HAGELIN-CRYPTOS

CRYPTO AG

HC-550 ML

Short-Form Instructions

3 K 639 b

CRYPTOMATIC HC-550

Flow Charts of Cryptomatic HC-550

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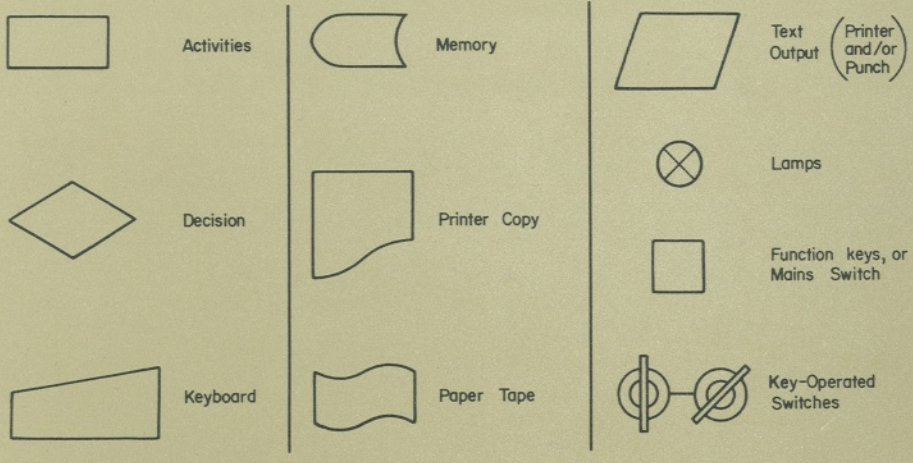
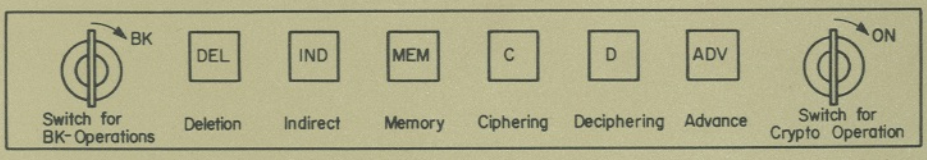
Flow Chart Annotation



Panel of Cipher Unit



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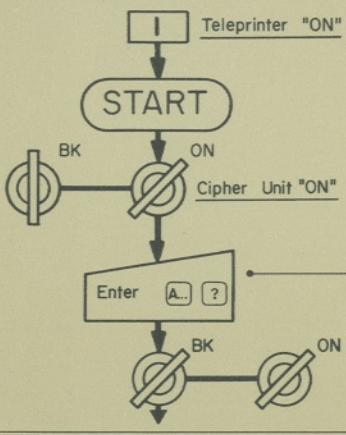
Basic Key Operations

-Chart I-

Storage Operations

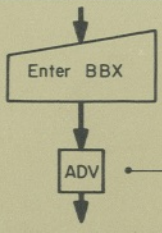


Recall of Bigrams
(and Presetting)

Printed Black
BK Bigrams or Full-Stops

Acoustic Alarm
Provided for Error Indication

Ready for BK Operations



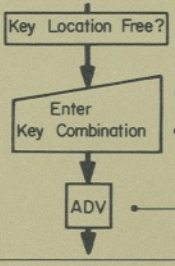
Deletion of BK

BB ≙ Bigram of Requested Key to Delete
X ≙ Instruction for Deletion

Alarm? Reason: BB Bigram not Stored

Printed Red
BBX /////

Key Deleted



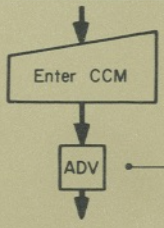
Input of Basic Keys by Keyboard

Example
CC QASWX DECFR EVDRF NYHUZ
Observe Correct Formatting

Printed Red
Complete BK Combination

Alarm? Reason: Formatting, CC Bigram Already Used

Entered Key Stored



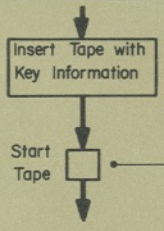
Designation Change of Master Key

CC ≙ Bigram of Requested Master Key
M ≙ Instruction for Master Selection

Alarm? Reason: CC Bigram not Stored

Printed Red
CCM /////

Master Key Fixed



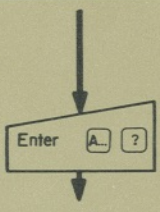
Input of Basic Keys by Tape

Note: Observe absolute correct formatting of Key tape. (Compare example in Handbook).

