

Projet de valorisation du Mémorial du débarquement de Provence du Mont Faron



Renaissance du mémorial du Débarquement de Provence du Mt Faron
TOULON - VAR

PROJET DE RENOUVELLEMENT DU MÉMORIAL DU DÉBARQUEMENT DE PROVENCE DU MONT FARON

DOE / Dossier d'ouvrage exécuté

Matériel et installation des programmes audiovisuels du
Mémorial du débarquement de Provence du Mont Faron



SOMMAIRE/

1. Allumage & extinction du parcours scénographique.....	p.3
2. En cas de dysfonctionnement.....	p.4
3. Plan d'implantation des dispositifs.....	p.5
4. Tableau des matériels par lieu/ Séquence 12/ salle multiprojection	p.7
Séquences 2 à 14/ programmes audiovisuels du mémorial	p.8
5. Synoptiques/ Séquence 12/ salle multiprojection	p.11
Séquences 2 à 14/ programmes audiovisuels du mémorial	p.13
6. Câblage.....	p.27
7. Fiches techniques/ Séquence 12/ salle multiprojection	p.28
Séquences 2 à 14/ programmes audiovisuels du mémorial	p.91
8. Contacts.....	p.173

NOTE TECHNIQUE/ Matériel audiovisuel/

ALLUMAGE ET EXTINCTION DU PARCOURS SCENOGRAPHIQUE/

1 / Eléments Autonomes

Chaque interrupteur alimente une zone

Le repérage exact est en cours avec l'électricien

- les systèmes audiovisuels sont autonomes et démarrent automatiquement à la mise sous tension



2 / Salle Immersive

La salle immersive est allumée avec un panel

Un raccourci sur l'ordinateur de la caisse permet

d'accéder directement à l'ordinateur situé dans le local (placard avant la salle)

Il permet :

- Allumage & extinction des vidéoprojecteurs et de la salle
- retour d'information des projecteurs
- Choix du mode de fonctionnement : Salle en boucle ou une seule fois
- Démarrer le spectacle ou l'arrêter

Pour allumer : allumer les vidéoprojecteurs , choisir le mode puis démarrer le spectacle

Pour l'extinction : Arrêter le spectacle puis éteindre les vidéoprojecteur



NOTE TECHNIQUE/ Matériel audiovisuel/

EN CAS DE DYSFONCTIONNEMENT/

Dépannage de niveau 1 :

Lors d'un dysfonctionnement le premier réflexe doit être de débrancher électriquement l'appareil incriminé

_ Les vidéoprojecteurs de la salle immersive fonctionnent grâce à des lampes LED : pas de remplacement de lampe

_ L'ordinateur de la baie de la salle immersive est équipé d'un logiciel de prise en main à distance : en cas de problème nous pouvons nous connecter pour analyser la panne avec vous .

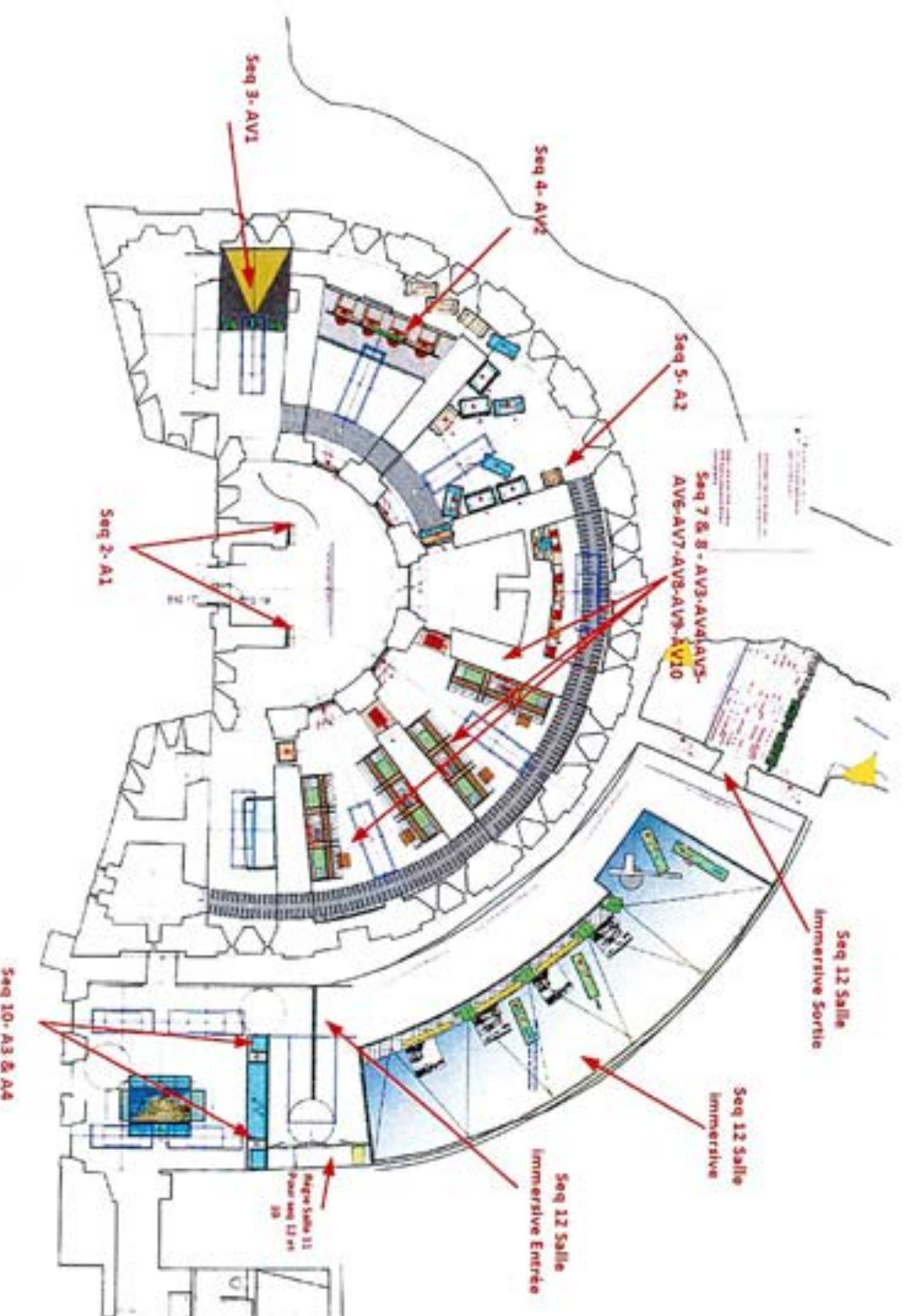
Contact maintenance : Nicolas Paineau n.paineau@etclondonparis.com 06 85 71 43 66

Attention

Nous attirons votre attention sur le fait qu'aucun onduleur n'a été mis en place contre les surtensions électriques, le site est très exposé à la foudre et le matériel audiovisuel est très sensible au surtension, pour éviter les dommages matériels nous vous demandons en cas d'orage d'éteindre les dispositifs audiovisuels et de couper les disjoncteurs correspondants.

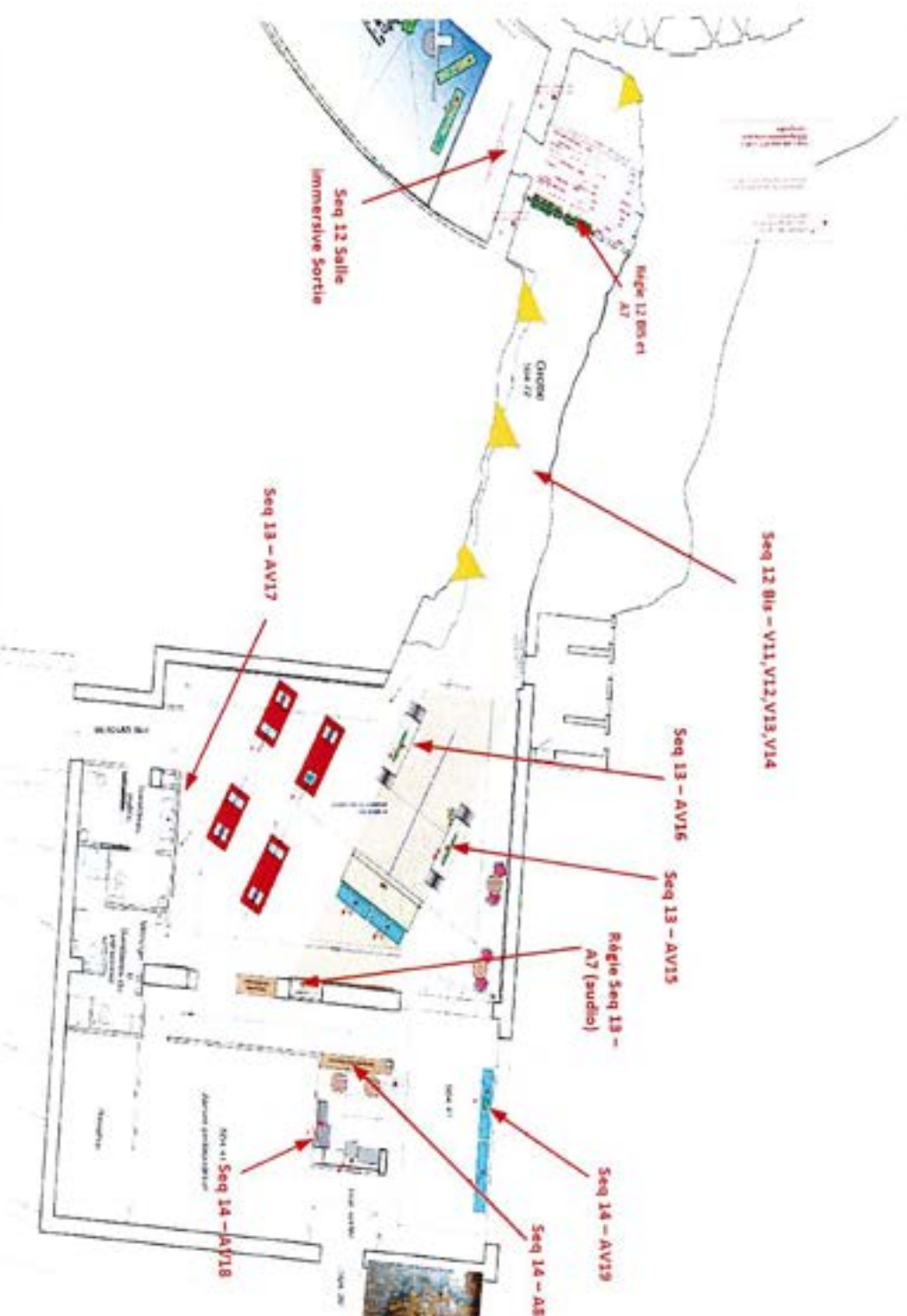
Matériel audiovisuel/

PLAN D'IMPLANTATION DES DISPOSITIFS



NOTE TECHNIQUE/ Matériel audiovisuel

PLAN D'IMPLANTATION DES DISPOSITIFS



NOTE TECHNIQUE

Matériel audiovisuel/

SALLE IMMERSIVE/ SÉQUENCE 12/ Tableaux des matériels audiovisuels par lieu/

	Designation	Descriptif matériel	Marques	Unité	Qté
Seq 12 Atrium	Débarquement de provenance du Mont Faron. Grand spectacle audiovisuel				
	Videoprojecteur	Videoprojecteur 1920/1080 Laser Optique 0,811 Lumensité 3000 lumen	PANASONIC PT-P2475E	u	5
	Lecteur carte flash	Lecteur Carte Flash résolution 1920/1080	BRIGHTSIGN HQ223	u	5
	Moniteur 65"	Moniteur 65" 1920/1080	Moniteur 65" FUJIFILM LG 6553MOKB	u	4
	Lecteur carte flash	Lecteur Carte Flash résolution 1920/1080	BRIGHTSIGN HQ223	u	4
	Lecteurs multipistes	Lecteur 16 pistes IP	MAJIDAP-IP	u	1
	Enceinte large bande	colonne line array 200w avec fixation murale	Karay KPS2	u	4
	Amplificateur	amplificateur 4x120w	BE PENDING PLANU 3000 DSP	u	2
	Subwoofer de proximité	Subwoofer	NS-SW300 Yamaha noir	u	2
	Amplificateur	Amplificateur multipistes	Eder MPA-6-5001	u	2
	Enceintes	Enceintes	Avia T5	u	12
	Lecteur carte flash	Lecteur Carte Flash résolution 1920/1080	BRIGHTSIGN HQ223	u	1
	Moniteur 17"	Moniteur 17" pour decompte IYAMA TF1734MC-BDX	Moniteur 17" pour decompte IYAMA	u	1
	Interface Audio	Interface Audio	Interface Beringer M-082	u	2
Automatisé	Automate pour synchronisation et programmation DMX	Automate Méclation	Shonmaster LE	u	1
Eclairage	Plaque lumineuse rgb	Plaque Led	Plaque LED marque KIOCI 165mm/2000mm	u	4

NOTE TECHNIQUE

Matériel audiovisuel/

PROGRAMMES AUDIOVISUELS/ SÉQUENCES 2 à 14/ Tableaux des matériels audiovisuels par lieu/

	Designation	Descriptif matériel	Marques	Unité	Qté
Seq 2	A1				
	Transducteur	Transducteur surface bas 40w	Visaton EX-60S	u	2
	Lecteur carte flash	Lecteur Carte Flash	Lecteur audio stéréo carte flash One DAP RSF + alimentation 12v	u	1
	Amplificateur	Amplificateur 2x50w	Mini amp RSF 2x30w 8ohm	u	2
Seq 3	AV1	Decteur de présence	Micro rad RSF	u	2
		Vidoprojecteur position sur la trémie Dimension image 123	Vidoprojecteur courte focale Optoma EH005T	u	1
		Support plafond	Euronel Aralino	u	1
		Lecteur carte flash	Lecteur Brighsign HQ223 résolution 1920x1080 + carte flash 8go Sandisk	u	1
		amplificateur avec equalisation	Mini amp RSF 2x30w 8ohm	u	1
		Mini enceintes encastré large bande	Enceinte Arco 4 DAS 90w 8ohms Noir	u	2
		Decteur de présence	Micro rad RSF	u	1
Seq 4	AV2				
		Moniteur 43"	Moniteur 43" PANASCHIC TH-43LFBW	u	1
		Support Mural	Screen Lb	u	1
		Lecteur carte flash	Lecteur Brighsign HQ223 résolution 1920x1080 + carte flash 8go Sandisk	u	1
		amplificateur avec equalizer	Mini amp RSF 2x30w 8ohm	u	1
		Enceinte 35w encastré - Noire	Enceinte visaton 080	u	2
		decteur de présence	Micro rad RSF	u	1
Seq 5	A2				
		Lecteur carte flash	Lecteur audio stéréo carte flash One DAP RSF + alimentation 12v	u	1
		Casque arrievandale	German maestro serie 8000	u	2
		Amplificateur casque	Behringer HA400	u	1
		Bouton arrievandale	Bouton poussoir ATEM 30mm de diamètre	u	2
		6 contacts			
Seq 7 et 8	AV3-AV4-AV5-AV6-AV7-AV8-AV9-AV10				
		Moniteur 24" 1920x1080	MONIG240W-OF Moniteur 24" OPEN FRAME 1920x1080	u	8
		Lecteur carte flash	Lecteur Brighsign HQ223 résolution 1920x1080 + carte flash 8go Sandisk	u	8
		Casque arrievandale	German maestro serie 8000	u	16
		Amplificateur casque	Behringer HA400	u	8
		Bouton arrievandale	Bouton poussoir ATEM	u	16
		Interface lumiere ON/OFF	Interface rélas interface lumiere (On/Off lumiere LED dans les vitrines)	u	8
Seq 10	A3-A4				
		Lecteur carte flash	Lecteur audio stéréo carte flash One DAP RSF + alimentation 12v	u	2
		Casque arrievandale	German maestro serie 8000	u	4
		Amplificateur casque	Behringer HA400	u	2
		Bouton arrievandale	Bouton poussoir ATEM	u	4

NOTE TECHNIQUE

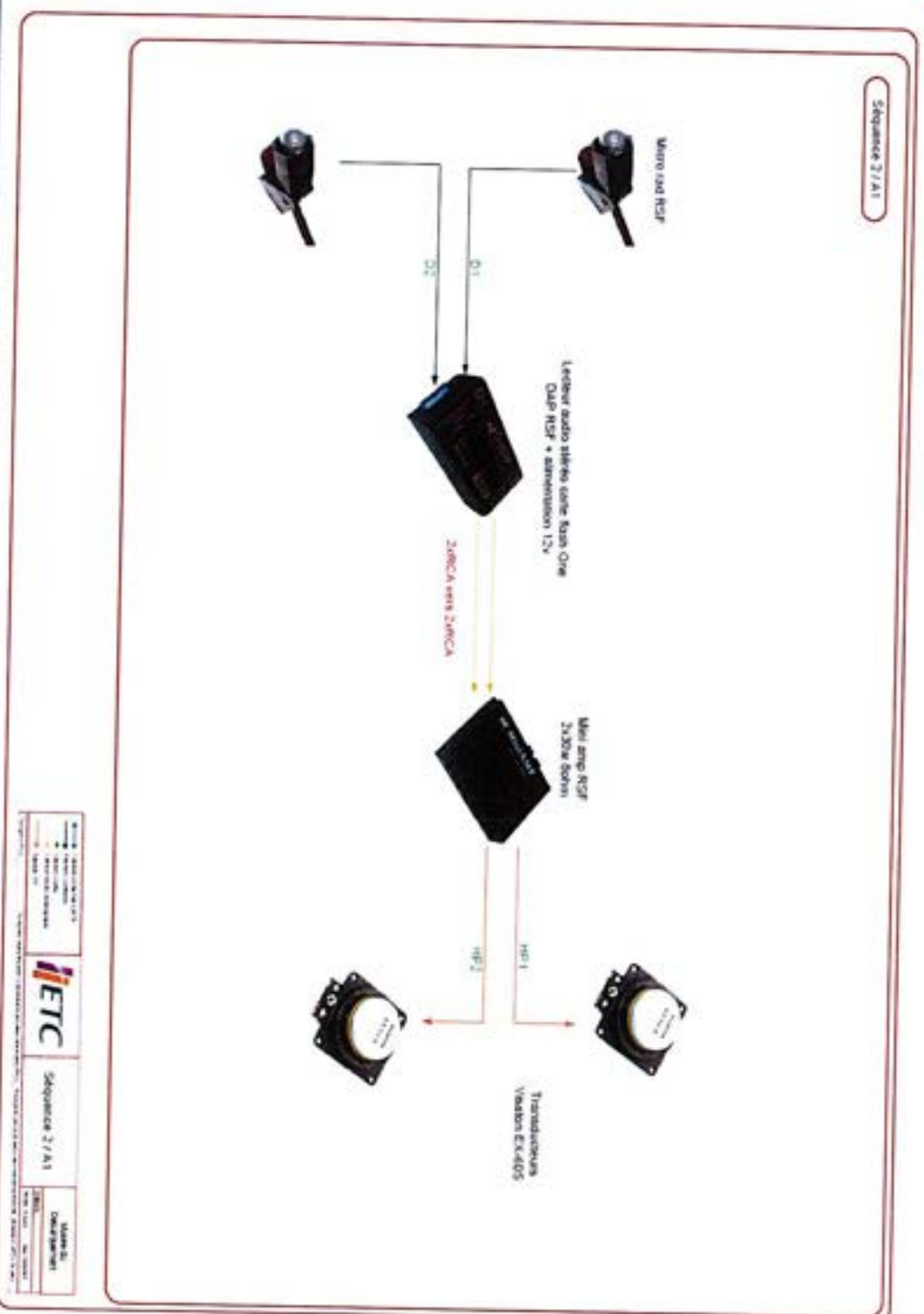
Matériel audiovisuel/

PROGRAMMES AUDIOVISUELS/ SÉQUENCES 2 à 14/ Tableaux des matériels audiovisuels par lieu/

Seq 11	A5				
	Enceinte large bande	Enceinte encastré plafond et mural	Enceinte encastré Ecler IC6 80chms Noir 40w 70Hz- 20KHz		U
	Lecteur carte flash	Lecteur Carte flash	Lecteur audio stéréo carte flash One DAP RSF + alimentation 12v		U
	Amplificateur	Amplificateur Multichannel pour spécialisation	Mini amp RSF 2x30w 8ohm		U
	Détecteur de présence	détecteur de présence	Micro rad RSF		U
Seq 12 Bls	V11- V12- V13- V14				
	Pico Projecteur	Pico projecteur Led 1280/720 350 lumens	Picopix Pico PICOPIX_PPX4335		U
	Support tige fileté	support	support tige fileté		U
	Lecteur carte flash	Lecteur Carte flash	Lecteur Brightsign HD223 résolution 1920/1080 + carte flash 8go Sandisk		U
	Lecteur carte flash	Lecteur Carte flash	Lecteur Brightsign LS423 résolution 1920/1080 + carte flash 8go Sandisk		U
	Détecteur de présence	détecteur de présence	Micro rad RSF		U
A6					
	Lecteur son multicanal	Lecteur	Lecteur audio stéréo carte flash One DAP RSF + alimentation 12v		U
	Enceinte non amplifiée 30w	enceintes	Enceinte AUDEO 103 Ecler		U
	Canon à Son	enceintes directionnel	H450Haut-parleur «SpotDAP» 32 x 16 cm + Attache de fixation AB2 RSF		U
	Amplificateur	amplificateur	Mini amp RSF 2x30w 8ohm		U
	Détecteur de présence	détecteur de présence	Micro rad RSF		U
Seq 13	AV15 - AV16				
	Moniteur 42"	Moniteur 42"	Moniteur 42" PANASONIC TH-43LFE8W		U
	Lecteur carte flash	Lecteur Carte flash	Lecteur Brightsign HD223 résolution 1920/1080 + carte flash 8go Sandisk		U
	Enceinte large bande	Enceinte 25w large bande	Enceinte encastré Visaton B80		U
	Amplificateur	amplificateur	Mini amp RSF 2x30w 8ohm		U
A7					
	Lecteur carte flash	Lecteur Carte flash	Multi-dap 3 flux Stéreo iP		U
	Enceinte large bande	Enceinte 25w large bande	Enceinte Arco 4 DAS 50w 8ohms Noir		U
	Amplificateur	amplificateur avec equalizer	MPA6-80 Amplificateur Ecler		U
	Préampli	Préampli	Beringer NX882 Ultra link pro		U
AV17					
	Ecran 24"	Moniteur 24" open frame	MON5240W-OF Moniteur 24" OPEN FRAME 1920/1080		U
	Lecteur carte flash	Lecteur Carte flash	Lecteur Brightsign HD223 résolution 1920/1080 + carte flash 8go Sandisk		U
	Casque antivandale	Casque noir, garnie inox antivandale	German maestro serie 8000		U
	Amplificateur casque	Amplificateur casque	Behringer HA400		U
	Bouton antivandale	bouton poussoir antivandale	Bouton poussoir ATEM		U

