

GPS Tower Clock System

Catalog

To:
VALUED CUSTOMER
INDONESIA

Date: 2 January 2023

Specifications

- Diameter sesuai dengan permintaan customer, up to 30 meters
- Single Sides, Double sides, Multi sides
- Illumination at Night with Back Light of Dial (optional)
- Independent Clock / Master Clock System
- Bell Music Hour striking (optional)



GFClock Yasa Persada

Dial/Hands: Markers / Plain



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Revision History

Date	Version	Description	Author
20 September 2022	1.0	Review - update	Anggono Basuki
2 January 2023	2.0	Additional GPS Synchronized function	Anggono Basuki

Distribution Document

This document is to be distributed to:

Name	Title
Anggono Basuki	GFClock Yasa Persada
VALUED CUSTOMER INDONESIA	

Document Related

- N/A

Clock Movement - Specifications

GFA Series for 1 – 6 Meter Diameter

Two hands: Hour and Minute



Available for 1 - 6 Meter diameter of Dial

- ☐ Micro-processor based self-setting movement
- ☐ Ideal for open-air tower clock system
- ☐ All metal fabric with stepping motor
- ☐ Remote control enabled
- ☐ Compact design with multiple functions

FEATURES

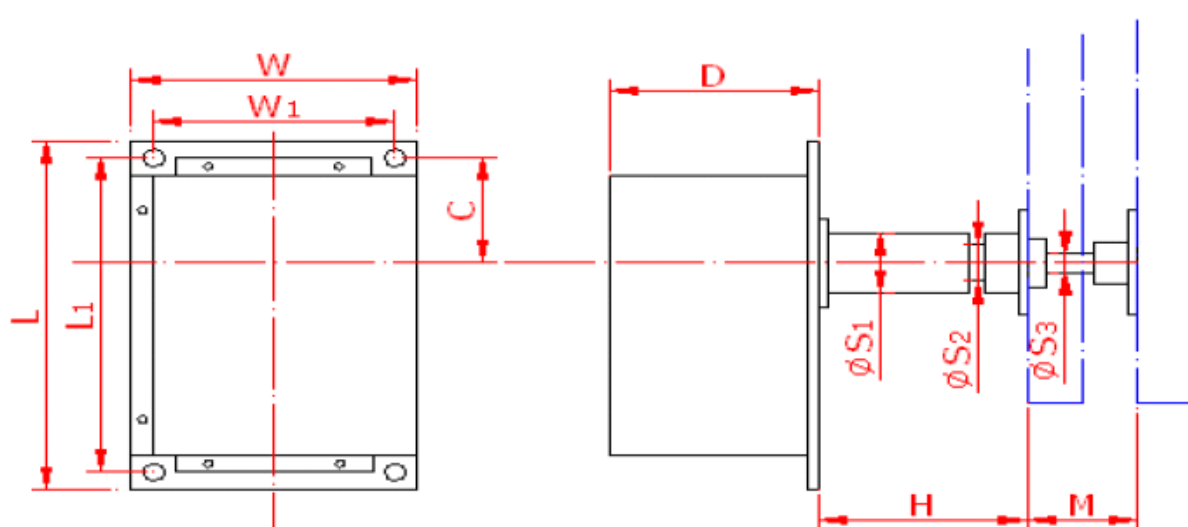
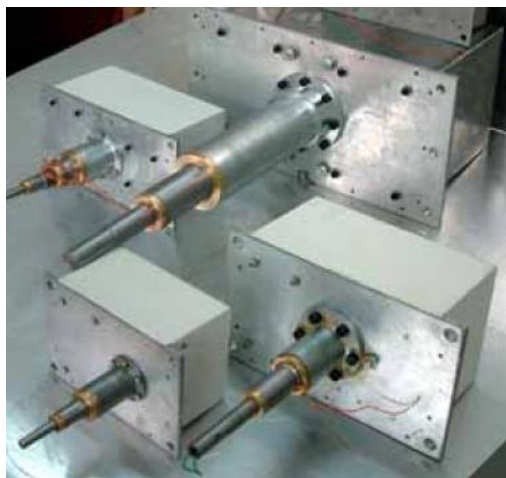
Microprocessor based open-air tower clock movement
Suitable for open-air dial diameter from 1.2m to 12m
Self-setting with master clock upon power recovery from failure
Controlled & synchronized by master clock or PC connected
Operation reservation upon power failure
High efficiency with low power consumption

GPS Tower Clock System

Applicable with or w/o master clock and UT tower clock software

OUTDOOR-USE DESIGN	:	- Entirely metal fabric from internal parts to outer case (GFA12 is exceptional with ABS 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
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 or PC - No operation on movement needed - Wiring distance to master clock or PC up to 1200m - Feedback running status to master clock or PC
TIME ACCURACY	:	- 0.3 s/d at 25° (independent)
HANDS ILLUMINATION	:	- Hollow shafts design enables LED
OTHER PARAMETER	:	- Power supply DC 12V - Shafts Hour & minute - Working Temp. -30 – 85° - Humidity 0 – 95%

