



## AM120-AF

### Japan Movement

Tower clocks are available backlighted, halo lighted, or edge lighted with LEDs. Custom designed tower clocks are limited only by your imagination. A wide range of standard dial markings and hands along with special dial lettering and logos are available. Others services including bell tower, tower clock, clock tower, makers of tower clocks, tower clock manufacturers, industrial wall clock also can be provided.

35 years long life

1+ years of Guarantee

Steel Frame with painting/coating

Aluminum Dial (or Acrylic Dial)

Different numerals available

Optional:

Music is available/changeable

Chiming each hour is enable

Automatic night LEDs light on/off system

Outside-clock (or inside-clock) lighting system

#### Features:

- Microprocessor based open-air tower clock movement
- Suitable for open-air dial diameter from 100 to 120 CM
- Self-setting with master clock upon power recovery from failure
- Controlled & synchronized by master clock
- Operation reservation upon power failure
- High efficiency with low power consumption



#### Specifications:

Type	: AM120-AF
Movement	: JAPAN Movement 12V step 1/s
Size	: Diameter 120 cm
Frame	: Metal material
Dial	: Acrylic white color, Arabic numeral black color
Hands	: Two hands (hour, minute)
Scale	: Minute bar black color
Illumination	: LED 100.000 hours inside
Synchronized	: Mandatory with master clock support 120 meter
Grade	: IP65

Additional  
GPS : Time Synchronized to satellite

#### Applications:

Public clocks: square, school, airport, church, mosque  
Facade building clocks at supermarket, school, station  
Landscape clocks: Floral clock, Flower clock, Park clock  
Tower clock, Specialty clock, Outdoor clock, Airport clock, Custom House clock, University clock, College clock, Master Clock System, Analog clock, Giant clock

Distributed by.

**PT. YASA PERSADA DEWANTARA**

Workshop: ARDEN MILLER clock tower

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## Projects & Application



Asian Games XVIII Palembang, Jembatan Ampera  
Project: Kementrian PUPR, 2 Agustus 2018



Jam Gede Jasa diameter 200CM di kota Tangerang  
dibangun pada tahun 2014



Menara Masjid Jami Gontor dibangun dengan ketinggian 85 meter, dilengkapi dengan 4 jam analog ukuran besar dengan diameter jam 4 meter di empat sisi arah mata angin.

Peletakan batu pertama dilaksanakan pada tahun 2016 oleh Bapak Presiden RI dan Pimpinan Pondok, peresmian dilakukan oleh Bapak Jusuf Kala, tahun 2018

**Dial & Hands**



**No. 1**



**No. 2**



**No. 3**



**No. 4**

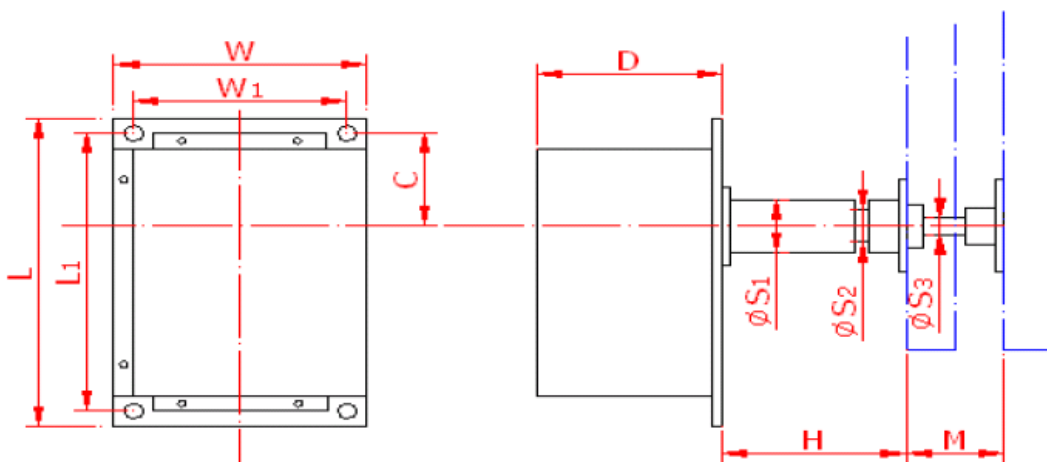
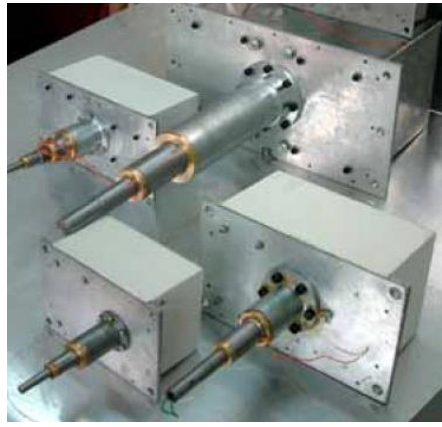


