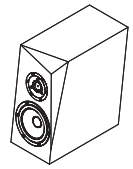


# 8|ACOUSTICS

## Ara / Ara-Be Kit



## User Manual



Technical specification :	Ara	Ara-Be
Frequency range	: 45-25000 Hz +/-3 dB	45-30000 Hz +/-3 dB
Sensitivity (2.83V / 1m)	: 87 dB	87 dB
Nominal impedance	: 4Ω	4Ω
Max SPL	: 105 dB	105 dB
Recommended amplifier	: 40-150 W	40-150 W
Cross-over frequency	: 3000 Hz	2300 Hz
Speaker type	: 2-way	2-way
Enclosure type	: Bass reflex	Bass reflex
Port tuning frequency	: 36.5 Hz	36.5 Hz

Drive Units:	Ara	Ara-Be
- High frequency driver	: SATORI TW29R (29 mm soft ring dome)	SATORI TW29BN (Beryllium Tweeter)
- Low frequency drivers	: 6½" SATORI MW16P-4 (advanced midwoofer)	6½" SATORI MW16P-4 (advanced midwoofer)

#### Cabinet:

18 mm MDF

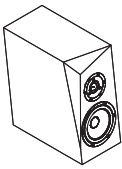
Dimensions (H x W x D): 391 x 190 x 388 mm / 15.4 x 7.48 x 15.27 inch

#### Net weight (pair):

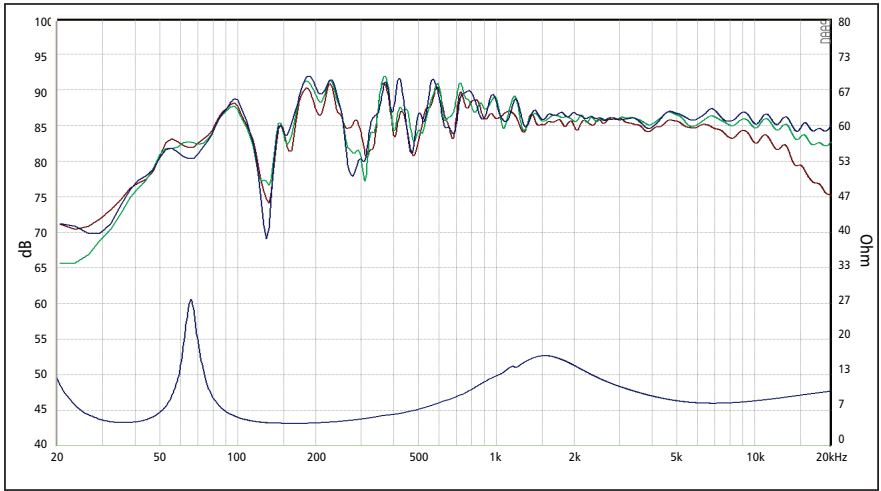
- Cabinet only : 8.06 kg / 17.77 lb
- Full assembly : 9.6 kg / 21.16 lb

#### Special Features:

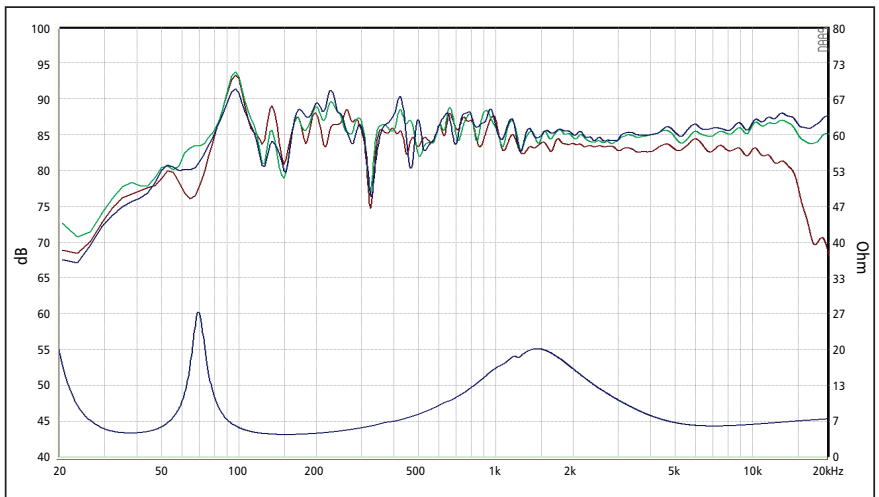
- Advanced high-end drivers.
- Facets on top of cabinet for reduced high frequency diffraction.
- Inclined baffle for correct time alignment of drivers  
(allowing for simpler cross-over design)
- Wedge shaped inner rear walls behind midwoofer for reduced direct reflection
- Internal bracing to reduce and distribute cabinet vibrations and hence lower sound coloration
- Solid single-wiring binding posts



### Frequency response (Ara-Be)

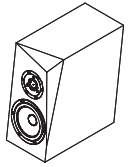


### Frequency response (Ara)

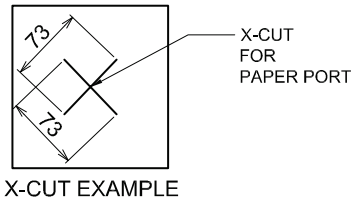
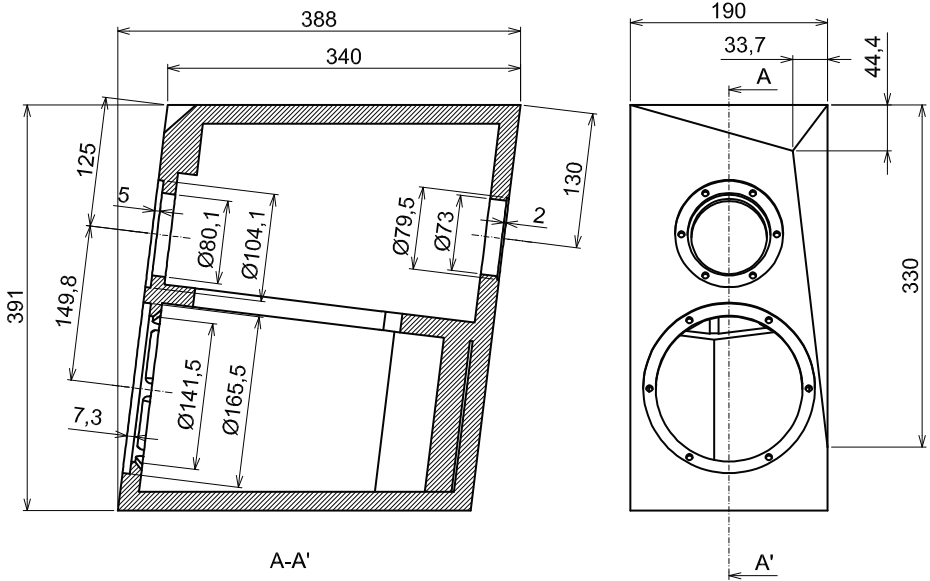


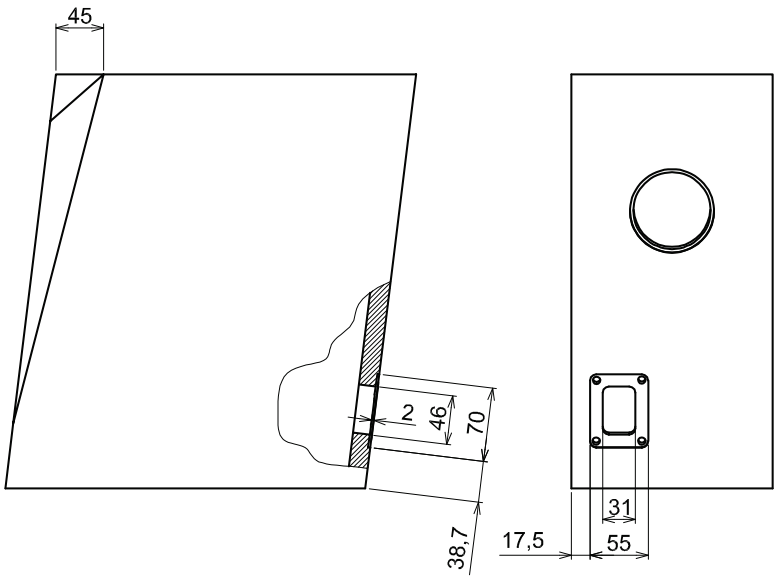
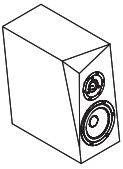
Response Curve :  
— (Blue) : on axis      — (Green) : 15° off-axis      — (Red) : 30° off-axis

