AMC X1616

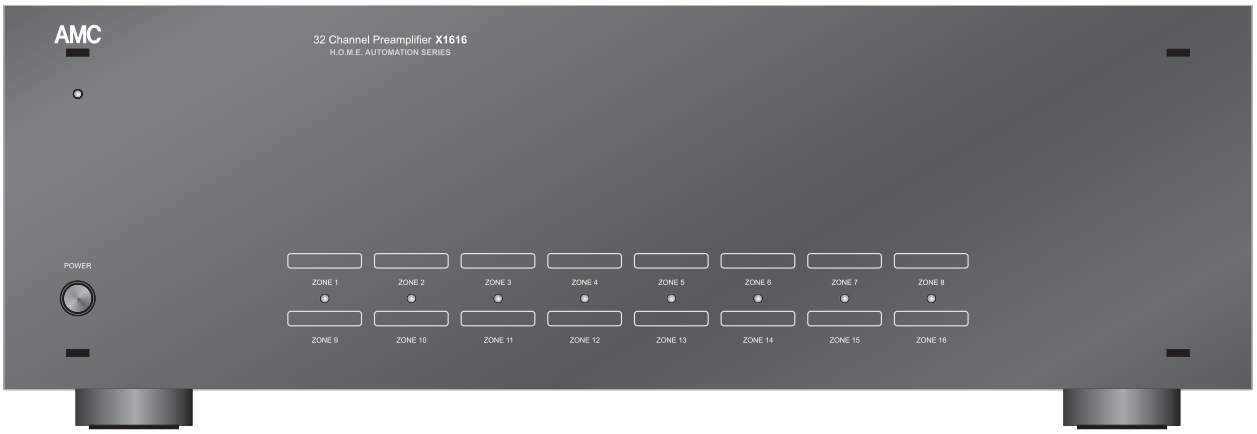
16 ZONE 16 Local/8 Remote SOURCE DIGITAL H.O.M.E. SYSTEM

with Remote Sources

AMC™ IA

AMC

IA PRODUCTS WITH 25 YEAR LIFE USING MODULE CONCEPT



INSTRUCTIONS FOR INSTALLATION AND OPERATION

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

ATTENTION:
RISQUE DE CHOC ELECTRIQUE N OUVRIR PAS

AFIN DEVITER UN CHOC ELECTRIQUE ET LES CONSEQUENCES GRAVES QUI POURRAIENT EN RESULTER, TENTEZ PAS D'OUVRIR L'APPAREIL ET DE TOUCHER AUX COMPOSANTS INTERNES SANS LA PRESENCE D'UNE PERSONNE QUALIFIEE.

PRECAUCION:
RIE SGO DE ELECTROCHOQUE NO ABRIR LA TAPA

PARA REDUCIR EL RIESGO DE SACUDIDAS ELECTRICAS, NO DEBERA QUITARSE LA TAPA (NI PARTE POSTERIOR). CONSULTESE AL PERSONAL CAPACITADO PARA LAS REPARACIONES INTERNAS.

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
ADVERTENICIA: PARA EVITAR EL RIESGO DE INCENDIO O SACUDIDA ELECTRICA, NO DEBERA EXPONERSE ESTE APARATO A LA LLUVIA O HUMEDAD.

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

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR. UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SILES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCuNE PARTIE FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

PRECAUCION: PARA EVITAR SACUDIDAS ELECTRICAS, NO DEBERA UTILIZARSE ESTA ÇLAVIJA POLARIZADA CON UN CORDON DE PROLONGACION, RECEPTACULO U OTRO TIPO DE SALIDA A MENOS QUE SE HAYAN INSERTASO COMPLETAMENTE LAS LENGÜETAS PARA EVITAR SU EXPOSICION.

NOTE: Some AMC products are equipped with dual or multi-voltage transformers (which is indicated on the back panel). If you wish to change the voltage, please bring your unit to an authorised AMC service technician for internal conversion.

ATTENTION: Quelques pièces AMC sont munies de transformateurs à double ou à multi-voltage (indiqué au panneau arrière). Si vous voulez changer le voltage, veuillez apporter votre appareil au fournisseur de AMC pour le transformer.

ZUR BEACHTUNG: Einige AMC Geräte sind mit Umschaltern für unterschiedliche Netzspannungern ausgerüstet (Ein Vermerk auf der Rückseite weist darauf hin).

Die Anpassung, wenn notwendig, muß von einem qualifizieren Techniker in einer AMC Servicestation vorgenommen werden.

NOTA: Ciertos componentes de AMC están dotados de transformadores de doble tensión o de varias tensiones (lo que se indica en el panel posterior). Si se desea cambiar la tensión, sírvanse llevar el aparato a un técnico autorizado por AMC para su conversión interna.

NOTE TO CATV systems installer: This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

NOTA PARA EL INSTALADOR DE ANTENAS DE TELEVISION COLECTIVAS: La presente advertencia se provee para llamar la atención del instalador al Artículo 820-22 de NEC (Córdigo Eléctrico Nacional) donde se facilitan las directrices para la pertinente puesta a tierra y que especifica en particular que el condutor a tierra del cable debe connectarse al sistema de conexión a tierra del edificio, lo más proximo posible al punto de entrada del cable.

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

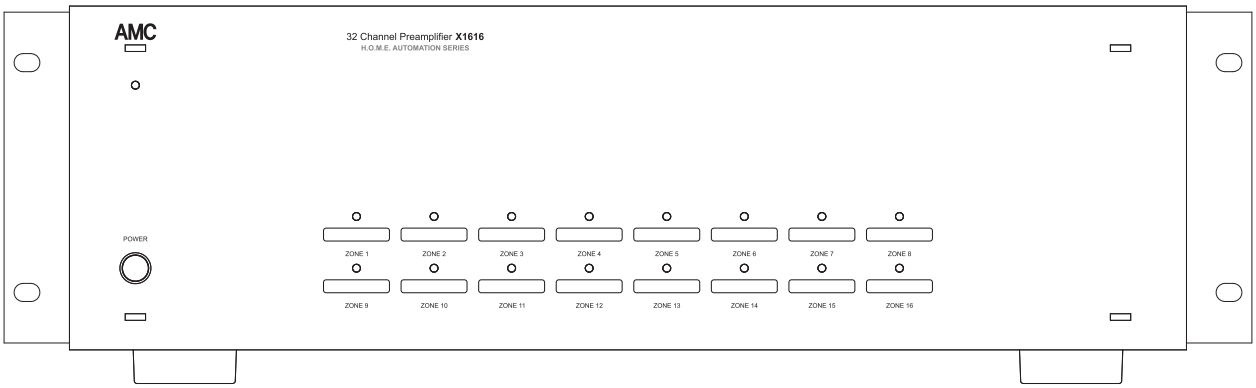
The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

APPLICATION AND FEATURE LIST

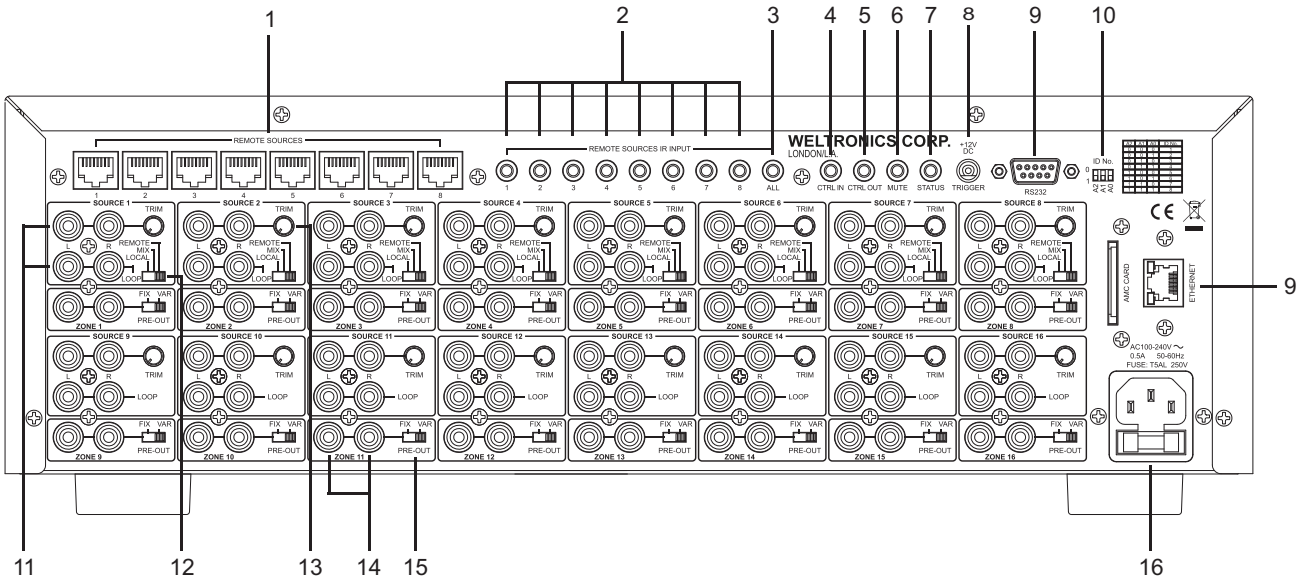
Features of the AMC$_{TM}$ model X1616

* System for total 16 Zones
* System with 16 Sources - 16 Local / 8 Remote Sources.
* Only RJ45 & Speaker Wires used for installations from X1616 main unit to all zones
* Two ways AMC proprietary Digital Data Communication between X1616 Main unit and Remote Sources
* Doorbell and telephone mute system (PDM1) - option
* With RS232 to digital link with other systems - option
* IR remote control receiver on 8 zones for controlling X1616 main unit and Remote Sources in other zones
* RCA, 3.5mm mini jack and RJ45 Remote Source input jacks in each Zone
* The X1616 package contains:
  - 1 X1616 main unit
  - 2 Rack ears
  - 1 This Manual-- Please down load the most updated Manual from AMC website through following link : www.amchome.com/X1616e
  - 1 Zone description label
* Options : XS1, XS1bt, AB01, PDM1 (numbers of XS1,XS1bt, AB01, PDM1 required based on each installation designs)

19" Rack mount model, X1616 is available

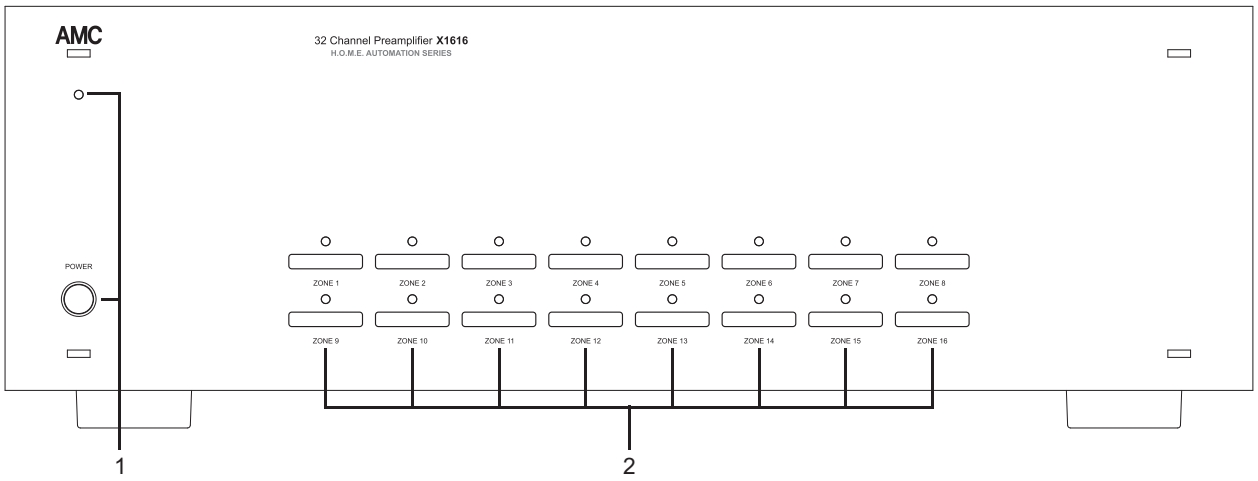


REAR PANEL CONNECTIONS/FRONT PANEL CONTROLS



1. Remote Sources
2. Remote Sources IR Input, Zone 1-8
3. Remote Sources IR Input, All
4. Control In
5. Control Out
6. Mute
7. Status
8. Trigger +12VDC
9. RS232, Ethernet, AMC Card
10. ID No. Switch
11. L & R Audio Input and Loop Connectors
12. Local / Mix / Remote Switch
13. Trim Input Sensitivity Adjustment
14. L & R PRE-OUT Connectors
15. VAR / FIX Switch
16. AC Input Receptacle with Fuse

FRONT PANEL



1. Power Switch (Standby / Off) & Blue LED
2. Zone LED & 16 square Recesses

REAR PANEL CONNECTIONS

1. **Remote Sources**
   For connecting to 8 Remote Sources in Zone 1-8 using CAT5 or CAT6 cables. Each Remote Sources will send Audio signals from Remote Sources to X1616 input as remote source. At the same time X1616 will send IR signal received from each or all Remote Source IR input to each XS1 Remote Source IR output to control each Remote Source through IR emmilter.