NOTE TECHNIQUE/ Matériel audiovisuel/

SYNOPTIQUE/ séquence 2/



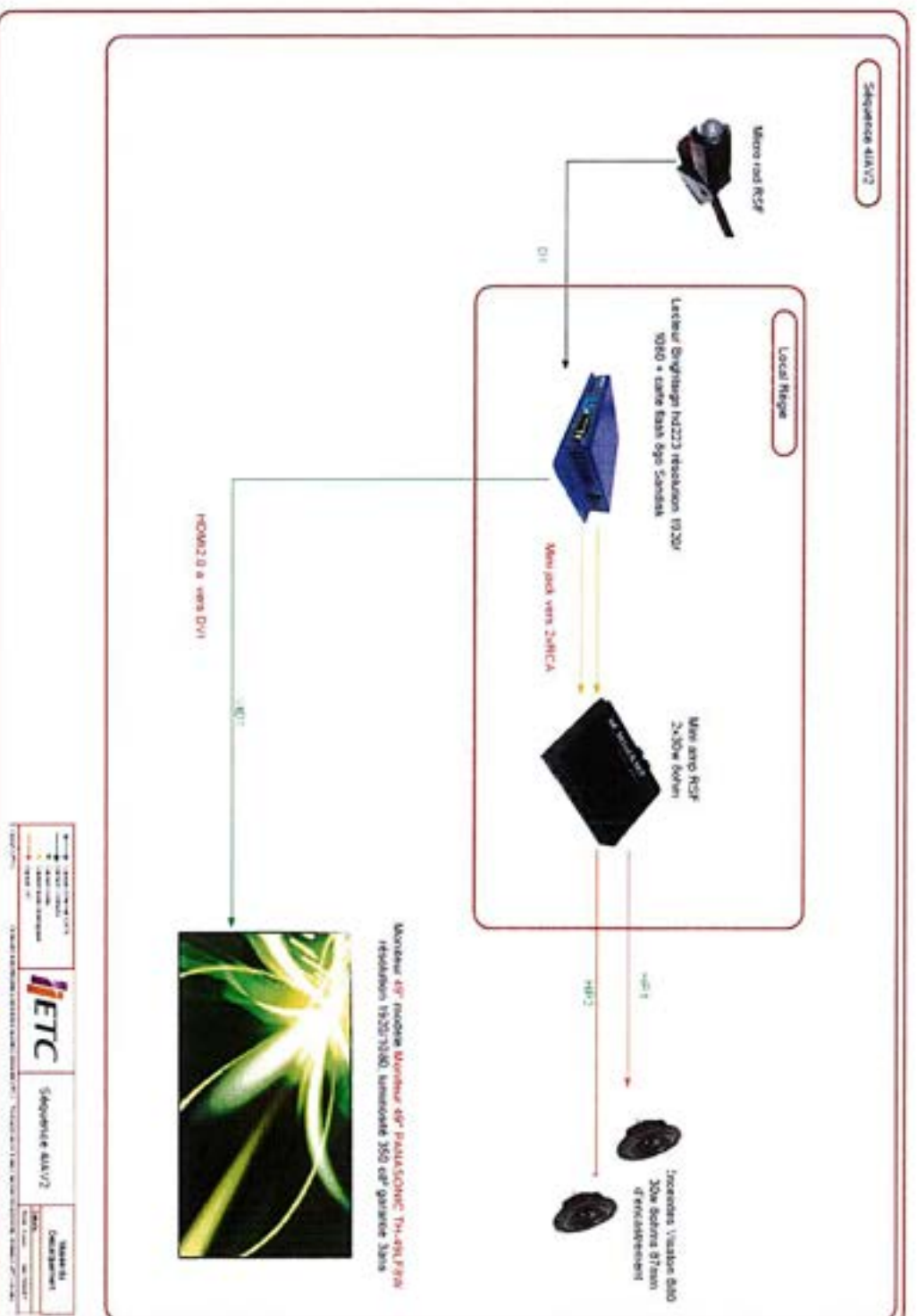
Matériel audiovisuel/

SYNOPSIS / séquence 3/



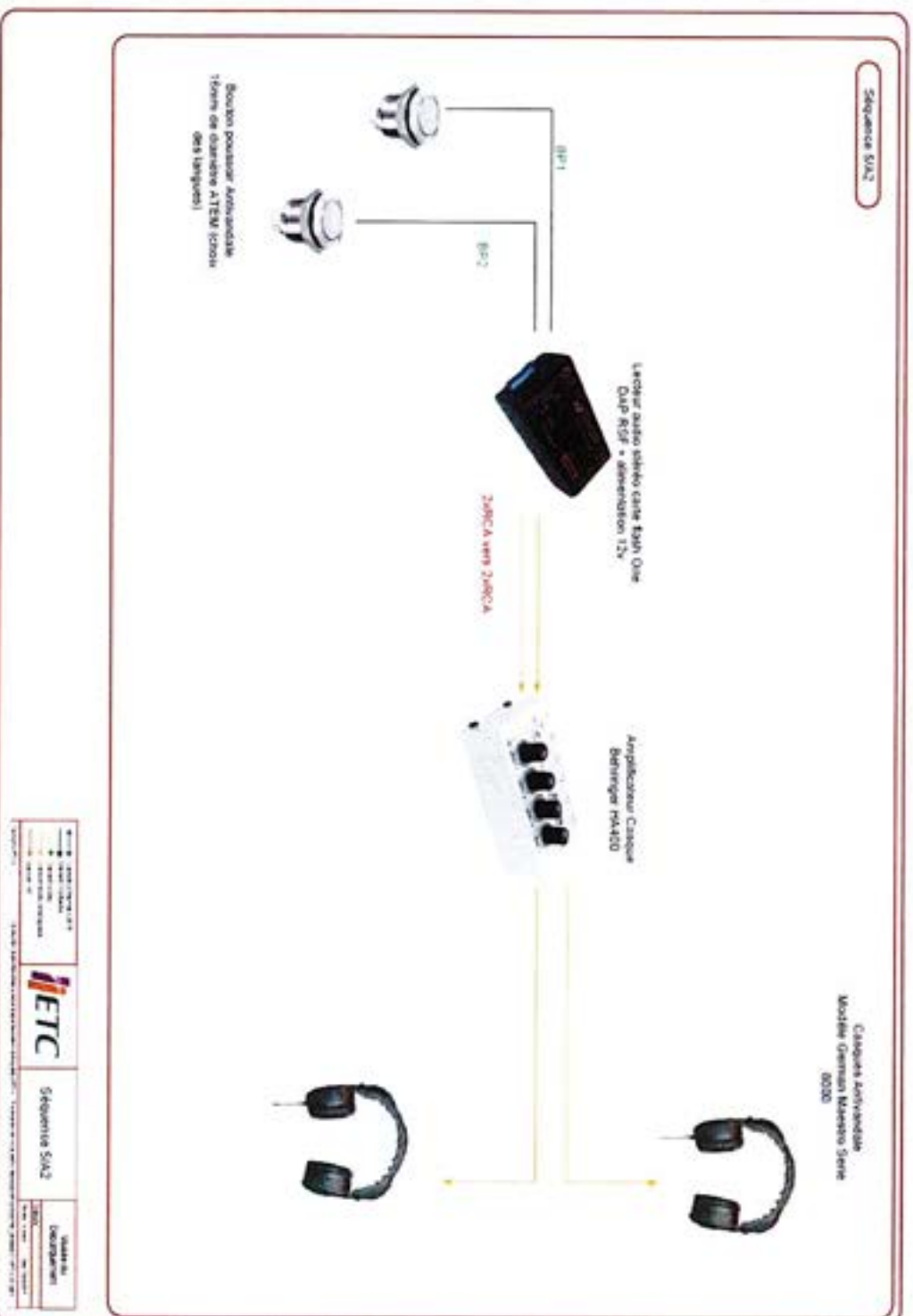
Matériel audiovisuel/

SYNOPSIS / séquence 4/



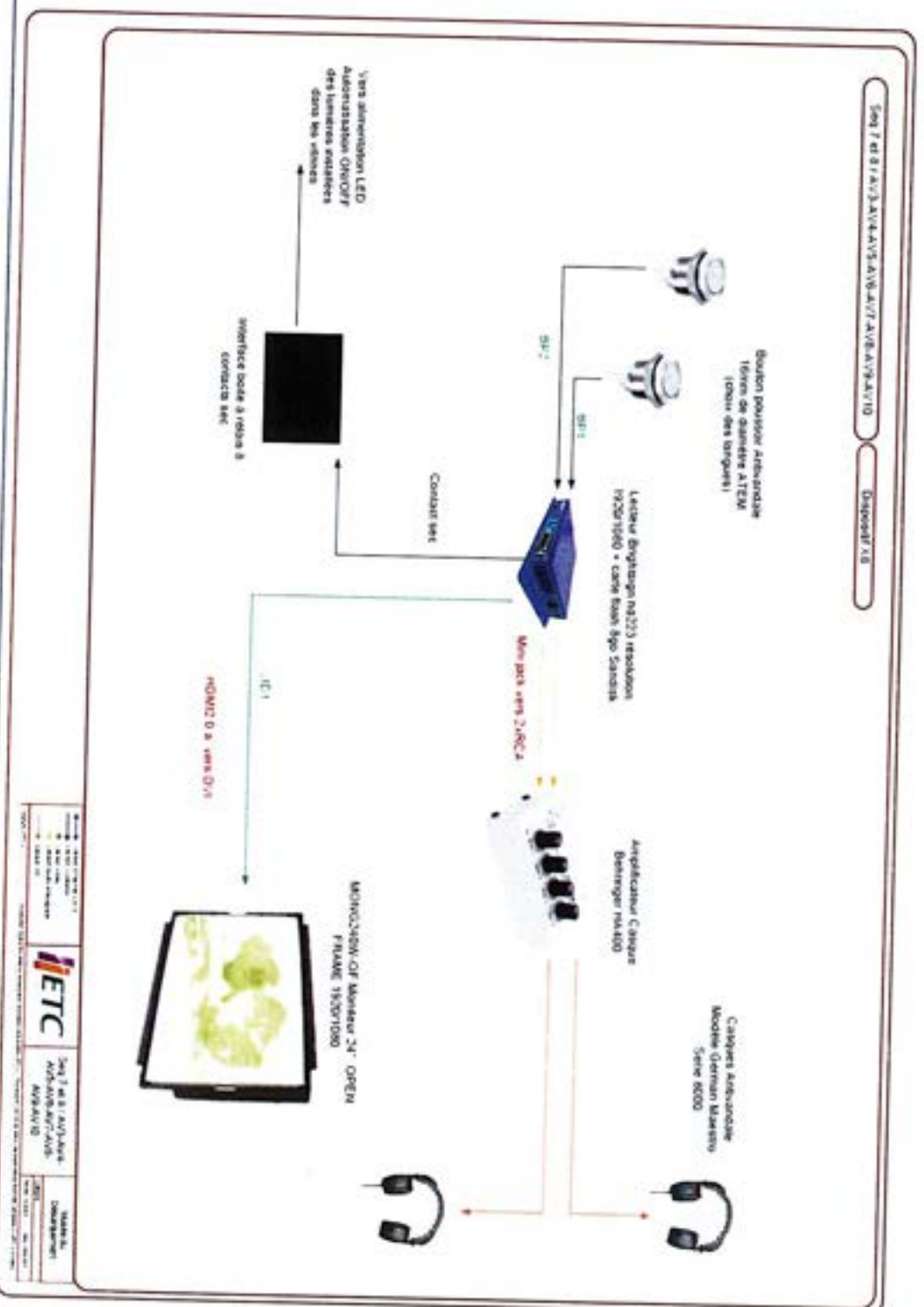
NOTE TECHNIQUE/
Matériel audiovisuel/

SYNOPSIS / séquence 5/



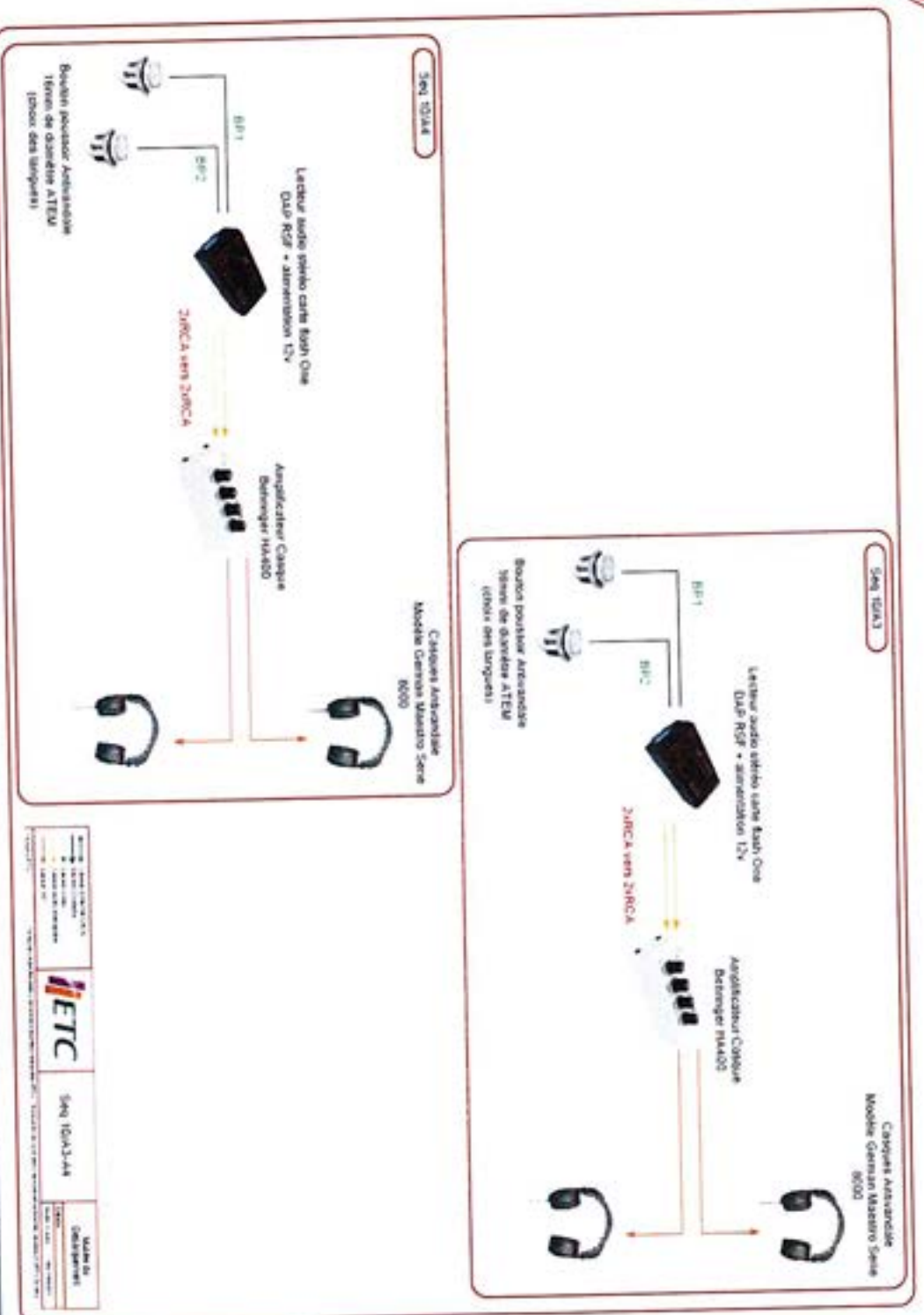
NOTE TECHNIQUE/ Matériel audiovisuel/

SYNOPTIQUE/ séquences 7 & 8/



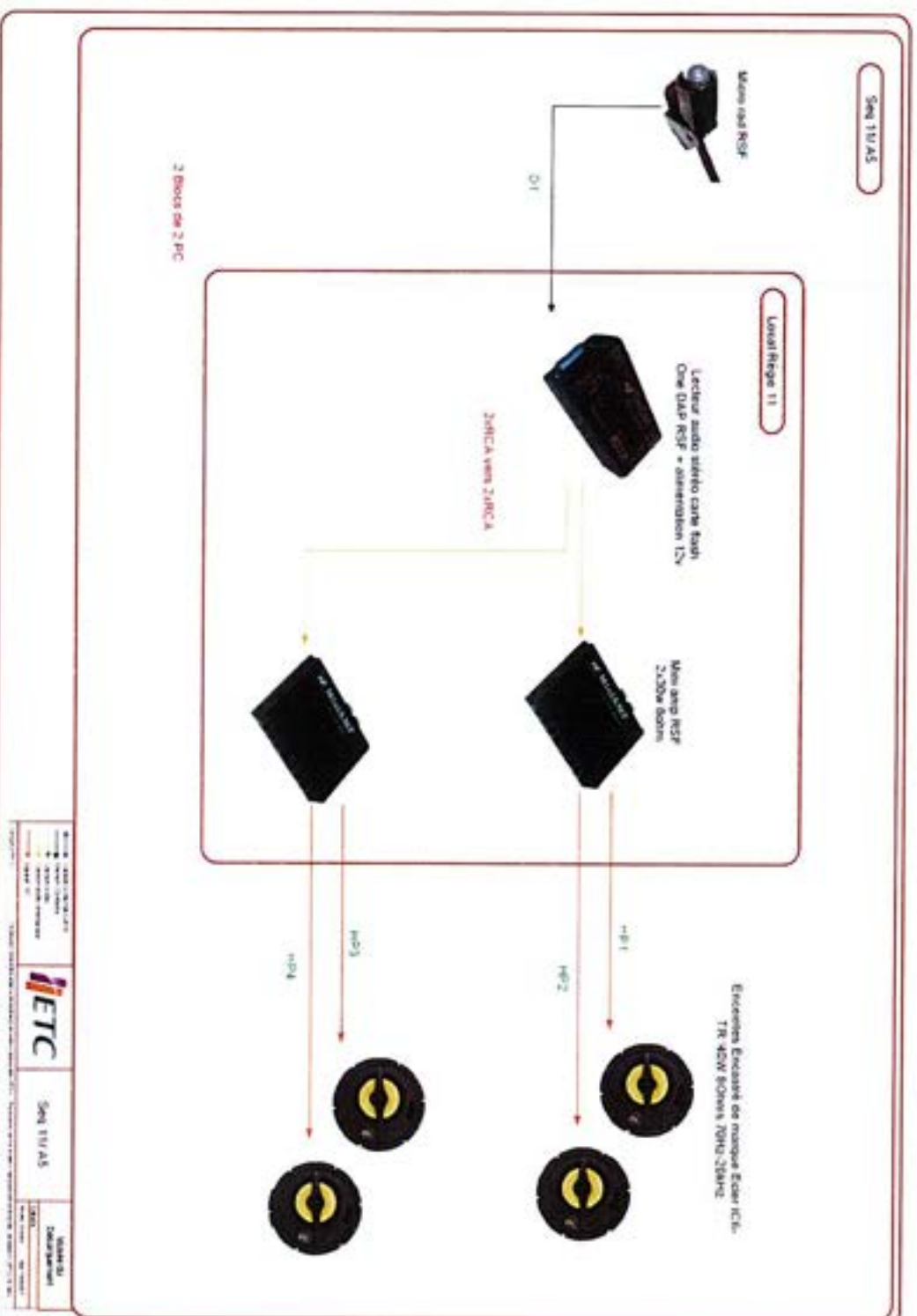
NOTE TECHNIQUE/
Matériel audiovisuel/

SYNOPSIS / séquence 10/



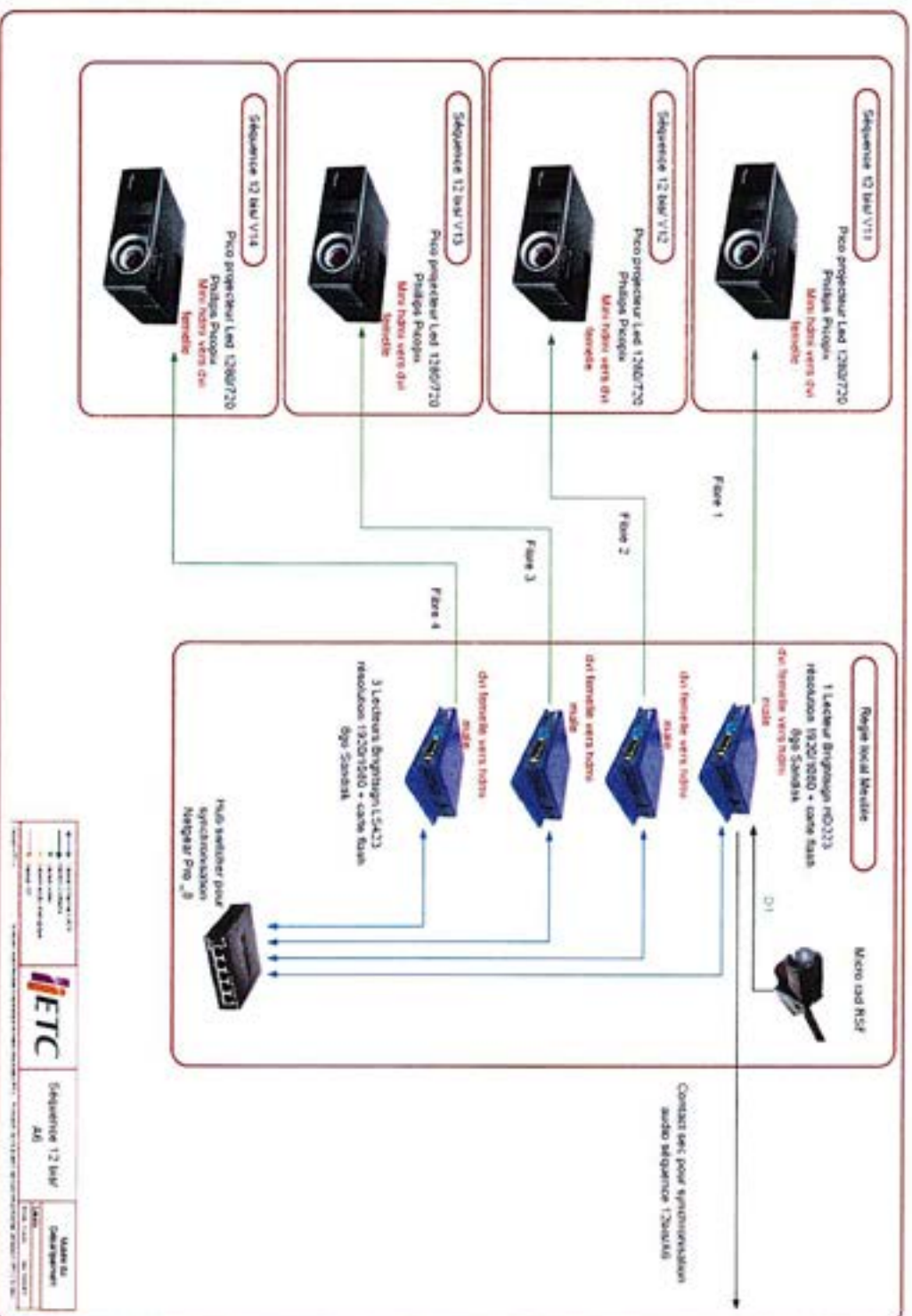
NOTE TECHNIQUE/ Matériel audiovisuel/

SYNOPSIS / séquence 11/



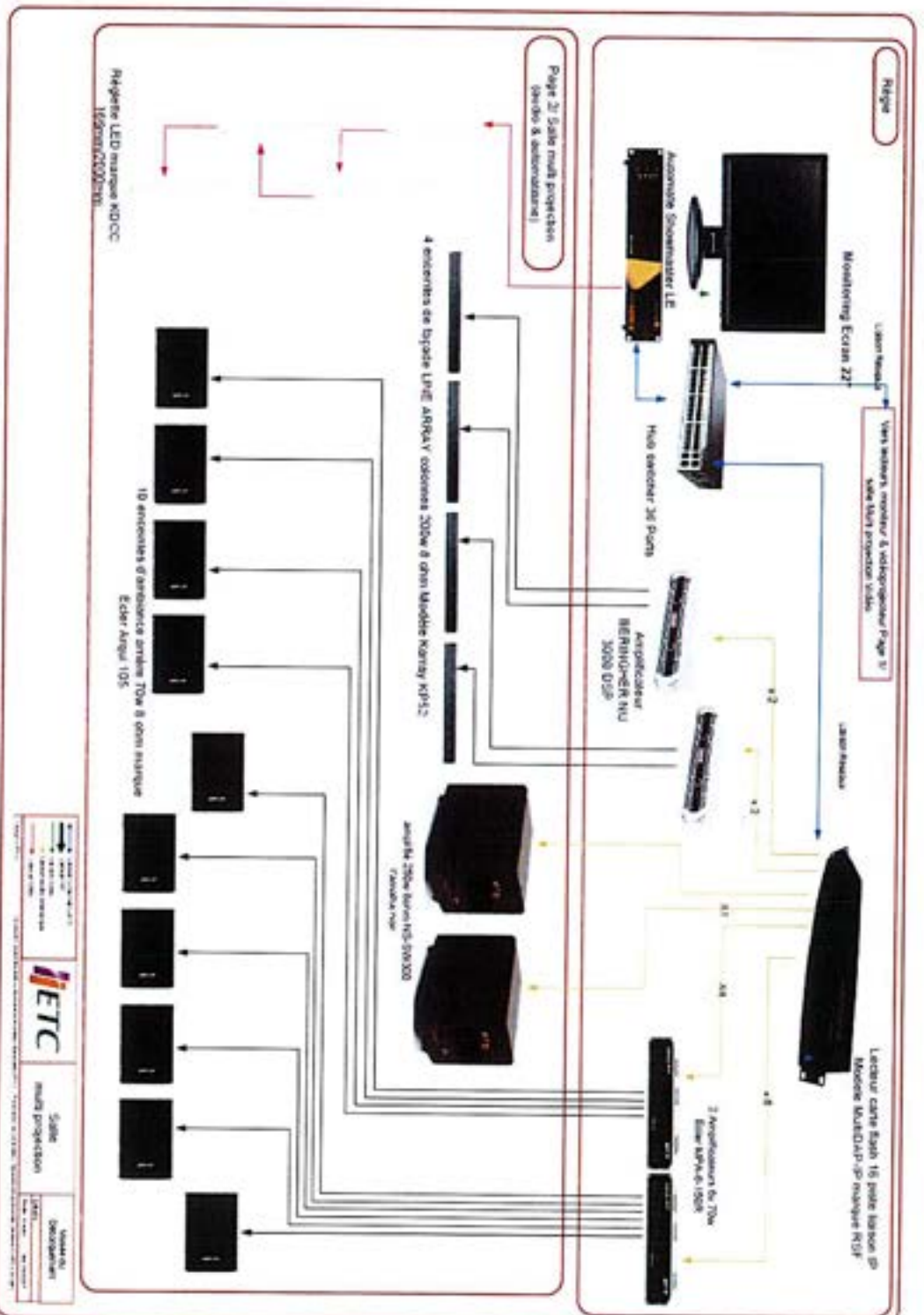
Matériel audiovisuel/

SYNOPTIQUE/ séquence 12 bis/



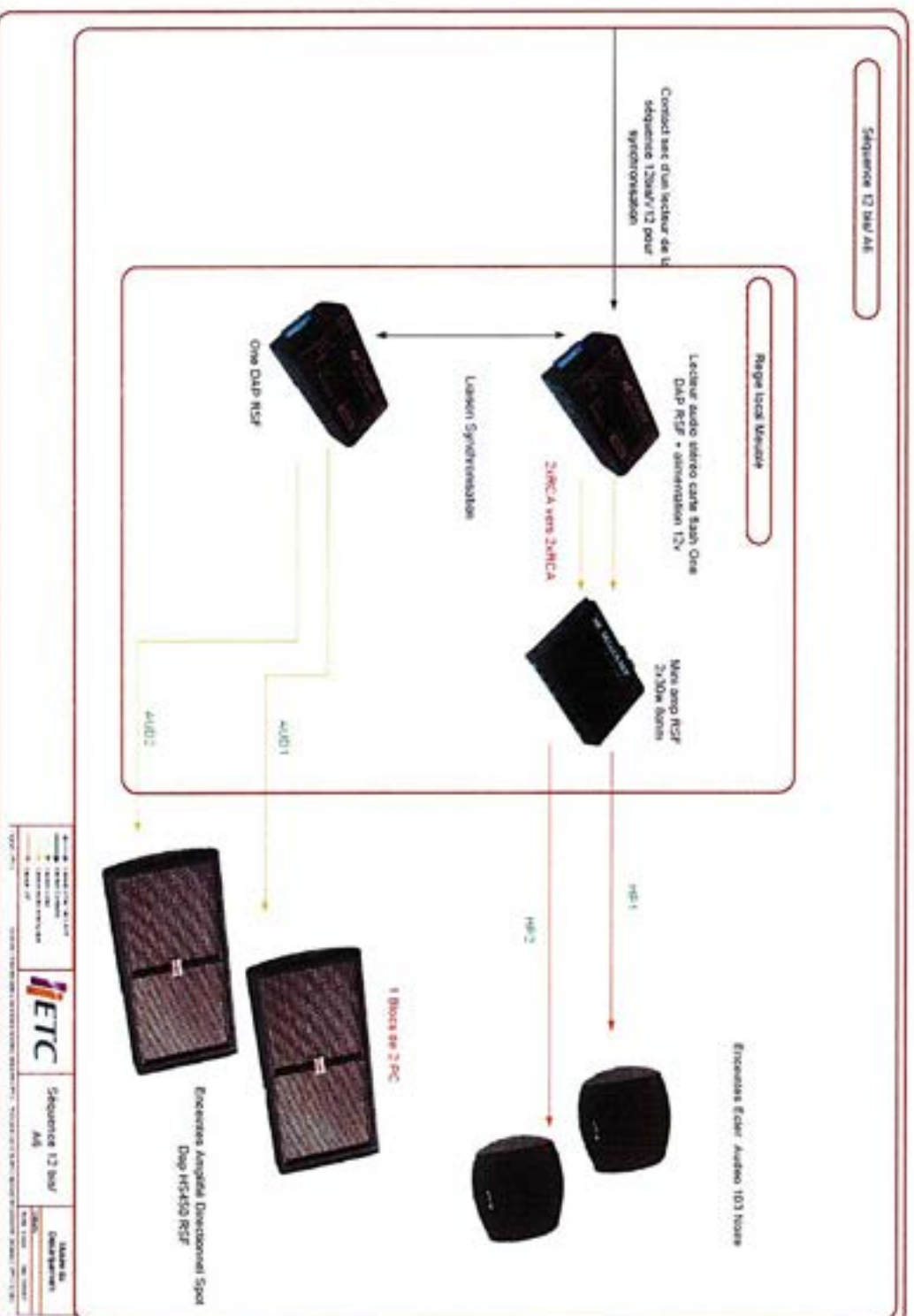
Matériel audiovisuel/

SYNOPSIS / SALLE MULTIPROJECTION / séquence 12/



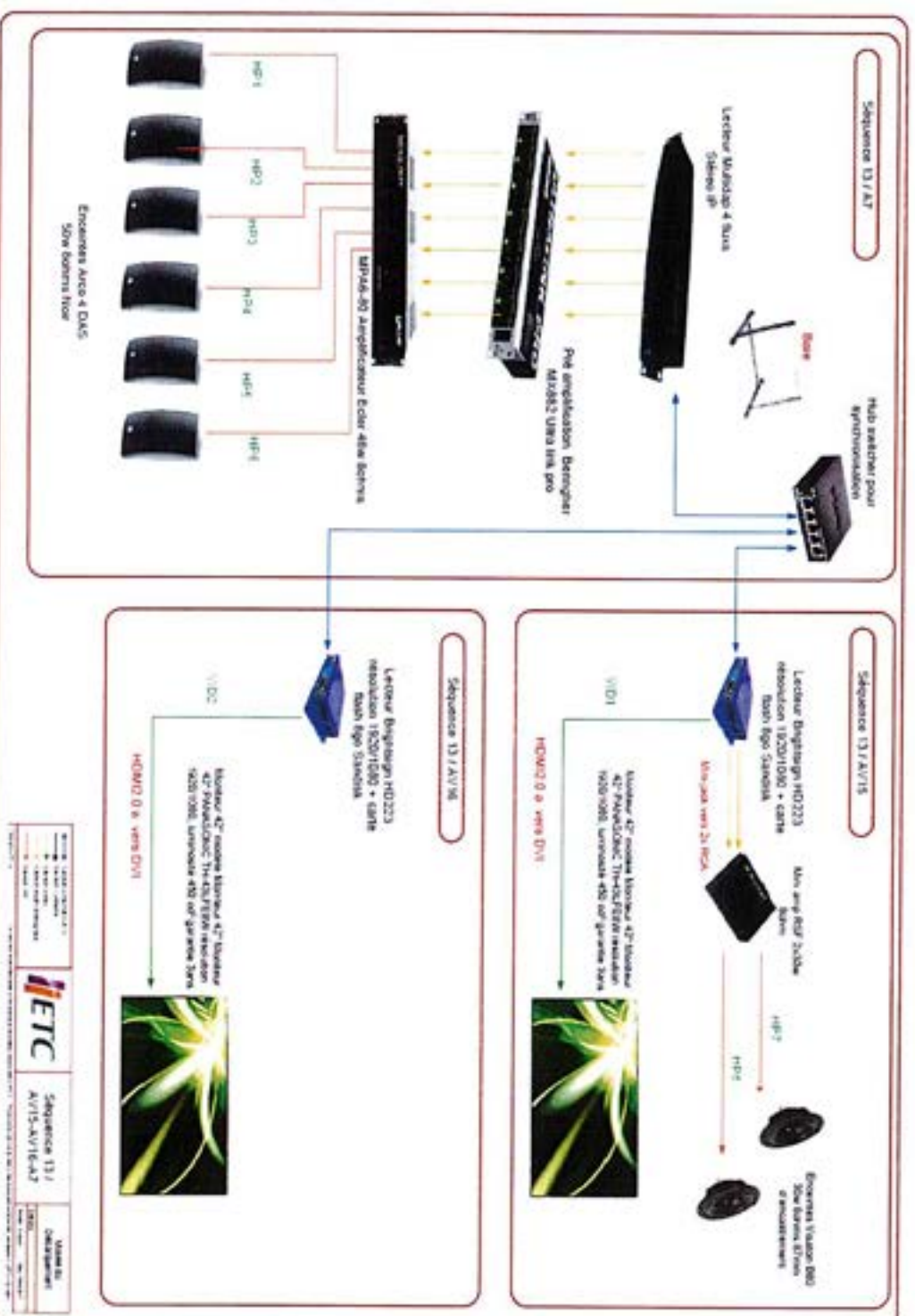
NOTE TECHNIQUE/
Matériel audiovisuel/

SYNOPTIQUE/ séquence 12 bis/



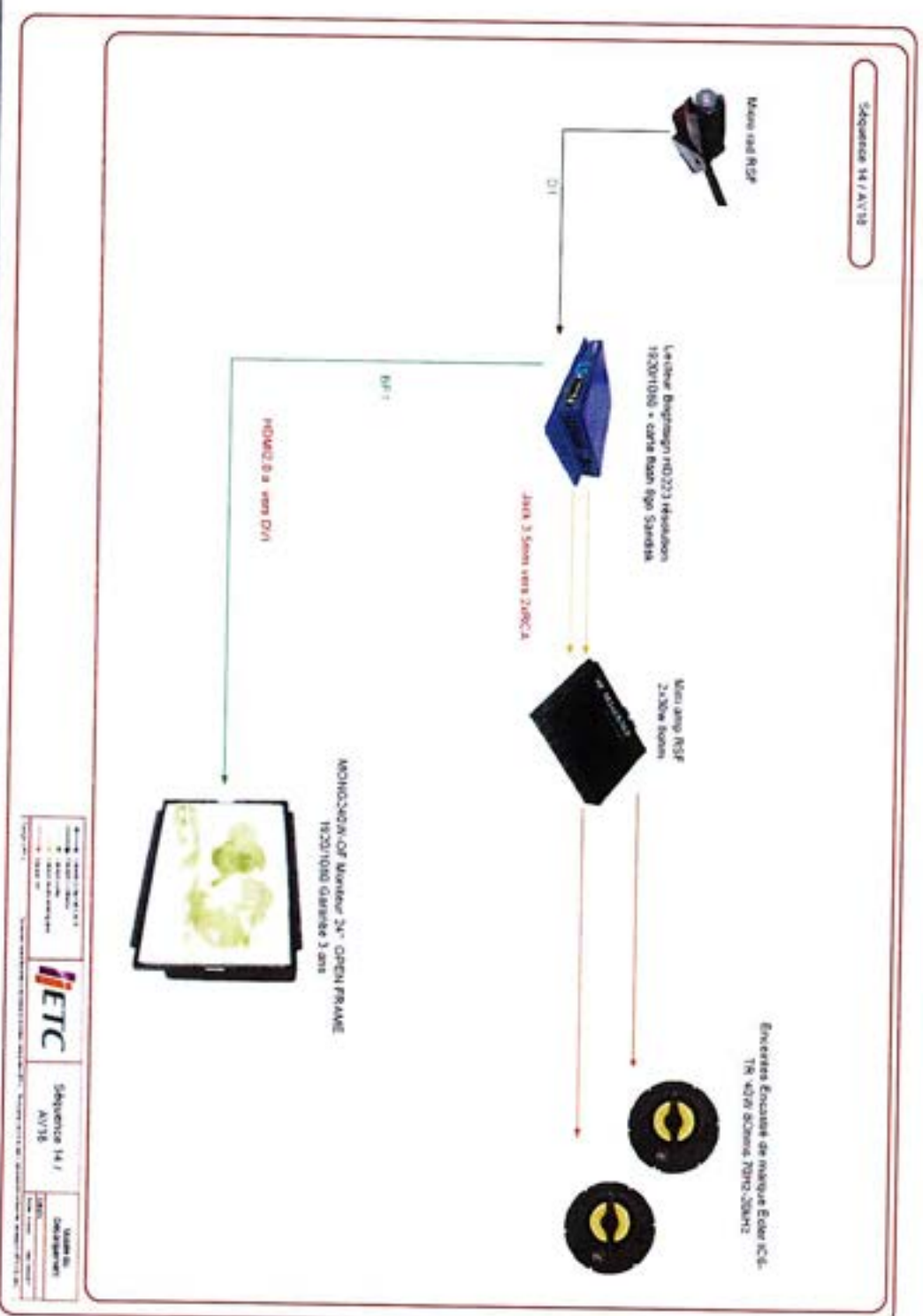
Matériel audiovisuel/

SYNOPSIS / séquence 13/



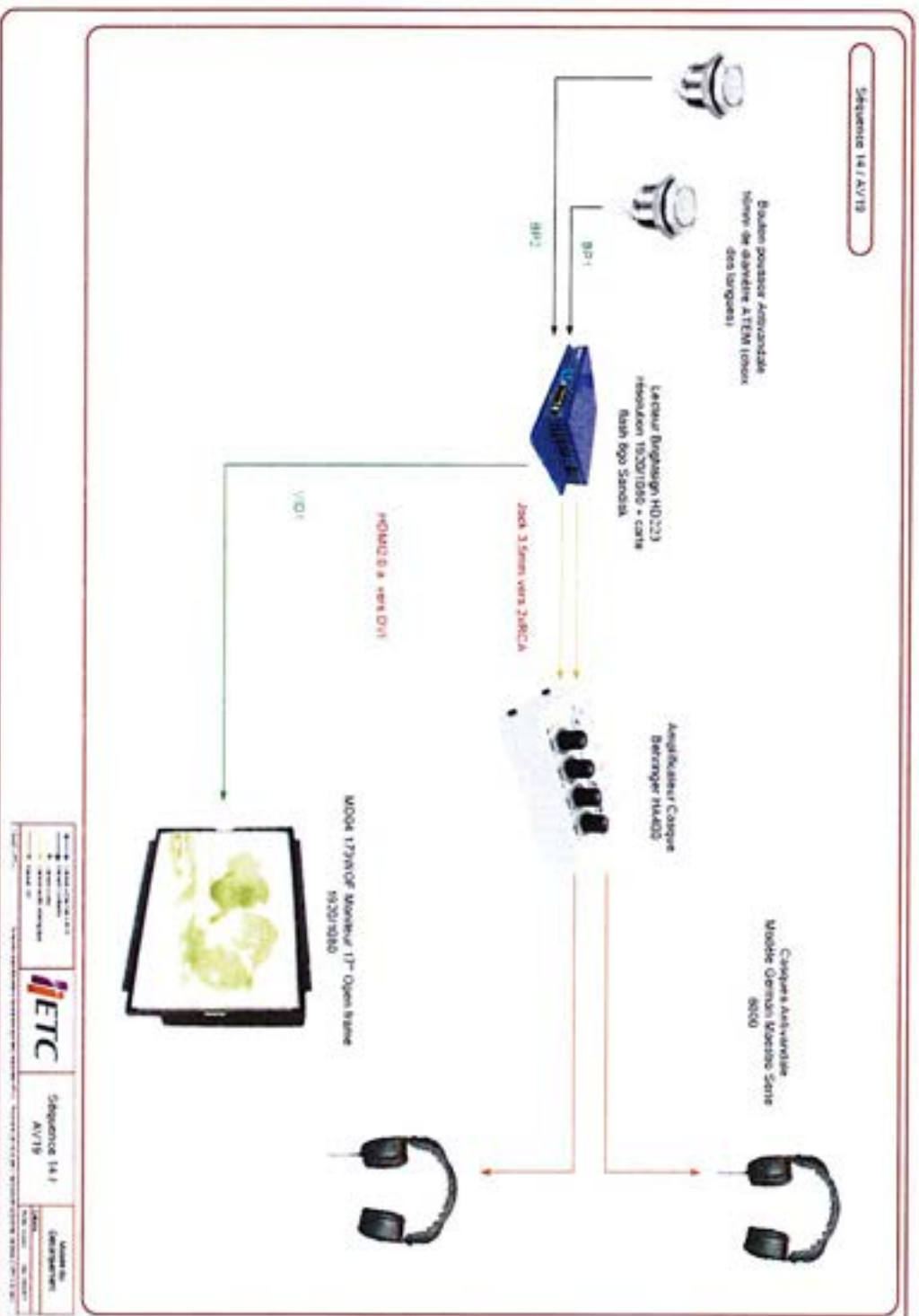
NOTE TECHNIQUE/ Matériel audiovisuel/

SYNOPSIS / séquence 14/



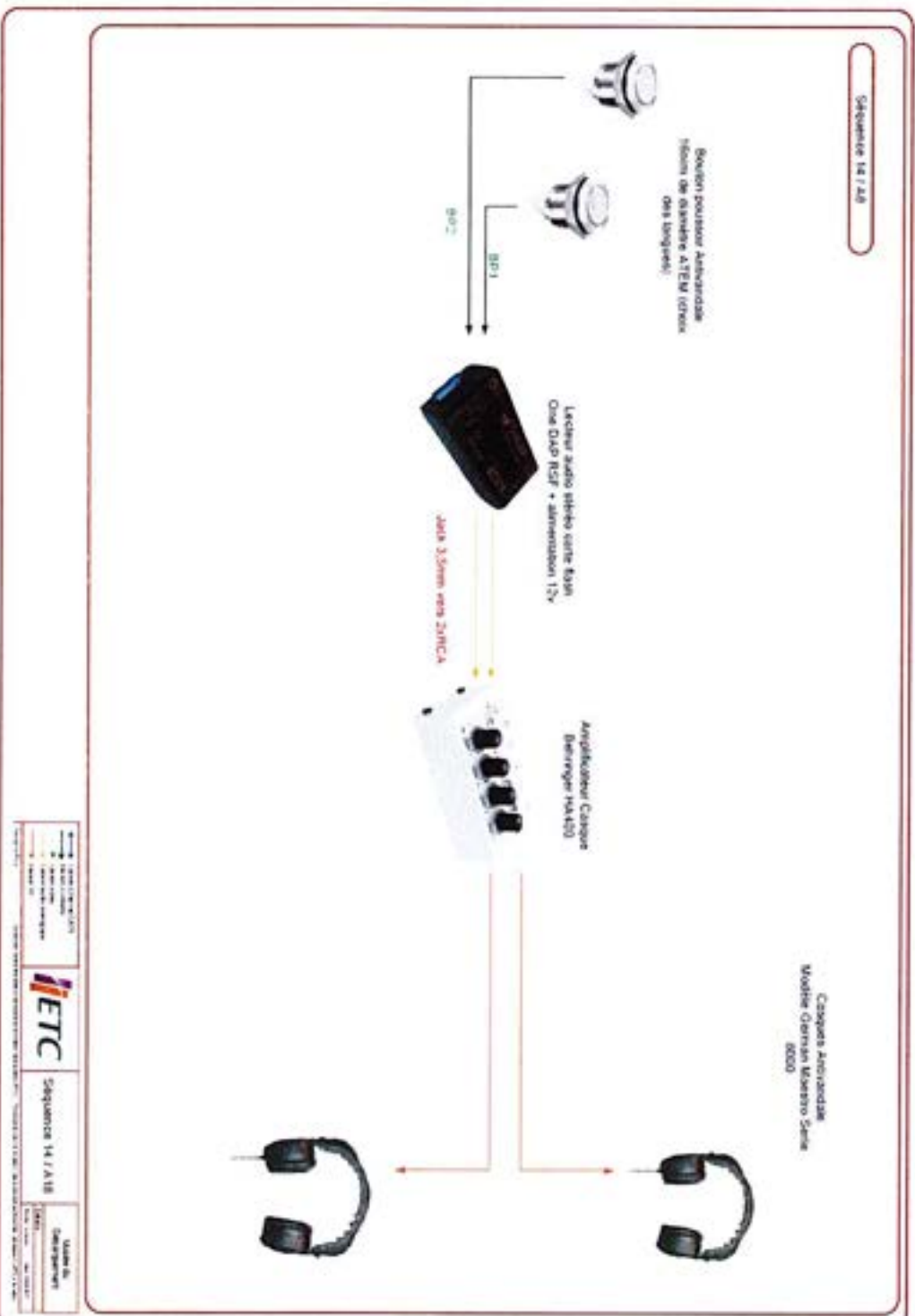
NOTE TECHNIQUE/ Matériel audiovisuel

SYNOPTIQUE/ séquence 14/



NOTE TECHNIQUE/ Matériel audiovisuel/

SYNOPTIQUE/ séquence 14/



NOTE TECHNIQUE

Câblage/

CÂBLE AUDIO

- Paire de brassage blindé 0,22mm
- Couleur : noir
- Nombre de connecteurs 2
- Section 0,22mm²
- Blindage Tresse de cuivre
- Température de fonctionnement 30°C à + 70°C

CÂBLE ÉLECTRIQUE

- Câble H07RN-F 3G2,5 mm² Souple
- Couleur : noir
- Conducteurs 3
- Section 2,5mm²

CÂBLE VIDÉO

- HDMI 2.0
- 60Hz UHD 4096 x 2160
- Prise en charge des profondeurs de couleur et HDR Deep color, format 3D.

CÂBLE RÉSEAU CAT 6

- Cordon cat.5 Real10 réalisé avec câble 4 paires 100 Ohm multibrin gris clair, S/FTP à gaine
- LSFRON non propagatrice de la flamme.
- Diamètre conducteurs : 0,14 mm².
- Câblage droit selon EIA/TIA T568A.
- Cordons munis du plug cat. 6A générique R&M à contacts CAD et reprise blindage à 360°.
- Systèmes de codage couleur interchangeables et réutilisables. 8 couleurs au choix.
- Compatible avec utilisation bague de verrouillage « Safe clip » et « Patch Guard ».
- Compatible avec système de sécurité R&Mfreeenet « Plug Guard »
- Version standard munie de manchons blancs (sans clips)
- Longueurs : de 0,5 à 20 mètres. (autres longueurs, nous consulter)
- Plug de couleur bleue pour différenciation avec connectique C5 Enhanced.
- Compatible catégories descendantes (5, 5e)

FICHES TECHNIQUES

SALE IMMERSIVE/ SÉQUENCE 1 2/ FICHES TECHNIQUES/

Un caisson de basses adapté à tous types d'enceintes et d'intérieurs, alliance d'ergonomie et de beauté, intégrant la nouvelle technologie Yamaha Twisted Flare Port pour des basses encore plus claires.



Amplificateur haute efficacité et circuit Dual Feedback

L'amplificateur intégré délivre une puissance totale de 250 W (NS-SW200 : 135 W) tout en maintenant la consommation d'énergie et l'émission de chaleur à haute vitesse est égale. Le circuit Dual Feedback réduit la distorsion en appliquant une double boucle de contre-réaction, pour une qualité audio cristalline.

Advanced YST II pour des basses profondes

Développée par Yamaha, la technologie Advanced YST II (Yamaha Active Servo Technology) combine les variations d'impédance et le principe du courant constant pour gérer le haut-parleur avec davantage de contrôle que la version précédente. Avec des circuits Convertisseur d'Impédance Avancé (AIFC), le système optimise l'impédance effective pour maintenir une réponse cohérente. La réponse des basses s'en retrouve plus stable et précise, influant positivement sur la qualité audio.

Cône woofer de 25 cm avec câble carré (NS-SW300)

Un grand woofer de 25 cm (NS-SW200 : 20 cm) est utilisé pour une configuration puissante. La bobine du haut-parleur utilise un câble carré avec une surface large qui génère de manière soignée une densité de flux magnétique plus élevée. Elle délivre une haute puissance, permettant une restitution des basses plus profonde.

Autres fonctions notables

- Consommation en veille de seulement 0,3 W
- Bouton veille automatique / sélection de sensibilité (haut, bas et éteint)
- Contrôle de phase (normal ou inversé)
- Bouton B.A.S.S. (SW100 seulement)

System Control et veille automatique

Le caisson peut être lié à l'amplificateur pour être allumé ou éteint automatiquement (System Control). Une fonction veille automatique est également présente : si aucun signal n'est reçu de l'amplificateur pendant un temps donné, le subwoofer se met en veille. Quand le signal est détecté, l'appareil s'allume automatiquement. Ce qui limite le gaspillage d'énergie.

Panneau de contrôle en façade

Les boutons d'alimentation et de volume, utilisés fréquemment, sont disposés en façade pour une accessibilité maximale. Ils sont disposés sur une surface inclinée à 45°, facilitant leur utilisation même lorsque l'appareil est sur le sol. Un indicateur LED rouge au-dessus du bouton d'alimentation permet de savoir si le subwoofer est sous tension.

Étant la forme arrondie de la façade, les panneaux qui la composent ont une apparence élégante et une robustesse naturelle. Ce subwoofer personnalise la puissance du son et s'accorde avec une large gamme d'enceintes. Plusieurs coloris sont disponibles, en parfaite harmonie avec votre intérieur.

d'intérieurs

Design élégant s'harmonisant avec tous types d'enceintes et

Spécifications principales

NS-SW300	250 W	20-160 Hz	25 cm	0,3 W	100 x 100 x 120 mm	18 kg
NS-SW200	135 W	20-160 Hz	20 cm	0,3 W	100 x 100 x 120 mm	11,2 kg
Code EAN NS-SW300 Piano White	495781250488					
Code EAN NS-SW300 Piano White	495781250488					
Code EAN NS-SW300 Black	495781250473					
Code EAN NS-SW300 Rosewood	495781250465					
Code EAN NS-SW300 Piano White	495781250473					
Code EAN NS-SW300 Black	495781250473					
Code EAN NS-SW300 Rosewood	495781250465					
Code EAN NS-SW200 Piano White	495781250473					
Code EAN NS-SW200 Black	495781250473					
Code EAN NS-SW200 Rosewood	495781250465					
Code EAN NS-SW200 Piano White	495781250473					
Code EAN NS-SW200 Black	495781250473					
Code EAN NS-SW200 Rosewood	495781250465					
Code EAN NS-SW200 Piano White	495781250473					
Code EAN NS-SW200 Black	495781250473					
Code EAN NS-SW200 Rosewood	495781250465					

Pour toutes informations complémentaires, veuillez consulter le site Internet ci-dessous.





KP52 Mark I

KP52W Mark I

Python
KP52 Mark I
3D line array element, selectable beam speaker

FEATURES

- Unique performance-to-size ratio
- Vertical, horizontal and 3D line-array applications
- Multiple 3.15" long-excursion full-range cone drivers
- Wide horizontal coverage
- Electronically protected
- Selectable 8 Ohm or 32 Ohm impedance
- Selectable vertical pattern (Spot - Flood)
- Weather proof, suitable for outdoor installations - IP54

COLORS AVAILABLE



Specific RAL code for a customized painted model



Brushed, Polished, Gold Plated and Stain-less steel finishes



K-BASE2, K-FLY2, KK-CLUSTER0, KK-CLUSTER30, KK-CLUSTER60, K-FOOT2, K-JOINT2, KP-STAGE, K-WALL2L, K-WALL2, K-KCLAMP/S, K-KCLAMP

ACCESSORIES

APPLICATIONS

Broadcast/ TV Studio
Club/ DJ Set
Corporate/AV
Hospitality
House of Worship
Large Congregations
Live Concerts
Store
Theatre
Theme Park

The K-array KP52 is a passive speaker system comprised of six 3.15" neodymium magnet transducers housed in an elegant and sturdy stainless steel chassis. The vertical dispersion pattern can be switched for wide or narrow coverage, allowing for a great variety of applications. The six closely spaced cone drivers provide true line array characteristics - phase coherence, low distortion and focused listening in both the near field, and at a distance from the speaker. A variety of rigging accessories provides many linking and hanging options for the KP52 (0.5 meter) and the larger (1 meter) KP102 to be combined in vertical and horizontal line array configurations to satisfy many different venue requirements during temporary events and for permanent installations.

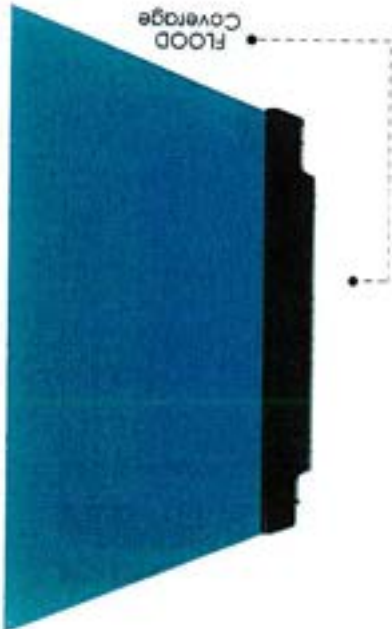
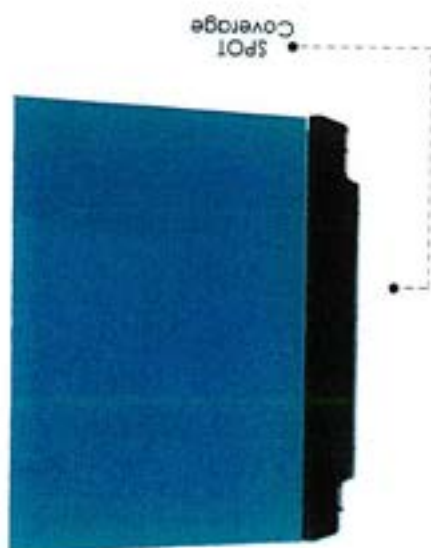
For easier use and integration with other speakers or amplifiers, the KP52 allows the user to select two different values of impedance (8Ω - 32Ω). At 32Ω as many as 4 KP52 speakers can be powered off a single amplifier channel at 8Ω (up to 8 units @ 4Ω), which eliminates the need of 70 V amplifiers for wider distributed installed systems.

The KP52 is able to reproduce the whole vocal frequency range with high intelligibility. Starting from 100 Hz, integrating one of the K-array powered subwoofers (KMT12, KMT18, KMT21), configured with specific presets for the KP52 assures excellent coverage of the entire musical frequency range.

The K-array KA amplifier series have pre-sets optimized for KP52.

All KP52 components are designed by the K-array R&D department and custom-made under the K-array quality control system.

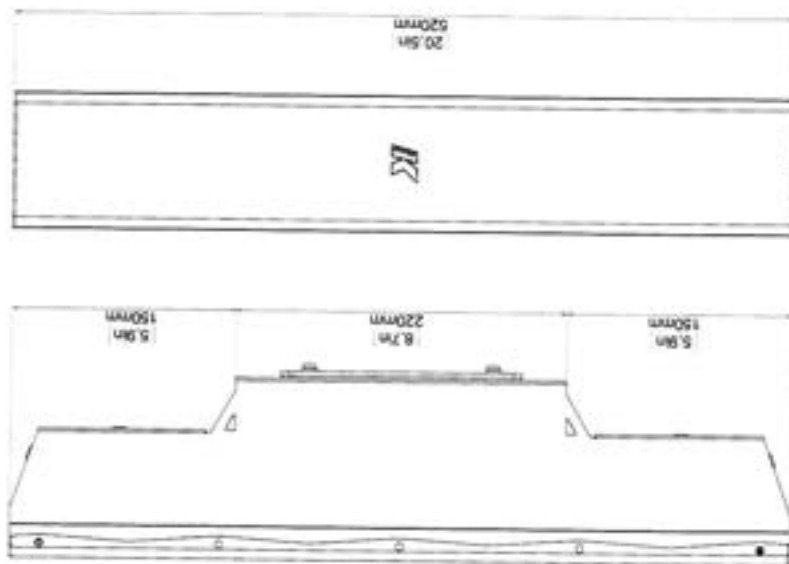
The vertical dispersion pattern can be switched for wide or narrow coverage, allowing for a great variety of applications.



TECHNICAL SPECIFICATIONS

ACOUSTICS		TRANSducers		Full range		SELECTION SWITCHES		Impedance		Coverage		POWER AUDIO INPUT/LINK		Connector		Wiring		Type		CERTIFICATION		IP		PHYSICAL		Dimensions		Weight	
Power handling		360 W _{max}		600W				100 Hz - 20 kHz (-10dB) ^{1,2}		8 Ω / 32 Ω (selectable)		96 dB ^{1,3}		122 dB (cont.) - 128 dB (peak)		COVERAGE		90°		10° - 45° (selectable)		CROSSOVER		External Crossover required		100 Hz, 24 dB/oct suggested minimum			
Frequency Range																													
Impedance																													
SPL 1W/1m																													
Maximum SPL																													
Horizontal																													
Vertical																													
Type																													
Frequency																													
Notes for data																													
1. With dedicated preset.																													
2. Measured @ 4 m than scaled @ 1 m.																													
3. Measured with musical signal.																													
New materials and design are introduced into existing products without previous notice. Present systems may differ in some respects from those presented in this catalogue.																													

New materials and design are introduced into existing products without previous notice. Present systems may differ in some respects from those presented in this catalogue.



ARQIS105

CABINET LOUSPEAKERS

Architectural Loudspeaker Cabinet

PRODUCT OVERVIEW

ARQIS105 is a 2-way wooden loudspeaker cabinet with a compact format, stylish aesthetics, excellent sound quality and long term reliability, featuring 70 W RMS @ 8 ohm, 5.25" woofer and 1" HF tweeter. Its smart wall bracket (included), allows for pan & tilt adjustment, employing a single screw for fastening. It has been specifically designed to fulfil permanent installation requirements where a perfect balance between sound performance and architectural/interior's design matching is a must.

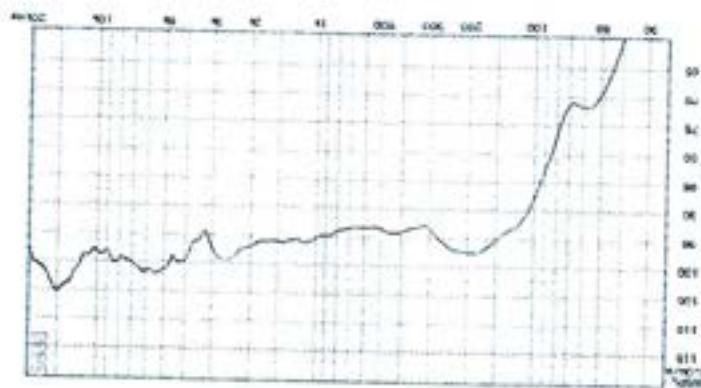
KEY FEATURES

- Full range, 2-way architectural loudspeaker
- 70 W RMS @ 8 ohm
- 5.25" low frequency woofer
- 1" high frequency tweeter
- Double INPUT/STACK connector, Euroblock type, with security attachment screws to avoid accidental disconnection
- Wall bracket included, allowing for pan & tilt adjustment, employing a single screw for fastening
- Metal safety sling included, to avoid drops in case of accidental detachment from the wall surface
- Available in black or white finish

APPLICATIONS

- Shopping malls
- Sports centres
- Theatres / auditoriums
- Conference rooms
- A/V presentations
- Corporate rooms
- Perimeter reinforcement in clubs
- Cafés
- Restaurants
- Theme parks

FREQUENCY RESPONSE



TECHNICAL DATA

Ways	2
Nominal low impedance	8Ω
Max RMS power	70 W RMS
Program power	140 W RMS
Efficiency SPL 1W 1m	89dB
Sound pressure (Max W/1m)	110dB
Frequency response (±3dB)	85Hz÷20kHz
Dimensions (WxHxD)	186x280x210mm
Weight	3.6kg

All product characteristics are subject to variation due to production tolerances. NEEC AUDIO BARCELONA S.L. reserves the right to make changes or improvements in the design or manufacturing that may affect these product specifications.

Motors, 166-168 08038 Barcelona - Spain - (+34) 932238403 information@ecler.es www.ecler.com

Accessoires

■ N/A

Power output (RMS)	70 W
Maximum SPL (dB@1m)	89 dB
Frequency response (-3 dB)	85Hz - 20kHz
Dispersion (HxV)	90° x 90°
Dimensions / weight	H: 186 mm L: 280 mm W: 210 mm 3,6 Kg

Principales caractéristiques

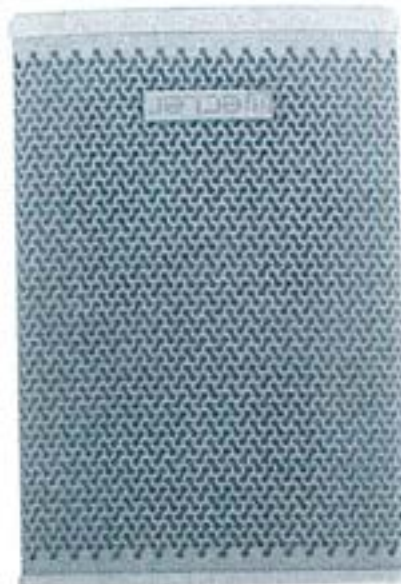
- Enceinte architecturale 2 voies large bande
- 70 W RMS sous 8 Ω
- Woofer de 5,25" pour les basses fréquences
- Tweeter de 1" pour les hautes fréquences
- Double connecteur d'entrée/renvoi, de type Euroblock, avec vis de fixation de sécurité pour éviter toute déconnexion accidentelle.
- Fixation murale fournie, permettant de faire pivoter et d'incliner l'enceinte, une seule vis servant au blocage
- Bague métallique de sécurité incluse pour éviter les chutes en cas de détachement accidentel de la surface murale
- Existe en noir et en blanc

■ Bague métallique de sécurité incluse pour éviter les chutes en cas de détachement accidentel de la surface murale

■ Double connecteur d'entrée/renvoi, de type Euroblock, avec vis de fixation de sécurité pour éviter toute déconnexion accidentelle.

■ Fixation murale fournie, permettant de faire pivoter et d'incliner l'enceinte, une seule vis servant au blocage

■ Bague métallique de sécurité incluse pour éviter les chutes en cas de détachement accidentel de la surface murale



L'ARQIS105 ECLER est une enceinte 2 voies en bois d'un format compact à l'esthétique élégante, avec une excellente qualité sonore et une grande fiabilité à long terme, son woofer de 5,25" et son tweeter HF de 1" acceptant 70 W RMS sous 8 Ω. Ses astucieuses fixations murales (fournies) permettent un réglage d'orientation horizontal et d'inclinaison, ne nécessitant qu'une seule vis pour le blocage. Elle a été spécifiquement conçue pour répondre aux exigences des installations fixes dans lesquelles un équilibre parfait entre performance sonore et adaptation au design architectural/d'intérieur est un must.

Enceinte architecturale



- ### Applications
- Centres commerciaux
 - Centres sportifs
 - Théâtres/auditoriums
 - Salles de conférence
 - Présentations audiovisuelles
 - Salles d'entrées
 - Sonorisation secondaire dans les clubs
 - Cafés
 - Restaurants
 - Parcs à thème

MPA6-150R

LOW IMPEDANCE (8/4/2Ω)

Multichannel Amplifier



PRODUCT OVERVIEW
MPA6-150R is a 6 x 150 W multichannel amplifier, a model belonging to our well known line of multi-zone power amplifiers for high end installations, the MPA series.

KEY FEATURES

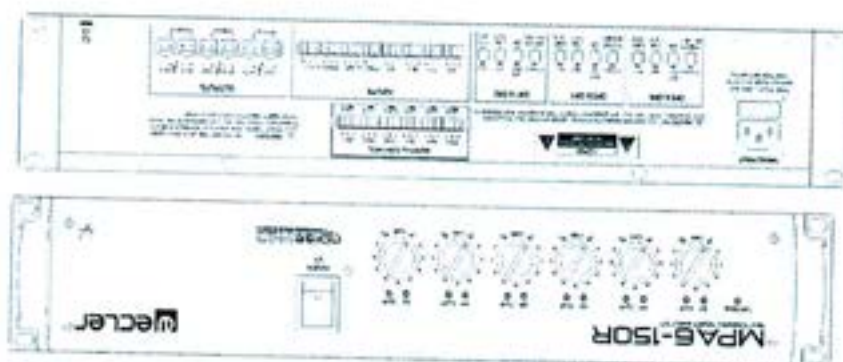
- 2 analogue audio inputs x 6 powered audio outputs
- Individual input sensitivity controls with sealing possibility to avoid unwanted manipulation
- Signal presence (SP) and CLIP indicators for each channel
- Balanced inputs, XLR connectors (Euroblock in 150W models), Euroblock output connectors
- Stack outputs on all models
- Input channels link switch for superior versatility
- Independent VCA (EUROBLOCK) volume remote control port for each input channel, ready for external 0-10 V signal, compatible with Wpm series wall panels
- Noiseless convection cooling (80 and 150 W models)
- Dual Slope Controlled Fan system (MPA4-400R)
- Totally protected against shorting, DC at the outputs and overheating

CERTIFICATIONS

- Public Address
- Theme parks
- Clubs
- Theme restaurants
- Multi-purpose halls
- Boardrooms and conference halls
- Franchise retail shops

- EN60065:2014
- EN55103-1:2009
- EN55103-2:2009
- 2006/95/EC
- 2004/108/CE

MECHANICAL DIAGRAMS



TECHNICAL DATA

POWER 20-20kHz 1% THD

1 Channel @ 4Ω	200 WRMS
1 Channel @ 8Ω	115 WRMS
All Channels @ 4Ω	123 WRMS
All Channels @ 8Ω	85 WRMS
1 Bridged channel @ 8Ω	350 WRMS
1 Bridged channel @ 8Ω	235 WRMS
Frequency response (-1 dB)	15Hz - 35kHz
Filter (Hi-Lo) 3rd order Butterworth	160Hz-160Hz
*THD+Noise @ 1kHz Full Power	<0.05%
*Intermodulation distortion 50Hz & 7kHz, 4:1	<0.05%
*T.M 100	<0.04%
*S+N/N 20Hz - 20kHz @ 1W/4Ω	<85dB
CMMR	>55dB
Damping factor	>300
Slew rate	±15V/μs
*Channel crosstalk @ 1kHz	>55dB
Input Sensitivity / Impedance	0dBV / >20kΩ
Anticlip	2% THD
Mains voltage	See characteristics in the back of the unit
Power consumption (pink noise, 1/3 power @ 4 Ohms)	233VA
Power consumption (pink noise, 1/3 power @ 4 Ohms)	350VA
Dimensions	482.6x86x373mm
Weight	10.8kg

*VCA OFF

MultidAP-IP

Digital Audio Player



RSF Fabrication
45 Av, Marcel Dassault
31500 TOULOUSE France
www.rsf-europe.com
E-Mail : s.fernandez@rsf-europe.com
Distribution export
RSF Europe
Arelersstrooss 31A
L-8552 Oberpallen G-D Luxembourg



Le MultidAP-IP est un rack 19 pouces 1U. Comme tous les produits RSF, c'est un produit entièrement statique avec une fiabilité extrême.



Le MultidAP-IP est modulaire.

Il existe de la version 1 flux 2 pistes à la version 8 flux 16 pistes. Le produit est équipé d'une carte SD de 2 Go par flux.

Son utilisation est extrêmement simple :

- Copier des sons en Wav 16 bits, ou en MP3, sur la carte. (99 sons max).
- Nommer les fichiers selon la documentation et le lecteur fonctionne :
- 1. Soit par flux en boucle ou piloté par les contacts secs, avec la possibilité d'avoir un port de sortie.
- 2. Soit avec un pilotage général programmable sur 4 ports (entrées et sorties), en RS232 ou par Ethernet.

Le MultidAP-IP est équipé d'un générateur de Genloc. De ce fait, la lecture des différents flux se fait de manière parfaitement synchrone.

Une entrée sortie de ce Genloc permet de coupler plusieurs MultidAP-IP.

L'interface Ethernet, équipée également d'une carte SD pour une programmation très simple, permet d'utiliser une interface HTML,

personnalisable, pour piloter le MultidAP-IP à distance, ou une interface FTP pour des mises à jour.

Caractéristiques techniques

- Le **MultiDAP-IP** est un lecteur audio statique multi-flux modulaire, équipé, par flux, d'une carte flash formatée en FAT16. Capacité maximum reconnue 2 Go.
- Le **MultiDAP-IP** diffuse de manière autonome des fichiers Wav ou MP3.
- Le **MultiDAP-IP** possède, par flux, 2 entrées de déclenchement paramétrable en multiplexé 3 sons, ou en 1 entrée et 1 sortie.
- Le **MultiDAP-IP** est équipé, par flux, d'un égaliseur grave aigu semi-paramétrique paramétrable (choix de la fréquence et du niveau) et d'un volume stéréo paramétrable.
- Le **MultiDAP-IP** peut diffuser un message en boucle dite « Parfaite ».
- Le **MultiDAP-IP** reconnaît immédiatement la carte et son contenu à l'insertion.
- Le **MultiDAP-IP** possède 4 ports IO paramétrables par une page HTML.
- Le **MultiDAP-IP** est entièrement pilotable par une interface RS232, ou par un port Ethernet.



Caractéristiques :

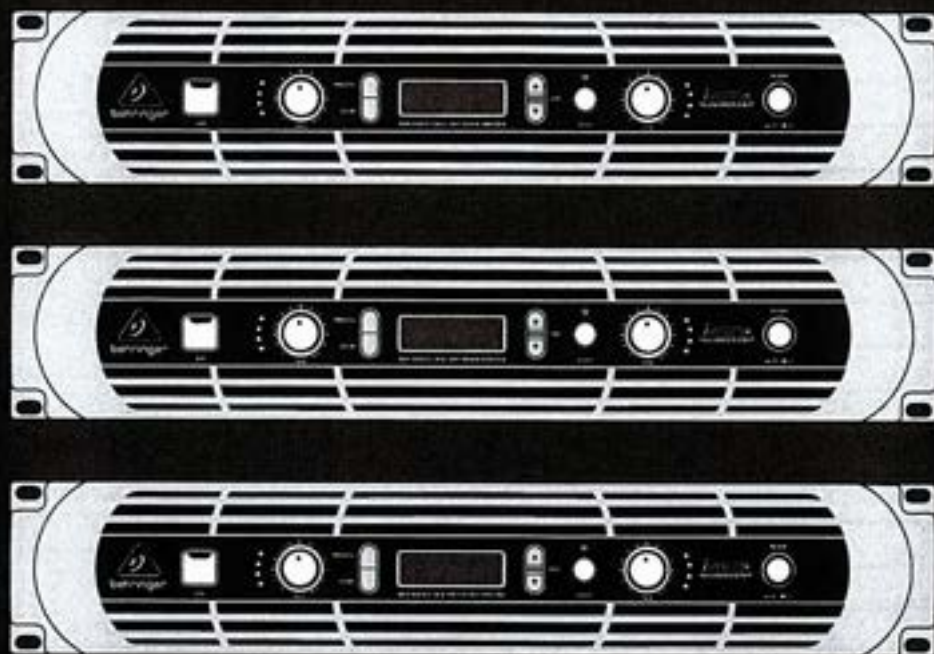
Boîtier :
 Montage :
 Carte Flash par Flux :
 Carte Flash IP :
 Sorties audio par Flux:
 Format audio :
 Lecture des fichiers :

Utilisation :

- La documentation d'utilisation est dans la carte SD.
- C'est un fichier PDF.
- Rajouter devant le nom le numéro de son avec le mode de lecture.
- Copier sur la carte, SD, livrée le ou les fichiers Wav ou MP3.
- Au besoin modifier le fichier texte Config.txt pour régler le volume, les graves les aigus et quelques paramètres.
- Pour un pilotage général, paramétrez la page HTML.

Métal dimensions 483 mm X 44 mm X 100 mm - 1700 GR
 Fixations normalisées Rack 1 U 19 pouces
 SD 1 ou 2 Go Formatage FAT16 (la carte, SD, est livrée).
 SD 1 ou 2 Go Formatage FAT16 (la carte, SD, est livrée).
 2 prises Cinch (RCA). Niveau: 0dB. Basse impédance.
 Wav 16 bits, 32 KHZ, 44,1 KHZ, 48 KHZ.
 MP3 32 KHZ, 44,1 KHZ, 48 KHZ de 32 à 320 kbit/s
 Paramétrage par édition d'un fichier texte : Config.txt
 Et par modification du début des noms des fichiers.
 Page HTML pour paramétrage déclenchements généraux





User Manual



iNUKE **NU6000DSP/NU3000DSP/NU1000DSP**

Ultra-Lightweight, High-Density 6000/3000/1000-Watt Power
Amplifier with DSP Control and USB Interface

EN Table of Contents

Thank you	2
Important Safety Instructions	3
Legal Disclaimer	3
Limited Warranty	3
1. Introduction	5
1.1 Before you get started	5
2. Control Elements	5
2.1 Front panel	5
2.2 Rear panel	6
3. DSP Processor	6
3.1 Processor Functionality	6
3.2 Front Panel control	6
3.3 BEHRINGER Amp Remote Software	10
4. Applications	16
4.1 Bi-amping	16
5. Installation	18
5.1 Rack mounting	18
5.2 Connections	18
6. Specifications	19

Thank you

Thank you for choosing a BEHRINGER INUKE DSP power amplifier. This piece of high-end gear was developed for professional use in live applications, and this amplifier incorporates many ground-breaking features that will make it a useful, dependable, and flexible part of your sound system.

The INUKE DSP amps feature an onboard Digital Signal Processor for precise, customized control. Multiple routing options, from dual mono to bridged operation, to special functions dedicated to bi-amping applications, give this amplifier unprecedented flexibility. Even better, all of these functions can be controlled remotely from a PC via the downloadable BEHRINGER Amp Remote control software.

This manual first describes the panel controls and connection points before delving into the DSP functionality. Special sections describe how you can program the DSP by using either the amp's front panel controls, or by using the Amp Remote software.

Read this manual and have fun as you become an INUKE DSP Power User!

EN Important Safety Instructions

Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock.

Use only high-quality professional speaker cables with 1/4" TS or twist-locking plugs pre-installed. All other installation or modification should be performed only by qualified personnel.



This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure - voltage that may be sufficient to constitute a risk of shock.



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

**Caution**

To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside. Refer servicing to qualified personnel.

**Caution**

To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.

**Caution**

These service instructions are for use by qualified service personnel only.

To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Use only attachments/accessories specified by the manufacturer.



12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid

injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.

16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

**LEGAL DISCLAIMER**

TECHNICAL SPECIFICATIONS AND APPEARANCES ARE SUBJECT TO CHANGE WITHOUT NOTICE AND ACCURACY IS NOT GUARANTEED. BEHRINGER IS PART OF THE MUSIC GROUP (MUSIC-GROUP.COM). ALL TRADEMARKS ARE THE PROPERTY OF THEIR RESPECTIVE OWNERS. MUSIC GROUP ACCEPTS NO LIABILITY FOR ANY LOSS WHICH MAY BE SUFFERED BY ANY PERSON WHO RELIES EITHER WHOLLY OR IN PART UPON ANY DESCRIPTION, PHOTOGRAPH OR STATEMENT CONTAINED HEREIN. COLORS AND SPECIFICATIONS MAY VARY FROM ACTUAL PRODUCT. MUSIC GROUP PRODUCTS ARE SOLD THROUGH AUTHORIZED FULLFILLERS AND RESELLERS ONLY. FULLFILLERS AND RESELLERS ARE NOT AGENTS OF MUSIC GROUP AND HAVE ABSOLUTELY NO AUTHORITY TO BIND MUSIC GROUP BY ANY EXPRESS OR IMPLIED

UNDERTAKING OR REPRESENTATION. THIS MANUAL IS COPYRIGHTED. NO PART OF THIS MANUAL MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING AND RECORDING OF ANY KIND, FOR ANY PURPOSE, WITHOUT THE EXPRESS WRITTEN PERMISSION OF MUSIC GROUP IP LTD.

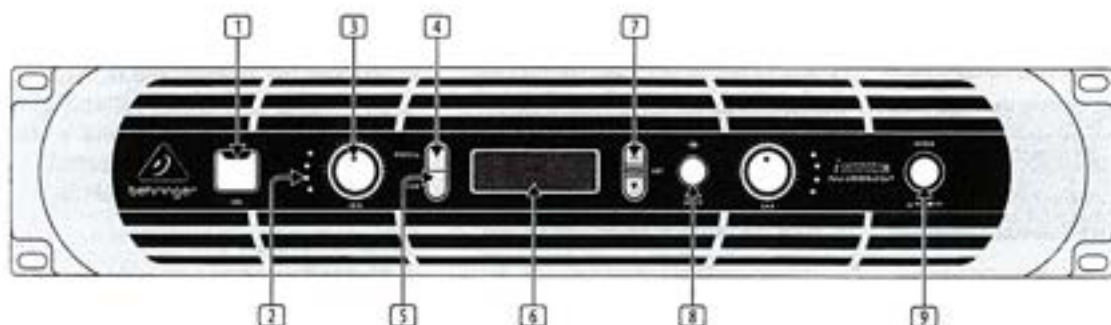
ALL RIGHTS RESERVED.

© 2012 MUSIC Group IP Ltd.

Trident Chambers, Wickhams Cay, P.O. Box 146, Road Town, Tortola, British Virgin Islands

LIMITED WARRANTY

For the applicable warranty terms and conditions and additional information regarding MUSIC Group's Limited Warranty, please see complete details online at www.music-group.com/warranty.



Front panel control elements

1. Introduction

1.1 Before you get started

1.1.1 Shipment

Your INUKE amplifier was carefully packed at the factory, and the packaging is designed to protect the unit from rough handling. Nevertheless, we recommend that you carefully examine the packaging and its contents for any signs of physical damage that may have occurred during transit.

- If the unit is damaged, please do NOT return it to BEHRINGER, but notify your dealer and the shipping company immediately. Otherwise, claims for damage or replacement may not be granted.

1.1.2 Initial operation

Please make sure the unit is provided with sufficient ventilation, and never place your INUKE amp on top of other heat-emitting equipment or in the vicinity of a heater to avoid the risk of overheating.

The mains connection is made via the enclosed power cord and a standard IEC receptacle. It meets all international safety certification requirements.

- Please make sure that all units have a proper ground connection. For your own safety, never remove or disable the ground conductor from the unit or the AC power cord.
- The sound quality may diminish within the range of powerful broadcasting stations and high-frequency sources. Increase the distance between the transmitter and the device and use shielded cables for all connections.

1.1.3 Online registration

Please register your new BEHRINGER equipment right after your purchase by visiting <http://behringer.com> and read the terms and conditions of our warranty carefully.

Should your BEHRINGER product malfunction, it is our intention to have it repaired as quickly as possible. To arrange for warranty service, please contact the BEHRINGER retailer from whom the equipment was purchased. Should your BEHRINGER dealer not be located in your vicinity, you may directly contact one of our subsidiaries. Corresponding contact information is included in the original equipment packaging (Global Contact Information/European Contact Information). Should your country not be listed, please contact the distributor nearest you. A list of distributors can be found in the support area of our website (<http://behringer.com>).

Registering your purchase and equipment with us helps us process your repair claims more quickly and efficiently.

2. Control Elements

2.1 Front panel

- 1 **USB** connection enables firmware updates and control over parameters via computer. Please visit Behringer.com to download DSP control software for your computer. The USB port is for amplifier configuration only.
- 2 **SIGNAL and LIMIT LEDs** display the signal level for each channel. Reduce the input gain if the red LIMIT LED lights up continuously.
- 3 **CH A/CH B CONTROLS** adjust the input level. To increase signal gain, rotate the knobs clockwise; to reduce the gain, rotate the knobs counter-clockwise.
- 4 **PROCESS** button steps through the DSP processing modules.
- 5 **SETUP** button steps through parameters within DSP processing modules.
- 6 **LCD SCREEN** displays the current DSP module and parameter settings.
- 7 **UP/DOWN/EXIT** buttons step through DSP modules and parameters or exit to the top-level INUKE screen (center button).
- 8 **SELECT** encoder knob toggles between Graphic and Edit modes (when pressed) and changes parameter values (when rotated).
- 9 **POWER** button turns the amplifier on and off.



