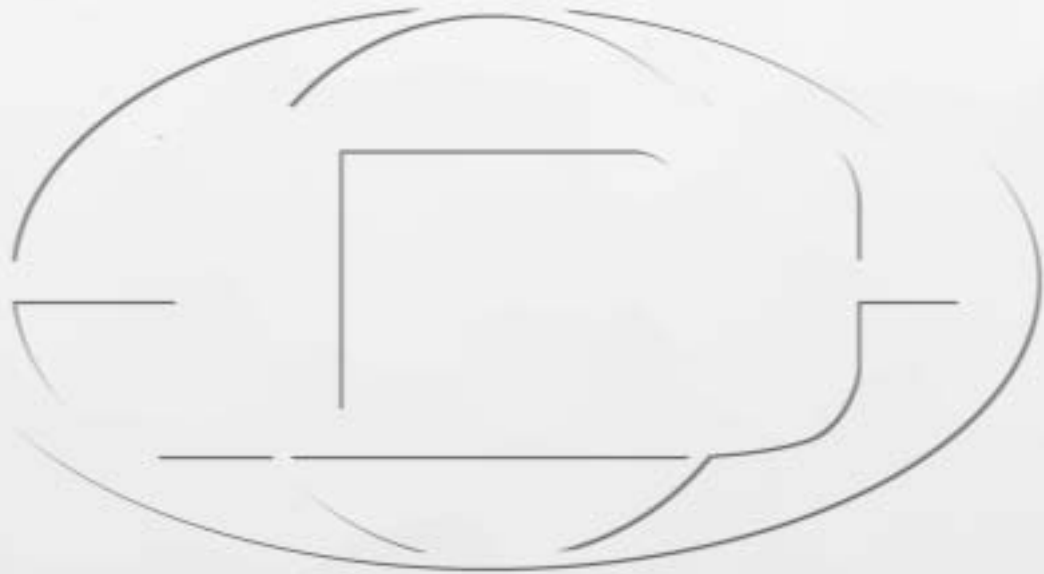




USER GUIDE



DYNAGORD®

"Audio Meets Installation"
The Perfect Solution For Audio Concepts

MX

MX-type loudspeakers are either used as compact full-range or Mid/Hi systems to be used in individual sound applications. This offers the opportunity for them to be employed as powerful stand-alone systems with an extended, linear frequency response or in combination with MT-woofer systems. Additionally, the asymmetric cabinet design of the MX 8 and MX 11 allows utilizing them as compact monitors.

The high-power systems MX 12 and MX 15 are equipped with rotatable CD-horns and also employ the HF-driver DH2010A, which is famous for its crystal clear high frequency range reproduction. All systems are furnished with 90°x40° CD-horns (see picture), literally providing the possibility to cover wide audiences. No matter which system you are using, with the audio performance and flexibility of the PI ONE - System you are always on the winning streak. Dynamic protection electronics TDSP and the PowerMax crossover function optimize these matching systems to be ideal.

PI-easy

The PI-easy mounting system is a sophisticated mounting technology. Its uncompromising design is based on decades of experience in the install sector and on actual and acute demands from installers and acoustics engineers. The unique modular design allows vandalism-safe and yet optically appealing mounting in the shortest period of time and with the least effort in any location. For the first time, the often heard demand for specially adjustable angles, flexible combination possibilities, and fixed position in the final mounting comes along with low cost. The name is the motto: PI-easy – easier is not possible.

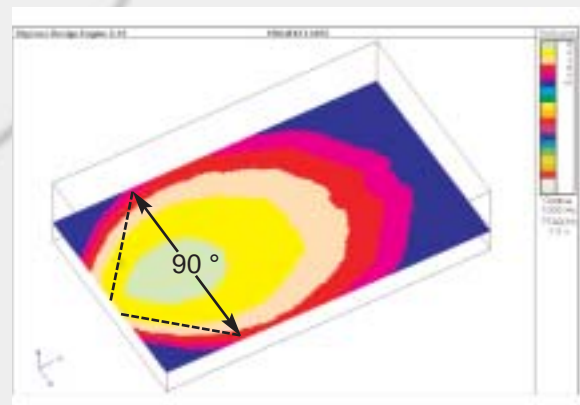




MT

MT-type loudspeakers are powerful “compact class” woofer systems. Within this category, woofer dimensions and acoustic output are designed for optimum performance. Therefore, it is now that fundamental low-frequency response or harmonic low-range extension can be accomplished not only with huge installations but also in locations where available space dictates speaker dimensions. No matter which system you are using, with the low-frequency performance and the flexibility in combining PI ONE - Systems, you are always on the winning streak in fulfilling nowadays increased customers’ expectations.

The PowerMax crossover function of the MT 115 model is already active when used in passive configurations together with MX-Systems. Thus being a particularly economical combination for smaller installations.