2. **Remote Sources IR Input, Zone 1-8**
   For connecting to 8 Zones' IR control signals for sending each control signal to each individual zone through Remote Source CAT5 cable.

3. **Remote Sources IR Input, All**
   IR signal input to the "ALL" Remote Sources IR input will be sent to all 8 Zone through Remote Source CAT5 cable.

4. **CONTROL IN**
   IR signal input to the CONTROL IN connector will control X1616 main unit.

5. **CONTROL OUT**
   This are used for making interface with other system.

6. **Mute**
   This 3.5mm non-shorting Stereo connector (Power, Mute, Gnd) is designed to be used in conjunction with the AMC PDM1 (Phone-Doorbell-Mute Module) - This is an option feature.

7. **Status**
   This jack goes high with any zone ON and goes low when the last zone is turned OFF.
   This is rather light current output and may not trip some external trigger inputs.

8. **+12V DC**
   This connector will give +12V DC / 500mA power output once X1616 turned on for supplying power to external adaptors like ADC etc.

9. **RS232, Ethernet, AMC Card**
   This are used for making interface with other system.

10. **ID No. Switch**
    This is switch to set ID No. of each X1616.

11. **L & R Audio Input and Loop Connectors**
    These RCA jacks, 4 for each Source, provide audio signal inputs and buffered loop outputs, for each Source. The buffered outputs may be used to drive local components or loop the signals to the additional zone inputs of other X1616's when using them for zone expansion.

12. **LOCAL / MIX / REMOTE SWITCH**
    This 3 position switch set source 1 to 8 to be connected to Local source or Remote source or Mix the Local & Remote sources together.

13. **TRIM Input Sensitivity Adjustment**
    These TRIM's are for adjusting each source to the optimized sensitivities in order to match each source output level.

14. **L & R PRE-OUT Connectors**
    These RCA jacks provide line level audio outputs for driving external power amplifiers for additional rooms within zones where needed.

15. **VAR/FIX Switch**
    The audio output from the PRE-OUT

jacks can either be controlled by the internal Volume Control of the X1616 in the VAR Volume Control position or be a fixed line level output in the FIX Volume Control position. In either case, the tone control action remains available for room "EQ" settings.

16.AC input receptacle with Fuse

FRONT PANEL CONTROLS X1616

1. Power Switch (Standby / Off) & Blue LED

The Power Switch turns AMC X1616 "Standby" or "Off"

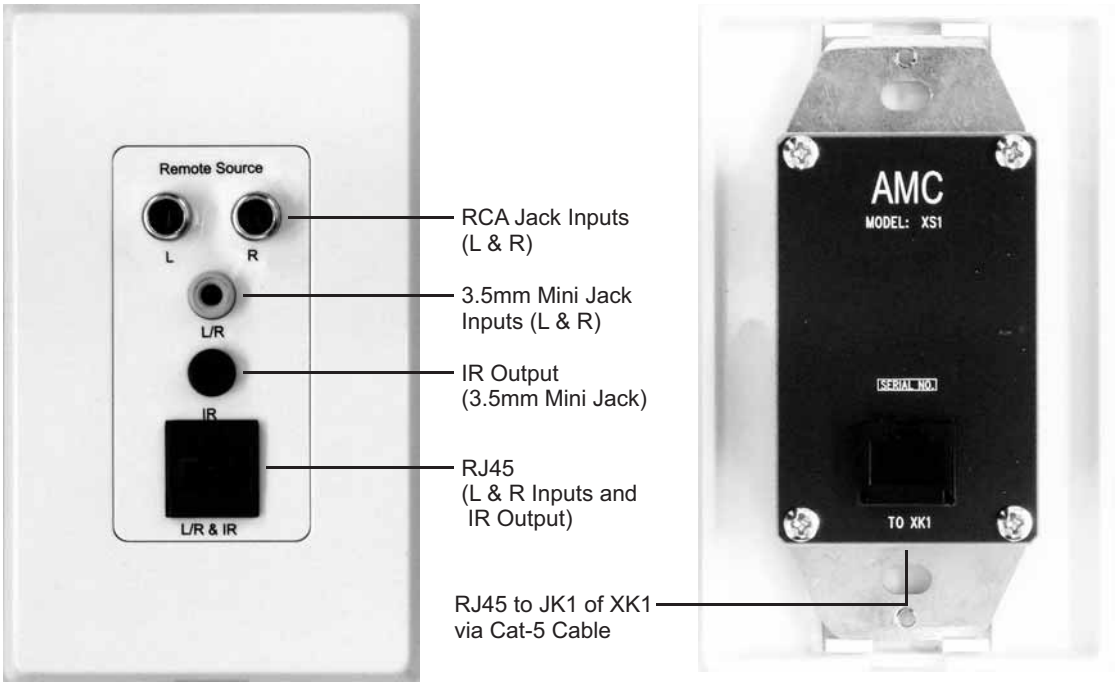
The Blue LED will be lit up during "Standby", will be turned off during "Off"

2. Zone LED & 16 square Recesses

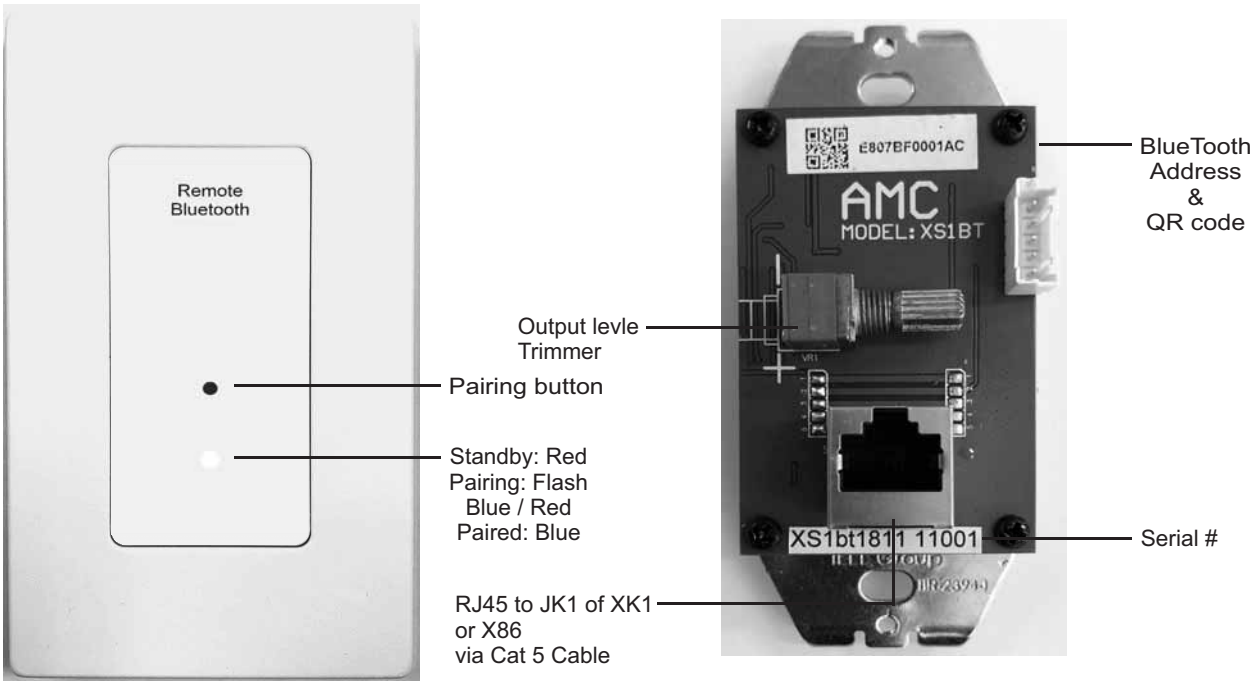
Each of these LEDs indicates, when lit, that its zone keypads are turned on.

The 16 square recesses are for putting labels of names of all zones

REMOTE SOURCE XS1 (for Zone 1 to 8)



REMOTE Bluetooth XS1bt (for Zone 1 to 8) Bluetooth Receiver (ID: AMC-BT)



Operations of Pairing button:
instant Press button: round dot under switch turns “Red” indicating “standby”
Press button for 3 sec: Pairing Mode, Flash Blue / Red
Paired: Blue
Press button for 3 sec → Blue / Red Flash → Press button for 5 sec again → Turned off
*Remarks:
After power outage, turn on Dot and set to play music, then instant press button, round dot will turn red and then turn to blue and back to normal operation status.

Output level Trimmer: Counter Clockwise position is maximum output, use the trimmer to set output level matching other sources

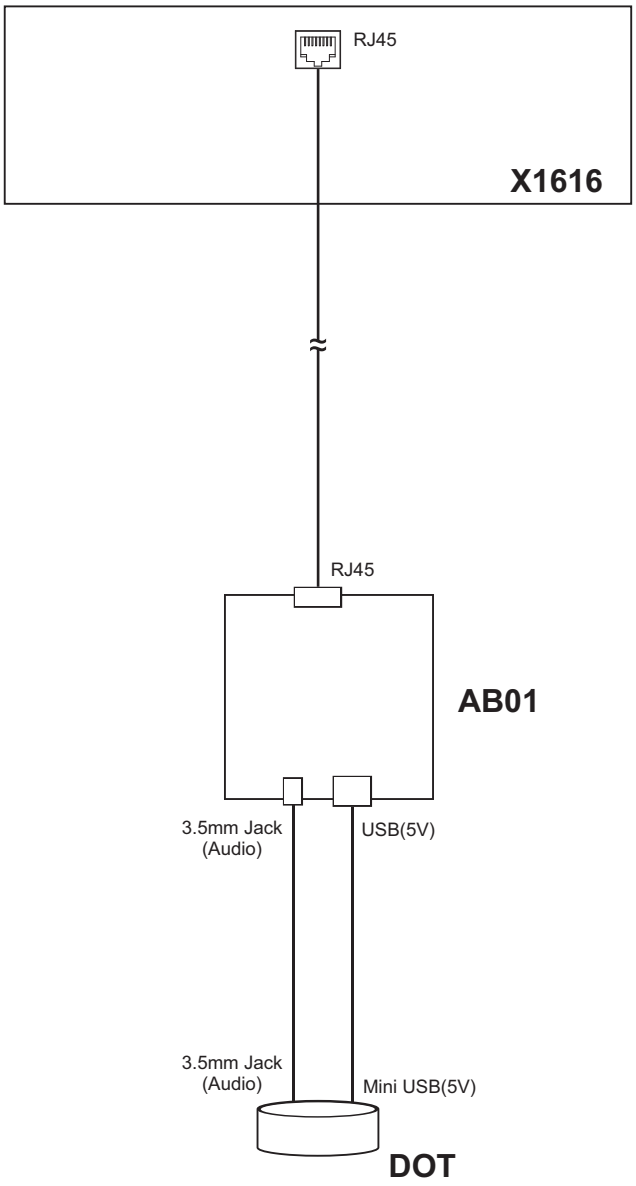
Use Amazon Alexa App to link Dot to Remote Bluetooth

- Select Amazon Alexa APP
- Touch 3 line icon on left upper corner on the page and select “Settings”
- Select Device or Set up a new device
- Select “Bluetooth” & set Remote Bluetooth XS1bt to pairing mode
- Select “Pair a new device”
- Wait until “AMC-BT” displayed (may take serval minutes depending on Mobile phone)
- Select “AMC-BT” and you will hear “Now connected to AMC-BT” from Speaker

Remarks:

- If for some reasons DOT responding with “Can not find AMC-BT”, please “Forget Device” the Pre-selected “AMC-BT” and then “PAIR A NEW DEVICE” again to connect to “AMC-BT”. Then the System will be connected together.

