



SABARAGAMUWA UNIVERSITY OF SRI LANKA

ACADEMIC YEAR 2021/2022, YEAR I - SEMESTER I

FACULTY OF GEOMATICS

DEPARTMENT OF SURVEYING AND GEODESY

GROUPS FOR FIELD PRACTICAL PROGRAMME

GROUP 01

22GES1662 Mr. NIMSARA S.V.G.H.
22GES1647 Ms. PREMAKONESWARAN T.
22GES1627 Ms. BANDARA P.M.N.P.
22GES1667 Mr. KAVINDA D.V.H.
22GES1689 Mr. WIJESEKARA W.V.P.M.D.
22GES1708 Mr. DEISAN S.
22GES1755 Ms. RAJATHEJA T.M.M

GROUP 02

22GES1735 Mr. DEVINDA B.G.N.
22GES1714 Mr. ASKEE A.A.M.
22GES1748 Ms SUJANI A.
22GES1738 Ms. DHARMASIRI P.P.T.A.K.
22GES1683 Mr. THENNAKON T.M.N.B.
22GES1650 Mr. PERERA D.H.A.J.D
22GES1728 Mr. RAGUVARAN P.

GROUP 03

22GES1679 Mr. KALANSOORIYA K.D.M.
22GES1718 Mr. DAVINSHAN R.
22GES1715 Mr. RAZEEN P.N.M.
22GES1751 Mr. YANOSHAN V.
22GES1628 Ms. WIJAYARATHNA K.A.D.D.
22GES1701 Mr. WICKRAMASINGHE W.W.A.K.N.
22GES1675 Mr. SENADHEERA S.P.V.L.

GROUP 04

22GES1618 Ms. THATHSARANEE M.W.N.
22GES1710 Mr. THIVVIYARAJ M.
22GES1694 Mr. NANAYAKKARA G.V.P.T.K.
22GES1752 Ms. KIRIJA R.
22GES1741 Ms. BANDARA W.M.N.M.
22GES1762 Mr. KUMARA H.M.M.C.U.
22GES1690 Mr. SANDEEPA G.S.

GROUP 05

22GES1652 Mr. GUNASINGHE G.A.N.S.M.
22GES1637 Ms. ABESINGHA R.M.H.P.
22GES1711 Mr. MANOJKARAN T.
22GES1736 Mr. HERATH R.S.S.H.M.M.P.S.
22GES1767 Ms. HARSHIKA A.
22GES1630 Ms. CHANDRASIRI T.G.I.R.
22GES1669 Mr. DILUKSHAN M.A.A.

GROUP 06

22GES1676 Mr. WIJEWEERA M.S.R.
22GES1638 Ms. THILEKA D.C.S.
22GES1712 Mr. SANOJAN S.
22GES1663 Mr. HASANTHA P.R.
22GES1742 Ms. THILAKARATHNA H.M.H.H.
22GES1685 Mr. HEMAPRIYA B.M.S.
22GES1768 Ms. PENUJA N.



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GROUP 07

22GES1668 Mr. M.R.M. MUAAD
22GES1705 Mr. SAMAM N.M.M.H.
22GES1719 Mr. RAAHUL E.
22GES1680 Mr. GUNAWARDHANA M.A.K.N.
22GES1702 Mr. WICKRAMSINGHE W.M.R.C.B.
22GES1619 Ms. NUHA M.S.F.
22GES1631 Ms. PAMUDITHA W.A.L.

GROUP 08

22GES1691 Mr. PERERA M.M.L.
22GES1707 Mr. FAZEEL M.F.A.S.
22GES1695 Mr. KUMBUREGAMA W.T.D.B.
22GES1720 Mr. SHARANGAN R.
22GES1763 Mr. GUNAPALA I.I.
22GES1745 Ms. PREMAWARDHANA O.Y.G.N.
22GES1769 Ms. SARANGA V.

GROUP 09

22GES1641 Ms. HELANSHIKA A.
22GES1620 Ms. HANSANI E.G.S.
22GES1623 Ms. DINUSHIKA L.G.D.
22GES1739 Mr. HESHAN I.C.
22GES1721 Mr. SANJEEV U.
22GES1670 Mr. JAYASINGHA R.A.G.
22GES1610 Ms. WATHMIKA A.S.

