



FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT
(AZOT, AZOT7)

Manufacturer:	SEE ADDENDUM FOR MANUFACTURER LOCATIONS
Applicant: (813307-003)	105140 (Party Site) Hanwha Techwin Co Ltd 6, Pangyo-ro 319beon-gil, Bundang-gu Seongnam-si Gyeonggi-do 13488 KR
Listee/Classified Company: (813307-003)	105140 (Party Site) SAME AS APPLICANT

Use of the Mark

This Follow-Up Service Procedure authorizes the above Manufacturer(s) to use the marking specified by UL LLC, or any authorized licensee of UL LLC, including the UL Contracting Party, only on products when constructed, tested and found to be in compliance with the requirements of this Follow-Up Service Procedure and in accordance with the terms of the applicable service agreement with UL Contracting Party. The UL Contracting Party for Follow-Up Services is listed in the addendum to this Follow-Up Service Procedure ("UL Contracting Party"). UL Contracting Party and UL LLC are referred to jointly herein as "UL."

It is the responsibility of the Applicant, Manufacturer(s), and Listee/Classified Company to make sure that only the products meeting the aforementioned requirements bear the authorized Marks of UL LLC, or any authorized licensee of UL LLC.

Additional Responsibilities

Additional responsibilities, duties and requirements for the Applicant and Manufacturers are defined under Additional Resources at the following web-site: <http://www.ul.com/fus>. Manufacturers without Internet access may obtain the current version of these documents from their local UL customer service representative or UL field representative. For assistance, or to obtain a paper copy of these documents or the Follow-Up Service Terms referenced below, please contact UL's Customer Service at <http://www.ul.com/aboutul/locations/>, select a location and enter your request, or call the number listed for that location.

Acceptance of Follow-Up Services

The Applicant and the specified Manufacturer(s) and any Listee/Classified Company in this Follow-Up Service Procedure must agree to receive Follow-Up Services from UL Contracting Party. If your applicable service agreement is a Global Services Agreement ("GSA"), the Applicant, the specified Manufacturer(s), and any Listee/Classified Company will be bound to a Service Agreement for Follow-Up Services upon the earliest by any Subscriber of a) use of the prescribed UL Mark, b) acceptance of the factory inspection, or c) payment of the Follow-Up Service fees. The Service Agreement incorporates such GSA, this Follow-Up Service Procedure and the Follow-Up Service Terms which can be accessed by clicking the following link: <http://services.ul.com/fus-service-terms>. In all other events, Follow-Up Services will be governed by and incorporate the terms of your applicable service agreement and this Follow-Up Service Procedure.

Use and Ownership of the Follow-Up Service Procedure

This Follow-Up Service Procedure, and any subsequent revisions, is the property of UL and is not transferable. This Follow-Up Service Procedure contains confidential information for use only by the Applicant, the specified Manufacturer(s), and representatives of UL and is not to be used for any other purpose. It is provided to the Subscribers with the understanding

that it is not to be copied, either wholly or in part unless specifically allowed, and that it will be returned to UL, upon request.

Definition of Terms

Capitalized terms used but not defined herein have the meanings set forth in the GSA and the applicable Service Terms or any other applicable UL service agreement.

No Third Party Liability

UL shall not incur any obligation or liability for any loss, expense or damages, including incidental, consequential or punitive damages arising out of or in connection with the use or reliance upon this Follow-Up Service Procedure to anyone other than the above Manufacturer(s) as provided in the agreement between UL LLC or an authorized licensee of UL LLC, including UL Contracting Party, and the Manufacturer(s).

Certification Body

UL LLC has signed below solely in its capacity as the certification body to indicate that this Follow-Up Service Procedure fulfills the requirements for certification documentation issued by the certification body.

Bruce A. Mahrenholz
Director
Conformity Assessment Programs (CPO)
UL LLC

LOCATION

52000 (Party Site)
INTER M CORP
73 Hwahap-ro 1402beon-gil
Yangju-si Gyeonggi-do 11451 KR

Factory ID: NONE
UL Contracting Party for above site is: UL GmbH

2897947 (Party Site)
INTER M CORP
7-18 Gwonyulro1253beon-Gil
Yangju Gyeonggi-do 11517 KR

Factory ID: Honjuk
UL Contracting Party for above site is: UL GmbH

File		Volume	Page	Date:
E158873	Index	X14	1	20-Apr-22

Index

<u>Product Type</u>	<u>Model/Type Reference</u>	<u>Report Reference #</u>	<u>Status</u>
Audio Server	SPA-S1000	E158873-A6085-UL	
AUDIO MODULE	SPA-D1000	E158873-A6086-UL	
Network Microphone	SPA-M1000	E158873-A6087-UL	
Wall speaker	SPA-W100W, SPA-W100B	E158873-A6090-UL	

UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 3rd Ed, Issued: 2019-12-13 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1:19, 3rd Ed, Issued: 2019-12-13 (Audio/video, information and communication technology equipment Part 1: Safety requirements)
Certification Type:	Listing
CCN:	AZOT, AZOT7 (Audio/video, Information and Communication Technology Equipment)
Complementary CCN:	N/A
Product:	Wall speaker
Model:	SPA-W100W, SPA-W100B
Rating:	PoE: 44-57 Vdc, max 300 mA or PoE+: 50-57 Vdc, max 510 mA
Applicant Name and Address:	HANWHA TECHWIN CO LTD 6, PANGYO-RO 319BEON-GIL, BUNDANG-GU SEONGNAM-SI GYEONGGI-DO 13488 KOREA

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared By: Lawrence Lee / Project Handler Reviewed By: SeulKi Park / Reviewer

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

A. Authorization - The Authorization page may include additional Factory Identification Code markings.

B. Generic Inspection Instructions -

- i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
- ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
- iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

Wall speaker has been designed for INDOOR use and integrated a bracket for wall or ceiling mount.

It is a commercial equipment supplied by PoE/PoE+ (Power over Ethernet) and installed by service personnel.

It can be used in available in controller mode or speaker mode.

Model Differences

Basic model is SPA-W100W.

SPA-W100B is identical to SPA-W100W except for model designation and color

Test Item Particulars

Product group	end product
Classification of use by	Ordinary person
Supply Connection	not mains connected: ES1
Supply tolerance	None
Supply connection – type	mating connector
Considered current rating of protective device	N/A
Equipment mobility	wall/ceiling-mounted
Over voltage category (OVC)	OVC I
Class of equipment	Class III
Special installation location	N/A
Pollution degree (PD)	PD 2
Manufacturer's specified T _{ma} (°C)	50
IP protection class	IPX0
Power systems	not AC mains
Altitude during operation (m)	2000 m or less
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	2.38

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer’s specification of : 50 °C
- The product is intended for use on the following power systems : No direct connection
- Considered current rating of protective device as part of the building installation (A) : N/A
- Mains supply tolerance (%) or absolute mains supply : No direct connection
- The equipment disconnect device is considered to be : N/A
- The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual

Additional Information

New (4789961781)

- Max. normal load : Continuous operation with followings.

- 1) 1/8 Pmax for each speaker
- 2) Insert 1kHz sine wave by SD card

4790369745

- [CCL] Add Enclosure - Front (Plastic) and Side: model VE-0800 made by LOTTE CHEMICAL CORPORATION.

Additional Standards

The product fulfills the requirements of: N/A

Markings and Instructions

Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listee’s or Recognized Company’s name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	Input Ratings (voltage, frequency/dc, current/power) Output Ratings (voltage, frequency/dc, current/power)
Installation Manual	These servicing instructions are for use by qualified service personnel only.

Special Instructions to UL Representative

N/A

BD1.0	TABLE: Production-Line Testing Requirements					
BD1.1	Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information.					
Model	Component	Removable parts	Test probe location	Test V rms	Test V dc	Test Time, s
-	-	-	-	-	-	-
BD1.2	Earthing Continuity Test Exemptions – This test is not required for the following models:					
	All models					
BD1.3	Electric Strength Test Exemptions – This test is not required for the following models:					
	All models					
BD1.4	Electric Strength Test Component Exemptions – The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test.					
	-					

BE1.0	Sample and Test Specifics for Follow-Up Tests at UL				
Model	Component	Material	Test	Sample (s)	Test Specifics
-	-	-	-	-	-

4.1.2	TABLE: List of critical components					Pass
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Product Category CCN(s)	Mark(s) of conformity	Supplement ID
Front Mesh Enclosure (Metal)	Interchangeable	Interchangeable	Steel, Min. 0.6 mm thickness.	-	-	
Enclosure - Front and Side (Plastic)	LG CHEM LTD	AF365(&)	Min. 3.0 mm thickness, rated Min. V- 0, 80 deg. C.	QMFZ2	UL (E67171)	
Enclosure - Front and Side (Plastic)- Alternate	LOTTE CHEMICAL CORPORATION	VE-0800	Min. 3.0 mm thickness, rated Min. V- 0, 60 deg. C.	QMFZ2	UL (E115797)	
Enclosure - Rear Cover (Metal)	Interchangeable	Interchangeable	Steel, Min. 2.0 mm thickness	-	-	
Bracket (Metal)	Interchangeable	Interchangeable	Steel, Min. 2.0 mm thickness	-	-	07-03
Woofers Speaker	IMC	IP-1015WS	One provided.8 ohm, 30 Watt.	-	-	
Tweeter Speaker	DAIDONG ZEGNA (DONGGUAN) ELECTRONICS CO LTD	140079 - WS-30T/50T_TW	One provided.6.3 ohm, 25 Watt.	-	-	
Audio module	HANWHA TECHWIN CO LTD	SPA-D1000	Rated: 44-57 Vdc, Max. 300 mA or 50-57 Vdc, Max. 510 mA	AZOT	UL (E158873)	
Tubing	DAEIL C S T CO	DDFA-25+	600 Vrms, 105 deg. C, VW-1	YDTU2	UL (E211756)	
Inductor coil	JINSUNGTECH CO., LTD.	Air cored coil type ø0.6, 0.5mH	Rated Min. 0.5 mH	-	-	07-02
Capacitor	CHUNILETC	MPE	Rated 250 V, Max. 3.3 uF	-	-	
Internal wiring	Interchangeable	Interchangeable	Style No. 1007 marked VW-1	AVLV2	UL	

Input Terminal Block	CIXI WANJIE ELECTRON CO LTD	WJ2EDGR followed by C, M or blank, followed by -5.0, -5.08, -7.5 or -7.62 @A	300 V, 15 A	XCFR2	UL (E251331)	
Input Terminal Block (Alternate)	CIXI WANJIE ELECTRON CO LTD	WJ2EDGR followed by C, M or blank, followed by -5.0, -5.08, -7.5 or -7.62 @A	300 V, 15 A	XCFR2	UL (E251331)	
Connectors and Receptacles on PWB	Interchangeable	Interchangeable	Min. V-2, 105 deg. C	ECBT2	UL	
Printed wiring board	KINGBOARD LAMINATES HOLDINGS LTD	KB-6160A	Min. V-0, 130 deg. C	ZPMV2	UL (E123995)	
Printed wiring board (Alternate)	Interchangeable	Interchangeable	Min. V-0, 130 deg. C	ZPMV2	UL	
Label	Interchangeable	Interchangeable	Suitable for use on each type of surface to which applied, rated for maximum surface temperature specified, or 50 deg. C if not specified.	PGDQ2 or PGJI2	UL	07-01

Enclosures

Type	Supplement Id	Description
Photographs	03-01	External View1 for model SPA-W100W
Photographs	03-02	External View2 for model SPA-W100W
Photographs	03-03	External View3 for model SPA-W100B
Photographs	03-04	External View4 for model SPA-W100B
Photographs	03-05	Internal View1
Photographs	03-06	Internal View2
Photographs	03-07	Internal View3
Photographs	03-08	Internal View4
Photographs	03-09	Internal View5
Schematics + PWB	05-01	Silk and pattern
Manuals	06-01	Manual
Miscellaneous	07-01	Label
Miscellaneous	07-02	Inductor coil Spec
Miscellaneous	07-03	Bracket

WISeNET

WALL SPEAKER

Quick Guide

SPA-W100B (Black)
SPA-W100W (White)



SAFETY INFORMATION

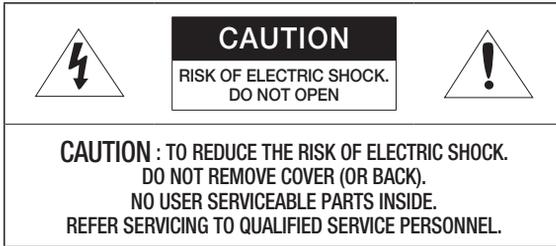
WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

To prevent injury, this apparatus must be securely attached to the Wall/ceiling in accordance with the installation instructions.

