

ingersoll

COMPUTER PROGRAM DATA RECORDER

XK-696



Owner's Manual

INSTRUCTION MANUAL

Congratulations! You are now the proud owner of an Ingersoll quality product. Please read this manual carefully and familiarize yourself with the unit before use.

Please retain this manual for future reference.

Mains Supply: 240 Volts A.C. 50 HZ.

IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:

BLUE—NEUTRAL BROWN—LIVE

A BS1363 three pin fused plug should be fitted, incorporating a 3-amp plug fuse. If the wire colours in the mains lead do not correspond with the terminal identification in the plug, connect as follows:-

BLUE wire to terminal coded N (Neutral) or coloured black.

BROWN wire to terminal coded L (Live) or coloured red.

Do NOT make any connection to the large terminal coded E or coloured GREEN or GREEN/YELLOW.

If in doubt—consult a competent electrician.

Ensure that the terminal screws are fully tightened and carefully clamp the outer covering of the mains lead using the "cord grip" in the plug.

WARNING: Mains Voltage Inside Cabinet

ALWAYS remove mains plug from wall socket when not in use, or before any service operation.

NEVER remove covers unless qualified to do so. Refer servicing to competent service personnel.

Do NOT allow this product to be exposed to rain or moisture.

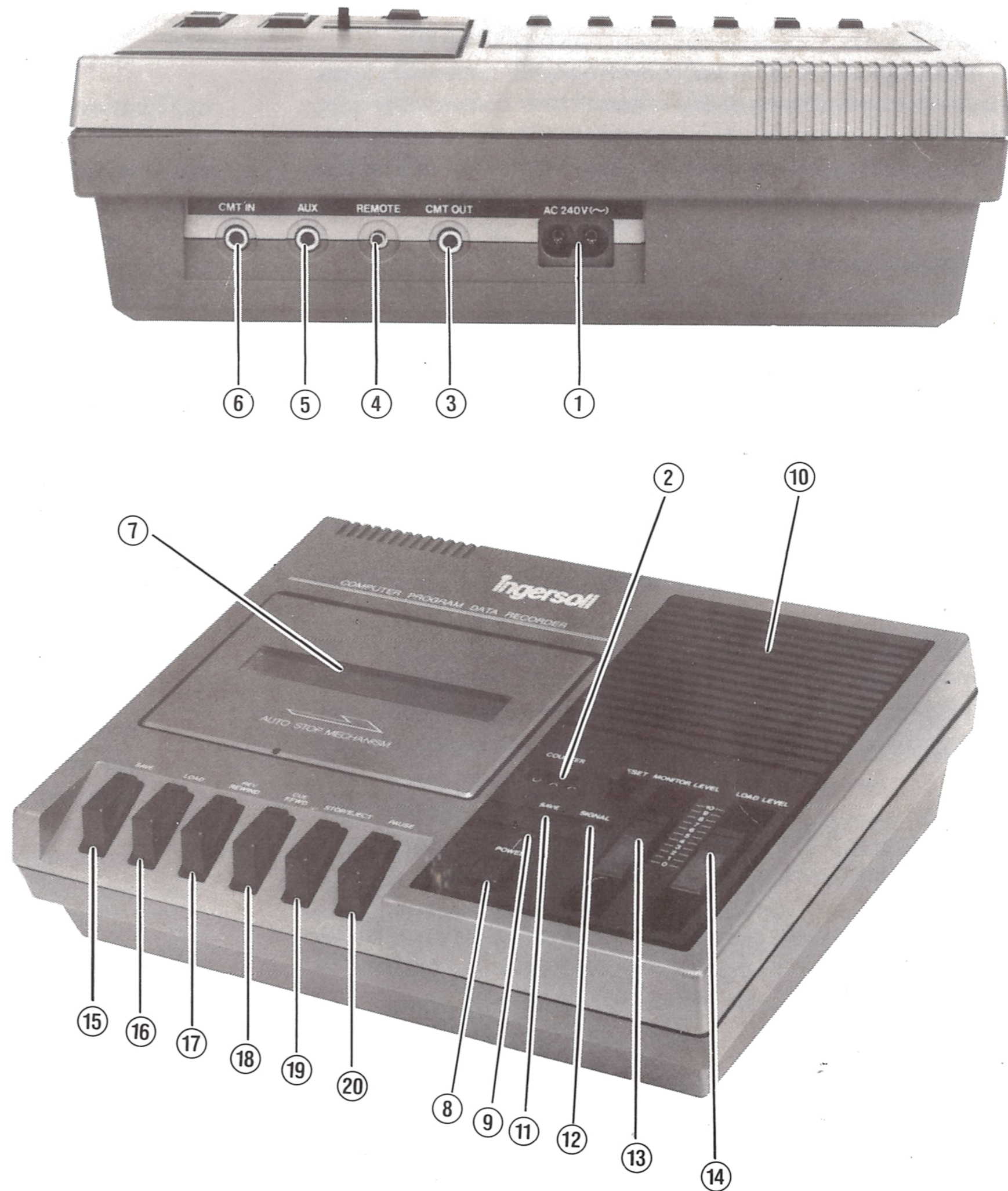
INTRODUCTION

This DATA RECORDER has been developed specifically for use with home computers. Consequently, it has many features not normally found on cassette recorders designed primarily for recording and playback of audio material. Using the DATA RECORDER you can store your lengthy computer programs on ordinary cassette tapes.

