

*Definitive Technology*®  
*The Leader in High-Performance Loudspeakers*®

# UIW RCS III™

## Reference Series In-Ceiling Speaker

### **Owner's Manual**

### *Congratulations*

Congratulations on your purchase of the Definitive Technology UIW RCS III Loudspeaker. This reference quality loudspeaker provides the highest level of sonic performance and construction quality and is designed for easy flush-mount installation in ceilings of homes and commercial spaces. Six years of intensive research and development by Definitive engineers, working in collaboration with one of the world's leading industrial design firms, has produced the finest architectural loudspeakers on the market. The beautiful upscale designer styling of this model is perfect for the finest homes belonging to the most discriminating homeowners.

## The UIW RCS III Loudspeaker

The RCS III:

- Incorporates high power, high definition cast basket Definitive bass/midrange drivers combined with pressure-coupled low-frequency radiators and state-of-the-art Definitive 1" dome tweeters.
- Incorporates polypropylene cones with butyl rubber surrounds.
- Incorporates a complete precision crossover system designed by Definitive engineers for seamless driver blending.
- Incorporates a completely sealed non-resonant mediate enclosure to assure you of laboratory reference quality performance in your home.
- Is moisture resistant to allow use in bathrooms, etc.
- Is easily paintable and comes complete with mounting templates and plastic paint masks.
- Can be used as an exceptional left main, right main, center channel or rear/side surround in a state-of-the-art home theater system or as stereo pairs in a 2-channel music system.

## The Sound Quality Is Extraordinary

The UIW RCS IIIs have been voiced by Definitive engineers (using the superb facilities of the Definitive Technology Advanced Research Facility) to the same high-end standards as all Definitive loudspeakers. The drivers and baffles are perfectly integrated into the design to minimize the diffraction problems that are inherent with most other in-wall loudspeakers. To ensure that you experience the finest performance possible from your UIW RCS IIIs, we encourage you to read this owner's manual to familiarize yourself with the proper installation and set-up procedures.

# Unpacking Your UIW RCS III Loudspeakers

## Please Inspect For Shipping Damage

Each loudspeaker leaves our plant in perfect condition. Any visible or concealed damage most likely will have occurred in handling after it left the plant and should be reported at once to your Definitive dealer or the delivery company that delivered your loudspeakers. Please unpack your system carefully. Save all cartons and packing materials in case you move or need to ship your system. Record the serial numbers found on the back of the UIW RCS III Loudspeakers in the appropriate place on your warranty card.

## UIW RCS III Applications

The UIW RCS III is designed to be mounted in ceilings and used as a front main left, right or center channel loudspeaker in a stealth home theater system of the highest quality. In addition, they can be used as rear or side surround speakers or as left and right stereo speakers.

## UIW RCS III Positioning

Definitive's UIW RCS III Loudspeakers are designed to be mounted in ceilings with excellent results. Because of their wide dispersion characteristics and other aspects of their superb sonic performance, mounting position in your room is very flexible. Due to the different requirements of the wide variety of room shapes and sizes, we recommend that you consult with the custom installation specialist at your Definitive Technology dealer regarding your own particular needs.

## Your Complete Definitive Home Theater

For best results, we recommend that you use Definitive speakers in combination with your RCS IIIs for the best overall sonic performance. A popular choice for matching side or rear surround speakers is the Definitive UIW RSS III. In-wall or free-standing subwoofers may be used with the RCS III. Popular choices are the in-wall Definitive UIW Sub 10/10, UIW Sub Reference or our freestanding SuperCube subs.

## Painting Your UIW RCS III Loudspeakers

The UIW RCS III Loudspeakers are easily paintable and are shipped with plastic paint masks (which should be retained even if you initially decide not to paint the speakers). The grille and frame must be painted separately, and for best results, prior to installation.

For the grille, spray painting is the recommended method. Follow the paint manufacturer's directions for ventilation and correct spraying procedure. Be very careful not to clog the speaker grille with too heavy a coat of paint as this will impair system sonic performance.

For the frame, spray painting is preferred but brush or roller will also give good results. The supplied frame masks should be put in place to protect the speaker components for whichever method you choose.

