



Australian Government

DEFCA202B Conduct field survey to determine fixation and orientation

Release 2

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Modification History

Release	TP Version	Comments
2	DEF12 V2	Application added. Evidence Guide updated.
1	DEF12 V1	First release

Unit Descriptor

This unit covers the competency required to conduct a field survey to determine fixation and orientation.

This survey is normally conducted by at least two people. One person will be the observer and one will record data. This unit of competency covers both roles.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication. In a Defence context, this means that there is no civilian need to hold this unit in order to meet licensing, legislative, regulatory or certification requirements.

Application of the Unit

This competency was developed for combat arms personnel required to conduct a field survey to determine fixation and orientation in a deployed operational environment but is applicable to any individual in this field of work.

Typically, operators as part of a two man team under direct and/or indirect supervision, use discretion and judgement, and take responsibility for the quality of their outputs.

All activities are carried out in accordance with relevant organisational policies and procedures.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for survey

- 1.1 Purpose and requirements of the survey are identified from written or oral instruction from supervisor.
- 1.2 Specifications of the survey are confirmed and clarified with supervisor.
- 1.3 Equipment required for the survey is selected and checked for serviceability in accordance with manufacturers' instructions.

2. Conduct survey tasks

- 2.1 *Survey equipment* is operated to determine orientation and fixation as determined by the survey scheme.
- 2.2 Data from the survey is recorded in field book or other proforma in accordance with organisational procedures and supervisor's instructions.
- 2.3 Results are verified for omissions and errors by re-checking visual clues in measurements or actual data.
- 2.4 *Survey data is communicated* in accordance with *standard procedures*.
- 2.5 *Survey control points* are established and recorded in accordance with standard procedures.
- 2.6 Supervisor and colleagues are communicated with regularly throughout the survey activity to ensure smooth operation and progress.
- 2.7 Survey equipment is *maintained* in accordance with standard procedures.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- use communication systems
- interpret data
- record information

Required Knowledge

- analytical processes
- characteristics, tabulated data and limitations of the survey equipment
- communication procedures
- principles of survey

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- use the following equipment:
 - GPS orientation and fixation equipment
 - gyroscopic orientation equipment
 - angular measurement equipment (as an example theodolite)
 - compass
 - distance measurement devices
- work as part of a team
- work in a stressful environment

Consistency in performance

Competency should be demonstrated over time and across a range of simulated or actual workplace situations.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in the workplace or in a simulated workplace environment.

Specific resources for assessment

Access to appropriate survey equipment and area.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

- | | |
|--|---|
| <i>Survey equipment</i> may include: | <ul style="list-style-type: none"> • ARTILLERY gun laying system (gun mounted global positioning system (GPS) receiver systems) • artillery orienting system • director artillery • electronic distance measuring equipment • gyroscopic orientator • hand held GPS receiver • illumination equipment • manual distance measuring equipment • orienting equipment • other equipment • station markers • theatre grid system • theodolite |
| <i>Survey data</i> may include: | <ul style="list-style-type: none"> • initialisation data • observations • measurements • templated and/or tabulated data |
| <i>Communication of survey data</i> may include: | <ul style="list-style-type: none"> • combat net radios • digital • non-military networks • oral • verbal • visual • written |
| <i>Standard procedures</i> may include: | <ul style="list-style-type: none"> • Australian Standards • job guides, doctrinal pamphlets and other publications • manufacturers' handbooks, industry specifications and technical instructions • work health and safety (WHS) regulations • organisational policies and procedures • relevant local government by-laws • relevant state/territory or federal legislation • verbal or written orders and job instructions |
| <i>Survey control points</i> may include: | <ul style="list-style-type: none"> • bearing picquet • bench mark |

Maintenance of survey equipment may include:

- calibration point
- fixed picquet
- point of change
- survey control point
- trigonometrical station
- calibration
- cleaning
- functionality checks
- lubricating
- non-technical inspection
- testing and adjusting

Unit Sector(s)

Not applicable.