

**MIYOTA**

MOVEMENT SPECIFICATIONS

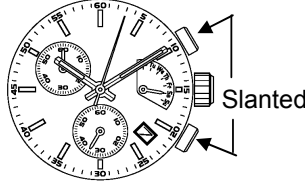
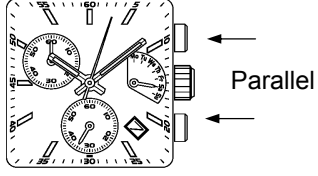
**CAL.FS60/61****10-1/2 LIGNE, 3 EYES CHRONOGRAPH**  
**ANALOGUE QUARTZ, 0 JEWEL**

MANUFACTURED IN JAPAN

**1. BASIC SPECIFICATIONS**

(1) Cal. No.

\*TO CONFIRM WITH MOV'T DRAWING ATTACHED

CALIBRE	<b>FS60</b>	<b>FS61</b>
PUSHER	<b>SLANTED</b>	<b>PARALLEL</b>
Ligne	<b>10-1/2</b>	
Overall diameter	<b>Φ 23.7X22.0mm (3H-9H)</b>	
Case fitting diameter	<b>Φ 23.3X22.0mm (3H-9H)</b>	
Date	<b>0</b>	
<b>Total height</b>	<b>5.10mm</b>	<b>5.25mm</b>
Figure (push button placed angle)	 <b>FS60</b>	 <b>FS61</b>
Battery & Life	<b>SR626SW 2YEARS*</b>	

\* based on 1 hour/day chronograph use

(2) Time standard

Type of quartz : Tuning fork type quartz crystal

Frequency : 32,768Hz

Accuracy : **+/-20 s/month** worn under normal circumstances

(3) Balanceable weight of hand

Minute hand Max. 0.4 μN.m

Center Chrono Second hand Max. 0.035 μN.m

Day hand Max. 0.040 μN.m

Other small hands Max. 0.020 μN.m

(4) Function

**Chronograph 1/1 sec. Basis (Up to 59 min. 59 sec.)**

Powercell Saving Reset Mechanism(PSRM)

Over-loading Compensation Device(OLCD)

Digital Frequency Control(DFC) for time adjustment

## 2.SEPARATED PARTS

### Setting stem x1

Code	065-549
Length from movement center to far end of setting stem	20.00mm
Thread.....	Φ0.9mm x 9.06mm

## 3.OTHERS

### \* Measurement of time rate

The unit(gate) time of measurement must be set at "10 sec." or integer fold value of 10 sec. owing to the DFC system, and the measurement must be performed in the form of complete watch.

### \* Marking on movement

**JAPAN  
MIYOTA CO.  
FS60/61  
NO JEWELS**

### \* Typical clearance

Mov't - Caseback	minimum 200 microns
Top of hands - Glass	300 - 400 microns *
* subject to the glass, case structure, and the length of hand	