Alarm? Reason: Formatting, Memoryfull Bigram Already Used

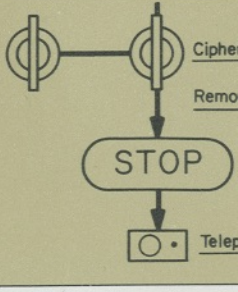
Printed Red
BK Informations

BK Input Stored



Final Control of Performed Operations

Printed Red
BK Bigrams or Full Stops



Resetting the Equipement

Remove and Safeguard Mechan. Keys!

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Direct Ciphering Operation by Tape

– Chart II –

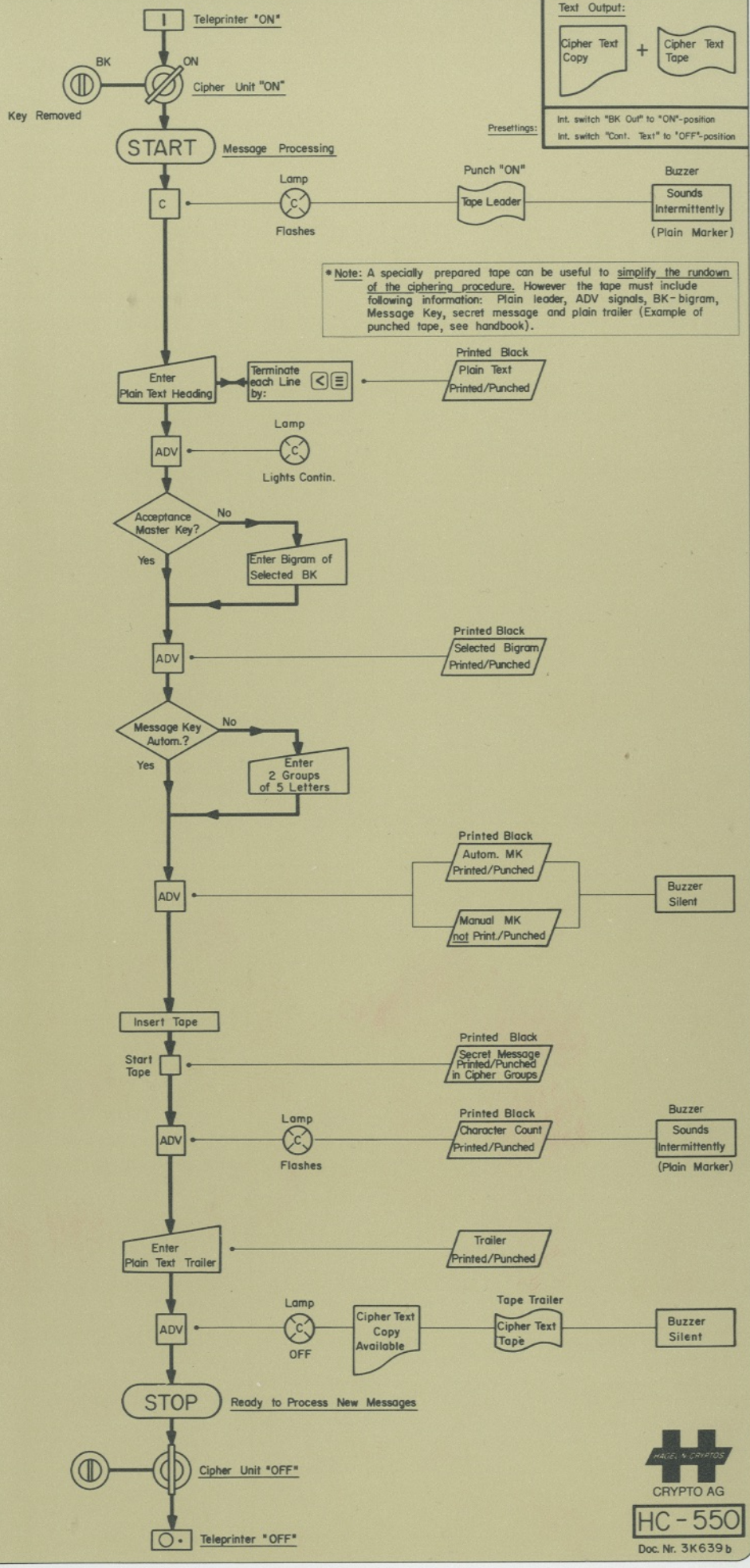
Text Output:

Cipher Text Copy + Cipher Text Tape

Presettings:

Int. switch "BK Out" to "ON"-position

Int. switch "Cont. Text" to "OFF"-position



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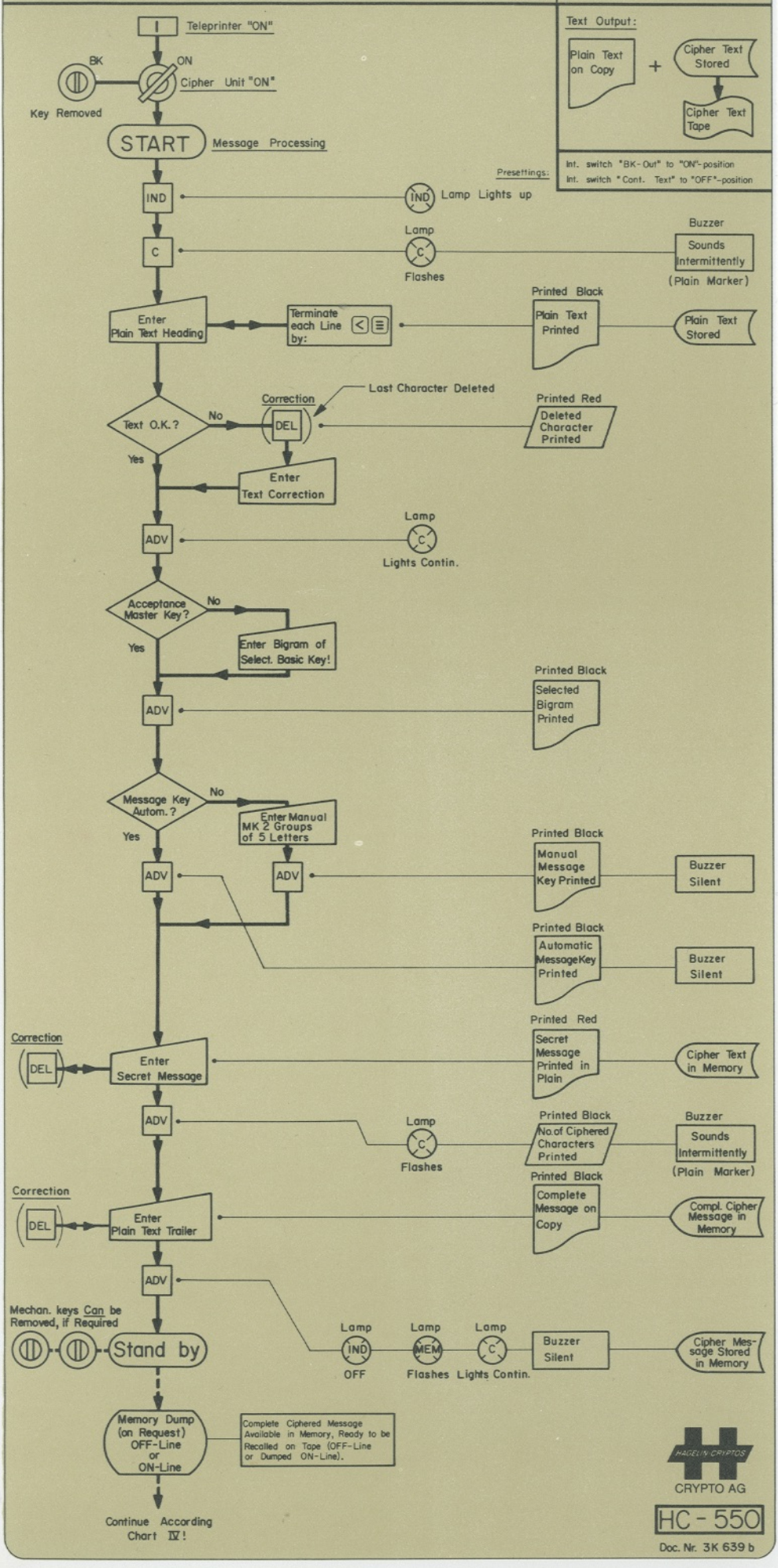
Indirect Ciphering Operation / Memory Dump

