

# NCR EDP INFORMATION

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TITLE -- CARD RANDOM ACCESS MEMORY (353-2 and 353-3)

## General Description



- The 353-2 CRAM deck contains 128 CRAM cards.
- The 353-3 CRAM deck contains 256 CRAM cards.
- Each card contains 56 tracks on which data can be stored.
- The 353-2 CRAM deck has a capacity of 3,182,592 slabs of data.
- The 353-3 CRAM deck has a capacity of 6,365,184 slabs of data.
- Demand Interrupt may be used for "time-sharing."
- Several decks of cards can be used with any one CRAM Unit.  
Caution: Decks of 353-2 and 353-3 CRAM cards cannot be interchanged.
- Recording Density is 700 bits per inch.

Control Panel



- A two position rotary switch used in conjunction with Unit Select Switch.
- Forms "eights" column of bi-octal assignment number.



- An eight position rotary switch used to assign CRAM unit numbers.
- Group Select and Unit Select Switches, together, make up a unit number within the ranges 00-07 and 10-17.

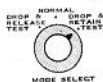


- Drop and Release Test. Test light illuminates.
- CRAM is ready to begin Drop and Release Test.
- Binary number of first card to be dropped is entered in First Card Switches and a number (one greater than last card to be dropped) is entered in Last Card Switches.
- When Start Switch is turned to DROP, the first card is dropped and released, the second is dropped and released, and so forth until the card (one less than the Last Card Switches setting) has been dropped.
- When above has been completed, if the Start Switch has been turned OFF, the operation will stop and the CRAM will return to Rest.
- If Start Switch is still on DROP, test will begin again with First Card.

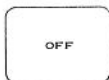
# The Core Memory Project



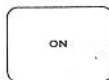
- Normal. Switch remains in this position for normal operation.  
NOTE: Must be in this position when turned ON.



- Drop and Retain Test. Test light illuminates.
- CRAM is ready to begin Drop and Retain Test.
- Binary number of card to be dropped is entered in First Card Switches.
- When Start Switch is momentarily turned to DROP, indicated card will drop and remain on capstan until Mode Select Switch is turned to Normal. Card will then return to magazine.  
NOTE: If WRITE PERMIT is ON when either "Drop and Release" or "Drop and Retain" Tests are being used, a pattern of all one-bits is written on each track, thus destroying all the old data.



- Illuminates approximately 15 seconds after being depressed.
- Turns ON button's light OFF.
- Actuates the sequencer.
- Causes sequential removal of power in CRAM.



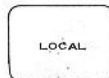
- Illuminates when depressed.
- Actuates the sequencer.
- Causes sequential application of power in CRAM.



- Illuminates when depressed.
- Can be turned ON only when in LOCAL or TEST states.
- Turns OFF automatically when CRAM switched from OPERATE to LOCAL.
- Turns OFF automatically when switched into or out of a TEST Mode.



- Illuminates when Mode Select Switch is used for testing.
- Used by Service Engineer for hardware checkout.



- Illuminates when depressed.
- Places CRAM in a LOCAL state.
- Lines to processor are disabled.



- Illuminated when depressed.
- Turns LOCAL Light OFF.
- Communication with processor is allowed.

# The Core Memory Project

## Status Indicators



SELFCYCLE

- Illuminates when CRAM is in Select State.



INTERRUPT

- Illuminates when CRAM has its Unit Demand Flag ON.



REST

- Illuminates when CRAM is in REST.



BUSY

- Illuminates when CRAM card is dropping.



READY

- Illuminates when a card is on capstan.



WRITE

- Illuminates when the Write circuit is enabled.
- Light flashes during a Write operation.

## Malfunction Lights



LOADER

- Illuminates when there is a loader failure.



P. E. CELL

- Illuminates if any of the photo cell light sources burn out.



WRITE

- Illuminates when no current flows through Write Head during a Write operation.



SOL. DR.

- Illuminates if circuit breaker in Solenoid Driver Chassis opens.



CH. SEL.

- Illuminates when two or more tracks have been simultaneously selected.

**NOTE:**

Only one of the REST, BUSY or READY may be ON at one time.

LOADER, P. E. CELL, WRITE, SOL DR, and CH SEL indicate CRAM malfunctions.

When one of the malfunction lights are ON, CRAM is forced into REST State and remains until malfunction has been rectified.