

Dual



CS 505-4 *Audiophile Concept*
HiFi Turntable

Bedienungsanleitung
Operating Instructions
Notice d'emploi
Gebruiksaanwijzing
Instrucciones de manejo
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Livro de Instruções

Sehr verehrte Kundin, sehr geehrter Kunde

Wir wünschen Ihnen viel Freude mit Ihrem DUAL-Gerät.

Bitte, lesen Sie vor der ersten Inbetriebnahme diese Bedienungsanleitung sorgfältig durch.

Bei eventuellen Funktionsstörungen wenden Sie sich bitte an Ihren Dual-Fachhändler. Er ist für den Kundendienst und für Garantieleistungen zuständig.

Zur Unterstützung des Fachhändlers in der Bundesrepublik Deutschland stehen die auf der Rückseite dieser Bedienungsanleitung genannten Dual-Service-Stellen bereit.

Dear customer

You are now the owner of a DUAL unit of guaranteed quality. Please read these instructions carefully before using your new equipment for the first time. Even though operation is rather simple, you can only utilize the full advantages, if you are thoroughly familiar with the particular features of this unit. Your dealer has sole authorization in respect of servicing and repairs under warranty. Your dealer will guarantee that any work carried out is of high quality and he also is a DUAL specialist trained and kept up to date by DUAL.

Chère cliente, cher client

En achetant cet appareil DUAL chez votre revendeur, vous venez d'acquérir un produit de qualité.

Veuillez lire ces instructions de service avant de mettre l'appareil en marche. Sa manipulation ne vous posera certainement aucun problème, mais vous ne pouvez utiliser pleinement toutes les possibilités de l'appareil que si vous le connaissez bien.

Seul votre revendeur est compétent pour le service après-vente et les cas de garantie. Il effectuera les travaux de garantie; et il connaît très bien les appareils DUAL car DUAL donne une formation à ses partenaires du commerce spécialisé et les tient informés en permanence.

Zeer geachte cliënt

Met de aankoop van dit DUAL apparaat bij Uw vakhandelaar, bent U in het bezit gekomen van een kwaliteits product.

Alvorens het apparaat in gebruik te nemen, moet de gebruiksaanwijzing goed lezen. Dit kan U later eventuele mogelijkheden, wat betreft de bediening, besparen.

Voor servicedienst en garantie, is uitsluitend Uw vakhandelaar verantwoordelijk.

Hij verleent U garantie, en hij kent de DUAL apparaten door en door, want DUAL schoold en informeerd doorlopend zijn vakhandelaren.

Apreciada clienta, apreciado cliente

Al decidirse por este aparato DUAL, Ud. ha adquirido un producto de calidad.

Le rogamos lea detenidamente el presente manual de instrucciones, antes de poner en marcha el aparato. Su manejo no presenta ninguna dificultad, pero solo tras haberse familiarizado por completo con el aparato, Ud podrá disfrutar de todas las posibilidades que le ofrece. Para el servicio técnico y de garantía es competente únicamente su distribuidor especializado. El se hace cargo de las reparaciones en garantía y conoce mejor que nadie los aparatos DUAL, puesto que DUAL le mantiene al corriente con la necesaria información técnica.

Högt ärade kund

Genom Ert köp av denna DUAL apparat hos Er radiohandlare har Ni förvärvat en kvalitetsprodukt.

Läs igenom den här bruksanvisningen innan Ni börjar använda apparaten. Handavandet av apparaten ger er säkert inga problem men Ni kan utnyttja alla möjligheter helt, först när Ni kan apparaten bra. För kund- och garantiservice är endast Er radiohandlare ansvarig. Han ger Er garanti och känner också DUAL's anläggningar bäst, eftersom DUAL är skyldig att ge löpande information till sina radiofackhandlare.

Cari clienti

Con l'acquisto di questo apparecchio DUAL vi siete assicurato un prodotto di qualità.

Preghiamo di leggere queste istruzioni d'uso prima di mettere in funzione l'apparecchio. L'uso dell'apparecchio certamente non crea problemi, ma diventa possibile assicurarsi tutti i vantaggi dell'apparecchio solo quando lo si conosce a fondo.