**No. 5**



**No. 6**

## JAPAN Clock Movement



MOVEMENT	W	W1	L	L1	D	C	S1	S2	S3	H	M
GFA12S	67	-	99	-	50	27	15	7	-	25	15

- OUTDOOR-USE DESIGN** :
- Entirely metal fabric from internal parts to outer case
  - Dust-proof, anti-rust, and weather-resistant
- LOW CONSUMPTION** :
- Lower power consumption by 50%
- HIGH EFFICIENCY** :
- Cylinder & gears design enables high efficiency with low abrasion
- SELF-SETTING** :
- Automatically synchronized with master clock with twist cable up to 120m
- TIME RESERVATION** :
- 3 months' operation reservation enables auto correction to master clock's time on power recovery from a mains power failure
- WIRING** :
- Ordinary double-twisted pair wire
- INTERFACE** :
- RS485 output & input
- REMOTE OPERATION** :
- Central supervised and controlled with master clock
  - No operation on movement needed
  - Wiring distance to master clock up to 1200 meter
  - Feedback running status to master clock
- TIME ACCURACY** :
- 0.3s at 25° (independent)
- OTHERS PARAMETER** :
- Power supply DC 12V
  - Shafts Hour & minute
  - Working Temp. -30 – 85°
  - Humidity 0 – 95%
  - Support Synchronized with Master Clock

## Master Clock

Master Control dapat digunakan untuk melakukan sinkronisasi waktu dari ke empat mesin jam sehingga waktu yang tercatat dari masing-masing mesin jam akan sama, dan mempunyai fungsi RTC = Real Time Clock yang berguna untuk menyimpan informasi waktu jika sumber Listrik dalam keadaan mati (informasi waktu tersebut akan tersimpan selama 6 bulan, setelahnya bisa dilakukan reset ulang untuk kembali dapat menyimpan informasi waktu)

Master Clock ini juga mempunyai fungsi illumination control untuk lampu akan menyala pada malam hari, auto correction time jika listrik PLN mati dan akan melakukan perintah recovery time secara otomatis kepada masing-masing secondary clocks, sehingga mesin jam akan menyamakan jarum secara otomatis dengan kondisi waktu saat ini.

Berikut adalah Master Control dalam penawaran ini adalah, sbb:

### Master Control / Master Clock



#### Optional Functions:

1. Master Clock System
2. illumination light at night
3. Auto correction time
4. Control up to 120 meter cable

<b>WIRING</b>	:	- Ordinary double-twisted pair wire
<b>INTERFACE</b>	:	- RS485 output & input
<b>REMOTE OPERATION</b>	:	- Wiring distance to slave clocks up to 1200 meter - Feedback running status for slave clock
<b>TIME ACCURACY</b>	:	- GPS synchronization accuracy 1 $\mu$ s - Quartz 0.2s at 25°
<b>OTHERS PARAMETER</b>	:	- Power supply DC 12V - Shafts Hour & minute - Working Temp. -30 – 85° - Humidity 0 – 95%

Other option:

Westminster Hours Striking Module + Speaker and Amplifier are support Melody/Chime

Note:

**Master Control** jenis ini adalah pilihan yang tepat dalam penawaran ini untuk support spesifikasi yang diinginkan, antara lain:

1. Tower Clock 4 Face dan masing-masing mesin jam akan saling tersinkronisasi waktunya
2. included RTC = Real Time Control (menyimpan informasi waktu sampai dengan 6 bulan selama Listrik Mati, dan bisa di reset kembali)
3. Auto correction time, jika listrik mati akan melakukan perbaikan waktu secara otomatis pada saat listrik kembali hidup
4. Support illumination control, dan bisa di set untuk interval waktu yang diinginkan
5. Tambahan, chime generator yang akan berbunyi setiap menit 00:00 (ini dapat deprogram jam berapa saja akan berbunyi)

