Figure 11: ConFigIT Electric Serial adaptor
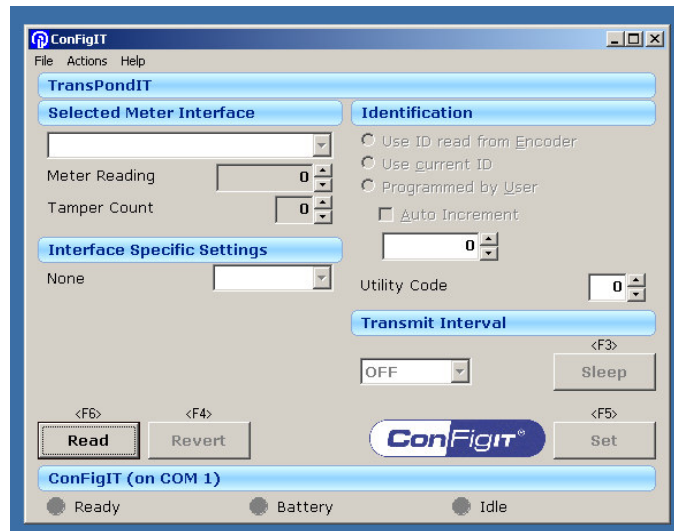

Figure 12: Electric ConFigIT connected to the TransPondIT

3.4   USE OF CONFIGIT PC SOFTWARE

1.   If you have ConFigIT PC software loaded on the PC, check that it is Version 6.4 or higher. If not, download self extracting zip file from www.ramartech.com/products/configit/ (Download instructions are provided on same web page). Start the program (see Figure 13).

Figure 13: ConFigIT application screen

2.   Activate program by selecting 'Help' followed by 'Product Activation'. Software will work for 28 days before it will need re-activation.

3.   Select 'Request' button. This generates a Request Code specific to the PC. The Request Code is sent to RAMAR Technical Support by email (recommended) or by telephone. A dialogue box for emailing Product Activation Request Code details is provided to help with this process – enter User Details into the box, click the 'Send Email' option and select 'OK' button. An email is generated if there is an email program installed on the PC.

4.   RAMAR Technical Support responds with an Activation Code. Cut and paste this code into the Product Activation dialogue box. (If manually entering be careful to enter Activation code exactly as it appears paying attention to spaces and upper/lower case) and select 'OK' button.

5.   The serial COM port connection is configured by selecting File – Interface and then selecting the appropriate COM port from the drop down menu.

6.   Connect the 'Computer' cable to RS232 port of computer (or to a USB port via a USB to RS232 interface device)

7.   The TransPondIT is configured either when in the meter or separately on the bench before fitting. If configuring the TransPondIT in the meter, ensure the meter is not connected to mains.

WARNING: Disconnect the meter from the mains BEFORE connecting the TransPondIT to the ConFigIT.

8. If configuring the TransPondIT in the meter, first remove the meter tamper seal. Then remove the meter's outer cover (twist counter- clockwise) and then connect the ConFigIT 'TransPondIT' cable to the TransPondIT with the electrical connections facing "up". When correctly installed the connector will "click" into place (see Figures 14a & 14b).

Figure 14a

Figure 14b

Figures 14a & b: Connection of ConFigIT Electric to TransPondIT

9. Select **Read** (or press **F6**). The 'Data Computer' LED on the ConFigIT flashes and the ConFigIT screen changes to one as shown in Figure 15. If an error message is displayed, refer to troubleshooting instructions in section 5.2.2 and Appendix B.
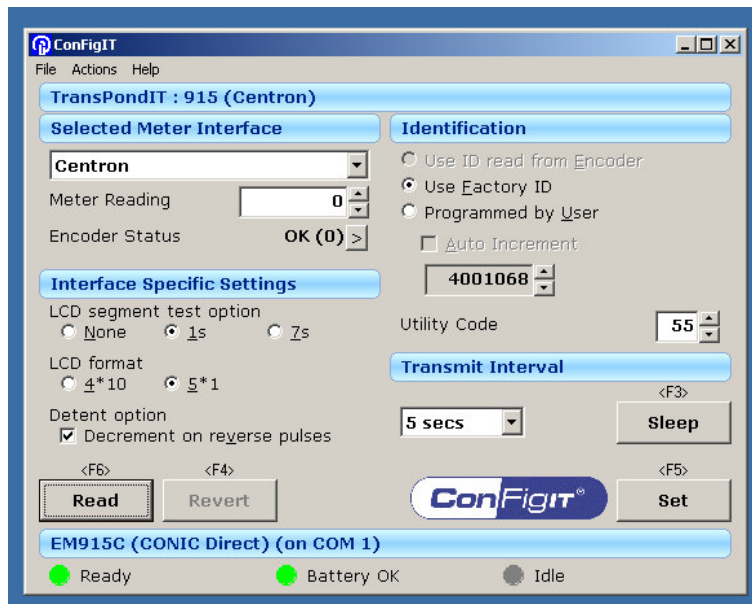

Figure 15: Configuration Screen

10. The following actions are performed to change the default TransPondIT settings, shown in Table 1. Invalid data entries are highlighted in **red** on the screen.

