

BASIC-105-A

PAGE 1

0001  
0002  
0003  
0004  
0005  
0006  
0007  
0008  
0009  
0010  
0011  
0012  
0013  
0014  
0015  
0016  
0017

\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*

BASIC-105-A

MINIMUM ASR ONLY IOS FOR 4K STAND ALONE OPERATION

EJCT

0018  
 0019  
 0020  
 0021  
 0022  
 0023  
 0024  
 0025  
 0026  
 0027  
 0028  
 0029  
 0030  
 0031  
 0032  
 0033  
 0034  
 0035  
 0036  
 0037  
 0038  
 0039  
 0040  
 0041  
 0042  
 0043  
 0044  
 0045  
 0046  
 0047  
 0048  
 0049  
 0050  
 0051  
 0052  
 0053

\*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*

LINKAGE DECLARATIONS

EXT	TYPE	MESSAGE TYPER
EXT	C307	= '307
EXT	M100	-- '100
EXT	L0DF	PROGRAM LOAD FLAG
EXT	LSTF	PROGRAM LISTING FLAG
EXT	C223	X-OFF CHARACTER CODE
EXT	CPOS	ASR POSITION INDICATOR
EXT	BRKF	PROGRAM BREAK FLAG
EXT	C221	X-ON CHARACTER
EXT	SBP	SOURCE BYTE POINTER
EXT	DDP	DESTINATION BYTE POINTER
EXT	SCHR	CHARACTER STORE ROUTINE
EXT	C215	CARRIAGE RETURN CODE
EXT	C300	= '300
EXT	C337	= '337
EXT	C240	SPACE
EXT	C1	= 1
ENT	LFCR	LINE FEED - CARRIAGE RETURN
ENT	IPUT	INPUT LINE
ENT	INAI	INPUT CHARACTER
ENT	OTAI	OUTPUT CHARACTER
ENT	BRKC	PROGRAM BREAK TEST
ENT	ITAPE	INITIALIZE FOR PUNCH
ENT	ETAPE	TERMINATE PUNCH
REL		THIS MODULE IS RELOCATABLE
CF3		FOR USE ON H516, H316
EJCT		

0054  
0055  
0056  
0057  
0058  
0059  
0060  
0061  
0062  
0063  
0064  
0065  
0066  
0067  
0068

\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*

INPUT LINE

CALLING SEQUENCE:

LDA PRFX            INPUT PREFIX CHARACTER  
JST IPUT  
DAC BUFF            40 WORD BUFFER  
.....RETURN

IF THE PROGRAM LOAD FLAG, LDF, IS SET A X-ON CHARACTER WILL BE OUTPUT IN PLACE OF THE PREFIX CHARACTR

5226	0069	00000	0 000000	IPUT	DAC	**
5227	0070	00001	000201		IAB	
5236	0071	00002	0 02 00000	LDA	LODF	
5231	0072	00003	0 06 00000	ADD	C221	
5232	0073	00004	0 11 00000	CAS	C221	
5233	0074	00005	000201		IAB	
5234	0075	00006	0 10 00044	JST	OTA1	
	0076	00007	100000		SKP	
	0077	00010	0 10 00071	IP01	JST	LFCR
	0078	00011	-0 02 00000	LDA*	IPUT	
	0079	00012	0414 77		LGL	1
	0080	00013	0 04 00000		STA	SBP
	0081	00014	0 04 00000	IP30	STA	DBP
	0082	00015	0 10 00005	IP02	JST	INA1
	0083	00016	0 11 00000		CAS	C215
	0084	00017	0 01 00022		JMP	**3
	0085	00020	0 01 00040		JMP	IP03
	0086	00021	0 01 00015		JMP	IP02
	0087	00022	0 11 00000		CAS	C300
	0088	00023	100000		SKP	
	0089	00024	0 01 00010		JMP	IP01
	0090	00025	0 11 00000		CAS	C337
	0091	00026	0 01 00015		JMP	IP02
	0092	00027	0 01 00034		JMP	IP04
	0093	00030	0 11 00000		CAS	C240
	0094	00031	101000		NOP	
	0095	00032	0 10 00000		JST	SCHR
	0096	00033	0 01 00015		JMP	IP02
	0097			*		
	0098	00034	0 02 00000	IP04	LDA	DBP
	0099	00035	0 11 00000		CAS	SBP
	0100	00036	0 07 00000		SUB	C1
	0101	00037	0 01 00014		JMP	IP30
	0102			*		
	0103	00040	0 10 00000	IP03	JST	SCHR