– Chart III –



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Memory Dump ON-Line or OFF-Line

– Chart IV –

Text Output:

OFF-Line: Cipher Text; Cipher Text

ON-Line: Cipher Text Line Output

Presettings:
Int. switch "BK Out" to "ON"-position
Int. switch "Cont. Text" to "OFF"-position

BK
Key Removed
Cipher Unit "OFF"

Memory Dump ?
ON-Line
OFF-Line

Call Receiver Station + 20x

ON Line
Sender: Communi-cation Printed
Receiver: Communi-cation Printed

Initiate Punch Enter CCCC

BK
ON
Lamp MEM Flashes
Lamp C Lights Contin.

MEM
MEM
Lamp MEM Lights Contin.

OFF-Line: Cipher Text; Cipher Groups Printed/ Punched
ON-Line: Cipher Text Output to Line

Interrupt Requested or Copies?
Yes
No

Lamp MEM Flashes
Interrupt of Memory Dump

Memory to be Cleared?
No
Memory Dumps for Other Stations
Yes

DEL + ADV
Memory Cleared

STOP
Ready to Process New Messages

BK
Cipher Unit "OFF"

Teleprinter "OFF"

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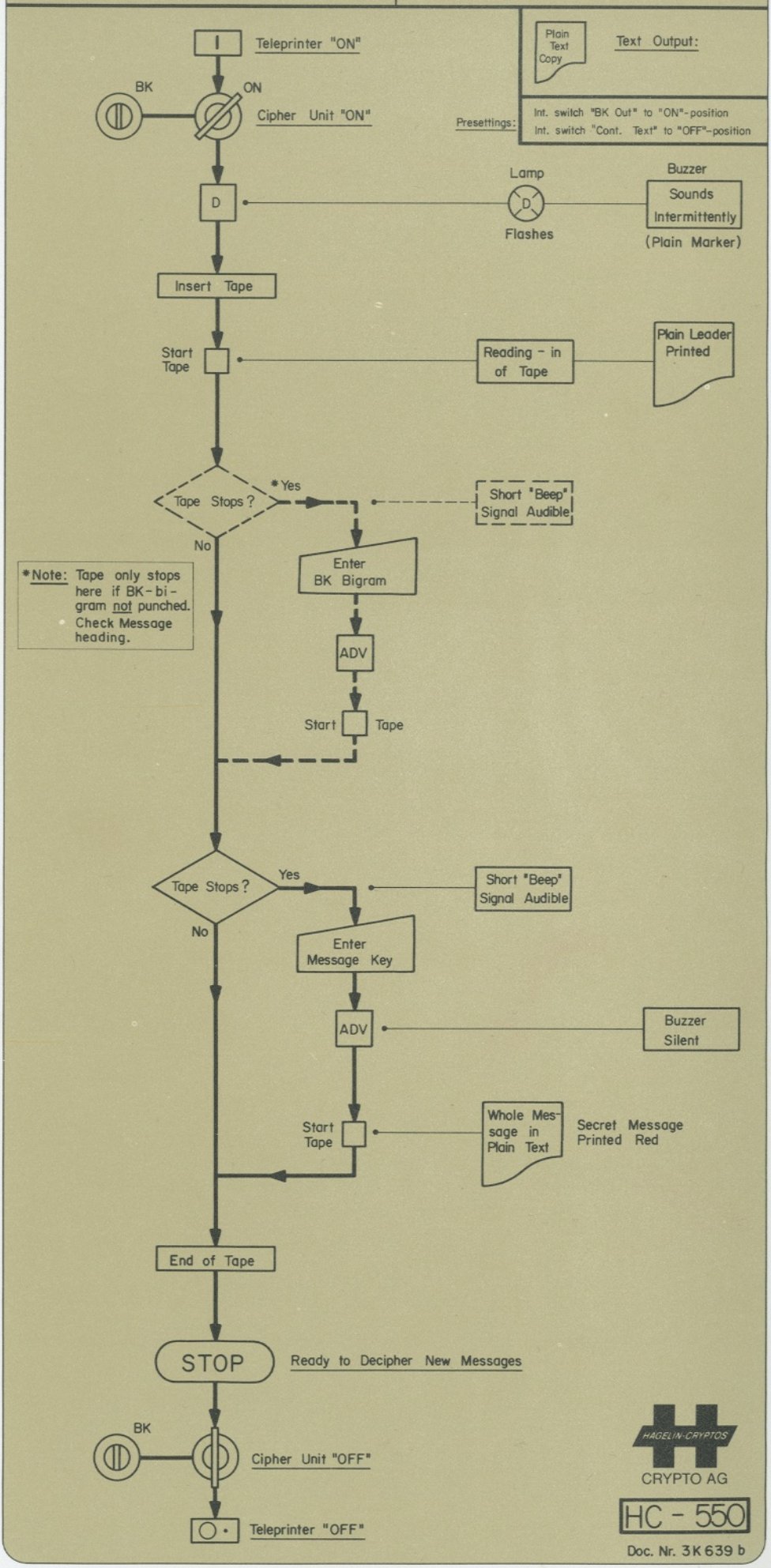
Direct Deciphering of Tape