- **To change the meter reading:** Highlight the current meter reading and enter the new value. Acceptable values are 0 to 99999.

- **To change the utility code:** Highlight the current value and enter the new value. Acceptable values are 000 to 255.

- **To change the TransPondIT serial number:** Select the '**Programmed by <u>U</u>ser'** radio button option and enter the new value. The acceptable range is 0 to 16777215.

- **To set the TransPondIT serial number to the factory default:** Select '**Use <u>F</u>actory ID'**

- **To change the transmit interval:** Click on the 'down arrow' symbol next to the current transmit interval and select one from the drop down menu. Options are: OFF, 5 seconds, 10 seconds and 20 seconds. Select 5 seconds.

- **To change the display format**: Select using the radio button. Options available are: 5*1 (displays the meter reading in KWh) or 4*10 (displays the readings in 10's of kWh). If using the 4*10 option; apply "x10" label (supplied with TransPondIT) on meter fascia panel to right of display.

  Example: Energy consumption = 12345kWh
  - LCD format is 5*1. LCD displays 12345 (kWh)
  - LCD format is 4*10. LCD displays 1234 (10's of kWh)
  - Transmitted radio reading is 12345 (kWh) – Always in 5*1 format.

- **To change the detent setting use check box provided:**
  Unchecked   Only forward energy flow will be accumulated (ignore reverse energy).
  Checked   Decrement the meter reading on detection of reverse energy.

- **To change the LCD segment test option:** Select the appropriate radio button. Options are:
  None   - No segment test (Only display kWh)
  1s   - Display kWh for 7 seconds then segment test for 1 second
  7s   - Display kWh for 7 seconds then segment test for 7 seconds

11. Once the changes are selected, select Set (or press F5). This writes the new configuration to the TransPondIT.

The TransPondIT automatically responds to a Set command with a configuration report. The ConFigIT software verifies the report against the requested settings and displays an error dialogue box if there is a mismatch.

Selecting Revert displays the TransPondIT's original factory default settings. The settings are saved to the TransPondIT by pressing **Set.**

Changes to the TransPondITs configuration are immediate but changes to LCD format are not visible until the LCD format is displayed. Cycling the TransPondIT's power (unplugging ConFigIT from TransPondIT refreshes the LCD format.
The ConFigIT PC software always reports the meter reading in kWh, irrespective of the LCD display format (5*1 OR 4*10). <u>The transmitted radio reading is always in kWh</u>.

Example: Energy consumption = 12345kWh
- *LCD format is 5*1. LCD displays 12345 (kWh)*
- *LCD format is 4*10. LCD displays 1234 (10's of kWh)*
- *Transmitted radio reading is 12345 (kWh)*

CHAPTER 4: TECHNICAL INFORMATION

4.1 SPECIFICATION

- Wireless Specification: Operates in the 902 MHz to 928 MHz license exempt ISM band.
- Operating Temperature: -40^0F to $+185^0$F (-40^0C to $+85^0$C)
- Operating Voltage: 240VAC $\pm$ 20% (120VAC optional)
- Power Consumption: 0.5W nominal and 7VA (240VAC, 60Hz)
- Data Format: Data is sent in fixed length, error checked, encoded data packets.
- Configuration options: Utility code, ID number, display format, meter reading, transmission interval, detent/non detent
- Tamper Detection: Error code in message indicates if reverse counts or meter tilted (with tilt switch option).
- Weight: 1.7 ounces (including LCD)
- Dimensions (approximate): H 3.5" x W 4.25" x D 1.2" (including LCD)

4.2 REGULATORY & STANDARDS

- FCC Part 15 (Class B device). – Radiated and conducted emissions
- ANSI C12.1 – 2001 (Tests applicable to AMR device)
- ANSI 12.20 (Class 0.5 – 1998): American National Standards for Electricity Meters
- ANSI C37.90.1 (1994): Standard Surge Withstand Capability (SWC) Tests
- IEC 61000-4-2 (1995): Electrostatic discharge immunity test
- IEC 61000-4-4 (1995): Electrical fast transient burst immunity test.
- IEC 60068-2-6 (1995-03): Basic Environmental Testing Procedure: Mechanical Vibration
- IEC 60068-2-27 (1997-06): Basic Environmental Testing Procedure: Mechanical Shock
- IC RSS210: Industry Canada Specification for Approval of Low Power, License Exempt Radio Communication devices
- IC LMB-EG-07: Industry Canada Specification for Type Approval of Electric Meter

4.3 MEASUREMENT AND DISPLAY

4.3.1 General

The TransPondIT is connected to the metrology board using the board-to-board connector. Energy pulses (1 pulse per Watt Hour consumed) and energy flow direction are sent to the TransPondIT from the metrology board.

