

ab 450 2000 - 2691 10085  
t ab 550 2000 - 2697 10085

## Disassembler für Lo 15

- 1) 2000 08 nop  
2001 c4ff ldi ff }  
2003 31 xpal 1 } Bnr I auf Stackpointer  
2004 c40f ldi 0f }  
2006 35 xpaH 1  
2007 c4e0 ldi e0 }  
2009 c900 st 1 00  
200b c40f ldi 0f  
200d c9ff st 1 ff } initialisierung  
200f c400 ldi 00  
2011 c9fa st 1 fa  
2013 c9f9 st 1 f9  
2015 c400 ldi 00 }  
2017 32 xpal 2 } Bnr II auf Display  
2018 c407 ldi 07 }  
201a 36 xpaH 2  
201b c45f ldi 5f }  
201d ca07 st 2 07 } "ad" auf Display 7 u. 6  
201f c45e ldi 5e }  
2021 ca06 st 2 06  
2023 c43e ldi 3e }  
2025 c9fe st 1 fe } Gethse-1 in "Raut. Abl."  
2027 c402 ldi 02 }  
2029 c9fd st 1 fd }  
202b c455 ldi 55 }  
202d 33 xpal 3 } Bush-1 im Punkt III  
202e c400 ldi 00 }  
2030 37 xpaH 3 } Anfangsadresse holen  
2031 3f xppc 3 }  
2032 c4e0 ldi e0 } Bnr I auf &FED  
2034 31 xpal 1 }  
2035 c40f ldi 0f } Anfangsadresse in &FEC u.  
2037 35 xpaH 1 } &FEB schreiben  
2038 c101 ld 1 01 }

2)	203a	c90b	st 1 0b	
	203c	c102	ld 1 02	
	203e	c90c	st 1 0c	
	2040	3f	xppc 3	Endadresse holen
	2041	14ff	ldi ff	} low
	2043	c91d	st 1 1d	} "Print"-1 in Raut. Adr.
	2045	c425	ldi 25	} high
	2047	c91c	st 1 1c	
	2049	c400	ldi 00	
	204b	c90d	st 1 0d	} flag Zeichen auf 0 setzen
	204d	c4bb	ldi bb	
	204f	3f	xppc 3	} Line feed
	2050	c4af	ldi af	
	2052	3f	xppc 3	} carriage return
	2053	c4bb	ldi bb	
	2055	3f	xppc 3	} Line feed
	2056	c493	ldi 93	2
	2058	c9ef	st 1 ef	
	205a	c491	ldi 91	1
	205c	c9ee	st 1 ee	
	205e	c499	ldi 99	2
	2060	c9ed	st 1 ed	
	2062	c4bd	ldi bd	3
	2064	c9ec	st 1 ec	
	2066	c4ab	ldi ab	4
	2068	c9eb	st 1 eb	
	206a	c49f	ldi 9f	5
	206c	c9ea	st 1 ea	
	206e	c495	ldi 95	6 look für Zahlen in Tabelle schreiben
	2070	c9e9	st 1 e9	
	2072	c4b1	ldi b1	7
	2074	c9e8	st 1 e8	
	2076	c4b3	ldi b3	8
	2078	c9e7	st 1 e7	
	207a	c48f	ldi 8f	9
	207c	c9e6	st 1 e6	
	207e	c439	ldi 39	17
	2080	c9e5	st 1 e5	
	2082	c40d	ldi 0d	B

3) 2084 c9e4 st 1 e4  
2086 c423 ldi 23  
2088 c9e3 st 1 e3  
208a c42d ldi 2d  
208c c9e2 st 1 e2  
208e c43d ldi 3d  
2090 c9e1 st 1 e1  
2092 c425 ldi 25  
2094 c9e0 st 1 e0  
2096 c10c ld 1 0c  
2098 1e rr  
2099 1e rr  
209a 1e rr  
209b 1e rr  
209c d40f ani 0f  
209e 01 xae  
209f c4f0 ldi f0  
20a1 02 ccl  
20a2 78 cae  
20a3 c802 st 02  
20a5 c1ed ld 1 ee  
20a7 3f xppc 3  
20a8 c10c ld 1 0c  
20aa d40f ani 0f  
20ac 01 xae  
20ad c4f0 ldi f0  
20af 02 ccl  
20b0 78 cae  
20b1 c802 st 02  
20b3 c1ef ld 1 ef  
20b5 3f xppc 3  
20b6 c10b ld 1 0b  
20b8 1e rr  
20b9 1e rr  
20ba 1e rr  
20bb 1e rr  
20bc d40f ani 0f  
20be 01 xae  
20bf c4f0 ldi f0  
20c1 02 ccl

C

D

E

F

1. Ziffer d. Adressen ausgeben

2. Ziffer d. Adressen ausgeben

3. Ziffer ausgeben

?

