

# MEM (function)

The MEM function returns a MEM block referring to the largest possible continuous memory region beginning at a variable's offset.

## Syntax

```
memoryBlock = _MEM(referenceVariable)
```

### Unsecure syntax

```
memoryBlock = _MEM(offset, byteSize)
```

## Parameters

- The *memoryBlock* created will hold the *referenceVariable* or array value(s), type and byte size in a separate memory area.
- The secure syntax *referenceVariable* is an existing variable's referenced memory block.
- The unsecure syntax's designated *offset* and *byteSize* cannot be guaranteed. **Avoid if possible.**

## Description

- The *memoryBlock* MEM type variable holds the following read-only elements: OFFSET, SIZE, TYPE and ELEMENTSIZE.
- All values created by memory functions MUST be freed using MEMFREE with a valid MEM variable type.
- MEM function cannot reference variable length STRING variable values. String values must be designated as a fixed-length string.

## Examples

*Example:* Assigning values to reference variables in memory.

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```

DIM SHARED m(3) AS MEM
DIM SHARED Saved(3)

m(1) = MEM(x)
m(2) = MEM(y)
m(3) = MEM(z)

x = 3: y = 5: z = 8
PRINT x, y, z
Save x, y, z
x = 30: y = 50: z = 80
PRINT x, y, z

RestoreIt
PRINT x, y, z

MEMFREE m(1)
MEMFREE m(2)
MEMFREE m(3)
END

SUB Save (n1, n2, n3)
Saved(1) = n1
Saved(2) = n2
Saved(3) = n3
END SUB

SUB RestoreIt
MEMPUT m(1), m(1).OFFSET, Saved(1)
MEMPUT m(2), m(2).OFFSET, Saved(2)
MEMPUT m(3), m(3).OFFSET, Saved(3)
END SUB

```

Code by SMcNeill

See also

- [\\_MEM](#)
- [\\_MEMNEW, \\_MEMCOPY, \\_MEMFREE](#)
- [\\_MEMGET, \\_MEMPUT, \\_MEMFILL](#)
- [\\_MEMIMAGE, \\_MEMSOUND](#)

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