

RESTRICTED

EXTENDED FUNCTIONAL TEST

AROFLEX

TYPE UA 8116/06U153

SHAPE CONTRACT
SHNMO 80-9017
AROFLEX - CEROFF
NSN

13956-E-1180

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| | Page |
|---|------|
| 1. Required documents | 2 |
| 2. Required measuring apparatus and tools | 3 |
| 3. Remarks | 4 |
| 4. Preparation | 5 |
| 5. Test procedure | |
| 1. Key setting | 6 |
| 2. PLAIN mode | 6 |
| 3. Enciphering DIRECT mode | 7 |
| 4. Deciphering DIRECT mode | 8 |
| 5. Enciphering INDIRECT mode | 9 |
| 6. Enciphering INDIRECT mode and CORREC-TION of input. | 11 |
| 7. Deciphering INDIRECT mode | 12 |
| 8. Deciphering INDIRECT mode and CORREC-TION of input. | 13 |
| 9. Wiping the memory | 14 |
| 10. Deciphering of System indicator | 16 |
| 11. Garbling of the first 11 groups, garbling of crypto text, regaining of crypto sync. | 16 |
| 12. Signalling of mistakes in operating procedure | 17 |
| 13. Full memory indication, paging information | 17 |
| 14. Check of the battery and Reset | 19 |
| Annex A : Operating controls | |
| Annex B : Printout of tests. | |

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1. REQUIRED DOCUMENTS^{ITS}

2

List of operating controls. See Annex A.

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RECHTER PAGINA

2. REQUIRED MEASURING APPARATUS AND TOOLS

- | | | |
|----|-----------|-----------------------|
| 1. | Extractor | 8122 060 35310 |
| 2. | Test tape | 4322 081 79760 361-B1 |
| 3. | Test tape | 4322 081 82630 361-B2 |
| 4. | Test tape | 4322 081 79760 361-B3 |
| 5. | Test tape | 4322 081 79760 361-B4 |
| 6. | Test tape | 4322 081 79760 361-B5 |
| 7. | Test tape | 4322 081 79760 361-B6 |
| 8. | Test tape | 4322 081 79760 361-B7 |

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3. REMARKS

4

- 1. The AROFLEX is defective if the criteria mentioned in the following para's are not met.**

- 2. If something has to be typed in via the keyboard it will be indicated between quotation marks.
The quotation marks should not be typed in.**

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4. PREPARATION

5

Connect the AROFLEX to the mains and switch on mains ON/OFF switch.

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RECHTER PAGINA

Failed passed

5.1. Key setting

1. Actuate ON

Criterion : lamp goes on

2. Type "KEYINSERT".

Criteria : a. INSERT is printed out on the paper
b. The lamps in the push buttons
PROCEDURE and DECIPHER go on 3. Insert test tape 361-B1 (2.2) into the tape reader,
start the reader and restart everytime it stops.Criteria : a. 26 keys (A-Z) have been inserted
b. Per key 1 checkword (a 5-character
group) is printed out

4. Actuate the OFF push button

Criterion : The lamps in the push buttons ON,
PROCEDURE and DECIPHER go out.

5. Remove the test tape from the tape reader.

5.2 Plain mode

1. Push ON button.

2. Push PLAIN button.

Criterion : Light in push button PLAIN goes on. 3. Switch on the tape punch.
Press the tape run out button.Criterion : the punched tape runs out. 4. Type in via keyboard :
THE QUICK BROWN FOZJUMPS OVER THE LAZY DOG
1234567890Criterion : The clear text is printed without errors.

Failed passed

5. Press the tape run out button for a while and tear off punched tape.

6. Insert the tape into the tape reader and start the reader.

Criterion : The same clear text is printed without errors.

7. Release PLAIN and OFF buttons.

Criterion : the lights in the push buttons go out.

5.3 Enciphering DIRECT mode

1. Push ON button.

2. Push PROCEDURE button.

Criteria : a. The checkword of the Z key and its system indicator are printed.
b. SELECT is printed.

3. Insert "A".

Criteria : a. The checkword of key A and the 5-figure system indicator are printed.
b. PAGE 1 is printed.

4. Insert 17 x "Q"

Criterion : A number of LF's is given.

5. Switch on the tape punch.

6. Insert format lines 1 - 4.

7. Actuate the PREAMBLE button.

Criterion : the teleprinter gives automatically CR and LF.

8. Insert format lines 5 - 11.

- | | Failed passed |
|--|---|
| 9. Actuate ENCIPHER button. | |
| <u>Criteria</u> : a. CR and LF are given | <input type="checkbox"/> <input type="checkbox"/> |
| b. 11 crypto groups are printed | <input type="checkbox"/> <input type="checkbox"/> |
| 10. Insert a message longer than 1 page in accordance with ACP 127. | |
| <u>Criterion</u> : A cryptotext is printed | <input type="checkbox"/> <input type="checkbox"/> |
| 11. Release the PROCEDURE button. | |
| <u>Criteria</u> : a. the cryptogram is finished | <input type="checkbox"/> <input type="checkbox"/> |
| b. BT and GR are printed | <input type="checkbox"/> <input type="checkbox"/> |
| c. a number of LF's are given | <input type="checkbox"/> <input type="checkbox"/> |
| d. NNNN is printed | <input type="checkbox"/> <input type="checkbox"/> |
| 12. Actuate the OFF button. | |
| 13. Press the tape run out button of the tape punch for a while, tear off the punched tape and keep it for test 5.4. | |

5.4 Deciphering DIRECT mode

1. Actuate the ON button.
2. Actuate the DECRYPT button.
3. Insert the tape obtained in 5.2.15. into the tape reader and start the reader.

