

Description

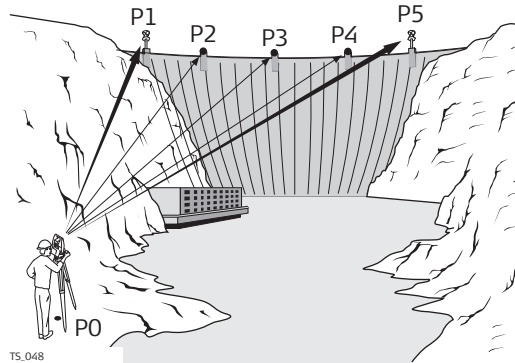
Sets of Angles:

- This application is used to measure multiple sets of directions and distances (optional) to pre-defined target points in one or two faces. The application can include Monitoring as an option.
- The mean direction and mean distance (optional) to each target point, within a set is calculated. The residual for each direction and distance (optional) within a set is also calculated.
- The reduced average direction and average distance (optional) to each target point, for all active sets is calculated.
- Coordinates to each target point are calculated using the reduced average direction and average distance (optional).

Monitoring:

- This module can be integrated within the Sets of Angles program.
- With this module, it is possible to use a timer to enable repeated and automated angle and distances measurements to pre-defined target points at defined intervals.

Diagram



Known:

- P1 Pre-defined target point - E,N,Height (optional)
- P2 Pre-defined target point - E,N,Height (optional)
- P3 Pre-defined target point - E,N,Height (optional)
- P4 Pre-defined target point - E,N,Height (optional)
- P5 Pre-defined target point - E,N,Height (optional)

Unknown:

- a) Mean direction and mean distance (optional) to each target point, within a set
- b) Mean coordinates (optional) for each target point, for all active sets
- c) Residual for each direction and distance (optional), within a set
- d) Reduced average direction and average distance (optional) to each target point, for all active sets

Measure at least:

- a) Two target points
- b) Two sets

Automatic aiming

Automatic aiming (search and measurements) can be performed to a prism. After completing the first measurements to each target point, the measurements to the target points in subsequent sets are automated.

Station setup and station orientation

If oriented grid coordinates are to be recorded, a station set up and station orientation is required before starting the Sets of Angles application.

Point properties

The properties stored with Sets of Angles points are:

- Class: **Meas** or **None**
 - Sub class: **TPS**
 - Source: **Sets of angles**
 - Instrument source: **TPS**
-

Point averaging

Sets of Angles points are never calculated as an average, even if a measured point of class **Meas** already exists with the same point ID.

49.2

49.2.1

Access

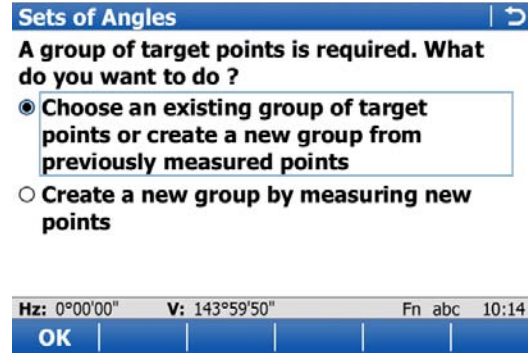
Sets of Angles

Sets of Angles

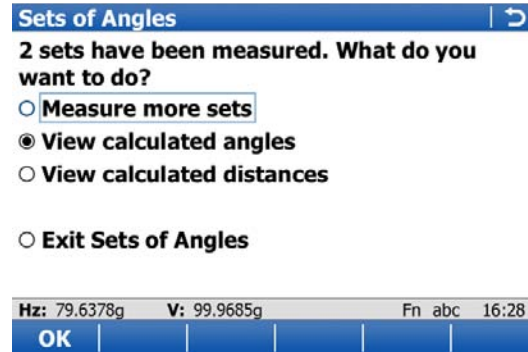
Accessing Sets of Angles

Select **Main Menu: Go to Work!\Survey+\Sets of angles.**

At the beginning of the application, the screen looks like this:



After the sets have been measured, the screen looks like this:



Key	Description
OK	To select the highlighted option and to continue with the next screen.
Fn Config..	To configure the Sets of Angles application. Refer to "49.2.2 Configuring Sets of Angles".
Fn Quit	To exit the application.

