

DCC Quick Reference Guide.

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1. How to start a new recording (completely overwriting a DCC tape)

To initialize a new or used tape.

DCC600:

- bulk erase your tape (if applicable)
- rewind to beginning of side A
- press APPEND
- the deck will now do its magic and write a LEAD-IN and put itself in REC PAUSE
- check levels on meters and adjust recording level (analog input only)
- press REC/MUTE to start the recording (300: press RECORD)

DCC730:

- bulk erase your tape (if applicable)
- select side A
- press REWIND (long press |<<)
- press SELECT/PAUSE
- the deck will now do its magic and write a LEAD-IN and put itself in REC PAUSE
- press SELECT/PAUSE for the correct source, and check for the correct levels on an analogue source (press TIME 3x)
- press RECORD to start the recording

DCC900:

- Insert a empty or bulkerased cassette
- Press APPEND
The deck searches for the start of side A and writes a buffer area (LEAD-IN).
- This buffer area is to guarantee optimum tape-recording conditions.
- Press REC to start the actual recording.

DCC951:

- bulk erase your tape (if applicable)
- select side A
- press REWIND (long press |<<)

- press REC SELECT/PAUSE
- the deck will now do its magic and write a LEAD-IN and put itself in REC PAUSE
- press REC SELECT/PAUSE for the correct source, and check for the correct levels on an analogue source (press TIME 3x)
- press RECORD to start the recording

2. How to start New Side Marker(730/951), Next Mark(600) (with rewind), also called 'Dual Album Format' or 'Start New Side'

This marker makes the tape switch from A to B and then REWIND to the beginning of side B.

Track numbering starts with track 1 again on side B (effectively independent track numbering per side).

DCC600:

- press REC PAUSE
- press MARK WRITE (NEXT MARK is written and tape spools to beginning of side B (A to B) and writes LEAD-IN MARK)
- continue the recording by pressing REC/MUTE

Bonus - to make tape rewind to beginning of tape after the last music track finishes playing on side B:

- during recording, after last track on side B has finished, press REC PAUSE
- press MARK WRITE (B to A)
- Tape winds neatly to beginning of side A.

DCC730/951:

When in REC PAUSE mode or in STOP mode, press EDIT key and select START NEW SIDE and press RECORD to actually edit the tape. The START NEW SIDE marker is written on side A and the tape will spool to the beginning of side B (starts again with track1!) and write a LEAD-IN.

3. How to record Reverse Marker (no rewind), also called 'Single Album Format' or 'Continue B'

This marker makes the tape switch from A to B immediately but does NOT REWIND to the beginning of side B.

Side B is marked immediately with the next track number (continuous track numbering).

DCC600:

- press REC PAUSE
- press SIDE A/B (REVERSE MARK is written). Tape switches to side B and enters PAUSE mode
- continue the recording by pressing REC/MUTE.

DCC730/951:

- when in REC PAUSE mode or in STOP mode:
- press EDIT key and select CONTINUE B
- press RECORD to actually edit the tape.

4. How to Split, Connect or Renumber tracks (DCC730), START MARK, MARK ERASE or Renumber (DCC600)

DCC600:

- * When in PLAY or RECORD, press MARK WRITE to write a START MARK.
- * When in PLAY, press MARK ERASE right before the marker to be deleted.
- * To renumber, press RENUMBER.

DCC730:

When in STOP mode, press EDIT key and select SPLIT TRACK, CONNECT TRACKS or RENUMBER DCC. Press RECORD to actually edit the tape.

5. Make recording from CD to fit side A and side B

CD911:

press EDIT, EDIT and select tape length with |<< and >>| keys (or type length with number keys) and press EDIT.

The display will show the number of tracks for side A and the time.

6. How to record using the ESI bus, also called CD Synchro Dubbing

-connect the CD player and the DCC using the ESI bus connectors and a normal coaxial cable.

-follow the normal procedures for preparing the tape and the deck, then make sure the deck is in RECORD PAUSE

-press CD SYNC key (DCC900)

-CD player will start playback to test the recording level

This can be interrupted by:

-press the REC key to start the synchronized recording.

CD will return to the beginning of the disc.

DCC will start recording simultaneously.

7. How to record from various sources on a FW68

There are three little preset buttons on the FW68 that lets you do CD -> ACC, DCC -> ACC and CD -> DCC recording.

But what if you want to do something else?

You can record from ACC -> DCC, and also from TUNER -> DCC or TUNER -> ACC, but you can not use one of the three little preset buttons for recording.

How to do this:

Suppose you want to record from ACC -> DCC.

-put the ACC and an empty DCC in the machine

-rewind the DCC

-press REC PAUSE on the DCC part

-RECORD is shown in the display, the DCC player starts writing the LEAD IN etc., just wait a while until that is finished

-press PLAY on the analog deck and PLAY on the DCC deck

-A recording will be made from ACC to DCC.

The same procedure for recording from TUNER to ACC or DCC:

-press REC PAUSE

-press TUNER

-and press PLAY.

This works with the analog and the digital cassette deck.

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Correct. Of course all recorders will have trouble reading or recording a tape if there is a problem picking up the bits from the tape but the 3rd generation recorders will actually give you the "Clean head" message, unlike the other ones.

With DCC, making a recording is slightly more complicated than you might think. The chips are designed to switch between playback and record mode in sync with the data that's on the tape. Regardless of whether you use "Append" or "Rec/Play" to "arm" the recorder for recording, when you push the "play" button to actually start the recording (or use the CD Sync option on some recorders), the recorder always reads back some data from the tape to synchronize with the data that's already on tape, before it actually starts recording. That way, at playback time, the data that comes from tape is seamless and you don't get an interruption while the player would have to synchronize with the data frames on the tape. Also, on a Super User tape, this makes it possible for the recorder to make the time codes on the recording continuous.

Of course there's un-recordable lead-in tape at the beginning and end of each cassette, and new cassettes will have nothing but "virgin tape" that has nothing on it. So the recorder has to deal with that too.

When you rewind a tape before you begin recording, the recorder knows that it's at the beginning of the tape so it records 5 seconds of silence first (the portable recorders record a longer silence and they also record "skip" markers though they don't obey the skip markers during playback. They may record a blank Table of Contents at the start of the tape but no DCC recorder is capable of handling a TOC at the start of the tape even though it's part of the standard).

After those 5 seconds (or whatever), the rewind slightly, and read the tape back, then they go into record/pause mode. When you start the recording, the microprocessor starts in playback mode but switches to recording as soon as it can. That may be at the beginning of a tape frame or at a tape block, I don't know off the top of my head. A tape frame is 13056 bytes (104448 bits) and there are 4 blocks in each frame. The data is read and written at 768 kilobits per second so each tape frame takes $104448/768000 = 0.136$ seconds. So on average, your recorder probably spends at least half of that time in play mode after you start the recording. Possibly more, if it waits for the tape speed to stabilize.

Because of this, the recorder needs to be able to read the tape even when you want to record. And if it can't read the tape, well, it gives you an error message to tell you that it thinks the heads are dirty (there can't possibly be any other reason, right? :wink:)