Direct-SPL of a 90° loudspeaker

COFFIN®

Why PI ONE and not XYZ ???

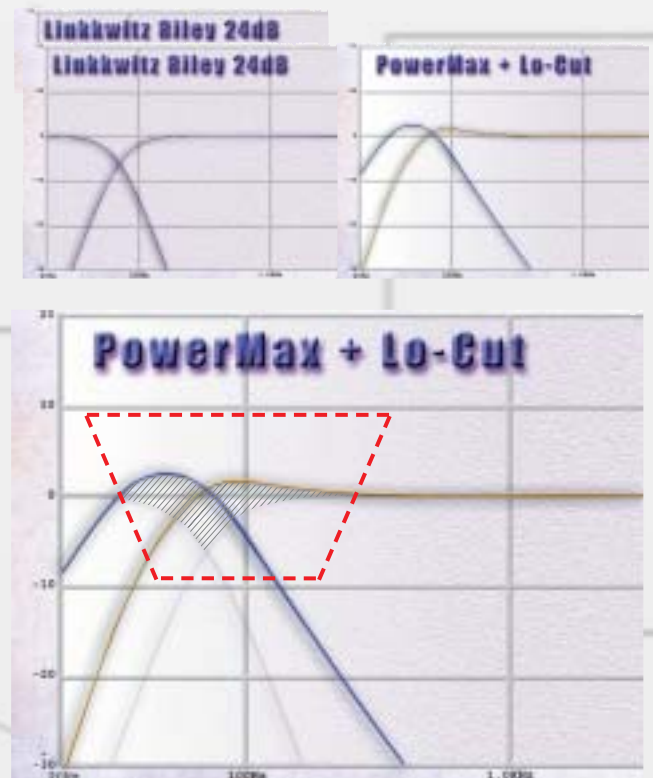
Good question! Better reasons ...



PowerMax

The name PowerMax already reveals the perceptible advantage of this technology, which optimizes the existing electrical power to an acoustic maximum output. Normal crossovers (mostly Linkwitz-Riley) offer well-known advantages but also the disadvantage of not guaranteeing that L/R-filters deliver the maximum possible acoustic output in the crossover frequency range. Using EQ's would strain the power amplifiers unnecessarily. For example increasing the signal by 3 dB at the EQ results in doubling the power fed to the loudspeaker. Early reaching the power amp's output capacity limit as well as the speakers' power handling limit would be the consequence. The PowerMax filter does not show this marked weakness. Amplifier and speakers are optimally operated. The entire concept is aimed at perceptibly improving the overall performance, compared to conventional crossovers, even when employing only a lesser amount of compact loudspeaker systems.

Thus, PowerMax perfectly supports the whole idea of the PI ONE concept with the result that even smaller systems deliver powerful low-frequency sound, like it is normally only achieved with comparably bigger installations – and without the drawback of overloading the system! This advantage is already apparent when operating a MX-system in passive combination with MT 115 subwoofer. Whenever extended output is needed, which can be achieved by employing MT 215 or MT 218 for the bass and MX 12 or MX 15 for the Mid/Hi-range, the PowerMax230 provides this special feature, which this active controller has been particularly designed for.



The PowerMax advantage



Thermal and Dynamic Speaker Protection

TDSP speaks for itself! The major advantage of TDSP is, that – different from conventional protection circuitry – its protection functions are dynamically and not static. Other than switching off only the affected signal path entirely (typically the high-frequency range) when an overload situation is apparent, TDSP dynamically controls and protects the overall system (high and low-frequency). Efficiently eliminating known problems of “normal” protection circuitry. Therefore, TDSP optimally guarantees the necessary continuous operation safety, stability, and the system’s high-quality sound performance. The positive effect of the TDSP-advantage is most noticeable when it comes to critical load conditions – just where its dynamic protection is most effective and most needed.



PI-easy

The name PI-easy already reveals the idea of this concept. The following story of our installer is a vivid demonstration how easy mounting this modular system can be. Best price/performance ratio and ultimate quality are ensured.



... AND MATCHED ELECTRONICS

Standard Precision power amplifiers rank in the highest audio class, provide stable operation at 2 ohms and have been designed to drive complex loads with phase angles of $\pm 90^\circ$. The combination of comprehensively laid out power supplies and special dynamic limiters offers additional performance reserves. The extensive protection package guarantees years of safe and reliable operation of your loudspeaker systems. Back-EMF, HF-protection, DC-offset, turn-on-delay and current inrush limiter, are according to **DYNACORD** philosophy self-evident. Recommendations are to be found next to their corresponding applications on pages 10 to 15.

The PowerMax 230 controller (pat. pending) offers the described PowerMax crossover functions for active 2-way applications. Balanced XLR-type input and output connectors are additionally provided. Detailed informations are seperately available.

Settings recommendations are to be found next to the corresponding application on pages 13 to 15.