Criteria : the format lines 1-11, the message ended with NNNN, a number of LF's the system indicator and the check word of the used key are printed.

4. Actuate the DECRYPT and OFF push buttons.
5. Remove the punch tape from the tape reader.

Failed passed

5.5 Enciphering INDIRECT mode

1. Actuate the ON push button.

2. Actuate the INDIRECT and PROCEDURE button.

3. Type in "B".

- Criteria : a. The 5-figure system indicator and the checkword are printed.
b. PAGE 1 is printed

4. Insert the station identification.

5. Type a CR.

- Criterion : 8 LF's are given

6. Insert the format lines 1 - 4.

7. Actuate the PREAMBLE button.

- Criterion : CR and LF are given.

8. Insert the format lines 5 - 11.

9. Actuate the ENCIPHER button.

- Criteria : a. CR and LF are given.
b. 10 slants are printed

10. Insert a message longer than 1 page.

- Criterion : the message is printed in plain language.

11. Release the PROCEDURE button.

- Criterion : The PROCEDURE button extinguishes.

12. Switch on the tape punch.

Failed passed

13. Actuate the OUTPUT button.

Criteria : a. the lamp in the OUTPUT button is

lit.

b. a crypto text is printed

c. the tape punch starts running

d. Page 2, station identification is
printed

e. BT, GR number and NNNN are
printed.

14. After the criteria in 5.5.13. have finished.

Switch off the tape punch, press the tape run out button,
tear off the tape and keep the tape for test 5.7.

15. Actuate the INDIRECT and OFF push buttons.

Failed passed

5.6 Enciphering INDIRECT mode and CORRECTION of input.

1. Actuate the ON push button.
2. Actuate the INDIRECT and PROCEDURE push buttons.
3. Type in "B".
4. Type in a CR.
Criterion : a number of LF's is given
5. Actuate the ENCIPHER push button.
6. Insert test tape 361-B3 (2.4) into the tape reader and start the reader.
Criterion :
THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG
1234567890
is printed with the error HOND instead of DOG
7. Insert again test tape 361-B3 (2.4) into the tape reader, start the reader and let the tape run through until the word HOND has been printed.
8. Actuate slowly 4 x the CORRECTION push button.
Criterion : The character DNOH are printed
9. Give in via the keyboard "DOG"
10. Let the tape reader step on.
11. Actuate the PROCEDURE push button
Criterion : 10 slants are printed
12. Switch on the tape punch.

Failed passed

13. Actuate the OUTPUT button

- Criteria : a. the lamp OUTPUT is lit
 b. a crypto text is printed
 c. the tape punch starts running

14. After the criteria in 5.6.13. have finished, switch off the tape punch, press the tape run out push button, tear off the tape and keep it for test 5.8.

15. Actuate the INDIRECT and OFF push buttons.

16. Remove the test tape from the tape reader.

5.7 Deciphering INDIRECT mode

1. Actuate ON push button.

2. Actuate the INDIRECT and DECIPHER push button.

3. Insert the tape obtained in 5.5.16 into the tape reader and start the tape reader:

- Criteria : the same crypto text as the one in 5.5.15 is printed.

4. Restart the reader after group 11.

5. Actuate the OUTPUT push button.

- Criteria : a. the lamp in the OUTPUT button is lit.

- b. the format lines 1-11, the clear text of 5.5.10 followed by NNNN, the system indicate and checkword are printed.

6. Repeat 5.7.5.

- Failed passed
7. Remove the tape from the tape reader.
 8. Release INDIRECT and DECIPHER push buttons.
 9. Actuate the OFF button.
- 5.8 Deciphering INDIRECT mode and CORRECTION of input.
1. Actuate the ON push button.
 2. Actuate the INDIRECT and DECIPHER push buttons
3. Insert the test tape from 5.6.14. into the tape reader and start the tape reader.
- Criteria : The same crypto text is printed as the one in 5.6.13.
4. Restart the reader after 11 groups, actuate the OUTPUT push button.
- Criteria : The clear text
- The QUICK BROWN FOX JUMPS OVER THE LAZY DOG
1234567890
is printed with and without the errors.
5. Repeat 5.8.4.
 6. Actuate the INDIRECT push button.
 7. Remove the punch tape from the tape reader.
8. Insert test tape 361-B4 (2.5) into the tape reader, start the tape reader and carry out the instructions as mentioned on the tape.

Failed passed

9. After the test tape has run through, actuate the OUTPUT push button.

Criteria : A faultless clear text

THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG
1234567890 is printed three times.

10. Actuate the INDIRECT and DECIPHER push buttons
11. Actuate the OFF push button
12. Remove the test tape from the tape reader.

5.9 Clearing the Memory

1. Actuate the ON push button.

2. Actuate the INDIRECT and PROCEDURE push buttons.

Criteria : The lamp in the INDIRECT and PROCEDURE buttons are lit.

