inspect the facility and its operation whenever necessary.

(5) The owner must assure the FAA that he will not withdraw the MLS facility from service without the permission of the FAA.

(6) The owner must bear all costs of meeting the requirements of this section and of any flight or ground inspection made before the MLS facility is commissioned.

(b) [Reserved]

§ 171.309 General requirements.

The MLS is a precision approach and landing guidance system which provides position information and various ground-to-air data. The position information is provided in a wide coverage sector and is determined by an azimuth angle measurement, an elevation angle measurement and a range (distance) measurement.

(a) An MLS constructed to meet the requirements of this subpart must include:

(1) Approach azimuth equipment, associated monitor, remote control and indicator equipment.

(2) Approach elevation equipment, associated monitor, remote control and indicator equipment.

(3) A means for the encoding and transmission of essential data words, associated monitor, remote control and indicator equipment. Essential data are basic data words 1, 2, 3, 4, and 6 and auxiliary data words A1, A2 and A3.

(4) Distance measuring equipment (DME), associated monitor, remote control and indicator equipment.

(5) Remote controls for paragraphs (a) (1), (2), (3), and (4) of this section must include as a minimum on/off and reset capabilities and may be integrated in the same equipment.

(6) At locations where a VHF marker beacon (75 MHz) is already installed, it may be used in lieu of the DME equipment.

(b) In addition to the equipment required in paragraph (a) of this section the MLS may include:

(1) Back azimuth equipment, associated monitor, remote control and indicator equipment. When Back Azimuth is provided, a means for transmission of Basic Data Word 5 and Auxiliary Data Word A4 shall also be provided.

(2) A wider proportional guidance sector which exceeds the minimum specified in §§ 171.313 and 171.317.

(3) Precision DME, associated monitor, remote control and indicator equipment.

(4) VHF marker beacon (75 MHz), associated monitor, remote control and indicator equipment.

(5) The MLS signal format will accommodate additional functions (e.g., flare elevation) which may be included as desired. Remote controls for paragraphs (b) (1), (3) and (4) of this section must include as a minimum on/off and reset capabilities, and may be integrated in the same equipment.

(6) Provisions for the encoding and transmission of additional auxiliary data words, associated monitor, remote control and indicator equipment.

(c) MLS ground equipment must be designed to operate on a nominal 120/240 volt, 60 Hz, 3-wire single phase AC power source and must meet the following service conditions:

(1) AC line parameters, DC voltage, elevation and duty:

120 VAC nominal value—102 V to 138 V (±1 V)*
240 VAC nominal value—204 V to 276 V (±2 V)*
60 Hz AC line frequency—57 Hz to 63 Hz (±0.2 Hz)*

*NOTE: Where discrete values of the above frequency or voltages are specified for testing purposes, the tolerances given in parentheses indicated by an asterisk apply to the test instruments used to measure these parameters.

Elevation—0 to 3000 meters (10,000 feet) above sea level
Duty—Continuous, unattended

(2) Ambient conditions within the shelter for electronic equipment installed in shelters are:

Temperature, −10 °C to + 50 °C
Relative humidity, 5% to 90%

(3) Ambient conditions for electronic equipment and all other equipment installed outdoors (for example, antenna, field detectors, and shelters):

Temperature, −50 °C to + 70 °C
Relative humidity, 5% to 100%

(4) All equipment installed outdoors must operate satisfactorily under the following conditions: