



## Forum Line

### F12

The demands on modern high-performance systems regarding their long-throw capability, low distortion, and intelligible sound are constantly growing. The introduction of DYNACORD's patented Planar Waveguide technology marks a quantum leap in the field of high-efficiency, direct radiating subwoofer systems.

Typical long-throw systems offer extreme throw on the cost of a comparably small directivity angle, so that several cabinets need to be employed to provide coverage of the entire audience area.

The Conical Waveguide horn F 12 CWH is a very compact Mid/Hi-component offering an immense SPL and a comparably wide radiation pattern. The speaker components are coaxially mounted, which provides a smooth extended frequency response within the entire radiation range.

In the Mid-Bass range works an ELECTRO-VOICE DL12 ST high-performance transducer mounted on a Conical Waveguide horn. The high-frequency range above 800 Hz is reproduced by an ELECTRO-VOICE DH6-8 driver, firing into a coaxially mounted 80°x55° wide coverage horn.

This coaxial design ensures extreme linear transmission, without the occurrence of Dead-Spots as they are usually found with conventional systems.

#### FREQUENCY RESPONSE

The sound of the F 12 CWH provides is marked through its noticeably high dynamic range with comparably low distortion. The linear frequency response between 100 Hz – 19 kHz (-10 dB) is as excellent as its SPL of 106 dB 1W/1m and the cabinet's off-axis sound is still impressively neutral and uncoloured.

#### THROW CAPABILITY

Because of its exceptional level of efficiency and outstanding power handling capacity of 350 W (EIA RS-426A), Even when employed as stand-alone cabinet, the



F 12 CWH offers excellent long-throw coverage, stable intelligible sound and superb performance.

The F 12 CWH represents a truly economic solution for a wide range of applications in festival tents, halls and at medium-size open-air events when compared to conventional long-throw systems (e.g. 35° x 35°) and because of its wide radiation angle of 80° x 55° and its superior medium and long-throw capability. Despite its wide coverage, the Conical Waveguide design awards the F 12 CWH with an on-axis sound pressure level that is identical to that of a typical long-throw component.

#### USAGE

Integrated in the cabinet is a passive horn-EQ, which allows using the F 12 CWH for vocal reproduction when directly connecting it to any common linear power amplifier. Only employing a 160 Hz Lo-Cut filter is recommended to protect the 12" horn system against low-frequency overload.

#### PROTECTION

Multi-stage protection circuitry guards the F12CWH driver systems from being damaged by thermal overload.



**APP>>> F9**

The F9CWH is an extremely powerful and yet compact Mid/Hi-cabinet that has been designed for medium and long-throw applications. The Constant Directivity horn HT94 is coaxially aligned in a conical mid-frequency horn and offers a nominal radiation angle of 90° x 40°, which provides extremely smooth transmission without distressing interference in the x-over frequency range between the mid and high-frequency horns.

The mid-frequency range is reproduced by an Electro-Voice DL 12ST speaker system, while high frequency reproduction is taken care of by an Electro-Voice DH2T driver with titanium diaphragm, which is renowned for his excellent vocal definition and crystal-clear treble sound. The SPL of 105dB/1W/1m allows almost doubling the throw-capability of conventional direct-radiating loudspeaker cabinets.

Employing at least two Lo-cabinets per side – e.g. two F5 or two F118 – for bass sound reproduction is recommended to match bass-SPL to the exceptionally high efficiency of the F9CWH. (also refer to “Xa5-System” in the Application Guide on page 54).



