



# REVOLUTION SIGNATURE

## DC4T



# SERVICE MANUAL



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## **Technical Manual Explained**

This Manual is designed to help you and your customers. In this manual you will find all information you will need regarding service to your Tannoy loudspeaker including technical specs, instructions for assembly, disassembly & faultfinding, spares drawings & parts lists as well as a detailed explanation of how to go about returning parts under warranty.

For further information regarding service or spares ordering, please contact us directly.

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## Specifications

<b>Revolution Signature DC4 T</b>	
<b>PERFORMANCE</b>	
<b>Recommended amplifier power</b>	<b>20 – 125 Watts RMS</b>
<b>Continuous power handling</b>	<b>62 Watts RMS</b>
<b>Peak power handling</b>	<b>250 Watts</b>
<b>Sensitivity</b>	<b>87dB (2.83V @ 1m)</b>
<b>Nominal impedance</b>	<b>8 Ohms</b>
<b>Frequency response</b>	<b>55Hz – 54kHz (-6dB)</b>
<b>Dispersion</b>	<b>90 degrees conical</b>
<b>DRIVE UNIT</b>	
<b>Dual Concentric™ high frequency</b>	<b>19mm (0.75") titanium dome with Tulip WaveGuide™</b>
<b>Dual Concentric™ low frequency</b>	<b>100mm (4.00") treated paper pulp cone with rubber surround and 33mm (1.33") edge wound voice coil</b>
<b>Bass driver</b>	<b>100mm (4.00") treated paper pulp cone with rubber surround and 33mm (1.33") edge wound voice coil</b>
<b>CROSSOVER</b>	
<b>Crossover frequency</b>	<b>1.5kHz</b>
<b>Crossover type</b>	<b>Passive low loss 2nd order LF, 1st order HF</b>
<b>CONSTRUCTION</b>	
<b>Enclosure type</b>	<b>Front ported</b>
<b>Volume</b>	<b>10.5L 0.37 cu. ft.</b>
<b>Dimensions</b>	<b>850 x 169 x 175mm (H x W x D ex. grille) 33.46 x 6.65 x 6.89" (H x W x D ex. grille)</b>
<b>Weight</b>	<b>10.5kg 23.15lbs</b>
<b>Finish</b>	<b>Light oak and Espresso</b>

