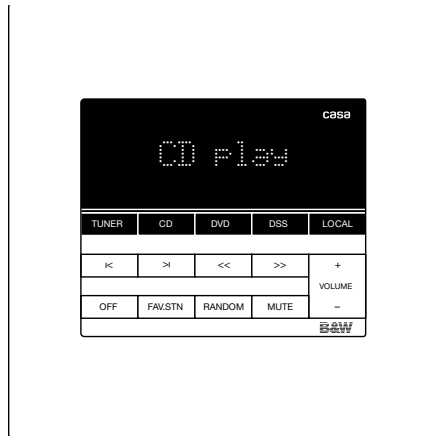


# Casa System

## INSTALLATION MANUAL



LISTEN AND YOU'LL SEE

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## SAFETY INSTRUCTIONS

Read this page carefully to ensure safe operation.



### CAUTION

To reduce the risk of electric shock, do not remove the cover or back panel. No user-serviceable parts inside. Refer servicing to qualified service personnel.

### EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert you to the presence of uninsulated 'dangerous voltage' within the product's enclosure that may be of sufficient magnitude to constitute an electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the equipment.

### WARNINGS

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

OBSERVE ALL WARNINGS ON THE EQUIPMENT ITSELF. TO AVOID ELECTRICAL SHOCK, DO NOT OPEN THE CONTROLLER ENCLOSURE. THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICE QUESTIONS TO AN AUTHORISED B&W DEALER.

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS (POLARISED) POWER PLUG WITH AN EXTENSION CORD/RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ENSURE THAT THE VOLTAGE INDICATED ON THE CONTROLLER PANEL MATCHES THAT OF THE POWER SUPPLY.

THE EQUIPMENT MUST BE EARTHED (GROUNDED).

DO NOT INSERT OBJECTS THROUGH THE CONTROLLER VENTILATION HOLES.

VENTILATION – THE APPLIANCE SHOULD BE SITUATED SO THAT ITS LOCATION OR POSITION DOES NOT INTERFERE WITH ITS PROPER VENTILATION:

A. FOR THE CONTROLLER: ENSURE AT LEAST 2 INCHES (50 MM) OF UNRESTRICTED AIR SPACE EITHER SIDE OF THE CONTROLLER AND 5 INCHES (125 MM) OF UNRESTRICTED AIR SPACE ABOVE THE CONTROLLER.

B. FOR THE SPEAKERS: ENSURE AT LEAST 2 INCHES (50 MM) OF UNRESTRICTED AIR SPACE IMMEDIATELY AROUND THE AREA OF THE REAR OF THE LOUDSPEAKER BAFFLE.

ENSURE SUFFICIENT SPACING BETWEEN CASA CONNECTION CABLES AND SINGLE INSULATED MAINS CABLING.

DO NOT RUN CASA CONNECTION CABLES AND TELECOMMUNICATIONS OR SINGLE INSULATED MAINS CABLING IN THE SAME TRUNKING.

USE CONNECTOR PLUGS AND SOCKETS WITH B&W APPROVED CASA COMPATIBLE EQUIPMENT ONLY.

DO NOT USE CONNECTOR PLUGS OR SOCKETS TO CONNECT TO COMPUTER OR TELEPHONY NETWORKS OR EQUIPMENT.

### UK ONLY

Please follow these instructions for fitting a mains plug.

The wires in the mains plug are coloured with the following code:

BLUE = Neutral (N)

BROWN = Live (L)

GREEN and YELLOW = Earth (E)


As the colours of the mains lead in this appliance may not correspond with the colour markings identifying the terminals in your plug, proceed as follows:

The wire that is coloured BLUE must be connected to the terminal that is marked with the letter 'N' or

coloured black.

The wire that is coloured BROWN must be connected to the terminal that is marked with the letter 'L' or coloured red.

Neither of these wires may be connected to the Earth terminal.

The wire that is coloured GREEN and YELLOW must be connected to the terminal that is marked with the letter 'E', or by the earth symbol  or coloured GREEN or GREEN and YELLOW.

The 13 amp mains plug must be fitted with a 5 amp fuse.

## IMPORTANT SAFEGUARDS

### Read this page carefully to ensure safe operation.

Please read all the safety and operating instructions before operating this equipment. Adhere to all warnings on the equipment and in the installation/instruction manuals. Follow all the safety and operating instructions. These safety and operating instructions should be retained for future reference.

### Power sources

The equipment should be connected to a power supply only of the type described in the installation/instruction manual or as marked on the equipment. For equipment intended to operate from battery power refer to the installation/instruction manual.

### Power cord protection

Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed over or against them. Particular attention should be paid to cords at plugs, convenience receptacles, and the point where they exit from the equipment. Never pull or stretch power cords.

### Ventilation

Slots and openings in the equipment enclosure are provided for ventilation. To ensure reliable operation and to protect the equipment from overheating these openings must not be blocked or covered. The equipment should be situated so that its location and position does not interfere with proper ventilation. The equipment should not be used on a bed, sofa, rug, or similar surface that may block the ventilation openings. This equipment should not be placed in a built-in installation, such as a bookcase, cabinet or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

### Carts and Stands

The equipment should be used only with a cart or stand that is recommended by the manufacturer.

### Wall or Ceiling Mounting

The equipment should be mounted to a wall or ceiling only as recommended by the manufacturer.

### Water and Moisture

The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool and the like.

### Temperature

The equipment may not function properly at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

### Heat

The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

### Electric shock

Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal

object such as a hair pin or needle comes into contact with the insides of this equipment, a dangerous electric shock may result. For families with children: never permit children to put anything, especially metal objects, inside this equipment.

### Grounding or Polarisation

The equipment must be grounded (earthed). When using an extension power supply cord or a power supply cord other than that supplied, it should be 3-core, fitted with the appropriate moulded-on plug and carry safety approval appropriate to the country of use.

### Cleaning

Use only a clean dry cloth. Do not use any solvents or liquids to clean the equipment.

### Abnormal smell

If an abnormal smell or smoke is detected, immediately turn the power off and unplug the equipment from the wall outlet. Contact your supplier or service centre immediately.

### Non-use Periods

The power cord should be unplugged from the wall outlet when the equipment is to be left unused for a long period of time.

### Damage Requiring Service

The appliance should be serviced by qualified personnel when: the power supply cord or the plug has been damaged; or objects have fallen, or liquid has been spilled into the equipment; or the equipment has been exposed to rain; or the equipment does not appear to operate normally, or exhibits a marked change in performance; or the equipment has been dropped, or the enclosure damaged.

### Servicing

The user should not attempt to service the equipment beyond that described in the installation/operating instructions. If servicing of any of the units making up the CASA System is required they should be returned for repair or replacement to:

B&W Loudspeakers Ltd, Meadow Road,  
Worthing, BN11 2RX England  
B&W Loudspeakers of America, 54 Concord  
Street, North Reading, MA USA 01864-2699

## INSTRUCTIONS DE SECURITE

Lisez ces pages avec attention pour connaître les procédures de sécurité.



### ATTENTION

Afin de prévenir tout risque d'électrocution ne démontez jamais le capot ou le fond de l'appareil. Il n'existe aucun réglage utile à l'utilisateur à l'intérieur. En cas de besoin faites appel à un technicien compétent.

### EXPLICATIONS DES SYMBOLES GRAPHIQUES



L'éclair contenu dans un triangle équilatéral signale la présence d'une tension non isolée pouvant être dangereuse.



Le point d'exclamation contenu dans un triangle équilatéral signale un point de maintenance ou d'utilisation particulièrement important, que nous traitons dans la littérature d'accompagnement de l'appareil.

### AVERTISSEMENTS

POUR EVITER TOUT RISQUE D'INCENDIE OU D'ELECTROCUTION, N'EXPOSEZ JAMAIS CET APPAREIL A LA PLUIE OU A L'HUMIDITE.

RESPECTEZ LES AVERTISSEMENTS INDIQUES SUR L'APPAREIL. POUR EVITER TOUT RISQUE D'ELECTROCUTION, N'OUVREZ JAMAIS LE CAPOT, IL N'EXISTE AUCUNE PIECE SUSCEPTIBLE D'ETRE CHANGEE PAR L'UTILISATEUR A L'INTERIEUR DE L'APPAREIL.

EN CAS DE PROBLEME, VEUILLEZ VOUS ADRESSER A UN REVENDEUR SPECIALISTE DE LA MARQUE B&W.

POUR EVITER TOUT RISQUE D'ELECTROCUTION, NOUS VOUS RECOMMANDONS DE VEILLER A N'UTILISER UN PROLONGATEUR ELECTRIQUE QUE LORSQUE SES BROCHES SONT INSEREES A FOND.

ASSUREZ-VOUS QUE LA TENSION SECTEUR INDIQUEE SUR LE PANNEAU DU CONTROLEUR CORRESPOND BIEN A CELLE DE VOTRE RESEAU ELECTRIQUE.

CET APPAREIL DOIT ETRE RACCORDE A LA TERRE

VENTILATION: INSTALLEZ CET APPAREIL DANS UN ESPACE OU L'AIR CIRCULE LIBREMENT

- A) CONTROLEUR: LAISSEZ AU MOINS 50mm D'ESPACE LIBRE AU DESSUS DE L'APPAREIL.
- B) ENCEINTES ACOUSTIQUES: LAISSEZ AU MOINS 50mm D'ESPACE LIBRE DERRIERE LE COFFRET DE CHAQUE ENCEINTE.

ASSUREZ-VOUS QU'IL EXISTE UN ESPACE SUFFISANT ENTRE LES CABLES DE VOTRE SYSTEME CASA ET D'AUTRES CABLES D'ALIMENTATION A SIMPLE ISOLEMENT.

NE FAITES PAS VOYAGER LES CABLES DU SYSTEME CASA DANS LA MEME GAINÉ QUE D'AUTRES CABLES DE LIAISON OU D'ALIMENTATION A SIMPLE ISOLEMENT.

N'UTILISEZ QUE DES CORDONS EQUIPES DE PRISES AUTORISEES PAR B&W ET COMPATIBLE AVEC LE SYSTEME CASA.

N'UTILISEZ PAS LES PRISES OU EMBASES POUR RACCORDER DU MATERIEL INFORMATIQUE OU LE RESEAU TELEPHONIQUE

## PROCEDURES DE SECURITE TRES IMPORTANTES

### Lisez ces pages avec attention afin de connaître les procédures de sécurité

Veillez lire très attentivement l'ensemble des instructions de protection et d'opérations avant d'utiliser cet équipement. Acceptez toutes les précautions signalées sur les appareils et le manuel d'instruction. Suivez toutes ces recommandations. Ces recommandations seront conservées pour une consultation future.

### Sources électriques

Cet équipement ne doit être raccordé qu'à une prise conforme à celle qui est indiquée sur le manuel d'instruction ou l'appareil lui-même. Pour le raccordement avec des appareils fonctionnant sur batterie, vous consulterez le manuel d'instruction.

### Protection du cordon d'alimentation

Les cordons d'alimentation doivent être disposés de façon à ne pas être posés sur ou près des appareils ou pincés par eux. Une surveillance particulière doit être effectuée au niveau de la liaison des câbles avec les prises, du choix de logements adaptés et des points de sortie de l'équipement. Ne tirez jamais sur un câble électrique, ne l'étendez pas!

### Ventilation

Les différentes ouvertures ou fentes présentes sur les appareils sont destinées à leur refroidissement. Pour en assurer le fonctionnement correct et éviter les risques de surchauffe, évitez de les obstruer ou de les couvrir. L'appareil doit être placé de façon à garantir une ventilation convenable. Il ne doit pas être placé sur un lit, un sofa, une couverture ou toute surface de ce type qui risquent de bloquer les ouïes d'aération.

Ce matériel ne doit jamais être placé dans une bibliothèque, un meuble ou un rack qui n'offre pas une aération suffisante ou qui ne corresponde pas aux recommandations du constructeur.

### Supports

Cet équipement ne doit être utilisé que sur des supports recommandés par le constructeur.

### Installation contre un mur ou en encoignure

Cet équipement doit être installé contre un mur ou en encoignure conformément aux instructions du constructeur.

### Eau et moisissures

L'installation ne doit jamais se situer à proximité d'une source d'humidité comme: une baignoire, un évier, une buanderie, une piscine ou similaires.

### Température

Cet ensemble ne peut fonctionner correctement à des températures extrêmement basses. La température idéale se situe au dessus de 5°C.

### Chaleur

Les appareils doivent être éloignés de toute source de chaleur telles que: radiateurs, cuisinières ou autres équipements (y compris amplificateurs de puissance) produisant une température élevée.

### Électrocution

Des précautions doivent être prises afin d'éviter la chute d'objets ou l'introduction de liquides à l'intérieur de Casa, à travers les ouvertures. Au cas où un objet métallique tel que: broche à cheveux ou épingle entrerait en contact avec l'intérieur de l'appareil, un risque d'électrocution grave pourrait en découler. Les familles ayant des enfants ne doivent jamais autoriser l'introduction d'objets et spécialement d'objets métalliques à l'intérieur des appareils.

### Mise à la terre et polarité

Ces matériels doivent être raccordés à la terre. Lorsque que vous utilisez un cordon d'alimentation ou un prolongateur électrique il doit posséder trois pôles. Raccordez l'installation en prenant toutes les précautions nécessaires et n'utilisez que des cordons moulés correspondant aux spécifications en usage dans le pays d'exploitation.

### Nettoyage

Utilisez un chiffon propre et sec. N'employez jamais de solvants ou de liquides pour nettoyer l'équipement.

### Odeurs anormales

En cas de perception d'odeurs anormales ou d'émission de fumées, éteignez immédiatement l'appareil et débranchez la prise murale. Contactez de toute urgence votre dépanneur ou le service après-vente.

### Périodes de non utilisation

Vous débrancherez l'installation de la prise d'alimentation électrique lorsque vous prévoyez une assez longue période de non utilisation.

### Problèmes nécessitant une maintenance

Une intervention technique, effectuée par du personnel qualifié, doit être envisagée quand:

- Le cordon d'alimentation ou la prise sont endommagés;
- Des objets ou du liquide ont pénétré à l'intérieur;
- Le matériel a été exposé à la pluie;
- L'appareil ne fonctionne pas normalement ou ses performances semblent être altérées;
- L'appareil est tombé ou son coffret est abîmé.

### Entretien

L'utilisateur ne doit jamais tenter d'assurer lui-même l'entretien technique de son appareil, ainsi que nous le signalons dans le mode d'emploi. Au cas où une intervention technique se justifierait sur le système CASA, il doit être retourné pour réparation ou remplacement à l'adresse suivante:

ONKYO Europe  
Immeuble «Le diamant»  
Domaine Technologique de SACLAY  
4, rue René RAZEL  
91892 SACLAY

## SICHERHEITSHINWEISE

**Lesen Sie sich die folgenden Hinweise genau durch, um einen sicheren Betrieb zu gewährleisten.**



### VORSICHT

Um einen elektrischen Schlag zu vermeiden, darf das Gehäuse nicht geöffnet werden. Im Geräteinnern befinden sich keine vom Bediener zu wartenden Teile. Überlassen Sie Wartungsarbeiten stets nur einem Fachmann.

### ERLÄUTERUNG DER GRAFISCHEN SYMBOLE



Das Blitz-Symbol mit nach unten weisendem Pfeil im gleichseitigen Dreieck warnt den Bediener vor "gefährlicher Spannung" im Gehäuseinnern, deren Höhe für eine Gefährdung von Personen durch einen Stromschlag ausreichend ist.



Das Ausrufungszeichen innerhalb des gleichseitigen Dreiecks macht den Benutzer auf wichtige Bedienungs- und Wartungsvorschriften in der beiliegenden Anleitung aufmerksam.

### WARNHINWEISE

UM DER GEFAHR VON FEUER UND EINES ELEKTRISCHEN SCHLAGS VORZUBEUGEN, DARF DAS GERÄT WEDER REGEN NOCH FEUCHTIGKEIT AUSGESETZT WERDEN.

BEACHTEN SIE ALLE WARNHINWEISE AUF DEM GERÄT. UM EINEN ELEKTRISCHEN SCHLAG ZU VERMEIDEN, ÖFFNEN SIE NIEMALS DAS CONTROLLER-GEHÄUSE. IM GERÄTEINNERN BEFINDEN SICH KEINE VOM BEDIENER ZU WARTENDEN TEILE. WENDEN SIE SICH BEI ALLEN SERVICEFRAGEN AN IHREN AUTORISIERTEN B&W-FACHHÄNDLER.

UM EINEM ELEKTRISCHEN SCHLAG VORZUBEUGEN, SOLLTEN SIE ZUM ANSCHLUß DIESES NETZSTECKERS WEDER EINE VERLÄNGERUNGSSCHNUR VERWENDEN NOCH SOLCHE ANSCHLUßMÖGLICHKEITEN, BEI DENEN DIE POLE DES NETZSTECKERS NICHT EXAKT IN DIE BUCHSEN PASSEN.

STELLEN SIE SICHER, DAß DIE AUF DEM TYPENSCHILD DES CONTROLLERS ANGEGEBENE BETRIEBSSPANNUNG DER NETZSPANNUNG ENTSPRICHT.

BETREIBEN SIE DAS GERÄT MIT EINER ORDNUNGSGEMÄßEN SCHUTZKONTAKT-STECKDOSE.

STECKEN SIE KEINE FESTEN GEGENSTÄNDE DURCH DIE VENTILATIONSÖFFNUNGEN DES CONTROLLERS.

BELÜFTUNG – STELLEN SIE DAS GERÄT NIEMALS AN EINEM ORT AUF, AN DEM KEINE AUSREICHENDE LUFTZUFUHR GEWÄHRLEISTET IST. DABEI GILT

A.FÜR DEN CONTROLLER, DAß FÜR EINE AUSREICHENDE LUFTZUFUHR AN BEIDEN SEITEN DES CONTROLLERS MINDESTENS EIN ABSTAND VON 50 MM UND OBERHALB DES CONTROLLERS EIN ABSTAND VON 125 MM VORHANDEN SEIN MUß.

B.FÜR DIE LAUTSPRECHER, DAß UM DEN BEREICH

DER RÜCKSEITE DER LAUTSPRECHERSCHALLWAND EIN ABSTAND VON MINDESTENS 50 MM GEGEBEN SEIN MUß.

STELLEN SIE SICHER, DAß GENÜGENDE ABSTAND ZWISCHEN DEN CASA-VERBINDUNGSKABELN UND DEM ISOLIERTEN NETZKABEL VORHANDEN IST.

FÜHREN SIE CASA-VERBINDUNGSKABEL NICHT DURCH DENSELBE KABELKANAL WIE TELEFONKABEL ODER ISOLIERTE NETZKABEL.

VERWENDEN SIE VERBINDUNGSSTECKER UND -BUCHSEN NUR MIT VON B&W ZUGELASSENEN, CASA-KOMPATIBLEN GERÄTEN.

VERWENDEN SIE KEINE FÜR DEN ANSCHLUß VON COMPUTER- ODER FERNSPRECHNETZEN ODER SONSTIGEM EQUIPMENT EINGESETZTE ANSCHLUßSTECKER ODER -BUCHSEN.

## WICHTIGE SCHUTZMASSNAHMEN

**Lesen Sie sich die Hinweise auf dieser Seite genau durch, um einen sicheren Betrieb zu gewährleisten.**

Lesen Sie sich vor Inbetriebnahme des Gerätes bitte alle Sicherheits- und Bedienungshinweise genau durch und befolgen Sie diese. Beachten Sie alle Warnhinweise auf den Geräten und in den Bedienungsanleitungen. Bewahren Sie die Bedienungsanleitungen so auf, daß sie Ihnen jederzeit zugänglich sind.

### Stromquellen

Das Gerät sollte nur an die in der Bedienungsanleitung bzw. auf dem Gerät selber angegebene Stromquelle angeschlossen werden. Bei batteriebetriebenen Geräten können Sie die entsprechenden Informationen der beiliegenden Bedienungsanleitung entnehmen.

### Schutz des Stromkabels

Die Stromkabel sollten nicht im Gehbereich verlegt werden. Ferner sollten sie nicht an Stellen liegen, wo sie durch darauf stehende bzw. dagegen gelehnte Gegenstände beschädigt werden könnten. In diesem Zusammenhang sollte besonders auf die Bereiche Kabel, Stecker, Netzsteckdose und auf den Punkt am Gerät geachtet werden, an dem das Kabel austritt. Ziehen Sie niemals am Stromkabel und dehnen Sie es niemals.

### Belüftung

Die Schlitze und Öffnungen am Gehäuse dienen zur Belüftung des Gerätes. Um einen zuverlässigen Betrieb zu gewährleisten und das Gerät vor Überhitzung zu schützen, dürfen die Belüftungsöffnungen nicht blockiert oder verdeckt werden. Das Gerät ist so aufzustellen, daß eine ausreichende Belüftung gewährleistet ist. So sollte es z.B. nicht auf ein Bett, ein Sofa, einen Teppich oder ähnliche Unterlagen gestellt werden, da hierdurch die Belüftungsöffnungen blockiert werden können. Ferner darf das Gerät nicht an einem Ort aufgestellt werden, an dem keine ausreichende Luftzufuhr gegeben ist, wie zum Beispiel in einem Einbauschränk oder einem engen Regalfach.

### Transport und Aufstellen

Das Gerät sollte nur wie vom Hersteller empfohlen transportiert oder gestellt werden.

### Wand- oder Deckenanbringung

Das Gerät sollte nur so wie vom Hersteller empfohlen an Wand oder Decke angebracht werden. Wasser und Feuchtigkeit Das Gerät sollte niemals in der Nähe von Wasser wie z.B. in der Nähe einer Badewanne, eines Waschbeckens, einer Spüle, eines Swimmingpools oder in einem feuchten Keller in Betrieb genommen werden.

### Temperatur

Bei extrem niedrigen Temperaturen oder Gefriertemperatur kann es beim Gerät zu Fehlfunktionen kommen. Die ideale Umgebungstemperatur liegt über +5 °C.

### Wärme

Stellen Sie das Gerät nicht in die Nähe von Wärmequellen (Heizkörper, Wärmespeicher, Öfen oder sonstige wärmeerzeugende Geräte einschließlich Verstärker).

### Elektrischer Schlag

Es dürfen keine festen Gegenstände oder Flüssigkeiten durch die Öffnungen in das Gehäuseinnere gelangen. Kommt ein Metallgegenstand wie eine Haarspange oder eine Nadel mit den Innenteilen des Gerätes in Kontakt, kann dies zu einem gefährlichen elektrischen Schlag führen. Eltern sollten daher darauf achten, daß Ihre Kinder keine Gegenstände und vor allen Dingen kein Metall in das Innere dieses Gerätes stecken.

### Erdung bzw. Polarisation

Das Gerät muß an eine Schutzkontakt-Steckdose angeschlossen werden. Verwenden Sie ein Verlängerungskabel oder ein anderes Netzkabel als das im Lieferumfang enthaltene, sollte es sich um ein dreiadriges Kabel mit Stecker handeln, das den im jeweiligen Land geforderten Sicherheitsvorschriften entspricht.

### Reinigung

Verwenden Sie zur Reinigung nur ein sauberes, trockenes Tuch. Reinigen Sie das Gerät niemals mit Lösungsmitteln oder sonstigen Flüssigkeiten.

### Ungewöhnliche Gerüche

Nehmen Sie einen ungewöhnlichen Geruch oder Rauch wahr, schalten Sie das Gerät sofort aus und trennen Sie es vom Stromnetz. Wenden Sie sich umgehend an Ihren autorisierten Händler oder das Service-Center. Phasen der Nichtbenutzung Sollte das Gerät für eine längere Zeit nicht genutzt werden, trennen Sie es von der Wandsteckdose ab.

### Durch geschultes Personal zu reparierende Schäden

Geschultes Fachpersonal sollte zu Rate gezogen werden, wenn:

- das Netzkabel oder der Stecker beschädigt sind; oder
- Gegenstände bzw. Flüssigkeit in das Gerät gelangt sind; oder
- das Gerät Regen ausgesetzt war; oder
- das Gerät nicht ordnungsgemäß funktioniert bzw. eine deutliche Leistungsminderung aufweist; oder
- das Gerät hingefallen ist bzw. beschädigt wurde.

### Wartung

Der Bediener sollte nur die Teile am Gerät warten, die in der Bedienungsanleitung entsprechend ausgewiesen sind. Ansonsten sind Wartungsarbeiten an den Geräten des CASA-Systems ausschließlich von geschultem Fachpersonal auszuführen. Wenden Sie sich in diesem Fall an Ihren autorisierten B&W-Fachhändler oder direkt an das B&W-Service-Center:

B&W Loudspeakers Vertrieb GmbH  
Kleine Heide 12  
33790 Halle/Westf.



## VEILIGHEIDSINSTRUKTIES

Voor een zo veilig mogelijk gebruik moet u deze pagina's zorgvuldig doorlezen.



### VOORZICHTIG

Verwijder het achterpaneel niet in verband met gevaar voor elektrische schokken.

Onderdelen kunnen niet door gebruiker worden onderhouden. Reparatie en onderhoud uitsluitend door gekwalificeerde technici.

### VERKLARING VAN GRAFISCHE SYMBOLEN



De bliksemschicht in een gelijkzijdige driehoek waarschuwt voor niet-geïsoleerde hoge voltages binnenin de behuizing, welke voldoende zijn om mensen een ernstige elektrische schok te geven.



Het uitroepteken in een gelijkzijdige driehoek maakt u attent op belangrijke gebruiks- en onderhoudsinstructies in de bij het apparaat horende documentatie.

### WAARSCHUWINGEN

OM BRAND- EN SCHOKGEVAAR TE VOORKOMEN MAG U DIT APPARAAT NIET BLOOTSTELLEN AAN REGEN OF VOCHT.

VOLG ALLE WAARSCHUWINGEN OP HET APPARAAT ALTIJD OP. OM EEN ELEKTRISCHE SCHOK TE VOORKOMEN MAG U DE BEHUIZING NIET OPENEN. ONDERDELEN KUNNEN NIET DOOR GEBRUIKER WORDEN GEREpareERD. REPARATIE EN ONDERHOUD UITSLUITEND DOOR EEN GEKwalIFICEERDE B&W-DEALER.