-Chart V-



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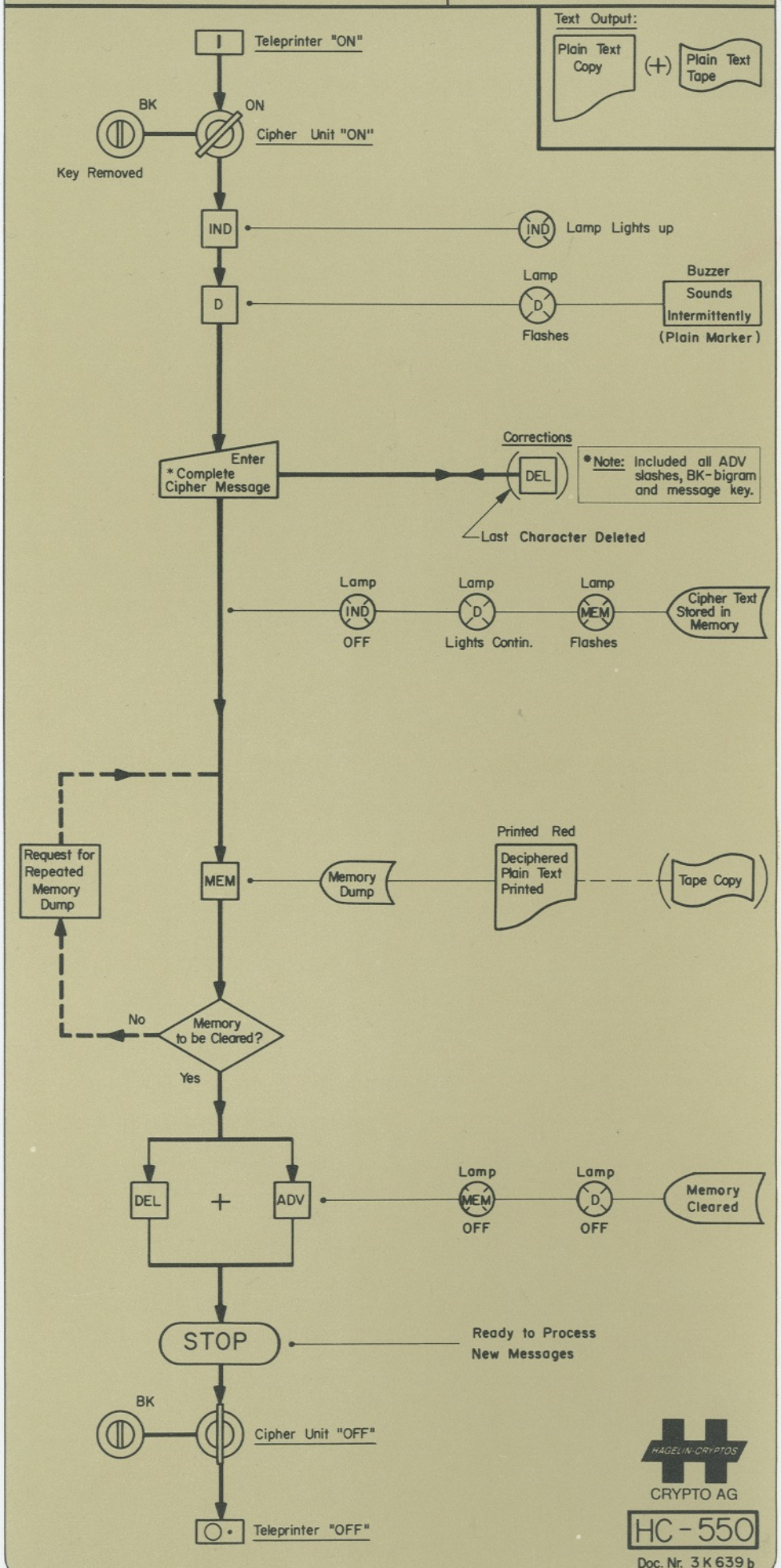
Indirect Deciphering (via Memory)

