

KI 6150 Tone & Traffic Identifier

OPERATING INSTRUCTIONS

Introduction

The Kingfisher Model KI6150 Probe is a rugged, hand held easy-to-use maintenance and installation instrument that identifies optical fibres by detecting the optical signals that are transmitted through a singlemode fibre. The KI6150 utilises non-destructive macro-bend detection, which eliminates the need to identify a fibre by opening it at the splice point.

Signal that the KI6150 detect include continuous wave line optical transmission and low frequency modulated tones at 2kHz, 1kHz and 270 Hz. When the KI6150 detects traffic on a fibre being tested, one of two traffic LEDs on the KI6150 illuminates to indicate the presence and direction of transmission. The presence of tone is indicated by the illumination of one of three LEDs, i.e., 2kHz, 1kHz, or 270 Hz (Figure 1).

Operating the KI6150

Operation of the KI6150 is simple, as outlined in the following steps.

1. Choose an adaptor head for the type of fibre to be tested. The KI6150 is supplied with three adaptors (as shown in Figure 2); (A) foam covered, to accommodate 900 unbuffered fibre; (B) smooth-surfaced with foam perimeter, for use with ribbon fibre or a 250um coated fibre., and (C) slotted, for 3mm jacketed fibre (ie, pigtails and jumpers) or loose tube fibre.
2. Select the appropriate adaptor and slide it into the mating slotted channel of the KI6150 with slight downward pressure, as shown in Figure 3.
3. Insert the fibre to be tested between the adaptor and the top of the clamp (refer to Figure 4). Slide the thumb switch upward and ensure that the fibre is installed properly in the alignment groove.

Illumination of either Traffic LED indicates the detection and direction of traffic. This is useful in determining whether the fibre is transmitting or receiving at equipment terminal locations.

Test Tone Detection

Illumination of any one of the 2kHz, 1kHz or 270 Hz LEDs indicates that a test tone is being detected, which ensures accurate identification of the fibre that is under test.

The 2 kHz, 1 kHz and 270 Hz tones can be generated by a laser source, such as Kingfisher series KI7400, KI7800, KI8000, as shown in Figures 5 and 6.

During operation at the lowest levels of tone detection (approximately -40dB core power) the tone LEDs may flicker, which indicates that the minimum range for detection was reached.

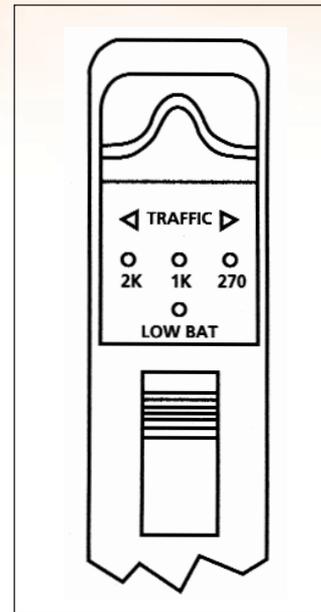


Figure 1

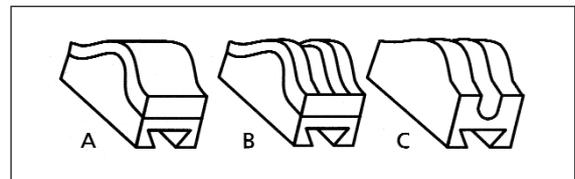


Figure 2

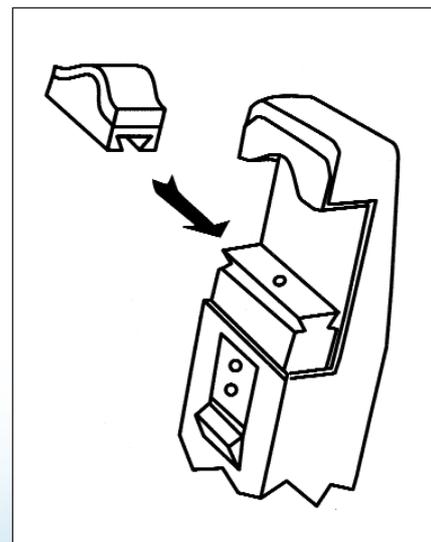


Figure 3

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HAND HELD OPTICAL FIBRE IDENTIFIER

Self Test

Each time the thumb switch is operated, the KI6150 performs a self test. When this occurs all LEDs will illuminate and then after approximately one-half second turn off.

Low Battery Indication

When the battery voltage becomes low, the "LOW BAT LED" illuminates. The unit will continue to operate for some time, but the battery should be replaced with a fresh 9-volt alkaline battery as soon as possible.

Battery Replacement

To replace battery hold probe in hand and with thumb on grip slide cover downward. Replace battery. To re-install cover reverse the steps. Gently place cover on probe and align cover keys with probe keyways. Slide cover forward.

Maintenance

it is important that the optical ports remain clean and free of dust, dirt, grease or other foreign matter. Cleaning with lint-free and isopropyl alcohol is recommended for optimum performance.

False Detection

Handy hints to prevent false detection due to stray lighting entering the instrument;-

Use the correct adaptor ie 250um, 900um, 3mm.

Ensure the 250um, 900um, or 3mm fibre is centred correctly. The upper body mould that houses the sensors has a very small alignment groove the fibre must be situated along this line.

Where bright inside or outside lighting is encountered place your free hand over the instrument. In extreme cases you may need to cover the entire instrument and yourself with a coat. Bare fibre (250um) material is translucent which means light can enter the fibre and travel along it cladding/core.

Wherever possible use a light source with either a 2kHz, 1kHz or 270Hz modulation tone to inject into the fibre, the identifier will detect this signal very easily.

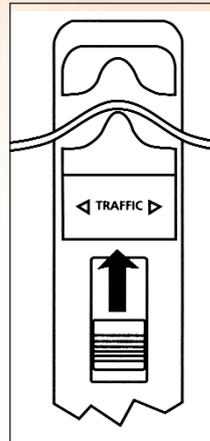


Figure 4



Figure 5

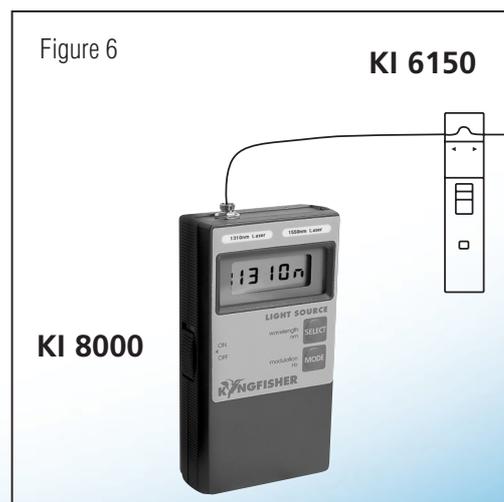


Figure 6



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