GROUP 10

22GES1658 Mr. NIMSARA H.G.V.
22GES1644 Ms. JEYARANJAN J.
22GES1713 Mr. ILHAM A.M.M.
22GES1664 Mr. KUMARA R.K.S.D.
22GES1722 Mr. VARNAN M.
22GES1687 Mr. MUNAJITH N.L.M.
22GES1633 Ms. RATHNAYAKA R.M.S.J.

GROUP 11

22GES1677 Mr. DHARMARATHNA R.D.I.P.
22GES1646 Ms. NIROJI S.
22GES1716 Mr. ASAM F.
22GES1681 Mr. WEERASOORIYA M.A.U.M.
22GES1723 Mr. KAJAVATHANAN M.
22GES1704 Mr. HERATH H.M.D.S.
22GES1754 Ms. JEEWANTHI R.A.N.

GROUP 12

22GES1692 Mr. SUDUWELLA S.A.H.K.
22GES1624 Ms. WIJESURENDRA U.B.C.
22GES1696 Mr. EKANAYAKE E.M.C.K.B.
22GES1740 Mr. JIDHAN Z.M.
22GES1698 Mr. NIRUSHRUBAN J.
22GES1724 Mr. M.THEEPIKAN
22GES1614 Ms. YAPA Y.A.S.S.



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GROUPS FOR FIELD PRACTICAL PROGRAMME

GROUP 13

22GES1731 Mr. KUMARA M.W.D.P.
22GES1640 Ms. DISSANAYAKE D.M.M.M.
22GES1744 Mr. PATHIRANA K.P.P.A.
22GES1747 Mr. DHEEN D.M.S.
22GES1764 Mr. SAMARASINGHE H.T.B.
22GES1699 Mr. KAVINRAJ P.
22GES1615 Ms. PATHIRANA P.I.A.

GROUP 14

22GES1659 Mr. DULANJANA K.A.U.
22GES1625 Ms. WIJESIRI P.N.K.D.
22GES1666 Mr. RANATHUNGA H.P.E.
22GES1750 Mr. THAJMEEL M.N.M.
22GES1648 Mr. GUNAWARDHANA N.V.P.
22GES1726 Mr. LATHUSAN T.
22GES1634 Ms. SANDAMALI H.M.P.D.

GROUP 15

22GES1639 Ms. JAYASENA W.I.D.
22GES1733 Ms. DISSANAYAKA D.P.G.A.I.
22GES1682 Mr. RAJAPAKSHA R.B.S.
22GES1671 Mr. MADHUSARA M.D.
22GES1688 Mr. MANAGE K.M.S.M.
22GES1729 Mr. RASHID M.R.M.
22GES1766 Ms. GALAPPATHTHI P.A.

GROUP 16

22GES1678 Mr. WIJESINGHE H.D.K.D.
22GES1626 Ms. ABEYRATHNA M.L.M.N.
22GES1697 Mr. HERATH W.M.R.L.
22GES1649 Mr. GUNARATHNE G.A.D.T.
22GES1706 Mr. JAKSHANTH T.
22GES1617 Ms. GURUSINGHE I.D.

GROUP 17

22GES1693 Mr. WITHANAGE K.W.I.M.
22GES1737 Ms. JALESHA R.A.D.
22GES1761 Mr. SIRIWRDHANA I.G.P.D.
22GES1672 Mr. PITUWALAGE P.K.D.C.S.
22GES1727 Mr. THANUSTAN T.
22GES1635 Ms. EKANAYAKA E.M.S.P.



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ACADEMIC YEAR 2021/2022, YEAR I - SEMESTER I

