

Operating
Instructions



C 430

STEREO-AUTOMATIC

Specification

Power supply: Mains 110-127/220-240 V AC 50-60 Hz
Batteries 6 x Ever Ready HP 11 cells (or equivalent).
Always use leakproof batteries. Accumulator 'dryfit'
4 D x 2 U.

Transistors: 19

Diodes rectifiers: 18

Tracks: 4 (2 x 2 stereo)

Tape speed: 4.75 cm/sec (1 $\frac{1}{8}$ ips)

Frequency response: 60-12500 Hz

Wow and flutter: 0.25 %

Signal / noise ratio: 46 dB

Power output:

Mains 1.7 W (music power)

Batt 1.3 W (sine)

Loudspeaker: 130 x 75 mm (5 $\frac{1}{8}$ x 3) 4 ohms

Sensitivities:

Microphone: 0.5 mV/16 k Ω

Diode: 0.5 mV/16 k Ω

Phono: 100 mV/2.2 M Ω

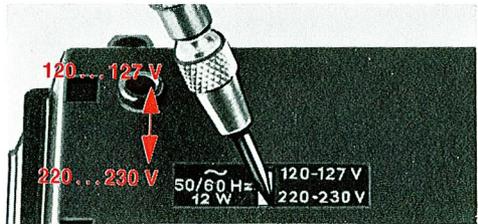
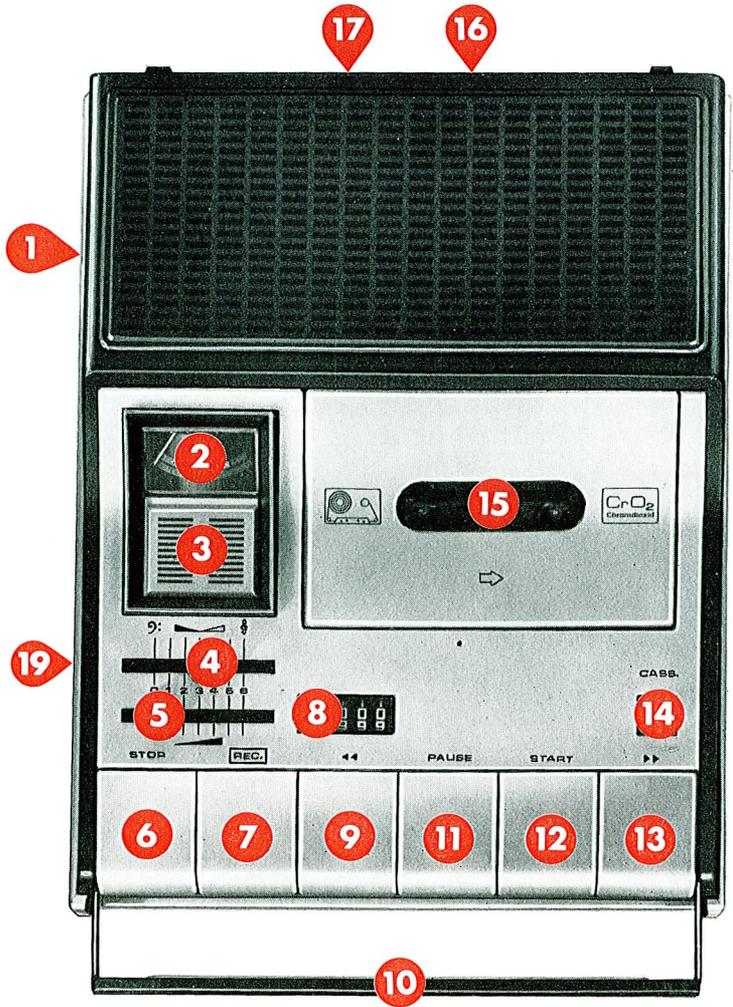
Hi Impedance output: 0.5-1.5 V/20 k Ω

Dimensions: 210 x 82 x 276 mm (8 $\frac{3}{8}$ x 3 $\frac{1}{4}$ x 11 in)

