

**CHANGES TO RADAR VECTORED ILS AND MLS CLEARANCE PROCEDURES AND PHRASEOLOGY.****1 Introduction**

1.1 The purpose of this Aeronautical Information Circular is to introduce new procedures and phraseology for use when aircraft are vectored for an ILS or MLS approach.

2 Background

2.1 Legacy ATC procedures within the UK have inhibited air traffic controllers from using the phraseology 'Cleared ILS' or 'Cleared Microwave Approach' when providing radar vectors for an ILS or MLS approach. This is to ensure that there is no ambiguity as to the level to which the aircraft may descend to prior to intercepting the glidepath. Therefore, when an aircraft is vectored for an ILS or MLS approach a specific instruction has been issued to descend on the glide path.

2.2 Recently, through two industry attended CAA working groups covering ATC procedures and phraseology, a review of these UK procedures was undertaken, with the objective of re-evaluating the use of the phraseology 'Cleared ILS' or 'Cleared Microwave Approach'. Following the review, the working groups concluded that when the procedures detailed below are used, ambiguity in the descent profile is removed, and the use of the phraseology 'Cleared ILS' or 'Cleared Microwave Approach' is acceptable.

3 Phraseology and procedures

3.1 With effect from 12 July 2012 the following procedures and phraseology are introduced.

3.2 When using the phraseology 'Cleared ILS runway (designator)', or 'Cleared Microwave Approach runway (designator)', controllers shall ensure that they have issued the pilot with an instruction to either:

- Descend to the level which coincides with the procedure level published for the Final Approach Fix, or
- A lower level when allocated in accordance with a Surveillance Minimum Altitude Chart (SMAC)¹.

3.3 Pilots should ensure that when receiving radar vectors and they are cleared for an ILS or MLS approach, by use of the phraseology 'Cleared ILS runway (designator)', or 'Cleared Microwave Approach runway (designator)', they descend to the last level assigned by air traffic control and when localiser established continue descent on the glidepath.

3.4 When a controller considers it appropriate to issue an instruction to descend with the ILS or MLS glidepath from a range at which the last assigned level is above that published for the procedure level at the Final Approach Fix, he will use the following phraseology:

- "When established on the localiser runway (designator) descend on the glidepath".

In such circumstances the phraseology 'Cleared ILS runway (designator)', or 'Cleared Microwave Approach runway (designator)' will not be used by a controller, and pilots should descend to the last level assigned by air traffic control and when localiser established continue descent on the glidepath.

Note: ¹Surveillance Minimum Altitude Area: Defined area in the vicinity of an aerodrome, depicted on a Surveillance Minimum Altitude Chart (SMAC) in which the minimum safe levels allocated by a controller vectoring IFR flights with Primary and /or Secondary Radar equipment have been predetermined. (CAP 777)

3.5 There may be occasions when a pilot is instructed to establish on the localiser but maintain an assigned level, before subsequently receiving an instruction to continue descent. This may occur because air traffic control are providing separation from traffic passing beneath the aircraft. In such circumstances controllers will use the following phraseology:

- 'Report established on the localiser runway (designator), maintain (level)'

and subsequently when the reason for the restriction no longer exists, either:

- 'Descend on the glidepath runway (designator)', if the level the pilot was instructed to maintain is above the procedure level at the Final Approach Fix, or
- 'Cleared ILS runway (designator)' or 'Cleared Microwave Approach runway (designator)', if the level the pilot was instructed to maintain coincides with the procedure level at the Final Approach Fix, or a lower level when allocated in accordance with an SMAC.

The use of 'maintain' in this paragraph is to ensure separation, where required, from traffic below the level of an aircraft joining the ILS or MLS localiser. When a controller intends to give a pilot successive instructions to establish on a localiser and descend on a glidepath (ILS/MLS), then the use of 'maintain' is not required.

3.6 Controllers shall not instruct pilots to establish on a localiser or descend on a glidepath when outside the designated operational coverage (DOC).

3.7 Controllers shall ensure when vectoring aircraft for an ILS or MLS Approach that the timing of descent instructions and the range at which an aircraft is vectored to intercept the localiser do not contribute to an unstable approach.

4 CAP 493, Manual of Air Traffic Services Part 1 (MATS Part 1)

4.1 With effect from 28 June 2012, MATS Part 1 is amended, with the change being effective from 12 July 2012. The Supplementary Instruction that details this change can be found on the CAA Website via the following link:

<http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=list&type=sercat&id=50>

5 CAP 413 Radiotelephony Manual

5.1 With effect from 12 July 2012 CAP 413 is amended as shown at Appendix A.

6 Queries

6.1 Any queries or further guidance required on the content of this AIC should be addressed to:

ATS Enquiries
Aerodrome and Air Traffic Standards
CAA Safety Regulation Group
2W Aviation House
Gatwick Airport South
West Sussex
RH6 0YR
E-mail: ats.enquiries@caa.co.uk

7 Cancellation

7.1 This Circular shall remain in force until 31 December 2012

Appendix A

CAP 413

Chapter 6

1.6 Vectoring to Final Approach

- 1.6.1 Radar vectors are given to arriving flights to position them onto a pilot interpreted approach aid, or to a point from which a radar-assisted approach, or visual approach is made.
- 1.6.2 MLS equipment will provide an ILS look-a-like straight in approach and the terms Localiser and Glidepath are retained. Due to the possibility of confusion between the words ILS and MLS, an MLS approach is referred to as a Microwave Approach in RTF communication.
- 1.6.3 Controllers shall not instruct pilots to establish on a localiser or descend on a glidepath when outside the designated operational coverage (DOC).
- 1.6.4 In the following example an identified aircraft inbound to Kennington is given radar vectors to the ILS. Where applicable Microwave is shown (in brackets) to indicate appropriate MLS phraseology.