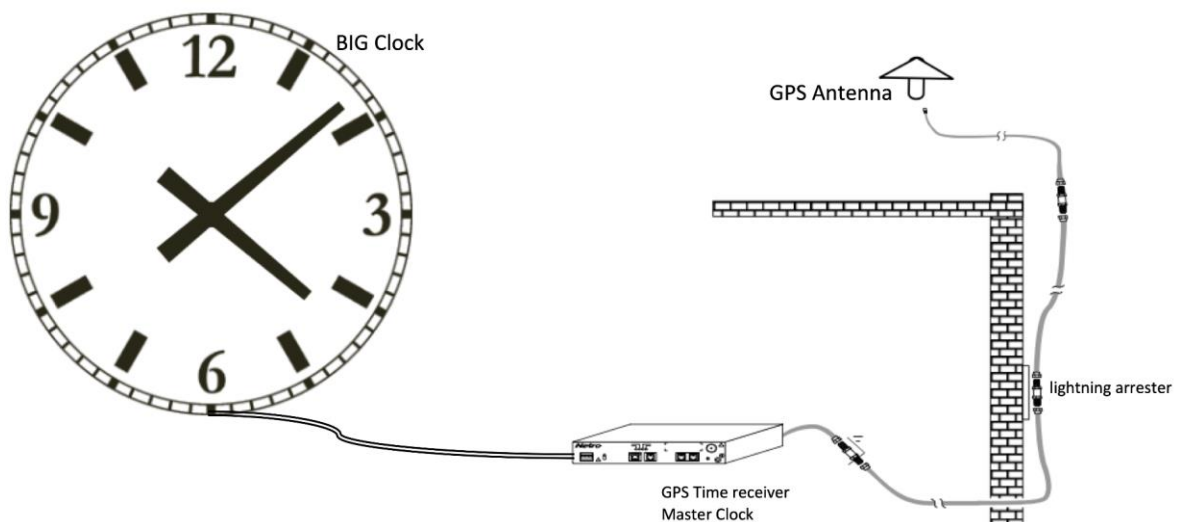
## GPS Antenna



GPS Antenna

### Specifications:

- Data standard: NMEA 0183, Data transmission: RS 485, 9600 baud rate, 1 stop bit, no parity
- Ingress Protection: IP67, Weatherproof: Yes
- Time Accuracy Absolute (With GPS signal)  $\leq 0.1$  s/d (at 25°C)
- Frequency 1,575.42±1.023MHz
- Receive Channels 16 channels in parallel, Tracking Satellites 12
- Start Time  $\leq 12$ s (Warm start)  $\leq 42$ s (Cold start), Re-capture Time 2s (Sheltering 10s)
- Antenna Interface BNC with 10 meters coaxial cable, Max. Wiring Length 1200 m
- Power Supply 220vac/50Hz Power Consumption  $< 0.3$  w
- Working Temperature 0°C ~ 50°C (Receiver) -30 ~ 85°C (Antenna)
- Working Humidity  $< 90\%$  (Receiver) 20% ~ 95% (Antenna)
- Storage Temperature. -20°C ~ 60°C (Receiver) -40 ~ 100°C (Antenna)
- Mounting Wall surface or 19" rack mounting



Masterclock and GPS Time - Installation

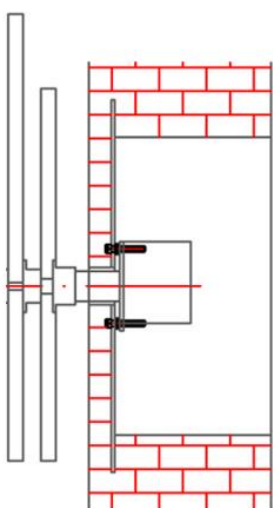


Fig. 1

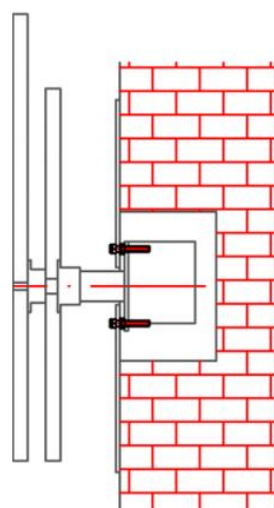


Fig. 2

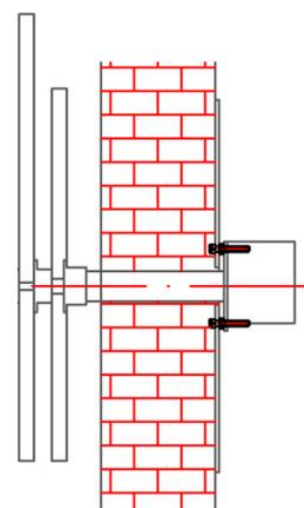


Fig. 3

Clock Movement - Installation