

TTL33-A II

LINE ARRAY MODULE



The TTL33-A II is a full range, ultracompact, wide dispersion, line array module that sets a new standard in the touring and theatre sound reinforcement. TTL33-A II is a 3-way active system featuring with 2 x 8" neo woofer 64 mm voice coil in a bandpass low frequency configuration, 1 x 8" neo midrange 64 mm voice coil in horn loaded configuration, 3 x 1" neo compression driver 37 mm voice coil, titanium dome, in horn-array configuration. Each transducer has been specifically designed for the application. The 2 woofer provides large excursion and very light weight, the midrange has an incredibly high BL for best vocal presence, the unique compression driver design offer the minimum spacing between throats to avoid HF cancellation. Tanks to the extensive use of neodymium and new basket designs, the total weight of the 6 transducers is less than 8 Kg!

The amplifier section features 750 watt switching power supply module, 500 watt low frequency digital amplifier module, 500 watt midrange digital amplifier module, 250 watt high frequency digital amplifier module, extra capacitor bus able to sustain the voltage for 100 ms burst signals. The total available power supply power is 750 watts and can be distributed to the 3 final amplifier sections. Each amplifier section has a very high maximum output power capability in order to provide, when necessary, maximum output bursts in a specific frequency range.

TTL33-A II amplifier represents a state of the art execution of a Dsp controlled multiway digital amplification. The analog input board offers xlr input and output link, cluster size control switches, high frequencies correction switches, pre-loaded equalizations by-pass (memory recall) switch and 4 status LEDs. Ethercon input and output connect the system in daisy chain on a RNet monitoring and controlling system from the FOH. The signal processor is a 32 bit floating point Dsp running at 96 kHz. The Dsp takes care of crossovers, equalisations, soft-limiters, rms limiters, large signals compression and customised presets for the 3 way amplification. The TTL33-A II is equipped with a dedicated networking board. Using our proprietary RNet protocol is possible to monitor all the system parameters, from the input to the status of each single amplifier. Having a Dsp on board of each cabinet, it is possible to address to single cabinets or groups of cabinets specific presets or modifications of parameters like gain, equalisation or delay.

The RNet protocol is based on RS-485 communication protocol, it is very stable and it is possible to send and receive data on a simple XLR cable.

The AC panel features In/Out Powercon connectors, On/Off switch. A small fan, speed controlled, guarantee the air circulation inside the amplifier in the most demanding situations. The cabinet is in marine baltic birch plywood, coated with high resistance epoxy paint. The mechanical suspension and orientation system is in high quality steel, very precise and easy to use. The suspension system is directly connected to the aluminum sides of the cabinet. The suspension system is designed to have a safety factor 7 up to 16 speakers per side.

Applications

- Touring sound reinforcement for mid-sized venues
- High quality reinforcement of music and speech
- Medium to large theatres and night clubs
- Stadiums, arenas, concert halls and other fixed venue installations
- Corporate A/V presentation

Features

- Very compact size (760 x 300 x 450 mm / 29.92" x 11.81" x 17.71")
- Maximum output per size available on market
- Minimum weight (32 kg / 70,54 lbs)
- Wide, constant directivity, horizontal coverage angle
- 6 high power neodymium transducers
- 750 watt, 3 high power switching amplifiers
- 96 khz, 24 bit, floating DSP
- XLR in/out, powercon in/out
- Baltic birch cabinet

ACOUSTICAL SPECIFICATIONS

| | |
|----------------------------|------------------------------|
| Frequency response: | 60 Hz- 20 KHz |
| Max SPL: | 135 dB |
| Horizontal coverage angle: | 100° |
| Vertical coverage angle: | 15° |
| Compression driver: | 3 x 1" neo, 37 mm voice coil |
| Midrange: | 8" neo, 64 mm voice coil |
| Woofer: | 2 x 8" neo, 64 mm voice coil |

INPUT SECTION

| | |
|---------------------------|-------------------|
| Input signal (Impedance): | bal/unbal |
| Input/Output connector: | xlr |
| Input sensitivity: | - 2 dBu / + 4 dBu |