Per il servizio tecnico sono competenti esclusivamente i centri servizio tecnico DUAL. L'indirizzo del più vicino centro potrete trovare sulle Pagine Gialle sotto la voce «televisori e radio-apparecchiriparazione» oppure tramite il vostro rivenditore di fiducia. Solo i centri di servizio DUAL sono in grado di effettuare gli interventi in garanzia anche perchè sono continuamente informati sulle innovazioni tecniche dei prodotti DUAL.

Caro cliente

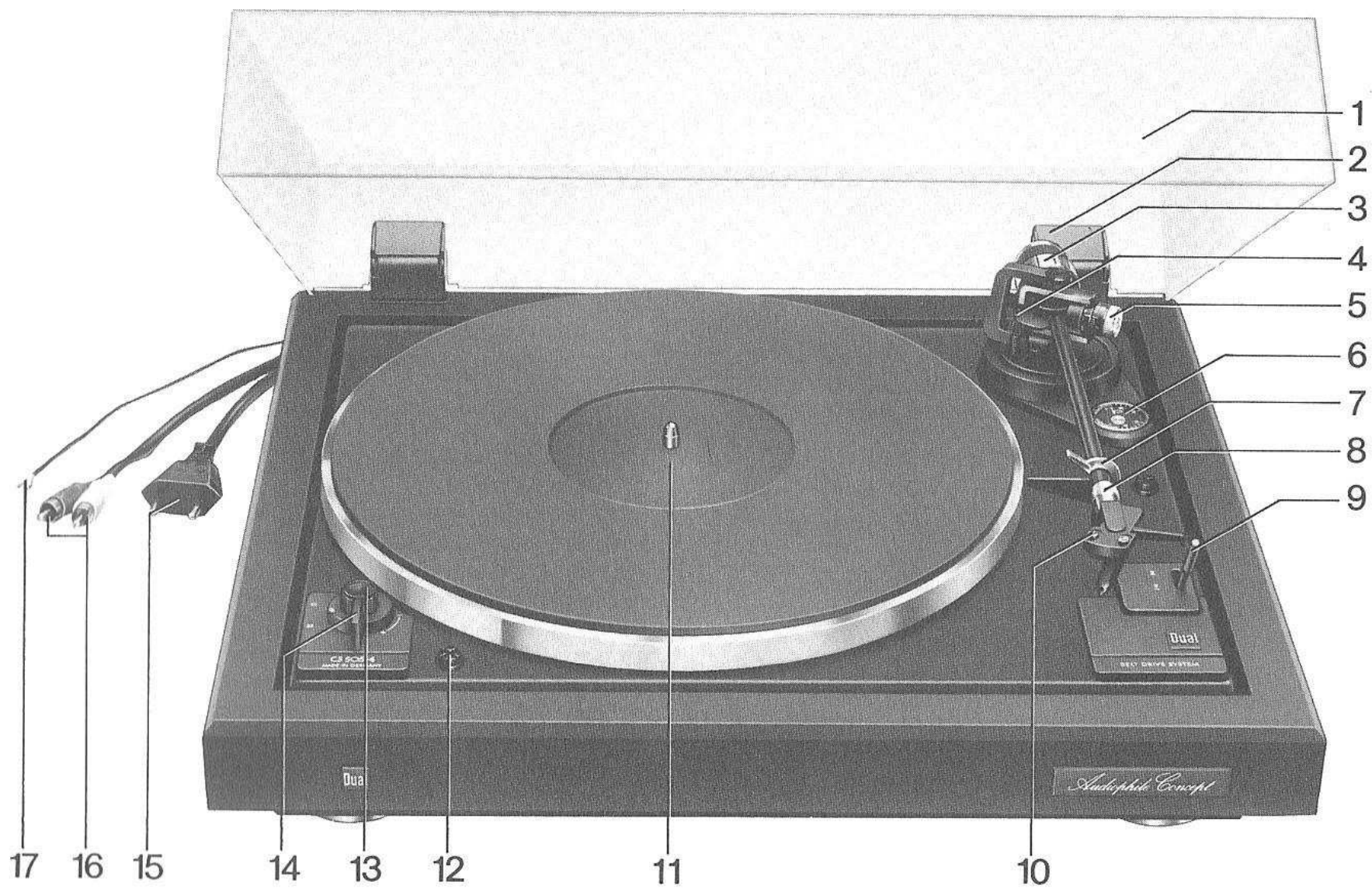
Ao se ter decidio por este aparelho DUAL, isso significa que adquiriu um produto de qualidade.

Sugerimos-lhe que leia atentamente o manual de instruções antes de começar a utilizar o seu aparelho.

Apesar de não oferecer qualquer dificuldade no seu manejo, só poderá usufruir de todas as suas vantagens após uma verificação prévia de todos os seus comandos.

Deverá solicitar sempre a presença do seu concessionário caso haja alguma avaria ou em relação à garantia.

Só o seu concessionário garante uma boa manutenção do seu aparelho, sendo este um técnico especializado e competente em relação aos aparelhos da marca DUAL, mantendo-o informando sobre qualquer dúvida técnica que possa surgir-lhe.



WARNING: To prevent fire or shock hazard, do not expose this product to rain or moisture.

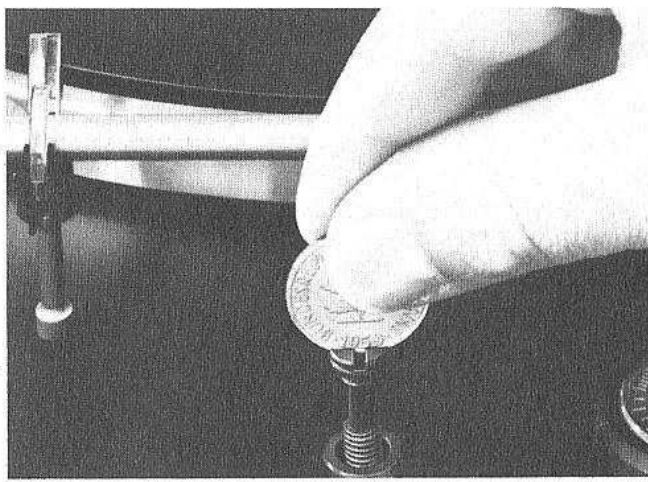


Fig. 1

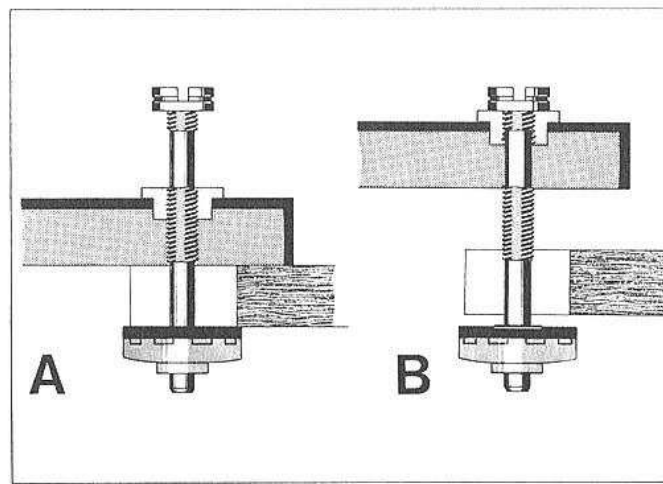


Fig. 2

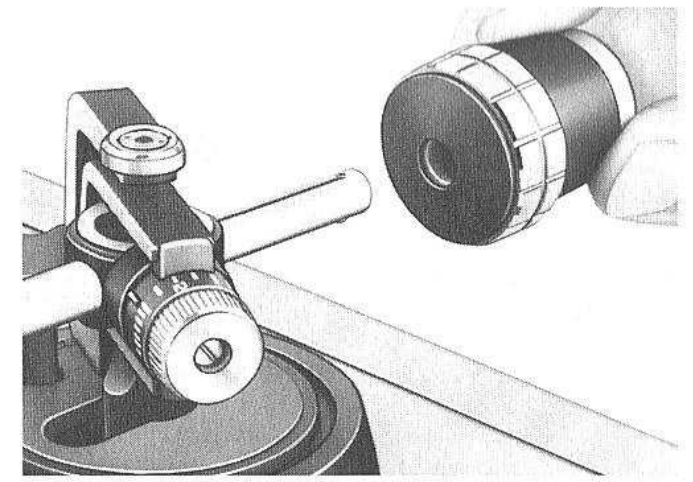


Fig. 3

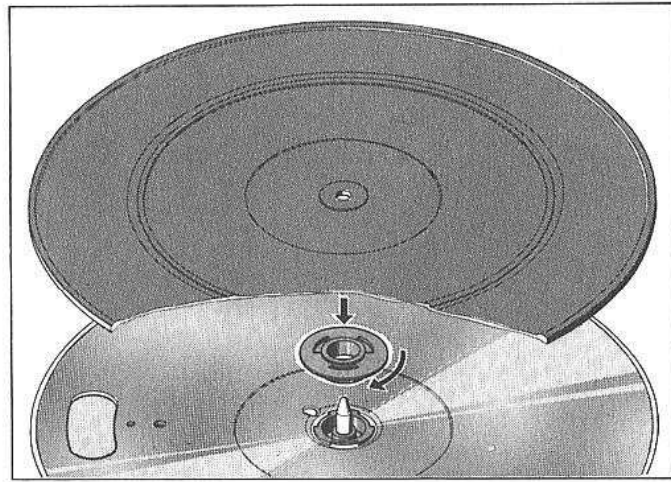


Fig. 4

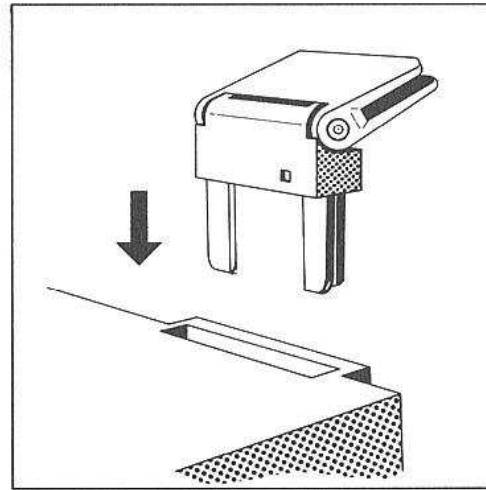


Fig. 5

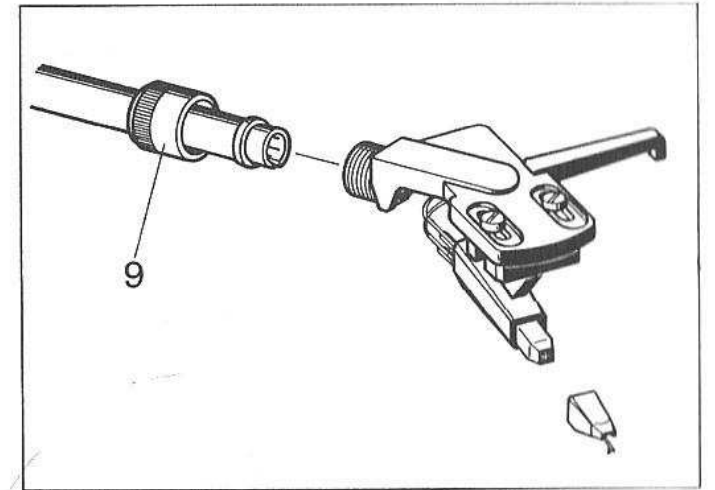


Fig. 6

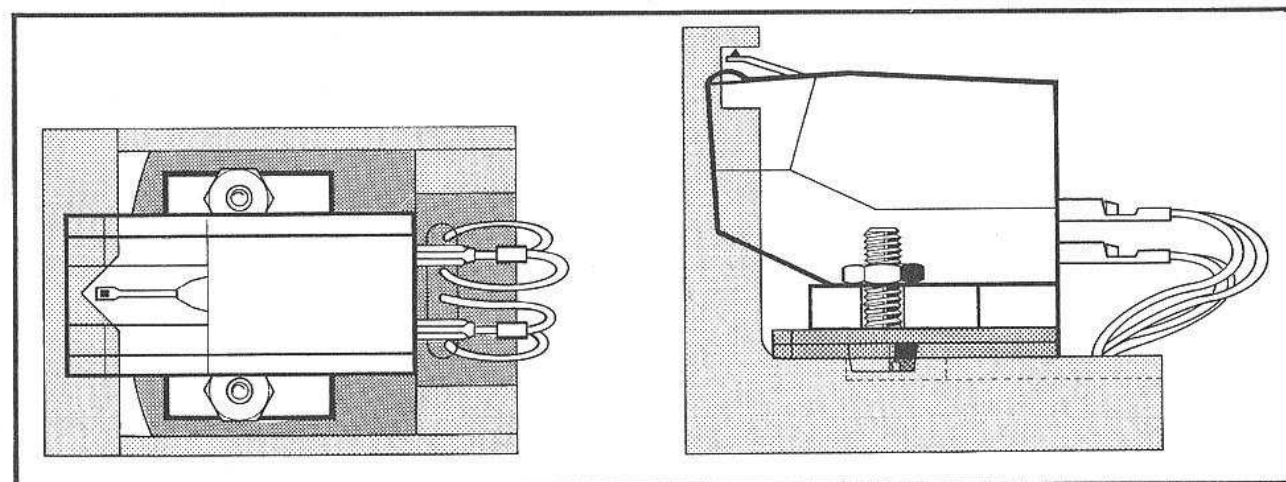


Fig. 7

ENGLISH

Operating features

- 1 Cover
- 2 Hinge
- 3 Tonearm counterbalance
- 4 Alignment screw for tonearm height
- 5 Stylus pressure setting
- 6 Anti-skating setting
- 7 Tonearm post with tonearm rest
- 8 Head-shell locking nut
- 9 Cue control
- 10 Securing screws for the cartridge
- 11 Securing screw for platter
- 12 Transport locking screw
- 13 Pitch control
- 14 Platter speed setting