When you wish to run a program that you have saved on tape, it is a simple matter to load it back into the computer memory without the necessity of typing the whole program again.

LAYOUT OF CONTROLS AND SOCKETS

1. AC 240 VOLT MAINS SOCKET
2. TAPE COUNTER AND RESET BUTTON
3. COMPUTER OUT (LOAD) SOCKET
4. REMOTE MOTOR CONTROL SOCKET
5. AUXILIARY INPUT SOCKET
6. COMPUTER IN (SAVE) SOCKET
7. CASSETTE COMPARTMENT AND LID
8. POWER ON/OFF SWITCH
9. POWER ON INDICATOR
10. SPEAKER
11. SAVE INDICATOR
12. SAVE SIGNAL INDICATOR
13. MONITOR LEVEL CONTROL
14. LOAD LEVEL CONTROL
15. SAVE KEY
16. LOAD KEY
17. REWIND/REVIEW KEY
18. FAST FORWARD/CUE KEY
19. STOP/EJECT KEY
20. PAUSE KEY



CONNECTING TO COMPUTER

1) Many home computers are supplied with suitable connecting leads. If you need to purchase a lead, it must have connections compatible with your computer at one end (refer to computer operating instructions) and jack plugs as shown below at the other end. The jack plugs are for connection to the DATA RECORDER.

a) **SAVE JACK** (3.5 mm type)

Connect this plug to the CMT IN socket (6).

Note: In some computer instruction leaflets, use of "AUX" or "MIC" sockets may be specifically recommended but this will not present a problem. In either case, connect to CMT IN (6) in the first instance, but try AUX (5) if difficulties are experienced in SAVING PROGRAMS (see later instructions)

b) **LOAD JACK** (3.5 mm type)

Connect this plug to the CMT OUT socket (3)

Note: In some computer instruction leaflets, the use of "EAR" socket may be specifically recommended. Again, simply ignore this instruction and connect to CMT OUT (3). The LOAD level is variable (see later instructions) and will suit virtually all brands of home computer.

c) **REMOTE START/STOP JACK** (2.5 mm type)