3. Type in "B"

4. Insert CR

Criteria : 15 LF's are given

5. Actuate the ENCIPHER button.

Insert test tape 361-B2 (2.3.) into the tape reader and start the reader.

Criteria :

THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG
1234567890 is printed.

6. Actuate the PROCEDURE button.

Criteria : 10 slants are printed.

Failed passed

7. Actuate the OUTPUT button.

- Criteria : a. the lamp in the push button is lit
b. a cryptogram is printed.

8. Actuate the PLAIN button twice.

- Criteria : a. the lamp in the PLAIN button lights
and extinguishes.
b. the lamp in the INDIRECT button
extinguishes.

10. Actuate the OUTPUT button.

- Criteria : nothing happens.

11. Actuate the OFF button.

Failed passed

5.10 Deciphering of system indicator.

1. Actuate the ON push button.
2. Actuate the DECIPHER push button.
3. Insert test tape 361-B5 (2.6) into the tape reader and start the tape reader:

Criteria : a. The teleprinter gives a procedure signal.

b. The CORRECTION lamp starts flashing.

c. 98765 is printed.

4. Actuate DECIPHER and OFF push buttons.
5. Remove the test tape from the tape reader.

5.11 Garbling of the first 11 groups, garbling of crypto text, regaining of cryptosync.

1. Actuate ON push button.
2. Actuate DECIPHER push button.
3. Insert test tape 361-B6 (2.7) into the tape reader and start the tape reader.

Criteria : a. CORRECTION goes on during running of the test tape.

b. The printed text is equal to following text. See Annex B.

4. Actuate DECIPHER and OFF push button.
5. Remove the test tape from the tape reader.

See Annex B

Failed passed

5.12. Signalling of mistakes in operating procedures.

1. Actuate the ON push button.
2. Actuate the following push buttons :
first PROCEDURE then PREAMBLE
first PROCEDURE then PLAIN
first DECRYPT then ENCRYPT
first PLAIN then PREAMBLE

Criteria : The procedure signal is sounded when the second push button is pushed in each case.

The procedure signal is sounded

5.13. Full memory indication, paging information.

1. Actuate the ON push button.
2. Actuate the PROCEDURE button and type "E" after SELECT.

Criteria : The system indicator, the check group and PAGE 1 are printed.

3. Type "ABCDEFGHIJKLMNPQ".

Criteria : a number of LF's is given.

4. Actuate the INDIRECT push button.

5. Actuate the ENCRYPT push button.

6. Insert the endless test tape 361-B7 (2.8) into the tape reader and start the tape reader.

7. Wait until the tape reader is blocked.

Criteria : The procedure signal is given.

Failed passed

8. Restart the tape reader and wait until it is blocked again.

Criteria: a few more characters are printed.

9. Restart the tape reader.

Criteria: The tape reader cannot be started.

10. Actuate the PROCEDURE push button.

11. Actuate the OUTPUT push button.

Criteria: a. 6 pages of crypto text are printed.

b. At the beginning of the pages 2-6
the clear text ABCDEFGHIJKLMNOP-

OPQ is printed after page no.

c. The number of groups is 1182.

12. Actuate the INDIRECT push button.

13. Actuate the OFF push button.

14. Remove the test tape from the tape reader.

5.14 Check of the battery and Reset

Failed passed

1. Actuate ON push button.
2. Actuate the INDIRECT and PROCEDURE push buttons.

3. Type in "B".

4. Type in CR.

Criterion : a number of LF's is given

5. Actuate the ENCIPHER button.

Criterion : 10 slants are printed

6. Insert test tape 361-B2 (2.3) into the tape reader and start the reader.

7. Actuate the PROCEDURE button.

Criterion : 10 slants are printed

8. Actuate the OUTPUT button.

Criterion : a cryptogram is printed.

9. Actuate the OFF button.

Criteria : a. the Aroflex comes in the stand by mode

b. the lamp in the INDIRECT button remains lit

10. Pull out the mains plug from the mains.

Criteria : a. the red LED in the front of the crypto module must light up.
b. the lamp in the INDIRECT button extinguishes.

- | | | |
|--|--|---------------|
| | | Failed passed |
|--|--|---------------|
11. Insert the mains plug into the mains.
- Criteria : a. the red LED extinguishes
 b. the lamp in the INDIRECT button
 is lit.
12. Actuate the ON button.
13. Actuate the OUTPUT button.
- Criterion : the same cryptogram as in Section 5.14.8
 is printed.
14. Press the red ZEROIZE button.
- Criterion : the INDIRECT lamp extinguishes.
15. Actuate the OUTPUT button.
- Criterion : nothing happens.
16. Actuate the ENCIPHER button.
17. Push PROCEDURE button.
 Type in "A".
- Criteria : a. the Aroflex gives the procedure signal
 b. the CORRECTION lamp start flashing
 c. the check group of the key is not
 printed.
18. Actuate PROCEDURE and OFF buttons.
19. Pull the mains plug from the mains.
- Criterion : the red LED battery drain indicator
 must light.
20. Press the red ZEROIZING button.
- Criterion : the red LED must extinguishes.

ANNEX A

OPERATING CONTROLS

OPERATING CONTROLS

The serial numbering of the operating controls is shown in Figure II.