### \* Note

**Please use aluminum material hand for Chrono second hand**

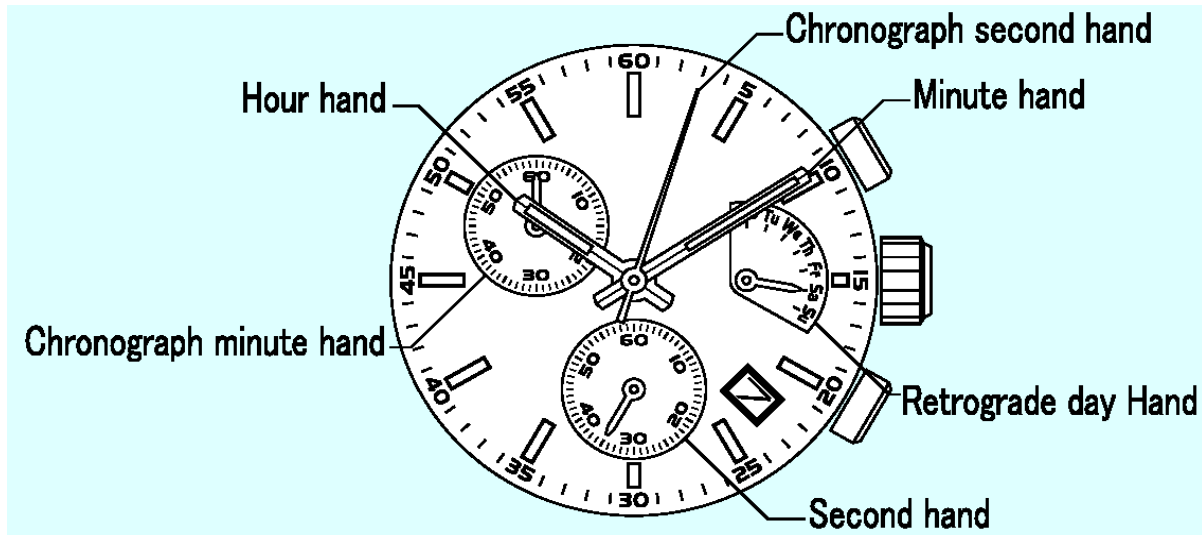
### \* TACHYMETER

The tachymeter is the device which measures the speed of an automobile. Knowing is how many seconds the car covers a distance of 1km, the meter can measure the approximate average speed per hour during a journey (up to the maximum measurable range of tachymeter is 60 seconds.)

If the chronograph is started at the same time as measurement, and stopped after 1 km, the average speed per hour can be determined according to the position of the second hand. If the car covers the distance of 1km in 45 seconds, the average hourly speed during the journey will be about 80 km.

## 4 INSTRUCTION MANUAL

### A) DISPLAYS AND BUTTONS



### B) SETTING THE TIME

1. Pull the crown to the 2nd Click Position so that the second hand stops at (0) position.
2. Turn the crown to set the hour and minute hands.

### C) SETTING THE DATE

1. Pull the crown to the 1st Click Position.
2. Turn the crown clockwise to set the date.
  - \* If the date is set between the hours of around 9:00 PM and 1:00 AM, the date may not change on the following day.
3. After the date has been set, push the crown back to the normal position.

### D) SETTING THE DAY

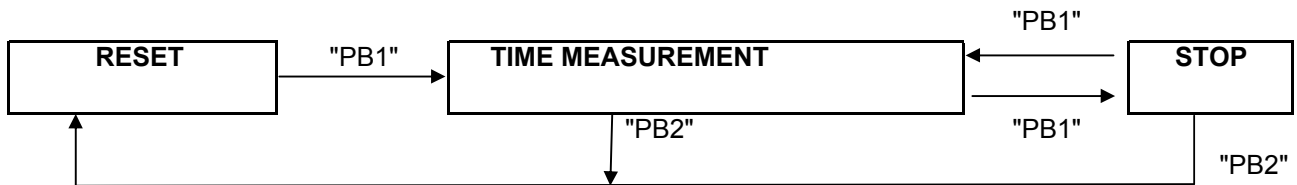
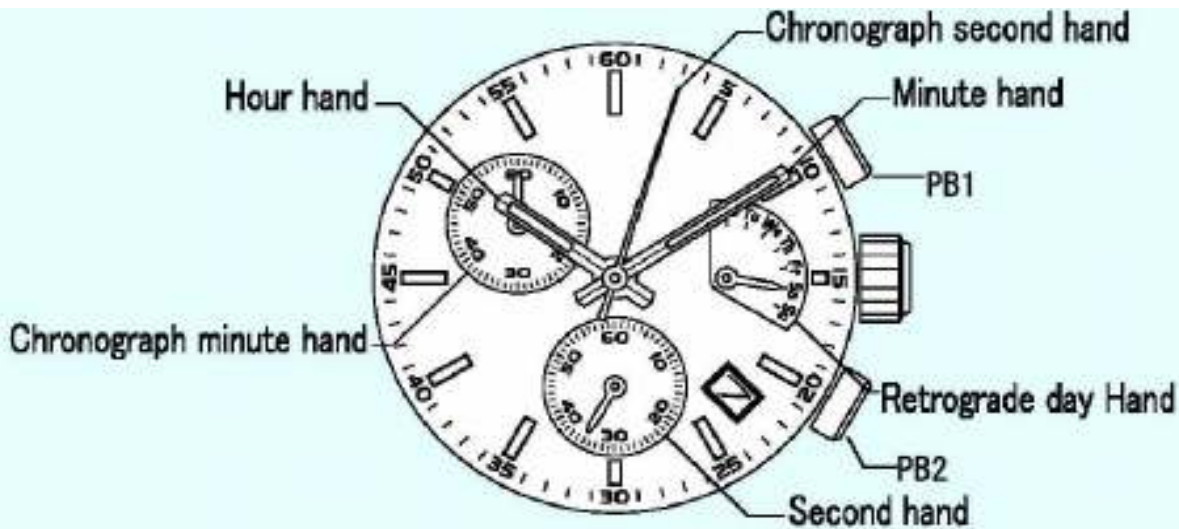
1. Pull the crown to the 1st Click Position.
2. Turn the crown counterclockwise to set the day.
  - \* If the day is set between the hours of around 11:00 PM and 2:00 AM, the day may not change on the following day.
3. After the day has been set, push the crown back to the Normal Position.