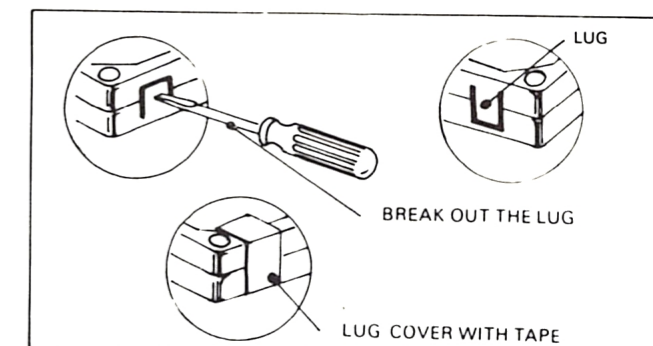
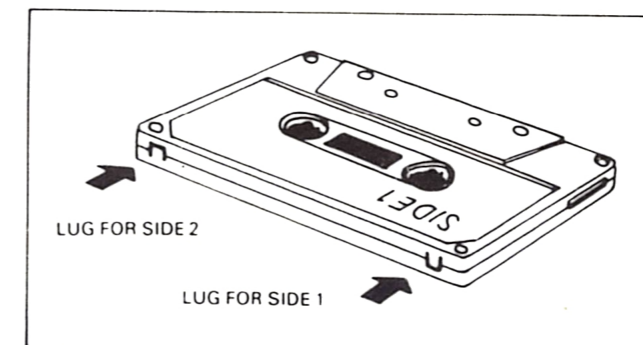
Connect this small plug to the REMOTE socket (4)

Note: Not all computers are equipped with this facility. In these cases, stopping and starting between programs is achieved by using the PAUSE key (20) (see later instructions).

GENERAL REMARKS

A) Short length blank cassettes C30 or less are recommended for storing computer programs. Thin C120 tapes should never be used.

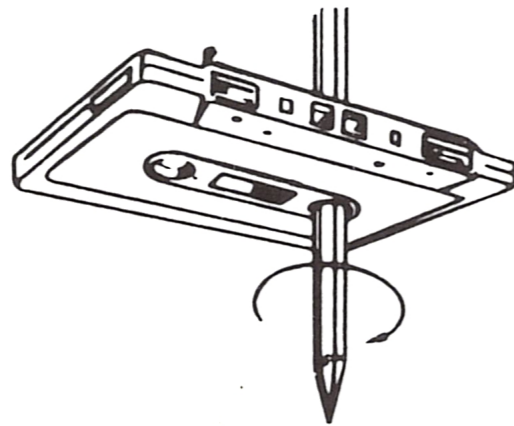
- B) Leave a few seconds gap between programs if you store several on the same cassette.
- C) Always save at least two copies of lengthy programs, preferably on different cassettes. Accidents will happen, and re-typing long programs can be very time consuming.
- D) For quick identification of programs, label cassettes immediately after storing programs.
- E) Remember to clean tape heads regularly. This is critical to avoid degradation of the computer signal. It is recommended that the heads are cleaned prior to SAVING programs or after every couple of hours of LOADING programs. (See "Important Cassette Care Notes").
- F) If you are re-using a cassette, programs on the tape will automatically be erased when SAVING. However, you are advised to erase used tapes completely beforehand because parts of old programs in between the new programs may confuse the computer. (See "Erasing tapes").
- G) SAFEGUARD AGAINST ACCIDENTAL ERASING. To protect your valuable programs, cassettes are equipped with special "lugs" (see diagram). When the lug for the side of the cassette in question is broken-out, the SAVE button (15) cannot be depressed. If you subsequently wish to re-use a cassette on which the lug has been removed, simply cover that area with a piece of sticky tape.



SAVING PROGRAMS ON CASSETTE TAPE

- 1) Ensure all computer connections have been correctly made and that the mains lead is plugged into socket (1).
- 2) Push power switch (8) "ON". Observe that power "on" indicator illuminates.
- 3) Open cassette compartment lid (7) using STOP/EJECT Key (19).
- 4) Examine cassette and check that the antierase "lugs" are intact (see "general remarks") Otherwise SAVE key cannot be depressed.
- 5) If the cassette has clear or coloured "leader" tape, manually wind forward until the brown recording tape is exposed. Use a pencil or ball-point as shown in the diagram.