DYNACORD®

P I - E A S Y



TÜV *



Machinery directive
89-392-EWG*
(formerly VBG 70)



MX + MB + TMA



MX + MB



MB

TMA



Mounting Bracket MB and Tilt Mount TMA

The PI-easy system consists of a mounting bracket as "standard mounting accessory", which allows swivel-mounting the speaker system. The supplied rubber plates eliminate the chance of inadvertently turning the mounted systems. The denominations are identical to the speakertypes. Therefore they named: MB 8 (for MX8), MB 11/12 (for MX 11, MX 12) and MB 15 (for MX 15, MT 115). The combination of the base plate, which ships with the correspondent angle bridge, and the needed mounting bracket allow setting tilt angles in steps of 5°. When finally mounted, the system's tilt can not be changed anymore. Thus, the actions radius is 5°- 45°.

Truss Clamp TC-02

Truss clamp and mounting bracket allow swivel-mounting a MX-system on trusses of 43-50 mm diameter. Grace to the specially shaped claw, the system is already secured upon hanging it in place. Quick and most of all safe mounting is guaranteed. The toggle lock provides tool-less and extreme secure adjustment.

Eyebolt

PI ONE - systems enclosures come with covered M10-threads, which are meant for the connection of screw-in eyebolts. Four of those eyebolts are supplied with each loudspeaker system – no matter whether MT or MX series cabinets.

Rotor RMA

Rotor for combination with any mounting bracket for swivel-mounting on walls and on the ceiling. When used together with the TMA, the RMA additionally offers the possibility for horizontally turning the mounted system. This allows directing the system straightforward into the room.



- *Extremely robust and yet optically appealing design*
- *TÜV-approved and acc. to 89-392-EWG (* in preparation)*
- *Thrown objects-protection and vandalism-proof*

- *Final mounting fixed adjustment*
- *All necessary screws and parts are included*



...well, here I am. 5 minutes before leaving work, but the PA-system has to work today. So that's where the speaker is supposed to hang - okay!



Here we go. Two 10-size holes and the dowels. No Problem!



Ooaak. Let's mount the TMA with the angle bridge stop. Fits!



... the adhesive rubber plates are quickly put in place and they're holding. And on the bracket we go. Sits!



... hey, wait a second. This already means the perfect solution for simple wall or ceiling mounting. So, let's lock it in place!



... only clicking in? Wow, it hangs by itself! Imagine being on a ladder 5 meters in the air trying 48 times to fit it in - no way!



.... safety bolt in place. One never knows!



... adjust the tilt angle, upper bolt in place. Safety first! Cable - plugged in and done we are. And it doesn't only sound super but also hangs perfect - if necessary for years. All done. ... now the show tonight is going to be a real success ...

Happy End...



DYNACORD®

H A R D F A C T S

UNIVERSAL



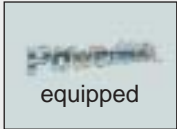
Monitor angle with MX 8 and MX 11

RAL



Coloured in RAL-Code as requested

SOUND



In passive combination of MT 115

PROTECTION



Woofers and HF-drivers

DESIGN



Identical front design of MX11 and MX12 and MX15 / MT115



MX 8



MX 11

Power Rating	150 watts RMS 300 wattss Cont. Prog	150 watts RMS 300 watts Cont. Prog.
SPL (1 Meter)	95 dB (1W / IEC 268-5) 120 dB (Rated Power)	97 dB (1 W / IEC 268-5) 122 dB (Rated Power)
Frequency Range	80 - 18.000 Hz (-10 dB)	70 - 18.000 Hz (-10dB)
Impedance (nom.)	8 Ω	8 Ω
Single powered	--	--
Drivers	8" / Tweeter (90°x40° CD)	12" / Tweeter (90°x40° CD)
x-over (lo-pass)	4 kHz (passive x-over)	4 kHz (passive x-over)
Housing/	250 x 420 x 280 mm	357 x 506 x 335 mm
Weight	11.0 kg net	17.5 kg net



MT 115

Power Rating	400 watts RMS 800 watts Cont. Prog.
SPL (1 Meter)	100 dB (1 W / IEC 268-5) 129 dB (Rated Power)
Frequency Range	50 - 250 Hz (-10dB)
Impedance (nom.)	8 Ω
Single powered	--
Drivers	15" vented design
x-over (lo-pass)	125 Hz / 12 dB
Housing /	427 x 660 x 492 mm
Weight	28.5 kg net



BASIC FEATURES:



MX 12



MX 15

300 watts RMS
600 watts Cont. Prog.
97 dB (1 W / IEC 268-5)
125 dB (Rated Power)
55 - 20.000 Hz (-10dB)
8 Ω
8 Ω / 8 Ω
12" / 1" (90°x40° CD)
3.2k Hz (passive x-over)
357 x 506 x 410 mm
20.0 kg net