**APP>>> F120**

By designing its 2-way speaker system F120, DYNACORD set a new standard for professional 12" 2-way cabinets. A sound pressure level of 100 dB, wide coverage and its excellent sound quality make the F120 equally suitable to be used as full-range cabinet or as Mid-Hi component in active 2-way applications. When comparing the F120 to conventional 12" 2-way speaker systems, it provides nearly double the throw and power as well as a convincingly natural reproduction of vocals. An Electro-Voice DL12 ST 12" speaker serves as a woofer system while an Electro-Voice DH2T driver with titanium diaphragm and HT94 Constant Directivity horn provides exceptionally powerful mid-range sound and crystal-clear trebles. The newly designed frequency x-over is furnished with halogen lamps and thermal-breakers, which provide reliable protection against overload. The system-switch on the connection board allows easily configuring the F120 for full-range operation or connection to DYNACORD system power amps like the PM 2600 or Xa2600. The carrying handles are prepared for retrofitting a TÜV-approved rigging-kit to allow trouble-free “flying” applications.





## F150



A professional 15" 2-way cabinet offering optimal sound, low weight and an outstanding price-performance ratio – that was the challenge for our engineering. A sound pressure level of 102 dB, wide coverage and its excellent sound quality make the F150 equally suitable to be employed as full-range cabinet or as Mid-Hi component in active 2-way applications offering an convincingly natural reproduction of vocals. An Electro-Voice DL15Y 15" speaker serves as a woofer system.

An Electro-Voice DL12 ST 12" speaker serves as a mid-range system while an Electro-Voice DH2T driver with titanium diaphragm and HT94 Constant Directivity horn provides exceptionally powerful mid-range sound and crystal-clear trebles. The newly designed frequency x-over is equipped with halogen lamps and thermal-breakers, which provide reliable protection against overload. The system-switch on the connection board allows easy configuring the F150 for full-range operation or connection to DYNACORD system power amps like the PM 2600 or Xa2600. Frontal protection is provided through a robust steel grille that is covered with acoustic foam. The carrying handles are prepared for retrofitting a TÜV-approved rigging-kit to allow trouble-free "flying" applications.



## F5



The F5 is a compact, but yet high-efficiency subwoofer system. An EV DL15Y woofer works in the optimally vented cabinet, ensuring highest power handling, efficiency and low distortion. The integrated passive PowerMax x-over (x-over frequency 160Hz) features a parallel output and an additional crossover output offering trouble-free parallel or x-over operation when combined with professional full-range or Mid-Hi cabinets. Reliably protecting the woofer against critical peak levels and thermal overload are a thermal breaker and professional halogen lamps. The 4-pole SPEAKON-type connectors wired-through, allowing active system installations that employ DYNACORD system power amps PM2600 or Xa2600 for instance can be set up using 4-pole SPEAKON-type cables, without the risk of inadvertent mismatching. Four extremely robust castors are located on the cabinet's rear and four ergonomically optimised recessed handles facilitate handling and transportation. Frontal protection is provided through a robust steel grille that is covered with acoustic foam.





**F8**

The F8 subwoofer marks DYNACORD's consequent further development of the meanwhile legendary F118. The highly efficient Electro-Voice EVX180B 18" woofer is capable of handling a continuous program power capacity of 500 W offering a peak-SPL of 130dB and lowest non-linear distortion. The integrated passive PowerMax x-over (x-over frequency 160Hz) features a parallel output and an additional crossover output offering trouble-free parallel or x-over operation when combined with professional full-range or Mid-Hi cabinets. Reliable protection of the Electro-Voice EVX180B woofer against critical peak levels and thermal overload is guaranteed through a thermal breaker and professional halogen lamps. The SPEAKON-type connectors wired-through, allowing active system installations that employ DYNACORD system power amps PM2600 or Xa2600 for instance can be set up using 4-pole SPEAKON-type cables, without the risk of inadvertent mismatching. Four extremely robust castors are located on the cabinet's rear and four ergonomically optimised recessed handles facilitate handling and transportation. Frontal protection is provided through a robust steel grille that is covered with acoustic foam.