Insert the tape into the slots in the cassette compartment lid. Ensure that the exposed tape faces towards you, and that the label indicating the side you wish to use faces upwards. Close the cassette compartment lid.



- 6) Set tape counter to 000 by depressing re-set button (2)
- 7) If your computer does not have Remote start facility, press the pause key (20) to down position.
If your computer does have Remote start, ensure that pause key (20) is always in the released (up) position.
- 8) Press SAVE key (15) until it locks down (the LOAD key will also lock down automatically). Note that the SAVE indicator (11) illuminates.
- 9) Follow computer manual and type appropriate SAVE instructions. Also release the PAUSE key (20) if your computer does not have remote start facility.

- 10) The cassette mechanism will start and the SAVE SIGNAL indicator (12) will glow, showing that data is being stored on the tape. The SAVE level is controlled automatically and no adjustments are required at this stage.
- 11) You may "listen" to the program being stored using the monitor speaker (10). The monitor level is controlled by slider (13). This control has no affect on the SAVE level. (The program data you hear will sound like a series of screeches and buzzes). To save without monitoring, slide the monitor level control (13) to "0".
- 12) If computer has remote facility the tape will stop at the end of the program to be stored. Otherwise, press the stop/eject when the SAVE SIGNAL LED (12) is extinguished and/or no further sounds are heard through the monitor speaker.
- 13) Note the tape counter reading for future reference.

LOCATION OF BEGINNING OF PROGRAMS

- 1) You should always leave a few seconds gap between stored programs, to help location of the desired program using cue/review facility.
- 2) If you have noted the tape counter reading press rewind/review key (17) or FFWD/Cue key (18) as applicable and press STOP/EJECT key (19) to halt the tape when desired.
- 3) To find the start of programs if you are not sure of the tape counter readings, press LOAD key (16) until it locks down. Raise monitor level using control (13). When you now press either the rewind/review (17) or FFWD/Cue key (18), they will not latch down but you will hear "chattering" wherever data is stored on the tape. You will then easily be able to locate the "gaps" in between the programs and ensure that you commence loading at the beginning of the desired program. Release key when you reach the correct position on the tape.

NB If your computer has remote facility, the cassette will not operate in either the LOAD or SAVE mode unless the correct commands have been typed.

LOADING PROGRAMS INTO COMPUTER MEMORY

- 1) Locate "gap" at beginning of program you wish to LOAD (see previous instructions).
- 2) Press LOAD key (16) until it locks down. (If your computer does not have remote facility: First, press the pause key (20)).
NB Leave pause key (20) in released (up) position at all times if your computer does have remote start facility.
- 3) Set monitor level (13) as desired.
- 4) Set LOAD level (14) to "6" initially.
- 5) Type LOAD instructions on computer (see computer manual). (If your computer does not have remote start also release the PAUSE KEY (20)).
The tape will start and loading will commence.
- 6) The program will fail to load if the load level does not suit your computer. When in difficulty, relocate the beginning of the program (see previous instructions) and repeat step (5) with different settings of the LOAD LEVEL control (14) until success is achieved. It is worth noting that different brands of cassette may vary in their output level. Consequently, LOAD level will have to be altered accordingly.

AUTO STOP

The tape mechanism incorporates an automatic stop system which functions only in the LOAD or SAVE modes. When the end of the tape is reached, the tape stops and the SAVE/LOAD keys are automatically released.

ERASING TAPES

To erase tapes without storing new programs simply remove the plugs from the REMOTE socket (4) and the CMT In socket (6). Depress the SAVE key (15) and allow the tape to run from beginning to end.

IMPORTANT CASSETTE CARE NOTES

Please read carefully

Each time a cassette is run, small quantities of brown oxide from the tape itself begin to build up on the tape heads and pinch roller. Without attention, this contamination will soon cause degradation of the data signal or mechanical problems. Check this **BEFORE ASSUMING THAT THE MACHINE IS FAULTY.**

Use a small cotton swab soaked in "tape head cleaning fluid" to clean the tape head, erasure head and pinch roller. Alternatively, you can regularly use a "head cleaning cassette". The tape head is a delicate precision component and serious damage will result if you attempt to scrape the contamination away with a sharp implement.

