

605H Mine Detector



QUICK OPERATING INSTRUCTIONS

TABLE OF CONTENTS

1. Introduction.....	3
2. General Description and Preparation.....	4
3. Operating Instructions.....	6
4. End of operation Activities.....	8
5. Specifications.....	8

1. Introduction

1.1 Since 1990, ELPAM has designed, developed and manufactured its range of detectors to meet the requirements of mine and explosive ordnance clearance operations throughout the world. Through its patented and unique technology, ELPAM has emphasized equipment capability and operator safety in its products.

1.2 The 605H mine detector incorporates patented technology. Sensitivity of a detector remains consistent regardless of the mineralized content of soil. Additionally, Bi-polar technology assists in eliminating the possibility of initiating a magnetic influence mine. Combined with “static coupling” the 605H does not require motion to detect a target thereby making pin-pointing techniques fast and accurate.



Figure 1: 605H Mine detector

1.3 The 605H is a robust detector that is extremely simple to operate. There are no complicated controls resulting in the operator being able to focus on the vital task of mine detection. The device is designed according to the human engineering rules. If mine detection occurs in a “difficult” environment that includes highly mineralized ground or electrical interference from overhead power lines or other sources, simple and quick semi-automatic procedures can be initiated by an operator to allow the detector to continue performing at maximum capability.

1.4 The 605H incorporates several safety features such as Low Battery and Fault warnings, and controlled internal self-testing. The inclusion of a Test Procedure provides the operator with a quick and easy test to ensure the detector is working to its operational capability.

1.5 The 605H supplied with an optional Light Emitting Diode (LED) display.

1.6 The 605H device has Volume/Sensitivity Control.

1.7 Components of the 605H are manufactured within tightly controlled parameters so that they can be interchanged in the field without any requirement for calibration.

2. General Description and Preparation

2.1 Mine Detecting Set. The 605H is supplied as a mine detecting set (Figure 2) comprising:

- Hard Case
- Operation Control unit
- Telescope extension rod
- Earphone
- Skidplate/Coil
- Place for Spare Batteries

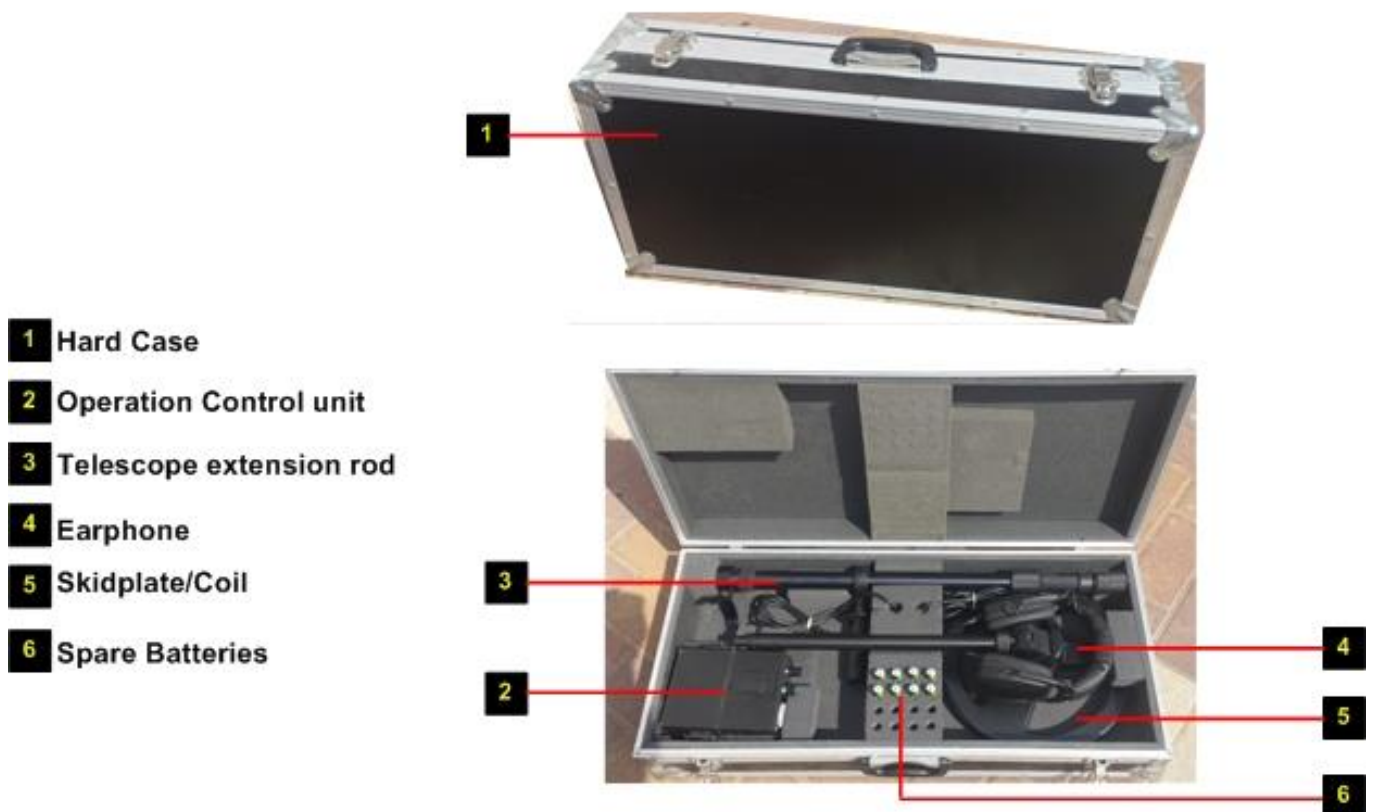


Figure 2: F3 Mine Detecting Set

As illustrated in Figure 2, the Hard Case includes an insert for easy placement of the 605H and its accessories. The case also provides protection for the detector and it is recommended that the 605H will be stored in its Hard Case whenever it is not in use or during transit. Failure to transport the detector in the supplied Hard Case may void warranty.

2.2 605H Main Components. Figure 3 identifies the main components of the 605H which comprise:

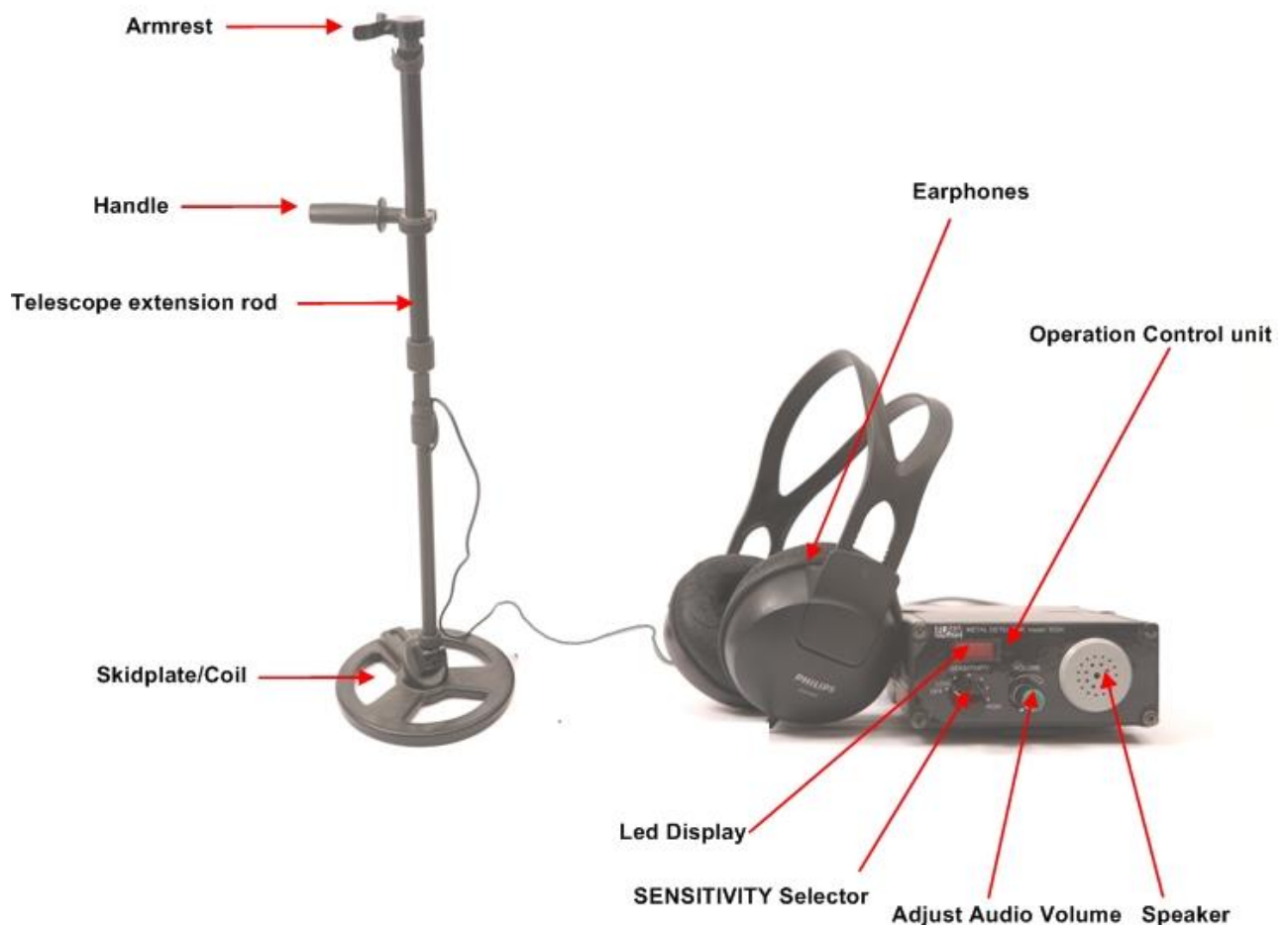


Figure 3: 605H - Main Components

2.3 605H Preparation before operations. To prepare the detector for use, conduct the following procedure:

- 2.3.1 Open the carrying case.
- 2.3.2 Take out the control unit .
- 2.3.3 Verify that the “**OFF-ON SENSITIVITY**” selector on the operation control unit is in “**OFF**” position. Maximum anti clockwise.
- 2.3.4 Open the control unit and insert 8 AA Alkaline batteries (not supplied). Verify correct polarity of the batteries. Close the control unit.
- 2.3.5 Take out the telescopic extension rod from the carrying case. Connect the 2 parts of the telescopic rod as follows:
 - 2.3.5.1 Connect the upper part of the telescopic rod to the lower part (with the Search coil), by pressing and turning clockwise.
 - 2.3.5.2 Adjust the length of the rod as needed.
 - 2.3.5.3 Connect the telescopic rod connector (located at the end of the cable) to the “Detector” connector, located on the operation control unit.
 - 2.3.5.4 Connect the earphones (if needed) to “Headphones” connector located on the operation control unit.

3. Operating Instructions

- 3.1** Turn the "OFF-ON SENSITIVITY" selector located on the operation control unit clockwise to the selected sensitivity. It can be select 5 levels of sensitivity by the selector switch.
- 3.2** Put the detection plate near a metallic object. A noise whistle will be heard in the loudspeaker and earphones (If connected). The LED Bar lights changes their lights depending on the closeness to metal.
The LED Bar is comprised of a 7 segment LED gauge bar.
For maximum detection the last (right) will be lit.
- 3.2.1** To adjust the audio volume use the volume control button on the control unit.
- 3.2.2** If no detection noise is heard, check batteries, (connection, polarity, voltage), earphones connection (If connected) and volume control adjustment.
- 3.3** The mine detector is ready for operation.
- 3.4** During mine sweeping operation, when nearing a metallic object, a buzzing noise will be heard in the loudspeaker and earphones (If connected).
- 3.5** When the batteries voltage is low, the instrument sounds a constant beep, alerting to replace to new batteries.