**F17 PWH**

The F17PWH is a highly efficient bass-cabinet with optimally matched dimensions an enclosure geometry to perfectly complement the F12CWH Mid-Hi cabinet. Its compact size, castors on the rear as a standard and low weight make the F17PWH the first choice for medium and long-throw on-the-road applications. Through its high efficiency of 99 dB (1 W/1 m) and a power handling capacity of 500 watts, the F17PWH accomplishes coverage distances of 60 m – 80 m in two-stack operation and of 120 m – 160 m when stacked in four. The recommended transition frequency to Mid-Hi cabinets is 160 Hz/18 dB/oct. Butterworth or 24 dB/oct. Linkwitz-Riley.



**F18 PWH**

The F18 PWH is mostly used serving as high-performance subwoofer. Especially its supreme long-throw ability and mid-bass range directivity make the F18PWH the predestined subwoofer to be employed in basically any system configuration. Both Planar Waveguide™ bass-horns are equipped with an ELECTRO-VOICE EVX180B 18" high-performance chassis with a power handling of 500 watts RMS / 1,000 watts program into 8 Ω.





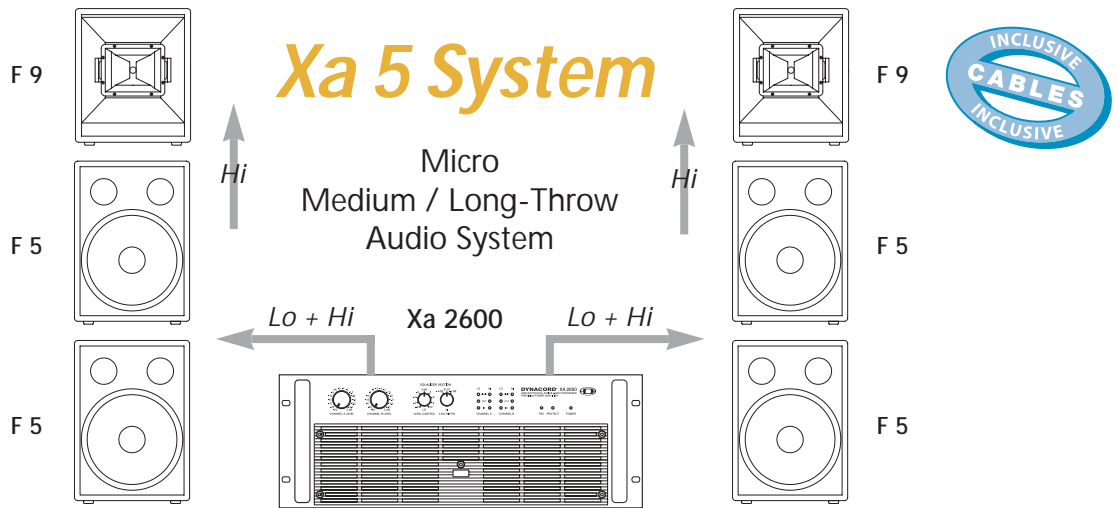
### SPECIFICATIONS

| Type                        | F 12 CWH                  | F9 CHW             | F120               | F150              |
|-----------------------------|---------------------------|--------------------|--------------------|-------------------|
| Design                      | 2-way Cabinet             | Waveguide Horn     | 2-way              | 2-way             |
| Components                  |                           |                    |                    |                   |
| LO:                         | 1 x 12"<br>DL12 ST<br>OEM | 1 x 12"<br>DL12 ST | 1 x 12"<br>DL12 ST | 1 x 15"<br>DL15 Y |
| HI:                         | DH 6-8<br>HP 8055         | DH 2T<br>HT 94     | DH 2T<br>HT 94     | DH 2T<br>HT 94    |
| Nominal power rating RMS    | 350 W*                    | 300 W              | 300 W              | 400 W             |
| Program power capacity      | 700 W                     | 600 W              | 600 W              | 800 W             |
| Frequency response (-10 dB) | 100-1900 Hz               | 140 Hz - 1900 Hz   | 75 Hz-18 kHz       | 70 Hz-18 kHz      |
| Nominal SPL (1W/1m)         | 106 dB                    | 105 dB             | 100 dB             | 102 dB            |
| Max. SPL*                   | 134 dB                    | 133 dB             | 128 dB             | 131 dB            |
| Crossover Freq. (passive)   | 800 Hz                    |                    |                    |                   |
| Impedance:                  | 8Ω                        |                    | 8 Ω                | 8 Ω               |
| Crossover frequencies       | 800/7 kHz                 | 1.6 kHz            | 1.6 kHz            |                   |
| Dimensions                  |                           |                    |                    |                   |
| Width                       | 606 mm                    | 436 mm             | 436 mm             | 522 mm            |
| Height                      | 625 mm                    | 517 mm             | 629 mm             | 755 mm            |
| Depth                       | 792 mm                    | 471 mm             | 339 mm             | 395 mm            |
| Weight                      | 54 kg                     | 28.5 kg            | 21.5 kg            | 26.5 kg           |