FACULTY OF GEOMATICS

DEPARTMENT OF SURVEYING AND GEODESY

**RESPECTIVE INSTRUCTORS AND SUPERVISORS FOR FIELD PRACTICAL
PROGRAMME**

Group No.	Field Instructor	Field Supervisor
1	Mr. K.A.S.Thilakarathne	Dr. H. Divithure
2	Mr. A.H. Rupasinghe	Prof. H.R.S. Bandara
3	Mr. K.D.N. Jayanatha	Mrs. D.S.Munasinghe
4	Mr. U.A.P.Hapugoda	Mr. A.N.D. Perera
5	Mr. B.B.S.D.Batugampala	Mr. T.D.A. Gomesz
6	Mr. J.Ingaran	Dr. N.M.P.M.Piyasena
7	Ms. R.I.Gayeni	Dr. N.M.P.M.Piyasena
8	Mr. K.S.C.Mendis	Dr. A.K.R.N. Ranasinghe
9	Mr. K.S.C.Mendis	Dr. A.K.R.N. Ranasinghe
10	Mr. M.D.K.G.Gunathilaka	Mrs. D.S.Munasinghe
11	Mr. M.D.K.G.Gunathilaka	Mrs. D.S.Munasinghe
12	Mr. M.V.Gamage	Dr. D.R. Welikanna
13	Mr. M.V.Gamage	Dr. D.R. Welikanna
14	Ms. K.M.D.Hasara	Prof. H.M.I.Prasanna
15	Mr. P.Kabilaharishnan	Prof. H.M.I.Prasanna
16	Ms. M.K.H.Dilshara	Mr. K.K.D.W.S.Kannangara
17	Ms. M.K.H.Dilshara	Mr. K.K.D.W.S.Kannangara



*The establishment of a desired relationship between the fundamental lines of a leveling instrument is termed “**permanent adjustment**”. So, permanent adjustment indicates the rectification of instrument errors.*

Objective

1. Make the axis of the bubble perpendicular to the vertical axis, i.e. the bubble should remain the central position for all direction of the telescope.
2. Make the line of collimation parallel to the axis of the bubble tube.
3. Make the line of collimation coincide with the telescope.

Equipment

Engineer's level with tripod	01	Levelling staves	02
Steel tape	01	Gig umbrella	01
Level plates	02		



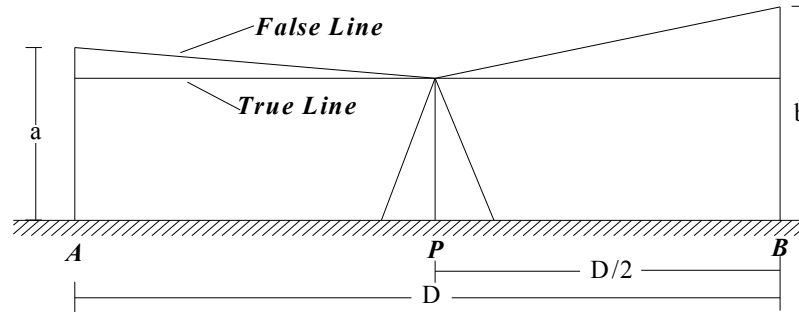
1. Adjustment of the circular level

- a. Set up the instrument; bring “air space” to center of circle etched on the level.
- b. Turn instrument through 180^0 about vertical axis.
- c. If the space does not come to rest exactly in the center of the circle remove half discrepancy by leveling screws and half by the capstan screws under the circular level.
- d. Repeat the process until bubble maintains the central position with regard to the etched circle regardless of the direction in which the telescope is pointed.

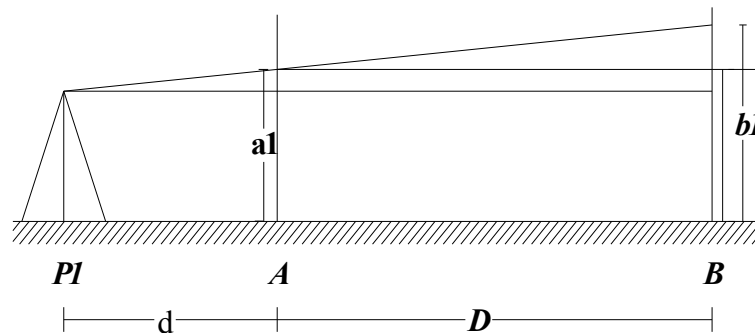
The circular level now gives an indication of verticality of the axis of the instrument.

2. To set the axis of the bubble tube parallel to the line of collimation

- a. Two pegs A and B are driven at a known distance apart (say D) on level and firm ground. The level is setup at P, just mid-way between A and B. After bringing the bubble to the center of its run, the staff readings on A and B are taken. Suppose the readings are a and b.



- b. Now the difference of level between A and B is calculated, this difference is the true difference, as the level is setup just mid-way between BS and FS. Let this difference be h_1 .
- c. The level is shifted and setup at P_1 (very near A), say at a distance d from A. Then after proper leveling, staff readings at A and B are taken. Suppose the readings are a_1 and b_1 . Then the apparent difference of level is calculated. Let this difference be h_2 .



