REQUEST FOR PROPOSALS

BURKE COUNTY
Public Schools

Table Rock Middle School Auditorium Sound

RFP #1081

Date of Issue: 01/30/2026
Sealed Proposals Due: 03/06/2026 at 3:00pm

Issued for Burke County Public Schools Technology Department By:

Kristin Edwards, Technology Director
Burke County Public Schools
509 W. Concord St., Morganton, NC 28655

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828.438.2995

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SCHEDULE

Advertisement of RFP	February 3, 2026
Sealed Proposals Due	March 6th, 2026 at 3:00pm
Select Recommendation for Award	March 20, 2026
Board of Education Approval	March 30, 2026
Contract Execution and Project Kickoff	Negotiations complete prior to BOE meeting, Contract executed no later than April 13, 2026

Burke County Public Schools reserves the right, at its sole discretion, to adjust this schedule as it deems necessary.

OVERVIEW

Burke County Public Schools is seeking proposals from qualified vendors to upgrade and modernize the auditorium sound system in the Table Rock Middle School Auditorium located at 1585 Highway 126, Morganton, NC 28655. The facility hosts school band and choral concerts, awards ceremonies, and whole school events. Our goal is to enhance the sound system quality, ensure ease of use for staff, and improve and modernize the existing audio system.

Table Rock Middle School opened in the fall of 1992. All audio system components are from the original build with the exception of a sound panel and wireless microphone system that was installed in 2023. The auditorium features fixed seating for over 700.

Burke County Public Schools is searching for a vendor to provide various upgrades in the Table Rock Middle School Auditorium meeting the standards outlined in the scope of work included in this document.

This RFP and related documents may be obtained on the Burke County Public Schools website at www.burke.k12.nc.us. Click on “Community”, scroll down to “TRMS RFP”. Burke County Schools encourages all qualified businesses, including DBE, Minority, and Women owned and operated businesses to respond to this RFP.

SCOPE OF SERVICES

Vendors should provide a comprehensive proposal that meets the specifications outlined in this document.

Installation services should include:

- Detailed timeline for installation.
- Minimal disruption to ongoing events.

Training:

- Provide training for staff on the new systems, with a focus on intuitive use.

Support and Maintenance:

- Include warranty and 12 months of support and maintenance as well as guaranteed response items for service calls.

SITE PHOTO

QUESTIONS

Only written questions will be considered and must be submitted via email to rfp2026@burke.k12.nc.us. Questions will be accepted throughout the advertisement period and answered as soon as reasonably possible. Note that complex questions submitted close to the due date or last minute may not be properly addressed. Submit questions as soon as possible to allow time for a thorough response. Questions and corresponding answers will be published on the county website as soon as possible.

Companies who intend to respond to this RFP may provide an email address for updates as a courtesy. However, proposers are ultimately responsible for monitoring the Burke County Public Schools website for updated Questions and Answers. A written record of all questions and answers will be provided via the district website.

Submission Instructions

Proposal should be presented in the general format specified below:

1. **Introduction**: Description of the professional qualifications of the company and staff proposed for the assessment services. Explain each staff members' role in the project. Include information about any applicable company professional registration or licenses in North Carolina.
2. **Work Plan**: A detailed description of equipment and services to be provided and schedule of estimated timeframes for installation and implementation.
3. **Fee Schedule**: Breakdown of potential fixed and/or variable costs to be incurred for equipment and services, with a total price for completion of this contract. All proposals should include all necessary brochures and/or specifications of proposed equipment. Provide as much detail as possible, as Burke County reserves the right to accept the proposal in full or in part. Multiple solutions/options may be provided.
4. **References**: A brief description of at least 3-5 projects that are similar in scope and size. For each project listed, please include the name of the entity and the name and contact information for personnel who would be familiar with the work performed. Preference is to list similar to North Carolina projects first.

5. **Contract**: This RFP will result in a contract for services provided to Burke County Public Schools. The awarded Proposer shall provide Burke County Public Schools with a sample contract which can be revised by the County's legal department as needed. The contract shall provide a termination clause in which the County reserves the right to terminate the contract immediately with cause or with ninety days prior written notice without cause.
6. **IRS W-9 Form**: Current (within the last 3 months) completed W-9 form which will be required to be set up as a vendor in our system.
7. **Insurance**: Copy of a certificate of insurance which identifies current levels of professional liability insurance.
8. **Proposal Form**: Complete and return Attachment 1 included here with submission.
9. **Certification Regarding Suspension and Debarment**: Complete and return Attachment 2 included here with submission.
10. **Non-Collusion Affidavit**: Complete and return Attachment 3 included here with submission.
11. If a proposal includes any proprietary information, such data or information must be specifically identified as such **on every page** on which it is found. Data or information so identified will remain confidential to the extent allowed by North Carolina law pursuant to GS 132-1.2 and will be used by Burke County Public School personnel solely for the purpose of evaluating proposals and conducting contract negotiations.
12. All prices quoted must be company for a period of 120 (one hundred twenty) days following the proposal deadline unless otherwise specified on the proposal.

Sealed proposals must be labeled RFP #1081 on the outside of the package. Proposals are due no later than March 6th, 2026 at 3:00pm and should be delivered to the following appropriate address:

Burke County Public Schools Technology Department
ATTN: Kristin Edwards, Technology Director
By Mail: 509 W. Concord St., Morganton, NC 28655
Electronic copy: rfp2026@burke.k12.nc.us

Proposals should be submitted bound, using standard paper, and sections should be appropriately labeled for easy reference. Proposers may submit proposals via email. If proposers submit a hard copy, it must be sealed and an electronic file must additionally be submitted. The hard copy submission must be received at the address above prior to the deadline for consideration. The electronic Proposal may be provided on a USB drive or emailed to rfp2026@burke.k12.nc.us. Any proposals received after the deadline will not be considered. Burke County Public Schools reserves the right to award in part or in full, as well as reserves the right to reject all proposals.

EVALUATION AND SELECTION

This contract will be awarded to the best overall proposal as permitted by NC 143-129.8 Purchase of Information Technology Goods and Services. Proposals will be evaluated by a committee composed of members of Burke County Public Schools Staff, and will in turn provide a recommendation to the Burke County Board of Education for award of this contract. Recommendations will be made based on the following criteria and weighted percentages:

Completeness, Quality, and Feasibility of Proposal Solution	25%
Relevant Experience and Qualifications	15%
Timeline for Completion	20%
Cost-effectiveness	25%
References - Prior experience and performance with Burke County Public Schools or similar	15%

References may be contacted along with other evaluations Burke County Public Schools feels necessary to accurately determine the criteria listed above. Burke County Public Schools reserves the right to interview companies who are being considered. In addition, Burke County Public Schools reserves the right to reject all submissions.

Burke County Public Schools reserves the right to reject any or all Proposals, to waive any non-material irregularities or informalities in any Proposal, to request additional clarification of Proposals, to be the sole judge of suitability of the services for its intended use and further, to award in part of in full, specifically reserves the right to make the award in the best interest of Burke County Public Schools.

RFP PROVISIONS

1. The Request for Proposals' Provision, Scope of Services and Terms and Conditions are integral parts of this RFP. The Proposer, by submitting a Proposal, agrees to comply with all provisions and conditions of this document.

2. Burke County Public Schools reserves the right to amend, at any time, any part of this RFP upon written notification to the Proposers; and to change any of the scheduled dates, including the Proposal due date. All changes will become part of this RFP and will be incorporated into the agreement entered between Burke County Public Schools and the Proposer.

3. Proposals should be prepared providing a straightforward description of the vendor's ability to meet the requirements of this RFP. Responses should be concise and understandable by a "non-technical" audience.

4. Burke County Public Schools is not liable for any costs or expenses incurred by the Proposers in the preparation of their Proposals or submissions related to this RFP.

5. All materials submitted with the Proposal become the property of Burke County Public Schools and may be returned only at the discretion of Burke County Public Schools Finance Director and Burke County Public Schools Purchasing Manager.

6. By submitting a Proposal, the Proposer represents that it has thoroughly examined and become familiar with the work required under this RFP and is capable of providing and performing quality work to achieve the objectives of Burke County Public Schools.

7. The Proposer accepts full responsibility for assuring the prompt and timely submission of the Proposal. Burke County Public Schools will make no allowances for late delivery of mail. The Proposal may be hand-delivered to the physical location specified in the **"SCHEDULE"** section.

8. If a Proposer requires to take exception to any part of the specifications of this RFP, please include a letter stating any exceptions along with a thorough explanation. All exceptions will be taken into consideration when evaluating and scoring Proposals.

9. Burke County Public Schools reserves the right to reject any or all Proposals received or to negotiate separately with competing Proposers to this RFP and to award a contract based on services other than those set forth in this RFP. After reviewing the Proposals, Burke County Public Schools may elect to withdraw the RFP, make changes, waive technicalities, and issue a modified RFP in any part thereof deemed to be in the best interest of Burke County Public Schools.

10. No assignment of the resulting contract may take place without the express written permission from Burke County Public Schools. This includes assignment or sale of the Proposer to another institution.

11. The Proposer will assume responsibility for all services offered, whether provided by the Proposer or a subcontractor. The Proposer will identify any subcontractors in its Proposal by providing a list as an attachment to the RFP. Burke County Public Schools will consider the Proposer to be the sole point of contact for the contractual matters including payment of any and all charges resulting from the cost of any contract. Burke County Public Schools reserves the right to approve or reject any subcontractor prior to use. All references to Proposer requirements throughout this RFP include subcontractors. If at any time Burke County Public Schools determines that any subcontractor is incompetent or undesirable, Burke County Public Schools shall notify the successful company accordingly, and the successful company shall take immediate steps for cancellation of the subcontract and replacement. Nothing contained in any contract resulting from this RFP shall create any contractual relationship between any subcontractor and Burke County Public Schools.

12. All procurement documents and contracts will be subject to audit. The Proposer will give full and free access to all records and materials necessary to perform audit fieldwork,

including data stored on computer systems, for Burke County Public Schools and its authorized representatives. This provision applies to any subcontractor as well.

13. Any material submitted in response to this RFP will become a "public record" once the Proposer's document(s) is(are) opened and the Proposer is determined to be a participant in the solicitation process and shall be subject to public disclosure consistent with Chapter 132, North Carolina General Statutes. Proposals submitted under this section shall not be subject to public inspection until a contract is awarded N.C.G.S. 143-129.8(d).

14. Trade secrets or proprietary information submitted by a company in connection with a procurement transaction shall not be subject to the public disclosure under the North Carolina Public Records Act pursuant to NC General Statutes §66-152(3). However, the company must invoke the protection of this section prior to or upon submission of the data or other materials and must identify the data on other materials to be protected and state the reasons why protection is necessary. **Each individual page considered a trade secret or proprietary information must be labeled "Confidential" in the top right corner.** This right of privacy will be construed as narrowly as possible to protect the interests of the individual responding to the RFP while attempting to maximize the availability of information to the public.

15. All submissions should be valid for acceptance for at least 90 days from the date of submission. The "Board of Education Approval" date listed in the "SCHEDULE" above is the anticipated award date.

TERMS AND CONDITIONS

In addition to the RFP Provisions above, Burke County Public Schools require adherence to the North Carolina General Contract Terms & Conditions found attached to this document.

Other Terms & Conditions as they apply are:

1. **Indemnification:** Proposer agrees to defend, indemnify, and hold harmless the Burke County Public Schools for all loss, liability, claims, or expense (including reasonable attorney's fees) arising from bodily injury, including death or property damage, to any person or persons caused in whole or in part by the negligence or misconduct of the Proposer, except to the extent same are caused by the negligence or willful misconduct of the County. It is the intent of this section to require the Proposer to indemnify Burke County Public Schools to the extent permitted under North Carolina law.

2. **E-Verify**: By responding to this RFP, the Proposer agrees to comply with the requirements of Article 2 of Chapter 64 of the General Statutes, as applicable.

3. **Availability of Funds**: Any resulting contract shall be deemed in force only to the extent of appropriations available to each department for the purchase of such goods and/or services. Burke County Public Schools extended obligations on contracts that include funding through successive fiscal periods shall be contingent upon actual appropriations for the successive periods (additional years).
4. **Conflict of Interest**: All parties (including subconsultants) must maintain compliance with conflicts of interest guidelines that meet or exceed those required under 2C.F.R.§200.318(c)(1) for all projects funded in part or in whole with federal or State financial assistance (direct or reimbursed). In addition to the prohibition against self-benefiting from a public contract under N.C. G.S. 14-234, no officer, employee, elected official, governing body member, or agent of Burke County Public Schools may participate directly or indirectly in the selection, award, or administration of a contract supported by a federal or State award if he or she has a real or perceived conflict of interest. A real or perceived conflict exists when any of the following parties ha a financial or other interest in or receives a tangible personal benefit from award of contract: the officer, employee, elected official, governing body member, or agent involved in the selection, award or administration of a contact; as well as any member of his or her immediate family; his or her partner; or an organization which employs or is about to employ any of these parties. Any such conflict shall be disclosed in writing and

included with the Proposal. Contractors that are related to Burke County Public School personnel having any influence over the decisions to consider or award a contract are strictly prohibited from bidding/responding or accepting award of Burke County Public School Contracts. Accepting gifts and favors from vendors and contractors in prohibited under N.C. G.S. 133-32, additionally officers, employees, elected officials, governing body members, and agents of Burke County Public Schools are prohibited from accepting or soliciting gifts, gratuities, favors, or anything of monetary value from contractors, suppliers, or parties to subcontracts. Violating this policy will result in disciplinary action for the employee and termination of the contract and violating companies/persons may not be eligible for future contract awards.

ATTACHMENT 1

PROPOSAL FORM - Burke County Public Schools RFP# 1081

To Burke County Public Schools, North Carolina:

By submitting a response to this Request for Proposals, the responding company represents that it has read and understands the Scope of Work and has familiarized itself with all federal, state, and local laws, ordinances, rules, and regulation that in any manner may affect the cost, progress, or performance of the contract work.

I have carefully examined the Request for Proposals and any other documents, to include addenda, accompanying or make a part of this Request for Proposal to perform the necessary services.

I certify that all information contained in this Proposal is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this Proposal on behalf of (insert name of Company) _____ as its act and deed and that the above named organization is ready, willing, and able to perform if awarded the contract.

I hereby acknowledge receipt of any Addenda issued by Burke County Public Schools. It is the responsibility of the Proposer to ensure that all addenda have been received.

Addendum No. _____ dated _____

Addendum No. _____ dated _____

Addendum No. _____ dated _____

Company Name:	_____		
Address:	_____		
Email:	_____		
Phone:	_____	Fax:	_____
Signature:	_____	Date:	_____
Printed Name:	_____	Title:	_____

ATTACHMENT 2

CERTIFICATION REGARDING DEBARMENT AND SUSPENSION

The undersigned applicant certifies to the best of his or her knowledge and belief, that the applicant and its principals:

A. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal Department or agency;

B. have not within a 3-year period preceding this Proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under public transaction; violation of Federal or STate antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

C. are not presently indicted or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (B.) of this certification; and

D. have not within a 3-year period preceding this application/Proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Company Name: _____

Address: _____

Email: _____

Phone: _____ Fax: _____

Signature: _____ Date: _____

Printed Name: _____ Title: _____

ATTACHMENT 3

NON-COLLUSION AFFIDAVIT

The company submitting a Proposal, under penalty of perjury under the laws of the United States, certifies that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract.

By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any collusion has been offered, or accepted, or promised by any employees of your organization.

Company Name: _____

BIDDER / RESPONDING REPRESENTATIVE:

Printed Name: _____

Title: _____

Signature: _____ Date: _____

NORTH CAROLINA GENERAL CONTRACT TERMS AND CONDITIONS

1. **GOVERNING LAW:** This contract is made under and shall be governed and construed in accordance with the laws of the State of North Carolina.

2. **SITUS:** The place of this contract, its situs and forum, shall be North Carolina, where all matters, whether sounding in contract or tort, relating to its validity, construction, interpretation and enforcement shall be determined

3. **INDEPENDENT CONTRACTOR:** The Contractor shall be considered to be an independent contractor and as such shall be wholly responsible for the work to be performed and for the supervision of its employees. The Contractor represents that it has, or will secure at its own expense, all personnel required in performing the services under this agreement. Such employees shall not be employees of, or have any individual contractual relationship with the Agency.

4. **KEY PERSONNEL:** The Contractor shall not substitute key personnel assigned to the performance of this contract without prior written approval by the Agency's Contract Administrator. The individuals designated as key personnel for purposes of this contract are those specified in the Contractor's proposal.

5. **SUBCONTRACTING:** Work proposed to be performed under this contract by the Contractor or its employees shall not be subcontracted without prior written approval of the Agency's Contract Administrator. Acceptance of an offeror's proposal shall include any subcontractor(s) specified therein.

6. **PERFORMANCE AND DEFAULT:** If, through any cause, the Contractor shall fail to fulfill in timely and proper manner the obligations under this agreement, the Agency shall thereupon have the right to terminate this contract by giving written notice to the Contractor and specifying the effective date thereof. In that event, all finished or unfinished deliverable items under this contract prepared by the Contractor shall, at the option of the Agency, become its property, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such materials. Notwithstanding, the Contractor shall not be relieved of liability to the Agency for damages sustained by the Agency by virtue of any breach of this agreement, and the Agency may withhold any payment due the Contractor for the purpose of setoff until such time as the exact amount of damages due the Agency from such breach can be determined.

   In case of default by the Contractor, the State may procure the services from other sources and hold the Contractor responsible for any excess cost occasioned thereby. The State reserves the right to require a performance bond or other acceptable alternative performance guarantees from successful offeror without expense to the State.

   In addition, in the event of default by the Contractor under this contract, the State may immediately cease doing business with the Contractor, immediately terminate for cause all existing contracts the State has with the Contractor, and de-bar the Contractor from doing future business with the State

   Upon the Contractor filing a petition for bankruptcy or the entering of a judgment of bankruptcy by or against the Contractor, the State may Immediately terminate, for cause, this contract and all other existing contracts the Contractor has with the State, and de-bar the Contractor from doing future business

   Neither party shall be deemed to be in default of its obligations hereunder if and so long as it is prevented from performing such obligations by any act of war, hostile foreign action, nuclear explosion, riot, strikes, civil insurrection, earthquake, hurricane, tornado, or other catastrophic natural event or act of God.

7. **TERMINATION:** The Agency may terminate this agreement at any time by 30 *days* notice in writing from the Agency to the Contractor. In that event, all finished or unfinished deliverable items prepared by the Contractor under this contract shall, at the option of the Agency, become its property. If the contract is terminated by the Agency as provided herein, the Contractor shall be paid for services satisfactorily completed, less payment or compensation previously made.

8. **PAYMENT TERMS:** Payment terms are Net not later than 30 days after receipt of correct invoice(s) or acceptance of services, whichever is later, or in accordance with any special payment schedule identified in this RFP. The using agency is responsible for all payments to the contractor under the contract. Payment by some agencies may be made by procurement card and it shall be accepted by the contractor for payment if the contractor accepts that card (Visa, Mastercard, etc.) from other customers. If payment is made by procurement card, then payment may be processed immediately by the contractor.

9. **AVAILABILITY OF FUNDS:** Any and all payments to the Contractor are dependent upon and subject to the availability of funds to the Agency for the purpose set forth in this agreement.

10. **CONFIDENTIALITY:** Any information, data, instruments, documents, studies or reports given to or prepared or assembled by the Contractor under this agreement shall be kept as confidential and not divulged or made available to any individual or organization without the prior written approval of the Agency.

11. **CARE OF PROPERTY:** The Contractor agrees that it shall be responsible for the proper custody and care of any property furnished it for use in connection with the performance of this contract or purchased by it for this contract and will reimburse the State for loss of damage of such property

12. **COPYRIGHT:** No deliverable items produced in whole or in part under this agreement shall be the subject of an application for copyright by or on behalf of the Contractor.

13. **ACCESS TO PERSONS AND RECORDS:** The State Auditor and the using agency's internal auditors shall have access to persons and records as a result of all contracts or grants entered into by State agencies or political subdivisions in accordance with General Statute 147-64.7 and Session Law 2010-194, Section 21 (i.e., the State Auditors and internal auditors may audit the records of the contractor during the term of the contract to verify accounts and data affecting fees or performance).

14. **ASSIGNMENT:** No assignment of the Contractor's obligations nor the Contractor's right to receive payment hereunder shall be permitted. However, upon written request approved by the issuing purchasing authority, the State may:
    a. Forward the contractor's payment check(s) directly to any person or entity designated by the Contractor, or
    b. Include any person or entity designated by Contractor as a joint payee on the Contractor's payment check(s).

    In no event shall such approval and action obligate the State to anyone other than the Contractor and the Contractor shall remain responsible for fulfillment of all contract obligations.

15. **COMPLIANCE WITH LAWS:** The Contractor shall comply with all laws, ordinances, codes, rules, regulations, and licensing requirements that are applicable to the conduct of its business, including those of federal, state, and local agencies having jurisdiction and/or authority.

16. **AFFIRMATIVE ACTION:** The Contractor shall take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of people with disabilities, and concerning the treatment of all employees without regard to discrimination by reason of race, color, religion, sex, national origin, or disability.

17. **INSURANCE:** During the term of the contract, the contractor at its sole cost and expense shall provide commercial insurance of such type and with such terms and limits as may be reasonably associated with the contract. As a minimum, the contractor shall provide and maintain the following coverage and limits:

    a. Worker's Compensation - The contractor shall provide and maintain Worker's Compensation Insurance, as required by the laws of North Carolina, as well as employer's liability coverage with minimum limits of $150,000.00, covering all of Contractor's employees who are engaged in any work under the contract. If any work is subcontracted, the contractor shall require the subcontractor to provide the same coverage for any of its employees engaged in any work under the contract.

    b. Commercial General Liability - General Liability Coverage on a Comprehensive Broad Form on an occurrence basis in the minimum amount of $500,000.00 Combined Single Limit. (Defense cost shall be in excess of the limit of liability.

    c. Automobile - Automobile Liability Insurance, to include liability coverage, covering all owned, hired and non-owned vehicles, used in connection with the contract. The minimum combined single limit shall be $150,000.00 bodily injury and property damage; $150,000.00 uninsured/under insured motorist; and $1,000.00 medical payment.

    Providing and maintaining adequate insurance coverage is a material obligation of the contractor and is of the essence of this contract. All such insurance shall meet all laws of the State of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized by the Commissioner of Insurance to do business in North Carolina. The contractor shall at all times comply with the terms of such insurance policies, and all requirements of the insurer under any such insurance policies, except as they may conflict with existing North Carolina laws or this contract. The limits of coverage under each insurance policy maintained by the contractor shall not be interpreted as limiting the contractor's liability and obligations under the contract.

18. **ADVERTISING:** The offeror shall not use the award of a contract as part of any news release or commercial advertising.

19. **ENTIRE AGREEMENT:** This contract and any documents incorporated specifically by reference represent the entire agreement between the parties and supersede all prior oral or written statements or agreements. This Request for Proposals, any addenda thereto, and the offeror's proposal are incorporated herein by reference as though set forth verbatim.

    All promises, requirements, terms, conditions, provisions, representations, guarantees, and warranties contained herein shall survive the contract expiration or termination date unless specifically provided otherwise herein, or unless superseded by applicable Federal or State statutes of limitation.

20. **AMENDMENTS:** This contract may be amended only by written amendments duly executed by the Agency and the Contractor. The NC Division of Purchase and Contract shall give prior approval to any amendment to a contract awarded through that office.

21. **TAXES:** G.S. 143-59.1 bars the Secretary of Administration from entering into contracts with vendors if the vendor or its affiliates meet one of the conditions of G. S. 105-164.8(b) and refuse to collect use tax on sales of tangible personal property to purchasers in North Carolina. Conditions under G. S. 105-164.8(b) include: (1) Maintenance of a retail establishment or office, (2) Presence of representatives in the State that solicit sales or transact business on behalf of the vendor and (3) Systematic exploitation of the market by media-assisted, media-facilitated, or media-solicited means. By execution of the proposal document the vendor certifies that it and all of its affiliates, (if it has affiliates), collect(s) the appropriate taxes.

22. **YEAR 2000 COMPLIANCE/WARRANTY:** Vendor shall ensure the product(s) and service(s) furnished pursuant to this agreement ("product" shall include, without limitation, any piece of equipment, hardware, firmware, middleware, custom or commercial software, or internal components, subroutines, and interfaces therein) which perform any date and/or time data recognition function, calculation, or sequencing, will support a four digit year format, and will provide accurate date/time data and leap year calculations on and after December 31, 1999, at the same level of functionality for which originally acquired without additional cost to the user. This warranty shall survive termination or expiration of the agreement.

23. **GENERAL INDEMNITY:** The contractor shall hold and save the State, its officers, agents, and employees, harmless from liability of any kind, including all claims and losses accruing or resulting to any other person, firm, or corporation furnishing or supplying work, services, materials, or supplies in connection with the performance of this contract, and from any and all claims and losses accruing or resulting to any person, firm, or corporation that may be injured or damaged by the contractor in the performance of this contract and that are attributable to the negligence or intentionally tortious acts of the contractor provided that the contractor is notified in writing within 30 days that the State has knowledge of such claims. The contractor represents and warrants that it shall make no claim of any kind or nature against the State's agents who are involved in the delivery or processing of contractor goods to the State. The representation and warranty in the preceding sentence shall survive the termination or expiration of this contract.

24. **OUTSOURCING:** Any vendor or subcontractor providing call or contact center services to the State of North Carolina shall disclose to inbound callers the location from which the call or contact center services are being provided.

    If, after award of a contract, the contractor wishes to outsource any portion of the work to a location outside the United States, prior written approval must be obtained from the State agency responsible for the contract.

    Vendor must give notice to the using agency of any relocation of the vendor, employees of the vendor, subcontractors of the vendor, or other persons performing services under a state contract outside of the United States.

25. **By EXECUTIVE ORDER 24,** issued by Governor Perdue, and N.C. G.S.§ 133-32, it is unlawful for any vendor or contractor (i.e. architect, bidder, contractor, construction manager, design professional, engineer, landlord, offeror, seller, subcontractor, supplier, or vendor), to make gifts or to give favors to any State employee of the Governor's Cabinet Agencies (i.e., Administration, Commerce, Correction, Crime Control and Public Safety, Cultural Resources, Environment and Natural Resources, Health and Human Services, Juvenile Justice and Delinquency Prevention, Revenue, Transportation, and the Office of the Governor). This prohibition covers those vendors and contractors who:
    (1) have a contract with a governmental agency; or
    (2) have performed under such a contract within the past year; or
    (3) anticipate bidding on such a contract in the future.

    For additional information regarding the specific requirements and exemptions, vendors and contractors are encouraged to review Executive Order 24 and G.S. Sec. 133-32.

    Executive Order 24 also encouraged and invited other State Agencies to implement the requirements and prohibitions of the Executive Order to their agencies. Vendors and contractors should contact other State Agencies to determine if those agencies have adopted Executive Order 24."

LIABILITY – Any damage to the school buildings, grounds, or equipment caused by the negligence of contractor, his servants, or employees, or any independent subcontractor engaged by his contractor shall be the liability of the contractor. **The successful bidder shall furnish to the School Board proof of Workman's Compensation Coverage on all employees of the contractor and proof of "Products Liability" insurance must be furnished.**

LUNSFORD ACT. The Vendor acknowledges that N.C. General Statute 14-208.18 prohibits anyone required to register as a sex offender under Article 27A of Chapter 14 of the General Statutes from knowingly being on the premises of any school. This prohibition applies to persons required to register under Article 27A who have committed any offense in Article 7A of Chapter 14 or any offense where the victim of the offense was under the age of 16 years at the time of the offense.

CRIMINAL BACKGROUND CHECKS. The Vendor shall conduct criminal background checks on each of its employees who, pursuant to this Agreement, engage in any services on Burke County Public Schools' property or at Burke County Public Schools' events. The Vendor shall provide documentation that criminal background checks were conducted on each of its employees prior to hiring, and shall refuse employment to any person convicted of a felony or any other crime, whether misdemeanor or felony, that indicates the person poses a threat to the physical safety of students, school personnel or others. Such check shall include an annual check of the State Sex Offender and Public Protection Registration Program, the State Sexually Violent Predator Registration Program, and the National Sex Offender Registry. Vendor shall not assign any employee or agent to provide services pursuant to this contract if (1) said worker appears on any of the listed registries; (2) said worker has been convicted of a felony; (3) said worker has been convicted of any crime, whether misdemeanor or felony, involving sex, violence, or drugs; or (4) said worker has engaged in any crime or conduct indicating that the worker may pose a threat to the safety or well-being of student or school personnel. Burke County Public Schools reserves the right to prohibit any individual employee of Vendor from providing services on Burke County Public Schools property or at Burke County Public Schools' events if Burke County Public Schools determines, in its sole discretion, that such employee poses a threat to the safety or well-being of students, school personnel or others.

Basis of Design – Auditorium Sound System Upgrades
Table Rock Middle School
Burke County Schools

This document establishes the Basis of Design (BOD) for the proposed auditorium sound system upgrades at Table Rock Middle School for Burke County Schools. It is intended to define system performance goals, functional requirements, equipment standards, and commissioning expectations to guide bidding, installation, and acceptance of the completed system.

1. Project Overview

The proposed upgrades include replacement of the main loudspeaker system and power amplifiers, addition of a digital signal processing (DSP) platform, modifications to existing stage boxes, and improvements to wireless microphone performance through a remote antenna distribution system. Existing core equipment and wiring will be reused where appropriate and verified for proper operation.

2. Scope of Work

- Furnish and install new main speakers, subwoofer (optional), power amplifiers, and DSP processor.
- Modify existing stage boxes to support new loudspeaker and monitor connections.
- Reuse existing wiring and XLR connectors where applicable.
- Install CD player with Bluetooth in the existing sound booth equipment rack.
- Install Bluetooth receiver in the auditorium near the stage for PA mode use.
- Install new 12 AWG, 2-conductor loudspeaker cable in two of the three stage boxes.
- Install new panel-mount Speakon connectors in stage boxes.
- Install a remote antenna distribution system to improve performance of existing wireless microphones.
- Integrate assistive listening system for ADA compliance (owner option).
- Commission, test, and train staff on the completed system.

3. Design Standards and Performance Criteria

The system shall be designed and commissioned in accordance with current professional audio industry standards. Commissioning shall include acoustic measurement and electronic equalization of the system using a calibrated sound analyzer. The system shall achieve uniform sound distribution throughout the seating area with a target variance of ±3 dB SPL.

Commissioning shall also include:
- Resetting the existing Behringer X32 digital mixer to factory default settings and perform a complete new setup of the mixer to match the new system configuration.
- Establishing proper gain structure throughout the signal chain.

- Configuration of DSP processing, amplifiers, and loudspeakers.
- Verification of all inputs, outputs, and system modes.
- Delivery of a fully operational system ready for immediate use.

4. System Operating Modes

The system shall be configured to allow operation by guest users or staff without full system training and without access to the main sound booth. This functionality shall be achieved through DSP programming and preset control. NOTE: The system will power up with the last active preset that was selected. The staff will need to select the appropriate preset needed each time the system is powered on.

PA Mode (DSP Preset 1):
- System powered on from sound booth only.
- Four inputs active: (2) wireless microphones, Stage Aux 1 input, and Bluetooth input.
- Inputs wired in parallel to both mixer and DSP.
- WR-5 remote wall controller provides independent volume control of the four inputs.
- Minimum and maximum limits set within DSP to protect system.
- Mixer, monitor speakers, and remining inputs/devices disabled other than the four listed inputs.
- Audio routed to main speakers and assistive listening system.

Performance Mode (DSP Preset 2):
- Full system operation using the Behringer X32 digital mixer.
- System controlled exclusively from the sound booth.
- WR-5 remote controller disabled.
- All system features and routing enabled for performances and events.

5. Assistive Listening and ADA Considerations

The Americans with Disabilities Act (ADA) requires that public facilities provide equal access to services, including assistive listening systems for individuals with hearing loss. ADA Accessibility Guidelines, developed by the United States Access Board, define minimum requirements for such systems.

Based on an ADA assistive listening calculator and a seating capacity of 822, the facility is required to provide:
- 30 Assistive Listening Receivers with earbuds
- 8 Neckloop devices

The owner shall determine whether to include or exclude the assistive listening system as part of this upgrade. It is recommended that, at a minimum, the system include a transmitter and at least four (4) receivers with the ability to expand to meet full ADA requirements. The Bill of Materials includes a recommended basic system configuration.

6. Warranty

The installation contractor shall provide a minimum one (1) year warranty covering both parts and labor for all newly installed equipment and workmanship.

7. Training

Training shall be provided for district staff and designated users. Training shall consist of up to two (2) separate sessions, with a combined total duration not to exceed eight (8) hours. Training shall include system operation, basic troubleshooting, and an overview of PA Mode and Performance Mode functionality.

8. Reuse of Existing Equipment and Wiring – Disclaimer

Existing wiring, connectors, and equipment are intended to be reused where applicable. The contractor shall test and verify the integrity, functionality, and suitability of all reused components prior to final commissioning. Any deficiencies identified shall be reported to the owner.

Reuse of existing materials may limit system performance beyond the control of the installer. The contractor shall not be responsible for failures related to existing equipment or wiring beyond reasonable testing and verification.

9. Drawings and Installation Details

Refer to the provided project drawings, riser diagrams, and system line diagrams for detailed installation requirements, signal flow, and equipment locations. These documents form an integral part of the Basis of Design.

10. Equipment Basis of Design

All new equipment shall be the models listed below or approved equivalents of equal or better type and performance.