## Installation Procedure Overview

The RCS III is designed to be installed inside the ceiling of your home quickly and easily. Because of its superb sonic performance, installation location within your room is very flexible. Your room is not like anyone else's room, and because of its unique size and shape will have its own requirements for optimal sonic performance. We recommend that you consult with the Custom Installation Specialist at your Definitive Technology dealer regarding your special needs or if you are at all uncertain about the best and safest way to install your RCS III.

- Installation of this product must follow all local and state building code requirements. We strongly recommend using a qualified, professional installer who is knowledgeable of local building codes.
- The UIW RCS III is designed for mounting inline or at 90 degrees to 12" on-center ceiling joists.
- If ceiling joists are wider than 12" apart, you will need to shim (or frame in the enclosure) with appropriate framing material.
- Before starting construction or modification of your ceiling, you should familiarize yourself with any applicable local fire and building codes.
- Make sure the locations you select do not conceal studs, electrical wiring or plumbing. Prior to installation, hold the speaker in your chosen location to make sure it meets the clearance requirements around obstacles such as studs, corners, beams, lighting fixtures and door/window frames.

## Installation Procedure Overview (continued)

- The speaker enclosure needs to be against joists or framing material on the 2 parallel sides that are to be fastened with the screws.
- The clearance required on outside ceiling surface is 1" around the cutout to clear the speaker bezel. On inside surface, 1/4" of clearance is required to clear lock arms on the sides that will not be fastened to the joists or framing material.
- Also note that the installation of the RCS III may require some modification of the joist structure in your ceiling. This should only be done by a competent professional who will configure the studs to maintain their structural integrity and make sure that everything is in compliance with all local and state building code requirements.
- Speaker wire must be run inside your ceiling as part of the installation process of in-wall loudspeakers. Plan the connection before you start your loudspeaker installation.

## Step-by-Step Installation

### Mounting options overview

- Installation of this product must follow all local and state building codes.
- We strongly recommend using a qualified, professional installer who is knowledgeable of local building codes.

### Required cutout and cavity size

- Template cutout size:  $10\frac{3}{8}$ "W x  $10\frac{3}{8}$ "L.
- Minimum size of installation cavity (inside ceiling and between joists) is as follows:
  - Depth:  $5\frac{7}{8}$ "
  - $10\frac{1}{2}$ " between joists on the sides the wood screws are to be installed in.
  - $12\frac{3}{4}$ " between joists on sides the lock arms are to be used ( $1\frac{1}{4}$ " of space required on each side to clear lock arms).

*See Diagram 1, page 9 for reference.*

## Hole location options and requirements

- Mounting in ceiling with joists 12" on-center.

- Place template against inside edge of joist.
- Trace around template with pencil.
- Cut hole.

*See Diagram 1, page 9 for reference.*

- Mounting in ceiling with joists wider than 12" on-center.

- Place template at least 1<sup>1</sup>/<sub>4</sub>" away from existing joists (to clear lock arms).
- Template does not need to be centered between joists.
- Trace around template with pencil.
- Cut hole.
- Install framing material inside cavity, running 90 degrees to existing joists, leaving 10<sup>1</sup>/<sub>2</sub>" between frame sides.

*See Diagram 2, page 9 for reference.*

- Mounting in ceiling with joists 12" on-center where crossbeam is closer than 1<sup>1</sup>/<sub>4</sub>" from side of enclosure.

- Enclosure **MUST** be against the crossbeam and 2 joists, boxing it in on 3 sides. Shim as required.
- This will require 1 additional #8 x 3<sup>1</sup>/<sub>2</sub>" wood screw and side gasket material (not included) to secure to crossbeam and prevent rattling.
- Place template against crossbeam and mounting joist.
- Trace around template with pencil.
- Cut hole.

*See Diagram 3, page 10 for reference.*

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## **Gasket requirements and application**

- There are 2 sizes of gasket strips included in the accessory pack with the owner's manual.
  - 5 long gaskets.
  - 1 short gasket.
- The gaskets are to be applied as follows:
  - 2 long gaskets on back of enclosure.
  - 2 gaskets on each side of enclosure to be placed against joist or framing material.
  - The short gasket is provided to run on the side of the enclosure where the terminal cut-away is located.

## **Connecting the speaker**

- Run color-coded wires between the speaker cavity and amplifier unit. When running the wires inside the ceiling to the opening, leave a minimum of 18" of additional length in the cavity to facilitate speaker connection.
- Fish wiring out of hole.
- Connect the speaker wires to the UIW RCS III taking care to make red to red (+) and black to black (-) terminal connections.
- Refer to your amplifier or receiver loudspeaker wiring instructions, turn off the unit and connect the speaker wires to the appropriate colored output terminal on the unit, again making red to red (+) and black to black (-) connections. This will ensure absolute phase throughout the system.

