68837 ELM D (1E37K) ERRATA

(October 6, 1994)

The ELM rev D mask 1E37K conforms with the full specification of the 68837, with the following exceptions.

1. Potential Register Corruption

When a read is performed on any of the FOTOFF Control A registers OR the FOTOFF control B registers, and that FOTOFF Control register was not the last register written, the register contents of the FOTOFF control register currently being read will be corrupted.

Workaround:

• Do not read either FOTOFF control register unless the read is performed IMMEDIATELY following the write operation to that same register

• In the case of multiple reads and writes (as in initial board tests) the writes and reads should be interleaved in the following order: write FOTOFF Control A, read FOTOFF Control A...etc.

2. Asynchronous Interface and Clear-on Read Registers

When using the asynchronous interface, it is possible that reading events in Clear on Read registers may result in the event being cleared before the event is read out of the ELM. This errata applies to all clear-on-read registers, including the interrupt event register. In the case of the interrupt event register, this may cause failure of the PCM software, preventing the node from entering the ring.

Workaround:

• Poll the other status registers to assure no events are missed. This will allow the node to enter the ring successfully.

3. Internal Cipher Loopback with non-Motorola Clock Generation and Recovery devices

RSCLK input is still used by the ELM receive clock, despite being in internal cipher loopback mode.

Workaround:

• Do not enable ciphering when using the loopback provided in the cipher control register.

• Use the external loopback provided in the clock recovery devices when implementing a cipher-enabled loopback.