Other common causes of trouble are

- a) tapes jamming—leading to uneven speed
- b) tapes tangling—where the tape wraps itself around vital parts of the mechanism.

To reduce the likelihood of these problems occurring you must observe the following precautions:

1. Check that there are no loose layers of tape visible through the cassette centre window "Take-up" these loose layers using a pencil or ballpoint pen before inserting the cassette into the machine (see fig. 2).

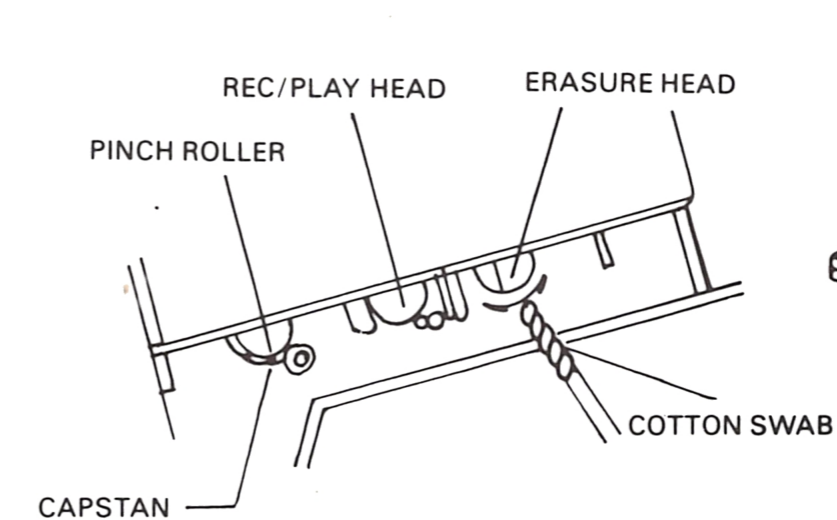


Fig. 1

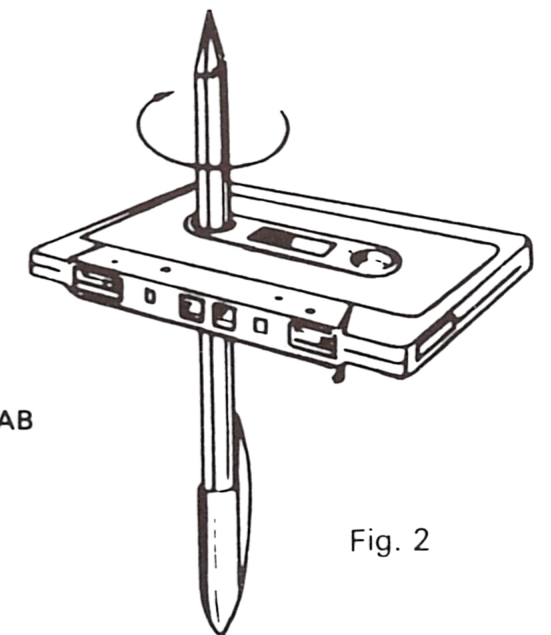


Fig. 2

2. If the cassette feels "tight" whilst performing the operation shown in fig. 2, the tape may be jamming due to "ridges" in the winding of the tape (visible through the centre window). These may be removed in most cases by fast winding of the cassette from one end to the other and back again.
3. Use only well-known brands of tape.
4. Use of C120 cassettes is not recommended.

AZIMUTH ADJUSTMENT

This has been pre-set at the factory for optimum results when loading the vast majority of pre-recorded programs.

Chewed tapes can result from over adjustment therefore we strongly recommend that you do not tamper with this unless qualified to do so. Please consult service personnel if in any doubt.

FOR AFTER SALES SERVICE, PLEASE CONTACT
THE DEALER FROM WHOM YOU PURCHASED
THE PRODUCT.

SCHEMATIC DIAGRAM