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of “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 to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

ATTENTION

IL Y A RISQUE D’EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UNE BATTERIE DE TYPE INCORRECT.

METTRE AU REBUT LES BATTERIES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS.

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

To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

The ITE is to be connected only to (PoE/PoE+) networks without routing to the outside plant.

The wired LAN hub providing power over the Ethernet (PoE/PoE+) in accordance with IEEE 802.3af/at shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL60950-1 or PS2 as defined in UL62368-1.

Unit is intended for installation in a Network Environment 0 as defined in IEC TR 62102. As such, associated Ethernet wiring shall be limited to inside the building.

SAFETY INFORMATION

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean the contaminated area on the product surface with a soft, dry cloth or a damp cloth.
(Do not use a detergent or cosmetic products that contain alcohol, solvents or surfactants or oil constituents as they may deform or cause damage to the product.)
7. Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/ accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. To prevent injury, this apparatus must be securely attached to the Wall/ceiling in accordance with the installation instructions..
14. Unplug this apparatus during lighting storms or when unused for long periods of time.
15. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
16. This product is intended to be supplied by a Listed Power Supply Unit marked "Class 2" or "LPS" or "PS2" and rated from PoE(802.3af) : 44V-57V (), max 300mA / PoE+(802.3at) : 50V-57V (), max 510mA.
17. This product is intended to be supplied by isolation power.
18. If you use excessive force when installing the product, the product may be damaged and malfunction.
If you forcibly install the product using non-compliant tools, the product may be damaged.
19. Do not install the product in a place where chemical substances or oil mist exists or may be generated. As edible oils such as soybean oil may damage or warp the product, do not install the product in the kitchen or near the kitchen table.
This may cause damage to the product.
20. When installing the product, be careful not to allow the surface of the product to be stained with chemical substance.
Some chemical solvents such as cleaner or adhesives may cause serious damage to the product's surface.
21. If you install/disassemble the product in a manner that has not been recommended, the production functions/ performance may not be guaranteed.
22. Do not install on a surface where it is exposed to direct sunlight, near heating equipment or heavy cold area.
23. Do not place this apparatus near conductive material.
24. Do not attempt to service this apparatus yourself.
25. Do not place a glass of water on the product.
26. Do not install near any magnetic sources.
27. Do not place heavy items on the product.
28. Please wear protective gloves when installing/removing the product.



SAFETY INFORMATION

The high temperature of the product surface may cause a burn.

29. This device has been verified using STP cable. The use of appropriate GND grounding and STP cable is recommended to effectively protect your product and property from transient voltage, thunderstroke, communication interruption.
30. In particular installation environments, there might be interference in radio communications.
When interference of electromagnetic waves occurs between the product and radio communication device, it is recommended to keep a certain distance between the two or change the direction of the receiving antenna..
31. An apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.
32. Batteries(battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.
The battery cannot be replaced.
33. Disconnect the main plug from the apparatus, if it's defected. And please call a repair man in your location.
34. Select an installation site that can hold at least 5 times the product's weight.
35. Stuck-in or peeled-off cables can cause damage to the product or a fire.
36. For safety purposes, keep anyone else away from the installation site.
And put aside personal belongings from the site, just in case.
37. We do not guarantee the quality of third-party products (e.g. accessories) that you separately purchase.

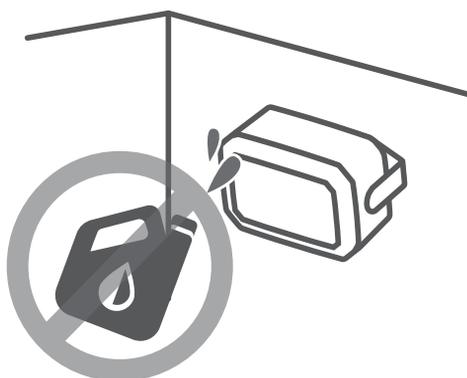
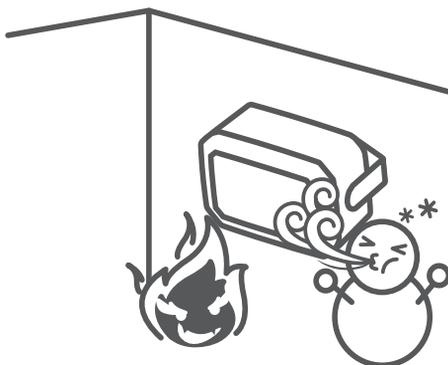
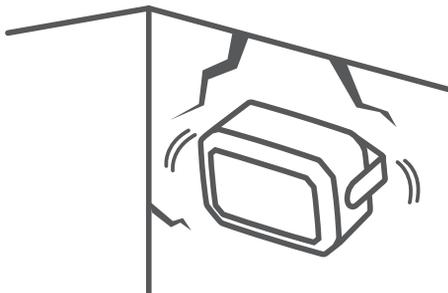
안전을 위한 주의사항

1. 제품 취급 시 항상 주의하세요.
2. 제품을 주먹으로 치거나 흔들지 않도록 하고 부주의한 보관이나 오동작으로 제품에 손상을 입히지 않도록 주의하세요.
3. 제품을 비가 오는 장소나 습기가 많은 장소에 설치하지 않도록 주의하고 젖은 장소에 두고 동작하지 마세요.
4. 제품을 물 속에서 설치 또는 사용할 경우 제품의 심각한 고장을 일으킬 수 있습니다.
5. 제품 표면은 깨끗하고 부드러운 마른 헝겊으로 오염 부위를 닦거나 부드러운 마른 헝겊에 물을 적서 물이 흐르지 않도록 꼭 짠 후에 오염 부분을 닦으세요.
(알코올, 솔벤트가 함유되거나, 계면활성제가 함유된 세제, 화장품류, 기름 성분 등은 제품의 파손 및 변형을 유발할 수 있으니 사용하지 마세요.)
6. 제품을 열기구에 가까이 설치하지 마세요.
7. 전원 및 신호선 연결 시 외부 연결 단자를 확인하고 연결하세요.
알람 단자에는 알람 신호선을 연결하고, DC 전원 입력 단자는 극성을 확인하여 DC 어댑터를 올바르게 연결하세요.
8. PoE 연결 단자를 확인하고 연결하세요.
9. 제품의 통풍구를 막거나 밀폐된 공간에 설치하지 마세요. 제품이 과열되어 고장이 날 수 있습니다.
10. 설치된 제품을 이동하고자 할 때에는 반드시 전원을 끄고 옮기거나 재설치 하세요.
11. 제품을 벽이나 천장 등에 설치 시 안전하고 확실하게 고정하세요.
낙하로 인한 부상의 원인이 됩니다.
12. 천둥, 번개가 치면 제품에 문제가 생길 수 있습니다. 설치 시 접지 등 낙뢰에 의한 파손이 최소화될 수 있도록 주의하세요.
13. 제품을 장기간 사용하지 않을 경우 안전을 위해 전원을 분리하세요.
14. 이 제품은 "Class 2" 또는 "LPS" 또는 "PS2"로 표시되고 PoE(802.3af) : 44V-57V (), 최대 300mA / PoE+(802.3at) : 50V-57V (), 최대 510mA 정격의 등재 전원 공급 장치에 의해 공급됩니다.
15. PoE 연결 외부 전원은 절연전원을 사용하세요.

SAFETY INFORMATION

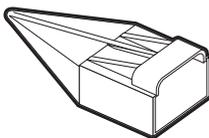
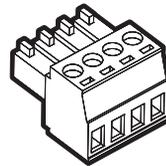
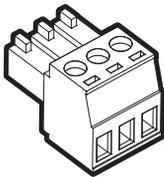
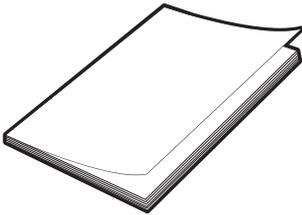
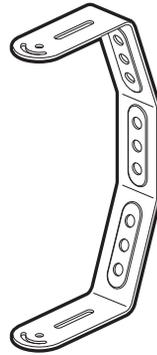
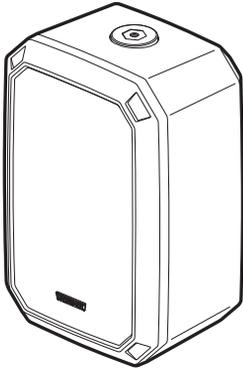
16. 무리한 힘을 가하여 억지로 제품을 설치 할 경우 오동작으로 인해 제품에 손상을 줄 수 있습니다.
규격에 맞지 않는 도구를 사용하여 강제로 조립할 경우 제품이 파손될 수 있습니다.
17. 제품이 설치되는 장소에 화학 물질 또는 유증기가 있거나 발생될 수 있을 경우 제품을 설치하지 마세요.
공기름과 같은 식용 기름 성분도 제품의 파손 및 변형을 유발할 수 있으므로, 주방 또는 조리대 근처에는 설치하지 마세요. 제품 손상의 원인이 될 수 있습니다.
18. 제품 설치시 화학 물질이 제품 표면에 묻지 않도록 주의하세요.
일부 세척제나 접착 성분과 같은 화학 용제는 제품 표면에 치명적인 손상을 줄 수 있습니다.
19. 당사에서 권장하지 않는 방법으로 제품을 설치/분해하는 경우 제품의 기능/성능을 보장할수 없습니다.
20. 제품을 직사광선이 비치지 않는 서늘한 곳에 설치하세요.
직사광선이 비치는 곳에 두면 제품에 좋지 않은 영향을 줄 수 있습니다.
21. 온도가 너무 높은 곳이나 낮은 곳, 습도가 높은 곳에 설치하지 마세요.
22. 사용자 임의로 제품을 분해하지 마세요.
23. 카메라 위에 전도성 물질(드라이버, 동전, 쇠붙이 등) 및 물이 차있는 용기 등을 놓지 마세요.
24. 진동이 심한 곳이나 자석종류가 있는 곳으로부터 멀리해 주세요.
25. 제품 위에 무거운 물건을 올려놓지 마세요.
26. 제품 설치/분리시 보호용 장갑을 착용하세요. 제품 표면의 고온으로 인해 화상을 입을 수 있습니다.
27. 이 장비는 STP 케이블을 사용하여 검증되었습니다. 과도 전압, 낙뢰, 통신 방해 등으로부터 효과적으로 제품과 자산을 보호하기 위해서 적절한 GND 접지와 STP 케이블 사용을 권장합니다.
28. 특정한 설치 환경에서 무선 통신에 간섭이 발생할 수 있습니다. 제품과 주변 무선통신 장비 간 전자파 간섭이 발생하는 경우, 무선통신 장비와 거리를 넓히거나 통신용 안테나 방향을 조정하는 것을 권장합니다.
29. 배터리(배터리 팩 또는 장착된 배터리)가 햇빛, 불 등과 같은 과도한 열에 노출되어서는 안됩니다.
배터리는 교체가 불가능합니다.
30. 연기가 나거나 이상한 냄새가 날 때는 사용을 중단하세요. 이때는 곧바로 전원을 분리 후 서비스 센터에 연락해 주세요.
31. 케이블이 부적절한 곳에 끼이거나 전선의 피복이 손상될 경우 제품의 손상이나 화재로 이어질 수 있으므로 주의하세요.
32. 제품 무게의 5배를 견딜 수 있는 장소(천장이나 벽)에 설치하여야 합니다.
33. 케이블이 부적절한 곳에 끼이거나 전선의 피복이 손상될 경우 제품의 손상이나 화재로 이어질 수 있으므로 주의하세요.
34. 제품을 설치할 때 다른 사람이 설치 장소에 접근하는 일이 없도록 해야 합니다.
그리고 귀중품이 아래에 놓여 있다면 즉시 치우세요.
35. 당사는 별도 구매하신 타사 제품(액세서리)에 대한 품질을 보증하지 않습니다.

SAFETY INFORMATION



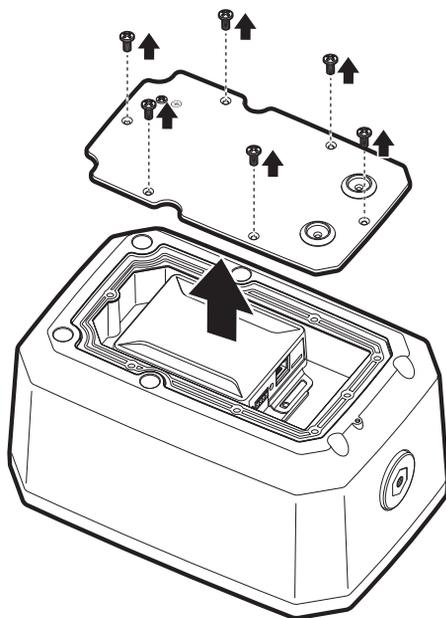
COMPONENT

As for each sales country, accessories are not the same.



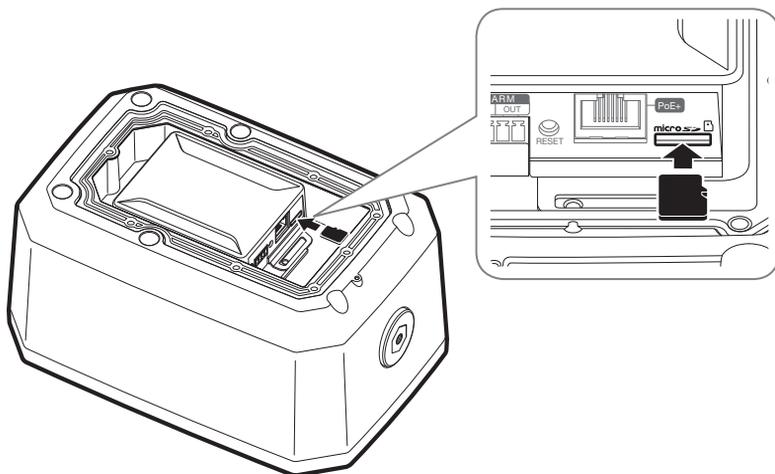
INSTALLATION

1



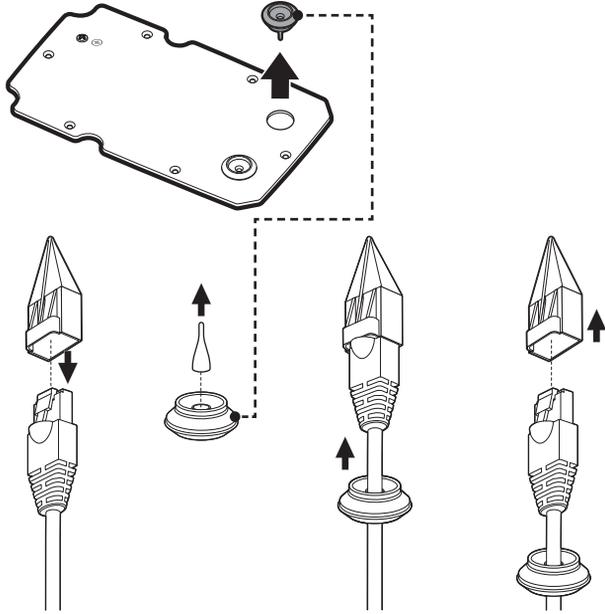
2

• Not Included : Micro SD Card

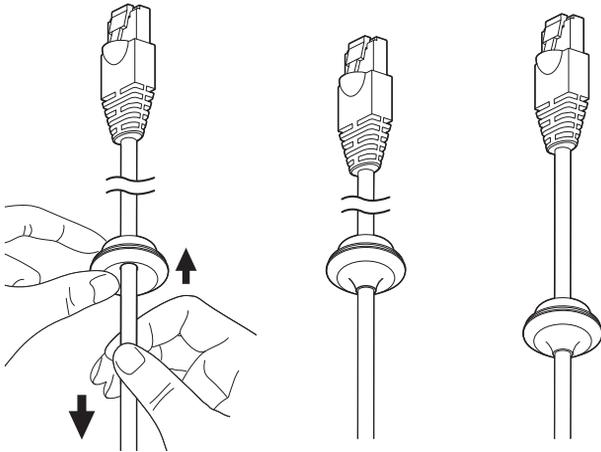


INSTALLATION

3

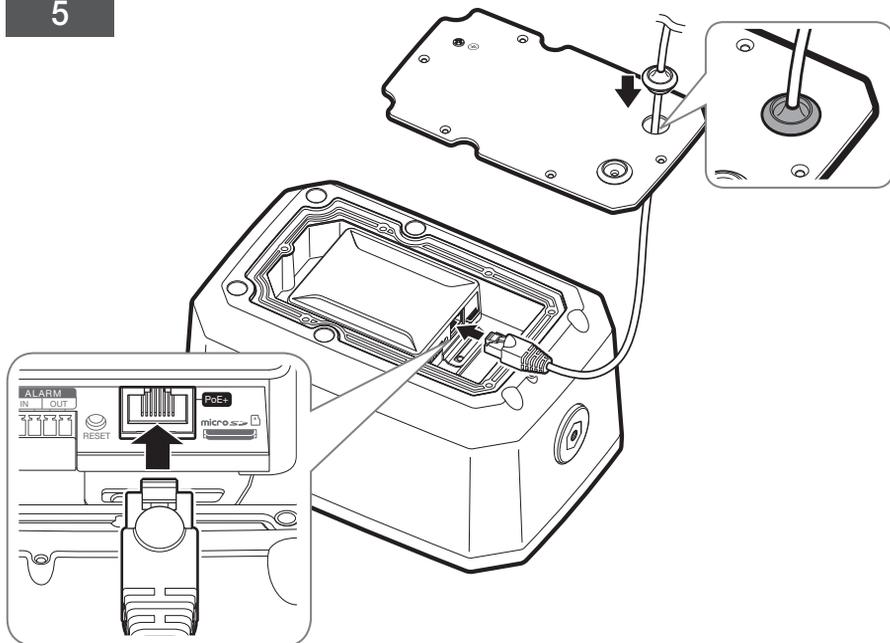


4

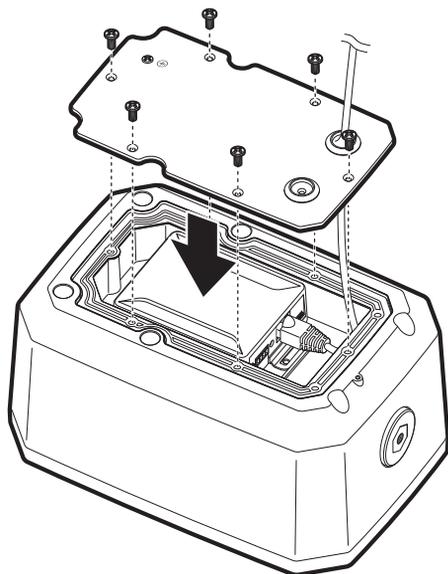


INSTALLATION

5

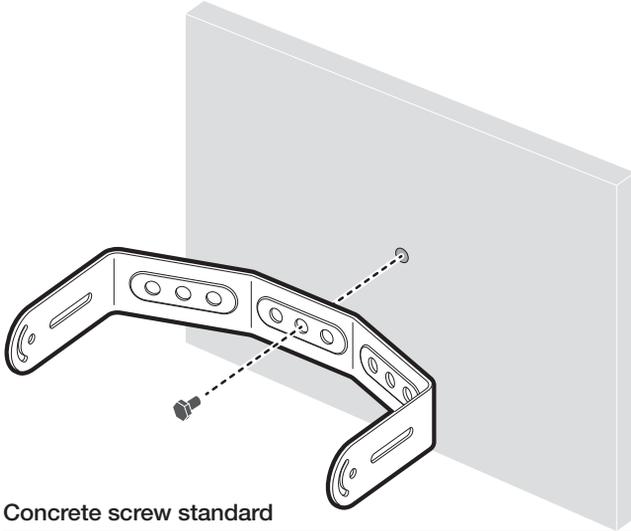


6



INSTALLATION

7



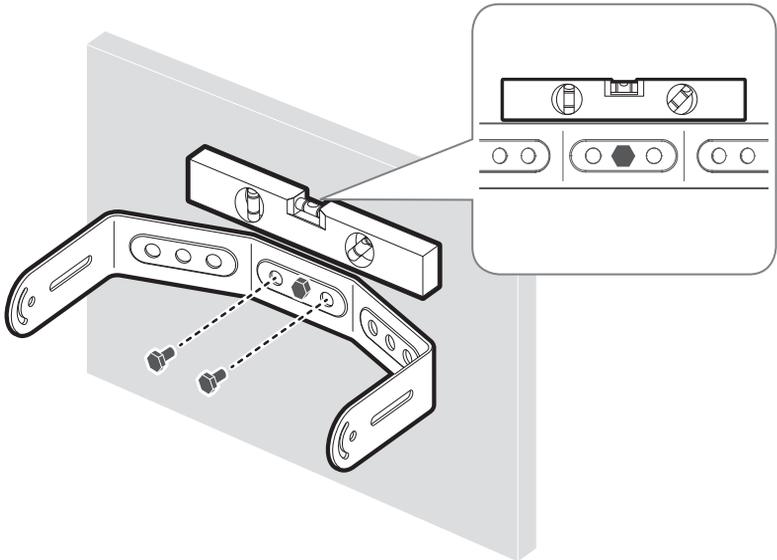
Concrete screw standard



Standard	Drill bit diameter M (mm)	Anchor length L (mm)	Hexagon head b (mm)	Insertion depth h (mm)
50 mm	8 mm	50 mm	13 mm	45 mm

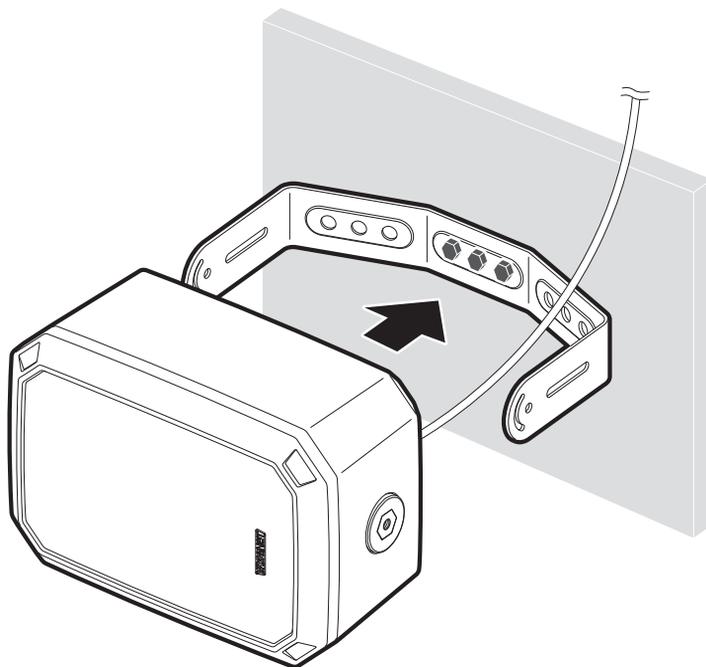
The product manufacturer is not responsible for any accident or damage occurring from using screws that do not meet the aforementioned standard specifications.

8

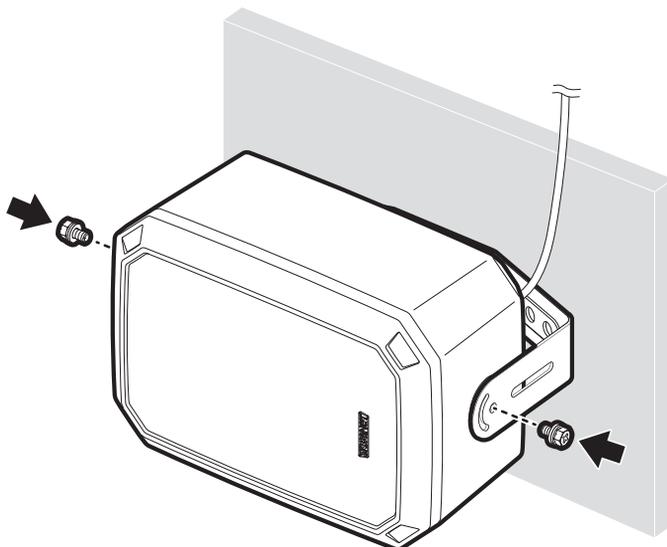


INSTALLATION

9

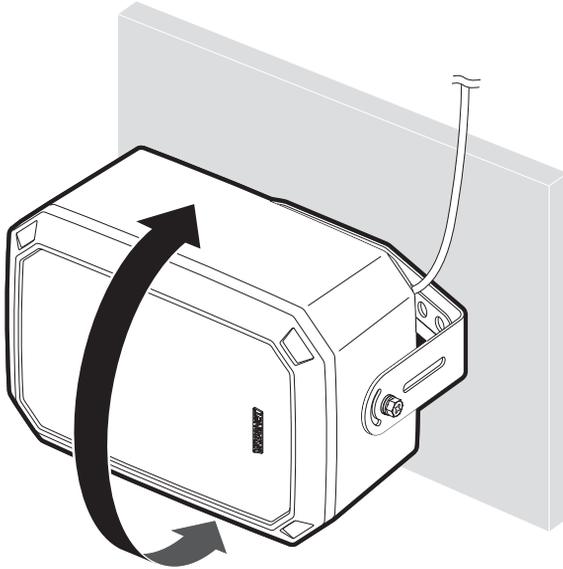


10

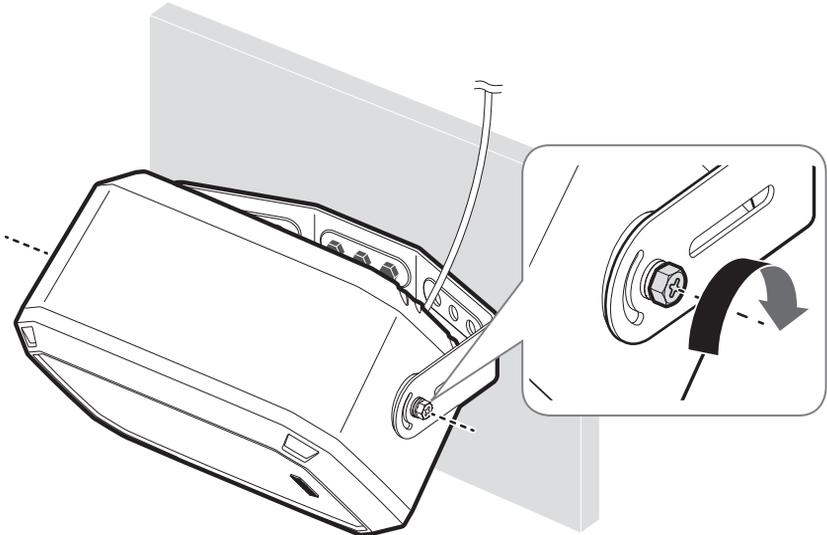


INSTALLATION

11

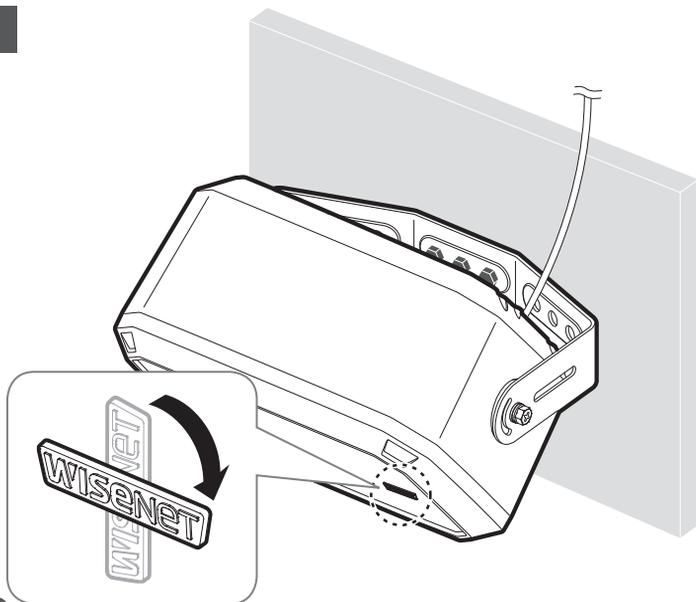


12

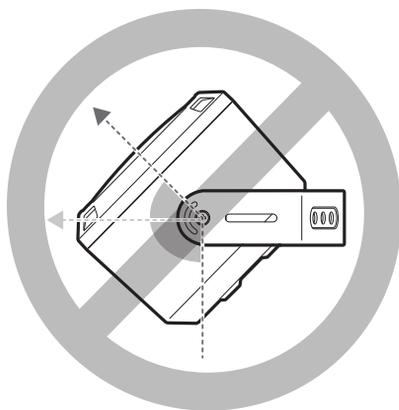
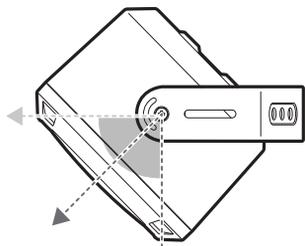
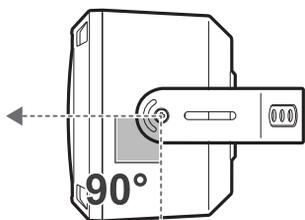


INSTALLATION

13

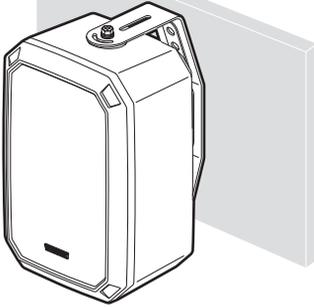


The product manufacturer is not responsible for any accident or damage occurring from using screws that do not meet the aforementioned standard specifications.

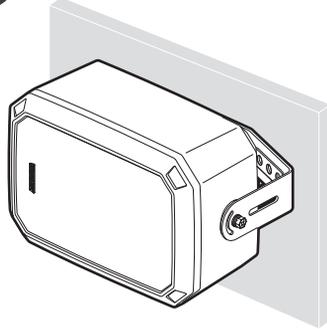


INSTALLATION

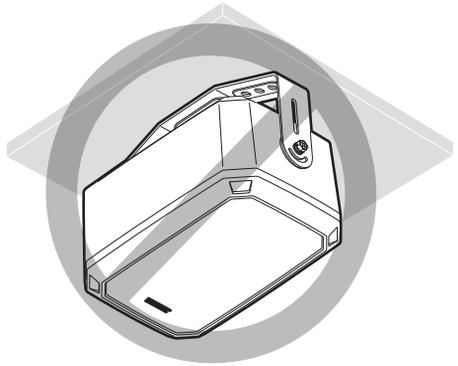
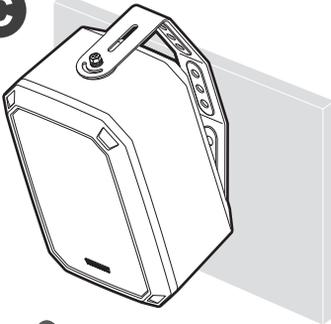
A



B



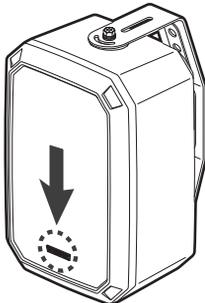
C



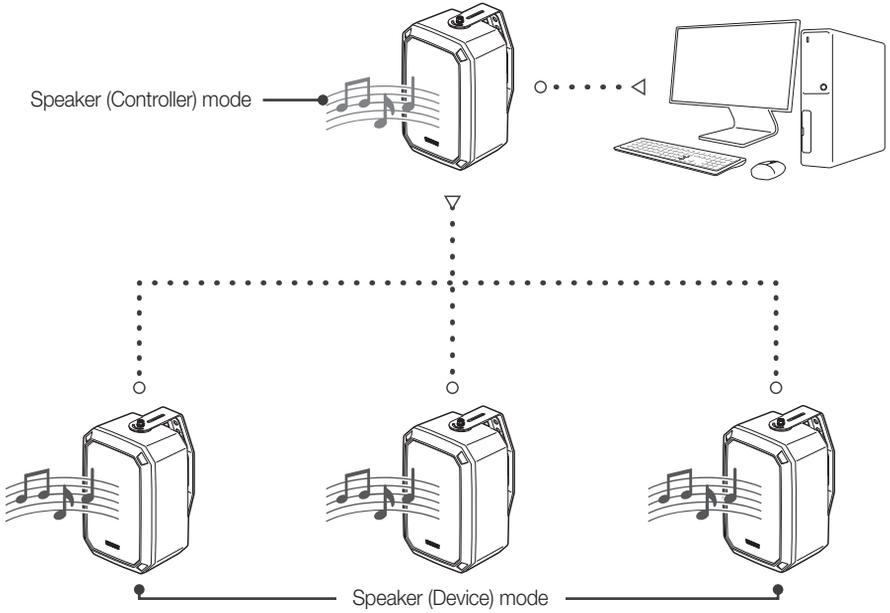
The product manufacturer is not responsible for any accident or damage occurring from using screws that do not meet the aforementioned standard specifications.

A

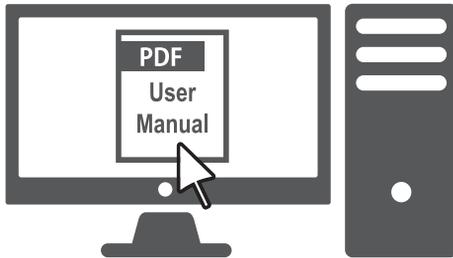
C



INSTALLATION



14



ACCESS THE SPEAKER

The PC must be connected to the network identical to the one used to connect the product for the first time.

Connect the product and PC to the same PoE switching hub.

- 1 Set the IP address of the PC to 192.168.1.x, in the same band range as the product.
(e.g. 192.168.1.100)
- 2 Launch the web browser.
- 3 Enter the initial IP address of the product (192.168.1.99) into the address bar to connect.

- ! Chrome is the only web browser supported for the product.

SET THE PASSWORD

When you are attempting to access the product through the web browser for the first time, the login password must be registered.

- ! The new password must include at least 8 characters, and must use at least 3 letter types out of uppercase/lowercase alphabets, numbers, and special characters.
- For higher security, you are not recommended to repeat the same characters or consecutive keyboard inputs for your passwords

LOGIN

Whenever you're accessing the product, the login window will be displayed.

You must enter the user ID and the preset password in order to access the product.

- 1 Enter "admin" in the <ID> input field.
- 2 Enter the preset password into the <Password> field.
- 3 Click [Login].

- !
 - If you lose the password, you must press the [RESET] button on the product for about 12 seconds in order to reset the product. When the product is reset, all the other set values will be reset as well, so be careful not to lose the password.
 - **If you pressed the [RESET] button on the product or initialized the system, DO NOT remove the power cable until the initialization is completed. It will take more than 10 minutes from product initialization to reboot.**

스피커에 접속하기

최초 제품 접속 시 제품과 동일한 네트워크에 PC를 연결해야 합니다.

제품과 PC를 같은 PoE 스위칭허브에 연결하세요.

- 1 PC의 IP 주소를 제품과 동일한 대역대인 192.168.1.x 로 설정합니다.
(예:192.168.1.100)
 - 2 웹 브라우저를 실행하세요.
 - 3 주소창에 제품의 초기 IP 주소(192.168.1.99)를 입력하여 접속하세요.
- ! 웹 브라우저는 Chrome 브라우저만 사용 가능합니다.

비밀번호 설정하기

웹 브라우저를 통해 처음 제품에 접속을 시도하면 로그인 비밀번호를 등록해야 합니다.

- ! 새로운 비밀번호는 8자 이상 영어 대/소문자, 숫자, 특수 문자 중 3종류 이상을 사용해야 합니다.
- 보안강화를 위하여 동일한 문자 반복 사용이나 연속된 키보드 배열을 비밀번호로 사용하지 않는 것을 권장합니다.