\* EIA RS-426A

### SPECIFICATIONS

| Type                      | F5                | F8                  | F 17 PWH                     | F 18 PWH                     |
|---------------------------|-------------------|---------------------|------------------------------|------------------------------|
| Design                    | Subwoofer         | Subwoofer           | 18" Planar<br>Waveguide Horn | 18" Planar<br>Waveguide Horn |
| Impedance                 | 8Ω                | 8Ω                  | 8Ω                           | 8Ω                           |
| Rated Power Capacity RMS  | 400 W             | 500 W               | 500 W                        | 500 W                        |
| Program Power Capacity    | 800 W             | 1000 W              | 1000 W                       | 1000 W                       |
| SPL (1W/1m)               | 100 dB            | 100 dB              | 99 dB                        | 103 dB                       |
| max. SPL (calc.)          | 129 dB            | 130 dB              | 129 dB                       | 130 dB                       |
| Frequency Range (-10 dB)  | 48-280 Hz         | 40 -300 Hz          | 39-255 Hz                    | 40-2000 Hz                   |
| Crossover Freq. (passive) | 160 Hz            | 160 Hz              |                              |                              |
| Components                |                   |                     |                              |                              |
| LO                        | 1 x 15"<br>DL15 Y | 1 x 18"<br>EVX 180B | 1 x 18"<br>EVX 180 B         | 1 x 18"<br>EVX 180 B         |
| HI                        |                   |                     |                              |                              |
| Dimensions                |                   |                     |                              |                              |
| Width:                    | 436 mm            | 522 mm              | 606 mm                       | 606 mm                       |
| Height:                   | 617 mm            | 737 mm              | 625 mm                       | 760 mm                       |
| Depth:                    | 674 mm            | 674 mm              | 792 mm                       | 1176 mm                      |
| Weight                    | 30.5 kg           | 38.0 kg             | 42.5 kg                      | 53.0 kg                      |