Main Cabinet Accessories

- Lowell ACR-159 Power Strip (Qty 3)
- Lowell SEP-1 1U Blank Panel (Qty 7 – Optional)
- Lowell SEP-2 2U Blank Panel (Qty 9 – Optional)
- RF Venue DISTRO04 Antenna Distribution System (Qty 1)
- Shure UA8-470-530 ½-Wave Omnidirectional Antenna (Qty 2)
- Shure UA-507 Rackmount Kit (Qty 2)

Power Amplifiers

- LEA CS702 2-Channel Amplifier (Qty 1 – Optional for Subwoofer)
- LEA CS704 4-Channel Amplifier (Qty 1)

System Processing

- Ashly NE24.24M 12x8 DSP Processor (Qty 1)
- Ashly WR-5 Analog Remote (Qty 1)

Main Speakers and Subwoofer

- Community IP6-1122/96 Main Speakers (Qty 2)
- Community IUB1122B-U Brackets (Qty 2)
- Community IS6-218 Dual 18” Subwoofer (Qty 1 – Optional)

Bluetooth and Aux Input

- Tascam CD-400U CD/ Bluetooth Player
- RDL BT1A Bluetooth Receiver
- RDL TX-TPR2A Type-A Twisted Pair Receiver
- RDL PS-24AS 24V Power Supply
- RDL RC-HPS1 Power Supply Chassis
- RDL D-CIJ3D RCA/3.5mm Stereo Audio Input Décor Wall Plate
- RDL D-XLR3F Single XLR Décor Wall Plate

Assistive Listening System

- Williams Sound FM558 Pro System with 4 Receivers
- (Optional) Additional Receivers - model PPA R38N
- (Optional) Additional earphones – model Ear 022
- (Optional) Additional Neckloops – model NKL 001

Choir Mics and Stage Connections

- Audio-Technica ES933WC Hanging Choir Mics (Qty 6)
- Neutrik NL4MPRXX Panel Mount Speakon Connectors (Qty 4)
- Rapco H14-30LN2 Speaker Cables (Qty 4)

Miscellaneous Materials

- 12-2 Non-Shielded Loudspeaker Cable
- 22-2 Shielded Cable for AV Inputs
- 18-4 Cable for WR-5 Remote
- Cat6 UTP Cable for Bluetooth
- Raceway, rigging, and wire management as required

Existing Equipment to be Reused

- Behringer X32 Digital Mixer
- Shure SLXD4D Wireless Microphone Systems (Qty 2)
- Monitor Speakers (Qty 4)
- Clear-Com Two-Way Communication System
- Existing wiring where applicable

1 Project Information

Project Title:	Table Rock Middle School - NC Sound of Goldsboro
Date:	Tuesday, December 30, 2025
Author:	JHerr
Company:	Mavric, Inc
Notes:	IP6-1122/26 with IS6-218 Sub
Temperature:	68.0°F
Pressure:	Standard (1010 hPa)
Humidity:	Standard (60%)
Mapping:	2500 Hz (3 Octaves) - A-Weighted

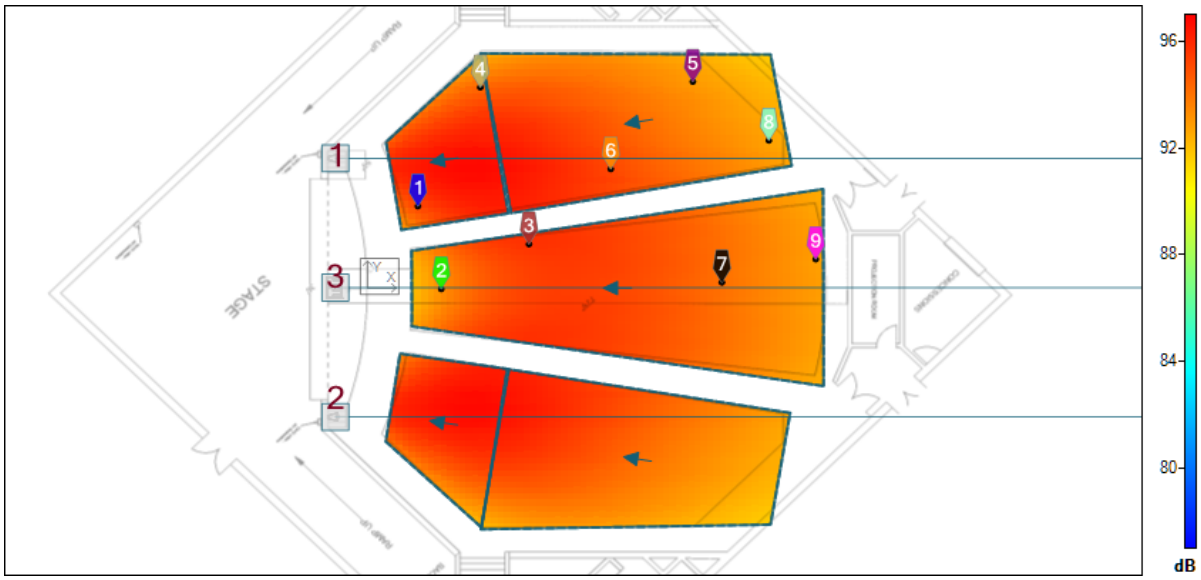


Figure 1: SPL mapping showing volume distribution at 2.5kHz (3 octaves A-weighted).

2 Sound Sources

	Label	Type	System	X [ft]	Y [ft]	Z [ft]	Hor [°]	Ver [°]	Rot [°]
1	IP6 SL	Loudspeaker	IP6-1122-96	-5.00	20.00	19.00	0.0	-4.0	0.0
2	IP6 SR	Loudspeaker	IP6-1122-96	-5.00	-20.00	19.00	0.0	-4.0	0.0
3	Sub	Loudspeaker	IS6-218	-5.00	0.00	19.00	0.0	0.0	90.0

3 Distribution

Average:	94.4 dB ±1.2
Average - Std. Dev.:	93.2 dB
Average + Std. Dev.:	95.6 dB

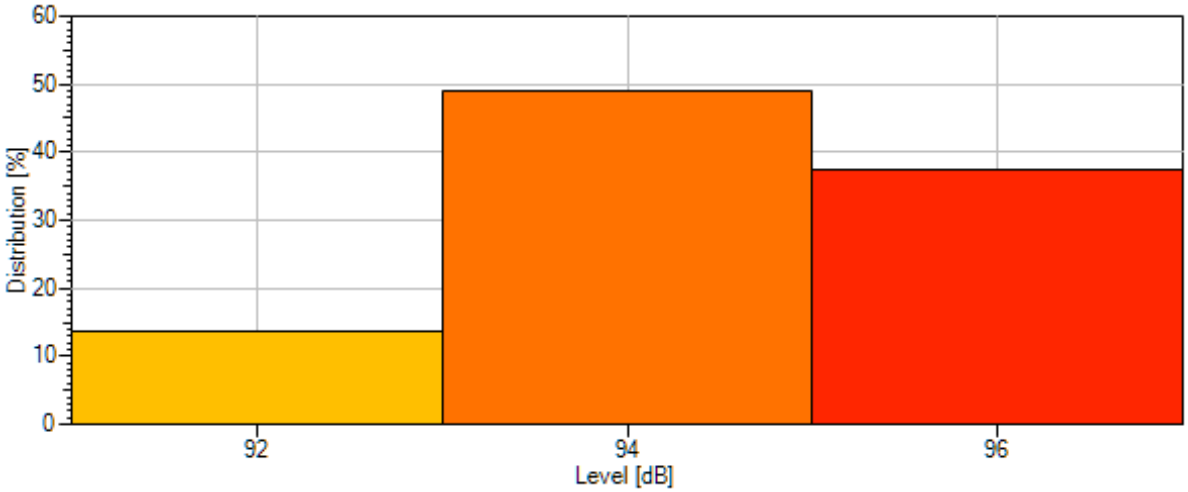
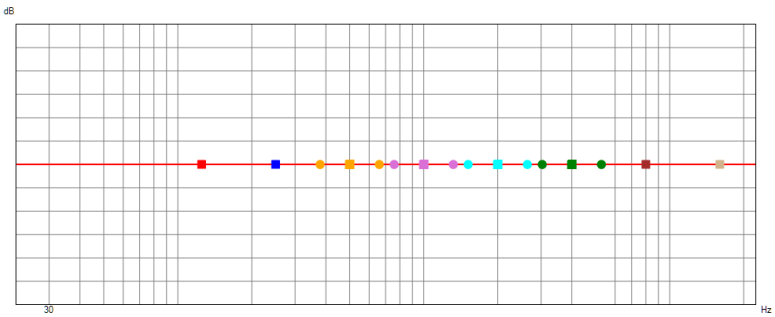


Figure 2: SPL distribution graph at 2.5kHz (3 octaves A-weighted).

4 Global Filter

Filter Status:	Active
Gain:	0.0 dB
Delay:	0.000 ms
Polarity:	Normal



	Filter Type	Frequency	Gain / Slope	Q Factor

No Active Filters

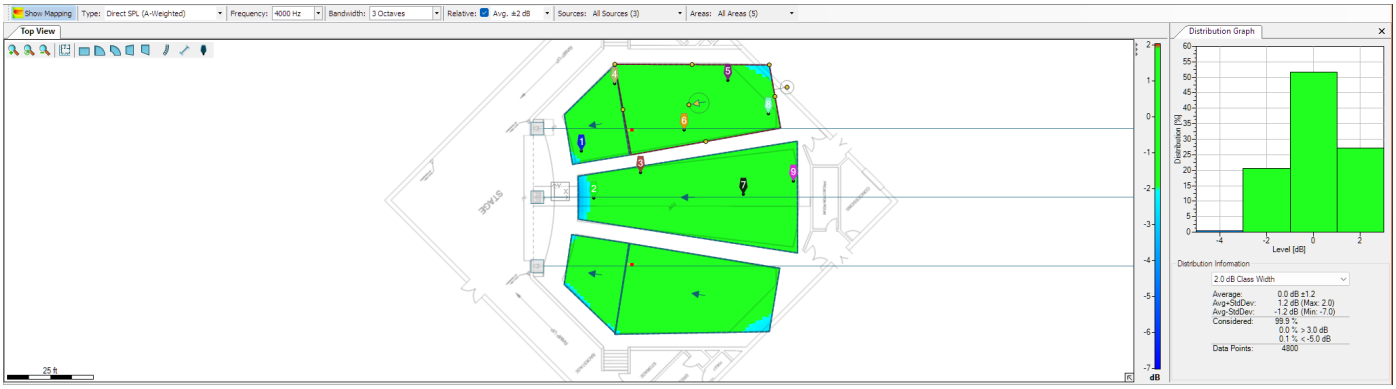


Figure 3: ±2dB relative mapping showing volume level distribution at 4kHz (3 octaves A-weighted).

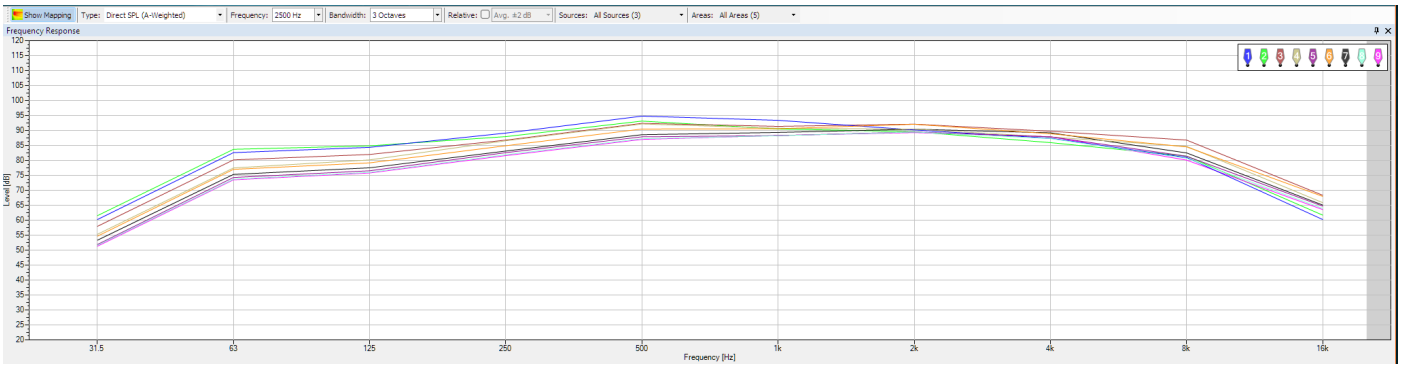


Figure 4: Frequency response at flagged listener positions. Direct SPL (A-Weighted).

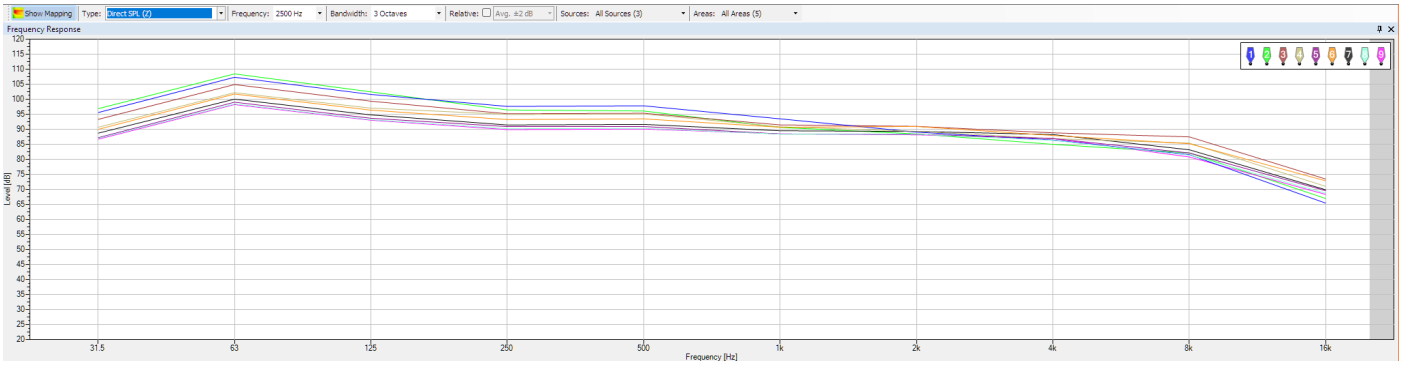


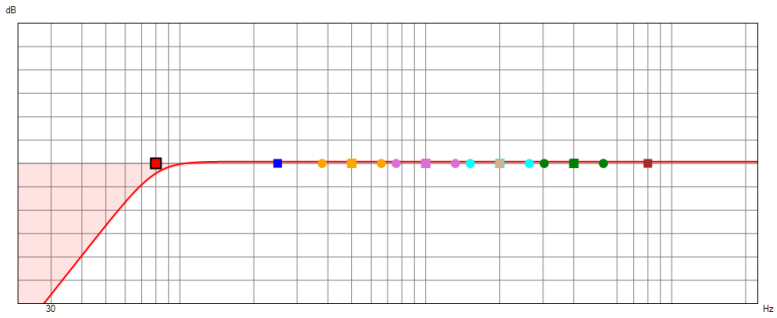
Figure 5: Frequency response at flagged listener positions. Direct SPL (Z).

5 Sound Source - IP6 SL

System:	IP6-1122-96
Company:	Community Professional Loudspeakers
Label:	IP6 SL
Position:	X=-5.00 ft Y=20.00 ft Z=19.00 ft
Orientation:	Ver=-4.0° Hor=0.0° Rot=0.0°

Box Type	Input Configuration	Input Types
IP6-1122-96	Biamp	LF: FilterDef1 HF: FilterDef1

Filter Status:	Active
Gain:	0.5 dB
Delay:	0.000 ms
Polarity:	Normal



	Filter Type	Frequency	Gain / Slope	Q Factor
Filter 1	High Pass	80 Hz	24.0 dB/Octave	1.00

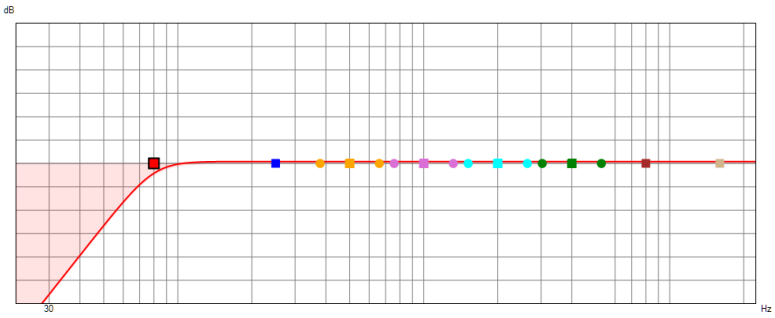
Status
No messages

6 Sound Source - IP6 SR

System:	IP6-1122-96
Company:	Community Professional Loudspeakers
Label:	IP6 SR
Position:	X=-5.00 ft Y=-20.00 ft Z=19.00 ft
Orientation:	Ver=-4.0° Hor=0.0° Rot=0.0°

Box Type	Input Configuration	Input Types
IP6-1122-96	Biamp	LF: FilterDef1 HF: FilterDef1

Filter Status:	Active
Gain:	0.5 dB
Delay:	0.000 ms
Polarity:	Normal



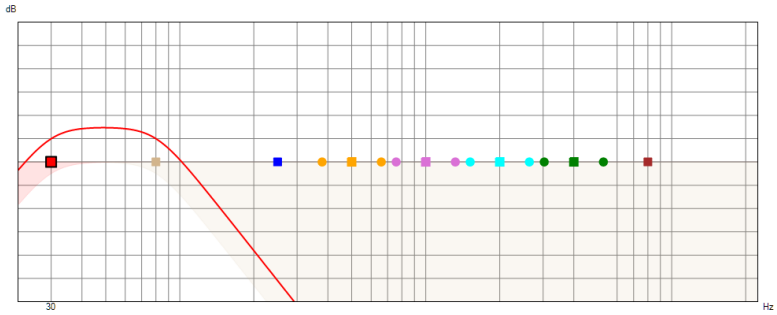
	Filter Type	Frequency	Gain / Slope	Q Factor
Filter 1	High Pass	80 Hz	24.0 dB/Octave	1.00

Status
No messages

7 Sound Source - Sub

System:	IS6-218
Company:	Community Professional Loudspeakers
Label:	Sub
Position:	X=-5.00 ft Y=0.00 ft Z=19.00 ft
Orientation:	Ver=0.0° Hor=0.0° Rot=90.0°

Filter Status:	Active
Gain:	9.0 dB
Delay:	0.000 ms
Polarity:	Normal



	Filter Type	Frequency	Gain / Slope	Q Factor
Filter 1	High Pass	30 Hz	24.0 dB/Octave	1.00
Filter 2	Low Pass	80 Hz	24.0 dB/Octave	1.00

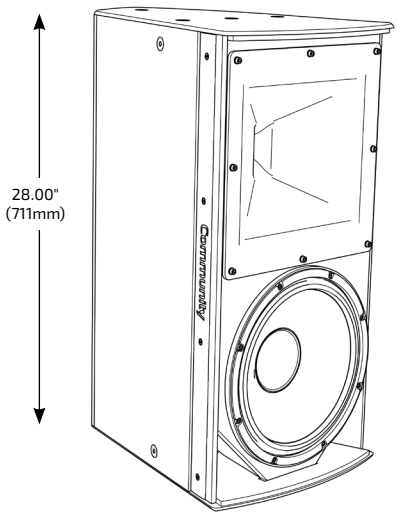
Status
No messages

I SERIES

Point Source 600

IP6-1122/96

MEDIUM POWER 12-INCH TWO-WAY
90° x 60° INSTALLATION LOUDSPEAKER



APPLICATIONS

MAIN PA *(Small to Medium Size Venues)*
Houses of Worship · Auditoriums · Restaurants
Meeting Rooms · Theaters · Corporate A/V Systems

DISTRIBUTED OR FILL *(Larger Size Venues)*
Arenas · Stadiums · Night Clubs · Theaters
Themed Entertainment · Larger Houses of Worship

DESCRIPTION

I SERIES Point Source 600 loudspeakers provide excellent acoustic performance, modular flexibility and elegant aesthetics for modern performance venues. Designed to support the goals of systems integrators and consultants both acoustically and mechanically, I SERIES includes a wide variety of arrayable, rotatable coverage patterns and a comprehensive selection of modular bracket systems that accelerate system design and system commissioning.

FEA-optimized ferrite motors, mechanically mirrored suspension and advanced cooling system combine to provide linear performance with minimal power compression. The custom long-excursion LF driver delivers deep bass response and a detailed midrange at maximum SPL levels. The HF driver delivers excellent sound quality from a hybrid diaphragm of deep drawn titanium and resonance-absorbing polyimide, coupled to a patented low compression, low resonance phase plug for very low distortion performance with abundant headroom.

The rotatable 13-inch (330mm) HF waveguide provides well-defined coverage and a smooth off-axis response that enhances arrayability. Individually voiced crossovers produce proper beamwidth matching transitions and identical sonic signatures, permitting horn patterns to be mixed throughout an installation. Additionally, user selectable single-amp or biamp operating modes expand application flexibility.

FEATURES

- Long excursion ferrite LF driver with FEA-optimized motor and symmetric movement suspension
- 3-inch voice coil, 1.4" exit HF driver; hybrid titanium/polyimide diaphragm on low compression phase plug
- Lightweight and compact with deep LF extension
- Large rotatable waveguide with individually voiced crossover, single amp / biamp selectable
- Innovative low profile modular bracket systems create elegant arrays with simplified installation

TECHNICAL SPECIFICATIONS[1]			
Operating Mode	Passive or Biamped with DSP		
Operating Environment	Indoor or Weather-Resistant Outdoor		
Operating Range[2]	37 Hz to 19 kHz		
Nominal Beamwidth (H x V)	90° x 60°, rotatable waveguide		
Transducers	LF 1 x 12" (305mm) ferrite driver, 2.5" (64mm) voice coil HF 1 x 1.4" (36mm) exit, 3" (76mm) voice coil, hybrid titanium/polyimide diaphragm, ferrite compression driver		
Continuous Power Handling[3] @ Nominal Impedance	Passive* LF HF	69V 63V 24V	600W @ 8 ohms (2400W peak) 500W @ 8 ohms (2000W peak) 75W @ 8 ohms (300W peak)
Nominal Sensitivity[4]	 Passive LF HF	@ 1W 94 dB 95 dB 105 dB	@ 2.83V 94 dB 95 dB 105 dB
Nominal Maximum SPL[5] (Whole Space)	 Passive LF HF	Peak 128 dB 128 dB 130 dB	Continuous 122 dB 122 dB 124 dB
Equalized Sensitivity[6]	System	@ 1W 93 dB	@ 2.83V 93 dB
Equalized Maximum SPL[7]	System	Peak 127 dB	Continuous 121 dB
Recommended Amplifiers	Passive LF HF	600W - 1200W @ 8 ohms, (69V - 98V) 500W - 1000W @ 8 ohms, (63V - 89V) 75W - 150W @ 8 ohms (24V - 35V)	
PHYSICAL			
Input Connection	Indoor: (2) Screw terminal blocks (6-position) Outdoor: Sealed Gland Nut with 12ft (3.6m) 14 Ga. SJOW cable		
Mounting Points	(15) M10 threaded rigging points		
Environmental	Outdoor: IP55W per IEC 60529 , MIL-STD-810G		
Weight	65.0 lbs (29.5 kg) loudspeaker only		
Dimensions H x W x D	28.00" x 14.50" x 17.70" (711 x 368 x 450 mm)		
Finish	Refer to the Technical Drawing		
OPTIONS			
Accessories *(Refer to BalancePoint™ Flyware Accessory Guide for complete listing)*	*Rigging kits include:* **BFR22:** BalancePoint™ Fly Rails; **IUB1122:** U-Bracket; **IVY1122:** Vertical Yoke; **IAF40/IAF55:** Isometric Array Frames; **VAB-BFR38:** Sub Above Vert Array; **HAB-BFR38:** Sub/Dual 2-Way Horiz Array; **HSB/VSB:** Multiple Splay Brackets for Horiz/Vert Arrays with/without Sub Behind options; **DFS:** Downfill Splay Kit; **DVS-BFR22:** Dual Vert Splay Kit with BalancePoint™ Fly Rails; **IUB1122WRG**: Reinforced 304SS U-Bracket (Grey)		
Configure-to-Order (CTO)	Custom color, Custom cable lengths on outdoor version		

**Rated continuous maximum input voltage at passive loudspeaker input may be higher than for directly connected transducers due to losses in the passive crossover. Voltages applied to the transducer terminals through the passive crossover shall always be the same or lower than the rated continuous voltage for each device.*

Biamp strives to improve its products on a continual basis. Specifications are therefore subject to change without notice.

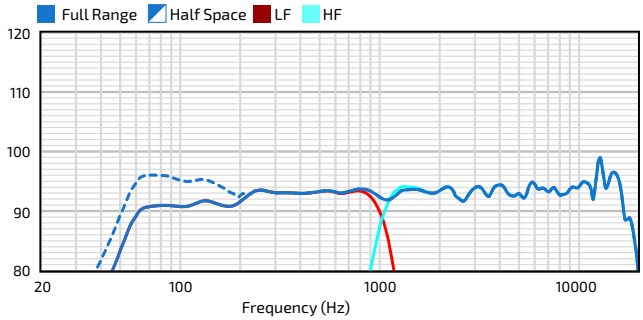
I SERIES Point Source 600

IP6-1122/96

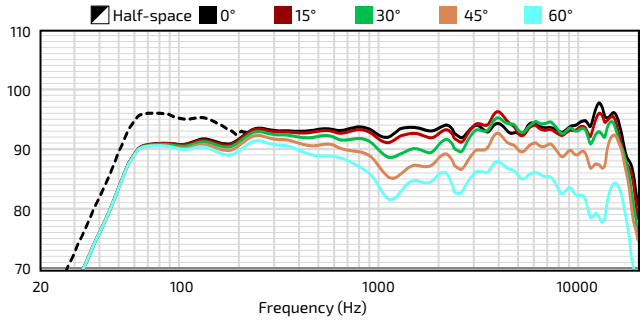
MEDIUM POWER 12-INCH TWO-WAY
90° x 60° INSTALLATION LOUDSPEAKER

Community®

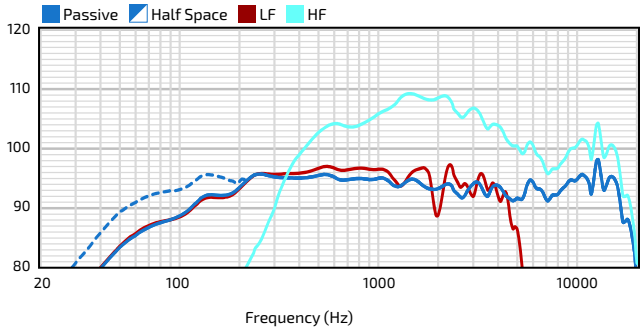
AXIAL PROCESSED RESPONSE (dB)[8]



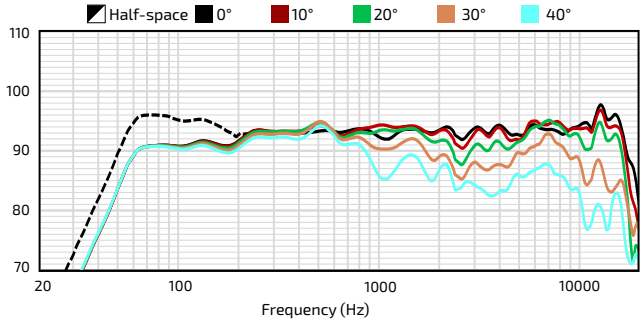
HORIZONTAL OFF-AXIS RESPONSE (dB)[10]



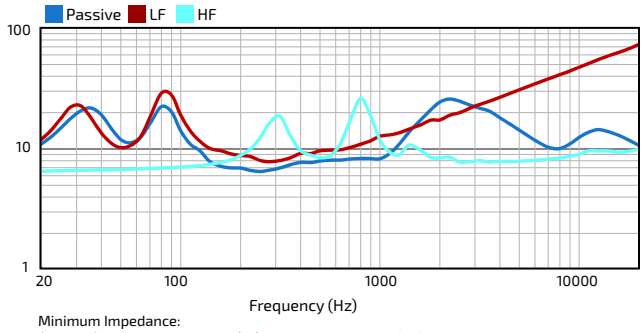
AXIAL SENSITIVITY (dB SPL)[9]



VERTICAL OFF-AXIS UP RESPONSE (dB)[10]

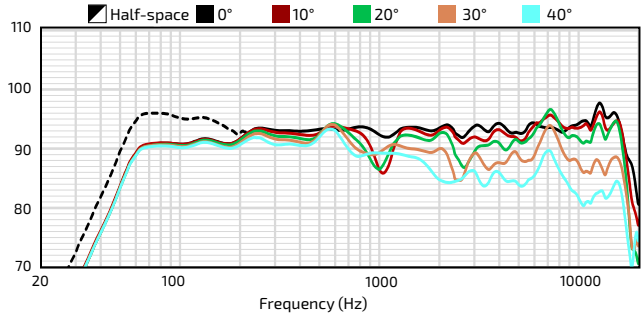


IMPEDANCE (Ohms)

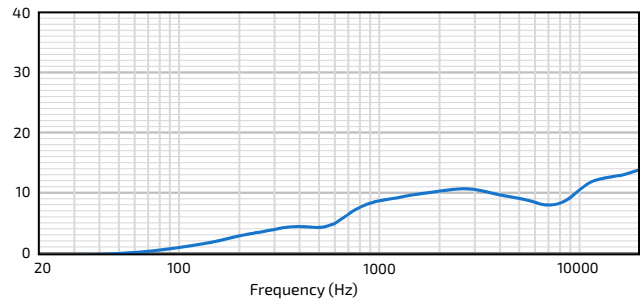


Minimum Impedance:
(Passive) 6.5 ohms @ 250 Hz, (LF) 7.8 ohms @ 280 Hz, (HF) 7.8 ohms @ 3550 Hz

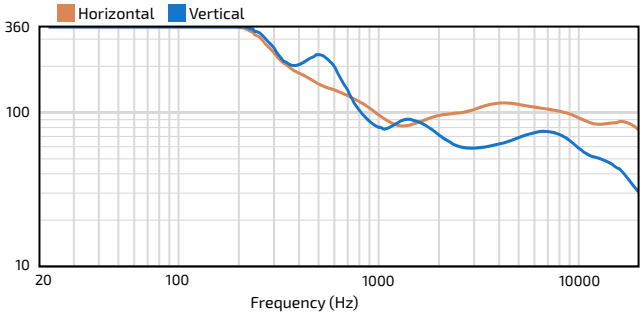
VERTICAL OFF-AXIS DOWN RESPONSE (dB)[10]



DIRECTIVITY INDEX (dB)[11]



BEAMWIDTH (Degrees)[12]



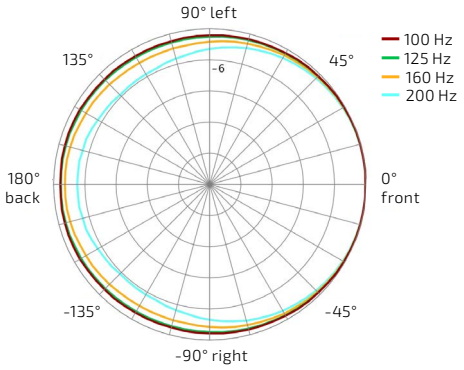
I SERIES Point Source 600

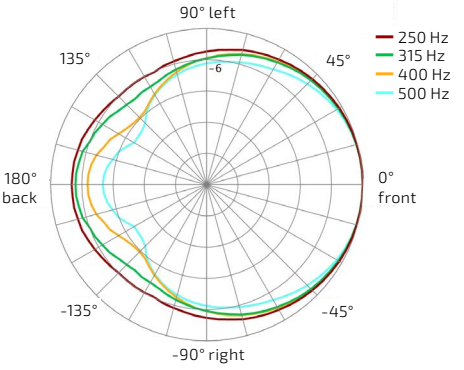
IP6-1122/96

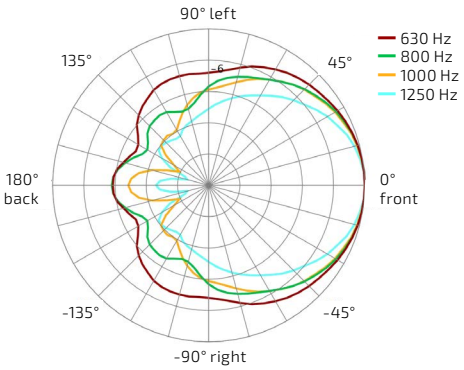
MEDIUM POWER 12-INCH TWO-WAY
90° x 60° INSTALLATION LOUDSPEAKER

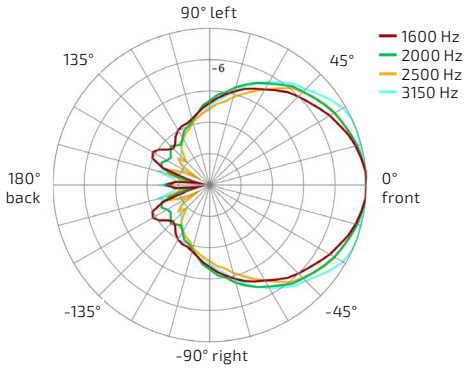
Community®

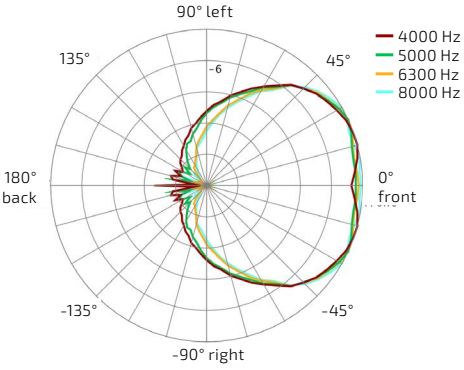
HORIZONTAL POLAR DATA *(30dB Scale, 6dB per major division)*