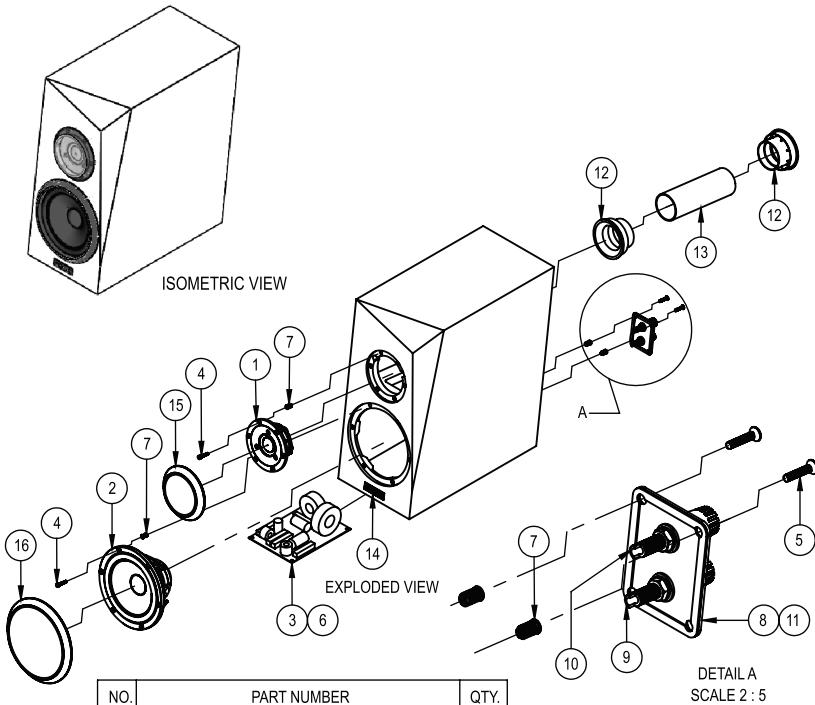
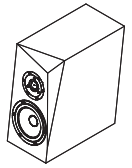
Measured on-axis, 15° and 30° off-axis at 1 m in an ordinary room. Lower frequency dips and peaks are caused by room modes/reflections.



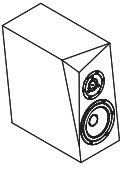
### Mechanical drawing (size in mm)



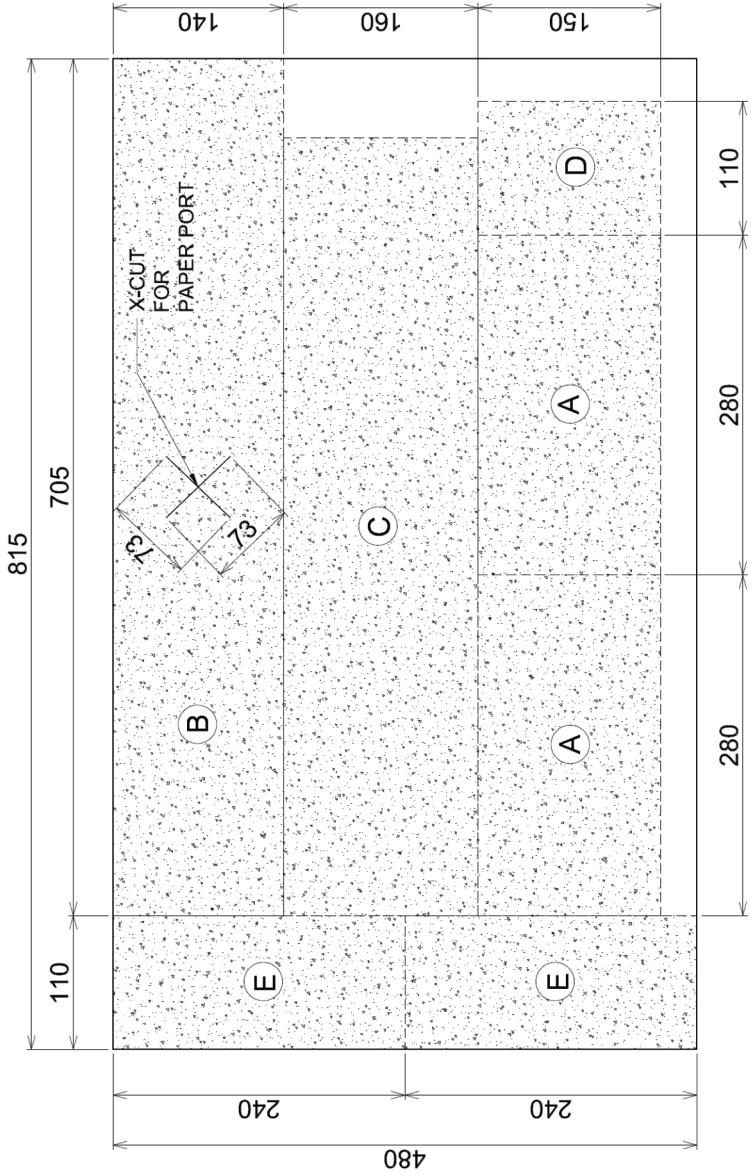


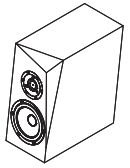


NO.	PART NUMBER	QTY.
1	SATORI TW29R or TW29BN (Sold separately)	1
2	6½" SATORI MW16P-4 (Sold separately)	1
3	Ara Kit Crossover (Sold separately)	1
4	Hex Socket Screw 4x20mm (For driver)	12
5	Countersunk Screw 4X20mm (For terminal plate)	4
6	Wood Screw 4x16mm (From kit crossover)	6
7	Insert Nut M4 (Installed)	16
8	Stainless Steel Terminal Panel	1
9	Binding Post (-) (Black)	1
10	Binding Post (+) (Red)	1
11	Seal Gasket (For terminal plate)	1
12	Port flare d:50mm (Installed on cabinet)	2
13	Paper tube d:50mm L:160mm (Installed on cabinet)	1
14	Name Plate	1
15	Grille for tweeter	1
16	Grille for woofer	1
17	Damping Material (See cut pattern)	1