SAVE PREFIX  
CHECK FOR LOAD MODE  
X  
X  
NO ... PREFIX INPUT  
X  
X  
ACKNOWLEDGE LINE DELETION  
SET BYTE POINTERS TO THE BUFFER  
X  
FOR PULLING THE SOURCE OUT  
FOR PUTTING THE SOURCE IN  
GET NEXT INPUT CHARACTER  
END OF LINE c  
NO  
YES ... GO CLOSE UP  
IGNORE CHARACTERS LESS THAN \*215  
LINE DELETION c  
NO  
YES ... START FROM SCRATCH  
CHARACTER DELETION c  
NO ... BUT IGNORE CHARS .GT. 337  
YES ... GO WIPE OUT THE LAST CHARACTER  
ALSO IGNORE BETWEEN 215 AND 240  
IT'S A GOOD CHARACTER,  
GO SAVE THE CHARACTER  
CONTINUE WITH INPUT  
  
GET INSERTION POINTER  
INSURE HE'S NOT BEFORE START OF LINE  
WIPE OUT LAST CHARACTER  
SET NEW POINTER AND CONTINUE  
  
PUT CARRIAGE RETURN IN THE BUFFER

5270 0104 00041 0 10 00071  
5271 0105 00042 0 12 00000  
0106 00043 -0 01 00000  
0107  
0108  
0109  
0110

JST LFCR ACKNOWLEDGE END OF LINE  
IRS IPUT AND...  
JMP\* IPUT ...RETURN

\*  
\*  
\*

EJCT

0111  
0112  
0113  
0114  
0115  
0116  
0117  
0118  
0119  
0120  
0121  
0122  
0123  
0124  
0125  
0126  
0127  
0128  
0129  
0130  
0131  
0132  
0133  
0134

\* OUTPUT ONE CHARACTER

\* CALLING SEQUENCE:

\* LDA CHAR  
\* JST OTAI  
\* .....RETURN A UNALTERED

\*  
\* OTAI DAC \*\*  
\* SKS '104 WAIT FOR ASR TO GO NOT BUSY  
\* JMP \*-1 X  
\* OCP '104 PUT ASR IN OUTPUT MODE  
\* OTA '4 OUTPUT THE CHARACTER  
\* JMP \*-1 X  
\* IRS CPOS INCREMENT CARRIAGE POSITION COUNTER  
\* JST BRKC TEST PROGRAM BREAKI  
\* JMP\* OTAI RETURN

\*  
\* EJCT  
\*

INPUT ONE CHARACTER

0135  
0136  
0137  
0138  
0139  
0140  
0141  
0142  
0143  
0144  
0145 00055  
0146 00056  
0147 00057  
0148 00060  
0149 00061  
0150 00062  
0151 00063  
0152 00064  
0153  
0154  
0155  
0156

\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*

CALLING SEQUENCE:

JST INA1  
.....RETURN CHARACTER IN A

0 000000	INA1 DAC	**	
34 0104	SKS	'104	WAIT FOR ASR TO GO NOT BUSY
0 01 00056	JMP	*-1	X
14 0004	OCF	'4	PUT ASR IN INPUT MODE
54 1004	INA	'1004	CLEAR AND INPUT
0 01 00061	JMP	*-1	X
0 10 00065	JST	BRKC	TEST PROGRAM BREAK
-0 01 00055	JMP*	INA1	RETURN

EJCT

0157  
0158  
0159  
0160  
0161  
0162  
0163  
0164  
0165  
0166  
0167  
0168

\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*

PROGRAM BREAK TEST

BRKC DAC \*\*  
SR1  
IRS BRKF  
JMP\* BRKC

SENSE SWITCH ONE FOR PROGRAM BREAK;  
SET ... BUMP THE FLAG  
RETURN

EJCT





INITIALIZE PUNCHED OUTPUT

CALLING SEQUENCE:

JST ITAPE
.....RETURN

0202
0203
0204
0205
0206
0207
0208
0209
0210
0211 00110 0 000000
0212 00111 0 10 00000
0213 00112 0 000122
0214 00113 0 10 00055
0215 00114 0 05 00000
0216 00115 100040
0217 00116 0 01 00113
0218 00117 0 10 00071
0219 00120 0 10 00142
0220 00121 -0 01 00110
0221
0222 00122 152325
00123 151316
00124 120317
00125 147240
00126 150325
00127 147303
00130 144240
00131 140716
00132 142240
00133 152331
00134 150305
00135 120307
0223 00136 120400

ITAP DAC \*\*
JST TYPE PRINT PUNCH ON REQUEST
DAC TPON X
JST INA1 WAIT UNTIL 'G' IS TYPED
ERA C307 X
SZE X SKIP IF A ZERO
JMP \*-3 NOT YET
JST LFCR ACKNOWLEDGE IT
JST LDR OUTPUT LEADER.
JMP\* ITAP RETURN

\*
TPON BCI 12,TURN ON PUNCH AND TYPE G

VFD 8,'241+8,'000 \* MESSAGE TERMINATOR

EJCT

0228  
0229  
0230  
0231  
0232  
0233  
0234  
0235  
0236  
0237  
0238  
0239  
0240  
0241  
0242  
0243  
0244

\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*

TERMINATE PUNCHED OUTPUT

CALLING SEQUENCE:

JST ETAPE  
.....RETURN

0238 00137 0 000000 ETAP DAC \*\*  
0239 00140 0 10 00142 JST LDR  
0240 00141 -0 01 00137 JMP\* ETAP

PUNCH TRAILER  
RETURN

EJCT

0245  
 0246  
 0247  
 0248  
 0249  
 0250  
 0251  
 0252  
 0253  
 0254  
 0255  
 0256  
 0257  
 0258  
 0259  
 0260  
 0261  
 0262  
 0263  
 0264  
 0265  
 0266

\*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*  
 \*

PUNCH LEADER/TRAILER

CALLING SEQUENCE:

JST LDR  
 .....RETURN

LDR	DAC	**	
	LDX	M100	64 FRAMES OF TAPE
	CRA		LEADER IS JUST SPROCKET HOLES
	JST	OTAI	X
	IRS	0	X
	JMP	*-2	X
	STA	CPOS	CLEAR ASR POSITION COUNTER
	JMP*	LDR	RETURN.

EJCT

0267

END

THIS IS THE E N D

BRKC	000065	BRKF	000000E	CL	000000E	C215	000000E
C221	000000E	C223	000000E	C240	000000E	C300	000000E
C307	000000E	C337	000000E	CP05	000000E	CRLF	000106
DBP	000000E	ETAP	000137	INA1	000055	IP01	000010
IPC2	000015	IP03	000040	IP04	000034	IP30	000014
IPUT	000000	ITAP	000110	LDR	000142	LFGR	000071
LDDF	000000E	LSTF	000000E	M100	000000E	OTAI	000044
SBP	000000E	SCHR	000000E	TPON	000122	TYPE	000000E

0000 WARNING OR ERROR FLAGS  
DAP-16 MOD 2 REV. A 03-16-70

161	BRKC	44	129	151	164		
	BRKF	29	163				
	C1	38	100				
	C215	34	83				
	C221	30	72	73			
	C223	27	189				
	C240	37	93				
	C300	35	87				
	C307	23	215				
	C337	36	90				
	CPUS	28	128	193	261		
196	CRLF	192					
	DBP	32	81	98			
238	ETAP	240					
	ETAPE	46					
145	INAI	42	82	152	214		
77	IP01	89					
82	IP02	86	91	96			
103	IP03	85					
98	IP04	92					
81	IP30	101					
69	IPUT	41	78	105	106		
211	ITAP	220					
	ITAPE	45					
255	LDR	219	239	262			
182	LFCR	40	77	104	185	194	218
	LODF	25	71	183			
	LSTF	26	186				
	M100	24	256				
122	OTAI	43	75	130	190	258	
	SBP	31	80	99			
	SCHR	33	95	103			
212	TPON	213					
	TYPE	22	191	212			

34 SYMBOLS  
 81 REFERS  
 267 RECORDS  
 19 U FLAGS