Alexa Box AB01 (for Zone 1 to 8) for Amazon Echo Dot



INSTALLING THE X1616 DIGITAL HOME SYSTEM

1. Prewire

The X1616 uses Cat-5 cable for remote sources. All the wire is “homerun” from each zone to the X1616.

2. The X1616 digital home systems require Cat-5, unshielded, twisted pair (UTP), for communication between the remote sources and the main X1616 unit. Each end of the wire is terminated with an RJ45 connector.

The X1616 system can accommodate 500 total feet of Cat-5 cable for each zone. For the most reliable operation, it is best that no single run of Cat-5 exceeds 250 feet.

The correct wiring scheme for the Cat-5 cable is standard EIA/TIA 568A. Properly terminating the Cat-5 cable is crucial for the operation of the system. It is very important to use a good quality crimp tool, and testing each end to end run with Cat-5 wire tester will insure that your system operate flawlessly, Fig. 1.

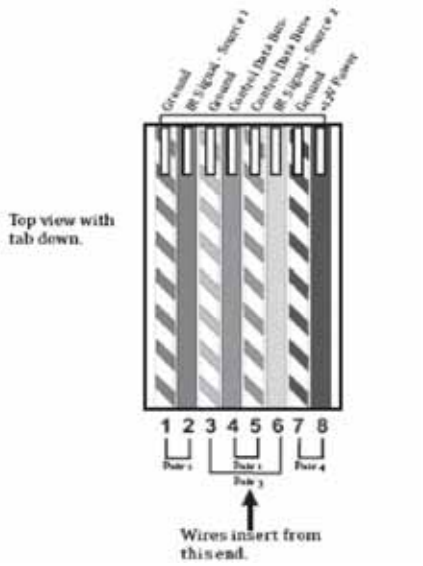


Fig.1: EIA 568A wiring scheme for Cat-5 Cable

Pin #
1. Green Stripe
2. Green
3. Orange Stripe
4. Blue
5. Blue Stripe
6. Orange
7. Brown Stripe
8. Brown

Note: Colors listed as "stripe" are a white wire with a colored stripe.

Step-by-Step Crimping instructions

Step1 Strip a 2 to 3 inches portion of the insulation, exposing the 4 twisted pairs.

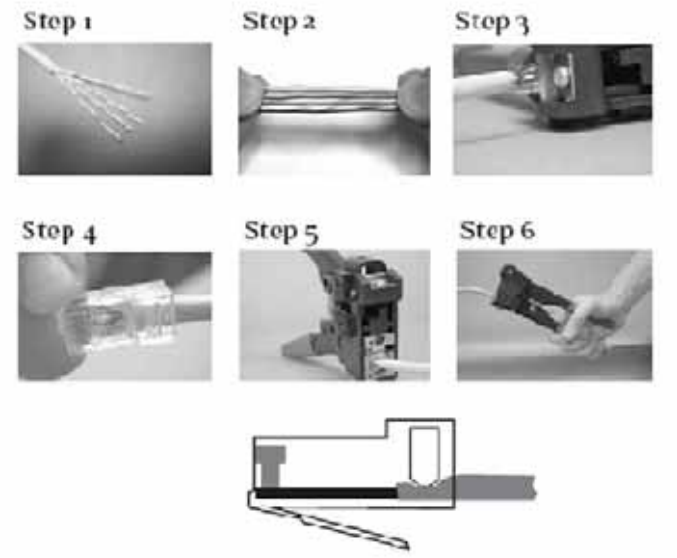
Step2 Untwist the wires and fan them out individually. Arrange the wires into the correct color scheme as shown in Fig.1

Step3 Flatten the wires in their correct order, and trim them evenly across the top. Most crimp tools have a wire trimmer built-in. It is best to trim the wires to about 1/2□ in length.

Step4 While holding the wires flat between your thumb and forefinger, insert the wires into the RJ45 connector, so each is its own slot. Push the wire into the RJ45, so all 8 conductors touch the end of the connector. The insulation jacket should extend beyond the crimp point of the RJ45.

Step5 Insert the RJ45 into the crimp tool receptacle and squeeze the tool firmly. Note that a ratchet type tool should tighten down until it no longer clicks.

Step6 The RJ45 should be firmly crimped to the Cat-5 insulation. It is necessary that the color scheme be repeated identically on each end of the wire.



3. Installing the X1616

The X1616 is designed to be placed on a shelf or in a component rack. If you are mounting the X1616 with other components, you should remove the feet.

The audio sources are plugged into the eight local source inputs on the back panel of the X1616 using stereo RCA cables, Fig.4

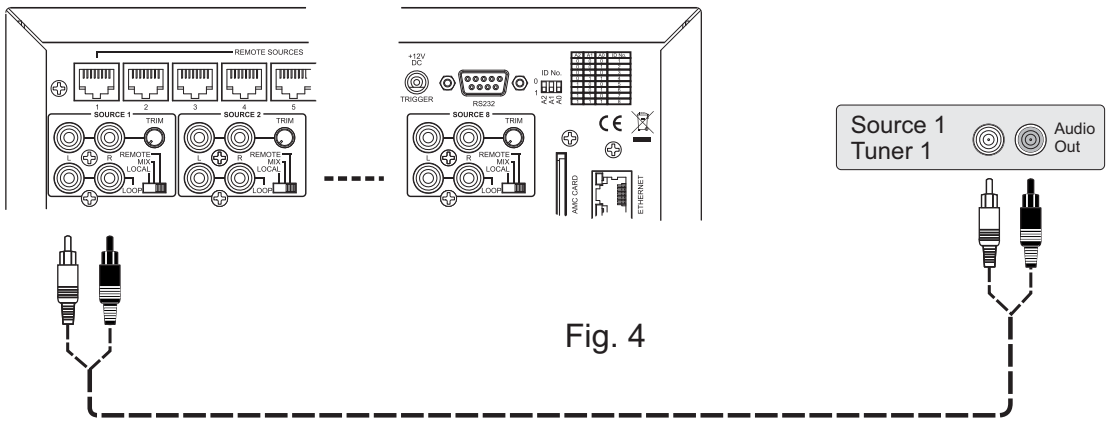
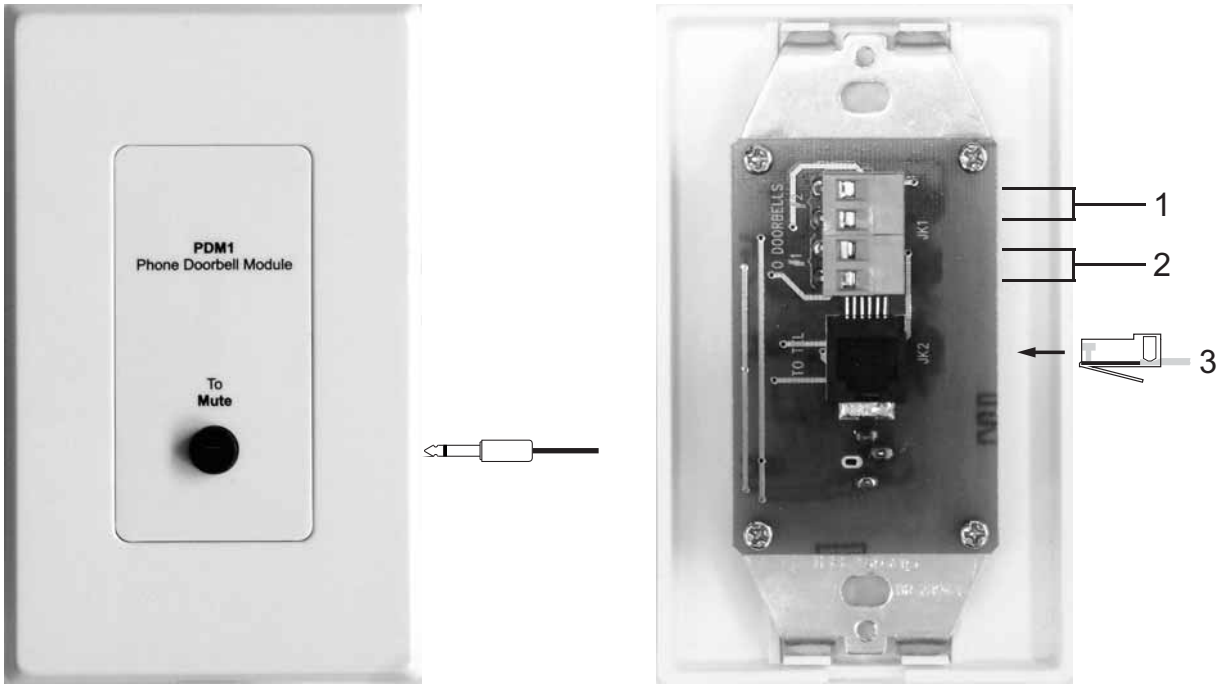


Fig. 4

4. Mute Input and the AMC PDM1 (Phone-Doorbell-Mute Module)
(This is an optional feature)

The back panel of the X1616 has a 3.5mm non-shorting stereo connector input labeled "Mute". This is designed to be used with the AMC PDM1 Phone-Doorbell-Mute module. When the PDM1 is connected, the system will temporarily mute when the phone or doorbell rings.



