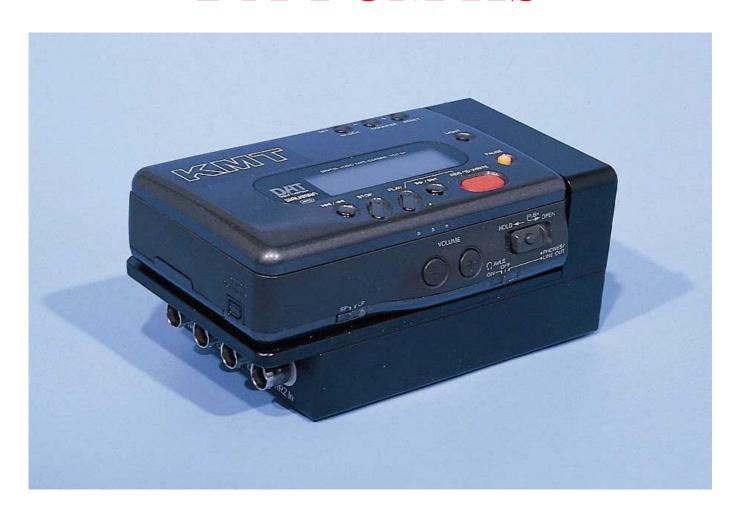# Kraus Messtechnik GmbH

Gewerbering 9, D-83624 Otterfing, ☎ +49-8024-48737, Fax. +49-8024-5532 – Germany
Web: www.kmt-gmbh.com   E-mail: info@kmt-gmbh.com

User manual
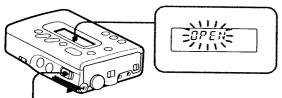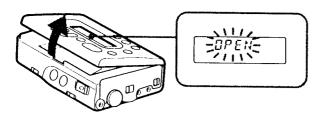
DA-PCM HS

Inserting a Cassette

1 Press and hold down the small button and slide the HOLD/PUSH OPEN-switch to the OPEN position.
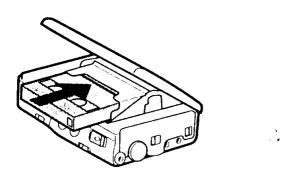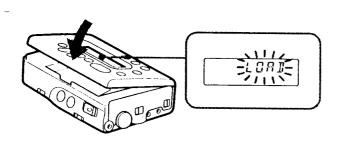
HOLD/PUSH OPEN-switch
While pressing

2 Open the cassette compartment door.

3 Insert a cassette with the window facing upward.

4 Close the cassette compartment door.
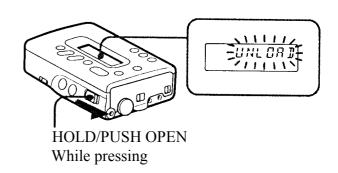
The cassette will be loaded automatically.

Notes

When disconnecting the unit from the power source, make sure the cassette compartment door is closed. Otherwise, you may not be able to close it afterward. If this happens, re-connect the power source.

When inserting a cassette, make sure that the side with which the tape is visible inside is facing upward. If you inset the cassette upside down, you may not be able to take the cassette out.

To eject the cassette

While the unit is in the stop mode, press and hold down the small button and slide the HOLD/PUSH OPEN-switch to the OPEN position.

HOLD/PUSH OPEN
While pressing

Record-protect shutter

Slide the record-protect shutter to the left to protect a recorded tape from being accidentally erased by recording on the tape for the second time.

If the shutter is open, you cannot record on the tape

If the shutter is closed, you can record on the tape

2

To Record

■STOP ►PLAY ‖PAUSE

out of function

HOLD/PHUSH OPEN

out of function   REC   out of function

1 **Insert a DAT cassette**

2 **Press the REC button and the**
‖ PAUSE-button.
The unit enters the pause mode.

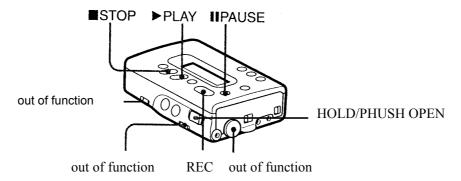**3** **Press either the ➢ PLAY-or the**
‖ PAUSE-button.
The recording starts.

Notes
The recording cannot be started by just pressing
the REC button, instead, the unit enters the
recording monitor mode. The unit can enters the
recording monitor mode whether the record-protect
shutter of the cassette is open or not. Recording is
possible only when the shutter is closed.