VOORKOM EEN ELEKTRISCHE SCHOK: GEBUIK DE NETSPANNINGKABEL UITSLUITEND MET WANDKONTAKTDOZEN OF VERLENGKABELS WAAR DE STEKERPENNEN VOLLEDIG KUNNEN WORDEN INGESTOKEN.

OVERTUIG U ERVAN OF DE OP DE CONTROLLER AANGEGEVEN NETSPANNING OVEREENKOMT MET DIE VAN HET LICHTNET.

SLUIT HET APPARAAT AAN OP EEN GEAARDE WANDKONTAKTDOOS.

STEEK GEEN VOORWERPEN IN DE VENTILATIEOPENINGEN VAN DE CONTROLLER.

VENTILATIE. PLAATS HET APPARAAT ALTIJD ZODANIG DAT DE EIGEN VENTILATIE NIET WORDT GEHINDERD:

A. CONTROLLER: LINKS EN RECHTS MOET TENMINSTE 50 MM RUIMTE VRIJBLIJVEN EN AAN DE BOVENZIJDE TENMINSTE 125 MM.

B. LUIDSPREKERS: AAN DE ACHTERZIJDE VAN HET VOORPANEEL MOET TENMINSTE 50 MM RUIMTE VRIJBLIJVEN.

ZORG VOOR VOLDOENDE RUIMTE TUSSEN DE CASA AANSLUITKABELS EN ENKELVOUDIG GEÏSOLEERDE NETSPANNINGKABELS.

COMBINEER GEEN CASA AANSLUITKABELS MET TELECOMMUNICATIEKABELS EN/OF NETSPANNINGKABELS IN DEZELFDE KABELGOOT.

GEBUIK DE CONNECTORS EN AANSLUITINGEN UITSLUITEND SAMEN MET DOOR B&W GOEDGEKEURDE CASA-COMPATIBELE APPARAATUUR.

GEBUIK DE CONNECTORS EN AANSLUITINGEN NIET OM COMPUTER- OF TELECOMMUNICATIENETWERKEN EN/OF - APPARAATUUR AAN TE SLUITEN.

## BELANGRIJKE VEILIGHEIDSINSTRUKTIES

### Voor een zo veilig mogelijk gebruik moet u deze pagina's zorgvuldig doorlezen.

Lees alle veiligheids- en gebruiksinstructies vóórdat het apparaat wordt gebruikt.

Neem alle waarschuwingen op het apparaat en in de gebruiksaanwijzing ter harte.

Volg alle bedienings- en gebruiksinstructies op.

Bewaar de veiligheids- en gebruiksinstructies zodat ze ook in de toekomst kunnen worden gebruikt.

### Voeding

Het apparaat mag u uitsluitend aansluiten op de lichtnetspanning die staat aangegeven in de gebruiksaanwijzing of achterop het apparaat.

Voor apparatuur die werkt met batterijen moet u de bijbehorende gebruiksaanwijzing lezen.

### Beveiliging netspanningkabel

Leg de netspanningkabel zodanig neer dat er niemand op kan gaan staan en dat hij niet beschadigd wordt door voorwerpen die erop of ernaast worden gezet. Let u daarbij vooral op het kabelgedeelte bij de connector, bij de wandkontaktdoos en de plaats waar de kabel uit het apparaat komt.

Trek nooit aan de netspanningkabel en rek hem zeker niet op of uit.

### Ventilatie

De openingen zijn bedoeld voor de ventilatie en koeling van het apparaat.

Houd deze openingen altijd vrij voor een betrouwbare werking en om het apparaat te beschermen tegen oververhitting.

Zet het apparaat altijd zodanig neer dat de eigen ventilatie niet wordt gehinderd. Hij mag dus bijvoorbeeld niet op een bed, bank, kleed of een vergelijkbaar oppervlak staan waardoor de ventilatie-openingen worden afgedekt.

Het apparaat mag ook niet worden ingebouwd - bijvoorbeeld in een boekenkast of wandmeubel - tenzij voldoende ventilatie is gegarandeerd en de inbouw instructies van de fabrikant zijn opgevolgd.

### Rekken en statieven

Gebruik het apparaat alleen met een rek of statief zoals aanbevolen door de fabrikant.

### Montage aan muur of plafond

Monteer het apparaat aan muur of plafond volgens de instructies van de fabrikant.

### Water en vocht

Gebruik het apparaat niet vlakbij water, zoals bijvoorbeeld naast een ligbad, wastafel, aanrecht, wastobbe, zwembad of in een vochtige kelder, etc.

### Temperatuur

Het apparaat zal bij extreem lage temperatuur en bij temperaturen onder 0° duidelijk mindere prestaties leveren. De ideale omgevingstemperatuur ligt boven de +5°C.

### Warmte

Plaats het apparaat niet dichtbij warmtebronnen zoals radiatoren, airco-uitblaasopeningen, kachels of andere warmteproducerende apparaten (inclusief versterkers).

### Elektrische schok

Voorkom dat voorwerpen en vloeistof via de ventilatie-openingen in het apparaat kunnen vallen.

Als een metalen voorwerp (zoals een haarspeld of naald) met de binnenkant van het apparaat in aanraking komt, kan dit leiden tot een levensgevaarlijke elektrische schok.

Belangrijk: zorg er vooral voor dat kinderen geen voorwerpen - in het bijzonder metalen voorwerpen - in het apparaat kunnen steken.

### Aarding en polariteit

Sluit dit apparaat aan op een wandkontaktdoos met randaarde. Wanneer u een verlengkabel gebruikt of een andere netspanningkabel dan die bij het apparaat wordt geleverd dan moet deze:

- drie-aderig zijn,
- een aangegoten randaarde steker hebben en
- voorzien zijn van een officieel veiligheidskeurmerk van het land van gebruik.

### Schoonmaken

Doe dit uitsluitend met een schone droge zachte doek.

Gebruik geen oplosmiddelen of vloeistoffen om het apparaat schoon te maken.

### Abnormale geur

Zodra u abnormale geur en/of rook waarneemt, moet u onmiddellijk het apparaat uitschakelen en de netsteker uit de wandkontaktdoos halen.

Neem daarna direkt contact op met uw leverancier.

### Niet in gebruik

Als het apparaat langere tijd niet wordt gebruikt, moet u de netspanningkabel uit de wandkontaktdoos halen.

### Schade die reparatie behoeft

Het apparaat moet onverwijld door een gekwalificeerde technicus worden gecontroleerd en zo nodig gerepareerd wanneer:

- a. de netspanningkabel of -steker is beschadigd,
- b. een voorwerp of vloeistof in het apparaat is gevallen
- c. het apparaat aan regen is blootgesteld,
- d. het apparaat niet normaal schijnt te werken,
- e. het apparaat een opvallende prestatieverandering vertoont,
- f. het apparaat is gevallen of de behuizing is beschadigd.

### Onderhoud

U mag uitsluitend het onderhoud plegen zoals staat aangegeven in de gebruiksaanwijzing. Alle andere handelingen mogen uitsluitend door gekwalificeerde technici worden verricht.

Als een van de onderdelen van het CASA Systeem gerepareerd moet worden, dan stuurt u deze na telefonische afspraak met de betreffende Service-afdeling naar:

Nederland	België
Audioscript BV	NV Van der Heyden Audio
Nijverheidsweg	13 Brusselbaan 278
3760 AE SOEST	9320 EREMBODEGEM
(035) 6020 302	(053) 214 915

## ISTRUZIONI DI SICUREZZA

**Leggete attentamente questa pagina per garantirvi un utilizzo sicuro dell'apparecchio.**



### ATTENZIONE

Per ridurre il rischio di scossa, non rimuovere il coperchio o il pannello posteriore. Non contiene parti che possono essere riparate dall'utente.

Per l'assistenza fate riferimento a personale qualificato.

### SPIEGAZIONE DEI SIMBOLI GRAFICI



Il fulmine inserito in un triangolo vi avverte della presenza di materiale non isolato a "voltaggio elevato" all'interno del prodotto che può essere abbastanza potente da costituire pericolo di folgorazione.



Il punto esclamativo entro un triangolo equilatero vi avverte della presenza di istruzioni importanti per l'utilizzo e la manutenzione nel manuale che accompagna l'apparecchiatura.

### AVVERTENZE

PER RIDURRE IL RISCHIO DI SCOSSA ELETTRICA NON ESPONETE L'APPARECCHIO A PIOGGIA O UMIDITA'

OSSERVATE TUTTE LE AVVERTENZE INDICATE SULL'APPARECCHIO. PER EVITARE SCOSSE ELETTRICHE, EVITATE DI APRIRE IL CABINET DELL'APPARECCHIATURA. NON VI SONO PARTI CHE POSSONO ESSERE RIPARATE DALL'UTENTE. PER TUTTE LE RIPARAZIONI RIVOLGETEVI AD UN RIVENDITORE AUTORIZZATO B&W.

PER PREVENIRE SCOSSE ELETTRICHE, NON UTILIZZATE QUESTA SPINA DI ALIMENTAZIONE (POLARIZZATA) CON UNA PROLUNGA O UN'ALTRA PRESA A MENO CHE LE LAMELLE NON POSSANO ESSERE INSERITE INTERAMENTE PER EVITARE CHE LE STESSE LAMELLE RIMANGANO ESPOSTE.

ASSICURARSI CHE IL VOLTAGGIO INDICATO SUL PANNELLO DELL'APPARECCHIO SIA UGUALE A QUELLO DELLA RETE DI ALIMENTAZIONE.

L'APPARECCHIATURA DEVE ESSERE COLLEGATA "A TERRA" (GROUNDED)

NON INSERIRE OGGETTI ATTRAVERSO LE FESSURE DI VENTILAZIONE DELL'APPARECCHIO.

VENTILAZIONE - L'APPARECCHIATURA DOVREBBE ESSERE COLLOCATA IN MODO TALE CHE LA SUA POSIZIONE O COLLOCAZIONE NON INTERFERISCA CON UN' ADEGUATA VENTILAZIONE:

A) PER L'AMPLIFICATORE: ASSICURARE ALMENO 50 mm DI SPAZIO DI ARIA LIBERO PER OGNI LATO DELL'APPARECCHIO E 125 mm DI SPAZIO D'ARIA LIBERO AL DI SOPRA DELLO STESSO.

B) PER I DIFFUSORI: ASSICURARE ALMENO 50 mm DI SPAZIO D'ARIA LIBERO IN PROSSIMITA' DELL'AREA DEL PANNELLO POSTERIORE DEL DIFFUSORE.

NON POSIZIONARE I CAVI DI COLLEGAMENTO DEGLI APPARECCHI DELLA CASA E I CAVI PER TELECOMUNICAZIONI O DI RETE DI ALIMENTAZIONE AD ISOLAMENTO SINGOLO NELLA STESSA CANALETTA.

UTILIZZARE SPINE DI CONNESSIONE E PRESE SOLO CON APPARECCHIATURE COMPATIBILI AL SISTEMA DELLA CASA APPROVATE DA B&W.

NON UTILIZZARE SPINE E PRESE PER COLLEGARE COMPUTER O RETI TELEFONICHE O APPARECCHIATURE VARIE.

## AVVERTENZE IMPORTANTI

**Leggete attentamente questa pagina per garantire un utilizzo dei prodotti in totale sicurezza.**

Vi preghiamo di leggere tutte le istruzioni relative alla sicurezza e al funzionamento prima di utilizzare questo apparecchio. Seguite tutte le avvertenze sull'apparecchio e sui manuali di istruzione. Attetevi a tutte le istruzioni relative alla sicurezza e al funzionamento. Queste avvertenze dovrebbero essere conservate per una consultazione futura.

### Sorgenti di alimentazione.

L'apparecchio dovrebbe essere collegato solo al tipo di alimentazione descritta sul manuale di istruzione o stampata sull'apparecchio stesso. Per apparecchiature alimentate a batteria fate riferimento al manuale di istruzione/installazione.

### Protezione del cordone di alimentazione

I cordoni di alimentazione dovrebbero essere collocati in modo tale che non vengano calpestati o schiacciati da elementi sovrapposti. Una particolare attenzione dovrebbe essere rivolta ai cavi e alle spine di alimentazione, a comode prese e al punto di uscita dall'apparecchio. Non tirare o sforzare i cavi di alimentazione.

### Ventilazione

Fessure ed aperture sono presenti sul cabinet dell'apparecchio per la ventilazione. Per garantire un adeguato funzionamento e proteggere l'apparecchio dal surriscaldamento queste aperture non devono essere coperte o ostruite. L'apparecchio dovrebbe essere collocato in modo tale che la sua posizione non interferisca con un'adeguata ventilazione. L'apparecchio non dovrebbe essere utilizzato su un letto, divano, tappeto o superfici simili che possono bloccare le aperture di ventilazione. Questo apparecchio non dovrebbe essere collocato in installazioni ad incasso, come librerie, cabinet o rack senza che una ventilazione adeguata sia fornita o non siano state seguite le istruzioni del costruttore.

### Carrelli e supporti

L'apparecchio dovrebbe essere utilizzato solo con un carrello o un supporto che sia raccomandato dal costruttore.

### Installazione a parete o a soffitto

L'apparecchio dovrebbe essere montato a parete o a soffitto solo come viene raccomandato dal costruttore.

### Acqua e umidità

L'apparecchiatura non dovrebbe essere utilizzata vicino all'acqua - per esempio alle tubature della vasca, il lavabo, il lavandino e le tubature della lavanderia; in un seminterrato umido o vicino ad una piscina e cose simili.

### Temperature

L'apparecchio potrebbe non funzionare adeguatamente a temperature estremamente basse o di congelamento. La temperatura ideale è al di sopra di 5°C.

### Calore

L'apparecchio dovrebbe essere collocata distante da fonti di

calore come radiatori, stufe o altri elementi (incluso amplificatori) che producono calore.

### Scosse elettriche

Particolare attenzione dovrebbe essere rivolta affinché oggetti e liquidi non cadano attraverso le aperture all'interno dell'apparecchio. Se un oggetto di metallo, come una forcina per capelli o un ago, viene a contatto con l'interno dell'apparecchio può provocare un pericolosa scossa elettrica. Per famiglie con bambini: non permettete ai bambini di inserire qualsiasi cosa, specialmente oggetti metallici, all'interno di questo apparecchio.

### Messa a terra e polarizzazione

L'apparecchio deve essere collegato a terra. Quando utilizzate una prolunga del cordone di alimentazione o un cordone di alimentazione diverso da quello fornito, questo dovrebbe essere a tre conduttori con l'apposita spina incorporata e attenersi alle norme di sicurezza in vigore nel paese di utilizzo.

### Pulizia

Utilizzare solo un panno pulito e asciutto.

Non utilizzare solventi o liquidi per pulire l'apparecchio.

### Odore inconsueto

Se un odore inconsueto o fumo viene notato spegnete immediatamente l'apparecchio e scollegatelo dalla presa di alimentazione. Contattate il vostro fornitore o centro di assistenza immediatamente.

### Periodi di non utilizzo

Il cavo di alimentazione dovrebbe essere scollegato dalla presa a muro quando l'apparecchio non viene utilizzato per un lungo periodo di tempo.

Danni che richiedono servizio di assistenza

L'apparecchiatura dovrebbe essere riparata da personale qualificato quando :

- il cordone di alimentazione e la spina sono stati danneggiati;
- oggetti sono caduti o liquidi sono stati versati all'interno dell'apparecchio;
- l'apparecchiatura è stata esposta a pioggia;
- l'apparecchiatura non sembra funzionare perfettamente
- o mostra un notevole cambiamento nelle prestazioni;
- l'apparecchiatura è caduta o il mobile appare danneggiato;

### Assistenza

L'utente non dovrebbe cercare di riparare l'apparecchio al di là di quello che viene indicato nel manuale di istruzione. Se è necessaria l'assistenza di un qualsiasi apparecchio di marca B&W si dovrebbe inviarlo per la riparazione o sostituzione a:

AUDIOGAMMA  
Via Pietro Calvi, 16  
20129 MILANO

## INSTRUCCIONES DE SEGURIDAD

Lea cuidadosamente esta página para asegurar el perfecto funcionamiento de su equipo.



### PRECAUCION

Para reducir el riesgo de que se produzca una descarga eléctrica, no quite la cubierta ni el panel posterior del aparato. No hay partes manipulables por el usuario en el interior del aparato. Para cualquier problema, diríjase a un servicio técnico cualificado.

### EXPLICACION DE LOS SIMBOLOS GRAFICOS



El triángulo equilátero con un rayo en su interior le alerta sobre la presencia de tensiones no aisladas en el interior del aparato que pueden poseer la suficiente magnitud como para provocar una descarga eléctrica en las personas.



El signo de admiración en el interior de un triángulo equilátero le alerta sobre la presencia de instrucciones importantes relacionadas con el funcionamiento y mantenimiento del aparato en el correspondiente manual de instrucciones.

### ADVERTENCIAS

PARA PREVENIR EL APARATO FRENTE A INCENDIOS O DESCARGAS ELECTRICAS, NO LO EXPONGA A LA LLUVIA O LA HUMEDAD.

OBSERVE TODAS LAS ADVERTENCIAS QUE FIGURAN EN EL PROPIO APARATO. PARA EVITAR QUE SE PRODUZCA UNA DESCARGA ELECTRICA, NO ABRA EL APARATO PUESTO QUE NO HAY PARTES MANIPULABLES POR EL USUARIO EN EL INTERIOR DEL MISMO. PARA CUALQUIER CUESTION RELACIONADA CON EL MANTENIMIENTO DEL EQUIPO, CONSULTE A UN DETALLISTA AUTORIZADO DE B&W.

PARA EVITAR QUE SE PRODUZCA UNA DESCARGA ELECTRICA, NO UTILICE ESTE CABLE DE ALIMENTACIÓN (POLARIZADO) CON UN CABLE DE EXTENSION, UNA CLAVIJA O UNA TOMA DE CORRIENTE DIFERENTE DE LA QUE CORRESPONDA AL EQUIPO.

ASEGURESE DE QUE LA TENSION INDICADA EN EL PANEL POSTERIOR DEL APARATO CONCUERDA CON LA DE SU RED ELECTRICA LOCAL.

NO COLOQUE OBJETOS ENCIMA DE LOS ORIFICIOS DE VENTILACION DEL APARATO.

VENTILACION - EL APARATO DEBERIA COLOCARSE DE MODO QUE SU UBICACION O POSICION NO INTERFIERA EN NINGUN MOMENTO CON LA ADECUADA VENTILACION DEL MISMO:

A-PARA LAS ELECTRONICAS: ASEGURESE DE QUE HAYA UN MINIMO DE 5 CM DE ESPACIO LIBRE EN CADA UNO DE LOS LADOS Y AL MENOS 12 CM EN LA ZONA SUPERIOR.

B-PARA LAS CAJAS ACUSTICAS: ASEGURESE DE QUE HAYA AL MENOS 5 CM DE ESPACIO LIBRE INMEDIATAMENTE DESPUES DEL PANEL POSTERIOR.

ASEGURESE DE QUE HAYA EL SUFICIENTE ESPACIO LIBRE ENTRE LOS CABLES DE SEÑAL Y LOS DE ALIMENTACION CON AISLAMIENTO SIMPLE.

NO COLOQUE CABLES DE SEÑAL, DE TELECOMUNICACIONES Y DE ALIMENTACION CON AISLAMIENTO SIMPLE EN EL MISMO CONDUCTO.

UTILICE UNICAMENTE CLAVIJAS DE CONEXION Y RECEPTACULOS COMPATIBLES CON DISEÑOS AUTORIZADOS POR B&W.

NO UTILICE CLAVIJAS DE CONEXION NI RECEPTACULOS DISEÑADOS PARA APLICACIONES DE AUDIO PARA CONECTAR ORDENADORES O REDES TELEFONICAS.

## PRECAUCIONES IMPORTANTES

**Lea cuidadosamente esta página para asegurar el perfecto funcionamiento de su equipo.**

Le rogamos que lea atentamente y siga escrupulosamente todas las instrucciones relacionadas con la seguridad y el funcionamiento del presente equipo antes de ponerlo en marcha. Tenga en cuenta todas las advertencias que figuran tanto en el propio equipo como en el correspondiente manual de instrucciones. Todas estas instrucciones deberían ser conservadas para cualquier futura consulta.

### Fuentes de energía

El equipo debería ser conectado únicamente a una fuente de energía idéntica a la descrita en el correspondiente manual de instrucciones/instalación o indicada en el propio equipo. Para equipos diseñados para funcionar con baterías, consulte el correspondiente manual de instrucciones/instalación.

### Protección del cable de alimentación

Los cables de alimentación (conexión a la red eléctrica) deberían ser colocados de tal modo que no sean aplastados o perforados por objetos situados encima de o junto a ellos. Debería prestarse una especial atención a los cables y clavijas de conexión, a los receptáculos y a la medida en que los dos primeros quedan instalados con respecto al equipo. No estire ni fuerce nunca un cable de alimentación.

### Ventilación

Se dispone de ranuras y orificios en el recinto del equipo para facilitar su ventilación. Para garantizar un funcionamiento fiable y proteger el equipo de un posible sobrecalentamiento, es imperativo no bloquear los mencionados orificios. El equipo debería situarse de tal modo que su ubicación y colocación no impidan una ventilación adecuada. El equipo no debería utilizarse en una cama, sofá o superficie similar susceptible de bloquear los orificios de ventilación.

Este equipo no debería colocarse en un recinto cerrado hecho a medida, como por ejemplo una biblioteca, un mueble o un rack a menos de que el mismo contenga un sistema de ventilación adecuado o el correspondiente manual de instrucciones permita realizar tal operación.

### Bases y Soportes

El equipo debería ser utilizado únicamente con una base o soporte recomendado específicamente por el fabricante.

### Montaje en Pared o Techo

El equipo debería ser montado en una pared o techo siguiendo exclusivamente el procedimiento recomendado por el fabricante.

### Agua y Humedad

El aparato no debería ser utilizado cerca del agua, por ejemplo cerca de una bañera, fregadero, lavadora, piscina o cualquier entorno particularmente húmedo.

### Temperatura

El equipo no funcionará adecuadamente a temperaturas extremadamente altas o bajas. La temperatura ambiente ideal se sitúa por encima de 5°C.

### Calor

El aparato debería alejarse de cualquier fuente de calor, como por ejemplo radiadores de calefacción, cocinas y otros aparatos (incluyendo amplificadores y etapas de potencia) que generen calor.

### Descargas eléctricas

Procure que el aparato no caiga al suelo ni penetre líquido en su interior a través de los orificios de ventilación. Si un objeto metálico tal como una aguja de coser o algo parecido entra en contacto con el interior del aparato, es posible que se produzca una descarga eléctrica potencialmente peligrosa.

Para familias con niños: no permitir que los niños introduzcan ningún objeto, en especial si es metálico, en el interior de este equipo.

### Conexión a Tierra o Polarización

El equipo debe ser conectado a masa (tierra). Cuando utilice una extensión del cable de alimentación o éste sea diferente del suministrado de origen, debería emplear un cable de tres conductores acompañado de la correspondiente clavija, asegurándose de que ambos satisfacen las instrucciones de seguridad del país de utilización.

### Limpieza

Use únicamente una gamuza limpia y suave. No utilice ningún tipo de disolvente o líquido para limpiar el equipo.

### Olores anormales

En caso de que detecte un olor anormal o humo, apague inmediatamente el aparato y desconéctelo de la red eléctrica. Contacte inmediatamente con su detallista o un servicio técnico cualificado.

### Períodos de no-utilización

El cable de alimentación debería desconectarse de la red eléctrica cuando el aparato no vaya a ser utilizado durante un largo período de tiempo.

### Daños que requieren Asistencia Técnica

El aparato debería ser enviado a un servicio técnico cualificado cuando se produzca cualquiera de las siguientes situaciones:

El cable de alimentación o la clavija del mismo hayan sido dañados.

Hayan penetrado objetos o líquido en el interior del equipo.

El aparato haya sido expuesto a la lluvia.

El equipo aparente no funcionar de manera normal o muestre un cambio importante en sus prestaciones.

El equipo haya caído al suelo o el recinto del mismo haya sido dañado.

### Servicio Técnico

El usuario no debería intentar reparar el aparato más allá de lo permitido por el manual de instrucciones/instalación. En caso de que se requiera una asistencia técnica posterior, el aparato debería ser enviado, para su reparación o sustitución, a:

DOSA,  
c/Dos de Mayo, 269 08025-Barcelona  
Tel: (93) 436 26 30

## INSTRUÇÕES DE SEGURANÇA

Leia atentamente esta página para assegurar um funcionamento seguro.



### ATENÇÃO

Para reduzir o risco de choque eléctrico, não retire a tampa ou o painel posterior. Não existem peças substituíveis pelo utilizador no interior do equipamento. Entregue toda a assistência a pessoal qualificado.

### EXPLICAÇÃO DOS SÍMBOLOS GRÁFICOS



O relâmpago dentro do triângulo equilátero destina-se a alertar para a presença de "tensões perigosas" não isoladas no interior do equipamento, que podem possuir uma amplitude suficiente para constituir um risco de choque eléctrico para as pessoas.



O ponto de exclamação dentro do triângulo equilátero destina-se a alertar o utilizador para a existência de importantes instruções de utilização e manutenção na literatura que acompanha o equipamento.

### AVISOS

PARA EVITAR O RISCO DE CHOQUE ELÉCTRICO, NÃO EXPONHA ESTE EQUIPAMENTO À CHUVA OU HUMIDADE.

RESPEITE TODOS OS AVISOS PRESENTES NO PRÍPRIO EQUIPAMENTO. PARA EVITAR CHOQUES ELÉCTRICOS, NÃO ABRA A TAMPÃO NEM RETIRE O PAINEL POSTERIOR. NÃO EXISTEM PARTES SUBSTITUÍVEIS PELO UTILIZADOR NO INTERIOR, DEVENDO TODAS AS QUESTÕES RELATIVAS A ASSISTÊNCIA SER APRESENTADAS A UM REVENDEDOR AUTORIZADO B&W.

PARA EVITAR O RISCO DE CHOQUE ELÉCTRICO, NÃO UTILIZE UMA EXTENSÃO PARA O CABO DE ALIMENTAÇÃO, A NÃO SER QUE OS PINOS DA FICHA FIQUEM COMPLETAMENTE COBERTOS.