400 watts RMS
800 watts Cont. Prog.
100 dB (1W / IEC 268-5)
129 dB (Rated Power)
55 - 20.000 Hz (-10dB)
8 Ω
8 Ω / 8 Ω
15" / 1" (90°x40° CD)
3.5k Hz (passive x-over)
427 x 660 x 492 mm
29.0 kg net



MT 215



MT 218

800 watts RMS
1.600 watts Cont. Prog.
101 dB (1 W / IEC 268-5)
133 dB (Rated Power)
45 - 3.000 Hz (-10 dB)
4 Ω
2 x 8 Ω
2 x 15" vented design
--
928 x 588 x 516 mm
58.0 kg net

1.000 watts RMS
2.000 watts Cont. Prog.
101 dB (1W / IEC 268-5)
134 dB (Rated Power)
40 - 3.000 Hz (-10dB)
4 Ω
2 x 8 Ω
2 x 18" vented design
--
1.236 x 588 x 516 mm
74.0 kg net

Colour: black structure lacquer (standard), overpaintable
Connections: Speakon® NEUTRIK-connections parallel, PIN 1+/- with all PI-ONE systems, PIN 2+/- with MX12, MX 15, and all MT-subwoofers
Bi-amping (internal): high power systems MX 12 / MX 15
Frontal Protection: protected against thrown objects, robust powder-coated steel grille
Characteristics: high sonic permeability, exchangeable acoustic foam provides protection against dust and humidity
Enclosure Shape: ultra-compact (see data overview), functional design monitor angle with MX 8, MX 11
Enclosure Material: 16 mm Mediapan plywood (19 mm with MT 215/ MT 218)
Protections: TDSP for HF-drivers and woofers at all systems
Rigging (M 10): 12 threaded with MX-cabinets, 10 with M-cabinets
Warranty: 3 years

PROTECTION



Covered input-terminal with MT-systems

FLEXIBILITY



Removable rubber-feet: MT 215 and MT 218

RUGGEDNESS



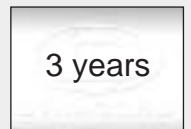
Strutted frontgrill with MT-systems

INCLUDED



4 pieces are scope of delivery

WARRANTY



For the complete PI ONE -System

Application 1

"Ambience"