Description of options

Options	Description
Choose an existing group of points or create a new group from previously measured points	To create, edit and manage a points group of the target points for the survey. Refer to "49.2.3 Managing the Points Groups".

Options	Description
Create a new group by measuring new points	To define the target points and to measure the first set. Refer to "49.2.4 Measuring the New Points".
Measure sets	Available after a point group has been created or selected. To sets. Refer to "Measure Sets".
Calculate & view angles	To calculate horizontal/vertical angles and their residuals. Refer to "49.2.6 Calculations - Calculating Angles and Distances in Two Faces".
Calculate & view distances	To calculate distances and their residuals. Refer to "49.2.7 Calculations - Viewing Angle and Distance Results in Two Faces".
Calculate coordinates using mean observations	Refer to "49.2.9 Calculation of Points".
Exit Sets of Angles	To end the Sets of Angles program.

49.2.2

Configuring Sets of Angles

Access

Select **Main Menu: Go to Work!\Survey+\Sets of angles**. Press **Fn Config...**

Configuration, Parameters page

The explanations for the softkeys given here are valid for all pages, unless otherwise stated.

Configuration | >

Parameters | Advanced | Tolerances | Report sheet

Measure method: A'A''B''B'

Page to show: Code

Stop measuring for: All messages

Time out: No time out

Define time when sets should be measured (timer monitoring)

Hz: 100.0001g V: 100.0000g Fn abc 08:35

OK | | | | Page

OK

To accept changes and return to the screen from where this screen was accessed.

Config..

To edit the survey screen page currently being displayed. Available when a list item in **Page to show** is highlighted. Refer to "24.3 My Survey Screen".

Page

To change to another page on this screen.

Fn About

To display information about the program name, the version number, the date of the version, the copyright and the article number.

Fn Quit

To exit the application.

Description of fields

Field	Option	Description
Measure method		Determines the order in which the target points are to be measured.
	A'A"B"B'	The target points are measured in face I and face II. point A I - point A II - point B II - point B I ...
	A'A"B'B"	The target points are measured in face I and face II. point A I - point A II - point B I - point B II ...
	A'B'A"B"	The target points are measured in face I and face II. point A I - point B I... point A II - point B II ...
	A'B'B"A"	The target points are measured in face I and face II. point A I - point B I... point B II - point A II...
	A'B'C'D'	The target points are only measured in face I. point A I - point B I - point C I - point D I ...
Page to show	Selectable list	The names of the available survey screen pages.
Stop measuring for		To define what action is taken when a message screen appears during a measurement set.
	All messages	All message screens are displayed as per normal and are closed as defined by the settings in Time out .
	To exceeded only	Only the message screen relating to the exceeding of tolerances is displayed and is closed as defined by the settings in Time out .


Field	Option	Description
	Never stop	No message screens are displayed except for specific warnings. Specific warnings which affect the instrument and its ability to continue with the monitoring process will be displayed and will remain on the screen. These warnings include the overheating of the instrument, low battery levels, or unavailable space on the data storage device.
Time out	No time out	To define the time delay for the automatic closing of message screens during a measurement set. This selectable list is not available when Stop measuring for: Never stop . There is no automatic closure of message screens. When a message screen appears, it is only closed by pressing Yes .
	1 sec to 60 sec	All message screens are automatically closed as defined by these individual time settings.
Define time when sets should be measured (timer monitoring)	Check box	This field is only available when Monitoring is registered through the licence key. When this box is checked, automatic monitoring of target points is activated. When this box is not checked, automatic monitoring of target points is not activated. The Sets of Angles application will apply.

Configuration, Advanced page

Next step

Page changes to the **Advanced** page.