ASSEGURE-SE QUE A TENSÃO DE ALIMENTAÇÃO INDICADA NO PAINEL DO CONTROLADOR É IGUAL À DA SUA INSTALAÇÃO.

O EQUIPAMENTO DEVE SER LIGADO À TERRA.

VENTILAÇÃO - O EQUIPAMENTO DEVE SER COLOCADO DE FORMA A QUE A SUA LOCALIZAÇÃO NÃO INTERFIRA COM A CORRECTA VENTILAÇÃO:

- A. PARA O CONTROLADOR: ASSEGURE-SE DE QUE EXISTE UM ESPAÇO LIVRE DE, PELO MENOS, 5 CENTÍMETROS DE CADA LADO E DE 12,5 CENTÍMETROS NA PARTE SUPERIOR.
- B. PARA AS COLUNAS: ASSEGURE-SE DE QUE EXISTE UM ESPAÇO LIVRE DE PELO MENOS 5 CENTÍMETROS NA PARTE POSTERIOR DA COLUNA.

ASSEGURE A EXISTÊNCIA DE ESPAÇO SUFICIENTE ENTRE OS CABOS DE INTERLIGAÇÃO "CASA" E OS CABOS DE ALIMENTAÇÃO DE ISOLAMENTO SIMPLES.

NÃO COLOQUE CABOS DE INTERLIGAÇÃO "CASA" EM CONJUNTO COM CABOS DE TELECOMUNICAÇÕES OU CABOS DE ALIMENTAÇÃO DE ISOLAMENTO SIMPLES.

UTILIZE AS FICHAS E TOMADAS APENAS COM EQUIPAMENTOS AUTORIZADOS PELA B&W E COMPATÍVEIS COM A SÉRIE "CASA".

NÃO UTILIZE AS FICHAS OU TOMADAS PARA LIGAÇÃO À REDE TELEFÔNICA OU A UM COMPUTADOR.

## AVISOS IMPORTANTES

### Leia atentamente esta página para assegurar um funcionamento seguro.

Leia por favor todas as instruções de segurança e utilização antes de iniciar a utilização do equipamento. Respeite todos os avisos presentes no equipamento ou nos manuais de instalação/utilização. Siga as instruções de segurança e de utilização. Estas instruções devem ser guardadas para futuras consultas.

### Alimentações

O equipamento deve ser ligado apenas a uma alimentação do tipo indicado no manual de instruções ou no equipamento. Para equipamentos alimentados a partir de uma bateria consulte o manual de instalação/utilização.

### Protecção do cabo de alimentação

Os cabos de alimentação devem ser colocados de forma a que não sejam pisados ou estrangulados por objectos colocados sobre eles. Deve ser prestada particular atenção aos cabos e fichas, tomadas, e aos pontos onde os cabos deixam o equipamento. Nunca estique ou puxe os cabos.

### Ventilação

As aberturas ou ranhuras existentes na caixa do equipamento destinam-se a facilitar a ventilação. Para assegurar um funcionamento correcto e proteger o equipamento de sobreaquecimento estas aberturas não devem estar obstruídas ou cobertas. O equipamento deve ser colocado de forma a que a localização não interfira com a sua correcta ventilação. Não deve, por exemplo, ser colocado sobre uma cama, sofá, tapete, ou superfície semelhante que possa tapar as aberturas da ventilação; nem deve ser colocado numa instalação embebida, como estantes ou armários, que podem impedir a circulação do ar através das aberturas de ventilação; a não ser que essa instalação esteja prevista pelo fabricante e a ventilação seja assegurada.

### Móveis e suportes

O equipamento deve apenas ser colocado em móveis ou suportes recomendados pelo fabricante.

### Montagem na parede ou no tecto

O equipamento deverá ser montado na parede ou no tecto apenas da forma recomendada pelo fabricante.

### Água e humidade

O equipamento não deve ser utilizado perto da água - por exemplo, próximo de uma banheira ou lava louça. Numa cave húmida, ou próximo de uma piscina e locais similares.

### Temperatura

O equipamento poderá não funcionar correctamente com temperaturas extremamente baixas. a temperatura ambiente ideal será acima de +5°C.

### Calor

O equipamento deve ser colocado longe de fontes de calor como radiadores, fogões ou outras fontes produtoras de calor (incluindo os amplificadores).

## Choque eléctrico

Devem tomar-se todas as precauções de forma a que não caiam objectos ou líquidos para o interior do equipamento através das aberturas de ventilação. Se um objecto metálico, como uma agulha ou um gancho de cabelo, entrar em contacto com o interior deste equipamento, poderá haver o risco de choque eléctrico. Em famílias com crianças deverá existir o máximo cuidado para que elas não introduzam objectos, especialmente metálicos, no interior deste equipamento.

## Ligação à Terra

O equipamento deve ser ligado à massa (terra). Quando utilizar uma extensão ou um cabo de alimentação diferente do fornecido, este deverá ser de 3 condutores e utilizar ficha adequada e aprovada no país de utilização.

## Limpeza

Utilize apenas um pano limpo e seco para efectuar a limpeza. Não utilize líquidos ou sprays de limpeza. Cheiro anormal Se detectar um cheiro anormal ou a existência de fumo, desligue imediatamente o interruptor de alimentação e retire a ficha da tomada. Contacte de imediato o seu revendedor.

## Períodos de não utilização

O cabo de alimentação deve ser desligado da instalação se o aparelho não for utilizado por um longo período de tempo.

## Danos que requerem assistência

O equipamento deve ser reparado por pessoal qualificado quando:

- fio ou a ficha de alimentação se encontrem danificados; ou
- tenham caído objectos, ou tenha sido derramado qualquer líquido para o interior do equipamento; ou
- o equipamento tenha estado exposto à chuva; ou
- o equipamento pareça não funcionar normalmente ou apresente uma forte alteração de desempenho; ou
- o equipamento tenha caído, ou a caixa sido danificada.

## Assistência

O utilizador não deverá tentar efectuar qualquer intervenção no equipamento, para além do que se especifica no manual de utilização. Em caso de necessidade de assistência a qualquer das unidades CASA System, este deverá ser entregue ao revendedor ou enviada para:

ESOTÉRICO Consultores de Som  
Praceta Alves Redol, 2  
Fanqueiro  
2670 LOURES



## SIKKERHEDSINSTRUKTIONER

### ADVARSEL



For at reducere risikoen for elektrisk stød, må man ikke fjerne låget eller bagpanelet. Der er ingen dele i apparatet der kan serviceres af brugeren!

### FORKLARING AF GRAFISKE SYMBOLER



lynet i trekanten bag på apparatet henviser til uisoleret strøm- føring i apparatet, der er kraftig nok til at give stød.



Udråbstegnet i trekanten henviser til, at der medfølger skriftlig instruktion, der er vigtig for brugen af apparatet.

### ADVARSEL

HOLD APPARATET VÆK FRA REGN ELLER FUGT FOR AT UNDGÅ ILD ELLER STØD.

VÆR OPMÆRKSOM PÅ ALLE ADVARSLER PÅ APPARATET. LAD VÆRE MED AT ÅBNE APPARATET FOR AT UNDGÅ STØD. GÅ TIL EN AUTORISERET B&W FORHANDLER, HVIS DER OPSTÅR FEJL, DER KRÆVER ÅBNING AF APPARATET.

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BRUG IKKE TILSLUTNINGER OG STIK TIL SAMMENKOBLING MED COMPUTERUDSTYR ELLER TELEFONUDSTYR.

## VIGTIGE SIKKERHEDSFORANSTALTNINGER

### Læs denne side grundigt for at sikre en sikker drift.

Vær venlig at læse hele denne sikkerheds- og instruktionsvejledningen, før du bruger dit udstyr. Følg alle advarsler på udstyret og i installations/ instruktionsvejledningen. Gem vejledningen, så du senere hen i tvivlsituationer kan blive hjulpet.

### Strømkilder

Apparatet skal sluttes til en strømkilde, der svarer til den angivne i installations/ instruktionsvejledningen, eller til en strømkilde, der svarer til det på apparatet angivne. Se i installations/instruktionsvejledningen i tilfælde af apparater, der skal drives af batterikraft.

### Beskyttelse af strømkabel

Strømkablerne skal placeres, så man ikke går hen over dem, eller så skarpe genstande ikke kommer i kontakt med dem. Vær især opmærksom på de svage punkter som stikket og det sted, hvor kablet forlader apparatet. Lad være med at rykke i kablet.

### Ventilering

Huller og riller i apparatet sikrer ventilation. For at sikre en pålidelig drift og for at beskytte mod overophedning må disse åbninger ikke dækkes til. Apparatet må ikke stilles på et tæppe, seng eller sofa, da disse underlag kan forhindre ventileringen. Ligeledes må apparatet heller ikke placeres i lukkede forhold som en tæt-pakket bogreol o.lign.

### Placering

Udstyret må kun stilles på hyller eller standere, der er anbefalet af producenten. På vægge og lofter må højttaleren ligeledes kun placeres, som det anbefales af producenten.

### Vand og fugt

Hold apparatet væk fra fugtige rum, og undgå vand nær apparatet. Det er meget farligt!!!

### Temperatur

Apparatet arbejder ikke optimalt ved ekstremt lave temperaturer. Den ideelle temperatur ligger over 5° C

Hold apparatet væk fra varmekilder, så som radiatorer, komfurer o.lign.

### Elektrisk stød

Hold vand og metalliske genstande væk fra apparatet, da det kan ødelægge apparatet og i værste fald give farlige stød.

### Rengøring

Brug ikke væsker til rengøring. Brug udelukkende en tør/let fugtig klud.

### Unormal lugt

Hvis der fra apparatet opstår en unormal lugt, så afbryd straks strømmen fra kontakten og henvend dig til din forhandler.

### Perioder hvor apparatet ikke bruges

Når apparatet i længere perioder ikke skal bruges, bør

stikket fjernes fra stikkontakten.

Skader, der behøver service

Apparatet bør serviceres af en professionel når:  
strøm kablet eller stikket er blevet beskadiget.  
genstande eller væske er faldet ned i apparatet.  
apparatet er blevet udsat for regn, apparatet ikke virker optimalt .  
apparatet har været tabt eller chassiset er blevet beskadiget.

### Servicering

Forhandleren bør altid servicere problemer, hvis løsning ikke er anført i brugsvejledningen.

## SÄKREHETSINSTRUKTION

Läs igenom denna sida noggrant för att kunna sköta apparaten säkert,



### VARNING

För att undvika risken för elchocker får apparatens hölje ej avlägsnas. Det finns inga delar i apparaten som kan åtgärdas av användaren. Anlita en auktoriserad serviceavdelning vid problem

### FÖRKLARING AV GRAFISKA SYMBOLER



blixten med pilhuvud varnar för delar inuti apparaten som kan ge elchocker som är skadliga för personer.



Utropstecknet som är inskrivet i en liksidig triangel är avsedd att varna vid viktiga handhavande och underhålls instruktioner i bruksanvisningen som följer med apparaten.

### VARNINGAR

FÖR ATT FÖREBYGGA ELCHOCKER OCH ELDSVÅDA SKALL MAN UNDVIKA ATT UTSÄTTA APPARATEN FÖR REGN OCH FUKT.

UPPMÄRKSAMMA ALLA VARNINGSSYMBOLER PÅ SJÄLVA APPARATEN. FÖR ATT UNDVIKA RISKEN FÖR ELCHOCKER FÅR APPARATENS HÖLJE EJ AVLÄGSNAS. DET FINNS INGA DELAR I APPARATEN SOM KAN ÅTGÄRDAS AV ANVÄNDAREN. OM DU HAR FRÅGOR OM APPARATENS FUNKTION SKALL DU VÄNDA DIG TILL EN AUKTORISERAD B&W HANDLARE.

FÖRSÄKRA DIG OM ATT APPARATEN ÄR AVSEDD FÖR RÄTT NÄTSPÄNNING, DET STÅR ANGIVET PÅ APPARATENS BAKPANEL. FÖR EJ IN FÖREMÅL GENOM APPARATENS VENTILATIONSHÅL.

VENTILATION. – SE TILL ATT APPARATEN PLACERAS SÅ ATT DEN FÅR TILLRÄCKLIG VENTILATION:

- A. FÖR HUVUDENHETEN: APPARATEN BEHÖVER MINST 5 CM PÅ SIDORNA OCH 12.5 CM FRITT UTRYMME PÅ HÖJDEN FÖR VENTILATION.
- B. HÖGTALARNA BEHÖVER 5 CM I SIDLED OCH BAKÅT FÖR VENTILATION.

SE OCKSÅ TILL ATT SEPARERA SIGNALKABLAR OCH NÄTKABLAR PÅ APPARATENS BAKSIDA. UNDVIK OCKSÅ ATT PLACERA SIGNALKABLAR OCH NÄTKABLAR NÄRA VARANDRA I KABELGENOMFÖRINGAR OCH LIKNANDE INSTALLATIONER.

ANVÄND BARA ANSLUTNINGSKONTAKTER SOM ÄR AVSEDDA ATT ANVÄNDAS MED B&W CASA KOMPATIBEL UTRUSTNING.

ANVÄND INTE ANSLUTNINGSKABLARNAS OCH KONTAKTERNA FÖR ANSLUTA DATORER ELLER TELEFONUSTRUSTNING.

## VIKTIGA SÄKERHETSPÅPEKANDEN

### Läs igenom denna sida noggrant för att sköta apparaten säkert.

Var vänlig och läs igenom bruksanvisningen och säkerhetsanvisningen noggrant innan apparaten tas i bruk. Tag hänsyn till de varningsskyltar som finns på apparaten och i bruksanvisningen. Följ anvisningarna i bruksanvisningen noga. Spara bruksanvisningen för framtida bruk.

### Strömkällan

Apparaten får endast anslutas till den typ av strömkälla som beskrivs i bruksanvisningen eller på apparatens baksida. För de delar som drivs med batterier, se bruksanvisningen.

### Säkerhetsföreskrifter för nätkabeln

Nätkablar skall placeras så att de inte riskerar att trampas på eller kläms av andra föremål. Extra aktsamhet bör iaktas nära kabelns anslutningar till kontakter eller där kabeln är fäst i maskinen. Undvik att sträcka eller dra i nätsladden.

### Ventilation

Öppningarna i apparatens hölje är till för att apparaten skall få tillräcklig ventilation.

Täck inte över ventilationshålen, då riskerar apparaten att överhettas. Placera apparaten så inte hålen går fria. Den skall inte placeras på ett mjukt underlag såsom en säng eller tjock heltäckningsmatta, då riskerar man att täcka ventilationshålen på undersidan. Apparaten får ej heller placeras inbyggd i en bokhylla eller liknande om inte ventilationen är säkerställd. Följ instruktionerna om placering noggrant.

### Bänkar och stativ

Apparaten skall bara användas tillsammans med bänkar och stativ som tillverkaren rekommenderar.

### Vägg eller takmontage

Apparaten får bara monteras i tak eller på vägg enligt tillverkarens rekommendationer.

### Vatten och fukt

Apparaten bör inte användas i närheten av vatten. Till exempel nära ett badkar, diskho, handfat, tvättbalja eller simbassäng och dylikt.

### Temperatur

Apparaten fungerar troligtvis inte vid väldigt låga temperaturer.

Den ideala omgivningstemperaturen ligger över 5° Celsius. Hetta Placera inte apparaten i närheten av värmekällor såsom element, spisar eller andra saker som avger värme (gäller även förstärkare).

### Elektriska stötar

Varsamhet skall iakttagas så att det inte tappas saker i eller spills vätska i apparaten. Se upp med saker av typen hårnålar, nålar och andra små metallföremål som kan komma in i apparaten. Detta kan resultera i farliga elektriska stötar eller elchocker. Barnfamiljer skall vara extra uppmärksamma så att inte barnen petar in saker som kan riskera att ge stötar.

## Rengöring

Använd bara en ren, mjuk trasa för avtorkning. Använd aldrig rengöringsmedel eller lösningsmedel.

## Onormal lukt

Om apparaten börjar lukta konstigt eller lukta rök, skall strömmen brytas direkt. Dra ur sladden ur vägguttaget. Kontakta din handlare eller auktoriserade serviceverkstad direkt.

## Om du inte skall använda apparaten

Om du inte skall använda apparaten under en längre tid bör nätsladden kopplas ur vägguttaget. Skador som kräver service Apparaten skall repareras av en kvalificerad tekniker när:

- Nätsladden är skadad eller behöver bytas.
- Föremål har fallit in i apparatens hölje.
- Apparaten har utsatts för väta.
- Apparaten inte uppför sig som normalt.
- Apparaten har tappats eller om höljet skadats.

## Service

Användaren skall inte försöka åtgärda några fel eller skador förutom det som beskrivs i bruksanvisningen.

Om någon av delarna i CASA systemet behöver service skall man vända sig till följande adress:

Hi-Fi Klubben  
Serviceavdelningen  
Box 5116  
S-40223 Göteborg  
Tel: 031/3351020 Fax 031/3351029

## SIKKERHEDSINSTRUKTIONER



### ADVARSEL

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Strømkablerne skal placeres, så man ikke går hen over dem, eller så skarpe genstande ikke kommer i kontakt med dem. Vær især opmærksom på de svage punkter som stikket og det sted, hvor kablet forlader apparatet. Lad være med at rykke i kablet.

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Huller og riller i apparatet sikrer ventilation. For at sikre en pålidelig drift og for at beskytte mod overophedning må disse åbninger ikke dækkes til. Apparatet må ikke stilles på et tæppe, seng eller sofa, da disse underlag kan forhindre ventileringen. Ligeledes må apparatet heller ikke placeres i lukkede forhold som en tæt-pakket bogreol o.lign.

### Placering

Udstyret må kun stilles på hyller eller standere, der er anbefalet af producenten. På vægge og lofter må højttaleren ligeledes kun placeres, som det anbefales af producenten.

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Hold apparatet væk fra fugtige rum, og undgå vand nær apparatet. Det er meget farligt!!!

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Hvis der fra apparatet opstår en unormal lugt, så afbryd straks strømmen fra kontakten og henvend dig til din forhandler.

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 apparatet har været tabt eller chassiset er blevet beskadiget.

### Servicering

Forhandleren bør altid servicere problemer, hvis løsning ikke er anført i brugsvejledningen.

**VAROITUS**

Vältyäksesi sähköiskun mahdollisuudelta älä avaa laitetta tai laitteen takapaneelia. Tarvittaessa huoltotoimenpiteitä ota yhteyttä maahantuojaan.

**SYMBOLIEN MERKITYS**

Nuolikärkinen salama tasakylkisessä kolmiossa varoittaa mahdollisesta sähköiskun vaarasta.

**VAROITUKSET**

EHKÄISTÄKSESI MAHDOLLISET TILIPALON TAI SÄHKÖISKUN VAARAT ÄLÄ KÄYTÄ LAITETTA KOSTEASSA TILASSA.

HUOMIOI KAIKKI LAITTEESSA OLEVAT VAROITUKSET JA TUTUSTU HUOLELLISESTI KÄYTTÖOHJEeseen. ÄLÄ AVAA LAITETTA. LAITTEEN SAA AVATA VAIN MAAHANTUOJAN VELVOITTAMA HUOLTOLIIKE.

KÄYTÄ AINA MAADOITETTUA VERKKOJOHTOA. ÄLÄ KÄYTÄ MAADOITTAMATONTA JATKOJOHTOA.

TARKISTA, ETTÄ LAITTEEN TAKAPANEELISSA OLEVA KÄYTTÖJÄNNITE ON ASETETTU VASTAAMAAN KÄYTETTÄVISSÄ OLEVAA VERKKOJÄNNITETTÄ.

ÄLÄ TYÖNNÄ MITÄÄN ESINEITÄ LAITTEEN SISÄLLE.

TARKASTA, ETTÄ LAITE VOI JÄÄHTYÄ KUNNOLLA. ÄLÄ SJOITA LAITETTA SITEN, ETTÄ SE EI PÄÄSE KUNNOLLA JÄÄHTYMÄÄN.

- A. LAITTEEN SÄÄTÖYKSIKÖN MINIMIETÄISYYS PINNOISTA ON 125MM.
- B. LAITE TARVITSEE VÄHINTÄÄN 50MM TILAA YMPÄRILLEEN.

HÄIRIÖIDEN ESTÄMISEKSI VARMISTA, ETTÄ LAITTEEN VIRTAJA SIGNAALIKAAPELIT EIVÄT OLE KIINNI TOISSAAN. ÄLÄ MYÖSKÄÄN SJOITA SIGNAALIKAAPELEITA SAMAN YHTEYTEEN PUHELIN-, TIETOLIIKENNE- TAI TELEFAKSIIKAAPELEIDEN YHTEYTEEN.

KÄYTÄ AINA TEHTAAN HYVÄKSYMIÄ LIITTIMIÄ KYTKIESSÄSI SIGNAALI- TAI KAIUTINKAAPELEITA. ÄLÄ KOSKAAN KÄYTÄ TIETOLIIKENNE- TAI PUHELINJOHTIMIA TAI NIIDEN LIITTIMIÄ LAITTEEN KYTKEMISEEN.

Estäksesi tulipalon tai sähköiskut, älä jätä laitetta kosteuteen tai sateeseen.

Huomioi kaikki laitteeseen kiinnitetyt varoitukset. Välttääksesi sähköiskut älä avaa laitetta. Älä myöskään irrota vahvistinosaa laitteen takapaneelistä. Laitteen sisällä ei ole

kotitaloudessa vaihdettavia osia. Ota yhteyttä huoltoon liittyvissä ongelmissa Suomen Hi-Fi Klubiin.

Estääksesi mahdollisen sähköiskun käytä aina alkuperäistä verkkojohdinta. Varmista, että verkkojohdin on kunnolla työnnetty paikalleen ennen kuin kytket virran.

Varmista, että laitteen takapaneelissa oleva jännitteen valintakytkin vastaa käyttämäsi jännitettä.

Laitteen päävirtasulake on sijoitettu laitteen takaosaan vahvistinpaneeliin. Vaihdeettavan sulakkeen arvon tulee olla alkuperäistä vastaava.

Älä maadoita laitetta.

Varmista laitteen kunnollinen jäähtyvyys, älä peitä jäähdytysripoja ja varmista, että rivat ovat aina pystysuunnassa.

Subwoofer on raskas ja tilaa vievä, se tulisi aina siirtää tai nostaa kahden ( 2 ) henkilön toimesta.

Tarkasta ettei laitteen tai maton alla ole kaapeleita, jotka voivat vahingoittaa laitteen pohjassa olevien piikkien vaikutuksesta.

Älä " kävelytä " laitetta laitteen alla olevien piikkien varassa, koska ne voivat irrota epätasaisen painonjakautuman johdosta ja aiheuttaa näin vahinkoa.

Varo ettet jätä jalkaasi piikkien alle.

## TURVALLINEN KÄYTTÖ

### Lue tämä sivu huolellisesti

Ennen kuin otat tuotteen käyttöön tutustu huolellisesti käyttöohjeeseen, sekä turvamääräyksiin.

### Virtalähteet

Laitteen saa liittää vain sellaiseen virtalähteeseen, joka mainitaan asennus- / käyttöohjeessa.

### Virtajohtojen suojaus

Virtajohto tulee sijoittaa lattialle siten, ettei se joudu tallattavaksi tai ettei sen päälle aseteta mitään painavaa, joka voisi mahdollisesti vahingoittaa johtoa.

Verkkojohto tulee irrottaa pistorasiasta ainoastaan vetämällä pistotulpasta.

### Jäähtyminen

Varmistaaksesi laitteen mahdollisimman pitkän käyttöiän huolehdi siitä että laitteen ympärillä on riittävästi tilaa, jotta laite pääsee jäähtymään kunnolla. Laitetta ei saa peittää.

Laitetta ei myöskään saa sijoittaa sängyn, sohvan taikka muun sellaisen huonekalun alle joka mahdollisesti estää kunnollisen ilmanvaihtumisen. Laitetta ei myöskään saa sijoittaa seinän tai muun sellaisen rakenteen sisälle, jossa ilmanvaihtuminen on rajoittunut.

### Jalusta tai kärry

Laitteen saa sijoittaa vain valmistajan hyväksymän laite- / kuljetustelineen tai jalustan päälle.

### Seinä- tai kattoasennus

Laitteen voi asentaa seinälle tai kattoon vain tehtaan suosittelemalla tavalla.

### Vesi ja kosteus

Laitetta ei saa käyttää lähellä vettä, esim. pesuhuone, keittiön pesualtaat, kodinhoituhuone, sauna tai uima-allas tai vastaava.

### Lämpötila

Laite ei toimi täysin normaalisti alhaisissa lämpötiloissa.

Minimisuositus on +5°C.

### Kuumuus

Laitetta ei saa asentaa lähelle lämpöä tuottavaa elementtiä. kuten esim. lämmityspatteri tai takka

### Sähköiskun vaara

Pidä huolta ettei laitteen jäähdytysaukoista pääse sisälle pieniä esineitä tai vettä / muita nesteitä. Jos laitteen sisälle pääsee esim. hiussolki on sähköiskun vaara mahdollinen. Älä koskaan päästä lapsia työntämään mitään, erikoisesti metalliesineitä laitteen sisälle.

### Maadoitus

Laite tulee aina kytkeä maadoitettuun pistorasiaan. Jos käytät jatkojohtoa tulee myös sen olla maadoitettu.

### Puhdistaminen

Pyöhi laitetta aina kuivalla liinalla. Älä koskaan käytä

mitään puhdistusainetta, sillä se saattaa vahingoittaa laitteen pintaa.

### Epänormaali haju

Jos laitteesta ilmenee normaalia poikkeavaa hajua tai savua kytke välittömästi laite pois päältä ja irrota verkkojohto pistorasiasta. Ota yhteyttä myyjäliikkeeseen.

### Kun laite ei ole käytössä

Verkkojohto tulee pitää irrotettuna pistorasiasta aina silloin, kun laite on poissa käytöstä pidempiä aikajaksoja kerrallaan. Esim. lomamatka.

### Huoltoa vaativat viat

Kun verkkojohto tai pistotulppa on vahingoittunut.