Pos Name

Function

201. ON/OFF Controls

| | |
|----------------|--|
| (1) -- | No function in the OFF-LINE mode. Flashing lamp inside button indicates open cover or end of paper roll. |
| (2) ON button | Spring loaded button for putting AROFLEX into the OFF-LINE mode, starting from the standby mode. Lamp is lit when AROFLEX is in the OFF-LINE mode. |
| (3) OFF button | Spring loaded button for putting AROFLEX into the standby mode from the off-line mode. Lamp inside button is lit when AROFLEX is in the line-connected mode. |
| (4) -- | Spare button. No function in the off-line mode. |
| (5) -- | Spare button. No function in the off-line mode . |

202. Crypto Controls

| | |
|----------------------|--|
| (6) MEMORY WARNING | White lamp,lit when text is present in the memory. |
| (7) PROCEDURE button | Two-position button for starting and terminating the enciphering process. When pushed down, the red lamp is lit and AROFLEX is ready to carry out the crypto procedure as described in para 410 below. After the crypto procedure the clear text heading of Format Lines 1 . . . 4 (if required) may be put in, without the counting of Line Feeds. Lit lamp denotes Procedure mode. Releasing the button terminates the enciphering. |

| Pos Name | Function |
|---------------------|--|
| (8) PREAMBLE button | Spring-loaded button for putting AROFLEX into the PREAMBLE mode for inputting of Format Lines 5 . . . 11 and 14, 15 before the EOM-function if required. The Line Feeds of Format Lines 5 . . . 11 are counted for the paging procedure. Lit lamp indicates PREAMBLE mode. |
| (9) ENCIPHER button | <p>Spring-loaded button for putting AROFLEX in the ENCIPHERING mode, indicated by lit lamp. In the DIRECT ENCIPHERING mode, the printing/punching of the cryptogram commences immediately after the pushing of the ENCIPHER button; the enciphering is terminated by releasing the PROCEDURE button (or first the PREAMBLE button for putting in clear text Format Lines 14 or 15 and subsequently the PROCEDURE button for the EOM function).</p> <p>In the INDIRECT ENCIPHER mode, the pushing of the ENCIPHER button causes the printing of 10 slants (/////////) as an indication of the beginning of the enciphering.</p> <p>The input is printed/punched in clear text. When the enciphering in the INDIRECT mode is terminated, another 10 slants (/////////) are printed.</p> |
| (10) OUTPUT button | <p>Spring-loaded button for producing the output, prepared in the INDIRECT ENCIPHER or INDIRECT DECIPHER mode.</p> <p>During the production of the output, the lamp is lit. Pushing the lit button stops the output and allows of beginning the output again at the start.</p> <p>The output can be repeated as many times as required. The Procedure signal + blocked keyboard/tape reader + lighting up of the OUTPUT lamp in the ENCIPHER mode indicate the "FULL MEMORY" condition. The enciphering must be terminated in order not to exceed the maximum length of a transmission section according to ACP-127: in the DIRECT ENCIPHER mode it is possible to continue the cryptogram (contrary to ACP-127) to 99 complete pages.</p> <p>The deciphering of such an extremely long cryptogram should also take place in the DIRECT DECIPHER mode.</p> |

| Pos Name | Function |
|------------------------|--|
| (11) INDIRECT button | Two position button for putting AROFLEX in the DIRECT or INDIRECT mode; lit lamp and depressed button indicate the INDIRECT mode with monitoring of the input and production of the output after pushing the OUTPUT button. The mode of operation must be selected before starting with the enciphering or deciphering. The lit lamp inside the INDIRECT button signifies: "TEXT IN MEMORY". A change from INDIRECT to DIRECT or vice versa resets the Memory and extinguishes the lamp. |
| (12) PLAIN button | Two-position button for putting AROFLEX in the PLAIN text mode: lit lamp and depressed button indicate mode. Pushing and releasing the PLAIN button clears and resets the crypto/message memory. |
| (13) CORRECTION button | Spring-loaded push button for character-by-character correction of: - input in the INDIRECT DECIPHER mode - input in the INDIRECT ENCIPHER mode - input for paging information The lamp inside this button has 2 functions: - steady burning in the DECIPHER mode indicates incorrect format - slow blinking + procedure signal in the DECIPHER mode after the 11th group indicates the "NO KEY" condition. |
| (14) DECIPHER button | Two-position push button for putting AROFLEX in the DECIPHER mode; lit lamp indicates mode. |
| (15) TAPE PUNCH ON/OFF | Spring-loaded push button for switching the tape punch on and off; lit lamp inside the button indicates that the punch is switched on. |

203. Punch Controls

| Pos Name | Function |
|---------------------------|--|
| (16) TAPE run out | Spring-loaded button for punching "Letters" continuously, regardless of operating mode or punch activation. |
| (17) TAPE backspacer | Spring loaded button for backspacing the tape for correction ("lettering out"); tape is backstepped one character when the button is pressed firmly. |
| (18) TAPE Retaining Catch | Small two-position catch under the plastic cover to be used for lifting the tape retaining pad when a new tape must be inserted; when catch is pressed home, the punch automatically punches approximately 20 "Letters". |

204. Mains ON/OFF switch

| | |
|-----------------------|---|
| (19) Switch indicator | To switch the mains supply on and off; lit indicator denotes mains present. |
| (20) Fuse | Slow, 2.5 Amp fuse. |