- 15 Mains lead plug
- 16 Audio Cinch plugs
- 17 Earth wire

Preparation for play

Remove the unit and all accessories from the shipping carton. Please keep all packing elements in case you should need them for later transport.

- Remove the safety screw which, in some cases, is additionally mounted on the left rear side.
To release the transport locking screw (fig. 1) turn these in clockwise direction until they slide down approximately 15 mm and then tighten these by turning them further in clockwise direction. In this way, the record player is spring-mounted in playing position (fig. 2/ B).
- Turn the tonearm counterweight **3** on the rear end of the tonearm (fig. 3).

Turntable

- Remove turntable, mounting washer and turntable cover from the package.
- Set the turntable down so that the 3 lock-in tabs on the support disc engage in the matching notches in the turntable.
- Insert the mounting washer, push down slightly and rotate approx. 60° in a clockwise direction (fig. 4).
Turntable is secured.
Set cover on turntable.

Dust cover

- Insert the hinges **2** in the appropriate recesses (fig. 5). Slide the cover **1** parallel to the position of the hinges **2** (opening angle approximately 60°) until it locks in position. In this position, the cover can be removed at any time.

Connection to the AC mains

- The turntable must be connected to a mains voltage of 230 V/50–60 Hz or to 115 V/60 Hz in accordance with the voltage information on the rating plate.
- The unit can also be connected to the socket of appropriately fitted amplifiers.
- The set carries voltage even when stopped. It is necessary to unplug it from the mains outlet to cut power off.

Connection to amplifier or receiver

- Connect the audio cables to the phono-magnetic inputs of the amplifier or receiver (red RCA-type plug = right channel, white RCA-type plug = left channel).
- Connect earth wire **17** to the earth connector of your amplifier.

Balancing the tonearm and setting the tracking and antiskating force

1. Set the tracking force **5** and anti-skating **6** controls to "zero" (with the pointer L/H). Remove the stylus guard.
2. Unlock the tonearm and move it over the tonearm rest. Place the cue-control lever **8** in **Y** position. Hold the tonearm whilst doing so.
3. Balance the tonearm precisely by turning the counter-balance. The tonearm is balanced precisely when it pivots freely.
4. Set the required tracking force for the cartridge used by turning the dial **5**. The tracking force for series cartridges OMB 10 = 15 mN = dial position 1.5.

Note: If a different cartridge is used, refer to the separate cartridge data sheet for the necessary setting values.

Set the appropriate value of the antiskating device **6** on the basis of the following table:

- Setting for spherical styli.
- Setting for biradial (elliptical) styli (OMB 10).