Rear panel control elements (NU6000DSP shown)

2.2 Rear panel

- 10 **BREAKER** (automated fuse, NU6000DSP only). After eliminating the cause of faulty operation, simply depress the BREAKER and power up the unit again. The BREAKER acts in place of common discardable fuses.
- 11 **POWER SOURCE** jack accepts the included IEC power cable.
- 12 **VENTILATION FAN** speed adjusts automatically to ensure trouble-free operation.
- 13 **TWIST-LOCKING SPEAKER OUTPUTS** connect the amplifier to the speakers using professional speaker cables with twist-locking plugs.
- 14 **INPUTS** route line-level input signals into these combination jacks using XLR, balanced 1/4" TRS, or unbalanced 1/4" TS connectors.

3. DSP Processor

3.1 Processor Functionality

The INUKE DSP processor manipulates your signal in the digital domain, offering tremendous flexibility and control. You may control and program the DSP processor via either the INUKE amplifier's front panel or remotely by computer using the BEHRINGER Amp Remote software (available for download from behringer.com).

By using the DSP processor, you can program all amplifier functions and parameters—except for the CH A and CH B input gain settings, which can only be controlled using the CH A / CH B knobs on the amplifier's front panel.

3.2 Front Panel control

The following material describes the DSP's screen organization and how to program the processor's various functions by manipulating your INUKE amplifier's front panel controls.

3.2.1 Main top-level screen

The top-level screen displays "INUKE," as well as the model name: NU1000DSP, NU3000DSP, or NU6000DSP.



3.2.2 SETUP screens

The SETUP screens access the preset, panel lock, device naming, and LCD screen contrast functions. To access these functions, press the SETUP button, and then move up and down through the top-level screens by pressing either the SETUP button or the UP / DOWN arrow buttons.

SETUP 1/4: Load Preset

The top-level Load Preset screen displays the current Preset name (up to 10 characters) and Preset number (1–20). Subsidiary screens offer options for loading, saving, and naming Presets.



Below the Preset name, this screen displays the "Load Preset" option by default. Rotate the SELECT encoder clockwise to access the "Save Preset" option.



Note: Preset #1:INIT_DATA cannot be overwritten. Select this preset any time you want to restore the amp's default settings.

Loading a Preset

1. Make sure the "Load Preset" option appears on the screen. (Rotate the SELECT encoder to toggle between "Load Preset" and "Save Preset.")



2. Press the SELECT encoder knob to access the DSP's internal Preset list on the next sub-screen. The correct sub-screen will display the LOAD PRESET option in the upper right-hand corner of the screen.
3. Scroll up and down through the Preset list by rotating the SELECT encoder knob. As you scroll, the Preset number will appear to the left below the disk icon.
4. To load the selected Preset, you may either press the SELECT encoder or press the UP arrow button.

Saving a preset

1. Make sure the "Save Preset" option appears on the screen. (Rotate the SELECT encoder to toggle between "Load Preset" and "Save Preset.")



EN

- Press the SELECT encoder knob to access the DSP's internal Preset list on the next sub-screen. The correct sub-screen will display the EDIT TITLE and SAVE PRESET options on the right-hand side of the screen.



- Scroll through the list until you find an EMPTY Preset slot or another Preset you wish to overwrite.
- If you wish to edit your Preset title before saving, press the UP arrow button to choose the EDIT TITLE option.



- Edit the Preset title (see "Editing the Preset" title below).
- Select the SAVE PRESET option by pressing the DOWN arrow key.

Editing a Preset title

- Make sure the "Save Preset" option appears on the screen. (Rotate the SELECT encoder to toggle between "Load Preset" and "Save Preset.")



- Press the SELECT encoder knob to access the DSP's internal Preset list on the next sub-screen. The correct sub-screen will display the EDIT TITLE and SAVE PRESET options on the right-hand side of the screen.



- Scroll through the Preset list by rotating the SELECT encoder knob.
- Select a Preset slot as a save destination by pressing the SELECT encoder knob.
- Press the UP arrow button to select the EDIT TITLE function. The EDIT TITLE window will appear, with alphanumeric characters in a row at the top and the current title directly below with the editing cursor.



- Select the backward arrow from the row of characters by rotating the SELECT knob until the backward arrow is highlighted.
- Press the SELECT encoder knob to erase characters. The cursor will erase characters from right to left across the existing title.
- Rotate the SELECT encoder to select new characters from the row above the current Preset title.
- Insert selected characters into the Preset title by pressing the SELECT encoder knob. Once you select and insert a character, the editing cursor will change direction and advance from left to right.
- Save the new Preset title by pressing the DOWN arrow key to activate the SAVE PRESET function.

SETUP 2/4: Panel Lock

The Panel Lock function uses a 4-character alphanumeric access code to lock the front panel controls and prevent unauthorized changes to DSP settings. Current settings can still be viewed while the unit is locked, but the parameters cannot be changed.

The amplifier can only be locked or unlocked from the Panel Lock screen.

Locking the amplifier

- Go to the Panel Lock screen by pressing the SETUP button.
- Press the SELECT encoder knob to access the password screen.



- Set an access code by using the SELECT encoder knob. Rotate the knob to scroll through the character list, and then select characters by pressing. With each press on the SELECT encoder knob, the password cursor will advance left to right by one space.



- The amplifier will automatically lock when you select the final character for the access code. The display will flash a brief confirmation message: "Device Locked!"
- The status displayed on the Panel Lock screen will state "LOCKED!"

Unlocking the amplifier

- Go to the Panel Lock screen by pressing the SETUP button.
- Press the SELECT encoder knob to access the password screen.
- Enter the access code by using the SELECT encoder knob. Rotate the knob to scroll through the character list, and then select characters by pressing. With each press on the SELECT encoder knob, the password cursor will advance left to right by one space.
- The amplifier will automatically unlock when you select the final character for the access code. The display will flash a brief confirmation message: "Unlocked."
- The status displayed on the Panel Lock screen will state "OFF."

SETUP 3/4: Device Name

Each INUKE DSP amplifier can be individually named for easy identification within a rack or remotely via the BEHRINGER Amp Remote control software (go to Behringer.com to download the software).

Naming the amplifier

- Access the Device Name screen by pressing the SETUP button.



- Press the SELECT encoder knob to access the editing screen.



- Choose the backwards arrow by turning the SELECT knob and press it to delete the existing characters of the current preset name.
- Rotate the SELECT encoder to select new characters from the row above the current amplifier name.
- Insert selected characters into the new amplifier name by pressing the SELECT encoder knob. Once you select and insert a character, the editing cursor will change direction and advance from left to right.
- Save the new amplifier name by pressing the DOWN arrow key to activate the SAVE TITLE function.

SETUP 4/4: Contrast

The Contrast screen allows you to adjust the LCD screen's contrast level. The Contrast parameter ranges from 1–30, with 30 representing maximum contrast. Rotate the SELECT encoder knob to adjust the Contrast setting.



3.2.3 PROCESS screens

Pressing the PROCESS button opens up the various screens that determine the signal path setup and that control processing parameters for the DSP modules: I/O, PEQ, XOVER, DEQ, DELAY, and LIMIT.

You can move between top-level module screens by pressing the PROCESS button.

I/O

The I/O module sets up the signal routing inside the DSP from input to output. Press and rotate the SELECT encoder knob to choose between dual mono, stereo, bi-amped, or bridged routing options.

DUAL



DUAL (dual mono) mode routes each channel input, A and B, through completely separate parallel signal paths with independent outputs for each channel. Each channel may be processed with its own unique filter, equalization, signal delay, and limiter settings.

STEREO



STEREO mode routes the signal from both the A and B inputs through a single series of DSP modules. The parallel DSP modules process the A and B signals with identical, linked settings (only module "A" parameter settings appear on subsequent DSP module screens).

BIAMP1



BIAMP1 mode splits the Channel A input signal at a programmable frequency point, and then routes the resulting high and low frequency signals through a parallel chain of DSP modules with independent equalization, signal delay, and limiter settings. In BIAMP1 mode, Output A routes low frequencies to a low-range speaker, while Output B connects to a high-frequency transducer.

BIAMP2



BIAMP2 mode operates identically to BIAMP1 mode, except that the output signals are swapped between Outputs A and B (i.e., Output B handles low frequencies while Output A handles high frequencies). The swapped A and B output routing allows the user to quickly correct reversed high/low speaker connections without having to physically access the amplifier's back panel and manually change the speaker connection.

BRIDGE



BRIDGE mode combines the signals from Inputs A and B into a blended mono signal and then routes the resulting mono signal through a single chain of DSP modules, leading to a combined mono output. The mono output signal is identical at Outputs A and B, and the amplifier responds to a single combined speaker load.

PEQ

The PEQ module deploys up to eight EQ bands for precise sound sculpting. The EQ bands can each be switched between low shelving, high shelving, and parametric modes. For the high shelving and low shelving EQ bands, the LS12 and HS12 settings provide steeper equalization curves than the LS6 and HS6 settings.

The main PEQ screen displays the composite equalization curve across the frequency spectrum.



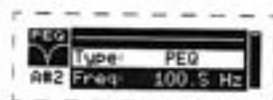
Programming equalizers

- Choose individual equalizers by rotating the SELECT encoder knob. As you rotate the SELECT encoder knob, dotted vertical lines will appear at different points within the frequency spectrum, and the EQ band name will appear in the lower-left corner of the screen (e.g., A#1, A#2, B#1, B#2, and so on).

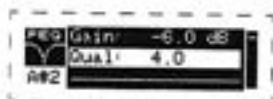


EN

- Press the SELECT encoder knob to enter the parameter screens for your chosen EQ band.
- Press the UP / DOWN arrow keys to switch between parameters. The chosen parameter will appear highlighted.
- Rotate the SELECT encoder knob to change parameter values.
- Choose the equalizer type (Type): OFF, PEQ (parametric), low shelving (LS6, LS12), or high shelving (HS6, HS12).



- Set the frequency (Freq) for each EQ band by rotating the SELECT encoder knob. The programmed frequency can represent either the center frequency for parametric mode, or the cutoff frequency for low and high shelving modes.



- Set the EQ band's cut or boost (Gain) by rotating the SELECT encoder knob.
- For parametric mode, control the width of the parametric curve by tweaking the Qual parameter. High Qual values produce a narrow, steep curve, while low Qual values create a wide curve with a gentle slope.
- Press the SELECT encoder knob or the EXIT button to return to the top-level PEQ screen.

XOVER

The XOVER module offers programmable pairs of high- and low-pass filters. STEREO and BRIDGE modes possess only one filter set (A#1). DUAL, BIAMP1, and BIAMP2 modes use two filter sets (A#1 and B#1), and in BIAMP1 and BIAMP2 modes, these two sets of filters may be linked.

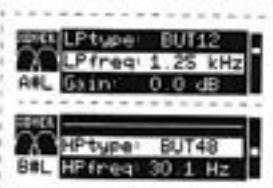
On the top-level screen, vertical dotted lines indicate the threshold point for each filter.



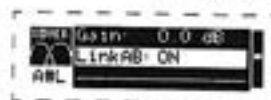
Each low-pass and high-pass filter also offers multiple options for filter type and slope: OFF, Butterworth (BUT6, BUT12, BUT18, BUT24, BUT48), Bessel (BES12, BES24), or Linkwitz-Riley (LR12, LR24, LR48).

Programming filters/bi-amping crossover

- Choose between filter sets A#1 and B#1 by rotating the SELECT encoder knob (DUAL, BIAMP1, and BIAMP2 modes only).
- Press the SELECT encoder knob to enter the parameter screens.
- Move up or down between parameters by pressing the UP / DOWN arrow buttons.
- Choose between filter types for high-pass (HPtype) and low-pass (LPtype) by rotating the SELECT encoder knob.



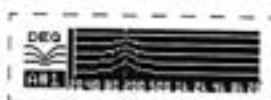
- Set the filter thresholds for high-pass (HPfreq) and low-pass (LPfreq) by rotating the SELECT encoder knob.
- Set the filter's overall signal gain (Gain) by rotating the SELECT encoder knob.



- Set the link parameter (LinkAB) to ON or OFF by rotating the SELECT encoder knob (BIAMP1 and BIAMP2 modes only).
- Press the SELECT encoder when finished to return to the top-level XOVER screen.

DEQ

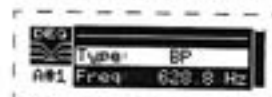
The DEQ module deploys a dynamic EQ that is triggered by a programmable signal threshold. For example, you can program the dynamic EQ to cut or boost increasing amounts of mid frequencies as the signal gets louder beyond your preferred threshold.



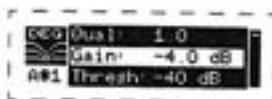
STEREO and BRIDGE modes feature one set of dynamic EQs (A#1 and A#2), while DUAL, BIAMP1, and BIAMP2 modes feature two sets of dynamic EQs (A#1, A#2, B#1, and B#2). Each dynamic EQ may be set to OFF, band-pass (BP), low-pass (LP6, LP12), and high-pass (HP6, HP12).

Programming dynamic EQs

- Choose between dynamic EQ sets by rotating the SELECT encoder knob.
- Press the SELECT encoder knob to enter the parameter screens.
- Move up or down between parameters by pressing the UP / DOWN arrow buttons.
- Choose between EQ types (Type) by rotating the SELECT encoder knob.



- Set the frequency (Freq) for each EQ by rotating the SELECT encoder knob. The programmed frequency can represent either the center frequency for band-pass mode, or the threshold frequency for low- and high-pass modes.
- For band-pass mode, control the width of the band-pass curve by tweaking the Qual parameter. High Qual values produce a narrow, steep curve, while low Qual values create a wide curve with a gentle slope.



- Set the dynamic equalizer's cut or boost (Gain) by rotating the SELECT encoder knob.
- Set the signal threshold (Thresh) by rotating the SELECT encoder knob.
- Program your desired ratio (Ratio). Similar to a compressor, higher ratio values yield a more intense equalization effect.

- Adjust attack (Atime) and release (Rtime) to your preferred values.



- Press the SELECT encoder when finished to return to the top-level DEQ screen.

DELAY

The DELAY DSP module digitally slows the final signal output from the amplifier by a programmable amount (expressed as either distance or time). This signal delay helps prevent phase and synchronization problems caused by sound traveling through air over long distances, e.g., between speaker arrays separated by long distances or between a performance stage and distant sound reinforcement speakers.



Programming signal delay

- Choose between signal paths (A#1, B#1) by rotating the SELECT encoder knob.
- Press the SELECT encoder knob to enter the parameter screens.
- Move up or down between parameters by pressing the UP / DOWN arrow buttons.
- Choose between 0° and 180° phase (PHASE) by rotating the SELECT encoder knob.



- Choose your amount of signal delay (Delay) by rotating the SELECT encoder button.
- Fine tune the Delay value using the (fine) parameter.



- Change the delay's unit of measure (Unit), if necessary, by rotating the SELECT encoder knob. The delay value can be expressed in milliseconds (ms), meters (m), or feet (ft).
- Press the SELECT encoder when finished to return to the top-level DELAY screen.

LIMIT

The LIMIT DSP module controls the unit's output limiter, with programmable parameters for threshold (Thresh), release (Rtime), and hold (Hold).

The top-level LIMIT screen always displays the threshold (Thresh) setting for quick reference.

Programming the output limiter

- Choose between signal paths (A#1, B#1) by rotating the SELECT encoder knob.
- Press the SELECT encoder knob to enter the parameter screens.
- Move up or down between parameters by pressing the UP / DOWN arrow buttons.
- Choose a threshold (Thresh) setting by rotating the SELECT encoder knob.
- Choose a release time (Rtime) by rotating the SELECT encoder knob.
- Choose a hold (Hold) setting by rotating the SELECT encoder knob.
- Press the SELECT encoder when finished to return to the top-level LIMIT screen.

behinger.com

3.3 BEHRINGER Amp Remote Software

EN



The BEHRINGER Amp Remote software allows the user to control all INUKE DSP settings remotely from a computer via the USB connection located on the INUKE front panel.

3.3.1 METERS

Meters

Monitor input and output levels by using the virtual meters on the right hand side of the control software screen. Adjust input levels using the knobs on the amplifier's front panel.



The Amp Remote software displays two level meters, one for the input signal, and another meter for the final output signal.

Input Meters



The input meters show the signal level at the CH A and CH B inputs. If the input signal exceeds the 0 dB level, the red Clip indicator will light over the channel experiencing an overload.

The input level can only be controlled by using the CH A and CH B knobs on the front panel of the INUKE amplifier. The Amp Remote software does not control the input level.

EN

Output Meters



The output meters show the signal level at the end of the DSP signal chain, following the Limit module. If the signal activates the limiter, the red Limit indicator will light over the channel experiencing an overload.

3.3.2 Function Tabs

The BEHRINGER Amp Remote window allows the user to access DSP functions via embedded tabs accessible near the top of the software window.



The software window includes these tabbed screens:

- **Configuration**—controls the amplifier Mode setting for Dual Mono, Stereo, and other routing options, as well setting controls for output delay and limiting.
- **Filter/Crossover**—offers control over adjustable hi-pass and lo-pass filters. In Bi-Amp 1 and Bi-Amp 2 configuration, this tab controls the crossover point for splitting the blended, mono input signal into separate high- and low-frequency mono signals for bi-amping.
- **Parametric EQ**—controls up to 8 adjustable parametric and shelving EQs for each channel.
- **Dynamic EQ**—adjusts parameters for 2 bands of level-dependent, dynamic equalization per channel.
- **Setup**—manages presets and networking options.

3.3.3 Connection Status

The software displays the connection status in the top header of the main software window.

▲ BEHRINGER Amp Remote [not connected!]

When the amp/software connection is active, the window heading displays the name of the amplifier.

▲ BEHRINGER Amp Remote [Device: NU1000DSP!]

3.3.4 Configuration



The Configuration tab displays two main sets of software controls:

- **Mode**—controls the amplifier configuration. Choose between Dual Mono, Stereo, Bi-Amp 1, Bi-Amp 2, and Bridge configurations. Each configuration's complete signal path appears in the display window, including the arrangement of internal DSP modules and speaker outputs.
- **Delay/Peak Limiter**—controls settings for the Delay and Limit DSP modules, as well as options for channel phase, Load settings (in Ohms) for the limiter wattage display, Hold and Release for the Limiter, and channel linking. The number of Delay/Peak Limiter controls change depending on the amplifier Mode configuration.

Mode



Changing amplifier mode

The amplifier mode can be changed by clicking on the button for your desired routing option along the left-hand side of the window. When you click on a mode button, the software will launch a confirmation window. Click "Yes" in the confirmation window to launch the new amplifier mode, and the new signal path will appear in the display.

Mode descriptions

Dual Mono



Dual Mono mode routes each channel input, A and B, through completely separate parallel signal paths with independent outputs for each channel. Each channel may be processed with its own unique filter, equalization, delay, and limiter settings. The Delay and Limit modules for A and B can be linked and programmed with identical settings by clicking on the Channel Link button below the Mode window.

Stereo



Stereo mode routes the signal from both the A and B inputs through a single series of DSP modules. Each DSP module processes both the A and B signals with identical, linked settings. The linked Delay and Limit parameters can be controlled from Stereo mode's consolidated Channel A+B control window (which displays automatically when Stereo mode is selected).

Bi-Amp 1



Bi-Amp 1 mode splits the Channel A input signal in the XOver DSP module at a programmable frequency point, and then routes the resulting high and low frequency signals through a parallel chain of DSP modules with independent equalization, delay, and limiter settings. The Delay and Limit modules for the split high and low frequency signals can be linked and programmed with identical settings by clicking on the Channel Link button below the Mode window. In Bi-Amp 1 mode, Output A routes low frequencies to a low-range speaker, while Output B connects to a high-frequency transducer.

Bi-Amp 2



Bi-Amp 2 mode operates identically to Bi-Amp 1 mode, except that the signals are swapped between Outputs A and B (i.e., Output B handles low frequencies while Output A handles high frequencies). The swapped A and B output routing allows the user to quickly correct reversed high/low speaker connections without having to physically access the amplifier's back panel and manually change the speaker connection.

Bridge



Bridge mode combines the signals from Inputs A and B into a blended mono signal and then routes the resulting mono signal through a single chain of DSP modules, leading to a combined mono output. The mono output signal is identical at Outputs A and B, and the amplifier responds to a single combined speaker load.

Delay/Peak Limiter



Channel Link

In Dual Mono, Bi-Amp 1, and Bi-Amp 2 modes, the Channel Link virtual button will appear just above the Delay and Peak Limiter controls. When you click on the Channel Link virtual button, the button will light up, and the Delay and Peak Limiter controls for both channels will display identical values.

Delay

The Delay function digitally slows the final signal output from the amplifier by a programmable amount (expressed as either distance or time). This signal delay helps prevent phase and synchronization problems caused by sound traveling through air over long distances, e.g., between speaker arrays separated by long distances or between a performance stage and distant sound reinforcement speakers.

The Delay controls also simultaneously display the amount of signal delay in milliseconds (ms), meters (m), and feet (ft), which can be useful if you already know the precise distance between speakers.

Programming signal delay

1. Program the signal delay by using either of these two methods:
 - a) Rotate the Delay virtual knob clockwise until you achieve a suitable amount of signal delay. The ms, m, and ft text boxes will each display equivalent values as you rotate the virtual knob.
 - b) Type a delay value directly into one of the text boxes below the Delay virtual knob (ms, m, or ft, depending on your preference). The Delay virtual knob will rotate to a position matching the delay value you have entered.
2. Choose between 0° and 180° phase either by clicking on the Phase virtual button or by clicking directly on 0° or 180° directly below the virtual button. When the Phase virtual button is engaged, the virtual button will light yellow and the indicator next to 180° will light up.

Peak Limiter

The Peak Limiter helps protect your speakers by preventing signal spikes at the amplifier's output stage.

The Peak Limiter controls include a dedicated virtual knob with matching numerical displays in dBfs (decibels relative to full scale), Vp (Voltage [peak]), as well as a rating in Watts, which appears only when you choose an Ohm setting from the Load pulldown menu.

The BEHRINGER Amp Remote software also allows you to see the amplifier's total output as a rating in Watts. This Watt rating allows you to connect speakers with lower power ratings and then adjust the limiter to match the speakers' maximum Watt rating.

Note: the Amp Remote software does not automatically detect or show the total speaker load connected to the amplifier.

Controls for Hold and Release times appear near the bottom of the window, each with a matching numerical display.

Programming the output limiter

1. Program the output limiter by using either of these two methods:
 - a) Rotate the Peak Limiter virtual knob counter-clockwise until you find an adequate limiter setting for your sound system. The dBfs (decibels relative to full scale) and Vp (Voltage [peak]) text boxes will each display equivalent values as you rotate the virtual knob.
 - b) Type a limiter value directly into one of the text boxes below the Peak Limiter virtual knob (dBfs or Vp). The Peak Limiter virtual knob will rotate to a position matching the delay value you have entered.
2. Choose a Load value from the Load pulldown menu (none, 2, 4, 8, or 16 Ohms) that matches the total combined load of all speakers connected to the amplifier's outputs. If your combined speaker load in Ohms does not exactly match 2, 4, 8, or 16 Ohms, choose the next lower Ohm setting from the Load pulldown menu (i.e., if your total combined speaker load equals 4.25 Ohms, select the 4 Ohm setting). When you select a Load setting, an additional Watt rating for the limiter will appear above the Load pulldown menu.

EN

3. Choose a Hold value either by rotating the Hold virtual knob or by entering a value (in milliseconds) into the matching text box below the knob.
4. Choose a Release value either by rotating the Release virtual knob or by entering a value (in milliseconds) into the matching text box below the knob.

3.3.5 Filter/Crossover



The Filter/Crossover tab displays and controls Filter/XOver module settings in two formats:

- **Frequency Curve**—displays the filter curves in visual form, and allows click-and-drag manipulation of filter threshold points.
- **Control View**—allows parameter tweaks via virtual controls, as well as pull-down menus for filter type and slope.

The Frequency Curve and Control View interact with each other and simultaneously shift as you change parameters in either view.

Filter/Crossover Frequency Curve Display



The Frequency Curve displays a frequency range from 20 Hz to 20 kHz, with 15 dB of cut/boost displayed on the vertical axis. Within this graphic field, the filter curve appears as a solid, colored line running from left to right. The line shifts and moves to reflect changing parameter values entered using the virtual controls and pull-down menus. Dotted vertical lines indicate frequency threshold points for the various filters, numbered 1 through 4, and these threshold points can be selected and moved through the frequency spectrum using the mouse or trackpad.

Moving filter thresholds via click-and-drag

1. Click and hold on the numbered box at the top of the desired filter threshold line.
2. Drag the threshold line to the desired location on the frequency spectrum.
3. The filter curve shown by the solid line will move and adjust as you shift the threshold line. The virtual knob and frequency displayed in the Control View will also simultaneously change as you move the threshold line in the Frequency Curve.

Filter/Crossover Control View



The Control View of the Filter/Crossover tab contains virtual knob controls for Gain, High Pass filter, and Low Pass filter. Exact parameter values appear in boxes below each virtual knob. These parameters may be altered by either adjusting the virtual knobs or by entering values directly in the parameter boxes.

Pull-down menus contain filter options for Type (Butterworth, Bessel, Linkwitz-Riley) and Slope (6–48 dB).

X-Over option for bi-amping

In Bi-Amp 1 and Bi-Amp 2 modes, the X-Over button appears on the Filter/Crossover tab. Activating the X-Over button links the Low Pass 2 and High Pass 3 filter controls and automatically creates a synchronized crossover point for bi-amped low frequency and high frequency signals.

Setting a linked crossover frequency

1. Activate the Bi-Amp 1 or Bi-Amp 2 settings on the Configuration tab.
2. Click on the Filter/Crossover tab.
3. Click on the X-Over button on the Filter/Crossover tab. The X-Over button will light up and overlapping filter curves will appear in the Frequency Curve.
4. Set the crossover frequency by any of these methods:
 - a) drag the Low Pass 2/High Pass 3 threshold line to the desired frequency in the Frequency Curve by clicking and dragging;
 - b) adjust the Low Pass 2 or High Pass 3 virtual knobs;
 - c) Enter the desired frequency directly into the Freq. text box.
5. Select a filter curve from the Type dropdown menu below either the Low Pass 2 or High Pass 3 virtual knobs.
6. Select the desired curve steepness from the Slope dropdown menu.

3.3.6 Parametric EQ



The Parametric EQ tab displays and controls PEQ DSP module settings in two formats (similar to the Filter/Crossover tab):

- **Control View**—allows parameter tweaks via virtual controls, as well as pull-down menus for EQ type (parametric, low shelving, and high shelving).

- **Frequency Curve**—displays the filter curves in visual form, and allows click-and-drag manipulation of EQ frequencies and gain.

The Frequency Curve and Control View interact with each other and simultaneously shift as you change parameters in either view.

Parametric EQ Control View



The Control View of the Parametric EQ tab contains virtual knob controls for Gain, Frequency, Quality (parametric EQ only). Exact parameter values appear in boxes below each virtual knob. These parameters may be altered by either adjusting the virtual knobs or by entering values directly in the parameter boxes.

To activate an EQ band, click the button (Filter 1, Filter 2, and so on) at the top of each channel strip. The channel button will light up to indicate the EQ is active.

Pull-down Type menus for each EQ band contain these additional options:

- PEQ (parametric EQ)
- LS6 (low shelving EQ, with a 6 dB slope)
- LS12 (low shelving EQ, with a 12 dB slope)
- HS6 (high shelving EQ, with a 6 dB slope)
- HS12 (high shelving EQ, with a 12 dB slope)

Parametric EQ Frequency Curve Display



The Frequency Curve displays a frequency range from 20 Hz to 20 kHz, with 15 dB of cut/boost displayed on the vertical axis. Within this graphic field, the EQ curve appears as a solid fill above and below the 0 dB center line and running from left to right. The curve shifts and moves to reflect changing parameter values. Dotted vertical lines indicate frequency points for the various EQ bands, numbered 1 through 8, and these frequency points can be selected and moved through the frequency spectrum using the mouse or trackpad. The gain for each EQ band may also be adjusted by using the frequency lines.

Adjusting Parametric EQ frequency via click-and-drag

1. Click and hold on the numbered box at the top of the desired EQ band frequency line.
2. Drag the frequency line to the desired location on the frequency spectrum.
3. The EQ curve shown by the solid yellow fill will move and adjust as you shift the frequency line. The virtual knob and frequency displayed in the Control View will also simultaneously change as you move the frequency line in the Frequency Curve.

Adjusting Parametric EQ gain via click-and-drag

1. Click and hold over the numbered box at the top of the desired EQ band's frequency line.
2. Move the cursor vertically up or down the frequency line to the desired gain level.

3. The EQ curve shown by the solid yellow fill will re-size and adjust as you move the cursor up and down the frequency line. The virtual gain knob and gain dB displayed in the Control View will also simultaneously change as you move the cursor up and down frequency line in the Frequency Curve.

4. Dynamic EQ



The Dynamic EQ tab displays and controls DEQ DSP module settings in two formats (similar to the Filter/Crossover and Parametric EQ tabs):

- **Frequency Curve**—displays the layered dynamic EQ curves in visual form, and allows click and drag manipulation of dynamic EQ/filter frequencies and gain.
- **Control View**—allows parameter tweaks via virtual controls, as well as pull-down menus for EQ/filter type (Type) and gain reduction/boost ratio (Ratio).

The Frequency Curve and Control View interact with each other and simultaneously shift as you change parameters in either view.

Dynamic EQ Frequency Curve Display



The Frequency Curve displays a frequency range from 20 Hz to 20 kHz, with layered dynamic EQ curves. Within this graphic field, the dynamic EQ curves appear as solid yellow lines that appear at every 10 dB (0 to -50 dB) threshold on the vertical axis. The curves shift and move to reflect changing parameter values. Dotted vertical lines indicate frequency points for the various dynamic EQ bands, numbered 1 and 2 (per channel), and these frequency points can be selected and moved through the frequency spectrum using the mouse or trackpad. The gain for each dynamic EQ band may also be adjusted by using the frequency lines.

Adjusting dynamic EQ frequency via click-and-drag

1. Click and hold on the numbered box at the top of the desired dynamic EQ band frequency line.
2. Drag the frequency line to the desired location on the frequency spectrum.
3. The layered dynamic EQ curves shown by the layered yellow lines will move and adjust as you shift the frequency line. The virtual knob and frequency displayed in the Control View will also simultaneously change as you move the frequency line in the Frequency Curve.

EN

Adjusting dynamic EQ gain via click-and-drag

1. Click and hold on the numbered box at the top of the desired dynamic EQ band frequency line.
2. Move the cursor vertically up or down the frequency line to the desired gain level.
3. The layered EQ curves shown by the solid yellow line will adjust as you move the cursor up and down the frequency line. The virtual gain knob and gain dB displayed in the Control View will also simultaneously change as you move the cursor up and down frequency line in the Frequency Curve.

Dynamic EQ Control View

The Control View of the Dynamic EQ tab contains virtual knob controls for Gain, Threshold, Frequency, Quality (bandpass filter only). Exact parameter values appear in boxes below each virtual knob. These parameters may be altered by either adjusting the virtual knobs or by entering values directly in the parameter boxes.

Pull-down Type menus for each dynamic EQ band contain these additional options:

- BP (bandpass filter)
- LP6 (lo-pass filter, with a 6 dB slope)
- LP12 (lo-pass filter, with a 12 dB slope)
- HP6 (hi-pass filter, with a 6 dB slope)
- HP12 (hi-pass filter, with a 12 dB slope)

The Ratio pulldown menu offers four options:

- 1:2.0
- 1:3.0
- 1:5.0
- 1:10

Gain vs. Ratio

Positive gain settings result in a frequency boost at low signal levels and a nearly flat EQ response at high levels. Negative gain settings yield opposite results: at low signal levels, the EQ response is nearly flat, while higher signal levels receive increasing amounts of cut from the equalizer. The higher the Ratio setting, the more the equalizer will cut or boost the signal at different signal levels.

Programming a dynamic EQ

1. Choose an EQ type from the Type pulldown menu.
2. Set the dynamic EQ's band frequency by rotating the Frequency virtual knob. The programmed frequency can represent either the center frequency for band-pass (BP) mode, or the threshold frequency for low- (LP) and high-pass modes (HP).
3. For band-pass BP mode, control the width of the band-pass curve by rotating the Quality virtual knob parameter. High Qual values produce a narrow, steep curve, while low Qual values create a wide curve with a gentle slope.
4. Set the dynamic EQ's band cut or boost by rotating the Gain virtual knob.
5. Set the signal threshold by rotating the Threshold knob.

6. Program your desired ratio by selecting from the Ratio pulldown menu. Similar to a compressor, higher ratio values yield a more intense equalization effect.
7. Adjust the attack (Attack) and release (Release) values by rotating each parameters respective virtual knob.

3.3.7 Setup

The Setup tab allows you to manage connections and settings for your iNUKE amps. Amp presets may be stored either on the iNUKE DSP or on the PC (presets stored on your PC may then be loaded onto any iNUKE amplifier).

PC Presets

The PC Presets section allows you to store iNUKE DSP presets on your computer instead of the iNUKE amp's internal memory. The Load function allows you to upload presets from the computer, while the Save function stores the current iNUKE DSP settings to the computer (these files use a .arp filename extension).

Amp Presets

The Amp Presets section allows you to access and manage presets stored in the iNUKE amp's internal memory. The amp's internal memory holds up to 20 presets, and these 20 preset slots appear in the Amp Presets section as a numbered, double-column list showing the preset name and the preset's signal routing configuration (DUAL, STEREO, BIAMP1, and so on). The preset currently in use will display an illuminated dot immediately to the preset's left.

Note: Preset #1:INIT_DATA cannot be overwritten. Select this preset any time you want to restore the amp's default settings.

Recalling a preset stored in the amp's internal memory

1. Click on the desired preset in the Amp Presets list. The dot to the immediate left of the selected preset will light up.

- Click on the Recall button in the upper left of the Amp Presets section. The selected preset's name will appear in the text box next to the Recall button. All settings contained in the preset will automatically deploy.

Saving a preset to the amp's internal memory

- Select a destination for the preset by clicking on a slot in the preset list. (If you save your preset to a slot already holding a stored preset, the stored preset will be replaced by your new preset.)
- Type your new preset's name into the text box to the right of the Recall button.
- Click on the Store button to store your preset in the selected slot in the preset list. Your new preset's name will appear in the selected slot in the preset list.

Amp Connection



The Amp Connection section tells you which INUKE amplifier you have connected to the software, as well as options for naming your INUKE amp and for setting up a code to lock the amplifier's front panel and prevent tampering (the amp can still be edited from your laptop using the Amp Remote software).

For the current edition of the BEHRINGER Amp Remote software, only one INUKE amplifier can appear at any one time in the amplifier list and be recognized by the software. Similarly, the IP address function can only be deployed with EUROCOM installed sound power amplifiers.

Connecting to an amplifier

- this procedure assumes you already have an INUKE amplifier connected to your computer, and that you are switching to another INUKE amplifier. Usually, the Amp Remote software will automatically detect a USB-connected INUKE amp and then ask if you wish to connect to the detected amplifier.
- Click on the Connect virtual button near the bottom of the Amp Connection section of the Setup tab. The software will disconnect from the current amplifier, clear the amplifier from the list in the Amp Connection section, and clear all presets from the Amp Presets list.
 - Press the Search virtual button near the top of the Amp Connection section, above and to the left of the amplifier list window. When the software finds your newly-connected INUKE amp, the amplifier will appear in the amplifier list window, and the amp's internal presets will populate the Amp Presets list. The software will also launch a confirmation window asking if you wish to connect to the detected amplifier.
 - Press the Connect virtual button in the confirmation window to finalize the connection.

Renaming an amplifier

- Type the new amplifier name directly into the text box to the left of the Rename Amp virtual button near the bottom of the Amp Connection section.
- Click on the Rename Amp virtual button. The new amplifier name will appear in the Amp Name column of the amplifier list.

Locking the amplifier

- Type a 4-character lock code of your choosing directly into the Lock Code window near the bottom of the Amp Connection section. (The Lock function requires a new lock code every time you lock the amplifier.)
- Click on the Lock virtual button at the bottom right of the Amp Connection section. The Lock virtual button will turn red to indicate the amplifier front panel has been locked.
- Clear the 4-character code from the Lock Code window if you desire extra security.

Unlocking the amplifier

- Type the amplifier's 4-character lock code into the Lock Code window near the bottom of the Amp Connection section.
- Click on the Unlock virtual button located directly to the right of the Lock Code text box. The Unlock virtual button will light up yellow to indicate the amplifier is unlocked, while the Lock button will change colors from red to gray. The characters in the Lock Code text box will disappear and be replaced by asterisks.

4. Applications

4.1 Bi-amping

Bi-amping splits a mono signal into upper and lower frequency bands, and then assigns each frequency band to separate speaker cabinets. A subwoofer typically takes the low frequency range. By splitting the signal this way, the speakers work more efficiently, and you can achieve a cleaner overall sound.

Setting up hardware for bi-amping

- Run a 4-pole speaker cable with professional twist-locking connectors from OUTPUT CH A to the subwoofer. (The subwoofer receives its low-frequency signal from Channel B using poles 2+ and 2-, while the middle and upper frequency ranges use Channel A via poles 1+ and 1-.)
- Set the subwoofer into BIAMPING mode.
- Run a 2-pole speaker cable with professional twist-locking connectors from the subwoofer to the other speaker.

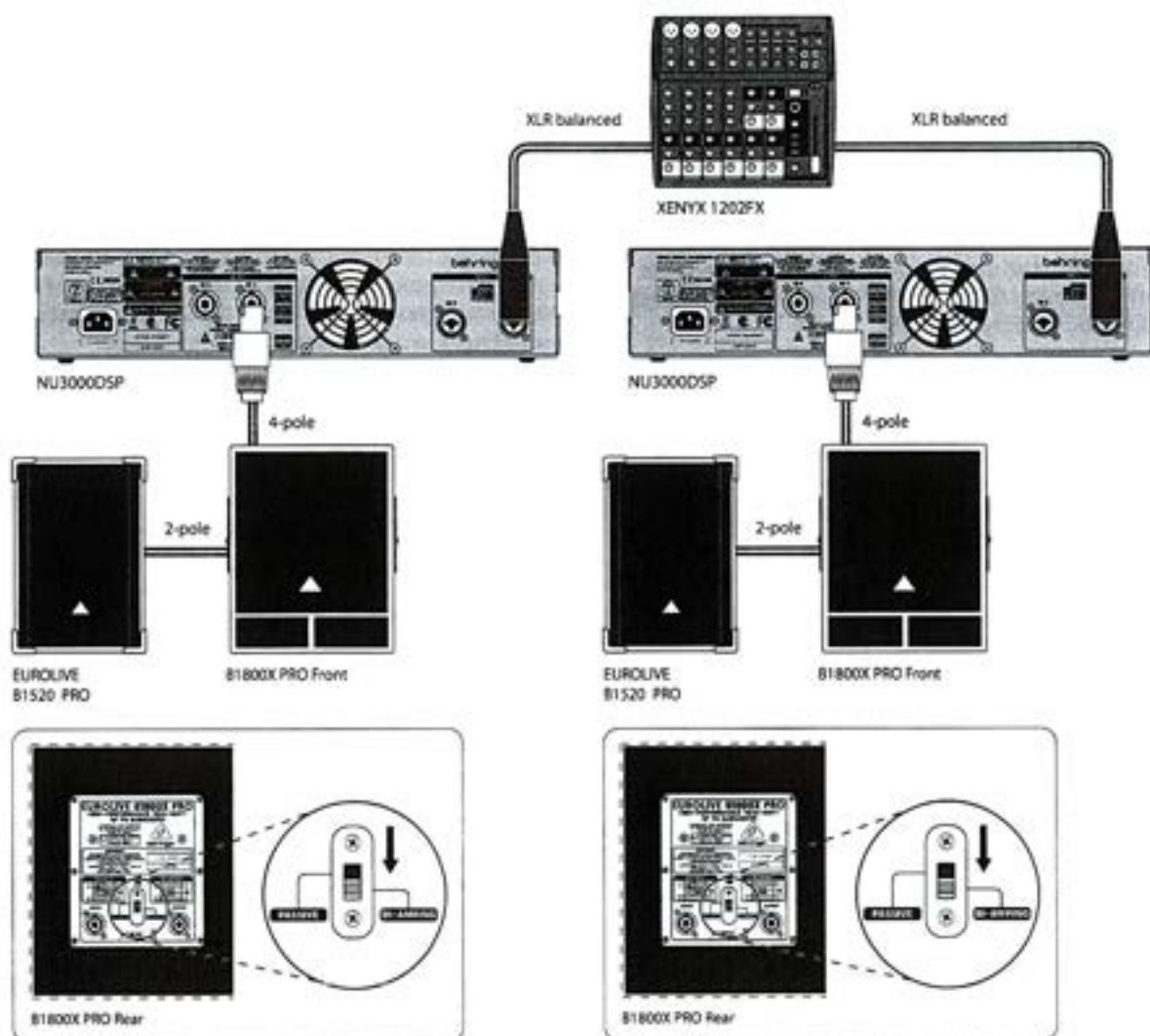
Programming DSP parameters for bi-amping

- Choose the BIAMP1 setting on the Amp Mode screen.
- Go to the XOVER screen using the UP/DOWN buttons to set appropriate high/low crossover frequencies.
- In Channel A#1, choose your high-pass filter type (HPtype: BUT6, BUT12, BES12, etc.) and set the cutoff frequency (HPfreq) to approximately 100 Hz. Deactivate the low-pass filter (LPtype: OFF) on this channel and set the gain level (Gain) to suit your system.
- In Channel B#1, choose your low-pass filter type (LPtype: BUT6, BUT12, BES12, etc.) and set the cutoff frequency (LPfreq) to approximately 100 Hz. Deactivate the high-pass filter (HPtype: OFF) on this channel and set the gain level (Gain) to suit your system.

EN

Programming BEHRINGER Amp Remote Software for bi-amping

1. Select the Configuration tab.
 2. Choose the Bi-Amp 2 signal path in the Configuration tab. A confirmation window will pop up.
 3. Click "Yes" on the Amp Mode confirmation window.
 4. Select the Filter/Crossover tab.
 5. Select the X-Over button below the Frequency Curve display. A confirmation window will pop up asking if you wish to set a Default Crossover.
 6. Click "Yes" in the confirmation window. The X-Over button will illuminate, and default crossover settings will appear in the Frequency Curve and Control View.
 7. Choose a filter type from either the Low Pass 2 or High Pass 3 Type pulldown menus (the software defaults to a Butterworth filter). Any changes to the Low Pass 2 or High Pass 3 settings will also automatically appear in both filter's Control View settings.
 8. Choose a filter slope setting from the Slope pulldown menu under either Low Pass 2 or High Pass 3 (the software defaults to a Butterworth filter).
- Again, matching parameters will automatically appear in both filter's Control View settings.
9. Set the crossover frequency by using any of these three methods:
 - a) Rotate the Low Pass 2 or High Pass 3 virtual Freq knobs in the Control View. The crossover frequency displayed in the Freq box below the virtual knob will change simultaneously for both filters.
 - b) Select the text box below either Freq virtual knob, and type your desired frequency directly into the text box.
 - c) Go to the Frequency Curve display, click on the frequency line marked "2," and drag the frequency line to the desired area of the Frequency Curve. Parameter settings and virtual knobs in the Control View will automatically move and change as you drag the crossover frequency through the Frequency Curve window.
 10. If necessary, adjust the Gain settings for Channel A and Channel B by rotating the respective Gain virtual knobs.



5. Installation

5.1 Rack mounting

Your INUKE amplifier fits into a 19" rack and requires two rack units. Install into the rack using four attaching screws and washers for the front panel. Reinforce the back panel, especially if you will be taking the iNUKE on the road. Make sure enough cool air reaches the rack, especially when other rack equipment emanates a lot of heat. The iNUKE amplifiers circulate heat from the rear to the front vents to relieve heat inside the rack enclosure.

Fan speed adjusts automatically to assure safe operation. Never block ventilation openings. Should internal temperature reach extreme values, the unit will shut down automatically.

5.2 Connections

5.2.1 Audio inputs

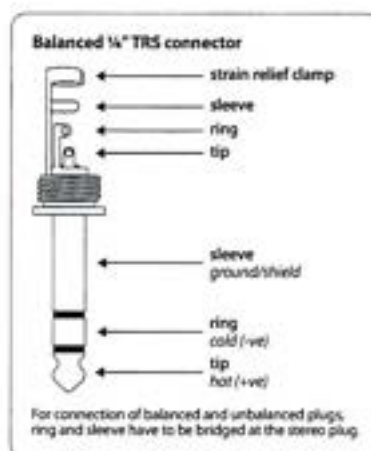
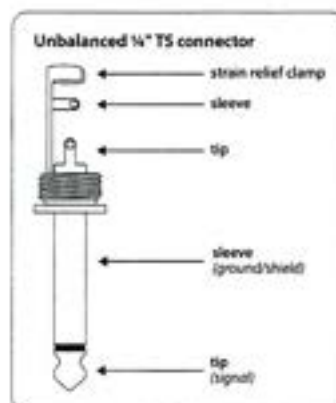
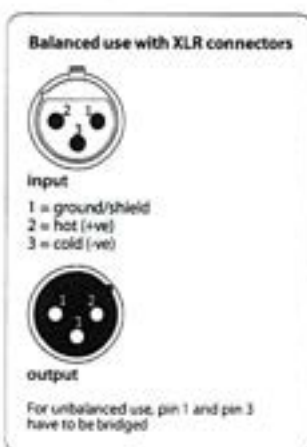
Each channel input uses combo jacks that can accept both balanced XLR and 1/4" TRS stereo connectors, as well as unbalanced 1/4" TS connectors. To deploy XLR connectors for unbalanced signals, bridge pins 1 and 3; mono 1/4" TS connectors do not require any alteration to carry unbalanced signals.

When working with balanced signals, please make sure to exclusively use balanced cables. One unbalanced cable in the signal chain can change a balanced signal into an unbalanced signal.

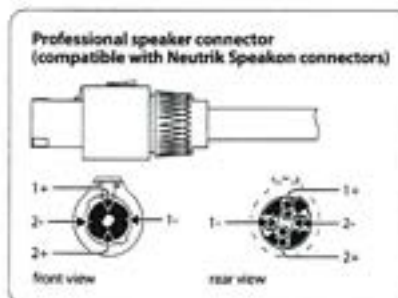
5.2.2 Outputs

Your INUKE amplifier requires two twist-locking professional speaker connectors. These professional speaker connectors were developed specially for driving high-powered speakers. The connectors snap in securely, prevent electric shock, and ensure correct polarity.

Inside the professional speaker connector, the 1+ pin (see figure) carries signal from either one or both channels, and this pin therefore suits mono-bridged operation (use pins 1+ and 2+). The lower connector, the 2+ pin, carries signal from CH B only.



⚠ Whenever possible, use thick and short speaker cables to minimize power loss. Never lay output cables near input cables.



5.2.3 Connecting to the mains

Always connect your INUKE amplifier to the voltage specified on the rear of the device. Connecting the amp to an incorrect voltage can permanently damage your amp.

Before powering up the amplifier, double-check all connections and fully lower the gain setting.

EN 6. Specifications

NU6000DSP

Output Power

Maximum Output Power

Stereo

8 Ω per channel, stereo	1600 W
4 Ω per channel, stereo	3100 W
2 Ω per channel, stereo	—

Bridged mono

8 Ω	—
4 Ω	—

System

Controls

Front	Power switch, Gain controls (channels A and B) DSP section rotary push-encoder, Buttons for Process, Setup, Up/Down, Exit
-------	--

Indicators

Power	Amber backlit illuminated gain controls
Limit (per channel)	0 dB, full scale
Signal (per channel)	-24, -12, -6 dB

Digital Signal Processing (DSP)

Display	LCD 128 x 32, amber backlit
Digital delay function (per channel)	0 - 300 ms
Digital crossover function	3 filter types, up to 48 dB/octave
Digital EQ function (per channel)	8-band parametric, 2-band dynamic equalizer
Digital dynamics function (per channel)	Zero attack limiter (peak)
Presets	20 total presets, 19 user-definable

Connectors

Inputs	2 x combo jacks
Input impedance	10 k Ω unbalanced, 20 k Ω balanced
Outputs	2 x locking-style professional speaker connectors
Output circuit type	Class D
Distortion	<0.2%
Frequency response	20 Hz to 20 kHz, +0 / -2 dB
Damping factor	>140 @ 8 Ω
Signal-to-noise	>98 dB
USB	Front panel USB connector type B for remote control of DSP section

Circuit Protection

Cooling	Continuously variable speed fan, Back-to-front air flow
Amplifier protection	Thermal and DC protection, Stable into reactive or mismatched loads
Load protection	On/off muting, DC-fault power supply shutdown

Power Supply, Power Consumption @ 1/8 Rated Power, Voltage (Breaker/Fuses)

USA / Canada	120V~, 60Hz (25A)
UK / Australia / Europe	220-240 V~, 50/60 Hz, (12A)
Korea / China	220-240 V~, 50/60 Hz, (12A)
Japan	100 V~, 50/60 Hz, (25A)
Power consumption @ 2 ohms	—
Power consumption @ 4 ohms	620 W
Mains connector	Standard IEC receptacle

Dimensions/Weight

Dimensions (H x W x D)	appr. 3.5 x 19 x 12.91" appr. 89 x 483 x 328 mm
Weight	appr. 11.9 lbs / 5.4 kg

NU3000DSP

Output Power

Maximum Output Power

Stereo

8 Ω per channel, stereo 440 W4 Ω per channel, stereo 820 W2 Ω per channel, stereo 1520 W

Bridged mono

8 Ω 1520 W4 Ω 3000 W

System

Controls

Front Power switch, Gain controls (channels A and B)
DSP section rotary push-encoder,
Buttons for Process, Setup,
Up/Down, Exit

Indicators

Power Amber backlit illuminated gain controls

Limit (per channel) 0 dB, full scale

Signal (per channel) -24, -12, -6 dB

Digital Signal Processing (DSP)

Display LCD 128 x 32, amber backlit

Digital delay function (per channel) 0 - 300 ms

Digital crossover function 3 filter types, up to 48 dB/octave

Digital EQ function (per channel) 8-band parametric,
2-band dynamic equalizer

Digital dynamics function (per channel) Zero attack limiter (peak)

Presets 20 total presets, 19 user-definable

Connectors

Inputs 2 x combo jacks

Input impedance 10 k Ω unbalanced, 20 k Ω balancedOutputs 2 x locking-style professional
speaker connectors

Output circuit type Class D

Distortion <0.3%

Frequency response 20 Hz to 20 kHz, +0 / -1 dB

Damping factor >145 @ 8 Ω

Signal-to-noise >98 dB

USB Front panel USB connector type B for
remote control of DSP section

Circuit Protection

Cooling Continuously variable speed fan,
Back-to-front air flowAmplifier protection Thermal and DC protection, Stable into
reactive or mismatched loadsLoad protection On/off muting, DC-fault power
supply shutdown

Power Supply, Power Consumption @ 1/8 Rated Power, Voltage (Breaker/Fuses)

USA / Canada 120 V~, 60 Hz (T 10 A H 250 V)

UK / Australia / Europe 220-240 V~, 50/60 Hz (T 6.3 A H 250 V)

Korea / China 220-240 V~, 50/60 Hz (T 6.3 A H 250 V)

Japan 100 V~, 50/60 Hz (T 10 A H 250 V)

Power consumption @ 2 ohms 350 W

Power consumption @ 4 ohms 210 W

Mains connector Standard IEC receptacle

Dimensions/Weight

Dimensions (H x W x D) appr. 3.5 x 19 x 9.76"
appr. 89 x 483 x 248 mm

Weight appr. 6.8 lbs / 3.1 kg

NU1000DSP

Output Power

Maximum Output Power

Stereo

8 Ω per channel, stereo 160 W4 Ω per channel, stereo 310 W2 Ω per channel, stereo 530 W

Bridged mono

8 Ω 620 W4 Ω 1050 W

System

Controls

Front Power switch, Gain controls (channels A and B)
DSP section rotary push-encoder,
Buttons for Process, Setup,
Up/Down, Exit

Indicators

Power Amber backlit illuminated gain controls

Limit (per channel) 0 dB, full scale

Signal (per channel) -24, -12, -6 dB

Digital Signal Processing (DSP)

Display LCD 128 x 32, amber backlit

Digital delay function (per channel) 0 - 300 ms

Digital crossover function 3 filter types, up to 48 dB/octave

Digital EQ function (per channel) 8-band parametric,
2-band dynamic equalizer

Digital dynamics function (per channel) Zero attack limiter (peak)

Presets 20 total presets, 19 user-definable

Connectors

Inputs 2 x combo jacks

Input impedance 10 k Ω unbalanced, 20 k Ω balancedOutputs 2 x locking-style professional
speaker connectors

Output circuit type Class D

Distortion <0.1%

Frequency response 20 Hz to 20 kHz, +0 / -1 dB

Damping factor >155 @ 8 Ω

Signal-to-noise >98 dB

USB Front panel USB connector type B for
remote control of DSP section

Circuit Protection

Cooling Continuously variable speed fan,
Back-to-front air flowAmplifier protection Thermal and DC protection, Stable into
reactive or mismatched loadsLoad protection On/off muting, DC-fault power
supply shutdown

Power Supply, Power Consumption @ 1/8 Rated Power, Voltage (Breaker/Fuses)

USA / Canada 120 V~, 60 Hz (T 6.3 A H 250 V)

UK / Australia / Europe 220-240 V~, 50/60 Hz (T 3.15 A H 250 V)

Korea / China 220-240 V~, 50/60 Hz (T 3.15 A H 250 V)

Japan 100 V~, 50/60 Hz (T 6.3 A H 250 V)

Power consumption @ 2 ohms 150 W

Power consumption @ 4 ohms 70 W

Mains connector Standard IEC receptacle

Dimensions/Weight

Dimensions (H x W x D) appr. 3.5 x 19 x 9.76"
appr. 89 x 483 x 248 mm

Weight appr. 6.4 lbs / 2.9 kg

FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION


BEHRINGER

 INUKE NU6000DSP/NU3000DSP/
NU1000DSP

Responsible Party Name: **MUSIC Group Services US Inc.**
 Address: **18912 North Creek Parkway,
Suite 200 Bothell, WA 98011,
USA**
 Phone/Fax No.: **Phone: +1 425 672 0816
Fax: +1 425 673 7647**

INUKE NU6000DSP/NU3000DSP/NU1000DSP

complies with the FCC rules as mentioned in the following paragraph:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

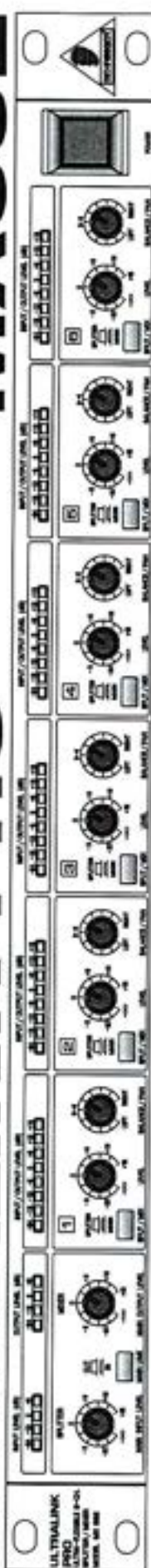
Important information:

Changes or modifications to the equipment not expressly approved by MUSIC Group can void the user's authority to use the equipment.