205. Tape Reader Controls

| | |
|-------------------------|--|
| (21) TAUT TAPE contact | Tape for reader must be passed upwards over this contact so that a stuck tape will stop the reader. |
| (22) TAPE READER ON/OFF | Spring-loaded button for starting and stopping the tape reader; when a tape has been inserted and the cover (23) is closed, pressing the button for a very short time (less than $\frac{1}{4}$ second) will advance the tape one character. Pressing the button for a longer time (about $\frac{1}{2}$ second) will make the reader step continuously. Pushing the button whilst the reader is stepping will stop the reader. |
| (23) TAPE READER cover | Catch-retained cover for opening the tape reader so that a tape can be inserted, engaging the transport holes in the sprocket wheel. |

| Pos Name | Function |
|-----------------------------|--|
| 206. Keying Controls | |
| (24) ZEROIZE button | Red spring-loaded button for zeroizing the key stores and crypto memory in case of emergency. The button must also be used for switching off the hold batteries when AROFLEX is removed from the mains and the contents of the crypto memory are to be zeroized. Pushing the ZEROIZE button (24) extinguishes the drain indicator (25). |
| (25) Drain indicator | Red light emitting diode, lit when the "hold" batteries are being drained to retain the contents of the key stores and crypto memory, for instance during interruptions in the power supply. The indicator lights up as soon as the mains switch is switched "off" or, the plug is pulled from the mains. The hold batteries are switched off automatically when the output voltage drops below a certain threshold. The hold batteries are constantly trickle-charged as long as the mains is connected to AROFLEX. The indicator is extinguished when the ZEROIZE button (24) is pushed. |

Push buttons:

1. Spare
2. On
3. OFF
4. Spare
5. Spare
6. Memory warning
7. PROCEDURE mode
8. PREAMBLE mode
9. ENCIPHER mode
10. OUTPUT
11. DIRECT/INDIRECT mode
12. PLAIN text mode
13. CORRECTION
14. DECIPHER mode

Other controls:

15. Tape punch ON/OFF
16. Tape run out "Letters"
17. Tape backspacer
18. Tape retaining catch
19. Mains ON/OFF switch
20. Fuze
21. Taut tape contact
22. Tape reader ON/OFF/SINGLE
23. Tape reader cover
24. Zeroize and batteries off
25. Battery drain indicator
26. Power on indicator