4.3.2 Energy Consumption Register

- The TransPondIT register for energy consumption holds a count of Wh. Electricity usage is metered by counting <u>pulses</u> generated by the metrology board. Energy flow direction is also indicated by the metrology board.
- The register contents are stable during power outage – there is no loss of partial kWh consumption if there is an outage.
- The LCD displays energy consumption in kWh (or 10's of kWh according to display format option selected).

4.3.3 Reverse Consumption

Reverse energy is handled according to the detent setting option. The register is configured such that:
1) Reverse energy flow decrements the value of the register, or
2) Reverse energy flow does not change the value of the register.

4.3.4 LCD Segment Test

An LCD segment test is provided (all numbers are 8's). Three options are available:
1) Display kWh only
2) Display kWh for 7 seconds, segment test for 1 second (Default)
3) Display kWh for 7 seconds, segment test for 7 seconds
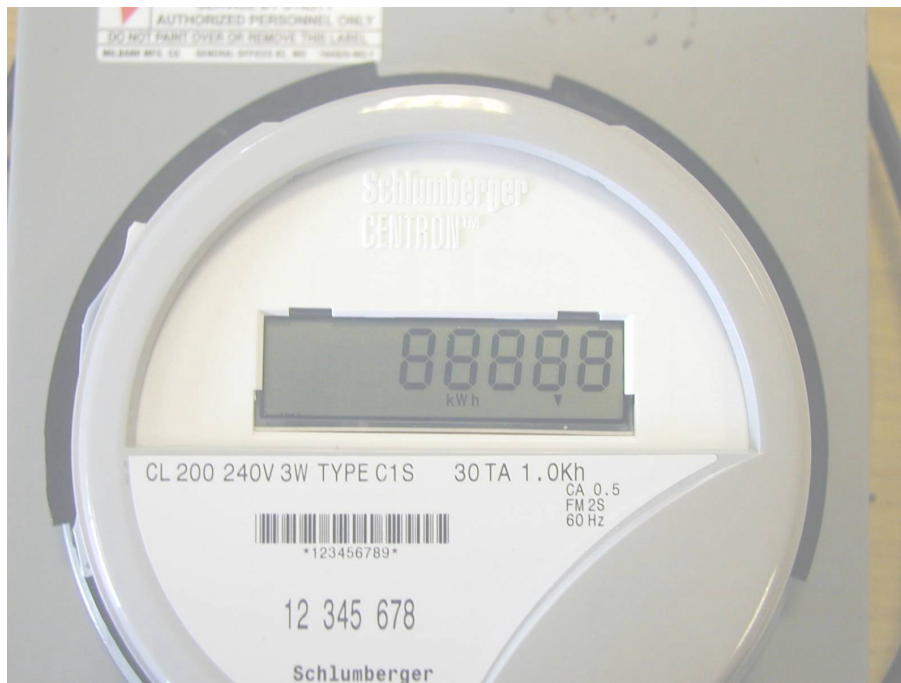

Figure 16: LCD showing segment test (5*1 format)

4.3.5 LCD Contrast

The LCD is automatically adjusted for contrast over the operating temperature range.