Pilot: Kennington Radar, BIGJET 347, FL60 Information Golf

ATC: BIGJET 347, Kennington Radar, vectoring for an ILS (or Microwave) approach runway 28

Pilot: ILS (Microwave) runway 28, BIGJET 347

ATC: BIGJET 347 leave North Cross heading 120 degrees

Pilot: Leave North Cross heading 120 degrees, BIGJET 347

Pilot: BIGJET 347, leaving North Cross heading 120 degrees

ATC: BIGJET 347, Roger, number 4 in traffic, 18 miles from touchdown, descend to altitude 2500 feet QNH 1011

Pilot: Descend to altitude 2500 feet QNH1011, BIGJET 347

ATC: BIGJET 347 this is a right hand circuit for runway 28.

Pilot: BIGJET 347 Roger

ATC: BIGJET 347, turn right heading 190 degrees base leg

Pilot: Right heading 190 degrees, BIGJET 347

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- 1.6.5 Where radar vectors would be insufficient to maintain separation between aircraft, it may be necessary to issue speed restrictions:

ATC: BIGJET 347, report speed

Pilot: 250 knots, BIGJET 347

ATC: BIGJET 347, for spacing reduce speed to 210 knots

Pilot: 210 knots, BIGJET 347

- 1.6.6 If it is necessary to vector an aircraft through the final approach track before subsequently joining the approach from the opposite side, the controller shall advise the pilot prior to the aircraft passing through the final approach track.

ATC: BIGJET 347, this turn will take you through the localiser for spacing

Pilot: BIGJET 347 Roger

or

ATC: BIGJET 347, taking you through the localiser for spacing

Pilot: BIGJET 347 Roger

NOTE: The following phraseology examples may be combined and ordered by controllers as necessary to appropriately reflect operational needs and priorities.

- 1.6.7 Controllers will provide closing headings and will continue to give heading instructions until the aircraft is established on the localiser.

ATC: BIGJET 347, 12 miles from touchdown turn right heading 240 degrees closing localiser from the right.

Pilot: Right heading 240 degrees, BIGJET 347

- 1.6.8 When it is judged that this will aid situational awareness, controllers may request aircraft to report established on the localiser. Notwithstanding its use for situational awareness, it should be used where the clearance to establish on the localiser is not implicit within the phraseology used.

ATC: BIGJET 347, report established on the localiser runway 28

Pilot: Wilco, runway 28, BIGJET 347

Pilot: Localiser established runway 28, BIGJET 347

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- 1.6.9 When a controller has issued a descent instruction to the level that coincides with the published level that intercepts the ILS/MLS glidepath at the Final Approach Fix, or to a lower level when allocated in accordance with the Surveillance Minimum Altitude Chart, the controller may clear the pilot for the ILS/MLS approach.

ATC: BIGJET 347 cleared ILS (Microwave Approach) runway 28, QNH 1011

Pilot: Cleared ILS (Microwave Approach) runway 28, QNH 1011, BIGJET 347

- 1.6.10 When a controller wishes a pilot to descend with the ILS glidepath from a level which is above the published level that intercepts the ILS/MLS glidepath at the Final Approach Fix, the controller may use the following alternative form of phraseology.

ATC: BIGJET 347 when established on localiser runway 28, descend on the glidepath QNH 1011

Pilot: When established on localiser runway 28, descend on the glidepath QNH 1011, BIGJET 347

or when the aircraft is already established on the localiser:

ATC: BIGJET 347, descend on the glidepath, QNH 1011

Pilot: Descend on the glidepath, QNH 1011, BIGJET 347

- 1.6.11 When it is necessary, e.g. for traffic separation purposes, to ensure that an aircraft joining the ILS localiser does not commence descent until specifically cleared, the controller may use the following alternative form of phraseology.

ATC: BIGJET 347, report established on the localiser runway 28, maintain (level)

Pilot: Wilco, runway 28, maintain (level), BIGJET 347

Pilot: Localiser established, BIGJET 347

When the reason for restricting the level no longer exists and the aircraft is descending to, or maintaining the level that coincides with the published level that intercepts the ILS/MLS glidepath at the Final Approach Fix, or to a lower level when allocated in accordance with the Surveillance Minimum Altitude Chart:

ATC: BIGJET 347, cleared ILS runway 28, QNH 1011

Pilot: Cleared ILS runway 28, QNH1011, BIGJET 347

or when the aircraft is descending to, or maintaining a level which is higher than the published level that intercepts the ILS/MLS glidepath at the final approach fix:

ATC: BIGJET 347, descend on the glidepath runway 28, QNH 1011

Pilot: Descend on the glidepath runway 28, QNH 1011, BIGJET 347

NOTE: When it is judged that this will aid situational awareness, controllers may request aircraft to report established on the glidepath.

1.6.12 When a pilot is transferred to aerodrome control for landing clearance and essential aerodrome information, a controller shall use the following phraseology.

ATC: BIGJET 347 contact Kennington Tower 118.5

Pilot: Kennington Tower 118.5, BIGJET 347

1.6.13 Military ILS phraseology appears in Chapter 10 paragraph 3.13.