Tracking force scale 5	Tracking force	Antiskating setting 6	
		"Dry" playing	"Wet" playing
	1 = 10 mN	1	0.7
	1.25 = 12.5 mN	1.25	0.8
OMB 10 →	1.5 = 15 mN	1.5	1.0
	2 = 20 mN	2	1.3
	2.5 = 25 mN	2.5	1.8
	3 = 30 mN	3	2,1

The antiskating device is switched off when the pointer is set to the left.

Start, cueing control

- Select the required platter speed 33 or 45 rpm with the knob **14**, remove the stylus protection cap, release the tonearm and position it over the lead-in groove of the record.

- The tonearm is now damped with the cue control lever **8**. Bring the cue control lever in to position **▼** and lower carefully onto the record.
- The tonearm can be raised at any arbitrary position – also for brief interruptions in playing – by means of the cue control lever (cue control lever in position **▼**). The platter continues to turn.
- With the cueing control in **▼** position, the height of the stylus above the record can be varied by approximately 6 mm by turning the adjusting screw **4**.

Stop

- The tonearm is raised automatically at the end of the record and the device is switched off. You can also switch off the turntable by setting the cue control lever in position **▼** and then setting the tonearm back onto the tonearm rest.
- After you have finished using your turntable, we recommend that you set the tonearm on the rest, lock it in position and put the stylus protection cap back over the stylus.

Pitch control

Each of the two standard speeds (33 $\frac{1}{3}$ and 45 rpm) can be varied with the pitch control. Adjustment is made with pitch control knob **13**. Adjustment range at 33 $\frac{1}{3}$ rpm approx. 1 semitone (6%).

- The pitch control maintains the nominal speed and provides for individual control of tempi and pitch of reproduction, for example, when the pitch of recorded music is to match a live musical instrument, or when a record passage is to match the length of a motion picture scene.
- The speed can be checked with the stroboscopic disc on the turntable platter. When the disc is illuminated by a light powered from alternating household current, the ring of lines corresponding to the chosen speed will appear to stand still when the turntable is rotating at the correct speed.

Exchange or installation of cartridge

A $\frac{1}{2}$ " cartridge weighing 2.5 . . . 8 g can be installed in place of the built-in cartridge or in equipment without a cartridge.

The Dual range of accessories includes appropriate cartridges.

- Loosen screw **8** and remove the head shell by pulling it forward (fig. 5). Remove the cartridge by loosening the two securing screws **10**. Pull off the connection wire on the cartridge. Attach the new cartridge, at first loosely, on the head shell. Secure the connection wires with the connection pin on the cartridge.

Red R right channel	blue GL left channel ground
Green RG right channel ground	white L left channel

- Replace the head shell on the tone arm and secure screw **8**.
- Attach the cartridge with the aid of the system installation gauge.
- This has been correctly installed if the tip of the stylus – viewed from above – is in the V-shaped recess of the system installation gauge. Viewed from the side, the stylus must be in the area of the rectangular recess (fig. 6).

Stylus

The stylus is subject to natural wear and tear during playing. We therefore recommend regular checks, which should be carried out after at least 300 playing hours in the case of diamond-tipped styli. Your dealer will be happy to do this for you cost-free. Worn out or damaged (chipped) styli damage records. Therefore, only use as replacements the stylus types recommended in the technical data of the cartridge. Other styli often cause audible reductions in quality and increased wear to records. Remove the stylus by pulling it diagonally downwards.

To fit a stylus in, follow the procedure in reverse order (fig. 6).

Subsequent transport

Make certain that the pickup arm is locked down and that the needle shield is in place.

- Loosen transport safety bolt by turning it counterclockwise, then pull it up and continue turning until tight (fig. 2/A).
- Remove balancing weight from pickup arm.

Electrical safety

The unit conforms to the international safety specifications IEC 65 (VDE 0860) and to the guidelines of the European Community, 82/499/EWG (VDE 0875).