Description of fields

Field	Option	Description
Re-measure points	Never	To define the action if a target point cannot be measured. The target point is skipped and the next target point in the list is measured.
	Automatically	The measurement to the target point is repeated automatically.  The option for Measure mode in Measure & Target Settings is also changed for the repeated measurement. If the option is changed, then it is applied to all following sets.
	Manually	The measurement to the target point can be repeated manually or the target point can be skipped.

Next step

Page changes to the **Tolerances** page.

Configuration, Tolerances page

Description of fields

Field	Option	Description
Use tolerances	Check box	If checked, the entered horizontal, vertical and distance tolerances are checked during the measurements to verify accurate pointing and measurements.
Hz tolerance	Editable field	Tolerance for horizontal directions.
V tolerance	Editable field	Tolerance for vertical directions
Distance tolerance	Editable field	Tolerance for distances.

Next step

Page changes to the **Report sheet** page.

Configuration, Report sheet page

Description of fields

Field	Option	Description
Create report sheet	Check box	To generate a report sheet when the application is exited. A report sheet is a file to which data from an application is written to. It is generated using the selected format file.
Report sheet	Selectable list	Available when Create report sheet is ticked. The name of the file to which the data will be written. A report sheet is stored in the \DATA directory of the active memory device. The data is always appended to the file. Opening the selectable list accesses the Report Sheets screen. On this screen, a name for a new report sheet can be created and an existing report sheet can be selected or deleted.

Field	Option	Description
Format file to use	Selectable list	Available when Create report sheet is ticked. A format file defines which and how data is written to a report sheet. Format files are created using LGO. A format file must first be transferred from the data storage device to the internal memory before it can be selected. Refer to "29.1 Transfer user objects" for information on how to transfer a format file. Opening the selectable list accesses the Format Files screen where an existing format file can be selected or deleted.

Next step

Page changes to the first page on this screen.

49.2.3

Managing the Points Groups

Description

A point group of the target points for the survey can be created, edited and managed. New points are always added from the fixpoint job, as defined in the **Sets of Angles Begin** screen.

Access

Highlight **Choose an existing group of points or create a new group from previously measured points** in **Sets of Angles** and **OK**.

Point Groups

Point Groups	
Group	No. points
123	3

Hz: 100.0002g	V: 100.0001g	Fn abc	11:44	
OK	New..	Edit..	Delete	More

Key	Description
OK	To continue with the next screen.
New..	To create a new points group.
Edit..	To edit an existing points group.
Delete	To delete an existing points group.

Key	Description
More	To display additional information.
Fn Quit	To exit the application.

Next step

New.. to access **New Point Group**.

New Point Group, General page

New Point Group | →

General Points

Point group name:

Automatically survey points

Auto sort points

Hz: 100.0002g V: 100.0001g Fn abc 11:45

Store | Page

Key	Description
Store	To store the new points group.
Page	To change to another page on this screen.
Fn Quit	To exit the application.

Description of fields

Field	Option	Description
Point group name	Editable field	The name of the points group.
Automatically survey points	Check box	Check this box to survey the target points automatically. The instrument will automatically turn and measure the target point. For instruments with automatic aiming.
Auto sort points	Check box	Check this box to sort the target points automatically. The instrument will work in a clockwise direction and find the shortest path to move between the target points.

New Point Group, Points page

Select Points	
Point	Point code
TPS0001	SV
TPS0002	TSB
TPS0003	ELP

Hz: 395.4943g	V: 100.8935g	Q1 abc	11:06
Store	+ All	+ 1	Remov More Page

Key	Description
Store	To store the points to the group.
+ All	To add points from the fixpoint job to the group.
+ 1	To add one point from the fixpoint job to the group.
Remov	To remove the highlighted point from the group. The point itself is not deleted.
More	To display additional information.
Page	To change to another page on this screen.
Fn Rmv all	To remove all points from the group.
Fn Quit	To exit the application.