We Hear You

ULTRALINK PRO MX882



Technical Specifications

Version 1.1 May 2000

ENGLISH



www.behringer.com

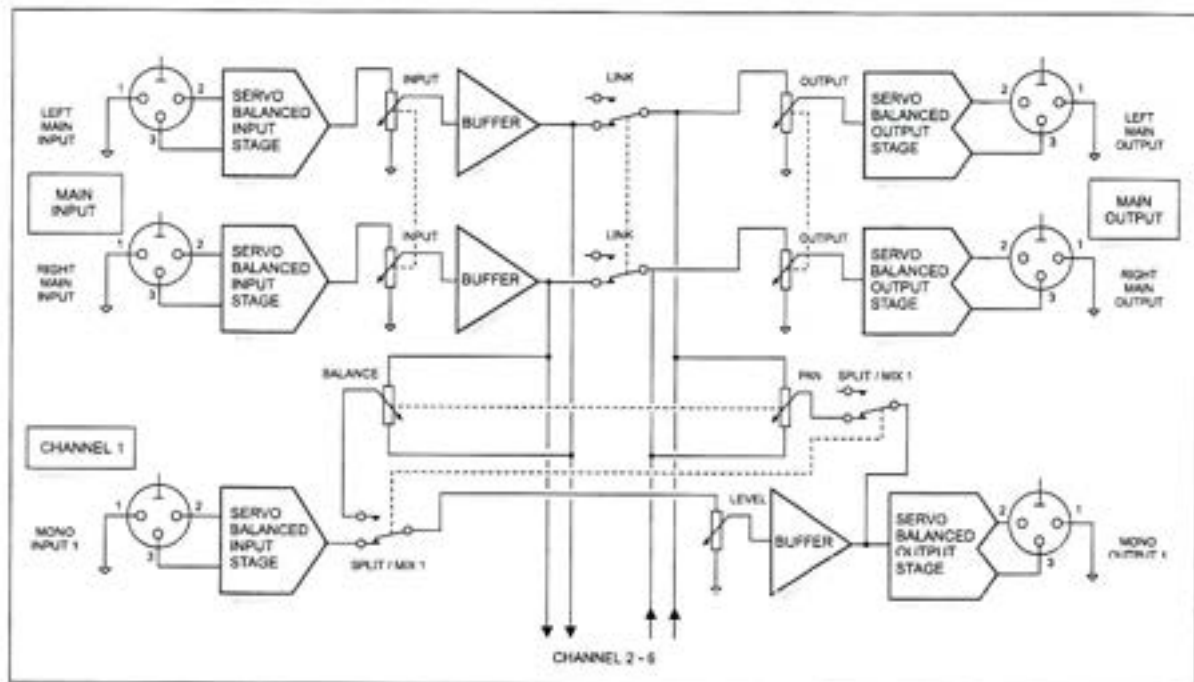
ULTRALINK PRO

Ultra-flexible, multi-purpose 8-channel Signal Router for stage and studio applications



- ▲ Use it as Effects Mixer, for P.A. Monitoring, Live Sound Systems, Theaters, Conference Rooms, Hotels, Churches, etc.
- ▲ Any channel can be selected either as Mixer or Splitter
- ▲ You can use it as 8-IN, 2-OUT Line Mixer
- ▲ You can use it as 2-IN, 8-OUT Line Splitter
- ▲ You can use it as 6-IN, 6-OUT Line Driver or DI-box
- ▲ You can use it as independent line driver to convert -10 dBV into +4 dBu or vice versa
- ▲ Extremely high headroom - offering more dynamic range
- ▲ Ultra-wide bandwidth from 2 Hz to 200 kHz for "open" sound
- ▲ Offers you 6 mono inputs, 6 mono outputs, 2 main inputs and 2 main outputs
- ▲ Offers you 6 Input Level controls, 6 Balance/Pan controls, a Main Input and a Main Output control
- ▲ A Main Link switch allows you to route the Main Input to the Main Output to link several units
- ▲ Accurate 4 / 8-segment LED metering for each individual gain section
- ▲ Servo-balanced gold-plated XLR and 1/4" TRS inputs and outputs
- ▲ Completely versatile DI-Box due to servo-balanced inputs and outputs
- ▲ Ultra-low noise 4580 audio operational amplifiers for outstanding sound performance
- ▲ High-quality detented potentiometers and illuminated switches
- ▲ Manufactured under ISO9000 certified management system

BLOCK DIAGRAM



MAIN Section

Both main inputs interface via the MAIN INPUT LEVEL control with the input bus as well as with the main outputs. The MAIN OUTPUT LEVEL control determines the output level of the signals which are summed by the second bus (i.e., the output bus) and are subsequently routed to the main outputs.

SPLIT Mode

In SPLIT mode, the main input signal is sent via the BALANCE control to the output buffer amplifiers of the mono channels, with the LEVEL control determining the output level of the respective channel. The maximum gain is +15 dB.

MIX Mode

In MIX mode, the input signals of the mono channels are "collected" via the LEVEL and PAN controls and are routed to the output bus. In this mode, the LEVEL control determines the amount of each channel at the output bus, while the PAN control is responsible for the allocation of the input signal to the left and right main outputs.

Additionally, the input signal is routed to the respective mono outputs, i.e., the circuit acts as a matching amplifier. The LEVEL control allows for level compensation of up to +15 dB.

SPECIFICATIONS

AUDIO INPUTS

Connectors	XLR and 1/4" jack
Type	RF filtered, servo-balanced input
Impedance	50 kOhms balanced, 25 kOhms unbalanced
Nominal operating level	-10 dBV to +4 dBu
Max. input level	+21 dBu balanced and unbalanced
CMRR	Typ. 40 dB, > 55 dB @ 1 kHz

AUDIO OUTPUTS

Connectors	XLR and 1/4" jack
Type	electronically servo-balanced output stage
Impedance	60 Ohms balanced, 30 Ohms unbalanced
Max. output level	+22 dBu balanced and unbalanced

SYSTEM SPECIFICATIONS

Frequency response	5 Hz to 200 kHz, +/- 3 dB
S/N ratio	>95 dBu, unweighted, 22 Hz to 22 kHz
THD	0.002 % typ. @ +4 dBu, 1kHz, gain 1

FUNCTION CONTROLS

Main input level	variable
Main output level	variable
Level	variable for each channel
Balance/pan	placing in the stereo field

FUNCTION SWITCHES

Main Link	links the main input signal to the main output
Split/mix	changeover from split to mix mode for each channel

INDICATORS

Input level (main)	4-digit LED display: -24/-12/0/+6 dB
Output level (main)	4-digit LED display: -24/-12/0/+6 dB
Input/output level	8-digit LED display: -24/-18/-12/-6/0/+6/+12/+18 dB

POWER SUPPLY

Mains Voltages	USA/Canada	120 V ~, 60 Hz
	U.K./Australia	240 V ~, 50 Hz
	Europe	230 V ~, 50 Hz
	General export model	100 - 120 V ~, 200 - 240 V ~, 50 - 60 Hz
Power Consumption	max. 35 Watts	
Fuse	100 - 120 V ~: T 630 mA H	
	200 - 240 V ~: T 315 mA H	
Mains Connection	Standard IEC receptacle	

PHYSICAL

Dimension	app. 1 3/4" (44.5 mm) * 19" (482.6 mm) * 8.5" (217 mm)
Net Weight	app. 3.0 kg
Shipping Weight	app. 3.8 kg

BEHRINGER is constantly striving to maintain the highest professional standards. As a result of these efforts, modifications may be made from time to time to existing products without prior notice. Specifications and appearance may differ from those listed or illustrated.

The information contained in this sheet is subject to change without notice. No part of this sheet may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording of any kind, for any purpose, without the express written permission of BEHRINGER Spezielle Studiotechnik GmbH.

BEHRINGER is a registered trademark. ALL RIGHTS RESERVED.

© 2000 BEHRINGER Spezielle Studiotechnik GmbH.

BEHRINGER Spezielle Studiotechnik GmbH, Hanns-Martin-Schleyer-Str. 36-38, 47877 Willich-Münchheide II, Germany

Tel. +49 (0) 21 54 / 92 06-0, Fax +49 (0) 21 54 / 92 06-30

MEDIALON SHOWMASTER LE

> Embedded Show Controller



FEATURES

- 2x Serial ports
- 4x Digital Inputs
- 4x Relay Outputs
- 1x MIDI In/Out
- 1x DMX Out
- 2x Ethernet ports
- Additional Serial, I/O, MIDI, DMX, and Infrared available via network port extension
- SSD Drive
- Drag & drop programming
- 1x Timeline Programming
- 3x HTML Touch Screens (WebPanels)
- Sync Accuracy 1/100th of a second
- Device Position Tracking
- Logical Programming
- Real time testing (no need to Compile / Download / Test / Start Over)
- Alarm via Email

OVERVIEW

Showmaster LE is an all-in-one embedded Show Controller fitted with all necessary show protocol interfaces. It controls and synchronizes dimmers, lighting desks, video projectors, video servers, sound processors etc. Showmaster LE also provides four digital inputs and four relay outputs.

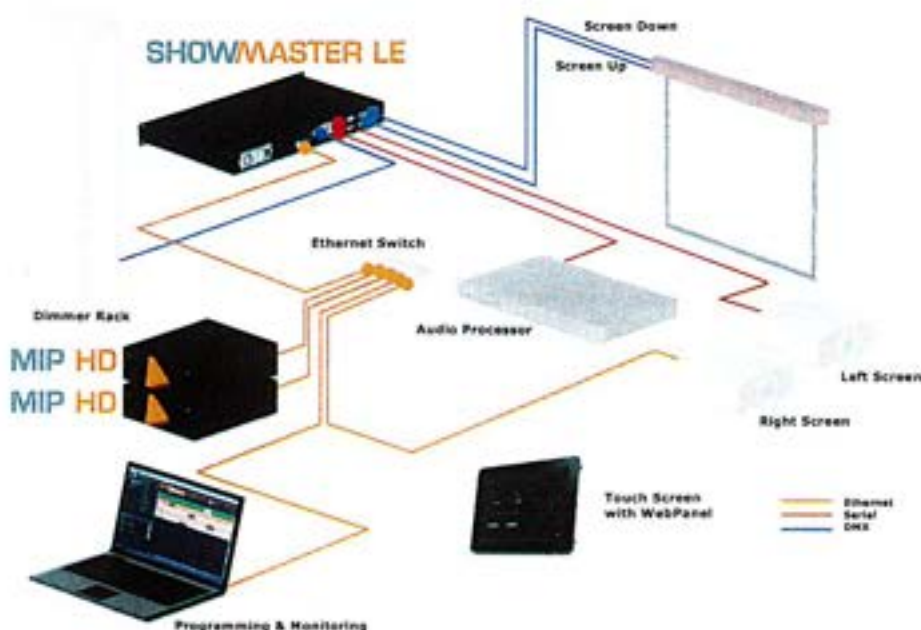
Its free editing software, Showmaster Editor, includes most of the features of our award-winning technology such as device synchronization and logical programming, as well as real time testing. It includes one timeline for synchronized show programming and provides an easy drag and drop interface for building up to 3 HTML touch screens (WebPanels). Showmaster LE supports third party networked Serial, I/O, Infrared, MIDI, and DMX interfaces.

APPLICATIONS

Showmaster LE is designed for small to medium Show Control applications in Museums, Showrooms, Stores, Restaurants, and Attractions.

It can also be used as subsystem in larger shows or attractions.

Its ability to generate 3 HTML touch panels, accessible by web browsers on any tablet or PC makes it very competitive for such applications.



Part Number

- **SWM_LE** - Showmaster LE, Embedded Show Controller, with Showmaster Editor Software included.

Dimensions

- Rack: 476 (W) x 44.5 (H) x 254 (D) mm (18.75" x 1.75" x 10.25"), Stand-alone: 441 (W) x 44.5 (H) 254 (D) mm (17.38" x 1.75" x 10"), Packing: 580 (W) x 145 (H) x 370 (D) mm (22.8" x 5.7" x 14.6")
- Rack size (1U)

Weight

- Rack: 3.6 Kg (8 lbs.)
- Packaging: 4.9 Kg (10.8 lbs.)

Power

- Auto-Ranging 100-240 VAC / 50-60Hz 80 Watts (Actual power requirement is usage dependent)

Enclosure

- Metal with satin black finish

Certifications

- FCC, CE, EN60950-1 FCC Class A - EN55022

Front Panel

- 3x buttons / Power, A & B
- 4x Status LEDs

Rear Panel

- 2x USB 2.0 Ports
- 1x 12 Volts Power Connector
- 2x 10/100/1000 Base-T Ethernet Ports
- 2x RS-232 DB9 Male Serial Ports
- 4x Terminal block relay connectors (24V 1A Max)
- 4x Terminal block digital input connectors (Dry Contact, max. impedance 10k Ohms)
- 1x DMX Output (5 Pin Female XLR)
- 1x MIDI Input DIN5 Female
- 1x MIDI Output DIN5 Female

System

- 2GB DDR3, SDRAM, 533 MHz
- 1x 16GB SATA Solid State Drive
- Intel Atom D2550 dual-core 1.86GHz Processor

Environmental

- Operating Temperature: 0°C/32°F to 60°C/140°F
- Operating Humidity: 30 to 90% (non-condensing)

Included Accessories

- 1x PSU Domino + IEC Power Cord
- 1x Showmaster Editor Installation CD
- 2x Rack Mounting Brackets

Software Specifications

(when used with Showmaster Editor)

- Drag & Drop Programming
- Multitasking: Several tasks can run simultaneously, 1 task with synchronization feature.
- 1x Timeline for synchronization
- 1/100th Sec Sync Accuracy
- Device Positracking (Sync)
- Recording (DMX, MIDI, Serial)
- Logical Programming Operators: +, -, *, /, %, ^, =, ==, !=, >, <, >=, <=, |, &, #, ()
- Logical Programming Functions: Hours, Minutes, Seconds, Frames, Day, Day Of The Week As Name, Day Of The Week As Number, Month, Year, Lower Case, Upper Case, Length, Char At, Get Field Of Enum, Get Index Of Enum, Random, Sqrt, Round, Cell, Floor, Abs, Max, Min, Sin, Asin, Tan, Atan, Cos, Acos, Ln, Log, Exp
- Variable Types: Integer, String, Time, Date, Enum. Unlimited number of variables.
- Real Time program testing
- OpenCap Protocol
- Log Files
- 3x WebPanels (or Manager Panels)
- Alarm via Email
- Driver writing tool: built-in TCP/IP serial and MIDI driver

Extensions Supported

(with firmware 2.5.0 and later)

- DMX over IP: ArtNet
- DMX over IP: Streaming ACN
- Serial over IP: Control Device Master series
- Serial over IP: MOXA nPort series
- Serial over IP: Sealevel SeaLINK series
- IO over IP: Opto22 SNAP Ethernet IO series
- IO over IP: Advantech ADAM-6000 series
- IO over IP: MODBUS/TCP compatible devices
- IO / Serial / IR over IP: Global Cache GC-100

MEDIALON Inc.

245 Catalonia Avenue
Coral Gables, FL 33134, USA
Tel.: +1 305 445 4045
Fax: +1 305 445 4048
www.medialon.com



TiMi-C RGBW

Specification sheet

KKDÖ



24V DC

15.12

W/m

49.2

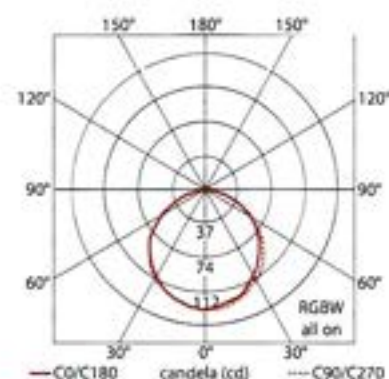
lm/W

IP20



PRODUCT SPECIFICATION

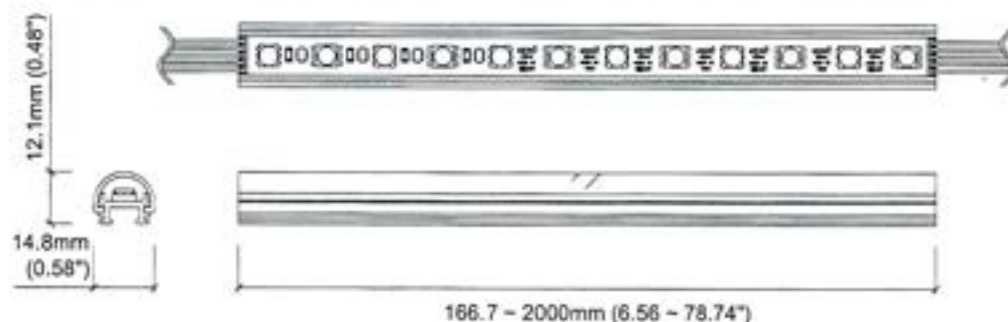
Dimension :	H12.1/W14.8/L166.7-2000mm
PCB increment :	166.7mm Increment/2000mm max
LED pitch :	27.8mm
Chip :	White Toyoda Gosei/Red TEKCORE/Green EPILEDs/Blue 3E
Beam angle :	110° (Clear cover)
Colours :	White: 2300K/2500K/2700K/3000K/3200K/3800K/5000K + RGB :Red 620-628nm/Blue 459-464nm/Green 521-527nm
Bin/Step :	White = 2 Step MacAdam ellipse/RGB = 5nm tolerance
CRI :	≥ 90 (white only)
Lifetime :	50,000 hours @ 25°C
Operating temp :	T _a = -25 to 55°C (T _c max = 74.6°C)
IP rating :	IP20
Finish :	Silver anodised
Cover/lens :	Diffused/Clear
Mounting :	Surface mounting via clips or magnets
Connection :	Hardwire tails or male/female connectors
Control :	0-10V/1-10V/DMX/DALI (see eidoLED options)



PERFORMANCE DATA for 1000mm / 3000K / RGB / Clear cover

Power consumption	15.12W
Supply voltage	24V DC
Supply current	0.63A
Luminous flux	744lm

TECHNICAL DRAWING



Data derived from production samples independently tested to UKAS / IESNA LM-79-08 standards.

See KKDÖ website for product document updates.

www.kkdc.lighting

TiMi-C RGBW-05EN-20150427

Onlyview®

Logiciel multi-diffusions temps réel

La référence ETC pour la diffusion d'image vidéo au format HD avec softedge & correction géométrique.

Hardware

Serveurs pourvus de disque dur amovible.

Lecture vidéo multi-formats, MPEG 2 à des flux supérieurs à 60Mbps, mais aussi, AVI, WMV, Quick Time.

Lecture audio WAV, AIFF, MP3.

Synchronisation par code temps SMPTE.

Sortie vidéo : 1 à 3 flux numérique DVI haute résolution 1920/1080, par serveur.

Sortie audio : Analogique symétrique ou numérique AES/EBU.

Châssis métallique 19".



Onlyview* fonctionne avec un PC maître relié par réseau Ethernet à chaque PC de diffusion.

Onlyview* Master :

NSC-i72600K Ordinateur à base d'Intel Core i7 2600K 1
Disque 128Go SSD CRUCIAL - m4 2,5" - SATA-600 3
CT128M4SSD2

Disque 300Go SSD Intel 320 Series 2,5" - SATA-300 2
SSD5A2CW300G310

note : Système sur 128Go et 2 x 300Go vide en RAID-0
Rack 19" ATX (4U) Antec 1

Alimentation ATX 750w Antec EarthWatts 750 (80 Plus) 1

Carte mère S1155 Intel P57 - Asus P8P67 WS Révolution 1

Audio HD (8 canaux) - DTS Surround Sensation , HD Audio

Processeur Intel Quad Core i7 2600K 3.40GHz S-1155 1

Mémoire DDR3 1600 Kingston HyperX blu - 2 x 4Go 1

KHX1600C9D3B1K2/8GX

ASUS ENGTX580 DCII/2DIS/1536MD5 1

- 1.5 Go GDDR5 - PCI E2.0 x16 - 2 x DVI, Mini-HDMI

Lecteur et Graveur DVD & CD double couche - Sata 1

Clavier LOGITECH - AZERTY - USB 1

Souris LOGITECH Optical mouse - USB 1

Windows 7 Pro 64bits SP1 OEM - licence & DVD

Onlyview* Display :

NSC-i72600K Ordinateur à base d'Intel Core i7 2600K
Disque 128Go SSD CRUCIAL - m4 2,5" - SATA-600 1
CT128M4SSD2

note : Système sur 128Go et 2 x 300Go vide en RAID-0

Rack 19" ATX (4U) Antec 1

Alimentation ATX 750w Antec EarthWatts 750 (80 Plus) 1

Carte mère S1155 Intel P57 - Asus P8P67 WS Révolution 1

Audio HD (8 canaux) - DTS Surround Sensation , HD Audio

Processeur Intel Quad Core i7 2600K 3.40GHz S-1155 1

Mémoire DDR3 1600 Kingston HyperX blu - 2 x 4Go 1

KHX1600C9D3B1K2/8GX

ASUS ENGTX580 DCII/2DIS/1536MD5 1

- 1.5 Go GDDR5 - PCI E2.0 x16 - 2 x DVI, Mini-HDMI

Lecteur et Graveur DVD & CD double couche - Sata 1

Clavier LOGITECH - AZERTY - USB 1

Souris LOGITECH Optical mouse - USB 1

Windows 7 Pro 64bits SP1 OEM - licence & DVD



ETC AUDIOVISUEL
27 rue maurice Gunsbourg 94200 Ivry sur Seine
tél. +33 (0) 145 152 828 - fax +33 (0) 145 152 829 - www.etc-london-paris.com

Onlyview®

Software

Outil de création et de production de terrain, doté d'une ergonomie inspirée à la fois des logiciels de montage et d'animation utilisés couramment par les créatifs et des logiciels d'encodage utilisés par les techniciens, **Onlyview®** offre des possibilités de traitement d'image puissant. La gestion précise du Softedge entre les vidéoprojecteurs et le traitement géométrique corrigeant les déformations dues au cintrage des écrans permettent d'obtenir des images parfaitement raccords pour une projection multi-écrans aisée avec gestion automatique du recouvrement.

La pleine utilisation de la puissance des cartes graphiques du PC permet des compositions étonnantes immédiatement visualisées en temps réel.

Modification rapide de toute création avec un rendu quasiment en temps réel.
Déplacement instantané et aisé sur plusieurs écrans de médias de toutes sortes.
Réalisation de fondus, changements d'échelle, déplacements, rotations, modification de colorimétrie

Gestion multi-timeline permettant d'appeler n'importe quelle séquence à tout moment d'un spectacle, enchainements en fondu.
Gestion de tout type de médias courants, images fixes (png, jpg, psd,...), vidéos (avi, wmv, mpeg 2, quicktime...), texte et son (wav, aiff, mp3). Ajout d'inserts.

Format de sortie HD ou SD (via des cartes dédiées embarquées) supérieur à 1920 / 1080.
Possibilité d'ajout d'un cadre ou d'une ombre portée à chaque type de médias, modification de la colorimétrie (saturation, contraste, brillance) d'une vidéo ou du direct.

Pilotage de tout type d'appareils (Bétacam, Dorémi, grille de commutation,...) et communication aisée avec d'autres logiciels ou interfaces (midi, ethernet, timecode LTC).

Performant et évolutif, **Onlyview®** continue de progresser avec des développements répondant aux attentes de nos clients, études sur mesure, synchronisation avec d'autres techniques.

Idéal pour réaliser des projections multi-écrans, résultat d'une collaboration étroite de notre bureau de développement avec les techniciens de terrains et les créatifs, **Onlyview®** s'adapte à tous types de création : événementiels, conventions, spectacles, émissions de télévision, installations pérennes.



ETC AUDIOVISUEL
27 rue maurice Gunsbourg 94200 Ivry sur Seine
tél. +33 (0) 145 152 828 – fax +33 (0) 145 152 829 – www.etc-london-paris.com



ONLYVIEW®



Onlyview est l'outil idéal pour réaliser vos projections multi-écrans. Issu d'une collaboration étroite entre notre bureau de développement intégré, les techniciens de terrains et les créatifs, Onlyview s'adapte à toutes les situations : événementiels, conventions, spectacles, émissions de télévision, installations fixes. Onlyview est à la fois un outil de création et de production sur le terrain.

Onlyview vous permet de réaliser aisément une projection multi écrans avec gestion automatique du recouvrement. Onlyview utilise pleinement la puissance des cartes graphiques de vos PC, vous permettant de réaliser des compositions étonnantes immédiatement visualisées : "Oubliez les longues journées de calculs et venez nous rejoindre dans l'univers fascinant du temps réel".

Onlyview fonctionne avec un PC maître relié par réseau ethernet à chaque PC de diffusion. Onlyview est modulaire, vous souhaitez un écran panoramique plus grand, il vous suffit d'ajouter des PC de diffusions.

Onlyview fonctionne avec des vidéo projecteurs (implantation horizontale ou verticale), plasmas, écrans pleins jours, moniteurs.

L'ergonomie de Onlyview s'inspire à la fois des logiciels de montages et d'animations utilisés couramment par les créatifs et des logiciels d'encodages utilisés par les techniciens. Le graphiste se sent immédiatement à l'aise pour créer sa composition, le technicien a tous les outils et la souplesse nécessaire pour répondre à chacun des besoins du terrain. Onlyview vous permet de modifier votre création à tout moment afin de faire face aux changements de dernière minute. Vous déplacerez instantanément et de manière simple sur plusieurs écrans des médias de toutes sortes, réaliserez des fondus, des changements d'échelles, des déplacements, rotations, changements de colorimétrie La gestion multi timeline vous permet des changements en fondu à tout moment de séquence pendant votre spectacle.



Onlyview gère tout type de médias courants : que ce soit des images fixes (png, jpg, psd,...), des vidéos (avi, wmv, mpeg 2, quicktime, swf,...), du texte et du son (wav, aiff, mp3). Vous pouvez également ajouter des inserts de direct HD ou SD (sans ajout de matériel supplémentaire). Il est possible d'ajouter un cadre ou une ombre portée à chaque type de médias, ainsi que de modifier la colorimétrie (saturation, contraste, brillance) d'une vidéo ou du direct. Onlyview pilote également tout type d'appareils (bétacam, dorémi, grille de commutation, ...) et communique aisément avec d'autres logiciels ou interfaces (midi, ethernet, timecode LTC).



Bien entendu Onlyview est synchronisable de manière simple avec Onlycue : Il est alors très facile de mélanger projection géante (PIGI) et vidéoprojection en parfaite synchronisation.

Onlyview est un outil performant et évolutif. Notre équipe de développeurs est à votre entière disposition pour adapter Onlyview aux impératifs de vos événements (développement sur mesure possible, synchronisation avec d'autres techniques). Rien n'est impossible !



ETC Audiovisuel c'est aussi la location d'équipement de projection et de régie vidéo, la vente et la mise en œuvre d'installations fixes, automatisation et synchronisation image, son, lumière, machinerie et effets spéciaux.

ETC Audiovisuel 27 rue Maurice Gunsbourg 94851 Ivry sur Seine Cedex France
Tel : 01 45 15 28 28 Fax : 01 45 15 28 29 E-mail : infos@etc-pigi.com
Visitez notre site web : <http://www.etc-pigi.com>

BRIGHTSIGN HD

AN UPDATED CLASSIC. MAINSTREAM PERFORMANCE.

BrightSign HD models are ideal for mainstream Full HD and HTML5 applications that require high reliability and ease of use. All models offer H.265 decoding, HTML5 rendering with mainstream performance, and Gigabit Ethernet. Robust interactive controls, live content features, BrightWall™ and Mosaic Mode make this set of players a perfect fit for a wide range of applications.



BrightSign HD223

Standard I/O Player

Enjoy flawless Full HD single video decoding, mainstream HTML5 performance and simultaneous playback from local, networked and streaming sources. Includes the standard I/O package of Gigabit Ethernet, GPIO, and analog/digital audio.

Price: \$350



BrightSign HD1023

Expanded I/O Player

All the features of the HD223 plus additional interactive options via USB 2.0 (type A), and serial ports to fully engage your audience.

Price: \$450

Features



SPECIFICATIONS

MODEL	HD223	HD1023
VIDEO ENGINE DECODER		
Single 1080p60 video decoding	X	X
MEDIA FORMATS		
Video Codecs: H.265, H.264/MPEG-4, Part 10, MPEG-2, MPEG-1	X	X
Video Containers: .ts, .mpg, .wmv, .mov, .mp4, .m2ts, .wmv	X	X
Images: BMP, JPEG, PNG	X	X
Audio: MP2, MP3, AAC, and WAV (AC3 is passed through)	X	X
HTML5	X (Mainstream)	
DISPLAY RESOLUTIONS		
1920x1080x24/25/29.97/30/50/59.94/60p, 1920x1080x50/59.94/60i, 1600x1200x60p, 1440x1050x60/75p, 1440x900x60/75p, 1360x768x60p, 1280x1024x60/75p, 1280x960x60p, 1280x800x60p/75p, 1280x768x60p, 1280x720x30/30p, 94x60p, 1024x768x60p, 800x600x60/75p, 720x576x50p/50i, 720x480x59.94/60p/60i, 640x480x60p	X	X
HARDWARE INTERFACES		
External micro SD Slot (SDHC and SDXC); SDHC storage up to 32GB SDXC storage up to 2TB	X	X
USB High Speed Host Port (also supports content updates)	X (Type A)	
Phoenix GPIO Port (8-pin bi-directional terminal block)	X	X
3.5mm RS-232 Serial Port	X	
3.5mm Audio Out (analog & digital)	X	X
HDMI 2.0a Out	X	X
Ethernet	X (Gigabit)	
ML2 (E) Keyed Wi-Fi/Bluetooth Connector	X	X
Wi-Fi External Antenna Connectors	X (dual)	
Status LEDs	Power, Error, Busy, Update	
Reset and Service Buttons	X	X
Real Time Clock	X	X
FEATURES		
H.265 Decoding: smaller file sizes and lower bitrates than H.264	X	X
HTML5: hardware-accelerated engine that plays modular HTML assets flawlessly alongside high-bandwidth video	X (Mainstream)	
BrightBeacon™: 2-way Bluetooth/Beacon communication between mobile devices & signage	X	X

MODEL	HD223	HD1023
BrightWell™: synchronized playback across multiple displays	X	X
Zones: playback multiple content types on a single screen	X	X
Mosaic Mode: simultaneously play a multitude of smaller resolution videos that add up to the maximum video resolution of the player	X	X
IP Streaming: play streaming media	X	X
IP Streaming Server: serve IP streams from local storage	X	X
Interactivity: connect virtually any type of interactive device to a multitude of interactive points	X (GPIO, UDP)	X (GPIO, USB, serial, UDP)
Live Feeds: Live Data, Live Text, RSS, Twitter, Flickr, etc.	X	X
Tagging: BrightSign Network users can assign media and player tags for highly targeted content distribution	X	X
BrightSign App: update signs with an iOS device	X	X
Geo-fencing: trigger playback based on location (requires USB dongle)	X	
Sign Preview: preview presentation playback in BrightAuthor	X	X
Remote Snapshot: remotely view a snapshot image of the display's playback	X	X
BrightPlates™: easy template-based sign creation service	X	X
Networking: update, manage and schedule your signage	X	X
B-deploy: A setup feature to deploy many players at once	X	X
SOFTWARE		
Free BrightAuthor Software	X	X
BrightSign Networking Options	X	X
ACCESSORIES		
USB Button Pads	X	
Wireless/Bluetooth Module	X	X
MicroSD Class 10 Cards (various capacities)	X	X
MISCELLANEOUS		
Dimensions (W x H x D)	159.9 x 22 x 144.2mm or 6.3 x 0.87 x 5.7 in	
Weight	12 oz	
Power	12V / 1.5A (18 Watts)	
Multi-Country Power & Regulatory Approvals	X	X
Built-in Wall Mounting Brackets	X	X
1 year warranty, parts and labor	X	X

BRIGHTSIGN LS

**SIGNATURE BRIGHTSIGN RELIABILITY.
AFFORDABLE ENTRY-LEVEL PERFORMANCE.**

BrightSign's fully featured commercial-grade player provides a far superior alternative to the consumer devices sometimes chosen for price-sensitive installations. Based on the award-winning BrightSign HD platform, BrightSign LS delivers our signature reliability and affordability. A robust feature set, including H.265 and Full HD video decoding, entry-level HTML5 performance, USB 2.0 (type C), and networking, is provided in a very small form digital signage media player.



BrightSign LS423

Entry-Level Media Player



The small form, commercial-grade BrightSign LS423 is fully featured to run circles around the competition. Network connected and featuring H.265 and 1080p60 video playback, entry-level HTML5 support and USB (type C) interactivity, this model is perfect for simple streaming applications and large deployments of common content.

Price: \$250

Features



H.265



1080p60
single decode



Entry-Level
HTML5



IP Streaming



BrightBeacon™



BrightWall™



Zones



Interactive



Live Feeds



Geo-Fencing



Tagging



BrightSign
App



Sign Preview



Remote
Snapshot



BrightPlates™



100base T
Networking



B-Deploy

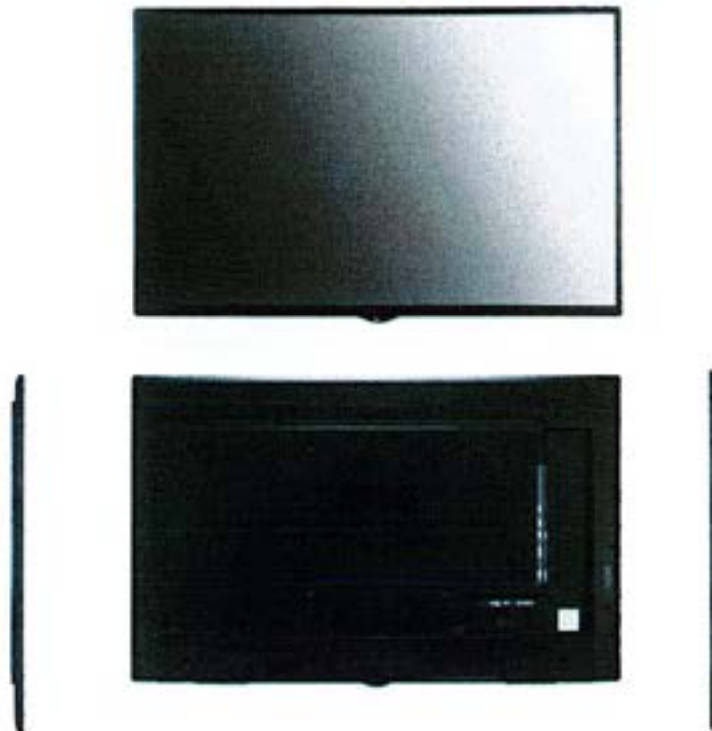
SPECIFICATIONS

MODEL	LS423
VIDEO ENGINE DECODER	
Single 1080p60 video decoding	X
MEDIA FORMATS	
Video Codecs: H.265, H.264/MPEG-4, Part 10, MPEG-2, MPEG-1	X
Video Containers: .ts, .mpg, .vob, .mov, .mp4, .m2ts, .wmv	X
Images: BMP, JPEG, PNG	X
Audio: MP2, MP3, AAC, and WAV (AC3 is passed through)	X
HTML5	X (Entry-level)
DISPLAY RESOLUTIONS	
1920x1080x24/25/29.97/30/50/59.94/60p, 1920x1080x50/59.94/60i, 1600x1200x60p, 1440x1050x60/75p, 1440x900x60/75p, 1360x768x60p, 1280x1024x60/75p, 1280x960x60p, 1280x800x60/75p, 1280x768x60p, 1280x720x50/59.94/60p, 1024x768x60p, 800x600x60/75p, 720x576x50/50i, 720x480x59.94/60p/60i, 640x480x60p	X
HARDWARE INTERFACES	
External micro SD Slot (SDHC and SDXC): SDHC storage up to 32GB SDXC storage up to 2TB	X
USB High Speed Host Port (also supports content updates)	X (Type C)
Analog Audio Out via USB (with dongle)	X
HDMI 2.0a Out	X
Ethernet	X
ML2 (E) Keyed Wi-Fi/Bluetooth Connector	X
Wi-Fi External Antenna Connectors	X (Single)
Status LEDs	Power
Reset and Service Buttons	X
Real Time Clock	X
FEATURES	
H.265 Decoding: smaller file sizes and lower bitrates than H.264	X
HTML5: hardware-accelerated engine that plays modular HTML assets flawlessly alongside high-bandwidth video	X (Entry-level)
BrightBeacon™: 2-way Bluetooth/Beacon communication between mobile devices & signage	X
BrightWall™: synchronized playback across multiple displays	X

MODEL	LS423
Zones: playback multiple content types on a single screen	X
IP Streaming: play streaming media	X
Interactivity: trigger playback from virtually any type of interactive device via a multitude of interactive ports	X (USB, UDP)
Live Feeds: Live Data, Live Text, MRSS, Twitter, Flickr, etc.	X
Tagging: BrightSign Network users can assign media and player tags for highly targeted content distribution	X
BrightSign App: update signs with an iOS device	X
Geo-Fencing: trigger playback based on location (requires USB dongle)	X
Sign Preview: preview presentation playback in BrightAuthor	X
Remote Snapshot: remotely view a snapshot image of the display's playback	X
BrightPlates™: easy template-based sign creation service	X
Networking: update, manage and schedule your signage	X
B-deploy: A setup feature to deploy many players at once	X
SOFTWARE	
Free BrightAuthor Software	X
BrightSign Networking Options	X
ACCESSORIES	
USB Button Pads	X
Wireless/Bluetooth Module	X
MicroSD Class 10 Cards (various capacities)	X
MISCELLANEOUS	
Dimensions (W x H x D)	96.8 x 23.7 x 144.3mm or 3.8 x 0.9 x 5.7 in
Weight	5.6 oz
Power	5W/2A (10 Watts/USB compatible power)
Multi-Country Power & Regulatory Approvals	X
Built-in Wall Mounting Brackets	X
1 year warranty, parts and labor	X

LG FULL HD DISPLAY SM5KB SERIES

65SM5KB



FEATURES:

- 65" IPS Panel
- Slim design, WebOS platform with Built-in Wi-Fi
- Ideal for Offices, Restaurants and Retail
- Native Resolution : 1920 x 1080 (Full HD)
- Aspect Ratio : 16:9
- Brightness : 450cd/m²
- Contrast Ratio : 1,300:1
- Orientation: Portrait and Landscape
- Viewing Angle (H x V) : 178° x 178°



*LED LCD Monitors combine LCD screen with LED back light technology

www.lg.com/au

Technical Data

65SM5KB



PANEL		
Screen Size	65" (164cm)	
Panel Technology	IPS	
Aspect Ratio	16 : 9	
Native Resolution	1920 x 1080 (Full HD)	
Brightness	450cd/m ²	
Contrast Ratio	1,300 : 1 (Native)	
Dynamic CR	4,000,000 : 1	
Operating Hours	24 Hours	
Viewing Angle (H x V)	178° x 178°	
Orientation	Portrait and Landscape	
Surface Treatment	Hard coating(3H), Anti-glare treatment (Haze 1% Typ.)	
CONNECTIVITY		
Input (Rear)	Digital	HDMI(1, Support HDCP 2.2), DP(1), DVI-D(1)
	Analogue	RGB (1)
	Audio	RGB/DVI (1), Speaker (10W x 2)
External Control	USB	RS232C (1), RJ45 (1), IR (1), Pixel Sensor (1)
	Wi-Fi/Bluetooth	Yes (1, USB3.0)
	SD Card	Dual Band (802.11n) / (802.15.1)
		Yes (1, SDHC/Full Size)
Output (Rear)	Digital	DP Out (1)
	Audio	Yes (1)
External Control		RS232C (1)
PHYSICAL SPECIFICATIONS		
Bezel Width	11.9mm(T/R/L), 18mm(B)	
Monitor Dimension (W x H x D)	1457mm x 838mm x 56.5mm	
Dimension with optional stand (W x H x D)	1457mm x 898mm x 220mm	
Carton Dimensions (W x H x D)	1561mm x 951mm x 170mm	
Weight (head)	27.9kg	
Weight(head+stand)	32.9kg	
Packed Weight	33.8kg	
VESA™ Standard Mount Interface	300 x 300 mm	
SPECIAL FEATURES		
Additional		Time, Tile Mode, Colour Settings, Languages, Internal Memory(4GB), DPM Select, File Play with USB, USB Cloning, Input Label, Smart Energy Saving, Built-in Speakers, SD Card Slot, Sync Mode
ENVIRONMENT CONDITIONS		
Operation Temperature	0 °C to 40 °C	
Operation Humidity	10 % to 80 %	
POWER		
Power Supply	100-240V~, 50/60Hz	
DPM	0.7W	
Typical / Smart Energy Saving on	125W/85W	
Power Off	0.5W	
Power Type	Built-In-Power	
STANDARD (CERTIFICATION)		
Safety	UL/cUL/CB/TUV/KC	
EMC	FCC Class "A"/CE/KCC, C-tick	
ErP/US EPA	Yes / Yes (Energy Star 6.0)	
MEDIA PLAYER COMPATIBILITY		
External Media player Attachable	Yes (MP500/MP700, KT-OPSA)	
SOFTWARE COMPATIBILITY		
SuperSign-w lite / SuperSign-c	Yes / Yes	
ACCESSORIES		
Included	Remote Controller (including 2ea battery), Power Cable, QSG, RGB Cable, Regulation Book, Photo to RSC232C Gender, Memory Cover	
Optional	Stand(ST-652T), Media Player, OPS Kit(KT-OPSA), Wall bracket (LSW230B), Pixel Sensor(KT-SP0), VESA Adapter(AM-B220S), HDBaseT(EB-B100)	
Warranty	3 Years (Parts & Labour)	

Disclaimer: All product specifications correct at time of printing. Specifications may change without prior notice.

www.lg.com.au



LG SM5KB Enhanced Smart Platform



- ▶ **65SM5KB**
65" class (64.5" diagonal)
- ▶ **55SM5KB**
55" class (54.6" diagonal)
- ▶ **49SM5KB**
49" class (48.5" diagonal)
- ▶ **43SM5KB**
43" class (42.5" diagonal)
- ▶ **32SM5KB**
32" class (31.5" diagonal)



The SM5KB Series with webOS signage, allows for customized apps that are easy to create using LG's Software Development Kit. The built in speakers, Wi-Fi, and SoC reduces the total cost of ownership, simplifies installation, and managing content is easy and convenient.

KEY FEATURES



QUAD CORE SOC (SYSTEM-ON-CHIP)

The High Performance SoC can execute several tasks at the same time and provides smooth content playback.



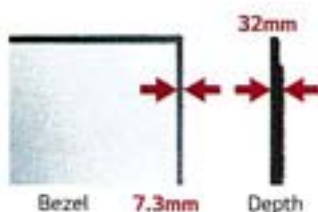
webOS

LG's webOS enabled displays feature an all-in-one hardware and software platform that allows software developers to install and run their software in a more simplified solution. This approach offers architecture that enables easy-to-build web-based apps across multiple platforms. This approach offers software architecture, including iOS®, Android® and Windows®. Using LG's SDK, integrators can construct their own ideal customized signage solution for their clients.



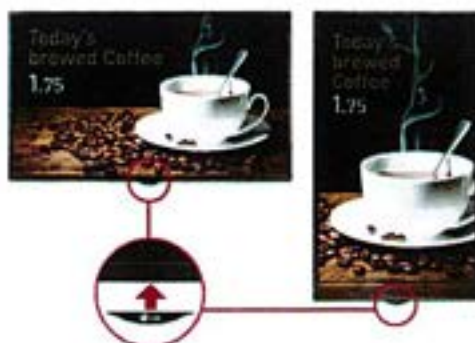
SLIM DESIGN | NARROW BEZEL

LG's monitors featuring a Direct-LED Backlight, have a stylishly slim design that fit perfectly into narrow spaces while ensuring high energy efficiency. The slim bezels are a perfect fit in confined areas and are easy to install.



DETACHABLE LOGO

The detachable logo can be removed and repositioned to the desired setting. Perfect when using in Portrait Mode.



DIGITAL SIGNAGE MANAGEMENT ESSENTIALS



SUPERSign
Digital Signage Solutions

Run messages on up to 50 display screens in the form of a billboard without any additional hardware. Advertisements, information and broadcast content can be arranged on the same screen to attract attention and deliver specific messaging to your customer base.

LG SuperSign Lite Usage Example

Different layout and designs available.



BEACON CONVENIENT SUPPORT

With BEACON and Bluetooth Low Energy (BLE) supported by SMSKB, retail stores can provide coupons and information in real-time.



CONFORMAL COATING

Conformal coating helps protect against water, dust and iron powder deposits which accumulate in harsh environments, saving on expensive installation and added enclosure costs.



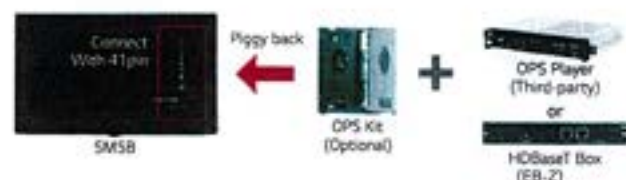
With Conformal Coating



Without Conformal Coating

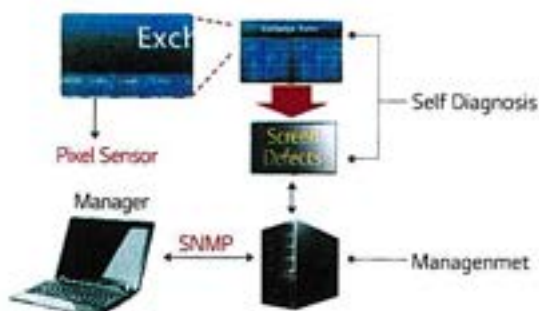
OPS (OPEN PLUGGABLE SPECIFICATION) KIT / HDBASET BOX

The SMSKB provides an OPS Kit to connect a third-party OPS player or HDBaset box. Users have the flexibility to choose any media player as long as it complies with OPS.



SCREEN FAULT DETECTION

Detects screen failure and sends an alert log via email.



ADVANCED FAILOVER

The enhanced failover function enables content in the internal memory to be displayed without dead spots when none of the external inputs are working. Monitor performs the signal switching automatically.



SoftAp

The SMSKB with SoftAp software can operate as a wireless access point for mobile devices.



SIMPLE INSTALLATION

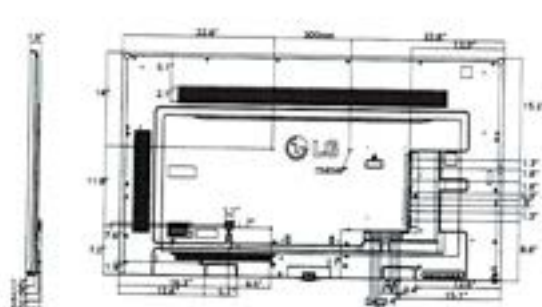
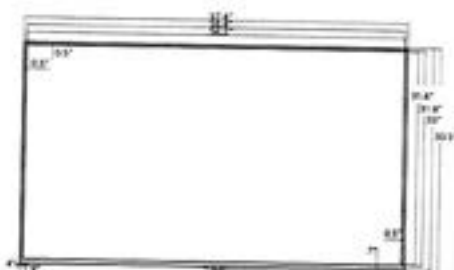
SuperSign embedded player with RJ45 interface allows easy content transfer and control via network without the need for an external media player.



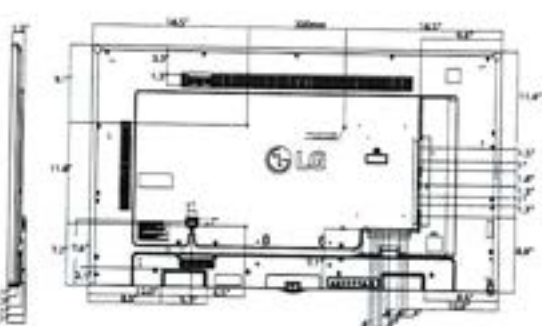
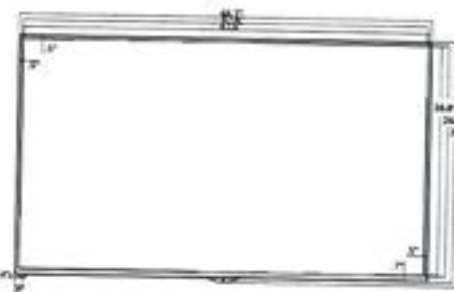
MIRRORING

Content sharing is convenient through a Wi-Fi network.