Technische Daten Meßwerte = typische Werte Rumpel- und Gleichlaufwerte mit Lackfolie ermittelt	Technical data Measured values = typical values Rumble and wow and flutter values obtained with lacquer foil	Caractéristiques techniques Valeurs mesurées = valeurs typiques Ronflement et synchronisme déterminé avec une feuille vernie	CS 505-4
Stromart Wechselstrom umrüstbar	Current type Alternating current changeable	Courant courant alternatif commutable	50 oder 60 Hz
Netzspannungen vom Werk eingestellt	Mains voltages fixed by the producer	Tensions secteur fixées manufacturier	220 – 240 oder, or 110 – 125 V
Riemenantrieb Dual 16-Pol-Synchron-Motor	Belt drive Dual 16-pole-synchronous motor	Entraînement à courroie Moteur synchrone 16 pôles Dual.	Dual SM 100-1
Leistungsaufnahme	Power consumption	Consommation	ca. 8 Watt
Stromaufnahme an 230 V 50 Hz an 115 V 60 Hz	Power consumption on 230 V 50 Hz on 115 V 60 Hz	Consommation de courant en 230 V 50 Hz en 115 V 60 Hz	ca. 30 mA ca. 40 mA
Plattenteller nichtmagnetisch, abnehmbar	Platter non-magnetic, removable	Plateau antimagnétique, amovible	1,2 kg, 304 mm Ø
Plattenteller-Drehzahlen	Platter speeds	Vitesses du plateau	33 $\frac{1}{3}$, 45 U/min.
Tonhöhen-Abstimmung auf beide Plattenteller-Drehzahlen wirkend Regelbereich bei 33 $\frac{1}{3}$ U/min.	Pitch control at both platter speeds adjustment range at 33 $\frac{1}{3}$ rpm	Réglage de la hauteur du son sur les deux vitesses Plage de réglage à 33 $\frac{1}{3}$ tr/mn	6%
Gesamtgleichlauffehler DIN WRMS	Wow and flutter DIN WRMS	Tolérance de vitesse totale DIN WRMS	± 0,06 % ± 0,035 %
Störspannungsabstand (nach DIN 45 500) Rumpel-Fremdspannungsabstand Rumpel-Geräuschspannungsabstand	Signal-to-noise ratio (in accordance with DIN 45 500) Rumble unweighted signal-to-noise ratio Rumble weighted signal-to-noise ratio	Rapport signal/bruit (suivant DIN 45 500) Signal/tension extérieure de ronflement Signal/tension perturbatrice de ronflement	52 dB 75 dB
Wirksame Tonarmlänge	Effective tonearm length	Longueur efficace du bras	221 mm
Kröpfungswinkel	Offset angle	Angle de coude	24° 30'
Tangentiale Spurfehlwinkel	Tangential tracking error	Angle d'erreur de piste tangential	0,15°/cm
Magnet-Tonabnehmer HiFi DIN 45 500 rot R rechter Kanal grün RG rechter Kanal Masse blau GL linker Kanal Masse weiß L linker Kanal	Cartridge HiFi DIN 45 500 red R right channel green RG right channel ground blue GL left channel ground white L left channel	Cellule HiFi DIN 45 500 rouge R canal droit vert RG masse canal droit bleu GL masse canal gauche blanc L canal gauche	Ortofon OMB 10
Diamantnadel biradial	Diamond stylus biradial	Aiguille/diamant biradial	Stylus unit 10 18 × 8 µm ○
Empfohlene Auflagekraft	Tracking force	Force d'appui	15 mN (12,5–17,5 mN)
Übertragungsbereich	Frequency range	Bande passante	10 Hz – 25 kHz
Übertragungsfaktor	Output	Facteur de transmission	4 mV/5 cms ⁻¹ /1 kHz
Compliance horizontal vertikal	Compliance horizontal vertikal	Compliance horizontale verticale	30 µm/mN 35 µm/mN
Tonabnehmergewicht	Cartridge weight	Poids de cellule	2,5 g
Gesamtkapazität Tonarmleitung und Tonabnehmerkabel	Total capacitance Tonearm leads and audio-cables	Capacité totale Câble du bras et câble de la cellule	ca. 160 pF
Achtung: Bei abweichender Tonabnehmer- bestückung sind die erforderlichen Einstell- werte dem separaten Tonabnehmerdaten- blatt zu entnehmen.	Note: If a different cartridge is used, refer to the separate cartridge data sheet for the ne- cessary setting values.	Attention: Avec une autre cellule, se reporter à la fiche technique séparée pour les valeurs requises de réglage.	

DUAL Phono GmbH

Feldbergstr. 11

78112 St. Georgen

Tel. 0 77 24 9 40 90

Fax 0 77 24 94 09 20

www.dual-phono.de

info@dual-phono.de