DIMENSIONS



MODEL	W	W ₁	L	L ₁	D	C	S1	S2	S3	H	M
GFA12S	67	-	99	-	50	27	15	7	-	25	15
GFA25N	130	110	200	180	95	60	34	21	11	95	50
GFA25L	130	110	200	180	95	60	34	21	11	230	50
GFA40N	150	130	230	210	100	68	58	33	16	124	65
GFA40L	150	130	230	210	100	68	58	33	16	250	65
GFA60N	200	180	300	280	159	92	64	39	22	154	95
GFA60L	200	180	300	280	159	92	64	39	22	270	95

GFA Series

COMPARISON & SELECTION TABLE OF GFA MOVEMENT

MODEL	Dial Size (cm)	Dial Thickness (mm)	Hour Shaft Length (mm)	Hands Illumination	Operation	Buttons for Adjusting Hands
GFA12SFP	~ 120	~ 10	25	-	w/o Master	* *
GFA12SFS	~ 120	~ 10	25	-	with Master	-
GFA12SFB	~ 120	~ 10	25	-	with or w/o Master	* *
GFA12SHP	~ 120	~ 10	25	Enabled	w/o Master	* *
GFA12SHS	~ 120	~ 10	25	Enabled	with Master	-
GFA12SHB	~ 120	~ 10	25	Enabled	with or w/o Master	* *
GFA25NFP	120 ~ 250	~ 60	90	-	w/o Master	* *
GFA25NFS	120 ~ 250	~ 60	90	-	with Master	-
GFA25NFB	120 ~ 250	~ 60	90	-	with or w/o Master	* *
GFA25NHP	120 ~ 250	~ 60	90	Enabled	w/o Master	* *
GFA25NHS	120 ~ 250	~ 60	90	Enabled	with Master	-
GFA25NHB	120 ~ 250	~ 60	90	Enabled	with or w/o Master	* *
GFA25LFP	120 ~ 250	~ 200	230	-	w/o Master	* *
GFA25LFS	120 ~ 250	~ 200	230	-	with Master	-
GFA25LFB	120 ~ 250	~ 200	230	-	with or w/o Master	* *
GFA40NFP	250 ~ 400	~ 60	115	-	w/o Master	* *
GFA40NFS	250 ~ 400	~ 60	115	-	with Master	-
GFA40NFB	250 ~ 400	~ 60	115	-	with or w/o Master	* *
GFA40NHP	250 ~ 400	~ 60	115	Enabled	w/o Master	* *
GFA40NHS	250 ~ 400	~ 60	115	Enabled	with Master	-
GFA40NHB	250 ~ 400	~ 60	115	Enabled	with or w/o Master	* *
GFA40LFP	250 ~ 400	~ 200	263	-	w/o Master	* *
GFA40LFS	250 ~ 400	~ 200	263	-	with Master	-
GFA40LFB	250 ~ 400	~ 200	263	-	with or w/o Master	* *
GFA60NFP	400 ~ 600	~ 60	154	-	w/o Master	* *
GFA60NFS	400 ~ 600	~ 60	154	-	with Master	-
GFA60NFB	400 ~ 600	~ 60	154	-	with or w/o Master	* *
GFA60NHP	400 ~ 600	~ 60	154	Enabled	w/o Master	* *
GFA60NHS	400 ~ 600	~ 60	154	Enabled	with Master	-
GFA60NHB	400 ~ 600	~ 60	154	Enabled	with or w/o Master	* *
GFA60LFP	400 ~ 600	~ 200	270	-	w/o Master	* *
GFA60LFS	400 ~ 600	~ 200	270	-	with Master	-
GFA60LFB	400 ~ 600	~ 200	270	-	with or w/o Master	* *

Note:

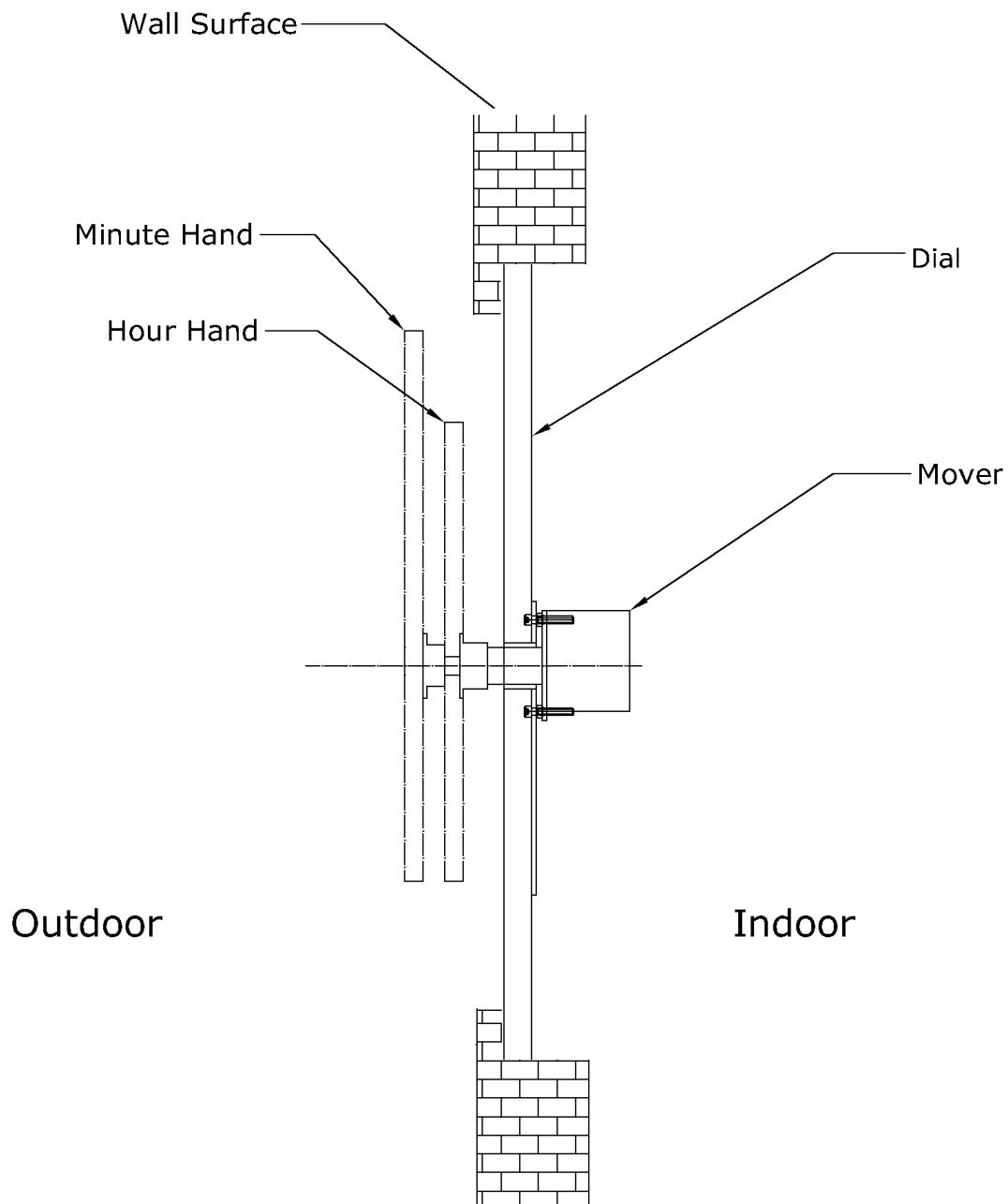
GFA25NFB adalah pilihan yang tepat dalam penawaran ini untuk support spesifikasi yang diinginkan, antara lain:

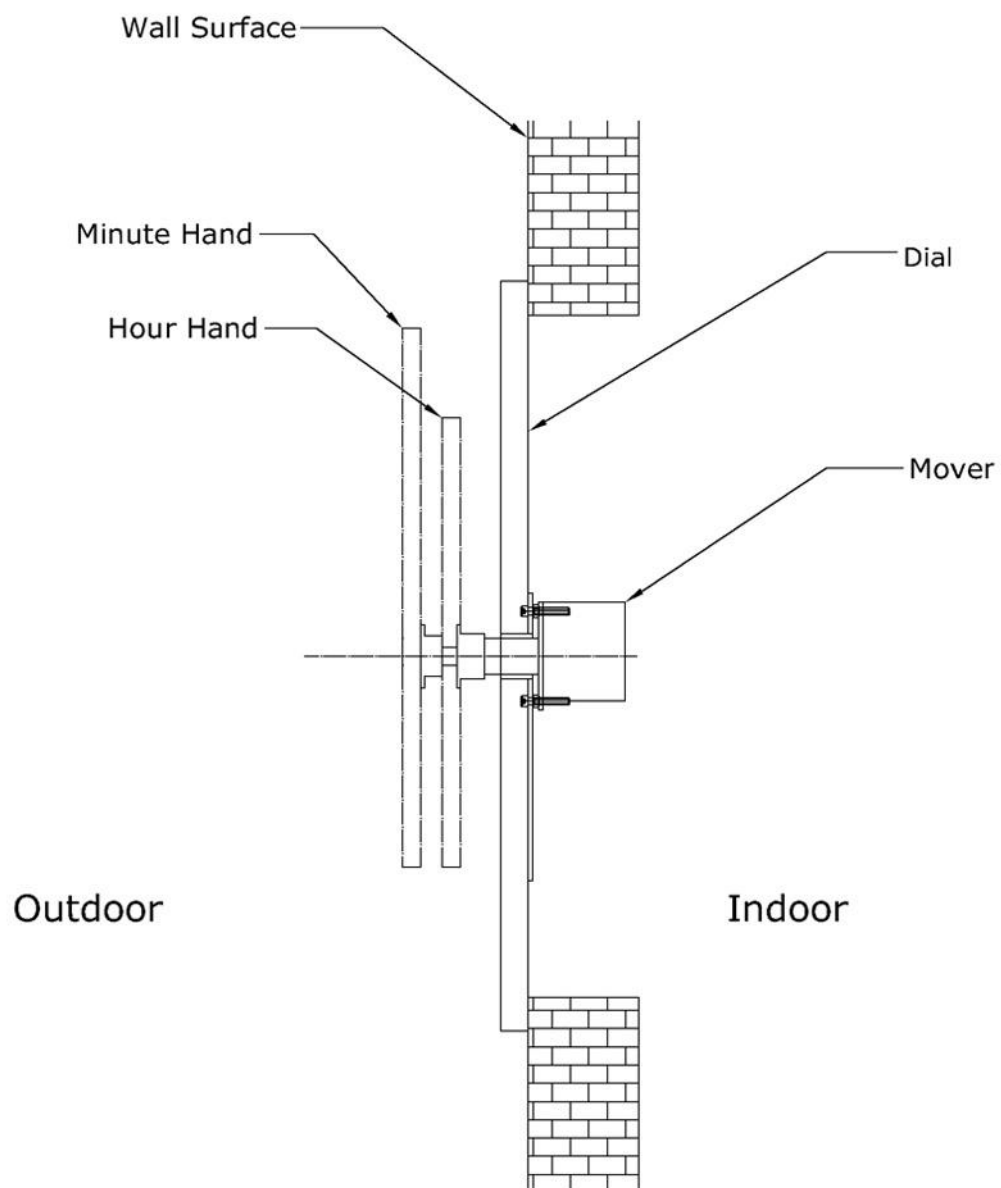
1. Diameter 3.0 meter, and working with Master clock and four slave clock
2. Support illumination at night of Hands