20c2	78	cae
20c3	c802	st 02
20c5	c1e3	ld 1 e3
20c7	3f	xppc 3
20c8	c10b	ld 1 0b
20ca	d40f	ani 0f
20cc	01	xae
20cd	c4f0	ldi f0
20cf	02	ccl
20d0	78	cae
20d1	02	ccl
20d2	c802	st 02
20d4	c1eb	ld 1 eb
20d6	3f	xppc 3
20d7	c437	ldi 37
20d9	3f	xppc 3
20da	3f	xppc 3
20db	c10c	ld 1 0c
20dd	36	xpah 2
20de	c10b	ld 1 0b
20e0	32	xpal 2
20e1	c200	ld 2 00
20e3	01	xae
20e4	40	lde
20e5	08	nop
20e6	9408	jp 08
20e8	c4f4	ldi f4
20ea	32	xpal 2
20eb	c422	ldi 22
20ed	36	xpah 2
20ee	9200	jmp 2 00
20f0	40	lde
20f1	c900	st 1 00
20f3	1e	rr
20f4	1e	rr
20f5	1e	rr
20f6	1e	rr
20f7	d40f	ani 0f
20f9	01	xae
20fa	c4f0	ldi f0

j) 20fc 02 ccl

20fd 78 cae

20fe c802 st 02

2100 c1e8 ld 1 e8

2102 3f xppc 3

2103 c100 ld 1 00

2105 d40f ani 0f

2107 01 xae

2108 c4f0 ldi fo

210a 02 ccl

210b 78 cae

210c c802 st 02

210e c1e7 ld 1 e7

2110 3f xppc 3

2111 c4b7 ldi b7

2113 3f xppc 3

2114 3f xppc 3

2115 3f xppc 3

2116 3f xppc 3

2117 c100 ld 1 00

2119 01 xae

211a c4d4 ldi d4

211c 32 xpah 2

211d c422 ldi 22

211f 36 xpah 2

2120 40 lde

2121 e440 xri 40

2123 9c0b jnz 0b

2125 c41b ldi 1b

2127 3f xppc 3

2128 c42d ldi 2d

212a 3f xppc 3

212b c43d ldi 3d

212d 3f xppc 3

212e 9200 jmp 2 00

2130 40 lde

2131 e401 xri 01

2133 9c0b jnz 0b

2135 c405 ldi 05

2137 3f xppc 3

2. Hex. Ziffer ausgeben

4X Space

Inhalt d. Adresse laden n.  
in E sichern

Ansprungadresse in Ptr. II

(221F)

2D

LDE

11

DE

OF XHE

2138 1439 ldi 39 } (3F)  
213a 3f xppc 3  
213b c43d ldi 3d } (DE)  
213d 3f xppc 3  
213e 9200 jmp 2 00  
2140 40 lde  
2141 e430 xri 30  
2143 d4f8 ani f8  
2145 9c18 jnz 18  
2147 c405 ldi 05 } (DF)  
2149 3f xppc 3  
214a c413 ldi 13 } XPA (29)  
214c 3f xppc 3  
214d c439 ldi 39 } ausgeben (3F)  
214f 3f xppc 3  
2150 40 lde  
2151 d404 ani 04  
2153 9c05 jnz 05 } Low oder  
2155 c41b ldi 1b } high? (2D)  
2157 3f xppc 3  
2158 9003 jmp 03  
215a c417 ldi 17 } (18)  
215c 3f xppc 3  
215d 9011 jmp 11  
215f 40 lde  
2160 e43c xri 3c  
2162 d4fc ani fc  
2164 9c34 jnz 34  
2166 c405 ldi 05 } XPPC (GF)  
2168 3f xppc 3  
2169 c413 ldi 13 } (29)  
216b 3f xppc 3  
216c 3f xppc 3  
216d c423 ldi 23 } (14)  
216f 3f xppc 3  
2170 c4b7 ldi b7 } space (1B)  
2172 3f xppc 3  
2173 40 lde  
2174 d403 ani 03  
2176 01 xae

