RCF

DXT 3000 PLANNER

OVERVIEW

DXT 3000 PLANNER

EN 54 Voice Alarm System Designer software by RCF

The Windows PC DXT 3000 Planner software allows configuring small and medium VOICE-ALARM systems in accordance to the regulations (prescriptive method), using EN 54-24 loudspeakers and EN 54-16 management electronics of the RCF DXT 3000 Series (250W and 500W models; 2, 4 and 6 zones, in stand-alone or networked configuration) and related accessories.

RCF DXT 3000 Planner performs all the mathematical calculations automatically for low-reverberant environments with reduced background noise. The algorithms are derived from the standards UNI-ISO 7240-19 and UNI-CEN / TS 54-32, which allow the use of the Prescriptive Method in the acoustic design of a Voice Alarm system in spaces without acoustic issues.

DXT 3000 Planner is interactive, allowing even the less experienced user to obtain excellent results. In a few steps, the software suggests the list of components necessary for the configuration of the entire system, from the integrated control center to the optimization of the acoustic loudspeakers, providing primary indications about their positioning.
The resulting document can also be used as specifications to support the economic proposal.

1. Assign the name to the project and confirm the necessary parameters. Then add the optional requirements required by the system designer and define the Zones. In any case it is possible to move freely back and forth in the project, between Zones and ADAs (Acoustically Distingushable Areas), and modify the choices made. The project, saved, can be recalled at any time.
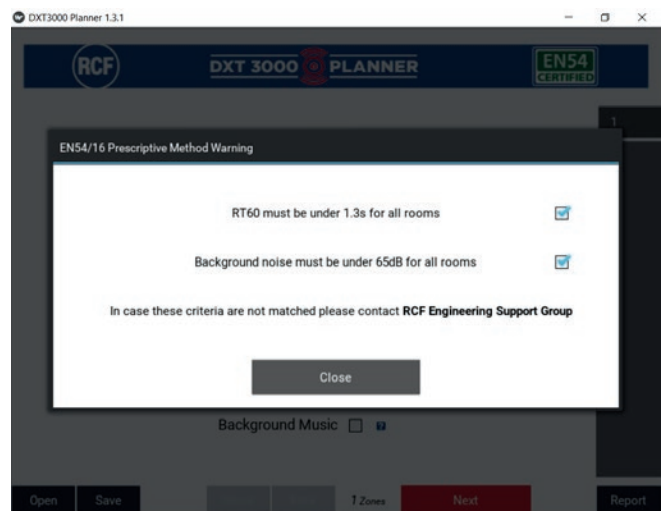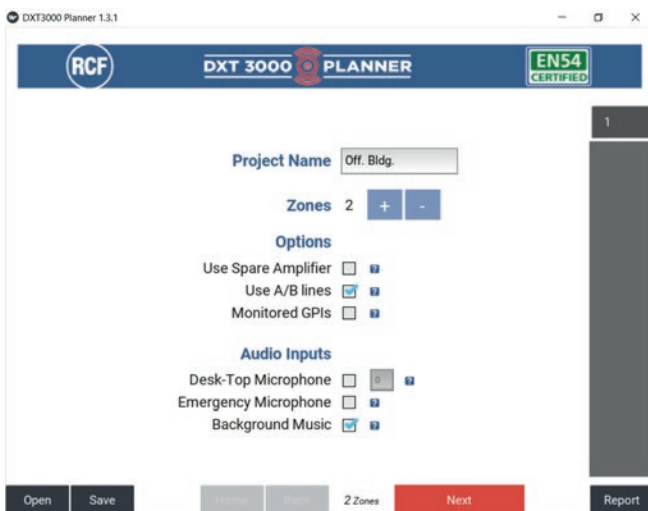
2. For each Zone, set the number of ADAs on which it is structured. There is the possibility of identifying areas and Zones by giving them a name.
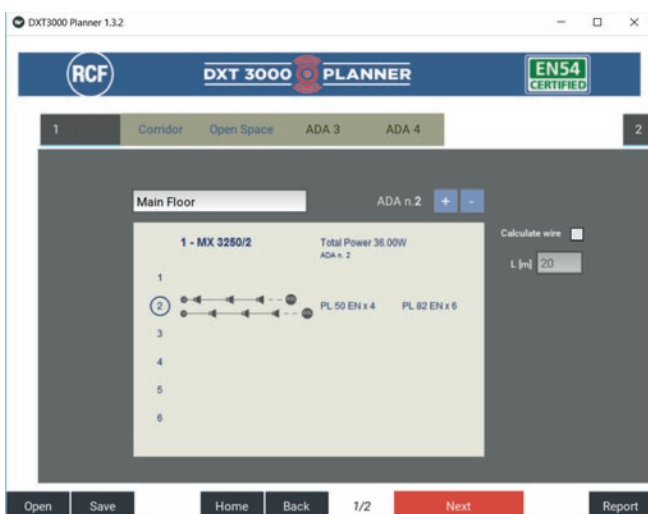
3. In the zone page, where you select the number of ADA, you can enter the total length of the 100V line, from the amplifier to the last speaker of the most remote ADA (the cable that connects all the speakers in daisy chain) of all the ADA belonging to the same area. The software calculates the 100V cable section to contain the losses within 10% (1 dB). The section in mm2 is meant for each of the two copper wires.
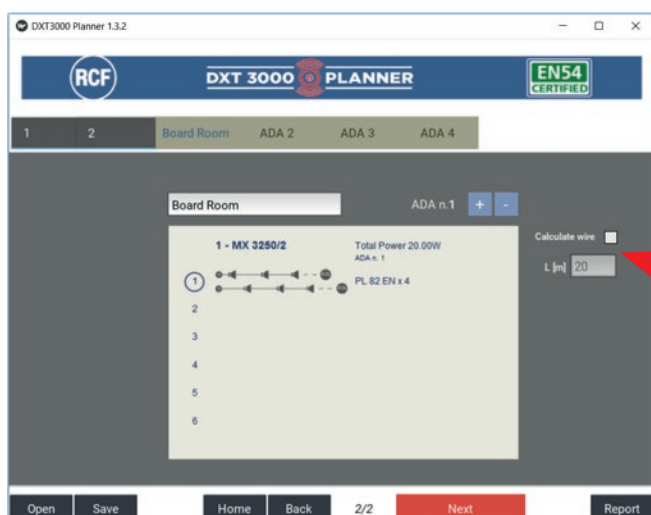
Calculation for the 100V cable.