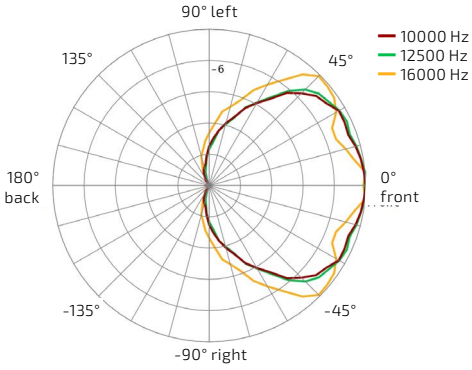




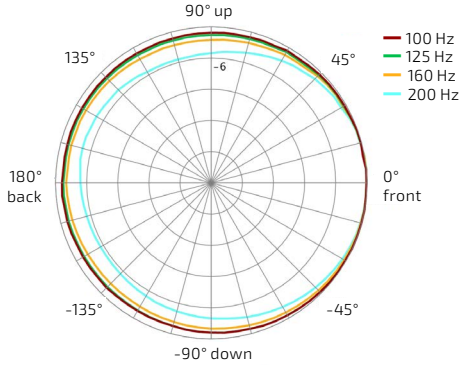


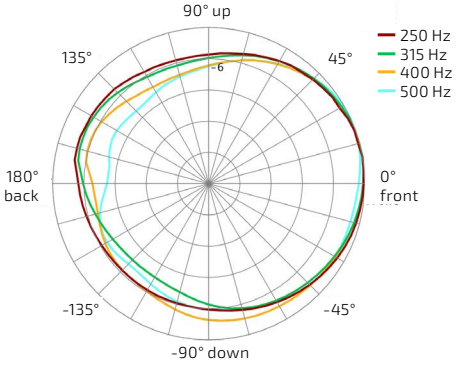


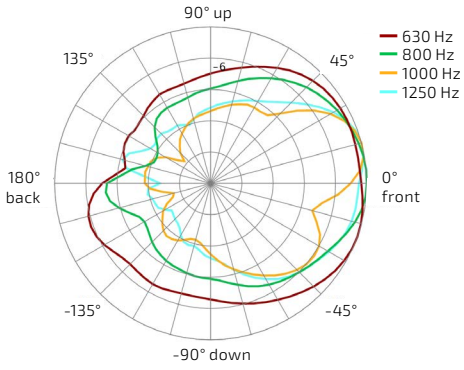


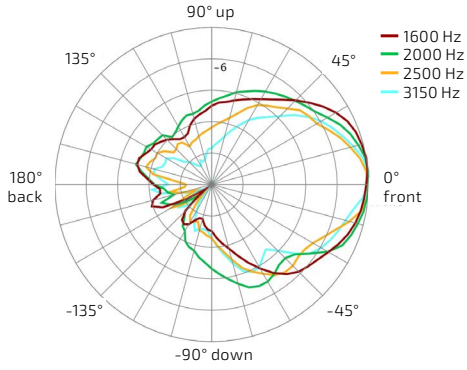


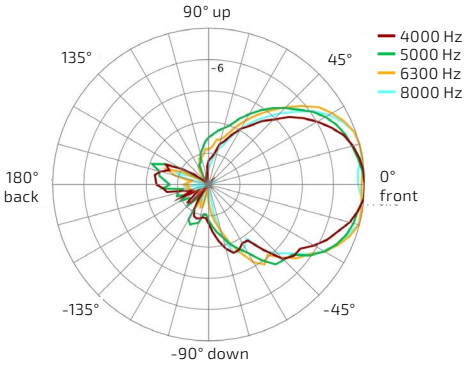
VERTICAL POLAR DATA *(30dB Scale, 6dB per major division)*

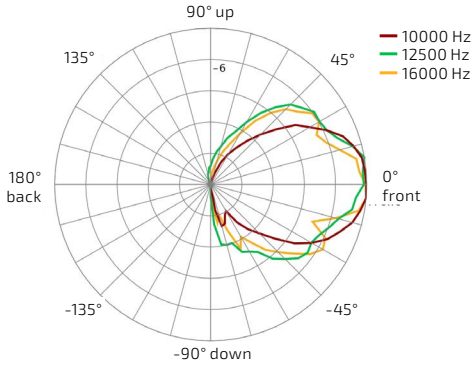












I SERIES Point Source 600

IP6-1122/96

MEDIUM POWER 12-INCH TWO-WAY
90° x 60° INSTALLATION LOUDSPEAKER

Community®

TECHNICAL DRAWING / DIMENSIONS / FINISH

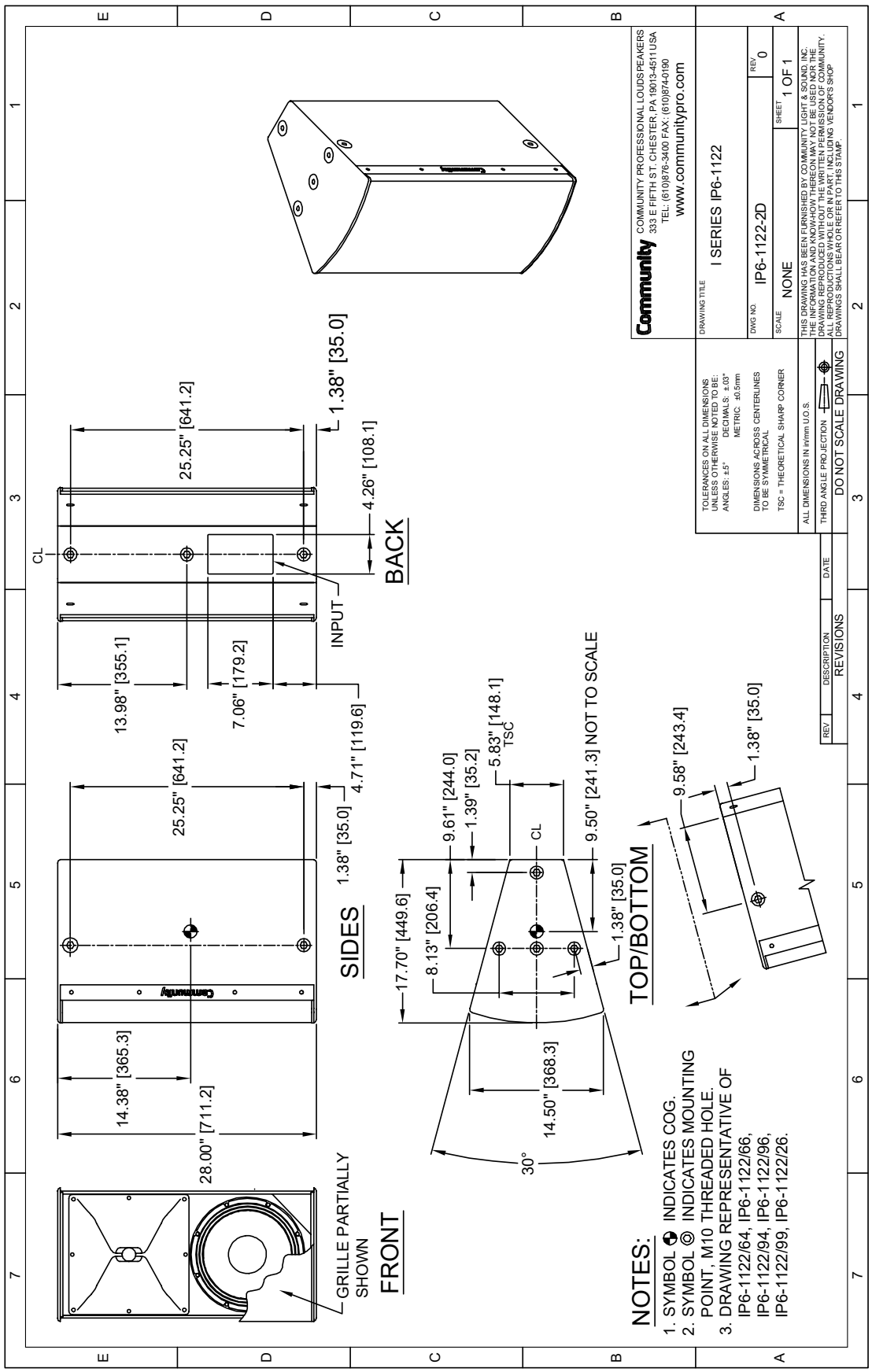
H x W x D
28.00" x 14.50" x 17.70"
(711 x 368 x 450 mm)

Unit Weight
65.0 lbs (29.5 kg) loudspeaker only

Shipping Weight
74 lbs (33.6 kg)

Indoor Models:
Grille: Powder-coated perforated steel backed with color-matched acoustically transparent woven fabric. Black (RAL#9005) or White (RAL#9003)
Enclosure / Finish: Black (RAL#9004) or White (RAL#9003) low gloss, uniformly textured painted 15mm Baltic Birch plywood.

***Outdoor Models:**
Grille: Marine grade aluminum with zinc-rich dual-layer powder-coat, featuring NeverWet™ treated acoustically transparent woven black fabric backing. Grey (RAL#7047)
Enclosure / Finish: 15mm PolyGlas™, Grey, heavily textured industrial-grade exterior-rated coating. Black, White or Custom colors upon request.



***Note:** The outdoor model drawing is available at biamp.com - Input panel and mounting point locations and the unit weight may vary from indoor model (shown).

Community®

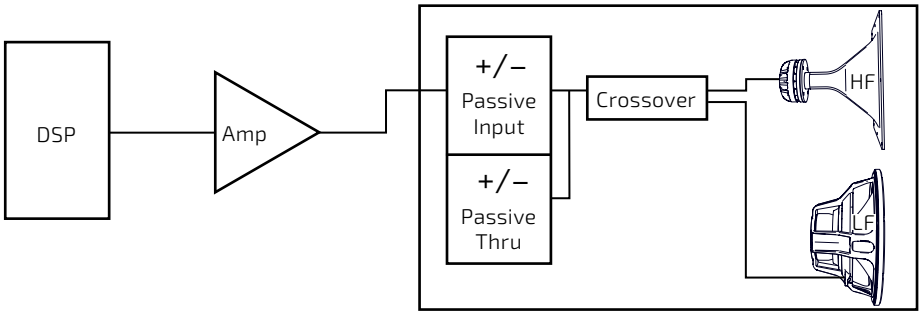
I SERIES

Point Source 600

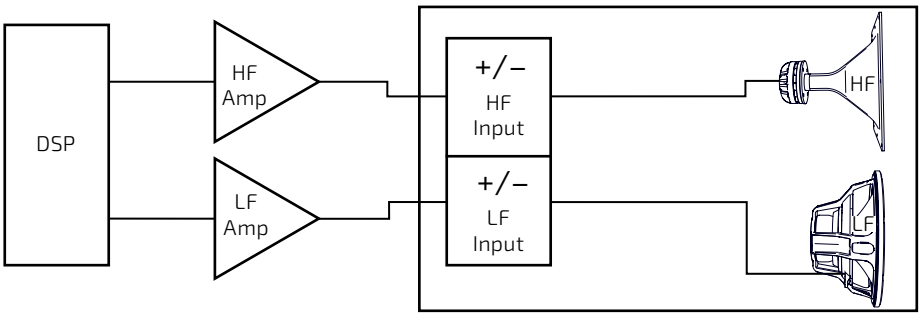
IP6-1122/96

MEDIUM POWER 12-INCH TWO-WAY
90° x 60° INSTALLATION LOUDSPEAKER

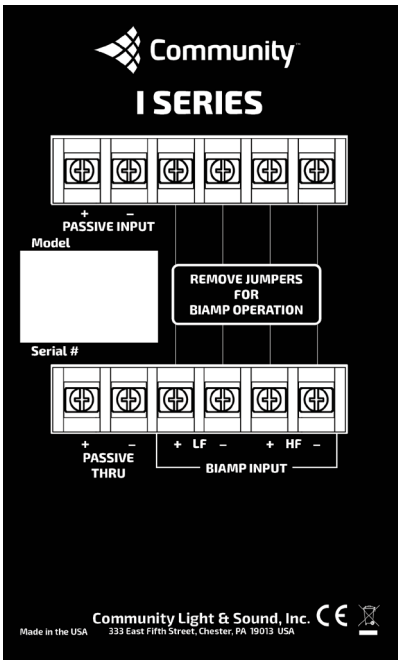
CONNECTION DIAGRAMS



Two-way single amp



Two-way biamp



Two-way input panel

NOTES

1. *PERFORMANCE SPECIFICATIONS All measurements are taken indoor using a time-windowed and processed signal to eliminate room effects, approximating an anechoic environment, a distance of 6.0 m. All acoustic specifications are rounded to the nearest whole number. An external DSP with settings provided by Community Professional Loudspeakers is required to achieve the specified performance; further performance gains can be realized using Community's dSPEC226 loudspeaker processor with FIR power response optimization.*

2. *OPERATING RANGE The frequency range in which the on-axis processed response remains within 10dB of the average SPL.*

3. *CONTINUOUS POWER HANDLING Maximum continuous input voltage (and the equivalent power rating, in watts, at the stated nominal impedance) that the system can withstand, without damage, for a period of 2 hours using an EIA-426-B defined spectrum; with recommended signal processing and protection filters.*

4. *NOMINAL SENSITIVITY Averaged SPL over the operating range with an input voltage that would produce 1 Watt at the nominal impedance and the averaged SPL over the operating range with a fixed input voltage of 2.83V, respectively; swept sine wave axial measurements with no external processing applied in whole space, except where indicated.*

5. *NOMINAL MAXIMUM SPL Calculated based on nominal / peak power handling, respectively, and nominal sensitivity; exclusive of power compression.*

6. *EQUALIZED SENSITIVITY The respective SPL levels produced when an EIA-426-B signal is applied to the equalized loudspeaker system at a level which produces a total power of 1 Watt , in sum, to the loudspeaker subsections and also at a level which produces a total voltage, in sum, of 2.83V to the loudspeaker subsections, respectively; each referenced to a distance of 1 meter.*

7. *EQUALIZED MAXIMUM SPL The SPL produced when an EIA-426-B signal is applied to the equalized loudspeaker system, at a level which drives at least one subsection to its rated continuous input voltage limit, referenced to a distance of 1 meter. The peak SPL represents the 2:1 (6dB) crest factor of the EIA-426-B test signal.*

8. *AXIAL PROCESSED RESPONSE The on-axis variation in acoustic output level with frequency of the complete loudspeaker system with recommended signal processing applied. 1/6 octave Gaussian smoothing applied.*

9. *AXIAL SENSITIVITY The on-axis variation in acoustic output level with frequency for a 1 Watt swept sine wave, referenced to 1 meter with no signal processing. 1/6 octave Gaussian smoothing applied.*

10. *HORIZONTAL / VERTICAL OFF-AXIS RESPONSES The loudspeaker's magnitude response at various angles off-axis, with recommended signal processing applied in the operating mode which utilizes the largest number of individually amplified pass bands. 1/6 octave Gaussian smoothing applied.*

11. *DIRECTIVITY INDEX The ratio of the on-axis SPL squared to the mean squared SPL at the same distance for all points within the measurement sphere for each given frequency; expressed in dB. 1/6 octave Gaussian smoothing applied.*

12. *BEAMWIDTH The angle between the -6dB points in the polar response of the loudspeaker when driven in the operating mode which utilizes the largest number of individually amplified pass bands. 1/6 octave Gaussian smoothing applied.*

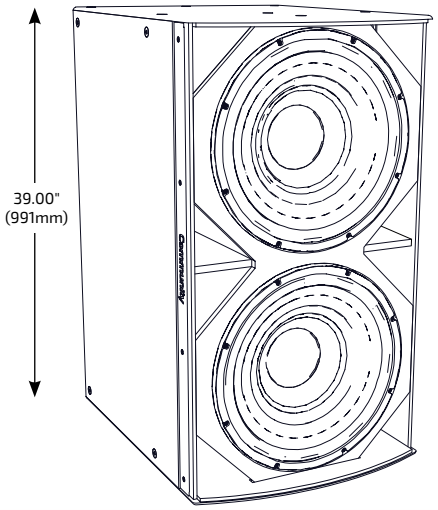
Data presented on this spec sheet represents a selection of the basic performance specifications for the model. These specifications are intended to allow the user to perform a fair, straightforward evaluation and comparison with other loudspeaker spec sheets. For a detailed analysis of this loudspeaker's performance, please download the GLL file and/or the CLF file from our website: biamp.com.

CAUTION: Installation of loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting design.

I SERIES
Subwoofer 600

IS6-218

MEDIUM POWER DUAL 18-INCH SUBWOOFER



APPLICATIONS

SMALL TO MEDIUM SIZE VENUES
Houses of Worship · Auditoriums · Restaurants
Meeting Rooms · Theaters · Corporate A/V Systems

LARGER SIZE VENUES
Arenas · Stadiums · Night Clubs · Theaters
Themed Entertainment · Larger Houses of Worship

DESCRIPTION

I SERIES Subwoofer 600 loudspeakers provide exemplary acoustic performance, modular flexibility and elegant aesthetics for modern performance venues. Designed to support the goals of systems integrators and consultants both acoustically and mechanically, I SERIES Subwoofers provide a broad range of sizes and capabilities that can be specifically matched to the needs of any modern venue.

Each cabinet was carefully designed to provide matching heights, face widths and suspension point locations for seamless integration into flown arrays with I SERIES full-range models. The broad range of optional low profile fly rails, fly frames and modular array brackets reduces design and installation time while also providing improved aesthetics and nearly limitless integration possibilities.

The IS6-218 is a direct radiating subwoofer with large, balanced ports that provide optimal enclosure tuning and even air pressure distribution to the driver cones, reducing distortion and extending system longevity. Drivers are loaded into individual air volumes within the enclosure, isolating their performance from one another. This arrangement not only provides additional protection to drivers in case of failures, but also allows the designer to implement directional subwoofer techniques, like steered end-fire arrays and cardioid patterns, within a single enclosure when using any I SERIES dual driver subwoofer model.

FEATURES

- Long excursion ferrite LF drivers with FEA-optimized motors and symmetric movement suspension
- Matched-size enclosure and aligned suspension point for seamless flown array integration
- 1400W continuous power handling (5600W peak)
- High sensitivity design minimizes power compression losses and required amplifier size
- Isolated driver air volumes allow use of directional steering techniques within a single enclosure

TECHNICAL SPECIFICATIONS[1]			
Operating Mode	Single or Dual Amp		
Operating Environment	Indoor or Weather-Resistant Outdoor		
Operating Range[2]	32 Hz to 145 Hz		
Transducers	2 x 18" (457mm) double-treated cones with 4" (102mm) inner/outer wound voice coil, ferrite construction		
Continuous Power Handling[3] @ Nominal Impedance	Single Amp Dual Amp	75V 75V	1400W @ 4 ohms (5600W peak) 700W @ 8 ohms (2800W peak) (each)
Nominal Sensitivity[4]		@ 1W	@ 2.83V
	Half Space	107 dB	110 dB
	Whole Space	101 dB	104 dB
Nominal Maximum SPL[5]		Peak	Continuous
	Half Space	144 dB	138 dB
	Whole Space	138 dB	132 dB
Equalized Sensitivity[6]		@ 1W	@ 2.83V
	Half Space	102 dB	105 dB
	Whole Space	96 dB	99 dB
Equalized Maximum SPL[7]		Peak	Continuous
	Half Space	139 dB	133 dB
	Whole Space	133 dB	127 dB
Recommended Amplifiers	Single Amp Dual Amp	1400W - 2800W @ 4 ohms, (75V - 106V) 700W - 1400W @ 8 ohms, (75V - 106V) (each driver)	
PHYSICAL			
Input Connection	(2) 4 position screw terminal blocks		
Mounting Points	(24) M10 threaded rigging points Indoor; (23 in Outdoor model)		
Environmental	Outdoor: IP55W per IEC 60529 , MIL-STD-810G		
Weight	170 lbs (77.1 kg) subwoofer only		
Dimensions H x W x D	39.00" x 22.10" x 28.89 " (991 x 561 x 734 mm)		
Finish	Refer to the Technical Drawing		
OPTIONS			
Accessories *(Refer to BalancePoint™ Flyware Accessory Guide for complete listing)*	*Rigging kits include:* **BFR22:** BalancePoint™ Fly Rails; **IAF55:** Isometric Array Frame; **VAB-BFR38:** Sub Above Vert. Array; **HAB3:** Sub/Dual 2-Way Horiz. Array; **HVS3:** Multiple Horiz./Vert. Array Kits with Sub Behind Array Options; ; **IUB1153WRG**: Reinforced 304SS U-Bracket (WR models only)		
Configure-to-Order (CTO)	Custom color, Custom cable lengths on outdoor version		

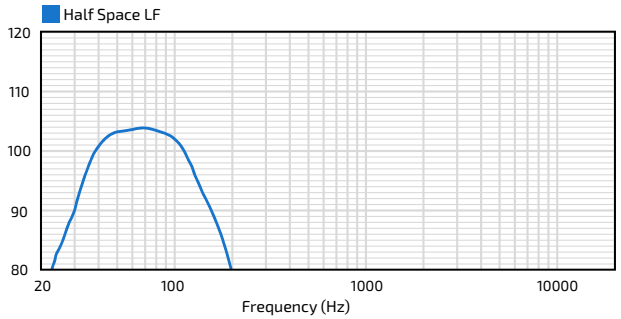
Biamp strives to improve its products on a continual basis. Specifications are therefore subject to change without notice.

I SERIES Subwoofer 600

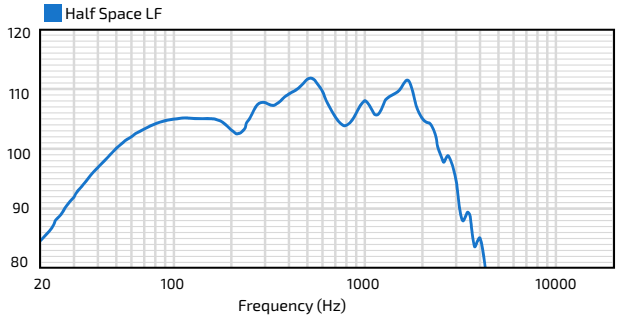
IS6-218 MEDIUM POWER DUAL 18-INCH SUBWOOFER

Community®

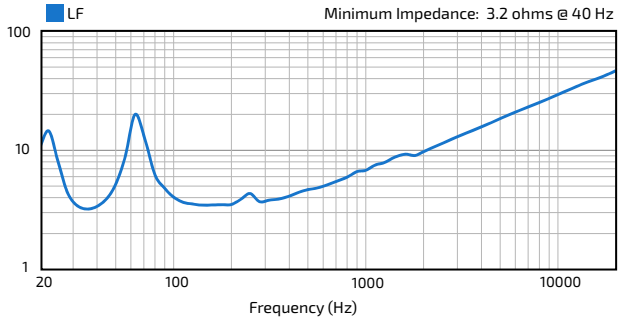
AXIAL PROCESSED RESPONSE (dB)[8]



AXIAL SENSITIVITY (dB SPL)[9]



IMPEDANCE (Ohms)



IS6-218 MEDIUM POWER DUAL 18-INCH SUBWOOFER

Community®

TECHNICAL DRAWING / DIMENSIONS / FINISH

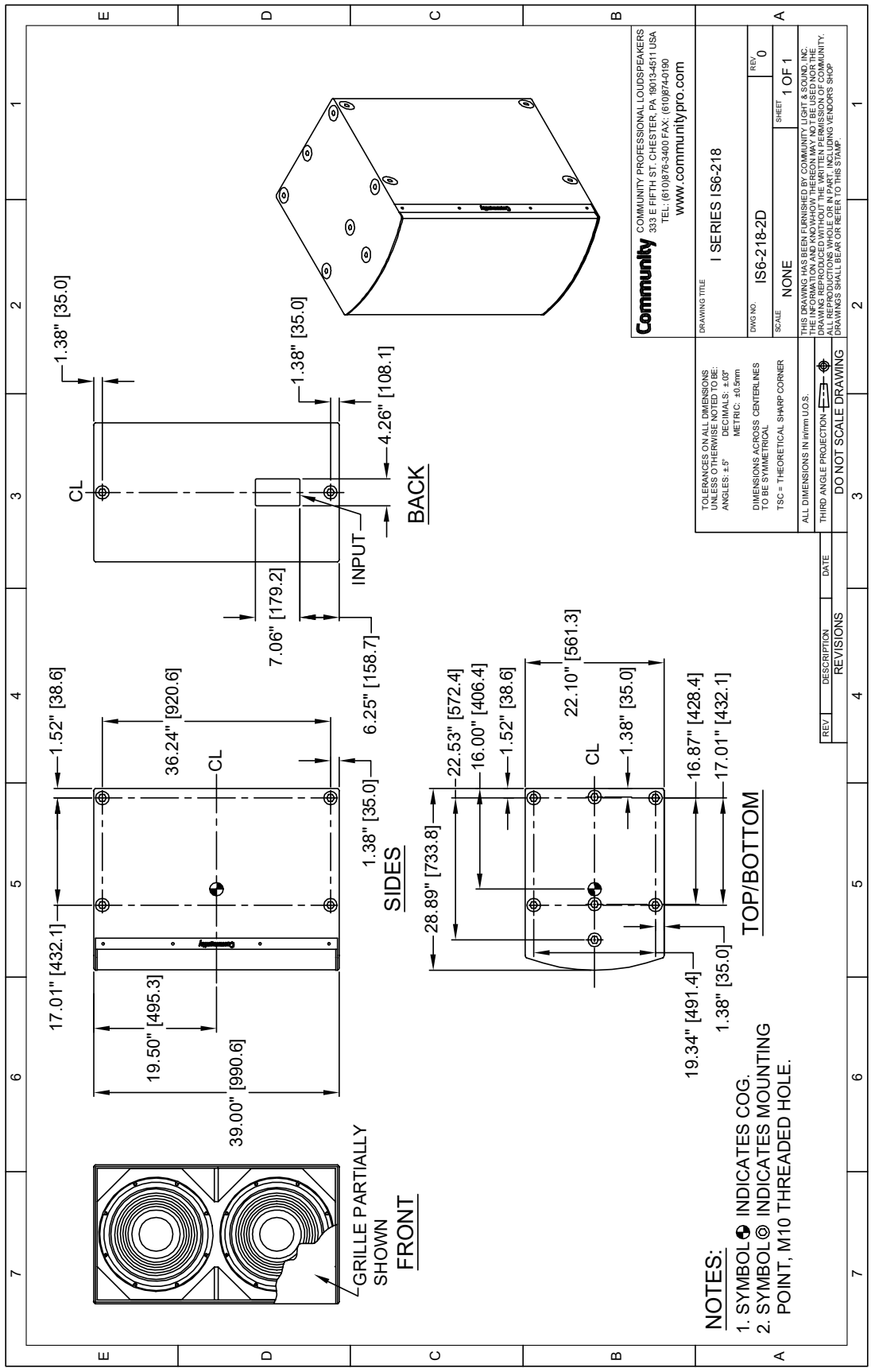
H x W x D
39.00" x 22.10" x 28.89 "
(991 x 561 x 734 mm)

Unit Weight
170 lbs (77.1 kg) loudspeaker only

Shipping Weight
190 lbs (86.2 kg)

Indoor Models:
Grille: Powder-coated perforated steel backed with color-matched acoustically transparent woven fabric. Black (RAL#9005) or White (RAL#9003)
Enclosure / Finish: Black (RAL#9004) or White (RAL#9003) low gloss, uniformly textured painted 15mm Baltic Birch plywood.

***Outdoor Models:**
Grille: Marine grade aluminum with zinc-rich dual-layer powder-coat, featuring NeverWet™ treated acoustically transparent woven black fabric backing. Grey (RAL#7047)
Enclosure / Finish: 15mm PolyGlas, Grey, heavily textured industrial-grade exterior-rated coating. Black, White or Custom colors upon request.



***Note:** The outdoor model drawing is available at biamp.com - Input panel and mounting point locations, and the unit weight will vary from indoor model (shown).

Community®

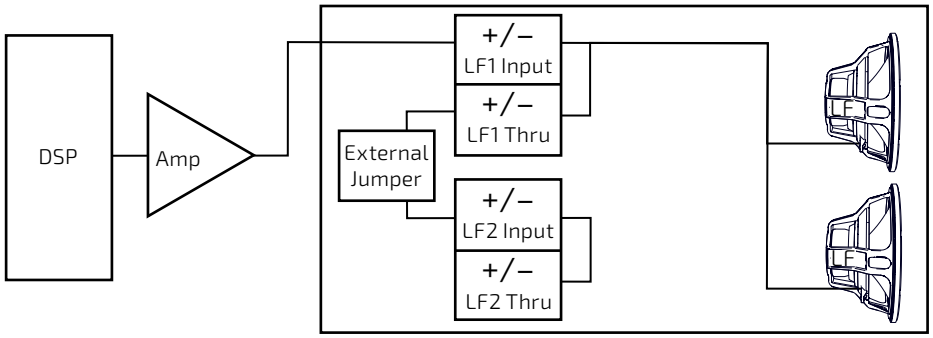
I SERIES

Subwoofer 600

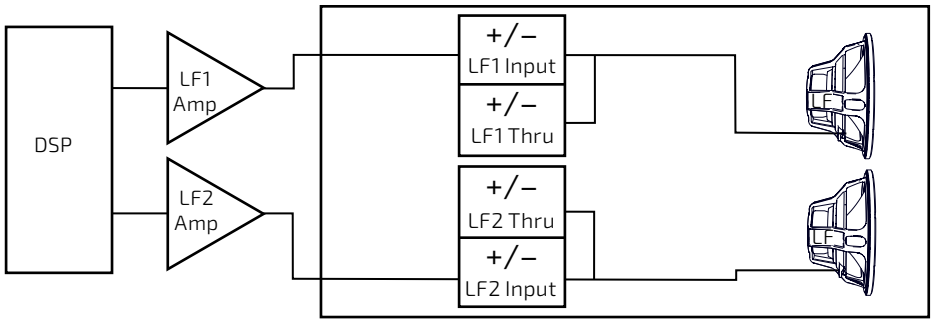
IS6-218

MEDIUM POWER DUAL 18-INCH SUBWOOFER

CONNECTION DIAGRAMS

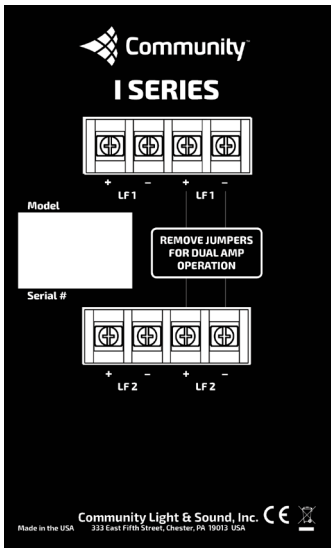


Single amp



Dual amp

INPUT PANEL



NOTES

1. *PERFORMANCE SPECIFICATIONS All measurements are taken indoor using a time-windowed and processed to eliminate room effects, approximating an anechoic environment, a distance of 6.0 m. All acoustic specifications are rounded to the nearest whole number. An external DSP with settings provided by Community Professional Loudspeakers is required to achieve the specified performance; further performance gains can be realized using Community's dSPEC226 loudspeaker processor with FIR power response optimization.*
2. *OPERATING RANGE The frequency range in which the axial processed response remains within 10dB of the average SPL.*
3. *CONTINUOUS POWER HANDLING Maximum continuous input voltage (and the equivalent power rating, in watts, at the stated nominal impedance) that the system can withstand, without damage, for a period of 2 hours using an EIA-426-B defined spectrum; with recommended signal processing and protection filters.*
4. *NOMINAL SENSITIVITY Averaged SPL over the operating range with an input voltage that would produce 1 Watt at the nominal impedance and the averaged SPL over the operating range with an input voltage of 2.83 Volts, respectively; swept sine wave axial measurements with no external processing applied in whole space, except where indicated.*
5. *NOMINAL MAXIMUM SPL Calculated based on nominal / peak power handling, respectively, and nominal sensitivity; exclusive of power compression.*
6. *EQUALIZED SENSITIVITY The respective SPL levels produced when an EIA-426-B signal is applied to an equalized loudspeaker system at a level which produces a total power of 1 Watt , in sum, to the loudspeaker subsections and at a level which produces a total voltage, in sum, of 2.83 volts to the loudspeaker subsections, respectively; each referenced to a distance of 1 meter.*
7. *EQUALIZED MAXIMUM SPL The SPL produced when an EIA-426-B signal is applied to an equalized loudspeaker system, at a level which drives at least one subsection to its rated continuous input voltage limit, referenced to a distance of 1 meter. The peak SPL represents the 2:1 (6dB) crest factor of the EIA-426-B test signal.*
8. *AXIAL PROCESSED RESPONSE The axial magnitude response of the complete loudspeaker system and each pass band capable of being driven by an independent amplification channel with recommended signal processing applied. 1/6 octave smoothing applied.*
9. *AXIAL SENSITIVITY The SPL plotted against frequency, in all operating modes and for each pass band capable of being driven by an independent amplification channel, for a 1 Watt swept sine wave, referenced to 1 meter with no signal processing. 1/6 octave smoothing applied.*

Data presented on this spec sheet represents a selection of the basic performance specifications for the model. These specifications are intended to allow the user to perform a fair, straightforward evaluation and comparison with other loudspeaker spec sheets. For a detailed analysis of this loudspeaker's performance, please download the GLL file and/or the CLF file from our website: biamp.com.

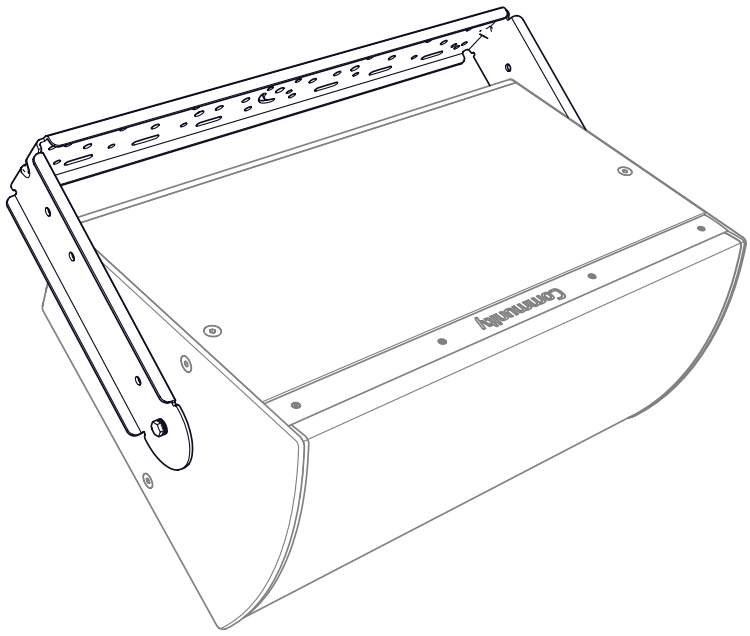
CAUTION: Installation of loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting design.

I SERIES

BalancePoint™ Flyware

For Point Source and
Subwoofer loudspeakers
models IP8, IP6, IS8, and IS6

IUB1122
IUB1152
IUB1153



U-Brackets for IP6/8-1122, IP6/8-1152, IP8-1153

The BalancePoint™ Flyware Accessory Guide (a complete set of instructions for all of the BalancePoint™ Flyware Kits) is available on the Community website.

Community Professional Loudspeakers
333 East Fifth Street, Chester, PA 19013-4511 USA
Phone (610) 876-3400 • Fax (610) 874-0190
communitypro.com • info@communitypro.com

CAUTION: Installation of loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting design.

IMPORTANT SAFETY INSTRUCTIONS

Always follow these basic safety precautions when using or installing I SERIES loudspeakers and accessories:

- Read these instructions prior to assembly.
- Keep these instructions for reference.
- Heed all warnings.
- Follow all instructions, particularly those pertaining to rigging, mounting, hanging and electrical connections.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instruction.
- Do not install near any heat sources such as radiators, heat registers, stoves,light fixtures, or other apparatus (including amplifiers) that produce heat.
- Only use attachments and accessories that are specified and approved by the manufacturer.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as 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.

The terms CAUTION, WARNING, and DANGER may be used in this manual to alert the reader to important safety considerations. If you have any questions or do not understand the meaning of these terms, do not proceed with installation. Contact your local dealer, distributor, or call Community directly for assistance. These terms are defined as:

CAUTION: describes an operating condition or user action that may expose the equipment or user to potential damage or danger.