## E) USING THE CHRONOGRAPH

This chronograph is able to measure and display time in 1/1 second united up to maximum of 1 hour.

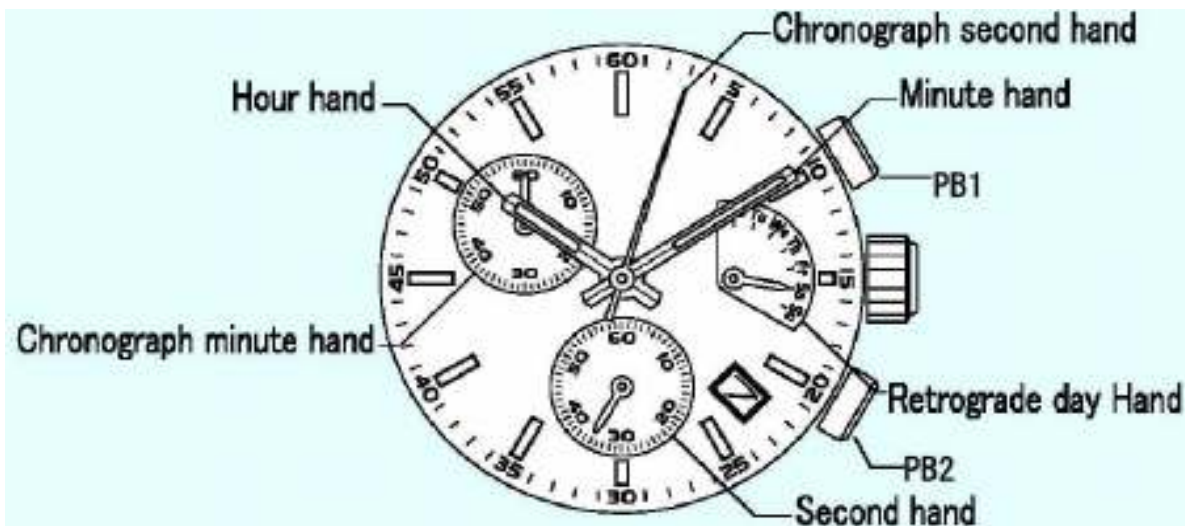
Measuring time with the chronograph

1. The chronograph can be started and stopped each time button "PB1" is pressed.
2. To reset, press button "PB2" and the chronograph second & minute hands return to their 0 positions.



## F) CHRONOGRAPH RESET (INCL. AFTER REPLACING BATTERY)

This procedure should be performed when the chronograph second hand do not return to the 0 second position after the chronograph has been reset, and including after the battery has been replaced.



1. Pull the crown out to the 2nd position.
2. Press button "PB1" to set the chronograph second hand to the 0 position.
3. The chronograph hands can be advanced rapidly by continuously pressing button "PB1".
4. Once the hands have been zeroed, reset the time and return the crown to its normal position.