4. Then choose the model of the speaker you prefer to be used, by privileging if possible the ceiling installation, as it offers a more homogeneous and comfortable diffusion. Then select whether your environment is a corridor or a regular room. Finally, set the dimensions of the room or its area in square metre (in the latter case the program will hypothesize a form factor). If desired, it is possible to force the sound pressure level above the one automatically calculated by the program to fulfil the standards, by increasing the power delivered to the speaker (by tapping up the loudspeaker).
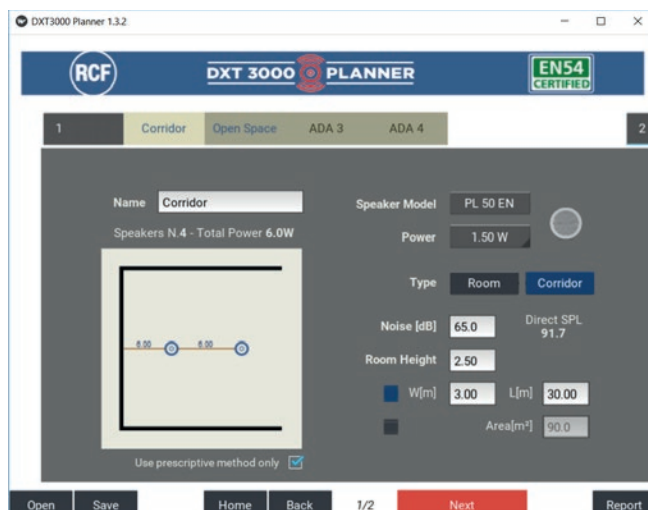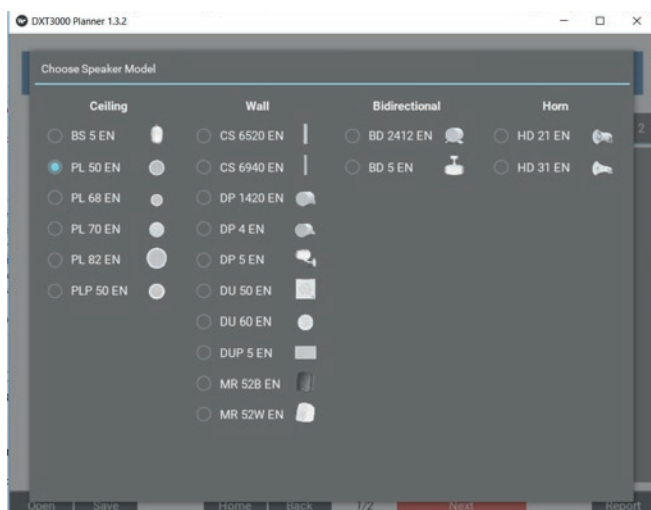
5. Repeat the same procedure for the other ADAs in the selected Zone and for other Zones and relevant ADAs.

