

# PA711D3-QE Data Sheet

44 pin QFP socket/28 pin DIP plug

## Supported Device/Footprints

Using this adapter, the Motorola MC68HC711D3 in QFP package can be programmed in a 27C256 footprint.

Mfgr	Device	Package	Device	Footprint Plug
Motorola	MC68HC711D3	44 pin QFP	27C256	28 pin DIP

This adapter puts the 'D3 in PROG Mode. In PROG Mode the 'D3 emulates a 27C256. Early releases of the 'D3 did not support PROG Mode. Mask C45A is not compatible with this adapter. Beginning with mask 1C67S PROG mode works and this adapter can be used.

## PROG Mode

While PROG mode makes the 'D3 look like a 27C256, it is not a perfect emulation. If the EPROM programmer's algorithm does not accommodate the 'D3's requirements, programming errors will occur. In that case there are three solutions.

1. A different programmer.
2. The programmer's manufacturer could add or change an algorithm to accommodate the 'D3.
3. The adapter may be returned for a refund.

The technical reason for this compatibility problem is that the 27C256 is a fully asynchronous device. Address and control signal inputs may change at any time.

The 'D3 is a synchronous device. It may be thought of as a 27C256 with internal address latches. The latches are updated when A0 or CE(OE on older die) changes. For example: if CE and OE are low and an address bit is changed a 27C256 would soon output the contents of a new address. The 'D3 would not. The 'D3 will not recognize the new address until the address latch is updated by a logic change at either A0 or the proper control signal (OE or CE).

Logical Systems has written a memo about this. It is intended to assist EPROM programmer manufacturers who wish to support the 68HC11 family. Copies are available, just ask for one.

## Adapter Construction

The adapter is made up of 2 sub-assemblies. They assemble via connectors making the adapter modular. This way the sub-assemblies can be replaced when they wear out.

When disassembling the adapter take care not to bend the pins. When reassembling the adapter note the pin 1 indicators to align the parts correctly.

### Test Socket

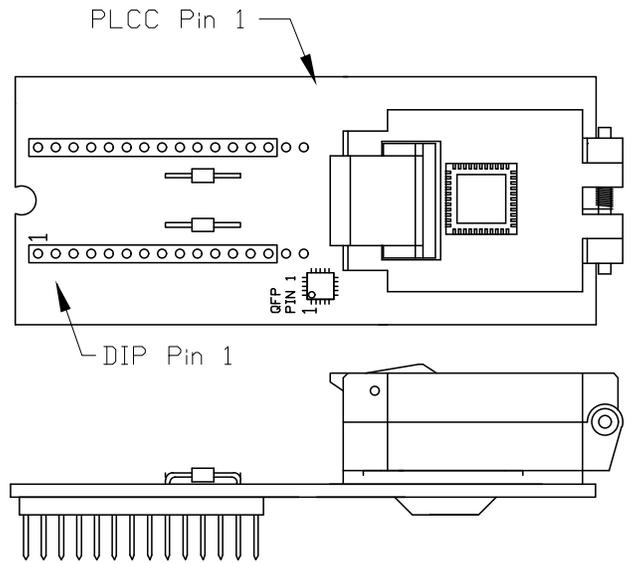
QFP test socket:

Enplas Part #: FPQ-44-0.8-06T      LSC Part #: 44QF-06T

### M68PA11D3FB44-28

Accepts the test socket and performs the wiring shown in the Adapter Wiring section.

## Adapter Dimensions



## Memory Access

Address	Size	'711K4	27C256 programmer
A000-FFFF	4K Bytes	EPROM	Pgm/Read/Write 0000-0FFF

## Adapter Wiring

This adapter connects an MC68HC711D3 to the footprint of a 27C256 as shown below. The chart shows the 27C256 signal names as the 'D3 is emulating a 27C256.

DEVICE	SIGNAL	PLUG	PLUG	SIGNAL	DEVICE
1	A4	6	7	A3	44
2	A5	5	8	A2	43
3	A6	4	9	A1	42
4	A7	3	10	A0	41
5	VPP	1	14	GND	40
6	D7	19	14	GND	39
7	D6	18	-	N/C	38
8	100K	14	14	100K	37
9	CE	20	-	N/C	36
10	D0	11	14	GND	35
11	D1	12	14	GND	34
12	D2	13	25	A8	33
13	D3	15	24	A9	32
14	D4	16	21	A10	31
15	D5	17	23	A11	30
16	VCC	28	2	A12	29
17	GND	14	14	GND	28
18	N/C	-	14	GND	27
19	N/C	-	22	OE	26
20	N/C	-	-	N/C	25
21	GND	14	14	GND	24
22	GND	14	14	GND	23



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Page 1 of 1