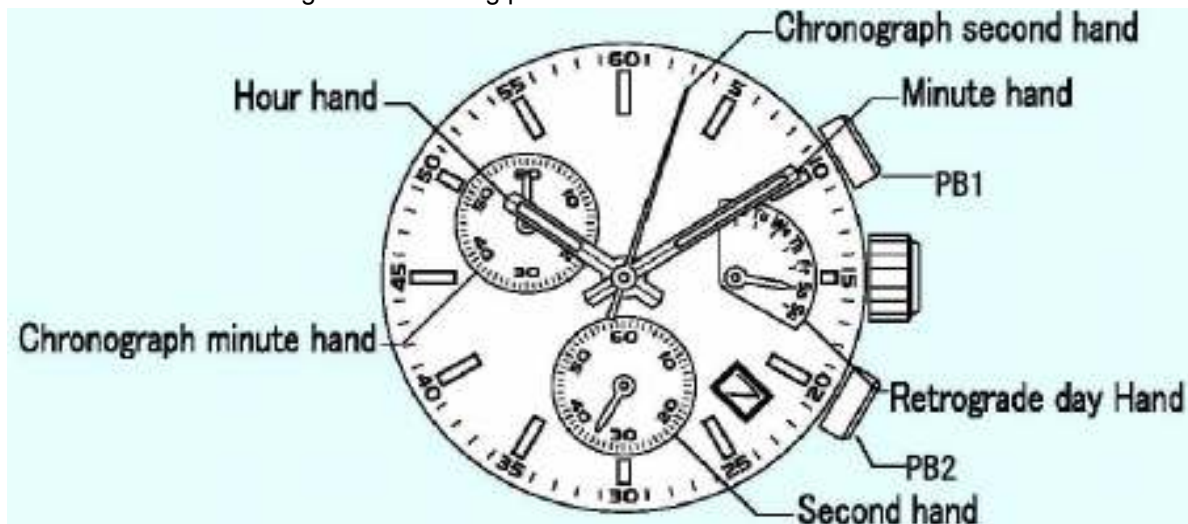
\* Do not return crown to normal position while chronograph second hand return to 12:00 (ZERO) position.

Hand stops on the way when crown are returned to normal position and these positions are recognized as 12:00 (ZERO) position.

### G) FITTING METHOD OF HANDS

Place the module on case.

then fit the hands according to the following procedure.



1. After the dial assembling, push "PB1" first and then "PB2" to make sure all the hands is not moving.
  2. Pull out the crown to the 2nd Click Potision.
  3. Turn the crown clockwise, and stop it just after the date changes. (When the date starts changing, turn the crown very slowly. And stop it when it changes the date.)
  4. Fit the hour hand, minute hand and chronograph second hand at the 12-o'clock position.
  5. Fit the second hand and chronograph minute hand at 60th(ZERO) position.
  6. Fit the retrograde day hand as indicating the day scale.
- \*The retrograde day hand can be set any angle.  
\*The angle from Monday to Sunday is always 120° .