6. The result of all the above-mentioned deployment produces a PDF document containing the list of the EN 54 certified products necessary for the project. For each ADA a lists of the speakers with their possible theoretical distribution pattern in the environment is provided, in addition to the power tapping to set the speakers themselves.
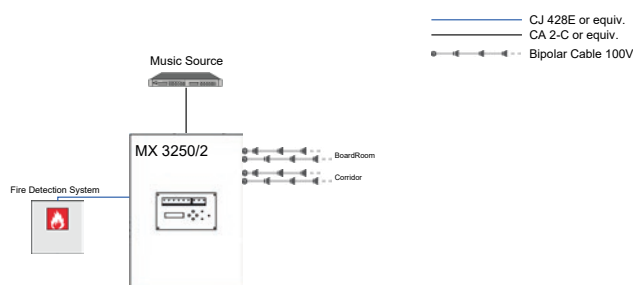
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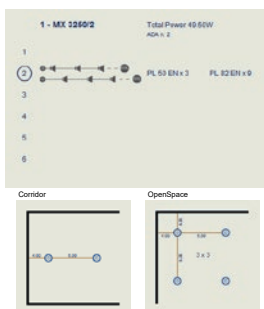| BOQ	p/n	Item	Qty
Master Units	17170177	MX 3250/2	1
	13330317	AC BAT 18	1
Speakers	13100007	PL 50 EN	3
	13100009	PL 82 EN	11
	17170176	EOL 3-9	4
Startup	19999101	System Startup	1

NOTE: Wire for 100V speaker lines not included

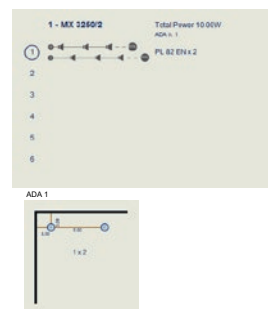*NOTE: EOL Number is approximate and may change depending on operating conditions.*

The present application software for PC, "DXT 3000 Planner", has been developed to offer a simple tool suitable to support the design of small to medium size Voice Alarm Systems, articulated on one or more areas, by applying the "Prescriptive Method" to define the necessary type and amount of speakers, as defined in the CEN Technical Specification 54-32, aligned to the ISO 7240-19 standard.
The user of the "DXT 3000 Planner" is required to first verify if the acoustic constraints/values of the project are in the range for the application of the Prescriptive Method. RCF is at your disposal in case the project you are working on does not allow you to proceed using the Prescriptive Method, or if you are not sure it does, or if you prefer in any case to receive our direct support.
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RCF has a wide range of products to cover any kind of projects, from a small supermarket to a big airport, from a stadium to an office building, from a shopping centre to a school or a hospital to a railway station or a sport arena or a theatre…

System Diagram

CJ 428E or equiv.
CA 2-C or equiv.
Bipolar Cable 100V

Music Source

MX 3250/2

BoardRoom

Corridor

Fire Detection System

Corridor

1 - MX 3250/2   Total Power 49.50W   ADA n. 2

PL 50 EN x 3   PL 82 EN x 9

Corridor   OpenSpace

BoardRoom

1 - MX 3250/2   Total Power 10.00W   ADA n. 1

PL 82 EN x 2

ADA 1

Da RCF un software per la progettazione di sistemi EN 54

Il software DXT 3000 PLANNER per PC Windows permette di configurare sistemi VOICE-ALARM piccoli e medi in accordo con la normativa (Metodo Prescrittivo), impiegando diffusori EN 54-24 ed elettroniche di gestione EN 54-16 della serie DXT 3000 (250W e 500W, 2, 4 e 6 zone, singole o collegate in rete) e relativi accessori.

Ambienti con ridotto rumore di fondo e non riverberanti sono facilmente approcciabili con alcuni calcoli matematici che il programma per PC RCF DXT 3000 Planner svolge automaticamente. Gli algoritmi sono derivati dagli standard UNI-ISO 7240-19 e UNI-CEN/TS 54-32, che consentono l'impiego del metodo prescrittivo nella progettazione acustica di un sistema Voice Alarm destinato ad ambienti che non presentano criticità acustiche.