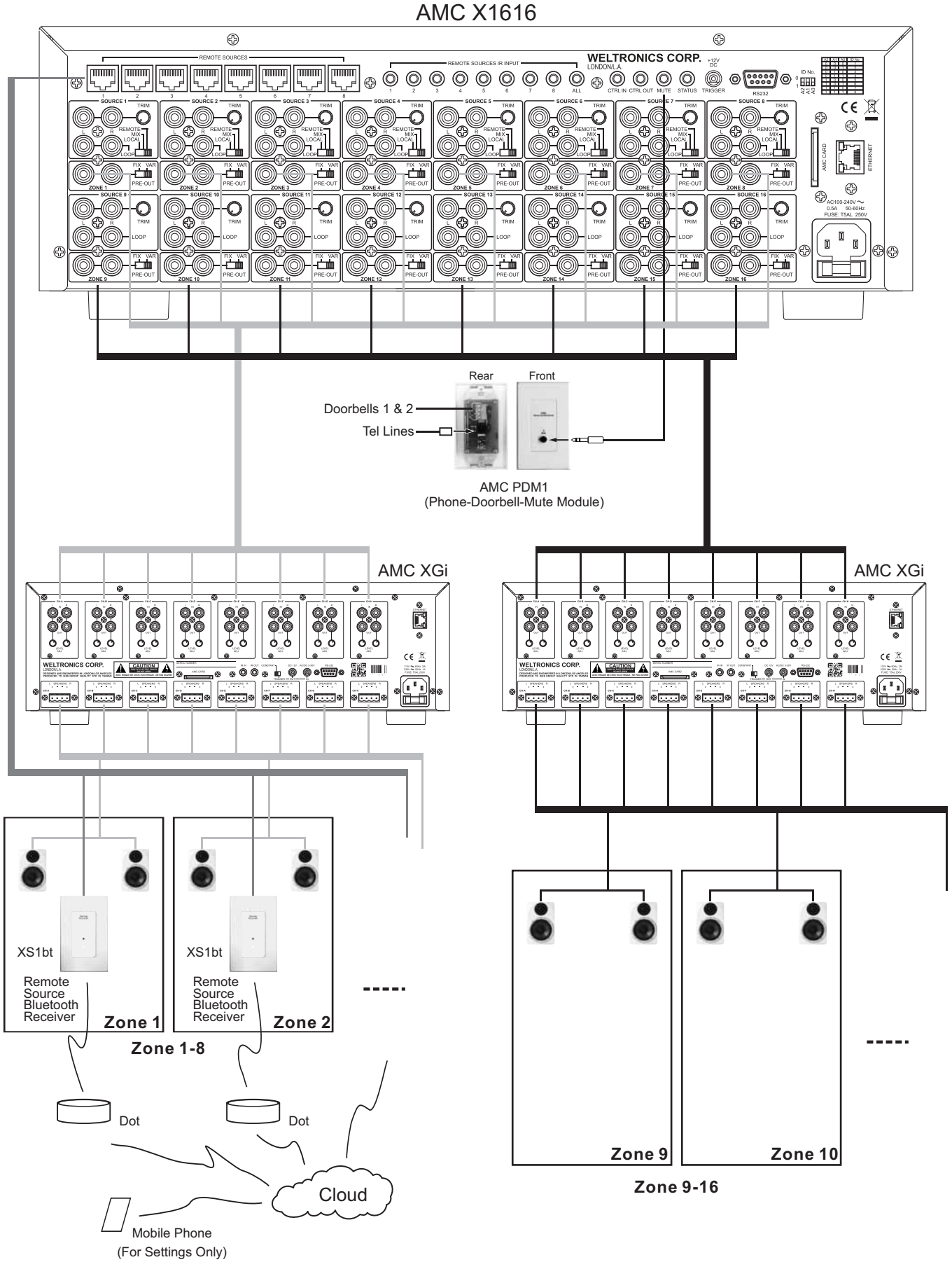
Front Rear

AMC PDM1 (Phone-Doorbell-Mute Module)

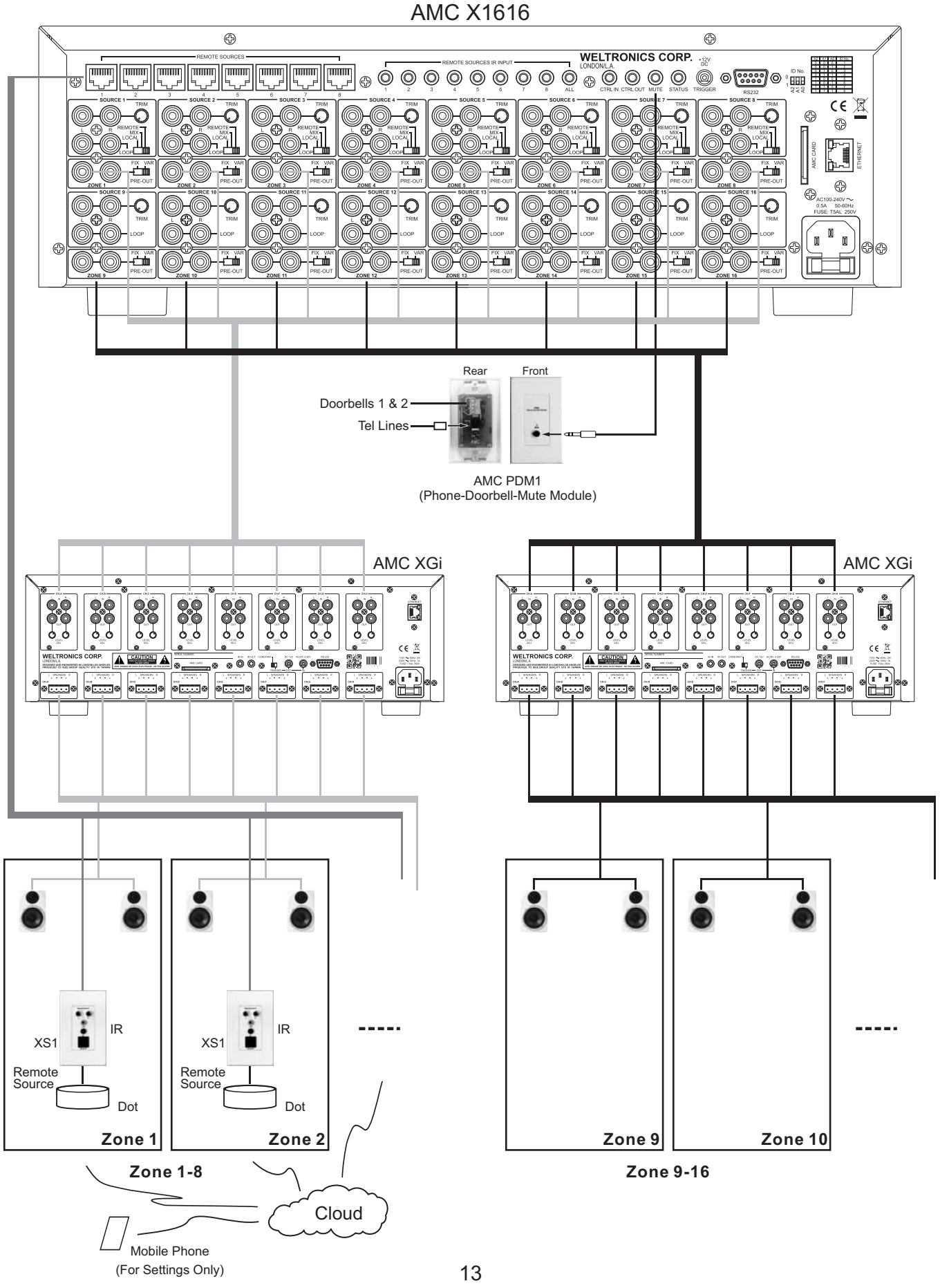
1,2 Doorbell (This is an optional feature)
The back of PDM1 will accept up to two AC or DC voltages from two different doorbell chimes.
This connection is done with two conductor wire from the terminals on the doorbell chime to the Doorbell A or Doorbell B inputs on the back of the PDM1, Polarity is not important for this connection.

3. RJ-11 Connection
Up to two phone lines can be brought into the RJ-11 connection on the back.
The voltage from the phone ringer will trigger the X1616 System to mute.

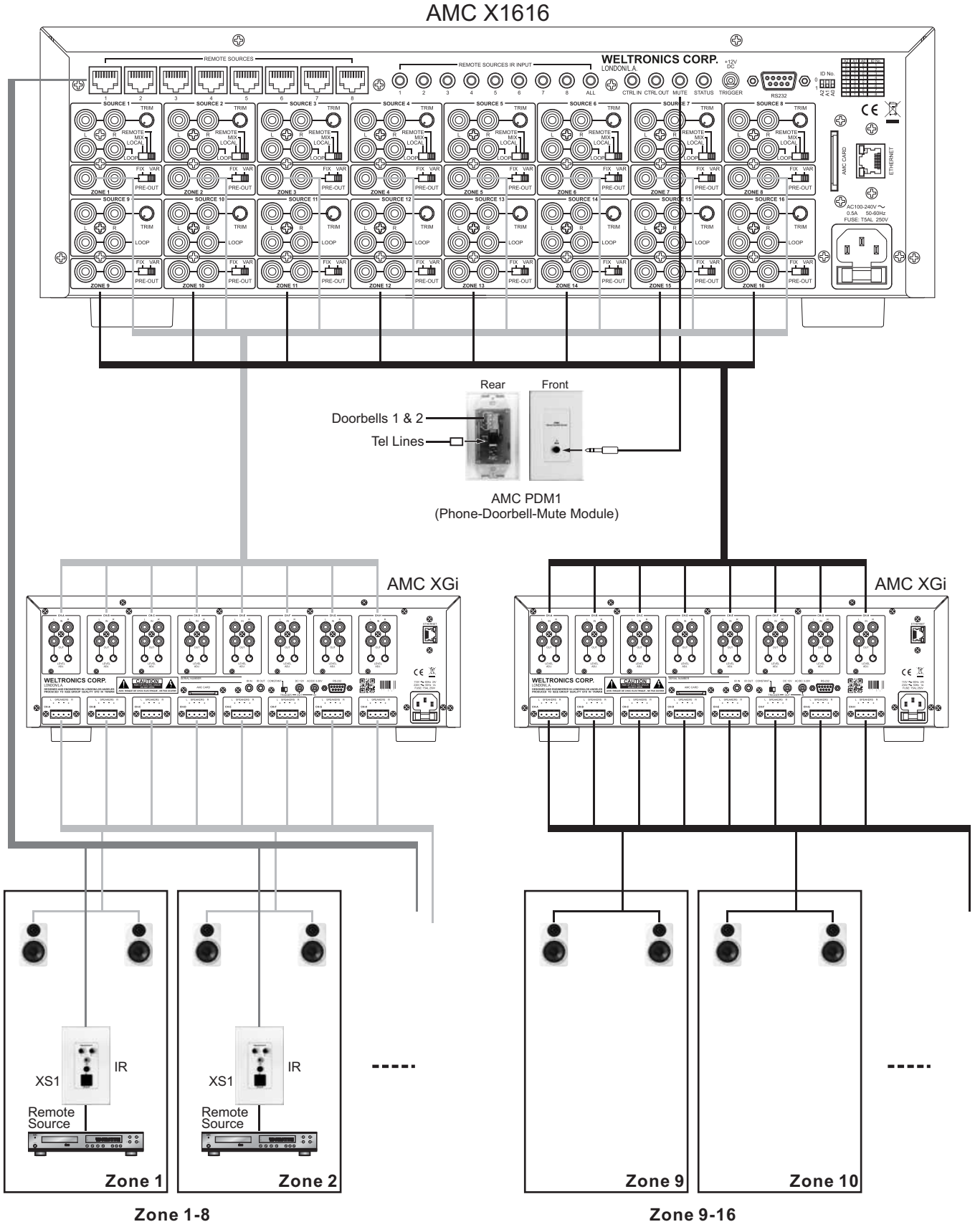
WIRING DIAGRAM OF X1616 DIGITAL H.O.M.E. SYSTEM-01



WIRING DIAGRAM OF X1616 DIGITAL H.O.M.E. SYSTEM-02



WIRING DIAGRAM OF X1616 DIGITAL H.O.M.E. SYSTEM-03



SPECIFICATIONS

Total Zones . . . . . 16 Zones
Sources . . . . . 16 Local / 8 Remote Sources
Sensitivity . . . . . 0 - 60mV

Phone input sensitivity . . . . . AC25V~AC100V 20Hz
Doorbell input sensitivity . . . . . AC/DC 3~12V

PHYSICAL
X1616
Dimensions (W x H x D) . . . . . W 432.0mm x H 147.0mm x D 373.0mm
Net weight 6.4Kgs
Shipping weight (1 pieces) 10.0Kgs
Power consumption AC100V-240V 50-60Hz 0.5A

Weltronics Corp. reserved the right to improve its products at any time. Specifications are subject to change without notice.