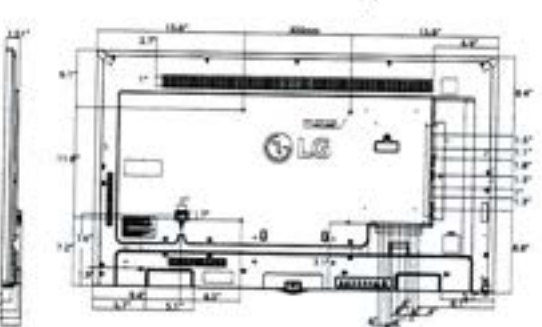
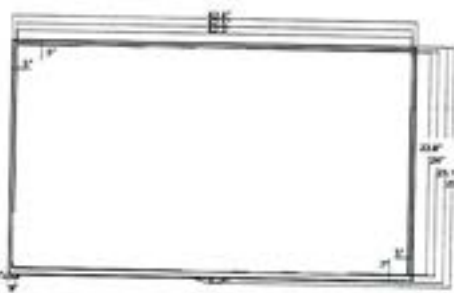




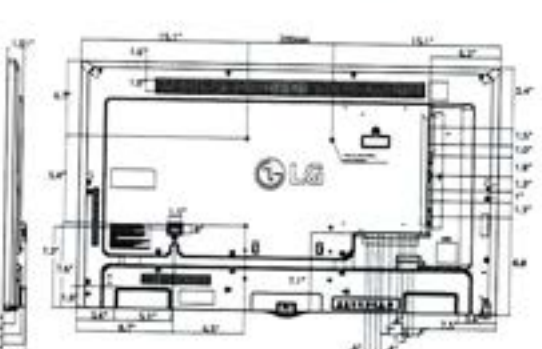
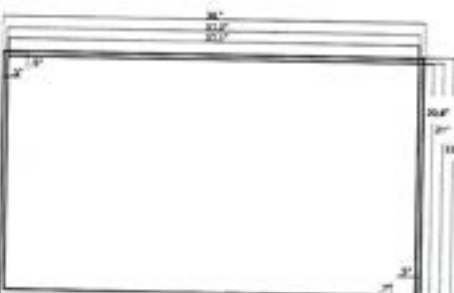
55MBK8



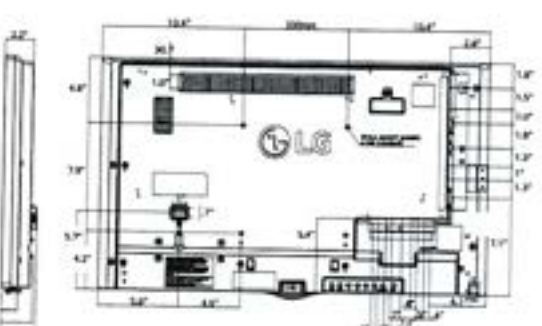
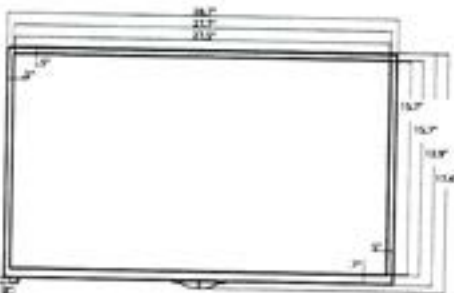
495M54CB



435M5kB



325M50B

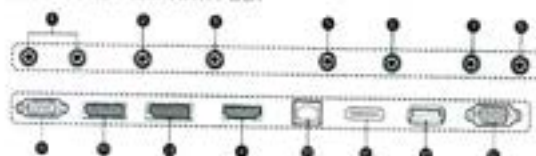


- | | |
|---------------------|-------------|
| 1 SPEAKER OUT | 11 DVI-D IN |
| 2 IR & LIGHT SENSOR | 12 DP IN |
| 3 PIXEL SENSOR | 13 DP OUT |
| 4 HDMI | 14 RGB IN |
| 5 RS-232C IN | 15 LAN |
| 6 RS-232C OUT | 16 USB 3.0 |
| 7 AUDIO IN | 17 SD |
| 8 AUDIO OUT | |

55/49/43/32SM5KB Rear Jack Pack



6SSM5KB Rear Jack Pack



SM5KB

Enhanced Smart Platform

▶ **65SM5KB**
65" class
(64.5" diagonal)

▶ **55SM5KB**
55" class
(54.6" diagonal)

▶ **49SM5KB**
49" class
(48.5" diagonal)

▶ **43SM5KB**
43" class
(42.5" diagonal)

▶ **32SM5KB**
32" class
(31.5" diagonal)

Model name	65SM5KB	55SM5KB	49SM5KB	43SM5KB	32SM5KB
Screen Size	65" class (64.5" diagonal)	55" class (54.6" diagonal)	49" class (48.5" diagonal)	43" class (42.5" diagonal)	32" class (31.5" diagonal)
Panel Technology			IPS		
Aspect Ratio			16:9		
Native Resolution			1920 x 1080 (FHD)		
Pixels (H x V x Z)			6,220,800		
Brightness		450cd/m ²			400cd/m ²
Contrast Ratio	1,300:1		1,300:1		
Dynamic CR			4,000,000:1		
Color gamut			68%		
Viewing Angle (H x V)			178 x 178		
Color Depth	1.06 Billion		16.7 Million		
Response Time		12ms (G to G BW)			12ms (G to G BW) 7ms (WOT)
Surface Treatment	Hard coating (3H), Anti-glare treatment of the front polarizer (Anti TN/Type2)				
Life time (Typical)		50,000 Hrs			
Operation Hours		24 Hr			
Orientation			Portrait & Landscape		
HDMI			Yes (1), HDMI HDCP2.2		
DP			Yes (1), DP HDCP1.3		
DVI-D			Yes (1), DVI-D		
RGB			Yes (1)		
Audio In			Yes (1), RGB/DVI		
RS232C In			Yes (1)		
IRAS			Yes (1)		
IR Receiver			Yes (1)		
Pixel Sensor			Yes (1)		
USB (USB3.0)			Yes (1)		
SD Card			Yes (1)		
SDHC (Full Size)			Yes (1)		
HDMI Formats			HDMI: T20p, 1080i, 1080p		
DP Out			Yes (1), SST/DP1.2a		
Audio Out			Yes (1)		
RS232C Out			Yes (1)		
Temperature Sensor			Yes		
Auto Brightness Sensor			Yes		
Cooling Fan			No		
Tile Mode			Yes (Up to 15x15)		
Natural Mode			Yes		
@Tile Mode			Yes		
Source Selection			RGB, HDMI, DVI, DP, OPS, USB, SD Card		
Brightness/Contrast / Backlight			Yes		
Position/Size			Yes		
Auto Config Phase			Yes		
Language (OSD)	English, French, German, Spanish, Italian, Korean, Chinese (Simplified), Chinese (Traditional), Portuguese (Brazil), Swedish, Finnish, Norwegian, Danish, Russian, Japanese, Portuguese (Europe), Dutch, Czech, Greek, Normal, White, Wash, Color, Wash, User image (User video, On/Off, Inversion, Washing Bar will be supported from 1.5 July) * Scheduling is supported additionally				
ISM Method			Dynamic Contrast, Dynamic Color, Color Gamut, Skin Color, Sky Color, Grass color, Gamma		
Advanced Timer			Clock, On/Off Timer, Auto Off, Automatic Standby		
Input Label			Yes (PC/DTV)		
Power On Status			Standby, PWR, LST		
Key Operation			IR operation, Local key operation		
DPM Select			(Analog Sync only, Digital Clock / Clock+Data selectable)		
DPM Wake Up			Yes		
Speakers			Yes		
Smart Energy Saving			Yes		
Energy Saving			Yes (Auto, Minimum, Medium, Maximum, Screen off)		
File Play With USB			Yes		
Internal Memory			8GB (System 4GB + Available 4GB)		
Wi-Fi			802.11n combo built-in		
USB Cloning			Logo image download, Sent to USB, Receive from USB		
Contents Scheduling			USB, Internal memory, SD Card		
Calibration Mode			Yes		
DST			Yes		
Sync Mode			Time Sync, Content Sync		
PIA Mode			Yes		
Firmware Update (LAN)			Yes		
Local Time Auto Setting			Yes		
Overlay Touch			Yes		
Still Image			Yes		
HDMI-CEC			Yes		

Model name	65SM5KB	55SM5KB	49SM5KB	43SM5KB	32SM5KB
Wake On LAN			Yes		
Digital Audio Input			Yes		
Power On Delay			0 - 250		
Pixel Mode			Yes		
Contents Rotation			0, 90, 270		
OSD Portrait Mode			0, 90, 270		
Intelligent Auto			Yes		
Password Change			Yes		
Self Setup			Manual, Auto		
Configuration Setup			USB auto Playback		
Lock Mode			USB		
Fail Over			USB, SDcard, RGB, DP, OPS, DVI, HDMI, Internal Memory		
SuperSign Server Setup			Signage name, Server IP setting, Server IP Status		
No Signal Image (Up to 5MB)			No (Use Internal memory fail over)		
Media Share			Minimizing (SoftAP will be supported from 1.5 July)		
Beacon			On/Off (Will be supported from 1.5 July)		
Embedded Template			Yes (Will be supported from 1.5 July)		
Check Screen (Via Pixel Sensor)			Yes		
OPS Power Control			Sync On, Sync On/Off, Disable		
Operation Temperature			32°F to 104°F		
Operation Humidity			10% to 80%		
Power Supply			100-240V~, 50/60Hz		
Power Type			Built-in Power		
Typical	120W	100W	85W	75W	60W
Smart Energy Saving	85W	70W	60W	55W	45W
DPM			0.5W		
Power Off			0.5W		
Balance			Yes		
Audio Power			20W (10W x 2) for Internal Speaker (6 ohm)		
Speaker On/Off			Yes		
Clear Voice II			Yes		
Virtual Surround Plus			Yes		
Equalizer			Yes		
Sound Mode			Standard, News, Music, Cinema, Sports, Game		
Safety	UL / cUL / CB / TUV / KC / FCC Class 'B' / CE / FCC Yes / Yes/ENERGY STAR® C				
OS Type			Yes		
External Media Player Attachable			Yes (MP500/MP700)		No
SuperSign+ Ver			Yes		
SuperSign+ Ver			Yes		
Bezel Color			Black		
Bezel Width			11.9mm (T/R/L), 18mm (B)		13mm (T/R/L), 18mm (B)
(W x H x D)	57.36" x 3" x 2.2"	48.7" x 28.1" x 2.1"	43.4" x 25.1" x 2.1"	38.1" x 22.2" x 2.1"	28.7" x 16.4"
Weight	61.5lbs	38.6lbs	31.5lbs	22.1lbs	12
w/Optional Stand (W x H x D)	57.4" x 35.4" x 16"	48.7" x 30.5" x 8.7"	43.4" x 27.4" x 8.5"	38.2" x 24.5" x 7.6"	28.7" x 16.4"
Weight	72.5lbs	45.4lbs	38.4lbs	27.1lbs	13.3lbs
Carton (W x H x D)	61.5" x 38.5" x 7.5"	52.4" x 31.8" x 6.7"	47.1" x 29.9" x 6.5"	41.4" x 25.6" x 4.8"	31.9" x 2
Carton Weight	74.1lbs	47.4lbs	37.9lbs	27.8lbs	14
VESA™ Compatible			300mm x 300mm		200mm x 200mm
Accessories	Basic: Remote Controller (include battery 2x), Power Cord, OSD, RGB Cable, Regulation Book, Pn RS232C Gender Memory tower				
Optional	Stand (ST-6527), Pixel sensor (KT-SP0), Media player, Wall bracket (SW-2508), VESA (AM-B3305), OPS kit (KT-OPS4), HD Base T (TB-B100)				
UPC	7 19192 19745 9	7 19192 19744 2	7 19192 19743 5	7 19192 19742 8	7 19192 19741 9
Warranty	3-Year Limited Warranty Parts/Labor/Backlight Extended warranty options are also available				



Contact your LG Regional Sales Representative
Channel: 800.897.8871
Hospitality: 800.228.1236
E-mail: info@lgsolutions.com

LG_SPEC_SM5KB Series_071519_PR



All screen images are simulated. Dimensions and weights are approximate. G specifications, and features subject to change without notice.

© Copyright, 2015 LG Electronics USA, Inc. All Rights Reserved. "LG Life's Good" is a registered trademark of LG Corp.

ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency. In Pa Switching is a trademark of LG Philips LCD Ltd. VESA is a trademark of Video Electronics Standards Association. HDMI, the HDMI logo and High-Definition Multimedia Interface trademarks or registered trademarks of HDMI Licensing LLC.

All other product and brand names are trademarks or registered trademarks of their respective companies.

Printed in the USA, August 2015



17" Open Frame 10pt Touch-Monitor

Der ProLite TF1734MC 17 Zoll (43 cm)-Multitouch LCD arbeitet mit der Projected Capacitive Touch Technologie, die dank einer speziellen Glasbeschichtung höchste Dauerhaftigkeit, Stoß- und Kratzfestigkeit sowie eine perfekte Bildqualität garantiert. Dabei bleibt die Touch-Funktion selbst bei zerkratztem Display voll funktionsfähig.

Der Bildschirm ist IP65 zertifiziert somit vor Staub und Wasser geschützt. Der TF1734MC wird mit externen Halterungen geliefert die eine einfache Installation und Einbau ermöglichen. Der TF1734MC ist die ideale Lösung für den Einsatz im Einzelhandel, Werbe- und Kiosksysteme.



TOUCH TECHNOLOGIE - KAPAZITIV

Diese Technologie nutzt ein Sensor-Netz von mikroskopischen Drähten die in der Glasoberfläche integriert sind. Durch Berührung der Scheibe werden elektrische Signale verändert und dadurch kann die Touch-Position errechnet und an den Controller weitergegeben werden. Die Glas-Oberfläche dieser Technologie ist äußerst langlebig, die Touch-Funktionalität bleibt unberührt, selbst wenn das Glas zerkratzt ist. Es bietet eine perfekte Bildwiedergabe und kann mit den Fingern (auch mit Latex-Handschuhen) oder magnetischen Stiften bedient werden.



OPEN FRAME BRACKETS

Dieser Open-Frame-Monitor ist mit Befestigungswinkeln ausgestattet. Diese garantieren eine einfache Installation und machen ihn zu einer idealen Lösung für Integratoren und für Kiosk System Hersteller.

1. DISPLAY EIGENSCHAFTEN

BILODIAGONALE	17"; 43cm
BILDFORMAT	5 : 4
PANEL	TN LED
PHYSIKALISCHE AUFLÖSUNG	1280 x 1024 (1.3 megapixel)
HELLIGKEIT	250 cd/m² typisch
HELLIGKEIT	225 cd/m² mit touch panel
KONTRASTVERHÄLTNIS	1 000 : 1 mit touch panel
REAKTIONSZEIT	5 ms
BLICKWINKEL	horizontal/vertikal: 170°/ 160°; rechts/links: 85°/ 85°; nach oben/unten: 80°/ 80°
DARSTELLBARE FARBEN	16.7 Mio.
TOUCHSCREEN TECHNOLOGIE	kapazitiv, multi touch (10 kompatible Touchpunkte - nur wenn das Betriebssystem das unterstützt), Aktivierung durch Finger
TOUCHPUNKTE	10
GLAS HÄRTEGRAD	7H min.
LICHTDURCHLÄSSIGKEIT	90%
ARBEITSFLÄCHE H X B	270.5 x 338 mm; 10.6" x 13.3"
PIXELABSTAND H x V	0.264 x 0.264 mm
HORIZONTALFREQUENZ	31.4 - 80 KHz
VERTIKALFREQUENZ	56 - 75 Hz
SYNCHRONISATIONSARTEN	Separate Sync

2. SCHNITTSTELLEN & ANSCHLÜSSE

ANALOG SIGNALEINGANG	VGA
DIGITAL SIGNALEINGANG	DVI
STEUERUNG	USB (touch)

3. FEATURES

PLUG & PLAY	VESA DDC2B™
PARAMETER-EINSTELLUNG	On-Screen-Display in 8 Sprachen (DE, EN, ES, FR, IT, JP, Chinesisch - vereinfachter und traditioneller) und 5 Tasten Bedienfunktion (Menu, Heraufscrollen/ Helligkeit, Nach unten scrollen/ Kontrast, Auswahl-Taste/ Auto, Power)
EINSTELLBARE PARAMETER	Kontrast, Helligkeit, Automatische Einstellung, Horizontale/Vertikale Position, Horizontale Größe, Phase, OSD horizontale/vertikale Position, OSD Einblendzeit, Zurücksetzen, Eingangsauswahl, OSD Sprache, Farbeinstellung
DIEBSTAHSICHERUNG	Kensington-lock™
RICHTLINIEN	CE, CB, TÜV-Bauart, CU, cULus
VESA MOUNTING	100 x 100 mm
FARBE	Schwarz
WASSER- UND STAUBSCHUTZ	IP65

4. ZUBEHÖR

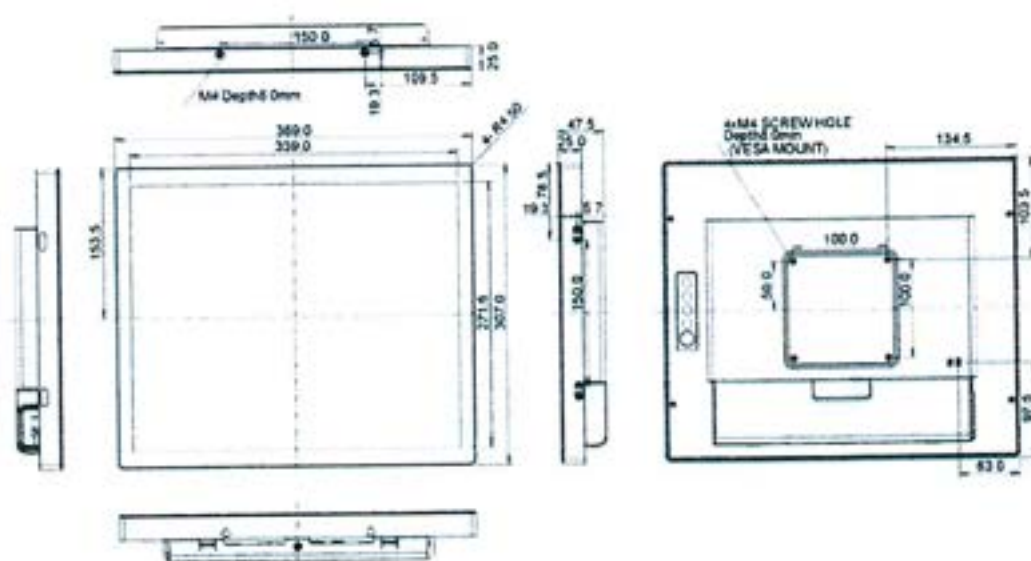
TREIBER	multi-touch: Windows7/8 (HID compliant), single-touch: Vista, XP, 9X, 2000, CE, NT4), Linux, Mac (OSX)
ZUBEHÖR IM LIEFERUMFANG	Netzteil, Strom-, VGA-, DVI-, USB-Kabel, L-Winkel, Touch Treiber CD-ROM, Hilfe zur Inbetriebnahme, Leitfaden zur Inbetriebnahme
OPTIONALE AUSSTATTUNG	portable OSD-Bedienleiste

5. POWER-MANAGEMENT

STROMVERSORGUNG	DC 12V
NETZTEIL	extern
LEISTUNGS-AUFNAHME	20 W typisch; max. 2 W in Power Management Modus
POWER MANAGEMENT	VESA DPMS

6. ABMESSUNGEN & GEWICHT

MASSE B x H x T	369 x 307 x 47.5 mm
GEWICHT	3.6 kg



Alle Warenzeichen sind eingetragene Handelsmarken. Irrtum und Änderungen in den Spezifikationen vorbehalten. Alle LCD's erfüllen die ISO-9241-307:2008 Pixelfehlerklasse.

Panasonic

PT-RZ475 Series

1-Chip DLP™ Projectors



**Ideal for Rear Projection—
Extremely Long-Term Continuous Operation**



A Short-Throw SOLID SHINE Projector Featuring Long-Term Reliability and Excellent TCO



No Maintenance
10 YEARS
Variable brightness

DIGITAL LINK
SINGLE CABLE SOLUTION

The PT-RZ475, a new Panasonic SOLID SHINE projector member, has no lamps or air filters, allowing it to achieve an extraordinarily long period of maintenance-free operation. This high-performance LED/Laser projector boasts up to 87,600 hours*¹ of continuous operation, i.e., about 10 years of 24/7 projection, while maintaining excellent brightness and picture quality. The total cost of ownership (TCO) has also been reduced because you no longer have to keep replacement lamps and filters on hand. Equipped with a high-precision short-throw lens, the PT-RZ475 is ideal for rear projection, for use in monitoring/control rooms, or for digital signage.



PT-RZ475

Full HD

3,000 lm

SOLID SHINE series uses the newly developed LED/Laser-combined light source



SOLID SHINE series projectors provide solid reliability and long-lasting brightness unprecedented by conventional lamp-based projectors.

Approximately up to 10 years*¹ of maintenance-free operation

No need to replace the light source or air filter, providing a dramatic reduction in the Total Cost of Ownership (TCO).

Long-lasting picture quality

Excellent picture quality and brightness are maintained for a long time.

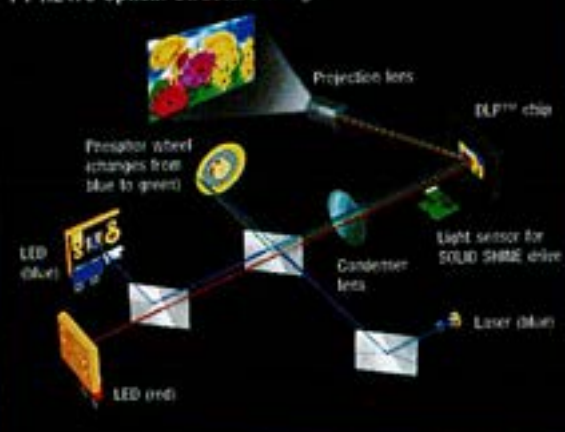
Superb color reproduction

Beautiful, vivid colors exceeding the levels of conventional projectors.

Quick start, quick off

The image appears almost instantly upon powering up, and there is no need for cooling after turning the power off. The power can be turned on immediately after being turned off, and it can be turned on/off as many times as you want.

PT-RZ475 Optical Structure Image



*1 With light power set to Eco2. Replacement of other parts than the light source may be required in short period.
24 hours/day × 365 days/year × 10 years = 87,600 hours

Long-Lasting Reliability

Outstanding Approx. up to 10 Years* of Continuous Operation

This new LED/Laser-combined light source requires no maintenance for approximately up to 10 years.* In many cases, this means no maintenance until your next refresh cycle. Naturally, there are no lamp burnout problems during use, so reliability is further increased. There is also no filter to clean due to carefully engineered sealed optics. As a consequence, running cost is dramatically lowered because of the savings on lamp costs, maintenance labor and hassle of stocking lamps.



Beautiful Picture Quality for a Long Period of Time with 24/7 Operation

The rate of brightness deterioration in the LED/Laser-combined light source is extremely slow compared to lamp-based projectors. The SOLID SHINE drive uses a built-in sensor to constantly detect the intensity of the light source and correct corresponding changes in white balance. This all helps to maintain excellent picture quality for a long period of time. Contrast is outstanding too, at 20,000:1, and images are reproduced with a wide dynamic range. There is no maintenance required because the PT-RZ475 does not use a lamp or air filter. And it has an efficient cooling system and dust-resistant structure, and uses a DLP™ chip that has a long life. Together, this makes the PT-RZ475 ideal for 24/7 operation.



Heat Pipe Cooling System Maintains Stable Operation up to 45 °C (113 °F)†

Laser cooling is performed by releasing the heat to cooling fins, then cooling with a heat pipe cooling system. This suppresses temperature rises inside the projector and allows stable operation up to an ambient temperature of 45 °C (113 °F)*. The use of this heat pipe-cooled system also achieves quiet operation of 35 dB*, enabling viewers to concentrate on the presentation or on quiet movie scenes.

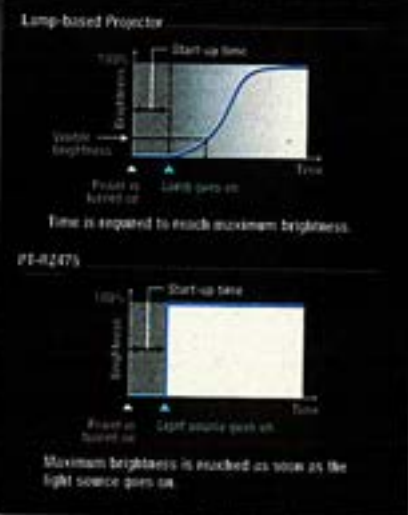


Dust-Resistant Structure with an Airtight Optical Block

The area between the LED/Laser to the DLP™ chip and prism is hermetically sealed to form an airtight structure for the optical block, the heart of the projector. This resists the effects of dust and other particles in the air, and enables use of the projector in a wide range of environments.

Image Appears Immediately—No Need for Cooling after Use

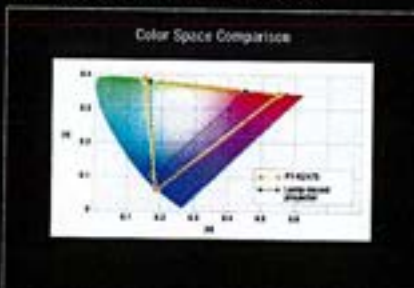
Images do not appear quickly with lamp-based projectors because the projector requires time to warm up. With the PT-RZ475, the image appears almost instantly. There's also no cooling time required when turning the power off, so you can quickly turn the projector on and off as many times as needed.



High Picture Quality

Superior Color Reproduction

The LED/Laser-combined light source has a higher level of color purity than an ordinary lamp, allowing it to achieve color reproduction with wider color space. Colors are more vibrant than those of conventional projectors.



30x Drive* Switching Prevents Color Breaking

In 1-chip DLP™ system projectors with conventional lamp, a color wheel is used for time-division multiplexing in a method where the human eye combines the result to achieve a full-color palette. In the PT-RZ475, this is done by on/off switching of the LED/Laser-combined light source. A unique Panasonic power supply circuit provides time-division multiplexing with ultrafast 30x drive*. The resulting, high-definition images exhibit virtually no color breaking*.

Connection Flexibility

DIGITAL LINK—The Single Cable Solution

Transmits Digital Signals up to 100 m (328 ft) with a Single Cable. Equipped with a DIGITAL LINK terminal, the PT-RZ475 allows transmission of HDMI, uncompressed HD digital video, audio and control signals (Ethernet, RS-232C) for up to 100 meters (328 feet) through a single CAT5e (STP) cable or higher. This simplifies cabling and system upgrades, making it ideal for ceiling-mounted and other permanent installations.

Optional ET-YFB100G Digital Interface Box for Easy Setup

Used together with the new ET-YFB100G Digital Interface Box, or other compatible equipment*, the installation of this projector is easier than ever, without any need for external receivers. The input signal can also be easily switched*.

*1. The operating temperature range is 0 °C to 40 °C (32 °F to 104 °F) when used in locations from 1,400 m to 2,700 m (4,593 ft to 8,856 ft) above sea level. If the ambient temperature exceeds 35 °C (95 °F), the light output may be reduced to protect the projector.

*2. With LIGHT SOURCE MODE set to OPTICAL.

*3. Picture mode: Dynamic. 10x drive in other picture modes. The rate for each vertical sync/shooting interval, with RGB light source switching set to 1x.

*4. A condition in which incorrect color expression causes color flickering.

from control panel or remote control of the projector to enable attractive presentations or lessons using multimedia content.



For details on other manufacturers' equipment, visit our Projector Global Web Site: panasonic.net/avc/projector

Abundant Connection Terminals

Interfaces include HDMI and DVI-I inputs. The serial terminal (RS-232C) has an Emulate function that lets you continue using existing control systems when replacing previous Panasonic models. It is also possible to output audio during Standby mode¹⁾. This is convenient when connecting an external audio system through the projector²⁾. A closed caption decoder is built in.

Easy Remote Monitoring and Control over a LAN

Web browser on a computer connected through a wired LAN system lets you remotely operate projectors and check their status. An e-mail messaging function can also notify you the overall projector status. In addition, Multi Projector Monitoring and Control Software Ver. 2.8 is available for monitoring and controlling multiple Panasonic projectors from a single PC. The wired LAN terminal is compatible with PLink³⁾ (class 1).

Enhanced Installation

Powered Focus, Short-Throw Lens

The lens axis can be shifted $\pm 10\%$ vertically and $\pm 3.4\%$ horizontally. This enables to replace an existing projector and to make fine tweaks after installation. Because it is a powered focus, the focus can be adjusted by remote control when it is installed in a rear projection configuration.



Multi-Screen Support System Seamlessly Connects Multiple Screens

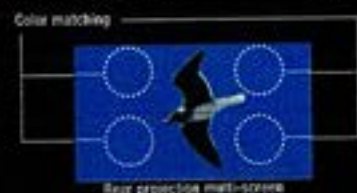
• Edge Blending

The edges of adjacent screens can be blended and their luminance controlled.



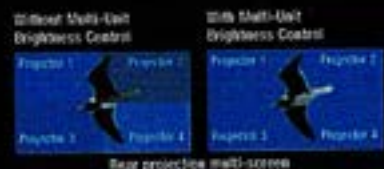
• Color Matching⁴⁾

This function corrects for slight variations in the color reproduction range of individual projectors.



Multi-Unit Brightness Control

This function automatically corrects the brightness fluctuations that occur over time in the individual projectors of a multi-screen system. Up to eight projectors can be controlled by connecting to each other via a hub, and this can be increased to a maximum of 2,048 projectors by using "Multi Projector Monitoring & Control Software"⁵⁾.



Portrait Mode Capability

Portrait mode allows the projector to be mounted with its side surface facing down⁶⁾, for projecting onto a long, vertical screen. The optional ET-PKR100P ceiling mount bracket for portrait projection is also available.



3D Projection Capability

The PT-RZ475 can deliver impressive 3D images when viewed with active 3D glasses⁷⁾.

- The HDMI input terminal supports 3D to project Blu-ray 3D images.
- DLP⁸⁾ Link⁹⁾: You can build a 3D system without the need for the optional transmitter.
- An additional 3D IR transmitter can be connected to the projector's 3D SYNC OUT terminal.

Other Features

- Daylight View Basic ensures clear images even in brightly lit rooms.
- DICOM simulation mode¹⁰⁾ for clear X-ray images.
- Rec. 709 mode for HDTV projection.
- Compatible with Crestron Connected¹¹⁾.
- 15 m (49 ft) long-range wireless remote control.
- Scheduling function.
- Flexible 360-degree installation.
- A unique ID number can be assigned to each projector using the supplied wireless remote control unit.
- A lens-centered, symmetrical design provides ease of installation.
- Customized startup logo: You can change the default Panasonic start up logo to any logo you want¹²⁾.
- Security features include a security bar, key lock, and security password.

Ecology-Conscious Design

- Lamp-free technology.
- Low heat dissipation.
- RoHS Directive compliant.
- No halogenated flame retardants are used in the cabinet.
- Lead-free glass is used for the lens.
- Light source mode is selectable to reduce power consumption.
- ECO button on the remote control for easy setting up of Eco Management functions.
- Standby power consumption of only 0.5 W has been achieved, surpasss class 1¹³⁾.
- An Auto Off sensor switches the projector to standby mode when no input signal is received for a preset time.

- 1) Crestron's SignalMedia eS-1M, Extron's ATP Systems and AVIX's Envoy DPA.
- 2) Input selection and other ET-WB1000 operations can be performed only when connecting to a DIGITAL LAN compatible projector.
- 3) Requires remote selection.
- 4) Audio monitoring requires external speakers and an audio amplifier.
- 5) Consult your dealer for information about color matching software.
- 6) If the temperature of the projector's surroundings is elevated, light output may be reduced in order to protect the projector unit. If this software is used for the brightness control of multiple projectors, please ensure that as far as possible the temperature of the surroundings is the same for all projectors.
- 7) The projector itself cannot be set vertically by itself. Also, the side with terminals should be facing downwards, using the projector at an angle that exceeds the adjustable angle of 210° may result in malfunctions. If setting up the projector at an angle that exceeds 210° is required, consult your dealer.
- 8) To view 3D images, active shutter 3D glasses are separately required. In the active shutter system, the right-left liquid crystal shutter is opened and closed alternately according to projected images.
- 9) This product is not a medical instrument. Do not use it for actual medical diagnosis.
- 10) A new logo can be released by connecting a computer to the PT-RZ475 through the LAN or serial connector by using the Logo Transfer Software. Still images that can be released are limited to 1024 x 768 pixel bitmap files. Also, the application will reduce the number of colors to 191.

Options

ET-PKR100P

Ceiling mount bracket for portrait



ET-PKR100H

Ceiling mount bracket for high ceilings



ET-PKR100S

Ceiling mount bracket for low ceilings

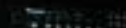


ET-YFB100G

Digital interface box



Brackets included for various installation needs, including server rack (EIA standards) mounting.



ET-MWP100G

Multi Window Processor



NOTE: Photos show the brackets attached to the PT-RZ470K.

ET-MWP100G Multi Window Processor

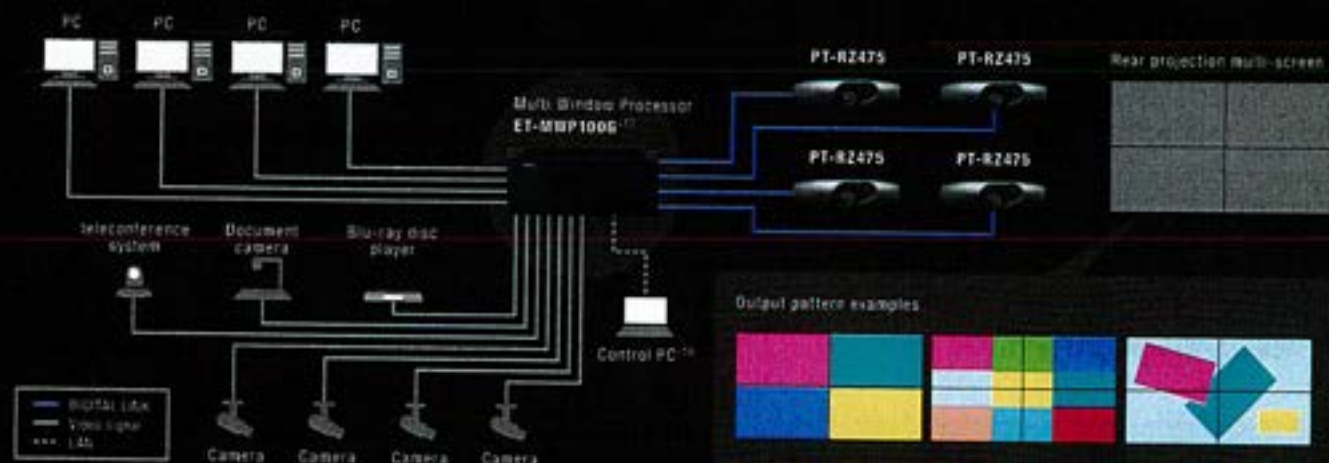
Turnkey Solution for Multi Window Presentations

The ET-MWP100G Panasonic Multi Window Processor makes it possible to quickly and efficiently combine multiple PT-RZ475 projectors into a multi vision system. Equipped with 16 slots for input/output terminals, the ET-MWP100G enables a combination of 5 optional interface boards, including a DIGITAL LINK output board, to support a variety of input sources and output devices. Interface boards are also easy to add or change, making the system highly flexible even after it has been configured. Images can be split among multiple display units, and multi-windows (PiP) can be freely allotted in desired sizes, locations, inclinations and overlapping orders. Display patterns can be registered and switched by control software for Multi Window Processor, which is included with the ET-MWP100G, installed onto a PC. Even with interface boards mounted onto all 16 slots, the ET-MWP100G features low power consumption of 160 W or less, helping to lower the total cost of ownership (TCO) in 24/7 continuous operation.

Major ET-MWP100G Features

- Dedicated "Control Software for Multi Window Processor" supplied
- 360° output rotation
- Simultaneous use of multiple layouts and canvases
- One or more windows (PiPs) on each canvas with 360° rotation of each window
- 16 interface board slots
- Easy addition and replacement of optional interface boards
- Low power consumption of max 160 W¹⁶⁾ with 16 interface boards mounted
- DIGITAL LINK compatibility (when the ET-MC00L350 interface board mounted)
- Capability of up to 28 inputs with the ET-MCYDV100 DVI-U and ET-MCYS200 3G/HD/SD-SDI interface boards
- Up to 56 inputs with the ET-MCYS210 HD/SD-SDI interface board
- Capability of up to 28 outputs with the ET-MC00V150 DVI-U and ET-MC00L350 DIGITAL LINK interface board

System Connection Example



- 16) When using a single power supply unit, the power consumption becomes 180 W when the optional ET-RPS100 power supply unit is added.
 •17) Input/output interface boards must be mounted.
 •18) The control software for Multi Window Processor, which is included with the ET-MWP100G, must be installed.

PT-RZ475G1 Printed in Japan



Fiche technique du MicroRAD



Caractéristiques du MicroRAD

Radar ultra miniature.

Dimensions : 30 mm x 15 mm.

Fixation par une vis sur embase.

Dimension de l'embase 20 mm x 15 mm.

Entièrement noir.

Réglage très facile.

Alimentation de 3.3 V à 18 V continu.

Distance de détection 5 M.

Angle de couverture : Horizontal : 100°, Vertical 82°.

Sortie de type TTL avec mise à la masse au déclenchement.

Livré avec câble de 1.5m.

Connexion par Jack 3.5 mm.

Livré avec un adaptateur Jack 3.5 - Bornier de connexion.

FREQUENCY RESPONSE

Figure 1 shows the frequency response at 1 m of a unit radiating to a half space anechoic environment and driven by a 1 W (2.83 V) swept sine signal.

and impedance curve.

FIG. 1

DISTORTION

Figure 2 shows the Second Harmonic Distortion (grey) and Third Harmonic Distortion (dotted) curves (used 20 dB for clarity) for a unit driven at 10% of its nominal power handling rating.

FIG. 2

DIRECTIVITY

Figure 3 shows normalized horizontal isobar plot.

Figure 4 shows normalized vertical isobar plot.

POLAR RESPONSE

Figure 5 shows the 1/3 octave band horizontal (left) and vertical (right) polars for the indicated frequencies. Full scale is 30 dB, 6 dB per division.

NOTES: 1. Frequency response referred to 1 m, low end obtained through the use of near field techniques, one-third octave smoothed for comparison with human hearing. 5. Plots were acquired by placing the unit on a computer controlled turntable inside our anechoic chamber. Measurement distance was 4 m.

Product improvement through research and development is a continuous process at D.A.S. Audio. All specifications subject to change without notice.

FIG. 5

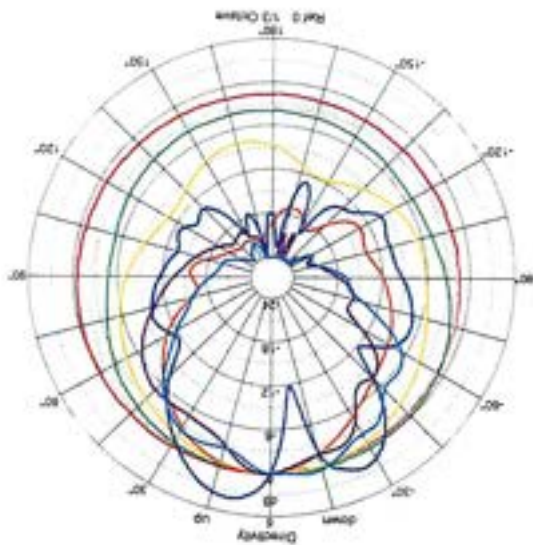
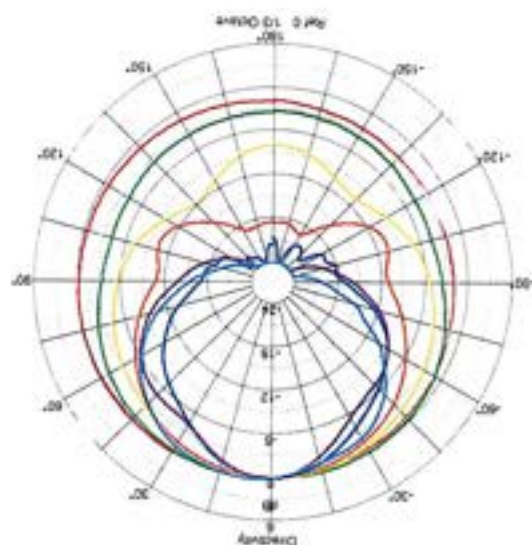


FIG. 4

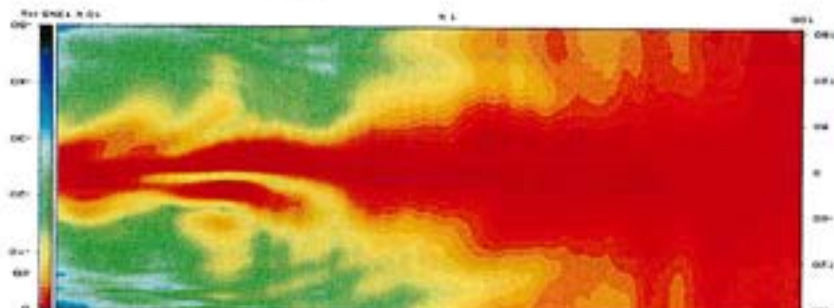
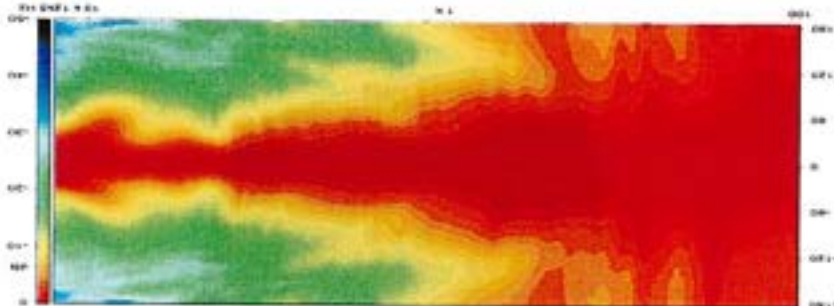


FIG. 3



DISTORTION

Figure 2 shows the Second Harmonic Distortion (grey) and Third Harmonic Distortion (dotted) curves (used 20 dB for clarity) for a unit driven at 10% of its nominal power handling rating.

FIG. 2

DIRECTIVITY

Figure 3 shows normalized horizontal isobar plot.

Figure 4 shows normalized vertical isobar plot.

POLAR RESPONSE

Figure 5 shows the 1/3 octave band horizontal (left) and vertical (right) polars for the indicated frequencies. Full scale is 30 dB, 6 dB per division.

Product improvement through research and development is a continuous process at D.A.S. Audio. All specifications subject to change without notice.

Product improvement through research and development is a continuous process at D.A.S. Audio. All specifications subject to change without notice.

Arco 4/Arco 4T

ARCO

series

INTRODUCTION

The D.A.S. Arco 4 is a 2-way vented loudspeaker system designed for background/foreground music and paging applications that is both compact in size and light in weight.

DESCRIPTION

The low end utilizes a 4" woofer with weather resistant polypropylene cone and 1" voice coil. The high end makes use of a 19 mm neodymium dome tweeter for brilliant highs.

The high impact ABS enclosure is paintable and UV resistant.

The unit has a rust-proof grille internally lined with acoustically transparent filter cloth to protect the loudspeaker components. The filter is resistant to wear and tear, provides protection from dust and dirt.

A full-bandwidth overload safety circuit protects the speakers from damage.

Cabinets are equipped with 4 M6 rigging points and a safety cable attachment point.

Arco 4T version is equipped with factory-installed multi-tap transformer.

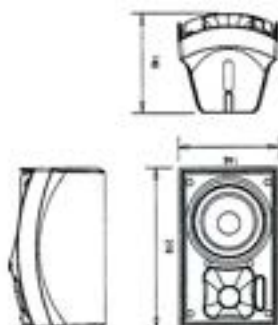


FEATURES

- » 2-way vented loudspeaker system
- » 4" cone speaker
- » 19 mm neodymium dome tweeter
- » 100 W program power handling

SPECIFICATIONS

RMS (Average) Power Handling ¹ :	50 W
Program Power Handling ² :	100 W
Peak Power Handling ³ :	200 W
On-axis Frequency Range:	72 Hz - 22 kHz
Nominal Impedance:	8 Ω
Transformer Taps:	100V, 5 W, 10 W, 15 W, 2.5 W, 5 W, 7.5 W, 70V
On-axis Sensitivity 1W / 1 m:	86 dB SPL
Rated Peak SPL at Full Power:	109 dB
Nominal -6 dB Beamwidths:	90° Horizontal x 90° Vertical
Enclosure Material:	High Impact ABS
Color/Finish:	Black or White
Transducers/Replacement Parts:	LF: 4G/4G HF: TWT-4/TWT-4
Connector:	Spring-Loaded Terminals
Dimensions (H x W x D):	21 x 14 x 14 cm 8.7 x 5.5 x 5.5 in
Weight:	1.6 kg (3.5 lb)
Accessories (optional):	AX-4RM (included) AXU-AC4 AXA-AC



ALL DIMENSIONS IN MILLIMETERS

¹ Based on a 2 hour test using a 6 dB crest factor pink noise signal bandlimited according to IEC 268-1 (1985). All power ratings are referred to the nominal impedance.
² Corresponds to 3 dB higher than the RMS measure, although this already utilizes a program signal.
³ Corresponds to the signal crest for the test described in IEC 268-1 (1985).



Optoma France

81-83 avenue edouard Vaillant, 92100 Boulogne-Billancourt, France

www.optoma.fr

¹La luminosité et la durée de vie de la lampe dépend du mode de projection choisi, les conditions de fonctionnement et l'environnement du projecteur. Comme pour tous les projecteurs à lampe, la luminosité diminuera au cours de la durée de vie de la lampe. ²La durée de vie effective de la lampe peut varier selon les conditions d'utilisations et l'environnement. La durée de 6500h est basée sur le cycle Dynamic Black Movie. Pour plus d'informations, veuillez visiter notre site internet. DLP®, et le logo DLP sont des marques déposées de Texas Instruments. Tous les autres noms de produits et d'entreprises sont pour simple information et peuvent avoir été déposés par leurs propriétaires respectifs. Toutes les images ont été simulées. Saut erreurs ou omissions, toutes les caractéristiques sont susceptibles de changer sans notification préalable. Copyright © 2014, Optoma France

21/09/2014 22:17

EH200ST Specification

Technologie d'affichage	Technologie 0.65" WXGA DC3 DMD avec puce DLP® de Texas Instruments
Résolution	1080p 1920 x 1080
Luminosité ¹ (mode Lumineux)	3000 ANSI Lumens
Contraste	20 000:1
Niveau sonore (mode Eco)	26dB
Poids (kg)	2.65
Connecteurs (Entrées/Sorties)	2 x HDMI (1.4a 3D) + MHL, Audio Out 3.5mm, Relais +12V, 3D-Sync, USB Service
Résolution Maximum	UXGA 1800 x 1200
Compatibilité Informatique	UXGA, SXGA, WXGA, HD, XGA, SVGA, VGA, Mac
Compatibilité	PAL (B, D, G, H, I, M, N, 576i/p), NTSC (M, 4.43/3.58 MHz, 480i/p), SECAM (B, D, G, K, L) HD (1080i, 720p)
Nombre de Couleurs	1073.4 Millions
Optique	F/2.8; f=7.42mm, Zoom fixe
Rapport de projection	0.49:1
Taille image projetée	1.15 - 7.67m ; Diagonale 16:9
Distance de projection	0.5 - 3.35 mètres
Type de zoom	Fixe
Ratio	Native 16:10, Compatible 4:3/16:9
Offset	116% ±5%
Taux de rafraîchissement Horizontal	15.375-91.148 KHz
Taux de rafraîchissement Vertical	24 ~ 85Hz (120Hz pour la 3D)
Lamp Type	190W
Durée de vie de la lampe (mode Eco/Lumineux)	6000/5000
Correction Trapézoïdale	± 40° Verticale
Audio	10W
Dimensions (LxPxH) (mm)	315 x 224 x 114
Télécommande	Télécommande multifonctions rétroéclairée avec piles
Alimentation	100-240V, 50-60Hz
Consommation électrique	233W mode Lumineux < 0.5W mode veille, 193W mode Eco < 0.5W mode veille
Température de fonctionnement	5°C - 40°C, Humidité max. 85%, Altitude max. 3000m
Uniformité	80%
Sécurité	Barre de sécurité, Encoche Kensington, Protection par mot de passe
Accessoires fournis en standard	Cache de l'objectif, Sacoches, Câble HDMI, Câble d'alimentation, Télécommande avec piles, Carte de démarrage rapide, Manuel utilisateur sur CD, Carte de garantie
Accessoires en option	Kit de fixation au plafond, Ecran
RoHS	Conforme
Support 3D	Les fonctions 3D des projecteurs Optoma ne peuvent être utilisées qu'avec du contenu 3D compatible. Les applications usuelles incluent la 3D éducative et la conception et la modélisation 3D. Certains boîtiers TV, les lecteurs Blu-ray 3D™, la PS3 de Sony® et la Xbox 360 de Microsoft® sont compatibles via la HDMI v1.4a.
Visualisation 3D	Nécessite le kit ZF2300 avec lunettes (vendu séparément)
Compatibilité 3D	Side-by-Side: 1080i50 / 60, 720p50 / 60 Frame-pack: 1080p24, 720p50 / 60 Over-Under: 1080p24, 720p50 / 60
Haut-parleur (Watts)	10
Menu à l'écran	27 Langues: Français, Allemand, Anglais, Espagnol, Italien, Portugais, Hollandais, Suédois, Finlandais, Grec, Danois, Norvégien, Polonais, Russe, Chinois, Chinois traditionnel, Coréen, Arabe, Japonais, Thaïlandais, Hongrois, Tchèque, Turque, Vietnamiens, Farsi, Roumain, Indonésien
Sans fil (optionnel)	Yes

Longue durée de vie de lampe

Réduisez le nombre de changements de lampe grâce à une durée de vie de jusqu'à 6500h.

EH200ST

Images cristallines et textes finement ciselés

L'EH200ST associe une résolution Full HD et des couleurs vives et lumineuses. Il projette des images cristallines et des textes finement ciselés - idéal pour une utilisation en salle de classe.

Grâce à deux entrées HDMI et un haut-parleur intégré, l'EH200ST est facile à installer et à utiliser. Il permet également la connexion d'un smartphone ou d'une tablette grâce à la connectique MHL. Branchez simplement un appareil compatible pour diffuser vos applications, vidéos, photos et jeux sur grand écran grâce au projecteur.

Projection à courte focale

Grâce à sa focale courte, ce projecteur peut afficher de grandes images à une courte distance. Par exemple, vous pourrez projeter une image de 100" de diagonale à seulement un peu plus d'un mètre de l'écran ou du mur.

Full HD 1080p

Projections plus détaillées avec une résolution de 1920 x 1080p pixels, parfaite pour regarder des Blu-ray sans compression.



Full 3D

Grâce à la vitesse de la technologie DLP, le projecteur Full 3D Optoma EH200ST peut afficher du contenu en véritable 3D à partir de la plupart des périphériques 3D, comme les lecteurs Blu-ray 3D, les consoles de jeux 3D et certains boîtiers TV.



Contraste élevé

Profitez d'images plus détaillées avec ce projecteur à contraste élevé. Les blancs sont plus nets et les noirs particulièrement profonds et vos contenus sont ultra-nets - idéal pour les entreprises ou le monde de l'éducation.

Connectique MHL

Le MHL fait de l'EH200ST l'extension de votre appareil mobile. Branchez simplement un appareil compatible pour diffuser vos applications, vidéos, photos et jeux sur grand écran grâce au projecteur.



Auto Power Off

There may be instances when the projector is left running when not in use. To help save energy, the "Auto Power Off" feature automatically turns off the projector after a set period of time if it is not being used.

Couleurs superbes

Grâce à la technologie BrilliantColor™, nos projecteurs affichent des images aux couleurs particulièrement vives et naturelles.



Garantie couleurs

Profitez de couleurs exceptionnelles en toute tranquillité, grâce à la garantie couleurs Optoma de 5 ans.



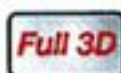
Haut-parleur intégré

Le puissant haut-parleur intégré complète votre installation home cinéma et vous évite l'achat de haut-parleurs externes. L'EH200ST devient votre solution tout-en-un et délivre un son de qualité.