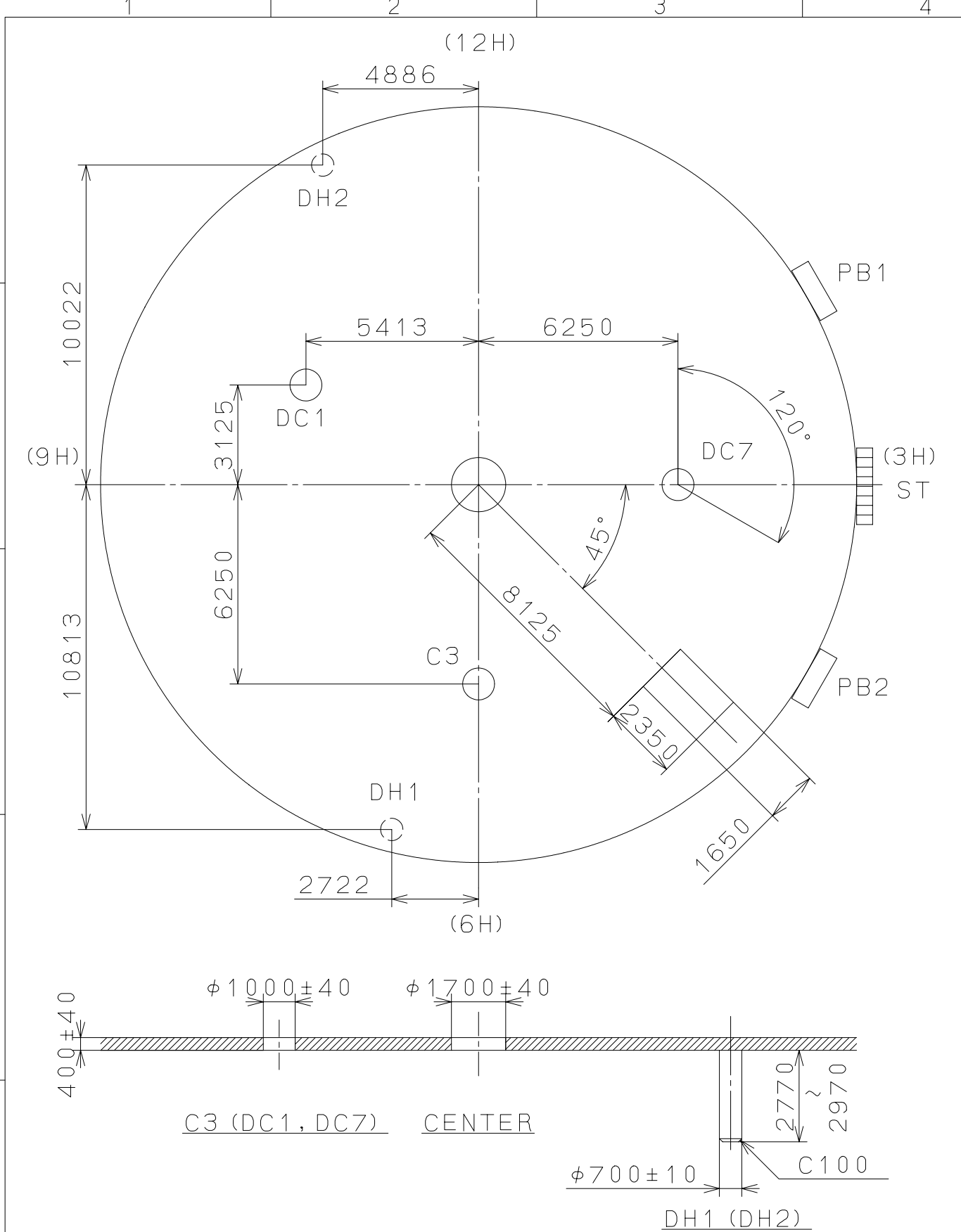
When fitting the hands, remove the case back and place the movement on work stand.

*These specifications might be changed without prior notice.*

**CITIZEN WATCH CO., LTD.**

2007/07/04 (14:35:56)

This drawing is provisional and subject to our reconfirmation and/or revision without notice.



△			Quantity		Cal.NO.:
△			Unit	1/1000 <sub>mm</sub>	FS60-00A
△			Scale	6:1	Parts No.:
△			Date		
△			Drawn		
Mark	Date	Description	Appr.	Checked	Name:
		Alterations	Approved	N. Suzuki	Indications for Dial
Material					Drawing No.: FS60D000
Heat Treatment			General Tolerances		
Hardness			Dimensions		
Plating			Angles		
				CITIZEN WATCH CO., LTD. TOKYO, JAPAN	