Dance School

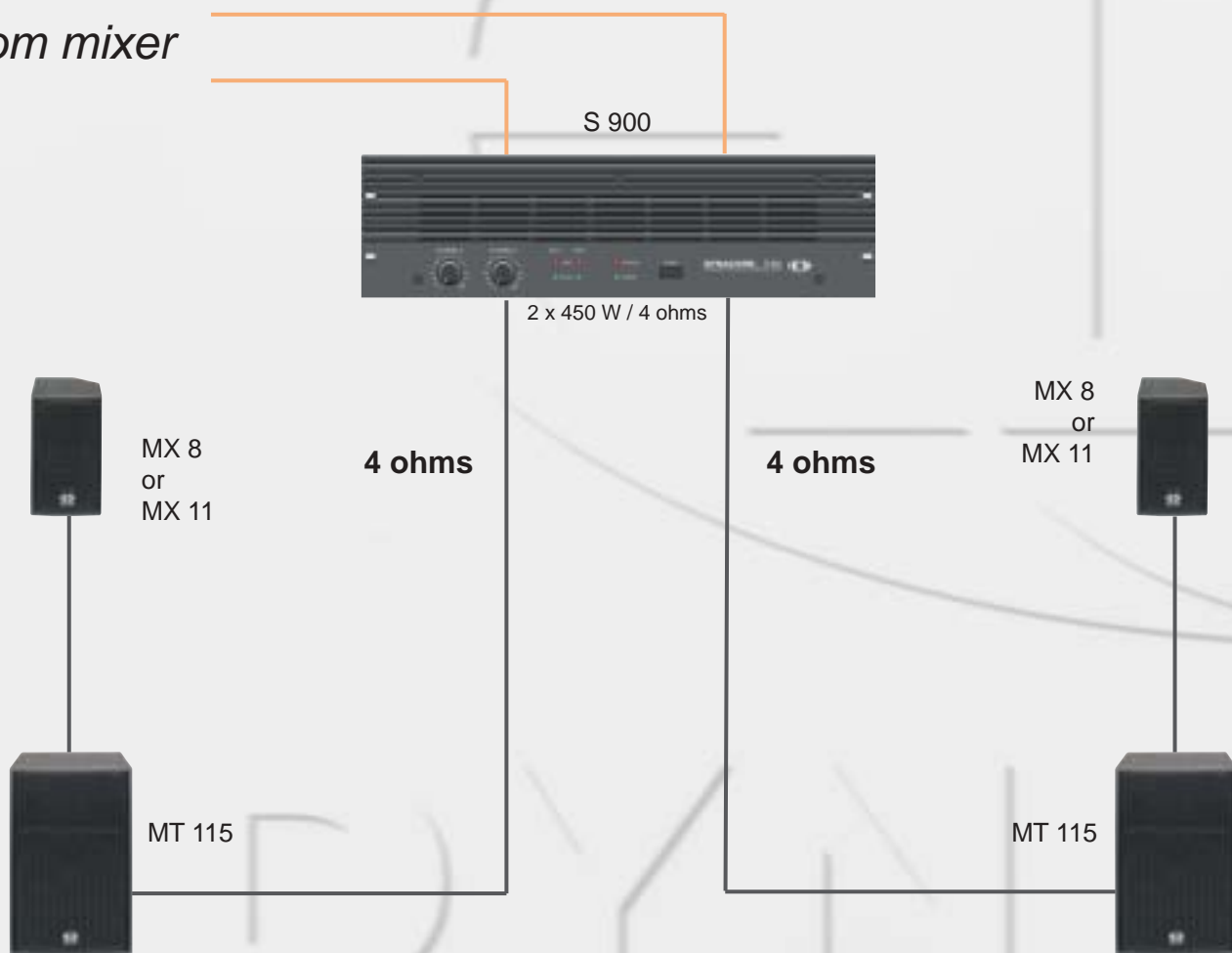
Multimedia

School

Audience: 20-100 / medium level

PowerMax (passive)

from mixer



Application 2

“Performing Art”

Audience: 100-150 / medium level

PowerMax (passive)

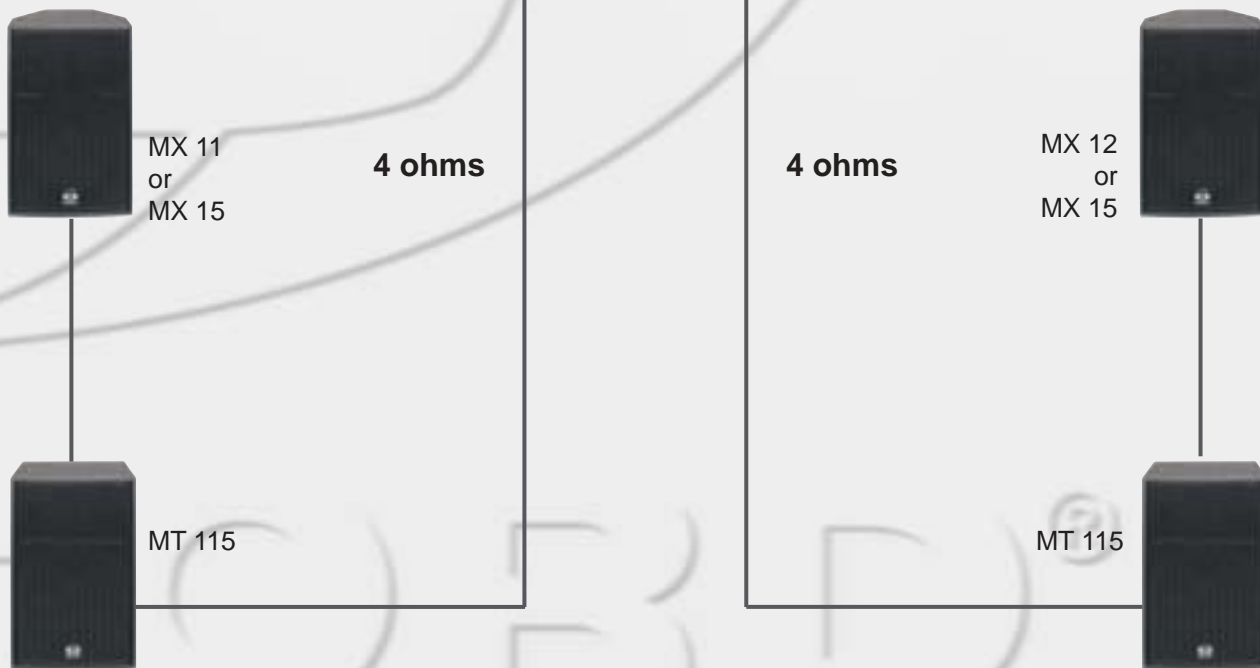
- Gym
- Club & Bistro
- Karaoke-Bar
- Multimedia

- Dance School
- School
- Houses of Worship

MP 7



2 x 300 W / 4 ohms



Application 3

"Show & Event"