2177 40 lde  
2178 e401 xri 01  
217a 9c03 jnz 03  
217c c491 ldi 91  
217e 3f xppc 3  
217f 40 lde  
2180 e402 xri 02  
2182 9c03 jnz 03  
2184 c499 ldi 99  
2186 3f xppc 3  
2187 40 lde  
2188 e403 xri 03  
218a 9c05 jnz 05(03)  
218c c4bd ldi bd  
218e 3f xppc 3  
218f 08 nop  
2190 08 nop  
2191 08 nop  
2192 08 nop  
2193 08 nop  
2194 08 nop  
2195 08 nop  
2196 08 nop  
2197 08 nop  
2198 9200 jmp 2 00  
219a c100 ld 1 00  
219c 01 xae  
219d 40 lde  
219e e450 xri 50  
21a0 9c0b jnz 0b  
21a2 c439 ldi 39  
21a4 3f xppc 3  
21a5 c427 ldi 27  
21a7 3f xppc 3  
21a8 c43d ldi 3d  
21aa 3f xppc 3  
21ab 9200 jmp 2 00  
21ad 40 lde  
21ae e458 xri 58  
21ee e410 xri 10

pt, I, II od. III ? (3D)

(08)

(0D)

(228C)

weglassen

(3F)

(22)

(0E)

EXTELEX TELELEX TELELEX TELELEX

21fa 000b inz 0b  
21fb 9c0b jnz 0b } DRE (2C)  
21f2 c40f ldi 0f  
21f4 3f xppc 3  
21f5 c42b ldi 2b  
21f7 3f xppc 3  
21f8 c43d ldi 3d } DRE (15)  
21fa 3f xppc 3  
21fb 9200 jmp 2 00 } (22B2)  
21fd 40 lde } XRE (DF)  
21fe e460 xri 60  
21f0 9c0b jnz 0b  
21f2 c405 ldi 05 } (15)  
21f4 3f xppc 3  
21f5 c42b ldi 2b  
21f7 3f xppc 3  
21f8 c43d ldi 3d } DRE (DE)  
21fa 3f xppc 3  
21fb 9200 jmp 2 00 }  
21cd 40 lde  
21ce e468 xri 68 } DRE (11)  
21d0 9c0b jnz 0b  
21d2 c42d ldi 2d } (3F)  
21d4 3f xppc 3  
21d5 c439 ldi 39 } DRE (DE)  
21d7 3f xppc 3  
21d8 c43d ldi 3d  
21da 3f xppc 3  
21db 9200 jmp 2 00 }  
21dd 40 lde } ADE (3F)  
21de e470 xri 70  
21e0 9c0b jnz 0b } (11)  
21e2 c439 ldi 39 } ADE (DE)  
21e4 3f xppc 3  
21e5 c42d ldi 2d  
21e7 3f xppc 3  
21e8 c43d ldi 3d  
21ea 3f xppc 3  
21eb 9200 jmp 2 00 }  
21ed 40 lde }  
21ee e478 xri 78 }

TELEX / TELE

21f0 9c0b jnz 0b  
21f2 c423 ldi 23  
21f4 3f xppc 3  
21f5 c439 ldi 39  
21f7 3f xppc 3  
21f8 c43d ldi 3d  
21fa 3f xppc 3  
21fb 9200 jmp 2 00  
21fd 40 lde  
21fe e440 xri 40 19  
2200 9c0b jnz 0b  
2202 c435 ldi 35  
2204 3f xppc 3  
2205 c433 ldi 33  
2207 3f xppc 3  
2208 c40f ldi 0f  
220a 3f xppc 3  
220b 9200 jmp 2 00  
220d 40 lde  
220e e41d xri 1d  
2210 9c0b jnz 0b  
2212 c435 ldi 35  
2214 3f xppc 3  
2215 c42b ldi 2b  
2217 3f xppc 3  
2218 c41b ldi 1b  
221a 3f xppc 3  
221b 9200 jmp 2 00  
221d 40 lde  
221e e41f xri 1f  
2220 9c0b jnz 0b  
2222 c42b ldi 2b  
2224 3f xppc 3  
2225 c42b ldi 2b  
2227 3f xppc 3  
2228 c41b ldi 1b  
222a 3f xppc 3  
222b 9200 jmp 2 00  
222d 40 lde  
222e e402 xri 02

22E5

C A E

(14)

(3 F)

(D E)

S i O

(8 C)

(7 7)

(2 C)

S R L

(8 C)

(15)

(2 D)

R R L

(15)

(15)

(2 D)

TELEX / TELE

(2325)