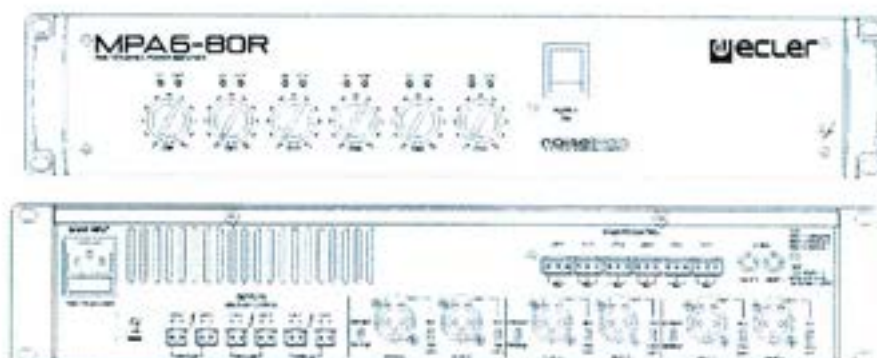
EH200ST

Images cristallines et textes finement ciselés

- Couleurs vives et lumineuses – 3 000 ANSI Lumens
- Contraste élevé - Ratio de 20 000:1
- Résolution Full HD
- Connectique étendue - 2x HDMI, compatibilité MHL et haut-parleur 10W



MECHANICAL DIAGRAMS



TECHNICAL DATA

POWER 20-20kHz 1% THD

1 Channel @ 4Ω	85 WRMS
1 Channel @ 8Ω	52 WRMS
All Channels @ 4Ω	58 WRMS
All Channels @ 8Ω	48 WRMS
1 Bridged channel @ 8Ω (all channels driven)	123 WRMS
Frequency response (-1 dB)	20Hz - 30kHz
*THD+Noise @ 1kHz Full Power	<0.02%
*Intermodulation distortion 50Hz & 7kHz, 4:1	<0.02%
*TIM 100	<0.05%
*S+N/N 20Hz - 20kHz @ 1W/4Ω	>90dB
Damping factor	>160
Slew rate	±10V/μs
*Channel crosstalk @ 1kHz	>60dB
Input Sensitivity / Impedance	0dBV / >20kΩ
Mains voltage	See characteristics in the back of the unit.
Power consumption (max out)	800VA
Dimensions	482.6x88x391mm
Weight	13.2kg

*VCA OFF

MPA6-80R

LOW IMPEDANCE (8/4/2Ω)

Multichannel Amplifier



PRODUCT OVERVIEW

MPA6-80R is a 6 x 80 W multichannel amplifier, a model belonging to our well known line of multi-zone power amplifiers for high end installations, the MPA series.

KEY FEATURES

- 2 analogue audio inputs x 6 powered audio outputs
- Individual input sensitivity controls with sealing possibility to avoid unwanted manipulation
- Signal presence (SP) and CLIP indicators for each channel
- Balanced inputs, XLR connectors (Euroblock in 150W models), Euroblock output connectors
- Stack outputs on all models
- Input channels link switch for superior versatility
- Independent VCA (EUROBLOCK) volume remote control port for each input channel, ready for external 0-10 V signal, compatible with Wpm series wall panels
- Noiseless convection cooling (80 and 150 W models)
- Dual Slope Controlled Fan system (MPA4-400R)
- Totally protected against shorting, DC at the outputs and overheating

APPLICATIONS

- Public Address
- Theme parks
- Clubs
- Theme restaurants
- Multi-purpose halls
- Boardrooms and conference halls
- Franchise retail shops

CERTIFICATIONS

- EN60065:2014
- EN55103-1:2009
- EN55103-2:2009
- 2006/95/EC
- 2004/108/CE

MECHANICAL DIAGRAMS



TECHNICAL DATA

Nominal low impedance	16 Ω
RMS power	75W
Power selector (70V)	1.5, 3.7, 7.5, 10, 15W
Power selector (100V)	3, 7.5, 15, 20, 30W
Frequency response (-6dB)	45Hz - 22kHz
Sensitivity 1W/1m	86dB
External diameter	270mm
Internal diameter	224mm
Recommended cut out diameter	227mm
Required depth	95mm
Weight	2,5Kg

IC6CLASS-TR

CEILING LOUDSPEAKERS

In-ceiling / In-wall High-End Loudspeaker



PRODUCT OVERVIEW

The IC6CLASS-TR 2-way loudspeaker integrates a very careful and efficient selection of components (6" woofer + 1" tweeter), together with a mechanical design that provide a high quality audio ("Hi-Fidelity" profile sound) and a very fast installation process, just using a basic set of tools.

KEY FEATURES

- 2 way loudspeaker, 75 WRMS
- 16 Ω impedance, allowing for multiple units connected in parallel to a standard audio amplifier
- High impedance built-in transformer, allowing for multiple units connected in parallel to a 70V / 100V line audio amplifier (5 different power tapings available)
- 16 Ω or high impedance power selection accessible from the front panel, once the loudspeaker is already installed in the ceiling
- 6,5" Kevlar® woofer
- 1" Silk dome (ACCW) tweeter
- Aluminium front grill
- Fast installation procedure using a basic set of tools

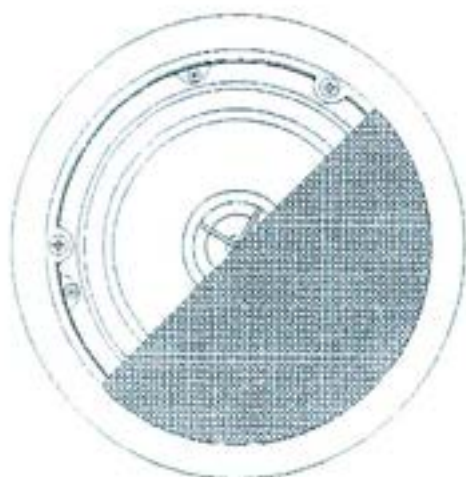
APPLICATIONS

- Corporate and residential buildings
- Commercial premises, retail shops
- Leisure centres
- Sound reinforcement in clubs, bars, etc.
- Health and sports centres
- Meeting and conference rooms
- 5.1 and 7.1 surround systems
- Auditoriums, museums

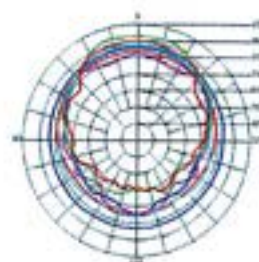
CERTIFICATIONS

- EN60065:2014
- EN55103-1:2009
- EN55103-2:2009
- 2006/95/EC
- 2004/108/CE

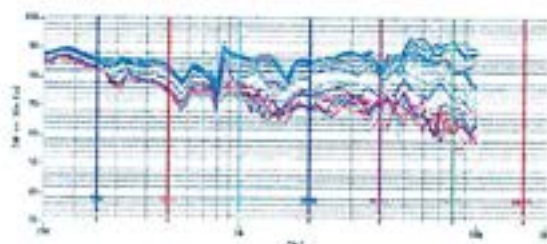
MECHANICAL DIAGRAMS



POLAR DIAGRAMS



HORIZONTAL



TECHNICAL DATA

Nominal low impedance	8Ω
RMS power	40W
Nominal high impedance	100V Line
Power selector	2.5, 5, 7.5, 15W
Frequency response (-6dB)	70Hz - 20kHz
Sensitivity 1W/1m	90dB
External diameter	204mm
Internal diameter	178mm
Recommended cut out diameter	180mm
Required depth	73mm
Weight	1,5Kg

IC6

CEILING LOUDSPEAKERS

In-ceiling / In-wall Loudspeaker



PRODUCT OVERVIEW

With its discreet design, the IC6 2-way loudspeaker is the perfect option for 70/100 V and low impedance sound solutions. It mounts a 6" woofer and a 1" tweeter.

IC series provide excellent sound quality thanks to their infinite baffle philosophy and a top-performance high frequency transducer.

KEY FEATURES

- Two-way ABS speaker, 40 WRMS
- 6,5" woofer / 1" tweeter
- Built-in audio transformer for 70/100 V use
- Polypropylene woofer that resists heat and humidity
- Front grill may be removed for painting
- Aluminium front grill, rust-proof
- Clip-type input terminals and low impedance / high impedance power tap selector
- Cutting and painting templates included
- Support system with 3 rotating tabs

APPLICATIONS

- Corporate and residential buildings
- Commercial premises
- Leisure centres
- Sound reinforcement in clubs, bars, etc.
- Health and sports centres
- Meeting and conference rooms
- 5.1 and 7.1 surround systems
- Auditoriums, museums

CERTIFICATIONS

- EN60065:2014
- EN55103-1:2009
- EN55103-2:2009
- 2006/95/EC
- 2004/108/CE



RSF Fabrication
45 Av, Marcel Dassault
31500 TOULOUSE France
www.rsf-europe.com
E-Mail : s.fernandez@rsf-europe.com



Distribution export
RSF Europe
Arelerstrooss 31A
L-8552 Oberpallen G-D Luxembourg



OneDAP

Digital Audio Player

Le OneDAP est un module audio compact équipé d'une carte SD de 2 Go. Copier 1, 2, ou 3 sons en Wav 16 bit/s, ou en MP3, sur la carte. (99 sons max) Nommer les fichiers selon la documentation et le lecteur fonctionne, soit en boucle ou piloté par les contacts sec. Possibilité d'avoir un port de sortie (GPIO). Possibilité d'utiliser un système de déclenchements Radar RSF le MicroRAD directement connecté et alimenté par le connecteur 3 point.

Caractéristiques techniques



- Le **OneDAP** est un lecteur audio statique compact, équipé d'une carte flash SD formatée en FAT16. Capacité maximum reconnue 2 Go.
- Le **OneDAP** diffuse de manière autonome des fichiers Wav ou MP3.
- Le **OneDAP** possède 2 entrées de déclenchement paramétrables en multiplexé 3 sons.
- Possibilité de coupler plusieurs **OneDAP** en synchronisation « start ».
- Le **OneDAP** possède une sortie pour alimentation du radar de déclenchement MicroRAD RSF.
- Le **OneDAP** possède 1 sortie (port de sortie GPIO) entièrement programmable.
- Le **OneDAP** est équipé d'un égaliseur grave aigu semi-paramétrique paramétrable (choix de la fréquence et du niveau) et d'un volume stéréo paramétrable.
- Le **OneDAP** peut diffuser 16 heures de musique en continu en MP3- 64 kbit/s.
- Le **OneDAP** peut diffuser un message en boucle dite « Parfaite ».
- Le **OneDAP** reconnaît immédiatement la carte et son contenu à l'insertion (pas de redémarrage nécessaire).

Caractéristiques :

Boltier :
Montage :
Carte Flash :
Sorties Audio :
Format Audio :

Lecture des fichiers :

Métal dimensions 110 mm X 50 mm X 30 mm - 195 Gr
Fixation possible par 1 trou dessous. Alim type prise
SD 1 ou 2 Go Formatage FAT16 (La carte SD est livrée).
2 prises Cinch (RCA). Niveau: 0dB basse impédance.
Wav 16 bit/s, 32 KHz, 44,1 KHz, 48 KHz.
MP3 32 KHz, 44,1 KHz, 48 KHz de 32 à 320 Kbit/s
Paramétrage par édition d'un fichier texte : Config.txt
Et par modification du début des noms des fichiers.

Utilisation :

- La documentation d'utilisation est dans la carte SD. C'est un fichier PDF.
- Rajouter devant le nom le numéro de son avec le mode de lecture.
- Copier sur la carte SD livrée le ou les fichiers Wav ou MP3.
- Au besoin modifier le fichier texte Config.txt pour régler le volume, les graves les aigus et quelques paramètres.



Caractéristiques techniques

- Le **MultiDAP-IP** est un lecteur audio statique multi-flux modulaire, équipé, par flux, d'une carte flash formatée en FAT16. Capacité maximum reconnue 2 Go.
- Le **MultiDAP-IP** diffuse de manière autonome des fichiers Wav ou MP3.
- Le **MultiDAP-IP** possède, par flux, 2 entrées de déclenchement paramétrable en multiplexé 3 sons, ou en 1 entrée et 1 sortie.
- Le **MultiDAP-IP** est équipé, par flux, d'un égaliseur grave aigu semi-paramétrique paramétrable (choix de la fréquence et du niveau) et d'un volume stéréo paramétrable.
- Le **MultiDAP-IP** peut diffuser un message en boucle dite « Parfaite ».
- Le **MultiDAP-IP** reconnaît immédiatement la carte et son contenu à l'insertion.
- Le **MultiDAP-IP** possède 4 ports IO paramétrables par une page HTML.
- Le **MultiDAP-IP** est entièrement pilotable par une interface RS232, ou par un port Ethernet..



Caractéristiques :

Boltier :	Métal dimensions 483 mm X 44 mm X 100 mm - 1700 GR
Montage :	Fixations normalisées Rack 1 U 19 pouces
Carte Flash par Flux :	SD 1 ou 2 Go Formatage FAT16 (la carte, SD, est livrée).
Carte Flash IP :	SD 1 ou 2 Go Formatage FAT16 (la carte, SD, est livrée).
Sorties audio par Flux:	2 prises Cinch (RCA). Niveau: 0dB. Basse impédance.
Format audio :	Wav 16 bit/s, 32 kHz, 44,1 KHZ, 48 kHz.
Lecture des fichiers :	MP3 32 kHz, 44,1 KHZ, 48 kHz de 32 à 320 kbit/s
	Paramétrage par édition d'un fichier texte : Config.txt
	Et par modification du début des noms des fichiers.
	Page HTML pour paramétrage déclenchements généraux

Utilisation :

- La documentation d'utilisation est dans la carte SD. C'est un fichier PDF.
- Rajouter devant le nom le numéro de son avec le mode de lecture.
- Copier sur la carte, SD, livrée le ou les fichiers Wav ou MP3.
- Au besoin modifier le fichier texte Config.txt pour régler le volume, les graves les aigus et quelques paramètres.
- Pour un pilotage général, paramétrez la page HTML.





RSF Fabrication
45 Av, Marcel Dassault
31500 TOULOUSE France
www.rsf-europe.com
E-Mail : s.fernandez@rsf-europe.com



Distribution export
RSF Europe
Arelerstrooss 31A
L-8552 Oberpallen G-D Luxembourg

MultiDAP-IP

Digital Audio Player

Le MultiDAP-IP est un rack 19 pouces 1U. Comme tous les produits RSF, c'est un produit entièrement statique avec une fiabilité extrême.



Le MultiDAP-IP est modulaire.

Il existe de la version 1 flux 2 pistes à la version 8 flux 16 pistes.

Le produit est équipé d'une carte SD de 2 Go par flux.

Son utilisation est extrêmement simple :

- Copier des sons en Wav 16 bit/s, ou en MP3, sur la carte. (99 sons max).
- Nommer les fichiers selon la documentation et le lecteur fonctionne :
 1. Soit par flux en boucle ou piloté par les contacts secs, avec la possibilité d'avoir un port de sortie.
 2. Soit avec un pilotage général programmable sur 4 ports (entrées et sorties), en RS232 ou par Ethernet.

Le MultiDAP-IP est équipé d'un générateur de Genloc. De ce fait, la lecture des différents flux se fait de manière parfaitement synchrone.

Une entrée sortie de ce Genloc permet de coupler plusieurs MultiDAP-IP.

L'interface Ethernet, équipé également d'une carte SD pour une programmation très simple, permet d'utiliser une interface HTML, personnalisable, pour piloter le MultiDAP-IP à distance, ou une interface FTP pour des mises à jour.



Fiche technique du MiniAMP

Le MiniAMP

Le MiniAMP est un amplificateur numérique de très haute qualité en classe T.

La puissance de sortie de 2 x 30W est suffisante pour la plupart des installations en muséographie.

L'égaliseur 3 bandes graves médiums aigus par canal, permet un réglage du son adapté aux choix de l'artiste, une fois l'installation terminée.

Fonction « Volume programmable ».

Cette fonction indépendante par canal, accessible sur connecteur à vis démontable 5 points, permet de basculer à la demande sur un volume atténué réglable.

La taille extrêmement réduite permet une intégration simple.

C'est un Amplificateur numérique avec un très haut rendement.

Une fonction « PowerDown » accessible sur connecteur à vis démontable 5 points, permet une utilisation sur batterie de 12 V avec une très grande autonomie.



Caractéristiques du MiniAMP

Puissance : 2 x 15 W RMS (4 Ohms), 2 x 10 W RMS (4 Ohms)

Bande Passante : 20 Hz à 20 kHz

Distorsion : < 0.01 %

Dynamique : 98 dB

Connectique :

Entrées audio RCA Cinch (x2)

Sorties HP Borniers 2 points Phoenix

Pilotage Bornier 5 points Phoenix

Protection Pour court-circuit sur les sorties, saturation des entrées, avec déconnexion et reconnexion automatique des entrées, surchauffe.

Dimensions : 128 mm x 96 mm hauteur 32 mm

Poids : 250 Gr (sans l'alimentation)

Alimentation 12 V DC / 2500mA. (externe)

Environnement :

Température 0° C (32 F) à 50° C (122 F)

Humidité relative ... 0 – 90%



Garantie : 3 ans

Casque PRESTIGE Fors Antivandale

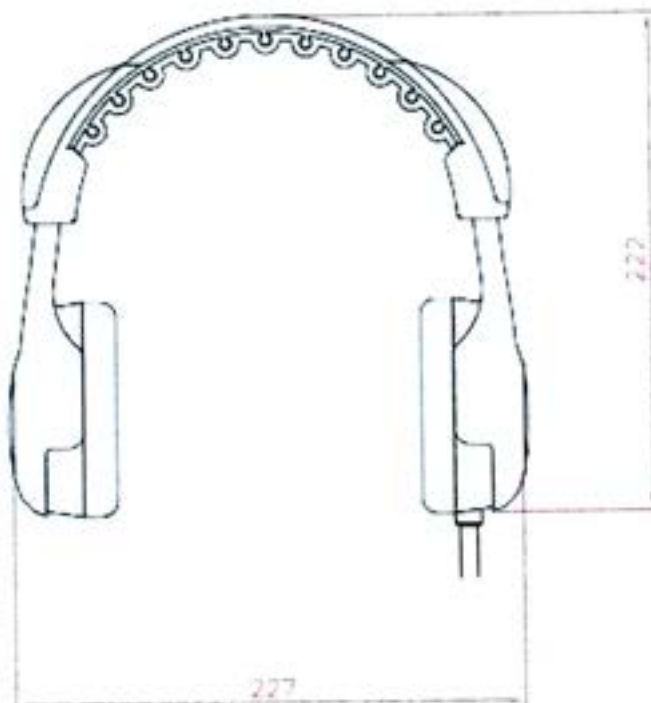
Le casque prestige est breveté et bénéficie de matériaux et d'une gaine "anti-vandales" ultra résistants.

Ce casque est idéal pour une utilisation dans des lieux à fort passage (point de vente, lieux publics[®]).

- Utilisation intérieure
- Casque noir muni d'oreillettes en mousses remplaçables pour hygiène
- gaine inox
- longueur standard 1m
- Réglage de l'arceau du casque Prestige

Caractéristiques techniques d'écoute :

- Nominal Impedance : $32\Omega \pm 15\%$
- Resonance Frequency : $150\text{Hz} \pm 20\%$
- Frequency Response : $150-20000\text{Hz } 10\text{dB}$
- Sound Pressure Level : $84\text{dB}(0.1\text{W}/0.5\text{M})$
- Nominal Power : 50mW
- Maximum Power : 100mW



SPECIFICATIONS

MODEL	XD232	XD1032	XD1132
	Networked Interactive Player	Networked Multi-Control Interactive Player	Networked Multi-Control Interactive and Live TV Player
VIDEO ENGINE DECODER			
Single 1080p30 video decoding	X	X	X
Single 1080p60 video decoding	X	X	X
Dual 1080p60p decoding	X	X	X
MEDIA FORMATS			
Video Codecs: MPEG-1, MPEG-2, H.264, WMV	X	X	X
Video Containers: MPEG-2 transport and program streams, AVCHD/BD-AV, ASF, MP4, MOV	X	X	X
3D capabilities with side-by-side and top-over-bottom support	X	X	X
Images: BMP, JPEG, PNG	X	X	X
Audio: MP2, MP3, AAC, and WAV (AC3 is passed through)	X	X	X
HTML5 content support	Better	Better	Better
DISPLAY RESOLUTIONS*			
PA/NTSC	X	X	X
Upscaling to: 3840x2160x24/25/29.97/30p	X	X	X
1920x1080x24/25/29.97/30/50/59.94/60p, 1920x1080x50/59.94/60i, 1360x768x60p, 1280x800x60p, 1280x768x60p, 1280x720x50/59.94/60p, 1024x768x60/75p, 800x600x60/75p, 720x576x50p, 720x480x59.94/60p, 640x480x60p	X	X	X
1920x1080x50/59.94/60p, 1600x1200x60p, 1440x1050x60/75p, 1440x900x60/75p, 1280x1024x60/75p, 1280x960x60p, 1280x800x75p	X	X	X
HARDWARE INTERFACES			
Locking Power Connector	X	X	X
SD Slot for SDHC and SDXC; Storage via SDXC (up to 2TB)	X	X	X
Internal MicroSD Slot	X	X	X
USB High Speed Host Port		X (2 ports)	X (2 ports)
GPIO Port (8 bi-directional)	X	X	X
RS-232 Serial Port		X	X
3.5mm IR Out	X	X	X
3.5mm Analog Stereo Audio Out	X	X	X
S/PDIF Out		X	X
VGA Out (Component Video, Composite/S-Video)	X	X	X
HDMI Out	X	X	X
HDMI Input			X (HDMI 1.4a)
Ethernet	X (10/100)	X (10/100)	X (10/100)
Status LEDs	Power, Error, Update, Network, Wi-Fi, Ethernet, Micro SD, SD		
Reset Button	X	X	X

*Additional display resolutions are supported

MODEL	XD232	XD1032	XD1132
FEATURES			
Dual Video Decoding	X	X	X
4K Upscaling: upscale 1080p content to sharp 4K resolution	X	X	X
Powerful Video Engine: dual decoding and superior scaling	X	X	X
Live TV: brings Live TV to your signage via HDMI In, even HDCP-protected content			X
HTML5: hardware-accelerated engine that plays modular HTML assets flawlessly	X (faster)	X (faster)	X (faster)
Touch: for interactive touch screen and kiosk presentations		X	X
Zones: playback multiple content types on a single screen	X	X	X
BrightWall®: synchronized playback across multiple displays	X	X	X
Interactivity: trigger playback from various interactive ports	X (GPIO)	X (GPIO, USB, Serial)	X (GPIO, USB, Serial)
UDP Control: interact with signage using networking	X	X	X
Live Feeds: Live Text, Audio MRSS, Twitter, Flickr, etc.	X	X	X
BrightSign App: update signs with an iOS device	X	X	X
Geo-Fencing: trigger playback based on location		X	X
IP Streaming: play streaming media	X	X	X
IP Streaming Server: serve IP streams from BrightSign's local storage	X	X	X
Sign Preview: preview presentation playback in BrightAuthor	X	X	X
Networking: update, manage and schedule your signage	X	X	X
Remote Snapshot: remotely view a snapshot image of the display's playback	X	X	X
Power over Ethernet+ (PoE+): type 2 port powers other devices up to 25 watts	X	X	X
Usage tracking statistics and real time clock	X	X	X
Content Update via USB		X	X
SOFTWARE			
Free BrightAuthor Software	X	X	X
BrightSign Networking Options	X	X	X
ACCESSORIES			
USB Button Pads		X	X
Wireless Module	X	X	X
SDHC and MicroSD Class 10 Cards (various capacities)	X	X	X
MISCELLANEOUS			
Dimensions	196 x 43 x 169mm or 7.72 x 1.7 x 6.6 in. (W x H x D)		
Weight	669 grams or 23.6 oz		
Power	12V / 3A		
Multi-Country Power & Regulatory Approvals	X	X	X
Built-in Wall Mounting Brackets	X	X	X
1 year warranty, parts and labor	X	X	X

BRIGHTSIGN XD

**INTRODUCING THE UPDATED XD LINE.
FASTER HTML5 & GRAPHICS ENGINE, AND POE+.**

Leading technology includes an advanced video engine capable of decoding two 1080p60 videos simultaneously, and a hardware-accelerated HTML5 & graphics rendering engine that enables flawless playback and layering of rich content. All models are network-enabled and equipped with Power over Ethernet (PoE+). BrightSign XD1132 can play Live TV, even HDCP-protected content, via HDMI.



BrightSign XD232

**Networked
Interactive Player**



Powerful video engine capable of dual Full HD 1080p60 video decoding and simultaneous content playback from local, networked and streaming sources. PoE+ networking and abundant content support with a faster graphics and HTML5 engine. GPIO and UDP interactivity with support for the BrightSign App and BrightWall™ video wall synchronization.

Price: \$450

BrightSign XD1032

**Networked Multi-Control
Interactive Player**



All the features of the XD232 plus S/PDIF output for pure digital and surround sound audio, and a diverse range of interactive controls such as GPIO, serial, USB, UDP and mobile devices for engaging interactive displays.

Price: \$600

BrightSign XD1132

**Networked Multi-Control
Interactive and Live TV Player**



Includes all the features BrightSign offers plus Live TV playback via the HDMI Input including HDCP-protected content.

Price: \$650

XD1132



Live TV

XD1032



Touch



USB, Serial & GPIO
Interactivity



Digital Sound



Geo-Fencing

XD232



Dual 1080p60
decode



Powerful
Video Engine



4K Upscaling



Faster
HTML5



Power over
Ethernet+



Remote
Snapshot



IP Streaming



IP Streaming
Server



BrightWall™



Sign Preview



Zones



GPIO & IR
Interactivity



Live Feeds



UDP Control



BrightSign App



Networking

Série AV

Poussoirs antivandales et poussoirs de sécurité

Guide de choix

B2

								
Page	B130	B131	B132	B133	B135	B138	B139, B152	B141
Caractéristiques générales								
Antivandales (IK08/IK10)	X	X						
De sécurité			X	X	X	X	X	X
Homologation (option)	UL/CSA	UL/CSA			UL/CSA			
Étanchéité	Jusqu'à IP65	Jusqu'à IP65	Jusqu'à IP65	Jusqu'à IP65	Jusqu'à IP65	IP65, IP69K	Jusqu'à IP67	Jusqu'à IP68
Lumineux							X	X
Marquage					X			
Caractéristiques électriques								
Pouvoir de coupure maxi.	2A 48VDC (4A 250VAC)*	2A 48VDC (4A 250VAC)*	0,2A 48VDC	1A 24VDC	2A 48VDC (4A 250VAC)*	5A 15VDC 5A 250VAC	1A 30VDC	2A 48VDC
Momentanés (NO)	X	X			X			
Momentanés (NO) tactiles			X					
Momentanés (NO/NC)						X	X	
A enclenchement				X				X
Diamètre et forme								
Ø 16 (.629)	Plat		AV063	AV061				
	Bombé		AV163	AV161				
Ø 19 (.748)	Plat	AV09			AV09	AV19LP	AV9	AV09.EA
	Bombé	AV19			AV19	AV19LB		AV19.EA
Ø 22 (.866)	Plat		AV03				AV3	
	Bombé		AV02					
(*) Voir homologations applicables								
								
Page	B143	B145, B147	B149	B150	B150	B154	B156	B158
Caractéristiques générales								
De sécurité	X	X	X	X	X	X	X	X
Homologation (option)			UL/CSA					
Étanchéité	Jusqu'à IP65	--> IP67, IP69K	Jusqu'à IP65	Jusqu'à IP65	Jusqu'à IP65	Jusqu'à IP65	IP65	IP65
Lumineux	X	X				X		
Marquage	X	X		X	X			
Caractéristiques électriques								
Pouvoir de coupure maxi.	50mA 24VDC	50mA 24VDC	2A 48VDC (4A 250VAC)*	2A 250VAC	3(1,5)A 250VAC	2A 48VDC	5A 250VAC	5A 250VAC
Momentanés (NO)			X					
Momentanés (NC)				X				
Momentanés (NO) tactiles	X	X						
Momentanés (NO/NC)							X	X
A enclenchement (visible)						X		
A enclenchement					X			
Diamètre et forme								
Ø 19 (.748)	Plat	AV09C7	AV9S					
	Bombé	AV19C7						
Ø 22 (.866)	Plat		AV3S	AV031200	AV044700	AV03.EA	AV22LP	
	Bombé		AV02	AV021200		AV02.EA	AV22LB	AV22PNA
Ø 24 (.944)	Plat						AV24LP	
	Bombé						AV24LB	
	Concave						AV24LC	

Série AV

Poussoirs antivandales et poussoirs de sécurité

Avantages

☐ Esthétiques, robustes et durants

UG1410-F-R1

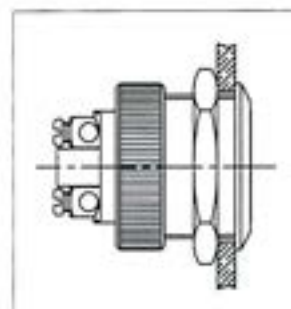
- Inarrachables
- Anti-blocage : jeu réduit au niveau du bouton évitant l'insertion de corps étrangers
- Contact et mécanisme protégés contre l'écrasement
- Résistants au feu
- Longue durée de vie

☐ Différents diamètres de canon et formes de bouton

☐ Versions étanches

☐ Indices de protection des versions étanches (poussoirs montés sur panneau vertical) : IP65 à IP67 ou IP69K selon les modèles

☐ Modèles homologués UL/CSA



La série AV est une large gamme de poussoirs à grande robustesse, composée de 2 familles :

LES POUSSOIRS ANTIVANDALES (pages B2-129 à B2-131)

- Grande robustesse (résistance aux chocs IK08 (Ø 19 mm) et IK10 (Ø 22 mm))
- Bouton et canon : acier inoxydable
- Canon Ø 19 mm (.748) ou 22 mm (.866)

LES POUSSOIRS DE SECURITE (pages B2-132 à B2-158)

- Grande variété de modèles
- Bouton et canon : laiton nickelé, laiton chromé, laiton poli verni, acier inoxydable
- Canon Ø 16 mm (.629), 19 mm (.748), 22 mm (.866) ou 24 mm (.944)
- Marquages, modèles lumineux, modèles tactiles
- Nombreuses fonctions électriques (momentanés, à enclenchement)

EXEMPLES DE MONTAGE POUR VERSIONS ETANCHES

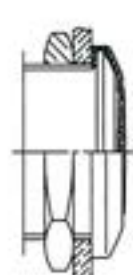
→ Joint



Recommandé



Pour panneaux à épaisseur réduite



Avec capuchon U2187 (sect. H)

Dimensions : first dimensions are in mm while inches are shown as bracketed numbers.



Unité de conditionnement : voir pages suivantes.



Accessoires de fixation : les accessoires standard et spéciaux sont présentés en section I.



Capuchons d'étanchéité disponibles pour modèles à canon Ø 19 mm. Voir Section H.



We Hear You

7. Specifications

Audio Inputs

Connectors	XLR and 1/4" TRS
Type	RF filtered, servo-balanced input
Impedance	50 kOhms balanced, 25 kOhms unbalanced
Nominal operating level	-10 dBV to +4 dBu
Max. input level	+21 dBu balanced and unbalanced
CMRR	Typ. 40 dB, > 55 dB @ 1 kHz

Audio Outputs

Connectors	XLR and 1/4" TRS
Type	Electronically servo-balanced output stage
Impedance	60 Ohms balanced, 30 Ohms unbalanced
Max. output level	+22 dBu balanced and unbalanced

System Specifications

Frequency response	5 Hz to 200 kHz, +/- 3 dB
S/N ratio	>95 dBu, unweighted, 22 Hz to 22 kHz
THD	0.002% typ. @ +4 dBu, 1kHz, gain 1

Function Controls

Main input level	variable
Main output level	variable
Level	variable for each channel
Balance/pan	placing in the stereo field

Function Switches

Main Link	links the main input signal to the main output
Split/mix	changeover from split to mix mode for each channel

Indicators

Input level (main)	4-digit LED display: -24/-12/0/+6 dB
Output level (main)	4-digit LED display: -24/-12/0/+6 dB
Input/output level	8-digit LED display: -24/-18/-12/-6/0/+6/+12/+18 dB

Power Supply

Mains Voltages

USA/Canada	120 V~, 60 Hz
U.K./Australia	240 V~, 50 Hz
Europe	230 V~, 50 Hz
General Export Model	100 - 120 V~, 200 - 240 V~, 50 - 60 Hz
Power Consumption	max. 35 Watts
Fuse	100 - 120 V~: T 630 mA H 200 - 240 V~: T 315 mA H
Mains Connection	Standard IEC receptacle

Physical/Weight

Dimensions (H x W x D)	approx. 8.5 x 1.75 x 19" approx. 217 x 44.5 x 483 mm
Net Weight	approx. 2.38 kg
Shipping Weight	approx. 3.5 kg

BEHRINGER is constantly striving to maintain the highest professional standards. As a result of these efforts, modifications may be made from time to time to existing products without prior notice. Specifications and appearance may differ from those listed or shown.

6.3 Application as a matching amplifier

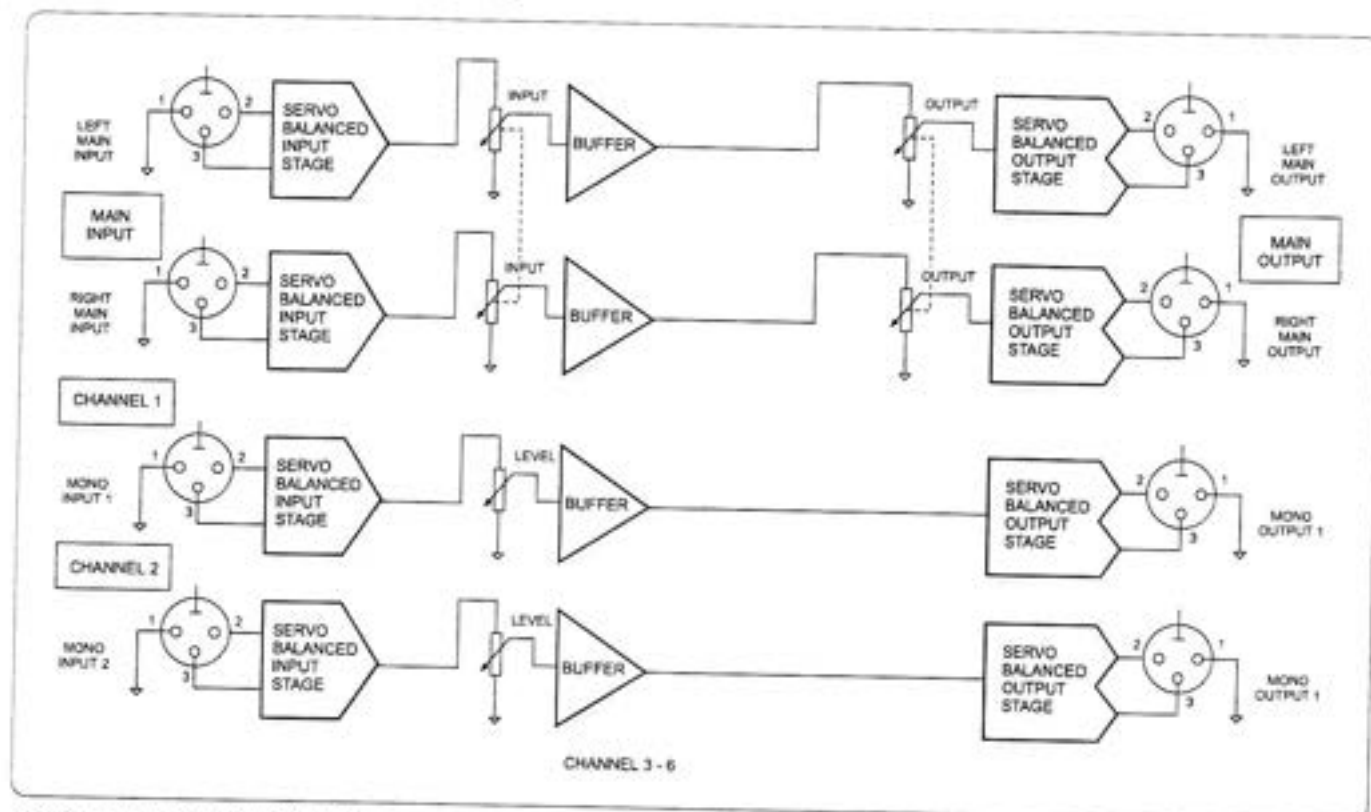


Fig. 6.3: Block diagram of the MATCHING AMPLIFIER function

The BEHRINGER ULTRALINK PRO can also be used as a multiple matching amplifier. The task of a matching amplifier is to convert the level of a signal source into another level. For instance, a cassette recorder with home recording level (-10 dBV) can be raised to studio level (+4 dBu). Of course, this process can also be reversed (level attenuation).

In this application, the ULTRALINK PRO is operated in MIX mode. The output of the signal source is connected to the mono input of the ULTRALINK PRO. The corresponding mono output provides the resulting output signal which can be raised or lowered in level. Each of the six mono channels is equipped with a LEVEL control. The control range is from $-\infty$ (full attenuation) to a maximum gain of +15 dB.

6.2 Application as a splitter

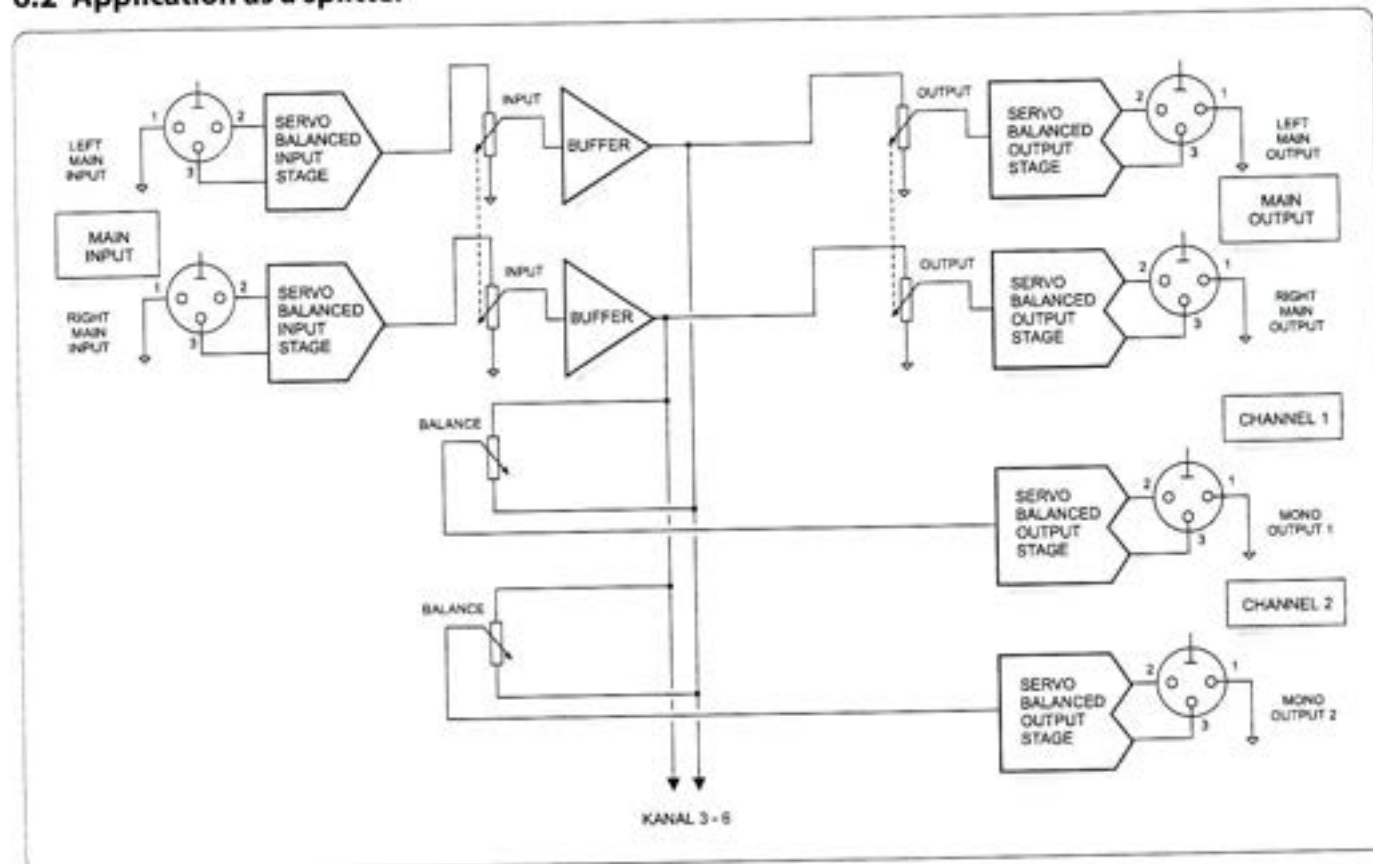


Fig. 6.2: Block diagram of the SPLITTER function

A splitter is a distribution amplifier which allows for splitting a specific input signal to several outputs. This function is of use, e.g., in a large-scale sound reinforcement system where the mixer's output signal needs to be allocated to several power amplifiers. Another field of application is in tape duplication systems, where one master tape machine is to be interfaced with several tape duplication recorders.

In this mode, the output signal from the mixer is applied to the main inputs of the BEHRINGER ULTRALINK PRO. If the SPLIT/MIX switches are set to "SPLIT", the mono outputs of the respective channels provide either the left or the right main signal. Depending on the setting of the BALANCE control, any balance between left and right main signal can be adjusted.

At the same time, the main input signal is also sent to the left or right main output, so that here two additional splitter outputs are available. Please note that these outputs do not feature a balance routing function. The left main input is routed exclusively to the left main output; similarly, the right main input feeds the right main output only.

6.2.1 The ULTRALINK PRO as a 4-channel stereo splitter

For this special application, the splitter function configures the unit as a 4-channel stereo splitter. Here, the stereo signal source is connected to the two main inputs. If all mono channels are operated in SPLIT mode, the BALANCE controls of channels 1, 3, and 5 are set to "LEFT", and the BALANCE controls of channels 2, 4, and 6 to "RIGHT"; thus, the corresponding stereo output pairs are routed through channels 1+2, 3+4, and 5+6. This kind of application is particularly useful for tape duplication systems.



6. Applications

6.1 Application as a mixer

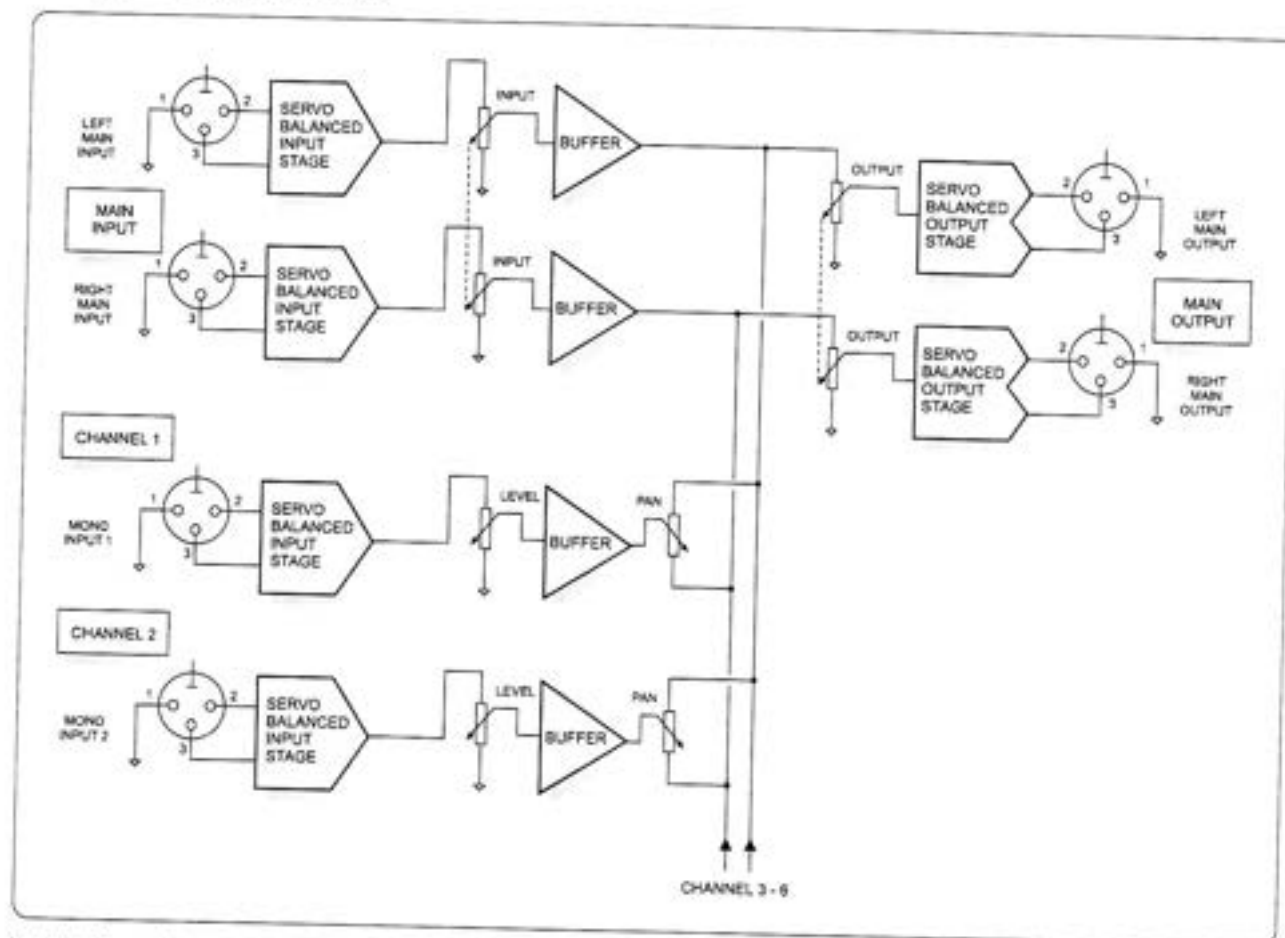


Fig. 6.1: Block diagram of the MIXER function

When the mono channels are operated in MIX mode, a maximum of 8 (6+2) mono input signals can be summed and routed to the main outputs. In this mode, the individual signal sources are connected to the mono inputs on the BEHRINGER ULTRALINK PRO. Each channel has a LEVEL knob to control the amount of its signal relative to others in the main section. Via the corresponding PAN control, each mono input signal can be routed either to the left or right main output. Of course, any intermediate pan settings can be achieved as well. The MAIN OUTPUT LEVEL control determines the overall level of the main output signal.

Since the two main inputs are alternatively routeable to the main outputs, two additional input signals can be added using the main inputs. For this you have to depress the MAIN LINK switch. However, as these inputs do not feature a PAN control, the left main input will always be routed to the left main output; similarly, the right main input can only be sent to the right main output. A total of 8 mono channels can thus be routed to two main outputs.

5. Block Diagram

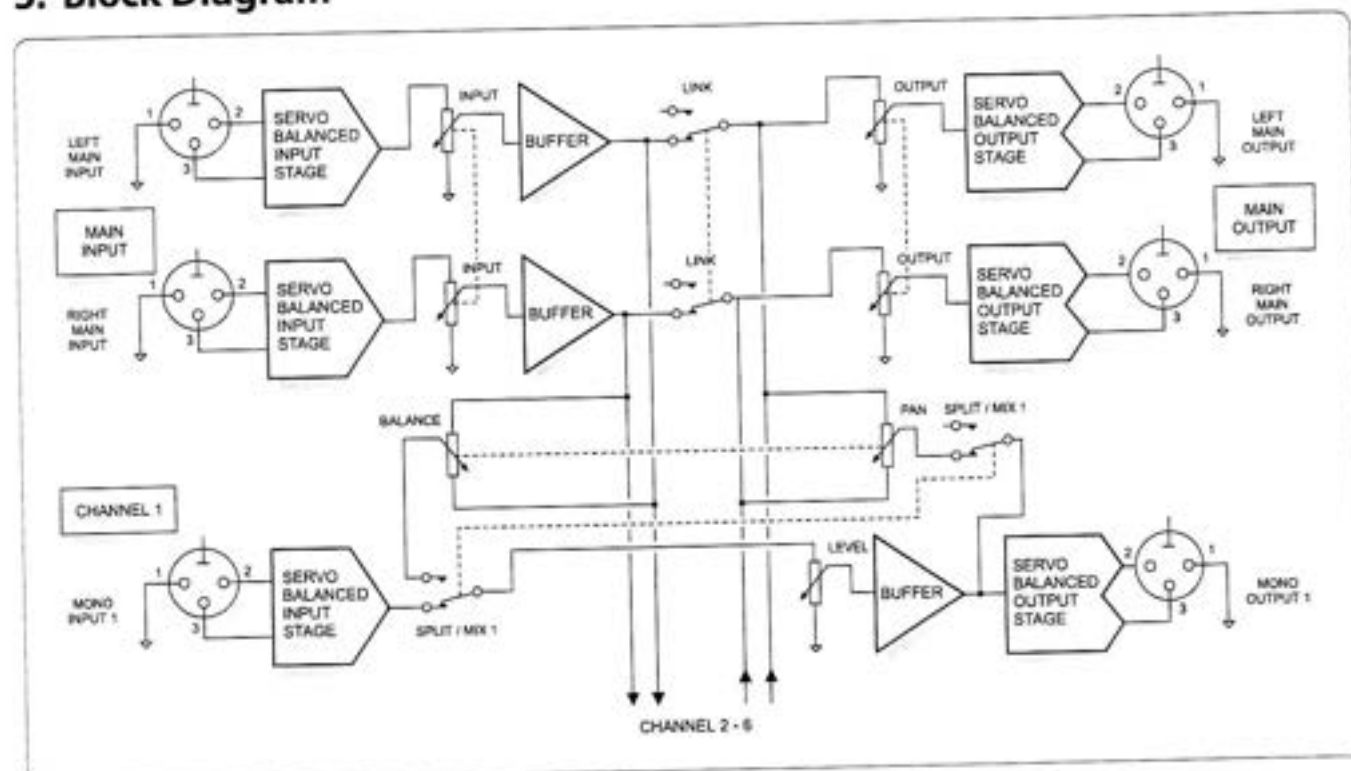


Fig. 5.1: Block diagram of the BEHRINGER ULTRALINK PRO MX882

MAIN Section

Both main inputs interface via the MAIN INPUT LEVEL control with the input bus as well as with the main outputs. The MAIN OUTPUT LEVEL control determines the output level of the signals which are summed by the second bus (i.e., the output bus) and are subsequently routed to the main outputs.

SPLIT Mode

In SPLIT mode, the main input signal is sent via the BALANCE control to the output buffer amplifiers of the mono channels, with the LEVEL control determining the output level of the respective channel. The maximum gain is +15 dB.

MIX Mode

In MIX mode, the input signals of the mono channels are "collected" via the LEVEL and PAN controls and are routed to the output bus. In this mode, the LEVEL control determines the amount of each channel at the output bus, while the PAN control is responsible for the allocation of the input signal to the left and right main outputs.

Additionally, the input signal is routed to the respective mono outputs, i.e., the circuit acts as a matching amplifier. The LEVEL control allows for level compensation of up to +15 dB.

4. Control Elements



Fig. 4.1: ULTRALINK PRO front panel

The Behringer ULTRALINK PRO has six identical channels. Each channel is equipped with two rotary controls, one button and eight LEDs. Moreover there is a main section with two rotary controls, one button and eight LEDs.

4.1 The front panel control elements

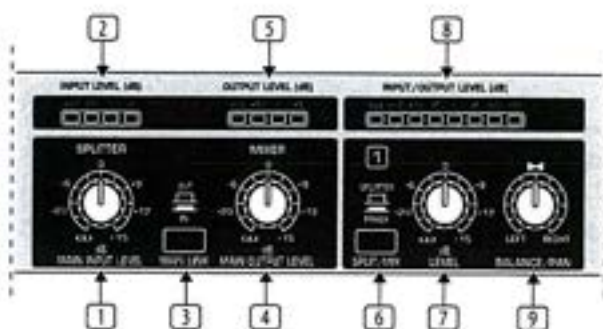


Fig. 4.2: Control elements on the front panel

- 1 The **MAIN INPUT LEVEL** control sets the main input gain, before the signal reaches the input bus. In **SPLIT** mode, the **MAIN INPUT LEVEL** control determines the common output level for all mono outputs.
- 2 The 4-digit **INPUT LEVEL** meter informs you about the input level of the main input within a range from -24 to +6 dB.
- 3 By depressing the **MAIN LINK** switch you can route the **MAIN INPUT** signal to the **MAIN OUT**. This way it is possible to route a maximum of eight input channels to the main mix.
- 4 The **MAIN OUTPUT LEVEL** control adjusts the output level applied to the main outputs. The levels present at the six mono outputs are not affected. Summing the signal levels of several mono channels can overload the main output stage. The **MAIN OUTPUT LEVEL** control is therefore used to adjust the overall output level.
- 5 The 4-digit **OUTPUT LEVEL** meter informs you about the output level of the main input within a range from -24 to +6 dB.
- 6 This **SPLIT/MIX** switch sets the respective channel to **SPLITTER** or **MIXER** mode.
- 7 The **LEVEL** control determines the signal level of the individual channels. In **SPLIT** mode, the **LEVEL** control sets the output level of the mono channels. In **MIX** mode, however, it controls the amount of the mono channel's input signal feeding into the main output section; at the same time, the level of the mono channel can be determined, which—owing to the maximum gain

of +15 dB—allows for converting, e.g., home recording levels (-10 dBV) into studio levels (+4 dBu).