Weight (inc batts): 2.75 kg (6 lbs)

The right is reserved to alter specifications and operational details without prior notice

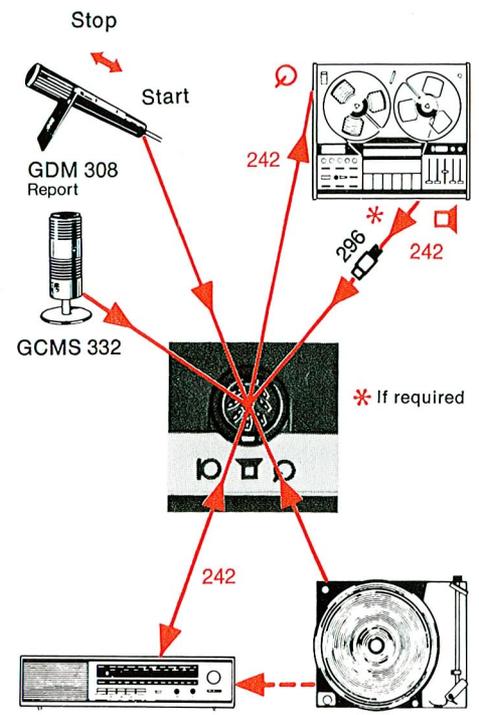




2

1

3



Controls and Sockets:

① Universal input/output socket;

for recording from external microphones, radio receivers, HiFi units, etc. When connecting to this socket the internal microphone is switched off. High impedance output is available for feeding amplifiers or tape recorders. When connecting mono microphones it may be necessary to use adaptor 294.

② Battery meter;

for checking the condition of the batteries or the accumulator (in the start position)

③ Built-in microphone;

for recording when no other connection is made to the universal socket.

④ Tone control;

♭: Bass ← normal → treble ♪

⑤ Volume control;

for playback only, soft  loud.

⑥ Stop key;

press this key to stop the tape and to release the record and start keys.

⑦ Record key;

press and hold down until start key ⑫ has also been depressed (a cassette must be fitted).

⑧ Tape position indicator;

with reset button for easy location of individual recordings.

⑨ Rewind key;

press to rewind tape, it does not lock.

⑩ Retractable handle;

pull out for use.

⑪ Pause key;

press to stop tape during record or playback, to restart press again.

⑫ Start key;

press to start tape during record and playback.

⑬ Fast forward wind key;

press and hold down until wanted tape position has been reached. It does not lock.

⑭ Cassette button;

press to open the cassette compartment.

⑮ Cassette compartment;

open by pressing the cassette button ⑭. The start key ⑫ must not be depressed.

⑯ Mains input socket;

connect the mains lead to this socket.

⑰ Loudspeaker output socket;

for connecting an extension loudspeaker (4 Ω) or earphone. Internal speaker is switched off.

⑱ Mains voltage selector;

select the required mains voltage by turning with a screwdriver.

⑲ Battery compartment;

to open push cover in direction of arrow. Fit batteries as indicated on bottom of compartment.

Operating Instructions

Please unfold the flap inside the front cover. All controls are explained briefly on page 4 and the numbers used on the illustrations are identical with those used in the text.

General

The C 430 is designed for use with normal HiFi low noise or CrO₂ cassettes and the necessary switching required for the different types is automatically achieved when the cassette is inserted. The unit can record in mono or in stereo and will playback in mono via its own loudspeaker or in stereo via a stereo radio or HiFi system.

The unit may be operated from the mains supply, from batteries or from a rechargeable accumulator.

Mains operation

The C 430 may be connected to a mains supply of 120–127 or 220–240 V AC 50–60 Hz. Before connection make sure that the mains voltage selector **18** is set to the supply voltage for your area. If in doubt please consult your dealer or your local electricity authority.

We recommend that the mains lead is fitted with a pin, 13 Amp plug and the plug is fitted with a 2 Amp fuse. The brown wire must be connected to the live pin, marked 'L' or red or brown, and the blue wire must be connected to the neutral pin, marked 'N' or black or blue. On no account must either of the wires be connected to the earth pin, marked 'E' or green or green-yellow.