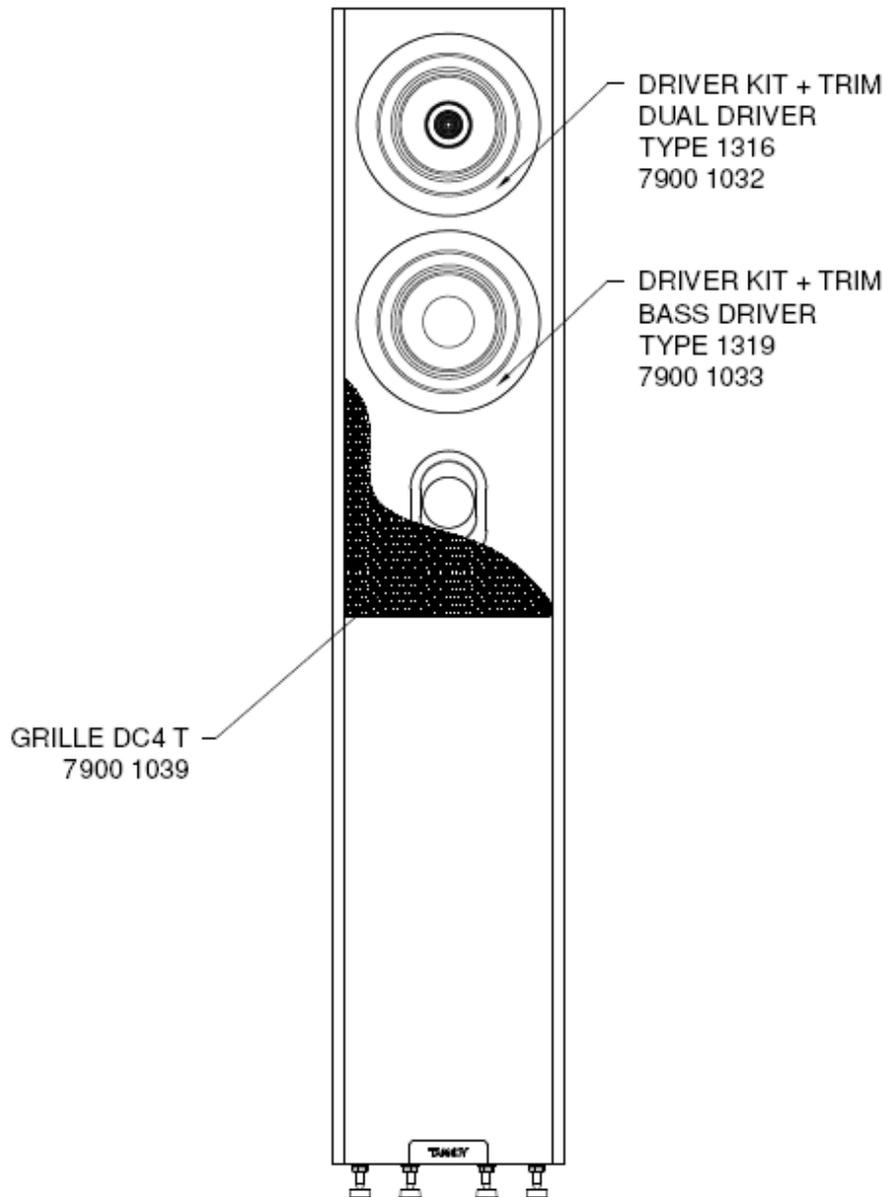


## **Fault Finding**

Tannoy loudspeakers are designed and manufactured to be reliable. When a fault occurs in a hi-fi system the effect is always heard through the loudspeakers although they may not be the source of the fault. It is important to trace the cause of the problem as accurately as possible. A fault heard on one source (only CD or tape for instance) is most unlikely to be a loudspeaker problem. Loudspeakers do not in themselves generate hum, hiss or rumble although high quality, wide bandwidth loudspeakers may emphasise such problems.



## Revolution Signature DC4 T



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### **Field Failure Report Explained**

This Procedure is designed to help you and your customers. By ensuring that we are supplied with full details of all product failures, on the attached Field Failure Report, we can promptly assess the information and rapidly implement remedial action. A further benefit is that we can use analysis of the data to identify design improvements that maybe applicable to improve product reliability.

Method:

1. **You** - Fill in the complete product failure details on to the attached **Field Failure Report** template, including product serial number, and then fax or e-mail to Tannoy Service Department. Fax: +44 (0) 1236 428230 or E-mail: [service@tannoy.com](mailto:service@tannoy.com)
2. **We** - Will enter the information supplied to us onto our **Field Failure Report** database. And appropriate action will be taken.
3. **We** - Cannot authorise the supply of spare parts free of charge, or under warranty, without complete information as to the nature of the failure.
4. **You** - Are required to hold all parts for which warranty claims have been made until instructed otherwise by Tannoy. We may require to inspect failed parts at a later date.

#### **Important**

**Please note:** When claiming spare parts under warranty the part will only be supplied free of charge if the order is accompanied by a completed **Field Failure Report**.

#### **Return of faulty or damaged complete product.**

Please use the Tannoy Returns Authorization Request Procedure if you require to return complete faulty or damaged product to Tannoy. Please contact the Tannoy Service Department for authorisation before returning product.

**Fax: +44 (0) 1236 428230 or E-mail: [service@tannoy.com](mailto:service@tannoy.com)**

Regards,

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## Customer Complaint / Fault Report

**Internal Use Only:**

Warranty Decision:	Source Area:	Report No:

**Customer Section:**

Product Description:	Part Number:	Date:
Customer / Distributor:	20-Digit Product Barcode Number (MANDATORY):	
Detailed description of problem/ fault (MANDATORY):		
Insert pictures below:		