PROCESSOR SECTION

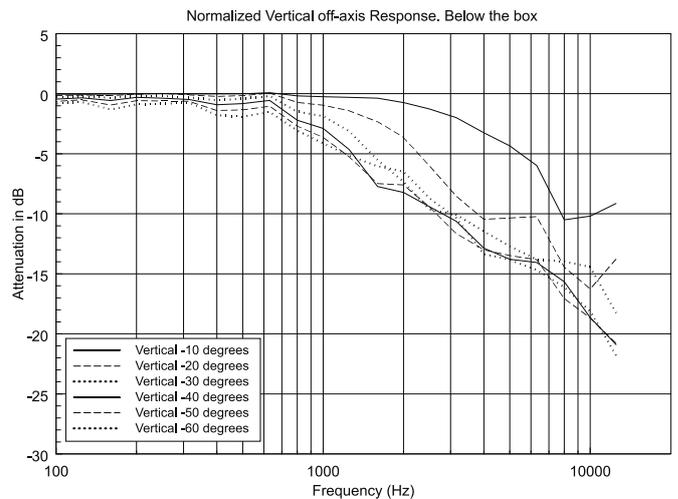
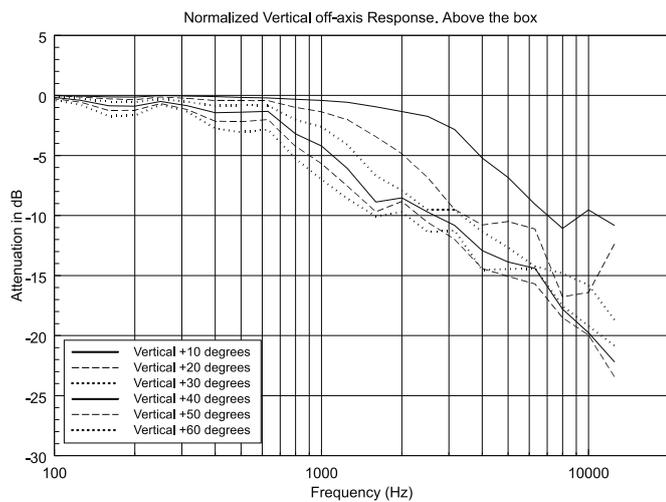
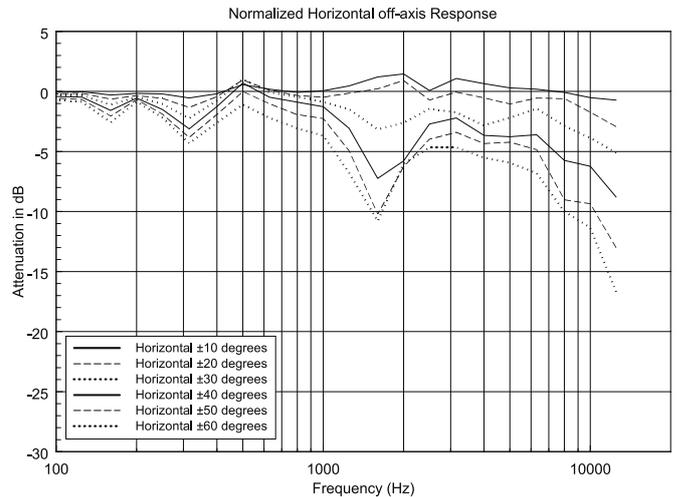
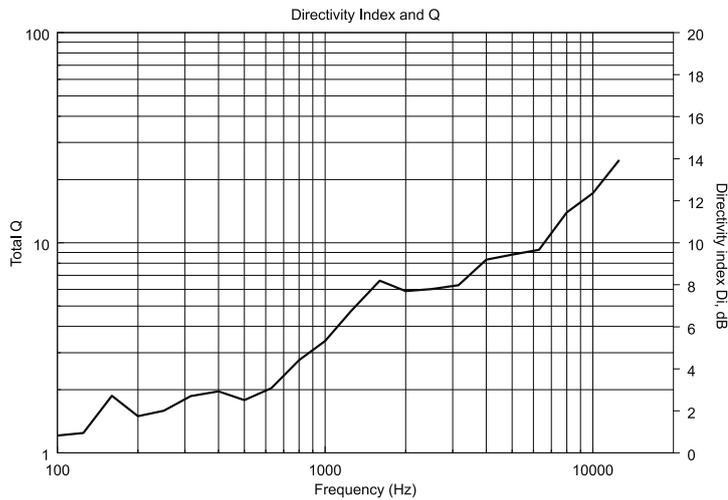
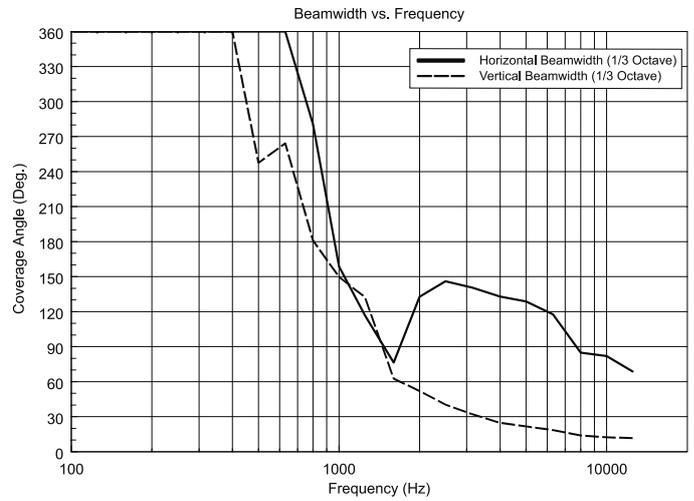
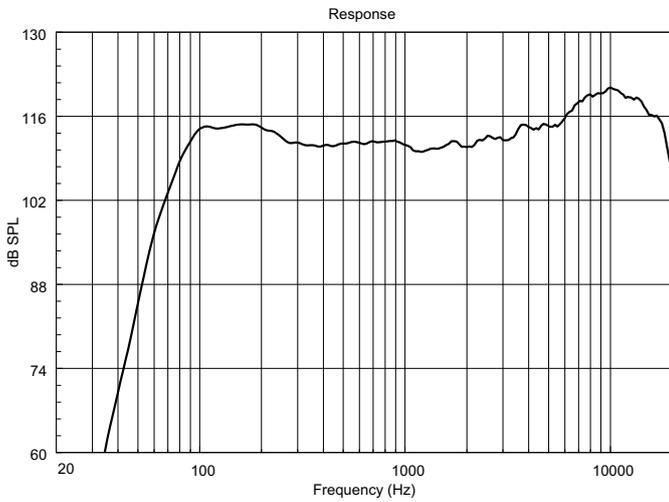
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|------------------------|----------------------------------|
| Crossover frequencies: | 400 Hz / 1800 Hz |
| Protections: | thermal, hf |
| Sensitivity control: | yes |
| Limiter: | fast limiter |
| High pass: | yes, 100 Hz |
| Controls: | hf correction, cluster size, HPF |