2230	9c0b	jnz 0b	CCL	(14)
2232	c423	ldi 23		(14)
2234	3f	xppc 3		(2D)
2235	c423	ldi 23		
2237	3f	xppc 3		
2238	c41b	ldi 1b		
223a	3f	xppc 3		
223b	9200	jmp 2 00		
223d	40	lde		
223e	e403	xri 03		
2240	9c0b	jnz 0b	SCL	(DC)
2242	c435	ldi 35		(14)
2244	3f	xppc 3		(2D)
2245	c423	ldi 23		
2247	3f	xppc 3		
2248	c41b	ldi 1b		
224a	3f	xppc 3		
224b	9200	jmp 2 00		
224d	40	lde		
224e	e405	xri 05		
2250	9c0b	jnz 0b	FEN	(27)
2252	c433	ldi 33		(DE)
2254	3f	xppc 3		(27)
2255	c43d	ldi 3d		
2257	3f	xppc 3		
2258	c427	ldi 27		
225a	3f	xppc 3		
225b	9200	jmp 2 00		
225d	40	lde		
225e	e406	xri 06		
2260	9c0b	jnz 0b	CSA	(14)
2262	c423	ldi 23		(DC)
2264	3f	xppc 3		(3F)
2265	c435	ldi 35		
2267	3f	xppc 3		
2268	c439	ldi 39		
226a	3f	xppc 3		
226b	9200	jmp 2 00		
226d	40	lde		
226e	e407	xri 07		

11) 2270 9c0b jnz 0b (2365 14  
2272 c423 ldi 23 C1S  
2274 3f xppc 3  
2275 c439 ldi 39 3F  
2277 3f xppc 3  
2278 c435 ldi 35 DC  
227a 3f xppc 3  
227b 9200 jmp 2 00  
227d 40 lde  
227e e408 xri 08  
2280 9c0b jnz 0b  
2282 c427 ldi 27 22  
2284 3f xppc 3  
2285 c40f ldi 0f 2C  
2287 3f xppc 3  
2288 c413 ldi 13 29  
228a 3f xppc 3  
228b 9200 jmp 2 00  
228d 40 lde  
228e e41c xri 1c  
2290 9c08 jnz 08  
2292 c435 ldi 35 DC  
2294 3f xppc 3 SR  
2295 c42b ldi 2b 15  
2297 3f xppc 3  
2298 9200 jmp 2 00  
229a 40 lde  
229b e41e xri 1e  
229d 9c06 jnz 06 RR  
229f c42b ldi 2b 15  
22a1 3f xppc 3  
22a2 3f xppc 3  
22a3 9200 jmp 2 00  
22a5 40 lde  
22a6 e400 xri 00  
22a8 9c0e jnz 0e HALT 18  
22aa c417 ldi 17  
22ac 3f xppc 3  
22ad c439 ldi 39 3F

22af	3f	xppc 3	(23A4)	
22b0	c41b	ldi 1b		2D
22b2	3f	xppc 3		
22b3	c41f	ldi 1f		13
22b5	3f	xppc 3		
22b6	9200	jmp 2 00		
22b8	40	lde		
22b9	e404	xri 04		
22bb	9c0e	jnz 0e		
22bd	c42d	ldi 2d		11
22bf	3f	xppc 3	DINT	
22c0	c433	ldi 33		27
22c2	3f	xppc 3		
22c3	c427	ldi 27		22
22c5	3f	xppc 3		
22c6	c41f	ldi 1f		13
22c8	3f	xppc 3		
22c9	9200	jmp 2 00		
22cb	c43d	ldi 3d		DE
22cd	3f	xppc 3		
22ce	c42b	ldi 2b		15
22d0	3f	xppc 3	ERR0	
22d1	3f	xppc 3		
22d2	c40f	ldi 0f		2C
22d4	3f	xppc 3	(23C9)	
22d5	c42f	ldi 2f		
22d7	3f	xppc 3		Line feed u. leere return
22d8	c43b	ldi 3b		
22da	3f	xppc 3		
22db	c464	ldi 64		"Schr. erhöhen" in
22dd	c91d	st 1 1d		Rout. Schr.
22df	c426	ldi 26		
22e1	c91c	st 1 1c		
22e3	3f	xppc 3		Schr. erhöhen
22e4	c4ff	ldi ff		
22e6	c91d	st 1 1d		"Print-1" in
22e8	c425	ldi 25		Rout. Schr.
22ea	c91c	st 1 1c		
22ec	c495	ldi 95		

22ee 32 xpal 2

13) 22ef c420 ldi 20

22f1 36 xpah 2

22f2 9200 jmp 2 00 Rückprung "Loop"