The mains lead is then connected to the mains input socket **16**. Note: This unit should be completely disconnected from the mains supply when not in use.

Battery operation

When operating the unit on batteries the mains lead must be withdrawn from the mains input socket. 6 x Ever Ready HP 11 leakproof cells (or equivalent) should be fitted into the battery compartment **19** after removing the battery compartment lid. The diagram inside the battery compartment indicates polarity.

The condition of the batteries can be checked by observing the battery check meter **2**. When the pointer falls into the red area the batteries must be replaced.

Always remove the batteries when they are exhausted or if the unit is to be operated from the mains supply for a long period. Even leak-proof batteries can leak and cause damage not covered by the guarantee.

Accumulator operation

To operate the C 430 from a GRUNDIG 'dryfit' accumulator type 4 D x 2 U the batteries must be removed and the accumulator fitted in their place. The unit is fitted with an automatic recharging circuit and all that is required to recharge the accumulator is that the unit be connected to the mains supply and left switched off for a period of 15 hours.

The accumulator should be given an initial charge and the state of the charge can be checked by observing the battery check meter **2**. When the pointer falls into the red area the accumulator must be recharged.

Accumulators must never run in a discharged state, nor should they be stored in a discharged state. If a fully charged accumulator is stored for a period of more than three months it should be given an initial charge of 15 hours before use. The normal operating time for a fully charged accumulator is about ten hours.

Inserting the cassette

Press the 'cass' button **14** and the cassette compartment **15** will open. The cassette can then be inserted with the full spool on the left and the empty spool on the right. Close the cassette compartment by pressing the lid down.

Preparing to record

Your first recording will probably be made through the built in condenser microphone **3**. Press the pause key **11**. It will stay down. Then press the record key **7** and — still pressing — press the start key **12**.

Both the record and start keys will stay down. The C 430 is now in the record mode but the tape is not yet running.

To record

If you have carried out the directions in the previous paragraph all you have to do is release the pause key **11** by pressing it again. The tape will start to move and you can begin to record.

Stop and rewind

To listen to your recording the tape must first be rewound. Press the stop key **6**. This will release the record and start keys. The tape will stop. Now press the rewind key **9** until the tape has been fully rewound. This key does not lock down.

Playback

To playback your recording press the start key **12**. Advance the volume control **5** to the right. The recording will then be heard on the units own loudspeaker. The tone control **4** can be adjusted to suit your taste. To stop press the stop key **6**.

Fast forward wind

If you wish to listen to a later part of your recording press the stop key and then press the fast forward wind key **15**. This key does not lock down. Release the key when you have reached the part of the tape to which you wish to listen.

You have now made and played back a basic recording. It is time for you to try some more advanced recording and to make full use of the high quality which the C 430 can give you.

Recording from other sources

You may connect any one of the following to the universal socket **1**:

- A mono microphone (Grundig GDM 308) with start/stop switch for remote control
- A condenser microphone (Grundig GCMS 332) (stereo) or GCM 319 (mono). For stereo recordings you may also connect two mono microphones using adaptor 278a.
- A dynamic microphone (Grundig GDM 314) mono.
- A record player with crystal or ceramic cartridge. When connecting to record players or HiFi installations all record and playback connections can be made with lead 242. It will not be necessary to change this cable when playing recordings through the record player or HiFi system or when recording from them.
- Two tape recorders may be interconnected using cable 242 for copying tapes from one machine to the other. If the output of the machine used for playback is too high and severe distortion occurs, adaptor 296 can be inserted into the cable to reduce the signal strength.

The C 430 is fitted with an automatic recording level control circuit which samples the incoming signal and sets the volume (on record) to the correct level for the best recording. When recording music we recommend that you preset the automatic recording level control in the following way: —

Put the machine into the record mode with the pause key **11** depressed (ie tape not running). Find the loudest passage in the music and play a short sample.