RS-232 PROTOCOL SPECIFICATIONS

NAME	DESCRIPTION	GROUP	COMMAND	RETURN	NOTES
Brand	Returns brand name	System Commands	BRAND	BRAND	
Model	Returns Model Name	System Commands	MODEL	MODEL	
Version	Returns installed firmware version	System Commands	*ZN01VER01	#VERSION-NUMBER	
Version	Returns installed firmware version	System Commands	*VER#	#VERSION-NUMBER	
Bootloader	Boot to bootloader	System Commands	*BOOT	#BOOT:	Goes into bootlaoder after displaying #BOOT:
Reset	System Reset (to defaults)	System Commands	*RST!	#RESET	Reset non-volatile memory to default values and reboot
Doorbell/Phone Mute	Mute zones for 10 seconds unless UnMute is received	System Commands	*BELL[bitmap]	#MUTE[bitmap]	
Doorbell/Phone Unmute	A special case of the Mute command	System Commands	*BELL00	#UNMUTE00	
Associate Zones to Group	-	System Commands	*GRPnGRP[bitmap] Ex: *GRP1GRP95 Bitmap must represent the complete bitmap of the group as the new bitmap will replace the old. (this setting is stored in non-volatile memory)	#GRPnn[bitmap] Ex: #GRP0195 The new bitmap status of Group 1. Will also return an ll Groups?status unless no groups change.	Note: A zone can only be in one group at a time. Adding it to a group removes it from any previous group n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex)
Report Zones in Group	-	System Commands	*GRPnSTA01	#GRPnn[bitmap] Same as above	n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex)
Group On	Turns a group on using the source that was in use the last time the zone was turned off. (That source is not remembered through a power cycle)	Group Commands	*GRP1PWR01	#GRPnnON[bitmap] The zones in the group that are being turned on (regardless of current status) #ZNON[bitmap] The zones in the group that are now on	
Group Off	Turns the zones in a group off	Group Commands	*GRP1PWR00	#GRPnnOFF[bitmap] The zones in the group that are being turned off (regardless of current status) #ZNON[bitmap] The zones in the group that are now on	
Group Source Assign	Turns the zones in a group to the specified source and turns it on	Group Commands	*GRPnSRCss	GRPnn[bitmap] Ex: #GRP0195 The bitmap is the group current members	n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex) ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16
Group Volume	Set Group Volume (volume of all zones in the group) to specified level	Group Commands	*GRPnVOLvv	#aa,bb,cc,dd,ee,ff,gg,hh Returns the volume for all zones	n = Group: 4x: 1-4, 8x: 1-8, 16x: 0-F (Hex) vv = Volume: 00 - 75 (in -1 db increments, -75 is muted)
Group Volume Up	Raise the volume of each zone in the group by 1. Note: No zone will increment if any zone is at 0 (max on)	Group Commands	*GRPnVOLUP	#aa,bb,cc,dd,ee,ff,gg,hh Returns the volume for all zones	n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex)
Group Volume Down	Raise the volume of each zone in the group by 1. Note: No zone will decrement if any zone is at -75 (minimum level)	Group Commands	*GRPnVOLDN	#aa,bb,cc,dd,ee,ff,gg,hh Returns the volume for all zones	n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex)

Group Mute On	Mutes the zones in the group	Group Commands	*GRPnMUT01	#GRPnMUT[bitmap]
				n = Group
				The bitmap is the group current members (sb the current mute map)
					n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex)

Group Mute Off	Unmutes the zones in the group	Group Commands	*GRPnMUT00	#GRPnMUT[bitmap]
				n = Group
				The bitmap is the group current members (sb the current mute map)
					n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex)

Clear all Groups	Reset group settings for all zones	All Zones Commands	*ZALLGRP00	#GRPALL,00,00,00,00,00,00,00,00	

RS-232 PROTOCOL SPECIFICATIONS

NAME	DESCRIPTION	GROUP	COMMAND	RETURN	NOTES
Request Zone Status	-	Zone Commands	*ZNzzSTA00	#zz,p,m,ss,-vv	zz = Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16 p = Power (1 = On) m = Mute (1 = Muted) vv = Volume: 4/8: 00 - 62 4x/8x/16x: 00 - 75 (in -1 db increments, -75 is muted)
Combo Command 1	Combo Command - Type 1	Combo Commands	*C1:zz,p,m,ss,-vv	#zz,p,m,ss,-vv	*C1:02,0,0,04,-32 p and m are ignored for now zz = Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16 p = Power (1 = On) m = Mute (1 = Muted) vv = Volume: 4/8: 00 - 62 4x/8x/16x: 00 - 75 (in -1 db increments, -75 is muted)
Request Tone Settings	-	Zone Commands	*ZNzzSET00	$zz,+bb,-tt	zz = Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16 +bb = Bass: -12 to +12 in increments of 2 +tt = Treble: -12 to +12 in increments of 2
Zone Power On	Turns a source on using the source that was in use the last time the zone was turned off. (That source is not remembered through a power cycle)	Zone Commands	*ZNzzPWR01	#zz,p,m,ss,-vv	zz = Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16 p = Power (1 = On) m = Mute (1 = Muted) vv = Volume: 4/8: 00 - 62 4x/8x/16x: 00 - 75 (in -1 db increments, -75 is muted)
Zone Power Off	Same as above	Zone Commands	*ZNzzPWR00	Same as above	Same as above
Zone Power Toggle	Same as above	Zone Commands	*ZNzzPWR02	Same as above	Same as above
All Zones On	-	All Zones Commands	*ZALLPWR01	#ZALLON (All zones on) #ZNONFF (Zones On with bitmap)	
All Zones Off	-	All Zones Commands	*ZALLPWR00	#ZALLOFF (All zones off) #ZNON00 (Zones On with bitmap)	
Zone Mute On	-	Zone Commands	*ZNzzMUT01	#zz,p,m,ss,-vv	All Mute needs a bitmap because channels that are off CANNOT be muted zz = Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16 p = Power (1 = On) m = Mute (1 = Muted) vv = Volume: 4/8: 00 - 62 4x/8x/16x: 00 - 75 (in -1 db increments, -75 is muted)
Zone Mute Off	-	Zone Commands	*ZNzzMUT00	Same as above	Same as above
Zone Mute Toggle	-	Zone Commands	*ZNzzMUT02	Same as above	Same as above
All Zones Mute	-	All Zones Commands	*ZALLMUT01	#ZALLMUTFF Zones muted with bitmap	All Mute needs a bitmap because channels that are off CANNOT be muted
All Zones Unmute	-	All Zones Commands	*ZALLMUT00	Same as above	Same as above

RS-232 PROTOCOL SPECIFICATIONS

NAME	DESCRIPTION	GROUP	COMMAND	RETURN	NOTES
Zone Volume Set	Set zone volume to level (turn on the zone if not currently on)	Zone Commands	*ZNzzVOLvv	#zz,p,m,ss,-vv	zz = Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16 p = Power (1 = On) m = Mute (1 = Muted) vv = Volume: (default: -30dB) 4/8: 00 - 62 4x/8x/16x: 00 - 75 (in -1 db increments, -75 is muted) FIX: Vol予欹滾婁轑帑堣-6dBタEQ嚕菩蓑媒up 勸應level 0dB齜 limit堣0dB VAR: Vol嚕0 - ~ dB滾婁タEQ嚕菩蓑媒up 勸應level 0dB齜 limit堣0dB
Zone Volume Up	Increases zone volume by 1	Zone Commands	*ZNzzVOLUP	Same as above	Same as above
Zone Volume Down	Decreases zone volume by 1	Zone Commands	*ZNzzVOLDN	Same as above	Same as above
Zone Source Select	Send specificed sourceout zones output	Zone Commands	*ZNzzSRCss	Same as above	Same as above
All Zone Source Select	Set all zones to the same source	All Zones Commands	*ZALLSRCss	#ZALL ss *ZNONFF	ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16
Zone Treble Set	Set Treble level	Zone Commands	*ZNzzTRBtt	$zz,bb,tt	Treble band: 10kHz Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 (+/-)bb = Bass: -12 to +12 in increments of 2 (+/-)tt = Treble: -12 to +12 in increments of 2
Zone Treble Up	Increase treble level by 2	Zone Commands	*ZNzzTRBUP	Same as above	Same as above
Zone Treble Down	Decrease treble level by 2	Zone Commands	*ZNzzTRBDN	Same as above	Same as above
Zone Bass Set	Set Bass level	Zone Commands	*ZNzzBAStt	$zz,bb,tt	Bass band: 100Hz Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 (+/-)bb = Bass: -12 to +12 in increments of 2 (+/-)tt = Treble: -12 to +12 in increments of 2
Zone Bass Up	Increase bass level by 2	Zone Commands	*ZNzzBASUP	Same as above	Same as above
Zone Bass Down	Decrease bass level by 2	Zone Commands	*ZNzzBASDN	Same as above	Same as above
Zone Balance Set	Set Balance adjustment	Zone Commands	*ZNzzBALcc	#BAL,zz,cc	zz = zone (+/-)cc = Balance: -12 to 12 (dB) in 1 dB step
Zone Balance Up	Balance Up	Zone Commands	*ZNzzBALUP	#BAL,zz,cc	Same as above
Zone Balance Down	Balance Down	Zone Commands	*ZNzzBALDN	#BAL,zz,cc	Same as above
Zone EQ Set	Set all EQ's for a zone (8 bands)	Zone Commands	*ZNzzEQZe1,e2,e3,e4,e5,e6,e7,e8	#EQZ,zz,e1,e2,e3,e4,e5,e6,e7,e8	8 band EQ Freq(Hz): 31.5, 63, 250, 500, 1000, 2000, 4000, 16000 zz = zone e1-e8 = EQ values for 1-8 bands (-12db to 12dB in 2 dB steps) Example Command: *ZN01EQZ-12,-10,-8,-6,0,8,10,12 Return: #EQZ,01,-12,-10,-8,-6,0,8,10,12
Zone EQ Status	EQ Status per Zone	Zone Commands	*ZNzzEQ?	#EQZ,zz,e1,e2,e3,e4,e5,e6,e7,e8	zz = zone e1-e8 = EQ values for 1-8 bands (-12db to 12dB in 2 dB steps)
Zone EQ Band	Set EQ by band for a zone (8 bands)	Zone Commands	*ZNzzEQBbb,ee	#EQZ,zz,e1,e2,e3,e4,e5,e6,e7,e8	zz = zone bb = Band ee = Value e1-e8 = EQ values for 1-8 bands (-12db to 12dB in 2 dB steps)
Zone EQ Preset Load	Load EQ Preset per zone	Zone Commands	*ZNzzEQPpp	#EQP,zz,pp	pp = EQ Preset slot
Zone EQ Preset Save	Save current EQ to a Preset	Zone Commands	*ZNzzEQSpp	#EQP,zz,pp	pp = EQ Preset slot

Remarks : Please download the most updated "RS-232 PROTOCOL" from AMC website through following link : www.amchome.com/X1616e

CONTROL X1616 THROUGH RS232 USING COMPUTER

1. Equipment used:

a. Computer PC
b. USB to RS232 adaptor
c. Software: Tera Term Pro Version 2.3 or newer
   * Can be down load from Internet

2. Test Procedure

a. Load Tera Term Pro Version 2.3 or newer
b. Setting: Port : COM # you will use
   Baud Rate : 38400
   Data : 8 bit
   Parity : none
   Stop : 1 bit
   Flow Control : none
   Transient delay : 0
c. Test each RS232 command

IR Codes chart

Subject: IEEE I/R Codes_X1616_AD-16_2015-01-29

DATA = ^D D CC ID

ID= UID + ZSIDE = UID (Unit ID) + ZIDE (Zone ID Extension) + SIDE (Source ID Extension)

CC= Customer Code = D8

D= D0 ~ D7 = Zone 1~8 + Command

^D= Inverted Command D

Customer Code: 07D8 (For IEEE X1616, AD16 etc)

ZSIDE (ZIDE+SIDE)