Doppelbyte

22f4 00 halt

22f5 c402 ldi 02

22f7 c803 st 03

22f9 9001 jmp 01

22fb 00 halt Speicher

22fc 40 lde

22fd c900 st 1 00

22ff 40 lde

2300 1e rr

2301 1e rr

2302 1e rr -

2303 1e rr

2304 d40f ani of } 1. Hex Ziffer angeben

2306 01 xae

2307 i4f0 ldi f0

2309 02 ccl

230a 78 cae

230b c802 st 02

230d c1e3 ld 1 e3

230f 3f xppc 3

2310 c100 ld 1 00

2312 d40f ani of

2314 01 xae

2315 c4f0 ldi f0

2317 02 ccl

2318 78 cae

2319 c802 st 02

231b c1ee ld 1 ee

231d 3f xppc 3

231e b8dc dld dc

2. Hex Ziffer angeben

2320 9811 jz 11

1. oder 2. byte des Befehls

2322 c100 ld 1 00

1. byte von DFE0 in DFEA schreiben

2324 c90a st 1 0a

2326 c10c ld 1 0c

2328 36 xpah 2

2329 c10b ld 1 0b

14) 232b 32 xpal 2

232c c201 ld 2 01

232e c900 st 1 00

2330 01 xae

2331 90cc jmp cc

2333 c437 ldi 37 } 2 x Ypos

2335 3f xppc 3 }

2336 3f xppc 3 }

2337 c10a ld 1 0a

2339 01 xae 1. byte im E sichern

233a c400 ldi 00 Anfangsadresse für 2. byte in  
Pointen II

233c 32 xpal 2

233d c425 ldi 25

233f 36 xpah 2

2340 40 lde (243C)

2341 e4c4 xri c4

2343 9c0b jnz 0b

2345 c41b ldi 1b } LDI 2D

2347 3f xppc 3

2348 c42d ldi 2d 11

234a 3f xppc 3

234b c433 ldi 33 27

234d 3f xppc 3

234e 9200 jmp 2 00

2350 40 lde (244C)

2351 e4d4 xri d4

2353 9c0b jnz 0b

2355 c439 ldi 39 } ANI 3F

2357 3f xppc 3

2358 c427 ldi 27 22

235a 3f xppc 3

235b c433 ldi 33 27

235d 3f xppc 3

235e 9200 jmp 2 00

2360 40 lde

2361 e4dc xri dc

2363 9c0b jnz 0b

15) 2365 c40f ldi 0f } ORI 2C  
2367 3f xppc 3 }  
2368 c42b ldi 2b }  
236a 3f xppc 3 }  
236b c433 ldi 33 } 15  
236d 3f xppc 3 }  
236e 9200 jmp 2 00 }  
2370 40 lde }  
2371 e4e4 xri e4 }  
2373 9c0b jnz 0b }  
2375 c405 ldi 05 } XRI 0F  
2377 3f xppc 3 }  
2378 c42b ldi 2b } 15  
237a 3f xppc 3 }  
237b c433 ldi 33 } 27  
237d 3f xppc 3 }  
237e 9200 jmp 2 00 }  
2380 40 lde }  
2381 e4ec xri ec }  
2383 9c0b jnz 0b }  
2385 c42d ldi 2d } DAI 11  
2387 3f xppc 3 }  
2388 c439 ldi 39 } 3F  
238a 3f xppc 3 }  
238b c433 ldi 33 } 27  
238d 3f xppc 3 }  
238e 9200 jmp 2 00 }  
2390 40 lde }  
2391 e4f4 xri f4 }  
2393 9c0b jnz 0b }  
2395 c439 ldi 39 } 3F  
2397 3f xppc 3 }  
2398 c42d ldi 2d } ADD 11  
239a 3f xppc 3 }  
239b c433 ldi 33 } 27  
239d 3f xppc 3 }  
239e 9200 jmp 2 00 }  
23a0 40 lde }