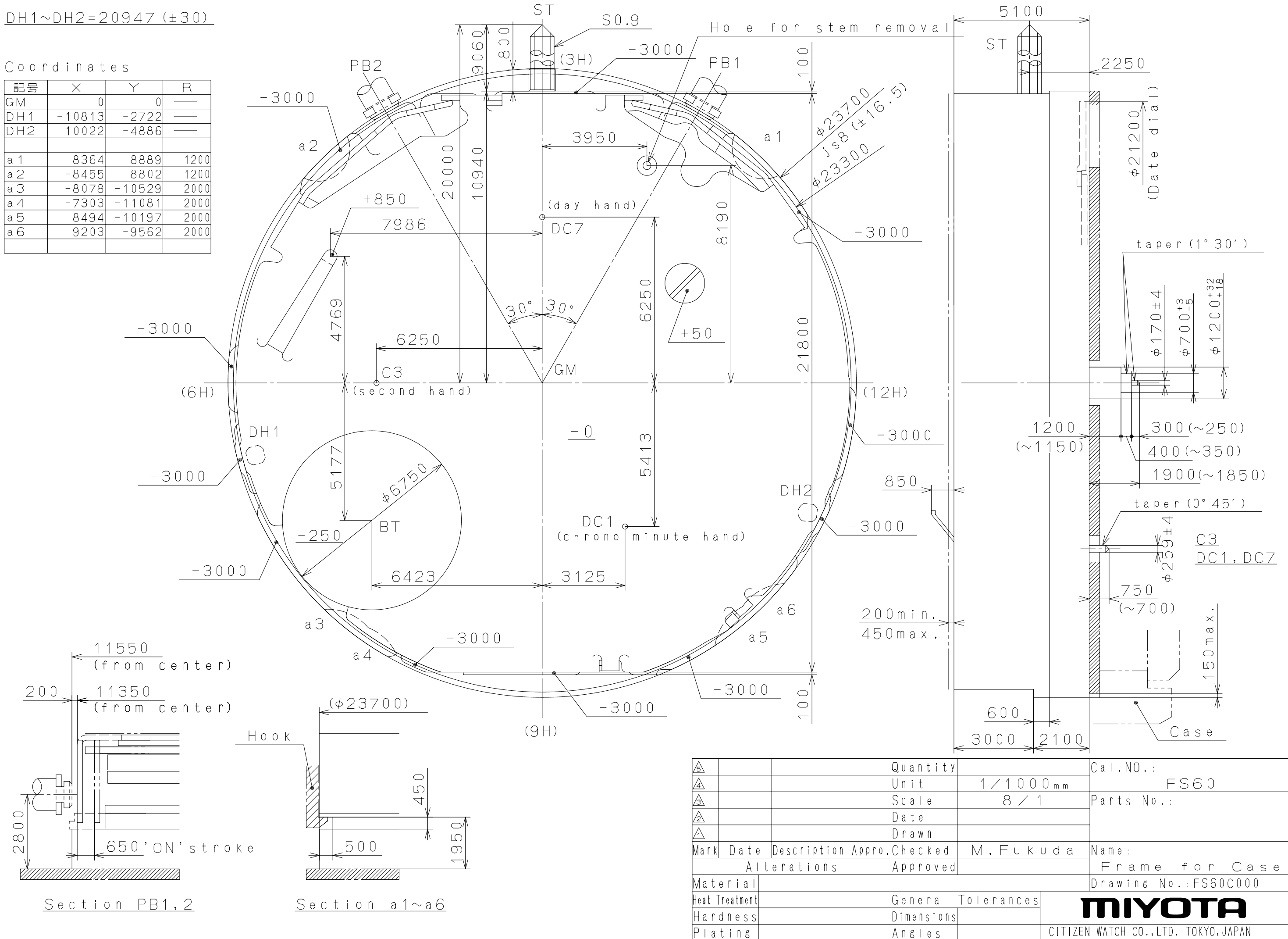
2006/07/06 (10:25:42)

This drawing is provisional and subject to our reconfirmation and/or revision without notice.