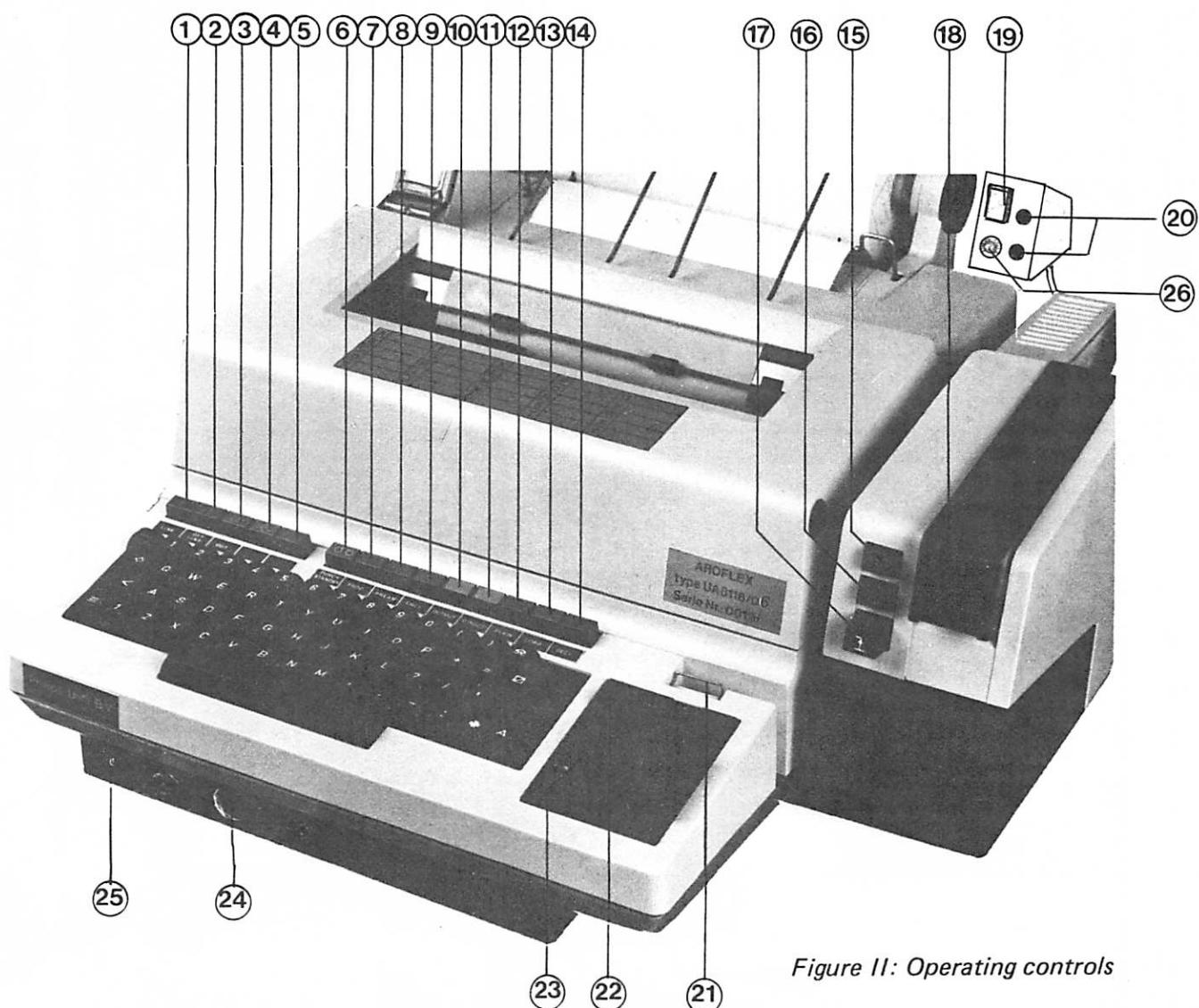


Figure II: Operating controls

ANNEX B

PRINTOUT OF TESTS

Test 5.1 KEYSETTING

KEYINSERT
INSERT A 12345 OITDO
INSERT B 23456 DANFE
INSERT C 34567 KNUCN
INSERT D 45678 CCFNH
INSERT E 56789 CFUTH
INSERT F 67890 TSSUU
INSERT G 78901 FNSUJ
INSERT H 89012 ICCAC
INSERT I 90123 CHDIN
INSERT J 01234 IECKN
INSERT K 21234 SRSAO
INSERT L 22345 LHULO
INSERT M 22334 NRLTS
INSERT N 22335 EFHIS
INSERT O 22347 LUDNU
INSERT P 23565 ICIID
INSERT Q 23567 RHHO
INSERT R 28765 UNIHK
INSERT S 78766 AFHRE
INSERT T 20231 SDDUN
INSERT U 28795 IDDTR
INSERT V 45432 RROUJI
INSERT W 56278 NSFLU
INSERT X 45231 UNETI
INSERT Y 63897 CLTAI
INSERT Z 99999 CFUTH
INSERT

TEST 5.2 Enciphering DIRECT mode, -Format lines 14 and 15.

Test 5.3 ENCIPHERING DIRECT MODE

15

99999 CFUTH
 SELECT A 12345 OITDO
 PAGE 1 QQQQQQQQQQQQQQQQQQ

1
2
3
4
5
6
7
8
9
10
11

KUODT DUUJO DUUJO DUUJO DUUJO GYJSU QKBII ICULD ZVRYX
 LVHAC XVIFS QUGHT IIBUT CLCLG WITXN AKUWIE DMZUR KLVLV FDAHM
 QYVGJ XCNUR AGQXK CQCBL KZAYW MGZKG SOCBB EHAAR XTKAR XEDGL
 PKSTF IGYDG UARAC RIFYI WTASV XNZFN ZULQU UGAJC NITWO ITSVB
 IOPQO KYTVN UUMRX NEKLS LPILY XUIKN DIANL QONNI TLKNT AHYNI
 GLFWR MGYPZ IJNET YQZAN PIEGN FWLW VSIYA OTPZX QLCVG LZXHS
 FXCSL ZAQZC RVILK MNLZX YKJOW NUAJW KDWYA FZEIE PNBXT SQLYH
 EKDQR EUHJL XDIXIV TAAJN NOSCM LKLHS UGNIP VOZUZ REABC WAEQM
 OOTZK ZIFHX AWSGV CZVTB WYRWY WUOEH ZRKBY WIPJP RBSVL UVSXP
 BBRSU RBZNY EURCM URWSI YVUPN TIIII PLFGW JBVNV EQIJK GQWWT
 PORCT UECQK KAPZE EEHOB CKZUF OEBYU QTQAP PEAFU TVTDO CWLFU
 ZQBYK DAOUB ISMDE IZGRR NDWFC YKAEN MNPKE EBMVA BJROO PQYGT
 CAZFU DEOUT ROIZN MVSRH WWATC VTLUR WOPSH MUMMO PJQBU FSBGM

PAGE 2 QQQQQQQQQQQQQQQQQQ

SWIRS ABOJB UHJLU IPFLW OIAOF OMBUH SIFBW NIRJN NRWJX UJAXR
 WOHHG YFTNA YDVUO MQNUN QJHQJ NDIJX SSHJC MFRZA MFTOD XTSTE
 SOXDD XFYXP HRSYE RUQCL DIKUT NBHRE GKOQG QEMLU TYXOO QLNWC
 FPPTX XZONO OATFM UKXQL DYKFH PYYF KEUJQ TICKL OUJOY VHSXP
 KKHBG PIGMR CLSFT WYSUX WNYUN ZEFFP OEYVH DNLPF CWNAI AQDTF
 LVBKY MJBNM AAFNK OBTQL PZDRD CQTBP DPPFD GLHWZ HOSFI OLUND
 EUDXA KJHOW CCNFY RMDUB XUNFH XAUHP FERTD TPNPE DDVIN OMFVH
 XLEOX UICWR XZMMH BGLFI PFRUN URJKR WZUIO CLGFC RTXXH MZGEE
 CMOFH PYHGY JIYTYH FLMNU IBWBL DCAGX UWXFG FWWJP UDRQO RQOUY
 XOCKY VGCPO OZWNN IMDYG NUDVC ISFMC VRNRXQ WNIMV WSDEM RDSPB
 GVDFM ZRUMV PKRUN TYELE USAQN FYIKU XLPSJ DROJQ BXJNG MXTJD
 EGGSC VGFHZ QQBOP XIZYD IKKTW IMICG FCATD UJHQPY MEXHE VEVGI
 YHLHG GDRCA YDZUQ WTERT WLXWE YUHQO NFGYP MITHJ ZUFDK EPZQU
 MDUMA NYVRY UOWQG TNWFK RMHYM NSZJP PEHVZ CWTHY STXCP DAGQG
 EUCWP CCTJW EOVIJG TJPOH DZEXA NDZND UKQQL LLUYY GUJKQ SLNLH
 BBZNI VQUCD QPLWO MQTIO VBUGP WRYYV THLYH PIEQL RSZAA UJGMBUI
 MBXAA QFSCC BJIHAB IFDJD BQHAN ZCYKN WGDCH XSZXL KUODT