23df	c42d	ldi 2d	(24E0)	11
23a1	e4fc	xri fc	(249D)	
23a3	9c0b	jnz 0b		
23a5	c423	ldi 23		14
23a7	3f	xppc 3		3F
23a8	c439	ldi 39		
23aa	3f	xppc 3		27
23ab	c433	ldi 33		
23ad	3f	xppc 3		
23ae	9200	jmp 2 00		
23b0	40	lde		
23b1	e48f	xri 8f		
23b3	9c0b	jnz 0b		
23b5	c42d	ldi 2d		11
23b7	3f	xppc 3	DLY	
23b8	c41b	ldi 1b		2D
23ba	3f	xppc 3		
23bb	c415	ldi 15		09
23bd	3f	xppc 3		
23be	9200	jmp 2 00	(24BA)	
23c0	c4db	ldi db		
23c2	32	xpal 2		Angangsadresse für "Nummer des Pointers"
23c3	i424	ldi 24		
23c5	36	xpah 2		6 5
23c6	40	lde	(24C7)	
23c7	e4a8	xri a8		
23c9	d4fc	ani fc		
23cb	9c0b	jnz 0b		
23cd	c433	ldi 33	ILD	27
23cf	3f	xppc 3		
23d0	c41b	ldi 1b		2D
23d2	3f	xppc 3		
23d3	c42d	ldi 2d		
23d5	3f	xppc 3		
23d6	9200	jmp 2 00		
23d8	40	lde		
23d9	e4b8	xri b8		
23db	d4fc	ani fc		
23dd	9c0b	jnz 0b		

17) 23df c42d ldi 2d (24E8) 11  
23e1 3f xppc 3  
23e2 c41b ldi 1b DLD 20  
23e4 3f xppc 3  
23e5 c42d ldi 2d 11  
23e7 3f xppc 3  
23e8 9200 jmp 2 00  
23ea 40 lde  
23eb e490 xri 90  
23ed d4fc ani fc  
23ef 9c0b jnz 0b JMP  
23f1 c429 ldi 29 24  
23f3 3f xppc 3 26  
23f4 c407 ldi 07  
23f6 3f xppc 3 29  
23f7 c413 ldi 13  
23f9 3f xppc 3  
23fa 9200 jmp 2 00  
23fc 40 lde  
23fd e49c xri 9c  
23ff d4fc ani fc  
2401 9c0b jnz 0b  
2403 c429 ldi 29 JNZ 24  
2405 3f xppc 3  
2406 c427 ldi 27 22  
2408 3f xppc 3  
2409 c41d ldi 1d 1F  
240b 3f xppc 3  
240c 9200 jmp 2 00  
240e 40 lde  
240f e494 xri 94  
2411 d4fc ani fc  
2413 9c08 jnz 08 JP  
2415 c429 ldi 29 24  
2417 3f xppc 3  
2418 c413 ldi 13 29  
241a 3f xppc 3  
241b 9200 jmp 2 00

78) 241e e498 xri 98  
2420 d4fc ani fc  
2422 9c08 jnz 08 } 77  
2424 c429 ldi 29  
2426 3f xppc 3  
2427 c41d ldi 1d  
2429 3f xppc 3  
242a 9200 jmp 2 00 } 24  
(252B)  
242c c4ce ldi ce }  
242e 32 xpal 2 } Anwendungsserie für "@"  
242f c424 ldi 24  
2431 36 xpah 2 } 5  
2432 40 lde } (2538)  
2433 e4c0 xri c0  
2435 d4f8 ani f8  
2437 9c08 jnz 08 } L D  
2439 c41b ldi 1b } 2 D  
243b 3f xppc 3  
243c c42d ldi 2d } 11  
243e 3f xppc 3  
243f 9200 jmp 2 00  
2441 40 lde  
2442 e4c8 xri c8  
2444 d4f8 ani f8  
2446 9c08 jnz 08 } S T  
2448 c435 ldi 35 } DC  
244a 3f xppc 3  
244b c41f ldi 1f } 13  
244d 3f xppc 3  
244e 9200 jmp 2 00  
2450 40 lde  
2451 e4d0 xri d0  
2453 d4f8 ani f8  
2455 9c0b jnz 0b }  
2457 c439 ldi 39 } AND 3 F  
2459 3f xppc 3  
245a c427 ldi 27 } 22

(2562)

19) 245c 3f xppc 3  
245d c42d ldi 2d  
245f 3f xppc 3  
2460 9200 jmp 2 00  
2462 40 lde  
2463 e4d8 xri d8  
2465 d4f8 ani f8  
2467 9c08 jnz 08  
2469 c40f ldi 0f  
246b 3f xppc 3  
246c c42b ldi 2b  
246e 3f xppc 3  
246f 9200 jmp 2 00  
2471 40 lde  
2472 e4e0 xri e0  
2474 d4f8 ani f8  
2476 9c0b jnz 0b  
2478 c405 ldi 05  
247a 3f xppc 3  
247b c40f ldi 0f  
247d 3f xppc 3  
247e c42b ldi 2b  
2480 3f xppc 3  
2481 9200 jmp 2 00  
2483 40 lde  
2484 e4e8 xri e8  
2486 d4f8 ani f8  
2488 9c0b jnz 0b  
248a c42d ldi 2d  
248c 3f xppc 3  
248d c439 ldi 39  
248f 3f xppc 3  
2490 c42d ldi 2d  
2492 3f xppc 3  
2493 9200 jmp 2 00  
2495 40 lde  
2496 e4f0 xri f0  
2498 d4f8 ani f8