Wiring Installation

GFA Series for Two Hands

Bangunan Menara oleh Pembeli harus dibuat seperti pada gambar dibawah ini:





Tower Clock - Installation

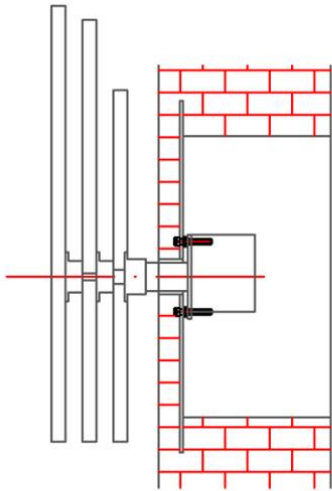


Fig. 1

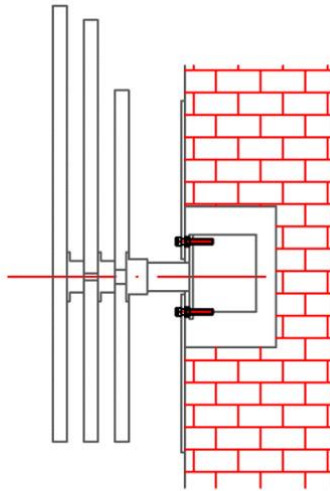


Fig. 2

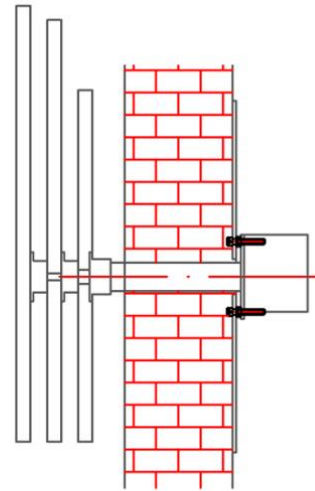
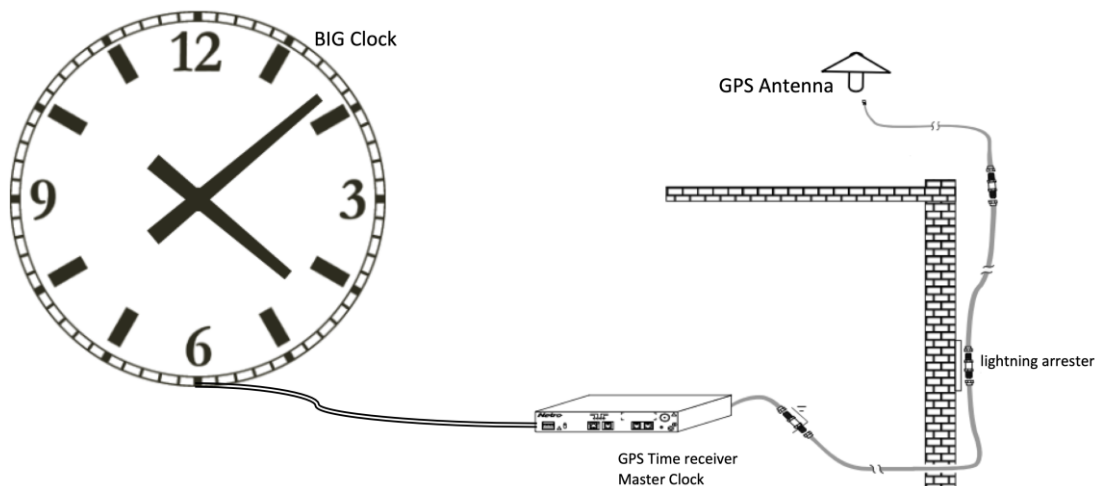


Fig. 3

Remark: in Fig. 3, movement with extended shaft is required

Building Clock - Installation



Master Clock & GPS Antenna

Master Clock

Digunakan untuk melakukan sinkronisasi waktu dari ke empat face mesin jam sehingga waktu 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 sebagai pengontrol lampu akan menyala pada malam hari, auto correction time jika listrik PLN mati dan akan melakukan recovery waktu secara otomatis kepada masing-masing secondary clocks

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

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

Master Clock 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 diset untuk interval waktu yang diinginkan

GPS Antenna



GPS Antenna

Specifications:

- Data standard: NMEA 0183, Data transmission: RS 485, 9600 baudrate, 1 stop bit, no parity
- Ingress Protection: IP67, Weatherproof: Yes
- Time Accuracy Absolute (With GPS signal) ≤ 0.1 s/d (at 25°C)
- Frequency 1,575.42 $\pm$ 1.023MHz
- Receive Channels 16 channels in parallel, Tracking Satellites 12
- Start Time ≤ 12 s (Warm start) ≤ 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

Dials & Hands

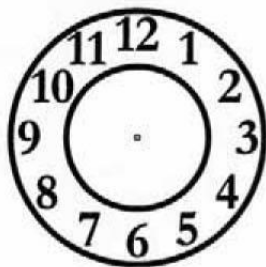
Berikut ini hanya beberapa contoh Dials dan Hands yang dapat dipilih, namun untuk Penawaran ini dipilih model Dials dan Hands sesuai dengan gambar pada Bab: **Picture References**

Spesifikasi:

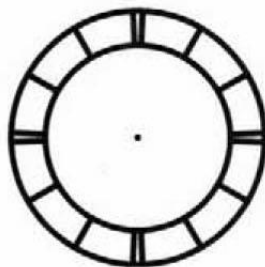
1. Dial diameter sesuai dengan penawaran
2. Dial dapat menyala pada malam hari disorot Lampu dari belakang.
3. Dial Warna dasar Putih, tulisan Angka warna Hitam
4. Dial terbuat dari Metal dan Acrylic
5. Hands (Jarum Menit dan Jarum Jam) dapat menyala di malam hari dengan LED berwarna
6. Hands Warna Hitam
7. Hands terbuat dari Metal atau Acrylic

GFClock Yasa Persada

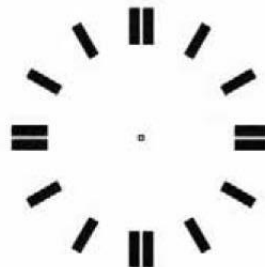
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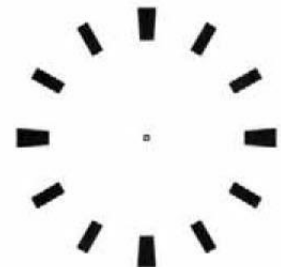
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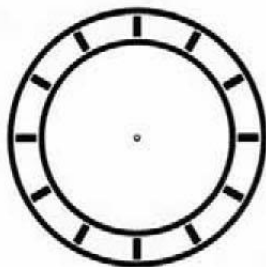
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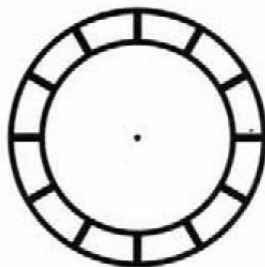
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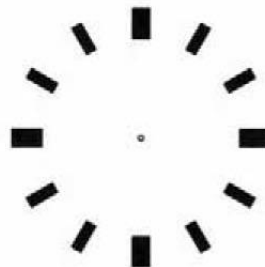
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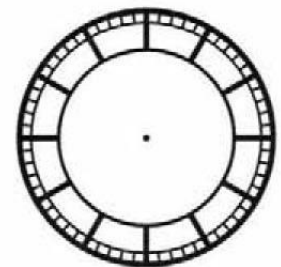
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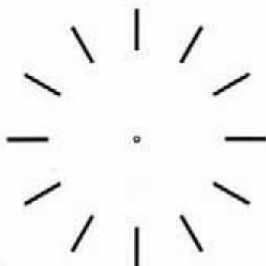
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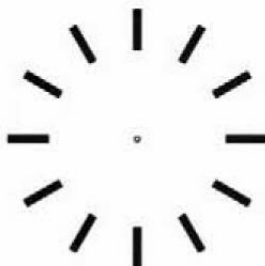
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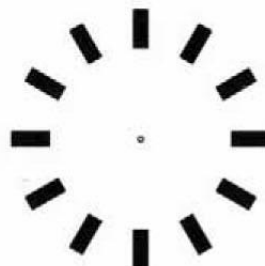
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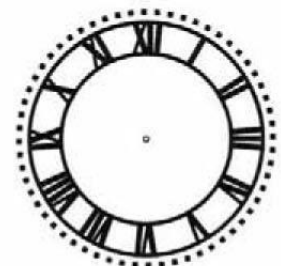
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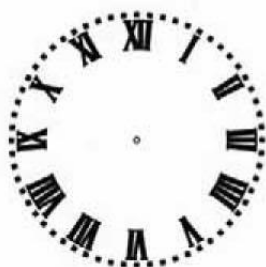
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EB-309H



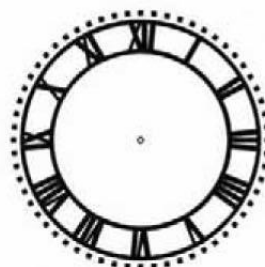
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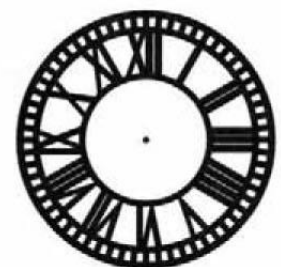
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EB-312V