49.2.4

Measuring the New Points

Description

The points to be used for Sets of Angles can be selected and the first set measured. The measurement settings of the first measurement to each point are used for all further sets.

Access

Highlight **Create a new group by measuring new points** in **Sets of Angles** and **OK**.

Define Points for Set

Define Points for Set | →

Points measured: 1

Point ID:

Target height: m

Target:

Leica constant: 0.000mm

Automatically survey this point

Hz: 195.4932g V: 299.1060g Q1 abc 10:14

OK | **Done**

Key	Description
OK	To measure the entered point and to access Select Points - Survey .
Done	To finish selection of points and access Sets of Angles for further steps.
Fn Get Pt	To select points stored in the database.
Fn IndividID and Fn Run	To change between entering an individual point ID different to the defined ID template and the running point ID according to the ID template. Refer to "24.1 ID templates".
Fn Quit	To exit the application.

Description of fields

Field	Option	Description
Automatically survey points	Check box	Available for instruments with automatic aiming and Target aiming: Automatic . If checked, search and measurements are done to specified targets in additional sets.

Next step

IF	THEN
new or selected points are to be measured	OK to access Select Points - Survey .
existing points are to be selected	Fn Get Pt to select a point from Data, Points page.
all desired points have been selected and measured	Done to return to the Sets of Angles .

Select Points - Survey,
Sets page

Key	Description
Meas	To measure and store the angles and distance, and to return to Define Points for Set .
Dist	To measure a distance.
Store	To store data and to return to Define Points for Set .
Positn	To position the instrument to the selected target point. Available if the target point has been selected using Fn Get Pt in the Define Points for Set screen.
Page	To change to another page on this screen.
Fn Quit	To exit the application.

Description of fields

Field	Option	Description
Δ Hz	Display only	Difference between the current horizontal angle and the horizontal angle to this target when selected.
Δ AR	Display only	Available when Hz angle display: Angle right is configured in Regional Settings, Angle page. Difference between the current angle right and the angle right to this target when selected.
Δ V	Display only	Difference between the current vertical angle and the vertical angle to this target when selected.
Δ slope	Display only	Difference between the current slope distance to the target and the slope distance to this target when selected.

Next step

Meas to measure and store the angles and distance, and to return to **Define Points for Set**.

49.2.5

Measuring the Sets

Description

The selected points from **Measure new points** are used for measuring further sets. The settings of measurements are taken from the first measurement to each target.

Access

Highlight **Measure Sets** in **Sets of Angles** and **OK**.

Measure Sets

Measure Sets | ↩

Enter number of sets to be measured

No. of sets: 2

No. of points: 3

Measure method: A'A''B''B'

Hz: 299.9996g V: 249.9998g Fn abc 12:16

OK

Key	Description
OK	Opens a screen to measure the points. When auto survey is activated, measurements are done automatically.
Fn Config..	To configure the Sets of Angles application. Refer to "49.2.2 Configuring Sets of Angles".
Fn Quit	To exit the application.

Description of fields

Field	Option	Description
No. of sets	Editable field	The number of sets to measure with the target points. There is a maximum of 99 sets allowed.
No. of points	Display only	The number of target points.
Measure method	Display only	The order in which the target points are measured.
	A'A"B'B'	The target points are measured in face I and face II. point A I - point A II - point B II - point B I ...
	A'A"B'B"	The target points are measured in face I and face II. point A I - point A II - point B I - point B II ...
	A'B'A"B"	The target points are measured in face I and face II. point A I - point B I... point A II - point B II ...
	A'B'B"A"	The target points are measured in face I and face II. point A I - point B I... point B II - point A II...
	A'B'C'D'	The target points are only measured in face I. point A I - point B I - point C I - point D I ...

Next step

OK to measure further sets of the defined points.

