National
Time \& Signal

The National Time 2M Series clock mechanisms are economical yet employ the exclusive wormgear drive technology similar to its bigger cousins. The 2 M mechanism is driven by a permanent magnet, 115 V 50 Hz or 60 Hz synchronous gear motor. These mechanisms offer mounting options to suit all applications with dial sizes up to 42" diameter. Custom shaft lengths up to $10^{\prime \prime}$ can be provided to meet specific project requirements.

## Variations:

$\mathbf{2 M}$ - The 2 M version is a stand-alone clock that keeps time using the 60 Hz power line. The synchronized motor provides smooth continuous movement of the hands. Time correction is accomplished by manually spinning the minute hand until the correct time is reached.

2MR- The 2MR Synchronous version employs an additional 10 rpm motor providing means to electrically adjust the time from an accessible location using a \#970 Series manual switch panel or be automatically corrected following power loss and daylight saving adjustments with any of our Master Clock Controllers.

2MI- The 2 MI minute impulse version advances incrementally each minute utilizing a single motor. An MC3-MI Master Clock Controller is required for operation and provides automatic correction. The 2 MI clocks will not be subject to power frequency drift when installed in countries that do not regulate the frequency or installations that may use generator backup power. An MC3-MI with the MC3-4SW circuit expansion switches will allow the user to remotely adjust up to 4 clocks independently during installation or repair.


## Common Features:

- Dial sizes to 42"
- Rugged box construction
- Shaft extension to eliminate illuminated dial shadows
- Through wall applications to 10" thick
- Front mount applications
- UL 48 Listed
- Manufactured in the U.S.A.


## Specifications

| Input power: | 120 VAC (specify 50 Hz or 60 Hz ) |
| :---: | :---: |
| Watts: | 3 |
| Weight: | 2.25 lbs - 1kg. (Approximate) |

## Standard Mounting



Clock dial up to $1 /{ }^{\prime \prime}$ thick.
Order (-LB) for dial thicknesses up to $1-1 / 4^{\prime \prime}$.

Order (-HGL) for $7 / 16^{\prime \prime}$ long hour and minute shafts. (Typical for clocks with front cover glass.)

## Through Wall Mounting



Shaft extensions up to 10 " for through wall or similar applications.

A 3/4" hole through wall is required.


Setback to Eliminate Shadow When Illuminated

When using a translucent dial and back lighting, the EX2 shaft length will provide a set-back to eliminate the shadow of the movement housing.

Order (-HGL) for $7 / 16^{\prime \prime}$ long hour and minute shafts typical for clocks with front cover glass.

## Front Mounting



Front mounting requires the \#139 Wall Box mounted flush or slightly recessed to the finished wall. A 7-1/2" diameter 0.09" aluminum front plate will cover the rough opening, support the 2 M mechanism and secure to the wall box with flathead screws. Square or custom shaped front plates are available.

See 500 Series Clock brochure and our Hand/Dial selections for typical styles or create your own vision.

## Part Numbers

## 2M<type> -<hand length>- <extension shaft >

<type>= Blank, R, or I
<hand length>= Length of minute hand center to tip; blank=without hands
<extension>= Blank, LB (long bushing) or EX+ Length of extension (2-10 inches)
Add suffix " -LC" for movement less cabinet
Add suffix "-HGL" for shorter 7/16" long hour and minute shafts.

## Examples:

2MI-18-EX8 : Impulse Series with $18^{\prime \prime}$ minute hand and 8" extension
2MR-14 : Synchronous Series Standard Mount with 14 " hands.
2MI-11-LB : Impulse Series Standard Mount with 11" hands and long center bushing.

139: Wall box for flush mount installations
139FP-7.5: Front plate mounting. 7-1/2" diameter $0.090^{\prime \prime}$ thick aluminum, primed for paint. Custom shapes available.

## Clock Controllers



970 Manual Switches


980-4-SA Manual Switches


MC3 Master Clock


MC3 Master Clock with 4SW Switches


MC100 and MC100-WP Weather proof Master Clock