DXT 3000 Planner è interattivo, permettendo anche all'utente meno esperto di ottenere ottimi risultati. In pochi passi il software suggerisce la lista dei componenti necessari per la configurazione dell'intero sistema, dalla centrale integrata di gestione all'ottimizzazione dei diffusori acustici, fornendo indicazioni di base circa il loro posizionamento.
Il documento risultante può essere inoltre impiegato come capitolato per supportare la proposta economica.

1. Assegnare il nome al progetto e confermare i parametri necessari. Aggiungere poi i requisiti opzionali richiesti dal progettista del sistema e definire le Zone. In ogni caso è possibile muoversi liberamente indietro e avanti nel progetto, tra Zone e ADA (Acoustically Distingushable Areas | Aree Acusticamente Distinguibili), e modificare le scelte operate. Il progetto, salvato, è richiamabile in ogni momento.
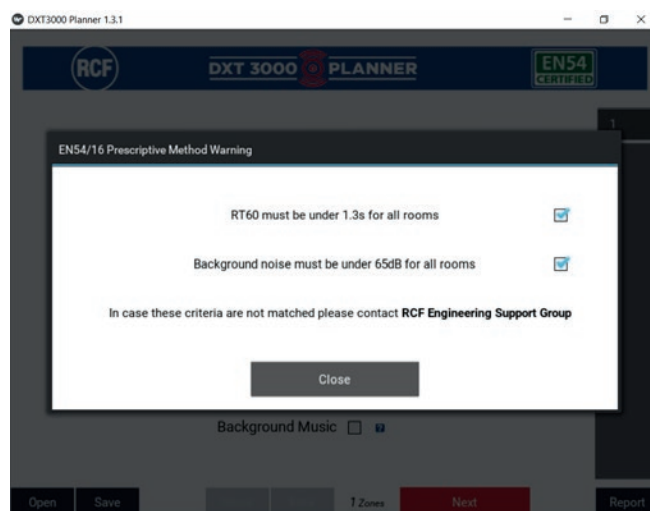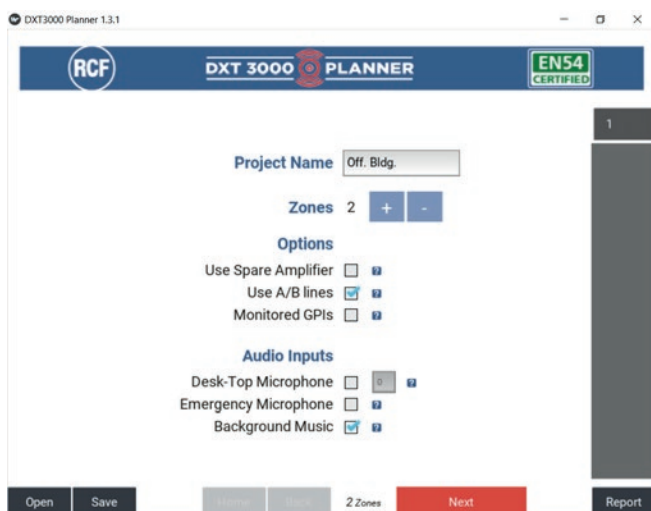
2. Per ogni Zona, impostare il numero delle ADA su cui è strutturata. C'è la possibilità di identificare zone e aree assegnando loro un nome.
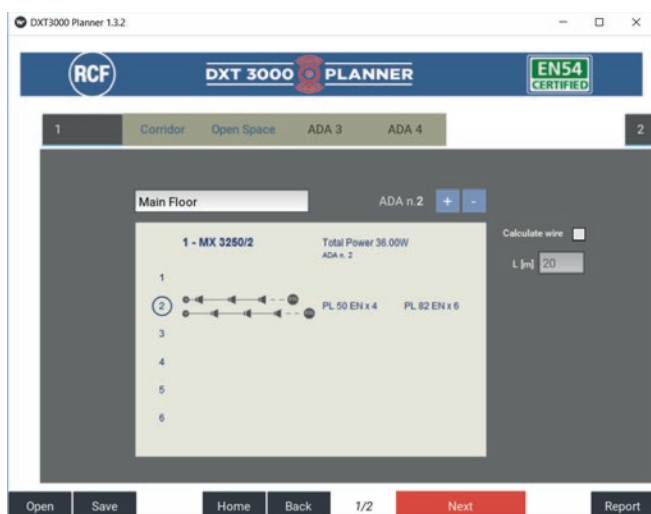
3. Nella pagina di Zona, ove si seleziona il numero delle ADA, è data la possibilità di inserire la lunghezza totale della linea 100V, dall'amplificatore all'ultimo diffusore dell'ADA più remota (il cavo che collega in cascata tutti i diffusori di tutte le ADA appartenenti alla zona stessa). Il software restituisce la sezione del cavo 100V necessario per contenere le perdite entro 10% (1 dB). Si intende la sezione in mm^2 per ognuno dei due fili in rame.
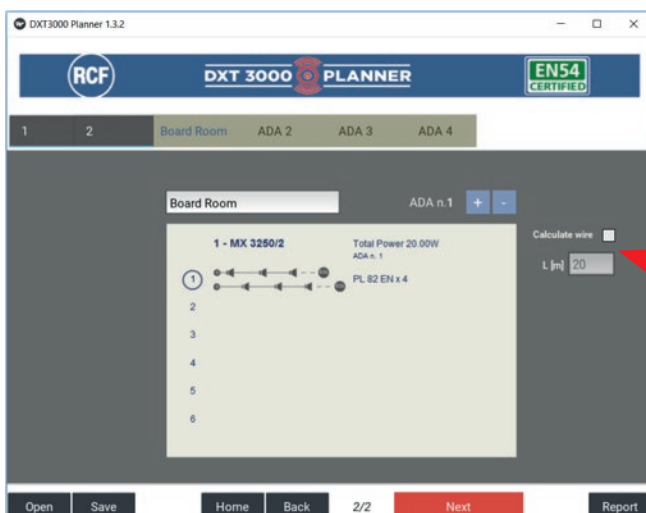
Calcolo della sezione per il cavo 100V