AMPLIFIER

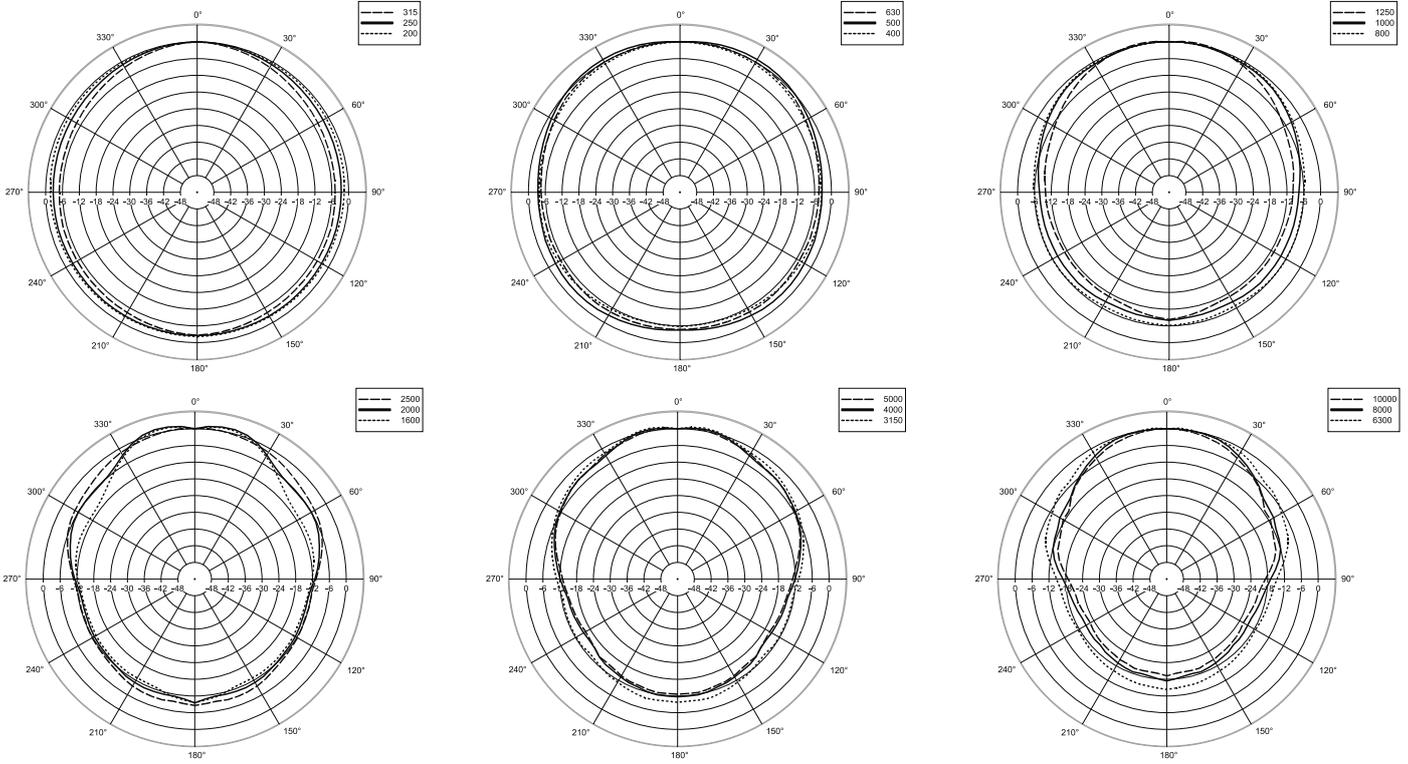
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|-------------------|--------------------|
| Power supply: | switching 750 Watt |
| High frequencies: | D / 250 Watt |
| Mid frequencies: | D / 500 Watt |
| Low frequencies: | D / 500 Watt |
| Cooling: | convection/forced |
| Connection: | powercon in/out |