School

Multi Purpose
Hall

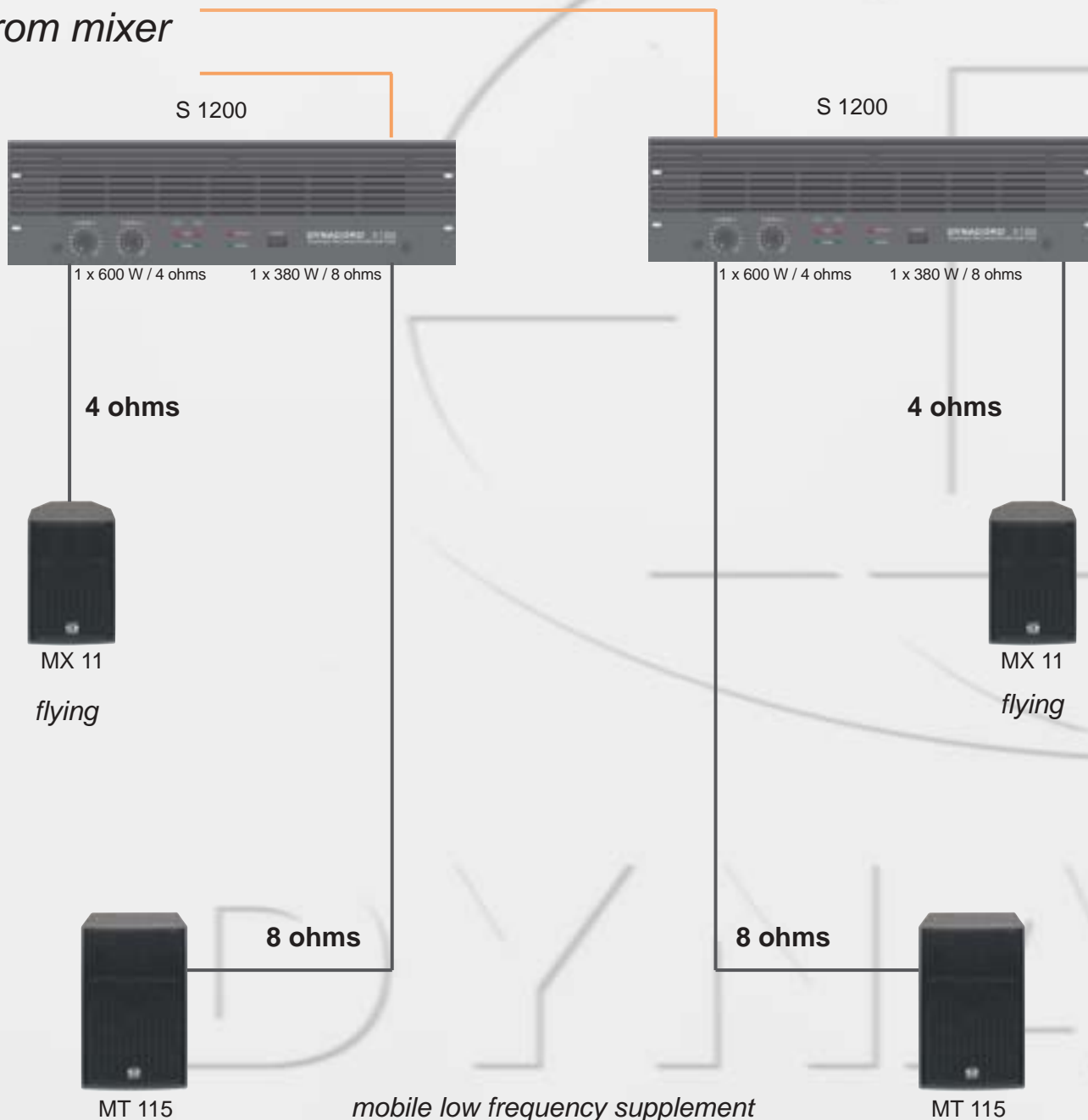
Audience: 150-200 / medium level

Theatre

Club

PowerMax (passive)

from mixer



Application 4

"Background"

Audience: 150-250 / medium level

PowerMax (active)