4.3.6 Watt Disc Emulator

The energy flow direction is indicated by sequentially flashing three downward pointing arrows' from left to right indicating forward energy usage and from right to left indicating reverse energy usage. Each arrow is 'on' for 1 watt-hour and 'off' for 1 watt-hour (see figure 17).
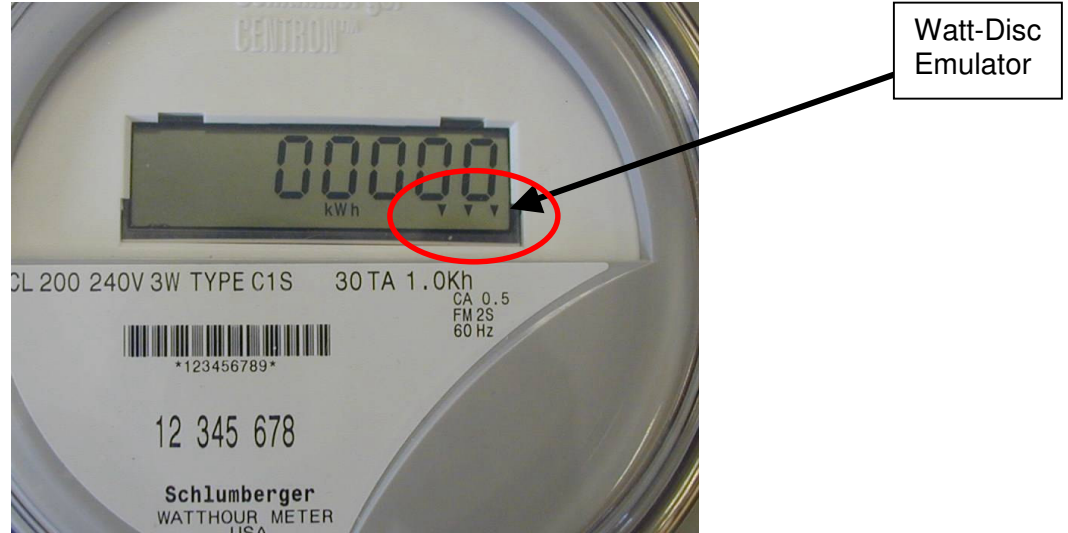
Watt-Disc Emulator

Figure 17: LCD showing watt-disc emulator

4.4 RADIO COMMUNICATIONS

4.4.1 Operational Range

The operational range is typically greater than 300 ft (unobstructed line-of-sight as reported using a FastTrackIT with an antenna at a height of 5 ft). The actual range varies depending on the characteristics of the location.

4.4.2 Transmit Carrier Frequency

The nominal transmission frequency operates within the ISM band 902 - 928MHz.

4.4.3 Antenna

The antenna is integral to the TransPondIT and printed on the PCB.

4.4.4 Transmission Interval

The transmit interval is configurable: OFF, 5, 10 & 20 seconds. Default = 5 seconds.

4.4.5 Meter Reading Transmission Format

The meter reading always transmits in kWh, irrespective of the LCD display format option (5*1 or 4*10).

CHAPTER 5: STATUS CONDITIONS & TROUBLESHOOTING

This chapter describes the TransPondIT status conditions and the mechanisms behind activation. It also covers troubleshooting steps, if a problem arises with the installation or configuration process.

5.1   STATUS CONDITIONS

Several status conditions are flagged and reported by the TransPondIT in the radio message. Table 2 lists the possible conditions and associated status code and type.

STATUS	CODE	STATUS TYPE
Reverse Energy Flow	1	Non-fatal
Metrology Board Error	2	Fatal
CAL Filtering	4	Non-fatal
Non-volatile memory fault	8	Fatal
Tilt Switch Activated (if fitted)	16	Non-fatal

Table 2: Status Conditions

A **fatal error** is one in which the meter count is halted. As the setting of the error flag is stored in the NVRAM, removing and restoring mains supply will have no effect. The last 'good' reading will continue to be written to the display (and transmitted in the RF message) and the error flag will be present in the RF message. Note: the "watt-disc emulator" will still be functioning. To resume normal operation, the error flag MUST be reset via the ConFigIT (see below).

A **Non-fatal error** is one that provides information only – it does not affect the count.

A complete list of status codes in the form they are received by HandTrackIT or FastTrackIT is provided in Appendix B.

Instructions for identifying and correcting possible causes of the error are described in Appendix C.

5.2 READING AND CLEARING STATUS CONDITIONS WITH CONFIGIT

All status codes reported by the TransPondIT are read and cleared using the ConFigIT.