로그인하기

제품에 접속할때마다 로그인 창이 뜹니다. 사용자 아이디와 설정된 비밀번호를 입력해야 접속할 수 있습니다.

- 1 <아이디> 입력란에 “admin”을 입력하세요.
- 2 <패스워드> 입력란에 설정한 비밀번호를 입력하세요.
- 3 [로그인] 버튼을 클릭하세요.

- ! 비밀번호 분실 시 제품에 있는 [RESET] 버튼을 약 12초 동안 눌러 제품을 초기화해야 합니다.
- 제품이 초기화되면 다른 모든 설정 값도 같이 초기화되니 비밀번호를 잊지 않도록 주의하세요.
- 제품의 [RESET] 버튼을 누르거나 시스템 초기화를 진행한 경우 초기화가 완료되기 전에는 절대로 전원을 분리하지 마세요. 제품 초기화 후 재부팅까지 약 10분 이상의 시간이 소요됩니다.

서비스 요청하시기 전에 꼭 알아 두세요

다음과 같은 사항에 대하여 서비스 요청 시 유상서비스로 처리될 수 있습니다.

[1] 고객 주의사항

- 오디오 시스템 및 제품의 이상 유무를 정기적으로(매일) 점검하여 사용하시기 바랍니다.
- A/S는 당사 해당 제품(단품)에 대해서만 가능합니다.
설치 문제로 인한 불량은 설치 전문 업체 및 유지 보수업체를 통해 처리하여야 합니다.
- 제품 사용 설명서에 포함되지 않는 기능이나, 타사 소핑몰 등에서 잘못 기재된 기능은 당사에서 책임지지 않습니다.
- 제품에 저장된 중요한 데이터는 서비스를 받는 동안 손실될 수 있습니다. 따라서, 서비스 요청 전 반드시 백업해 두시기 바랍니다. 수리과정에서 손실될 경우 당사에서 책임지지 않습니다.

[2] 제품 사용 설명서로 서비스 요청한 경우

- 사용 환경에 따른 신호 점검, 전원 점검, 네트워크 환경 문제 등의 서비스 요청 시
- 제품과 관련된 타기기의 설치, 설명 요청 시

[3] 단순 분해조립, 간단조정, S/W 업그레이드 등으로 서비스 요청한 경우

- 제품 안에 이물질이 투입되어 문제가 발생하는 경우
- 제품 간단 조정이나 분해하지 않고 처리하는 경우
- 제품 고장 요인이 아닌 S/W 업그레이드 요청 시

[4] 그 밖의 경우

- 제품에서 사용되는 소모품(기록 매체 등)의 관리 소홀로 인한 고장이나 사용 설명 서비스 요청 시 (소모품 문제에 대한 사용설명 및 서비스 요청은 해당 업체에 문의하여 주십시오)
- 품질이 좋지 않은 기록 매체 사용에 따른 고장이나 사용 설명 서비스 요청 시
- 제품이 비정상적인 환경에서 사용하거나 설치되어 문제가 발생한 경우

※ 상기와 같은 유형의 서비스를 받으실 경우에는 소정의 수수료가 부과될 수 있으므로, 서비스 신청 전 전문상담원 (☎1588-5772)을 통하여 보다 양질의 서비스를 받으시길 권장 드립니다.



한화테크윈은 지구환경보전을 위하여 제품과 관련된 전 과정에서 환경을 고려하고 있으며, 고객에게 보다 친환경적인 제품을 제공하기 위하여 다양한 활동을 추진하고 있습니다.

에코(Eco)마크는 친 환경제품을 만들기 위한 한화테크윈의 의지이며, 유럽의 환경규제(RoHS)에 만족하는 제품임을 의미합니다.

품질보증서

제 품 명	네트워크 스피커 (벽부형)	보증 기간
모 델 명	SPA-W100B / SPA-W100W	구 입 후 3년 (소모품 제외)
구입일자	년 월 일	
보증기간	년 월 일 까지	

고객 주소	성 명	
	연락처	
판매점 주소(상호)	성 명	
	연락처	

※ 제품 판매 시 공란의 내용을 필히 기입하여 주십시오.

◀ 서비스를 받으실 때 ▶

제품 고장으로 판단되더라도 서비스를 요청하기 전에 반드시 사용설명서를 한 번 더 읽어 주십시오. 사용방법을 알지 못해서 고장으로 판단하실 수 있으므로 사용설명서의 취급법과 주의사항 등을 보시면 간단히 해결되는 경우가 있습니다.

서비스를 요청하시는 방법은?

요청하실 때는 고장상태를 정확히 알려 주십시오.

이때 보증서를 함께 제시하시면 보증서에 기재된 내용에 따라 유상, 무상수리의 구분이 됩니다.

한화테크윈(주)

경기도 성남시 분당구 판교로 319번길 6 (삼평동 701)

영 업 TEL 070-7147-8771~9 A/S 및 기술문의 1588-5772

부산영업소 TEL 051-796-3216

대구영업소 TEL 053-742-3098

광주영업소 TEL 062-941-9559

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아래 사항에 따른 고장은 보증에서 제외되며, 수리 불가 혹은 유상 처리 될 수 있습니다.

- 1) 설치자 과실, 사용자 취급 부주의에 의한 고장
- 2) 정격 전원 외의 전원 연결 시
- 3) 사용자 임의로 분해, 수리한 경우
- 4) 자연재해에 의한 고장 (낙뢰, 지진, 화재, 홍수, 해일 등)
- 5) 소모품 교체 및 추가 시(HDD/SSD, SD카드, 아답터, FAN 등)

Important

Please check 'Manuals' from our website, before connecting to the Supply,
<https://www.hanwha-security.com/en/data-center/download-data/>



Hanwha Techwin cares for the environment at all product manufacturing stages, and is taking measures to provide customers with more environmentally friendly products. The Eco mark represents Hanwha Techwin's devotion to creating environmentally friendly products, and indicates that the product satisfies the EU RoHS Directive.



Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.



Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

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Tel : +84.91.982.40.88

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SPA-W100B

WALL SPEAKER
MODEL: SPA-W100B

PoE (802.3af) : 44V-57V $\overline{=}$, max 300mA
PoE+ (802.3at) : 50V-57V $\overline{=}$, max 510mA
M/C:SPA-W100B/KEX

May. 2021 S/N:ZQSPxxxxxxxxxx

F/W Ver:
CAN ICES-3(A)/NMB-3(A)
HANWHA TECHWIN CO.,LTD. MADE IN KOREA



SPA-W100W

WALL SPEAKER
MODEL: SPA-W100W

PoE (802.3af) : 44V-57V $\overline{=}$, max 300mA
PoE+ (802.3at) : 50V-57V $\overline{=}$, max 510mA
M/C:SPA-W100W/KEX

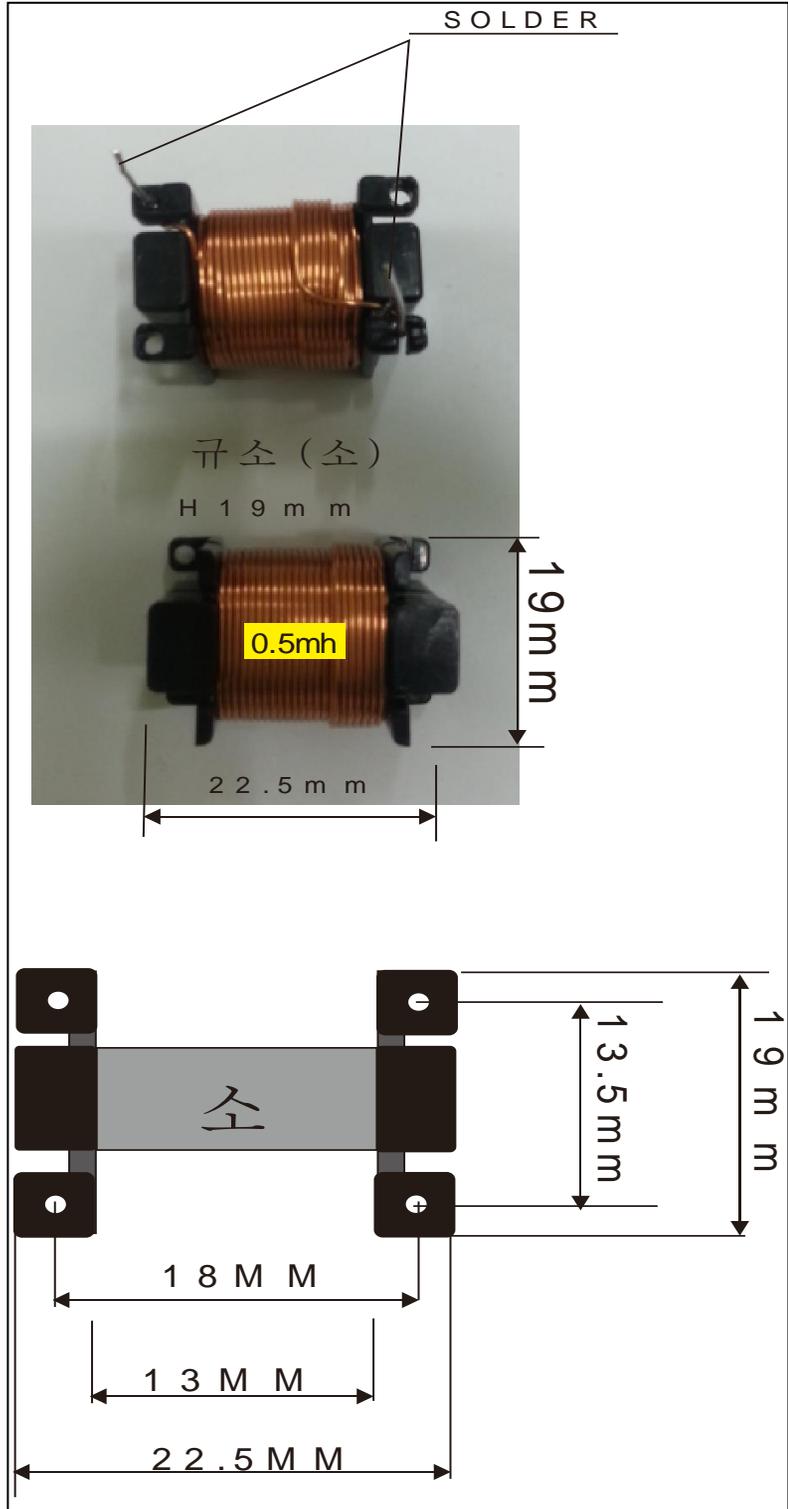
May. 2021 S/N:ZQSQxxxxxxxxxx

F/W Ver:
CAN ICES-3(A)/NMB-3(A)
HANWHA TECHWIN CO.,LTD. MADE IN KOREA



부품 배치도

제정; 2016.04.11



기 안	박향분	심 사	승 인	이흥희

제 품 사 양 서

제정 2016.04.11

개정

1. 시 험 조 건

시험 및 측정은 특별한 규정이 없는 한 표준상태인 상온 (5-35 C) 상습 (45-80%) 에서 시험하며 INDUCTOR의 측정 주파수는 1KHZ로 한다. 단, 표준상태에 있어서 측정에 의한 문제가 생겼을 경우나 특별한 요구가 없을 때에는 기준상태 (온도 20 \pm 2 $^{\circ}$ C) (상습온도 65 \pm 5%)에서 시험한다.