Lift the pick-up arm and return it to the beginning of the record. Release the pause key and the tape will start running and recording at the correct level.

Do not press the stop key after the recording level has been set because this will cancel the setting.

Note: When any DIN plug is inserted into the universal socket **1** the built-in condenser microphone is switched off. When recording with external microphones set the volume control on zero (fully left), otherwise the microphone might pick-up the signal coming from the loudspeaker and set up a continuous howl known as acoustic feedback. If a recording is attempted under these conditions the howl will be recorded as well.

Also remember that the first few seconds of the cassette consist of a blank leader tape which cannot be recorded upon. Always wait five or six seconds once the tape has started before commencing your recording with a fully wound cassette.

High impedance output

A high impedance low level output is available from the universal socket **1** for driving a stereo record player, radio or high fidelity installation. Connection should be made using cable 242 and the output level is approximately 380mV (maximum) with a recommended load impedance of not less than 50k.

Extension loudspeaker/earphone socket

A 4 ohm loudspeaker may be connected to the loudspeaker socket **17**. When a plug is inserted into this socket the internal loudspeaker is switched off. An earphone may also be connected and may be used for private listening on playback or for monitoring during record.

The universal socket **1**

The universal socket is wired to international standards in the following way: —

- Pin 1; Microphone/diode input (LH channel).
- Pin 4; Microphone/diode input (RH channel).
- Pin 2; Common earth (screen) strapped to pin 6.
- Pin 5; Hi impedance input (2.2 M Ω) (RH channel) on record.
- Pin 5; Hi impedance output 18 k Ω (RH channel) on playback.
- Pin 3; Hi impedance input (2.2 M Ω) (RH channel) on record.
- Pin 3; Hi impedance output (18 k Ω) (RH channel) on playback.
- Pin 6; Remote control earth (strapped to pin 2).
- Pin 7; Remote control switching (Supply line to motor).
- Pin 8; DC voltage supply to condenser microphone.



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

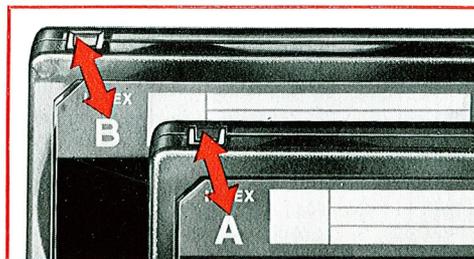
Tape position indicator

When inserting a fully wound cassette the tape position ⑧ can be reset to 000 by pressing the button next to it. The numbers can be used to compile an index so that individual recordings can be easily found at a later date.

Erasure and safeguard against erasure

As you record, any previous recordings on the tape will be automatically erased. If you wish to erase a tape without recording new material insert a dummy DIN plug into the universal socket ①. Set the C 430 into the record mode and allow the tape to run through.

Commercially recorded cassettes lock the record button so that they cannot be inadvertently erased. You can safeguard your own recordings in the same way if you break the appropriate safety catch off the cassette. Each cassette is labelled 'A' and 'B' and the safety catch can be seen on the rear edge of the cassette near the index letter (or number). Each track can be protected separately and if, at a later date, you wish to record the track again this can be done by covering the hole with a little sticky tape. Please note that only the outer half of the safety catch aperture should be covered when the cassettes are the chromium dioxide (CrO₂) type, as the inner half is used for automatic switching.



Care of tapes

Tape should never be left on top of central heating radiators or near any other source of heat as this will distort the tape and render it useless. Cassettes not in use should always be stored in their cases to prevent the tape becoming contaminated with dust which can damage the delicate mechanism of your machine. To lessen the likelihood of loose looped tape in the cassette, tighten the tape by re-winding so that no loose layer of tape can be seen.

Maintenance

The design of this unit will guarantee long operation without maintenance. If any fault should occur do not attempt to repair it yourself. Repairs should be carried out by a qualified engineer.

You should, from time to time, clean the rubber pressure roller, the capstan spindle and the faces of the record/playback heads (marked by arrows in the illustration). Open the cassette compartment

15 and press the start key 12. This will bring the mechanism forward so that the parts may be cleaned using a little methylated spirit and a lint-free cloth. Stubborn deposits of oxide on the head faces should never be removed with anything harder than a matchstick.

Never touch the surfaces with metallic or magnetic objects this can cause serious damage.

Press the stop key 6 when you have finished cleaning and before attempting to insert a cassette. The cleaning procedure can be made easier if you use the Grundig cleaning cassette 461. Simply insert the cassette, press the start key and allow the special cleaning tape to run through, this takes about five minutes.

To clean the case use nothing more abrasive than a soft duster. Cleaners and polishes should be avoided.

Note: Do not expose this machine to temperatures higher than 70° C. Remember that this can be exceeded on the rear window shelf of a car exposed to strong sunlight.

This instrument is designed for long operation without maintenance. Cassettes recorders are very reliable machines, provided that they are used correctly and are kept clean. By far the most common trouble is the tangling of tape, where the tape wraps itself around the drive spindle, the pressure roller and other vital parts of the recorder.

ALMOST INVARIABLY THIS IS NOT A FAULT OF THE MACHINE BUT THE CASSETTE.

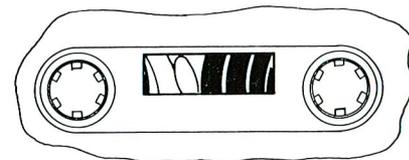
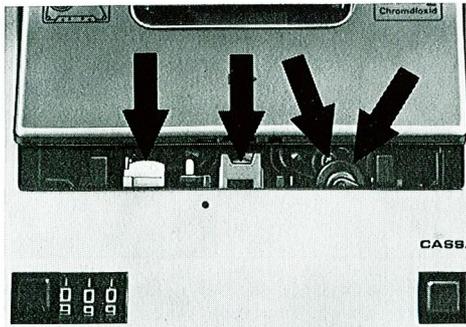


Fig. 1

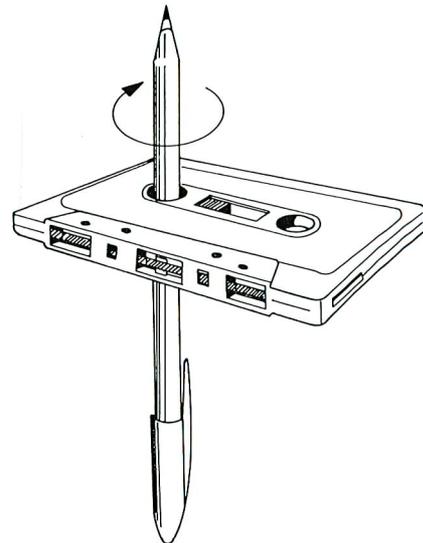


Fig. 2

To lessen the likelihood of this happening you must observe the following:

1. Before inserting a cassette to record or playback, tighten the tape so that no loose layers of tape can be seen when looking through the centre window, (See Fig. 1). Use a pencil or a ball point pen to tighten the tape, (See Fig. 2).
2. Use only quality cassettes. There are vast differences and only with a high quality cassette with a well known trade name can you be reasonably sure that faults will not occur.
3. Do not drop the cassette. If this happens small ridges could form in the winding of the tape (visible through the centre window). This will cause the cassette to jam or to become a little stiff. In such cases carefully wind the tape from one end to the other and back again to even out the steps and ridges.

Accessories

- Cassettes C 60 HE 2 x 30 minutes
C 60 CR 2 x 30 minutes
C 90 HE 2 x 45 minutes
C 90 CR 2 x 45 minutes
C 120 CR 2 x 60 minutes



Cleaning Cassette 461

Dynamic Microphone GDM 308 Report
GDM 314

Condenser Microphone GCMS 332

Connecting Lead 242

Adaptor 242

Earphone 340/S

Accumulator 4 D x 2 U



GDM 308 Report



GCMS 332



Stethoclip 514



Earphone 340