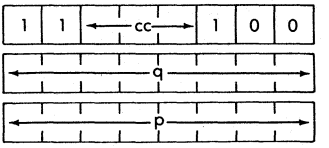
CALL cc, pq

Call subroutine on condition.

Function:

if cc true: (SP – 1) ← PC_{high}; (SP – 2) ← PC_{low}; SP ← SP – 2; PC ← pq
If cc false: PC ← PC + 3

Format:



byte 1
byte 2: address, low order
byte 3: address, high order

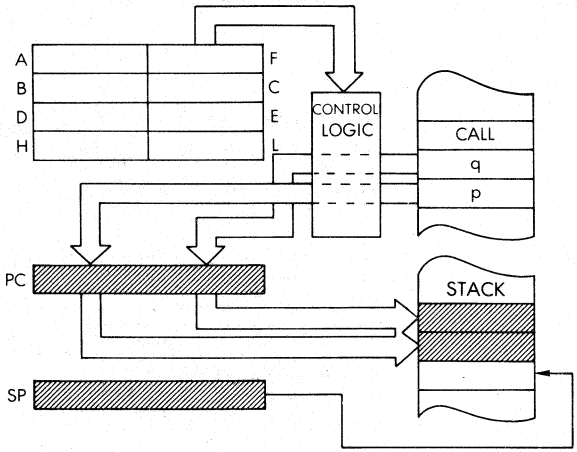
Description:

If the condition is met, the contents of the program counter are pushed onto the stack as described for the PUSH instructions. Then, the contents of the memory location immediately following the opcode are loaded into the low order of the PC and the contents of the second memory location after the the opcode are loaded into the high order half of the PC. The next instruction fetched will be from this new address. If the condition is not met, the address pq is ignored and the following instruction is executed. cc may be any one of:

NZ – 000	PO – 100
Z – 001	PE – 101
NC – 010	P – 100
C – 011	M – 111

An RET instruction can be used at the end of the subroutine being called to restore the PC.

Data Flow:



Timing:

	M cycles:	*T states:*	*usec @ 2 MHz*
condition true:	5	17	8.5
condition not true:	3	10	5

Addressing Mode: Immediate.

Byte Codes:

CC:	NZ	Z	NC	C	PO	PE	P	M	
C4	CC	D4	DC	E4	EC	F4	FC	-q-p	

Flags:

S	Z		H		P/V	N	C	
								(no effect)

Example: CALL Z, B042