples for very flexible touring solutions.

- High power full neodymium 18" transducer
- 1000 watt power switching amplifier

TTS28-A

The TT28-A is a reference double 18" bass reflex subwoofer. Ideal for touring applications. With the digital switching amplifiers, neodymium woofers and a well designed structure, it is one of the smallest and lightest double 18" systems available. A unique feature is the semi charged horn design which at low frequencies around 40Hz operates as a conventional bass reflex cabinet, however at the slightly higher frequencies in the 80 to 100Hz area the system operates as a 'semi charged horn loaded' design which provides around 3 to 4dB more efficiency.

- 2 x high power full neodymium 18" transducers
- 2000 watt power switching amplifiers

Powerful tools for powerful systems

Sound systems designed for almost any application benefit from the addition of extended low frequency or sub bass. True natural reproduction of music requires that the sound system's output should extend into the lowest octaves of the audible spectrum. Whether it is for the provision of subtle dynamic sound for theatre applications, the raw power of a 'bass drum kick' or an air moving concert sound sub bass system – RCF has the solution.

Superior woofers

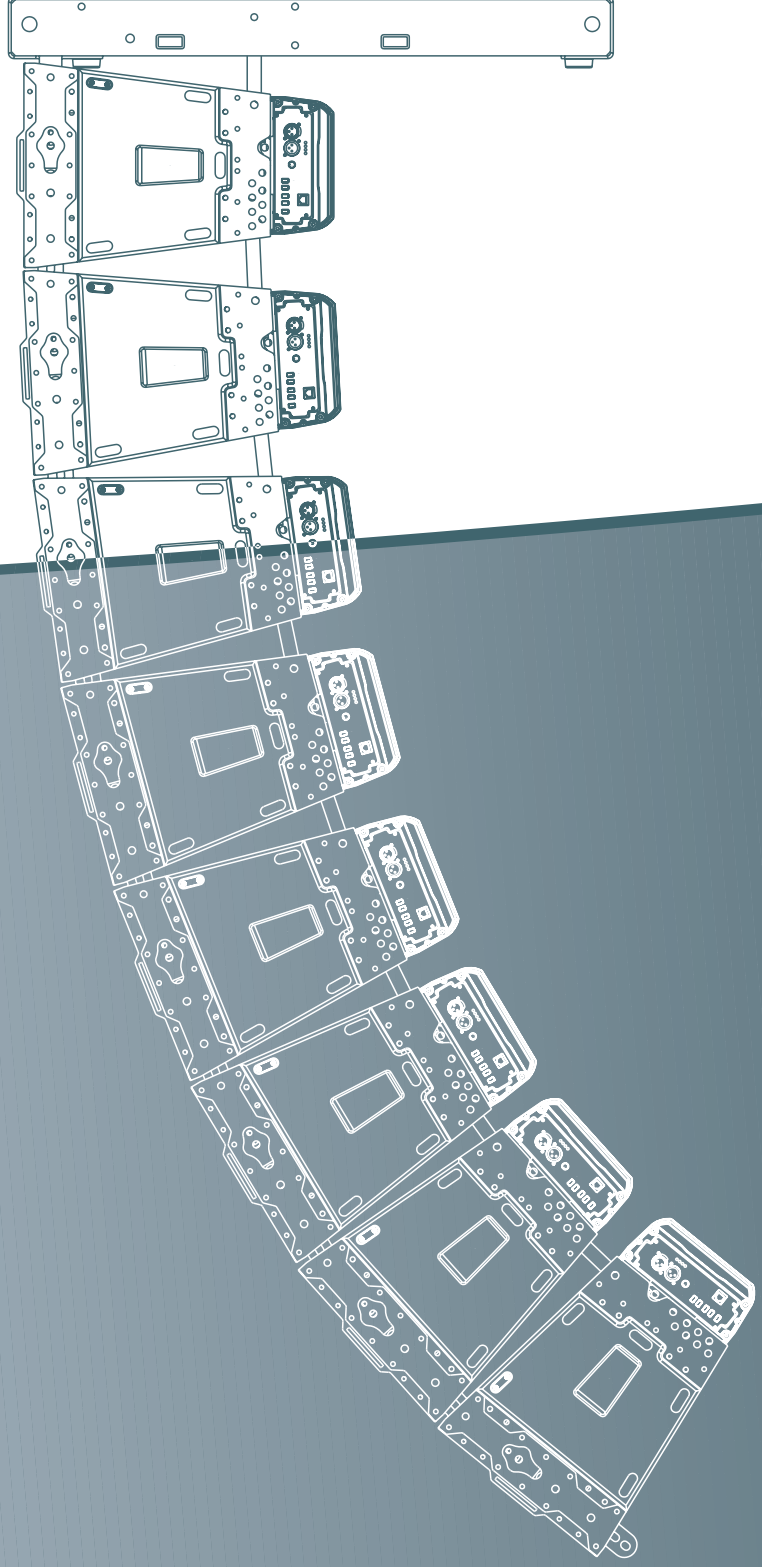
RCF LF18N401: incredibly linear frequency response characteristics, the highest power handling of any comparable 18-inch neodymium transducer, the lower power compression. Fibre loaded cone assembly along with a high excursion triple roll, constant geometry surround. This combination provides remarkable strength and a peak to peak maximum excursion of 48 mm. A fully optimised T-pole design generate the minimum amount of flux modulation, the unique dual-forced air venting system guarantee a very efficient voice coil ventilation for minimum power compression and higher power handling.

Massive power

On our subwoofers each single transducer is independently driven from a 1 kilowatt RMS amplifier providing an incredible performance and amount of sound power from a very compact size.