11

OR

2C

15

XOR

OF

2C

15

DAD

11

3F

11

TELEX / TELE

249a	9c09	jnz 09		ADD	3F
249c	c439	ldi 39			
249e	3f	xppc 3			
249f	c42d	ldi 2d			
24a1	3f	xppc 3			
24a2	3f	xppc 3			
24a3	9200	jmp 2 00			
24a5	40	lde		(25AB)	
24a6	e4f8	xri f8			
24a8	d4f8	ani f8			
24aa	9c0b	jnz 0b			
24ac	c423	ldi 23			
24ae	3f	xppc 3			
24af	c439	ldi 39		CAD	14
24b1	3f	xppc 3			
24b2	c42d	ldi 2d			
24b4	3f	xppc 3			
24b5	9200	jmp 2 00		(25BB)	
24b7	c400	ldi 00			
24b9	32	xpal 2		Anker für "2. byte ausgeben"	
24ba	c425	ldi 25			
24bc	36	xpah 2			
24bd	c437	ldi 37			
24bf	3f	xppc 3			
24c0	c43d	ldi 3d			
24c2	3f	xppc 3		ERR0	
24c3	c42b	ldi 2b			
24c5	3f	xppc 3			
24c6	3f	xppc 3			
24c7	c40f	ldi 0f			
24c9	3f	xppc 3			
24ca	9200	jmp 2 00			
24cc	08	nop			
24cd	08	nop			
24ce	08	nop			
24cf	40	lde		← Ankerung für @	
24d0	d404	ani 04			
24d2	9808	iz 08			

← Ankerung für @

24d6 3f xppc 3 } space  
24d7 c48d ldi 8d }  
24d9 3f xppc 3 } @ news  
24da 9003 jmp 03  
  
24dc c437 ldi 37 } space  
24de 3f xppc 3 }  
24df 40 lde } (25E5)  
  
24e0 d403 ani 03  
24e2 e401 xri 01 } Pointer I ?  
24e4 9c05 jnz 05  
24e6 c491 ldi 91 } 3D  
24e8 3f xppc 3  
24e9 9016 jmp 16  
  
24eb 40 lde  
24ec d403 ani 03  
24ee e402 xri 02 }  
24f0 9c05 jnz 05 } Pointer II ?  
24f2 c499 ldi 99 }  
24f4 3f xppc 3  
24f5 900a jmp 0a  
24f7 40 lde  
24f8 d403 ani 03  
24fa e403 xri 03  
24fc 9c03 jnz 03  
24fe c4bd ldi bd } ØD  
2500 3f xppc 3 (2606)  
2501 08 nop  
2502 08 nop  
2503 08 nop  
2504 c437 ldi 37 } space  
2506 3f xppc 3 }  
2507 c100 ld 1 00  
2509 1e rr  
250a 1e rr  
250b 1e rr  
250c 1e rr  
250d d40f ani 0f

22) 250f 01 xae  
2510 c4f0 ldi f0  
2512 02 ccl  
2513 78 cae  
2514 c802 st 02  
2516 c1ef ld 1 ef  
2518 3f xppc 3  
2519 c100 ld 1 00  
251b e40f ani of  
251d 01 xae  
251e c4f0 ldi f0  
2520 02 ccl  
2521 78 cae  
2522 c802 st 02  
2524 c1ed ld 1 ed  
2526 3f xppc 3  
2527 c464 ldi 64 } "Adresse erhöhen - 1" in Ront. Adr.  
2529 c91d st 1 1d }  
252b c426 ldi 26  
252d c91c st 1 1c  
252f 3f xppc 3 } 2x Adresse erhöhen  
2530 3f xppc 3  
2531 c4ff ldi ff }  
2533 c91d st 1 1d } "Print - 1" in Ront. Adr.  
2535 c425 ldi 25  
2537 c91c st 1 1c  
2539 c4af ldi af } carriage return  
253b 3f xppc 3 }  
253c c4bb ldi bb } line feed  
253e 3f xppc 3  
253f c495 ldi 95  
2541 32 xpal 2  
2542 c420 ldi 20  
2544 36 xpah 2  
2545 3e xppc 2  
2546 00 halt  
2547 00 halt