## **Securing speaker**

- Installation of this product must follow all local and state building code requirements.
- We strongly recommend using a qualified, professional installer who is knowledgeable of local building codes.
- We recommend holding the unit by the bezel and outer edges of the speaker to avoid damaging the drivers.
- Place speaker in hole and secure to joists (or framing material) with at least 2 of the screws provided. Tighten screw on one side before installing and tightening the opposing side.

- As a minimum, the speaker must be secured using two screws provided on 2 parallel sides.

*See Diagrams 1 and 2, page 9 for reference.*

- If speaker is mounted against a crossbeam, install one additional #8 x 3<sup>1</sup>/<sub>2</sub>" wood screw (included) into side that is against crossbeam to secure speaker and prevent rattling.

*See Diagram 3, page 10 for reference.*

- Secure lock arms on sides that are not secured using wood screws.

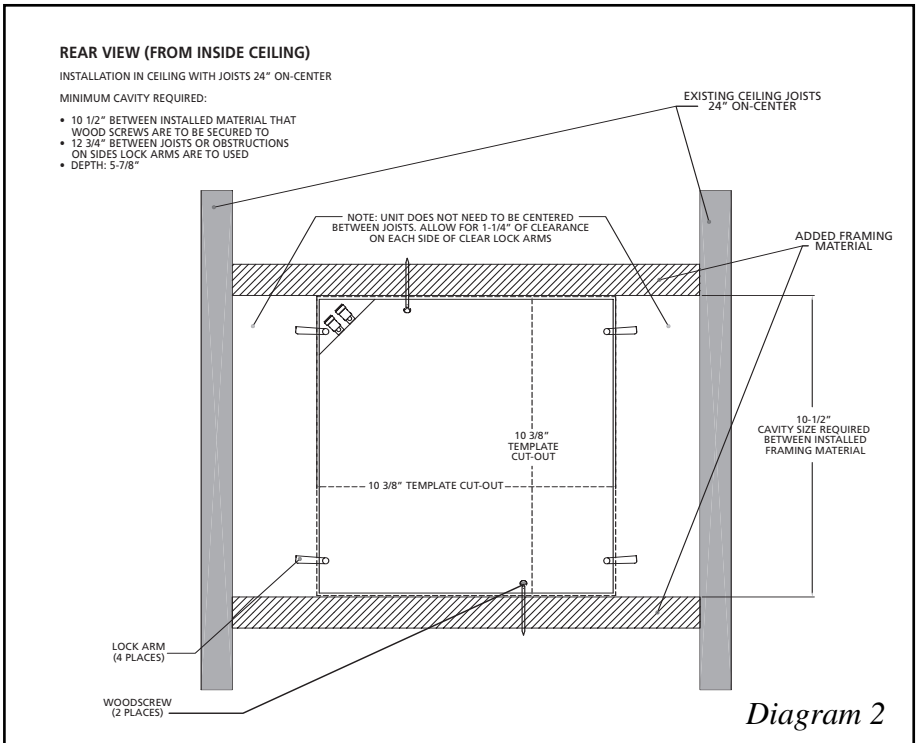
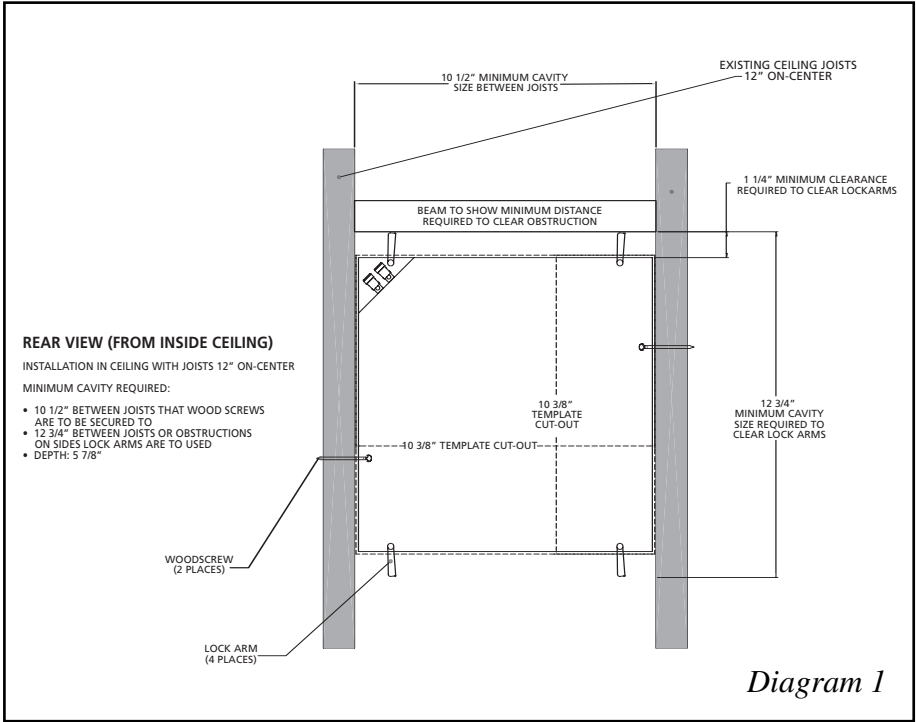
*See Diagrams 1, 2 and 3, page 9 and 10 for reference.*