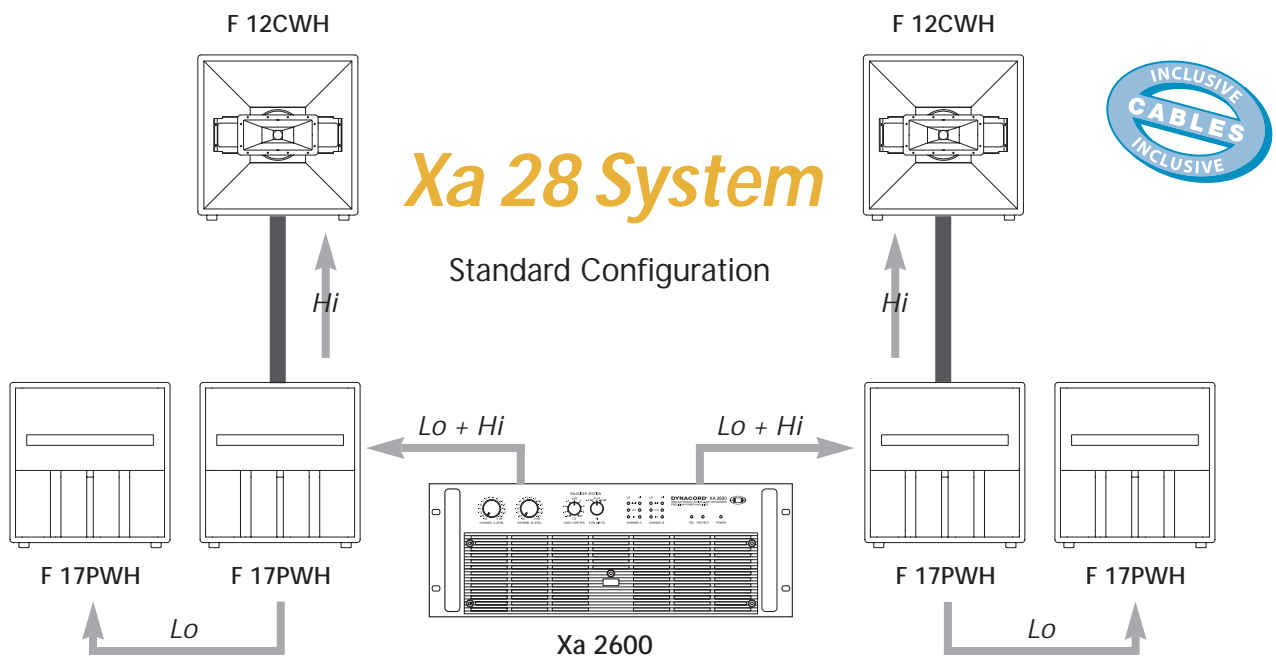


The Xa 5 System is a truly powerful, outstandingly compact loudspeaker system offering superior efficiency in medium and long throw applications.

The system is meant to be used in an active 2-way installation, i. e. together with the XA2600 system power amplifier, or in a passive configuration, i. e. directly connected to a PowerMate 1000, or together with any regular power amplifier. Because of the horn-loaded system's tremendous SPL of 105 dB/1W/1m it is possible to achieve spectacular dynamic results and – compared to conventional direct

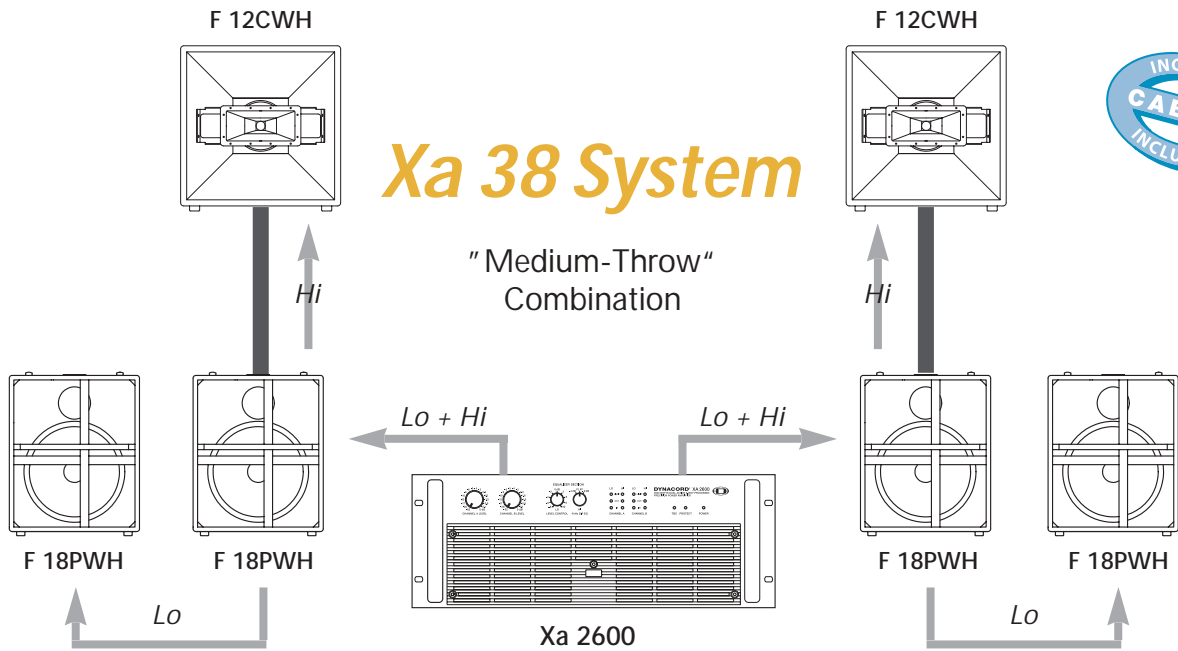
radiating speaker systems – nearly double the long throw capability. The Xa 5 System includes a F9CWH Mid/Hi cabinet and two F5 sub woofers, on each side. When operating the Xa5 system in active 2-way configuration, the recommended crossover frequency between the F5 sub woofers and the F9CWH Mid/Hi cabinet is 160 Hz with a slope of 18 dB/octave and Butterworth characteristics.