WARNING: describes an operating condition or user action that will likely cause damage to the equipment or injury to the user or to others in the vicinity.

DANGER: describes an operating condition or user action that will immediately damage the equipment and/or be extremely dangerous or life threatening to the user or to others in the vicinity.

These installation instructions are for use by qualified personnel only. To reduce the risk of fire or electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

UNPACKING / INSPECTION

Community I SERIES loudspeakers are engineered and manufactured to be rugged and they are carefully packed in sturdy cartons. However, it is recommended to thoroughly inspect each unit after it has been removed from the packaging, as damage could occur during shipping.

Please note that once the shipment has left your dealer or the Community factory, the responsibility for damage is always borne by the freight company. If damage has occurred during shipping, you must file a claim directly with the freight company. It's very important to contact the freight company as soon as possible after receiving your shipment, as most freight companies have a short time limit within which they will investigate claims. Make sure to save the carton and the packing material, as most claims will be denied if these materials are not retained. Your Community dealer and the factory will try to help in any way they can, but it is the responsibility of the party receiving the shipment to file the damage claim.

It is always a good idea to retain the carton and packing materials, if possible, in the event that the unit may need to be returned to your dealer or distributor for repair in the future.

CAUTION: Installation of I SERIES loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting. Severe injury and/or loss of life may occur if this product is improperly installed.

RIGGING SAFETY / IMPORTANT NOTES

There are three primary areas of responsibility for rigging loudspeakers. The first is the building structure. Always consult with the building architect or structural engineer to assure the ability of the structure to support the loudspeaker system. The second area of responsibility is the loudspeaker itself. Community certifies its loudspeaker systems and rigging accessories for suspension when they are properly installed according to our published guidelines. The third area of responsibility is everything between the loudspeaker and the building structure and the actual process of installation. The installing contractor assumes this responsibility. Loudspeaker rigging should be performed only by certified rigging professionals using certified rigging hardware chosen for the specific application. Prior to installation, the contractor should present a rigging plan, with drawing and detailed parts list, to a licensed structural engineer (P.E.) or architect for written approval.

IMPORTANT: I SERIES loudspeakers are designed and intended to be mounted to differing building surfaces using a variety of rigging hardware, means and methods. Installation of loudspeakers should only be performed by trained and qualified personnel. All electrical connections must conform to applicable city, county, state, and national (NEC) electrical codes.

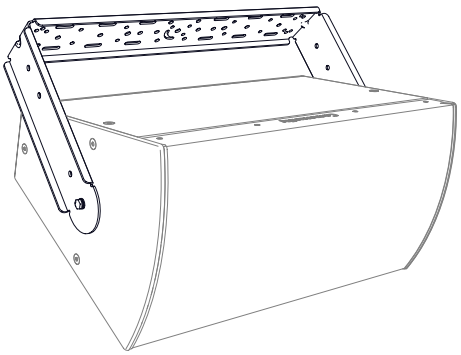
DANGER: All rigging fittings must be fully tightened and secured. Any missing fasteners or parts will compromise the structural integrity of the enclosure and constitute a safety hazard. Over-tightening (crushing the wood) should be avoided as well. Do not suspend the loudspeaker unless all fasteners are securely in place!

IMPORTANT: The flat head bolts that come installed in each enclosure must remain in place or be replaced by a threaded fastener from an array bracket. The bolts attach to internal metal brackets that are critical to the structural integrity and rated Safe Working Load (SWL) of each point and each array assembly. Failure to include a fastener in every location could lead to serious injury, or even death.

DANGER: I SERIES rigging fittings are rated at a Working Load Limit (WLL) of 150 lbs (68 kg) with a 10:1 safety margin. No single rigging fitting should ever be subjected to a load that is greater than this stated limit. Failure to heed this warning could result in injury or death!

U-BRACKETS

IUB1122 - U-Bracket for IP6-1122, IP8-1122
IUB1152 - U-Bracket for IP6-1152, IP8-1152 *(shown)*
IUB1153 - U-Bracket for IP8-1153

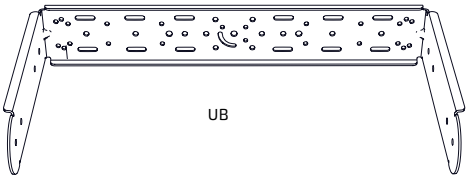


APPLICATION: Suspend and aim single loudspeakers from ceilings, walls, trusses, etc in portrait or landscape orientation.

Before assembly: Adhere the rubber washers to the inside of the yoke (aligned with cabinet mounting point).

Note: The yoke can be attached to the building structure and then the loudspeaker can be installed later.

Parts:



UB: U-Bracket

Hardware:

Qty	Code	Description
2	**HH1-4**	10 x 40 mm Hex Hd Bolts
2	**HW1**	10 mm Flat Washers
2	**HL1**	10 mm Lock Washers
2	**HW8-4**	8mm ID x 40mm OD Black Rubber Washer

The u-bracket is shipped preassembled and ready to attach to the cabinet.

Kit Weights:

IUB1122: 16.0 lb (7.3 kg)
IUB1152: 17.0 lb (7.7 kg)
IUB1153: 22.0 lb (10.0 kg)

Can also be used with: a downfill bracket to provide pan capability for two vertically oriented loudspeakers [DFS bracket or DVS-BFR22], BalancePoint™ Fly Rails, or to array two (2) loudspeakers horizontally on IAF40 or IAF55 frames.

1

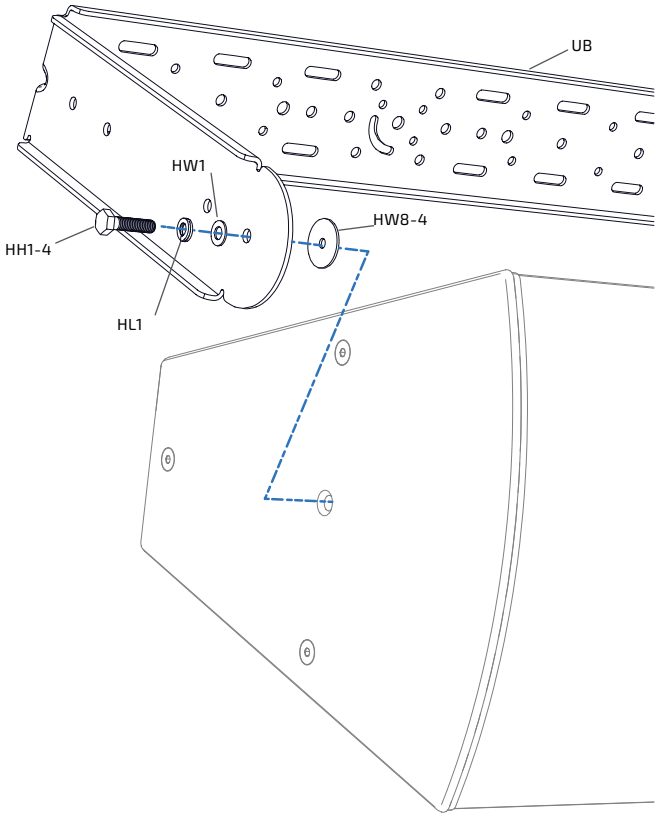
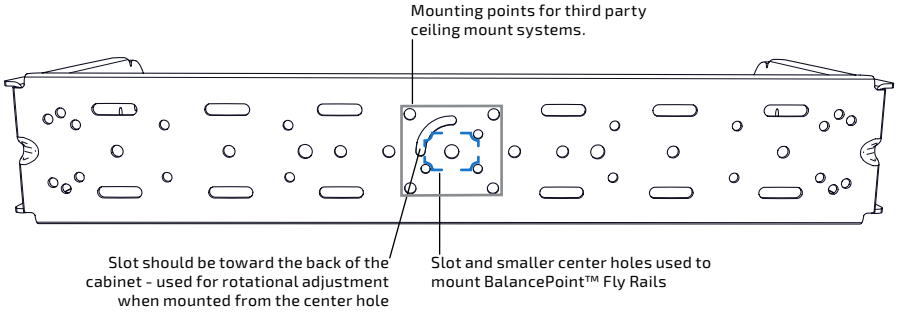
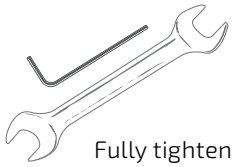


Figure 1. Remove middle cabinet bolts and attach yoke to cabinet

Mounting Key



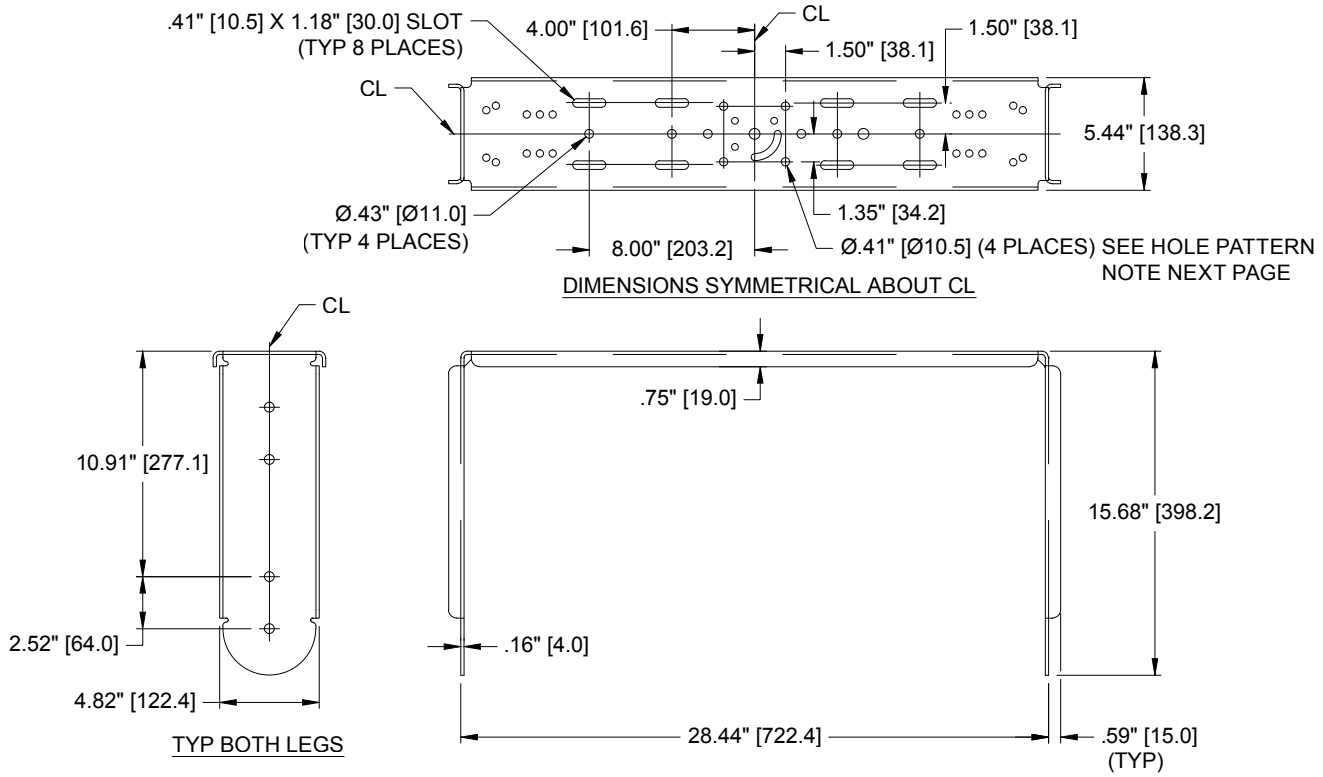
2



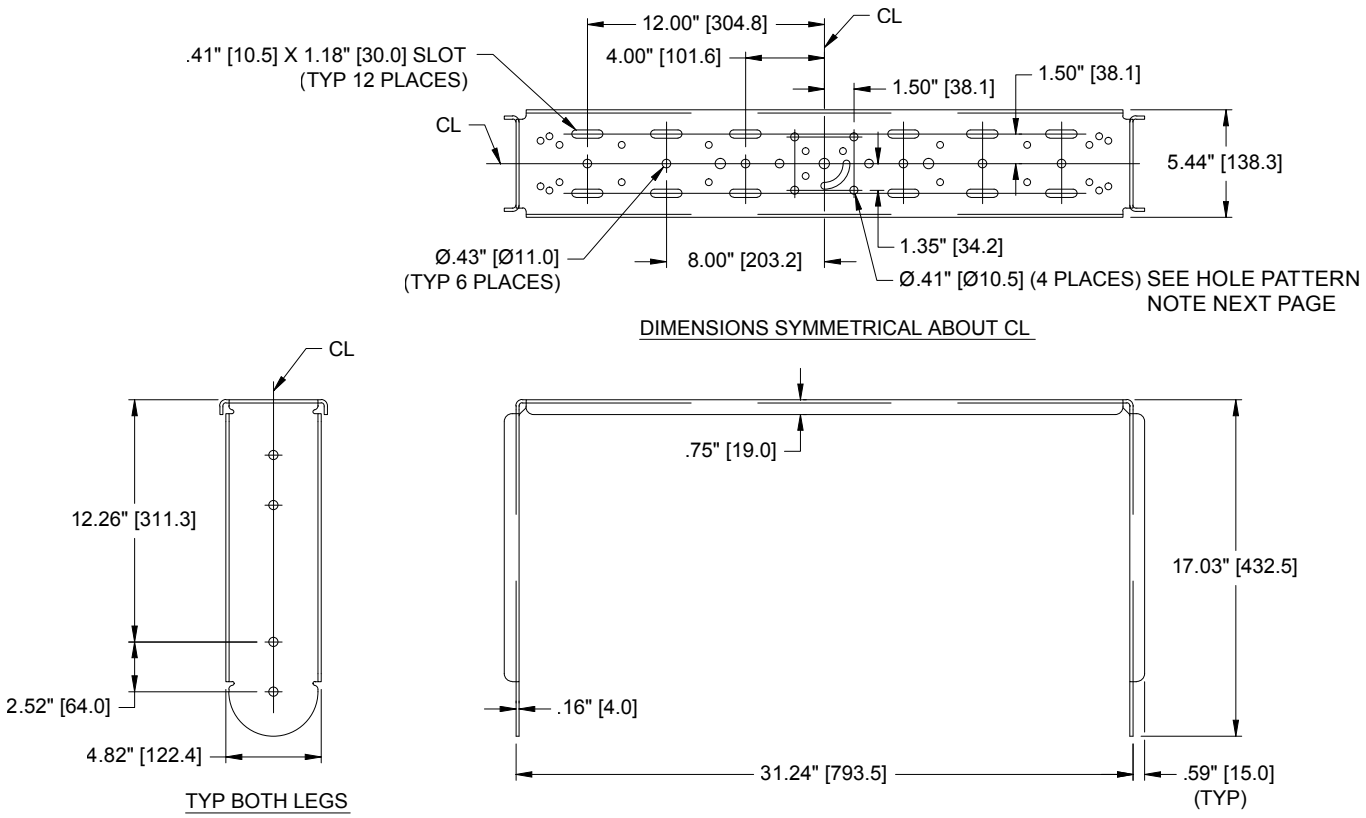
Fully tighten **all** connections

TECHNICAL DRAWINGS

IUB1122 - U-BRACKET FOR IP6-1122 AND IP8-1122 MODELS

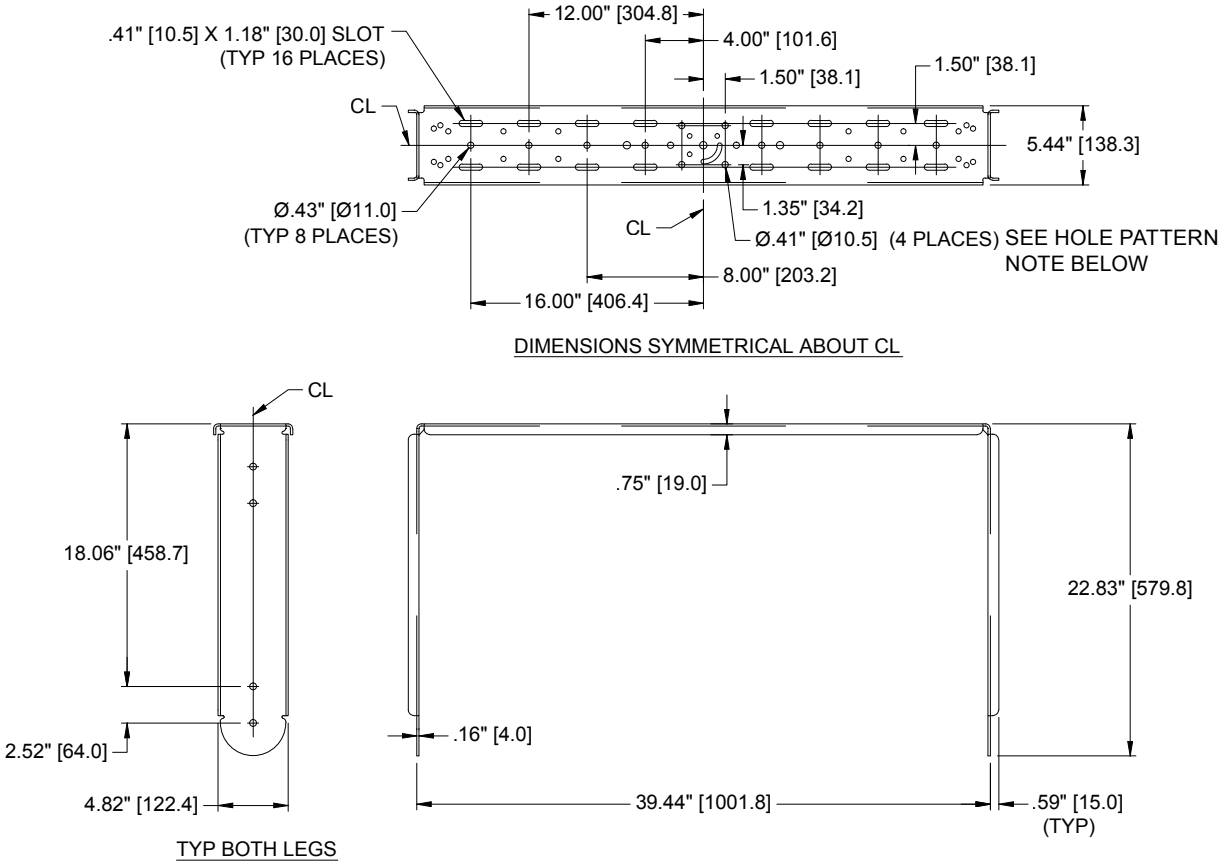


IUB1152 - U-BRACKET FOR IP6-1152 AND IP8-1152 MODELS



TECHNICAL DRAWINGS (continued)

IUB1153 - U-BRACKET FOR IP8-1153 MODELS



Hole Pattern Note: Hole pattern compatible with Chief CMA105 UL listed Ceiling mount adapter plates for use with the manufacturer's respective 1-1/2" NPT rigid pole mounting systems. See manufacturer's websites for mounting details and limitations.

Drawings not to scale

HELPFUL INSTALLATION TIPS

- Assemble the horizontal arrays on the ground (or lifting surface) and then lift the entire assembly into place. Large vertical arrays should be assembled top down - lifting each component and attaching it in order. Smaller vertical arrays can be assembled on the ground and then flown.
- Many brackets and plates come preassembled with the 8mm flat head hardware installed. Some of the corner brackets have differing bolt patterns and we preinstall them in the most common configuration for that kit. Refer to the diagrams on install pages to confirm that the bolts are in the correct position for your cabinet size.
- Assemble the array with the differing models (horn/coverage patterns) in the correct configuration.
- If the cabinets are horizontal, keep the input panels all on the same side for wiring ease, whenever possible.
- To determine the approximate splay or array angles prior to installation, use simulation software such as EASE®. Document those values, and set the angles on the hinges and splay brackets as they are attached to the cabinets.
- When attaching corner brackets, thread both bolts in finger tight first, then continue to tighten equally with hex wrenches (helps avoid misalignment issues).
- Fully tighten the connections as each assembly is finished without crushing the wood fibers.
- The U-Brackets, Vertical Yokes and Isometric Frames have hole patterns compatible with third party manufacturers' adapter plates for 1-1/2" NPT rigid pole mounting systems (such as Chief CMA105 UL listed Ceiling mounting systems, with a SWL rating of 500 lbs [226.7 kg]). See manufacturer's website for details.
- Contact our Technical Assistance Group (TAG) for additional guidance by phone: (610) 876-3400 or email: tagteam@communitypro.com.

GENERAL ASSEMBLY INFORMATION

The BalancePoint™ Flyware kits for the I SERIES loudspeakers are modular and can be combined in a number of ways. The most common configuration of each kit is shown along with instructions for assembly.

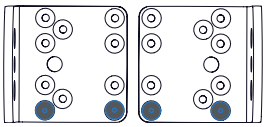
TOOLS NEEDED FOR ASSEMBLY:

- Metric socket and ratchet set
- Metric wrench set
- Metric hex key set

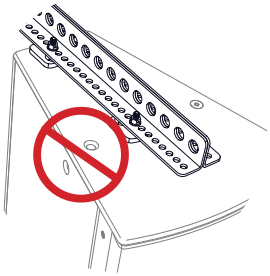
Hardware and Parts: There is a key at the beginning of each instruction that shows the parts, their quantity and abbreviation. We also use a shortened code for the hardware that offers an easy reference to the type, diameter and approximate length.

ex: HW6 = Hardware Washer 6mm;
HF1-2 = Hardware, Flat head bolt, 10 x 25mm

Several parts have underside countersunk holes that are threaded for 8mm flat head bolts. They should be fully seated (at or below the surface of the piece) before attaching the plate/bracket to the enclosure. Bolt placement diagrams are shown for the cabinet brackets that have multiple holes. Several of the brackets are shipped with the 8mm flat head bolts already installed in the most common configuration for that kit.



Typical bolt placement diagram for 2-way Cabinet (angle) Bracket (PB-3)



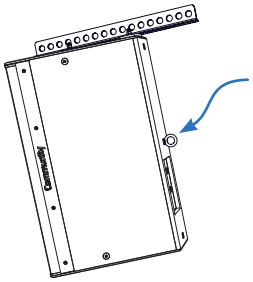
The loudspeaker enclosure must have fasteners in all threaded holes

IMPORTANT: The flat head bolts that come installed in each enclosure must remain in place or be replaced by a threaded fastener from an array bracket. The bolts attach to internal metal brackets that are critical to the structural integrity and rated Safe Working Load (SWL) of each point and each array assembly. Failure to include a fastener in every location could lead to serious injury, or even death.

GENERAL ASSEMBLY INFORMATION (continued)

SAFETY CABLES

IMPORTANT: Attach a safety cable to one of the unused mounting points on the loudspeaker (and/or the bracket assembly). Safety cables must be secured to a suitable load-bearing point separate from the loudspeaker mounting point, with as little slack as possible, oriented to minimize dynamic swinging of the load, so as not to develop undue shock or kinetic force if the loudspeaker mount were to fail. Safety cables and hardware are not included. Please consult a structural engineer for the appropriate cables, hardware, and location(s) for the load and application.

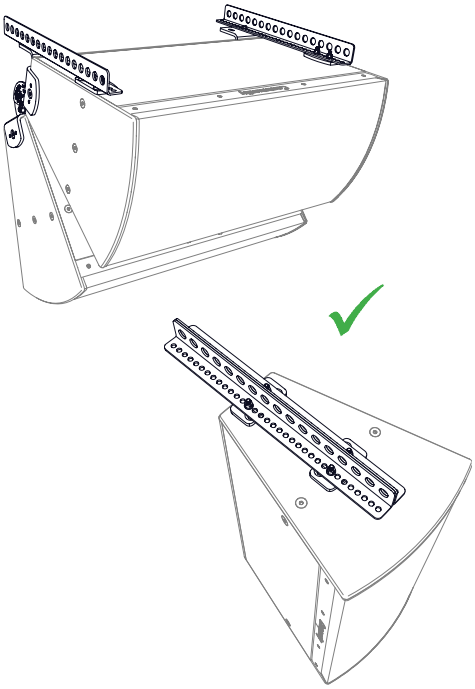


Typical placement for safety cable and hardware (eyebolt not included)

BALANCEPOINT™ FLY RAILS

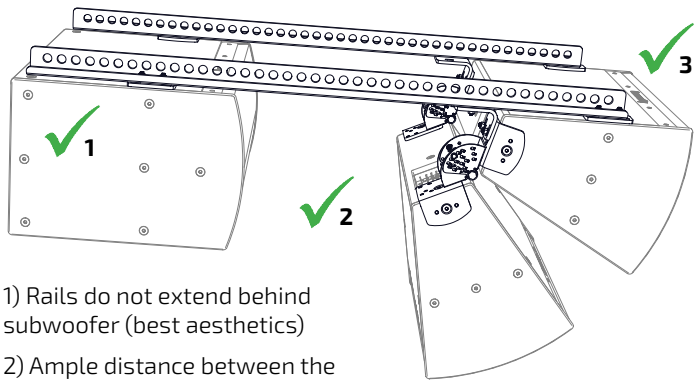
Positioning:

- The fly rails may be mounted in any position required as long as **all** attachment points are used.
- For the best aesthetics, the fly rails should not extend beyond the front edge of the front cabinet.
- The fly rails can extend beyond the back of the cabinet.
- The rails should be attached to the cabinets using all of the connections shown in the instructions for each assembly. This will ensure that the cabinets don't rotate on the rigging and that the rigging is securely attached to the cabinets.
- In "Subwoofer Behind" configurations, the general rule of thumb is that there shouldn't be less than 6" (152mm) between the face of the subwoofer and the rear of the cabinet in front of it (allows sufficient air movement from the subwoofer cones and parts).



Flying:

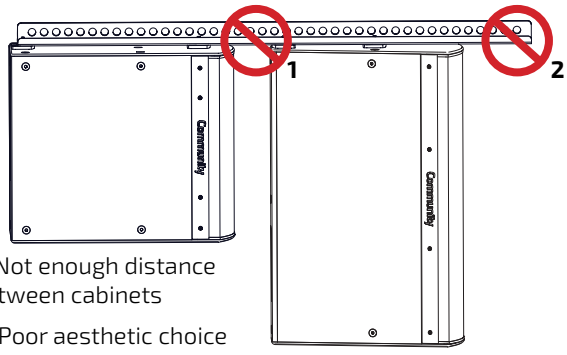
- Optimally, each array should be lifted from the hole(s) on the fly rails that produce the desired tilt angle using gravity alone (the "Balance Point").
- A second cable may be used to fine-tune the exact aiming angle and/or stabilize the array from rotation as necessary.



1) Rails do not extend behind subwoofer (best aesthetics)

2) Ample distance between the subwoofer and full-range cabinets

3) Fly rails well behind cabinet face



1) Not enough distance between cabinets

2) Poor aesthetic choice

LOUDSPEAKER WEIGHTS

FULL-RANGE	*600 Level [lbs (kg)]*	*800 Level [lbs (kg)]*
IP6/8-1122	65.0 (29.5)	55.0 (24.9)
IP6/8-1152	79.0 (35.8)	68.0 (30.8)
IP8-1153	-	105.0 (47.6)
IP8-0002	-	63.0 (28.6)
IP8-1151	-	54.0 (24.5)

SUBWOOFER	*600 Level [lbs (kg)]*	*800 Level [lbs (kg)]*
IP6/8-112	64.0 (29.0)	58.0 (26.3)
IP6/8-115	78.0 (35.4)	72.0 (32.7)
IP6/8-118	97.0 (44.0)	98.0 (44.5)
IP6/8-212	101.0 (45.8)	89.0 (40.4)
IP6/8-215	126.0 (57.2)	14.0 (51.7)
IP6/8-218	170.0 (77.1)	172.0 (78.0)

LEA Network Connect

-amplifier datasheet-

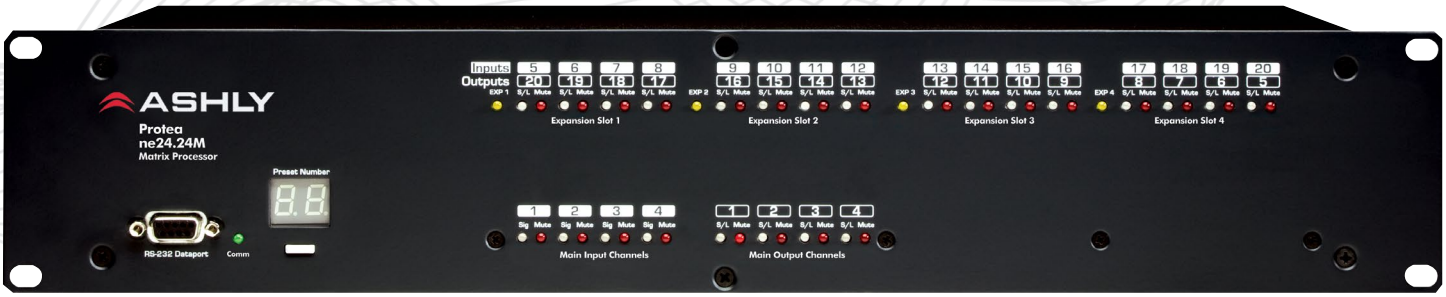
Output Power (20Hz to 20kHz)	**Connect 88**	8 x 80 WRMS @ 4Ω, 8Ω, 70V, 100V (40W at 2Ω)
	Connect 168	8 x 160 WRMS @ 4Ω, 8Ω, 70V, 100V (80W at 2Ω)
	Connect 84	4 x 80 WRMS @ 4Ω, 8Ω, 70V, 100V (40W at 2Ω)
	Connect 164	4 x 160 WRMS @ 4Ω, 8Ω, 70V, 100V (80W at 2Ω)
	Connect 354	4 x 350 WRMS @ 4Ω, 8Ω, 70V, 100V (175W at 2Ω)
	Connect 704	4 x 700 WRMS @ 4Ω, 8Ω, 70V, 100V (350W at 2Ω)
	Connect 352	2 x 350 WRMS @ 4Ω, 8Ω, 70V, 100V (175W at 2Ω)
	Connect 702	2 x 700 WRMS @ 4Ω, 8Ω, 70V, 100V (350W at 2Ω)
Audio Spec	**Inputs**	Balanced analog Inputs with user selectable 26 dB and 34 dB input sensitivity
	THD+N	0.1% (20Hz to 20kHz)
	Frequency Response	+/- 0.5 dB @ 4Ω, 8Ω, 70V, 100V, -2.5dB @ 20kHz at 2Ω
	Signal to Noise Level	105dB (20Hz to 20kHz referenced to 8Ω)
	Crosstalk	70dB (20Hz to 20kHz)
	I/O Latency	1 ms DSP latency under any condition
	Load Impedance	LowZ down to 2 ohms, 70V direct, and 100V Direct per channel
	Amplifier Output Classification	Class D with Proprietary Smart Power Bridge Technology allowing bridged output functionality without sacrificing an amplifier channel
	DC Offset	+/- 3mV
DSP	**DSP Architecture**	Analog Devices Sigma 96kHz DSP Processor with 32-bit Core with Sample Rate Converters
	Input Matrix	Routable matrix; any input to any output with primary and secondary input priority
	Crossovers	Up to 48 dB/Octave IIR Filters (Linkwitz Riley and Butterworth)
	Parametric EQ	8 Band Parametric EQ per channel
	Output Delay	100ms per channel
	Output Protection	DC, VHF, and AC Mains Protection, Overtemp and Current Limiter, fan fault detection
	User Adjustable Limiting	Peak Voltage and RMS Voltage
	Load Monitoring	Realtime Load Monitoring and Pilot Tone Detection from Internal or External Sources
Control, Monitoring, Network	**Network Connectivity**	WiFi or 100MB Ethernet with PoE or Built in WiFi Access Point (IEEE 802.11 b/g/n WPA, WAP2, WEP) Operating Frequency: 2412 – 2472MHz ; Channel Spacing:5Mhz ; Modulation: DSSS, OFDM
	User Interface	Web Browser User Interface or 3rd Party API control
	Supported Operating Systems	MAC, iOS, PC, Android
	Event Reporting	User Downloadable and Viewable Event and Fault log - POE allows for enhanced error monitoring
	External I/O	External I/O In: Toggles Remote On/Off External I/O Out: Indicates Amplifier Health
	Cloud IoT	Cloud-based IoT functionality
Operation	**AC Mains**	100VAC - 240VAC +/- 15% 50Hz or 60Hz
	Temperature	Storage: -20°C to 90° C - Operating: 0°C to 60° C
	Power Supply	Universal Switch Mode Power Supply with Power Factor Correction (No PFC in 84, 164, 88, & 168)
	Safety Approvals	UL, CSA,CE, ETL, FCC, CCC, KETI, NOM , ROHS, PSE, EN54-16
Physical Spec	**Dimensions (L x W x H)**	Product: 14.25" x 19" x 1U (362mm x 482mm x 1U) Shipping: 20" x 22.75" x 3.75" (508mm x 578mm x 95.25mm)
	Weight	352 & 702: 10lbs / 3.4kg | Shipping: 17.4lbs / 7.9kg 354 & 704: 14lbs / 4kg | Shipping: 18.7lbs / 8.5kg 84 & 164: 12.10lbs / 5.49kg | Shipping: 16.40lbs / 7.44kg 88 & 168: 13.40lbs / 6.08kg | Shipping: 17.80lbs / 8.07kg
	Cooling	Front to Rear Variable Fan Speed Cooling Fan Noise at idel is 50dB @ 1m Fan Noise at 50% is 57dB @1m Fan Noise at full speed is 63dB @ 1m
	Connectors	Analog Input: 3 pin Amphenol Anytek, Output: 2 pin Amphenol Anytek, External IO: 3 pin Amphenol Anytek, Power in: IEC, Ethernet RJ45 In for Control ***Note: 84, 164, 88, & 168 do not have potentiometers on the rear panel

LEA PROFESSIONAL

Ashly Audio, Inc. | 847 Holt Road | Webster, NY 14580-9103 USA | US toll free: +1-800-828-6308 | tel: +1-585-872-0010 | fax: +1-585-872-0739 | sales@ashly.com | www.ashly.com | Ashly is a division of Jam Industries, Ltd.

5-Year Warranty

Hand-built in Webster, NY



NE 24.24M

Network-Enabled Matrix Processing with Protea™ DSP

Whether you are designing or installing a system for corporate boardrooms, restaurants, courtrooms, houses of worship, left/center/right high output speaker systems in performance spaces, auditoriums or conference centers, our widely-popular ***Protea™ ne24.24M Matrix Processor*** will more than satisfy your requirements for any zoned system. When your install requires input/output matrixing with signal processing it doesn't get much easier than programming your channels using *Protea™ ne Software* on your PC.