2. 부품 용량 및 재질

NO	I T E M	M A T E R I A L	P A R T N O
1	COIL	UEW 2종	
		선경 0.6 ϕ	
		DCR 0.38 ohm허용공차 (+-0.5%)	
		0.5 mh 허용 공차 (+- 0.5%)	
2	사출	ABS 난연	
3	solder	PB FREE	
4	I CORE	21 MM	

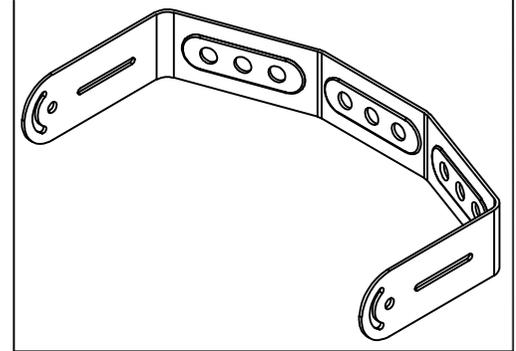
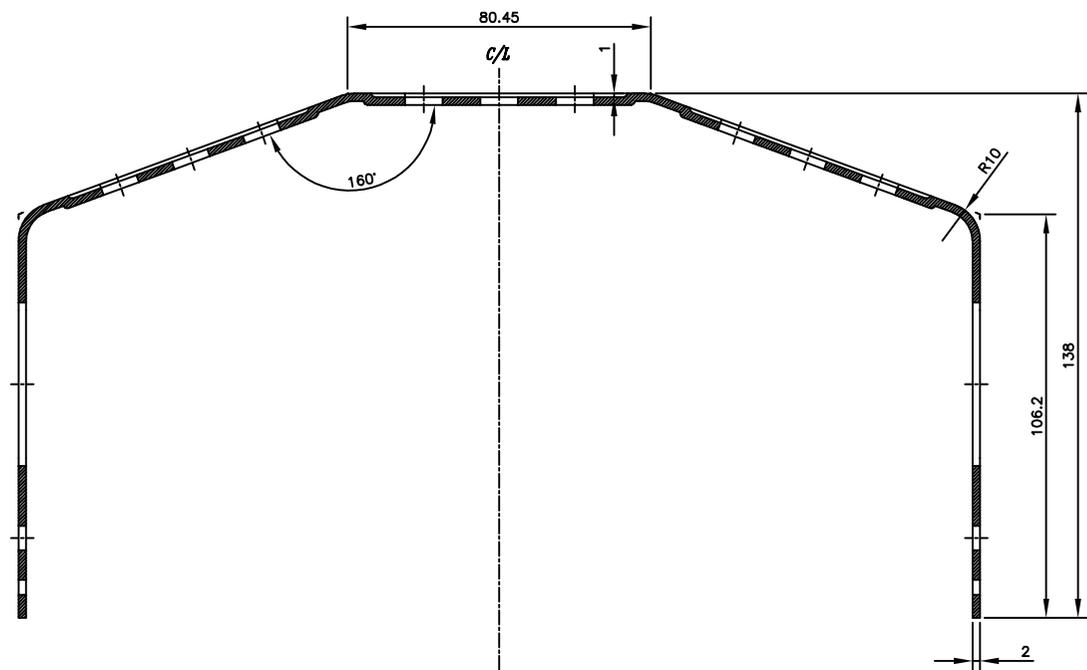
3. 내건고성 시험 방법

- 1) 내열성 : 60 \pm 2 $^{\circ}$ C에서 10시간후 1시간 동안 상온 상습의 상태에 방치하여 전기적 성능 및 기계적 성능에 만족할것.
- 2) 내습성 : 40 \pm 2 $^{\circ}$ C(85-90%)에서 24시간 후 1시간 동안 상온상습 상태에 방치하여 전기적 성능 및 기계적 성능에 만족할것.
- 3) 내한성 : -30 \pm 3 $^{\circ}$ C에서 10시간후 1시간동안 상온 상습의 상태에 전기적 성능 및 기계적 성능에 만족할것.

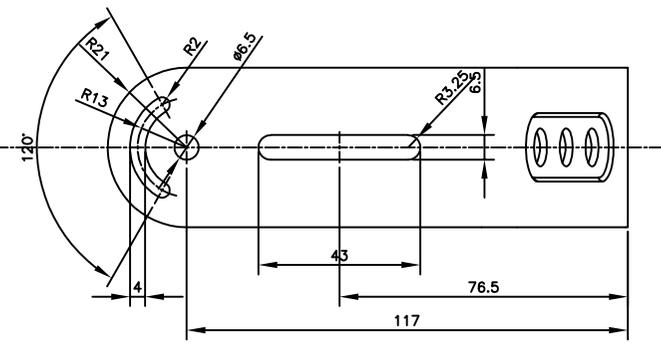
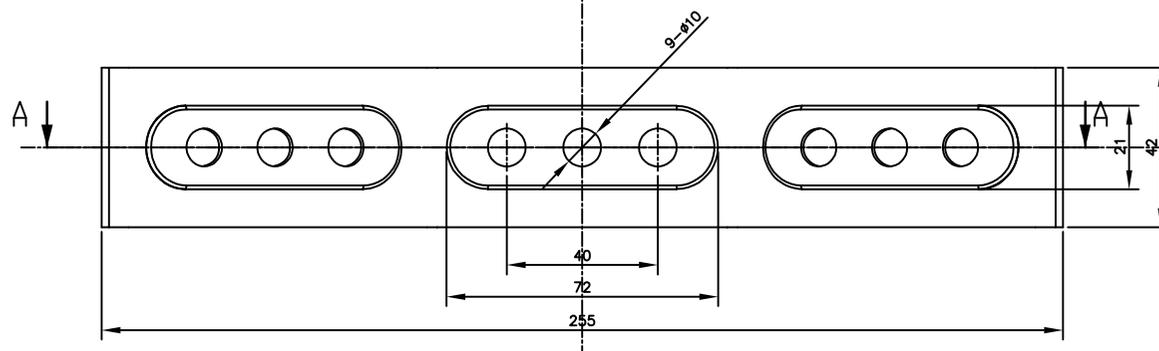
4. 외 관

- 1) 일반사항 : 외관에는 유해한 상처 또는 파손이 없어야 한다.
- 2) 외형치수 : 별지 도면에 의함.

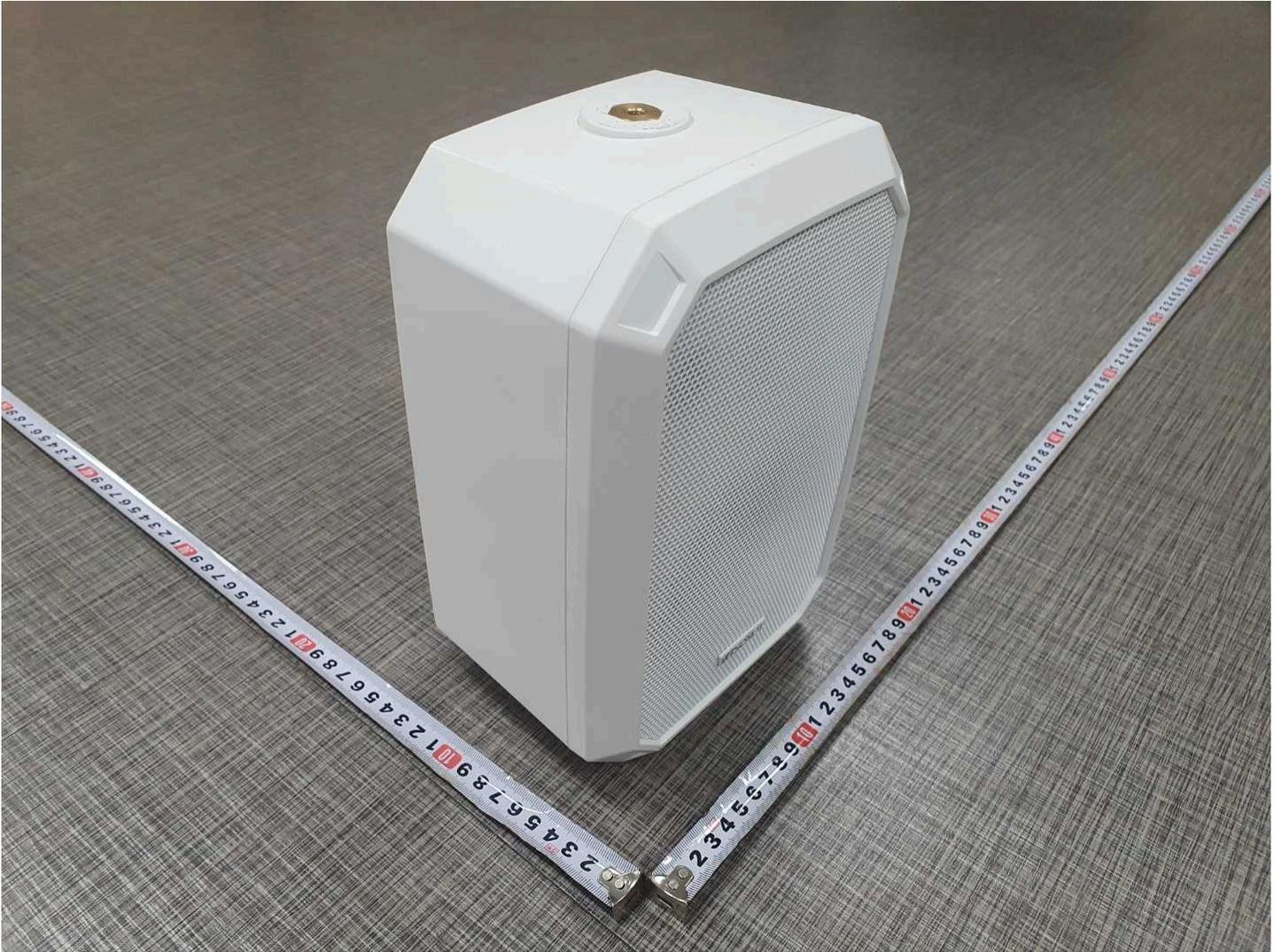
DIMENSION	f	⊕	c	v	DATE	SIGN	REVISION		DESIGNED	용도
							권준오	권준오	권준오	용도
0.5~3	±0.05	±0.1	±0.2	-	20.12.16		원도작성		건부제작용	
3~8	±0.05	±0.1	±0.3	±0.5					건부제작용	
8~30	±0.1	±0.2	±0.5	±1					건부제작용	
30~120	±0.15	±0.3	±0.8	±1.5					건부제작용	
120~400	±0.2	±0.5	±1.2	±2.5					건부제작용	
400~1000	±0.3	±0.8	±2	±4					건부제작용	
1000~2000	±0.5	±1.2	±3	±6					건부제작용	
2000~4000	-	±2	±4	±8					건부제작용	