BT
GR299

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Test 5.4

DECIPHERING DIRECT MODE

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page 4

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page 2-
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WWAQR ULWGX NJLWX XJLWX XULWX XULWX XIMTW MDQLI YECLD YJFBH
 AFTZF YPXFZ XBPNT MSJBA AQWLD MPTJIL PTBPI TJSZE UNELA SKIVZ
 UAYXL HWFSL NJRBE LMHIH GOUWZ QUXOI ULPAU RTWHZ TOUOC WZXQK
 GRQRZ HERPT SCCKQ QHGIM EQUJC KUNBV GLHII QADGU YZVAF OMNNE
 LPWVN FMQEY QKKRT CQGBB VUITM FXZPV LPDZV PWZQJ VHMPQ WGNCR
 WNZAI CYVYF PBDKU XOWRO XKEIT IVMAS DHIIM DOWFB NGZGG HJBXH
 AYWAZ PGABS WCHQF CTBCO OFZUW PKZAV CUZPJ ZXBDJ EAKNF SFRKH
 DBDFW NZEPC ALGIV XGAXI GUACU DDEJC OGZQD GLMIB AKPMU TRIZJ
 RAWPD QAZBS XYHPE RIXIO MDDIW ABFPV DNQFZ TDEXU YGZAK SPAWE
 NEWXZ YRUSO RDQVH SSVHD MVAQJ BGRFW HWEDS RZKRR VLXOG LLLNH
 ORMWU MXFWQ REBOQ YWRSE JARBJ UXNS KGPVC LHSWG JLIGZ MUNJR
 PHXHJ MTGIO ENYEW YKQFN ZIEDX MPTPK GZZS DSKVW QIXT NSFQS
 XLDMK MUNVY GYVIR VPTOV JNBCI BPTOC HRUJP CXWXD KTASH TEJAI

PAGE 2 00000000000000000000

TZUIF RDXMI BIAXD YJKJIC JIMGQ UIAQX AIKGL UDUQB FCDVB GRIIP
 QRDLE RHYIK GEHWX IYPFF RVLSR FUEFI FZYTH TAXLC JHWAG MBSYM
 BDZDY RCWZA RGUCC RBCOP KXNUQ ZWZAC AWZBE MDPQH CDNTD LSRGB
 SBUAUJ XNOZJ TZTMX JUTAZ VWPNIK CEQFH UKXQD XKIVT MCQXV BOCHG
 UEACW FTHIP SAJXW QUIWK IZUOE IVOIJ WTYMW UELZY CBFMV KALBR
 KIPJY YKBSQ YPMFW AVTRF YWKEJI XUHBI QBBDD PHXVV BDZHL FAKKZ
 FBNPL KIPOR ZRGKC YYHZH AUBQB SMWHV OMTXS KISSP PDPQG UBZGK
 IDJRT WWAQR

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THE QUICK BROWN FOX JUMPS OVER THE LAZY HOND 1234567890

THE QUICK BROWN FOX JUMPS OVER THE LAZY HONDNOHDOG 1234567890
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ZERFR WSZDT WSZDT WSZDT WSZDT CKZZN FBOHE ZILBT NBLAB
BKJ PY PIXSO LIZJD VPAZF TWOJN CNEDS UUFND YRUCR WZVNA RRYAL
NNBAU LGPWO UUWBK RFBQB AUYQI GUCTH BBIZU OQIAV ERUGZ GHKWE
KQMPD MASCO AABNN RHUZH FNEM YWXTU LRMBL UCCEE BGXQH XWGZH
NNCDZ UWPF C BPTVE IZMCF NFBXQ UQAET RZMDD GVOOS DGYCO LPACN
MIVLE PLYAO ZAESQ NMZUT YDGPA HSTFL WOTLU CIENY AIGYK WYCDQ
HZYSI IJQQQ ZERFR

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Test 5.7 DECIPHERING INDIRECT mode

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Test 5.8 : DECIPHERING INDIRECT + correction

