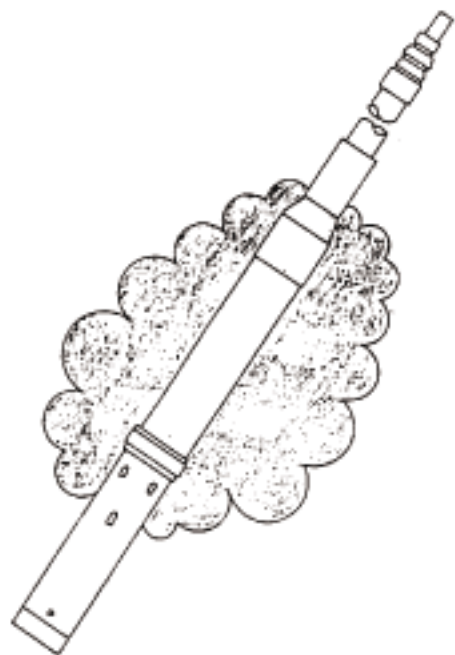


SMOKE DETECTOR TESTER
MODEL TSE-A100

OPERATING INSTRUCTIONS MANUAL



FOREWORD

This is the User's Manual for the Hochiki Smoke Detector Tester, TSE-A100.

In order for you to fully utilize the functions of the TSE-A100 Detector Tester and perform a correct test, you should familiarize yourself with the complete information about it before you start to use it.

GENERAL DESCRIPTION

The TSE-A100 is designed to test ionization type or photo-electric type smoke detectors.

The tester can be more easily and safely operated than conventional smoke detector testers, while requiring a much shorter time for testing. All the functions of the TSE-A100 have been approved by the Fire Agency of the Government of Japan.

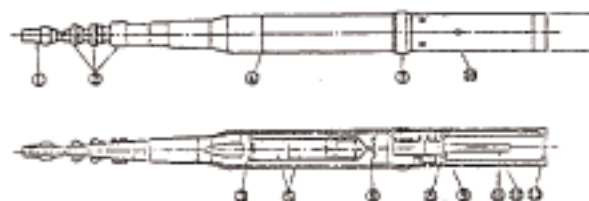
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SPECIFICATIONS

Model code	:	TSE-A100
Rated voltage	:	DC-3V (UM-1 x 2)
Battery life	:	3 days assuming 8 hours of operation per day
Main material	:	Heat-resistant resin
Smoking material	:	Incense rod (7mm O.D., 150mm long)
Smoking material consumption	:	Approx. 2.5 hours/rod
Overall dimensions	:	Maximum length 4300mm Minimum length 1600mm Second node 2500mm Third node 3400mm
Accessories	:	Wind shield adapter Adapter for heating test (HX-3)
Weight	:	Approx. 2.5kg

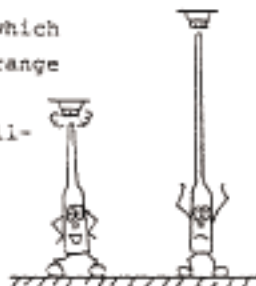
CONSTRUCTION



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|--|--|
| ① Tip (bore: 12mm) | ⑧ Filter cap |
| ② Stopper | ⑨ Filters (two) |
| ③ Battery tube cap | ⑩ Air control tube |
| ④ Tube coupling A | ⑪ Combustion tube |
| ⑤ Dry cell batteries (UM-1, 1.5V, x 2) | ⑫ Smoking material (φ7 x 150, incense rod, designated) |
| ⑥ Blower fan | ⑬ Combustion tube holding cap |
| ⑦ Tube coupling B | |

FEATURES

- (1) The tester has a smoke exhaustion facility, which enables smoke to be exhausted after the activation of the smoke detector under test.
- (2) When you operate the tester, its smoking part is always in your hand. And the smoking material is in the tester. There should be no danger if you upset the tester by chance.
- (3) Filters are used to prevent tar or similar substances from being deposited inside the tester.
- (4) The adapter, when attached to the TSE-A100, enables a heating tester (HK-3) to be mounted to it.
- (5) The length of the tester may be adjusted in four steps according to the height of the ceiling on which smoke detectors are installed. The telescoping range is from 1600mm minimum to 4300mm maximum. A stopper at each connection (node) assures a well-locked extension.