# Subroutine "Print"

23)

```

2600 c411 ldi 11
2602 36 xolah 2
2603 c400 ldi 00 } Adresse LEDs in Pointen II
2605 32 xpah 2
2606 c4c0 ldi c0 } LEDs auf Ziffern
2608 ca00 st 2 00
260a c400 ldi 00
260c 01 xae } 0 an Anfang
260d 19 erro
260e c4e0 ldi e0
2610 31 xpah 1 } Startbit in Pointen I
2611 c40f ldi 0f
2613 35 xolah 1
2614 c1ff ld 1 ff Accumulator laden
2616 d480 ani 80
2618 940a jp 0a Ziffer ?
261a e10d xor 1 0d nein
261c 9828 jz 28 Flag gesetzt ?
261e c480 ldi 80
2620 c90d st 1 0d
2622 900e jmp 0e
2624 c400 ldi 00 ja Ziffer !
2626 e10d xor 1 0d Letztes Zeichen war Buchstabe ?
2628 981c jz 1c
262a c400 ldi 00
262c c90d st 1 0d
262e c401 ldi 01 Zeichen für Buchstaben laden
2630 9002 jmp 02
2632 c489 ldi 89 Zeichen für Ziffer laden
2634 01 xae
2635 c406 ldi 06
2637 c80a st 0a
2639 19 erro
263a 8f13 dly 13 Zeichen für Ziffer laden
263c b805 dld 05 Buchstaben neu

```

263e 9cf9 jnz f9  
2640 9001 jmp 01  
2642 00 halt  
2643 19 erro  
2644 8f1d dly 1d

Raus; Aufladen

2648 01 xae  
2649 c406 ldi 06

264b c80a st 0a

264d 19 erro

264e 8f13 dly 13

2650 b805 dld 05

Raus

2652 9cf9 jnz f9

2654 9001 jmp 01

2656 00 halt

2657 19 erro

2658 8f1d dly 1d

265a c400 ldi 00

265c ca00 st 2 00

Leds ausmachen

265e 37 xpah 3

265f c414 ldi 14

über Null ins Hauptprogramm

2661 33 xpal 3

2662 3f xppc 3

2663 00 halt

2664 00 halt

2665 c4e0 ldi e0

Subroutine "Adresse erhöhen"

2667 31 xpal 1

Hochbase in Pointer I

2668 c40f ldi 0f

266a 35 xpah 1

266b c10b ld 1 0b

266d 01 xae

unteres Byte von Anfang u.

266e c101 ld 1 01

Endadresse gleich?

2670 60 xre

2671 9c0a jnz 0a

2673 c10c ld 1 0c

oberes Byte von Anfang u. Endad.  
gleich?

2675 01 xae

2676 c102 ld 1 02

2678 60 xre

25) 2679 9c02 jnz 02

267b 911f jmp 1 1f

Übung anspringen

267d c10b ld 1 0b

267f 02 ccl

2680 f401 adi 01

Adresse um 1 erhöhen

2682 c90b st 1 0b

2684 c10c ld 1 0c

2686 f400 adi 00

2688 c90c st 1 0c

268a c400 ldi 00

268c 37 xpah 3

über "null" ins Hauptprogramm

268d c414 ldi 14

268f 33 xpal 3

2690 3f xppc 3

2691 00 halt

Ende

Offf stackpointer  
Offe  
Offd rout. adr. low  
Offc high  
Offb stack full flag  
Offa stack deep  
Offg aktueller stack fuellstand - stkeff  
Off8 zwischenspeicher ac  
Off7 zwischenspeicher pointer 3  
Off6  
  
Ofed0 flag 80 = ziffern 00 = buchstaben  
Ofec oberes byte der 1. adresse }  
Ofeb unteres byte der 1. adresse }  
Ofea speicher fuer inhalt der 1. adresse bei 2 byte befehlen  
Ofeg inhalt der taste mit ani Of  
Ofe8 inhalt der taste gesamt  
Ofe7 hex code der taste  
Ofe6  
Ofe5  
Ofe4 ram tabelle fuer 4 tasten  
Ofe3  
Ofe2 oberes byte der endadresse  
Ofe1 unteres byte der endadresse }  
Ofe0 stackbase u. speicher fuer inhalt der adresse  
Ofdf stack ac  
Ofde stack extension  
Ofdd stack status  
Ofdc stack fuer pointer 1 low  
Ofdb high  
Ofda stack fuer pointer 2 low  
Ofd9 high  
Ofd8 stack fuer pointer 3 low  
Ofd7 stack fuer pointer 3 high  
Ofd6 stack fuer rout. adr.  
Ofd5