Laitteen sisälle on joutunut nestettä tai esineitä.

Laite on joutunut alttiiksi kosteudelle.

Laite ei toimi normaalisti.

Laite on pudotettu, tai sen ulkokuori on vaurioitunut.

Laitteen huollon saa suorittaa vain ja ainoastaan maahantuojan hyväksymä huoltoliike.



## -ΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ

Διαβάστε προσεκτικά αυτή τη σελίδα για να εξασφαλίσετε την ασφαλή λειτουργία της συσκευής.



## ΠΡ-Σ-ΧΗ

Για να περιορίσετε τον κίνδυνο ηλεκτροπληξίας μην ανοίξετε για κανένα λόγο το κάλυμμα ή την πίσω πλευρά της συσκευής. Δεν υπάρχουν στο εσωτερικό της συσκευής μέρη που μπορούν να επισκευαστούν από το χρήστη. Αναθέστε ενδεχόμενη επισκευή σε ειδικευμένο προσωπικό.



## ΕΠΕΞΗΓΗΣΗ ΣΥΜΒ-ΛΩΝ

Το τρίγωνο με το τεθλασμένο βέλος σημαίνει την ύπαρξη στο εσωτερικό της συσκευής σημείων με υψηλή τάση ρεύματος, των οποίων η μόνωση δεν είναι δυνατή και τα οποία μπορούν να προκαλέσουν ηλεκτροπληξία.



Το τρίγωνο με το θαυμαστικό επιστελλει την προσοχή του χρήστη σχετικά με την ύπαρξη σημαντικών οδηγιών χρήσης και συντήρησης, στις οποίες θα πρέπει να ανατρέξει.

## ΠΡ-ΦΥΛΑΞΕΙΣ

ΓΙΑ ΝΑ ΑΠ-ΦΥΓΕΤΕ Τ- ΕΝΔΕΧ-ΜΕΝ- ΠΥΡΚΑΓΙΑΣ Ή ΗΛΕΚΤΡ-ΠΛΗΞΙΑΣ, ΜΗΝ ΕΚΘΕΤΕΤΕ ΤΗ ΣΥΣΚΕΥΗ ΣΕ ΒΡ-ΧΗ Ή ΥΓΡΑΣΙΑ

ΑΚ-Λ-ΥΘΗΣΤΕ -ΛΕΣ ΤΙΣ -ΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ Π-Υ ΑΝΑΓΡΑΦ-ΝΤΑΙ ΕΠΑΝΩ ΣΤΗ ΣΥΣΚΕΥΗ.

ΓΙΑ ΝΑ ΑΠ-ΦΥΓΕΤΕ Τ- ΕΝΔΕΧ-ΜΕΝ- ΗΛΕΚΤΡ-ΠΛΗΞΙΑΣ ΜΗΝ ΑΝ-ΙΞΕΤΕ Τ- ΕΞΩΤΕΡΙΚ- ΚΑΛΥΜΜΑ ΤΗΣ ΣΥΣΚΕΥΗΣ ΕΛΕΓΧ-Υ (CONTROLLER). ΔΕΝ ΥΠΑΡΧ-ΥΝ ΣΤ- ΕΞΩΤΕΡΙΚ- ΜΕΡΗ Π-Υ ΜΠ-Ρ-ΥΝ ΝΑ ΕΠΙΣΚΕΥΑΣΤ-ΥΝ ΑΠ- Τ- ΧΡΗΣΤΗ. ΓΙΑ -Π-ΙΑΔΗΠ-ΤΕ ΕΠΙΣΚΕΥΗ ΑΠΕΥΘΥΝΘΕΙΤΕ ΣΤΗΝ ΑΝΤΙΠΡ-ΣΩΠΕΙΑ ΤΗΣ Β&W.

ΓΙΑ ΝΑ ΑΠ-ΦΥΓΕΤΕ Τ- ΕΝΔΕΧ-ΜΕΝ- ΗΛΕΚΤΡ-ΠΛΗΞΙΑΣ ΜΗΝ ΧΡΗΣΙΜ-Π-ΙΕΙΤΕ Π-ΛΥΠΡΙΖΑ Ή ΠΡ-ΕΚΤΑΣΕΙΣ (ΜΠΑΛΑΝΤΕΖΕΣ) ΣΤΙΣ -Π-ΙΕΣ ΔΕΝ ΕΦΑΠΤ-ΝΤΑΙ ΚΑΛΑ -Ι ΑΚΡ-ΔΕΚΤΕΣ Τ-Υ ΦΙΣ.

ΒΕΒΑΙΩΘΕΙΤΕ -ΤΙ Η ΤΑΣΗ Τ-Υ ΡΕΥΜΑΤ-Σ Π-Υ ΑΝΑΓΡΑΦΕΤΑΙ ΕΠΑΝΩ ΣΤΗ ΣΥΣΚΕΥΗ ΕΛΕΓΧ-Υ ΕΙΝΑΙ ΙΔΙΑ ΜΕ ΑΥΤΗ ΤΗΣ ΠΑΡ-ΧΗΣ ΡΕΥΜΑΤ-Σ ΣΤΗΝ -Π-ΙΑ ΘΑ ΤΗ ΣΥΝΔΕΣΕΤΕ.

-Ι ΣΥΣΚΕΥΕΣ IHF ΘΑ ΠΡΕΠΕΙ ΝΑ ΕΙΝΑΙ ΓΕΙΩΜΕΝΕΣ.

ΓΙΑ ΚΑΝΕΝΑ Λ-Γ- ΜΗΝ ΒΑΛΕΤΕ ΚΑΠ-Ι- ΑΝΤΙΚΕΙΜΕΝ- ΣΤ- ΕΞΩΤΕΡΙΚ- ΤΗΣ ΣΥΣΚΕΥΗΣ ΕΛΕΓΧ-Υ ΑΠ- ΤΑ ΑΝ-ΙΓΜΑΤΑ ΕΞΑΕΡΙΣΜ-Υ.

ΕΞΑΕΡΙΣΜ-Σ - Η ΣΥΣΚΕΥΗ ΘΑ ΠΡΕΠΕΙ ΝΑ Τ-Π-ΘΕΤΗΘΕΙ ΣΕ ΣΗΜΕΙ- ΤΕΤ-Ι- ΩΣΤΕ ΝΑ ΕΞΑΣΦΑΛΙΖΕΤΑΙ - ΕΠΑΡΚΗΣ ΕΞΑΕΡΙΣΜ-Σ ΤΗΣ.

Α. ΓΙΑ ΤΗ ΣΥΣΚΕΥΗ ΕΛΕΓΧ-Υ (CONTROLLER): ΦΡ-ΝΤΙΣΤΕ ΩΣΤΕ ΝΑ ΥΠΑΡΧΕΙ ΚΕΝ- Τ-ΥΛΑΧΙΣΤ-Ν 50 ΧΙΛΙ-ΣΤΩΝ ΜΠΡ-ΣΤΑ, ΠΙΣΩ ΚΑΙ ΠΛΑΓΙΑ ΚΑΙ 125 ΧΙΛΙ-ΣΤΩΝ ΕΠΑΝΩ ΑΠ- ΤΗ ΣΥΣΚΕΥΗ.

Β. ΓΙΑ ΤΑ ΗΧΕΙΑ: ΘΑ ΠΡΕΠΕΙ ΝΑ ΥΠΑΡΧΕΙ ΚΕΝ- Τ-ΥΛΑΧΙΣΤ-Ν 50 ΧΙΛΙ-ΣΤΩΝ ΣΤΗΝ ΠΕΡΙ-ΧΗ Π-Υ ΒΡΙΣΚΕΤΑΙ ΠΙΣΩ ΑΠ- ΤΑ ΗΧΕΙΑ.

ΦΡ-ΝΤΙΣΤΕ ΩΣΤΕ ΝΑ ΥΠΑΡΧΕΙ ΑΡΚΕΤΗ ΑΠ-ΣΤΑΣΗ ΜΕΤΑΞΥ ΤΩΝ ΚΑΛΩΔΙΩΝ ΓΙΑ ΤΙΣ ΣΥΝΔΕΣΕΙΣ CASA ΚΑΙ ΤΩΝ Μ-ΝΩΜΕΝΩΝ ΚΑΛΩΔΙΩΝ ΡΕΥΜΑΤ-Σ.

ΑΝ ΤΑ ΚΑΛΩΔΙΑ ΕΙΝΑΙ ΜΕΣΑ ΣΕ ΕΙΔΙΚ-ΥΣ ΑΓΩΓ-ΥΣ (Λ-ΥΚΙΑ) ΔΕΝ ΘΑ ΠΡΕΠΕΙ ΣΤ-Ν ΙΔΙ- ΑΓΩΓ- ΝΑ ΥΠΑΡΧ-ΥΝ ΚΑΛΩΔΙΑ ΣΥΝΔΕΣΕΩΝ CASA ΚΑΙ ΚΑΛΩΔΙΑ ΤΗΛΕΠΙΚ-ΙΝΩΝΙΩΝ Ή Μ-ΝΩΜΕΝΑ ΚΑΛΩΔΙΑ ΡΕΥΜΑΤ-Σ.

ΧΡΗΣΙΜ-Π-ΙΗΣΤΕ ΤΑ ΦΙΣ ΚΑΙ ΤΙΣ ΥΠ-Δ-ΧΕΣ ΣΥΝΔΕΣΕΩΝ Μ-Ν- ΜΕ ΣΥΣΚΕΥΕΣ CASA Π-Υ ΕΧ-ΥΝ ΤΗΝ ΕΓΚΡΙΣΗ ΤΗΣ Β&W.

ΜΗΝ ΧΡΗΣΙΜ-Π-ΙΕΙΤΕ ΤΑ ΦΙΣ ΚΑΙ ΤΙΣ ΥΠ-Δ-ΧΕΣ ΣΥΝΔΕΣΕΩΝ ΓΙΑ ΝΑ ΣΥΝΔΕΘΕΙΤΕ ΣΕ ΔΙΚΤΥΑ Ή ΣΥΣΤΗΜΑΤΑ ΥΠ-Λ-ΓΙΣΤΩΝ Ή ΤΗΛΕΠΙΚ-ΙΝΩΝΙΩΝ.

## ΣΗΜΑΝΤΙΚΕΣ ΠΡ-ΦΥΛΑΞΕΙΣ

Διαβάστε προσεκτικά αυτή τη σελίδα για να εξασφαλίσετε την ασφαλή λειτουργία της συσκευής.

Παρακαλούμε, πριν θέσετε σε λειτουργία τη συσκευή διαβάστε όλες τις οδηγίες ασφαλείας και λειτουργίας που περιλαμβάνονται στα συνοδευτικά φυλλάδια, και λάβετε όλες τις προφυλάξεις που αναφέρονται στα εγχειρίδια χρήσης και/ή εγκατάστασης. Ακολουθήστε πιστά τις οδηγίες ασφαλείας και χρήσης της συσκευής, και κρατήστε τα φυλλάδια για ενδεχόμενη μελλοντική χρήση.

## Παροχή ρεύματος

Η συσκευή θα πρέπει να συνδεθεί μόνο σε παροχή ρεύματος με τα χαρακτηριστικά που αναφέρονται στις οδηγίες εγκατάστασης/χρήσης ή που αναγράφονται επάνω στην ίδια τη συσκευή. Για συσκευές που λειτουργούν με μπαταρίες συμβουλευτείτε τις οδηγίες εγκατάστασης ή/και χρήσης.

## Προστασία του καλωδίου ρεύματος

Τα καλώδια ρεύματος θα πρέπει να τοποθετούνται με τέτοιο τρόπο ώστε να μην υπάρχει κίνδυνος να πατηθούν ή να τρυπηθούν από αιχμηρά αντικείμενα που έχουν τοποθετηθεί επάνω ή δίπλα σε αυτά. Ιδιαίτερη προσοχή θα πρέπει να δοθεί στο σημείο που το καλώδιο συνδέεται στην πρίζα, σε πολύπριζο ή προέκταση, και στο σημείο που βγαίνει από τη συσκευή. Μην τεντώνετε υπερβολικά και μην τραβάτε το καλώδιο. Για να βγάλετε το καλώδιο από την πρίζα, πιάστε το καλά από το φιο και τραβήξτε το. Ποτέ μην τραβήξετε το ίδιο το καλώδιο.

## Εξαερισμός

Τα ανοίγματα και οι οπές που υπάρχουν στη συσκευή προορίζονται για τον εξαερισμό της. Για να εξασφαλίσετε τη σωστή λειτουργία της συσκευής και για να αποφύγετε το ενδεχόμενο υπερθέρμανσής της δεν θα πρέπει για κανένα λόγο να καλύψετε τα ανοίγματα αυτά. Η συσκευή θα πρέπει να τοποθετηθεί με τέτοιο τρόπο ώστε η θέση της να μην εμποδίζει το σωστό εξαερισμό της. Μην τοποθετήσετε τη συσκευή επάνω σε έπιπλα που καλύπτονται από ύφασμα (καναπέδες, κρεβάτια κ.λπ.) ή επάνω σε χαλιά γιατί μπορεί οι πτυχές ή η πλέξη να καλύψουν τα ανοίγματα εξαερισμού. Επίσης, μην τοποθετήσετε τη συσκευή σε κλειστά έπιπλα (ράφια βιβλιοθήκης, ντουλάπια κ.λπ.) παρά μόνο αν είστε βέβαιος/η ότι θα υπάρχει επαρκής εξαερισμός, ή αν έχετε ακολουθήσει κατά γράμμα τις σχετικές οδηγίες του κατασκευαστή.

## Ράφια και βάσεις

Τοποθετήστε τη συσκευή μόνο σε έπιπλα ή βάσεις που εγκρίνονται από τον κατασκευαστή.

## Ανάρτηση στον τοίχο ή στο ταβάνι

Αν θέλετε να τοποθετήσετε τη συσκευή στον τοίχο ή στο ταβάνι, θα πρέπει να το κάνετε μόνο με τον τρόπο που

συνιστά ο κατασκευαστής.

Θησέως 8-10 Καλλιθέα  
176 76 Αθήνα

#### Νερά και υγρασία

Μην χρησιμοποιείτε τη συσκευή κοντά σε νερά – π.χ. κοντά στη μπανιέρα, στο νεροχύτη, μέσα σε κάποιο υγρό υπόγειο, κοντά σε πισίνα κ.λπ.

#### Θερμοκρασία

Η συσκευή μπορεί να μην λειτουργεί καλά σε υπερβολικά χαμηλές θερμοκρασίες χώρου. Η ιδανική θερμοκρασία λειτουργίας της συσκευής είναι πάνω από +5° Κελσίου.

#### Θερμότητα

Μην τοποθετήσετε τη συσκευή κοντά σε πηγές θερμότητας όπως καλοριφέρ, σόμπες, τζάκια κ.λπ., καθώς και κοντά σε άλλες συσκευές που εκπέμπουν θερμότητα (π.χ. ενισχυτές).

Για να ελαχιστοποιήσετε το ενδεχόμενο ηλεκτροπληξίας Προσέξτε ώστε να μην εισχωρήσουν στο εσωτερικό της συσκευής – π.χ. από τα ανοίγματα εξαερισμού – υγρά ή αντικείμενα. Εάν πέσει μέσα στη συσκευή κάποιο μεταλλικό αντικείμενο όπως ένα τσιμποδάκι ή μία καρφίτσα μπορεί να προκαλέσει βραχυκύκλωμα. Ειδικά εάν υπάρχουν παιδιά στο σπίτι, δεν θα πρέπει για κανένα λόγο να τα αφήσετε να βάλουν οτιδήποτε, και κυρίως μεταλλικά αντικείμενα, στο εσωτερικό της συσκευής.

#### Γείωση ή Πάλωση

Η συσκευή θα πρέπει να είναι γειωμένη. Εάν χρησιμοποιήσετε προέκταση ή κάποιο άλλο καλώδιο ρεύματος από αυτό που έχει η συσκευή, θα πρέπει να είναι τριπολικό (3-core), με ενσωματωμένο το κατάλληλο φως, και να είναι εγκεκριμένο στη χώρα που θα χρησιμοποιηθεί.

#### Καθαρισμός

Καθαρίστε τη συσκευή με ένα απαλό, στεγνό κομμάτι ύφασμα. Μην χρησιμοποιήσετε διαλυτικά ή υγρά απορρυπαντικά.

#### Μη φυσιολογική οσμή

Εάν αντιληφθείτε μία όχι συνηθισμένη οσμή ή καπνό, κλείστε αμέσως τη συσκευή και βγάλτε την από την πρίζα. Επικοινωνήστε με το κατάστημα από όπου την αγοράσατε ή με το τμήμα επισκευών (service) της αντιπροσωπείας.

#### Εκτός λειτουργίας

Εάν δεν πρόκειται να χρησιμοποιήσετε τη συσκευή για μεγάλο χρονικό διάστημα, βγάλτε την από την πρίζα.

#### Ζημιά που απαιτεί επισκευή

Στις ακόλουθες περιπτώσεις θα πρέπει να δώσετε τη συσκευή για επισκευή από ειδικευμένο τεχνικό προσωπικό:

αν έχει υποστεί ζημιά το καλώδιο ρεύματος ή το φως ή αν έχουν πέσει αντικείμενα ή έχουν χυθεί υγρά στη συσκευή ή  
αν έχει εκτεθεί σε βροχή ή  
αν δείχνει να μην λειτουργεί κανονικά ή παρουσιάζει σημαντική αλλαγή στην απόδοσή της ή  
αν πέσει κάτω ή πάθει ζημιά το εξωτερικό της περιβλήμα.

#### Επισκευή

– χρήστης δεν θα πρέπει για κανένα λόγο να επιχειρήσει να επισκευάσει ή να επεμβεί με οποιοδήποτε τρόπο στη συσκευή πέρα από όσα αναφέρονται στις οδηγίες εγκατάστασης ή/και χρήσης.

Εάν χρειαστεί επισκευή οποιαδήποτε από τις μονάδες που αποτελούν το σύστημα CASA, θα πρέπει να επιστραφεί για επισκευή ή αλλαγή στη διεύθυνση:

Τηλεοπτική – Αφοι Σαραβέλου ABEE

### SYSTEM DESCRIPTION

CASA is a radically different multi-source, multi-room system. It is designed to offer a high quality, permanent audio installation, reliably and independently serving many rooms in one home through a simple yet powerful user-interface. For the installer it also offers simplicity of installation and reliability in use.

B&W Loudspeakers has an outstanding reputation for quality audio products. In designing its CASA multi-room system B&W set outstanding sound quality as an overriding priority.

Conventional multi-room systems use centralised power amplifiers to drive remote passive loudspeakers. This approach often limits the size and scope of a system and its architecture. Remote powered speakers are one obvious solution. However, the industry has avoided powered speaker systems because of the need to install both power and signal cabling to each speaker. There is an additional problem involved with powered speakers in needing to switch them on and off remotely through separate control wiring.

The CASA System side-steps these issues by using Active Speakers driven by remote DC power supplies in a central Controller. Output lines are driven in balanced form by independent amplifiers in the Controller. This form of working permits far longer cable runs than can generally be provided in domestic audio systems without loss of quality due to cable impedance effects or interference.

The connection requirement is for five signals between Active Speaker and Controller, namely two power, two signal and a ground. The adoption of Category 5 shielded RJ45 plugs and cables means the CASA System relies on just one proven connector type and cabling, familiar from the computer and telecommunications industries. This neatly satisfies all requirements for reliability and ease of installation.

The provision of DC power wiring to each Active Speaker gave the CASA design team an easy route down which to run data from infra red (IR) receivers in the speakers back to the central Controller. This IR data is carried at high frequencies and 'piggy backs' the power supply lines, eliminating the need for separate control conductors. Third-party IR remotes can also send back their IR data to the central Controller through this route.

Considerable effort has been put into designing the controlling software and the CASA Keypad Displays. The number of control keys has been reduced without putting limitations on flexibility or expandability. The design criterion for the operating software was intuitive, first-time use. Usability was also enhanced by taking the opportunity to provide a remote handset that could be used in place of a wall-mounted Keypad by communicating with the central controller through an IR receiver in a Active Speaker or Keypad.

The CASA Interface is a two-channel power supply that opens up the possibilities of using CASA through large buildings and widely distributed sites. The Interface can relieve the load on CASA Controllers and cost-effectively deliver extra power to system designs featuring many loudspeakers neatly by-passing loading issues. The open architecture of the CASA System allows for

endless possibilities of control via the RS-232 port. These connections allow integration with home automation products providing limitless configurability as defined by the home automation control system.

CASA is the first domestic audio system to use true, in-wall Active Speakers. Provision for multiple Controllers; a range of Active Speakers (some with active crossovers); additional power supplies; ancillary input and output modules and the division of zones into Sub-zones for the independent control of volume, all make CASA one of the most flexible, expandable, yet high quality multi-room systems available.

## DEFINITIONS

The CASA multi-source, multi-room system is built around a central **Controller** driving **Active Loudspeakers**. Control over source switching and volume is by wall mounted **Keypad/Display** units (often referred to here simply as **Keypads**) and/or by hand-held **Remote Controls**.

Each Controller comprises of four independent digitally controlled pre-amplifiers selecting from four possible sources. Low-voltage power supplies feed four stereo outputs driving Active Loudspeakers. Each stereo output is under the control of a connected Keypad or IR remote control and comprises a CASA **Zone**.

The CASA **Interface** is an additional two-channel power supply to drive long cable runs and provide more power for elaborate systems. The CASA **Interface** can also be used to power CASA active speakers outside a CASA system to provide a superb sound quality installation. CASA Controllers can be linked one to another via the **CANbus** (Controller Area Network bus). All Controllers are shipped set as **Slave** Units. One Controller in a CANbus connected group must be designated a **Master** Controller during set-up – see section System Sources in the chapter Initial System Set-up.

The CASA System can relay its own **IR** (infra red) codes (**CASA codes**) from its own remote controls and from third-party remotes (**Native codes**). This enables CASA Controllers to pass native IR codes from one to another and out via either the **Flood IR** (a high power, wide area IR output) or electrical IR outputs to control connected third-party equipment from their own remote controls.

CASA Active Loudspeakers have their own on-board power amplification. Some use passive crossover networks for drive unit integration, others feature full active electronic crossovers. The first speakers (nearest the Controller) in a particular zone are called the **Master speakers**. More than one pair of speakers can be connected in a zone to receive the same signal (subject to certain operating limitations – see section Loading Considerations in the chapter System Design).

Subsidiary speakers may be connected to the buffered outputs (marked '2nd Speaker') on an ACM60 master speaker pair. They will operate at the same volume as the master speakers and are called '**Daisy chained speakers**'.

The RJ45 sockets marked '2nd Speaker' on the AWM70, AWM65, have a function when the **Sub-zone Module** is added (or activated in the case of the AWM650 and ACM80), as does the 4/4 socket marked 'Volume'. When no Sub-zone Module is fitted or activated these connectors have no function. A subsidiary pair of speakers with their own volume control is termed a **Sub-zone**.

A Sub-zone may be connected beyond the master speakers only if the optional volume control modules are present or enabled on the master speakers. Certain operational limitations will apply:

The ACM60/65 cannot be used as a master speaker for a Sub-zone as it has no option to fit a Sub-zone Module. The AWM650 and ACM80 have the subzone fitted. To use please ensure the dip switch is in the correct position (See *System Components*, Sub-zone Volume Module section).

SYSTEM COMPONENTS

CONTROLLER (Figure 1a and 1b)

The CASA Controller is at the heart of the CASA multi-source, multi-room system. It contains four independent, digitally controlled preamplifiers, each of which can select from four available sources. In place of conventional power amplifiers the CASA Controller is equipped with low voltage power supplies feeding balanced output lines independently to four zones. The choice of low-voltage balanced working permits the Controller to drive cable lengths far in excess of that generally provided by domestic audio equipment. Each zone amplifier can drive its Active Speakers over anything up to 600 feet (200 metres) (including any 'daisy chained' loudspeakers). This is typically an order of magnitude higher than can be achieved with conventional speaker wiring without loss of quality.

Power outlets (one switched and one un-switched socket) are provided on the rear of the Controller. The Controller runs third-party equipment from a comprehensive but restricted number of reliable code sets based on the most popular equipment available. There is no means of adding codes for other equipment. Four line level inputs are provided with 'loop through' permitting the sources connected to the Controller to be used locally to it, in an independent high-quality audio/video system for example. An additional main zone line level Pre-Out is provided.

The CASA System provides a means by which other equipment can be controlled by transmission of locally received IR codes. Received at either Keypad or Active Speaker (AWM70, AWM65 and AWM650 only), the third-party IR codes are 'looped through' the Controller and transmitted both by the Flood IR on the Controller front panel, and by the IR output jack marked 'All'. IR output jacks marked 'Tun', 'CD', 'Aux 1' and 'Aux 2' drive 'stick-on' IR output devices (window emitters) that can be positioned over the IR receivers on equipment to be controlled. Two independent channels of IR information are available with Tun and Aux 1 carrying one channel and CD and Aux 2 the other. This means that two pieces of equipment of the same make and type (two Denon tuners for example) can be controlled independently.

A pair of RCA phono sockets, marked 'IR In' and 'IR Out', provide a 'loop through' facility for native IR codes to be passed from one Controller to another in multiple Controller installations. A single RCA phono socket is provided on the rear panel of the Controller for the control of equipment using RC5 codes. Each of the four zones is equipped with three RJ45 connectors, one to the Keypad and one each to the first stereo pair of speakers. Status LEDs (marked 'Left' and 'Right') show if power is being taken by a speaker to help diagnosis of installation problems.