Set n of n, Pt n of n,
Sets page

Set 2 of 3, Pt 1 of 3

Sets Appl Map

Point ID: TPS0001

Target height: 1.500 m

Hz: 395.4934g

V: 100.8934g

Slope distance: 106.831m

Δ Hz: 0.0001g

Δ V: 0.0003g

Hz: 395.4934g V: 100.8937g Q1 abc 10:20

Meas Dist Store Skip Done Page

Key	Description
Meas	To measure and store the angles and distances, and to increment to the next point.
Dist	To measure a distance.
Store	To store data and to increment to the next point.
Skip	To skip measuring the displayed point and continue with the next point.
Done	To end the sets of angles measurements and to return to Sets of Angles .
Page	To change to another page on this screen.
Fn Positn	To position the instrument to the selected target point.
Fn Quit	To exit the application.

Description of fields

Field	Option	Description
ΔH_z	Display only	Difference between the current horizontal angle and the horizontal angle to this target when selected.
ΔV	Display only	Difference between the current vertical angle and the vertical angle to this target when selected.
Δslope	Display only	Difference between the current slope distance to the target and the slope distance to this target when selected.

Next step

Meas to measure further sets of the selected points.



- Motorised instruments point automatically in the direction of the targets.
- Instruments with automatic aiming and auto survey activated, measure the targets automatically.



For the calculation, two entire sets must be measured. Horizontal and vertical angles and distances can be calculated individually.

49.2.6

Calculations - Calculating Angles and Distances in Two Faces

Description

For two or more sets, measured with angles and distances in two faces calculations can be done for angles and distances. For sets measured in one face, the results can be viewed but no calculations are done. Refer to "49.2.8 Calculations - Viewing Results in One Face" for more information.

Access

Highlight **Calculated Angles** or **Calculated Distances** in **Sets of Angles** and **OK**.

Calculated Angles/Calculated Distances, Hz set/V set/Distance set page

The softkeys are the same for vertical angles, horizontal angles and distances.

Calculate Angles | ↻

Hz Set | V Set | Plot

Points active: 3
Sets active: 3

SD single direction: 0.0002g
SD avg direction: 0.0001g

Hz: 395.4932g | V: 100.8936g | Q1 abc | 10:21

OK | | More | Page

Key	Description
OK	To access Sets of Angles .
More	To view results of calculation. Refer to "49.2.7 Calculations - Viewing Angle and Distance Results in Two Faces".
Page	To change to another page on this screen.
Fn Quit	To exit the application.

Description of fields

Field	Option	Description
No. of points active	Display only	Number of active points which are set to Yes in the Use column and used for calculation.
No. of sets active	Display only	Number of active sets which are set to Yes in the Use column and used for calculation.
σ single direction	Display only	Standard deviation of a single horizontal or vertical direction.
σ single distance	Display only	Standard deviation of a single distance.
σ avg direction	Display only	Standard deviation of the average horizontal or vertical direction.
σ avg distance	Display only	Standard deviation of the average distance.

Next step

Page accesses the **Plot** page. The functionality and softkeys available are described in the MapView chapter. Refer to "36.4.1 Screen Area" for information functionality.

49.2.7

Calculations - Viewing Angle and Distance Results in Two Faces

Access

Press **More** in **Calculated Angles** or **Calculated Distances**.

Angle Results/Distance Results

Angle Results			
Set	Use	Hz Σr	V Σv
1	Yes	0.0004g	-0.0000g
2	Yes	-0.0004g	0.0000g
3	No	-----	-----

Hz: 395.4933g	V: 100.8935g	Q1 abc	10:23
OK	Edit..	Use	

Key	Description
OK	To return to the previous screen.
Edit..	To access View Residuals in Set n .
Use	To set Yes or No in the Use column for the highlighted set.
Fn Quit	To exit the application.

Description of columns

Column	Description
Set	Displays the numbers of all sets measured.

Column	Description
Use	For Yes : The selected set is used for calculations. For No : The selected set is not used for calculations.
Hz Σr	Shows the calculated sum of residuals in Hz of the selected set. The sum of residuals is the sum of the difference between the reduced average direction and each sets directions. For sets not used in the calculation, ----- is shown.
V Σr	Shows the calculated sum of residuals in V of the selected set. The sum of residuals is the sum of the difference between the average vertical angles and each sets vertical angles. For sets not used in the calculation, ----- is shown.