Adjusting the Detector for Comfortable Detecting

For comfortable detecting it is important to take the time to adjust the detector correctly.

Holding the Detector

Thread your arm through the armrest. Grasp the handle of the detector and rest your forearm in the armrest. The correct position of the armrest should allow you to comfortably grip the handle. Your elbow should sit just above the back of the armrest and the detector should feel like an extension of your forearm.



Adjusting the Length of the Telescope rod

A correct Telescope rod length will allow you to swing the coil over the ground without uncomfortably stretching or stooping.

If the coil is too far from your body it will be difficult to balance and manoeuvre while detecting.

If the coil is too close to your body it may detect your digging tools or any other metal which you are carrying, causing confusing sounds.

Adjust the lower Telescope rod to the correct length.

A longer lower shaft is available for tall people.



✗ *rod is too short*



✓ *rod is the correct length*

Adjusting the Angle of the Coil:

1. Loosen the bolt that connects the Lower rod to the Coil. It should be loose enough to allow the Coil to be moved for adjustment, but tight enough that the Coil can hold its position.
2. While holding the detector as if detecting, lightly press the Coil to the ground until it sits flat/parallel with the ground. The Coil should remain parallel when lifting to the sweep height, approximately 25mm (1") above the ground.



The optimal situation for work



4. End of operation Activities

4.1 After operation is completed, dismantle the accessories.

Important: take out batteries from operation control unit.

4.2 Clean the equipment with a damp cloth.

4.3 Store the equipment in its case.

**** WARNING ****

When Low Battery Alarm occurs the operator must Immediately STOP demining operations. The 605H should be switched Off and new batteries inserted into the 605H

5. Specifications

Mine detector will detect any metal mine to a depth of 40 centimeters and more. The search head will survey an area of 700 square centimeters at any instant. The control unit has an ON – OFF switch and connectors to the mine detector and headphones. One set of batteries provides about 70 hours of operation. (Eight alkaline type AA cells). The detector sounds a warning signal before batteries run down.

Detector – Dimensions & Weight

- Overall length – 105, extendable to 150 centimeters.
- Retracted length – 72 centimeters.
- Search head diameter – 30 centimeters.
- Weight ~ 1,700 gram.

Control Unit – Dimensions & Weight

- Size – 17x13x6 centimeters.
- Weight (with batteries) – 1070 gram.

Total Weight of the equipment

- 10kgs max.

(*) Elpam does not allow shipping separate batteries or batteries packed with the equipment, that's why the equipment comes without batteries for the customer.

Detection capabilities

(a) The detector can detect all ferrous and nonferrous metals.

(b) Capable of detecting buried mine/metals in:

- All types of soils including literate (Ferrous and aluminum oxides).
- Under water 1 ft.
- In all weather conditions from arid to pouring rain. The equipment meet international standard IP-67 over the temperature range of -10 degree to +50 degree C.

Detection sensitivity

(a) The size and shape of the objects with which the test are conducted are as under:

- 2 gm metal -1 inch x 1 inch tin foil.
- 50mm nail -Thickness 3 mm and dia of head 6 mm.
- Salty water - 3 gm iodized common salt in 1Ltrs of water.

(b) The sensitivity of the detector meets the following specifications:

	In Free Air	Underground	In Clear Water
2 gm metal	0.5cm	0.5cm	0.5cm
50 mm nail vertical	0.5cm	0.5cm	0.5cm
50 mm nail horizontal	2cm	2cm	2cm

(c) Detector is capable of pinpointing detected metal ± 5 cm range.

(d) Detection tone is distinct from the working tone. The instrument is free from radio and static interference from distance.



www.elpam.com

8 Moshe Aviv St., Or Yehuda, 6037130 Israel

Tel: (972) 3 533 7019

Fax: (972) 3 533 7063

E-mail: office@elpam.com

All rights reserved. Features, Specifications and Content may be changed without prior notice. Pictures, drawings and other graphic images are for illustration only and do not represent product configuration.

All information and specification are subject to change without notice, and may contain typographical or other errors.



ELP-MA-0154

Copyright © 2017 ELPAM Electronics Ltd