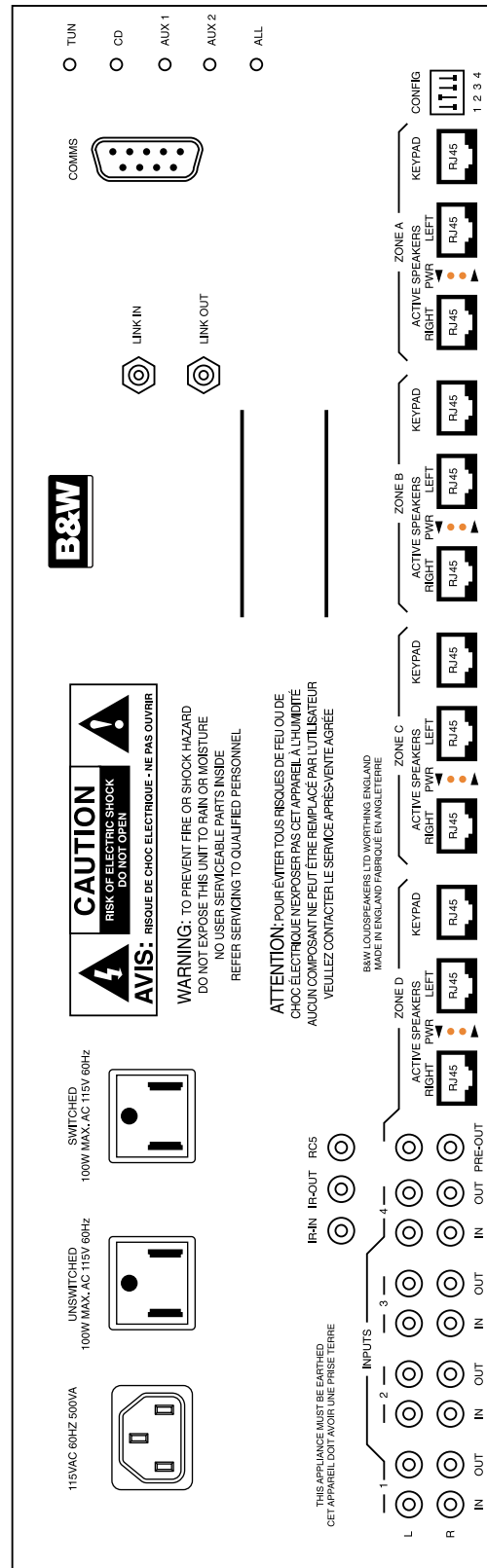


Figure 1a 110V model

Front panel indication is by LED and shows Zone On/Off, Zone receiving code and a Zone OK indicator, which illuminates when everything is fine. Each Controller preamplifier provides volume, tone and a balance control.

Overdriving is prevented by the speakers shutting off at maximum volume. In addition to a built-in current limiter each of the eight outputs (four zones, left and right) is protected by a polyswitch re-settable fuse. The Controller provides sufficient power for four 100W AWM70 speakers, eight 50W AWM65/AWM650 speakers or twenty 20W ACM60/ACM65/ACM80 speakers – see section Loading Considerations for further details.

Controllers can be 'daisy chained' through the CANbus In/Out 3.5mm jack sockets marked 'Link In' and 'Link Out'. This high-speed serial link permits a seamless expansion of the CASA System to include up to eight Controllers. A 9-pin serial D connector (RS-232) permits in-field updates of the operating firmware held in flash EPROM – the Controller is switched into Software Upgrade mode by setting Switch 2 on the rear panel DIP switch in the Down position as shown in Figure 2a/b and subsequently power cycling the controller. This bi-directional serial port will also allow the CASA System to be integrated with other home automation products and offers the future possibility of computer software control.

CONFIG



Figure 2a  
Normal

1 2 3 4

CONFIG



Figure 2b  
Software upgrade mode

1 2 3 4

The front panel Flood IR emitter is a high power, wide coverage infra red output that can operate third-party equipment with native IR codes relayed through the CASA System. The Flood IR can be disabled by setting Switch 1 on the rear panel DIP switch in the Up position as shown in Figure 3a/b – see sub-sections Adding...Additional Controllers and Using With...Any IR controlled source component for further considerations.

CONFIG



Figure 3a  
Flood IR enabled

1 2 3 4

CONFIG



Figure 3b  
Flood IR disabled

1 2 3 4

Battery backed RAM is used to store all system and clock settings. See General Remarks section within the *System Set-up* chapter.

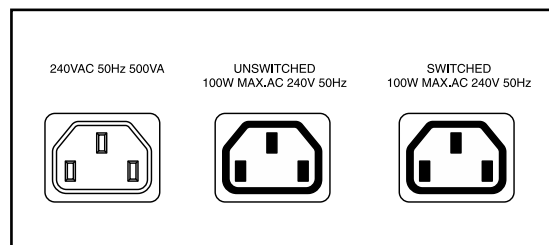


Figure 1b 240V model – Mains, Unswitched and Switched sockets

## KEYPAD/DISPLAY

(Figure 4)

The CASA integrated Keypad/Display fits in a double J-box. The Keypad incorporates an 8 character alphanumeric matrix display. A light sensor automatically adjusts display brightness to the ambient light conditions.

An IR receiver is also incorporated. When the Keypad/Display is in a zone that is switched off, or if the CASA System is All off, the Keypad/Display can display either the present time ( 11:32 (for example)) or two dots ( : ).

The time taken for the display to revert to showing the selected source after another command is issued is 3 seconds.

A Volume toggle key **VOL** and 13 additional keys in three banks are featured. The top row of five keys provides source switching for four remote and one local source. Positions 1 and 2 always control the remote Tuner and CD, positions 3 and 4 can be customised to a number of remote sources. Position 5 provides source switching of the Local source only if a CASA Local Input Module is installed in the zone and connected to this Keypad.

The second bank of four keys **|<**, **>|**, **<<** and **>>** performs various 'step up' and 'step down' functions depending on the source selected.

The bottom row of keys always features the **OFF** (Zone off/All off) and **MUTE** keys in positions 1 and 4 while positions 2 and 3 can be customised to work with source components having Favourite Station or Random Track selection features. Blank keys, **FAV.STN** and **RANDOM** keys and keys labelled with a range of alternative sources are supplied with every Keypad to permit customisation. When sources have been correctly set blank keys inserted into the Keypad produce no display response when pressed.

The **CASA** key in the top right of the display area can be used to display and set clock, alarm and sleep functions. The system Timer function can be used to set the system on and off times. In addition, a Sleep function can be set for 20 minute increments, up to 1 hour, that will turn off all sources including the Local source after that time has elapsed.

The rear panel of the Keypad/Display is provided with two RJ45 connectors (Next Keypad and Controller) through which the Keypad is connected to the CASA Controller and other Keypads. Keypads can be 'daisy chained' using these connections to provide additional Keypad control in any zone. There is a recommended maximum of three Keypads per zone.

A single 4/4 connector (Telephone Handset plug) carries serial data and clock information and is currently used only in conjunction with a Local Input module.

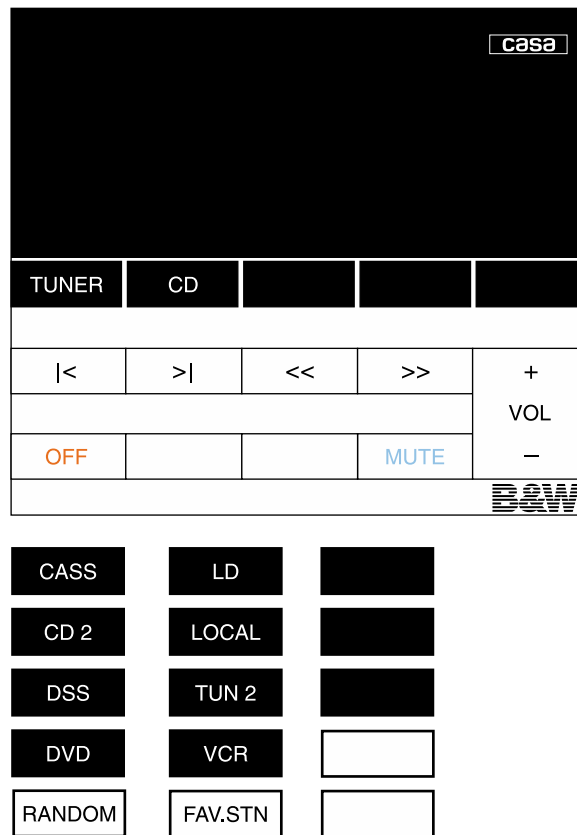


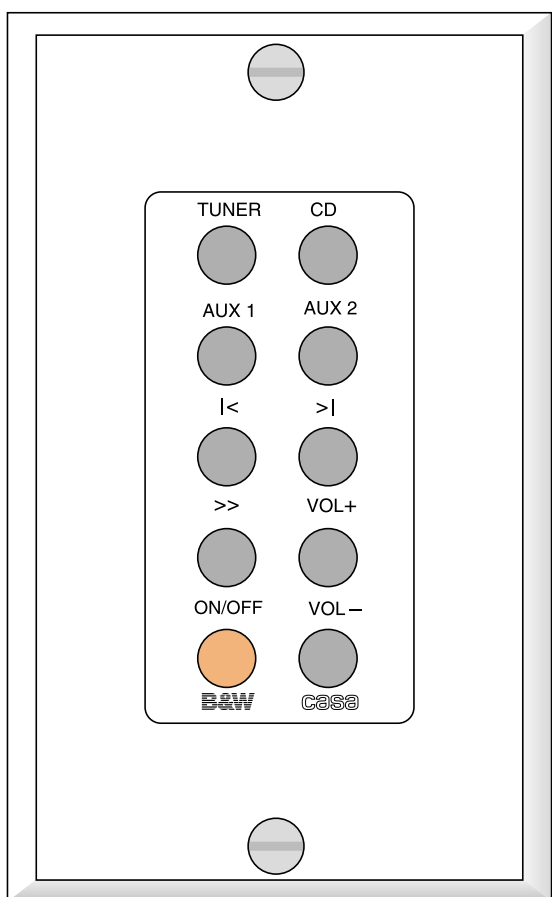
Figure 4  
CASA Keypad/Display as shipped with optional key set to be fitted by installer.

### SMALL KEYPAD

(Figure 5 and 6)

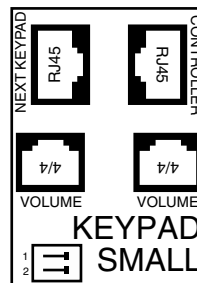
The CASA Small Keypad has been designed to be directly substituted for the CASA Keypad/Display in situations where a local input is not installed and where the display, timer and IR input features are not required. The Small Keypad fits in a single J-box. The Keypad has ten keys arranged in two banks of five. Four source buttons are featured.

The second group of three keys (<, > and >>|) performs various 'step up' and certain 'step down' functions depending on the source selected.











The paired keys to the bottom right offer volume up and volume down functions. There is an ON/OFF key to the lower left. Note: that the ON/OFF key has a slightly different mode of operation from the  key (Zone off/All off) on the Keypad/Display.

The rear of the Small Keypad is provided with two RJ45 connectors (Next Keypad and Controller) through which the Keypad is connected to the CASA Controller and other Keypads. Keypads can be 'daisy-chained' using these connections to provide additional Keypad control in any zone but there is a recommended maximum of three Keypad/Displays or 10 Small Keypads per zone.



The two 4/4 connectors (Telephone Handset plug) are for connection to the volume connector on the speakers. One socket connects to the Left speaker and one to the Right. A dual DIP switch is used to configure the Small Keypad for use in any one of four Sub-zones A, B, C or D as shown in Figure 7.

Figure 5 – Key layout of Small Keypad

- 1  Figure 7a – Sub-Zone A
- 2 
- 1  Figure 7b – Sub-Zone B
- 2 
- 1  Figure 7c – Sub-Zone C
- 2 
- 1  Figure 7d – Sub-Zone D
- 2 



## CASA REMOTE CONTROL

(Figure 8)

The CASA hand-held Remote control is an elegant and robust unit powered by two AAA batteries. It duplicates the functions of the Keypad though has an additional STOP key that puts any selected source into stop from any other mode (should this function be appropriate to the source selected). The Remote also features separate ZONE OFF and ALL OFF keys.

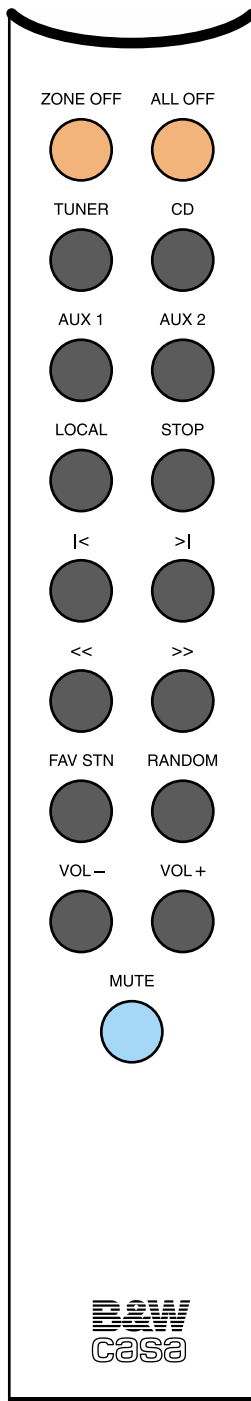


Figure 8

## LOUDSPEAKERS

### ACM™60

The ACM60 is a 20w, Active ceiling-mounted speaker using a 165 mm mid/bass driver with a 25 mm co-axially placed tweeter. No IR input is provided and there is no volume control option. Two RJ45 connectors (Controller and 2nd Speaker) are provided which can be used to 'daisy chain' up to five pairs of ACM60s in any zone. See section Loading Considerations for further details.

### ACM™65

The ACM™65 is a 2 x 25w, Active ceiling mounted speaker using a 6.5-inch Kevlar mid/bass driver with a 1-inch co-axially placed tweeter. No IR input is provided and there is no volume control option.

Two RJ45 Connectors on the rear of the amplifier board enables stereo from mono capability.

If the speakers are overloaded the LED will flash red. If the system conversely is running into clipping the LED will emit a green flash.

### ACM™80

The ACM™80 is a 2 x 30w Active ceiling mounted speaker using a 8-inch Kevlar mid/bass driver with a 1-inch co-axially placed tweeter. No IR input is provided.

Three RJ45 connectors (Controller, 2nd Speaker, and local) are provided to connect to the controller and to use a Local source (in conjunction with the local Input module). The RJ45 socket marked '2nd speaker' is used to provide a Sub-zone.

A single 4/4 connector marked volume is used when the speaker is configured to operate in subzone mode. If the speakers are overloaded the LED will flash red. If the system conversely is running into clipping the LED will emit a green flash.

### AWM™65

The AWM65 is a wall-mounted 1 x 50w Active Speaker using a 6.5-inch Kevlar® mid/bass driver and a 1-inch aluminium dome tweeter. A high-quality passive crossover is used to integrate the mid/bass driver and tweeter.

An IR receiver/modulator is mounted in the bottom centre of the baffle. This receives IR codes from the remote control and transmits those codes back to the Controller by way of the power supply. An LED tell-tale flashes to show when an IR command has been received.

The AWM65 motherboard supports an option to add a volume controlled Sub-zone Module.

Three RJ45 connectors (Controller, 2nd Speaker and Local) are provided to connect to the Controller and to use a Local source (in conjunction with the Local Input module). The RJ45 socket marked '2nd speaker' is used to provide a Sub-zone when a Sub-zone Module is fitted.

A single 4/4 connector (Telephone Handset plug) marked 'Volume' is used in conjunction with the Sub-zone Volume Module mentioned above.

## **AWM™650**

The AWM™650 is a wall-mounted 2 x 50w Active Speaker using a 6-inch Kevlar® mid/bass driver and a 1-inch aluminium dome tweeter. An active crossover is used to integrate the mid/bass driver and tweeter.

An IR receiver is mounted in the bottom centre of the baffle. This receives IR codes from the remote control and relays back to the controller by way of the power supply. An LED telltale flashes to show when an IR command has been received.

The AWM™650 motherboard includes a Sub-zone Module. This permits 'daisy chained' speakers on this output to be independently volume controlled.

Three RJ45 connectors (Controller, 2nd Speaker, and local) are provided to connect to the controller and to use a Local source (in conjunction with the local Input module). The RJ45 socket marked '2nd speaker' is used to provide a Sub-zone.

A single 4/4 connector marked volume is used in conjunction with the Sub-zone Volume Module mentioned above.

If the speakers are overloaded the LED will flash red. If the system conversely is running into clipping the LED will emit a green flash.

## **AWM™70**

The AWM70 is a wall-mounted 2 x 100w Active Speaker using a 7-inch Kevlar® mid/bass driver and a 1-inch aluminium dome tweeter. Two 100w channels of amplification are provided to power the HF and LF outputs of the active crossover. Amplifier power of this order requires substantial heatsinking which is provided both by a finned rear extrusion and the ribbed baffle itself.

The crossover has a damped 2nd-order network for the mid/bass unit and a 3rd-order slope for the tweeter. Active equalisation is used to enhance bass output and to perform drive unit correction and phase compensation giving smooth drive unit integration and good off-axis frequency response. The crossover also features overload and DC offset protection together with a power-on mute sequence (not using relays) that ensures power-up is free from clicks and bangs.

An IR receiver/modulator is mounted in the bottom centre of the baffle. This receives IR codes from the remote control and transmits those codes back to the Controller by way of the power supply. An LED tell-tale flashes to show when an IR command has been received.

The AWM70 motherboard supports an option to add a volume controlled Sub-zone Module. This will permit 'daisy chained' speakers on this output to be independently volume controlled.

Three RJ45 connectors (Controller, 2nd Speaker and Local) are provided to connect to the Controller and to use a Local source (in conjunction with the Local Input module). The RJ45 socket marked '2nd speaker' is used to provide a Sub-zone when a Sub-zone Module is fitted.

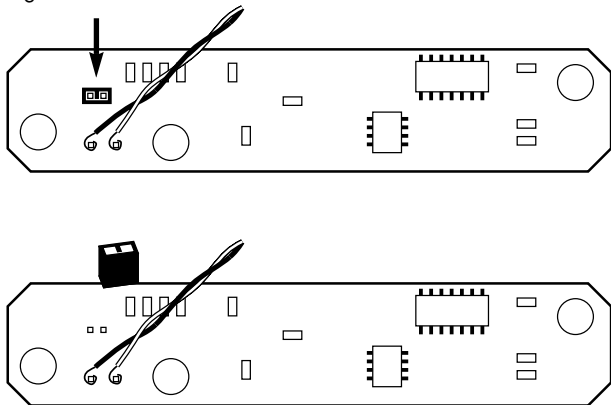
A single 4/4 connector (Telephone Handset plug) marked 'Volume' is used in conjunction with the Sub-zone Volume Module mentioned above.

## Disabling IR receiver/modulator

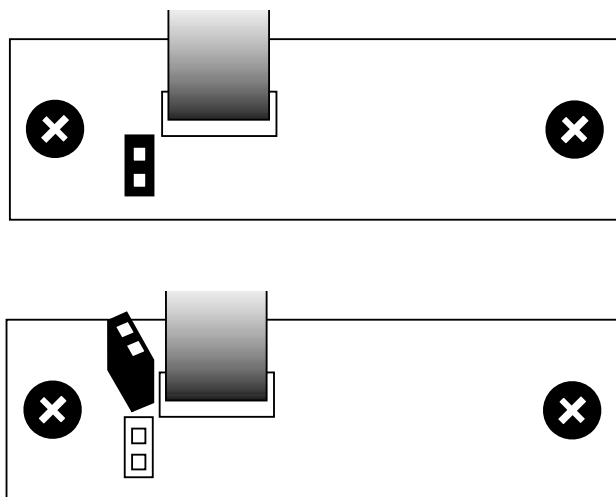
### AWM70/65/650 (Figure 9a)

If IR reception is a problem in a particular location it may be necessary to disable IR reception on a speaker. Locate the IR board behind the IR lens at the bottom of the rear of the baffle. To disable the IR receiver locate the jumper shown in the diagrams below and remove it taking care not to damage any components.

Figure 9



AWM650 Figure 9a



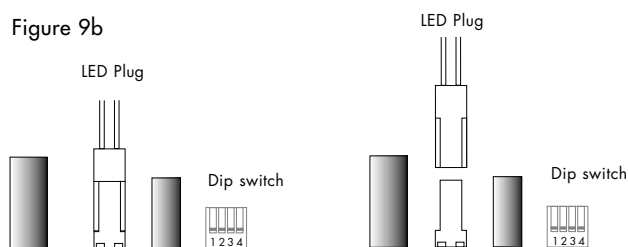
## Disabling LED

(ACM65/80) see figure 9b

To disable the LED locate the plug shown in the diagram below.

1. Hold speaker with drive unit facing upwards with RJ45 plugs to the right of the board.
2. The plug is located to the left of the dip switches.
3. Carefully unclip the plug.

Figure 9b



## ANCILLARIES

### T-pieces

T-pieces comprise three RJ45 connectors wired in parallel. They are used to add the CASA Interface or Remote Output to systems and may have to be used when 'daisy chaining' loudspeakers, depending on the system topography. See the sub-sections Adding...Additional Speakers and Adding...CASA Interface for more details.

### Local Input Module

The Local Input is a single pair of stereo RCA phono jacks on a panel that fits a single J-box. It connects to both speakers and the Keypad in its zone. Only volume and mute functions of the actual source connected to the Local Input can be controlled by the Keypad.

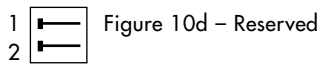
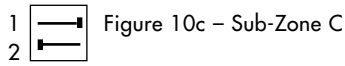
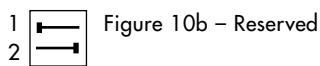
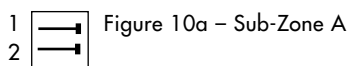
Two RJ45 connectors are used to connect to the left and right speakers in the zone. The AWM70, AWM65, AWM650 and ACM80 have sockets that support this option. A 4/4 connector (Telephone Handset plug) is provided to connect to the zone Keypad at the end of the Keypad 'daisy chain'.

### Remote Output Module

The Remote Output is a single pair of stereo RCA phono jacks panel that fits a single J-box and takes the place of a pair of speakers in a zone. The Remote Output converts the balanced high level CASA transmission to unbalanced line-level output. This option allows a zone to operate with an external power amplifier and passive loudspeakers in place of CASA Active Speakers. Additionally the Remote Output features an IR 3.5mm input jack that accepts IR commands from a third-party or CASA Remote unit and relays them back to the CASA Controller.

### Sub-zone Volume Module (AWM65/70 only)

The Sub-zone Volume Modules are always supplied in pairs. These double-sided printed circuit boards fit the expansion slot on an AWM65/70 loudspeaker. Each Sub-zone Volume Module contains two volume controls which can be allocated to either Sub-zones A and B or to C and D using the switch settings on the PCB. Sub-zone A or C always relate to a speaker with a Sub-zone Volume Module installed. Sub-zone B or D will then be available from the '2nd speaker' socket of this speaker. In order to fit the Sub-zone Volume Module the finned heatsink must be detached from the front panel by removing the four allen-head bolts. The amplifier motherboard and Sub-zone Volume Module connector can then be accessed. The Sub-zone Volume Module PCB has a locating tab so it cannot be inserted in the wrong orientation. Before fitting, the links LK2/3 must be removed. These have been arranged so that the PCB simply cannot be pushed into its socket without their removal.



A dual DIP switch (Figure 10) is used to configure the Sub-zone Volume Modules in each speaker. The diagrams show the DIP switch when the Sub-zone Module is orientated with the pins up. The On position for the DIP switch is then to the right-hand side. The DIP switch setting must correspond to the Sub-zone in which the speaker will eventually reside. This may not be the same Sub-zone as the Small Keypad to which it connects.

Both left and right channel speakers in a Sub-zone need to be given the same switch setting.

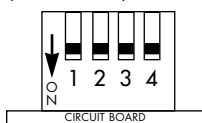
Note: currently only A and C are valid settings for the Sub-zone Volume Modules since daisy-chaining of Sub-Zone Modules is not supported. Two other options are provided for future expansion.

When reassembling the speaker take care to reconnect the two pin connector to the IR receiver in the front baffle in the correct orientation. (In some Sub-Zone installations it is recommended that the IR receiver be disabled—see Figure 9 of the CASA Installation Manual.)

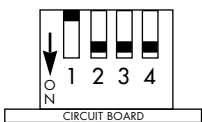
The AWM™650 and ACM™80 have the subzone module built into the amplifier PCB board. The subzone modules have the following settings enabling subzones to be activated/deactivated.

To set the subzone in the AWM650 and ACM80 the following dip switch settings are required.

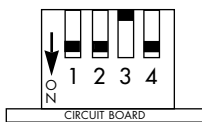
Speaker used in zone that has not been split into subzones (normal use):



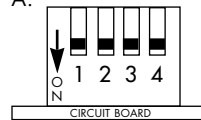
Local Input connected:



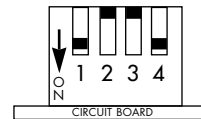
Subzone A:



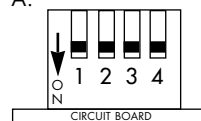
Subzone B - same configuration as normal use since it is taking its volume control feed from the speaker in sub-zone A:



Subzone C:



Subzone D - same configuration as normal use since it is taking its volume control feed from the speaker in sub-zone A:





### CASA Interface

(Figure 11a/b)

The Casa Interface is a two-channel power supply and can be used to increase the power available in complex CASA systems enabling additional speakers to be used or maximum replay levels to be retained when using additional speakers. The output power of one interface will effectively support one pair of AWM70 loudspeakers. A local mains power supply for the interface will be required. See Figure 11a/b.

Two rear panel DIP switches control operation. The upper switch sets the unit to Normally On or Normally Standby and is used in conjunction with the 3.5 mm trigger socket. The second DIP switch controls the Master/Slave function of the interface. The Slave mode is required for connection to a CASA Controller. The unit is shipped with both switches in the off (left) position set as Master/Normally On. See Figure 12a/b.