- d. If the true difference and apparent difference are equal (i.e. $h_2 = h_1$), the line of collimation is in adjustment. If not the line of collimation is inclined. $h_2 - h_1$ is the amount by which the line of sight inclined.
- e. If $h_2 - h_1 < 0$, the line of collimation is inclined upwards.
If $h_2 - h_1 > 0$, the line of collimation is inclined downwards.
- f. By applying the principle of similar triangles,

$$\text{Correction to near peg; } e_1 = \frac{d (h_2 - h_1)}{D}$$

$$\text{Correction for far peg, } e_2 = \frac{D+d (h_2 - h_1)}{D}$$

- g. Sighting the staff held at B, alter the reading to $b_1 \pm e_2$ by tilting the telescope with the fine setting screw.
- h. Bring the sensitive bubble back to the center with the capstan-headed screw at the end of the bubble tube.
- i. Check by repeating, c to g.

3. The axis of the level tube should be perpendicular to the vertical axis and adjust the Micrometer scale

- a. Set the gradient screw to read zero. Bring the telescope parallel to two-foot screws, and center the sensitive bubble with the latter.
- b. Turn the telescope through 90^0 and level the 3rd foot-screw.
- c. The process is repeated until the bubble is in the central position in both the directions.
- d. Turn the telescope through 180^0 and position of the bubble is noted. If the bubble remains center no adjustment is necessary; if not, correct half with the gradient screw and half with the foot-screws.
- e. Repeat till the bubble remains in the central position at any position of the telescope.
- f. The vertical axis is now truly vertical and the line of collimation truly horizontal.

Adjustment of Micrometer:

In this position the micrometer should read zero; if not, loosen the locking screw in knurled position of the drum and turn the engraved portion in it's sleeve until it reads zero.

*** ***The respective instructors will demonstrate this adjustment process.***

Students are not allowed to perform any of the permanent adjustments to the instruments. This task will be conducted as a group task.

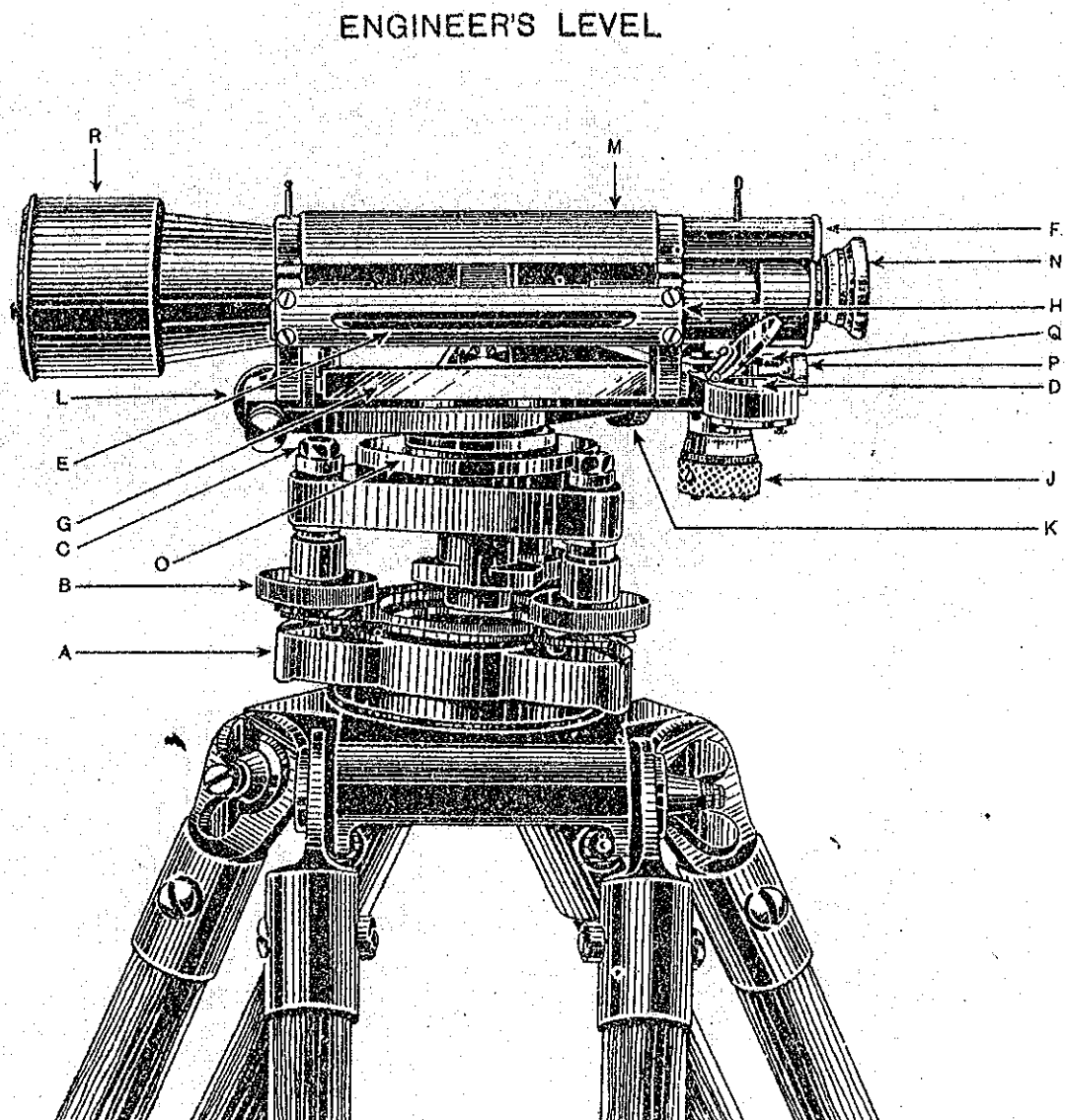
Submissions:

☞ Individual report.

Submission date will be assigned by the respective supervisor.

Aim of the task:

- Identification of parts of an Engineer's level.
- Applications and the different permanent adjustments of an Engineer's level.



A	Trivet stage
B	Leveling screws
C	Adjusting nuts for levelling screws
D	Circular spirit level
E	Guard protecting main spirit level
F	Reading eyepiece for main spirit level
G	Reflector for main spirit level
H	Adjusting screws for main spirit level (not seen)
J	Fine levelling screw and gradienter
K	Azimuth clamp screw
L	Azimuth slow – motion screw
M	Focussing screw (not seen)
N	Screw focussing eyepiece
O	Horizontal circle and guard (where provided)
P	Microscope for reading circle (where provided)
Q	Focussing eyepiece to circle microscope (where provided)
R	Rayshade



Levelling is an operation by means of which the relative elevations as well as the absolute elevations of points on the surface of the earth are determined.

The instrument used for this purpose is called 'Level' accompanied by a 'Graduated Staff'.

Front Page

LEVEL BOOK

200401 Height - 12 mm
(Year/Reg. No./Book No.)

Index Page

LEVEL BOOK No: 200401

Class of Levelling : Ordinary Levelling

Survey of : (Area Description/Name)

Province :

Page	Nature of Work
From --- To (Ex: 01-04)	Level Line from ---- to ---- (Setting Out Surveys-Cross Sections)

* Note whether it is a detail level line or a third order level line, from BM To BM
Via(if there is any touching BMs)

Page Numbering

Page Numbering should be done on the upper left corner of the Left hand side page, upper right corner of the right hand side page and with two digits.

Note:- Before starting the page numbering, student should check whether there is total number of pages. (40 pages)

Before starting the field work, each student should complete the page numbering of every page.

Title of Each Page

DETAILS OF LINE LEVELLED From(BM ..) To(BM..) Via.....

*If there is any touching BM/TBM, It should be written in each page for the duration of the level line in blue/black

Booking

After finished the booking of a level page, the Distance, Back, Fore, Rise and Fall columns should be added and the differences calculated. Then the sum of each column should carry to the first row of the next page.

Rules in booking Level Book

1. If the last reading at the end of a page is an intermediate reading, put it in the F.S. column and the same reading should be put on the second row of the next page in B.S. column with same R.L.
* see annexure 01
2. If the last reading at the end line of a page happens to be actually F.S. reading, it is put in the F.S. column and on second line of the next page put the actual B.S. reading (related to the F.S. reading) with the same R.L.

Corrections

Corrections for Observation

- If booking of an observation is done in a wrong manner, just cut the whole line by a single line and Give the correction certificate near the cancelled line.

* See the annexure 01

Computations

To know whether there is a rise or a fall at a particular point, the rule is always deduct from the proceeding staff reading, the reading of the point and if the result is +ve it indicates there is a rise at the point considered. If the result is -ve, it indicates there is a fall.

Rise and Fall Method

For a check whether the readings are correctly entered in a proper column the rule is,

$$\sum \text{B.S.} - \sum \text{F.S.} = \sum \text{Rise} - \sum \text{Fall} = \text{Last R.L.} - \text{First R.L.}$$

This check is known as **arithmetical check**.

