



MEX68USE

User System Evaluator (USE)

The MEX68USE User System Evaluator (USE), working with the M6800 EXORciser and the optional MEX68SA Systems Analyzer Module, provides the user with the complete systems development tool. That is, USE extends all of the EXORciser's EXbug functions and all of the optional Systems Analyzer functions into the user's system. The USE-equipped EXORciser provides the designer with the capability of configuring an emulation of his M6800 microprocessor system in the EXORciser, external to the EXORciser, or a combination of EXORciser-mounted modules working with the user's external system. The designer also can develop his system software and firmware on the EXORciser and can use the USE-equipped EXORciser to debug his system hardware and software. In fact, a USE-equipped EXORciser can even be used to test and evaluate the user's production systems.

- Extends the EXORciser EXbug functions into the user's system.
- Operates from the user's system clock or from the EXORciser's internal clock.
- Permits the user to share the EXORciser's memory and input/output modules with the user's system.
- Extends the optional Systems Analyzer Module's functions into the user's system when the Systems Analyzer is used with the EXORciser.
- Provides convenient block/fault isolation.
- Uses present commands — no new protocol to be learned.

USE consists of three assemblies: the USE Processor Module, the USE Intercept Module, and the USE Cable and Buffer Assembly. The *USE Processor Module* is used in place of the MEX6800 MPU Module in the EXORciser and provides the following functions:

- Shares its MC6800 MPU device between the EXORciser and the user's system.
- Provides the EXORciser internal clock circuitry.
- Provides the option of using the EXORciser clock within the EXORciser.
- Enables the overall system — user's system and EXORciser — to operate with the user's system clock.
- Interfaces the MC6800 MPU address, data, and control signals with the EXORciser bus.
- Interfaces the MC6800 MPU address, data, and control signals with the user's system via the USE Cable and Buffer Assembly.
- Interfaces selected MC6800 MPU signals (\overline{IRQ} , \overline{NMI} , HALT, VMA, and BA) with the optional Systems Analyzer Module via the USE Intercept Module.

The *USE Intercept Module* plugs directly into the EXORciser bus and is used to mount the optional Systems Analyzer Module. A cable assembly couples the selected control signals between the Systems Analyzer and the USE Processor Module.

The *USE Cable and Buffer Assembly* connects the USE Processor Module into the user's system. A 40-pin connector on this assembly plugs into the MPU socket in the user's system permitting the USE Processor Module's MPU to control the operation of the user's system. In this application everything within the EXORciser appears to be within the MPU in the user's system. Through special jumper connections, this assembly also can transfer the timing signals required by the dynamic memories in the EXORciser to operate with the user's system clock. In addition, the USE Cable and Buffer Assembly buffers the transferred signals.

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Specifications

Microprocessor MC6800 MPU

Word Size
Data 8 bits
Address 16 bits
Instruction 8, 16, or 24 bits

Instruction Set 72 variable length instructions

Addressing Modes Seven address modes – Direct, Relative, Immediate, Indexed, Extended, Implied, and Accumulator

Memory Size Capability 65,536 bytes with the EXORciser EXbug Firmware (when used) using 4K bytes. Addresses EXORciser ROM, RAM, and I/O and user's system ROM, RAM, and I/O in any combination.

Clock Signals Switch Selectable
Crystal controlled 1 MHz clock with capability to work with dynamic and slow memories. Operates in the EXORciser system.
or
User's system clock operating in the EXORciser and the User's system.

Operating Temperatures 0 to 70° C.