 Figure 12a – Normally On  
 Figure 12a – Master



 Figure 12b – Normally Off  
 Figure 12b – Slave

Figure 11a – Interface front panel

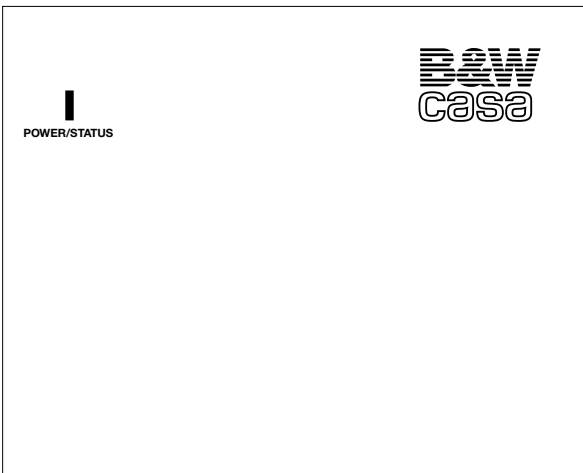
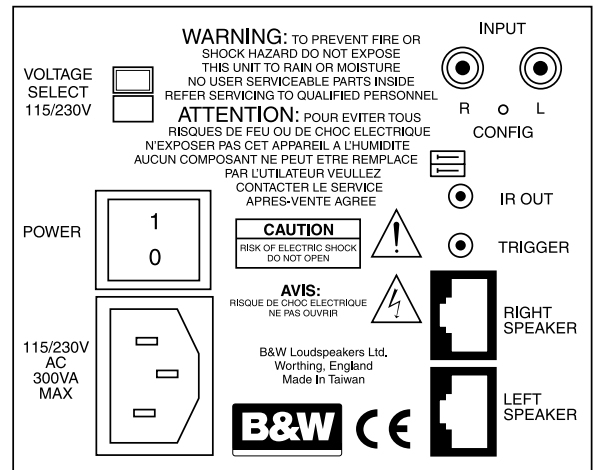


Figure 11b – Interface rear panel



## CABLING

The CASA System is designed to use shielded Category 5 cable with RJ45 connectors (24 or 26 AWG with certain loading considerations – 120 foot runs for the AWM70 for instance). Longer runs can be considered with the CASA Interface power supply.

Twisted-pair cables comprise copper cores surrounded by an insulator twisted together to form a pair. The cable is a bundle of twisted pairs surrounded by an insulator. **Unshielded twisted pair cable (UTP) is common in telephony applications but is unsuitable for use in CASA installations.** Shielded twisted pair cable (STP) offers better cross-talk and interference performance.

The EIA/TIA 568 Commercial Building Wiring Standard defines five categories of network cabling. CASA is designed for shielded Category 5 cable which is 100-ohm, four-wire twisted-pair cable (eight cores) certified to 100 Mbps (Mega bits per second) transmission rates in network installations. The cable has low capacitance and low cross-talk characteristics.

Of the eight cores available six (three pairs) are dedicated to providing a low impedance supply to the speakers. The remaining two cores carry the audio signal. The high frequency IR data is 'piggy backed' on the DC power supply lines. The screen of the shielded cable makes a required ninth connection.

All cables and terminations must conform to specifications to eliminate cross-talk and interference problems. Old style connectors and jacks are not suitable. Additionally, twists in the cable pairs must be maintained up to the connection point.

One other cable characteristic needs to be considered which relates to where the cable is installed. To comply with the National Electrical Code (NEC), all cable installed into the ceiling void (plenum space) must be in metal conduit or must meet local fire codes. Two types of insulation are used: PVC (polyvinyl chloride) insulation for normal use and fluoropolymer (Teflon) insulation for plenum-rated cable. We recommend the latter for CASA in-wall and ceiling installations.

There are no twists in the cable terminations which are wired straight through. The only criterion is that the pairs are adjacent, for example: Brown is alongside Brown/White; Blue is alongside Blue/White and Green is alongside Green/White, etc.

The 4/4 Serial Data connectors (Telephone Handset plugs) do not carry an audio signal and can use unshielded FCC-68 flat data cable (26 AWG). These cables are also wired straight through.

## RJ45 Connector Pin Assignment

(Figure 12a/b)

Pin assignment for the RJ45 connector (Speaker):

Pin	Signal	Comment
1	+24/+12V	12V in Standby mode
2	-24/-12V	12V in Standby mode
3	as 1	
4	as 2	
5	as 1	
6	as 2	
7	+ Audio	
8	- Audio	
9	OV Screen	

Pin assignment for the RJ45 connector (Keypad):

Pin	Signal	Comment
1	SDA	Serial Data
2	OV	
3	SCL	Serial Clock
4	OV	
5	OV	
6	+10V	
7	IR	Infra red data
8	OV	
9	Chassis	

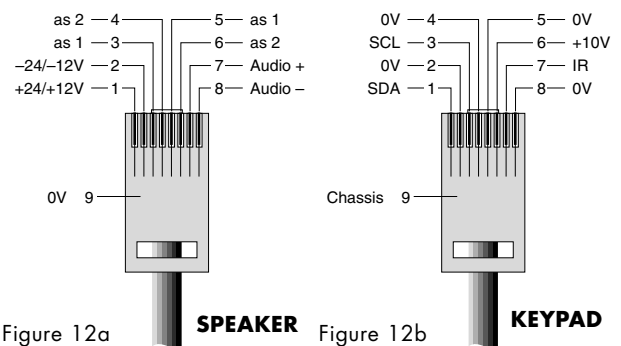


Figure 12a

Figure 12b

## 4/4 Connector Pin Assignment (Figure 13)

Pin assignment for the 4/4 Telephone Handset plug:

Pin	Signal	Comment
1	OV	
2	SDA	Serial Data
3	OV	
4	SCL	Serial Clock

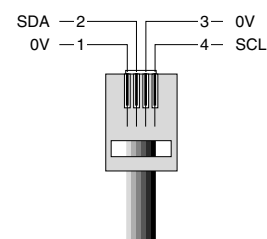


Figure 13

## SYSTEM DESIGN

### DESIGNING (Figure 14)

The CASA multi-source, multi-room system can be as simple as one Controller, one pair of Active Speakers and a Remote or Keypad/ Display. However, modular design and the ability to 'daisy chain' components mean a CASA System could easily comprise eight Controllers, feeding two sources to all 32 master zones and two further independent sources available for each set of four zones governed by each Controller (14 other sources in total) – this all feeding 64 Active Speakers and 96 Keypad/Displays. Local inputs could add 32 further inputs specific to each zone.

In planning complex CASA installations using more than one Controller, it is important to understand that sources can be made available globally to the whole system, to the four zones of one Controller only, or locally. Sources that are to be used globally must be 'looped through' each Controller. It follows that if the two main sources (Tuner and CD) are to be looped through to a second Controller six sources will be available, not the potential eight, if two Controllers were to be used independently. Sources to be added locally (an existing TV/Video system for example) need a Local Input module for connection to the CASA System.

The Remote Output module allows for the use of CASA connected sources and Keypad controls with existing power amplifiers and passive speakers.

Zones are divisible into a main zone and additional Sub-zones with independent control of volume and simple source switching within the Sub-zone. Sockets for these features are provided on some CASA speakers (AWM70, AWM65 AWM650 and ACM80).

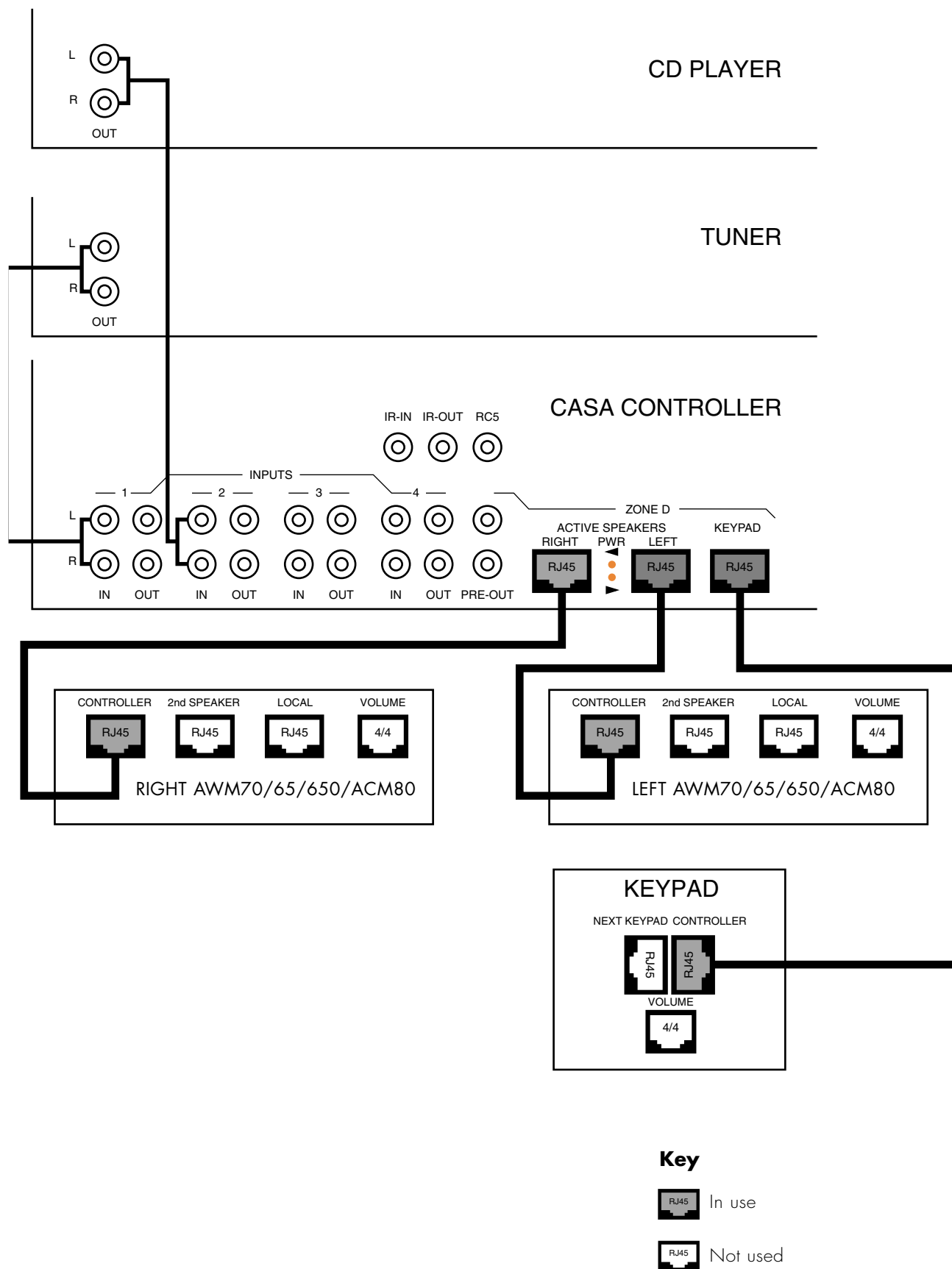








Figure 14  
: 14



**LOADING CONSIDERATIONS**

System design is governed by the permitted number of speakers in any zone and, in a complete installation, by the loading constraints of the speakers on the Controller.

The loading units of individual speakers in the CASA System are as follows:

Speaker Icon (each)	Loading units
	100
	50
	50
	25
	30
	25

The maximum total load on one Controller for full power capability is 400 loading units. Exceeding the total loading will not render an installation unsafe. The effect will be that all speakers cannot be played at maximum power output simultaneously. We do not consider this to be a major limitation though systems designed for full-house party use would be best designed within the limitation to achieve full power output. Maximum loading on any one output (ie. the left or right channel for each zone) of the Controller is 125 units. This loading must not be exceeded.



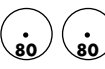





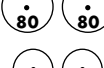


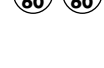








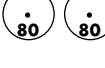
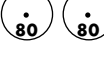




**CASA Interface**

The loading of speakers for one CASA Interface is as follows:





- 1 pair of AWM70 OR
- 2 pairs of AWM65 OR
- 2 pairs AWM650 OR
- 5 pairs of ACM60 OR
- 4 pairs ACM65 OR
- 4 pairs ACM80

Exceeding this loading will not make an installation unsafe but will limit the maximum volume at which loud-speakers can be played simultaneously.







**Permitted permutations of speakers in a single zone are as follows:**

Master speakers	'Daisy chained'	and	and
	-	-	-
		-	-
		-	-
	-	-	-
			-
			-
		-	-
		-	-
			-
			-
			








**Typical installation with maximum loading (400 units) all speakers simultaneous full volume**

Zone	Speakers	'Daisy chained'	Sub-zone	Loading
A		-	-	200
B		-	-	100
C		-	-	50
D		-	-	50
<b>Total</b>				<b>400</b>

**Installation exceeding maximum loading (650 units) which will not allow all speakers to play to their maximum power outputs at the same time for instance in Party Mode — maximum volume will be down by about 4dB**

Zone	Speakers	'Daisy chained'	Sub-zone	Loading
A		-	-	200
B		-	-	100
C		-		200
D			-	150
<b>Total</b>				<b>650</b>

**Installation exceeding maximum loading (800 units) which will certainly not allow all speakers to play to their maximum power outputs at the same time**

Zone	Speakers	'Daisy chained'	Sub-zone	Equivalent Load
A		-	-	200
B		-		200
C		-		200
D			-	200
<b>Total</b>				<b>800</b>

**ADDING...**

**Additional Speakers**

Additional speakers can be connected using RJ45 T-pieces.

The total loading on a Controller should not be exceeded if simultaneous maximum volume levels are required – see section Loading Considerations.

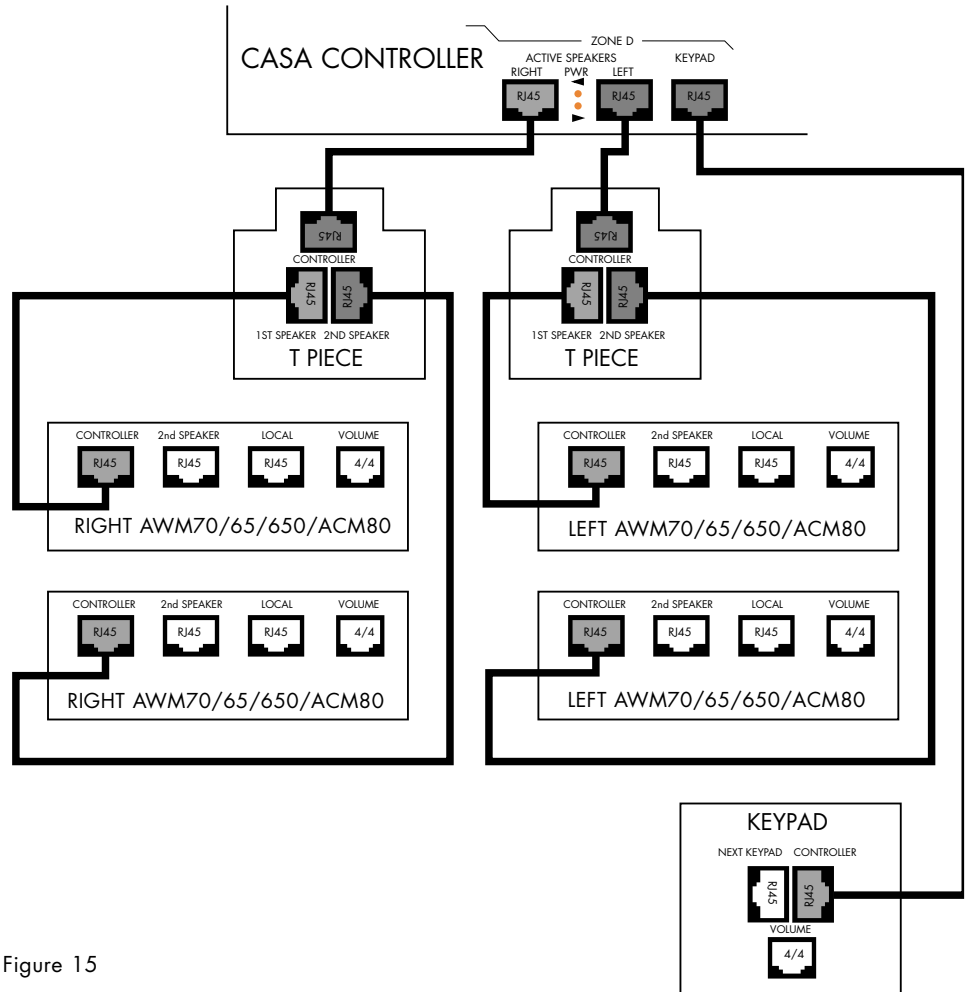


Figure 15

**ADDING...**

**Additional Keypads**

Additional Keypads can be used to provide additional control flexibility within larger or awkwardly shaped rooms. They can also be used as additional IR 'pickup points' in installations using predominantly ACM60/65/80 speakers that do not feature IR receiver/modulators. Up to three Keypads can be used in any zone. Additional Keypads are simply connected to the empty RJ45 connector marked Next Keypad on the last (or only) Keypad in the chain (as shown in Figure 16).

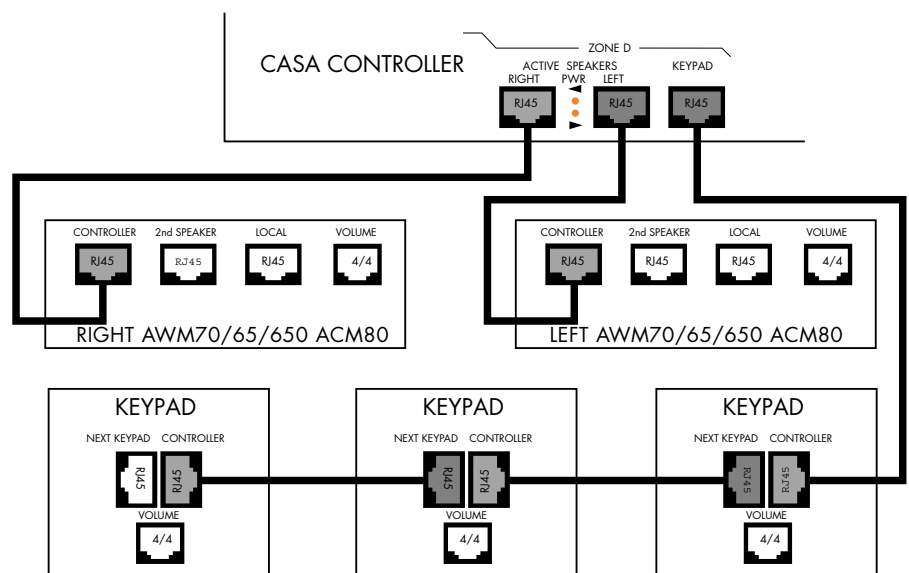


Figure 16

**ADDING...**

**Local Sources**

The Local Input module makes provision for a source to be connected locally within a zone rather than to the Controller and to be available to local speakers. This would allow, for example, an existing TV/video installation to be connected locally for replay through CASA speakers. Taking a feed from the TV fixed volume outlet would allow any connected source to be switched through the TV pre-amplifier for CASA replay, massively extending the number of connected sources.

RJ45 sockets marked 'R' and 'L' are connected to the sockets marked Local on the right and left speakers in the zone. The controlling Keypad connects to the Keypad socket of the same zone on the Controller.

An 4/4 connector (Telephone Handset plug) is provided to connect to the zone Keypad to provide local volume control. The 4/4 connector on the Local Input module and the 4/4 connector on the Keypad (both marked 'Volume') are to be connected (as shown in Figure 17).

If the variable volume of the local input needs to be fixed this can be done as part of the Initial Set-up procedure See the sub-section *Initial System Set-up-System Sources* for details.

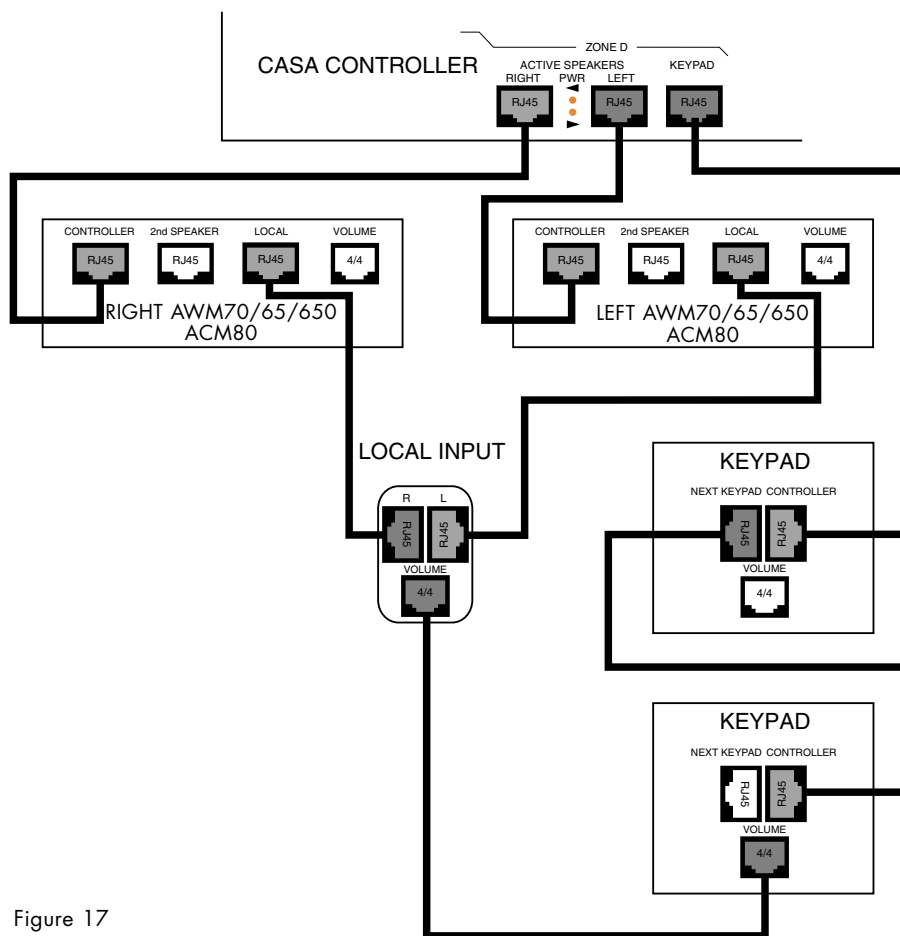


Figure 17

ADDING...

Remote Output

This ancillary allows a zone to operate with a conventional external power amplifier and passive loud-speakers in place of CASA Active Speakers. It can be thought of as a local CASA System Pre-out socket. The Remote Output takes the place of a pair of speakers in a zone. RJ45 sockets marked 'R' and 'L' are connected back to the right and left sockets of one zone on the Controller. The controlling Keypad connects to the Keypad socket of the same zone on the Controller (as shown in Figure 18). Alternatively if the Remote Output is to be used in conjunction with other CASA speakers the feed from the Controller can be split using T-pieces (as shown in Figure 19). The feeds from the T-piece connected to the left socket on the Controller would go to both the left speaker and socket marked 'L' on the Remote Output; similarly for the right channel. In addition, the Remote Output features an IR 3.5mm input jack that accepts IR commands from a third-party and CASA Remote unit and relays them back to the CASA Controller.

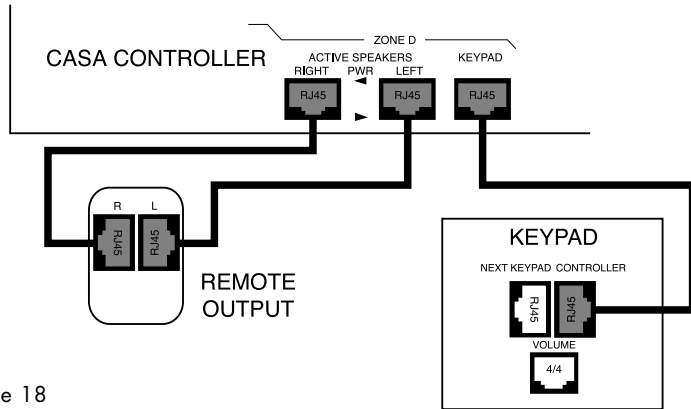


Figure 18

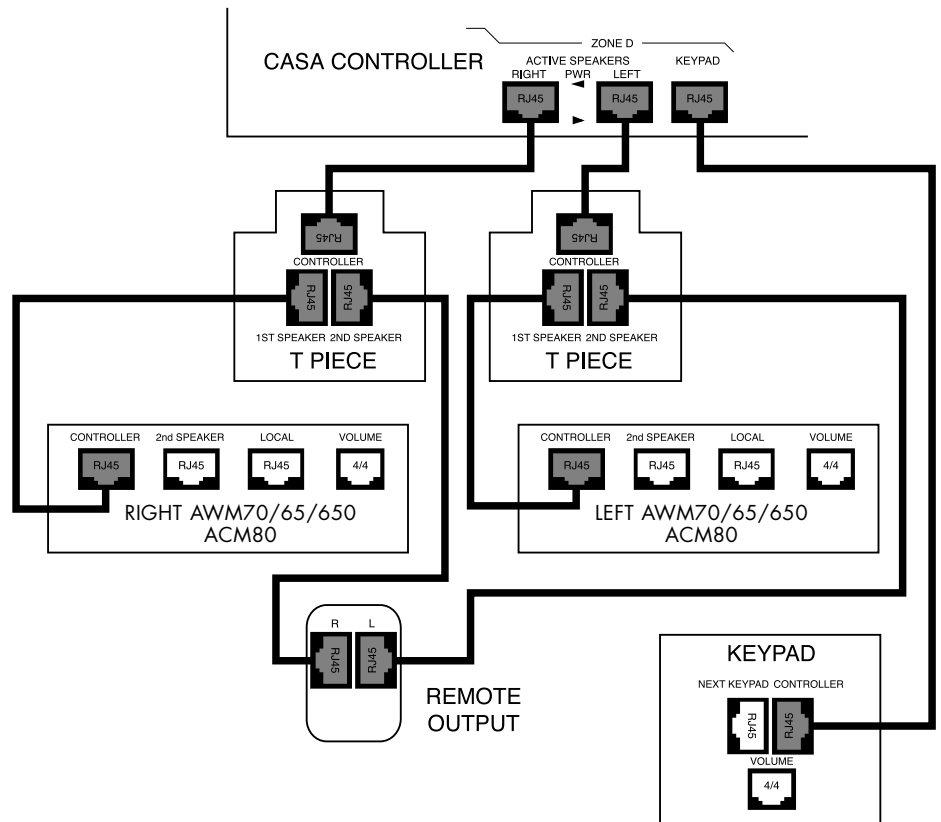


Figure 19

**ADDING...**

**Additional Controllers** (Figure 20)

Controllers can be 'daisy chained' up to a maximum of eight units. All Controllers are shipped set as Slave units. The first Controller in a system needs to be set up as a Master unit. Subsequent Controllers need only connecting through the CANbus jacks. See section System Sources in the chapter Initial System Set-up for details.