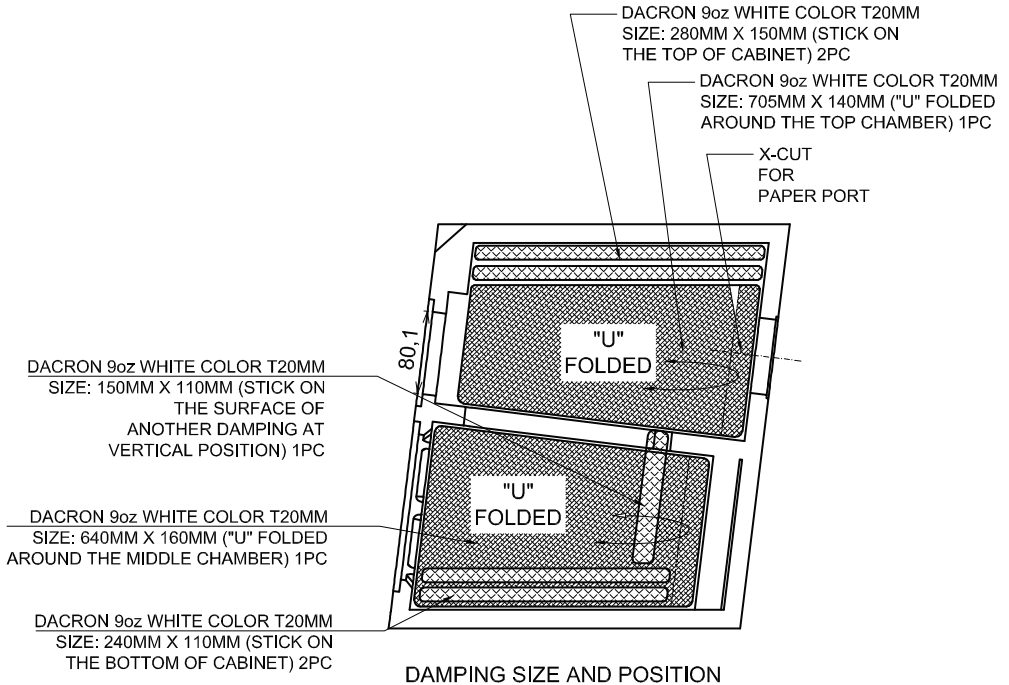


### Damping Material Cut Pattern (Size in mm)

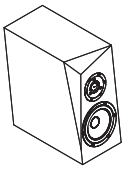




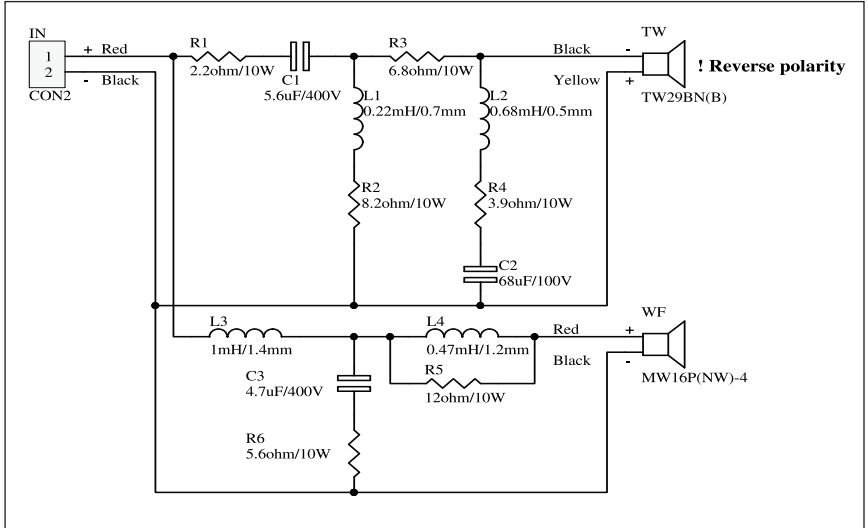
## Damping material position (size in mm)



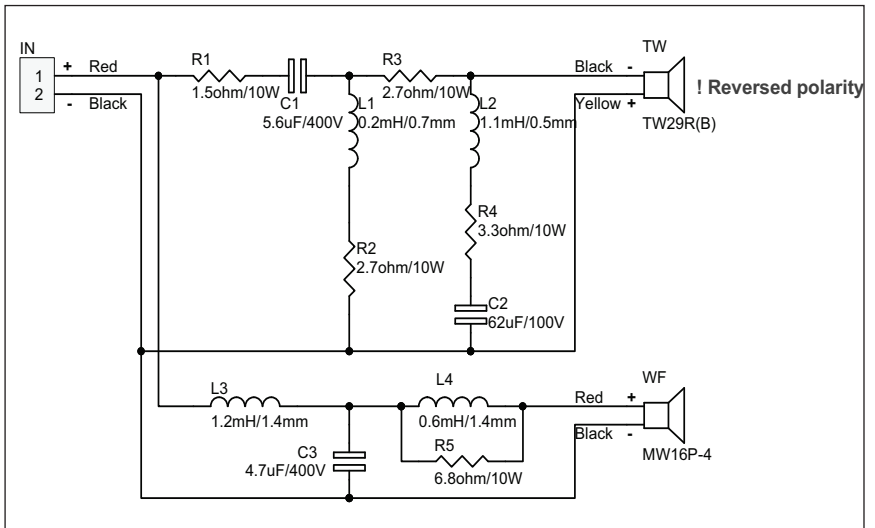


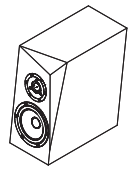


### Crossover Schematic Ara-Be



### Crossover Schematic Ara





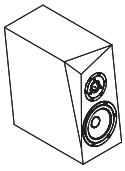
## Assembling instruction

### Part list (each cabinet):

- High frequency driver Satori TW29R or TW29BN (sold separately)...	1 pc
- Low frequency drivers 6½" Satori MW16P-4 (sold separately) .....	1 pc
- Ara kit crossover (sold separately) .....	1 pc
- Hex socket screw M4 x 20mm (for drivers) .....	12 pcs
- Countersunk screw M4 x 20mm (for terminal plate) .....	4 pcs
- Wood screw 4 x 16 mm for crossover (from kit crossover) .....	6 pcs
- Insert nut M4 (installed on cabinet) .....	16 pcs
- Stainless Terminal plate .....	1 pc
- Binding post .....	1 pair
- Seal gasket (for terminal plate) .....	1 pc
- Port flare (installed on cabinet) .....	1 pc
- Port paper tube (installed on cabinet) .....	1 pc
- Damping .....	1 pc
- Name plate .....	1 pc
- Tweeter grill .....	1 pc
- Woofer grill .....	1 pc

### Tools needed:

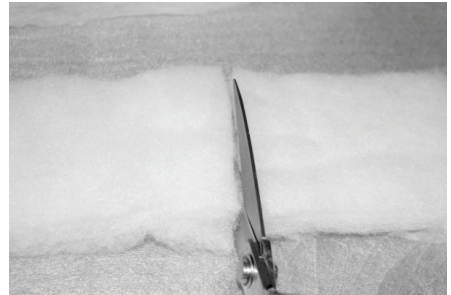
- Hex key 3mm size (for driver screw)
- Hex key 2.5mm size (for terminal plate screw)
- Philips screwdriver no. 2 (for crossover screw)
- Soldering iron + tin (for soldering input wire to terminal)
- Hot melt glue gun (for attaching the damping and sealing the wire hole)



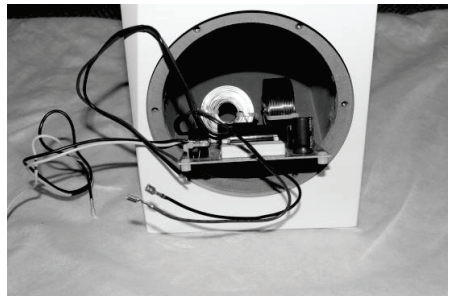
1. Take out the cabinet from the packaging and take out the raw damping material from the cabinet

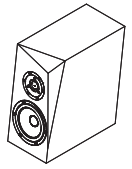


2. Cut the raw damping material to 7 pcs of damping according to the cutting pattern diagram



3. Put the crossover on top of the bottom panel, place the two big inductor side towards the rear terminal side

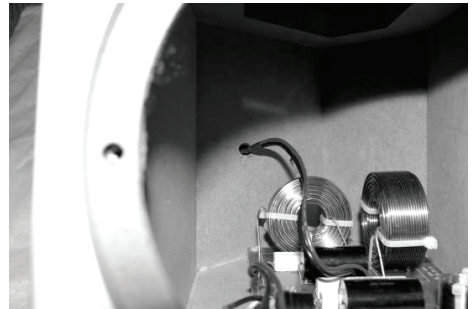




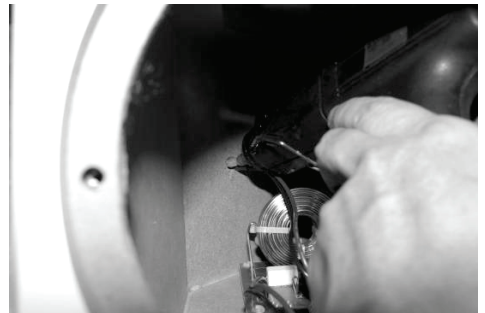
4. Fasten the crossover by tightening all 6 screws

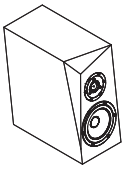


5. Pass the input wire through hole in the rear panel of the cabinet



6. Seal the cable hole with hot melt glue

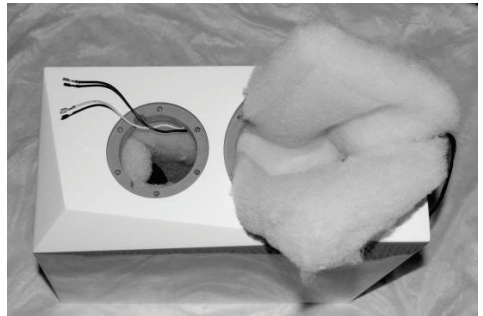




7. Pull the tweeter cable through the hole in cabinet bracing



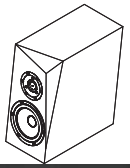
8. Place each damping part into the cabinet according to position diagram. Add a bit of glue if needed to hold the damping in place