The DYNACORD XA2600 system power amplifier provides these filter parameters as a factory preset.



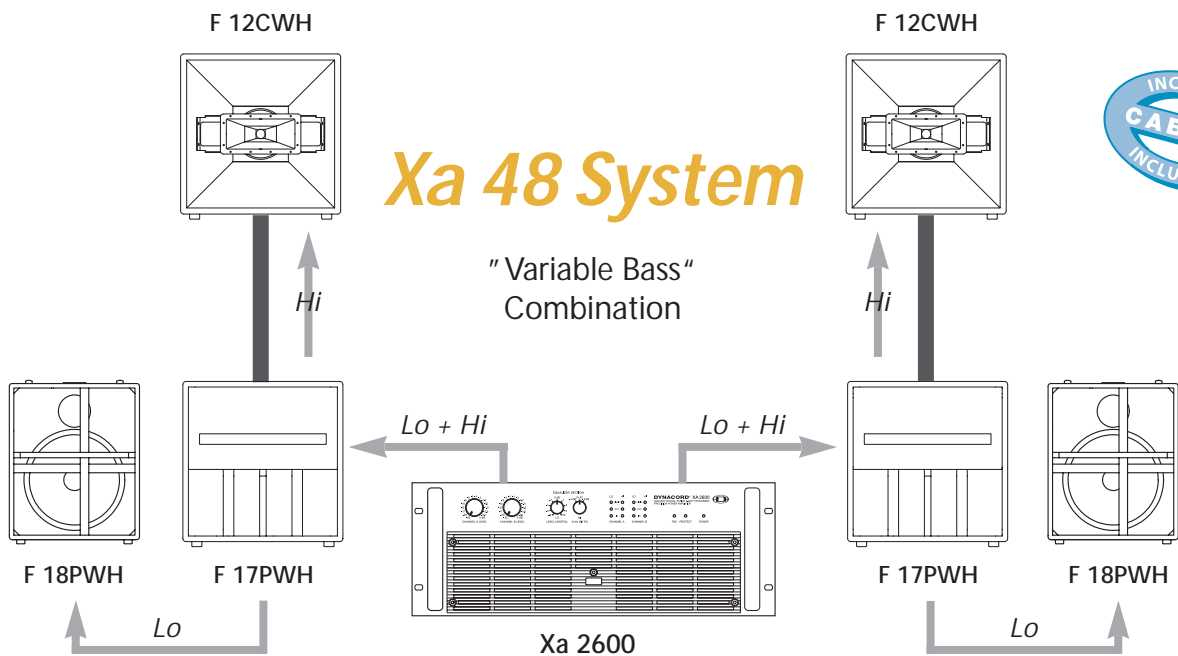
Super-compact, horn-loaded system meant to be used for medium throw applications with identical dispersion capabilities. The Xa28 System is ideally suitable for medium halls or clubs. Being equipped with two F17PWH Planar

Waveguide bass-horns, it is equally appropriate to provide the sound reinforcement at pop/rock live concerts, delivering "fat" bass drum and "slappy" bass guitar sound.