**Please be aware that we cannot accept field-failure reports that do not have mandatory sections completed.**



## FOR GUIDANCE

### Diagnosis of low frequency driver failures resulting from misuse:-

SYMPTOM	PROBABLE CAUSE
Charred voice coil	Under powered amplifier clipping; Excessive peak amplifier power; DC at amp output (amp failure)
Fused, broken or blackened leadout wires	Under powered amplifier clipping; Excessive peak amplifier power; Excessive low frequency equalisation applied
Voice coil out of gap	Excessive peak amplifier power; Excessive low frequency equalisation applied
Coil rubbing	Excessive continuous amplifier power resulting in separation of coil former from cone or suspension; Coil delamination due to excessive temperatures generated; Improper mounting of driver resulting in deformation of frame; Dropping of cabinet resulting in deformation of frame or shifted pole piece
Broken frame or misaligned magnet assembly	Dropping of cabinet ; careless transportation
Torn or punctured cone	Excessive low frequency equalisation applied; Excessive peak amplifier power; vandalism
Cone to coil joint failure	Excessive low frequency equalisation applied
Suspension to coil/cone joint failure	Excessive low frequency equalisation applied

### Diagnosis of high frequency driver failures resulting from misuse:-

SYMPTOM	PROBABLE CAUSE
Charred voice coil	Under powered amplifier clipping; Excessive peak amplifier power; DC at amp output (amp failure)
Fused or broken leadout wires	Excessive amplifier power; connection to low frequency or midrange amplifier in active system
Leadout to coil joint failure (solder)	Excessive amplifier power generating excessive temperatures which melts solder >300°C
Coil rubbing	Excessive continuous amplifier power resulting in separation of coil former; Coil delamination due to excessive temperatures generated; Improper replacement of diaphragm assembly; Dropping of cabinet resulting shifted pole piece
Diaphragm cracked or pulverised	Excessive continuous amplifier power (often frequency related); Under powered amplifier clipping; Connection to low frequency or midrange amplifier in active system.
Misaligned magnet assembly	Dropping of cabinet ; careless transportation

### Diagnosis of manufacturing defects:-

DEFECT	TEST	RESULT
Insufficient glue on:- Cone to coil/suspension Cone to surround Surround to frame Suspension to frame	Sine wave sweep	Buzzing sounds due to separation of defective joints
Incomplete bonding of voice coil to diaphragm or insufficient glue on rubber surround to phase corrector joint	Sine wave sweep	Buzzing sounds; Coil rubbing; Separation of the coil from the diaphragm
Dry solder joints on leadouts	DC resistance of voice coil termination	Coil resistance greater than the rated impedance, or open circuit
Faulty welds at the voice coil terminations on the coil former	DC resistance of voice coil termination	Coil resistance infinite or intermittent
Poorly assembled driver	Visual check Sine wave sweep	Buzzing sounds; Loose parts; Coil rubbing; foreign particles in magnetic gap



### Export Returns Authorization Procedure

Our returns system has been designed to help you and us by ensuring that product returned to the factory is dealt with promptly and correctly.

**No product should be returned without following this procedure.**

#### **What to do:**

1. **You** - Contact the Tannoy Sales / Service Department with a request for a **Returns Authorization Number**, stating the type of product, quantity of product to be returned and reason for return.
2. **WE** - Quote you a **Returns Authorization Number** and send you an **Export Returns Authorization Form**, by fax or e-mail.
3. **You** - Fill in all the relevant details in the form and send it to Tannoy, before arranging shipment.
4. **WE** – On return of the completed form, we will send you written approval to return the goods.
5. **You** – Arrange despatch of the goods to us ensuring the **Returns Authorization Number** is clearly quoted on all paperwork. (Please be sure to agree any shipping cost with Tannoy BEFORE returning products)

#### Important

Authorization must be obtained, in writing from Tannoy, before any products are returned. No responsibility will be accepted on our part for repair, replacement or credit unless this authorization has been given.



## **Warranty Policy**

**Tannoy loudspeakers are warranted against manufacturing defects in material or craftsmanship over a period of 5 years from the date of purchase.**

This warranty is in addition to your statutory rights as a customer. Tannoy cannot however be held responsible for failures caused by abuse, unauthorised modifications, improper operations or damage caused by faults elsewhere in your system.

Tannoy Ltd or its authorised Distributor or Service Agent will make the determination of the cause of failure based on physical inspection of the failed parts. If you suspect a problem with your loudspeakers then in the first instance discuss it with your Tannoy Dealer. The Dealer has the expertise and experience to help you troubleshoot the system and assess the situation. If you continue to have problems contact your Tannoy Distributor or Tannoy Customer Services at our Coatbridge address. Due to our policy of continuous improvement, all specifications are subject to change without notice.



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