document
inspection devices

identity
form
card
mobile
payment

security since 1851
PORTABLE HORUS INSTRUMENTS

Portable verification instruments offer features similar to those of desktop equipment, making them ideally suitable for a wide spectrum of users. ANY Security Printing Company PLC offers four types of portable HORUS devices containing a variety of features. Each device is attachable to a waist belt and capable of 10x magnification. The user can utilize UV light to verify mono, bi-, and tri-fluorescent inks and infrared LEDs to verify the anti-Stokes effect. Our devices provide rigorous verification of the security elements of a broad range of documents, and facilitate the identification of counterfeit documents. Their ease of use and maintenance makes them ideally suited for use in the field under a wide range of conditions.

DOCUMENT INSPECTION EQUIPMENT – PORTABLE DEVICES

<table>
<thead>
<tr>
<th></th>
<th>MODEL 1010</th>
<th>MODEL 1011</th>
<th>MODEL 1013</th>
<th>MODEL 1019</th>
</tr>
</thead>
<tbody>
<tr>
<td>White illumination</td>
<td>•</td>
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<td>UV 365</td>
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<td>UV 313</td>
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<td>UV 245</td>
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<tr>
<td>Retroreflective light (3M)</td>
<td>•</td>
<td>•</td>
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<td>•</td>
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<tr>
<td>AntiStokes visualisation</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Magnification</td>
<td>10x</td>
<td>10x</td>
<td>10x</td>
<td>10x</td>
</tr>
<tr>
<td>View field</td>
<td>4/5&quot;</td>
<td>4/5&quot;*</td>
<td>4/5&quot;</td>
<td>4/5&quot;*</td>
</tr>
</tbody>
</table>

Technical Specification:
Dimension: 96x38x45
Weight, max: 0.15 kg
Battery: 2 pcs. AAA type
Adjustable focal distance

*101x0.1 modifications — with measuring scale
*Leather case can be ordered separately
IF15 ink is a powerful security feature as it can only be detected with a special verification device developed for this purpose. Our state-of-the-art handheld IF ink detector is called RADIR. The device alerts the user to the presence of the security material through a simple user interface that produces both sound and visual alerts in the LED display.

The instrument is extremely flexible and easy to operate: the user need only press the operating button continuously while pointing the device towards the target from a distance of 10 cm. It is therefore ideal to high-traffic validation of documents such as transportation or event tickets.

**Characteristics of the portable device:**

- The paper or print contains a hidden marker that can be revealed only by the device
- Small, hand-held, easy-to-use verification tool gives a clear yes/no answer during the authentication process
- This system gives the opportunity of rapid but secure check of documents of great volume like documents, permissions etc.
VerifIR  
verification process through  
IR fluorescence

There has always been a strong need to combine the simplicity of the application of a second level security device (a fluorescent offset ink e.g.) with the high security of a third (laboratory) level device. Earlier developed devices (like our RADIR) determined the presence of certain IR fluorescent materials only. This fact strongly limited the number of possible applications.

VerifIR system

The VerifIR system contains two elements:
- ink
- controller

INK

First step is placing multiplicity of infrared fluorescent materials in strictly controlled amounts into a printing ink. This provides complicated emission spectrum. This spectrum is then processed with the help of a sophisticated mathematical algorithm in order to calculate a value which remains constant regardless of the tolerances of the coverage during the printing process. Determination of this constant value allows successful identification of a certain ink. Virtually any printing process is possible to apply except for those using inks of low viscosity. Inks containing carbon black are also excluded.

The battery operated controller processes the emission spectrum of the print and calculates the constant value mentioned above. This constant value is then compared to the one that has been determined during the initial setting of the device and contained in its memory. If the two values match the pre-defined range the controller gives a positive answer (a beep sound and a green light). The negative answer is another beep sound and red light.

The controller itself is very handy; it is shaped very much like a conventional remote controller for the sake of ease of use. But of course, the inner content is much-much more sophisticated.

**MOST IMPORTANT PHYSICAL PARAMETERS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>150x35x20 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>120 grams approx.</td>
</tr>
<tr>
<td>Working capacity</td>
<td>8 hours (depending on use)</td>
</tr>
</tbody>
</table>

**FEATURES**

*Stability of measurement*

The main advantage of this verification method lies in the constant value calculating method. Nor like simply measuring fluorescent intensity, this method is independent on the variations of the thickness of the applied ink layer (consequently, independent on the quantity of the fluorescent materials) that is characteristic to printing processes. The verification process is also much less influenced by variations in the measuring environment including ambient radiation, skill of the operator, level of the battery etc. This stability that is based on the measuring principle make the device suitable to use conveniently outdoor and indoor as well.

*Customer specific system*

The great number of different possible inks gives the opportunity of providing a **customer-specific ink-controller system**. The ink to be supplied to a certain customer contains the security materials and all other components in **strictly the same, specific composition in each shipment**. The previously shipped controller has been set to give positive answer to this composition only.