To stop recording
Press the ■ STOP-button.

To pause recording momentarily
Press the ‖ PAUSE-button.

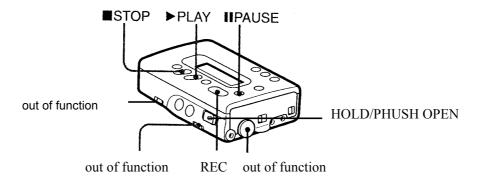**To cancel the pause mode**
Press the ‖ PAUSE-button again or press the ➢
PLAY-button.

Notes
If the unit is left in the pause mode for more than five
minutes, the unit will automatically enter the stop
mode in order to protect its head and the tape.

Notes on Recording

■STOP ►PLAY ‖PAUSE

out of function

out of function   REC   out of function

HOLD/PHUSH OPEN

Do not leave any unrecorded parts on a DAT tape.
If there is a blank (unrecorded) part left on a DAT tape, the absolute time* will not be written thereafter. Also, when the tape is being fast-forwarded or rewound, it will stop at that point. In order not to leave any unrecorded parts on a tape while recording, observe the following:

● If you intend to continue to record on a tape which is partially recorded, make sure that you find the end of the previous recording first, then the start the new recording from that point without leaving any unrecorded gap. (If you fast-forward the tape, if should automatically stop where the previous recording has ended.)

*The absolute time indicates the elapsed time from the beginning of the tape and the current position of the tape which is written digitally. The absolute time will be automatically written when you record a DAT tape for the very first time and cannot be erased once written.

When you record to the end of a DAT tape
The tape automatically rewinds to the beginning and will stop there. (Auto-rewind function)

To avoid any accidental operation (Hold function)
Slide this switch to the HOLD position to avoid any accidental operation while the unit is set in a particular operational mode.

(In the HOLD Position are all switch lock!)
....
Start ID

This signal indicates the beginning of a recorded program (track). By reading these start ID signals, the unit can cue the beginnings of the recorded programs (tracks) automatically.

tape transport direction

program (track)	program (track)	program (track)

start ID

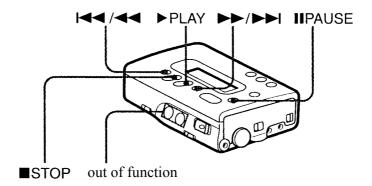**To write the start IDs automatically while recording**
This start codes are set by each new recording, also by using the "Pause button" by recording.

To write the start IDs manually while recording
While recording, press the REC button at the point where you wish to write the start ID.

Note
While writing the start IDs, the *W R I T E indication comes on and the* START-ID *-* indicator flashes for about nine seconds. While the unit is set in this mode, no operational buttons other than the ■ STOP button will function.

Playback

I◄◄ /◄◄   ►PLAY   ►►/►►I   IIPAUSE

■STOP   out of function

1 Insert a DAT cassette

2 Press the ➢ PLAY-button.

Playback starts.
The SP/LP switch is out of function.

To stop playback
Press the ■ STOP-button.

To pause playback momentarily
Press the II PAUSE-button.
To cancel the mode, press either the II PAUSE-button
or the ➢ PLAY-button.

Notes
If the unit is left in the pause mode for more than five
minutes, the unit will automatically enter the stop
mode in order to protect its head and the tape.

To fast forward the tape
Press the ➢➢/➢➢I button when the unit is in the stop
mode.

To rewind the tape
Press the I◄ ◄/◄ ◄ - button when the unit is in the
stop mode.

When a tape is played back to the end
The tape will be rewound to the beginning
automatically and the unit enters the stop mode.
(Auto-rewind function)

Cleaning the Head

Prolonged operation may cause contamination of
the head. To make the best possible recording
and playback, we recommend you to clean the
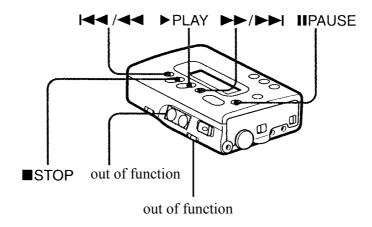head periodically, using the cleaning cassette
DT-1OCL (not supplied)*.

How to use the cleaning cassette
1 Insert the cleaning cassette as you would a
   normal DAT cassette.

2 Press the ➢ PLAY button, then press the 3
   STOP button after about 10 seconds.

3 Remove the cleaning cassette without
   rewinding it.

4 Proceed with recording and playback with a
   normal DAT cassette and check the sound
   quality.

Notes on the cleaning cassette
● The cleaning cassette cannot be used for
   recording or playback.