		S1	S2	S3			Z1 (Z1 ~Z5)	Z2	Z3		UID (Unit ID)									ZIDE (Zone ID Extension)		SIDE (Source ID Extension)		ID (=UID+ZSIDE)	
Hex	Function	D7	D6	D5	D4	D3	D2	D1	D0	DATA	All	1	2	3	4	5	6	7	8	Z4	Z5	S4	S5	Zon1~8(Z4=0)	Zone9~16(Z4=1)
00	Zone 1 or 9 Mute/Unmute Toggle	0	0	0	0	0	0	0	0	0xFF00D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
80	Zone 1 or 9 On	1	0	0	0	0	0	0	0	0x7F80D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
40	Zone 1 or 9 Off	0	1	0	0	0	0	0	0	0xBF40D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
C0	Zone 1 or 9 Volume Up	1	1	0	0	0	0	0	0	0x3FC0D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
20	Zone 1 or 9 Volume Down	0	0	1	0	0	0	0	0	0xDF20D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
A0	Zone 1 or 9 Mute	1	0	1	0	0	0	0	0	0x5FA0D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
60	Zone 1 or 9 Unmute	0	1	1	0	0	0	0	0	0x9F60D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
E0	Zone 1 or 9 Source 1	1	1	1	0	0	0	0	0	0x1FE0D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
10	Zone 1 or 9 Source 2	0	0	0	1	0	0	0	0	0xEF10D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
90	Zone 1 or 9 Source 3	1	0	0	1	0	0	0	0	0x6F90D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
50	Zone 1 or 9 Source 4	0	1	0	1	0	0	0	0	0xAF50D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
D0	Zone 1 or 9 Source 5	1	1	0	1	0	0	0	0	0x2FD0D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
30	Zone 1 or 9 Source 6	0	0	1	1	0	0	0	0	0xCF30D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
B0	Zone 1 or 9 Source 7	1	0	1	1	0	0	0	0	0x4FB0D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
70	Zone 1 or 9 Source 8	0	1	1	1	0	0	0	0	0x8F70D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
E0	Zone 1 or 9 Source 9	1	1	1	0	0	0	0	0	0x1FE0D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	1	0	(UID)2	(UID)A
10	Zone 1 or 9 Source 10	0	0	0	1	0	0	0	0	0xEF10D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	1	0	(UID)2	(UID)A
90	Zone 1 or 9 Source 11	1	0	0	1	0	0	0	0	0x6F90D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	1	0	(UID)2	(UID)A
50	Zone 1 or 9 Source 12	0	1	0	1	0	0	0	0	0xAF50D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	1	0	(UID)2	(UID)A
D0	Zone 1 or 9 Source 13	1	1	0	1	0	0	0	0	0x2FD0D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	1	0	(UID)2	(UID)A
30	Zone 1 or 9 Source 14	0	0	1	1	0	0	0	0	0xCF30D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	1	0	(UID)2	(UID)A
B0	Zone 1 or 9 Source 15	1	0	1	1	0	0	0	0	0x4FB0D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	1	0	(UID)2	(UID)A
70	Zone 1 or 9 Source 16	0	1	1	1	0	0	0	0	0x8F70D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	1	0	(UID)2	(UID)A
F0	Zone 1 or 9 Bass Up	1	1	1	1	0	0	0	0	0x0FF0D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
08	Zone 1 or 9 Bass Down	0	0	0	0	1	0	0	0	0xF708D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
88	Zone 1 or 9 Treble Up	1	0	0	0	1	0	0	0	0x7788D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
48	Zone 1 or 9 Treble Down	0	1	0	0	1	0	0	0	0xB748D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
C8	Zone 1 or 9 On/Off Toggle	1	1	0	0	1	0	0	0	0x37C8D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
28	Zone 1 or 9 Status	0	0	1	0	1	0	0	0	0xD728D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
A8	Zone 1 or 9 Bass Flat	1	0	1	0	1	0	0	0	0x57A8D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
68	Zone 1 or 9 Treble Flat	0	1	1	0	1	0	0	0	0x9768D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
04	Zone 2 or 10 Mute/Unmute Toggle	0	0	0	0	0	1	0	0	0xFB04D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
84	Zone 2 or 10 On	1	0	0	0	0	1	0	0	0x7B84D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
44	Zone 2 or 10 Off	0	1	0	0	0	1	0	0	0xBB44D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
C4	Zone 2 or 10 Volume Up	1	1	0	0	0	1	0	0	0x3BC4D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
24	Zone 2 or 10 Volume Down	0	0	1	0	0	1	0	0	0xDB24D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
A4	Zone 2 or 10 Mute	1	0	1	0	0	1	0	0	0x5BA4D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
64	Zone 2 or 10 Unmute	0	1	1	0	0	1	0	0	0x9B64D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
E4	Zone 2 or 10 Source 1	1	1	1	0	0	1	0	0	0x1BE4D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
14	Zone 2 or 10 Source 2	0	0	0	1	0	1	0	0	0xEB14D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
94	Zone 2 or 10 Source 3	1	0	0	1	0	1	0	0	0x6B94D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
54	Zone 2 or 10 Source 4	0	1	0	1	1	0	0		0xAB54D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
D4	Zone 2 or 10 Source 5	1	1	0	1	0	1	0	0	0x2BD4D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
34	Zone 2 or 10 Source 6	0	0	1	1	0	1	0	0	0xCB34D8(ID)	0	8	4	C	2	A 6	E 1			0 or 1	0	0	0	(UID)0	(UID)8
B4	Zone 2 or 10 Source 7	1	0	1	1	0	1	0	0	0x4BB4D8(ID)	0	8	4	C	2	A	6	E	1	0 or 1	0	0	0	(UID)0	(UID)8

IR Codes chart

74	Zone 2 or 10 Source 8	0	1	1	1	0	1	0	0	0x8B74D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID) 0	(UID) 8			
E4	Zone 2 or 10 Source 9	1	1	1	0	0	1	0	0	0x1BE4D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID) 2	(UID) A			
14	Zone 2 or 10 Source 10	0	0	0	1	0	1	0	0	0xEB14D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID) 2	(UID) A			
94	Zone 2 or 10 Source 11	1	0	0	1	0	1	0	0	0x6B94D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID) 2	(UID) A			
54	Zone 2 or 10 Source 12	0	1	0	1	1	0	0		0xAB54D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID) 2	(UID) A			
D4	Zone 2 or 10 Source 13	1	1	0	1	0	1	0	0	0x2BD4D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID) 2	(UID) A			
34	Zone 2 or 10 Source 14	0	0	1	1	0	1	0	0	0xCB34D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID) 2	(UID) A			
B4	Zone 2 or 10 Source 15	1	0	1	1	0	1	0	0	0x4BB4D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID) 2	(UID) A			
74	Zone 2 or 10 Source 16	0	1	1	1	0	1	0	0	0x8B74D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID) 2	(UID) A			
F4	Zone 2 or 10 Bass Up	1	1	1	1	0	1	0	0	0x0BF4D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID) 0	(UID) 8			
0C	Zone 2 or 10 Bass Down	0	0	0	0	1	1	0	0	0xF30CD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID) 0	(UID) 8			
8C	Zone 2 or 10 Treble Up	1	0	0	0	1	1	0	0	0x738CD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID) 0	(UID) 8			
4C	Zone 2 or 10 Treble Down	0	1	0	0	1	1	0	0	0xB34CD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID) 0	(UID) 8			
CC	Zone 2 or 10 On/Off Toggle	1	1	0	0	1	1	0	0	0x33CCD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID) 0	(UID) 8			
2C	Zone 2 or 10 Status	0	0	1	0	1	1	0	0	0xD32CD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID) 0	(UID) 8			
AC	Zone 2 or 10 Bass Flat	1	0	1	0	1	1	0	0	0x53ACD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID) 0	(UID) 8			
6C	Zone 2 or 10 Treble Flat	0	1	1	0	1	1	0	0	0x936CD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID) 0	(UID) 8			
Subject:	IEEE I/R Codes_X1616_AD-16_2015-01-29																					ZSIDE (ZIDE+SIDE)											
																						Zone ID Extension		Source ID Extension								
Customer Code: 07D8 (For IEEE X1616, AD16 etc)						(Z1 ~Z5)																											
		S1	S2	S3		Z1	Z2	Z3				UID (Unit ID)										ZIDE		SIDE			ID (=UID+ZSIDE)					
Hex	Function	D7	D6	D5	D4	D3	D2	D1	D0	DATA		All	1	2	3	4	5	6	7	8		Z4	Z5	S4	S5		Zon1-8(Z4=0)	Zone9-16(Z4=1)				
02	Zone 3 or 11 Mute/Unmute Toggle	0	0	0	0	0	0	1	0	0xFD02D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
82	Zone 3 or 11 On	1	0	0	0	0	0	1	0	0x7D82D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
42	Zone 3 or 11 Off	0	1	0	0	0	0	1	0	0xBD42D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
C2	Zone 3 or 11 Volume Up	1	1	0	0	0	0	1	0	0x3DC2D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
22	Zone 3 or 11 Volume Down	0	0	1	0	0	0	1	0	0xDD22D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
A2	Zone 3 or 11 Mute	1	0	1	0	0	0	1	0	0x5DA2D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
62	Zone 3 or 11 Unmute	0	1	1	0	0	0	1	0	0x9D62D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
E2	Zone 3 or 11 Source 1	1	1	1	0	0	0	1	0	0x1DE2D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
12	Zone 3 or 11 Source 2	0	0	0	1	0	0	1	0	0xED12D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
92	Zone 3 or 11 Source 3	1	0	0	1	0	0	1	0	0x6D92D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
52	Zone 3 or 11 Source 4	0	1	0	1	0	0	1	0	0xAD52D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
D2	Zone 3 or 11 Source 5	1	1	0	1	0	0	1	0	0x2DD2D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
32	Zone 3 or 11 Source 6	0	0	1	1	0	0	1	0	0xCD32D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
B2	Zone 3 or 11 Source 7	1	0	1	1	0	0	1	0	0x4DB2D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
72	Zone 3 or 11 Source 8	0	1	1	1	0	0	1	0	0x8D72D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
E2	Zone 3 or 11 Source 9	1	1	1	0	0	0	1	0	0x1DE2D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	1	0		(UID) 2	(UID) A			
12	Zone 3 or 11 Source 10	0	0	0	1	0	0	1	0	0xED12D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	1	0		(UID) 2	(UID) A			
92	Zone 3 or 11 Source 11	1	0	0	1	0	0	1	0	0x6D92D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	1	0		(UID) 2	(UID) A			
52	Zone 3 or 11 Source 12	0	1	0	1	0	0	1	0	0xAD52D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	1	0		(UID) 2	(UID) A			
D2	Zone 3 or 11 Source 13	1	1	0	1	0	0	1	0	0x2DD2D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	1	0		(UID) 2	(UID) A			
32	Zone 3 or 11 Source 14	0	0	1	1	0	0	1	0	0xCD32D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	1	0		(UID) 2	(UID) A			
B2	Zone 3 or 11 Source 15	1	0	1	1	0	0	1	0	0x4DB2D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	1	0		(UID) 2	(UID) A			
72	Zone 3 or 11 Source 16	0	1	1	1	0	0	1	0	0x8D72D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	1	0		(UID) 2	(UID) A			
F2	Zone 3 or 11 Bass Up	1	1	1	1	0	0	1	0	0x0DF2D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
0A	Zone 3 or 11 Bass Down	0	0	0	0	1	0	1	0	0xF50AD8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
8A	Zone 3 or 11 Treble Up	1	0	0	0	1	0	1	0	0x758AD8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
4A	Zone 3 or 11 Treble Down	0	1	0	0	1	0	1	0	0xB54AD8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
CA	Zone 3 or 11 On/Off Toggle	1	1	0	0	1	0	1	0	0x35CAD8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
2A	Zone 3 or 11 Status	0	0	1	0	1	0	1	0	0xD52AD8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
AA	Zone 3 or 11 Bass Flat	1	0	1	0	1	0	1	0	0x55AAD8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			
6A	Zone 3 or 11 Treble Flat	0	1	1	0	1	0	1	0	0x956AD8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID) 0	(UID) 8			

