Digital Master Clock System

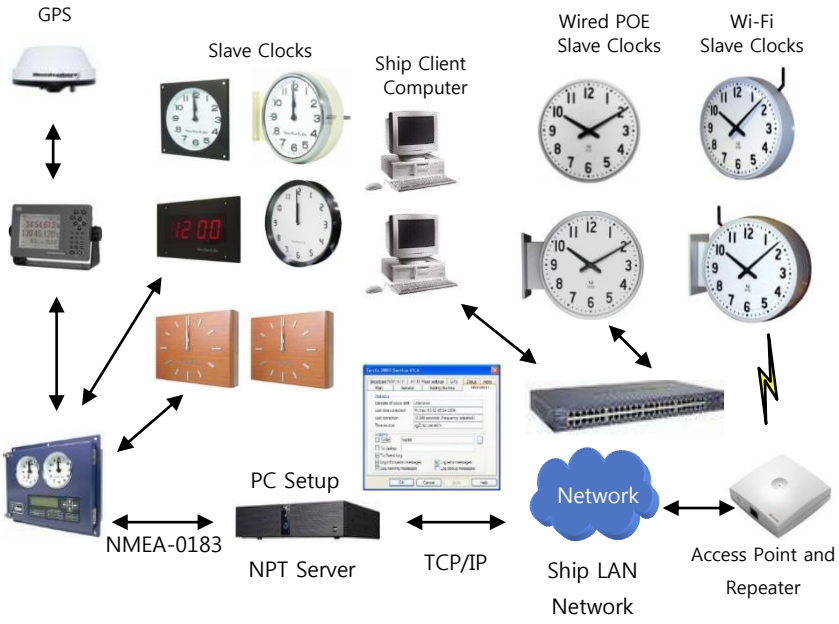
Digital Master Clock System (MCS-980)
with GPS Interface and NTP Server



- Digital Master Clock System (MCS-980)

The Marine Master Clock System is designed to provide accurate time and date to all data logging and monitoring systems of vessels. The data of the NMEA from a GPS can be used to update the ship's local time and then the master clock synchronizes automatically. To increase reliability, C-MOS IC is used in the frequency divider circuit. The robust mechanism provides a useful system for sailing vessels. The design of the system prevents vibration, shock, air compression or salty contamination. As slave clocks are installed in the ship, they will be adjusted to desire time according to the position of ship.

The system is tested according to IEC60945, certified for CE by DNV Register.



Wiring Diagram of Digital Master Clock (MCS-980) System

- General Features

-1. Power Source : AC110/220V, 1Ø, 50/60 Hz
-2. Emergency Power : AC or DC 24V (Ripple less than 5%)
-3. Power Consumption : AC, less than 50VA
DC, less than 1.6A (at 24V DC)
-4. Automatically switch to DC when AC power causes failure
-5. Certification : DNV CE Submitted
-6. Temperature : -20℃ ~ +45℃
-7. Humidity : less than 90%
-8. Net Weight : 7.52Kg
-9. Painting Color : 5.4 PB 2.8/3.0(Dark Blue)
-10. Dimensions : 338(W) X 272(H) X 128(D)
-11. Fixing Type : Flush Mounting (Maker Standard)

- Capacity & function of the System

1) Crystal Oscillation Frequency: 10.000 MHz (TCXO)
2) Accuracy (None GPS): Within ±1.0 sec per a month
(With GPS): Synchronizing from GPS automatically
3) Dual Clocks in Main Unit
-1. Master (UTC): Three Hands, 0.5sec. Leap, Ø80mm Dial
-2. Slave (LTC): Two/Three Hands, 30sec. Leap, Ø80mm Dial
-3. LCD Display: UT/LT Year/Month/Day/Hour/Minute/Second
: 16-Character 2-Line, Back Light
4) Output Signal Form
-1. For 0.5sec Slave Clock: DC 24V, 0.5sec Polarized Pulse
-2. For 30sec Slave Clock: DC 24V, 30sec Polarized Pulse
-3. Time Signal for Engine Telegraph Logger: DC 24V, ±30sec Polarized Pulse (ADV/REV)
5) NMEA-0183 Signal: Time & Date: (IEC1162-1, RS-422, ZDA)
6) There are 3-set Output Port for NMEA-0183
7) Baud Rate Setup (NMEA-0183): Setup, 1200/2400/4800/9600
8) +20/-20 Minute Control (Option)
9) Slave Clock: up to 80ea
10) Battery Slave Clock (Options)
11) Built-in lighting control system (Dimmer)
12) Fully protects: power source and slave line circuit
13) Robust mechanism architecture and excellent stability
14) Easy time control: CW and CCW direction for slave clocks
15) High speed time setup
16) NTP Server (Network Time Protocol, Option)

ISO 9001 & OHSAS 18001 Certified, for more information, visit www.mrckorea.com

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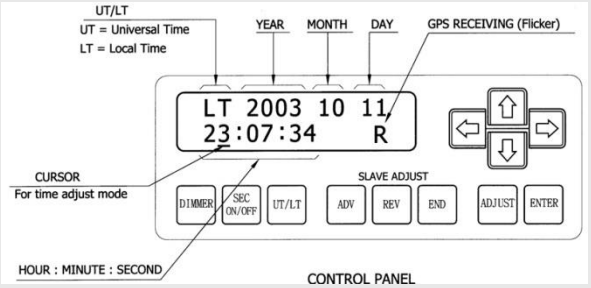
- Display of Control Panel of Main Unit

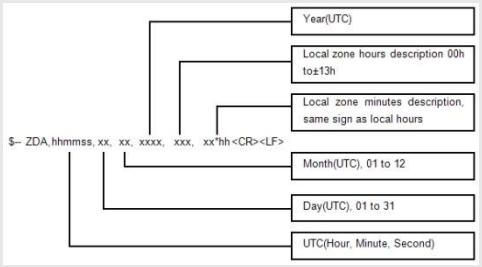


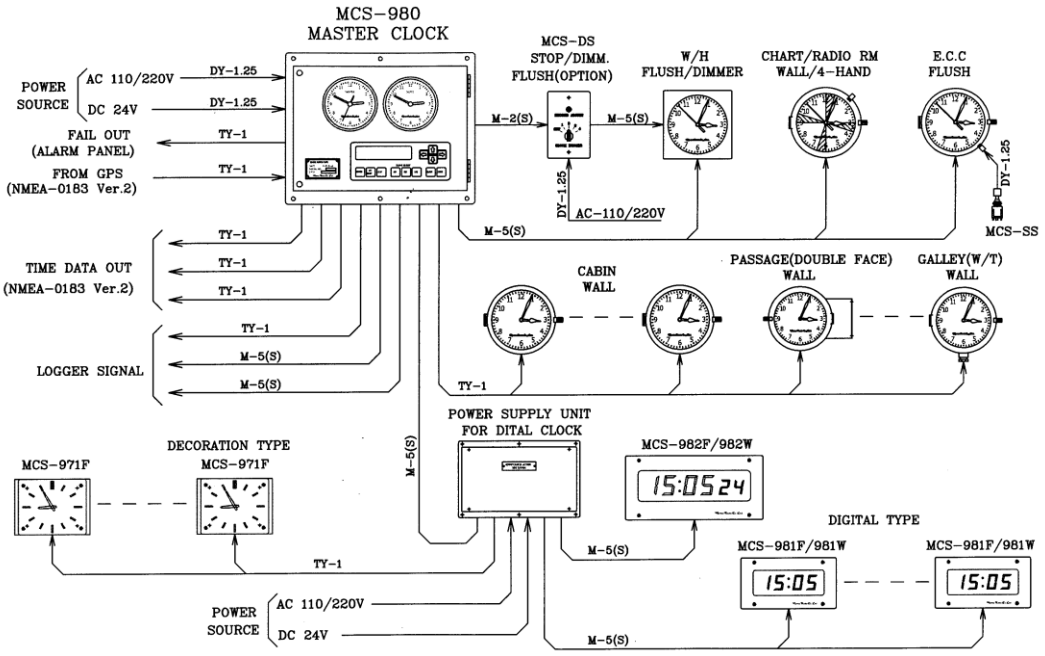
-1. UT/LT: Universal Time / Local Time

-2. Synchronizing from GPS signal automatically

- NMEA-0183, Serial Interface Protocol

1. In(1)/Out(3) (NMEA-0183, IEC1162-1, RS-422 Compatible, $GPZDA)
2. Baud Rate Preset: 4800BPS (1200/2400/4800/9600 Compatible)
3. Standard Data Format: 4800-N-8-1(BR-Data-Parity-Stop), ZDA





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Agent of MRC

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