Next step

Edit.. to access **View Residuals in Set n.**

View Residuals in Set n

Residuals in Set 1			
Point ID	Use	sd	Resdl V
TPS0001	Yes	0.0000g	0.0000g
TPS0002	Yes	0.0003g	0.0000g
TPS0003	Yes	0.0001g	-0.0001g

Hz: 395.4938g	V: 100.8935g	Q1 abc	10:25
OK		Use	More

Key	Description
OK	To return to the previous screen.
Use	To set Yes or No in the Use column for the highlighted point.
More	To view additional information.
Fn Quit	To exit the application.

Description of columns when calculating angles

Column	Description
Point ID	This column is always visible. Point ID of the measured points in the order they were defined and measured in Measure new points .

Column	Description
Use	For Yes : The selected point is used for calculations in all sets. For No : The selected point is not used for calculations in any set.
sd	Residual in the Hz value of the selected point within the single set.
Resdl V	Residual in the V value of the selected point within the single set.
Avg Hz	Reduced Average Hz value of the point in all active sets.
Avg V	Average V value of the point in all active sets.
Mean Hz	Mean Hz value of the point within the single set.
Mean V	Mean V value of the point within the single set.

Description of columns when calculating distances

Column	Description
Point ID	This column is always visible. Point ID of the measured points in the order they were defined and measured in Measure new points .
Use	For Yes : The selected point is used for calculations in all sets. For No : The selected point is not used for calculations in all sets.
Resdl SD	Residual in the distance value of the point within the single set.
Avg SD	Average distance value of the point in all active sets.
Mean SD	Mean distance value of the point within the single set.

49.2.8

Calculations - Viewing Results in One Face

Access

Highlight **Calculated Angles** or **Calculated Distances** in **Sets of Angles** and press **OK**.

Single Face Results

Single Face Results		
Point ID	SD Hz	Avg Hz
TPS0001	0.0003g	395.4945g
TPS0002	0.0001g	395.4946g
TPS0003	0.0001g	395.4948g

Hz: 395.4947g	V: 100.8938g	Q1 abc	10:28
OK		More	

Key	Description
OK	To return to the previous screen.
More	To view additional columns.
Fn Quit	To exit the application.

Description of columns

Column	Description
Point ID	Point ID of the measured points in the order they were defined and measured in Measure new points .

Column	Description
σ Hz angle	Standard deviation of all Hz readings to the point.
Avg Hz	Average value of all Hz readings to the current point.
σ V angle	Standard deviation of all V readings to the current point.
Avg V	Average value of all V readings to the current point.
σ distance	Standard deviation of all distance measurements to the current point.
Avg SD	Average value of all distance measurements to the current point.

49.2.9

Calculation of Points

Access

Calculate coordinates using mean observations,
General page

Highlight **Calculate coordinates using mean observations** in **Sets of Angles** and **OK**.

Key	Description
Store	To store the results and continue with the next screen.
Page	To change to another page on this screen. The functionality and softkeys available on the Plot page are described in the MapView chapter. Refer to "36.4.1 Screen Area" for information functionality.
Fn Quit	To exit the application.

Description of fields

Field	Option	Description
No. of points active	Display only	The number of selected points having been measured.
No. of sets active	Display only	The number of sets having been measured.
Store points to job	Selectable list	The calculated points will be stored in this job. The original points are not copied to this job. The working job is selected: If a measurement triplet with the same point ID measured outside the application exists in the job, then the point can be stored with a pre-/suffix or it can be disabled from the calculation. A job other than the working job is selected: The point is stored with class CTRL. The angles and distances are stored as point results to the point in the database

Field	Option	Description
Store Point ID with	Prefix	Adds the setting for Prefix/suffix in front of the original point IDs.
	Suffix	Adds the setting for Prefix/suffix at the end of the original point IDs.
Prefix/suffix	Editable field	The identifier with up to four characters is added in front of or at the end of the ID of the calculated points.