After completing a level line, student should distribute the misclosure by proportionate method.

Accuracy Required for Different types of Levelling

1. Rough Levelling for reconnaissance and preliminary surveys
(Fourth Order)
 $= 120\sqrt{k}$ mm
2. Ordinary Levelling for Location and construction survey
(Third Order)
 $= 24\sqrt{k}$ mm
3. Accurate Levelling for extensive surveys
(Second Order)
 $= 8\sqrt{k}$ mm
4. Precise Levelling
(First Order)
 $= 4\sqrt{k}$ mm

Where k is the distance between Benchmarks measured along the leveling route in km.

Diary

No of Setups :

Distance Levelled :

Distance Travelled:

Weather : (Ex: Fine/Sunny/Windy/Drizzling/Rainy)

Signature

Name

Designation

Date

Date

Annexure 01

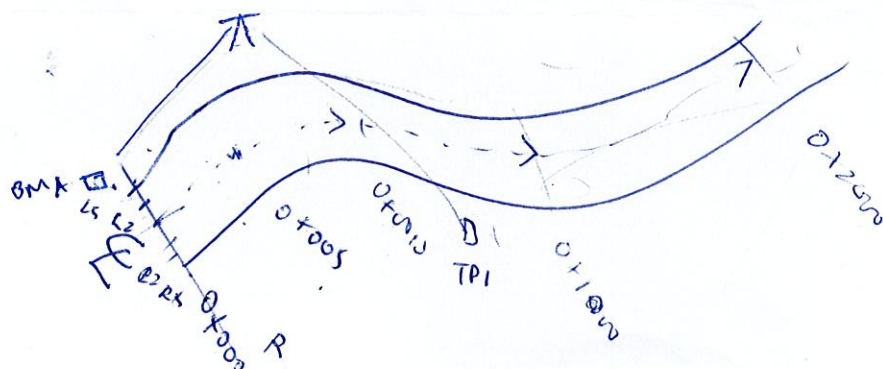
DETAILS OF LINE LEVELLED From BM P To BM Q

Horizontal Distance in meters	Staff Readings			Difference of Level		Reduced Level	Remarks No. and Description etc.
	Back	Inter Mediate	Forward	+	-		
	(2.483)					539.660	On BM P
		1.594		0.889		540.549	0+000
		1.362		1.121		540.781	0+000,R2
		1.359		1.124		540.784	0+000,R5
		1.650		0.833		540.493	0+000,L2
		1.672		0.811		540.471	0+000,L5
		1.277		1.206		540.866	0+005
		1.212		1.271		540.931	0+005,R2
		1.095		1.388		541.048	0+005,R5
		1.263		1.220		540.880	0+005,L2
		1.245		1.238		540.898	0+005,L5
13.00	(1.613)		1.143	1.340		541.000	On TP 1
		1.770			0.157	540.843	0+010
		1.450		0.163		541.163	0+010,R2
		1.468		0.145		541.145	0+010,R5
		1.755			0.142	540.858	0+010,L2
		1.995	1.073	0.382		540.618	0+010,L5
		1.995			0.382	540.618	0+010,L5
10.00	(1.814)		1.073	0.540		541.540	On TP 2
		1.715		0.099		541.639	0+015
		2.713			0.899	540.641	0+015,R2
		2.647			0.833	540.707	0+015,R5
		2.755			0.941	540.599	0+015,L2
		1.722		0.092		541.632	0+015,L5
		1.708		0.106		541.646	0+020
		1.330		0.484		542.024	0+020,R2
		1.652		0.162		541.702	0+020,R5
		2.032			0.218	541.322	0+020,L2
		2.244			0.430	541.110	0+020,L5
		1.103		0.711		542.251	0+025
			0.900	0.914		542.454	0+025,R5
23.00	5.910		3.116	2.794	0.000		
	3.116			0.000			
	2.794			2.794			

One (01) correction by me, initialed and dated thus.