IR Codes chart

06	Zone 4 or 12 Mute/Unmute Toggle	0	0	0	0	0	1	1	0	0xF906D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
86	Zone 4 or 12 On	1	0	0	0	0	1	1	0	0x7986D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
46	Zone 4 or 12 Off	0	1	0	0	0	1	1	0	0xB946D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
C6	Zone 4 or 12 Volume Up	1	1	0	0	0	1	1	0	0x39C6D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
26	Zone 4 or 12 Volume Down	0	0	1	0	0	1	1	0	0xD926D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
A6	Zone 4 or 12 Mute	1	0	1	0	0	1	1	0	0x59A6D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
66	Zone 4 or 12 Unmute	0	1	1	0	0	1	1	0	0x9966D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
E6	Zone 4 or 12 Source 1	1	1	1	0	0	1	1	0	0x19E6D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
16	Zone 4 or 12 Source 2	0	0	0	1	0	1	1	0	0xE916D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
96	Zone 4 or 12 Source 3	1	0	0	1	0	1	1	0	0x6996D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
56	Zone 4 or 12 Source 4	0	1	0	1	0	1	1	0	0xA956D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
D6	Zone 4 or 12 Source 5	1	1	0	1	0	1	1	0	0x29D6D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
36	Zone 4 or 12 Source 6	0	0	1	1	0	1	1	0	0xC936D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
B6	Zone 4 or 12 Source 7	1	0	1	1	0	1	1	0	0x49B6D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
76	Zone 4 or 12 Source 8	0	1	1	1	0	1	1	0	0x8976D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
E6	Zone 4 or 12 Source 9	1	1	1	0	0	1	1	0	0x19E6D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
16	Zone 4 or 12 Source 10	0	0	0	1	0	1	1	0	0xE916D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
96	Zone 4 or 12 Source 11	1	0	0	1	0	1	1	0	0x6996D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
56	Zone 4 or 12 Source 12	0	1	0	1	0	1	1	0	0xA956D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
D6	Zone 4 or 12 Source 13	1	1	0	1	0	1	1	0	0x29D6D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
36	Zone 4 or 12 Source 14	0	0	1	1	0	1	1	0	0xC936D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
B6	Zone 4 or 12 Source 15	1	0	1	1	0	1	1	0	0x49B6D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
76	Zone 4 or 12 Source 16	0	1	1	1	0	1	1	0	0x8976D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
F6	Zone 4 or 12 Bass Up	1	1	1	1	0	1	1	0	0x09F6D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
0E	Zone 4 or 12 Bass Down	0	0	0	0	1	1	1	0	0xF10ED8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
8E	Zone 4 or 12 Treble Up	1	0	0	0	1	1	1	0	0x718ED8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
4E	Zone 4 or 12 Treble Down	0	1	0	0	1	1	1	0	0xB14ED8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
CE	Zone 4 or 12 On/Off Toggle	1	1	0	0	1	1	1	0	0x31CED8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
2E	Zone 4 or 12 Status	0	0	1	0	1	1	1	0	0xD12ED8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
AE	Zone 4 or 12 Bass Flat	1	0	1	0	1	1	1	0	0x51AED8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
6E	Zone 4 or 12 Treble Flat	0	1	1	0	1	1	1	0	0x916ED8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		

Subject:	IEEE I/R Codes_X1616_AD-16_2015-01-29																						ZSIDE (ZIDE+SIDE)									
																							Zone ID Extension		Source ID Extension							
Customer Code: 07D8 (For IEEE X1616, AD16 etc)						(Z1 ~Z5)																										
		S1	S2	S3		Z1	Z2	Z3			UID (Unit ID)												ZIDE		SIDE		ID(=UID+ZSIDE)					
Hex	Function	D7	D6	D5	D4	D3	D2	D1	D0	DATA	All	1	2	3	4	5	6	7	8				Z4	Z5	S4	S5	Zon1~8(Z4=0)	Zone9~16(Z4=1)				
01	Zone 5 or 13 Mute/Unmute Toggle	0	0	0	0	0	0	0	1	0xFE01D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
81	Zone 5 or 13 On	1	0	0	0	0	0	0	1	0x7E81D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
41	Zone 5 or 13 Off	0	1	0	0	0	0	0	1	0xBE41D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
C1	Zone 5 or 13 Volume Up	1	1	0	0	0	0	0	1	0x3EC1D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
21	Zone 5 or 13 Volume Down	0	0	1	0	0	0	0	1	0xDE21D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
A1	Zone 5 or 13 Mute	1	0	1	0	0	0	0	1	0x5EA1D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
61	Zone 5 or 13 Unmute	0	1	1	0	0	0	0	1	0x9E61D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
E1	Zone 5 or 13 Source 1	1	1	1	0	0	0	0	1	0x1EE1D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
11	Zone 5 or 13 Source 2	0	0	0	1	0	0	0	1	0xEE11D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
91	Zone 5 or 13 Source 3	1	0	0	1	0	0	0	1	0x6E91D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
51	Zone 5 or 13 Source 4	0	1	0	1	0	0	0	1	0xAE51D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
D1	Zone 5 or 13 Source 5	1	1	0	1	0	0	0	1	0x2ED1D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
31	Zone 5 or 13 Source 6	0	0	1	1	0	0	0	1	0xCE31D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
B1	Zone 5 or 13 Source 7	1	0	1	1	0	0	0	1	0x4EB1D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
71	Zone 5 or 13 Source 8	0	1	1	1	0	0	0	1	0x8E71D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
E1	Zone 5 or 13 Source 9	1	1	1	0	0	0	0	1	0x1EE1D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
11	Zone 5 or 13 Source 10	0	0	0	1	0	0	0	1	0xEE11D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
91	Zone 5 or 13 Source 11	1	0	0	1	0	0	0	1	0x6E91D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		

IR Codes chart

51	Zone 5 or 13 Source 12	0	1	0	1	0	0	0	1	0xAE51D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
D1	Zone 5 or 13 Source 13	1	1	0	1	0	0	0	1	0x2ED1D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
31	Zone 5 or 13 Source 14	0	0	1	1	0	0	0	1	0xCE31D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
B1	Zone 5 or 13 Source 15	1	0	1	1	0	0	0	1	0x4EB1D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
71	Zone 5 or 13 Source 16	0	1	1	1	0	0	0	1	0x8E71D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
F1	Zone 5 or 13 Bass Up	1	1	1	1	0	0	0	1	0x0EF1D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
09	Zone 5 or 13 Bass Down	0	0	0	0	1	0	0	1	0xF609D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
89	Zone 5 or 13 Treble Up	1	0	0	0	1	0	0	1	0x7689D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
49	Zone 5 or 13 Treble Down	0	1	0	0	1	0	0	1	0xB649D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
C9	Zone 5 or 13 On/Off Toggle	1	1	0	0	1	0	0	1	0x36C9D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
29	Zone 5 or 13 Status	0	0	1	0	1	0	0	1	0xD629D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
A9	Zone 5 or 13 Bass Flat	1	0	1	0	1	0	0	1	0x56A9D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
69	Zone 5 or 13 Treble Flat	0	1	1	0	1	0	0	1	0x9669D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
05	Zone 6 or 14 Mute/Unmute Toggle	0	0	0	0	0	1	0	1	0xFA05D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
85	Zone 6 or 14 On	1	0	0	0	0	1	0	1	0x7A85D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
45	Zone 6 or 14 Off	0	1	0	0	0	1	0	1	0xBA45D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
C5	Zone 6 Volume Up	1	1	0	0	0	1	0	1	0x3AC5D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
25	Zone 6 or 14 Volume Down	0	0	1	0	0	1	0	1	0xDA25D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
A5	Zone 6 or 14 Mute	1	0	1	0	0	1	0	1	0x5AA5D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
65	Zone 6 or 14 Unmute	0	1	1	0	0	1	0	1	0x9A65D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
E5	Zone 6 or 14 Source 1	1	1	1	0	0	1	0	1	0x1AE5D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
15	Zone 6 or 14 Source 2	0	0	0	1	0	1	0	1	0xEA15D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
95	Zone 6 or 14 Source 3	1	0	0	1	0	1	0	1	0x6A95D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
55	Zone 6 or 14 Source 4	0	1	0	1	0	1	0	1	0xAA55D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
D5	Zone 6 or 14 Source 5	1	1	0	1	0	1	0	1	0x2AD5D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
35	Zone 6 or 14 Source 6	0	0	1	1	0	1	0	1	0xCA35D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
B5	Zone 6 or 14 Source 7	1	0	1	1	0	1	0	1	0x4AB5D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
75	Zone 6 or 14 Source 8	0	1	1	1	0	1	0	1	0x8A75D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
E5	Zone 6 or 14 Source 9	1	1	1	0	0	1	0	1	0x1AE5D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
15	Zone 6 or 14 Source 10	0	0	0	1	0	1	0	1	0xEA15D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
95	Zone 6 or 14 Source 11	1	0	0	1	0	1	0	1	0x6A95D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
55	Zone 6 or 14 Source 12	0	1	0	1	0	1	0	1	0xAA55D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
D5	Zone 6 or 14 Source 13	1	1	0	1	0	1	0	1	0x2AD5D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
35	Zone 6 or 14 Source 14	0	0	1	1	0	1	0	1	0xCA35D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
B5	Zone 6 or 14 Source 15	1	0	1	1	0	1	0	1	0x4AB5D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
75	Zone 6 or 14 Source 16	0	1	1	1	0	1	0	1	0x8A75D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A			
F5	Zone 6 or 14 Bass Up	1	1	1	1	0	1	0	1	0x0AF5D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
0D	Zone 6 or 14 Bass Down	0	0	0	0	1	1	0	1	0xF20DD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
8D	Zone 6 or 14 Treble Up	1	0	0	0	1	1	0	1	0x728DD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
4D	Zone 6 or 14 Treble Down	0	1	0	0	1	1	0	1	0xB24DD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
CD	Zone 6 or 14 On/Off Toggle	1	1	0	0	1	1	0	1	0x32CDD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
2D	Zone 6 or 14 Status	0	0	1	0	1	1	0	1	0xD22DD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
AD	Zone 6 or 14 Bass Flat	1	0	1	0	1	1	0	1	0x52ADD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
6D	Zone 6 or 14 Treble Flat	0	1	1	0	1	1	0	1	0x926DD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8			
Subject:	IEEE I/R Codes_X1616_AD-16_2015-01-29																					ZSIDE (ZIDE+SIDE)										
																						Zone ID Extension		Source ID Extension								
Customer Code: 07D8 (For IEEE X1616, AD16 etc)							(Z1 ~Z5)																									
		S1	S2	S3			Z1	Z2	Z3			UID (Unit ID)										ZIDE		SIDE			ID(=UID+ZSIDE)					
Hex	Function	D7	D6	D5	D4	D3	D2	D1	D0	DATA		All	1	2	3	4	5	6	7	8		Z4	Z5	S4	S5		Zon1~8(Z4=0)	Zone9~16(Z4=1)				
03	Zone 7 or 15 Mute/Unmute Toggle	0	0	0	0	0	0	1	1	0xFC03D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID)0	(UID)8				
83	Zone 7 or 15 On	1	0	0	0	0	0	1	1	0x7C83D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID)0	(UID)8				
43	Zone 7 or 15 Off	0	1	0	0	0	0	1	1	0xBC43D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID)0	(UID)8				
C3	Zone 7 or 15 Volume Up	1	1	0	0	0	0	1	1	0x3CC3D8(ID)		0	8	4	C	2	A	6	E	1		0 or 1	0	0	0		(UID)0	(UID)8				