Description

Monitoring is a module integrated within the Sets of Angles application. Monitoring uses a timer to enable repeated and automated angle and distances measurements to pre-defined target points at defined intervals. The ability to configure the handling of message screens during measurement sets is also enabled.

Important aspects

For monitoring, instruments must be motorised.

Monitoring is licence protected and is only activated through a licence key. The licence key can be entered manually or loaded from the data storage device.

Monitoring preparation

This step-by-step description is an example on preparing a set for monitoring.

Step	Description
1.	Set station coordinates and station orientation.
2.	Select Main Menu: Go to Work!\Survey+\Sets of angles.
3.	In Stakeout , select the control job and press OK .
4.	In Sets of Angles press Fn Config.. to configure Sets of Angles for monitoring. For the Parameters page set: <ul style="list-style-type: none"> • Measure method: A'B'A"B" (for example purposes only). • Page to show: None (for example purposes only). • Stop measuring for: All messages (for example purposes only). • Time out: 10 secs (for example purposes only).

Step	Description
	<ul style="list-style-type: none"> • Define time when sets should be measured (timer monitoring) (this option must be selected for monitoring). This setting will enable access to the Define Monitoring Timer screen.
5.	Press OK to access the Sets of Angles screen.
6.	Select Measure new points .
7.	Press OK to access the Define Points for Set screen.
8.	<p>Enter details of the target point as required.</p> <p>For each target point, ensure that auto survey is activated. This setting will enable the automated measurement and recording of the target point in the other face. The setting also enables the automated measurement and recording of all target points during monitoring.</p>
9.	Press OK to access the Select Points - Survey screen.
10.	Measure and record the measurement to the target point as required.
11.	Continue with steps 8. to 10. until all target points for the first measurement set have been measured and recorded.
12.	Press Done to complete the selection of the target points for the first measurement set in one face. This action then begins the measurement of the target points in the other face. On completion, the Sets of Angles screen will be accessed.
13.	Select Measure Sets .
14.	Press OK to access the Define Monitoring Timer screen.

Define Monitoring Timer

Description of fields

Field	Option	Description
Begin date	Editable field	Start date for monitoring.
Begin time	Editable field	Start time for monitoring.
End date	Editable field	End date for monitoring.
End time	Editable field	End time for monitoring.
Interval	Editable field	The time between the start of each scheduled measurement set.
Stop measuring for	Selectable list	To define what action is taken when a message screen appears during a measurement set. The setting for this editable field has already been defined in the configuration. It can be changed in this screen if desired, before starting the monitoring process.
Time out	Selectable list	To define the time delay for the automatic closing of message screens during a measurement set. This selectable list is not available for Stop measuring for: Never stop . The setting for this editable field has already been defined in the configuration. Here, it can be changed if desired, before starting the monitoring process.

Next step

When all required information is entered press **OK** to begin the monitoring process.

A screen displays a notice that monitoring is in progress. If necessary, press **Cancel** to stop the monitoring process and return to **Sets of angles menu**.
Refer to "49.2 Sets of Angles" for information about calculations and the viewing of results.

Monitoring interval

Description

The dates and times entered define the timeframe for when the monitoring will take place. The time interval defines the time between the start of each measurement set during the monitoring period. The interval time begins at the start of a measurement set and ends at the start of the next measurement set.

Example

Data;

- 3 target points
- Begin Date: 03.11.2010
- End Date: 06.11.2010
- Interval: 30 min
- 4 measure sets
- Begin Time: 14:00:00
- End Time: 14:00:00

Results;

- The time taken to measure 4 sets of 3 target points in both faces is 10 minutes.
 - The measurements will start at 14:00:00 on 03.11.2010.
 - At 14:10:00, the first measurement set is complete.
 - The instrument will wait until 14:30:00 for the next scheduled measurement set.
-