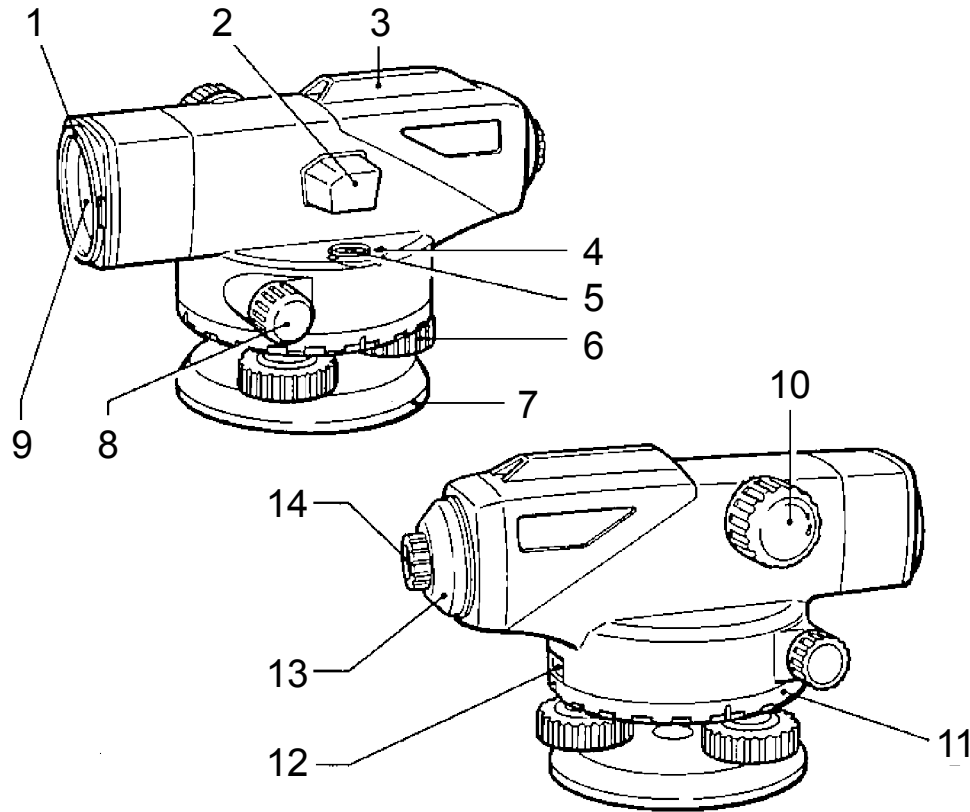
DETAILS OF LINE LEVELLED From BM P To BM Q

Horizontal Distance In meters	Staff Readings			Difference of Level		Reduced Level	Remarks No. and Description etc
	Back	Inter Mediate	Forward	+	-		
23.00	5.910		3.116	2.794	0.000		
	0.900					542.454	0+025.R5
10.00	1.372		0.711	0.189		542.643	On TP 3
4.00			1.106	0.266		542.909	On BM Q
37.00	8.182		4.933	3.249	0.000	542.912	B.M.Q.
	4.933			0.000			
	3.249			3.249			
							In Red colour
No. of setups : 03							
Distance levelled : 100m							
Distance travelled : 1 km							
Weather : Sunny							
KS.. ..							
Student (SUSL)							
01/07/08							
Reduced Level of B.M. 18 = red							
Reduced Level of H 19 = red							
Height difference = RL of B.M.18 - RL of H 19 =							
Obtained height difference =							
Obtained error =							
Allowable error = $\pm c\sqrt{k}$							



4. PARTS OF THE INSTRUMENT

(Instrument shown: B20)



1. Lens hood (B20 only)
2. Prism (B20)/Reflector (B30/40)
3. Peep sight^{*1}
4. Circular level adjusting screw
5. Circular level
6. Leveling foot screw
7. Base plate
8. Horizontal fine motion screw
9. Objective lens
10. Focussing knob
11. Horizontal circle positioning ring
12. Horizontal circle window
13. Reticle adjusting screw cover
14. Eyepiece^{*2}

^{*1} The B40 has a gun sight.

^{*2} The B20 eyepiece is detachable.



Levelling, or the determination of the relative altitude of points on the Earth's surface, is an operation of prime importance to the engineers, both in acquiring data for the design of all classes of works, and during construction operations. The simplest operation with the Level is to determine the difference of level between two points so situated that, from one position of the instrument, readings can be taken on a staff held successively upon them. The precise situation of the instrument is immaterial but, to minimize the effects of possible instrumental error and other complications, the two sights should be of equal lengths or nearly so [Jackson].

Objective

The aim of this practical programme is to establish the difference of levels,

- Between two points close to each other and
- To establish the difference of level between benchmarks some distance apart using series leveling.

Equipment

Level	01	Linen Tape	01	Gig Umbrella	01
Levelling Staves	02	Wooden pegs to be used as change points (turning points)			

Field Work

- ☞ Each student of group should do the following two programmes individually.