Note that 'looped through' sources available to every connected Controller restrict the total number of sources available.

If two or more Controllers are used in the same system we suggest you connect them so that only one Flood IR emitter works. This will avoid potential interference that may cause erratic or intermittent operation see sub-section Using With...Any IR controlled source component for further considerations. Some systems may benefit from the increased signal strength provided by multiple Flood IRs. As there are no hard and fast rules, experimentation will be needed.

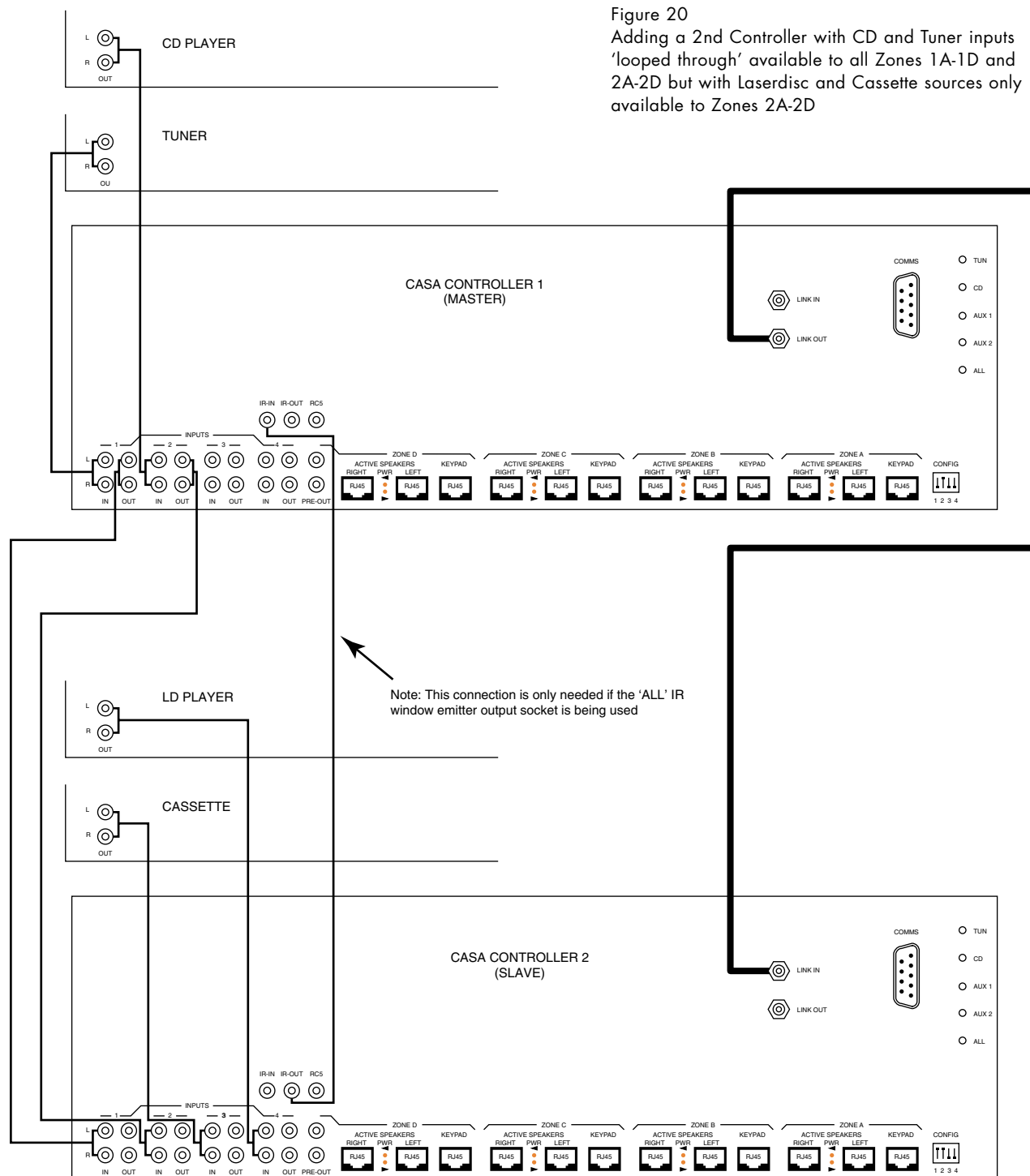


Figure 20  
Adding a 2nd Controller with CD and Tuner inputs 'looped through' available to all Zones 1A-1D and 2A-2D but with Laserdisc and Cassette sources only available to Zones 2A-2D

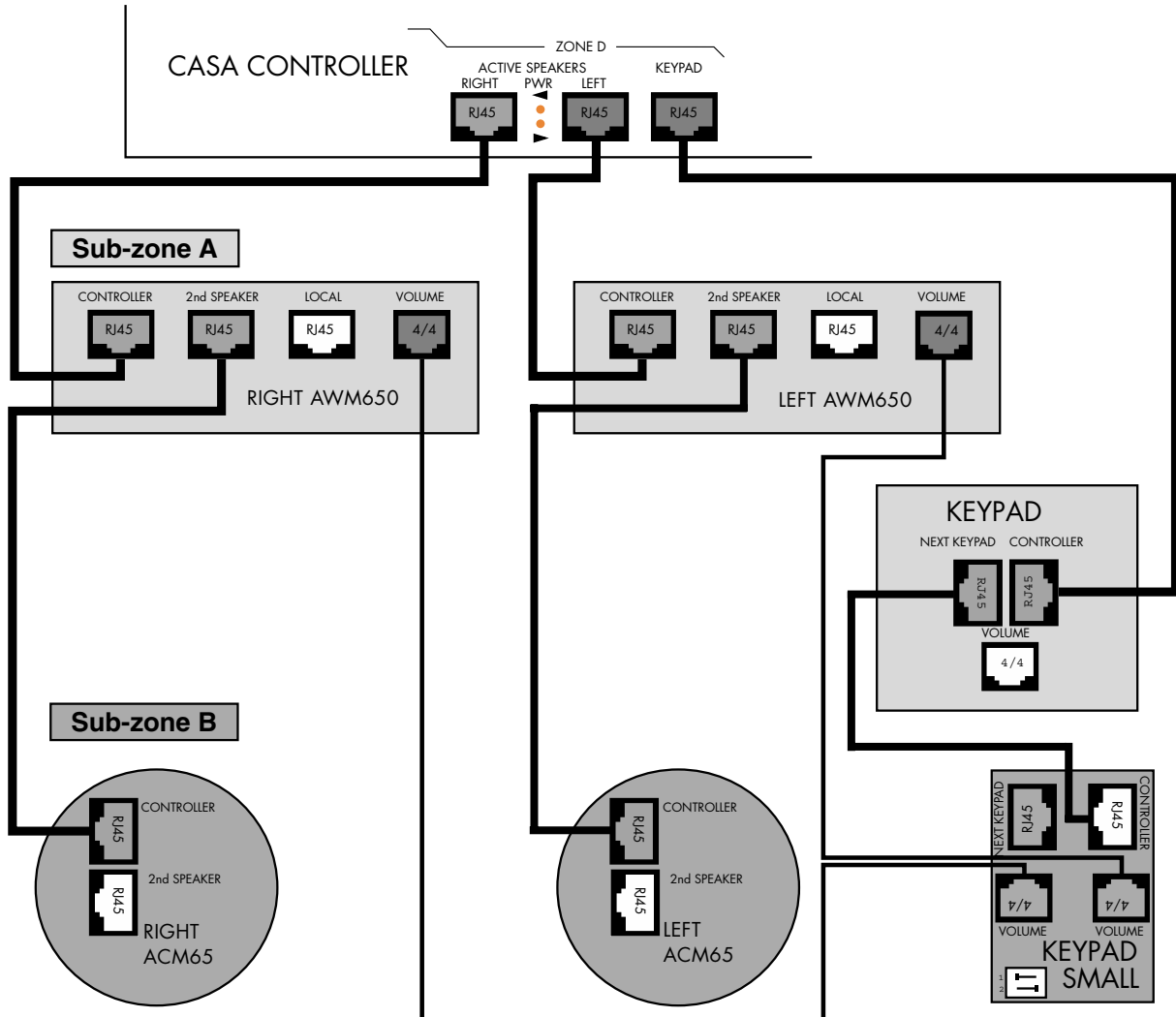
**ADDING...**

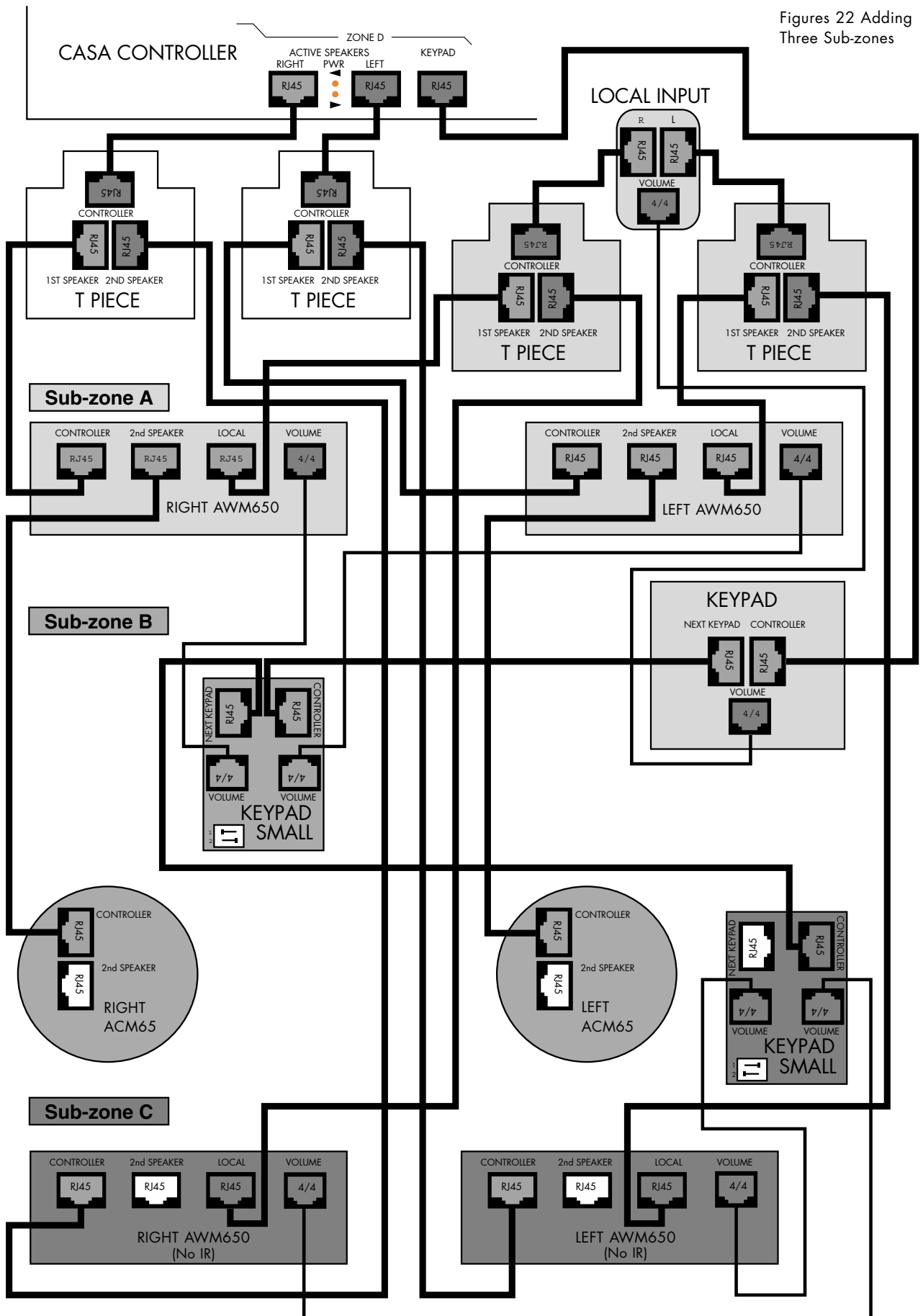
**Sub-zones** (Figures 21 and 22)

Figure 21 shows the simplest of Sub-zones. Figure 22 shows one of the more complex configurations with a local input available to three Sub-zones (A, B and C). Both pairs of AWM loudspeakers need to be fitted, or have the Sub-zone module activated, with Sub-zone Volume Modules switched to the correct addresses. Sub-zone C must have the IR receiver disabled since confusion will result if a remote handset is used with these speakers. Sub-zone D could be created by connecting a pair of ACM65s to the AWM650/70s in Sub-zone C. The daisy-chain order of all Keypads is unimportant, remember that when using Sub-zone C the audio output from the controller is split to A and C by a T-piece in each channel.

IR remote control can only be implemented in Sub-zone A. The Small Keypad has no IR sensors and speakers with IR receivers operating in Sub-zones other than Sub-zone A need to have their IR receiver disabled by removal of the IR links — see Figure 9 Page 33 of the CASA Installation Manual.

Figure 21 Simplest possible Sub-zone





Figures 22 Adding Three Sub-zones



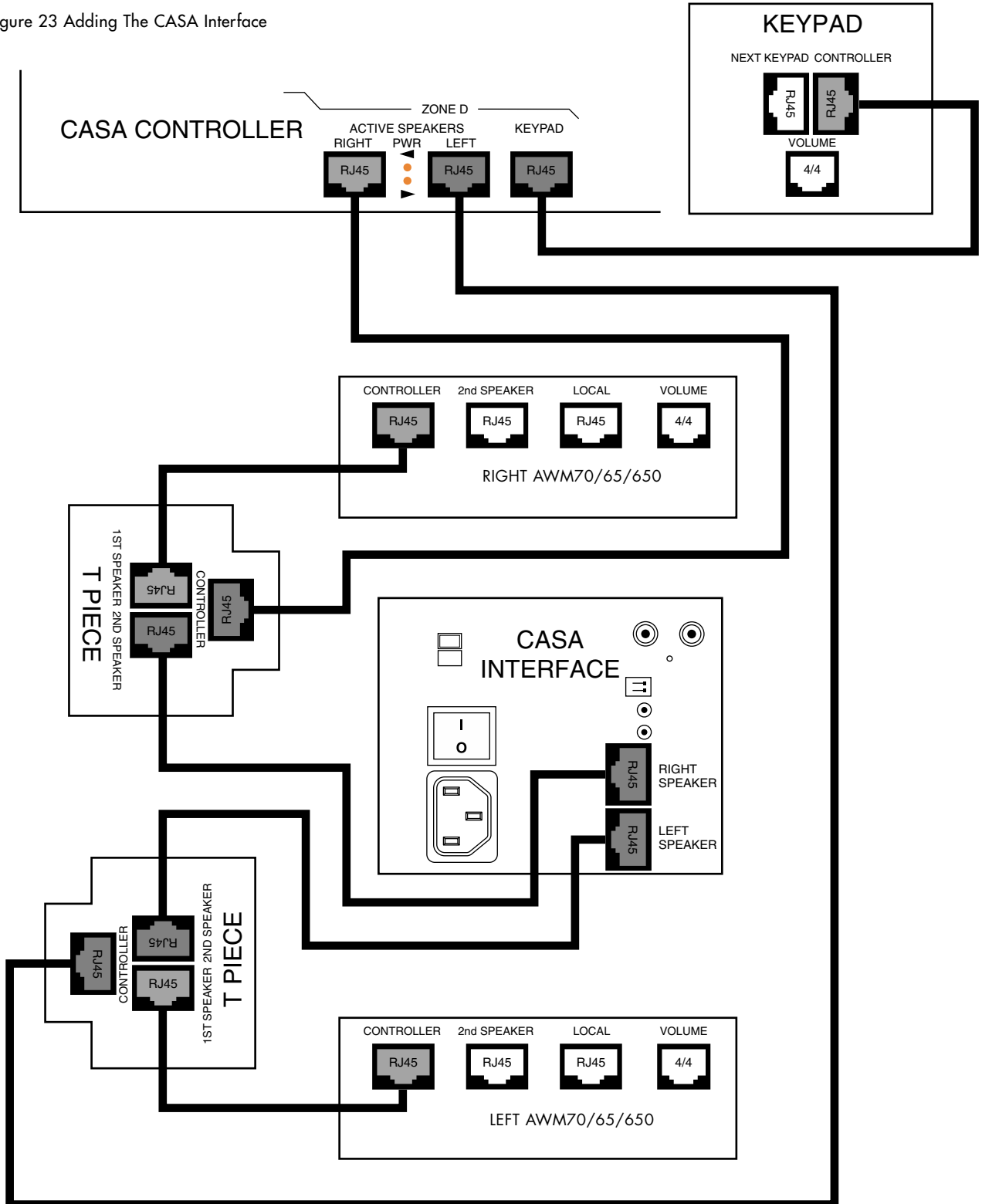
**ADDING...**

**The CASA Interface**

The CASA Interface power supply is added using two T-pieces (as shown in Figure 23). The left socket on one zone of the Controller is connected to the T-piece which

Speaker socket. The speakers are then connected to the 1st Speaker socket on the T-piece. Channel orientation is not important as the Interface is not being fed via its own Audio In sockets, however for clarity L-L and R-R connections are shown. A local mains power supply will be needed for the Interface.

Figure 23 Adding The CASA Interface



is in turn connected to the CASA Interface by the 2nd

**ADDING...**

**Two identical source components**

Two identical source components can be successfully used with the CASA System under remote control. When using two identical sources the front panel Flood IR must be de-activated.

Identical tuners may be used to extend the number of available presets for example. The IR outputs Tun and Aux 1 carry one channel of IR information while CD and Aux 2 carry another. As long as the two identical components are used one each on these separate channels they can be independently controlled.

**ADDING...**

**Two RC5 code controlled source components**

If two pieces of RC5 equipment of different types are to be used it is recommended that one is connected to the dedicated RCA phono output carrying RC5 codes and that the other be controlled either using a 'stick-on' IR window emitter or 'looped through' via the RCA sockets carrying RC5 codes from the first piece of equipment.

If two identical pieces of RC5 equipment are to be used 'stick-on' IR window emitter must be used for both pieces of equipment.

**ADDING...**

**Source with lower than average output**

(Figure 24a/b/c/d)

To accommodate source components with lower than average output the sensitivity of the two Auxiliary inputs (Aux 1 and Aux 2) can be independently increased by 9dB relative to the Tuner and CD inputs. Set switches 3 and 4 on the DIP switch marked 'Config' on the rear panel on the Controller in the down position.

Figure 24a



Figure 24b



Figure 24a/b  
 Aux 1 +9dB Aux 2 +0dB (left)  
 Aux 1 +0dB Aux 2 +9dB (right)

Figure 24c

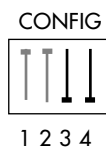


Figure 24d



Figure 24c/d  
 Aux 1 and Aux 2 +9dB (left)  
 Aux 1 and Aux 2 +0dB (right)

**Home automation**

The RS-232 socket offers open architecture control of and feedback from the CASA System components.

## INITIAL SYSTEM SET-UP

### REMOTE

If they have not already been fitted or to fit replacement batteries: remove the two screws from the base of the remote control and remove the bottom cover. A conventional 2 x AAA battery carrier is tucked inside. Slide out the battery carrier with its two wires attached. Insert the appropriate batteries noting correct polarity. Carefully insert the battery carrier into the bottom of the handset and push gently inside, taking care not to trap or damage any wires. Fit and secure the bottom cover.

Check the remote operation by looking for the red LED tell-tale lighting on the master speaker when a keypress is made on the remote (AWM70, AWM65 and AWM650).

### GENERAL REMARKS

The installer set-up modes require a combination of long keypress sequences and should not be accidentally chosen by the user. With the system in set-up mode any 'illegal' keypress will be ignored and will elicit no display response. Any set-up functions left with no keypresses for 1 minute will revert without saving any settings that had been changed.

The standard time for the display reverting (to displaying the time for example) is 3 seconds

Sources can be set-up individually and do not all have to be set-up and stored at one time. Changes can be made to individual source settings, if for example a CD player is upgraded or a component moved to another input, without affecting the rest. You do not have to set-up all sources each time set-up mode is initiated. All source and clock settings are protected by battery back-up.

In all set-up modes (both consumer and installer) ZONE OFF and ALL OFF key presses will elicit the display `Cancel` and the system will be taken out of set-up mode.

### CLOCK SET-UP

The zone has to be off. Press the `CASA` key for 6 seconds to put system into clock set-up mode. The display will show `Set clk` and will then flash the time `11:32` (example) indicating it can be changed. The `<` and `>` keys are used to set the hours; the `<<` and `>>` keys are used to set the minutes.

Press the `CASA` key again (short press) to show the 'hide clock' status. Each zone can display either the clock on each Keypad (show clock) or a simple double dot indicator ( `⋯` ) (hide clock). The `<` and `>` keys will toggle between `Hide clk` and `show clock`. Choose which is required and press the `CASA` key again (short press) to save the time and 'hide clock' status. The Keypad/Display will show that the system is saving the settings ( `Saving` ) and the display will then revert.

## SYSTEM SOURCES

With the system all off, three long presses (3 seconds) on the `<`, `MUTE` and `>` keys in sequence (on either the Keypad/Display or Remote control) will take the CASA System into set-up mode. The display will show `Set-up`. The `<<` and `>>` keys are then used to toggle between `Master?` and `Slave?`. All Controllers are shipped set as Slave units.

Pressing either the `TUNER` or `CD` keys on either the Keypad or Remote will change the display to either `Tn type?` or `CD type?`. The `<<` and `>>` keys can then be used to select the appropriate manufacturer and type from the list. Manufacturer's names are restricted to five letters only; CD players also show if the machine is a single or multi-disc player (`CD=PionS` Pioneer single disc CD player, for example). Products using RC5 compatible codes can also be selected in this way.

If the Controller has been defined as a Slave, Aux 1 and Aux 2 are already set up with the Master Controller sources. Keypresses on either `TUNER` or `CD` source keys will elicit the response `As mstr` on the display and these cannot be changed.

To set up a source for either Aux 1 or Aux 2 keys, press the key in either Aux 1 or Aux 2 position (Keypads will be shipped without keys fitted in these positions but an appropriate key for the new source component should be selected and fitted from those provided – see Keypad Installation sheet) to change the display to either `A1 is?` or `A2 is?`. The `<` and `>` keys can then be used to select the appropriate source from the list of source types ( `A1=CD` Aux 1 set for CD player for example). The `<<` and `>>` keys can then be used to select the appropriate manufacturer and type from the list as above.

In the case where Aux 1 or 2 are set to source type Server (A1= Server) the volume buttons `VOL+` and `VOL-` can be used to select alternative outputs where these are available. The available source names for use and during set-up are as follows:

For use	During set-up
CD	CD
Tuner	Tn
CD2	CD2
Tunr2	Tunr2
LD	LD
Cass	Cass
DSS	DSS
VCR	VCR
DVD	DVD
-	A1
-	A2
None	None

One long press (3 seconds) on the **MUTE** key (on either the Keypad/Display or Remote control) will save the new source settings (display will show *Save*) and take the system out of set-up mode.

If there is a local input present press **LOCAL** and the display will show *LVol=---*. This indicates a variable volume for the local input. If this needs to be fixed — if the volume control of a local device needs to be used, for instance — press the **VOL-** key. (A typical example of where a fixed input may be useful is when taking the L and R channels from an AV processor and doubling up Casa speakers as left and right with the volume controlled as normal from the processor when the Local input is selected.) The display will show *LVol=80* and will decrement in volume units of 5 down to the desired fixed level. A long press on **MUTE** will save all settings in the normal way.

## Review

To review source settings with the system All off, three long presses (3 seconds) on the **<<**, **MUTE** and **>>** keys in sequence (on either the Keypad/Display or Remote control) will automatically cycle through the settings for each source. See section *Reviewing System Sources* in the chapter *System Operation*.

## Dip switches

Please note: If the dip switches are altered with the system live, the change will only be recognised if the configured component is powered down and up again. This can be done by disconnecting it and then reconnecting, or power cycling the controller.

### TONE CONTROL AND BALANCE

Tone control and balance are set on a zone by zone basis. When the zone is off one long press (3 seconds) first on the **VOL+** and then the **VOL-** key (on either the Keypad/Display or Remote control) will take the CASA System into tone control set-up mode. As this will also take the system into CD1 play mode any CD listening material you wish to use for tone control setting should be loaded beforehand in CD Player 1. The degree of Treble and Bass cut or boost can be judged from the CD source playing as the CASA tone controls operate in real-time.

The CASA tone controls are not designed to replicate the Treble and Bass controls provided on the average preamplifier. They have been specifically tailored to provide installers with a solution to many room acoustic problems. Architectural constraints may dictate that speakers will be too close to corners or conversely without the necessary bass reinforcement from room boundaries. The bass cut and boost centred below 100Hz can help here. For speakers in acoustically highly reflective or overdamped rooms the shelving treble cut and boost will assist. (See Figure 26 for details of roll-over frequencies and the precise degree of cut/boost available.)

The display will initially show the current **Volume #**. The **<<** and **>>** keys can be used to cut or boost bass. The initial keypress will show the current bass setting (**Bass -** if no changes have been stored or **Bass-1** (example)) further single keypresses will take the system from **Bass-7** to **Bass+7**.

The **<** and **>** keys can be used to cut or boost treble (see Figure 26 for details of roll-over frequency and degree of cut/boost). The initial keypress will show the current treble setting (**Treble -** if no changes have been stored or **Treble-1** (example)) further single keypresses will take the system from **Treble-7** to **Treble+7**.

The **FAV.STN** and **RANDOM** keys can be used to adjust the balance. The initial keypress will show the current balance setting (**- Bal -** if no changes have been stored or **+1Bal-1** (example)) further single key-presses will take the system from **+7Bal-7** (balance hard over to left) to **-7Bal+7** (balance hard over to right). A single keypress changes both numbers.