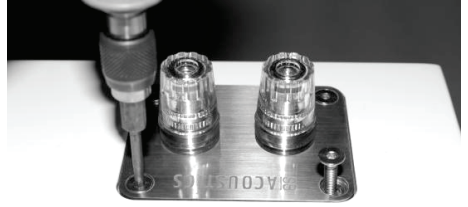
## 12

9. Pull out the input cable through the terminal hole then solder it to the binding post terminal



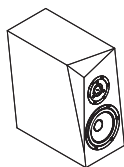


10. Mount the terminal panel into the terminal hole at the back side

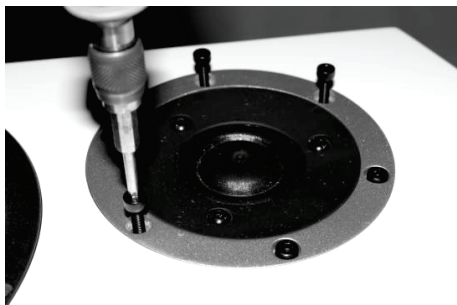


11. Hook up the cable to the tweeter and woofer terminal





12. Mount the driver to the cabinet and fasten the screws



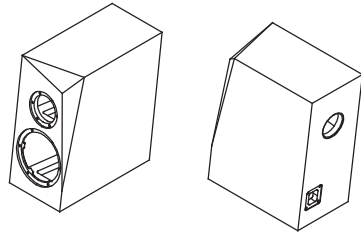
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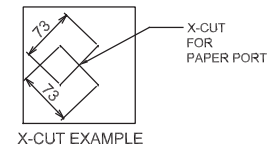
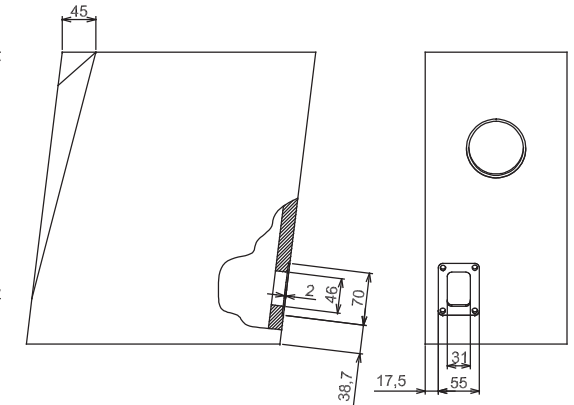
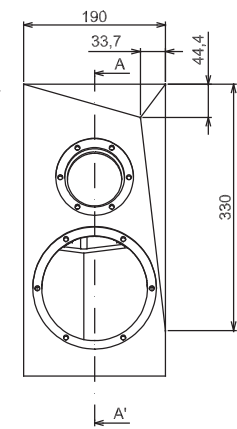
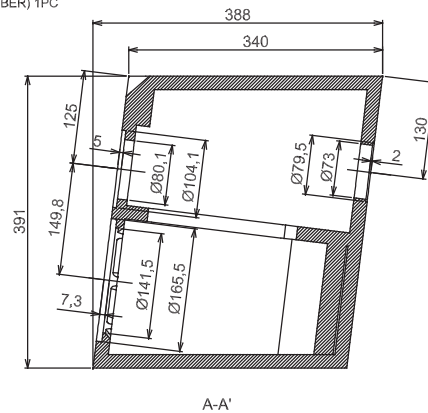
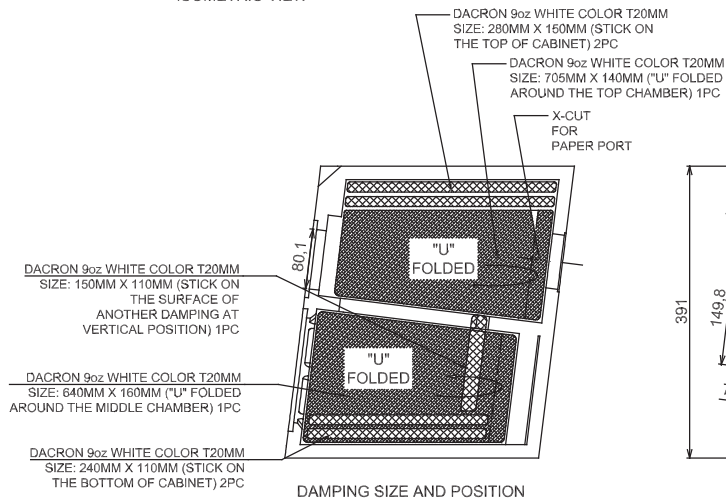
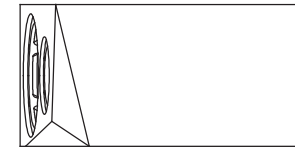


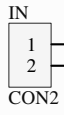


ISOMETRIC VIEW

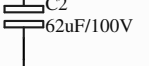
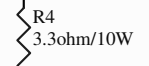
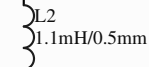
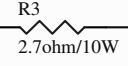
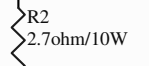
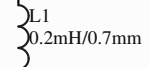
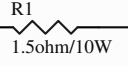
# LEFT SPEAKER

ARA SCHEMATIC MECHANICAL DRAWING  
RIGHT SPEAKER IS MIRRORED



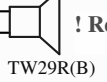


Red  
Black

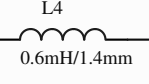
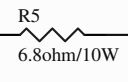
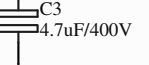
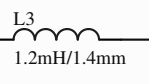


Yellow  
Black

TW



**! Reverse polarity**

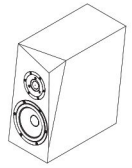


Red  
Black

WF



Title			SBA Satori Ara		
Size	Number		Revision		
A					
Date:	03-May-17		Sheet of		
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Technical specification :	Ara	Ara-Be
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Sensitivity (2.83V / 1m)	87 dB	87 dB
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Recommended amplifier	40-150 W	40-150 W
Cross-over frequency	3000 Hz	2300 Hz
Speaker type	2-way	2-way
Enclosure type	Bass reflex	Bass reflex
Port tuning frequency	36.5 Hz	36.5 Hz

Drive Units:	Ara	Ara-Be
- High frequency driver	SATORI TW29R (29 mm soft ring dome)	SATORI TW29BN (Beryllium Tweeter)
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#### Cabinet:

18 mm MDF

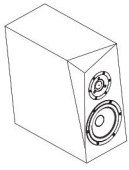
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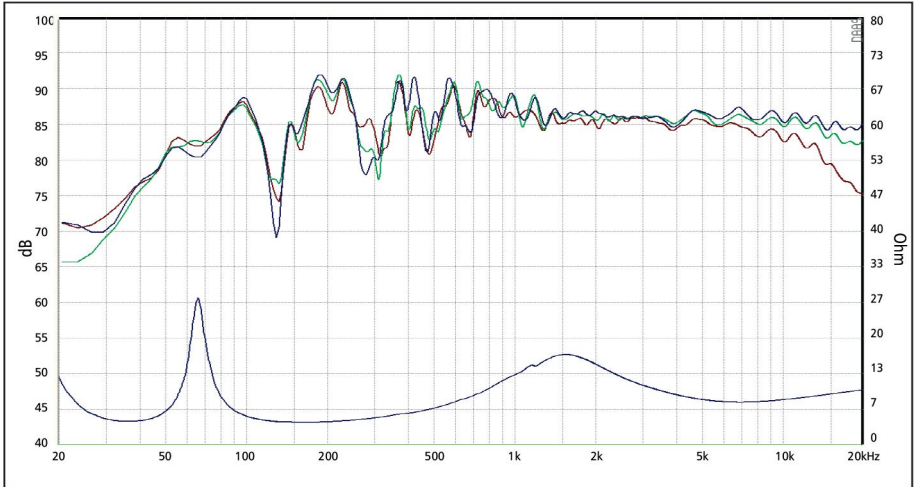
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#### Special Features:

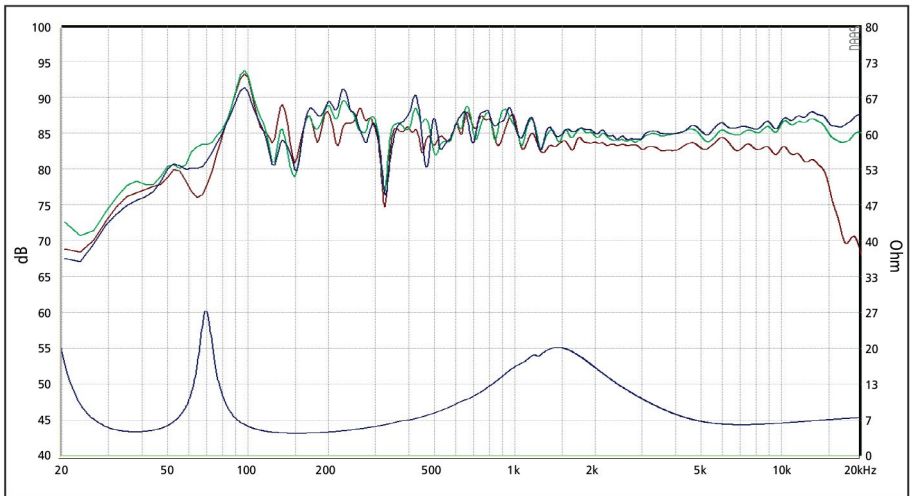
- Advanced high-end drivers.
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- Inclined baffle for correct time alignment of drivers  
(allowing for simpler cross-over design)
- Wedge shaped inner rear walls behind midwoofer for reduced direct reflection
- Internal bracing to reduce and distribute cabinet vibrations and hence lower sound coloration
- Solid single-wiring binding posts



### Frequency response (Ara-Be)

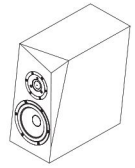


### Frequency response (Ara)

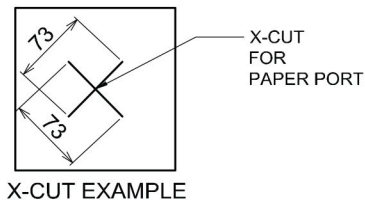
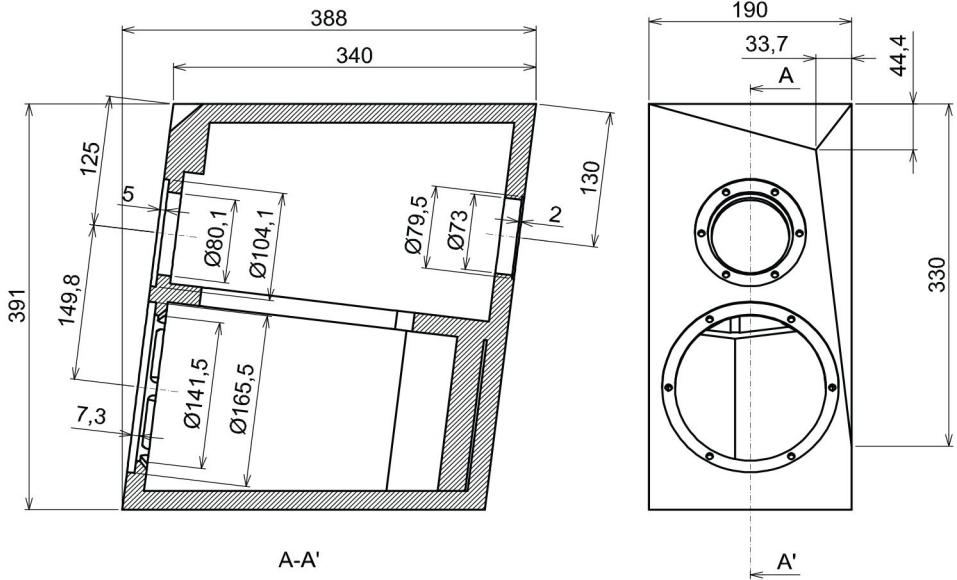


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Measured on-axis, 15° and 30° off-axis at 1 m in an ordinary room. Lower frequency dips and peaks are caused by room modes/reflections.



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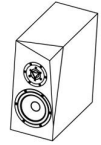


# 8|ACOUSTICS

## Ara-Be Kit



## User Manual

**Technical specification :**

Frequency range	: 45-30000 Hz +/-3 dB
Sensitivity (2.83V / 1m)	: 87 dB
Nominal impedance	: 4Ω
Max SPL	: 105 dB
Recommended amplifier	: 40-150 W
Cross-over frequency	: 2300 Hz
Speaker type	: 2-way
Enclosure type	: Bass reflex
Port tuning frequency	: 36.5 Hz

**Drive Units:**

- High frequency driver : SATORI TW29BN  
(Beryllium Tweeter)
- Low frequency drivers : 6½" SATORI MW16P-4  
(advanced midwoofer)

**Cabinet:**

18 mm MDF

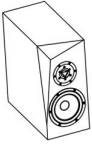
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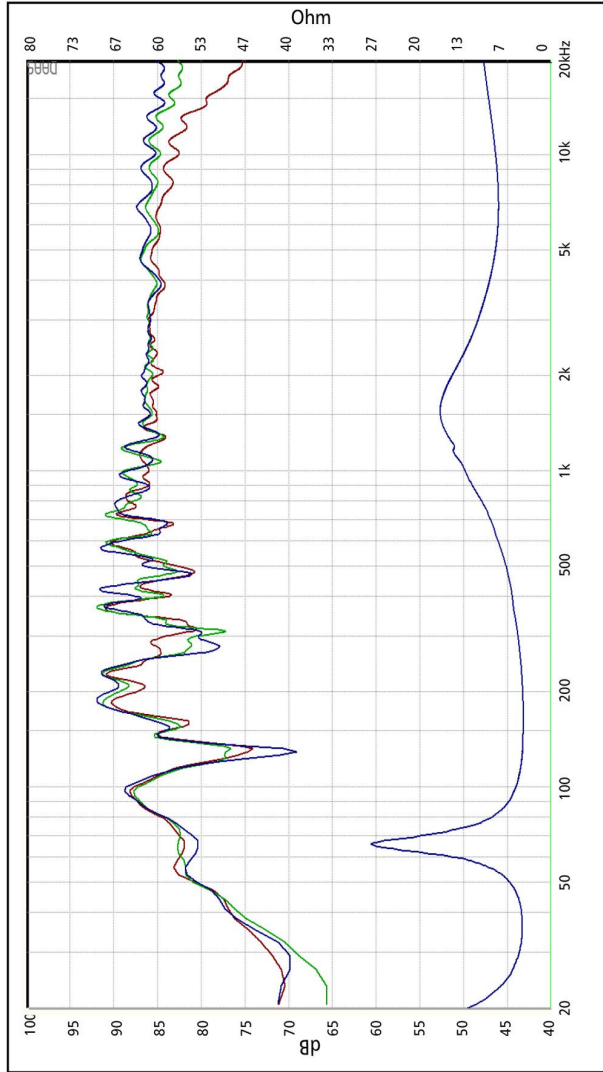
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- Advanced high-end drivers.
- Facets on top of cabinet for reduced high frequency diffraction.
- Inclined baffle for correct time alignment of drivers  
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- Wedge shaped inner rear walls behind midwoofer for reduced direct reflection
- Internal bracing to reduce and distribute cabinet vibrations and hence lower sound coloration
- Solid single-wiring binding posts

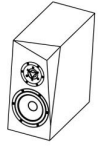


## Frequency response (Ara-Be)

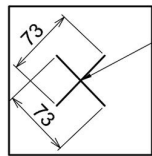
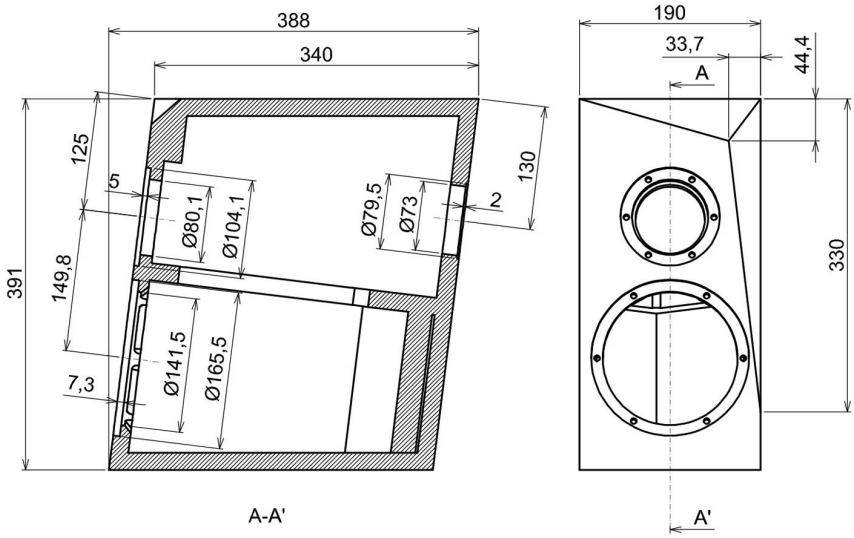


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Measured on-axis, 15° and 30° off-axis at 1 m in an ordinary room. Lower frequency dips and peaks are caused by room modes/reflections.