The artist that calls hip-hop, techno and similar music styles his domain, where energetic ultra-low bass sounds are an absolute "must", will simply love the Xa38 System. Employing a total of four FORUM LINE F18PWH sub woofers together with two FORUM LINE F12CWH Mid/Hi-cabinets, this configuration provides outstanding dispersion capabili-

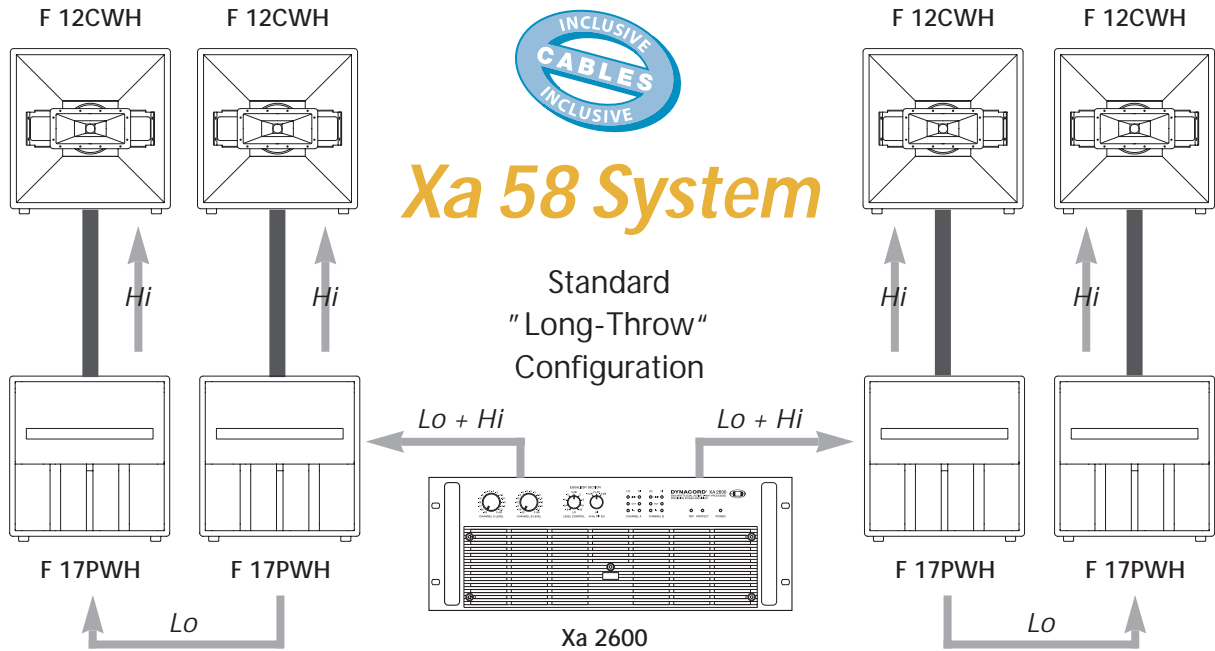
ties that are universally suitable for any medium-throw application. Compared to the Xa28, this system offers extended bass response allowing to re-produce extremely low "techno bass sounds" without a problem. Besides, when using the Xa38 for jazz or rockabilly, the upright bass sounded never more powerful and voluminous.