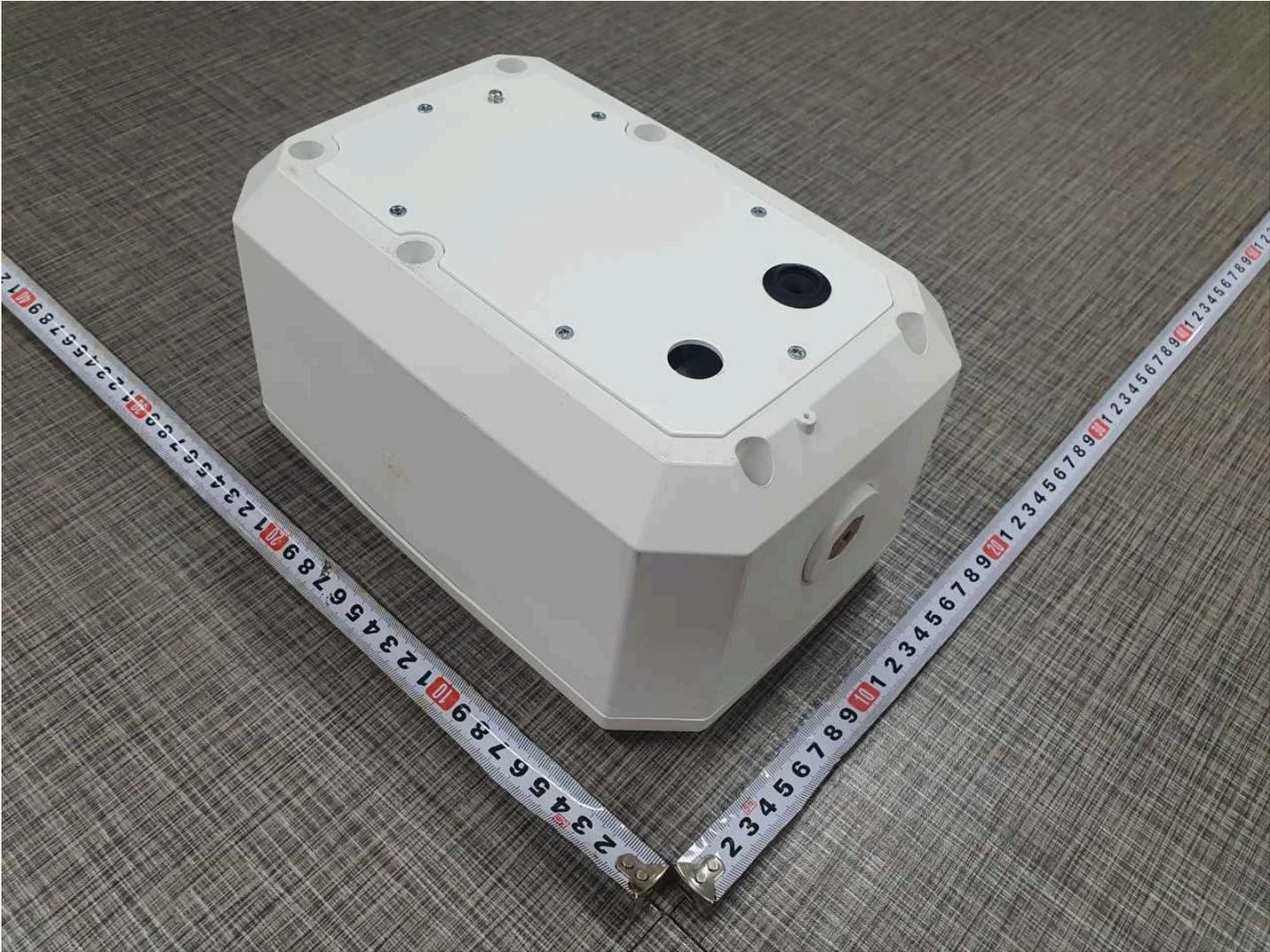


SECTION A-A

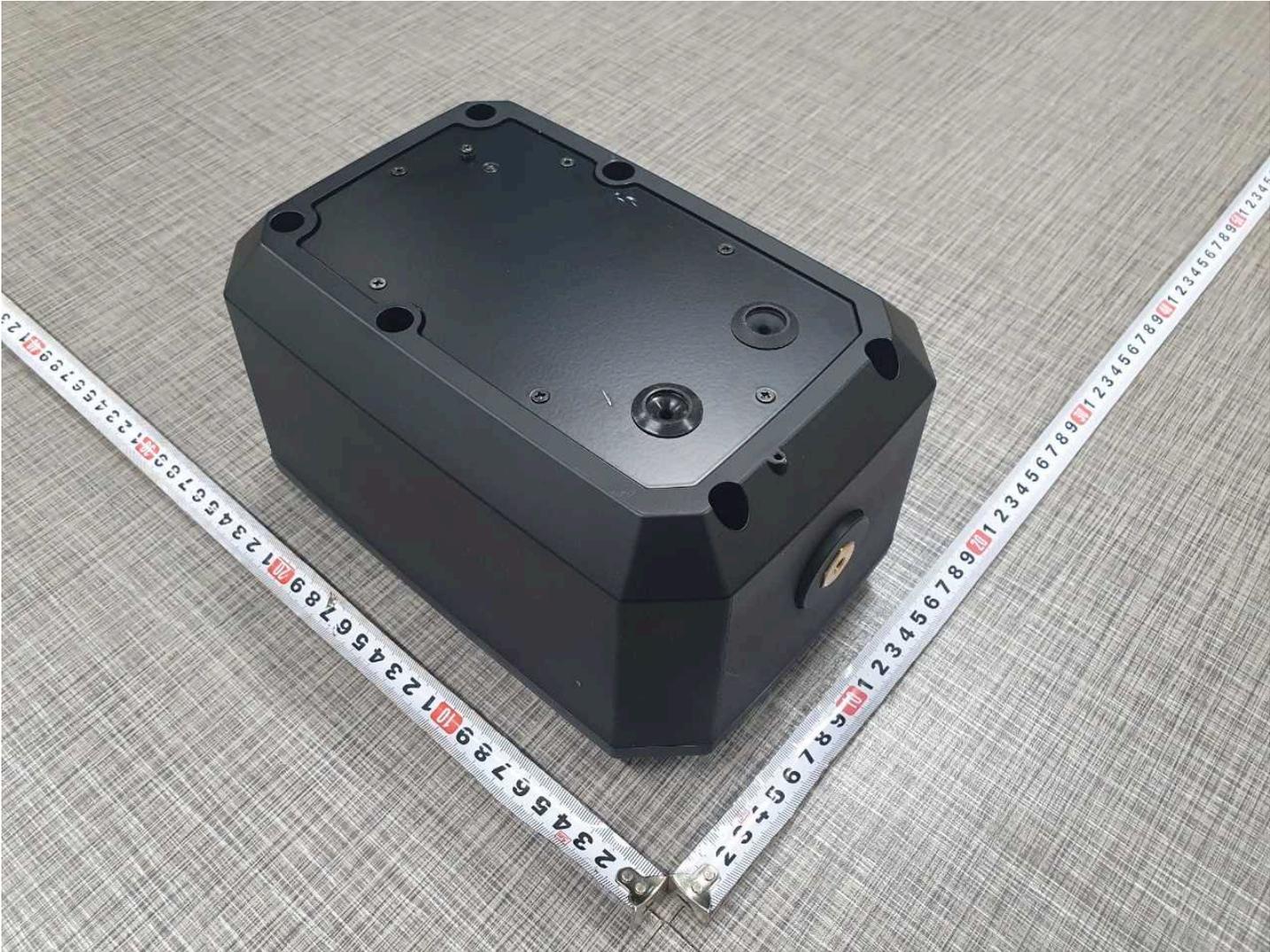


1						
No	PART NAME	PART NUMBER	IRIS No	MATERIAL	FINISH	QTY
MODEL	SPA-W100B/W	MATERIAL	SECC 2.0t	NAME	U-BKT	
DESIGNED	권준오	CHECKED		FINISH	디자인사양 참조	
APPROVED		SCALE	1/1	DWG.NO	86A00631 00	