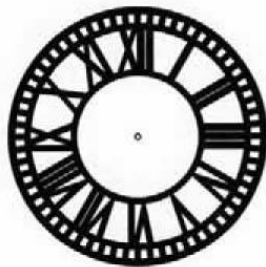
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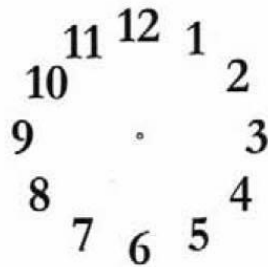
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GFClock Yasa Persada

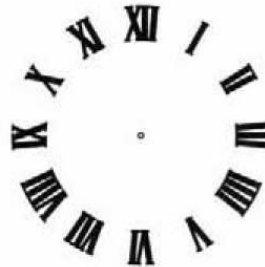
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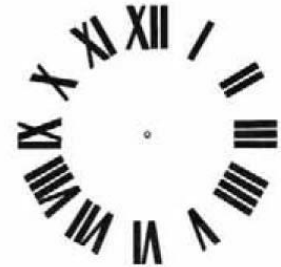
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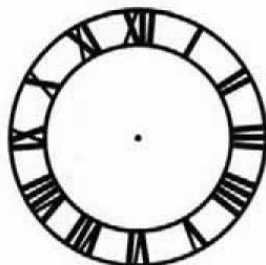
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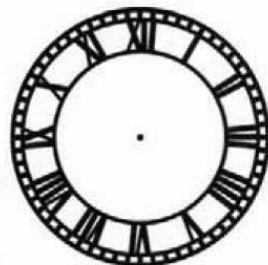
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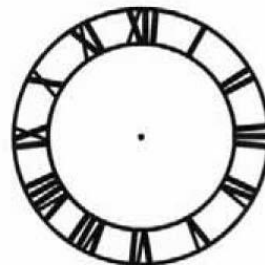
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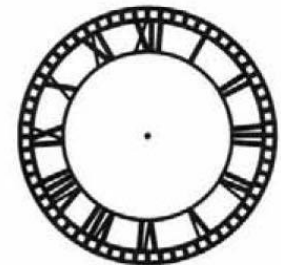
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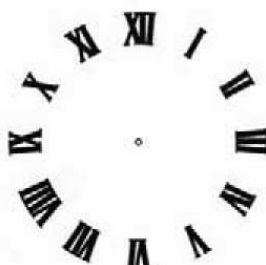
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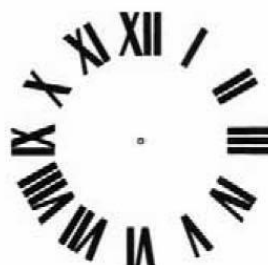
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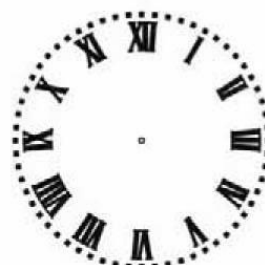
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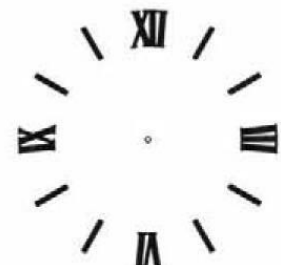
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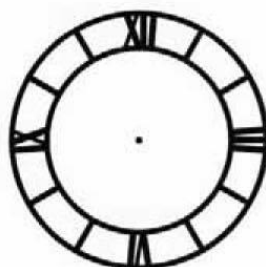
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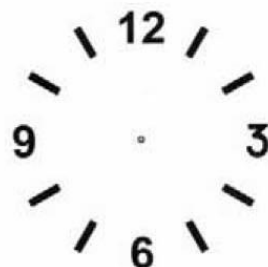
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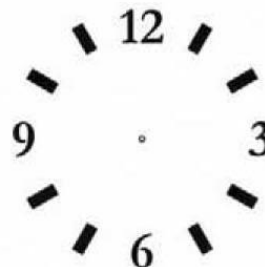
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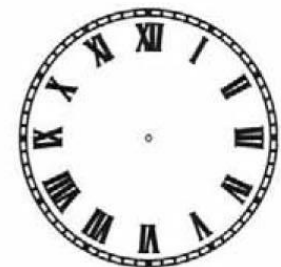
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EB-325



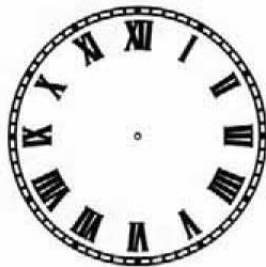
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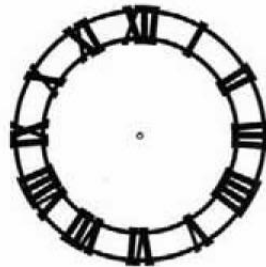
EB-328

GFClock Yasa Persada

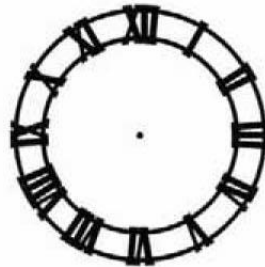
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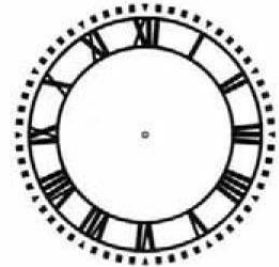
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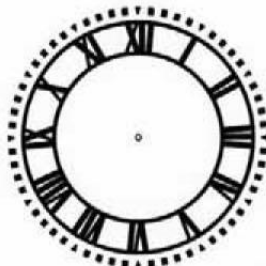
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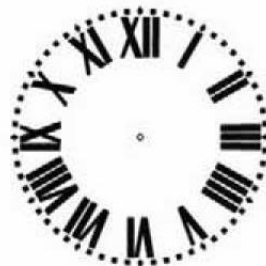
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EB-334