OPERATING INSTRUCTIONS

(1) Operating Procedures

o When in the package, the tester is split into two parts at the connection node A ④. Assemble them into a complete unit.

- ① Ignite the smoking material and set it inside the tester.
- ② Set the air control tube ⑩ to "SMOKE" and see that smoke is being emitted through the tester tip. Then return the tube ⑩ to "NORMAL" position to complete the preliminary step.
- ③ Adjust the length of the tester according to the height of the ceiling on which the smoke detector to be tested is installed.

The tester length can be adjusted in four steps, and may be extended up to 4300mm.

- ④ Extend the tip ① to near the detector under test (approx. 20 - 60mm) and set the air control tube ⑩ to "SMOKE". The test now starts.
- ⑤ On completing the checking of the detector for operation, set the air control tube to "EXHAUST SMOKE". 20 - 30 seconds later, the detector will be reset.
- ⑥ After the detector under test has been reset, return the air control tube to "NORMAL" position.

o Criteria for test results:

The detector under test must be activated within the time specified below.

Type of detector	Non-accumulation type	Accumulation type
1	30 seconds	60 seconds
2	60 seconds	90 seconds
3	90 seconds	120 seconds

(2) Dry Cell Replacement

- o Turn the air control tube to "SMOKE" and "EXHAUST SMOKE" positions and check that the fan rotates.
- o If the fan does not rotate, the dry cells have been exhausted. Replace them.

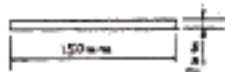
Replacement Procedures:

- ① Disconnect the tester at connection node A ④. Remove the exposed battery tube cap ③ and replace.
- ② The batteries have directivity. A label bearing the direction of each battery to be inserted is attached to the inside wall of the battery tube. Place new batteries in the correct position and in the designated direction.
- ③ If the batteries are placed reversely, the fan ⑥ will rotate reversely. In this case, no smoke will come out from the tip.



(3) Smoking Material

- o The material is an incense rod 7mm in O.D. and 150mm long.
- o The incense will produce smoke for approx. 2.5 hours/rod.



- o Remove the combustion tube holding cap 13, and the combustion tube 11 is exposed. Then remove the filter cap 8 at the tip of the combustion tube, and the smoking material fitting is exposed. Install the incense rod to the fitting.



Precautions:

- o Install the smoking material upright and reliably.
- o Do not throw away the material being ignited on the floor. Always place it into a fire-proof case or ashpan.
- o Always use only the specified smoking material and filter.
- o Check that the smoking material has been completely ignited before placing it into the tester. Incomplete ignition can cause the material to extinguish.
- o Store the material in a dry place. It must be free from moisture. A wet incense rod cannot easily be ignited and may extinguish.
- o Place an order for incense rods with HOCHIKI or its agent. (A set of incense rods and filters is available.)

(4) Filter

- o Two filters are used to prevent tar or similar materials from being deposited within the smoke detector. A clogged filter should immediately be replaced so that the intended service may be fully performed.
- o The recommended replacement interval is every 5 hours of operation; replace the two filters after two rods have been consecutively used.



- o The instructions for installation and replacement are found inside the filter cap ⑧



(5) Cleaning

- o Clean the combustion tube.
- o Use soap-suds to clean the tube.
- o A filter with its surface holes blocked with tar or similar substance will cause the incense rod to be likely to extinguish.

(6) Accessories

- o Check the following accessories:

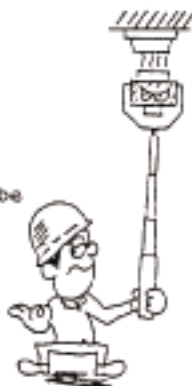


① Wind shield adapter (1)

- o This is used when a smoke test is performed in the presence of strong winds.
- o The adapter permits the tip of the tester to be positioned stably if used when a smoke test is performed with a detector installed on a high ceiling.

② Adapter for heating test (1)

- o This adapter permits a heating tester (HK-3) to be mounted to the detector tester. It enables both heating and smoking testing.



③ Smoking material storage/fire-proof case

④ Smoking materials and filters (50 each)