The ne24.24M uses modular expansion cards to provide up to 24-channels of audio matrixing and processing. The base unit offers a 4-input/4-output configuration. Each input and output expansion card has an individual DSP processor allowing you to expand the total input or output 4 channels of DSP processing at a time.

These cards are easily installed in the field without the need to reprogram the device.

Matrixing allows you to route any input to any output and control individual levels once they have been assigned. Fixed path architecture and extensive processing power per channel will reduce the amount of time it takes to set up your system.

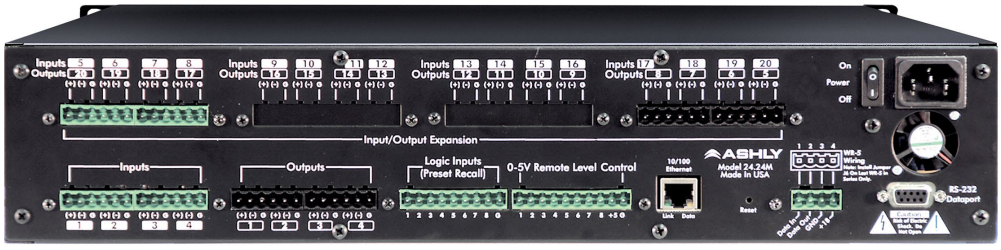
An optional GPO Logic Card allows the ne24.24M to trigger projection screens, curtains or lights. The logic card is installed in place of a 4-input or 4-output card and occupies one of the four expansion slots.

ne24.24M Features:

- 10/100 Ethernet & RS-232 computer interface standard
- Extensive DSP available
- Easy and intuitive user interface
- Mic/line inputs
- 24-bit A/D–D/A audio resolution
- Up to 24-channels of audio processing
- 4x4 base unit configuration
- Expand inputs or outputs 4-channels per module
- Modules easily field installable
- Euroblock connectors for audio, preset recall, DC remote level control and data in/out
- 31 preset locations
- Remote controls for level, preset recall and programmable functions
- Third-party control-friendly
- Input and output metering viewable in dBu
- Multi-level security
- Safety/Compliance: $_{c}$TUV$_{us}$, FCC, CE, RoHS

Specifications	*Note: 0dBu = 0.775 VRMS*
Input	Active Balanced, 18k Ohms
Input Gain Range	-50dB – +12dB, Selectable Polarity
Output	Active Servo Balanced, 112 Ohms
Input/Output Level	+20dBu (Max)
Output Gain Range	-50dB – +12dB, Selectable Polarity
Frequency Response	20Hz–20kHz, ±0.25 dB
THD	<0.01% @ 1kHz, +20 dBu
Dynamic Range	>110dB (20Hz–20kHz) Unweighted
Output Noise	<-90 dBu Unweighted
Environmental	40–120 deg. F, (4-49 deg, C) noncondensing
Rear Panel	
Controls	Remote level control, Data In/Out ports, Preset Recall, Logic Inputs, On/Off switch
Connections	10/100 Ethernet port, RS-232, Euroblock In/Out
Power Cord	3-Prong, Detachable
Weight, Dimensions & Power	
Dimensions	19"L x 3.5"H x 8.5"D (483mm x 89mm x 216mm)
Unit Weight	8.9lbs (4.04kg)
Shipping Weight	12lbs (6kg)
Power Requirements	90 – 240VAC, 50/60Hz, 40W

Accessories	
Internal Modules	
4-Channel, Input Module	
4-Channel, Output Module	
GPO Logic Output Option Module	
External Remotes	
WR-1	2-Channel Level Control
WR 1.5	Preset Recall and Level Control
WR-2	Four-Position Preset Recall Switch
WR-5	Programmable Button Controller
RD/RW8	8-Channel Fader Remote
neWR-5	Programmable Network Button Controller
FR-8	8-Channel Network Fader Remote
FR-16	16-Channel Network Fader Remote
Ashly Remote	Remote Application for Apple® iPad®



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Protēa™

Digital Signal Processing for the ne24.24m

Protea is compatible with Microsoft® Windows 8, 7 (Vista/XP) 32 & 64 bit systems.

Audio professionals find our *Protea™ DSP* to be very intuitive and easy to navigate—and you will too. No need to attend a one-week training class away from home to learn our software. Common sense layout of controls and features, on-line help, or a visit to the Technical Support page on our website provides answers to all of your questions.

Protēa™ DSP Specifications	
All DSP functions can be linked to 1 of 16 link groups	
Compressor	
Threshold	-20dBu to +20dBu
Ratio	1.2:1 – ∞
Attack	0.2 to 50ms
Release	5ms/dB to 1000ms/dB
Detector	Peak/Average
Attenuation Bus	1 available
Metering	In, Out, Attenuation, Graphical
Autoleveler Controls	
Target Level	-40dBu to +20dBu
Action	Gentle, normal, aggressive, user defined
Maximum Gain	0dB to +27dB
Metering	Attenuation
Ratio	1.2:1 to 10:1
Threshold Below Target	-30dB to 0dB
Gain Increase/Decrease Rate	5ms/dB to 1000ms/dB
Hold Time	0-6 sec
Ducking: *High/Low Priority, Trigger, Filibuster, Ducked Program*	
Trigger Threshold	-80dBu to +20 dBu
Ducking Release	5ms/dB to 1000ms/dB
Ducking Depth	0dB to -30dB, -∞
Enable Ducking at Matrix Mixer	Yes
Metering	Input
Gate	
Threshold	-80dBu to +20dBu
Range	off, 100dB to 0dB
Attack	0.2ms/dB to 50 ms/dB
Release	5ms/dB to 1000ms/dB
Metering	Gate LED, Graphical

Gain	
Gain	-50dB to +12dB, off, polarity invert
Remote Level Control	8 available, 0dB to -∞
Remote RD8C Gain	Enable per channel, 0dB to -∞
WR-5 (neWR-5) Remote Gain	0 to -50dB, Mute
EQ: *Parametric 15 Band*	
Frequency	20-20kHz
Level	-30dB to +15dB
Q Value	0.016 to 3.995 Octave
EQ: *Hi/Low Shelf 6/12 dB/oct*	
Frequency	20Hz–20kHz
Level	-15dB to +15dB
EQ: *All Pass*	
Frequency	20Hz–20kHz
EQ: *Variable Q HP/LP*	
Frequency	20Hz–20kHz
Q Value	3.047 to 0.267
EQ: *Notch/Bandpass*	
Frequency	20Hz–20kHz
Q Value	92.436 to 0.267
Crossover: *2 Way, 3 Way, 4 Way Crossover & High Pass/Low Pass Filters*	
Bessel & Butterworth Filters	12/18/24/48 dB/oct
Linkwitz-Riley Filter	12/24/48 dB/oct
Frequency	Off, 20Hz–20KHz
Delay: *@ 48kHz Sampling Rate (Input Time, Distance & Temperature)*	
Speaker Delay	0–21ms
Delay	0–682ms

Delay: *@ 96kHz Sampling Rate (Input Time, Distance & Temperature)*	
Speaker Delay	0–10.6ms
Delay	0–341ms
Audio Metering Tool	
Range	-60dBu to +20dBu
Increments	1dB
Peak Hold Indicator	Yes
Signal Generator Tool: *Pink noise, White noise, Sine wave*	
Signal Level	Off, -50dBu to +20dBu
Sine Wave Frequency	20Hz–12kHz
Matrix Mixer	
Gain (0.5dB increments)	Off, -50 to +12dB
Mute	Per channel
Enable Ducking at Mixer	Yes
Ducking LED	Per channel if enabled
Processors	
Input A/D, Output D/A	24-bit
DSP Processors	24-bit signal, 48-bit filters, 56-bit accumulator
Sample Rate	48kHz
Propagation Delay @ 48kHz:	1.46ms

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NE 24.24M

Architect & Engineering Specs

ne24.24M

The digital signal processor base unit shall consist of four inputs and four outputs and shall use modular expansion cards to provide up to twenty-four channels of input / output audio matrixing and processing. Each expansion card shall have an individual DSP processor allowing for expansion of the base unit's total inputs or outputs four channels at a time. Expansion cards shall be factory installed or easily installed in the field without the need to reprogram. The processor shall use fixed path architecture to reduce set-up time. The processor control and programming shall be accomplished using a PC platform through a standard Ethernet connection. An RS-232 jack shall be provided for control and monitoring by a third-party controller. Multi-level security and no front panel controls shall insure tamper-resistant operation. Input channel processing blocks shall include a Mic/Line Preamp with 48V Phantom Power, Gain, Pink Noise Generator, Delay, fifteen EQ Filters, Gate, Autoleveler and Ducker. Output channel processing blocks shall include a Cross-Point Mixer, HPF/LPF, Delay, fifteen EQ Filters, Gain, and Limiter. The cross point mixer shall allow any input to be routed to any output at any level and mute any input at any output without affecting the true input configuration. Rear panel Euroblock connectors shall include eight preset recall contact closures plus eight remote potentiometer level controls. The DSP processor shall mount in a standard 19" rack using 2 spaces (3.5" high).

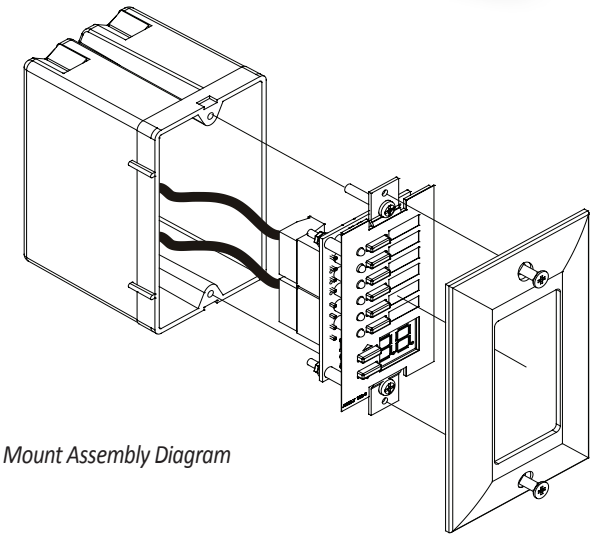
The digital signal processor shall be an Ashly DSP Matrix Mixer model **ne24.24M**

Ashly Audio, Inc. | 847 Holt Road | Webster, NY 14580-9103 USA | US toll free: +1-800-828-6308 | tel: +1-585-872-0010 | fax: +1-585-872-0739 | sales@ashly.com | www.ashly.com | Ashly is a division of Jam Industries, Ltd.

5-Year Warranty

Hand-built in Webster, NY

WR-5 *US Version*



Wall Mount Assembly Diagram

WR-5

Programmable Multi-Function Decora Wall Remote

Control your system from any location with our remote controls. These devices fit in standard wall boxes and use low gauge wire for hook-up.† ***WR-5*** is a programmable remote button controller for Ashly amps and processors that have a serial data connector. Multiple WR-5 remotes can control several channels on the same host unit. All button programming is done using Ashly Protea NE Software.

WR-5 Features:

- Six programmable function buttons w LED
- Two Up/Down buttons w LED display adjust parameters
- Preset recall and preset scroll
- Input, Output, and matrix mix gain control
- Zone source select
- Channel mute
- Logic high/low output (ne24.24M w/ GPO option, ne8800, 4800, 4400)
- Connect directly to host unit, no network required
- Up to four WR-5 remotes per host unit
- RPS-18 Inline Power Booster available when more than four WR-5 remotes used
- Window for user-defined labels
- Shipping weight: 1lbs (1kg)
- Safety/compliance: CE, FCC, RoHS

Compatible Ashly Products include:

- nXe*, nXp amplifiers
- Pema amplifiers
- NE multi-channel amplifiers*
- NE two-channel amplifiers*
- ne24.24M matrix processor
- NE8800/4800/4400 network processors

*† To prevent static discharge issues, WR-5 frame should be earth grounded at point of installation * Use on products without DSP is limited to preset recall/scroll, mute, and logic functions*

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WR-5 Architect & Engineering Specs

The programmable remote control unit shall use serial data communications to control Ashly products. The unit shall have six programmable LED function buttons and two up/down buttons with adjacent numeric LED display for adjusting parameters. The unit shall connect directly to it's host unit using low gauge four conductor wire and be powered from that unit or from an external Ashly RPS-18 in-line power booster. The unit shall be programmed using Ashly Protea NE Software, and offer control of preset recall/scroll, channel mute, zone source selection, individual channel level, matrix point level, and logic output if available. The unit shall have clear windows for insertion of user-defined function button labels. The unit shall mount in a standard US electrical wall box. No other unit shall be acceptable unless all specifications herein are verified through an independent agent.

The unit shall be an Ashly **WR-5.**

Specifications

DISTRO4™
Antenna Distribution System

DISTRO4 is a broadband UHF antenna distribution amplifier that routes antenna signals from a pair of diversity antennas to several receivers in a multi-channel system. DISTRO4 compensates for signal strength lost in the splitting process with high quality amplifiers. Two or more units may be cascaded together to accommodate more than four receivers with the included cascade port.

DISTRO4 features a 2000 mA internal power supply (no wall wart). For active antennas and in-line amplifiers, DISTRO4 provides an internal switch to apply DC power over coaxial cable to antenna connections. It includes all RF and DC power cables needed to connect a 4 channel wireless microphone system as well as cascade to one additional DISTRO4.

SKU **DISTRO4** Includes:
(1) DISTRO4 Antenna Distribution System
(10) 61cm / 2' BNC jumpers
(4) 36cm / 14" DC jumpers
(1) AC power cord

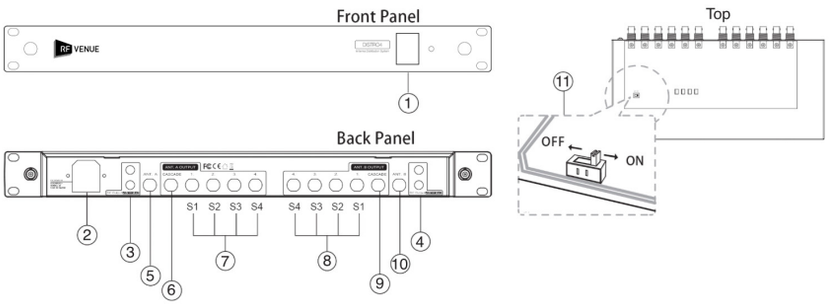
WARNING
- Do not expose this appliance to heat or moisture.
- To avoid shock, do not remove cover. Refer all service to qualified service personnel or distributors.

Specifications

Frequency range	470-952 MHz
RF output level (gain)	3 dB (±2 dB)
Cascade output level	0 dB ~ +2 dB
Output connection isolation	⩾ 25 dB
Third order intercept point	24 dBm
Impedance	50Ω
Power consumption	60 W
Input AC voltage	100~240 V switching
DC over coax (to external antennas)	12-14 VDC
Output DC voltage (to receiver jacks)	+12 V ⎓ 1 A x 4
Output DC connectors	5.5mm OD, 2.1mm ID
Dimensions	480(W) X 45(H) X 250(D) mm / 19(W) X 2(H) X 10(D) in
Weight	2.15 Kgs / 4.75lbs

(800)795-0817 • orders@rfvenue.com
www.RFvenue.com

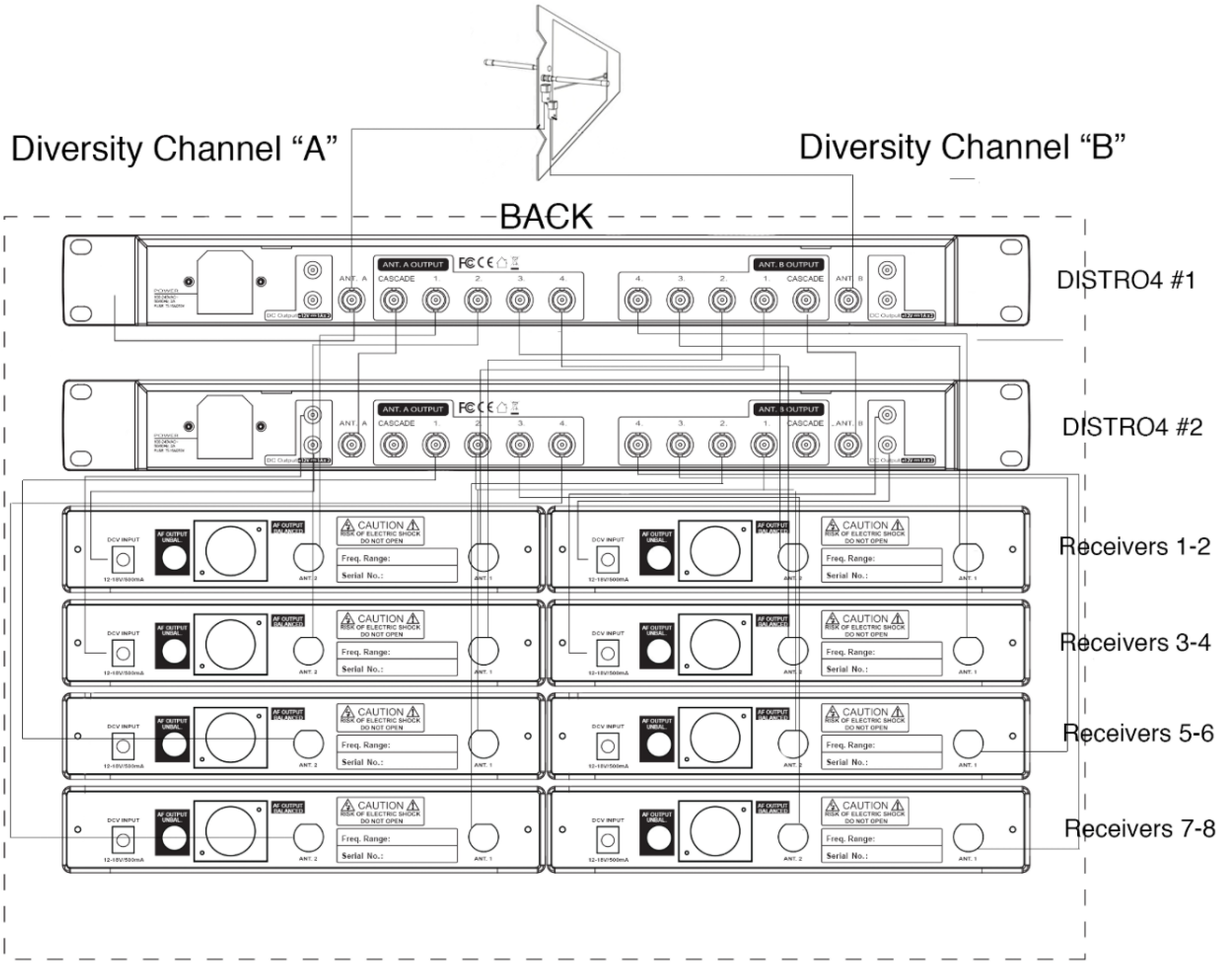
Specifications



1. Power Switch
2. AC input
3. DC output (to receivers)
4. DC output (to receivers)
5. Antenna "A" input
6. Cascade output "A"
7. Antenna "A" output
8. Antenna "B" output
9. Cascade output "B"
10. Antenna "B" input
11. Power switch Antenna A&B (Internal) Switch on when using 12V DC over coax (to external antennas)

NOTE: The DC Power-to-Antenna output is factory-set to the 'Off' position. To turn the Power-to-Antenna function 'On', the switch (labeled #11 above) must be moved to the 'On' position. However, access to this switch requires opening the DISTRO4 housing cover, which can involve the risk of electric shock; see WARNING below.

WARNING: Opening the DISTRO4 housing must only be done only by a qualified service technician, and only once ALL power removed to the unit (disconnect the main power cord from the unit, labeled #2 above).



ES933C/MIC & ES933WC/MIC

audio-technica

engineered sound® microphones

Cardioid Condenser Hanging Microphones

Features

- **Uniform cardioid polar pattern with 120° acceptance angle**
- **Low-profile design with low-reflectance finish for minimum visibility**
- **Superior off-axis rejection for maximum gain before feedback**
- **UniGuard® RFI-shielding technology offers outstanding rejection of radio frequency interference (RFI)**
- **Available interchangeable elements permit angle of acceptance from 90° to 360°**
- **Steel hanger positions microphone over choirs, instrumental groups and theater stages**
- **Available in two colors: black (ES933C/MIC) and white (ES933WC/MIC)**

Description

The ES933C/MIC is a wide-range miniature condenser microphone with a cardioid polar pattern. It is designed for quality sound reinforcement, professional recording, television and other demanding sound pickup applications. The combination of small size and excellent response makes the microphone ideal for suspension over choirs, instrumental groups or theater stages.

The microphone requires a compatible Audio-Technica power module (not included) for operation.

The microphone is equipped with UniGuard® RFI-shielding technology, which offers outstanding rejection of radio frequency interference (RFI).

The microphone's cardioid polar pattern provides a 120° angle of acceptance. Additional interchangeable elements with omnidirectional (360°), hypercardioid (100°) and MicroLine® (90°) pickup patterns are available.

The microphone include a 15.2 m (50') permanently attached miniature cable. Its free end connects to a compatible Audio-Technica power module (not included) via a special TA3F-type connector designed to optimize RFI immunity.

The microphone comes equipped with a vinyl-coated steel hanger for positioning over a choir/orchestra/stage, and a two-stage foam windscreen. The microphone is enclosed in a rugged housing with a low-reflectance black finish. It is also available with white housing, cable, hanger and windscreen as the ES933WC/MIC.

Installation and Operation

The ES933C/MIC requires a compatible Audio-Technica power module (not included) for operation.

A uniform 120° angle of acceptance provides well-balanced audio pickup. The microphone should be located forward of the front-most source, above the rear-most source, and "aimed" between them (Fig.1). Increasing the height of the mic above the sources will tend to equalize sound levels between them, but may also increase background/reverberant sound pickup. When possible, the distance from the mic to the rear-most source should be no more than twice the distance to the front source, to maintain front-to-rear balance (Fig. 1).

Width of pickup is approximately three times the distance to the closest source. If additional mics are needed for wide sources, they should be positioned apart laterally at least three times the distance to the front source, to avoid phase cancellation (Fig. 2).

To orient the microphone in the proper direction, twist the housing slightly in its wire holder. (Clockwise rotation moves the microphone to the right; counterclockwise rotation moves it to the left.)

The provided two-stage foam windscreen simply snaps over the head of the microphone, effectively reducing noise from wind or ventilation air currents.

Avoid leaving the microphone in the open sun or in areas where temperatures exceed 110° F (43° C) for extended periods. Extremely high humidity should also be avoided.

Note: Audio-Technica has developed a special RFI-shielding mechanism, which is an integral part of the connectors in the Engineered Sound® line. If you remove or replace the connector, you may adversely affect the unit's RFI immunity. Audio-Technica offers a crimp tool (ATCT) and RFI shields that enable you to shorten the cable and correctly reinstall the connector while maintaining the highest level of RFI immunity.

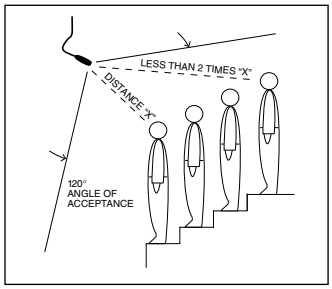


Figure 1

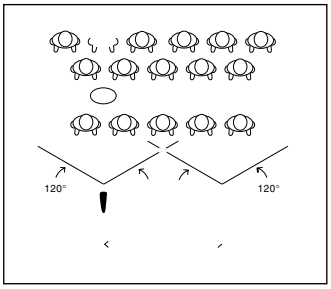


Figure 2

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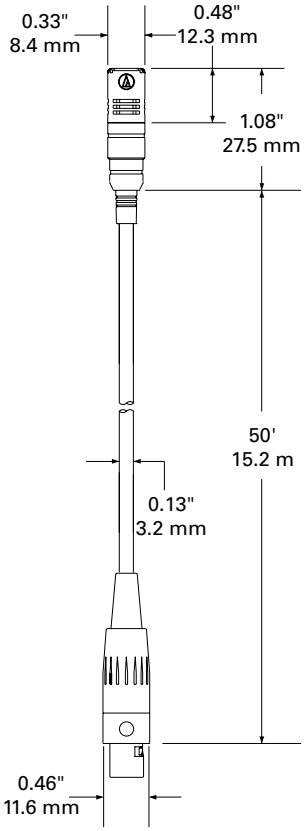


Specifications

Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Cardioid
Frequency response	30-20,000 Hz
Open circuit sensitivity	–40 dB (10.0 mV) re 1V at 1 Pa
Maximum input sound level	138 dB SPL, 1 kHz at 1% T.H.D.
Dynamic range (typical)	109 dB, 1 kHz at Max SPL
Signal-to-noise ratio[1]	65 dB, 1 kHz at 1 Pa
Weight	5.5 g (0.2 oz)
Dimensions	27.5 mm (1.08") long, 8.4 mm (0.33") head diameter
Output connector	TA3F-type
Cable	15.2 m (50') long (permanently attached to microphone), 3.2 mm (0.13") diameter, 2-conductor shielded cable, terminated with TA3F-type connector
Optional interchangeable elements	ESE-O omnidirectional (360°) ESE-H hypercardioid (100°) ESE-ML MicroLine® (90°)
Audio-Technica case style	M25
Accessories furnished	
ES933C/MIC	AT8109 two-stage foam windscreen; AT8452 steel hanger
ES933WC/MIC	AT8109(WH) two-stage foam windscreen; AT8452(WH) steel hanger
Compatible power modules	AT8534 wall/ceiling plate power module; AT8538 power module; ATND8734 network audio microphone power module

Specifications derived by using AT8538 power module.

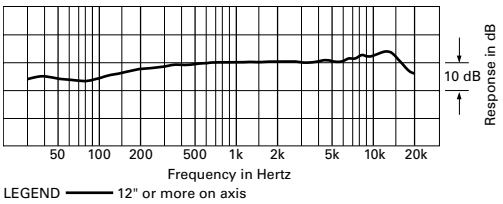
In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

1 Pascal = 10 dynes/cm^2 = 10 microbars = 94 dB SPL

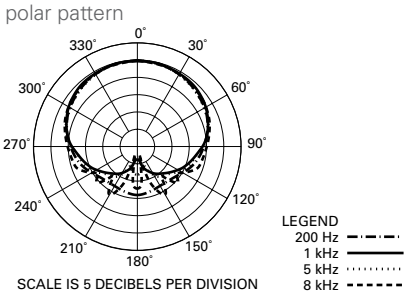
[1] Typical, A-weighted, using Audio Precision System One.

Specifications are subject to change without notice.

frequency response: 30–20,000 Hz



polar pattern



audio-technica

Lowell™
Distributed Audio, Power & Rack Solutions

Steel Panel #SEP Series

blank panel for 19"W racks

0.625" flange for strength

100% CERTIFIED US STEEL

MADE IN THE U.S.A

Available as a single panel or in multi-pack cartons.

features

- **Description:** Blank panel for 19" E.I.A. racks is 18-gauge steel with flange for strength and rigidity.
- **Construction:** 18-gauge certified U.S. steel
- **Finish:** Smooth black semi-gloss powder epoxy finish
- **Special Sizes:** Finishing panels available in 1/2U and 1/3U
- **Flange:** 0.625" flange (all but 1/3U model which has .375" flange)
- **Origin:** Made in the U.S.A.
- **Compliance:** E.I.A. compliant
- **Packaging:** Available as a single panel or in a multi-pack contractor's carton.

a&e specifications

The rack shall include _____ (quantity) blank panels, Lowell model # _____, which shall be 18-gauge steel with smooth black semi-gloss powder epoxy finish. Each panel shall measure 19"W x ____ rack units and feature a ____ (0.375", 0.625") flange. Panels shall be made in the U.S.A. with certified U.S. steel.

SEP series summary

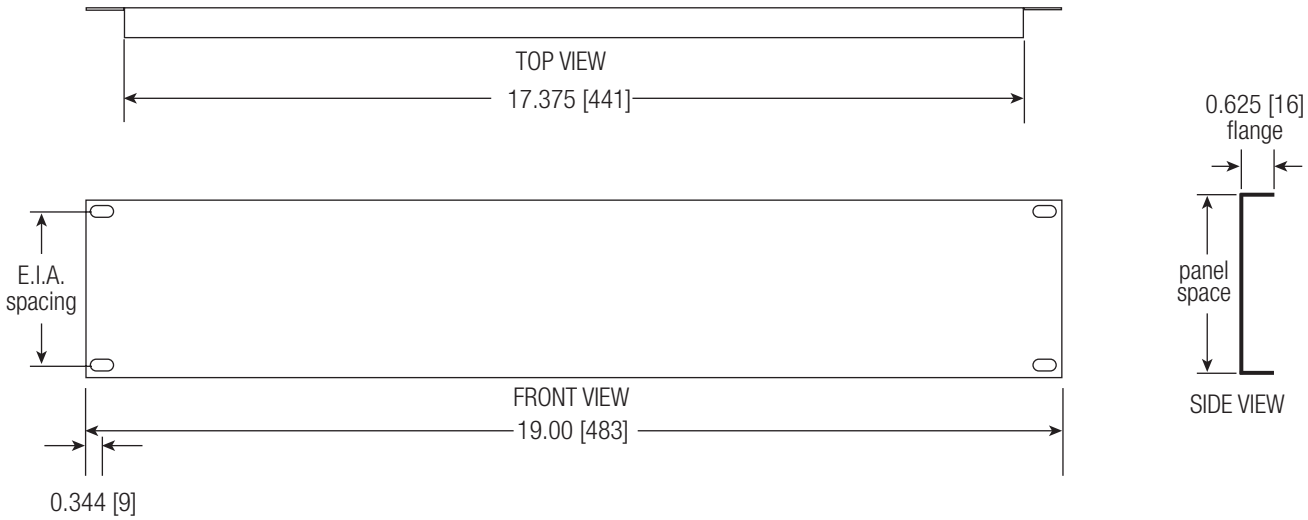
Model No.	*Panel Space*	*Overall Height*	*Overall Width*	*Overall Depth (flange)*	*Material*	*Finish*	*Carton Pack*
Single Panels							
SEP-03	1/3 U	0.566 [14]	19.00 [483]	0.375 [10]	18-ga. steel	Black semi-gloss	1
SEP-02	1/2 U	0.875 [22]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	1
SEP-1	1 U	1.75 [44]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	1
SEP-2	2 U	3.50 [89]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	1
SEP-3	3 U	5.25 [133]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	1
SEP-4	4 U	7.00 [178]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	1
SEP-5	5 U	8.75 [222]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	1
SEP-6	6 U	10.50 [267]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	1
Multi-pack Cartons							
SEP-1CC	1 U	1.75 [44]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	12
SEP-1MC	1 U	1.75 [44]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	48
SEP-2CC	2 U	3.50 [89]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	12
SEP-2SC	2 U	3.50 [89]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	24
SEP-3CC	3 U	5.25 [133]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	6
SEP-4CC	4 U	7.00 [178]	19.00 [483]	0.625 [16]	18-ga. steel	Black semi-gloss	6

Dimension = inches [mm]
1U = 1.75"

Steel Panel #SEP Series

Dimensions are inches and [mm] unless stated otherwise.

2U model pictured



Lowell™
Distributed Audio, Power & Rack Solutions

AC Power Distribution Rack Panel: ACR-159-S

DESCRIPTION:

Model ACR-159-S power distribution panel features 15A NEMA outlets (nine total), all controlled by the on/off switch. The lighted rocker style activation switch makes it easy to see at-a-glance when the switched outlets are powered. A guard across the switch protects against accidental operation. This panel also includes basic surge suppression with an LED status indicator and an external grounding/bonding terminal.

The compact steel chassis with black powder epoxy finish is designed to occupy minimal rack space with overall dimensions of 19"W x 9"D x 1.75"H (1U). Termination is via an attached nine foot power cord with NEMA 5-15P plug.

A&E SPECIFICATIONS:

The rack shall include Lowell panel model ACR-159-S, which shall feature nine NEMA 5-15R outlets (one front, eight rear), all controlled by a lighted rocker switch. It shall include basic surge suppression to protect against power surges up to 30,000A and an external grounding/bonding terminal. The panel shall be UL Listed and have a power rating of 120VAC, 60Hz, 15A. The 19"W x 9"D x 1.75"H (1U) steel chassis shall have a black powder epoxy finish and termination shall be via an attached 9 foot cord with NEMA-5-15P plug.

FEATURES:

- **Outlets:** Unit includes a total of nine 15A NEMA outlets, which are switched (controlled by front switch).
  - Front Outlets:
    NEMA 5-15R (1 switched)
  - Rear Outlets:
    NEMA 5-15R (4 switched duplex)
- **Rocker Switch:** Lighted rocker activation switch controls all outlets, front and rear. Switch includes a guard to protect against accidental operation.
- **Power Rating:** 120VAC, 60Hz, 15A
- **Circuit Breaker Protection:** 15A breaker (in on/off switch)
- **External Grounding/Bonding Terminal:** Panel front
- **Power Cord:** Attached 9-ft. cord with NEMA 5-15P plug
- **Chassis:** 19"W x 9"D x 1.75"H (1U), 9 lbs.
- **Certification:** UL Listed in US/Canada (UL60950)
- **Country of Origin:** Imported from China
- **Surge Suppression:**
  - LED status indicator shows protection is active when lit
  - Maximum surge current: 30,000A
  - VPR (UL1449-3): 500V
  - Endurance: 100 WCS* (unlimited low level surges)
  - Response time: 1 nanosecond
  - EMI/RFI noise reduction: 20dB@100kHz
  - Protection mode: Line to neutral only. No ground contamination.