Test 5.8 DECIPHERING INDIRECT + CORRECTION

page 8

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ZERFR WSZDT WSZDT WSZDT WSZDT CKZZN FBOHE ZILBT JIBLAB
BKJJPY PIXSO LIZJD VPAZF TWOUN CNEDS JUFND YRUCR WZVNA RRYAL
NNBAU LGPWO JUWBK RFBOB AUYQI GUCTH BBIZU OQIAV ERUGZ GHKWE
KQMPD MASCO AABNN RHJZH FNEM YWXTU LRMBL UCKEE BGXQH XWGZH
NNCDZ UWPFC BPTVE IZMCF NFBXQ UQAET RZMDD GVOOS DGYCO LPACN
MIVLE PLYAO ZAESQ NMZUT YDGPA HSTFL WOTLU CIENY AIGYK WYCDQ
HZYSI IJIQQQ ZERFR
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THE QUICK BROWN FOX JUMPS OVER THE LAZY HOND 1234567890

THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890
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Test 5.8

DECIPHERING INDIRECT + CORRECTION (continued)

Deciphering indirect + correction
continued!)

PLEASE CARRY OUT THE FOLLOWING OPERATIONS AND CORRECTIONS:

1. RESTART THE TAPEREADER AFTER GROUP 11
2. INSERT A SPACE AFTER GROUP 12 AND RESTART THE TAPEREADER
3. INSERT A 'G' IN GROUP 26 AND RESTART THE TAPEREADER
4. STOP THE TAPEREADER AFTER GROUP 34, ACTUATE THE CORRECTION PUSH BUTTON 5X, INSERT 'ABEMB' AND RESTART THE TAPE READER
5. SWITCH OFF THE TAPEREADER, ACTUATE THE INDIRECT PUSH BUTTON AND RESTART THE TAPEREADER

Cryptogram with errors (not printed out).

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FVCEE EUXQO EUXQO EUXQO EUXQO EUXQO RHCFV DIQXT RVOQO LLSJL
WLZXP AFGUDEEEYRR ASZXB JUODV LTKUQ BDOBB HPOTY OIOZO YXZQL
SNVCY HTHLY KKBWS XWEDT GAKTK IP PY AHYCE TZIOU CNZLB ECPPQ
OATAJ YNYAR FGJTS JHGFD GWCNE VANYS EOMBY ZDCKG EHKES LWZSZ
VWOAP DGQGT UARZV WDZVT HXEDH QZSOK KCENI MIILC PGTPK PCZCC
FVCEE
BT
GJV51
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FVCEE EUXQO EUXQO EUXQO EUXQO EUXQO RHCFV DIOXT RVOQO LLSWL
WLZXP AFGUD EEYRR ASZXB JUODV LTKUQ BDOBB HPOTY OIOZO YXZQL
SNVCY HTHLY KKBWS XWEDT GAKTK IPGPY AHYCE TZIOU CNZLB ECPPQ
OATAJ YNYAR FGJTS JHGFD FGHJABEMB GWCNE VANYS EOMBY ZDCKG EHKES LWZSZ
VWOAP DGQGT UARZV WDZVT HXEDH QZSOK KCENI MIILC PGTPK PCZCC
FVCEE
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GJV51
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THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890
 THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890
 THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890, , , ,

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TEST 5.9 WIPING THE MEMORY

Test 5.9 CLEARING THE MEMORY

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PAGE 1

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THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890
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KUIDH IGVOU IGVOU IGVOU IGVOU IGVOU NHTMM RDANV CAVVI QMVXJ
EEBHR HSVXP BIGSJL QTZBD CGDWU QQPJL WEVFW HJYHY YZYPP UEPST
PVEWH NDWAR REEAC GLTZC UBGYA EPBDD UFNTQ SVKET CHFZO AVHLW
NDLWK IFZNJL HQQQM BMFBS XWHXQ DUCCV QAVQI XPNHR IJNJS MSFXD
JCWNZ ZOEXM AMWZT RQIYU YNVYZ NUZVO YBILI LZXSN BXZTM KUIDH
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| TEST 5.11 Garbling of the first 11 groups

Test 5.10 DECRYPTING OF SYSTEM INDICATOR

TEST 5.10. Deciphering of system indicator

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Test 5.11 GARBLING OF THE FIRST 11 GROUPS, GARBLING
OF CRYPTO TEXT, REGAINING OF CRYPTO SYNC.

THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1236567890
THE QUICK BROWN FOX JUMPS OVER THE LAZSLLMM 1234567890
THE QUICK BR
RDNXAUV WOFOQFPWUMRPYARFNQLQXXLF
DQRP5LJ3I#03:(?492, 19/ 87.0' 9=34 5LJ3)-+6 1234567890
THE QÜICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890
THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890
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Test 5.14

CHECK OF BATTERY AND RESET.

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PAGE 1

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THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG 1234567890
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DZQIB YQERI YQERI YQERI YQERI RZAAZ DOWQS UBOIK MPFLB
EWILJI ZYDQB XHXBM BXRLZ VCAPP LUWCP QLFQT SOFQZ QNDFS UZYRT
HKBNU KZUDR CQIPS KZVMS SMIKG WJHBB GHCRT VLIQF HQALI KVMYL
TIUFO BTIMJU FZJPS NWXNUJ BAZVM NHBAL FVLQT UMFGE IEZMQ IMRYS
ZWTXE UYRYD TPCWP EHIPH TBHUB VIGUNI DCXCN OYRPY DZQIB
BT
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