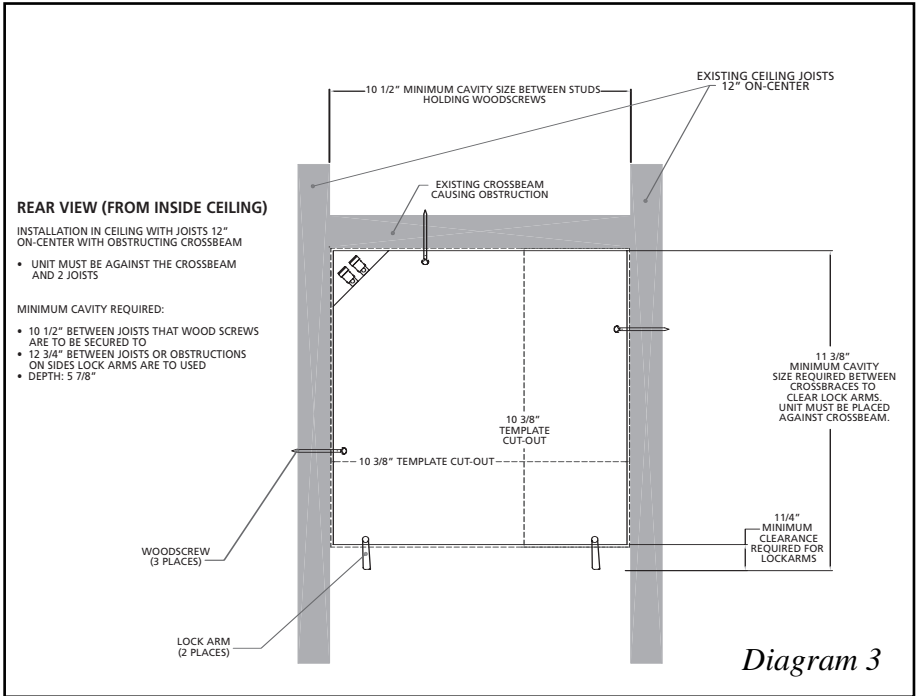
- The metal pivoting lock arms are pre-installed in the loudspeaker frame with Phillips screws. The lock arms can be rotated left or right by turning the screws.
- Fit grille on speaker bezel.

### **\*VERY IMPORTANT\***

**Please note that the pivoting lock arms are not designed to support the weight of the speaker. They are only designed to pull the speaker tight to the ceiling and prevent it from rattling. Do not use them for supporting the speaker. The screws going through the speaker and into the joists are there for support and must be properly used.**







## Troubleshooting Your UIW RCS III Speakers

If you experience any difficulties with your UIW RCS III Loudspeakers, try the suggestions described below. If you are still having problems, please consult your Definitive Technology authorized dealer for assistance.

- Make sure all your system interconnections and power cords are solidly in their place.
- Check to be sure that the power cords and/or speaker wires have not been damaged.
- Many amplifier/receivers have sophisticated internal protection circuitry. If for some reason the protection circuitry is tripped, please turn down the system's volume and wait five minutes before trying the system again.