PHYSICAL

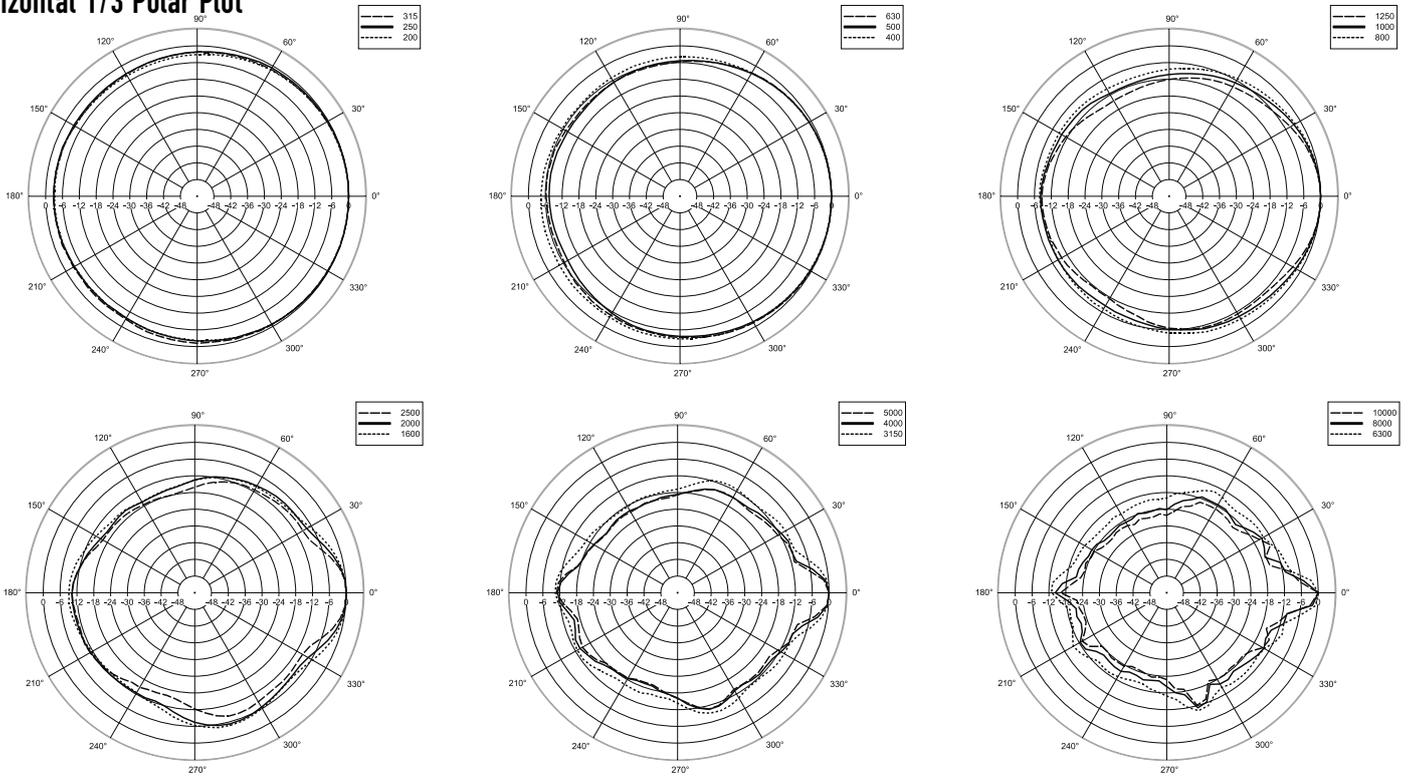
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|-----------|--------------------|
| Height: | 300 mm (11.81") |
| Width: | 760 mm (30.00") |
| Depth: | 450 mm (18.2") |
| Weight: | 32.5 kg (71.5 lbs) |
| Cabinet: | baltic birch |
| Hardware: | side fly fittings |
| Handles: | 2 on side |
| Colour: | Black |



Vertical 1/3 Polar Plot



Horizontal 1/3 Polar Plot



CSI PRODUCT SPECIFICATIONS FOR DESIGNERS, SPECIFIERS, AND CONSULTANTS (ALSO KNOWN AS “A&E SPECIFICATIONS”)

The following are “Part 2 Products” CSI-type specifications. It is assumed that “Part 1 General – Administrative and Procedures” and “Part 3 Execution – Installation and Maintenance” are part of an overall audio system or project specification.

PART 2 PRODUCTS

2.01 Approved Manufacturer/Product

A. RCF, Via Raffaello 13, 42100 Mancasale, Reggio Emilia, Italy.

B. Model number: TTL33-A

2.02 Design

| | |
|----------------|---|
| Configuration | 3 way line array module |
| LF Sub-section | 2 x 8” neodymium woofer, 64 mm voice coil |
| MR Sub-section | 8” neodymium, 64 mm voice coil |
| HF Sub-section | 3 x 1” neodymium, 37 mm voice coil |

2.03 Acoustical Properties

| | |
|---------------------------|----------------------------------|
| Nominal dispersion angle: | Horizontal: 100° - Vertical: 15° |
| Axial frequency range: | 60Hz-20kHz |

2.04 Physical Properties

| | |
|-------------------------|--|
| Cabinet: | Baltic birch |
| Rigging inserts: | Side fly fittings |
| Color: | Black |
| Grille: | Custom perforated steel grille with open-cell poly fiber backing |
| Input Connectors: | xlr |
| Dimensions (H x W x D): | 300 x 760 x 450 mm (11.81” x 29.92” x 17.71”) |
| Weight: | 32 kg (70.54 lbs.) |

2.05 Accessories

| | |
|-------------------|--|
| FLY BAR TTL33 | Suspending bar for array system TTL33-A. |
| STCK BAR TTL33 | Accessory to add to fly bar for stacking option on sub TTL33-A. Quick lock pins to be added. |
| KART TTL33 | Kart with wheels for 4 TTL33-A. |
| AC PROTECTION | Rain cover protection for TTL33-A amplifier. |
| AC QL-PIN TTL33-A | Kit 4 quick lock pins for TTL33-A array system. |