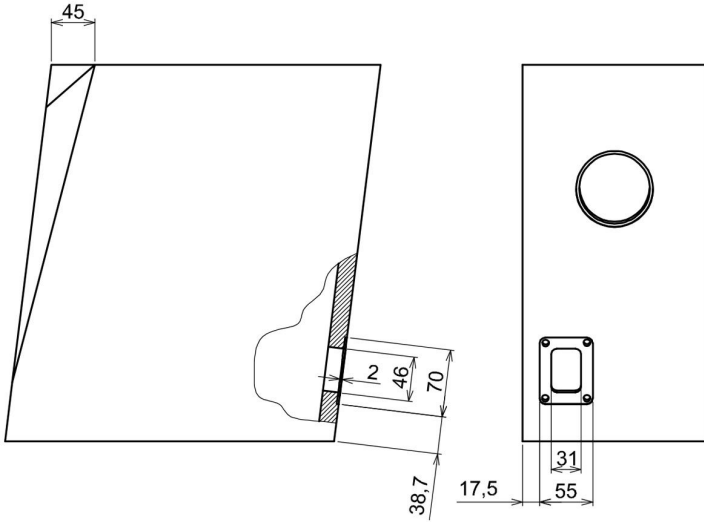


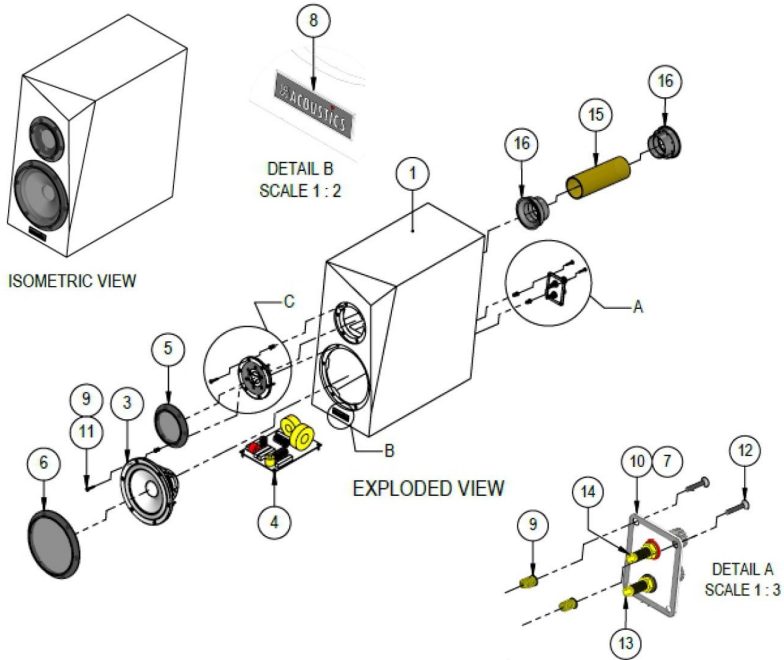
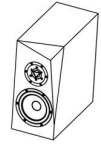
Mechanical drawing (size in mm)



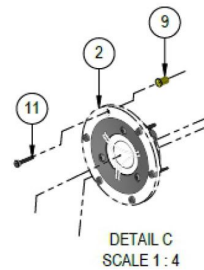
X-CUT  
FOR  
PAPER PORT

X-CUT EXAMPLE



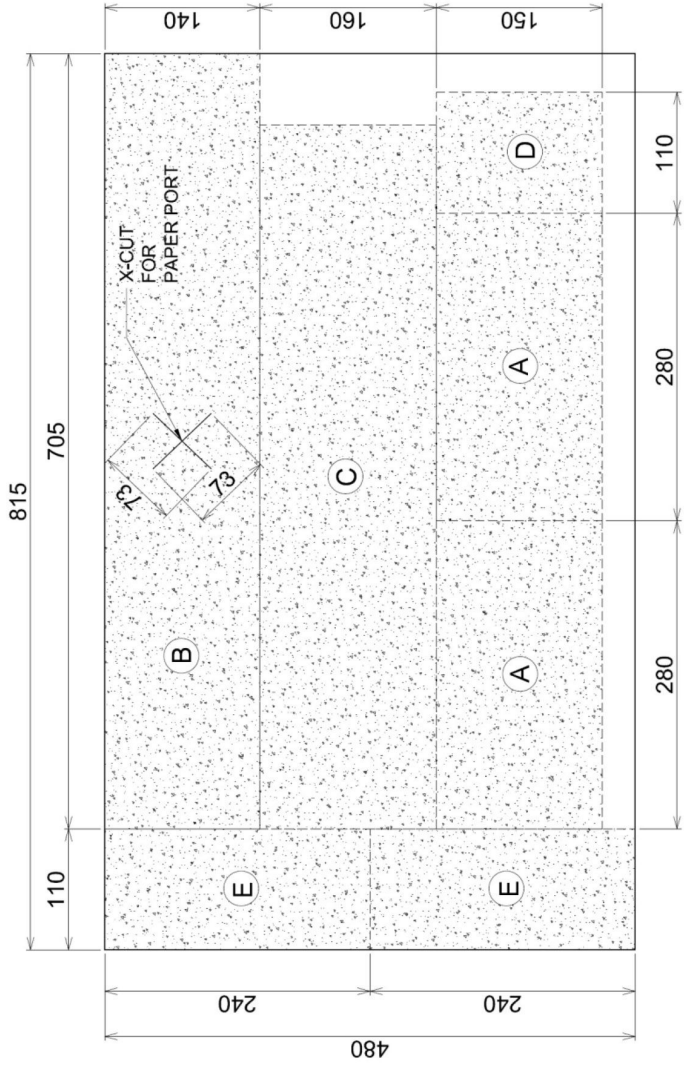


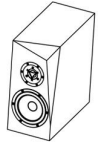
NO.	PART NUMBER	DESCRIPTION	QTY.
1	SATORI TW29BN (Sold Separately)	3B00165-00-WS-L/R BO-MDF-ARA WHITE SATIN(SBE1)-LEFT/RIGHT or 3B00165-00-WHG-L/R BO-MDF-ARA WHITE HIGH GLOSS (SBE1)-LEFT/RIGHT or 3B00165-00-BHG-L/R BO-MDF-ARA BLACK HIGH GLOSS (SBE1)-LEFT/RIGHT	1
2	TWEETER (Sold Separately With Option)	1HTWDEXP021 SATORI TW29R-B or 1HTWDEXP028 SATORI TW29BN-B	1
3	WOOFER (Sold Separately)	1H065WEXP003 6.5in SATORI MW16P-4	1
4	X-OVER (Sold Separately With Option)	1HCRVXEXP006 ARA CROSSOVER or 1HCRVXEXP008 ARA BERYLLIUM CROSSOVER	1
5	2GC0198	GRILL ASSY-SATORI TW29 MAGNETIC GRILL	1
6	2GC0200	GRILL ASSY-SATORI 16 MAGNETIC GRILL	1
7	3GS0368-00	GS-SEAL-PE FOAM30-240x4x11-GRAY+3M1000NF0.15	1
8	3NT0223-01	PL-LDPE-15x6x0.03t	1
9	3NU0030-00	NU-INSERT NUT M4 WITH FLANGE (INSERT SKD 44041201)	16
10	3PN0027-01	PL-LDPE-15x6x0.03t	1
11	3SR0383-00-8	SR-MSIH-4x20-ED BLK	12
12	3SR0384-00	SR-YFS-4x20-STAINLESS	4
13	3TM0543-00	TM-BINDING POST HD-520-A BLK CLR	1
14	3TM0543-00	TM-BINDING POST HD-520-A RED CLR	1
15	3WT0010-00	WT-PORT TUBE (OD54x160x21)mm BLK PAPER	1
16	3WT0011-00	WT-PORT FLARE 2in BLK	2