**Surge Protection Endurance WCS (Worst Case Situation): Defined as power quality disruptions likely to cause facility infrastructure damage such as direct lightening strike, transmission line cross-connection or collapse (from severe storm, ice damage, etc.) sub-station transformer explosion, etc. Industry standards for residential and commercial service entrance equipment limit surges entering a facility from external sources to maximum of 6kV and 10kA.*

INTERNAL USE ONLY: PN 24203

ACR Series Power Distribution Panels

Model No.	Power Rating	Front Outlets	Rear Outlets	Surge Supp.	Power Input	Switch Type	Outlets Controlled by Switch	Network Interface	Charging Ports	Time Delay	Input from Remote Switch	Input from External Trigger	Input from Alarm System	Output to Remote Control	Lights	Country of Origin
ACR-1505-SSI-RC	15A	1 (15A)	4 (15A)	yes	6' cord	---	---	yes	rear	---	---	---	---	---	---	USA
ACR-1506-LTS	15A	---	6 (15A)	yes	9' cord	rocker	all	---	---	---	---	---	---	---	hd	USA
ACR-1507-GNLT	15A	1 (15A)	6 (15A)	---	9' det.cord	rocker	2	---	---	---	---	---	---	---	goose	USA
ACR-1507-HDLT	15A	1 (15A)	6 (15A)	---	9' det.cord	rocker	2	---	---	---	---	---	---	---	hd-nt	USA
ACR-1507-SSI-FC	15A	1 (15A)	6 (15A)	yes	6' cord	---	---	yes	front	---	---	---	---	---	---	USA
ACR-1508-SHW	15A	---	8 (15A)	yes	6' conduit	---	---	---	---	---	---	---	---	---	---	USA
ACR-1509-S	15A	1 (15A)	8 (15A)	yes	9' cord	rocker	3	---	---	---	---	---	---	---	---	China
ACR-159-S	**15A**	**1 (15A)**	**8 (15A)**	**yes**	**9' cord**	**rocker**	**all**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**China**
ACR-2009	20A	1 (15A)	8 (15/20A)	---	9' cord	rocker	5	---	---	---	---	---	---	---	---	USA
ACR-209-S	20A	1 (20A)	8 (20A)	yes	9' cord	rocker	all	---	---	---	---	---	---	---	---	China
ACR-RPC-1508-SD	15A	---	8 (15A)	yes	9' cord	ext	6	---	---	---	yes	yes	yes	---	---	USA
ACR-SEQ4-1509	15A	1 (15A)	8 (15A)	---	9' cord	rocker & ext	6	---	---	SEQ	yes	---	yes	---	---	USA
ACR-SEQ6-2009	20A	1 (15A)	8 (15A)	---	9' cord	rocker & ext	6	---	---	SEQ	yes	---	yes	yes	---	USA

Surge Suppression = Panel includes basic surge suppression. (For rackmount panels with advanced surge suppression see ACSPR Series.)

Power Input = cord (attached cord), det.cord (detachable cord), conduit (non-metallic flexible conduit)

Switch Type (activation) = rocker (rocker switch on front), ext (external switch, not included)

Outlets Controlled by Switch = Number of outlets activated/deactivated by switch. Other outlets are unswitched (always on).

Network Interface = Panel includes network pass-through ports.

Charging Ports = Panel includes high speed charging connectors for devices (USB-A, Type-C)

Time Delay (SEQ) = Panel includes sequencing to activate/deactivate switched outlets with a time delay between steps (adjustable).

Input from Remote Switch = Panel can be controlled by an external switch, typically placed in a remote location (order RPS Series switch separately).

Input from External Trigger = Panel can be controlled by external trigger voltage (separate control system by others, not included).

Input from Alarm System = Panel can accept control override from an alarm system (alarm by others, not included).

Output to Remote Control = Panel can activate/deactivate remote equipment (order RPC Series remote power controls separately).

Lights = hd (hooded white light), goose (gooseneck lights), hd-nt (hooded night-vision lights)

See individual product spec sheets for more information.

RDL®

High Performance Audio Products. Made in America.

TWISTED PAIR FORMAT-A
Model D SERIES-BT1A
Wall-Mounted Bluetooth® Audio Format-A Interface

- Bluetooth Audio Input for Installed Sound System
- Intuitive Single Button Pairing with LED Status Indication
- Special Software Not Required for Module Setup
- Customize the Module ID Name and Programming Password through the Bluetooth Connection
- Sends Received Bluetooth Audio to RDL Format-A Receivers
- Mono Summed or Stereo Audio Input Mode is Switch-Selectable on Rear Panel
- Rear-Panel Switch Selects which RJ45 Pair (A, B or C) is Fed in Mono Summed Mode
- Daisy-Chain up to Three D SERIES-BT1A modules to One Format-A Receiver in Mono Mode
- Remotely Powered through Twisted Pair Cable
- Signal and Power Pair Pass-Through on RJ45 Jacks

APPLICATION: The D SERIES-BT1A modules are Bluetooth audio receiving modules compatible with RDL® Format-A twisted pair receivers. When paired with a compatible Bluetooth enabled device, the module receives stereo audio from the Bluetooth source. The stereo signal is sent through two Format-A pairs to any RDL Format-A receiver. A stereo/mono switch set by the installer permits summed mono audio to be sent over one switch-selected pair to the Format-A receiver.

If set for stereo operation, an additional Format-A source (set to Pair A) may be daisy chained with the D SERIES-BT1A to a three-pair Format-A receiver. If set for mono operation, up to three D SERIES-BT1A modules may be daisy chained to a single three-pair Format-A receiver. Connections between Format-A modules and Format-A receivers use standard CATx cable with RJ45 connectors.

The D SERIES-BT1A modules are powered from the Format-A receiver. The installer can customize the module name and programming password through the Bluetooth connection using a smartphone, computer or tablet terminal program. These modules feature studio-quality circuits and analog filters to provide audio performance exceeding expectations from consumer interface technologies. High performance, simplicity of operation and efficiency of installation make RDL the best value in professional Bluetooth interfaces.

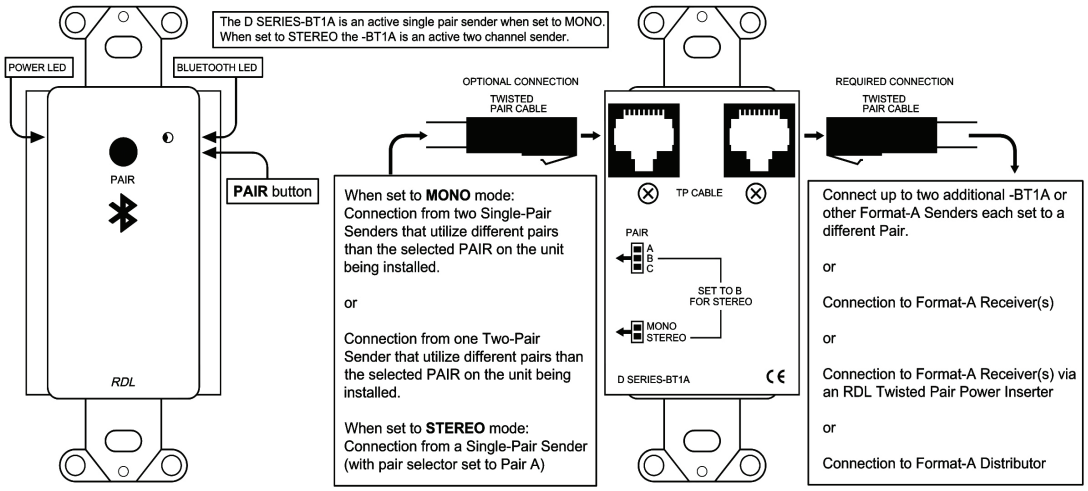
RDL®

High Performance Audio Products. Made in America.

Installation/Operation

Declaration of Conformity available from rdlnet.com.
Sole EMC specifications provided on product package.
Specifications are subject to change without notice.

TWISTED PAIR FORMAT-A
Model D SERIES-BT1A
Wall-Mounted Bluetooth Audio Format-A Interface



Instructions for Bluetooth pairing

These instructions are based on the default RDL unit identification as RDL_BT_FA. If the RDL unit has been renamed by the installer, substitute the new name for RDL_BT_FA in the following steps.

PAIRING

1] Press and hold the PAIR button until the blue LED on the RDL unit illuminates, then release.

Note: The blue LED flashes as long as the unit is available for pairing. If the blue LED stops flashing before the pairing process is completed, restart these steps.

2] While the blue LED is flashing, locate RDL_BT_FA on your device's Bluetooth settings and click PAIR DEVICE, following screen prompts to complete the pairing process.

Note: The blue LED glows steady while the RDL unit is paired.

UN-PAIRING

The RDL unit will unpair automatically 30 seconds after the user device leaves the area. The user device may be manually disconnected by pressing and holding the PAIR button on the RDL unit.

RE-PAIRING

1] Press and hold the PAIR button until the blue LED on the RDL unit illuminates, then release.

2] While the blue LED is flashing, locate RDL_BT_FA under Previously Connected Devices on your device's Bluetooth settings and click RDL_BT_FA,

following screen prompts to complete the re-pairing process.

Note: If the re-pairing fails, click Forget Device on the user device and pair the RDL unit as a new device.

Upon successful pairing, the user device applications for audio playback through a Bluetooth interface may be used.

TYPICAL PERFORMANCE

Output:	RDL Format-A (RJ45)
Format-A Input:	RJ45 LOOP IN
Format-A Signal Pair Used:	A, B, or C (summed mono mode, rear-panel switch-selectable); B and C (stereo mode, pair A pass through)
Frequency Response:	20 Hz to 20 kHz (± 0.5 dB) THD+N: < 0.1%
Noise below -20 dBFS:	< -70 dB
Crosstalk (channel to channel):	< 70 dB
Audio Operating Levels:	-20 dBFS = +4 dBu (balanced), nominal
Ambient Operating Environment:	0° C to 40° C
Power Requirement:	24 Vdc @ 100 mA (through RJ45)
Dimensions:	1.73" (4.39 cm) W; 4.11" (10.44 cm) H; 1.62" (4.11 cm) D
Package Type:	Cardboard Box
Package Dimensions:	3.625 x 4.625 x 2.125 in.
Shipping Weight:	0.45 lb.
WEEE weight:	0.29 lbs.

See the D SERIES-BT1A page at rdlnet.com for programming information.

Safety Instructions/Consignes de sécurité/
Instrucciones de seguridad/Sicherheitshinweise:

EU Importer:
Importateur de l'UE:
Importador de la UE:
EU-Importeur:

RDL Europe B.V.
Joan Muyskenweg 124
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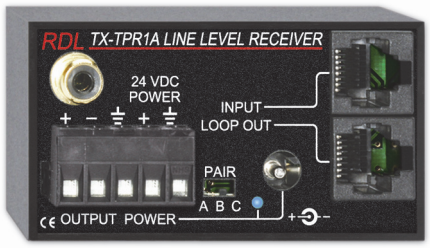
SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

maxTX™ SERIES TWISTED PAIR
Model TX-TPR1A
Format-A Single-Pair Receiver



- Single -10 dBV Unbalanced or +4 dBu Balanced Output
- Phono Jack and Detachable Terminal Block Outputs
- Switch Selects which Pair (A, B or C) Feeds the Output
- Signal and Power Pair Pass-Through to LOOP OUT Jack
- Powered Locally or Remotely through RJ45 Jack
- Fused Local Power Feeds all Modules Connected to RJ45s
- Local Power Input on Terminal Block or dc Power Jack
- Blue LED Indicates Module is Powered
- Daisy-Chain with Additional Format-A Receivers
- Studio-Quality Precision Active Balanced Circuitry

The TX-TPR1A is a single-pair audio receiving module compatible with RDL Format-A twisted pair products. It is built in the versatile Max-TX series enclosure. The durable adhesives provided with the TX-TPR1A permit permanent or removable mounting. The TX-TPR1A may be rack or surface mounted with optional TX™ series accessories.

APPLICATION: The TX-TPR1A is a single-pair audio receiving module compatible with RDL Format-A twisted pair products. A front-panel switch set during installation determines which of the three FORMAT-A pairs is buffered to feed the module output. The audio signal received from the selected pair of the RJ45 INPUT jack feeds the -10 dBV unbalanced RCA phono jack output and the +4 dBu balanced detachable terminal block output. A studio-quality buffer amplifier feeds the outputs at the correct operating level.

The TX-TPR1A is a single-pair receiver, bridging the input signal from the cable pair set on the front-panel switch during installation. Because this module receives only one cable pair, a LOOP OUT RJ45 jack is provided for connecting additional Format-A receivers. Two other single-pair receivers may be chained to the LOOP OUT jack, or a single two-pair receiver may be connected. In addition to completing the reception of signals from all three FORMAT-A pairs, additional receivers may be connected to the same twisted pair feed. The bridging input circuits used in all FORMAT-A twisted pair receivers allow connection of up to 10 receiver outputs for each cable pair. The possibility of multiple receiver locations adds enormous flexibility in the design of audio routing systems using RDL FORMAT-A products. The power pair and all three audio pairs are fed through from the INPUT jack to the LOOP OUT jack.

The TX-TPR1A may be powered directly from a 24 Vdc power supply using either the power jack or the detachable terminal block. Local power connected to the module is also fed to all modules connected to the INPUT and LOOP OUT RJ45 jacks. The TX-TPR1A may be remotely powered through the twisted pair cable from any other module, signal distributor or RDL power inserter connected to the same twisted pair cable. Module power is indicated by a front-panel LED.

RDL FORMAT-A features superior audio performance that rivals or exceeds shielded wiring. Design simplicity, ease of installation, unsurpassed flexibility, automatic fused power, exceptional hum rejection, low noise, and low distortion provide designers and installers the optimum choice in economical twisted pair products.

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SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

FORMAT-A™

max TX™ SERIES TWISTED PAIR
Model TX-TPR1A
Format-A Single-Pair Receiver

Installation/Operation

CE

EN55103-1 E1-E5; EN55103-2 E1-E4
Typical Performance reflects product at publication time exclusive of EMC data, if any, supplied with product. Specifications are subject to change without notice.

STEP 1: Connect 24 Vdc to the **POWER** input (terminals or jack) if this module is not being powered through the twisted pair cable from another module, or if this module is located an excessive distance from the next powered module on the cable. Note: The front-panel power LED will be illuminated if this module is powered. If this module is powering other modules through the cable and if there is a wiring short, the short must be cleared then power must be turned off to this module for 10 seconds to reset the internal protection circuit.

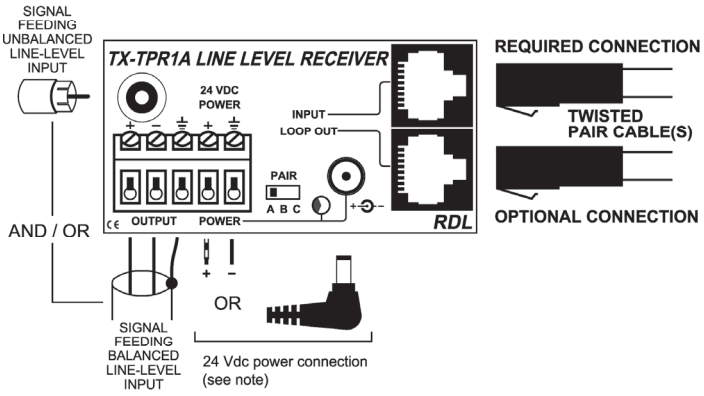
STEP 2: Set the **PAIR** selector so the module is receiving signal from the desired pair A, B or C of the Format-A cable.

STEP 3: Connect the **UNBAL OUT** jack to a -10 dBV equipment input, and/or connect the **BAL OUT** terminals to a +4 dBu equipment input.

STEP 4: Connect the **INPUT** twisted pair cable coming from Format-A senders or distributors.

STEP 5: Connect the **LOOP OUT** twisted pair cable feeding additional Format-A receiver(s), if any, and mount the module.

NOTE: Both audio outputs may be used simultaneously. Each output, balanced and unbalanced, is fed from the selected Format-A pair.



Connection from Single-Pair, Two-Pair or Three-Pair Senders (direct, or via an RDL Twisted Pair Power Inserter)

or

Connection from Format-A Distributor

or

Connection from other Format-A Receivers

Connection to additional Format-A Receiver(s)

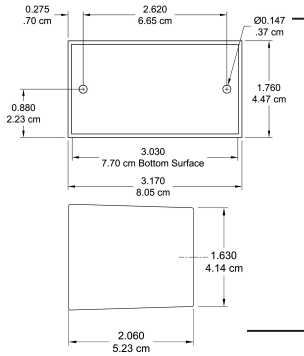
or

Connection to Format-A Receiver(s) via an RDL Twisted Pair Power Inserter

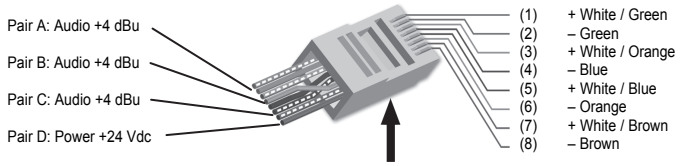
or

Connection to Format-A Distributor Input

NOTE: Connect a 24 Vdc power supply to the module if power is not being supplied through a twisted pair cable from a connected module.



RJ45 Standard wiring



Tab on bottom of connector

RJ45 conductor colors shown are for 568A standard. The 568B standard may be used if the connectors at both ends of the cable are wired identically.

Safety Instructions/Consignes de sécurité/
Instrucciones de seguridad/Sicherheitshinweise:

EU Importer:
Importateur de l'UE:
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EU-Importeur:

RDL Europe B.V.
Joan Muyskenweg 124
1114 AN Amsterdam

TYPICAL PERFORMANCE

Input:	RDL TP Format-A
Input Connection:	RJ45
Format-A Signal Pair Used:	Switch-selectable A, B, or C
Format-A Output:	RJ45 LOOP OUT
Outputs (2):	150 Ω Balanced; 1 kΩ Unbalanced
Output Connection:	Detachable Terminal Block (Bal); RCA (Unbal)
Output Level:	+4 dBu Bal., +22 dBu Max; -10 dBV Unbal
Frequency Response:	10 Hz to 50 kHz (+/- 0.1 dB).
THD+N:	< 0.005%
Noise below +4 dBu:	< 90 dB
Headroom above +4 dBu:	> 18 dB
CMRR:	> 80 dB (50 Hz to 150 Hz)
Indicator:	Power In
Power Connections (3):	Power Jack; Detachable Terminal Block; RJ45
Power Requirement:	24 Vdc @ 35 mA plus connected loads
Maximum Load Current:	165 mA
Dimensions:	3.17" (8.05 cm) W; 1.76" (4.47 cm) H; 2.06" (5.23 cm) D

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ACCESSORIES

Models **D SERIES-XLR3F**

XLR 3-pin Female Jack on Decora® Wall Plate

DB-XLR3F DS-XLR3F D-XLR3F

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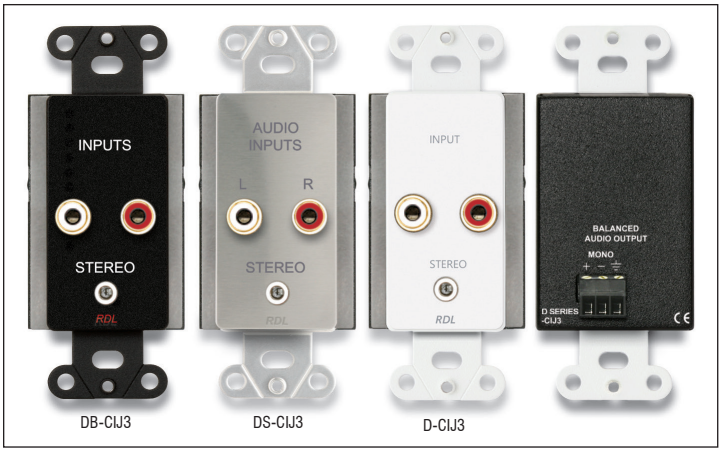
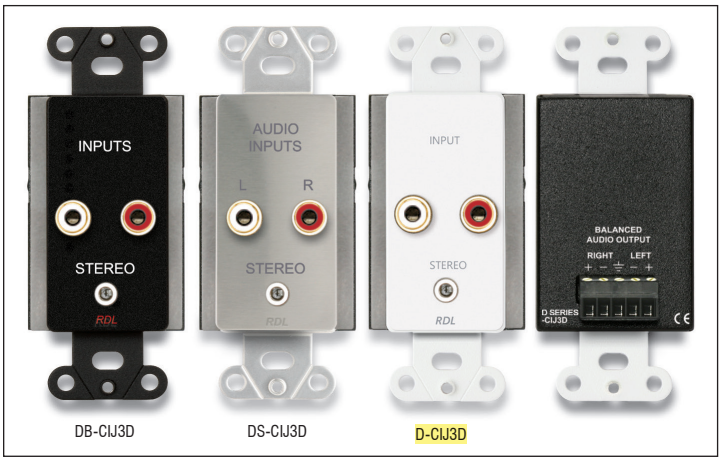
ACCESSORIES

Models **D-CIJ3, DB-CIJ3, DS-CIJ3**
Consumer Input Jacks – Mono

Models **D-CIJ3D, DB-CIJ3D, DS-CIJ3D**
Consumer Input Jacks – Stereo

- Stereo Inputs to Stereo Outputs (D SERIES-CIJ3D)
- Stereo Inputs to Mono Output (D SERIES-CIJ3)
- Stereo Inputs on RCA Jacks and Stereo Mini-Jack
- Unbalanced to Balanced Conversion Without Gain
- Transformer Isolation for Unbalanced Line Inputs
- Hum Cancellation on Unbalanced Line Inputs
- Line-Level Output to Feed 10 k Equipment Inputs
- Output Connections on Detachable Terminal Block
- Mix Stereo Inputs to Mono Balanced (D SERIES-CIJ3)
- Available in Stainless Steel, Black and White





D SERIES-CIJ3: The -CIJ3 is the ideal choice in installations requiring the passive mixing of two unbalanced line-level audio sources to feed a mono balanced (or unbalanced) audio line.

The -CIJ3 is a complete unbalanced line-level audio input module. The front panel features two gold plated phono jacks and a single stereo mini-jack, intended for mono or stereo consumer level sources. An input signal may be connected to either the phono jacks or to the mini-jack. The left and right signal inputs are combined and balanced through audio transformers configured to reject induced hum. A mono line-level output is provided on the rear-panel detachable terminal block for connection to a 10 kΩ or higher input impedance line-level module or equipment input.

D SERIES-CIJ3D: The -CIJ3D is the ideal choice in installations requiring stereo unbalanced line-level audio sources to feed stereo balanced (or unbalanced) audio lines.

The -CIJ3D is a complete unbalanced line-level audio input module. The front panel features two gold plated phono jacks and a single stereo mini-jack, intended for mono or stereo consumer level sources. An input signal may be connected to either the phono jacks or to the mini-jack. The inputs are balanced through audio transformers configured to reject induced hum. A stereo line-level output is provided on the rear-panel detachable terminal block for connection to 10 kΩ or higher input impedance line-level module or equipment inputs.

Wherever consumer format audio signals need to be connected to a professional audio system, the -CIJ3 and -CIJ3D are the ideal choices. Use them individually or in conjunction with other RDL products as part of a complete audio/video system.

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Installation/Operation

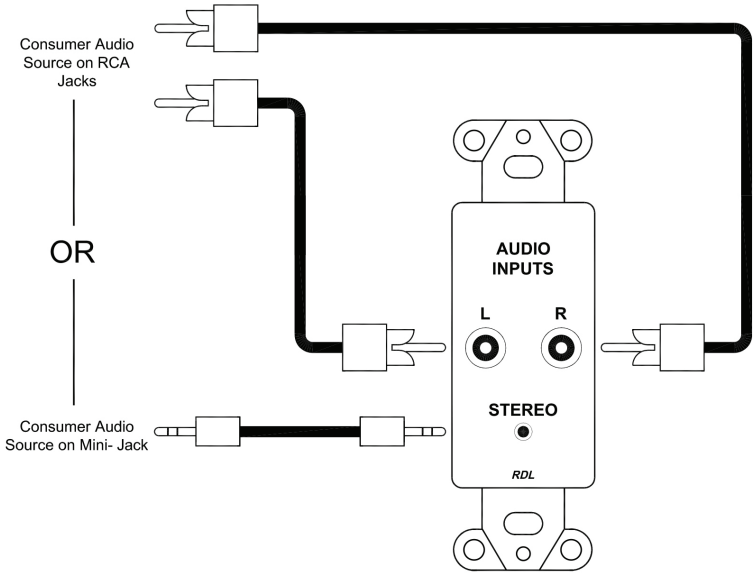
Declaration of Conformity available from rdlnet.com.
Sole EMC specifications provided on product package.
Specifications are subject to change without notice.

ACCESSORIES

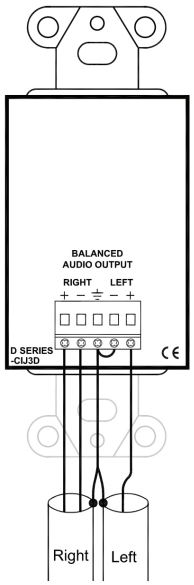
Models **D-CIJ3, DB-CIJ3, DS-CIJ3**
Consumer Input Jacks – Mono

Models **D-CIJ3D, DB-CIJ3D, DS-CIJ3D**
Consumer Input Jacks – Stereo

AUDIO INPUT CONNECTIONS



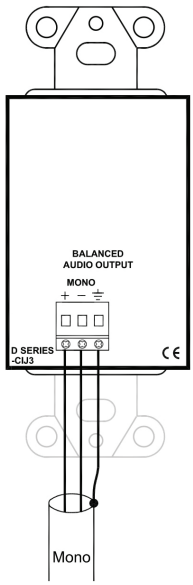
AUDIO OUTPUT CONNECTIONS



Balanced Connection to Bridging Equipment Input

Unbalanced Connection to Hi-Z Equipment Input

Each channel may be connected balanced or unbalanced.



Balanced Connection to Bridging Equipment Input

The output may be connected balanced or unbalanced.

TYPICAL PERFORMANCE

Input connectors (3):	Phono jacks with gold contacts (Left and Right), Mini-jack 3.5 mm (Stereo)		
Frequency response (line level):	50 Hz to 20 kHz (±1 dB); 30 Hz to 20 kHz (±2 dB)		
Crosstalk (D SERIES-CIJ3D):	<-80 dB (1 kHz); <-60 dB (10 Hz to 20 kHz)		
THD:	<0.2% (1 kHz)		
Output connector:	Detachable terminal block		
Dimensions:	Height:	4.13 in.	10.49 cm
	Width:	1.7 in.	4.32 cm
	Depth:	2.15 in.	5.47 cm
Mounting Box Minimum Dimensions:	Width:	1.80 in.	4.57 cm
	Depth:	1.75 in.	4.45 cm

Safety Instructions/Consignes de sécurité/
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SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

POWER SUPPLIES

Model PS-24AS
24 Vdc Switching Power Supply, North American AC Plug, 500 mA, dc Plug

TYPICAL PERFORMANCE

- Input: 100 to 240 VAC.
- Output: 24 Vdc, 500 mA (UL, CSA).
- Dimensions: 1.80 in. (4.6 cm) x 2.76 in. (7 cm) x 1.37 in. (3.8 cm), nominal.
- Efficiency: ENERGY STAR Level IV.

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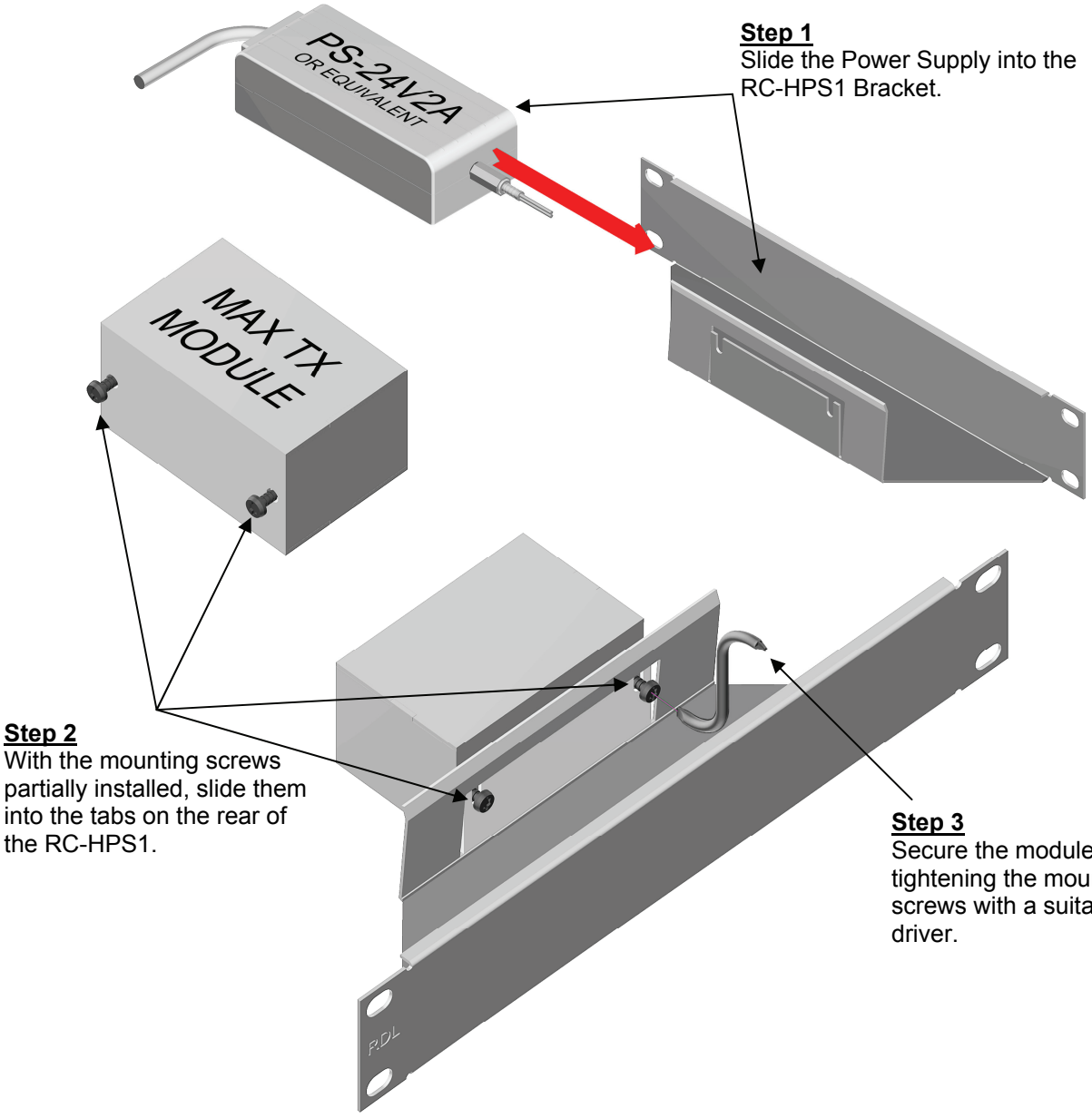
SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

ACCESSORIES

Model RC-HPS1
Power Supply Chassis

Installation/Operation

CE EN55103-1 E1-E5; EN55103-2 E1-E4
Typical Performance reflects product at publication time exclusive of EMC data, if any, supplied with product. Specifications are subject to change without notice.



Step 1
Slide the Power Supply into the RC-HPS1 Bracket.

Step 2
With the mounting screws partially installed, slide them into the tabs on the rear of the RC-HPS1.

Step 3
Secure the module by tightening the mounting screws with a suitable driver.

TYPICAL PERFORMANCE

Capacity:	Compatible with all RDL desktop power supplies and with any desktop power supply with maximum dimensions: 5.8” (14.7 cm) x 3” (7.6 cm) x 1.7” (4.3 cm)
Material:	18-guage
Finish:	RDL Black

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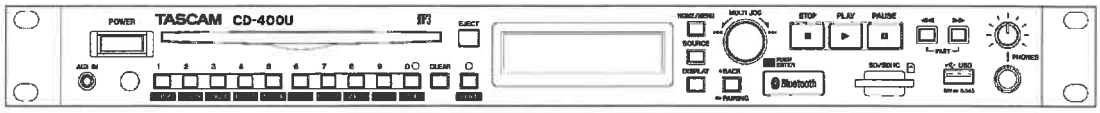
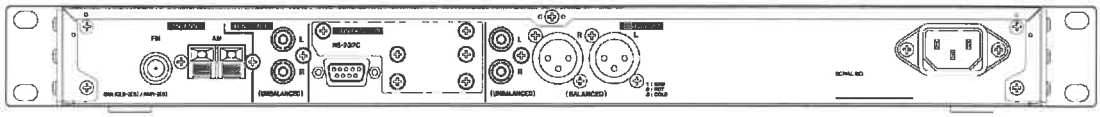
May, 2018

Product Spec Sheet

CD/MEMORY PLAYER

CD-400U





■ Specifications

Ratings

•Supported media

CD, CD-R* (only CD-DA format), CD-RW (12 cm, ISO 9660 LEVEL 1/2/JOLIET) (multi-session and CD text not supported)
SD cards* (512 MB – 2 GB)
SDHC cards* (4 GB – 32 GB)
USB flash drives* (512 MB – 64 GB)
* Media must be formatted FAT16/32.

•Playback file formats

CD-DA:	44.1 kHz, 16-bit stereo
WAV*:	44.1/48 kHz, 16-bit (LPCM SD card/USB flash drive)
MP3*:	44.1/48 kHz, 32-320 kbps, VBR (MPEG1/2 Audio Layer-3, data CD/SD card/USB flash drive)
AAC*:	44.1/48 kHz, 8-320 kbps, VBR (MPEG4 AAC-LC (Audio stream), DRM not supported, SD card/USB flash drive)
WMA*:	44.1/48 kHz, 32-320 kbps, VBR (WMA ver.9 standard, DRM not supported, data CD/SD card/USB flash drive)

* File/folder specifications are as follows.
Maximum file size: 2 GB
Maximum number of files: 300 (including folders)
Maximum number of files in a single folder: 100
Maximum number of folders: 50
Maximum number of folder levels: 16 (The full path, including the file name, must not exceed 260 characters.)