## Technical Assistance

It is our pleasure to offer assistance if you have any further questions or comments. Please feel free to contact our technical support staff at Definitive Technology, LLP, 11433 Cronridge Dr., Suite K, Owings Mills, MD 21117 or call (410) 363-7148.

## Service

Service and warranty work on your Definitive loudspeakers will normally be performed by your local Definitive Technology dealer. However, if you wish to return the speaker to us, please contact us first, describing the problem and requesting authorization as well as the location of the nearest factory service center. **Please note that the address given in this booklet is the address of our offices only. Under no circumstances should loudspeakers be shipped to our offices or returned without contacting us first and obtaining return authorization.**

Definitive Technology Offices  
11433 Cronridge Dr.  
Suite K  
Owings Mills, Maryland 21117  
Phone: 410-363-7148

## UIW RCS III Specifications

### UIW RCS III

<b>Outer Dimension:</b>	11 $\frac{1}{2}$ " W x 11 $\frac{1}{2}$ " H
<b>Cut-out Size:</b>	10 $\frac{3}{8}$ " W x 10 $\frac{3}{8}$ " H x 5 $\frac{7}{8}$ " D
<b>Recommended Amplification:</b>	10 – 300 Watts/channel
<b>Frequency Response:</b>	30 Hz – 30 kHz
<b>Nominal Impedance:</b>	Compatible with 4 – 8 ohm outputs
<b>Driver Complement:</b>	– Two 4 $\frac{1}{2}$ " bass/mid drivers – Two 5 $\frac{1}{4}$ " x 4 $\frac{1}{8}$ " pressure-driven low-bass radiators – One 1" Pure Aluminum dome tweeter
<b>Sensitivity:</b>	92 dB

Specifications subject to change without notice.

## **Limited Warranty: 5-Years for Drivers and Cabinets, 3-Years for Electronic Components**

Definitive Technology warrants to the original retail purchaser only that this Definitive Technology Loudspeaker Product (the "Product") will be free from defects in materials and workmanship for a period of five (5) years covering the drivers and cabinets, and three (3) years for the electronic components from the date of the original purchase from a Definitive Technology Authorized Dealer. However, this warranty will automatically terminate prior to the expiration of five (5) years for the drivers and cabinets and three (3) years for the electronic components if the original retail purchaser sells or otherwise transfers the Product to any other party. The original retail purchaser shall hereinafter be referred to as "you." Defective Products must be shipped, together with proof of date of purchase, prepaid insured to the Authorized Dealer from whom you purchased the Product, or to the nearest factory service center. Product(s) must be shipped in the original shipping container or its equivalent; in any case the risk of loss or damage in transit is to be borne by you. If, upon examination at the Factory or a Definitive Technology Authorized Dealer, it is determined that the unit was defective in materials or workmanship at any time during this Warranty period, Definitive Technology or the Definitive Technology Authorized Dealer will, at its option, repair or replace this Product at no additional charge, except as set forth below. All replaced parts and Product(s) become the property of Definitive Technology. Product(s) replaced or repaired under this Warranty will be returned to you, within a reasonable time, freight collect.

*This Warranty does not include service or parts to repair damage caused by accident, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage in excess of the rated maximum of the unit, cosmetic appearance of cabinetry not directly attributable to defects in materials or workmanship, or service, or repair or modification of the Product which has not been authorized by Definitive Technology. Definitive Technology makes no Warranty with respect to its Products purchased from dealers or outlets other than Definitive Technology Authorized Dealers. This Warranty is in lieu of all other expressed Warranties. If this Product is defective in material or workmanship as warranted above, your sole remedy shall be repair or replacement as provided above. In no event will Definitive Technology be liable to you for any incidental or consequential damages arising out of the use or inability to use the Product, even if Definitive Technology or a Definitive Technology Authorized Dealer has been advised of the possibility of such damages, or for any claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation may not apply to you.*

*All implied warranties on the Product are limited to the duration of this expressed Warranty. Some states do not allow limitation on how long an implied Warranty lasts, so the above limitations may not apply to you. This Warranty gives you specific legal rights, and you also may have other rights which vary from state to state.*



**This product complies with the essential requirements of  
EMC directives 89/336/EEC and 73/23/EEC (inclusive of  
93/68/EEC) and carries the CE mark accordingly.**

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