

**COMMISSIONING AND ROUTINE TESTING  
OF  
WALK-THROUGH METAL DETECTORS**

**1. Background**

1.1 A minimum as well as a recommended setting shall be established to allow for locations where the recommended setting procedures reject rate of passengers that cannot be tolerated.

**2. Commissioning**

2.1 The operator carries this out when a model of WTMD detector is first installed in an airport or after a WTMD has been relocated. It involves the operator, suppliers and maintenance engineers. The results are to be recorded and made available to the Administrator of the Office for Transportation Security when required.

2.2 The recommended setting allocated for a model of WTMD should be used whenever possible. A lower sensitivity setting can be used (but not less than the minimum), if the passenger reject level is too high. A higher sensitivity setting can be used if the operator considers it necessary, or if the OTS Administrator requires this in response to a period of enhanced threat.

2.3 WTMD shall be set up at the airport in the location in which it is to be used. A careful survey of the location should be carried out to take account of sources of interference that might affect the sensitivity of the equipment. This interference could be from moving metal or electrical interference from equipment (e.g., television monitor).

2.4 Once the WTMD has been installed to the satisfaction of the suppliers it will be tested. The WTMD shall be set at the recommended setting to detect the operational test piece, available from the supplier of the archway metal detector, in the four positions on the body. The barrel of the test piece should be pointing down in each position. The position on the body are:

- (a) right armpit
- (b) right hip
- (c) centre back waist
- (d) inside right ankle

2.5 There should be a minimum of ten (10) passes through the WTMD with the test piece in each position on the body; five (5) passes in one direction through the equipment and five (5) in the opposite direction. There should be no other metal

present on the person carrying out the tests. These tests have to be repeated if setting need to be charge. The setting should not be changed during a test.

2.6 The test piece should cause the WTMD to alarm at least eight (8) out of ten (10) times (at the recommended setting) for each body position. If detection of the test piece is not considered adequate the sensitivity should be increased. Once this has been achieved, the passenger reject rate can be obtained. If during commissioning, the passenger reject rate is not tolerable at the recommended setting, the sensitivity should be reduced gradually and the passenger reject rate re-established. The detection performance of the WTMD should be checked using the test piece, after each reduction in sensitivity.

2.7 The sensitivity must not be reduced below the minimum allocated for the archway. If the re-established passenger reject rate is not considered tolerable at the minimum setting, the suppliers of the archway metal detector and the OTS Administrator should be notified.

2.8 If the sensitivity setting needs to be higher than the recommended setting, in order to achieve an adequate detection of the test piece, the sensitivity cannot be reduced if the passenger reject rate is found to be intolerable. The suppliers of the archway metal detector and the OTS Administrator should be notified.

2.9 All aspects of the commissioning should be recorded for a specific WTMD. The records of settings tried and reject figures obtained should be made available to the OTS Administrator upon request. This should include the detection rate of the operational test piece at each position.

2.10 The recording of passenger reject rates is a useful indication of the performance of an archway. Operators should consider recording these figures on a regular basis.

2.11 The setting for a particular WTMD at a particular location should be recorded on paper (with the serial number) and on the equipment itself. The latter should not be obvious to those passing through it.

### **3. Routine Testing**

3.1 Routine testing is to demonstrate to an operator that a WTMD is working after being switched on or after a period of time when it has not been used. It will be the same test for all models of WTMD used under this Program.

3.2 If a WTMD is in continuous use (i.e., it is never switched off), it should be tested at least once per day. It should also be tested when it is switched on and before any passengers pass through it.

3.3 An operator should remove all items likely to affect the WTMD such as radios, keys and coins. The operator should then walk through the WTMD to verify that there are no significant amounts of metal present on their person. He should then place the test piece in the small of the back with the barrel pointing down, the handle to the right and walk through the equipment at least five times in the direction that a passenger would take.

3.4 It is possible that on occasion the test piece will not cause the WTMD to alarm. It should only be cause for concern if the equipment appears to be performing worse than in previous tests, or if it fails to detect the test piece at all. The supervisor should record the results of each daily test.

3.5 If the supervisor is satisfied with the results, the WTMD can be used to screen passengers.

3.6 If the WTMD appears less sensitive to the operational test piece than previous tests show, the sensitivity should be increased until the supervisor is satisfied with the performance, all results should be recorded by the supervisor. If the problem cannot be solved, the WTMD should be switched off until maintenance staff arrives. The suppliers and maintenance staff should also be informed and the WTMD switched off if any fault develops with it.

3.7 A more detailed test should be carried out once a week with the operational test piece at the four positions on the body with the barrel pointing down. These tests should be carried out five times in each direction for each position and the results should be recorded. Comparison of results will show if the archway metal detector performs consistently. This test can be carried out and the results recorded more frequently, if the operator considers it necessary.

3.8 Detection of the operational test piece at the ankle may vary. This will depend on whether the foot is swung through or placed inside the equipment. An operator should vary his foot placement and compare the results with previous tests.

3.9 This method of testing shall apply to all WTMDs. The format of the recording sheet should include model, serial number, location, setting, results obtained, date and signature of a supervisor.