Restaurant

Disco

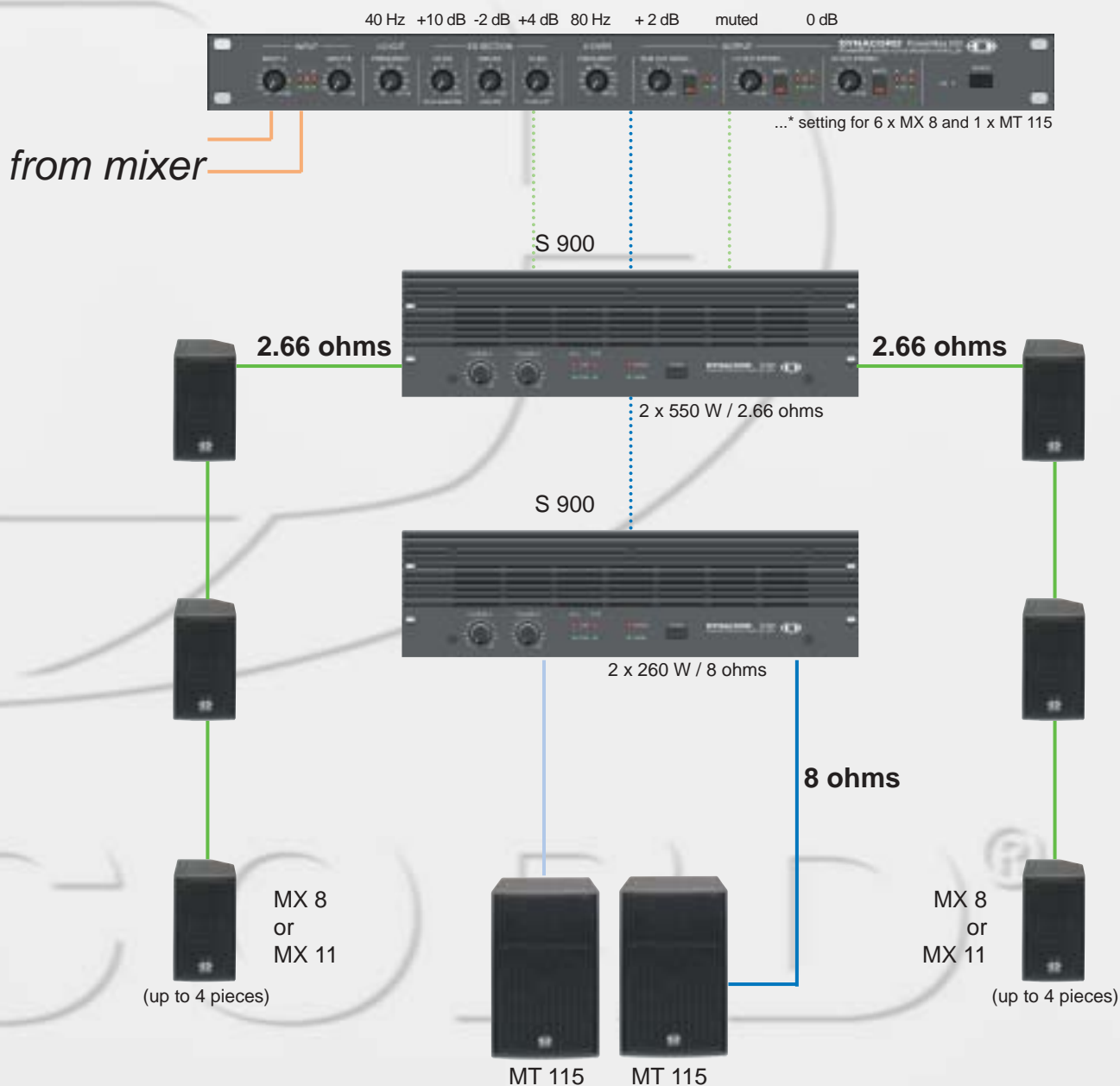
Dance School

Gym

Showroom

Multimedia

Houses of
Worship



Application 5

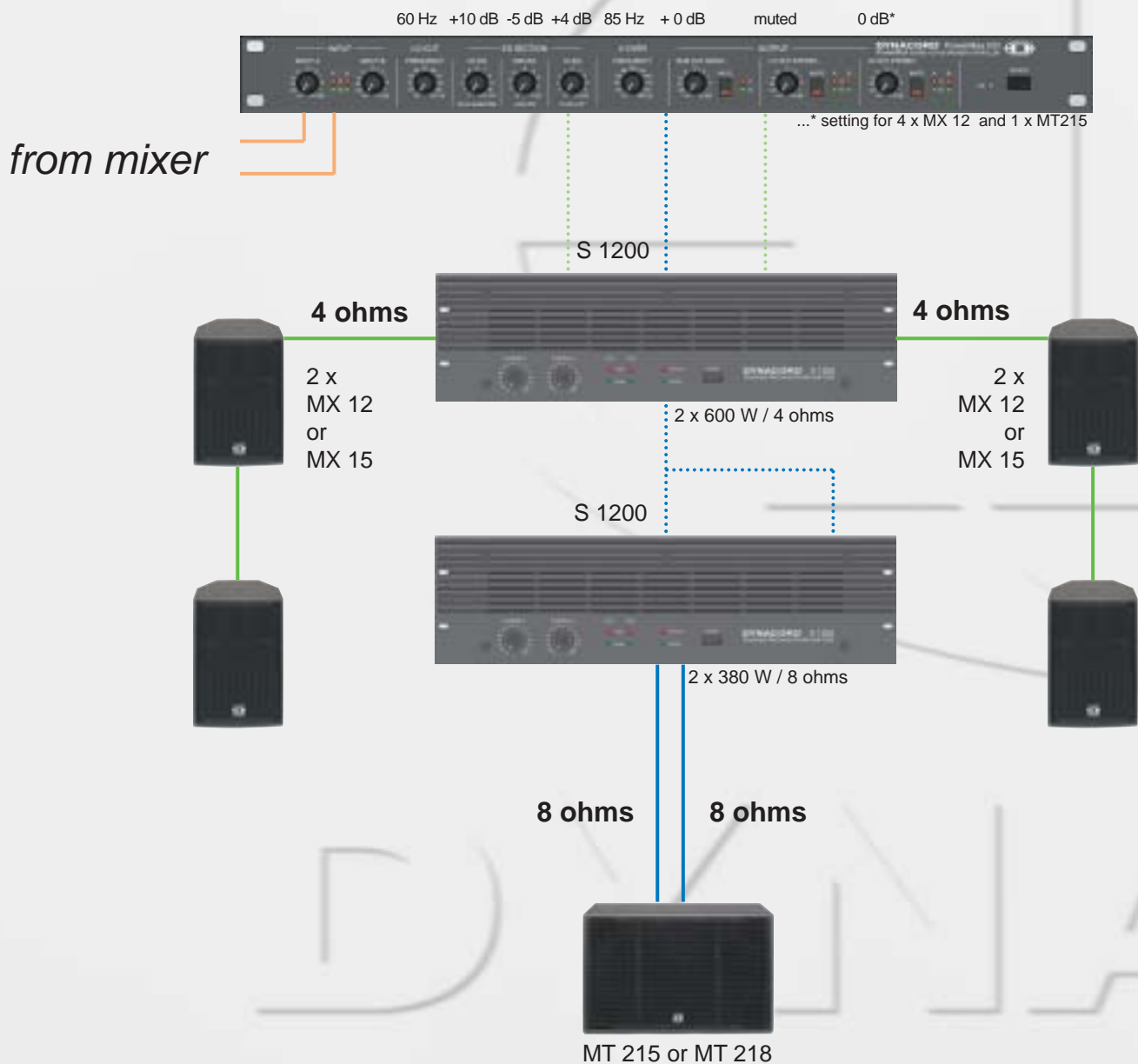
"Entertainment"

Audience: 150-200 / high level

- Club
- Disco
- Theatre

- Multi Purpose Hall
- Show Room

PowerMax (active)



Anwendung 6

"Club & Dance"

Audience: 200-300 / high level

Club/Disco

Multi Purpose Hall

Show Room