A long press on the **MUTE** key on either the Keypad or Remote control will save the Tone and Balance settings for the zone. The Keypad/Display will show **Saving .**

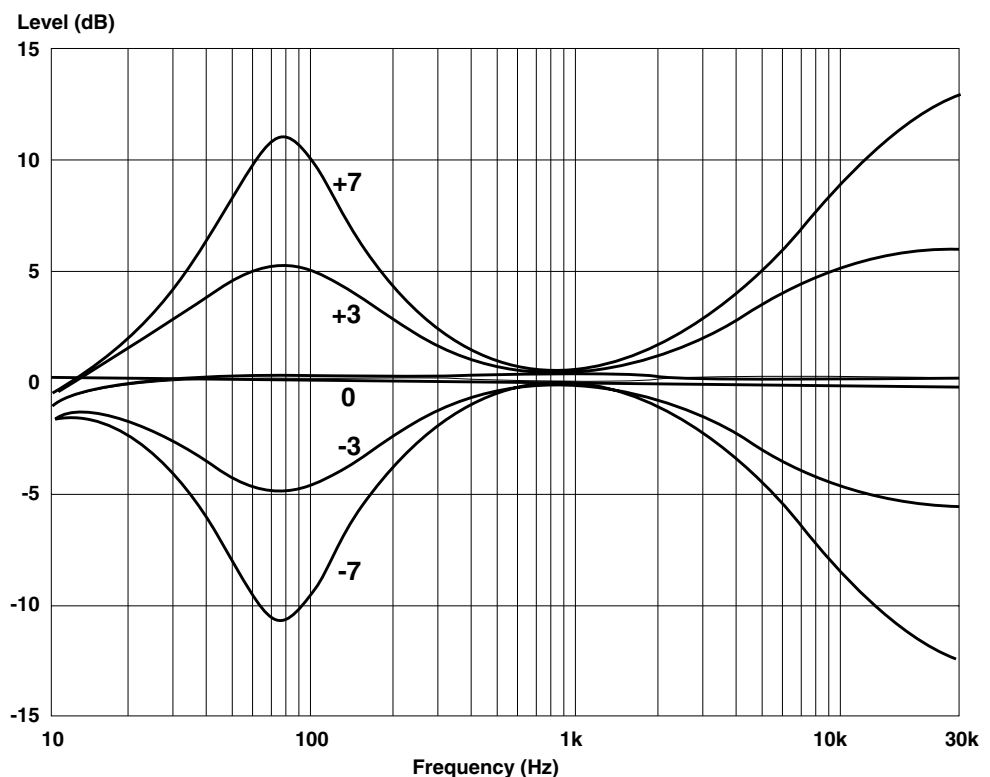



















Figure 25


## ZONE SETUP

With the system off long presses (3 seconds) on the ,  and the  key in sequence (on either the Keypad/Display or Remote control) will take the CASA System into Zone Setup mode. The display will automatically show Zone Set before showing the default setting NoSubs?. The  and  keys can then be used to toggle between NoSubs? and UseSubs?. Pressing the  key again permits the Zone to be included or excluded from Party Mode. The display shows Party? as default. The  and  keys can then be used to toggle between Party? and NoParty?. Pressing the  key again permits the Zone to be configured for use with an Output module. The display shows NoOutPM? as default. The  and  keys can then be used to toggle between NoOutPM? and OutPM?.

Pressing the  key again permits a selection of turn on volume options for that zone. The display shows LastVol? as default. The  and  keys can then be used to scroll through LastVol?, Vpreset? and Fixed?. For these last two options the volume control can then be used to set either a preset turn on or fixed volume for that zone.




Pressing the  key again permits the Zone to be set to have a maximum volume. The display shows MaxV=80? as default. The  and  keys can then be used to toggle between MaxV=80? and MaxV=?. The volume control can then be used to set maximum volume for that zone.

If a Fixed volume level has been set before this maximum volume option effectively 'disappears' from the menu.


One long press (3 seconds) on the  key (on either the Keypad/Display or Remote control) will save the new Zone settings (display will show Saving ) and take the Zone out of set-up mode.





## SYSTEM OPERATION


### REVIEWING SYSTEM SOURCES






With the system All off, three long presses (3 seconds) on the ,  and  keys in sequence (on either the Keypad/Display or Remote control) will take the CASA System into review mode. The display will automatically show Review and the current firmware version V 1.00 (for example) before showing the source set-up details for Tuner, CD, Aux 1 and Aux 2 in order ( CD=PionS [pause] Tn=Denon [pause] A1=CD [pause] A1=RC5 [pause] A2=Cass [pause] A2=Sony (for example)). The display will then revert.

### TIMER

With the zone on or off, a single press on the  key will automatically cycle through the current settings ( Time on [pause] w11:32 (Time On example) or n11:32 (if timer has not been set) [pause] CD (selected timer source for example) [pause] Time off [pause] w12:01 (Time Off example) or n12:01 (if timer has not been set)).





A long press on the  key for 3 seconds with the zone off puts the system into timer set-up mode. The display will cycle through the current settings until it reaches the timer setting when it will flash to show that a change can be made ( Set timr [pause] Time on [pause] w11:32 (Time On example) [  key press] CD (selected timer source for example) [  key press] Time off [pause] w12:01 (Time Off example) or n12:01 (if timer has not been set)  key press to save Saving ).

The  key is used to toggle between on/off ( w11:32 / n11:32 ) for each timer event.

The  and  keys can then be used to set the hours and the  and  keys used to set the minutes for each event. The source for timer operation can be selected using the appropriate source key. The chosen source then shows in the display. The final  key press will save the new timer settings, the display will show Saving and then revert.

The tilde symbol ~ will appear on the far left of the display when the zone is switched off to indicate that the timer is set for that zone. All sources other than a locally connected source can be turned on by the Timer function.

## SLEEP

With the zone on, a long press on the  key for 3 seconds puts the system into sleep set-up mode and the display will show Sleep?. The  and  keys can then be used to select Disabled, 20 mins, 40 mins, or 60 mins settings. A short  key press will save the new sleep settings (display will show Saving if the status has been changed) and the display will then simply read Sleep until the zone automatically turns off.

The system will remain switched on and sources can be changed until the Sleep time has expired. At that time the volume will automatically turn down and the zone switch off. The Keypad/Display will operate as normal but will revert to the Sleep display while Sleep time has yet to run.

If sleep set-up mode is accessed a second time while the system is in sleep mode the display will show the remaining minutes before sleep as its first choice in the Disabled, 20 mins, 40 mins, 60 mins display.

Sleep delay can be reset or disabled at any time. The Sleep function can turn off all sources, including the Local source output through the system.

## KEYPAD CONTROLS

### General Remarks

As a general rule key presses that do not perform any function at the time they are pressed will elicit the display message `Can't do`. This display will revert after 1 second.

In set-up mode, functions left with no key press for one minute will revert to the previous mode without saving any changed information.

If commands are actioned on two Keypads simultaneously in zones with more than one Keypad, the Keypad in the circuit nearest the Controller has priority.

### Switching on

Any source key (including the **LOCAL** key), the **FAV.STN** or **RANDOM** can be used to switch the CASA System on. The system will go from standby to playing or selecting the appropriate source and will turn up the volume to the last set volume level unless the volume on has been pre-set. The display will revert to showing the chosen source.

#### **OFF** key

A short press on the **OFF** key will turn the volume down and switch the zone off. The display will show the Source and volume level ramping down ( `Tuner ##`(example)) before showing `Zone off` and then reverting to the normal standby display, showing or hiding the clock as set by the user ( `11:32` or `#`).

A long 3-sec press on the **OFF** key will turn the volume down and switch the system to standby. The CASA System automatically sends the appropriate Stop and Standby commands to connected source equipment when this keypress is made. The display will show the Source and volume level ramping down ( `Tuner ##`(example)) before showing `ALL off` and then reverting to the normal standby display, showing or hiding the clock as set by the user ( `11:32` or `#`).

In a normal Zone a short press on the **OFF** key will switch the Zone off. A long press (3 sec) will switch off all zones with the message `ALL off` appearing on all Displays. In contrast when Sub-zones have been set-up three degrees of 'off' can be achieved. The Display/Keypad in Sub-zone A will additionally respond to a medium keypress on the **OFF** key which switches off all the speakers playing within the Zone. The Keypad/Display will show `Zone off`. The ON/OFF key on the Small Keypad does not have this intermediate function.

A further consideration is whether just Sub-zone A is playing or whether other Sub-zones are playing. The operation of the **OFF** key in the Keypad/Display is best shown in the following matrix.

	Sub-zone speakers other than A playing	Just Sub-zone A playing
short keypress	Only Sub-zone speakers off <code>Off</code>	Zone switched off <code>Zone off</code>
mid keypress (1.5 sec)	Zone switched off <code>Zone off</code>	NO FUNCTION
long keypress (3 sec)	System off <code>ALL off</code>	System off <code>ALL off</code>

#### **VOL** key (Volume)

The **VOL** key is a rocker marked + at the top and - at the bottom that gently increases or decreases the volume from its previous level. The display will show the level counting up or down ( `Vol 26` (example)) as the **VOL** key is used. The display will then revert to show the currently selected source.

#### **MUTE** key

The **MUTE** key toggles between the normal listening volume and the muted volume (40 dB below listening level). The display will show the Source and volume level ramping down ( `Tuner ##`(example)) before showing `Muted`. All functions work normally even if the system is muted except the **VOL+** key which takes the system out of mute before turning up the volume.

The **VOL-** keypress reduces the volume and will display the normal volume display before reverting to the muted display. Both the muted, listened to, volume and the normal unmuted level will be reduced.

A second press on the **MUTE** key will restore the normal listening volume. The display will show the Source and volume level ramping up to the previously set numerical level ( `Tuner 27` (example)). The display then reverts to the currently selected source name `CD` or `Tuner P1` (example).

#### **FAV.STN** key (Favourite Station)





The **FAV.STN** (Favourite Station) key selects Preset 1 on the selected tuner or Channel 1 if the selected source is a satellite receiver. The display will show `Fav stn` and then revert to `Tuner P1` if the source was the tuner or `DSS` if the source was satellite. Installers should ensure that the tuner Favourite Station is tuned to Preset 1.



#### **RANDOM** key

The **RANDOM** key toggles the selected CD source in and out of Random Play mode (Shuffle) if that source was already selected. If the **RANDOM** key is pressed when a source other than CD is selected the system will search out the 'most random' mode available on the player, i.e. a random track from a random disc on a multi-CD player will take priority over random track choice from a single disc.







### and keys

The  and  keys perform slightly different functions depending on the source selected when they are pressed. For tuner or satellite sources the  key will select one preset or channel down from the current choice, the  key will select one preset or channel up. The display will show #Preset or Preset# (if Tuner is selected) and #Channel or Channel# (if a satellite source is selected) reverting to display the new channel or preset number selected (Tuner P3 or DSS Ch01 (examples)).





If a Laserdisc, DVD player or video recorder is the selected source, the  and  keys perform search with picture backwards and search forwards respectively (the display will change to #Search or Search#). The search function will only operate while the key is being held down. When the key is released play is resumed and the display will revert to the appropriate source name (LD, DVD or VCR (examples)).






Note: because of the repeating nature of the IR code for the search function other IR functions in the Controller will be blocked. If a keypress is made while the selected source is searching the display will show Busy and the request will not be actioned.



If a cassette deck is the selected source and if the function is supported by the machine, the  and  keys will operate as previous and next track keys (the display will change to #Track or Track#). Note that the display will revert to showing the source Cass without waiting for the machine to find a track.





If a sound server is the selected source the  and  keys will operate as the Next track and Previous track function.



### and keys



As with the  and  keys, the  and  keys perform slightly different functions depending on the source selected when they are pressed. For CD and Tuner sources there is no appropriate function and the display will simply show Can't do.

If a multi-disc CD player is the selected source the  and  keys function as previous Disc ( #Disc ) and next Disc ( Disc# ) keys. A long press on the  key will change the display to a flashing CD 1, the number will increment at increasing speed up to the maximum number of CDs in the multi-disc player. When the correct number is reached CD 23 (example) the button should be released. Only after 3 seconds free from up and down key-presses will the code be sent to select that disc. During that period the CD number can be adjusted using the  and  keys. The display will then revert.


If a satellite receiver is the selected source the  and  keys will skip down or up 10 channels. The display will show #10Chann or Chann#10 and revert to showing the newly selected channel DSS Ch21 (example).

If a video recorder or cassette deck is the selected source then the  and  keys function as rewind ( VCR rew and Cass rew ) and fast forward ( VCR ffwd and Cass ffwd ) keys. This function can be stopped by the STOP key on the remote handset (Stop appears on the display which then reverts to showing the selected source). Pressing the  or  source key on the Keypad/Display takes the selected source out of fast forward/rewind and into play mode, the display reflects this showing either VCR Play or Cass play before reverting to the source name.

If a Laserdisc or DVD player is the selected source the  and  keys operate as previous and next Chapter keys. The display will show Chapt# or #Chapt before reverting to show the source LD or DVD.

If a Server is the selected source the  and  keys performs a Previous and Next album function.


### key

Pressing the  key switches the zone to operate on the Local source. The volume is turned down (the display shows the initial source and the volume decrementing Tuner ##). The display shows the Local source is selected and turns up the volume to the previously set level (Local ##). The display then reverts to show the source Local.

### Source keys

In addition to their On functions the Source keys all switch to and actuate the appropriate component. The display reflects this by showing Cas Play or CD Play before reverting to simple source names Cass and CD.

If the system is in Local mode the system will turn the volume down (the display shows the Local source and the volume decrementing Local ##). The display then shows the selected source Cas play and turns up the volume to the previously set level (Cass ##). The display then reverts to show the selected source Cass.

Note: When the system receives a CD play command from a  keypress it disregards subsequent CD play keypresses from anywhere in the system for 5 seconds. This is to allow the chosen CD source to go into play without interruption or confusing subsequent keypresses that may be interpreted as Replay commands by some CD players.

See the chapter Party mode for special information on operation of the source keys in party mode.

**CASA key**

The **CASA** key can be used to review or set the timer and sleep functions. On a short keypress the display will automatically cycle through the current settings. If the Time Off function of the timer has not been set and the Time On function has been set, the display will show `Time on [pause] 11:32 [pause] CD` (selected timer source for example) [pause] `Time off [pause] 12:01`. The display will then revert.

If the Time On function of the timer has not been set and the Time Off function has been set, the display will show `Time on [pause] 11:32 [pause] CD` (selected timer source for example) [pause] `Time off [pause] 12:01`. The display will then revert.

For long press responses see *Timer* and *Sleep* sections of the *System Set-up* chapter.

**REMOTE CONTROL****STOP key**

The Remote control duplicates all functions of the Keypad keys with the exception of the **CASA** key. There is, however, an additional STOP key provided. This puts any selected source into stop from any other mode (should this function be appropriate to the source selected).

**ALL OFF key**

This duplicates the effect of a long 2-second press on the Keypad **OFF** key – the volume is turned down and the system is switched to standby. The appropriate Stop command is sent by the CASA Controller to connected source equipment and the switched mains outlet turns off after 1 minute.

The Keypad in the zone (if fitted) will show the Source and volume level ramping down (`Tuner ##` (example)) before showing `All off` and then reverting to the normal standby display, showing or hiding the clock as set by the user (`11:32` or `!`).

**ZONE OFF key**

This duplicates the effect of a short press on the Keypad **OFF** key – the volume is turned down and the zone is switched off. The Keypad in the zone (if fitted) will show the Source and volume level ramping down (`Tuner ##` (example)) before showing `Zone off` and then reverting to the normal standby display, showing or hiding the clock as set by the user (`11:32` or `!`).

## SMALL KEYPAD

### Switching on

Any source key can be used to switch the CASA System on. The system will go from standby to playing or selecting the appropriate source.

### ON/OFF key

If the Small Keypad resides in a Sub-zone other than Sub-zone A a long press on the ON/OFF key will turn the volume down and switch the whole zone off. Note: this means that the All Off capability of the Keypad/Display is not available from the Small Keypad other than in Sub-zone A.

A short press on the ON/OFF key will switch off the Sub-zone.

If the Small Keypad resides in Sub-zones B to D and Sub-zone A is not playing pressing the ON/OFF key will switch on the last selected source in that Zone.

When Sub-zone A is already playing the ON/OFF key supports a 'follow' facility bringing up the volume in the resident Sub-zone with the Sub-zone A source. This is the only way to hear the local source connected in Sub-zone A from a Sub-zone controlled by a Small keypad.

### VOLUME+ and VOLUME- keys

The VOLUME+ and VOLUME- keys gently increase or decrease the volume from its previous level.

### < and > keys

The < and > keys perform slightly different functions depending on the source selected when they are pressed. For tuner or satellite sources the < key will select one preset or channel down from the current choice, the > key will select one preset or channel up. If a Laserdisc, DVD player or video recorder is the selected source, the < and > keys perform search with picture backwards and search forwards respectively. The search function will only operate while the key is being held down. When the key is released play is resumed. If a cassette deck is the selected source and if the function is supported by the machine, the < and > keys will operate as previous and next track keys.

If a sound server is the selected source the < and > keys will operate as the Next track and Previous track function.

### >> key

As with the < and > keys, the >> key performs slightly different functions depending on the source selected when it is pressed. For CD and Tuner sources there is no appropriate function. If a multi-disc CD player is the selected source the >> key functions as a next Disc key. If a satellite receiver is the selected source the >> key will skip up 10 channels per keypress. If a video recorder or cassette deck is the selected source then the >> key function as a fast forward key. If a Laserdisc or DVD player is the selected source the >> key operates as a next Chapter key.

If a Server is selected source the >> key performs a Next album function from the Server.

### Source keys

In addition to their On functions the Source keys all switch to and actuate the appropriate component. Note: When the system receives a CD play command it disregards subsequent CD play keypresses from anywhere in the system for 5 seconds to allow the chosen CD source to go into play without interruption or confounding subsequent keypresses that may be interpreted as Replay commands by some CD players.

## USING WITH...

### Any source components

Before selecting source equipment you should study the source equipment addendum and choose equipment that is both supported by the CASA code set and which is functionally best suited to the system(s) in which it will be used.

It is recommended that the source equipment should be plugged into the switched mains outlet. If the source equipment is being used for other duties and consequently not plugged into the CASA Controller's switched mains outlet the CASA System will not be able to turn it on or off.

Note: due to potential functional reliability problems the CASA System does not send Standby commands to put the source equipment from On into Standby.

### Any IR controlled source components

As a general rule 'stick-on' IR window emitters should be used in preference to the Flood IR for maximum operational reliability.

### Tuners

Tuners that do not support both Favourite Station and direct preset access functions will not display a preset number as part of the source display ( Tuner and not Tuner P2 for example).

Only the first nine presets will be shown in the CASA display ( Tuner P1 through Tuner P9 ). Customers' preferred stations should therefore be tuned to the first nine presets on the tuner.

The << and >> keys perform no function.

### CD players

The << and >> keys have no function on single-disc CD players. On multi-disc CD players these keys perform Previous and Next Disc functions.

The **RANDOM** key will put a connected single-disc CD player into random track replay (Shuffle) mode but will attempt to find a random track choice from a random disc on an appropriately equipped multi-disc player if one is the selected source.

The system disregards subsequent CD play keypresses from anywhere in the system for 5 seconds after it receives an initial CD play command from a **CD** source keypress. Subsequent keypresses may be interpreted as Replay commands by some CD players and this delay permits the chosen CD source to go into play without interruption. The STOP key (Remote only), **OFF** key (Zone off (short press) or All off (long press)) or another source key pressed in that zone will all be actioned within the 5 second 'window'.

### Hard Disc Server

If a Server is the selected source the << and >> keys will operate as the Next track and Previous track function.

The << and >> keys performs a Previous and Next album function from the Server.

The **RANDOM** key will find random tracks throughout the sound Server unit.

### Cassette decks

The << and >> keys only perform Search Back and Search Forward if this function is supported by the connected cassette deck. The display will revert without waiting for the cassette deck to find the track.

The << and >> keys are used for Rewind and Fast Forward functions. The cassette deck can only be stopped from the Remote handset, though pressing the **CASS** source key will put the cassette deck from rewind or fast forward into play mode.

### DSS

The << and >> keys jump down or up 10 channels. Laserdisc and DVD players

The << and >> keys perform Previous and Next Chapter functions.

### Laserdisc and DVD players

The << and >> keys perform Previous and Next Chapter functions.

### Video recorders

The << and >> keys are used for Rewind and Fast Forward functions. The video recorder can only be stopped from the Remote handset, though pressing the **VCR** source key will put the video recorder from rewind or fast forward into play mode.

## MULTIPLE USERS/MULTIPLE ZONES

With either one or multiple CASA Controllers in use a symbol will appear in the display to warn the user that the source selected is in use in another zone or zones. A +symbol will appear if the system is in use by another zone with a different source. A ⚡ symbol will appear if the system is in use by another zone with the same source. This warning is to prevent inadvertent source changes that would affect other users in different parts of the house.

No zone has priority over control of sources except in party mode (see the following section).

## PARTY MODE

With the zone on or off, a long press on any one of the four main source keys for 3 seconds puts the whole system into party mode with that source and the display will show **PartyM**. All other Keypad/Displays will show **Party** and will be turned on with the party source. The volume setting will be dependent on the chosen volume options in Zone setup. This will not work from a zone that has been set to exclude Party Mode nor from a Small Keypad in other than Sub-zone A

The master zone Keypads will then have full functional control of all sources and volume with any changes being reflected across the system. Volume changes made in the master zone will change relatively in the slave zones. For example if the volume was turned up from 20 to 25 in the master zone a slave zone set to a volume level of 12 would increment 5 units to 17.

Either the Zone off or All off (short or long key press on the **OFF** key) commands on any Keypad in the master zone will perform All off and take the system out of party mode. If one of the slave zones is switched off when the system is in party mode and then switched back on it will still be in party mode. In a slave zone the All off command performs All off and takes the system out of party mode.

Slave zone Keypads are limited in their operation to Volume up and down, Mute, Zone off and All off and Local input selection (if connected). Any other operation attempted will elicit no display change.

The master zone status can be transferred to another zone by a long 3 second press on the currently playing source key in the slave zone. The display will show **PartyM**.

## Sub-zones

The Display/Keypad in Sub-zone A can be used as a Party Master and will control both Party Volume and Source. The Small Keypad in one of the Sub-zones will control only local volume when in Party mode.

## SPECIAL KEY SEQUENCES/PRESSES

Key sequence	Status	Press	Function	Keypad	Remote
<b>CASA</b>	Zone off	6 sec	Clock Set-up	x	-
[<] [>]	In Clock Set-up	short	Hours Up/Down	x	x
[<<] [>>]	In Clock Set-up	short	Minutes Up/Down	x	x
<b>CASA</b>	In Clock Set-up	short	Save Clock settings	x	-
[<] [MUTE] [>]	System off	long (3 sec)	System Source Set-up	x	x
[<<] [MUTE] [>>]	System off	long (3 sec)	Review Source settings	x	x
<b>LOCAL</b>	In Source Set-up	short	Set fixed local volume	x	x
[MUTE]	In Source Set-up	long (3 sec)	Save Source settings	x	x
[VOL +] [VOL -]	Zone off	long (3 sec)	Tone control and balance Set-up	x	x
[<<] [>>]	In Tone control and balance Set-up	short	Bass Up/Down	x	x
[<] [>]	In Tone control and balance Set-up	short	Treble Up/Down	x	x
[FAV.STN]	In Tone control and balance Set-up	short	Balance L/R	x	x
[MUTE]	In Tone control and balance Set-up	long (3 sec)	Save Tone control and balance settings	x	x
<b>CASA</b>	Zone on or off	short	Cycle current Timer settings	x	-
<b>CASA</b>	Zone off	long (3 sec)	Timer Set-up	x	-
[VOL +] [VOL -]	In Timer Set-up	short	Toggle Events On/Off	x	x
[<] [>]	In Timer Set-up	short	Hours Up/Down	x	x
[<<] [>>]	In Timer Set-up	short	Minutes Up/Down	x	x
<b>CASA</b>	In Timer Set-up	short	Save Timer settings	x	-
<b>CASA</b>	Zone on	long (3 sec)	Sleep Set-up	x	-
[<] [>]	In Sleep Set-up or 60 min settings	short	Pick Disabled, 20, 40	x	x
<b>CASA</b>	In Sleep Set-up	short	Save Sleep settings	x	-
Any source	Zone on or off	long (3 sec)	Party Mode	x	x
Current source		long	Transfer Master	x	x
in slave zone			zone Status		
[<] [MUTE] [<]	System off	long (3 sec)	Zone Set-up	x	x
[<<] [>>]	In Zone Set-up	short	Toggle No Subs/Use Subs	x	x
[>]	In Zone Set-up	short	Party Mode Set-up	x	x
[<<] [>>]	In Party Mode Set-up	short	Toggle Include/Exclude	x	x
[>] again	In Zone Set-up	short	Configure Output Module	x	x
[<<] [>>]	In Output Module Set-up	short	Toggle No Output/Output	x	x
[>] again	In Zone Set-up	short	Volume Option Setup	x	x
[<<] [>>]	In Volume Option Setup	short	Pick Last volume, Preset	x	x
			Volume turn-on or Fixed		
[>] again	In Zone Set-up	short	Max Volume Setup	x	x
[<<] [>>]	In Max Volume Set-up	short	Toggle Default/Set Max vol	x	x
[VOL]	In Max Volume Set-up	short	Set Max volume for zone	x	x
[MUTE]	In Zone Set-up	long (3 sec)	Save Zone settings	x	x
[OFF]	Zone on (No Sub-zones)	short	Zone off	x	x
[OFF]	Zone on (No Sub-zones)	long (3 sec)	All off	x	x
[OFF]	Just Sub-zone A plays	short	Zone off	x	x
[OFF]	Just Sub-zone A plays	mid (1.5 sec)	NO FUNCTION	x	x
[OFF]	Just Sub-zone A plays	long (3 sec)	All off	x	x
[OFF]	Sub-zone A and others play	short	Sub-zone off	x	x
[OFF]	Sub-zone A and others play	mid (1.5 sec)	Zone off	x	x
[OFF]	Sub-zone A and others play	long (3 sec)	All off	x	x

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