•Number of channels

2 channels (stereo)
1 channel (mono)

•Dubbing file formats

MP3:	44.1 kHz, 96/128/192/320 kbps (96/128/192 kbps with tuner)
Maximum file size:	2 GB

Inputs and outputs

Analog audio input and output ratings

•AUX IN jack (front panel)

Connector:	3.5 mm stereo mini jack
Nominal input level:	−20 dBV (0.1 Vrms)
Maximum input level:	−4 dBV (0.63 Vrms)
Input impedance:	10 kΩ or higher

• Analog output (balanced) jacks

Connectors:	XLR-3-32 (1: GND, 2: HOT, 3: COLD)
Rated output level:	+4 dBu (1.23 Vrms, when analog output level setting **OFF**)
Maximum output level (switchable):	+20 dBu (7.75 Vrms, when analog output level setting **OFF**)
Output impedance:	100 Ω

• Analog output (unbalanced) jacks

Connectors:	RCA pin jacks
Rated output level:	−10 dBV (0.316 Vrms, when analog output level setting **OFF**)
Maximum output level (switchable):	+6 dBV (2.0 Vrms, when analog output level setting **OFF**)
Output impedance:	200 Ω

• TUNER OUTPUTS (UNBALANCED) jacks

Connectors:	RCA pin jacks
Rated output level:	−10 dBV (0.316 Vrms)
Maximum output level:	+6 dBV (2.0 Vrms)
Output impedance:	200 Ω

• Phones jack

Connector:	6.3 mm (1/4″) standard stereo jack
Maximum output:	20 mW + 20 mW or higher (THD+N 0.1% or less, into 32 Ω load)

Control input/output

• RS-232C connector

9-pin D-sub (female, inch-standard)

Audio performance

• Frequency response

20 Hz – 20 kHz: ±1.0 dB (when 44.1/48 kHz sampling frequency, CD/SD/USB playback to Analog outputs, JEITA)

• Distortion

0.005% or less (when CD/SD/USB playback to Analog outputs, JEITA)

• S/N ratio

95 dB or higher (when CD/SD/USB playback to Analog outputs, JEITA)

• Dynamic range

90 dB or higher (when CD/SD/USB playback to Analog outputs, JEITA)

• Channel separation

90 dB or higher (when CD/SD/USB playback to Analog outputs, JEITA)

Bluetooth

Bluetooth version: 4.2

Output class:	2 (about 10 m* unobstructed transmission distance)
Supported profiles:	A2DP, AVRCP 1.0
Supported A2DP codecs:	SBC, AAC, aptX
Supported A2DP content protection:	SCMS-T

* The transmission distance is only an estimate and might vary depending on the surrounding environment and radio wave conditions.

Tuner

• Frequency range

US model

FM:	87.5 MHz to 108.0 MHz
AM:	520 kHz to 1,720 kHz

Other models

FM:	87.5 MHz to 108.0 MHz
AM:	522 kHz to 1,629 kHz

•Antenna connectors

FM:	F-type (female)
AM:	2-pin push terminal

Other

•Power
AC100-240 V, 50/60 Hz

•Power consumption
20 W

•Dimensions
482.8 × 46.5 × 297.1 mm (W x H x D)

•Weight
3.3 kg

•Operating temperature range
5°C – 35°C

•Permitted installation tilt
30° or less

■ Dimensional drawings

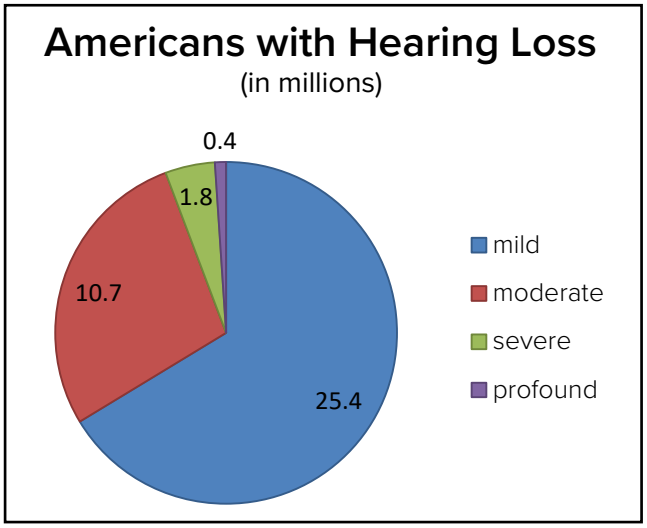
ASSISTIVE LISTENING SYSTEMS AND THE AMERICANS WITH DISABILITIES ACT

What Makes Hearing Hard?

Around 23% of Americans over the age of 12 have hearing loss. By 2030, 44 million Americans age 65+ Americans will experience hearing loss by 2030.

Hearing damage is also occurring at younger ages. Listening to loud music with ear buds, and going to loud concerts all plays a part in the contribution of noise-induced hearing loss.

There are different levels of hearing loss, from mild hearing loss (where only a few decibels of sound are not heard) to profound (where the majority of sound is not heard).



But hearing loss does not just mean losing the ability to hear certain sounds. There is a difference between the ability to hear and intelligibility – the ability to understand what you hear.

Intelligibility can be affected by:

- Poor Room Acoustics
- Background Noise
- Distance from the Sound Source

Hearing Assistance

Intelligibility can be improved by using assistive listening systems (ALS). An ALS is a sound amplifying device that can bring sounds closer to a listener, such as by broadcasting sound from a stage to a headset.

Many people are unaware of these devices, but 67% of those surveyed say they would use some form of hearing assistance if it was provided.

Hearing assistance devices are required to be provided in many public venues according to the Americans with Disabilities Act (ADA).

The ADA

The Americans with Disabilities Act (ADA) provides protections to individuals with disabilities in many areas, including public accommodation and commercial facilities. The ADA incorporates the Americans with Disabilities Guidelines developed by the United States Access Board (a federal agency committed to accessible design).

The ADA ensures that a building (and any services provided there) are equally accessible to everyone, including those with hearing loss.

Who Must Be Compliant?

If audible communication is important to the use of the space, an ALS must be provided. ALS are **not** required where audio amplification is not provided, unless the area is a courtroom. ADA-compliant ALS are required when there is:

- Public use of the facility
- Use of an installed P.A. system
- Speech or sound is integral to the use of the space
- New facilities or a building are constructed
- Major retrofit, or renovation of more than 65% of a venue

Hearing assistance is required to be available in any of a ADA-compliant building's assembly areas.

Assembly Areas

An assembly area is defined as any part of building or facility that is used for the purpose of entertainment, education, civic gatherings, or similar purposes. An assistive listening systems (ALS) must be provided in each assembly area where sound is important.

Specific assembly areas that require ALS include, but are not limited to: classrooms, public meeting rooms, legislative chambers, auditoriums, theatres, concert halls, amphitheaters, stadiums, grandstands, or convention centers.

Signs informing patrons of ALS availability are also required in each assembly area, unless there is a ticket office or ticket windows. If there are, signs can be displayed at each ticket office or ticket window.

Note: The ADA does not cover private clubs and entities that are operated and controlled by religious organizations. However, many houses of worship make ALS available to their congregants, not as a matter of law but as a service, and club facilities used by other organizations must provide ALS for meetings and performances.

ALS Technologies

Several forms of assistive listening systems (ALS) can be used to improve someone's understanding of audio and meet ADA standards. ALS are categorized by their mode of transmission.

There are several types of wireless systems:

- FM Transmission Systems

- Infrared Systems

- Induction Loop Systems

- Digital Communication Systems

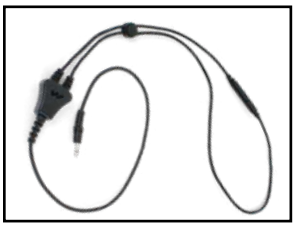
Each system has different advantages and disadvantages that determine which system is best for a given application. Selecting or specifying an effective ALS for a large or complex venue requires assistance from a professional sound engineer.

For example, an FM system may be better than an infrared system in open-air venues, since infrared signals are less effective in sunlight.

For help deciding which system will work best for a certain project, Williams Sound offers a product picker on our website.

Users of the ALS listen to the audio through receivers. Receivers may output to a pair of headphones or earbuds, or to the user's hearing aid.

T-Coil Enabled Receivers



Many hearing aids are telecoil (t-coil) enabled, allowing sound to be transmitted directly to the hearing aid. Receivers that are hearing-aid compatible will broadcast to the t-coil in hearing aids through a neckloop.

Number of Receivers

The number of receivers required in each assembly area is determined by the venue's size:

Seating capacity of assembly area	Min.#of required receivers	Min.# of hearing-aid compatible receivers
50 or less	2	2
51 to 200	2, plus 1 per 25 seats over 50 seats*	2
201 to 500	2, plus 1 per 25 seats over 50 seats*	1 per 4 receivers*
501 to 1000	20, plus 1 per 33 seats over 500 seats*	1 per 4 receivers*
1001 to 2000	35, plus 1 per 50 seats over 1000 seats*	1 per 4 receivers*
2001+	55 plus 1 per 100 seats over 2000 seats*	1 per 4 receivers*
Rules differ in California.		*or fraction thereof.

At least 25% of receivers provided (but no fewer than two) must be hearing-aid compatible.

If all seats are served by an induction loop ALS, the minimum number of hearing-aid compatible receivers are not required to be provided because a loop can broadcast directly to a hearing aid.

If a building contains more than one assembly area owned by one management, the total number of required receivers can calculated according to the total number of seats in the assembly areas of the building.

For help calculating the amount of receivers needed for a specific project, Williams Sound offers an ADA Calculator on our website.

Complaints

An individual can file a complaint when a business is not ADA compliant. When that happens, the Department of Justice (DOJ) is contacted and will notify the venue owner of non-compliance. The DOJ will allow an amount of time for the business to become compliant. If the venue doesn't comply, a lawsuit may be filed in a Federal Court.

Why Williams Sound?

Williams Sound has been helping companies with their assistive listening needs since 1976.

- We have a variety of product offerings to meet the unique demands of each venue.
- We offer technical design implementation support.
- We create innovative products that are competitively priced.
- Many of our products are made in the USA.

To learn more about our ALS products, and for tools such as an ADA required receiver calculator, visit williamssound.com.

If you need help meeting your ADA requirements, contact us today by calling 800-843-3544 (US) or 1-952-943-2252 (international).

WILLIAMS AV
info@williamssound.com / www.williamssound.com
800-843-3544 / INTL: +1-952-943-2252

WILLIAMSAV

SPECIFICATION DATA

FM 558 Systems

FM 558 systems are complete turnkey solution that include both FM and Wi-Fi transmission from the same box.

The FM R38 is a multi-channel FM receiver with a high-resolution OLED screen. The receiver comes with earphones and batteries, but is otherwise identical to the PPA R38. The R38 offers a quick view of receiver status and immediate entry to all user settings. On-screen channel selection with easy access to 17 pre-set, wide-band frequencies (72-76 MHz). The system is expandable, accommodating any number of listeners. This system complies with 2010 ADA guidelines for hearing assistance all for nearly the same cost as traditional FM systems.

NOTE: The FCC requires this device to be used with approved, FCC 15.203 compliant antennas and be professionally installed. Refer to Williams AV's 72 MHz Antenna Selection Install Guide for compliant antennas for this product.

Systems

FM 558	(1) FM T55 transmitter (4) PPA R38N receivers (4) EAR 022 surround earphones (2) NKL 001 neckloops (1) IDP 008 ADA wall plaque
FM 558 PRO	(1) FM T55 transmitter (4) PPA R38N receivers (4) EAR 022 surround earphones (2) NKL 001 neckloops (2) BAT KT6 two-bay chargers and rechargeable batteries (1) ANT 005 remote coaxial antenna (1) IDP 008 ADA wall plaque (1) RPK 005 rack panel kit
FM 558 PRO D	(1) FM T55 D transmitter (4) PPA R38N receivers (4) EAR 022 surround earphones (2) NKL 001 neckloops (2) BAT KT6 two-bay chargers and rechargeable batteries (1) ANT 005 remote coaxial antenna (1) IDP 008 ADA wall plaque (1) RPK 005 rack panel kit
FM 558-12	(1) FM T55 transmitter (12) PPA R38N receivers (12) EAR 022 surround earphones (3) NKL 001 neckloops (1) IDP 008 ADA wall plaque
FM 558-12 PRO	(1) FM T55 transmitter (12) PPA R38N receivers (12) EAR 022 surround earphones (3) NKL 001 neckloops (1) CHG 3512 12-bay charger (12) BAT 026-2 AA NiMH rechargeable batteries (1) ANT 005 remote coaxial antenna (1) IDP 008 ADA wall plaque (1) RPK 005 rack panel kit
FM 558-12 PRO D	(1) FM T55 D transmitter (12) FM R38N receivers (12) EAR 022 surround earphones (3) NKL 001 neckloops (1) CHG 3512 12-bay chargers (12) BAT 026-2 AA NiMH rechargeable batteries (1) ANT 005 remote coaxial antenna (1) IDP 008 ADA wall plaque (1) RPK 005 rack panel kit
FM 558-24	(1) FM T55 transmitter (24) PPA R38N receivers (24) EAR 022 surround earphones (6) NKL 001 neckloops (1) IDP 008 ADA wall plaque
FM 558-24 PRO	(1) FM T55 transmitter (24) PPA R38N receivers (24) EAR 022 surround earphones (6) NKL 001 neckloops (2) CHG 3512 12-bay chargers (24) BAT 026-2 AA NiMH rechargeable batteries (1) ANT 005 remote coaxial antenna (1) IDP 008 ADA wall plaque (1) RPK 005 rack panel kit
FM 558-24 PRO D	(1) FM T55 D transmitter (24) PPA R38N receivers (24) EAR 022 surround earphones (6) NKL 001 neckloops (2) CHG 3512 12-bay chargers (24) BAT 026-2 AA NiMH rechargeable batteries (1) ANT 005 remote coaxial antenna (1) IDP 008 ADA wall plaque (1) RPK 005 rack panel kit

FM T55

Dimensions	8.45” W x 8.25” D x 1.72”H (21.5 cm x 21 cm x 4.4 cm)
Weight	Transmitter: 3.2 lbs (1.45 kg)
Color	Black/Silver with silver legends on the front, white legends on the back
Rack Mount	Standard 19” Rack, one EIA rack space high, 1/2 space wide 1–2 units can be mounted in a single rack space with optional RPK 005 (single) or RPK 006 (double) Rack Mount Kits
Power Supply	Desktop Style Transformer (TFP 062); Input: 100-240 VAC, 50/60 Hz. IEC Line Cord; Output: 24 VDC, 750 mA, 18W. 2.5mm ID center positive barrel connector
Power ON Indicator	Push On/Push Off latching power button, backlit green indicates power ON, backlight off indicates power OFF, fading from bright to dark indicates Sleep Mode.
Temperature Range	Operating: +32° F to +122° F (0° C to 50° C); Storage: -4° F to +158° F (-20° C to 70° C)
Ethernet	RJ-45 on back of unit supports CAT 5e cable lengths up to 328 feet (100 meters); 10/100 Base-T IEEE 802.3 compliant, unique MAC address
Dante	Only available on FM T55 D
User Interface	3.12” High Resolution OLED display with selections via buttons. Hosted Web page. Remote control and monitoring.
RF Section	
Operating Frequencies	72.1-75.9 MHz , 17 wideband channels (selectable)
Frequency Accuracy	± 2 ppm stability, 0-50˚ C
Deviation	± 75 kHz maximum
Pre-Emphasis	75 µsec
RF Field Strength	Does not exceed 80 mV/m at 3 m
Compatible Antennas	ANT 005, ANT 021, ANT 024, ANT 025, ANT 028, or ANT 034 *Refer to Williams AV’s **72 MHz Antenna Selection Install Guide** for FCC-compliant antennas for this product.*
Transmission Range	Up to 1000 ft (304 m) with ANT 005 coaxial antenna mounted on rear chassis connector
RF Outputs	(1x) #10-32 stud connector in center of unit (pcb mounted) (1x) F-connector on rear chassis
RF Transmit Indicator	1 Green LED On Air Indicator
RF Power	Full, Medium, Low or OFF indiacted by menu icon.
RF Time Out (sleep mode)	30 min. duration, 4 hr. duration, or Always On selected via menu. Starts when audio is below -18 dB level with no button pressed for selected duration.
Audio Section	
Audio Processor Functions	DSP based; Compression: 1:1, 1.5:1 or 2:1; High-pass and Low-pass Filter Frequency control, Music, Voice and Hearing Assistance Audio Presets
Frequency Response	31-16000 Hz, ±3 dB (re: 1 kHz, ±3 dB) (“Music” Audio Preset)
Signal-to-Noise Ratio	67 dB (typical) Transmited RF

Total Harmonic Distortion	Less than 0.25% @ 1 kHz (RF output)		
Common Mode Rejection	>57 dB @ 1 kHz, Mic or Line		
Audio Inputs	(1x) Combination 3-pin XLR, 1/4" (TRS) jack for balanced or unbalanced line level, or balanced or unbalanced microphone with selectable phantom power		
Audio Input Gain Adjust	In menu, adjustable to 0 to -50 dB, in 1dB steps		
Phantom Power	14.4 VDC applied through 2.2 kΩ resistors to analog combo jack: Pin 2 and Pin 3 on XLR jack, or tip and ring on 1/4" TRS jack		
Audio Level Indicators	10-LED array that reads -18 to +9 dB at 3 dB intervals. 7 Green, 2 Amber, and 1 red LED. Green LEDs indicate normal operating audio level peaks, Amber LEDS indicate close to overload peaks, Red LED indicates overload peaks		
Headphone Output	1/4" TRS stereo jack, mono signal, 14.85 mW at +9 dB, maximum in 33 Ω (level adjustable in menu 0 to -40 dB in 2 dB steps)		
Line Output	RCA jack (black), -10 dBV (.32 VRMS); Output impedance 100 Ω at +9 dB		
Input Levels (Bal or Unbal) (at Audio Input Gain = 0dB)	Nominal (1st Amber LED)	**Overload Warning (Displayed On Screen)**	**Absolute Max. Rating***
Microphone	-55 dBV (1.7 mV RMS)	-22 dBV (80 mV RMS)	+20 dBV (10.0 V RMS)
Line	-25 dBV (55 mV RMS)	+16 dBV (6.3 V RMS)	+20 dBV (10.0 V RMS)
Approvals	FCC, RoHS3, WEEE, Industry Canada		
Warranty	2-year parts and labor		

NOTE: Specifications are subject to change without notice.

* Stresses above these ratings may cause permanent damage or degrade reliability.

ANT 005

Connector type	F-connector
Cable type	RG 59 coax
Nominal Impedance	75 Ohm
Total Cable Length	22 ft
Active Antenna Length	80 in

CHG 3502 *(Included in BAT KT6)*

Dimensions:	4-7/8” x 3-7/8” x 2” (12.4 cm x 9.8 cm x 5.1 cm) (LxWxH)
Shipping Weight:	1.1 lbs (0.5 kg)
Enclosure:	Black, ABS plastic
Charger Power:	Input: 6 VDC, 300 mA, Center Positive Output: 100 mA per bay
Power Supply:	Williams AV TFP 041 Input: 100-240 VAC 50-60Hz, 0.5-0.3 A Output: 6 VDC, 1.5A
Charging Time:	16 hours nominal, based on Williams AV BAT 026-2 NiMH battery
Unit Capacity:	2 Units
Indicators:	2 Red LEDs - one for each bay. LEDs are lit when charging.
Warranty:	1-year
Approvals:	CE, FCC, RoHS

CHG 3512

Size	9.5”L x 7.4”W x 1.7”H (24.1 cm L x 18.8 cm W x 4.3 cm H)
Weight	1.2 lbs (.54 kg), excluding power supply
Color	Black ABS
Power Supply Input	90 - 240 VAC input
Power Supply	TFP 037 Switching AC adapter, 5 VDC - 4A output
Charging Rate	16 Hour Charge: 140 mA Pulse/Maintain: 140 mA
Charging Time	16 hours nominal
Unit Capacity	12 Units
Indicators	Individual Charging Indicators: Red LEDs. LEDs blink when batteries are charged
Warranty	1 year (cables and power supply warrantied for 90 days)
Approvals	CE, WEEE, RoHS

EAR 022

Style	Around-ear speaker

Plug	3.5mm mono
Cord	39”
Driver Size	23 mm
Nominal Impedance	32Ω
Freq. Response	20 - 20kHz
Weight	15g
Max Power Input	30 mW
Sensitivity	118 dB @ 1kHz

IDP 008

Size	10-3/8” (L) x 6-¼” (W) x 1/8” (H)

PPA R38

Dimensions:	4.1” x 2.85” x 1.38” (104 x 72 x 35mm)
Weight:	4.6oz (130g) with batteries. 2.6oz (73g) without batteries
Color:	Black/Silver. Black ABS Plastic case with Aluminum faceplate.
Battery Type:	(2) AA Alkaline or (2) AA NiMH Rechargeable
Battery Life:	(2) AA non-rechargeable alkaline batteries (BAT 001-2), approx. 50 hrs (2) AA rechargeable NiMH batteries (BAT 026-2), 1500mAh, approx. 32 hrs
Current Consumption:	47mA nominal at 2.4VDC
Operating Temp. Range:	32° – 122°F (0° to 50°C)
Channels:	17 Wideband, accessed via menu
Operating Frequencies:	72.1, 72.2, 72.3, 72.4, 72.5, 72.6, 72.7, 72.8, 72.9, 74.7, 75.3, 75.4, 75.5, 75.6, 75.7, 75.8, 75.9 MHz*
FM Deviation:	75 kHz
De-Emphasis:	75 µS
Display Screen:	1” OLED
Power Indication:	Power button, backlit green. Good battery strength - glows solid. Low battery - slow flashes. Error - fast flashes with 1 sec delay.
Sensitivity:	2 µV at 12 dB Sinad with squelch defeated
Input Overload:	100 mV
Frequency Response:	200 Hz – 15 kHz, ±3dB
Modulation:	FM, +/- 75 kHz peak deviation

Signal-to-Noise Ratio:	Minimum 65 dB @ 1.0V
Receive Antenna:	Integral with earphone/headphone cord
Audio Output:	35 mW max at 16 Ω
Headphone Connector:	3.5 mm stereo jack, mono output for stereo or mono earphones, headphones, or neckloops
Power Save - Display Off/ Sleep Mode/Auto-Off:	**Display Off:** 5, 30, or 60 seconds of no button pushes (adjustable in menu) **Sleep Mode:** 6 mins of no RF signal or button pushes; wakes up with RF Signal or any button push **Auto Off:** 2 hours of no RF signal or button pushes
Soft Audio Turn-On:	Upon Power ON or Channel Change, mutes audio, then ramps up 1 numeric step per 1/10th second until set volume is reached
Approvals:	FCC, Industry Canada, RoHS, WEEE
Warranty:	Lifetime PLUS Limited Warranty, 90 Days on most accessories.

Wireless Access Point

Dimensions	9.3” x 7” x 1.65” (236cm x 178cm x 42cm)
Weight	1.8 lbs. (0.82 kg)
Standards Compliance	2.4GHz: IEEE802.11n, IEEE802.11g, IEEE 802.11b; 5.xGHz: IEEE 802.11n, IEEE 802.11a; 802.11ac IEEE802.3, IEEE802.3u, IEEE802.3ab
Interface	One 10/100/1000M WAN Port (Auto MDI/MDIX); Four 10/100/1000M LAN Ports (Auto MDI/MDIX); One USB 3.0 Port
Antenna	Four 5dBi Detachable Omni-Directional Antennas
Power	Input: 12VDC @ 3A
Max Power Consumption	35W
Wireless Speed	2.4GHz: 1000Mbps; 5GHz: 2167Mbps
Frequency	Concurrent 2.4GHz and 5GHz
Wireless Security	WPA/WPA2-PSK, WPA/WPA2, AES
Warranty	Three (3) year, parts and labor
Approvals	CE, FCC, RoHS, IC, RCM

NL4MDXX-H-2

This connector is fully compliant to the device standard IEC 62368-1, due to its component certification according to IEC 61984.

4 pole chassis connector, black D-size flange, mirrored self tapping screw holes (A-screw), horizontal PCB mount.

The speakON panel mount connectors are the standard chassis connectors for loudspeaker / amplifier interconnections. They feature a unique metal locking system, making contact only once fully locked. The speakON receptacles are robust, versatile and easy to terminate.

Features & Benefits

- IEC 61984 certified > IEC 62368-1 compliant
- Glass reinforced V-0 materials make it extremely robust and dependable
- Precise keyway for secure mating
- Accurate twist lock latching system
- Metal insert in locking area

Technical Information

Product	
Title	NL4MDXX-H-2
Gender	male

NEUTRIK

Electrical	
Contact resistance	≤ 2 mΩ
Dielectric strength	2.8 kVac
Insulation resistance	>0.1 GΩ (after dampheat)
Rated current per contact	25 A rms continuous (audio rating significantly higher, depending on signal)
Rated voltage	250 V ac
Attention	speakON is NOT to be used as an AC mains or power supply connector!

Mechanical	
Lifetime	> 5000 mating cycles
Wiring	Horizontal PCB mount
Locking device	Quick Lock
Mounting direction	Rear mounting
Chassis shape	D
Layout	Mirrored hole position, self tapping screw holes (A-Screw)

Material	
Contact plating	Ag
Locking element	Stainless Steel
Shell	Polyamide (PA 6.6)
Contacts	Copper Alloy

Environmental	
Flammability	UL 94 V-0
Temperature range	-30 °C to +80 °C

Detailed Specifi ation & Technical Data

WEST PENN WIRE Since 1971
AV, SECURITY & NETWORKING SOLUTIONS

227BK1000

2 Conductor 12AWG Unshielded CL3R Rated
Audio, Control, and Low Voltage Power

Construction & Dimenstions

CONDUCTOR PARAMETERS	-
Number Of Conductors	2
AWG Size	12
Conductor Stranding	19x25
Conductor Type	Bare copper
Nominal DCR	1.7 Ohm/1000ft
Cabling Lay Length	4.5 in
Twists / Foot	2.7 twist/ft
INSULATION PARAMETERS	-
Insulation Type	PVC
Insulation Thi kness	0.012 in
Insulation Color Code	1. Black 2.White
SHIELDING PARAMETERS	-
Shield Type	None
ELECTRICAL CHARACTERISTICS	-

Overall Construction

OVERALL CONSTRUCTION PARAMETERS	-
Jacket Type	PVC
Jacket Thi kness	0.017 in
Nominal Cable O.D.	0.264 in
Plenum	No
NEC UL Rating	CL3R, FPLR
RoHS Compliant	Yes
Pull Tension	152 lbs
Bend Radius	2.376 in
Cable Weight	61 lbs

Overall Electrical & Optical Characteristics

OVERALL ELECTRICAL/OPTICAL CHARACTERISTICS	-
UL Flammability	UL1666 Vertical Shaft
Operating Range	-20 to 60 Deg C
UL Voltage Rating	300

227BK1000

Related Products

RELATED PRODUCTS	-
Plenum Number	25227B
Aquaseal Direct Burial Number	AQ227
SpeakOn Panel Mount	CN-NL4MP

25244B

18/4 UTP CMP
Audio, Control, and Low Voltage Power

Construction & Dimensions

CONSTRUCTION & DIMENSIONS	
CONDUCTOR PARAMETER	
• Number of Conductors	4
• AWG Size	18
• Conductor Stranding	7x26
• Conductor Type	Bare copper
• Nominal DCR	6.2 Ohm/1000ft
• Cabling Lay Length	3.5 in
• Twists/Foot	3.4 twist/ft
INSULATION PARAMETER	
• Insulation Type	Plenum PVC
• Insulation Thi kness	0.008 in
• Insulation Color Code	1.Black,2.Red,3.White,4.Green
SHIELDING PARAMETER	
• Shield Type	None
ELECTRICAL CHARACTERISTICS	

Overall Construction

OVERALL CONSTRUCTION PARAMETERS	
Jacket Type	Flexible Plenum
Jacket Thi kness	0.015 in
Nominal Cable O.D.	0.18 in
Plenum	Yes
NEC UL Rating	CMP
RoHS Compliant	Yes
Pull Tension	80 lbs
Bend Radius	1.61 in
Cable Weight	32 lbs

Overall Electrical & Optical Characteristics

OVERALL ELECTRICAL/OPTICAL CHARACTERISTICS	
UL Flammability	NFPA 262 Plenum
Operating Range	-0 to 60 Deg C
UL Voltage Rating	300

WEST PENN WIRE Since 1971
AV, SECURITY & NETWORKING SOLUTIONS

25244B

18/4 UTP CMP
Audio, Control, and Low Voltage Power

Related Products

RELATED PRODUCTS	
Non Plenum Number	244
Aquaseal Direct Burial Number	AQ244

Technical Data Sheet
Communication Cables

WEST PENN WIRE

2833 West Chestnut Street
Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER: **291**

DESCRIPTION: 22/2 Stranded bare copper conductors, shielded with an overall jacket.

NEC RATING: CMR, NEC Article 800

APPROVALS: (UL) C(UL) Listed or c(ETL)us Listed

APPLICATION: Indoor for: Intercom, Security, Sound, Audio, Background Music, and Power Limited Control Circuits.

Construction Parameters:

Conductor	22 AWG Bare Copper
Stranding	7x30
Insulation Material	PVC
Insulation Thickness	0.007" Nom.
Number of Conductors	2
Shield	100% Aluminum Polyester Foil
Drain	Stranded Tinned Copper
Jacket Material	PVC
Jacket Thickness	0.017" Nom.
Overall Cable Diameter	0.127" Nom.
Approximate Cable Weight	10.4 Lbs/1M' Nom.
Flame Rating	UL 1666 Riser Flame Test

Electrical & Environmental Properties:

Temperature Rating	-20°C To +60°C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	55 pf/ft Nom.
Capacitance Between Conductors to Shield @ 1 KHz	99 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	17 Ohms/1M' Nom.
Insulation Colors	Black ,Red
Jacket Color	Gray, Black, Green, Brown, Orange, Red, Yellow, Violet, Blue
RoHS Compliant	Yes

Mechanical Properties:

Max. Recommended Pull Tension	23.7 lbs.
Min. Bend Radius (Install)	1.3”

ADVANTAGE BOX
MADE IN USA

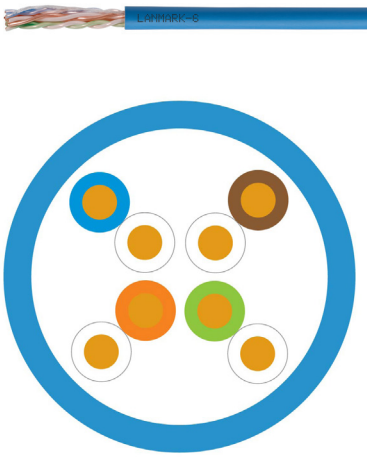
Specification Issue Date: 7/06

Standard Lengths are 1000ft.
The Jacket is sequentially footmarked.
The information presented here is, to the best of our knowledge, is true and accurate. However, since conditions of use are beyond our control, all recommendations or suggestions are presented without guarantee or responsibility on our part. We disclaim all liability in connection with the use of information contained herein or otherwise.

LANMARK-6 UTP Riser Rated Cable

APPLICATION

The Leviton LANMARK-6 features a reduced diameter compared to other Cat 6 UTP cables. This is an ETL Cat 6 verified cable, constructed without the center spline for easy installation and termination. LANMARK-6 is capable of transmitting applications such as 1000BASE-T. It is ideal for network applications that extend to 250 MHz. LANMARK-6 is available in both CMP and CMR and conforms to ANSI/TIA-568.2-D Cat 6 and ISO/IEC 11801 2nd Edition Class E Cat 6 requirements.



BENEFITS

- Provides Cat 6 performance
- Value engineered entry level Cat 6 solution
- Provides additional usable bandwidth required for future applications
- Superior box design allows cable to be pulled easily from the box with minimum kinking
- Compact box design takes up less shelf space
- Clearly identified packaging eliminates potential confusion
- Max bundle size for 100 W PoE is 240 cables
- Unique ID in print legend allows cable to be traced without additional equipment

FEATURES

- Cost effective compact design
- Characterized to 500 MHz, 250 MHz greater than the standard
- Jacketed with flame-retardant polymer
- 3rd party verified Cat 6 performance

STANDARDS & REGULATIONS

- ANSI/TIA 568.2-D
- ISO/IEC 11801
- IEEE 802.3 PoE Type 1, 2, 3, 4 (100 watts max)
- Cisco UPOE, UPOE+ (90 watts max)
- Power over HDBaseT™ PoH (95 watts max)
- UL 444
- RoHS Compliant

FIRE RATING

- UL 1666 Riser - NFPA 70
- CMR - Riser Rated

COUNTRY OF ORIGIN

USA

WARRANTY INFORMATION

For Leviton product warranties, go to leviton.com/ns/warranty

LANMARK-6 UTP Riser Rated Cable

I23 SS2011-CA-US ENv7
Revised September 2023

LEVITON
Network Solutions

TECHNICAL SPECIFICATIONS

Electrical properties (20 °C ± 5 °C)	
DC resistance	Max. 9.38 Ω/100 m
DC resistance unbalance	Max. 5%
Mutual capacitance	Nom. 5.1 nf/100 m at 1 kHz
Capacitance unbalance (pair-to-ground)	Max. 330 pf/100 m at 1 kHz
Nominal velocity of propagation	69%
Delay skew	45 ns/100 m max.

CHARACTERISTICS

Dimensional Characteristics	
Length per reel	1000 ft (305 m)
Number of pairs	4
Usage Characteristics	
Field of application	Indoor
Category	Cat 6 Indoor
Type of cable	UTP
Temperature (Installation):	+5 °C to +50 °C (+41 °F to +122 °F)
Temperature (Operating):	-20 °C to +60 °C (-4 °F to +140 °F)
Temperature (Storage):	-20 °C to +60 °C (-4 °F to +140 °F)
Listed temperature	+75 °C (+167 °F)

HIGH SPEED DATA AND POWER APPLICATIONS

IEEE 802.3	2.5/5GBASE-T (2.5/5 Gb/s), 1000BASE-T (1 Gb/s), 100BASE-TX (100 Mb/s), 10BASE-T (10 Mb/s)
IEEE 802.3bt	PoE Types 1, 2, 3, and 4

TECHNICAL DATA - PHYSICAL

Conductor	24 AWG bare copper	
Conductor diameter	0.021 inches	(0.53)
Max insulated conductor diameter - in. (mm)	0.038	(0.97)
Nom. cable weight - lb./kft (kg/km)	19.5	(29.0)
Nom. cable diameter - in. (mm)	0.205	(5.21)

COLOR CODE

Pair-1	White	Blue
Pair-2	White	Orange
Pair-3	White	Green
Pair-4	White	Brown

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Revised September 2023

GUARANTEED PRODUCT PERFORMANCE TRANSMISSION CHARACTERISTICS

Freq.	RL (dB)		NEXT (dB)		PS NEXT (dB)		ACR* (dB/100 m)		PSACR* (dB/100 m)	
MHz	TIA Spec	Product Guarantee	TIA Spec	Product Guarantee	TIA Spec	Product Guarantee	TIA Spec	Product Guarantee	TIA Spec	Product Guarantee
1	20.0	20.0	74.3	74.3	72.3	72.3	72.3	72.3	70.3	70.3
4	23.0	23.0	65.3	65.3	63.3	63.3	61.5	61.5	59.5	59.5
10	25.0	25.0	59.3	59.3	57.3	57.3	53.3	53.3	51.3	51.3
16	25.0	25.0	56.2	56.2	54.2	54.2	48.7	48.7	46.7	46.7
20	25.0	25.0	54.8	54.8	52.8	52.8	46.3	46.3	44.3	44.3
31.25	23.6	23.6	51.9	51.9	49.9	49.9	41.2	41.2	39.2	39.2
62.5	21.5	21.5	47.4	47.4	45.4	45.4	32.0	32.0	30.0	30.0
100	20.1	20.1	44.3	44.3	42.3	42.3	24.5	24.5	22.5	22.5
150	18.9	18.9	41.7	41.7	39.7	39.7	16.9	16.9	14.9	14.9
200	18.0	18.0	39.8	39.8	37.8	37.8	10.8	10.8	8.8	8.8
250	17.3	17.3	38.3	38.3	36.3	36.3	5.5	5.5	3.5	3.5
300**	—	16.8	—	37.1	—	35.1	—	0.7	—	-1.3
350**	—	16.3	—	36.1	—	34.1	—	-3.6	—	-5.6
400**	—	15.9	—	35.3	—	33.3	—	-7.7	—	-9.7
450**	—	15.5	—	34.5	—	32.5	—	-11.5	—	-13.5
500**	—	15.2	—	33.8	—	31.8	—	-15.1	—	-17.1

*ACR and PSACR are provided for calculation only; they are not guaranteed for LANMARK-6

**LANMARK-6 is guaranteed between 1 MHz and 250 MHz; values above 250 MHz are for reference only and not a part of the product guarantee.