IR Codes chart

23	Zone 7 or 15 Volume Down	0	0	1	0	0	0	1	1	0xDC23D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
A3	Zone 7 or 15 Mute	1	0	1	0	0	0	1	1	0x5CA3D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
63	Zone 7 or 15 Unmute	0	1	1	0	0	0	1	1	0x9C63D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
E3	Zone 7 or 15 Source 1	1	1	1	0	0	0	1	1	0x1CE3D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
13	Zone 7 or 15 Source 2	0	0	0	1	0	0	1	1	0xEC13D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
93	Zone 7 or 15 Source 3	1	0	0	1	0	0	1	1	0x6C93D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
53	Zone 7 or 15 Source 4	0	1	0	1	0	0	1	1	0xAC53D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
D3	Zone 7 or 15 Source 5	1	1	0	1	0	0	1	1	0x2CD3D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
33	Zone 7 or 15 Source 6	0	0	1	1	0	0	1	1	0xCC33D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
B3	Zone 7 or 15 Source 7	1	0	1	1	0	0	1	1	0x4CB3D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
73	Zone 7 or 15 Source 8	0	1	1	1	0	0	1	1	0x8C73D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
E3	Zone 7 or 15 Source 9	1	1	1	0	0	0	1	1	0x1CE3D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
13	Zone 7 or 15 Source 10	0	0	0	1	0	0	1	1	0xEC13D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
93	Zone 7 or 15 Source 11	1	0	0	1	0	0	1	1	0x6C93D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
53	Zone 7 or 15 Source 12	0	1	0	1	0	0	1	1	0xAC53D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
D3	Zone 7 or 15 Source 13	1	1	0	1	0	0	1	1	0x2CD3D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
33	Zone 7 or 15 Source 14	0	0	1	1	0	0	1	1	0xCC33D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
B3	Zone 7 or 15 Source 15	1	0	1	1	0	0	1	1	0x4CB3D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
73	Zone 7 or 15 Source 16	0	1	1	1	0	0	1	1	0x8C73D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
F3	Zone 7 or 15 Bass Up	1	1	1	1	0	0	1	1	0x0CF3D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
0B	Zone 7 or 15 Bass Down	0	0	0	0	1	0	1	1	0xF40BD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
8B	Zone 7 or 15 Treble Up	1	0	0	0	1	0	1	1	0x748BD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
4B	Zone 7 or 15 Treble Down	0	1	0	0	1	0	1	1	0xB44BD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
CB	Zone 7 or 15 On/Off Toggle	1	1	0	0	1	0	1	1	0x34CBD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
2B	Zone 7 or 15 Status	0	0	1	0	1	0	1	1	0xD42BD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
AB	Zone 7 or 15 Bass Flat	1	0	1	0	1	0	1	1	0x54ABD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
6B	Zone 7 or Treble Flat	0	1	1	0	1	0	1	1	0x946BD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
07	Zone 8 or 16 Mute/Unmute Toggle	0	0	0	0	0	1	1	1	0xF807D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
87	Zone 8 or 16 On	1	0	0	0	0	1	1	1	0x7887D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
47	Zone 8 or 16 Off	0	1	0	0	0	1	1	1	0xB847D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
C7	Zone 8 or 16 Volume Up	1	1	0	0	0	1	1	1	0x38C7D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
27	Zone 8 or 16 Volume Down	0	0	1	0	0	1	1	1	0xD827D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
A7	Zone 8 or 16 Mute	1	0	1	0	0	1	1	1	0x58A7D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
67	Zone 8 or 16 Unmute	0	1	1	0	0	1	1	1	0x9867D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
E7	Zone 8 or 16 Source 1	1	1	1	0	0	1	1	1	0x18E7D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
17	Zone 8 or 16 Source 2	0	0	0	1	0	1	1	1	0xE817D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
97	Zone 8 or 16 Source 3	1	0	0	1	0	1	1	1	0x6897D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
57	Zone 8 or 16 Source 4	0	1	0	1	0	1	1	1	0xA857D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
D7	Zone 8 or 16 Source 5	1	1	0	1	0	1	1	1	0x28D7D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
37	Zone 8 or 16 Source 6	0	0	1	1	0	1	1	1	0xC837D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
B7	Zone 8 or 16 Source 7	1	0	1	1	0	1	1	1	0x48B7D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
77	Zone 8 or 16 Source 8	0	1	1	1	0	1	1	1	0x8877D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
E7	Zone 8 or 16 Source 9	1	1	1	0	0	1	1	1	0x18E7D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
17	Zone 8 or 16 Source 10	0	0	0	1	0	1	1	1	0xE817D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
97	Zone 8 or 16 Source 11	1	0	0	1	0	1	1	1	0x6897D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
57	Zone 8 or 16 Source 12	0	1	0	1	0	1	1	1	0xA857D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
D7	Zone 8 or 16 Source 13	1	1	0	1	0	1	1	1	0x28D7D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
37	Zone 8 or 16 Source 14	0	0	1	1	0	1	1	1	0xC837D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
B7	Zone 8 or 16 Source 15	1	0	1	1	0	1	1	1	0x48B7D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
77	Zone 8 or 16 Source 16	0	1	1	1	0	1	1	1	0x8877D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	1	0		(UID)2	(UID)A		
F7	Zone 8 or 16 Bass Up	1	1	1	1	0	1	1	1	0x08F7D8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
0F	Zone 8 or 16 Bass Down	0	0	0	0	1	1	1	1	0xF00FD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
8F	Zone 8 or 16 Treble Up	1	0	0	0	1	1	1	1	0x708FD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
4F	Zone 8 or 16 Treble Down	0	1	0	0	1	1	1	1	0xB04FD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
CF	Zone 8 or 16 On/Off Toggle	1	1	0	0	1	1	1	1	0x30CFD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
2F	Zone 8 or 16 Status	0	0	1	0	1	1	1	1	0xD02FD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
AF	Zone 8 or 16 Bass Flat	1	0	1	0	1	1	1	1	0x50AFD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		
6F	Zone 8 or 16 Treble Flat	0	1	1	0	1	1	1	1	0x906FD8(ID)		0	8	4	C	2	A	6	E	1			0 or 1	0	0	0		(UID)0	(UID)8		

IR Codes chart

Subject:	IEEE I/R Codes_X1616_AD-16_2015-01-29																				ZSIDE (ZIDE+SIDE)							
					D4~D0 =11111 or 11000=All Zones																Zone ID Extension		Source ID Extension					
Customer Code: 07D8 (For IEEE X1616, AD16 etc)						(Z1 ~Z5)																						
		S1	S2	S3			Z1	Z2	Z3			UID (Unit ID)										ZIDE		SIDE			ID(=UID+ZSIDE)		
Hex	Function	D7	D6	D5	D4	D3	D2	D1	D0	DATA		All	1	2	3	4	5	6	7	8		Z4	Z5	S4	S5		Zon1~8(Z4&Z5=0)	Zone9~16(Z4=1,Z5=0)	All Zones(Z4=1,Z5=1)
1F	All Zones Mute/Unmute Toggle	0	0	0	1	1	1	1	1	0xE01FD8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
9F	All Zones On	1	0	0	1	1	1	1	1	0x609FD8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
5F	All Zones Off	0	1	0	1	1	1	1	1	0xA05FD8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
DF	All Zones Mute	1	1	0	1	1	1	1	1	0x20DFD8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
3F	All Zones Unmute	0	0	1	1	1	1	1	1	0xC03FD8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
BF	All Zones On/Off Toggle	1	0	1	1	1	1	1	1	0x40BFD8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
18	All Zones Source 1	0	0	0	1	1	0	0	0	0xE718D8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
98	All Zones Source 2	1	0	0	1	1	0	0	0	0x6798D8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
58	All Zones Source 3	0	1	0	1	1	0	0	0	0xA758D8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
D8	All Zones Source 4	1	1	0	1	1	0	0	0	0x27D8D8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
38	All Zones Source 5	0	0	1	1	1	0	0	0	0xC738D8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
B8	All Zones Source 6	1	0	1	1	1	0	0	0	0x47B8D8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
78	All Zones Source 7	0	1	1	1	1	0	0	0	0x8778D8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
F8	All Zones Source 8	1	1	1	1	1	0	0	0	0x07F8D8(ID)		0	8	4	C	2	A	6	E	1		1	1	0	0		-	-	(UID)C
18	All Zones Source 9	0	0	0	1	1	0	0	0	0xE718D8(ID)		0	8	4	C	2	A	6	E	1		1	1	1	0		-	-	(UID)E
98	All Zones Source 10	1	0	0	1	1	0	0	0	0x6798D8(ID)		0	8	4	C	2	A	6	E	1		1	1	1	0		-	-	(UID)E
58	All Zones Source 11	0	1	0	1	1	0	0	0	0xA758D8(ID)		0	8	4	C	2	A	6	E	1		1	1	1	0		-	-	(UID)E
D8	All Zones Source 12	1	1	0	1	1	0	0	0	0x27D8D8(ID)		0	8	4	C	2	A	6	E	1		1	1	1	0		-	-	(UID)E
38	All Zones Source 13	0	0	1	1	1	0	0	0	0xC738D8(ID)		0	8	4	C	2	A	6	E	1		1	1	1	0		-	-	(UID)E
B8	All Zones Source 14	1	0	1	1	1	0	0	0	0x47B8D8(ID)		0	8	4	C	2	A	6	E	1		1	1	1	0		-	-	(UID)E
78	All Zones Source 15	0	1	1	1	1	0	0	0	0x8778D8(ID)		0	8	4	C	2	A	6	E	1		1	1	1	0		-	-	(UID)E
F8	All Zones Source 16	1	1	1	1	1	0	0	0	0x07F8D8(ID)		0	8	4	C	2	A	6	E	1		1	1	1	0		-	-	(UID)E

Remarks : Please download the most updated "IR Codes" from AMC website through following link : www.amchome.com/X1616e

SAFETY INSTRUCTION

1. READ INSTRUCTIONS

All the safety and operating instructions should be read before the appliance is operated.

2. RETAIN INSTRUCTIONS

The safety and operating instructions should be retained for future reference.

3. HEED WARNINGS

All warnings on the appliance and in the operating instructions should be adhered to.

4. FOLLOW INSTRUCTIONS

All operating and use instructions should be followed.

5. 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, etc.

6. CARTS AND STANDS

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

6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. WALL OR CEILING MOUNTING

This equipment is not designed for use mounted on a wall or a ceiling.

8. VENTILATION

The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings, or placed in a built-in installation, such as bookcase or cabinet that may impede the flow of air through the ventilation openings.

9. HEAT

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

10. POWER SOURCES

The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

11. POWER-CORD PROTECTION

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance

12. CLEANING

The appliance should be cleaned only as recommended by the manufacturer.

13. NON USE PERIODS

The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

14. OBJECT AND LIQUID ENTRY

Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

15. SERVICING

The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

16. DAMAGE REQUIRING SERVICE

The appliance should be serviced by qualified service personnel when:

a) The power-supply cord or the plug has been damaged; or

b) Objects have fallen, or liquid has been spilled into the appliance; or

c) The appliance has been exposed to rain; or

d) The appliance does not appear to operate normally or exhibits a marked change in performance; or

e) The appliance has been dropped, or the enclosure is damaged.

17. POWER LINES

(APPLIES TO TUNER AND RECEIVERS ONLY)

An outdoor antenna should be located away from power lines.

18. OUTDOOR ANTENNA GROUNDING

(APPLIES TO TUNER AND RECEIVERS ONLY)

If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.

Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.

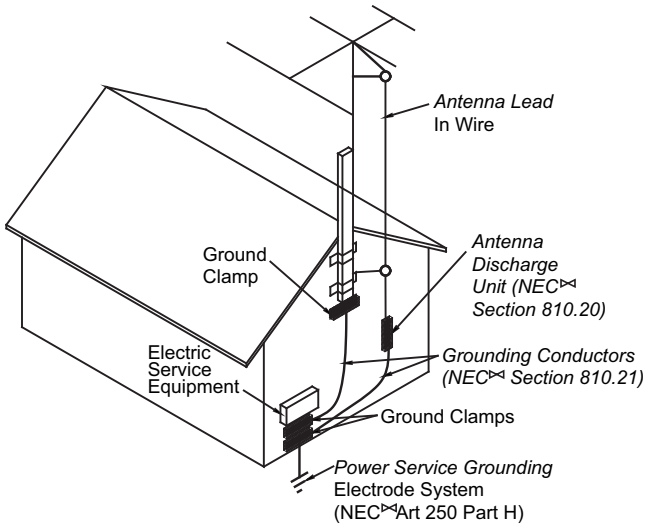
a) Use No. 10 AWG (5.3 mm^2) copper, No. 8 AWG (8.4 mm^2) aluminum, No. 17 AWG (1.0 mm^2) copper-clad steel or bronze wire, or larger, as a ground wire.

b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4-6 feet (1.22-1.83 m) apart.

c) Mount antenna discharge unit as close as possible to where lead-in enters house.

d) Use jumper wire not smaller than No.6 AWG (13.3 mm^2) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21(j).

Antenna Grounding According to the National Electrical Code



⋈ National Electrical Code Available from Library, book stores, or National Fire Protection Association (Batterymarch Park, Quincy. MA 02269).

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