DH1~DH2=20947 (±30)

Coordinates

記号	X	Y	R
GM	0	0	—
DH1	-10813	-2722	—
DH2	10022	-4886	—
a1	8364	8889	1200
a2	-8455	8802	1200
a3	-8078	-10529	2000
a4	-7303	-11081	2000
a5	8494	-10197	2000
a6	9203	-9562	2000



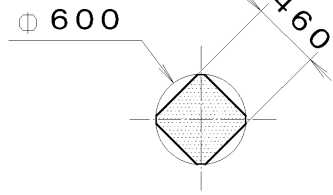
△5		Quantity		Cal.NO.:
△4		Unit	1/1000mm	FS60
△3		Scale	8/1	Parts No.:
△2		Date		
△1		Drawn		
Mark	Date	Description	Checked	M. Fukuda
Alterations			Approved	Name:
				Frame for Case
Material				Drawing No.: FS60C000
Heat Treatment				General Tolerances
Hardness				Dimensions
Plating				Angles

**MIYOTA**

CITIZEN WATCH CO., LTD. TOKYO, JAPAN

This drawing is provisional and subject to our reconfirmation and/or revision without notice.

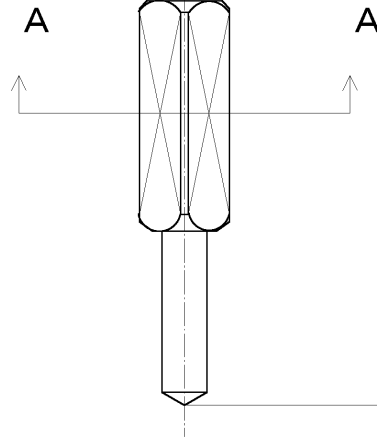
\*\*\* T I P W 065-549 (01) \*\*\* (2100 1121) 01-12-07



Section A-A

S0. 9, P=0. 225mm

⌀ 1000



<table border="1"> <tr><td>7</td><td></td></tr> <tr><td>6</td><td></td></tr> <tr><td>5</td><td></td></tr> <tr><td>4</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>1</td><td></td></tr> </table>		7		6		5		4		3		2		1		<table border="1"> <tr><td>Quantity</td><td></td></tr> <tr><td>Unit</td><td>1/1000 mm</td></tr> <tr><td>Scale</td><td>20:1</td></tr> <tr><td>Date</td><td></td></tr> <tr><td>Drawn</td><td></td></tr> <tr><td>Checked</td><td>T. Hiruta</td></tr> <tr><td>Approved</td><td></td></tr> </table>		Quantity		Unit	1/1000 mm	Scale	20:1	Date		Drawn		Checked	T. Hiruta	Approved		<table border="1"> <tr><td>Cal. No. :</td><td></td></tr> <tr><td>Parts:</td><td>065-549</td></tr> <tr><td>Name:</td><td>SETTING STEM</td></tr> <tr><td>Drawing No. :</td><td>5490S000</td></tr> </table>		Cal. No. :		Parts:	065-549	Name:	SETTING STEM	Drawing No. :	5490S000
7																																									
6																																									
5																																									
4																																									
3																																									
2																																									
1																																									
Quantity																																									
Unit	1/1000 mm																																								
Scale	20:1																																								
Date																																									
Drawn																																									
Checked	T. Hiruta																																								
Approved																																									
Cal. No. :																																									
Parts:	065-549																																								
Name:	SETTING STEM																																								
Drawing No. :	5490S000																																								
<table border="1"> <tr><td>Material</td><td></td></tr> <tr><td>Heat Treatment</td><td></td></tr> <tr><td>Hardness</td><td></td></tr> <tr><td>Plating</td><td></td></tr> </table>		Material		Heat Treatment		Hardness		Plating		<table border="1"> <tr><td>General Tolerances</td><td></td></tr> <tr><td>Dimensions</td><td></td></tr> <tr><td>Angles</td><td></td></tr> </table>		General Tolerances		Dimensions		Angles		<p><b>CITIZEN</b> WATCH CO., LTD. TOKYO, JAPAN</p>																							
Material																																									
Heat Treatment																																									
Hardness																																									
Plating																																									
General Tolerances																																									
Dimensions																																									
Angles																																									