- 8 The 8-digit **OUTPUT LEVEL** meter informs you about the output level of each channel within a range from -24 to +18 dB.
- 9 With the **BALANCE/PAN** control you can set the balance between the left and right main signals. In **SPLIT** mode, the main input signal is routed to the mono output, with the **BALANCE** control determining the balance between the left and right main signal portions. In **MIX** mode, the mono inputs are mixed and routed via the **LEVEL** control to the main outputs, with the **PAN** controls determining the allocation of the mono inputs to the left and right main outputs.

4.2 The rear panel elements

- 10 **FUSE HOLDER / VOLTAGE SELECTOR**. Please make sure that your local voltage matches the voltage indicated on the unit, before you attempt to connect and operate the ULTRALINK PRO. Blown fuses may only be replaced by fuses of the same type and rating.
 - 11 **MAINS CONNECTION**. Use the enclosed power cord to connect the unit to the mains. Please also note the instructions given in chapter 3 "Installation".
 - 12 **MAIN INPUTS**. These are the main audio inputs of your ULTRALINK PRO, available as balanced XLR connectors. They may feed the mono outputs of all channels which are operated in **SPLIT** mode.
 - 13 **MAIN OUTPUTS**. These are the main outputs, available as balanced XLR connectors. They may be fed either by the left and right main inputs or by any of the six mono inputs (or a combination of both).
 - 14 **MONO INPUTS** (channel 1 to 4). These are the mono inputs. Connection takes place via balanced XLR connectors.
 - 15 **MONO OUTPUTS** (channel 1 to 4). These are the mono outputs, available as balanced XLR connectors.
 - 16 **MONO INPUTS** (channel 5 to 6). These are the mono inputs. Connection takes place via balanced phone jacks.
 - 17 **MONO OUTPUTS** (channel 5 to 6). These are the mono outputs, available as balanced phone jacks.
- ♦ Please take the time to fill in and return the warranty card within 14 days after the date of purchase, so as to benefit from our extended warranty. Or use our online registration option available on the World Wide Web at behringer.com.

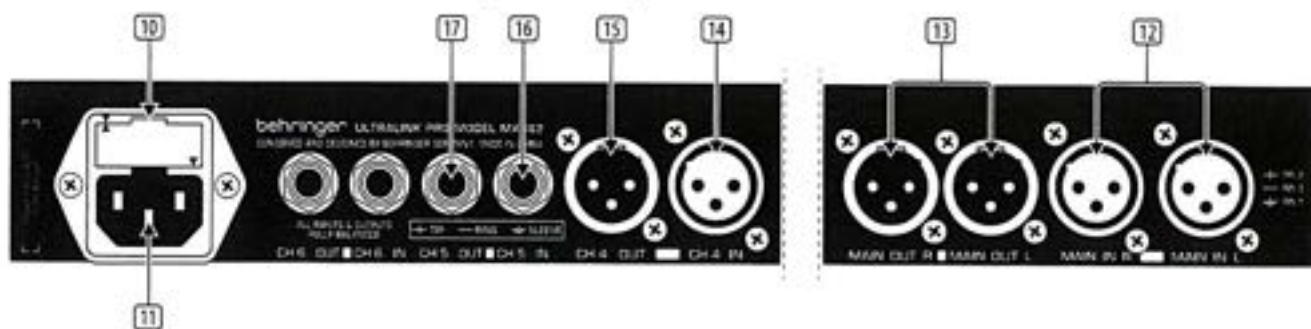


Fig. 4.3: Rear panel elements

3. Installation

Your BEHRINGER ULTRALINK PRO was carefully packed in the factory and the packaging was designed to protect the unit from rough handling. Nevertheless, we recommend that you carefully examine the packaging and its contents for any signs of physical damage, which may have occurred in transit.

- ♦ If the unit is damaged, please do not return it to us, but notify your dealer and the shipping company immediately, otherwise claims for damage or replacement may not be granted. Shipping claims must be made by the consignee.

3.1 Rack mounting

The BEHRINGER ULTRALINK PRO fits into one standard 19" rack unit of space (1 $\frac{1}{4}$ "). Please allow at least an additional 4" depth for the connectors on the back panel. Be sure that there is enough air space around the unit for cooling and please do not place the ULTRALINK PRO on high temperature devices such as power amplifiers etc. to avoid overheating.

3.2 Mains voltage

Before you connect your ULTRALINK PRO to the mains, please make sure that your local voltage matches the voltage required by the unit! The fuse holder on the female mains connector has 3 triangular markers, with two of these triangles opposing each other. Your ULTRALINK PRO is set to the operating voltage printed next to these markers, and can be set to another voltage by turning the fuse holder by 180°. **CAUTION: this instruction does not apply to export models exclusively designed, e.g. for 115 V operation!**

3.3 Audio connections

The audio inputs and outputs on the BEHRINGER ULTRALINK PRO are fully balanced. If possible, connect the unit to other devices in a balanced configuration to allow for maximum interference immunity.

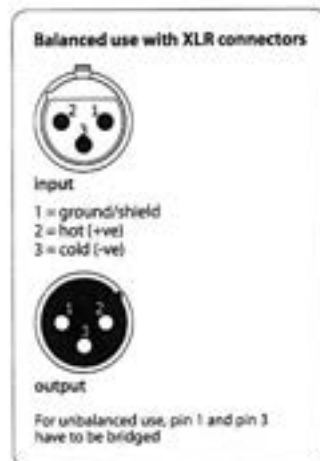
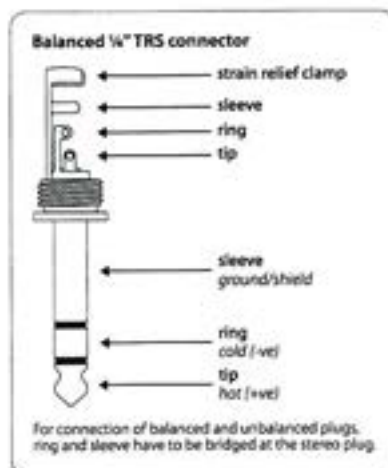
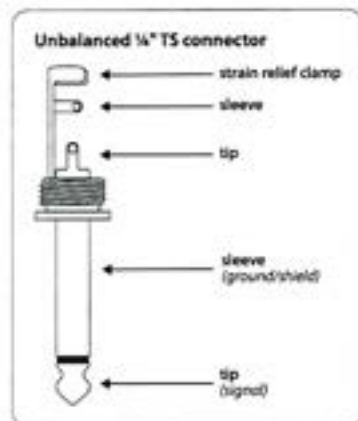


Fig. 3.1: Different plug types

- ♦ Please ensure that only qualified persons install and operate the ULTRALINK PRO. During installation and operation the user must have sufficient electrical contact to earth. Electrostatic charges might affect the operation of the ULTRALINK PRO!



1. Introduction

With the BEHRINGER ULTRALINK PRO you have purchased an ultra-flexible "problem solver" in signal distribution applications, designed to meet highest requirements: professional recording, broadcast and television studios, CD and digital production facilities, etc. Much like an all-in-one tool, it provides virtually unlimited configurations. Be it the distribution of a stereo signal to several outputs (splitter); the combination of separate signals to one stereo output (mixer), or the specific level adaption of individual signals (buffer amplifier): the ULTRALINK PRO can perform all of these functions easily – and simultaneously.

Future-oriented BEHRINGER technology

Our ULTRALINK range of devices has been a hit ever since we introduced our first model several years ago. This splitter/mixer is based on many years of experience and findings in mixing technology and is used throughout the world in renowned studios, sound reinforcement systems as well as in broadcast and television studios.

It was a real challenge to improve the well-known ULTRALINK even further, and we are proud of our success. Compared to its predecessor models, the ULTRALINK PRO not only has additional features, but also comes with dramatically improved functionality. For example, it now has input and output level meters and balanced in- and outputs.

The architecture of the ULTRALINK PRO

Basically, the unit consists of six mono channels, which can be used either as a splitter or as a mixer. For instance, a stereo program source can be inserted via the main input to be subsequently routed to any of the mono channels that are set to SPLIT mode. Using the individual BALANCE/PAN control, you can—for each channel—determine the ratio between the left and right main input signals that are routed to the corresponding output of the channels. Thus, the stereo input signal coming from the main input section can be distributed selectively among the six mono output channels.

In MIX mode, the input signals from the respective channel(s) can be mixed at the stereo main output, with the individual BALANCE/PAN control determining the signal ratio between the left and right main outputs (pan function). It is of particular advantage that, in MIX mode, the stereo input signal from the main input section is alternatively routed to the main outputs. By using this feature a total of up to 8 single signals can be combined.

In MIX mode, the mono input signals are simultaneously applied to the respective mono outputs, which permits each channel to be used as an individual matching amplifier. The LEVEL controls in the corresponding channels enable the user to adapt the levels at will, with a maximum gain of +15 dB. Levels used in home-recording can therefore be converted into studio levels (+4 dBu), and vice versa.

Typical applications

The ULTRALINK PRO MX882 is one of the most flexible systems of its type. The following applications can be realized:

2 IN/8 OUT splitter, 8 IN/2 OUT mixer, 6 IN/6 OUT matching amplifier or any other combination.

- Keyboard submixer
- Distribution amplifier for P.A. systems, discotheques, theatres, churches, hotels, communication systems, etc.
- Add-on module for mixer channels
- Add-on module for effect and monitor paths
- Level translator from -10 dBV to +4 dBu etc.

By combining several ULTRALINK PROs you can set up, for instance, a 24-channel mixer or splitter.

- ◊ The following operational manual will introduce you to the BEHRINGER ULTRALINK PRO and its various functions. After reading the manual carefully, make sure it is always on hand for future reference.

2. The Design Concept

2.1 High quality components and design

The philosophy behind BEHRINGER products guarantees a no-compromise circuit design and employs the best choice of components. The operational amplifiers NJM4580 which are used in the ULTRALINK PRO, are exceptional. They boast extreme linearity and very low distortion characteristics. To complement this design the choice of components includes high tolerance resistors and capacitors, detent potentiometers and several other stringently selected elements.

For the first time, the ULTRALINK PRO MX882 uses SMD technology (Surface Mounted Device). These sub-miniature components known from aerospace technology allow for an extreme packing density and improved reliability. Additionally, the unit is manufactured in compliance with a ISO9000 certified management system.

2.2 Inputs and outputs

2.2.1 Balanced inputs and outputs

As standard, the BEHRINGER ULTRALINK PRO is installed with electronically servo-balanced inputs and outputs. The new circuit design features automatic hum and noise reduction for balanced signals and thus allows for trouble-free operation, even at high operating levels. Externally induced mains hum etc. will be effectively suppressed. The automatic servo-function recognizes the presence of unbalanced connectors and adjusts the nominal level internally to avoid level differences between the input and output signals (correction 6 dB).

EN Important Safety Instructions



Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock.

Use only high-quality professional speaker cables with ¼" TS or twist-locking plugs pre-installed. All other installation or modification should be performed only by qualified personnel.



This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure - voltage that may be sufficient to constitute a risk of shock.



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.



Caution

To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside. Refer servicing to qualified personnel.



Caution

To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.



Caution

These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Use only attachments/accessories specified by the manufacturer.



12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid

injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.

16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.



TO BIND MUSIC GROUP BY ANY EXPRESS OR IMPLIED UNDERTAKING OR REPRESENTATION. THIS MANUAL IS COPYRIGHTED. NO PART OF THIS MANUAL MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING AND RECORDING OF ANY KIND, FOR ANY PURPOSE, WITHOUT THE EXPRESS WRITTEN PERMISSION OF MUSIC GROUP IP LTD.

ALL RIGHTS RESERVED.

© 2013 MUSIC Group IP Ltd.

Trident Chambers, Wickhams Cay, P.O. Box 146, Road Town, Tortola, British Virgin Islands

LIMITED WARRANTY

For the applicable warranty terms and conditions and additional information regarding MUSIC Group's Limited Warranty, please see complete details online at www.music-group.com/warranty.

LEGAL DISCLAIMER

TECHNICAL SPECIFICATIONS AND APPEARANCES ARE SUBJECT TO CHANGE WITHOUT NOTICE AND ACCURACY IS NOT GUARANTEED. BEHRINGER, KLARK TEKNIK, MIDAS, BUGERA, AND TURBOSOUND ARE PART OF THE MUSIC GROUP (MUSIC-GROUP.COM). ALL TRADEMARKS ARE THE PROPERTY OF THEIR RESPECTIVE OWNERS. MUSIC GROUP ACCEPTS NO LIABILITY FOR ANY LOSS WHICH MAY BE SUFFERED BY ANY PERSON WHO RELIES EITHER WHOLLY OR IN PART UPON ANY DESCRIPTION, PHOTOGRAPH OR STATEMENT CONTAINED HEREIN. COLORS AND SPECIFICATIONS MAY VARY FROM ACTUAL PRODUCT. MUSIC GROUP PRODUCTS ARE SOLD THROUGH AUTHORIZED FULLFILLERS AND RESELLERS ONLY. FULLFILLERS AND RESELLERS ARE NOT AGENTS OF MUSIC GROUP AND HAVE ABSOLUTELY NO AUTHORITY



Table of Contents

Important Safety Instructions	3
Legal Disclaimer	3
Limited warranty.....	3
1. Introduction	4
2. The Design Concept	4
2.1 High quality components and design.....	4
2.2 Inputs and outputs	4
2.2.1 Balanced inputs and outputs.....	4
3. Installation	5
3.1 Rack mounting.....	5
3.2 Mains voltage.....	5
3.3 Audio connections.....	5
4. Control Elements	6
4.1 The front panel control elements	6
4.2 The rear panel elements	6
5. Block Diagram.....	7
6. Applications	8
6.1 Application as a mixer	8
6.2 Application as a splitter.....	9
6.2.1 The ULTRALINK PRO as a 4-channel stereo splitter	9
6.3 Application as a matching amplifier.....	10
7. Specifications	11



User Manual



ULTRALINK PRO MX882

Ultra-Flexible 8-Channel Splitter/Mixer

AUDEO series

AUDEO103, AUDEO105,
AUDEO106, AUDEO108,
STANDAUDEO

loudspeaker cabinets

GIUGIARO

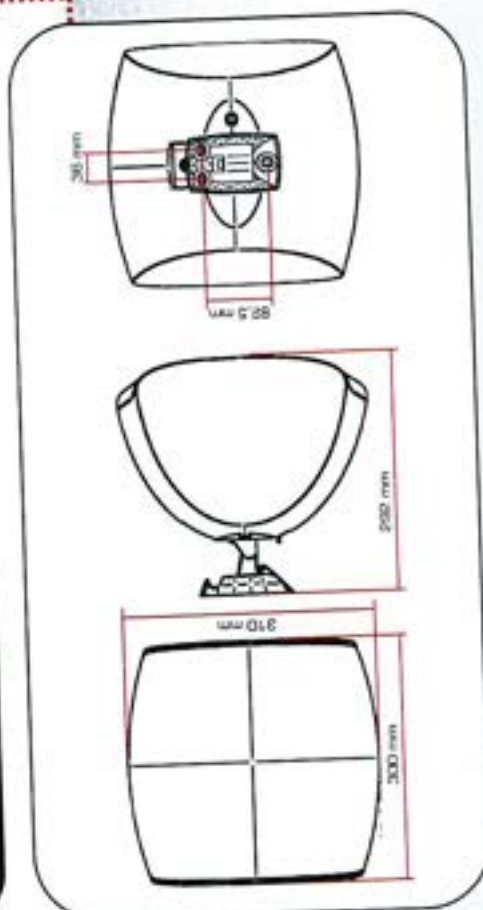


AUDEO108

- 100 W RMS - 8 ohms
- Efficiency: 94,5 dB SPL 1 W / 1 m
- 8 ohm / 100 V (7,5, 15, 30 o 60 W)
- mode switch
- 8" Kevlar woofer and 1" ACCW silk dome tweeter
- Frequency response (-10 dB): 65 Hz to 22 kHz
- Aluminium made wall bracket
- Dimensions: 300 x 310 x 225 mm
- Weight: 3,75 kg



AUDEO108



Tech. Characteristics

	AUDEO103	AUDEO105	AUDEO106	AUDEO108
Ways	2	2	2	2
Nominal box impedance	8Ω	8Ω	8Ω	8Ω
Max RMS power	250W	500W	500W	500W
Program power	500W	1000W	1000W	1000W
Nominal high impedance	100Ω LINE	100Ω LINE	100Ω LINE	100Ω LINE
Power selector	25/50/75/100W	5/7,5/15/30W	7,5/15/30/60W	7,5/15/30/60W
Frequency SPL 1W 1m	90dB	90dB	94,5 dB	94,5 dB
Frequency response at -10dB @ 8Ω	110Hz - 20kHz	90Hz - 20kHz	65 Hz - 22 kHz	65 Hz - 22 kHz
Dimensions (WxHxD) (without accessories)	120x130x110mm	240x240x160mm	300x310x225mm	300x310x225mm
Weight	1,45kg	2,2kg	3,75kg	3,75kg



AUDEO106

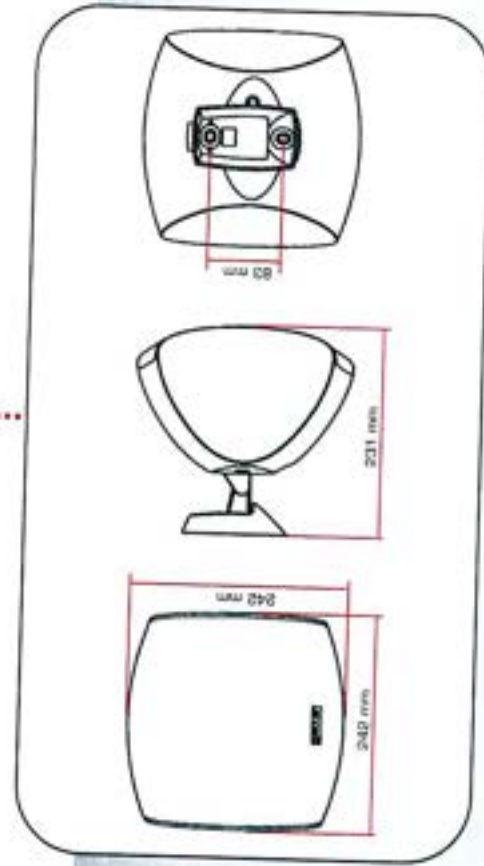
- 50 W RMS - 8 ohms
- Efficiency: 92,5 dB SPL 1 W / 1 m
- 8 ohm / 100 V (5, 7,5, 15 or 30 W) mode switch
- 8,5" woofer and 25 mm Tweeter
- Frequency response (-10 dB): 90 Hz to 20 kHz
- Dimensions: 242 x 242 x 163 mm
- Weight: 2,3 kg

GIUGIARO
S P A

AUDEO series

AUDEO103, AUDEO106,
AUDEO108, AUDEO5B110,
STANDAUDEO

loudspeaker cabinets



AUDEO series

AUDEO103, AUDEO105,
AUDEO106, AUDEO108,
STANDAUDEO

loudspeaker cabinets

The AUDEO loudspeaker series strikes the perfect balance between the intelligibility and sound reproduction quality requirements currently demanded in the professional audio installation and ever increasing demands with respect to aesthetics, design and integration into all types of architectural environments.

AUDEO has a balanced, innovative design, resulting from the collaboration between Ecler and the prestigious group Giugiaro Design during the conceptual and the external design phases of the speakers. This factor, together with its high quality sound reproduction, make this series the ideal solution for use in numerous sound projects: corporate and residential buildings, commercial premises, leisure centres, health centres, conference and meeting rooms, auditoriums, museums, etc.

This versatile series, which comes in three sizes (AUDEO 103, 106 and 108) and in black or white, is completed by its wall/ceiling supports which allow the cabling to be concealed and make it possible to install the speakers at low (8 ohms) or high impedance operation (100 V line).

In addition to the included wall brackets, the 103 and 106 models can use the DISTANDAUDEO desktop stand. If you need to mount the AUDEO speakers on a microphone stand, then the MSTANDAUDEO is the right accessory to use. For a subwoofer reinforcement of the AUDEO series speakers, try the AUDEO SB110P self-powered subwoofer cabinet.

Key features

- Full range, 2-way acoustic boxes.
- Made of reinforced ABS
- Available in black or white
- 8 ohms / 100 V line operating switch
- Accessories for wall-mounting included
- IP 54 class for installing outdoors
- Protective grille at the front with anti-rust treatment

Recommended amplification:

- HZA multi-channel 100 V line amplifiers
- MPA-R multi-channel amplifiers line (low impedance or high impedance with DLA adapters)
- NZA multi-channel amplifiers with built-in DSP and remote Ethernet management (low impedance)
- Enviro modular system (100 V line)
- AMPACK series
- pKUB

Applications:

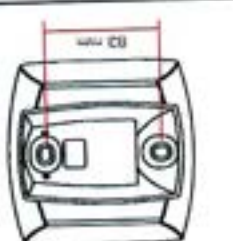
- Corporate and residential buildings
- Commercial premises
- Leisure centres
- Sound reinforcement in clubs, bars, etc.
- Health and sports centres
- Meeting and conference rooms
- Auditoriums, museums

GIUGIARO



AUDEO103

- 25 W RMS - 8 ohms
- Efficiency: 90 dB SPL 1 W / 1 m
- 8 ohm / 100 V (2.5, 5, 7.5 or 15 W) mode switch
- 3.5" woofer and 13 mm Tweeter
- Frequency response (-10 dB): 110 Hz to 20 kHz
- Dimensions: 132 x 134 x 110 mm
- Weight: 1.45 kg



BEHRINGER MicroAMP HA400

SPECIFICATIONS

INPUT	
Type	1/4" TRS connector, stereo
Impedance	100 k Ω
Max. input level	+15 dBu
HEADPHONE OUTPUTS	
Type	1/4" TRS connector, stereo
Impedance	approx. 80 Ω
Max. output level	approx. 40 mW in 100 Ω
POWER SUPPLY	
Power range	external power supply, 12 V $\pm$ / 150 mA
USA/Canada	120 V~, 60 Hz
China	220 V~, 50 Hz
U.K./Australia	240 V~, 50 Hz
Europe	230 V~, 50 Hz
Japan	100 V~, 50 / 60 Hz
DIMENSIONS/WEIGHT	
Dimensions (H x D x W)	approx. 1 5/8" x 2 1/4" x 4 1/16" (approx. 46.5 mm x 57.2 mm x 103.6 mm)
Weight	approx. 0.38 lbs (190 g)

BEHRINGER is constantly striving to maintain the highest professional standards. As a result of these efforts, modifications may be made from time to time to existing products without prior notice. Specifications and appearance may differ from those listed or illustrated.

SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Technical specifications and appearance subject to change without notice. The information contained herein is correct at the time of printing. The names of companies, institutions or publications pictured or mentioned and their respective logos are registered trademarks of their respective owners. Their use neither constitutes a claim of the trademarks by BEHRINGER® nor affiliation of the trademark owners with BEHRINGER®. BEHRINGER® accepts no liability for any loss which may be suffered by any person who relies either wholly or in part upon any description, photograph or statement contained herein. Colours and specification may vary slightly from product. Products are sold through our authorized dealers only. Distributors and dealers are not agents of BEHRINGER® and have absolutely no authority to bind BEHRINGER® by any express or implied undertaking or representation. No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording of any kind, for any purpose, without the express written permission of BEHRINGER Spezielle Studientechnik GmbH. BEHRINGER® is a registered trademark.

ALL RIGHTS RESERVED © 2005 BEHRINGER Spezielle Studientechnik GmbH,
Hanns-Martin-Schleyer-Str. 36-38, 47877 Wülfrath-Münchheide II, Germany
Tel. +49 2154 9206 0, Fax +49 2154 9206 4603

INSTRUCCIONES DE SEGURIDAD

- 1) Lea las instrucciones.
- 2) Conserve estas instrucciones.
- 3) Preste atención a todas las advertencias.
- 4) Siga todas las instrucciones.
- 5) No use este aparato cerca del agua.
- 6) Limpie este aparato con un paño seco.
- 7) No instale el equipo cerca de fuentes de calor.
- 8) Proteja los cables de suministro de energía de tal forma que no sean pisados o doblados.
- 9) Use únicamente los dispositivos o accesorios especificados por el fabricante.
- 10) Desenchufe el equipo durante tormentas o si no va a utilizarlo durante un periodo largo.
- 11) Confíe las reparaciones únicamente a servicios técnicos cualificados. Se requiere mantenimiento siempre que la unidad haya sufrido algún daño.

УКАЗАНИЯ ПО ТЕХНИКЕ БЕЗОПАСНОСТИ

- 1) Прочитайте эти указания.
- 2) Сохраните эти указания.
- 3) Выполняйте эти указания.
- 4) Следуйте всем инструкциям по обслуживанию.
- 5) Не пользуйтесь прибором в непосредственной близости от воды.
- 6) Протирайте прибор сухой тряпкой.
- 7) Не располагайте прибор рядом с источниками тепла.
- 8) Прокладывайте сетевой кабель таким образом, чтобы он был защищён от обрывов, острых краёв и не мог быть повреждён.
- 9) Применяйте только рекомендованные производителем дополнительные приборы принадлежности.
- 10) Вынимайте вилку из розетки при грозе и длительных перерывах в эксплуатации прибора.
- 11) Поручайте выполнение работ по обслуживанию прибора только квалифицированному персоналу сервисной службы. Техническое обслуживание требуется если прибор был каким-то образом повреждён.

安全にお使いいただくために

- 1) 取扱説明書を通してご覧ください。
- 2) 取扱説明書を大切に保管してください。
- 3) 警告に気づいてください。
- 4) 説明書に従ってください。
- 5) 本機を水などの近くで使用しないでください。
- 6) お手入れの際は常に乾燥した布巾を使用してください。
- 7) 本機は熱源から離して設置してください。
- 8) 電源コードを踏みつけたり、引っ張らないようにご注意ください。
- 9) 付属品は本機製造元が指定したもののみをお使いください。
- 10) 雷雨の際は、もしくは長期間の使用にならない場合は、電源プラグをコンセントから抜いてください。
- 11) 故障の際は当社指定のサービス技術者に修理をご依頼ください。修理がある特定の原因によって故障が起きた場合、修理が必要となります。

详细安全说明

- 1) 请仔细阅读说明书。
- 2) 请妥善保管好说明书。
- 3) 请留意所有的警告说明。
- 4) 请严格遵照所有的操作说明。
- 5) 请勿在靠近水源处运行此机器。
- 6) 请勿用潮湿的布擦拭机器。
- 7) 请勿将本机器放置于热源附近。
- 8) 请至少用干燥的布擦拭。使用不会损坏机器表面材料。
- 9) 请仅使用制造商认为合适的附加机器/配件。
- 10) 在雷雨期间或长期不使用机器时请拔掉电源插头拔出。
- 11) 请仅让具有资质的服务人员来进行保养工作。当机器有损坏时，要运行维修保养。

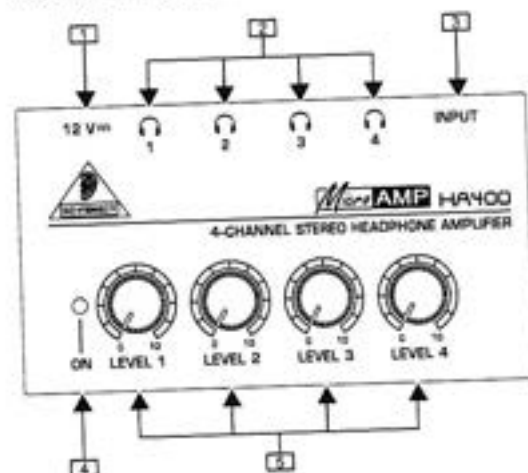
BEHRINGER MicroAMP HA400

WELCOME TO BEHRINGER

Thank you for showing your confidence in us by purchasing the BEHRINGER MicroAMP HA400.

This 4-channel stereo headphone amplifier is designed for use with all types of headphones and therefore provides maximum flexibility. Its high-power stereo amplifiers guarantee the highest sonic quality even at maximum volume. The ultra low-noise 4580 operational amplifiers ensure outstanding audio performance.

CONNECTORS AND CONTROL ELEMENTS



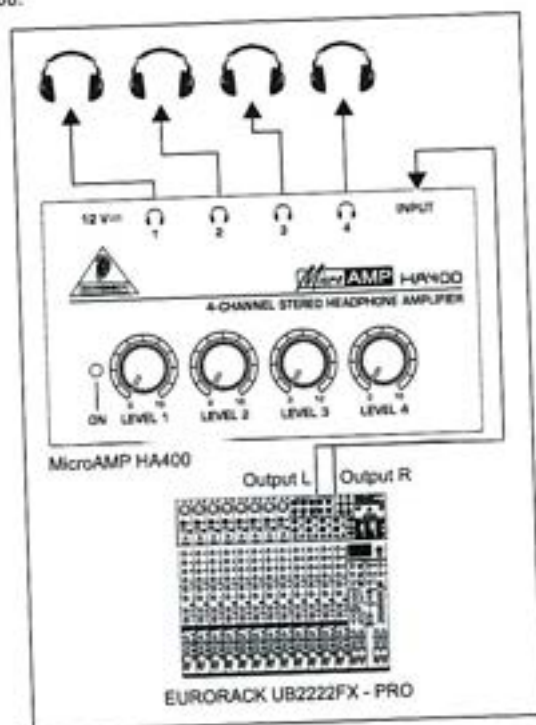
HA400 connectors and control elements

- 1 Connect the power supply unit to your HA400 using the 12 V connector. Connecting the power supply unit to the mains automatically switches the HA400 on. To disconnect the unit from the mains, pull out the main cord plug.
- 2 When installing the product, ensure that the plug is easily accessible. If mounting in a rack, ensure that the mains can be easily disconnected by a plug or by an all-pole disconnect switch on or near the rack.
- 3 Connect up to 4 headphones to these 1/4" TRS connectors.
- 4 The signal source has to be connected to this 1/4" TRS connector (INPUT).
- 5 In case the volume level of the signal source is set too high, the HA400 may produce distortion!
- 6 This ON LED is illuminated as soon as the unit is connected to the power.
- 7 Using the LEVEL controls you can set the volume level of each headphone output.
- 8 High volume levels can damage your hearing or your headphones. Please turn down all volume controls to zero (all the way to the left) before you power up the amp. Always make sure you use appropriate volume levels.

SERIAL NUMBER. The serial number of the HA400 is located at the bottom.

APPLICATIONS

The following figure shows an example of how to use the MicroAMP HA400.



Example: HA400 wiring

WARRANTY

For our current warranty terms, please refer to our website at <http://www.behringer.com>.

Die deutsche Anleitung ist erhältlich @ www.behringer.com
 Manuel francophone en téléchargement sur www.behringer.com
 Manual en español disponible en www.behringer.com
 Manuali italiani disponibili @ www.behringer.com
 Руководство по эксплуатации @ www.behringer.com
 Polska instrukcja dostępna jest pod adresem @ www.behringer.com
 Nederlandse handleiding beschikbaar @ www.behringer.com
 Suomenkielinen käyttöohje saatavilla osoitteesta www.behringer.com
 Svensk manual finns tillgänglig på www.behringer.com
 Dansk vejledning findes på @ www.behringer.com
 Manual português disponível @ www.behringer.com
 Ελληνικό εγχειρίδιο उपलब्ध है @ www.behringer.com
 日本語版マニュアル @ www.behringer.com
 使用说明书可在 www.behringer.com 下载



Spécifications techniques

Audio

Impédance	10k Ohms
Bande passante	400Hz - 16 KHz
Sortie Audio SPL Max	85dB @ 1kHz/1 mètre
Tension d'entrée max pour sortie max	160 mV rms x 1 canal ou 80 mV rms x 2 canaux

Boutons

Equaliseur	Sélecteur 3 positions
------------------	-----------------------

Connecteurs

Entrée audio	2 RCA « cinch » connecteur
--------------------	----------------------------

Voyants

Indicateur de présence de signal/saturation	
---	--

Alimentation

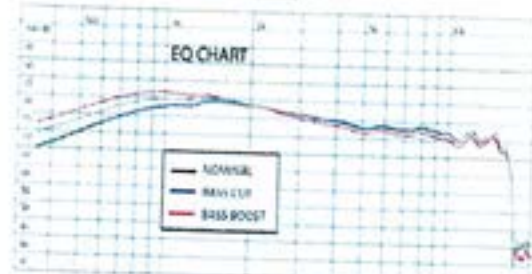
Entrée	90V—264VAC
Transformateur externe	48VDC @ 1.5 A max
Consommation maximale	100 W max

Environnement

Température	0°C à 40°C
Taux d'humidité	0 à 95% (sans condensation)

Boîtier

Dimensions (boîtier)	Plastique ABS noir ou blanc 311 x 88 x 151 mm (LxPxH)
Poids	1,3 kg



Technologie SpotDAP HSS® (HyperSonic Sound)

La technologie HSS® est un concept complètement nouveau et révolutionnaire de reproduction du son, basé sur de solides règles de physique.

Le principe de la technologie HSS® est de moduler un son dans des fréquences d'ultrasons. Or, la diffusion de fréquences ultrasoniques est très directionnelle, et peut être considérée comme une colonne (un faisceau directionnel). Les ultrasons ne sont pas audibles en eux-mêmes, mais l'interaction de l'air et de ces fréquences modulées recrée un son audible qui peut être entendu à l'intérieur de cette colonne. En fait, le son est recréé lorsque la colonne d'ultrasons rencontre une surface solide. Il peut donc être entendu soit de manière directe en se positionnant à l'intérieur de la colonne, ou de manière indirecte en projetant la colonne d'ultrasons sur un objet. Dans ce cas, c'est l'objet en question qui devient une sorte de haut-parleur virtuel (le son est régénéré sur l'objet), et peut être entendu comme s'il provenait de l'objet.

Mais encore ...

Le générateur SpotDAP utilise une propriété de l'air connue comme "la non linéarité". Une onde sonore normale (entendue) est une petite vague de pression qui voyage dans l'air. Comme la pression va de haut en bas, la nature "non linéaire" de l'air lui-même change légèrement l'onde sonore. Si vous changez une onde sonore, de nouvelles fréquences sont formées. Donc, si nous savons comment l'air affecte les ondes sonores, nous pouvons prévoir exactement quelles nouvelles fréquences seront ajoutées dans l'onde sonore par l'air lui-même. Dans l'ultrasonique (au-delà de la gamme d'audition de l'homme) l'onde sonore peut être envoyée dans l'air avec un volume suffisant pour forcer l'air à créer ces nouvelles fréquences. Puisque nous ne pouvons pas entendre le son ultrasonique, nous allons seulement entendre les nouveaux sons qui sont formés par l'action non linéaire de l'air. Les musiques ou les voix des sources audio sont converties en un signal ultrasonique fortement complexe par le processeur de signal avant l'amplification et émis dans l'air par l'émetteur. Puisque l'énergie ultrasonique est fortement directionnelle, il se forme une colonne virtuelle de son directement devant l'émetteur, comme la lumière d'une torche électrique. Tout le long de cette colonne de son ultrasonique, l'air va créer de nouveaux sons (le son que nous avons à l'origine converti en une vague ultrasonique). Puisque le son que nous entendons est créé directement dans la colonne d'énergie ultrasonique, il ne s'étend pas dans toutes les directions comme le son d'un haut-parleur conventionnel, au lieu de cela il reste fermement bloqué à l'intérieur de la colonne d'énergie ultrasonique. Pour entendre le son, vos oreilles doivent être dans la colonne d'ultrasons, ou, vous pouvez entendre le son après réflexion sur une surface dure. Par exemple, si vous dirigez l'émetteur ultrasonique vers un mur, vous entendrez seulement le son audible après réflexion sur le mur. C'est semblable à la tache d'une torche électrique contre un mur dans une pièce sombre. Vous ne voyez pas la lumière de la torche électrique, vous voyez seulement la tache de lumière sur le mur. Le générateur SpotDAP travaille de la même manière. Le son concentré ou dirigé voyage beaucoup plus loin sur une ligne droite que des haut-parleurs conventionnels.

Accessoires

SPT-Mount AB2	Support mural à rotule
SPT450-CMW	Support pour plafond



SPT-Mount - AB2



SPT450-CMW

ProDAP

SpotDAP 450

Générateur de son ultra directif

i informations produit

Imaginez... la diffusion d'un message sonore concentré à un endroit très précis désiré, et uniquement à cet endroit!... c'est le résultat obtenu avec le générateur de son ultra directif SpotDAP450. Le SpotDAP450 est conçu sur base de la technologie "HyperSonic Sound®" (HSS®).

La directivité sonore du SpotDAP450 est inégalée (3°), ce qui réduit de manière significative la pollution sonore, essentiellement dans les endroits où le bruit ambiant est un véritable problème. Une autre caractéristique avantageuse du SpotDAP450 est sa diffusion longue portée (15 mètres).

Les applications sont diverses : points de vente, kiosques, parcs d'attractions, banques, musées ...



SpotDAP

Évite les pollutions sonores

Permet de concentrer la diffusion sonore uniquement là où elle est souhaitée. La directivité est de 3°.

Flexibilité de positionnement

Le SpotDAP450 est compact et léger. Il peut être utilisé de manière directe ou indirecte: le son est orienté directement sur le point d'écoute, ou en réflexion sur un objet. Contrairement à d'autres technologies, aucune contrainte de boîtier, de vibration, ou encore d'onde arrière n'est à considérer.

Simple à mettre en oeuvre

Le SpotDAP450 se connecte directement sur n'importe quelle source sonore. Aucun amplificateur de puissance n'est nécessaire.

Diffusion longue portée

Une particularité de la technologie HSS® est que le niveau sonore ne décroît que très lentement en fonction la distance. La diffusion sonore reste audible et intelligible à plusieurs dizaines de mètres!

Effet de surprise!

Placé dans un passage, l'effet de surprise ou d'attraction est garanti !

Technologie primée

La technologie HSS® a reçu de nombreux prix, et notamment SpotDAP a reçu le "Label de l'innovation muséographique" au Salon International des Techniques Muséographiques (SITEM - Paris - 2003).

ProDAP... Extrême

Fiabilité...Extrême

- Produits conçus pour un fonctionnement continu 365/7/24.
- Absence totale de partie mécanique mobile.

Service...Extrême

Garantie de base 1 an, extensible à 2 ou 3 ans.

Références...Extrêmes

Du petit musée régional aux plus grands parcs d'attractions, l'excellent rapport qualité/prix des produits RSF séduit les plus grands acteurs du domaine touristique et du loisir. Citons dans les plus grandes références Disneyland Paris (FR), le Futuroscope de Poitiers (FR), la Cité des Sciences de Paris (FR), le British Muséum de Londres (UK), Stonehenge (UK), ...

Commercial Division

RSF Europe SA
rue de l'Industrie, 18
L-8399 Windhof
G. D. of Luxembourg

Tel. +352 49 74 20 40
Fax +352 49 74 20 50
www.rsf-europe.com

Manufacturer

RSF
45, Avenue Marcel Dassault
(Parc de la Plaine)
31500 Toulouse - France

Tel. +33 5 61 20 79 09
Fax +33 5 61 80 00 94
rsf-europe.com



FICHES TECHNIQUES

PROGRAMMES AUDIOVISUELS/ SÉQUENCES 2 à 14/ FICHES TECHNIQUES/

HEADPHONES

HEADSETS

PROFESSIONAL HEADPHONES



M GERMAN AESTRO

LOGIC PRODUCTS
2011/2012

Powered by

M AESTRO
BADENIA

GermanMAESTRO, You can feel it! The Brand with the Tradition of German Perfection

Die Marke mit der Tradition deutscher Perfektion



Hören heißt unterscheiden. Das menschliche Ohr nimmt Feinheiten wahr, erkennt Nuancen und verspürt genau dies als das Gefühl des wahren Hörgenusses. Voraussetzung allerdings sind Klangquellen, die in ihren Möglichkeiten nicht hinter den Fähigkeiten des menschlichen Ohrs zurückbleiben. Das GermanMAESTRO Team mit mehreren 100 Jahren gemeinsamer Akustik Erfahrung baut Lautsprecher, die dem menschlichen Ohr weit voraus sind. Viele der einzelnen Merkmale, die einen GermanMAESTRO Schallwandler auszeichnen, befinden sich im nur technisch messbaren Bereich. In ihrer Summe jedoch sind sie hörbar – als Gefühl eines rundum vollkommenen Klangerlebnisses.

Dafür gibt es Gründe. Der eine ist der Erfindungsreichtum unserer Entwickler. Wenn jeder Schallwandler angewandte Akustik ist, dann sind es eben auch hier die kleinen Feinheiten und intelligenten Details, die den großen Unterschied ausmachen. Hinzu kommt ein weiteres wichtiges Qualitätsprinzip:

Die eingesetzten Materialien. Seit Jahrzehnten sind die im GermanMAESTRO Team tätigen Experten bahnbrechend bei der Entwicklung neuer Werkstoffkombinationen. Nur ein Beispiel ist der, den Lautsprecherbau revolutionierende Einsatz von Titan-Technologie. Schließlich ist GermanMAESTRO – um ein drittes Merkmal für unterscheidbare Qualität anzuführen – bei den Herstellungsverfahren ein stets überzeugter Verfechter von grundsolider und erfahrener Handarbeit.

In der Summe nennen wir dies German Engineering, getragen von der Leidenschaft für Qualität bis in jedes Detail, der Menschen, die gemeinsam für GermanMAESTRO stehen. Den Unterschied kann man hören. Und vor allem fühlen.

To hear is to distinguish. The human ear receives acoustic vibrations and translates every whisper, thunderclap and minute detail into the listening experience. When our auditory senses are stimulated by an acoustic source that satisfies the spirit, a feeling of true listening pleasure is achieved. The GermanMAESTRO Team with their hundreds of years of combined experience in acoustics understands the importance of the listening experience and creates speaker-systems capable of exceeding the limits of human hearing.

In the technical details that enable our loudspeakers to reproduce a uniquely broad range of sound is our goal to provide you, the listener, with an instrument for transmitting every nuance and acoustic detail that comprises a perfect sound experience. There is no substitute. Here with GermanMAESTRO, we know that every product starts with the advantage of our engineering staff's extensive industry experience.

The GermanMAESTRO Team inventive spirit and pursuit of excellence has fostered the use of new design technologies and materials in the application of their art. Our use of titanium, fiber-glass reinforced ABS, unique Polycomp cone material, and special crossover technologies has revolutionized the mobile loudspeaker industry. But to temper the hard edge of scientific invention, we incorporate the watch men like precision of handcrafting into our final assembly process.

This guarantees that both form and function will meet or exceed our performance expectations. We call this German Engineering. This is nothing more than the passion and attention to detail of the GermanMAESTRO Team. You can hear the difference and above all – you can feel it.

**Handcrafted in
GERMANY**

GERMAN MAESTRO



HEADPHONES

GMP Studio-Series

High Performance meets perfect Comfort

Perfektion in Klang und Komfort



GMP 400



GMP 450 PRO

Der GMP 400 repräsentiert die Spitzenklasse in der Kopfhörer-Technologie: kompromisslose Klangreproduktion mit glasklaren Höhen, extrem hohem Detailreichtum in den Mitten und präziser Dynamik in den Tiefen. Ebenso überzeugt auch die Ausstattung: Sandwich-Membran, Spule aus kupferplattiertem Aluminium, kardamatische Aufhängung der Hörsysteme, Ohrpolster aus hautfreundlichen Samtveloursstoff und ein vergoldeter Multi-Klinkenstecker. Seine analytischen Klangqualität und sein besonderer Langzeittragekomfort werden seit Jahrzehnten in der Recording-Studio-Szene hochgeschätzt.

The GMP 400 represents the top range in headphone technology: Uncompromising sound reproduction with crystal clear trebles, rich details in the mid-range and precise dynamic response in the bass reproduction. The technical features are also very impressive: Sandwich-diaphragm, copper plated aluminium voice coils, ear cups with cardamatic suspension, ear pads made of a top-quality soft velvet and a gold plated Multi-Jack-plug. Many recording engineers' favourite headphone!

Der GMP 450 Pro repräsentiert wie schon sein Pendant, der GMP 400, die Spitzenklasse im Kopfhörerbau. Jedoch wurden hier, aufgrund von weiteren Bedarfen professioneller Anwender, alle Eigenschaften des GMP 400 nochmals in einer akustisch geschlossenen Ausführung realisiert. Somit eignet sich diese Variante hervorragend für viele Studioanwendungen und -produktionen, die eine gewisse Außengeräusch-Abschirmung notwendig machen.

Like its counterpart, the GMP 400, the GMP 450 Pro represents top-of-the line headphone technology. But following specific needs of professional users in special environments, all the characteristics of the GMP 400 have been packed into an acoustically closed version. Thus this version is ideally suited for a variety of studio applications and production sessions, where outside noise shielding is required.

M GERMAN MAESTRO



**GMP 8.35 D
Monitor**

Akustisch besticht der GMP 8.35 D Monitor mit dynamischen Bässen und hoher Transparenz im Mittel-Hochtonbereich. Mit seinen niederohmigen und hochempfindlichen Systemen findet der Hörer fast überall Anschluss – ob am Mischpult oder portablen Rekorden und Abspielgeräten. Gehäuse und Bügel entsprechen auch hier dem Standard der GMP 8.000 Serie, was eine sehr lange Lebensdauer garantiert.

Acoustically the GMP 8.35 D Monitor amazes users with its dynamic bass response and overall transparency in the midrange and high frequency section. The headphone's low-impedance and highly sensitive drivers are able to adapt to the widest range of equipment – whether on a mixing table or on portable devices. And of course, the GMP 8.35 D Monitor features the same technical design standards of the GMP 8.000 Series – as a long-term durability is granted.



GMP 8.300 D PRO

Dieser akustisch geschlossene Kopfhörer von sehr hoher Klangwiedergabe-Qualität besteht jeden Härte-test! Der bruchsichere Stahlbügel ist aufwändig gepolstert und ergonomisch geformt. Einseitige Kabelzuführung, verdeckt geführte Verbindungsleitungen und robuste Kunststoffgehäuse sind Garantien für eine lange Lebensdauer.

This acoustically closed high quality headphone will also withstand even the harshest treatment! The unbreakable steel headband features generous padding and an ergonomic design. One-sided cable entry, concealed wiring inside the headphone and unbreakable housing are guarantee for long-lasting performance. And high performance driver systems grant for superb sound reproduction.

HEADPHONES

GMP Live-Series

Brilliant Sound Reproduction

Brilliante Klangwiedergabe



GMP 435 S

Basierend auf dem GMP 400 aber ausgestattet mit niederohmigen und hoch empfindlichen Systemen für ein ausgeglichenes Klangbild und eine hervorragende Basswiedergabe bei bestem Wirkungsgrad speziell an portablen Abspielgeräten wie zum Beispiel MP3-Playern. Die speziell entwickelten Ohrpolster garantieren angenehmen Tragekomfort und perfekten Sitz auch bei längeren Hör-Sessions.

This high performance headphone is based on the GMP 400 but equipped with low-impedance and highly sensitive drivers for a very well balanced sound reproduction and impressive bass performance with highest efficiency, especially on portable devices like MP3-players. The cardamatic suspension and the specifically engineered ear pads guarantee perfect comfort and fit, also during long-term listener sessions.



GMP 250

Geschlossenes Kopfhörersystem in hochwertiger akustischer Ausführung. Ideal für alle, die Wert auf Dynamik legen. Die außerordentlich differenzierte und bassstarke Klangwiedergabe des GMP 250 setzt in seiner Klasse Maßstäbe. Die Kardamatik mit dem hochflexiblen Bügel und dem verstellbaren Kopfband sichert bequemes Tragen und guten Sitz.

This closed headphone with superb acoustical features is ideally suited for all those who attach importance to dynamic response. The extremely clear bass and the fine reproduction of the mid- and high frequency ranges enables the GMP 250 to set benchmarks in its class. The cardamatic suspension with its highly flexible head-bow and adjustable headband ensure excellent long-term comfort and fit.

M GERMAN MAESTRO



GMP 240

Offenes Kopfhörersystem für perfekte Klangwiedergabe mit hoher Dynamik. Dank seiner Transparenz und seines Frequenzganges ist der GMP 240 für jede Musikrichtung geeignet. Die kardamatische Aufhängung und die Samthorpolster sorgen für perfekten Sitz und Tragekomfort. Der Bestseller für den ambitionierten Anwender.

Acoustically open headphone for perfect sound reproduction with high dynamic response. Thanks to its transparency and linear frequency response the GMP 240 is ideal for all music tastes. The cardamatic suspension and the velvet ear pads guarantee perfect fit and excellent comfort. For passionate listeners this is great value for money.



GMP 160

Der GMP 160 ist ein Stereo-Leichtkopfhörer für allerhöchste Ansprüche mit enorm hohem Wirkungsgrad und außergewöhnlicher Bassdynamik. Ebenso hochwertig sind die Ausstattungsdetails: Der GMP 160 verfügt über Schallwandler mit Kobalt-Magnetsystemen, ein extrem flexibles Kabel aus sauerstoffarmen Kupfer und ein zusätzliches Verlängerungskabel mit integriertem Lautstärkeregler.

The GMP 160 light weight stereo headphone meeting the highest demands. This is thanks to their extremely high efficiency and excellent bass response. The features are superb: transducers with cobalt magnet systems, highly flexible cables made of low-oxygen copper and an additional extension cord with integrated volume control.

HEADSETS

Headsets

Just work with the Best

Arbeiten Sie nur mit dem Besten

Speziell für den Dauereinsatz in Sprachlabors und Intercom-Anwendungen entwickelt, wo größter Wert auf Zuverlässigkeit und Robustheit bei gleichzeitig hohem Tragekomfort gelegt wird, jetzt auch für Privatanwender erhältlich. Hautsympathische Ohrpolster ermöglichen besten Tragekomfort auch über lange Zeiträume hinweg. Jedes Headset ist mit einem Elektret-Mikrofon in Nierencharakteristik ausgeführt, mit hervorragender Rückwärtsdämpfung und einem im Mikrofongehäuse integrierten hochwirksamen Popschutz. Der unzerbrechliche Mikrofonarm ist nahtlos mit dem linken Gehäuse verbunden, lässt sich aber durch seine besondere Konstruktion ohne Bruchgefahr beliebig ausrichten. Die Kabelzuführung erfolgt bei den Hörern einseitig und ein spezielles, flexibles und bruchfestes Rundkabel, verfügbar mit verschiedenen Steckern, garantiert eine hohe Lebensdauer selbst bei stärkster Beanspruchung.

Specifically developed for demanding applications such as those required for language laboratories and intercom applications, where great importance is attached to quality, reliability, and comfort, now also available for private use. Soft, gentle ear pads provide comfort even for the longest lasting audio sessions. Each headset features a electret microphone with cardioid characteristic, excellent front-to-back ratios and integrated pop filter. The flexible yet unbreakable microphone boom is molded from a single die with the left headphone housing and can be bent into any required position. The cable entry on these models is one sided and a special rugged round PUR cable, which is available with various connectors, guarantees a long life cycle even under harsh working conditions.