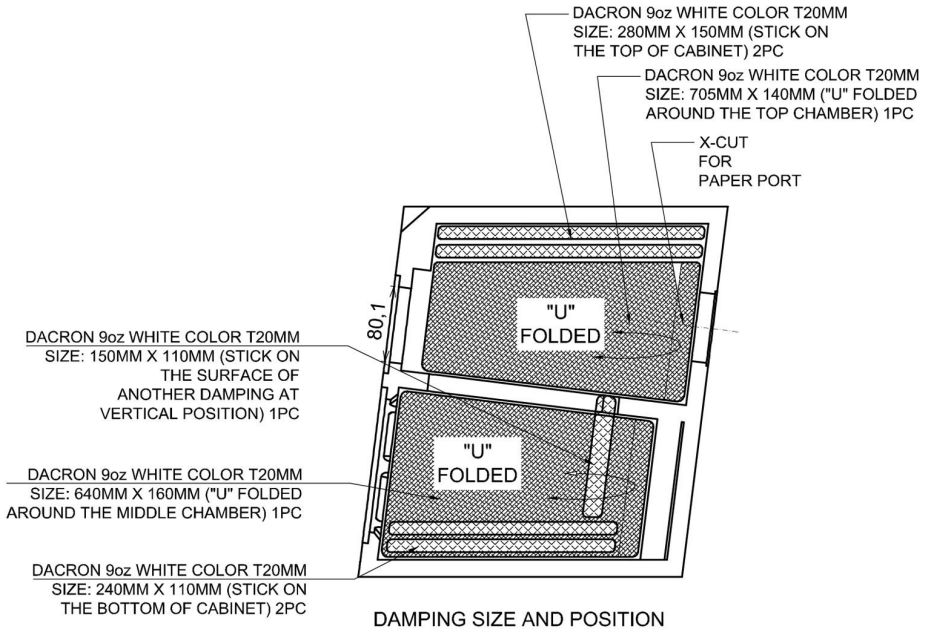


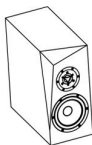
**Damping Material Cut Pattern (Size in mm)**



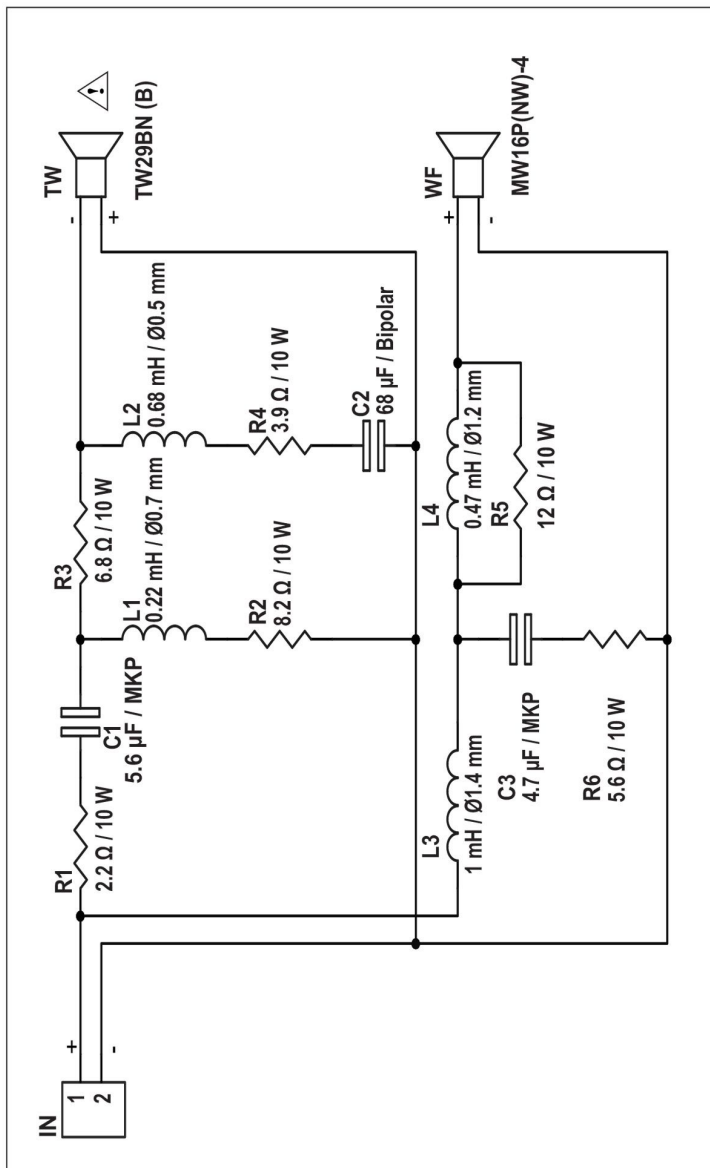


## Damping material position (size in mm)





### Crossover Schematic Ara-Be





## Assembling instruction

### Part list (each cabinet):

- High frequency driver Satori TW29BN (sold separately).....	1 pc
- Low frequency drivers 6½" Satori MW16P-4 (sold separately) .....	1 pc
- Ara kit crossover (sold separately) .....	1 pc
- Hex socket screw M4 x 20mm (for drivers) .....	12 pcs
- Countersunk screw M4 x 20mm (for terminal plate) .....	4 pcs
- Wood screw 4 x 16 mm for crossover (from kit crossover) .....	6 pcs
- Insert nut M4 (installed on cabinet) .....	16 pcs
- Stainless Terminal plate .....	1 pc
- Binding post .....	1 pair
- Seal gasket (for terminal plate) .....	1 pc
- Port flare (installed on cabinet) .....	1 pc
- Port paper tube (installed on cabinet) .....	1 pc
- Damping .....	1 pc
- Name plate .....	1 pc
- Tweeter grill .....	1 pc
- Woofer grill .....	1 pc

### Tools needed:

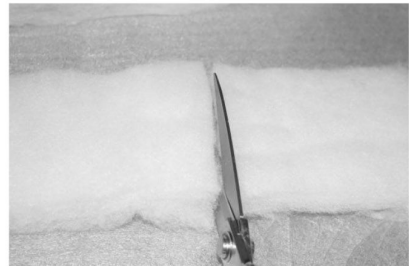
- Hex key 3mm size (for driver screw)
- Hex key 2.5mm size (for terminal plate screw)
- Philips screwdriver no. 2 (for crossover screw)
- Soldering iron + tin (for soldering input wire to terminal)
- Hot melt glue gun (for attaching the damping and sealing the wire hole)



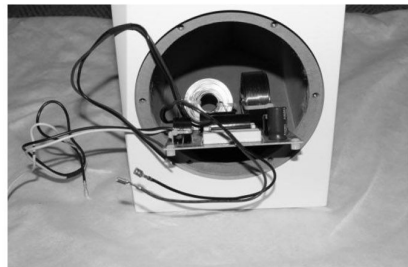
1. Take out the cabinet from the packaging and take out the raw damping material from the cabinet



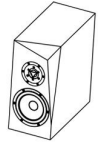
2. Cut the raw damping material to 7 pcs of damping according to the cutting pattern diagram



3. Put the crossover on top of the bottom panel, place the two big inductor side towards the rear terminal side



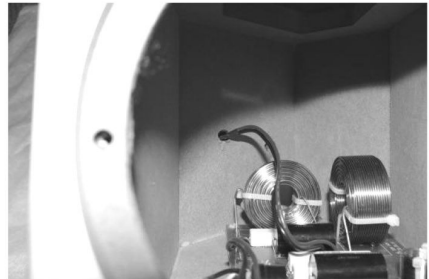




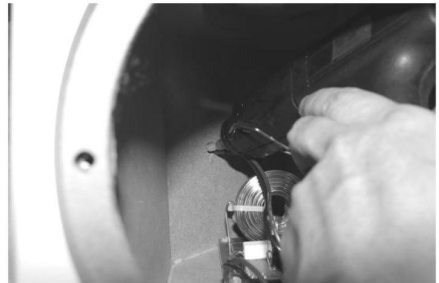
4. Fasten the crossover by tightening all 6 screws



5. Pass the input wire through hole in the rear panel of the cabinet



6. Seal the cable hole with hot melt glue

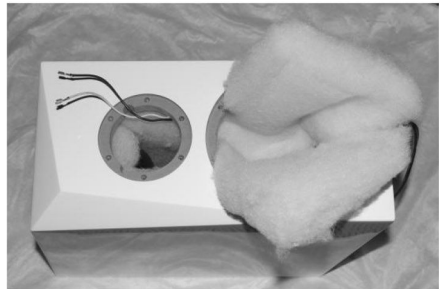




7. Pull the tweeter cable through the hole in cabinet bracing

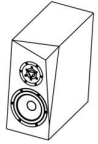


8. Place each damping part into the cabinet according to position diagram. Add a bit of glue if needed to hold the damping in place



