THE EZ-CPU MEMORY MAP

RAM Memory area
The memory map for RAM is broken up into different sections and shared between the user and the system.

PROGRAM memory area:
This is where the user stores the bytes of data that make up their program.

Reserved areas:
These are used by the system and are not accessible by the user.

Stack area:
This is the area where CALL instructions save memory addresses and where PUSH and POP load and save values to. Bytes are used in pairs to form 16bit values, lowest byte first, highest byte last. The user has no direct access to this area.

DATA memory area:
This is where the user can store data and variables. There are 96 bytes from address 110 – 16F. These addresses are readable and writeable.

RAM MEMORY	
Addr.	**Description of Use**
000	Program memory area 256 bytes **0FF**
100	Reserved 16 bytes **10F**
110	Stack 16 bit use 96 bytes **16F**
170	Reserved 16 bytes **18F**
190	Data RAM – User RAM 96 bytes **1EF**
1F0	Reserved 16 bytes **1FF**

ACCESSING I/O MEMORY AREA:

Use **IN A,(nn)** and **OUT (nn),A** to communicate to ports

INPUT PORTS								
PORT Value	**Data Byte**							
	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
FF	INPUT PORT FROM 4mm PCB SOCKETS, bits 0-7							
FE						M button	> button	< button

OUTPUT PORTS								
PORT Value	**Data Byte**							
	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
FF	OUTPUT PORT TO LED's and 4mm PCB SOCKETS, bits 0-7							
FE								Beeper

THE EZ-CPU MEMORY MAP

RAM Memory area
The memory map for RAM is broken up into different sections and shared between the user and the system.

PROGRAM memory area:
This is where the user stores the bytes of data that make up their program.

Reserved areas:
These are used by the system and are not accessible by the user.

Stack area:
This is the area where CALL instructions save memory addresses and where PUSH and POP load and save values to. Bytes are used in pairs to form 16bit values, lowest byte first, highest byte last. The user has no direct access to this area.

DATA memory area:
This is where the user can store data and variables. There are 96 bytes from address 110 – 16F. These addresses are readable and writeable.

RAM MEMORY	
Addr.	**Description of Use**
000	Program memory area 256 bytes **0FF**
100	Reserved 16 bytes **10F**
110	Stack 16 bit use 96 bytes **16F**
170	Reserved 16 bytes **18F**
190	Data RAM – User RAM 96 bytes **1EF**
1F0	Reserved 16 bytes **1FF**

ACCESSING I/O MEMORY AREA:

Use **IN A,(nn)** and **OUT (nn),A** to communicate to ports

INPUT PORTS								
PORT Value	**Data Byte**							
	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
FF	INPUT PORT FROM 4mm PCB SOCKETS, bits 0-7							
FE						M button	> button	< button

OUTPUT PORTS								
PORT Value	**Data Byte**							
	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
FF	OUTPUT PORT TO LED's and 4mm PCB SOCKETS, bits 0-7							
FE								Beeper