With USB-Soundadapter or Jack-connector

Mit USB-Soundadapter oder Klinken-Stecker

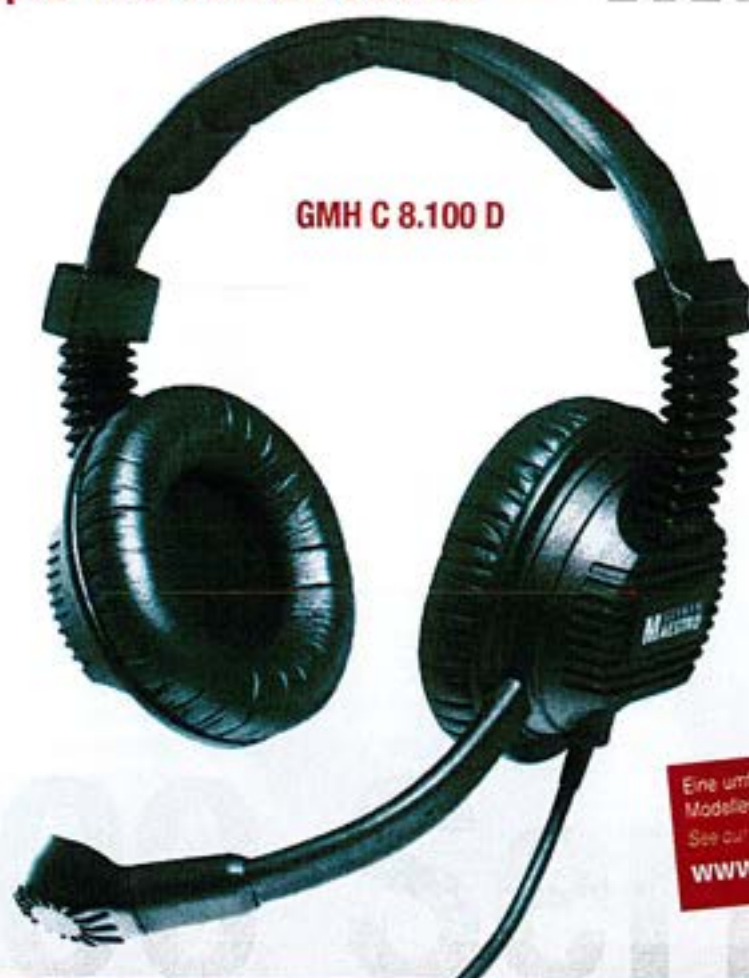
GERMAN
MAESTRO

GMH C 8.100 D

GMH C 8.100 D (USB)



GMH C 8.100 D (Jack)



Eine umfangreiche Auswahl von Headset Modellen finden Sie auf unserer Website:
See our website for more headset models:
www.german-maestro.de

KOPFHÖRER HEADPHONE	ÜBERTRAGUNGSBEREICH FREQUENCY RESPONSE	NENNIMPEDANZ NOMINAL IMPEDANCE	ANDRUCKKRAFT AVERAGE PRESSURE ON THE EAR	GEWICHT OHNE KABEL WEIGHT W/O CABLE
GMH C 8.100 D (USB)	20 - 17.000 Hz	100 Ohm	~ 6 N	270 g
GMH C 8.100 D (Jack)	16 - 21.000 Hz	100 Ohm	~ 6 N	270 g
GMH C 8.40 S	18 - 20.000 Hz	40 Ohm	~ 6 N	200 g

MIKROFON MICROPHONE	RICHTCHARAKTERISTIK DIRECTIONAL CHARACTERISTIC	ÜBERTRAGUNGSBEREICH FREQUENCY RESPONSE	NENNIMPEDANZ NOMINAL IMPEDANCE	EMPFINDLICHKEIT SENSITIVITY	PHANTOMSPESUNG PHANTOM POWER	RÜCKWÄRTSDÄMPFUNG FRONT-TO-BACK RATIO
ELECTRET	Cardioid	40 - 18.000 Hz	1000 Ohm	16,25 mV/Pa	1,5 - 10 V	15 dB (DIN/IEC)

PROFESSIONAL HEADPHONES

Nearly Indestructible

POS-/ InfoPoint-Series

Nahezu Unzerstörbar

GMP 8.40 D



Der Serie 8.000 Kopfhörer als Spezialversion für Vorführgeräte und Info-Points, die es unter anderem in Museen und vielen anderen Orten gibt. Akustisch entsprechen diese Modelle der GMP-Serie 8.000, wurde jedoch den Anforderungen am POS (Point Of Sales) angepasst.

Die Ohrpolster bestehen aus einer weichen, hautfreundlichen Schaumfolie, die sich leicht mit handelsüblichen Haushaltsreinigern säubern lässt. System und Kabel sind speziell für den Dauereinsatz ausgelegt. Der bruchsichere Stahlbügel ist aufwändig gepolstert und ergonomisch geformt. Wie jeder andere Kopfhörer dieser legendären Baureihe besteht auch diese Version jeden Härtestest! Die Kopfhörer sind ausgestattet mit einem flexiblen Panzerkabel gegen Diebstahl.

The 8.000 Series headphone as a special version for demo units and info points in for instance Museums and many other locations. Acoustically this model is identical to the GMP-Series 8.000 except that this version has been adapted for POS (Point Of Sales) requirements. The ear pads are made of soft, 'gentle to the skin' foam and can be easily cleaned with normal household detergents. The systems and cables are especially designed for continuous use. The unbreakable steel headband features generous padding and an ergonomic design. Like every other headphone from that legendary product family, also this version will withstand even the harshest treatment! This headphone series features a flexible armoured cable against theft.



Headphone Survey Kopfhörer Übersicht

Technische Daten Technical Data

	GMP 160	GMP 240	GMP 250	GMP 400	GMP 435 S	GMP 450 PRO	GMP 8.35 D Monitor	GMP 8.300 D PRO
Arbeitsprinzip Acoustical Principle	halb-offen semi-open	offen open	geschlossen closed	offen open	offen open	geschlossen closed	geschlossen closed	geschlossen closed
Wandlerprinzip Transducer Principle	dynamisch dynamic	dynamisch dynamic	dynamisch dynamic	dynamisch dynamic	dynamisch dynamic	dynamisch dynamic	dynamisch dynamic	dynamisch dynamic
Übertragungsbereich Frequency Response	30 - 26.400 Hz	24 - 20.100 Hz	13 - 20.400 Hz	14 - 24.100 Hz	20 - 27.000 Hz	14 - 24.000 Hz	20 - 27.000 Hz	20 - 27.400 Hz
Impedanz Impedance	40 Ω	100 Ω	100 Ω	300 Ω	35 Ω	300 Ω	35 Ω	300 Ω
THD Klirrfaktor (1 mW/1 kHz) THD Harmonic Distortion (1 mW/1 kHz)	0,16%	0,17%	0,09%	0,07%	0,05%	0,06%	0,12%	0,05%
Schalldruckpegel (1 mW/1 kHz) Sound Pressure Level (1 mW/1 kHz)	89 dB	86 dB	92 dB	98 dB	102 dB	100 dB	101 dB	100 dB
Nennbelastbarkeit Load Rating	100 mW	100 mW	100 mW	100 mW	100 mW	100 mW	100 mW	100 mW
Andruckkraft Contact Pressure	-1,5 N	-3 N	-3 N	-3 N	-3 N	-3 N	-5,5 N	-5,5 N
Gewicht ohne Kabel Weight w/o cable	70 g	220 g	220 g	240 g	240 g	240 g	220 g	220 g
Kabellänge Cable length	gerade 1,2m + Verlängerung 5m straight 1.2m + Extension 5m	Spiralkabel 3m coiled 3m	Spiralkabel 3m coiled 3m	gerade 3m straight 3m	gerade 3m straight 3m	gerade 3m straight 3m	Spiralkabel 3m coiled 3m	gerade 3m straight 3m
Stecker Connector	gewinkelter Klinkenstecker 3,5mm, vergoldet, Adapter 6,3mm inkl. angled Jack 1/8", gold plated, Adapter 1/4" incl.	gerader Multi- Klinkenstecker 3,5/6,3mm, vergoldet straight Multi- Jack (1/4"- 1/8"), gold plated	gerader Multi- Klinkenstecker 3,5/6,3mm, vergoldet straight Multi- Jack (1/4"- 1/8"), gold plated	gerader Multi- Klinkenstecker 3,5/6,3mm, vergoldet straight Multi- Jack (1/4"- 1/8"), gold plated	gerader Multi- Klinkenstecker 3,5/6,3mm, vergoldet straight Multi- Jack (1/4"- 1/8"), gold plated	gerader Multi- Klinkenstecker 3,5/6,3mm, vergoldet straight Multi- Jack (1/4"- 1/8"), gold plated	gewinkelter Multi- Klinkenstecker 3,5/6,3mm, vergoldet angled Multi- Jack (1/4"- 1/8"), gold plated	gewinkelter Multi- Klinkenstecker 3,5/6,3mm, vergoldet angled Multi- Jack (1/4"- 1/8"), gold plated

Technische Änderungen vorbehalten. Subject to technical changes.

HEADPHONES

HEADSETS

PROFESSIONAL HEADPHONES

GERMAN MAESTRO

SERIOUS ABOUT AUDIO



MAESTRO



facebook

MAESTRO BADENIA AKUSTIK & ELEKTRONIK GMBH

Neckarstr. 20, D-74847 Obrigheim, Germany

Phone +49 (0) 62 61 - 6 38-0, Fax +49 (0) 62 61 - 6 38-129

E-Mail info@german-maestro.de

GERMAN MAESTRO USA, INC.

27075 Cabot Rd., Suite 108, Laguna Hills, CA 92653, USA

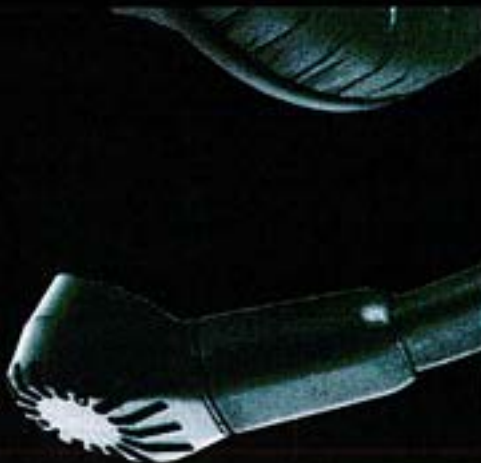
Toll Free 877-689-7833, Direct 949-600-8195, Fax 949-600-8196, Direct 949-228-2153

E-Mail r.windsor@german-maestro.de

89-0182



Handcrafted in
GERMANY



Powered by

MAESTRO
BADENIA

BRIGHTSIGN HD

AN UPDATED CLASSIC. MAINSTREAM PERFORMANCE.

BrightSign HD models are ideal for mainstream Full HD and HTML5 applications that require high reliability and ease of use. All models offer H.265 decoding, HTML5 rendering with mainstream performance, and Gigabit Ethernet. Robust interactive controls, live content features, BrightWall™ and Mosaic Mode make this set of players a perfect fit for a wide range of applications.



BrightSign HD223

Standard I/O Player

Enjoy flawless Full HD single video decoding, mainstream HTML5 performance and simultaneous playback from local, networked and streaming sources. Includes the standard I/O package of Gigabit Ethernet, GPIO, and analog/digital audio.

Price: \$350



BrightSign HD1023

Expanded I/O Player

All the features of the HD223 plus additional interactive options via USB 2.0 (type A), and serial ports to fully engage your audience.

Price: \$450

Features



SPECIFICATIONS

MODEL	HD223	HD1023
VIDEO ENGINE/DECODER		
Single 1080p60 video decoding	X	X
MEDIA FORMATS		
Video Codecs: H.265, H.264(MPEG-4, Part 10), MPEG-2, MPEG-1	X	X
Video Containers: .ts, .mpg, .vob, .mov, .mp4, .m2ts, .wmv	X	X
Images: BMP, JPEG, PNG	X	X
Audio: MP2, MP3, AAC, and WAV (AC3 is passed through)	X	X
HTML5	X (Mainstream)	
DISPLAY RESOLUTIONS		
1920x1080x24/25/29.92/30/50/59.94/60p, 1280x800x30/59.94/60p, 1600x1200x60p, 1440x1056x60/75p, 1440x900x60/75p, 1360x768x60p, 1280x1024x60/75p, 1280x960x60p, 1280x800x60p/75p, 1280x768x60p, 1280x720x50/59.94/60p, 1024x768x60p, 800x600x60/75p, 720x768x50/50p, 720x480x59.94/60p/50p, 640x480x60p	X	X
HARDWARE INTERFACES		
External micro SD Slot (SDHC and SDXC); SDHC storage up to 32GB SDXC storage up to 2TB	X	X
USB High Speed Host Port (also supports content updates)		X (Type A)
Phoenix GPIO Port (8-pin bi-directional terminal block)	X	X
3.5mm RS-232 Serial Port		X
3.5mm Audio Out (analog & digital)	X	X
HDMI 2.0a Out	X	X
Ethernet	X (Gigabit)	
M.2 (E) Keyed Wi-Fi/Bluetooth Connector	X	X
Wi-Fi External Antenna Connectors	X (dual)	
Status LEDs	Power, Error, Busy, Update	
Reset and Service Buttons	X	X
Real Time Clock	X	X
FEATURES		
H.265 Decoding: smaller file sizes and lower bitrates than H.264	X	X
HTML5: hardware-accelerated engine that plays modular HTML assets flawlessly alongside high-bandwidth video	X (Mainstream)	
BrightBeacon™: 2-way Bluetooth/Beacon communication between mobile devices & signage	X	X

MODEL	HD223	HD1023
BrightWall™: synchronized playback across multiple displays	X	X
Zones: playback multiple content types on a single screen	X	X
Mosaic Mode: simultaneously play a multitude of smaller resolution videos that add up to the maximum video resolution of the player	X	X
IP Streaming: play streaming media	X	X
IP Streaming Server: serve IP streams from local storage	X	X
Interactivity: connect virtually any type of interactive device to a multitude of interactive ports	X (GPIO, UDP)	X (GPIO, USB, serial, UDP)
Live Feeds: Live Data, Live Text, RSS, Twitter, Flickr, etc.	X	X
Tagging: BrightSign Network users can assign media and player tags for highly targeted content distribution	X	X
BrightSign App: update signs with an iOS device	X	X
Geo-Fencing: trigger playback based on location (requires USB dongle)		X
Sign Preview: preview presentation playback in BrightAuthor	X	X
Remote Snapshot: remotely view a snapshot image of the display's playback	X	X
BrightPlates™: easy template-based sign creation service	X	X
Networking: update, manage and schedule your signage	X	X
B-deploy: A setup feature to deploy many players at once	X	X
SOFTWARE		
Free BrightAuthor Software	X	X
BrightSign Networking Options	X	X
ACCESSORIES		
USB Button Pads		X
Wireless/Bluetooth Module	X	X
MicroSD Class 10 Cards (various capacities)	X	X
MISCELLANEOUS		
Dimensions (W x H x D)	159.9 x 22 x 144.2mm or 6.3 x 0.87 x 5.7 in	
Weight	12 oz	
Power	12V / 1.5A (18 Watts)	
Multi-Country Power & Regulatory Approvals	X	X
Built-in Wall Mounting Brackets	X	X
1 year warranty, parts and labor	X	X

B 80 - 8 Ohm

Art. No. 1261



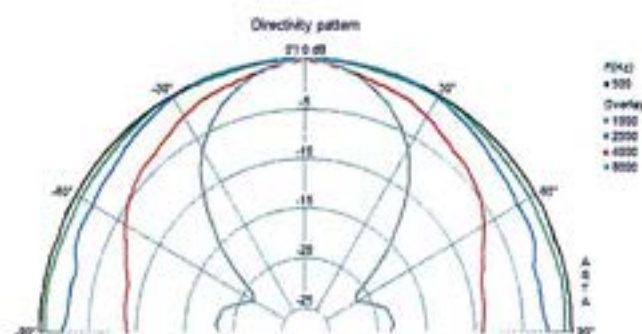
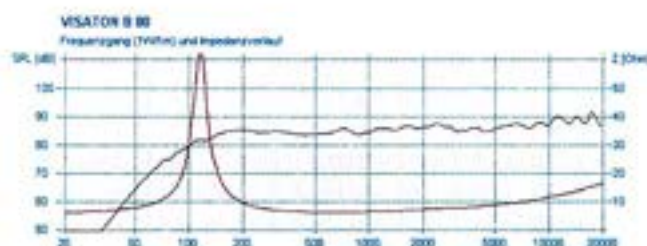
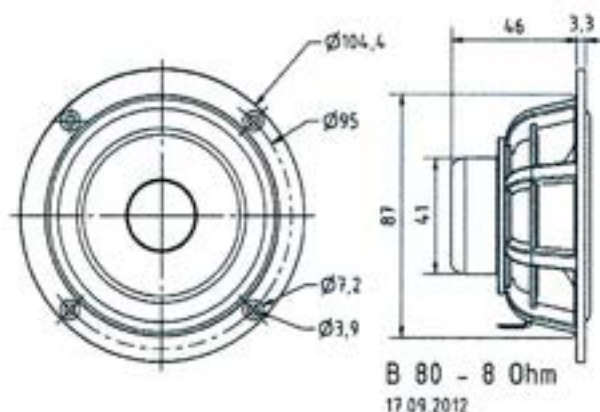
8 cm (3.3") High-End-Breitband-Lautsprecher mit hervorragend ausgeglichenem Übertragungsverhalten. Durch das Zusammenspiel der beschichteten Papiermembran, der hinterlüfteten Zentrierspinne, dem Phaseplug, sowie dem sehr starken, aber gleichzeitig leichten Neodymantrieb konnte ein äußerst ausgeglichener Frequenzgang mit sehr geringen Verzerrungen und mechanischen Verlusten geschaffen werden. Der B 80 - 8 Ohm ist ideal einsetzbar für kleine High-End-Regalboxen oder als Mittelhochtöner in hochwertigen Mehrwegkombinationen.

8 cm (3.3") high-end full-range loudspeaker with excellent balanced response characteristics. Due to perfect accordance of the coated paper cone, the rear ventilated damper and the phase plug, as well as the strong and lightweight neodymium magnet, an extremely well-balanced frequency response with very low harmonic distortion and lowest possible mechanical losses comes into being. The B 80 8 OHM is ideal for small high-end shelf speakers or as a mid-high-range unit in high-end multi-way speakers.

25.11.2013

B 80 - 8 Ohm

Art. No. 1261



Technische Daten / Technical data

Membrannachgiebigkeit C_m	0,87 mm/N
Nennbelastbarkeit Rated power	30 W
Musikbelastbarkeit Maximum power	50 W
Nennimpedanz Z Nominal impedance Z	8 Ohm
Übertragungsbereich Frequency response	80-20000 Hz
Mittlerer Schalldruckpegel Mean sound pressure level	85 dB (1 W/1 m)
Abstrahlwinkel (-6 dB) Opening angle (-6 dB)	119°/4000 Hz
Maximaler linearer Hub Maximum linear displacement	2,2 mm
Resonanzfrequenz f_s Resonance frequency f_s	110 Hz
Magnetische Induktion Magnetic induction	1,17 T
Magnetischer Fluss Magnetic flux	290 μ Wb
Obere Polplattenhöhe Height of front pole-plate	3 mm
Schwingspulendurchmesser Voice coil diameter	25 mm
Wickelhöhe Height of winding	7,5 mm
Schallwandöffnung Cutout diameter	89 mm
Gewicht netto Net weight	0,32 kg
Gleichstromwiderstand R_{dc} D.C. resistance R_{dc}	6,6 Ohm
Mechanischer Q-Faktor Q_{ms} Mechanical Q factor Q_{ms}	6,53
Elektrischer Q-Faktor Q_{es} Electrical Q factor Q_{es}	0,69
Gesamt-Q-Faktor Q_{ts} Total Q factor Q_{ts}	0,63
Äquivalentes Luftnachgiebigkeitsvolumen V_{as}	

25.11.2013

Equivalent volume V_{as}	1,8 l
Effektive Membranfläche S_d Effective piston area S_d	38,5 cm ²
Dynamische bewegte Masse M_{ms} Dynamically moved mass M_{ms}	2,8 g
Antriebsfaktor B_{xl} Force factor B_{xl}	4,15 Tm
Anschlüsse Connections	5,1 x 0,5 mm (+) 2,8 x 0,5 mm (-)

25.11.2013

BRIGHTSIGN LS

INTRODUCING THE BRIGHTSIGN LS. AFFORDABLE, SMALL AND FULLY FEATURED.

BrightSign introduces a low cost and fully featured commercial-grade player providing a far superior alternative to the consumer devices sometimes chosen for price-sensitive installations. Based on the award-winning BrightSign HD platform, BrightSign LS delivers BrightSign's signature reliability and affordability, while packing a robust feature set into a very small form-factor digital signage media player and commercial audio device.



BrightSign LS322 Commercial Audio Distribution



An affordable, fully-featured, compact commercial audio device with S/PDIF digital audio plus GPIO and USB interactivity.

Price: \$200

BrightSign LS422 Entry-Level Media Player



The small form, commercial-grade BrightSign LS422 is fully featured to run circles around the competition. Network connected and featuring 1080p30 video playback via HDMI, USB 2.0 and GPIO interactivity, as well as S/PDIF audio out, this model is perfect for simple streaming applications and large deployments of common content.

Price: \$250

LS 422



1080p30
Video



Zones



Touch



BrightWall™



Sign Preview

LS322



Digital Sound



Interactivity



Live Feeds



UDP Control



BrightSign App



IP Streaming



Geo-Fencing



Networking

SPECIFICATIONS

MODEL	LS322	LS422
	Commercial Audio Distribution	Entry-level Media Player
VIDEO ENGINE DECODER		
Single 1080p30 video decoding		X
MEDIA FORMATS		
Video Codecs: MPEG-1, MPEG-2, H.264, WMV		X
Video Containers: MPEG-2 transport and program streams, AVCHD/BDMV, ASF, MP4, MOV		X
Images: BMP, JPEG, PNG		X
Audio: MP2, MP3, AAC, and WAV (AC3 is passed through)	X	X
DISPLAY RESOLUTIONS*		
PAL/NTSC		X
1920x1080x24/25/29.92/30, 1360x768x60p, 1280x800x60p, 1280x768x60p, 1280x720x50/59.94/60p, 1024x768x60/75p, 800x600x60/75p, 720x576x50p, 720x480x59.94/60p, 640x480x60p		X
HARDWARE INTERFACES		
SD Slot for SDHC and SDXC; Storage via SDXC (up to 2TB)	X	X
USB High Speed Host Port	X	X
GPIO Port (Bi-directional)	X	X
3.5mm Analog Stereo Audio Out	X	X
S/PDIF Out	X	X
HDMI Out		X
Ethernet	X (10/100)	X (10/100)
Status LEDs	Power/Stats	
Reset Button	X	X
FEATURES		
Zones: playback multiple content types on a single screen		X
Touch: for interactive touch screen and kiosk presentations		X

*Additional display resolutions are supported

MODEL	LS322	LS422
BrightWall™: synchronized playback across multiple displays		X
Interactivity: trigger playback from various interactive ports	X (GPIO, USB)	X (GPIO, USB)
UDP Control: interact with signage using networking	X	X
Live Feeds: Live Text, Audio, RSS, Twitter, Flickr, etc.	X	X
BrightSign App: update signs with an iOS device	X	X
Geo-Fencing: trigger playback based on location	X	X
IP Streaming: play streaming media	X	X
Sign Preview: preview presentation playback in BrightAuthor		X
Networking: update, manage and schedule your signage	X	X
Usage tracking statistics and real time clock	X	X
Content Update via USB	X	X
SOFTWARE		
Free BrightAuthor Software	X	X
BrightSign Networking Options	X	X
ACCESSORIES		
USB Button Pads	X	X
SDHC Class 4 Cards (various capacities)	X	X
MISCELLANEOUS		
Dimensions	153 x 27 x 105mm or 6.02 x 1.06 x 4.13 in. (W x H x D)	
Weight	181.4 grams or 6.4 oz	
Power	12V / 1A	
Multi-Country Power & Regulatory Approvals	X	X
Built-in Wall Mounting Brackets	X	X
1 year warranty, parts and labor	X	X

MD04 Serie

17.3" Wide Open frame 1920x1080

Features



- Modularize mechanical design provides flexible product configuration and easy maintenance
- Optional build-in touch screen for interactive application
- Available with auto-brightness sensor offers application in day and night
- VGA connector with optional AV,SV,AV-Looping
- Complete custom design/solution for OEM customers

Panel	Cell Type / Glass Surface	TFT LCD / Black Anti-Glare, low reflection coating	
	Aspect Ratio / Size	Wide / 17.3" viewable diagonal area	
	Active Area / Pixel Pitch	381.888(H) x 214.812(V) mm / 0.1989(H) x 0.1989(V) mm	
	Native Resolution / Colors	1920(H) x 1080(V) / 262 K	
	Brightness / Contrast	300 cd/m ² (typ) / 600 : 1	
	Response Time	≤ 35 ms	
	Viewing Angle (typical)	H.178° (- 89° ~ + 89°) , V. 178°(- 89° ~ + 89°)	
	Light Source	LED backlight, Long life, 35,000 hrs (typ)	
Input Sources	PC System	Signal	Analog RGB (0.7/1.0 V _{pp} , 75 ohms)
		Sync	Separate Sync, Composite Sync, Sync On Green
		Frequency	F _v : 30 - 82Khz , F _s : 50 -75Hz
	Audio System	N / A	
Input Terminals	1 x VGA (15 Pin Female D-Sub) , 1 x PC Audio (Stereo Headphone Jack) , 1 x DC Power Plug		
Convenient Features	Auto Calibration , Back Light Adjustment , Plug&Play (VESA DDC/CI, DDC 2B)		
	OSD Multi-Languages , Wall Mount Ready (VESA Dimension - please refer to Drawing)		
Power	Internal power supply with universal / Auto-Sensing, AC90 to 260V, 50/60 Hz		
Power Consumption	Operation / Power Saving	15 watt , < 1 watt (Support DPMS)	
Operating Condition	Temperature / Humidity	0°C ~ 50°C (32°F ~ 122°F) , 10% ~ 90% (no condensation)	
Storage Condition	Temperature / Humidity	- 20°C ~ 60°C (- 4°F ~ 140°F) , 10% ~ 90% (no condensation)	
Certification		FCC , CE	
Dimensions	Physical	Please refer to Drawing	
	Carton	W x H x D = TBD	
Weight	N.W. / G.W.	4.5 Kgs / 5.5 Kgs	
Container Loaded	20ft / 40ft / 40ft HQ	TBD (Sets , By pallet)	

Options	Touch	Video / TV	Enhanced Panel	Others
	Resistive touch	SV + AV	Panel with LED backlight	Digital Signage(Stand alone)
	Capacitive touch	SV + AV + AV_Looping	High brightness panel	Networking Digital Signage
	SAW touch	SV + AV + TV	Wide Temperature	Motion Sensor
	Infrared touch		Sunlight Readable	Light Sensor
	Protected glass			Auto-Dimming

MD04 Serie

24" Wide OpenFrame1920*1080

Specification



Features

- 1920 x 1080 Native resolution, 300 cd/m² brightness, 170° horizontal/vertical viewing angles
- Modularize mechanical design provides flexible product configuration and easy maintenance
- Optional build-in touch screen for interactive application
- Optional panel with ultra high brightness and super dynamic contrast, along option with auto-brightness sensor offers application in day and night

Panel	Cell Type / Glass Surface	TFT LCD / Black Anti-Glare, low reflection coating	
	Aspect Ratio / Size	Wide / 24" viewable diagonal area	
	Active Area / Pixel Pitch	531.36(H) x 298.89(V) mm / 0.2768(H) x 0.2768(V) mm	
	Native Resolution / Colors	1920(H) x 1080(V) / 16.7 Million	
	Brightness / Contrast	300 cd/m ² (typ) / 1000 : 1	
	Response Time	≤ 2 ms (G-to-G)	
	Viewing Angle (typical)	H, 170° (- 85° ~ + 85°) , V, 160° (- 80° ~ + 80°)	
	Light Source	CCFL , Long life, 50,000 hrs (typ)	
Input Sources	PC System	Signal	Analog RGB (0.7/1.0 V _{pp} , 75 ohms)
		Sync	Separate Sync, Composite Sync, Sync On Green
		Frequency	F _s : 30 - 82Khz , F _v : 50 -75Hz
	Audio System	3W speaker x 2	
Input Terminals	1 x VGA (15 Pin Female D-Sub) , 1 x PC Audio (Stereo Headphone Jack) , 1 x DC Power Plug		
Convenient Features	Auto Calibration , Back Light Adjustment , Plug&Play (VESA DDC/CI, DDC 2B)		
	OSD Multi-Languages , Wall Mount Ready (VESA 100 x 100 mm)		
Power	Internal power supply with universal / Auto-Sensing, AC 90 to 260V, 50 / 60 Hz		
Power Consumption	Operation / Power Saving	50 watt , < 1 watt (Support DPMS)	
Operating Condition	Temperature / Humidity	0°C ~ 50°C (32°F ~ 122°F) , 10% ~ 90% (no condensation)	
Storage Condition	Temperature / Humidity	- 20°C ~ 60°C (- 4°F ~ 140°F) , 10% ~ 90% (no condensation)	
Certification	FCC , CE		
Dimensions	Physical	With Flanges(W x H x D) : 579.0 x 363.2(Screw center-to-center) x 61.0 (mm)	
		Without Flanges(W x H x D) : 579.0 x 347.2 x 61.0 (mm)	
	Carton	W x H x D = TBD	
Weight	N.W. / G.W.	9.0 Kgs / 10.0 Kgs	
Container Loaded	20ft / 40ft / 40ft HQ	TBD (Sets , By pallet)	

Options	Touch	Video / TV	Enhanced Panel	Others
	Resistive touch	SV + AV	Panel with LED backlight	Digital Signage(Stand alone)
	Capacitive touch	SV + AV + AV_Looping	High brightness panel	Networking Digital Signage
	SAW touch	SV + AV + TV	Wide Temperature	Motion Sensor
	Infrared touch		Sunlight Readable	Light Sensor
	Protected glass			Auto-Dimming

Panasonic

LF80 Series
LF8 Series
FULL HD LCD Display

Professional Display with High Picture Quality and Excellent Versatility



Indoor Displays 700 cd/m²/model

55-inch TH-55LF80
49-inch TH-49LF80
42-inch TH-42LF80

Indoor Displays 500 cd/m²/model

55-inch TH-55LF8
49-inch TH-49LF8
42-inch TH-42LF8



LF80 Series

High-brightness model for installation in bright, open spaces.

700 cd/m



LF8 Series

Ideal for store signage use. Vertical installation also possible to match the installation location.

500 cd/m

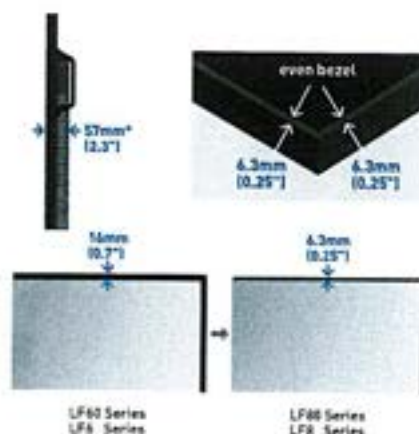


	LF80 Series	LF8 Series
Screen Size	55/49/42-inch	55/49/42-inch
Panel Brightness	700 cd/m ²	500 cd/m ²
LCD Panel	IPS/Edge LED	
Orientation	Landscape/Portrait	
Tilt Angle	0-45 degrees forward/backward with landscape/portrait setting*	
DIGITAL LINK	Yes	No
24/7 Operation	Yes	

* Please contact your sales representative with regard to the tilt angle before installation.

Featuring industrial durability and reliability, as well as a stylish appearance.

This stylish design blends in with surrounding spaces and fills the screen with images. The 6.3 mm (0.25") bezel width of the LF80/8 Series is less than half the 16 mm (0.7") bezel width of the LF60/6 Series. And the slim design makes the depth only 57mm (2.3"). Since the LF80/8 Series blends in with almost any surroundings and the screen is nearly filled with images, this display has a powerful, eye-catching impact.



* Excluding handle part

Functions Ideal for Industrial Signage Use Come as Standard Equipment



Efficiency and Reliability for Continuous 24-hour Operation

The use of highly durable panel materials and quality electronic components ensures dependable 24-hour operation seven days a week. This makes the LF80/8 Series ideal for installation in public places, surveillance centers, and other applications where absolute reliability is critical.

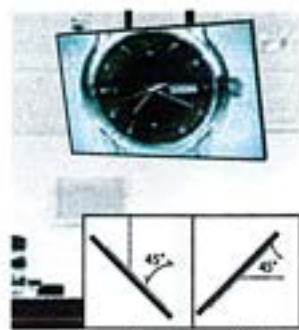
* Display of moving images is recommended when panels are in use for long periods to prevent image retention. Note that image burn-in can be gradually rectified with the periodical display of moving images.

Choose the Installation to Match Your Application

The LF80/8 series is designed for use in either portrait or horizontal orientation with no effect on panel color and lifespan, further reducing TCO. A tilt installation up to 45 degrees forward or backward is also possible. The angle can be adjusted for easy viewing when installed in a high location.



Portrait



Tilt
0-45 degrees forward/backward with landscape/portrait setting.

USB Media Player for Simple Signage Use Without an STB

NEW

The LF80/8 Series features a USB media player. Signage operation is possible by simply inputting the desired content via USB, eliminating the need for a set-top box. Both videos and still images can be displayed, so a wide variety of original signage content can be used.



Standalone Operation Saves Labor by Making Content Changes Over a Network

NEW

Multi Monitoring & Control Software makes it possible to change the content in the USB memory via LAN after installation. Content can be easily changed even when the display is installed in a high place or suspended from the ceiling. This enables smooth, easy operation.

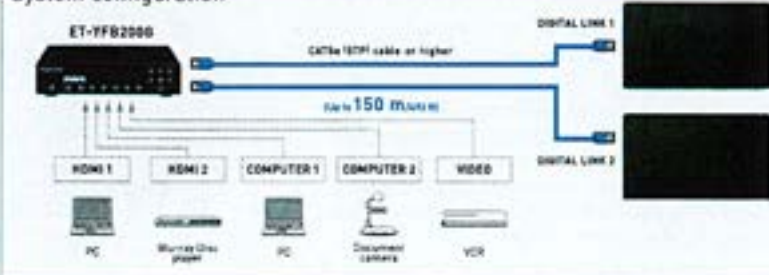


DIGITAL LINK Function Enables Simple Installation and Low System Costs (LF80 Series only)

Using DIGITAL LINK makes it possible to transmit video, audio and control signals over a long distance (up to 150 m (492 ft)) with a single LAN cable.* Easy cabling also reduces labor during setup. This provides transmission of high-quality images and sounds, as well as remote control.

*1 When connected with the (Long reach) mode, the maximum transmission distance is 150 m (492 ft). In this case, the unit can receive the signals of up to 1080/60p. A CAT5e (STP) cable or higher is required.

System configuration



A Variety of Software is Available for Efficiently Operating Multiple Devices

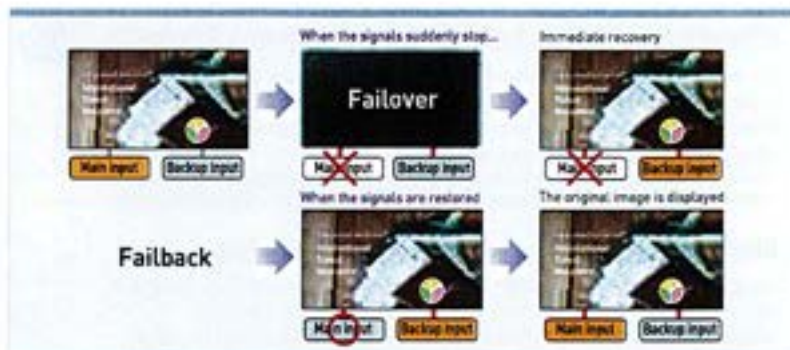


Failover and Failback Safeguards for Mission Critical Situations

NEW

The LF80/8 Series is equipped with a variety of signal input terminals. If the main video and audio signals are interrupted, the system immediately switches to alternative signals. This makes it ideal for mission critical control rooms and surveillance centers. If the main signals are restored, the original image is displayed.

* The usable combinations of main and backup signals are limited.
For details, see the LF80/8 product website.



Multi Monitoring & Control Software (Free) Lets You Control Devices in Groups

NEW

This free Panasonic software enables you to monitor and control up to 2048 devices over a LAN network from a single PC. As a monitoring function, the status of multiple devices can be listed in groups, and then detailed information on each device can be separately displayed. As a control function, control commands such as power ON/OFF, input switching and command inputs can be executed, and a schedule function can be used.



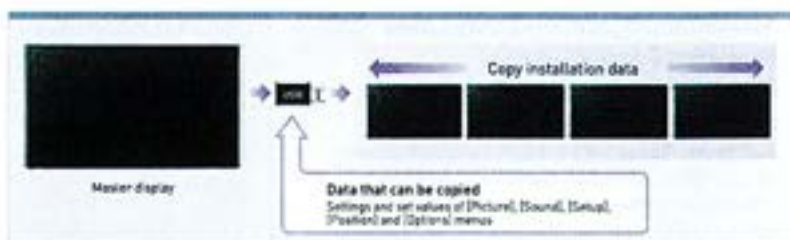
* To download software: <http://panasonic.net/industrial/display/download/software/index.html>

Cloning Function Saves Labor When Setting Up Multiple Devices

NEW

You can easily copy the setting data of a master display to other displays using USB memory. This saves labor when making screen settings during the installation of multiple devices.

* If the inch sizes/series (LF8, LF80) for the displays differ, the cloning function does not operate. Use common inch sizes/series.



Compatible with "Early Warning Software" for Sensing Display Problems in Advance

The LF80 and LF8 Series support Early Warning Software (optional: ET-SWA100), which monitors the status of devices (projectors or flat-panel displays) connected to an intranet, reports device failures, and gives advance warnings by detecting predicted abnormalities, after installation to the PC has been completed. The status of displays in an intranet is observed, and problems are forecast, the occurrence of other problems is sensed, and notification is sent to the user.

* The use of this software will not detect malfunctions in all devices and equipment in advance.



Ideal for Application that Require Faithful Color Reproduction

High Brightness for Displaying Easy-to-See Content in Bright Places

Performance with 700 cd/m² of brightness is required for some signage and other professional applications. This allows images to be beautifully displayed even in large, brightly lit spaces, such as train stations and airports.

*The LF8 Series has 500 cd/m² of brightness.

The IPS Panel Has a Wide Viewing Angle and Minimal Color Fluctuations

There is very little change in color, compared with the VA panel, when the screen is viewed at right or left angles, so the images are crisp and clear. This is ideal for providing correct information to places with a lot of people present, such as public spaces and facilities.



Effective for drawing attention with high visibility even in bright places like shopping malls.

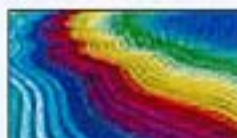
NEW

Easy Display of Images Optimized for the Display Content and Viewing Environment

Conventional display panels are preset with display modes such as Standard and Dynamic. The LF8Q/B Series comes with an extensive display menu to let you select the most suitable mode for the content to be displayed and the viewing environment. You can select the best mode for the video source and the place of display.

High-Performance Image Engine for Flexible Image Adjustment Like Never Before

- **6-segment Color Management** — Enables adjustment of the color tone, color density and brightness parameters individually for red, green, and blue, as well as the complementary colors of cyan, magenta and yellow.
- **Color Enhancement** — Displays images with enhanced color.
- **Refine Enhancer** — Corrects blurry image contours resulting from resizing, etc., to improve the image resolution.
- **MPEG Noise Reduction** — Noise reduction suppresses the block noise and mosquito noise that are characteristic of digital video signals. This faithfully reproduces the inherent beauty of the image.



Vivid Signage

Displays images suitable for signage in a bright environment.



Natural Signage

Displays images with priority on natural color reproduction.



Standard

Displays images faithful to the original.



Surveillance

Displays images with reduced brightness and with priority on gradation.



Graphic

Suitable for PC input.



DICOM*

Display images close to the DICOM Part 14 Grayscale Standard.

*Although the term "DICOM" is used, this product is not medical equipment. Do not use displayed images for medical purposes such as examination or diagnosis.

Color Enhancement



OFF



High

Refine Enhancer



OFF



Max

MPEG Noise Reduction



OFF



ON

* Images on screen are simulated.

Product specification

Model	TH-55LF80	TH-55LF8	TH-49LF80	TH-49LF8	TH-42LF80	TH-42LF8
Display panel						
Screen size (diagonal)	55-inch (1387 mm)		49-inch (1232 mm)		42-inch (1064 mm)	
Aspect ratio	16:9					
Panel type	IPS Panel/Edge LED					
Effective display area (W x H)	1209 x 680 mm (47.4" x 26.7")		1073 x 604 mm (42.2" x 23.7")		927 x 521 mm (36.5" x 20.5")	
Number of pixels (H x V)	1920 x 1080 pixels					
Brightness (typ.)	700 cd/m ²	500 cd/m ²	700 cd/m ²	500 cd/m ²	700 cd/m ²	500 cd/m ²
Contrast ratio	1300:1					
Dynamic contrast ratio	50000:1					
Response time	8 ms (G to G)					
Viewing angle (Horizontal/Vertical)	178°/178° (CR ≥ 10)					
Connection terminal						
Video In/Audio In (L/R)	BNC x 1 set (shared with Component /RGB Y/G) /Stereo mini-jack (M3) x 1 (shared with Component In)					
Component/RGB In/Audio In (L/R)	BNC x 1 set /Stereo mini-jack (M3) x 1 (shared with Video In)					
HDMI In	Type A connector x 2					
DVI-D In/Audio In (L/R)	DVI-D 24-pin x 1 /Stereo mini-jack (M3) x 1 (shared with PC In)					
DVI-D Out	DVI-D 24-pin x 1					
PC In/Audio In (L/R)	Mini D-sub 15-pin x 1 /Stereo mini-jack (M3) x 1 (shared with DVI-D In)					
Audio Out	Stereo mini-jack (M3) x 1					
USB	USB 2.0 Type A connector x 1, DC 5 W 1 A (USB 3.0 Incompatible)					
Control						
Serial In/Out	D-sub 9-pin x 1/x 1, RS-232C compatible					
LAN/DIGITAL LINK (LF80)	RJ45 x 1, 100BASE-TX, compatible with P.Link™					
LAN (LF8)	RJ45 x 1, 10BASE-T/100BASE-TX, compatible with P.Link™					
IR In/Out	Stereo Mini-jack (M3) x 1 / x 1					
Audio						
Built-in speakers	20 W (10 W + 10 W)					
Electrical						
Power requirements	110-127/220-240 V AC, 50/60 Hz					
Power consumption	190 W	185 W	175 W	160 W	155 W	145 W
On mode average power consumption ¹⁾	145 W	140 W	130 W	115 W	110 W	100 W
Power off condition	Approx. 0.3 W					
Standby condition	Approx. 0.5 W					
Mechanical						
Dimensions (W x H x D)	1229 x 699 x 72 mm/ 48.4" x 27.6" x 2.8"		1093 x 623 x 72 mm/ 43.1" x 24.6" x 2.8"		947 x 541 x 72 mm/ 37.3" x 21.3" x 2.8"	
Dimensions (W x H x D) Excluding handle part	1229 x 699 x 57 mm/ 48.4" x 27.6" x 2.3"		1093 x 623 x 57 mm/ 43.1" x 24.6" x 2.3"		947 x 541 x 57 mm/ 37.3" x 21.3" x 2.3"	
Bezel width	T/R/L/B: 6.3 mm (0.25")					
Weight	24.7 kg/54.5 lbs		19.0 kg/41.9 lbs		15.3 kg/33.7 lbs	
Wall-hanging pitch	VESA compliant 400 x 400 mm (15.8" x 15.8")				VESA compliant 200 x 200 mm (7.9" x 7.9")	
Orientation	Landscape/Portrait					
Tilting angle	0-45 degrees forward/backward with landscape/portrait setting ²⁾					
Environment						
Operating environment	Temperature: 0 °C to 40 °C (32 °F to 104 °F) ³⁾ ; 0 °C to 35 °C (32 °F to 95 °F) ⁴⁾ Humidity: 20-80 % (non-condensation)					

¹: Based on IEC 62087 Ed.2 measurement method ²: Please contact your sales representative with regard to the tilt angle before installation ³: for up to 1400 m (4593 ft) altitude

⁴: for between 1400 m (4593 ft) and 2800 m (9186 ft) altitude Depending on the temperature or humidity conditions, uneven brightness may be observed. This is not a malfunction. This unevenness will disappear while applying current continuously. If not, consult the distributor.

Optional Accessories

Pedestal
TY-ST43PE8



Peripheral Equipments

DIGITAL LINK Switcher
ET-YFB200G (Optional)



Digital Interface Box
ET-YFB100G (Optional)



Auto Display Adjustment Upgrade Kit^{*}
TY-VUK10 (Optional)

^{*}Supports Ver.1.1 or later

Early Warning Software

ET-SWA100 series^{*} (Optional)

^{*}Suffix of the part number may differ depending on the license type



^{*}PASS Website: panasonic.net/prodisplays/pass
Register your display to activate the upgrade kit and get what you need.

Panasonic

Weights and dimensions shown are approximate. Specifications and appearance are subject to change without notice. Product availability differs depending on region and country. This product may be subject to export control regulations. HDMI, the HDMI logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries. All other trademarks are the property of their respective trademark owners. Images on screen are simulated. © 2015 Panasonic Corporation. All rights reserved.



For the latest information about Panasonic Professional Display, please visit:

Professional Display Global Website: panasonic.net/prodisplays
YouTube: www.youtube.com/PanasonicProDisplay

All information included here is valid as of October 2015.

CT15-002PF-LF8
Printed in Japan.

The top half of the advertisement features a photograph of a hand pressing a button on a small, black, rectangular projector. The projector is resting on a dark wooden surface. In the background, a blurred interior scene with a lamp and some furniture is visible. In the top left corner, there is a white and blue logo for Philips PicoPix.

PHILIPS

PicoPix

Project your life

Projecteur de poche PicoPix

Ce projecteur de poche PPX4935 est l'appareil multimédia ultime. Grâce à ses 350 lumens et sa résolution HD (720p), il est le compagnon parfait. Sa fonction Wi-fi vous permet de vous connecter à d'autres appareils mobiles et de partager vos vidéos et photos immédiatement et très facilement grâce au Miracast. Les ports HDMI/MHL vous permettront de connecter votre notebook, tablette, smartphone et tout autre appareil mobile à votre PPX4935. Vous avez une présentation à faire, pas de problème grâce à l'Office Viewer intégré. Sa taille d'image jusqu'à 150" (381 cm) et sa fonction Bluetooth vous permettent de recréer votre propre cinéma à la maison, peu importe où vous êtes ou ce que vous faites.

Connectivité sans fil

- Wi-Fi pour partager votre contenu internet & vous connecter sans fil à d'autres appareils avec ou sans réseau, et même créer votre propre réseau
- Fonction audio Bluetooth® pour hauts parleurs externes

Excellente qualité d'image

- Technologie LED SmartEngine, résolution 720p pour des couleurs brillantes et un contraste élevé
- Projection HD des vidéos, images et présentations sur une taille d'image pouvant aller jusqu'à 150" (381 cm)

Utilisation ultra simple

- Media Player intégré & ports HDMI/MHL pour vos tablettes, smartphones...
- Partagez vos vidéos, photos... via carte micro SD ou clé USB

Ultra portable

- Batterie interne jusque 2h

*Partage tes émotions

Technologie

Technologie d'affichage	DLP SmartEngine
Source lumineuse	LED RVB
Durée de vie de la lampe LED	30.000 heures
Luminosité	jusqu'à 350 lumens
Contraste	100.000:1
Résolution	1280 x 720 pixels
Ratio de projection	1,47
Taille d'image projetée (diagonale)	38 – 381 cm 15" – 150"
Distance de projection	50 cm – 500 cm 19" – 197"
Format de l'image	16:9
Modes de projection	plafond retourné : face plafond, retourné plafond
Correction de la couleur murale	oui (blanc, jaune, rose vert et bleu)
Correction du trapèze	manuel
Ajustement focus	manuel
Mémoire interne	1 Go
Niveau de bruit	< 28 dB
Système d'exploitation	Android 4.4
Touchpad	pour une navigation simple même sans télécommande

Son

Haut-parleur intégré	3 Watts
Formats audio supportés	MP3, WAV

Connexion

Wi-Fi	Wi-Fi IEEE 802.11 b/g/n Supporte DLNA
Bluetooth® audio	aptX® audio codec pour un son pur sans fil
Connectique	micro-USB : supporte USB OTG accès à la mémoire interne HDMI : Mini HDMI avec HDCP Mémoire externe : micro SD / SDHC / SDXC USB Sortie audio : Jack 3.5 mm pour casque

Média Player Intégré

Formats vidéo supportés	vob, dat: MPEG-1, MPEG-2 avi, mkv: MJPEG, MPEG-1, MPEG-2, H.264, Divx, Xvid, H.265/HEVC mov, mp4: MJPEG, MPEG-4, H.264, H.265/HEVC flv H.263 3gp H.264 mts AVCHD
Formats image supportés	JPG, BMP
Formats document supportés	pdf ppt/pptx xls/xlsx doc/docx

Alimentation

Batterie	Batterie interne : 2000 mAh / 7.4 V Durée de vie de la batterie Mode lumineux 1,5 heures Mode standard 2 heures
----------	--

Informations Logistiques

Dimensions du produit	Emballé (L x l x H): 150 x 150 x 105 mm Produit seul (L x l x H): 115 x 115 x 32 mm
Poids	Emballé : 1059g Produit seul : 351g
Conditions ambiantes autorisées	En utilisation : 5 – 35° C Stockage emballé : -25 – 60° C Stockage déballé : 0 – 45° C
Humidité relative	En utilisation : 15 – 85 % RH Stockage emballé : 5 – 93 % RH Stockage déballé : 15 – 85 % RH
L'emballage standard comprend	PPX4935 Guide de démarrage rapide Certificat de garantie Câble HDMI – Mini HDMI Adaptateur secteur Housse de transport Télécommande
Accessoires (non inclus)	Câble MHL PPA1340 Câble Mini display port PPA1270 Etui de protection PicoPix PPA4400

SMART
ENGINE

LED

30 000
hrsWi-Fi
DLNA

Internet

1280 x 720
pixelKeystone
correction

150" (381 cm)

Screen
Mirroring

3 Watt



microSD

115 x 115 x 32 mm
4.53 x 4.53 x 1.26 inch351g
12.06 ozBluetooth
audio

aptX

Philips and the Philips Shield Emblem are registered trademarks of Koninklijke Philips N.V. and are used by Sagecom under license from Koninklijke Philips N.V.

© 2015 Sagecom Austria GmbH

All rights reserved. The information and specifications included are subject to change without prior notice. Sagecom tries to ensure that all information in this document is correct, but does not accept liability for error or omission.



PPX4935
EAN: XXX
9NC: XXX

www.philips.com/picopix
www.youtube.com/user/picopixTV
www.twitter.com/picopix_
www.facebook.com/picopix

EX 60 S - 8 Ohm

Art. No. 4506



Elektrodynamischer Exciter zur Anregung von Platten zu Biegewellenschwingungen. Die Befestigung des Exciters auf der Oberfläche der anzuregenden Platte kann durch Kleben oder Schrauben erfolgen.

Weitere Informationen zu Excitern finden Sie hier: Grundlagen der Exciter-Technologie (PDF; 349 KB)

*) Maximale Langzeit-Eingangsleistung nach DIN EN 60268-5

Electro dynamical exciter for stimulating bending waves on plates. The unit can be attached to the surface of the plate by gluing or screwing.

Please find further information on exciters here: Basic principles of exciter-technology (PDF; 388 KB)

*) Maximum long term power according to DIN EN 60268-5

Anwendungsmöglichkeiten / Typical applications

- Signalausgabe in Anwendungen aller Art, bei denen aus Designgründen oder zum Schutz vor Umwelteinflüssen oder Vandalismus keine sichtbaren Lautsprecher verbaut werden können.
- Signal output in every application where normal speakers can not be installed for optical reasons or for protection against environment conditions or vandalism.

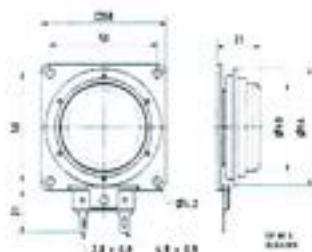
06.05.2013

Körperschallwandler / Structure-borne drivers

GERMANY
VISATON

EX 60 S - 8 Ohm

Art. No. 4506



Technische Daten / Technical data

Musikbelastbarkeit Maximum power	25 W *)
Nennimpedanz Z Nominal impedance Z	8 Ohm
Schwingspulendurchmesser Voice coil diameter	32,5 mm
Gewicht netto Net weight	0,12 kg
Anschlüsse Connections	4,8 x 0,8 mm (+) 2,8 x 0,8 mm (-)
Temperaturbereich Temperature range	-25 ... 70 °C

06.05.2013

CONTACTS/

Laurent Segelle / chargé d'affaires

Nicole Paineau/ chef de projet & maintenance

mobile 06 70 27 15 58

mobile 06 85 71 43 66

l.segelle@etc-london-paris.com

n.paineau@etc-london-paris.com

27 RUE MAURICE GUNSBURG 94851 IVRY SUR SEINE CEDEX

<http://www.etc-onlyview.com/>

tél+33(0)1 45 15 28 28/ fax+33(0)1 45 15 28 29