● Do not clean the head with the cleaning
   cassette more than five times in succession.
   Cleaning the head continuously for a long
   period of time may cause wear to the head.

● Do not rewind the cleaning cassette each time
   you use it. When the cleaning cassette tape is
   taken up (wound) completely, rewind it to the
   beginning and reuse it. The cleaning cassette
   can be used approximately 200 times, with 10
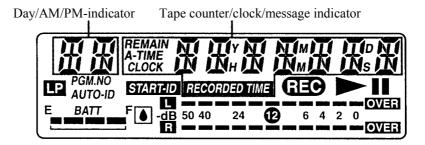   seconds of cleaning each time.

Locating the beginning of a program (track)

I◀◀/◀◀   ▶PLAY   ▶▶/▶▶I   IIPAUSE

■STOP   out of function

out of function

Press either ➤➤/➤➤I or I◀◀/◀◀ button quickly once during playback. If the unit is in the fast forward/rewind mode, press either the ➤➤/➤➤I or I◀◀/◀◀ button once.
Or if the unit is in the stop mode, press either the ➤➤/➤➤I or I◀◀/◀◀ button twice.

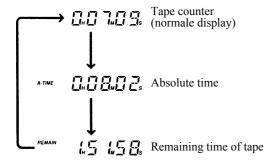| To locate the beginning of the succeeding program (track)	Press ➤➤/➤➤I the same number of times as the programs (tracks) to be skipped.	_06_ PGM NO _-0.2_ E.g. to locate the beginning of the fifth program (track)
To locate the beginning of the previous program (track)	Press ➤➤/➤➤I the same number of times as the programs (tracks) (including the currently played one) to be skipped.	_03_ PGM NO _0.5_ E. g. to locate the beginning of the fourth program (track) including the currently played one

6

Display

Day/AM/PM-indicator   Tape counter/clock/message indicator

● **The tape counter indications**

Each time you press the COUNTER button, the display changes cyclically as follows:

Tape counter (normale display)

A-TIME   Absolute time

REMAIN   Remaining time of tape

To reset the tape counter (normal display) to
00H00M00S
Press the RESET button.

Remaining time of the tape
The remaining time left on the tape will normally come on after about 16 seconds of commencing playback in the SP mode.
However, there may be some aberration in the amount of time displayed which depends upon the tape you use.
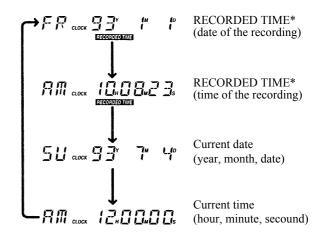
Note
The tape counter should not be used as a clock
What is being displayed on the counter is not completely accurate in terms of displaying the actual time. Therefore, do not use the tape counter as a clock.

● **Clock display**

Each time you press the CLOCK button, the display changes cyclically as follows:

RECORDED TIME* (date of the recording)

RECORDED TIME* (time of the recording)

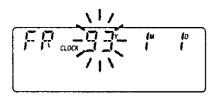Current date (year, month, date)

Current time (hour, minute, secound)

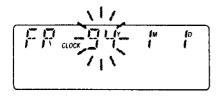*The RECORDED TIME will not be displayed while the unit is in the recording, recording monitor, or pause mode.

7

Setting the Clock

The unit automatically registers the date of recording (year/month/date/day/hour/minute/second) at the time of recording. The date of recording can be then displayed on the display window while the unit is playing back, fast forwarding/rewinding or cueing/reviewing a tape (Date function). It is essential to set the clock before any recordings are made. Otherwise, the date function will not work properly and the correct date and time of a recording will not be registered on the tape.
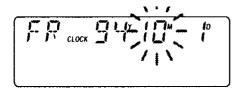
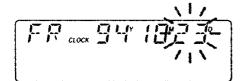**1** Press the CLOCK/SET button for more than four seconds.

2 Press the COUNTER/- and RESET/+ buttons to set the year digits, then press the CLOCK/SET button.
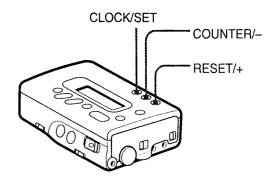

3 Press the COUNTER/- and RESET/+ buttons to set the month digits, then press CLOCK/SET-button.
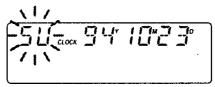

4 Press the COUNTER/- and RESET/+ buttons to set the date digits, then press the CLOCK/SET button.

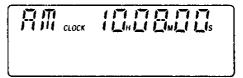Proceed with the following steps while the unit is in the stop mode.

