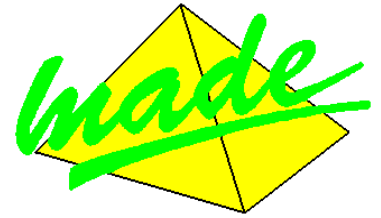


# NADIR



## PURPOSE :

**NADIR** is used to identify (strictly speaking – pre-identify) a live 230/400V cable on which it is intended to work, and one or more of the cores in it. It eliminates the risk of inadvertently opening an 11kV cable by mistaking it for a 400 V one. The system consists of a **Transmitter** which is connected as close as possible downstream of the point of interest, and which draws a complex current signal from the substation, and a **Receiver** which identifies the cable and the core(s) required by locating this signal.

## TRANSMITTER :



- Integral carrying case
- 1 Power cable with integral fused crocodile clips
- 230 V lead and a Receiver charging lead.

## RECEIVER :

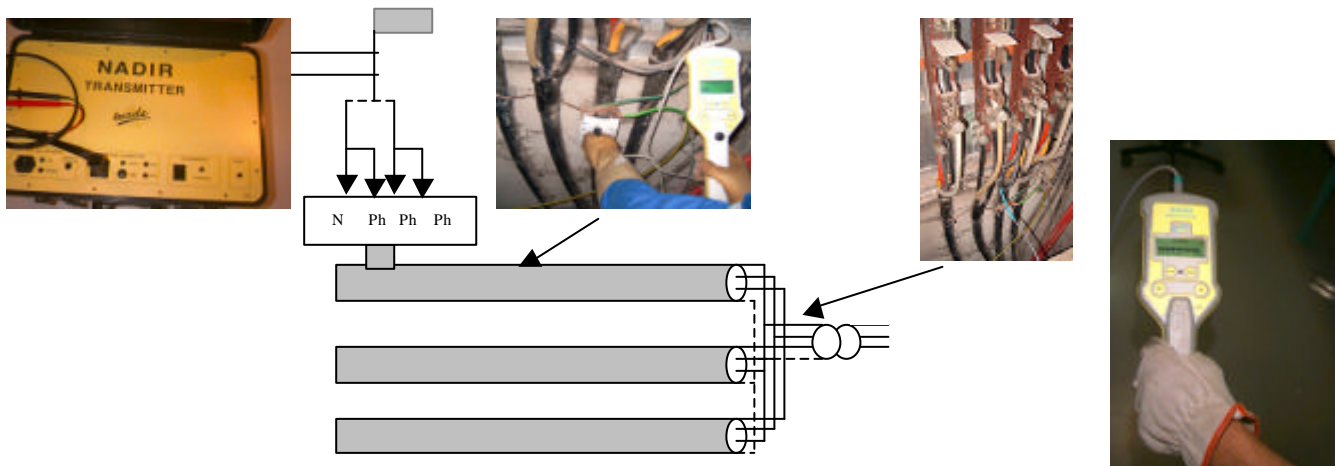


- Polycarbonate cased hand-held with display screen
- Buzzer and internal Transducer
- Cable pre-identification Transducer
- **MADE-Flex** (Rogowski coil) for phase identification

## CONNECTING THE TRANSMITTER :

With the **Transmitter** switch in the **OFF** position, plug the connecting cable into the socket in the **Transmitter** face and connect the two coloured crocodile clips between two cores (400V) or between one core and Neutral (230V). If possible, connect the **Transmitter** between two cores, Phase-to-Phase, as this eliminates any possibility of signal propagation over the cable screens via the Neutral connection. However, if only one Phase is accessible, for example at a customer connection, **NADIR** will work correctly in all normal circumstances when connected Phase-to-Neutral. The **Transmitter** will automatically differentiate between the two types of connection, and set itself accordingly. When power is present, the **GREEN** light will illuminate. Moving the power switch to **ON** will start transmission and the "Transmitting" light will flash.

If an internal fault is shown by the "Fault" light, recycle the **Transmitter**. If the fault persists, contact **MADE S.A.** or **A. T. M. S.** The **Transmitter** can be left operating continuously, with the lid closed if required.