9. Pull out the input cable through the terminal hole then solder it to the binding post terminal



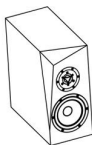


10. Mount the terminal panel into the terminal hole at the back side

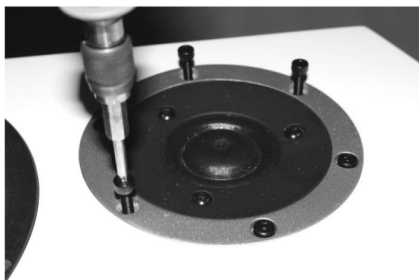


11. Hook up the cable to the tweeter and woofer terminal





12. Mount the driver to the cabinet and fasten the screws



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**Technical specification :**

Frequency range	: 45-30000 Hz +/-3 dB
Sensitivity (2.83V / 1m)	: 87 dB
Nominal impedance	: 4Ω
Max SPL	: 105 dB
Recommended amplifier	: 40-150 W
Cross-over frequency	: 2300 Hz
Speaker type	: 2-way
Enclosure type	: Bass reflex
Port tuning frequency	: 36.5 Hz

**Drive Units:**

- High frequency driver : SATORI TW29BN  
(Beryllium Tweeter)
- Low frequency drivers : 6½" SATORI MW16P-4  
(advanced midwoofer)

**Cabinet:**

18 mm MDF

Dimensions (H x W x D): 391 x 190 x 388 mm / 15.4 x 7.48 x 15.27 inch

**Net weight (pair):**

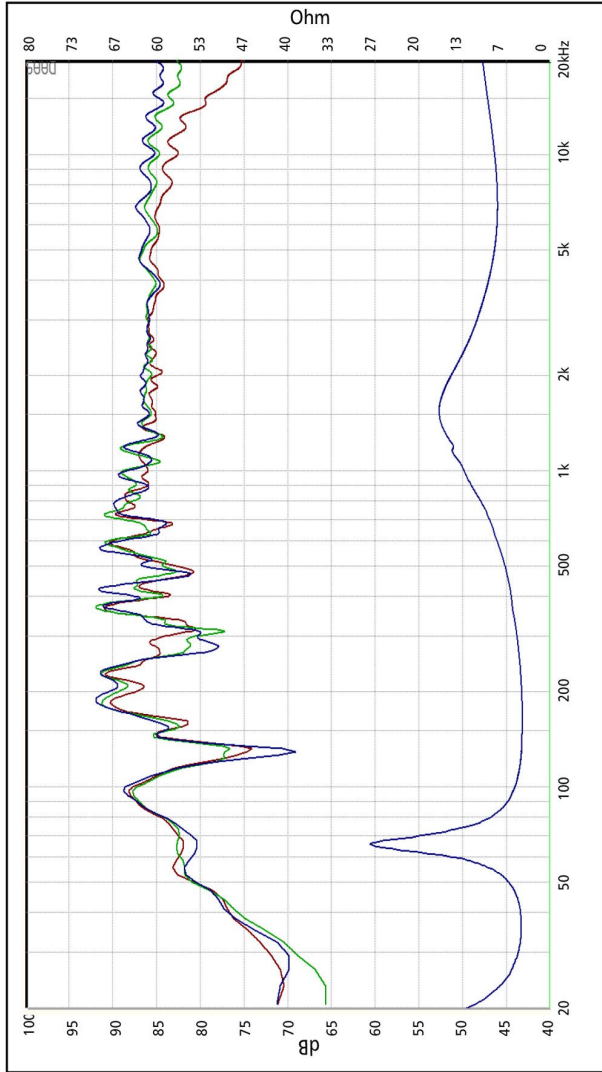
- Cabinet only : 8.06 kg / 17.77 lb
- Full assembly : 9.6 kg / 21.16 lb

**Special Features:**

- Advanced high-end drivers.
- Facets on top of cabinet for reduced high frequency diffraction.
- Inclined baffle for correct time alignment of drivers  
(allowing for simpler cross-over design)
- Wedge shaped inner rear walls behind midwoofer for reduced direct reflection
- Internal bracing to reduce and distribute cabinet vibrations and hence lower sound coloration
- Solid single-wiring binding posts



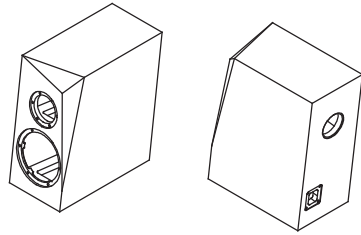
## Frequency response (Ara-Be)



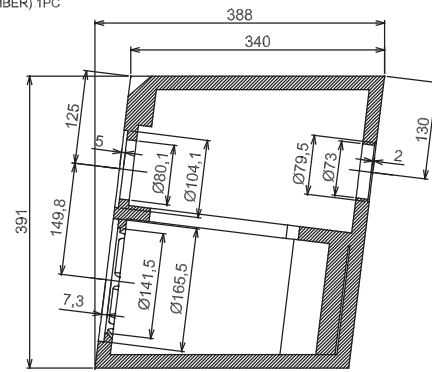
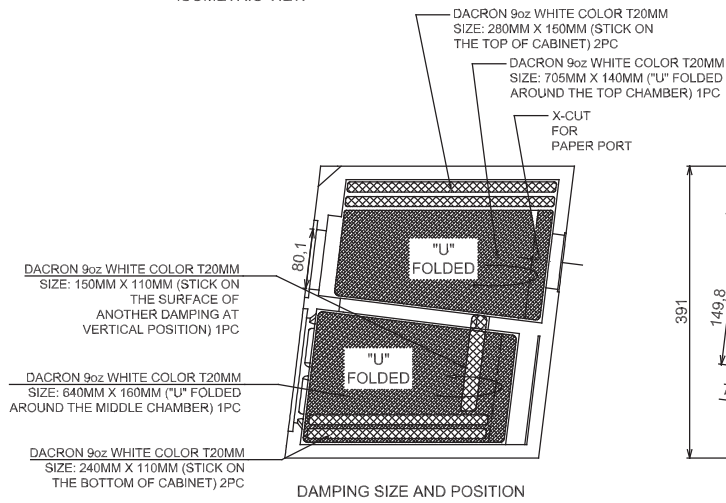
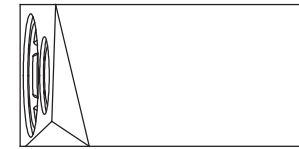
Response Curve :  
— (Blue) : on axis  
— (Green) : 15° off-axis  
— (Red) : 30° off-axis  
Measured on-axis, 15° and 30° off-axis at 1 m in an ordinary room. Lower frequency dips and peaks are caused by room modes/reflections.

# LEFT SPEAKER

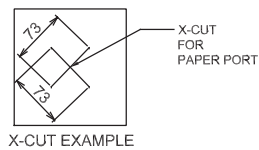
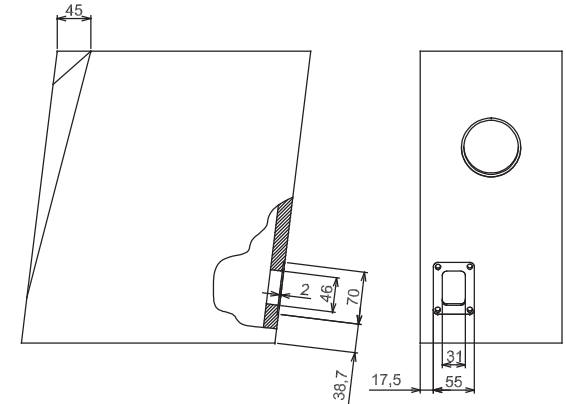
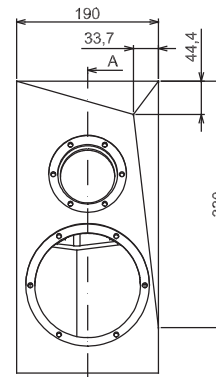
ARA SCHEMATIC MECHANICAL DRAWING  
RIGHT SPEAKER IS MIRRORED



ISOMETRIC VIEW



A-A'





# Crossover Schematic Ara-Be