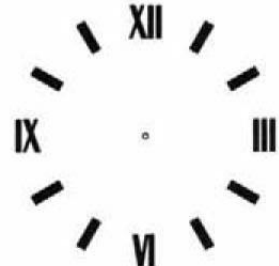
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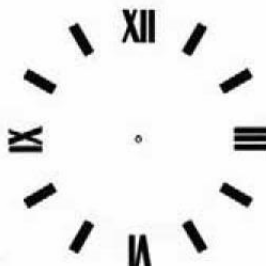
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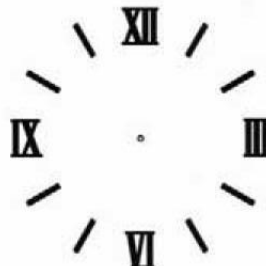
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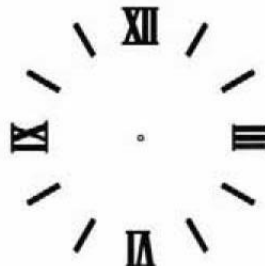
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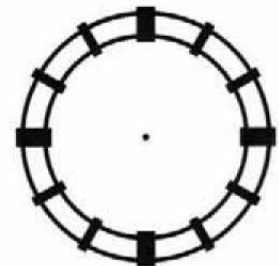
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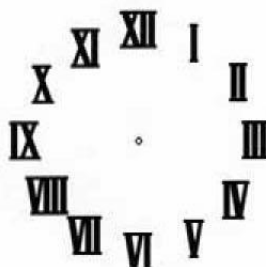
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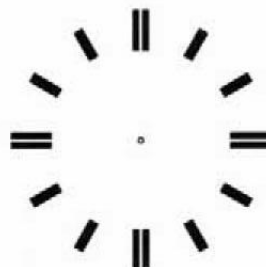
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EB-346