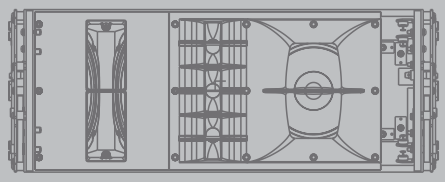
Flexible controls

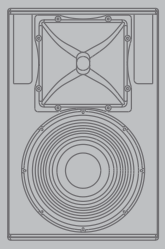
Power amplifiers are driven from a very accurate analog input board: perfect linearity and audio quality, soft peak limiter, rms limiter. Many crossovers and operation options are available: extreme low frequency high pass, phase inversion, 80 Hz and 110 Hz crossover, adding mode crossover for maximum punch of the system.



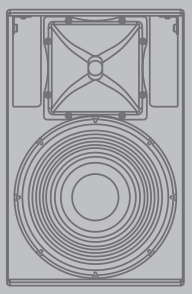
RCF Prediction Software

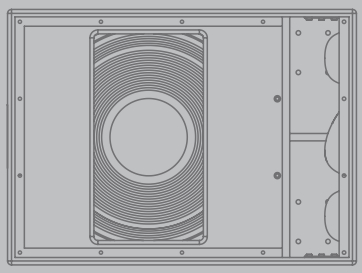
In order to assist with the set up procedures for the TTL33-A Line Array System, RCF has developed a complete prediction software package.
The software enables a complete two dimensional simulation of the behaviour of the TTL33-A cabinets and also suggests the correct subwoofer combinations. The system curvature angles and the sound projection data are computed with maximum sound pressure levels for the given building design originally inputted. The software will allow simulations up to a maximum of sixteen TTL33-A mid-high cabinets.
There is also a rigging menu which provides data for weight, centre of gravity and height of the array configuration. Rigging points and rigging hardware configurations are also computed.

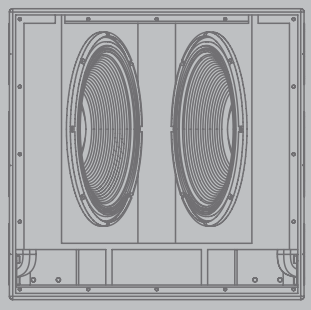




MODEL	TTL33-A	TT22-A
ACOUSTICAL SPECIFICATIONS		
Frequency Response	60 - 20 Khz	50 - 20 Khz
SPL peak	134 dB	131 dB
Sensitivity	x	x
Horizontal coverage angle	100°	90°
Vertical coverage angle	15° max, depending on config.	40°
Compression Driver	3 x 1"neo, 37 mm voice coil	1.5"neo, 75 mm voice coil
Midrange	8"neo, 64 mm voice coil	x
Woofer	2 x 8" neo, 64 mm voice coil	12"neo, 87 mm voice coil
INPUT SECTION		
Input signal	bal/unbal	bal/unbal
Input connector	xlr	xlr
Output signal connector	xlr	xlr
Input sensitivity	- 2 dBu / + 4 dBu	- 2 dBu / + 4 dBu
PROCESSOR SECTION		
Crossover frequencies	400 Hz, 1800 Hz	1200 Hz
Protections	thermal, hf	thermal, hf
Sensitivity control	yes	yes
Limiter	fast limiter	fast limiter
Phase switch	x	x
High pass	yes, 100 Hz	yes, 100 Hz
Controls	hf correction, cluster size	side/floor coupling
AMPLIFIER		
Power supply	Switching 750 Watt	Switching 750 Watt
High frequencies	D / 250 Watt	D / 250 Watt
Mid frequencies	D / 500 Watt	x
Low frequencies	D / 500 Watt	D / 500 Watt
Cooling	convection/forced	convection
Connection	powercon in/out	powercon in/out
PHISICAL SPECIFICATIONS		
Height	300 mm	600 mm
Width	760 mm	400 mm
Depth	450 mm	400 mm
Weight	32 Kg	23.2 Kg
Cabinet	baltic birch	baltic birch
Hardware	side fly fittings	6 x fly tracks
Handles	2 on side	2 on side
Pole Mount/Cap	x	x
Colour	Black	Black







TT25-A	TTS18-A	TTS28-A
40 - 20 Khz	35 Hz - 120 Hz	30 Hz - 110 Hz
136 dB	136 dB	139 dB
x	x	x
90°	x	x
40°	x	x
1.5"neo, 75 mm voice coil	x	x
x	x	x
15"neo, 87 mm voice coil	18"neo, 100 mm voice coil	2 x 18"neo, 100 mm voice coil
bal/unbal	bal/unbal	bal/unbal
xlr	xlr	xlr
xlr	xlr	xlr
- 2 dBu / + 4 dBu	- 2 dBu / + 4 dBu	- 2 dBu / + 4 dBu
1200 Hz	80 Hz /110 Hz	80 Hz /110 Hz
thermal, hf	thermal, hf	thermal, hf
yes	yes	yes
fast limiter	fast limiter	fast limiter
x	x	x
yes, 100 Hz	yes, 40 Hz	yes, 40 Hz
side/floor coupling	80/110/add crossover	80/110/add crossover
Switching 1500 Watt	Switching 1000 Watt	Switching 2000 Watt
D / 500 Watt	x	x
x	x	x
D / 1000 Watt	D / 1000 Watt	D / 2000 Watt
convection	convection	convection
powercon in/out	powercon in/out	powercon in/out
670 mm	520 mm	700 mm
430 mm	700 mm	700 mm
450 mm	860 mm	920 mm
26.8 Kg	48 Kg	73 Kg
baltic birch	baltic birch	baltic birch
6 x fly tracks	fittings ready	fittings ready
2 on side	6 on side	6 on side
x	x	x
Black	Black	Black

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