5 Press the COUNTER/- and RESET/+ buttons to set the day, then press the CLOCK/SET button.

6 Repeat steps 2 to 4 to set the correct current time (hour/minute/second).
The second digits change to "00" when the COUNTER/- or RESET/+ button is pressed and the clock starts activating when the CLOCK/SET button is pressed. Therefore, synchronize the clock by pressing either - or + button with the radio time-signal etc.

The flashing will stop and the clock will start activating..

To cancel the procedure
Press the ■ STOP button. The clock display will return to the previous time display.
However, if you have proceeded to step 6, the year, month, day and date will be set.

12/24 hour display
To select either the 12-hour or the 24hour clock display. Press the RESET button for more than two seconds.

8

Precautions

On Safety
Should any solid object of liquid fall into the unit, unplug the unit and have it checked by qualified personnel before operating it any further.

On Installation
Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight and excessive dust.

On Moisture Condensation
If the unit is brought directly from a cold to a warm location, moisture may condense inside the unit. In such a condition, the tape may adhere to the head drum and can be damaged, or the unit may not operate properly (the ♦-indicator has come on). Always remove the DAT cassette from the unit when the unit is not to be used for an extended period of time.

If moisture is present
Operating buttons and controls may not function properly.
The unit may shut off.

Clock

PCM Code TTL

Remote Start/Stop via 5-30 V DC level

DA-PCM HS

SET CLOCK   COUNTER   RESET

LIGHT

PAUSE

Clock

PCM Code TTL

DA-PCM HS in standard configuration

Remote control box Opt. 3

Remote Start/Stop via 5-30 V DC level

PCM Code TTL

Opt. 1

Clock

PCM

DA-PCM HS

SET CLOCK   COUNTER   RESET

LIGHT

PAUSE

Clock

PCM Code TTL

Opt. 2

Opt. 2

IRIG B time 1kHz modulated In

IRIG B time 1kHz modulated Out

DA-PCM HS with option 1, 2 and 3

Pulse diagram DA-PCM HS

clock

PCM Code

Clock battery replacement:
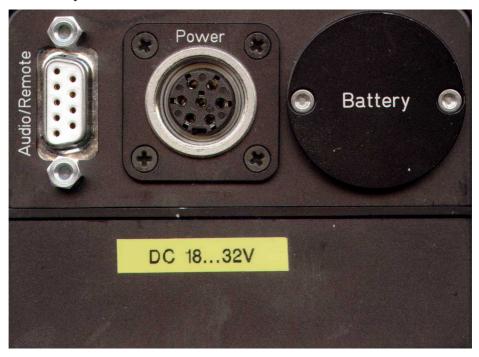
Lithium battery TYPE *Sonnenschein SL340*

The battery is used for storage of the date and time during power off.

The life time of the battery is approximately 1 year.

With a completely discharged battery the date and time values will be lost when power is off.

Battery change is carried out by removing the two screws of the battery cover on the DAT recorder right side and insertion of a new battery,

Old battery connections have to be removed by using a soldering iron. (WARNING !!! Do not exchange the red and blue wires!). The red wire is to connect to the ++ connection and the blue to -- one when re-soldering the connections of the new battery.

Pin connection:

PCM In/Out Clock In/Out	
BNC	**Signal**
1	PCM In
2	Clock In
3	Clock Out
4	PCM Out

Audio / Remote control box 9 pol. Cannon	
Pin	**Signal**
1	RCB Clock
2	RCB Out
3	RCB In
4	Loudspeaker Out
5	Microphone In
6	reserved
7	reserved
8	+5V
9	GND

PWR 7 pol. Tuchel	
Pin	**Signal**
1	Remote min 15 sec
2	++18-32 V
3	Event min 60 sec.
4	GND
5	-- 18-32 V
6	WRC (write contr.)
7	not connected

PWR female
7 pol. Tuchel

5 ○ ——————————→ – 9...32 V DC

2 ○ ——————————→ + 9...32 V DC

Remote Start

1 ○

Event Start

3 ○

Record time as long as the level on, but min. 12 sec.

LED

6 ○ WRC LED

←1Sec.

Record time as long as the level (event) on, but min. 60 sec.

4 ○

12