

ENGINEERING DEPARTMENT

Title: Time Verification of Wall Clock

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1.0 OBJECTIVE:

To lay down a Procedure for the Time Verification of Wall Clocks.

2.0 SCOPE:

This SOP is applicable for the Verification of Time displayed on all the Wall Clocks installed in various Departments / Sections.

3.0 RESPONSIBILITY:

Operator/ Operating Person – Engineering

4.0 ACCOUNTABILITY:

Head – Engineering

5.0 ABBREVIATIONS:

ER Engineering

Hrs. Hours

IST Indian Standard Time

ID Identification No. Number

QA Quality Assurance

SOP Standard Operating Procedure

6.0 PROCEDURE:

6.1 Definition:

6.1.1 Digital Clock:

An instrument used for logging and monitoring time, especially a mechanical / electronic device having a digital display.

6.1.2 GPS Clock:

A GPS clock is a satellite system that provides very precise service. Each set of GPS clocks has 01 No. of master clock with which all the other slave clocks are synchronized.

6.2 Procedure For Time Verification of Digital Wall Clock:

- **6.2.1** Prior to startup the time verification activity, check and ensure that master clock is calibrated and certificate of calibration is available.
- **6.2.2** All the clocks shall have a unique identification number, as per respective SOP.



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- **6.2.3** Check and ensure that updated list of wall clock is available.
- **6.2.4** Record of wall clock shall be updated as per **Annexure –II** titled as "List of Wall Clocks".
- **6.2.5** Frequency of time verification of wall clock is on quarterly basis with tolerance of ± 7 days.
- **6.2.6** Time of all the clocks shall be verified against a Calibrated Watch / Clock.
- **6.2.7** Engineering concern personnel shall carry the calibrated clock along with her to verify the time displayed on respective clock (unit under verification) with respect to calibrated clock.
- **6.2.8** If in case time displayed in respective clock found mismatch with respect to calibrated clock then immediate remedial action shall be taken to resolve the problem after concerning with superiors.
- **6.2.9** In case the time variance is beyond the specified limit (i.e. ± 1 minute), then re-verify the time of defective clock by the use of standard clock (Calibrated clock).
- **6.2.10** During time verification activity, check and ensure that the voltage of wall clock battery is not less than 1.3 volt, if found below then replace the battery with new one and note down the same in remark column of respective **Annexure-III.**
- **6.2.11** After completion of time verification activity, affix the dully filled status label on wall clock as per **Annexure I** and frequency of Time verification shall be hand written on Tag.
- **6.2.12** Time verification record shall be maintained / updated as per **Annexure –III** titled as "Time Verification Record".

6.3 Installation and Time Verification Procedure for New Digital Wall Clock:

- **6.3.1** Unpack the consignment containing the respective clock (Mechanical / Electronic).
- **6.3.2** Before using, refer the manual of the clock.
- **6.3.3** Insert the Battery of the specified grade / class.
- **6.3.4** New unique identification number shall be provided to new clock before taking it in use as per the respective SOP.
- **6.3.5** List of wall clock shall be updated accordingly to incorporate the newly installed clock.
- **6.3.6** Time verification activity shall be performed for new clock with the use of calibrated clock.
- **6.3.7** Affix a Status label on the Wall Clocks, in accordance with **Annexure-I.** Frequency of Time verification shall be hand written on Tag.
- **6.3.8** Adjust the time by using the knob(s) [UP / DOWN in Electronic Clocks], provided on the rear side of the clock. Time format should on 24 hours pattern.



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NOTE:

- A) For time format, i.e. 12 Hrs. or 24 Hrs. use the 12 / 24 knobs (Electronic Clocks), provided on the rear side of the clock.
- B) Time of all the clocks shall be adjusted in accordance with Indian Standard Time (IST), i.e. GMT + 5.30 Hrs.
- **6.3.9** List of all the Wall clocks available in Plant shall be prepared section wise as per **Annexure-II.**

6.4 Installation and Time Verification Procedure of GPS Clock:

- **6.4.1** Master/Slave clock are installed in different blocks.
- **6.4.2** Time verification certificate shall be available at the time of installation of GPS clock.
- **6.4.3** List of Master/Slave clocks with location details shall be maintained as per **Annexure-II** titled as 'List of Wall Clocks.
- **6.4.4** UPS supply shall be provided to all clocks in each block.
- **6.4.5** Time verification of GPS clock shall be done on a frequency of every 02 Years±01 months.
- **6.4.6** Time verification shall be done with Indian Standard Time available at www.indianstandardtime.com.
- **6.4.7** Time shall be logged preferably with the use of GPS clock. Wherever GPS clocks are not available, Time logging shall be done with the use of Digital clocks in those areas.
- **6.4.8** Affix a Status label on the Wall Clocks, in accordance with **Annexure-I.** Frequency of Time verification shall be hand written on Tag.

6.5 Maintenance:

- **6.5.1** If any clock is not functioning properly, then concern department shall inform to engineering department for the corrective action.
- **6.5.2** Time shall also be verified / adjusted after every maintenance activity and replacement of Battery.

7.0 ANNEXURES:

ANNEXURE No.	TITLE OF ANNEXURE	FORMAT No.
Annexure – I	Status Label	
Annexure – II	List of Wall Clocks	
Annexure – III	Time Verification Record	
Annexure – IV	Time Verification Record of GPS Clock	



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8.0 DISTRIBUTION:

Controlled Copy No. 01
 Controlled Copy No. 02
 Master Copy
 Quality Assurance
 Engineering
 Quality Assurance

9.0 REFERENCES:

Not Applicable.

10.0 REVISION HISTORY:

CHANGE HISTORY LOG

Revis	ion	Change Control	Details of Changes	Reason for Change	Effective	Updated
No	٠.	No.			Date	By



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ANNEXURE-I

	STATUS LABEL
Name	Wall Clock
ID. No.	
Location	
Time Verification	
Frequency	
Done by / On	
(Sign & Date)	
Next Verification	
Due On	
Checked by / On	
(Sign & Date)	



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ANNEXURE – II LIST OF WALL CLOCKS

BLOCK:

S.No.	MAKE	MODEL	ID. No.	LOCATION	REMARK(s)

Prepared By (Engg)
Sign & Date

Checked By (Engg)
Sign & Date

Reviewed By (QA) Sign & Date



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ANNEXURE-III

TIME VERIFICATION RECORD OF WALL CLOCK

Make:

ID. No. of Calibrated Clock:

Calibration Valid Till:

	Date	Id no. of respective watch / clock	Time displayed on		Time	Acceptance	Battery	Done	
S. No.			Calibrated clock (a)	Respective clock (b)	difference (a – b) minutes	Criteria (a ± 1 minute)	Volt. NLT: 1.3 volt	By Sign & Date	Remarks

Reviewed By: Sign & Date



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ANNEXURE-IV TIME VERIFICATION RECORD OF GPS CLOCK

Make:

Calibration Valid Till:

S.No.	Date	Clock ID	Location	Time on Website	Actual Time in Clock	Time Difference	Done By	Remarks

Reviewed By: Sign & Date