For medium-throw applications you need a system that is capable of handling any musical style? The extended bass-performance of the Xa48 System configuration with its combination of FORUM LINE F18PWH and FORUM LINE F17PWH speaker systems covering the bass range provides the listener with the bass impact that makes any live

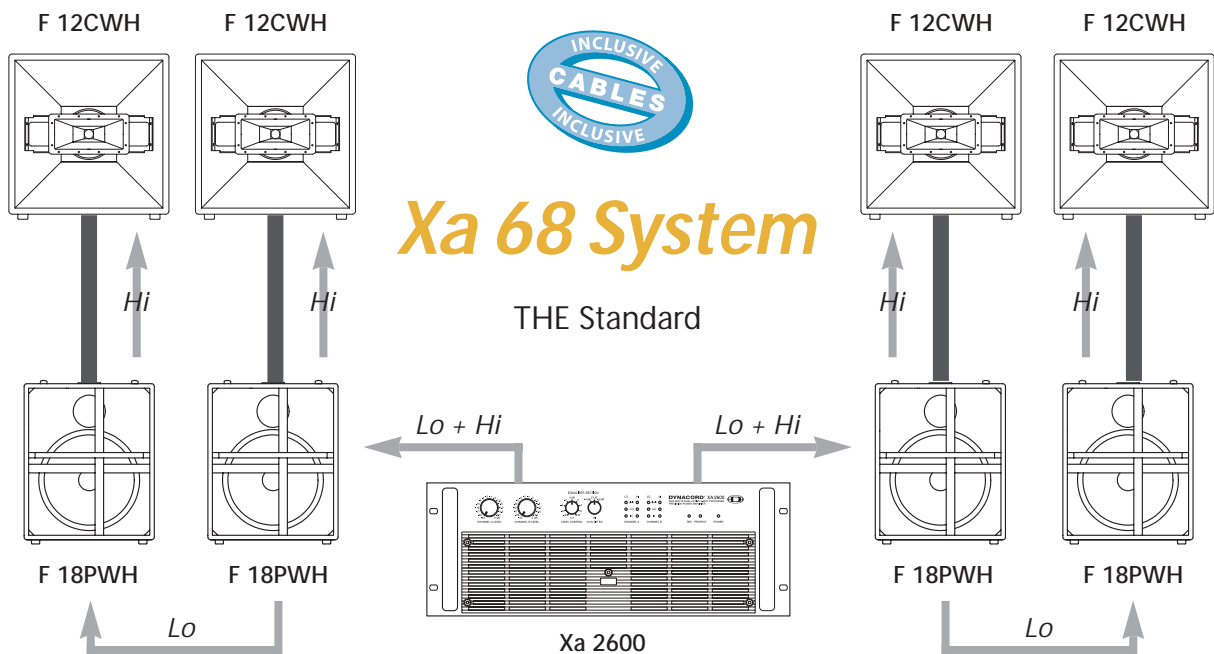
concert a long-lasting experience. For smaller events only the F 17 PWH sub woofers are necessary. In case you will need a system for halls where the coverage has to exceed 100m, "upgrading" the Xa48 is no problem at all. You just supplement the configuration with additional loudspeaker systems.





There is a perfect solution for long-throw applications with coverages between 120m - 160m - i. e. huge halls or tents that at the same time require wide dispersion: the Xa58 System. Utilizing a total of four F12CWH for the Hi/Mid-range provides the opportunity to cover an extremely wide area, when

their cabinets are turned slightly against each other. And another four F17PWH provide low frequency sound with tremendous impact. Non matter which musical style or how big the event, the Xa58 is capable to deliver sound reinforcement at its finest - in any location and even in the furthest corner.



Open-air heavy-metal, rave event at an industrial estate or pop-festival in a huge hall - the powerful bass performance at these long-throw events mostly means lots of watts and even more wood. The Xa68 is the ultimate solution for any major live application employing a minimal amount of material and most of all at unbeatable low cost. The Xa68 System provides

very clear and outstandingly intelligible Hi/Mid-sound reproduction and, by incorporating the Planar Waveguide Technology, fundamental impact and directivity in the bass and sub-bass range. If necessary, each stereo-side of the Xa68 can be enhanced by a F18PWH and a F12CWH cabinet, each; without the need for additional power amplifiers.