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0001
0002 0200                org    $0200                start address
0003
0004                *** HJS22 equates.
0005                *
0006 0000                R0      equ    0                general registers.
0007 0001                R1      equ    1
0008 0002                R2      equ    2
0009 0003                R3      equ    3
0010 0004                R4      equ    4
0011 0005                R5      equ    5
0012 0006                R6      equ    6
0013 0007                R7      equ    7
0014 0008                R8      equ    8
0015 0009                R9      equ    9
0016
0017 000B                A0      equ    11                address registers.
0018
0019 000D                cr      equ    $0D                Carriage Return.
0020 000A                lf      equ    $0A                Line Feed.
0021 0000                null    equ    $00                Null.
0022
0023                *
0024                *** HJS22 - "Hello World" program starts here...
0025                *
0026 0200                start    equ    *
0027 0200 8B 0B 02 4A    lrd     %A0,#msg01                Hello World msg.
0028
0029                *
0030                *** Transmit a message (till 0x00) pointed by %A0.
0031                *
0032 0204                txmsg    equ    *
0033 0204 38 12          sta     *,save03+1                save acc.
0034 0206 EE 05          jmp     *,cont06
0035
0036 0208 CC 02 1E          loop06 jts     txmit                transmit it.
0037 020B 0C 0B          ind     %A0                increment pointer.
0038 020D 17 0B          cont06 lda     [%A0]                get character.
0039 020F 24 23          cmp     #'#'                no crlf ?
0040 0211 E2 02          jie     *,cont07
0041 0213 E1 F3          jnz     *,loop06                end of message ?
0042 0215 0C 0B          cont07 ind     %A0                bump over # (if applicable)
0043 0217 27 00          save03  lda     #$00                restore acc.
0044 0219 CE 02 04          jmp     txmsg                keep going...
0045
0046                *
0047                *** Transmit one byte (in accumulator) subroutine.
0048                *
0049 021C 00 00          txmit    fdb     0000                return address
0050 021E                equ     *
0051 021E AB            rti                     issue start bit
0052
0053 021F 8A 01 09          ldr     %R1,#9                set loop counter.
0054
0055 0222 8A 00 09          delay01 ldr     %R0,#09                wait 1 bit time.
0056 0225 0D 00          dcr     %R0                *
0057 0227 C7 02 25          jnc     delay01                *
0058
0059 022A A5            loop01  rrs                     shift out
0060 022B C8 02 31          jis     set
0061 022E AB            reset    rti                     Xmit "0"
0062 022F EE 03          jmp     *,cont01
0063 0231 AA            set      sti                     Xmit "1"
0064 0232 EE 00          jmp     *,cont01
0065
0066 0234 8A 00 08          cont01 ldr     %R0,#08                wait 1 bit time.
0067 0237 0D 00          delay02 dcr     %R0                *
0068 0239 C7 02 37          jnc     delay02                *
0069

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0070	023C	89	01	EB		djnz	%R1,loop01	Decr loop counter
0071								
0072	023F	AA				sti		Issue stop bit
0073								
0074	0240	8A	00	0E		ldr	%R0,#08+6	Wait 1.5 bit time.
0075	0243	0D	00		delay03	dcr	%R0	
0076	0245	C7	02	43		jnc	delay03	
0077								
0078	0248	ED	D4			jfs	*,txmit	Return to caller.
0079								
0080								
0081	024A	48	65	6C	6C	6F	20	msg01
		57	6F	72	6C	64	20	
		21						
0082	0257	00				fcb	null	
0083								
0084						end		
0085								
0086								

A0	000B	*0017	0027	0037	0038	0042		
R0	0000	*0006	0055	0056	0066	0067	0074	0075
R1	0001	*0007	0053	0070				
R2	0002	*0008						
R3	0003	*0009						
R4	0004	*0010						
R5	0005	*0011						
R6	0006	*0012						
R7	0007	*0013						
R8	0008	*0014						
R9	0009	*0015						
cont01	0234	*0066	0062	0064				
cont06	020D	*0038	0034					
cont07	0215	*0042	0040					
cr	000D	*0019						
delay01	0225	*0056	0057					
delay02	0237	*0067	0068					
delay03	0243	*0075	0076					
lf	000A	*0020						
loop01	022A	*0059	0070					
loop06	0208	*0036	0041					
msg01	024A	*0081	0027					
null	0000	*0021	0082					
reset	022E	*0061						
save03	0217	*0043	0033					
set	0231	*0063	0060					
start	0200	*0026						
txmit	021E	*0050	0036	0078				
txmsg	0204	*0032	0044					