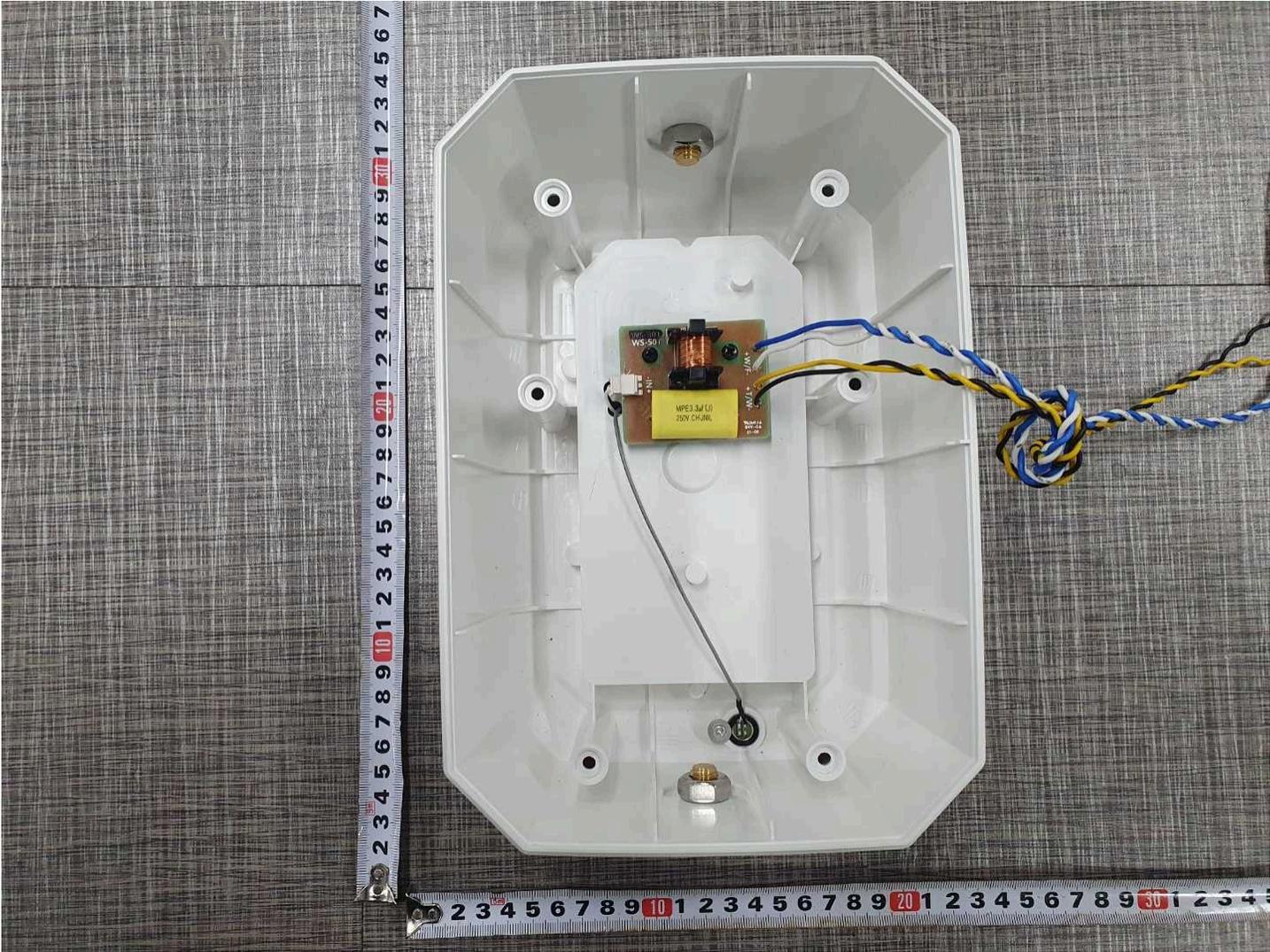




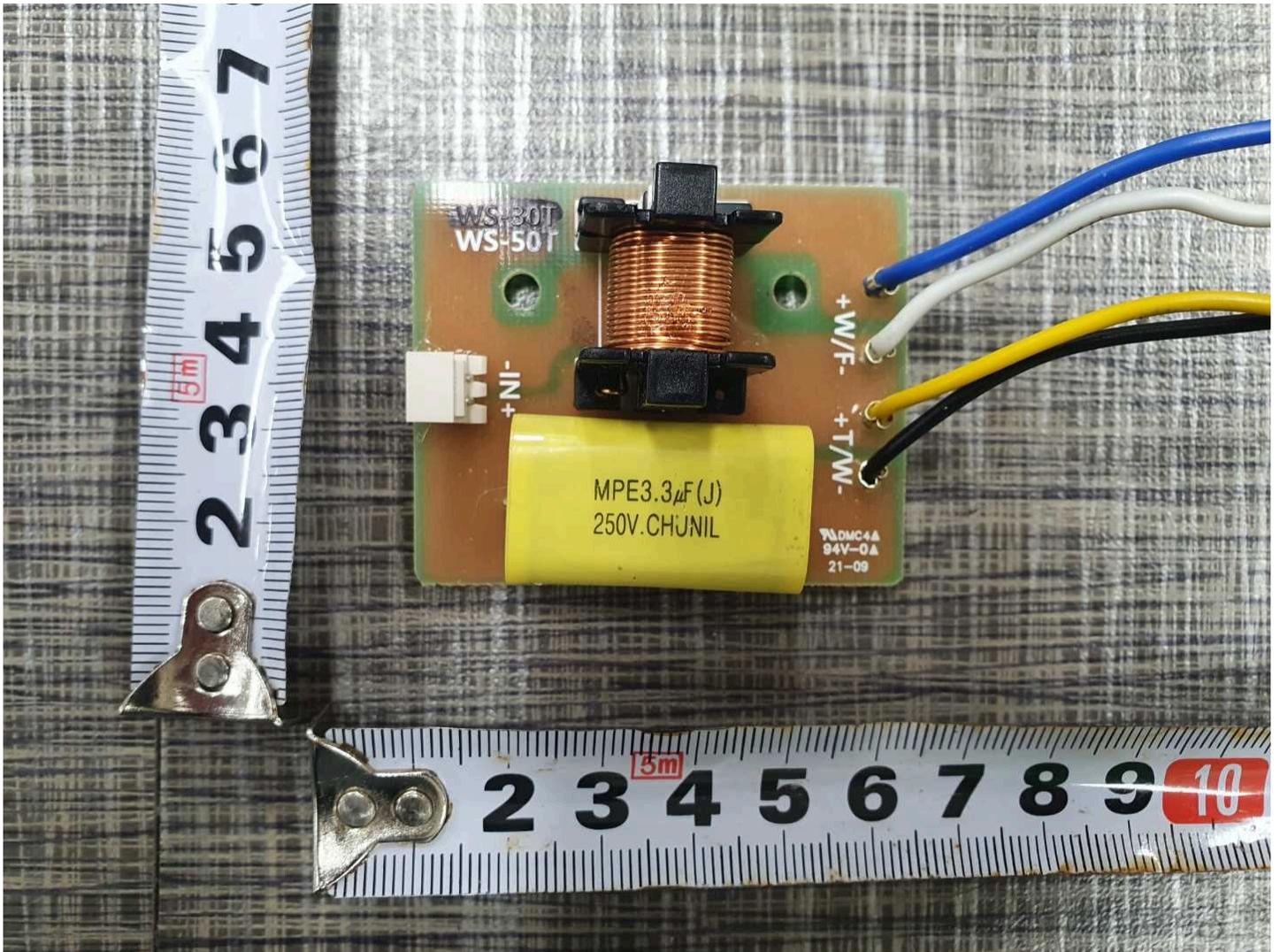


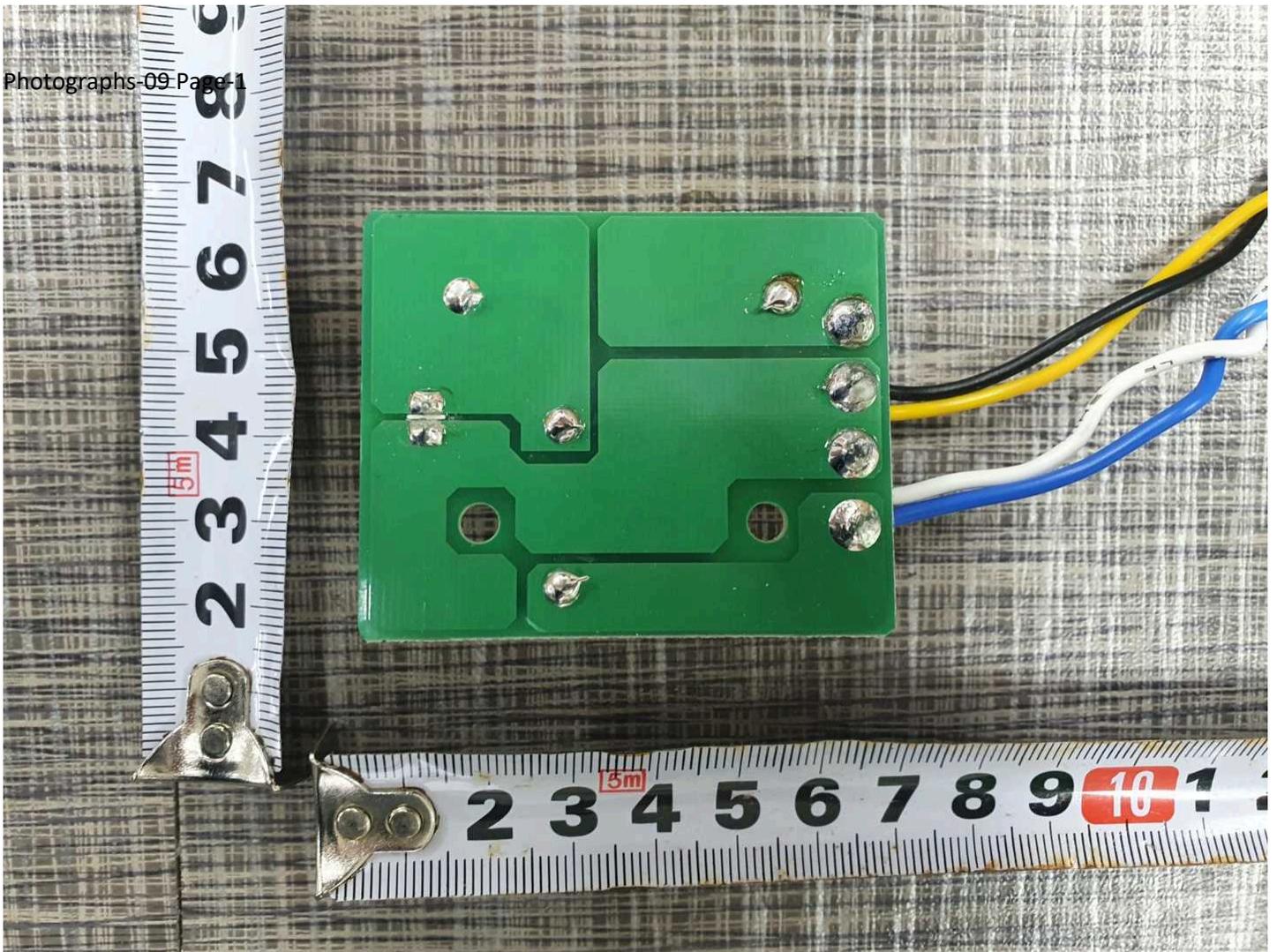






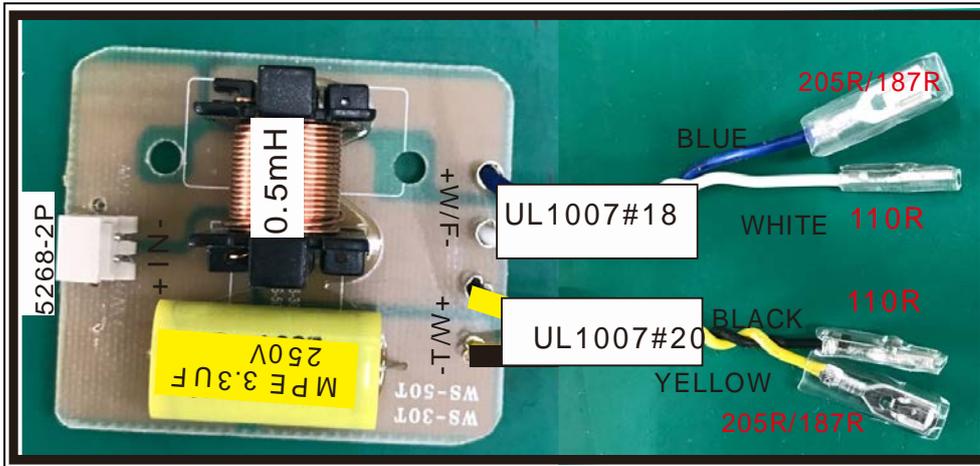
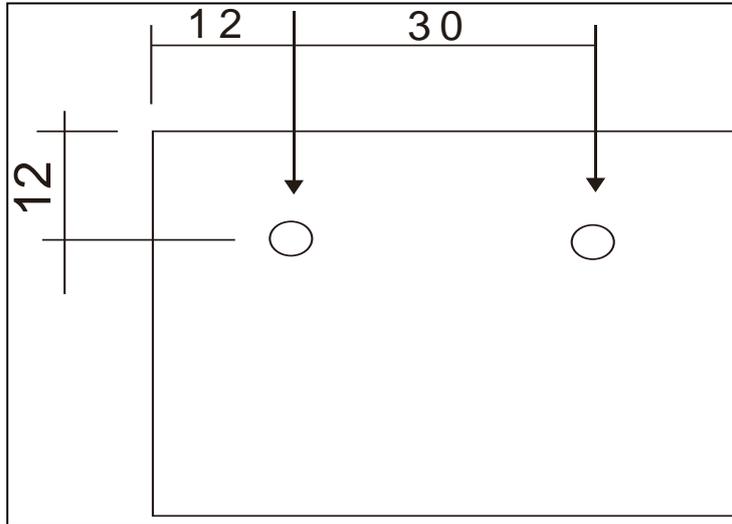






부품 배치도

제정; 2019.05.13

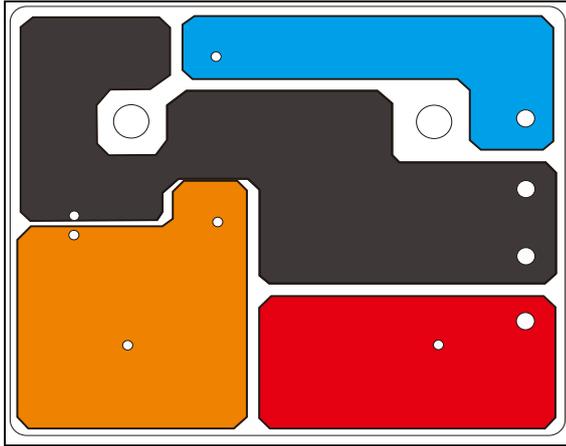


WOOFER+ :BLUE 500MM+-20 205/187R
 WOOFER- : WHITE 500MM+-20 110R
 TWEETER + :YELLOW 500MM+-20 205/187R
 TWEETER - :BLACK 500MM+-20 110R

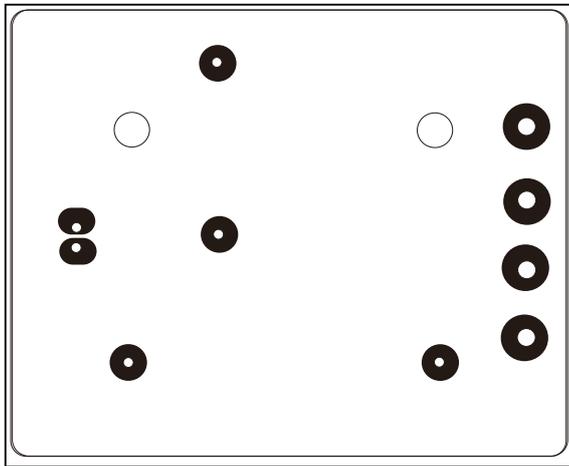
PCB 사양

제정; 2019.05.13

동 박 면



SOLDER



기 안

박향분

심 사

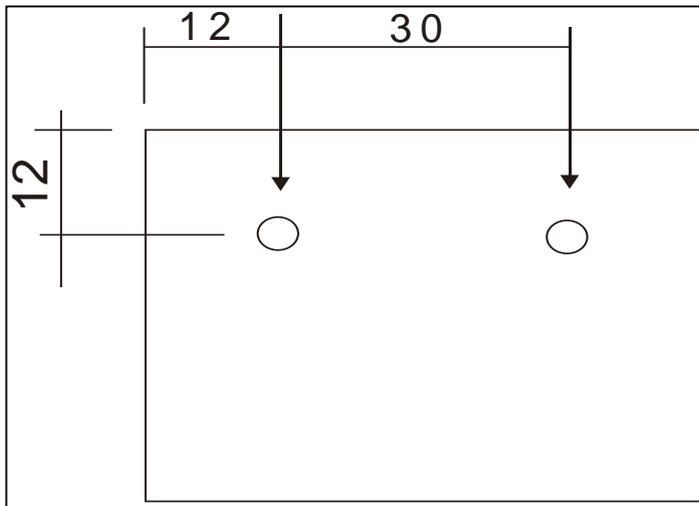
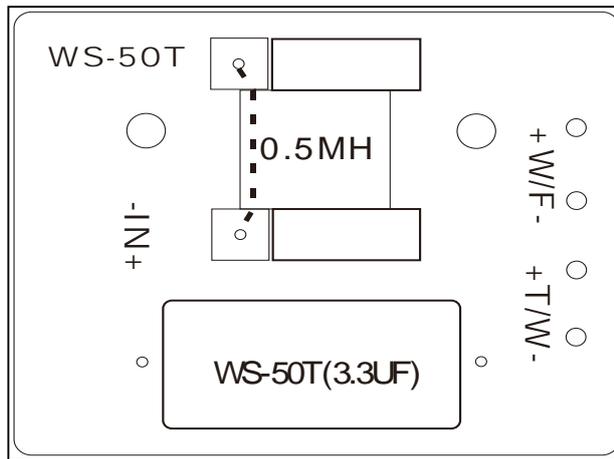
승 인

이흥희

PCB 사양

제정; 2019.05.13

실크면



기안 박향분

심사

승인 이흥희