PowerMax (active)

35 Hz +6 dB -5 dB +3 dB 75 Hz -3 dB muted 0 dB*



...*setting for 4 x MX 15 and 2 x MT 218

from mixer

S 1200



2 x 600 W / 4 ohms

S 1200



2 x 600 W / 4 ohms



2 x
MX 12
or
MX 15

4 ohms



4 ohms



MT 215 or MT 218



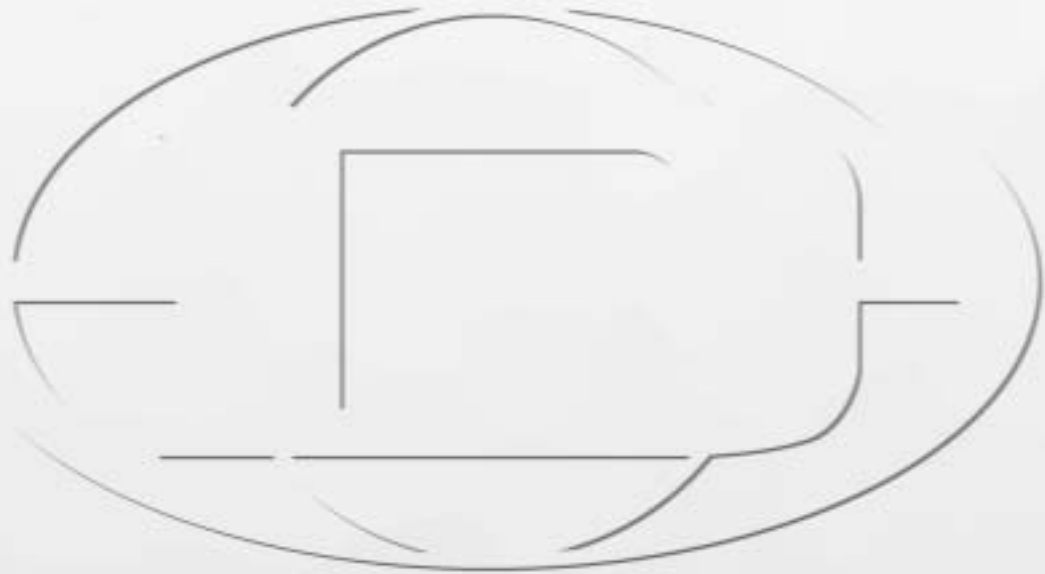
MT 215 or MT 218



2 x
MX 12
or
MX 15

4 ohms





DYNACORD®

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