Programme A

- ☞ Drive two wooden pegs about 20m apart and set up the level in the middle.
- ☞ Observed and book the staff reading on each peg.
- ☞ Move the instrument to a different position and observe the same pegs successively. Check the height different between two points for both.
- ☞ Select two points about 50m apart and drive two wooden pegs.
- ☞ Establish the difference of level between these two points using two instrument set-ups. (i.e. By using a turning point in between the points.)
- ☞ Repeat this exercise three times. Check the height difference between two points for each time.

Note

Programme B

- ☞ Establish the difference between the Benchmarks assigned to each group.
- ☞ This is an individual practical.
- ☞ Each observer must set up the instrument himself/herself. Readings should be taken and booked to the third decimal place of a metre. The observer himself/herself must book his/her readings in a Level Book. The method adopted should be the “Rise and Fall Method”.
- ☞ Wooden pegs driven firmly to the ground should be used as turning points. The distance from instrument to staff should be measured and booked to two decimals.
- ☞ Each group should complete this practical programme according to the schedule (7 days including Adjustment of a Level)
- ☞ Maximum allowed tolerance for the level line misclose should be checked against the formula $C\sqrt{K}$ (C root K), where C is the closeness factor & K is the total distance levelled in kilometers.

Completed Level Book and a Report should submit on the date assigned by the respective supervisor.

(Level Book must be initialized by the respective instructor and the supervisor prior to the final submission)

**Department of Surveying & Geodesy, Faculty of Geomatics
Sabaragamuwa University of Sri Lanka**

Year I Semester I

LDSP 05 – Ordinary Levelling : Description of Level Lines

Level Line (LL)	Bench Mark		
	From	Touching	To
LL1	BM-1	GPS06, GPS07, GPS08, GPS10, GPS09	BM-F
LL2	BM-F	GPS09, GPS10, GPS11, GPS03, GPS02, GPS01, GPS-Base	BM-P
LL3	BM-O	GPS09, GPS10, GPS08, GPS07, GPS06	BM-1
LL4	BM-B	GPS11, GPS09, GPS10, GPS08, GPS07, GPS06	BM-1
LL5	BM-C	GPS10, GPS08, GPS07, GPS06, GPS03, GPS11	BM-B
LL6	BM-P	GPS02, GPS01, GPS03, GPS11	BM-C
LL7	BM-D	GPS02, GPS-Base, GPS01, GPS03, GPS11	BM-B

Group	Student						
	1	2	3	4	5	6	7
1	LL1	LL2	LL3	LL4	LL5	LL6	LL7
2	LL1	LL2	LL3	LL4	LL5	LL6	LL7
3	LL2	LL3	LL4	LL5	LL6	LL7	LL1
4	LL2	LL3	LL4	LL5	LL6	LL7	LL1
5	LL3	LL4	LL5	LL6	LL7	LL1	LL2
6	LL3	LL4	LL5	LL6	LL7	LL1	LL2
7	LL4	LL5	LL6	LL7	LL1	LL2	LL3
8	LL4	LL5	LL6	LL7	LL1	LL2	LL3
9	LL4	LL5	LL6	LL7	LL1	LL2	LL3
10	LL5	LL6	LL7	LL1	LL2	LL3	LL4
11	LL5	LL6	LL7	LL1	LL2	LL3	LL4
12	LL6	LL7	LL1	LL2	LL3	LL4	LL5
13	LL6	LL7	LL1	LL2	LL3	LL4	LL5
14	LL7	LL1	LL2	LL3	LL4	LL5	LL6
15	LL7	LL1	LL2	LL3	LL4	LL5	LL6
16	LL1	LL2	LL3	LL4	LL5	LL6	LL7
17	LL1	LL2	LL3	LL4	LL5	LL6	LL7

Department of Surveying & Geodesy
Faculty of Geomatics
Sabaragamuwa University of Sri Lanka

Benchmark Locations



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FACULTY OF GEOMATICS
SABARAGAMUWA UNIVERSITY OF SRI LANKA

YEAR I SEMESTER I
LDSP 05 – ORDINARY LEVELLING
BENCH MARK VALUES

Benchmark ID	Benchmark Value
BM-01	1000.612
BM-B	995.382
BM-C	990.239
BM-D	991.716
BM-F	987.619
BM-O	999.078
BM-P	998.619

Date: 06.06.2022