4. Scegliere il modello del diffusore da impiegare, privilegiando quando possibile l'installazione a soffitto in quanto offre una diffusione più omogenea e confortevole. Stabilire successivamente se si tratta di un corridoio oppure di una stanza. Infine impostare le misure dell'ambiente oppure la sua area (in quest'ultimo caso il programma ipotizzerà un rapporto di forma). Se lo si desidera è possibile forzare il livello di pressione acustica oltre quello richiesto dalla norma e calcolato dal programma, incrementando il dato di potenza configurato per l'altoparlante.
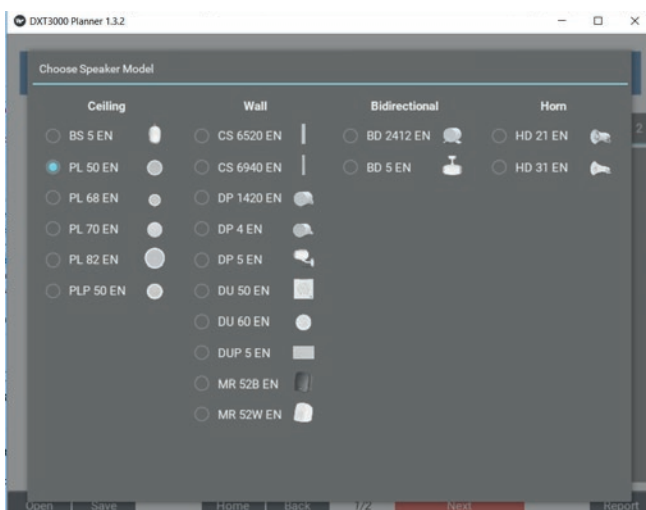
5. Ripetere lo stesso procedimento per le altre ADA della zona, e per le altre zone.

6. Il risultato delle operazioni sopra descritte si traduce in un documento PDF che contiene la lista dei prodotti certificati EN 54 necessari. Per ogni ADA vengono elencati i diffusori e la loro possibile distribuzione in ambiente, oltre all'impostazione della potenza cui predisporre gli altoparlanti medesimi.

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System Diagram

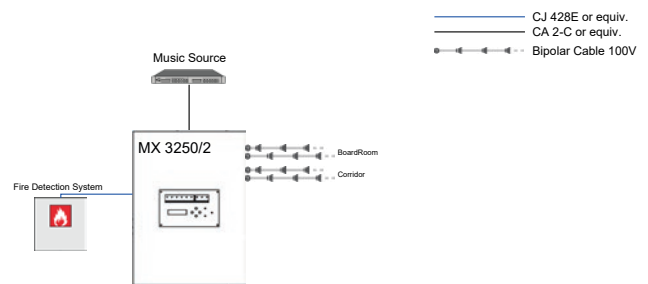| BOQ	p/n	Item	Qty
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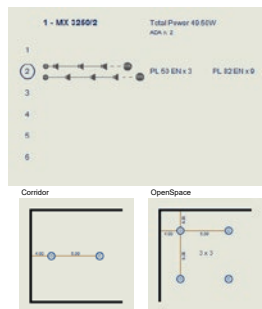*NOTE: EOL Number is approximate and may change depending on operating conditions.*

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