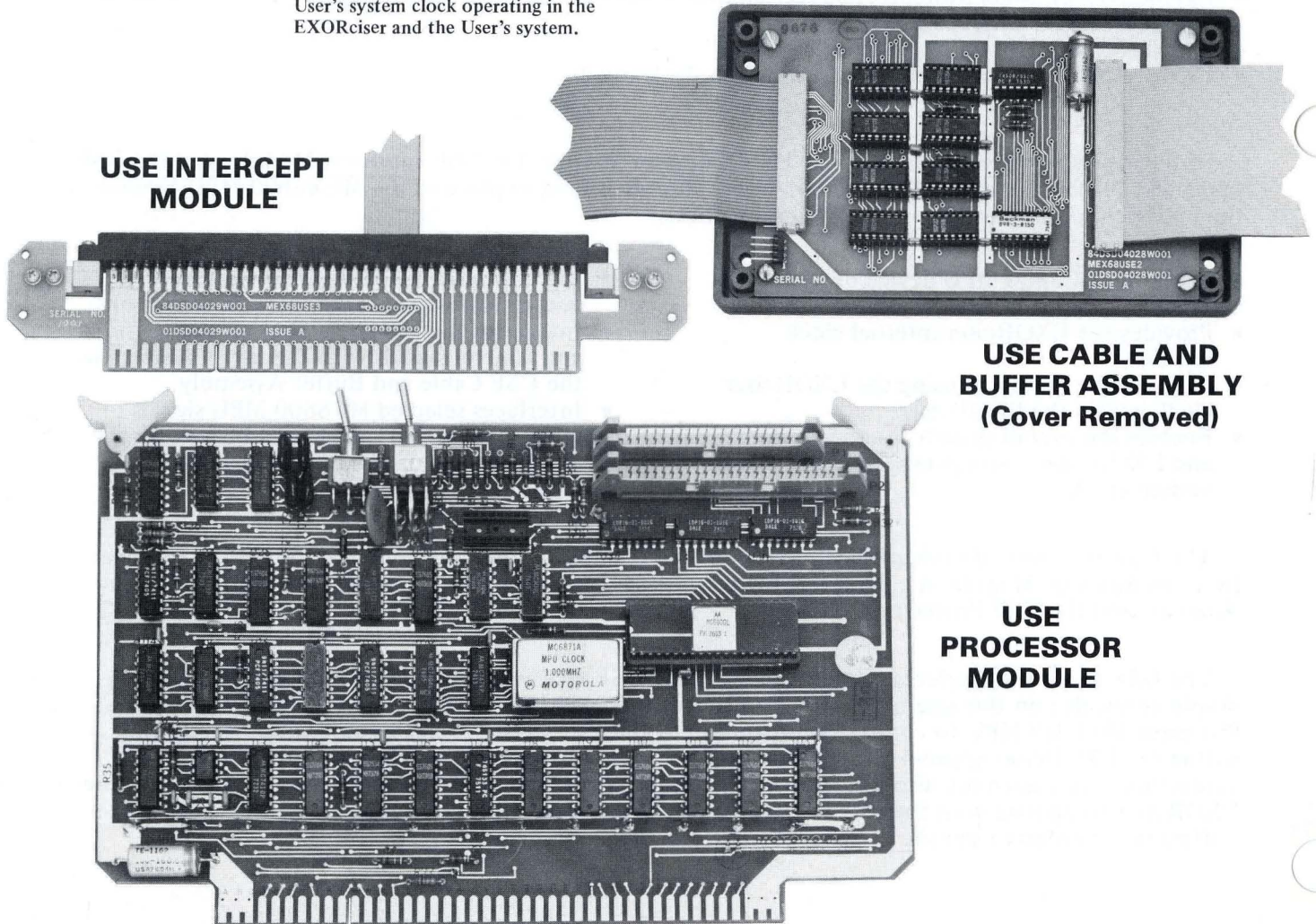
Power Requirements +5 Vdc at 1.5 A

Physical Characteristics

USE Processor Module
Width 9.75 in.
Height 5.75 in. above connector
Board Thickness 0.062 in.

USE Intercept Module
Width 9.75 in.
Height 1.875 in.
Board Thickness 0.062 in.
Cable Assembly Length 1 ft.

USE Cable and Buffer Assembly
Case Height 0.875 in.
Case Length 7.50 in.
Case Width 4.32 in.
Cable Assembly Length 2 cables 5 ft. each
1 cable 13 in.



**USE INTERCEPT
MODULE**

**USE CABLE AND
BUFFER ASSEMBLY
(Cover Removed)**

**USE
PROCESSOR
MODULE**



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