GUARANTEED PRODUCT PERFORMANCE TRANSMISSION CHARACTERISTICS, CONTINUED

Freq.	IL (dB/100 m)		ACRF (dB/100 m)		PSACRF (dB/100 m)		LCL/TCL (dB)	EL TCTL (dB)
MHz	TIA Spec	Product Guarantee	TIA Spec	Product Guarantee	TIA Spec	Product Guarantee	Product Guarantee	Product Guarantee
1	2.0	2.0	67.8	67.8	64.8	64.8	40.0	35.0
4	3.8	3.8	55.8	55.8	52.8	52.8	40.0	23.0
10	6.0	6.0	47.8	47.8	44.8	44.8	40.0	15.0
16	7.6	7.6	43.7	43.7	40.7	40.7	38.0	10.9
20	8.5	8.5	41.8	41.8	38.8	38.8	37.0	9.0
31.25	10.7	10.7	37.9	37.9	34.9	34.9	35.1	—
62.5	15.4	15.4	31.9	31.9	28.9	28.9	32.0	—
100	19.8	19.8	27.8	27.8	24.8	24.8	30.0	—
150	24.7	24.5	24.3	24.3	21.3	21.3	28.2	—
200	29.0	28.8	21.8	21.8	18.8	18.7	27.0	—
250	32.8	32.8	19.8	19.8	16.8	16.8	26.0	—
300*	—	36.4	—	18.3	—	15.3	25.2	—
350*	—	39.8	—	16.9	—	13.9	24.6	—
400*	—	43.0	—	15.8	—	12.8	24.0	—
450*	—	46.0	—	14.7	—	11.7	23.5	—
500*	—	48.9	—	13.8	—	10.8	23.0	—

*LANMARK-6 is guaranteed between 1 MHz and 250 MHz; values above 250 MHz are for reference only and not a part of the product guarantee.

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PART NUMBERS

Description	Color	Packaging	Length (Ft.)	Part No.
LANMARK-6 UTP Riser	White	Box	1000	10136340
LANMARK-6 UTP Riser	Blue	Box	1000	10136339
LANMARK-6 UTP Riser	Dark gray	Box	1000	11091257
LANMARK-6 UTP Riser	Yellow	Box	1000	10136753
LANMARK-6 UTP Riser	Green	Box	1000	10136752
LANMARK-6 UTP Riser	Pink	Box	1000	11058425
LANMARK-6 UTP Riser	Red	Box	1000	10170931
LANMARK-6 UTP Riser	Black	Box	1000	10170932
LANMARK-6 UTP Riser	Violet	Box	1000	11072302
LANMARK-6 UTP Riser	Orange	Box	1000	10189773
LANMARK-6 UTP Riser	White	Reel	1000	10136343
LANMARK-6 UTP Riser	Blue	Reel	1000	10136342
LANMARK-6 UTP Riser	Dark gray	Reel	1000	11091285
LANMARK-6 UTP Riser	Yellow	Reel	1000	10136775
LANMARK-6 UTP Riser	Green	Reel	1000	10136774
LANMARK-6 UTP Riser 1500 ft. SMARTPAK™	White	Box	1500	11074744
LANMARK-6 UTP Riser 1500 ft. SMARTPAK	Blue	Box	1500	11074703
LANMARK-6 UTP Riser 1500 ft. SMARTPAK	Dark gray	Box	1500	11094953
LANMARK-6 UTP Riser 1500 ft. SMARTPAK	Yellow	Box	1500	11074906
LANMARK-6 UTP Riser 1500 ft. SMARTPAK	Green	Box	1500	11074907

PRINT LEGEND:
BERK-TEK LANMARK-6 24 AWG CMR 75C C(ETL)US ETL VERIFIED TIA-568.2-D CAT 6 [DATE] [COUNTER] [UID]

For further support information, visit leviton.com/ns/support

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Revised September 2023

TABLE ROCK MIDDLE SCHOOL

1585 NC 126

MORGANTON NC 28655

BURKE COUNTY SCHOOLS

AUDITORIUM SOUND SYSTEM UPGRADES

NORTH CAROLINA SOUND OF WINSTON-SALEM, LLC
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WINSTON-SALEM, NC 27101
PHONE: 336-724-5992
WWW.NCSOUND.ORG

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Home Office:
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336-724-5993 (Fax)

AUTHORIZED DEALER OF:

BOGEN COMMUNICATIONS, INC.

NAPCO SECURITY SYSTEMS

PANASONIC SURVEILLANCE SYSTEMS

Table Rock Middle School auditorium
1585 NC 126
Morganton NC 28655

DRAWN BY:

Mike Hinton

DATE : 01/05/2026

REVISIONS

REV #	DATE	DESCRIPTION

SHEET TITLE:

COVER PAGE
SOUND SYSTEM
SHOP DRAWINGS

SHEET NO.

COVER

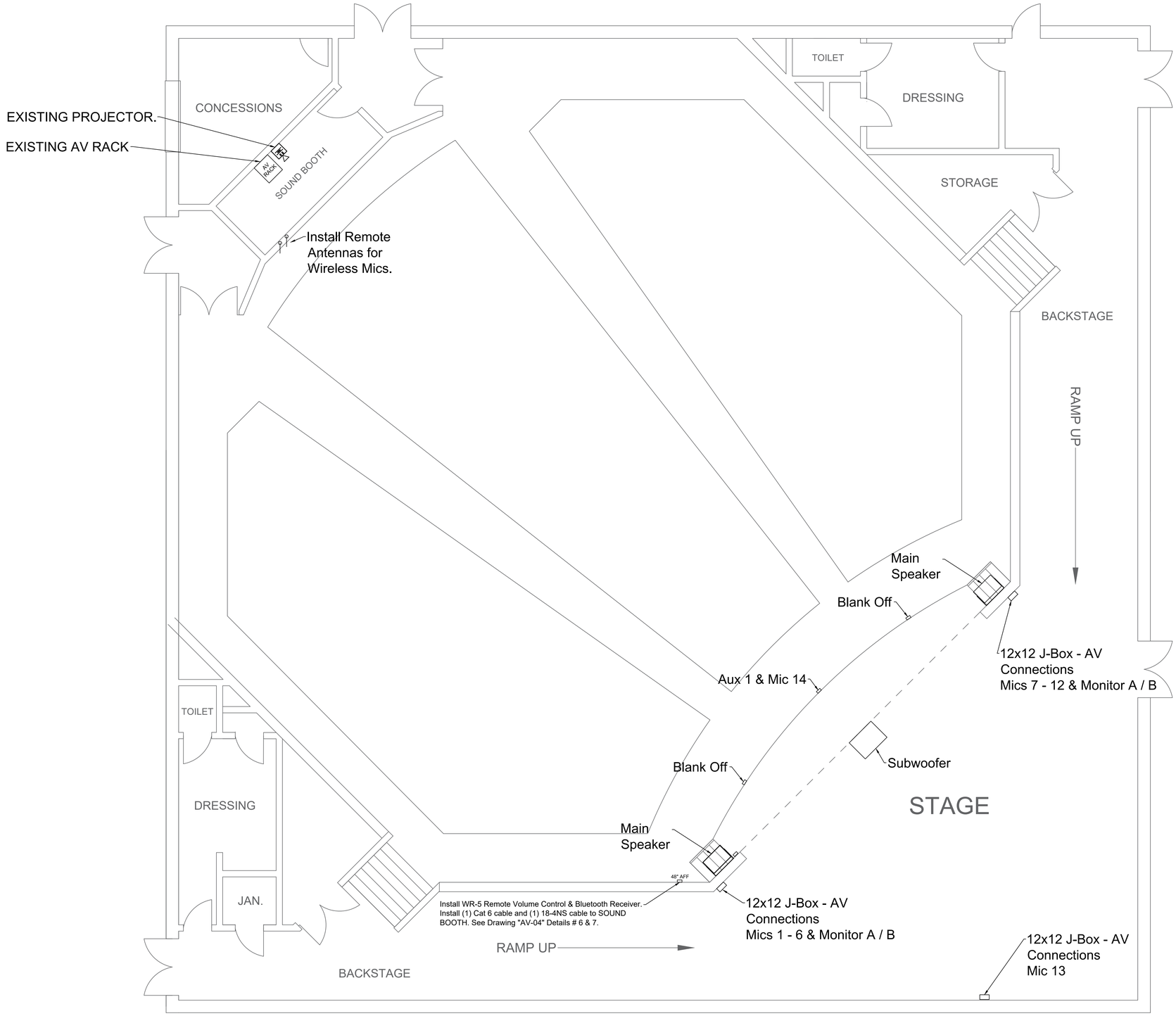

TABLE ROCK MIDDLE SCHOOL
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North Carolina Sound

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Morganton NC 28655

DRAWN BY:

Mike Hinton

DATE : 01/05/2026

REVISIONS

REV #	DATE	DESCRIPTION

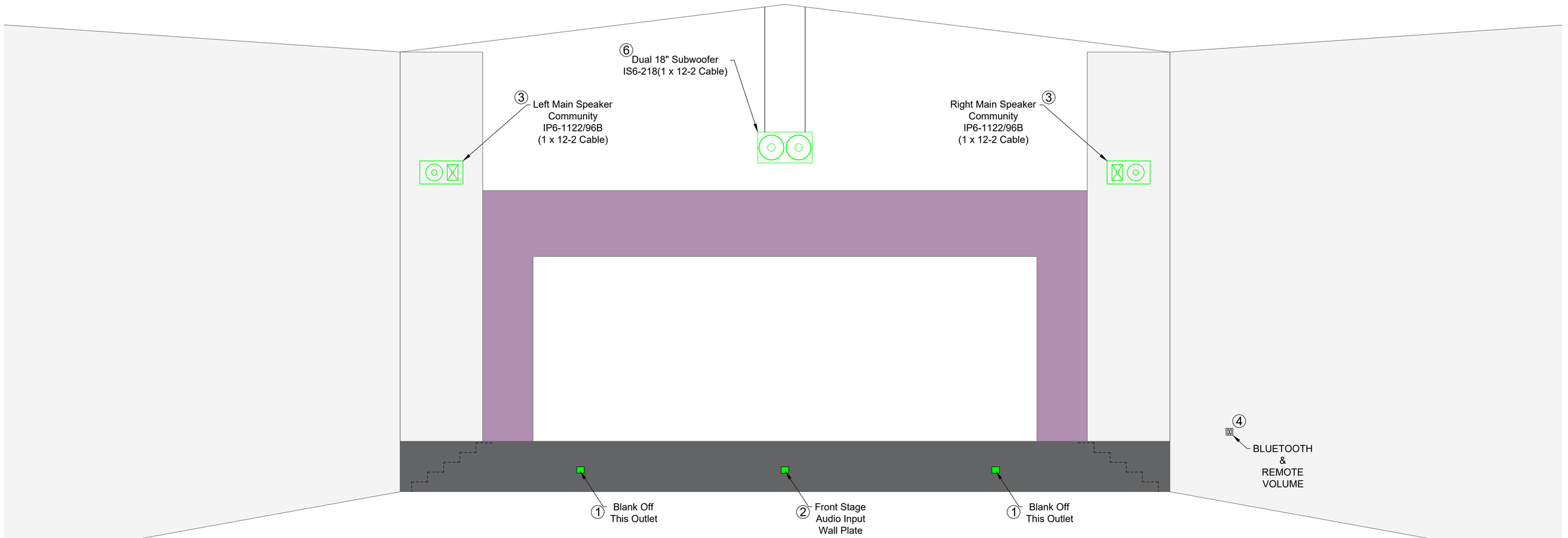
SHEET TITLE:
1ST FLOOR
ALL SYSTEMS
SHOP DRAWINGS

SHEET NO.
AV-01

GENERAL NOTES:

1. Remove existing XLR wall plate, cap off wiring and install blank plate.
2. Replace existing XLR wall plate with audio input wall plate. Includes (1) RDL D-CIJ3D, (1) RDL D-XLR3F. See AV-05 drawing details.
3. Left and Right Main Speakers.Install raceway as needed. Install 1 x 12-2 non-shielded cable to sound booth. Existing raceway may be used where applicable.
4. Install remote volume control for system PA Mode and Bluetooth receiver module. See AV-05 drawing details.
5. Existing wired stage inputs to be reused. The sound contractor shall test all connectors and wiring. Replace any connectors or wiring as needed. Add "Speakon" type connectors. See AV-01 and AV -05 drawings details.
6. (OPTIONAL SUBWOOFER) Install optional subwoofer if approved, suspend above the proscenium wall in the open space using appropriate rigging. Install 1 x 12-2 non-shielded cable to sound booth.

SEE SOUND SYSTEM UPGRADES DESIGN SPECIFICATIONS FOR ADDITIONAL INFORMATION.



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Morganton NC 28655

DRAWN BY:

Mike Hinton

DATE : 01/05/2026

REVISIONS

REV #	DATE	DESCRIPTION

SHEET TITLE:

1ST FLOOR
ALL SYSTEMS
SHOP DRAWINGS

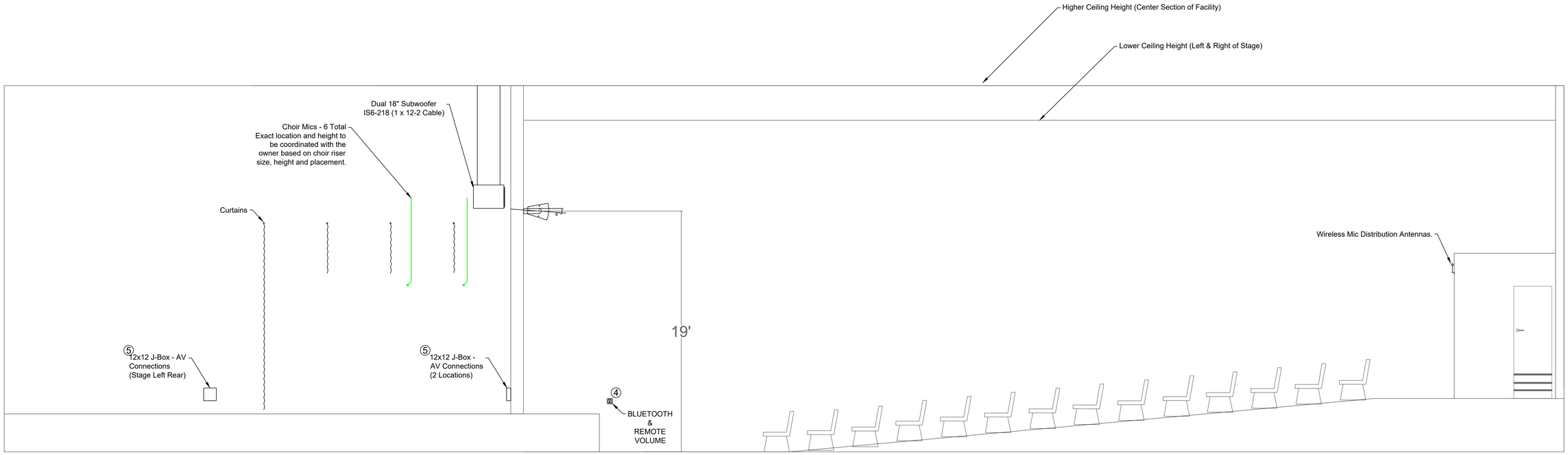
SHEET NO.

AV-02

GENERAL NOTES:

1. Remove existing XLR wall plate, cap off wiring and install blank plate.
2. Replace existing XLR wall plate with audio input wall plate. Includes (1) RDL D-CIJ3D, (1) RDL D-XLR3F. See AV-05 drawing details.
3. Left and Right Main Speakers.Install raceway as needed. Install 1 x 12-2 non-shielded cable to sound booth. Existing raceway may be used where applicable.
4. Install remote volume control for system PA Mode and Bluetooth receiver module. See AV-05 drawing details.
5. Existing wired stage inputs to be reused. The sound contractor shall test all connectors and wiring. Replace any connectors or wiring as needed. Add "Speakon" type connectors. See AV-01 and AV -05 drawings details.
6. (OPTIONAL SUBWOOFER) Install optional subwoofer if approved, suspend above the proscenium wall in the open space using appropriate rigging. Install 1 x 12-2 non-shielded cable to sound booth.

SEE SOUND SYSTEM UPGRADES DESIGN SPECIFICATIONS FOR ADDITIONAL INFORMATION.



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DRAWN BY: Mike Hinton

DATE : 01/05/2026

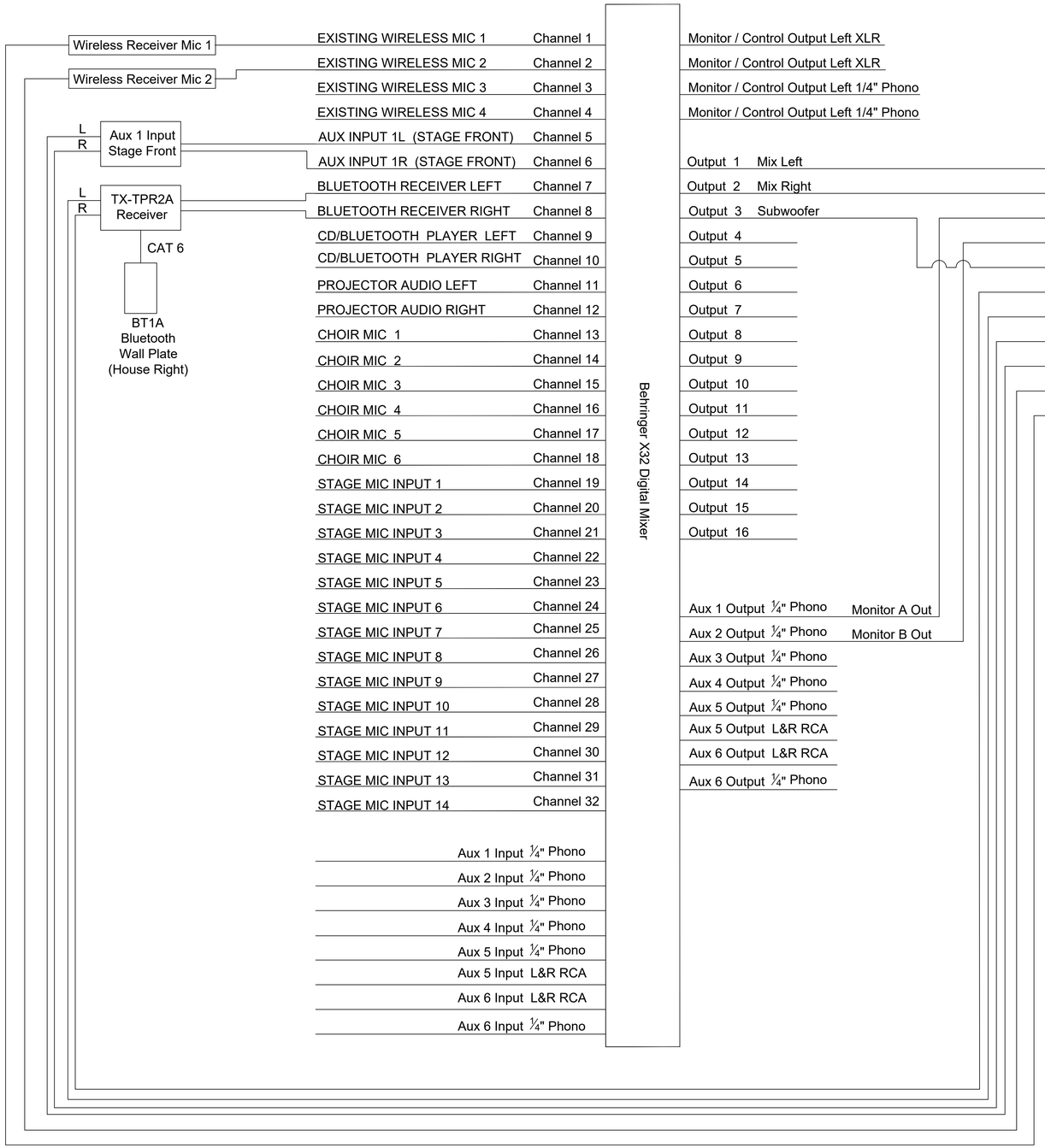
REVISIONS

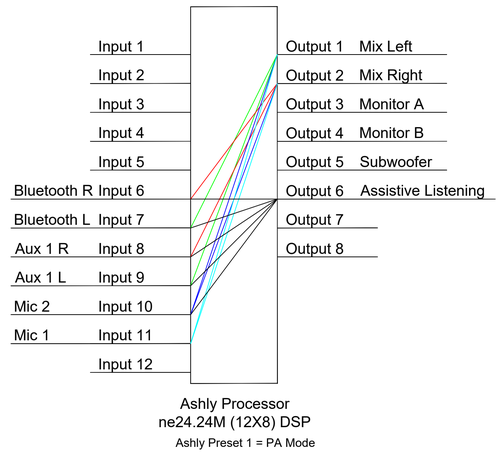
REV #	DATE	DESCRIPTION

SHEET TITLE:
1ST FLOOR
ALL SYSTEMS
SHOP DRAWINGS

SHEET NO.
AV-03

SYSTEM RISER DIAGRAM





PA Mode - Allows for operation and limited control of the system from the main seating area only. Access to the sound booth is only needed to power the system and select the mode of operation. When the DSP processor Preset 1 is selected, only four Input devices are active. The four active input devices are 2 wireless mics, the stage Aux 1 input and the Bluetooth Input. These 4 Input devices broadcast over the main speakers and assistive listening devices only. The WR-5 remote volume control allows independent volume adjustments of each input. These controls have a minimum and maximum limit setting to protect the system. The mixer, monitor speakers and other devices are not operational during this mode of operation.

Performance Mode - The staff can select Preset 2 on the DSP and the system is now in using the mixer and is fully functional. The system is now controlled from inside the sound booth. The WR-5 Is disabled at in this mode of operation.

NOTE: The system will power up with the last active preset that was selected. The staff will need to select the appropriate preset needed each time the system is powered on.

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DRAWN BY:
Mike Hinton

DATE : 01/05/2026

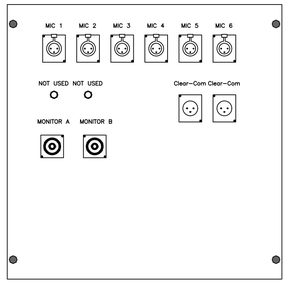
REVISIONS

REV #	DATE	DESCRIPTION

SHEET TITLE:
1ST FLOOR
ALL SYSTEMS
SHOP DRAWINGS

SHEET NO.
AV-04

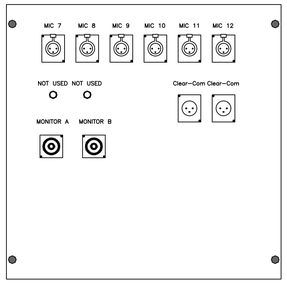
SYSTEM DETAILS



GENERAL NOTES:

1. INSPECT, TEST AND REUSE EXISTING FEMALE XLR CONNECTORS. REPLACE ANY FAULTY CONNECTORS OR WIRING AS NEEDED.
2. EXISTING 4" CONNECTORS ARE NOT TO BE USED. LABEL AS "NOT USED".
3. INSTALL (2) SPEAKON CONNECTIONS FOR MONITOR SPEAKERS. INSTALL (2) 12-2 NON-SHIELDED CABLES TO SOUND BOOTH FOR CHANNEL A AND CHANNEL B MONITOR FEEDS.
4. CLEAR-COM CONNECTIONS - VERIFY AND TEST THESE CONNECTIONS FOR FUNCTIONALITY.

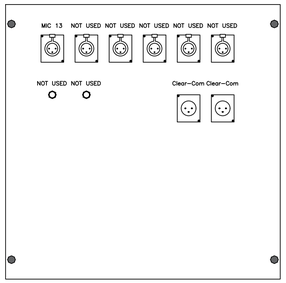
1 AV-01 STAGE LEFT SYSTEM WIRNG 12X12 J-BOX / CONNECTIONS
NOT TO SCALE



GENERAL NOTES:

1. INSPECT, TEST AND REUSE EXISTING FEMALE XLR CONNECTORS. REPLACE ANY FAULTY CONNECTORS OR WIRING AS NEEDED.
2. EXISTING 4" CONNECTORS ARE NOT TO BE USED. LABEL AS "NOT USED".
3. INSTALL (2) SPEAKON CONNECTIONS FOR MONITOR SPEAKERS. INSTALL (2) 12-2 NON-SHIELDED CABLES TO STAGE LEFT AV J-BOX FOR PARALLEL CONNECTIONS TO MONITOR A AND MONITOR B CHANNELS.
4. CLEAR-COM CONNECTIONS - VERIFY AND TEST THESE CONNECTIONS FOR FUNCTIONALITY.

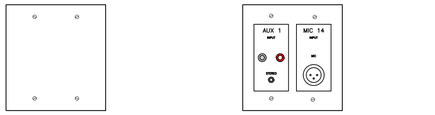
2 AV-01 STAGE RIGHT SYSTEM WIRNG 12X12 J-BOX / CONNECTIONS
NOT TO SCALE



GENERAL NOTES:

1. INSPECT, TEST AND REUSE ONE EXISTING FEMALE XLR CONNECTOR. FIVE OF THESE WILL BE DISCONNECTED AND NOT REUSED FOR THE SYSTEM. REPLACE ANY FAULTY CONNECTORS OR WIRING AS NEEDED.
2. EXISTING 4" CONNECTORS ARE NOT TO BE USED. LABEL AS "NOT USED".
3. EXISTING FEMALE XLR CONNECTORS ARE NOT TO BE USED. LABEL AS " NOT USED". EXISTING WIRING FOR THESE CAN BE REALLOCATED FOR OTHER USE.
4. CLEAR-COM CONNECTIONS - VERIFY AND TEST THESE CONNECTIONS FOR FUNCTIONALITY.

3 AV-01 STAGE LEFT REAR WALL SYSTEM WIRNG 12X12 J-BOX / CONNECTIONS
NOT TO SCALE



EXISTING WALL PLATES L&R STAGE FRONT APRON.

1. REMOVE EXISTING XLR WALL PLATE AND INSTALL 2-GANG BLANK PLATE. TERMINATE/CAP OFF EXISTING WIRING.

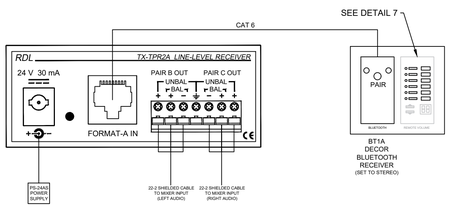
SYSTEM INPUT WALL PLATE CENTER STAGE FRONT APRON.

1. 2-GANG DECOR WALL PLATE.
2. INSTALL (1) AUDIO INPUT MODEL MODEL RDL D-CJ30 OR EQUAL.
3. INSTALL (1) XLR MICROPHONE INPUT MODEL RDL D-XLR3F OR EQUAL.
4. INSTALL (3) 22-2 SHIELDED CABLES TO SOUND BOOTH.

GENERAL NOTES:

1. REPLACE EXISTING WALL PLATE.
2. REUSE EXISTING RACEWAY.
3. REUSE EXISTING WIRING WHEN APPLICABLE.
4. INSTALL NEW WIRING IF REQUIRED.

4 AV-02 FRONT STAGE APRON - WALL PLATE DETAILS
NOT TO SCALE



GENERAL NOTES:

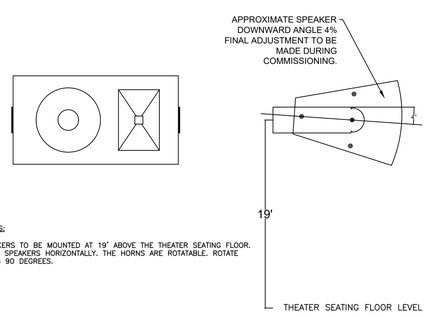
1. INSTALL (1) MODEL RDL BT1A BLUETOOTH RECEIVER ON THE WALL AT THE RIGHT SIDE OF THE STAGE. FOR THIS DEVICE, INSTALL 2-GANG OUTLET BOX ON STAGE LEFT. INSTALL RACEWAY AS NEEDED.
   NOTE: 2-GANG BOX TO BE INSTALLED TO ACCOMMODATE A REMOTE VOLUME CONTROL DEVICE.
2. INSTALL (1) CAT6 NETWORK CABLE FROM THE DEVICE TO THE SOUND BOOTH. INSTALL (1) TX-TPR2A FORMAT RECEIVER IN THE EQUIPMENT CABINET. RACK MOUNT BRACKET SOLD SEPARATELY. CONNECT THE FORMAT RECEIVER OUTPUT TO THE EXISTING BEHRINGER X32 MIXER.

6 AV-02 BLUETOOTH INPUT DEVICE DETAILS
NOT TO SCALE

GENERAL NOTES:

1. INSTALL (1) MODEL ASHLY WR-5 REMOTE VOLUME DEVICE ON THE WALL AT THE RIGHT SIDE OF THE STAGE. INSTALL THE DEVICE IN THE SAME 2-GANG BOX WITH THE BLUETOOTH INPUT. FOR THIS DEVICE, INSTALL (1) 18-4 NON-SHIELDED CABLE FROM THE DEVICE TO THE SOUND BOOTH. INSTALL (1) TX-TPR2A FORMAT RECEIVER IN THE EQUIPMENT CABINET. RACK MOUNT BRACKET SOLD SEPARATELY. CONNECT THE FORMAT RECEIVER OUTPUT TO THE EXISTING BEHRINGER X32 MIXER.

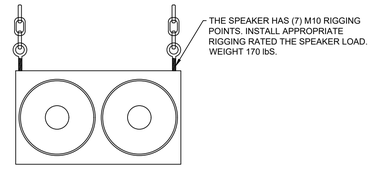
6 AV-02 REMOTE VOLUME CONTROL FOR PA MODE
NOT TO SCALE



GENERAL NOTES:

1. MAIN SPEAKERS TO BE MOUNTED AT 19' ABOVE THE THEATER SEATING FLOOR.
2. MOUNT THE SPEAKERS HORIZONTALLY. THE HORNS ARE ROTATABLE. ROTATE THE HORNS 90 DEGREES.

7 AV-03 MAIN SPEAKER DETAILS
NOT TO SCALE



GENERAL NOTES:

1. THE SUBWOOFER SHOULD BE SUSPENDED ON STAGE CENTERED JUST ABOVE THE PROSCENIUM WALL. THE INSTALLER IS RESPONSIBLE TO PROVIDE THE NECESSARY RATED RIGGING FOR THE SPEAKER LOAD. THE MANUFACTURES SPECIFICATIONS LIST THE WEIGHT AT 170 lbs.
2. THE MOUNTING HEIGHT IS NOT CRITICAL FOR THIS SPEAKER AND MAY VARY TO ALLOW EASE OF INSTALLING THE SPEAKER. SUGGESTED HEIGHT IS 16'-20' ABOVE THE STAGE FLOOR.

8 AV-03 (OPTIONAL) SUBWOOFER DETAIL
NOT TO SCALE

NORTH CAROLINA SOUND
* VOICE & DATA
* INTERCOM
* PRO AUDIO
* ACCESS CONTROL
* SECURITY
* CCTV
* AV
* BDA SYSTEM

Home Office:
114 Fayette St NW
Winston-Salem, NC 27101
336-724-5992 (Voice)
336-724-5993 (Fax)

AUTHORIZED DEALER OF:
BOGEN COMMUNICATIONS, INC.
NAPCO SECURITY SYSTEMS
PANASONIC SURVEILLANCE SYSTEMS

Table Rock Middle School auditorium
1585 NC 126
Morganton NC 28655

DRAWN BY:
Mike Hinton
DATE: 01/05/2026

REVISIONS

REV #	DATE	DESCRIPTION

SHEET TITLE:
1ST FLOOR
ALL SYSTEMS
SHOP DRAWINGS

SHEET NO.
AV-05

SYSTEM AV RACK LAYOUT
(EXISTING CABINET TO BE REUSED)

40	EXISTNG CLEAR-COM SYSTEM	40
39		39
38	2 U BLANK PANEL	38
37		37
36	ASSISTED LISTENING (OPTIONAL)	36
35		35
34	2 CH WIRELESS MIC RECEIVER	34
33	2 CH WIRELESS MIC RECEIVER	33
32	2 U BLANK PANEL	32
31		31
30	2 U BLANK PANEL	30
29		29
28	1 U BLANK PANEL	28
27	ACR 159 POWER STRIP (15A)	27
26	TX-TPR2A RECEIVER	26
25		25
24	2 U BLANK PANEL	24
23		23
22	2 U BLANK PANEL	22
21		21
20	2 U BLANK PANEL	20
19		19
18	CD / BLUETOOTH PLAYER	18
17	1 U BLANK PANEL	17
16	2 U BLANK PANEL	16
15		15
14	ACR 159 POWER STRIP (15A)	14
13	1 U BLANK PANEL	13
12	NE24.24M DSP PROCESSOR	12
11		11
10	1 U BLANK PANEL	10
9	ACR 159 POWER STRIP (15A)	9
8	1 U BLANK PANEL	8
7	1 U BLANK PANEL	7
6	CS704 (4 CH AMP) MAINS/MONITORS	6
5	1 U BLANK PANEL	5
4	CS 702 - (OPTIONAL FOR SUB)	4
3	1 U BLANK PANEL	3
2	2 U BLANK PANEL	2
1		1

NOTE: 1U and 2U Blanks Should be Listed as Optional Equipment.
They are Not Required but Cabinet Enhance Appearance.

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SHEET TITLE:
1ST FLOOR
ALL SYSTEMS
SHOP DRAWINGS

SHEET NO.
AV-06