## Charging the Receiver :

The charger for the **Receiver** is included in the **Transmitter**. With the **Transmitter** powered from a mains socket by a computer cable, connect the **Receiver** to the charging socket in the **Transmitter** using the cable provided. A full charge will allow several days use of the **Receiver** and the state of charge is shown on the last page of the **Receiver** menu. However, this reading will be correct only if the **Receiver** is disconnected from the charger and the charging cable.

## USING THE RECEIVER :

The hand-held **Receiver** incorporates a cable-identifying **Transducer** in its back cover. In addition, it has a choice of two remote **Transducers**. The "trough" shaped one with the handle is for cable identification and the flexible Rogowski Coil ( **MADE-Flex**) one is for identifying the core(s).

### 1- To turn on the Receiver : press ON.

The software version and the manufacturer's telephone number are shown.

- Press **SCROLL** for the Configuration screen.
- To turn **ON** the screen lighting, enter the configuration screen with **VALID** (the little *arrow* reverses), and press **SCROLL** once to bring the little *arrow* opposite the word **LIGHTING**. Press **VALID** once to reverse the *arrow*, and **SCROLL** once to turn on the lighting. Press **VALID** once to turn the *arrow* back, and **SCROLL** twice to return it to the top. Press **VALID** once again in order to use **SCROLL** to leave the Configuration screen.

The item **MEMO MAX** causes the **Receiver** to display the largest reading in a sequence as well as the current reading. It is a useful aid and is activated in the same way as turning on the lighting.

NADIR V1.00  
WWW.MADE-SA.COM  
Tel. : +33.494.083.198  
MADE SA

CONFIGURATION ←  
LIGHTING : OFF  
MEMO MAX: OFF

### 2- Searching for the required cable :

Place the cable identification **Transducer** or the **Receiver** directly on the cables, upstream of the **Transmitter**.

#### 2-1 SCROLL to « SEARCH » Menu and press « VALID » :

Place the hand-held or the remote **Transducer** on each cable in the trench and observe the bar graph on the screen. Move the **Transducer** around and / or along the cable for the highest value. If the **MEMO MAX** function is **ON**, the lower bar graph shows the value of the current reading, and the upper one shows the maximum so far. An instantaneously measured value is updated on the display every two seconds, and the buzzer increases in intensity in line with the display. The correct cable will show a significantly greater value than the others.

SEARCH  
■■■■■■■■■■  
LEVEL xx %

#### 2-2- SCROLL to « IDENTIFICATION » Menu and press « VALID » :

For confirmation of the correct cable, **IDENTIFICATION** takes a measurement which integrates the signal over 5 seconds and leaves the value on the screen. Pressing **SCROLL** twice will repeat the process, leaving the same maximum displayed. To start a new measurement sequence press **VALID** twice which will re-start **IDENTIFICATION** with the maximum value reset to zero.

IDENTIFICATION  
■■■■■■■■■■  
LEVEL xx %

### 3- Identifying a CORE or CORES :

Even if identification of the CORE (or Phase) is not required, it provides a good confirmation of the identification of the cable, as the signal will only be found on the CORE or CORES to which the transmitter has been connected, and none will be found on the same Phases in other cables. Connect the **MADE-Flex** (Rogowski coil) to the **Receiver**, which detects the change of **Transducer** automatically. Open the loop of the **MADE-Flex** and snap it closed around one conductor. The identification of the CORE / Phase is performed exactly as for cable identification. Since the cable screen is not included in the measurement, the identification is perfectly unambiguous. If the Transmitter is connected Phase-to-Phase, there will be signal on those two CORES and none on the third CORE, enabling identification of the CORE and confirmation of the cable identification. If the **Transmitter** is connected Phase-to-Neutral, only that CORE will have signal, as will the Neutral, again enabling identification of the CORE and confirmation of the cable identification.

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|  | <p><b>MADE</b><br/>S.A. au capital de 225 000 €<br/>167, Impasse de la garrigue<br/>F 83210 LA FARLEDE<br/>Tél. : +33 (0) 494 083 198 - Fax : +33 (0) 494 082 879<br/>E-mail : <a href="mailto:contact@made-sa.com">contact@made-sa.com</a> - Web : <a href="http://www.made-sa.com">www.made-sa.com</a></p> |  |
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U. K. distributor – **A. T. M. S.** Tel. : 07717763510

E-mail : [support@advantechms.com](mailto:support@advantechms.com)