EB-347



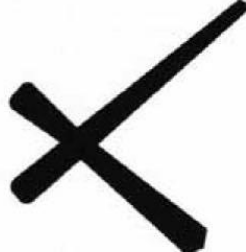
EB-348

GFClock Yasa Persada

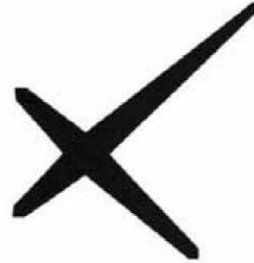
1/3



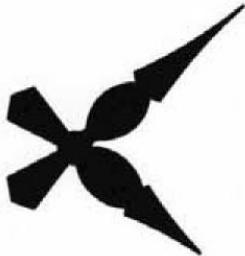
EB-401



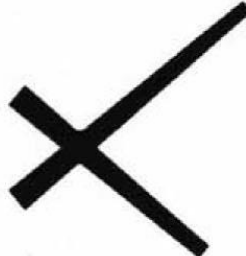
EB-402



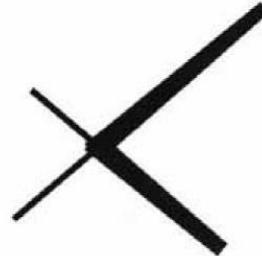
EB-403



EB-404



EB-405



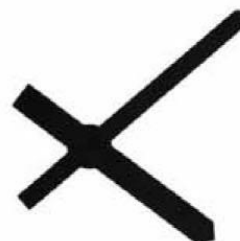
EB-405T



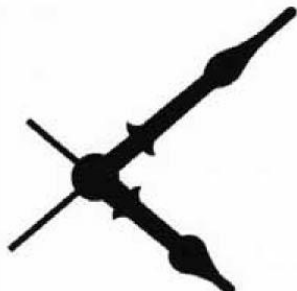
EB-406



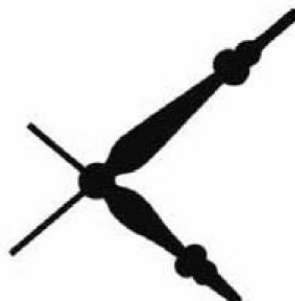
EB-407



EB-408



EB-409



EB-410



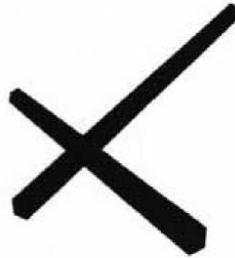
EB-412

GFClock Yasa Persada

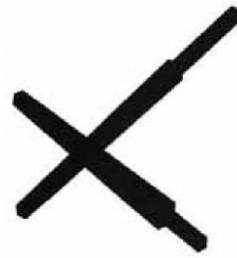
2/3



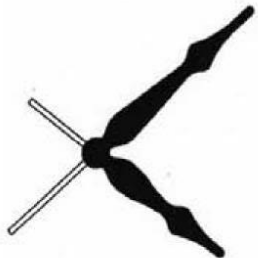
EB-412-H



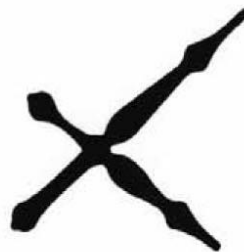
EB-413



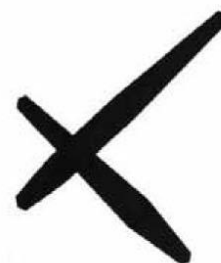
EB-414



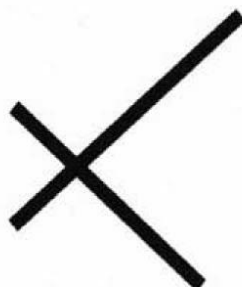
EB-415



EB-416



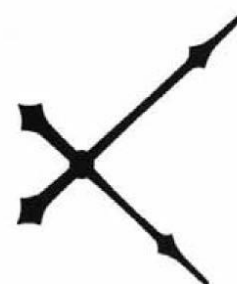
EB-417



EB-418



EB-418-H



EB-419



EB-420

Picture References

Berikut adalah Jenis Dials dan Hands yang dipilih untuk diimplementasikan dalam Tower Clock pada Penawaran ini.



Dial with illumination at Night



Berikut adalah contoh gambar Jam Tugu lainnya, bisa dipilih sebagai referensi model dan bentuk yang diinginkan:





Anda bisa melihat beberapa koleksi bentuk jam Tower Clocks, Outdoor Clocks, dan Street Clocks di website kami di <http://gfclock.blogspot.co.id>

Atau kunjungi blog kami di <http://clock-making.blogspot.com>

atau bisa kontak kami secara langsung ke:

GFClock Yasa Persada

Add: Arden Miller clock tower

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ANGGONO BASUKI

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W/A: **0821-1461 17 32**

Lampiran-1**RAB - Rincian Anggaran dan Biaya**

Berikut adalah contoh rincian anggaran dan biaya untuk pengadaan material Jam Tower dengan ukuran sampai dengan diameter 240 CM terdiri dari 4 sisi/arah dengan spesifikasi teknis dan jumlah barang, sebagai berikut:

Spesifikasi Teknis**A. BIG WALL Clock Diameter 240 CM – Quarter Face**

No.	Descriptions	Model	Qty	Rp/unit	Total Rp
1	BIG WALL Clock Diameter 150 – 240 CM (Belum termasuk Pemasangan)		4	calls	calls
	MOVEMENT	GFA25NHB			
	Open-air movement for tower clock two hands = minute and hour. Hands set by buttons movement back cover. Enhanced metal construction for weather resistant operation 24-hours-a-day.				
	Reinforced for dial diameter up to 2.5m with hour and minute hand bushing.				
	Synchronized for each clock with serial communication by wires up to 120 meters				
	DIALs	150 - 240 CM			
	Metal material and Acrylic or Polycarbonate, or ACP material, with Numeral EB-SERIES				
	HANDs	For 150 - 240 CM Dial			
TWO hands for hour and minute with Metal material UP TO 250cm dial size EB-SERIES					
2	Power System A sets power system with Battery backup for main power failure		1	calls	calls

GPS Tower Clock System

3	Illumination Import LED illumination Module for DIAL only Included LED driver, and Timer	4	calls	calls
4	Master Clock / Master Control Support for 1-99 secondary clocks, and Purposed for automatic recovery time due to Power failure Adjustment and control for each clock at room of operational control up to 120meter.	1	calls	calls
5	GPS Clock synchronized GPS time synchronized function from satellite and connect to master clock for automatic time update	1	calls	calls
OPTIONAL				
6	CHIME Generator Hourly melody and chime sticking generator, (chime and melody can be request by customer) Power Amplifier and Speaker for Chime melody and hourly sticking	1	calls	calls
Note: Berat Jam per side size 150 - 250 CM = 80 Kg, Lead Delivery Time: 30 Days 1. Warranty / Garansi Mesin Jam 12 bulan 2. Harga Franko JAKARTA, jika dikirim ke luar kota ada biaya Packing dan Deliverable oleh Jasa Paket titipan barang 3. Harga belum termasuk pemasangan, dan jika pemasangan di luar Jakarta maka pembeli harus menyediakan akomodasi (makan, penginapan, transportasi dari Jakarta ke kota tujuan)				

GPS Tower Clock System

B. Packing – Delivery and Installation

No.	Descriptions	Model	Qty	Rp/unit	Total Rp.
1	Wooden Packing Biaya Packing dengan teliti dan kuat menggunakan kayu, dalam rangka pengiriman barang ke tujuan pembeli		Package	calls	calls
	Deliverable to PROJECT LOCATION Pengiriman Material JAKARTA ke Lokasi Dimensions: ____ x ____ x ____ cm pembagi 6000 equal = ____ Kg		lots	calls	calls
	Local Transport Biaya yang hanya timbul di Jakarta dalam rangka deliverable ke tempat expedisi, atau lainnya		Package	calls	calls
	Installation materials Cables, Screw, Adhesive, Iron, Panel Box, Welding, Silent, Rivet, battery, etc		Package	calls	calls
	Implementation Biaya installation & Setup Tower clock Master/Slave System bergaransi 1 Tahun (biaya ini tidak termasuk makan, penginapan, dan transportasi dari Jakarta di Kota Tujuan Pemasangan)		Package	calls	calls