– Chart VI –



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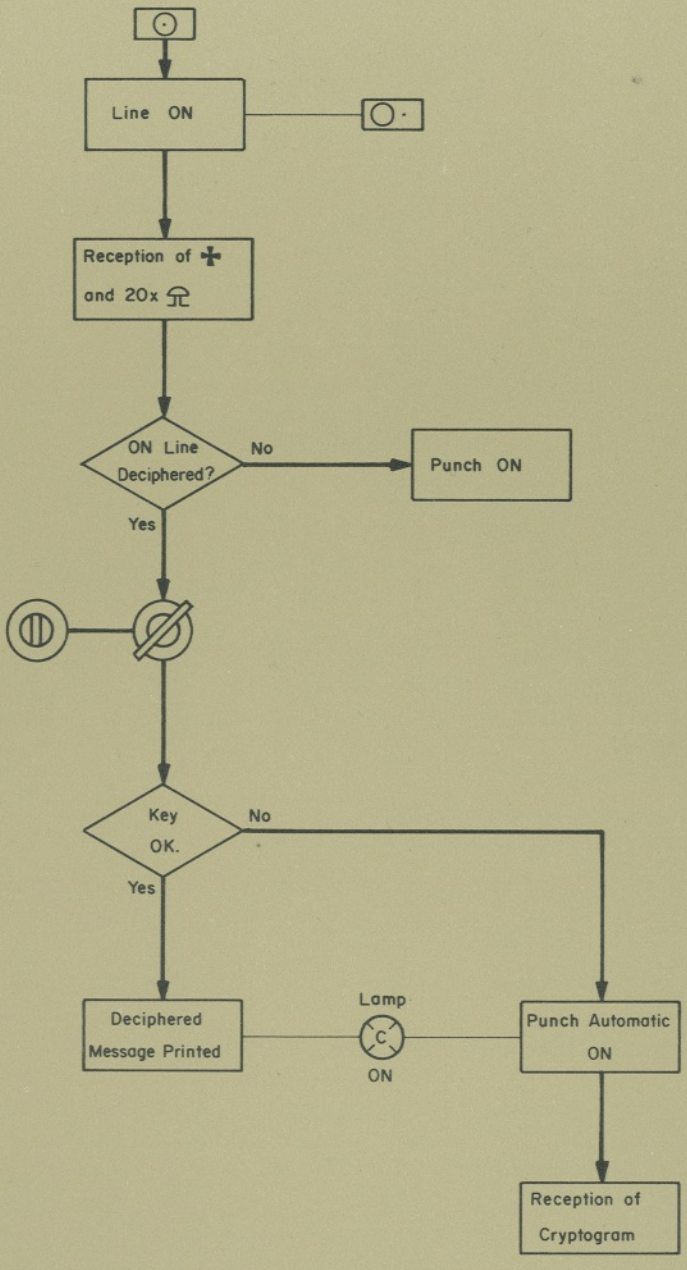
Station A (Transmitter)

See chart IV "on line"
Chiphered Message from Memory or tape prepared in local mode

Station B (Receiver)