- When displayed by the ConFigIT PC Software, a status code of 0 indicates normal operation (see Figure 18). The specific code number is enclosed in brackets ().
- A non-zero status code is highlighted in **red** alongside the word **Error** (see Figure 19).
- Clicking on the '>' sign next to the "error code" window on the ConFigIT software brings up the Register Status flags window for explanation (see Figure 20).
- The appropriate status flags are selected for clearing (see Figure 21).
- Once all changes are made, pressing '**Set**' or <**F5**> stores the new configuration in the TransPondIT.
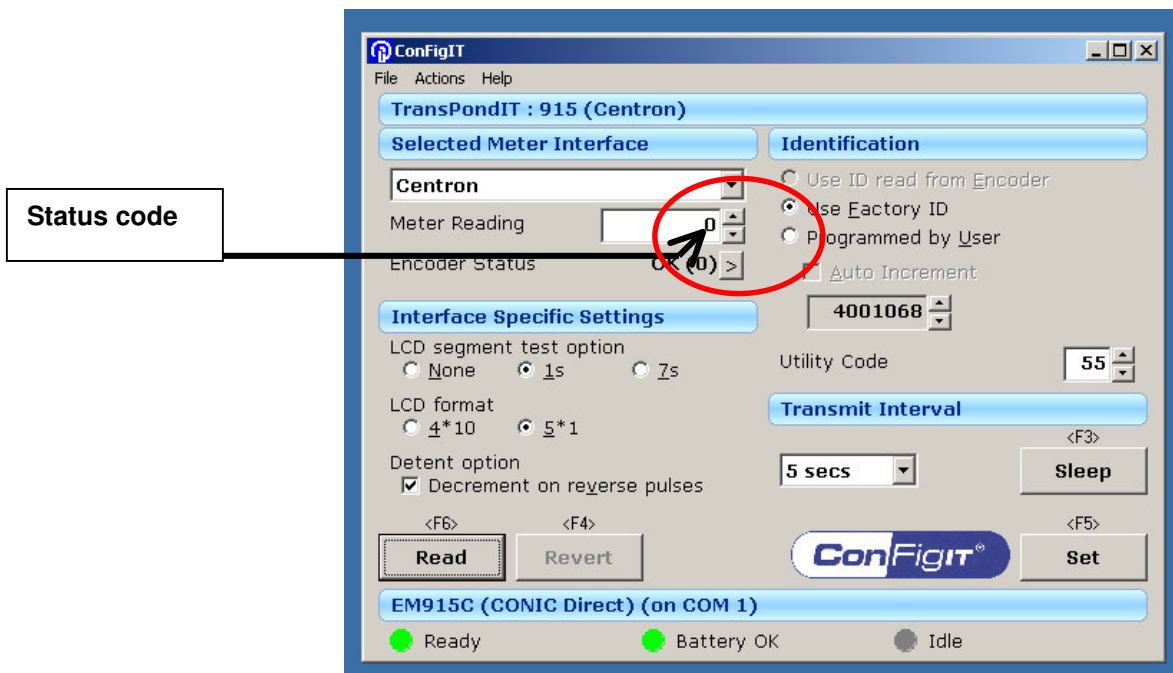

Figure 18: Location of status code – (0) indicates normal operation

Figure 19 illustrates an example of the ConFigIT screen with a TransPondIT that has registered a 'reverse energy flow'. The 'Meter Reading' is also highlighted in **red**.
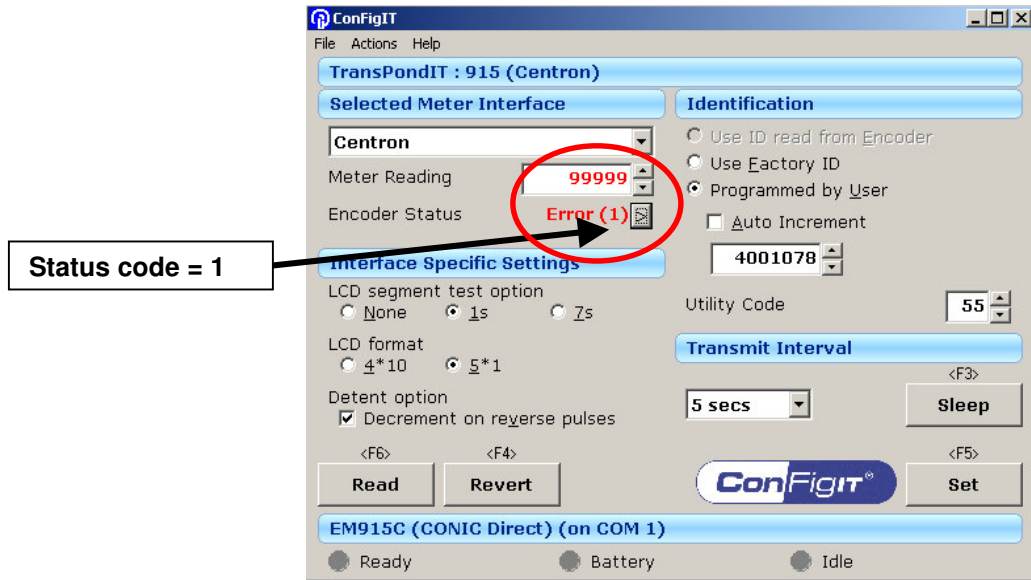
Status code = 1

Figure 19: 'Reverse energy flow' reported

Register Status Flags window

Click on '>' to display the Register Status Flags
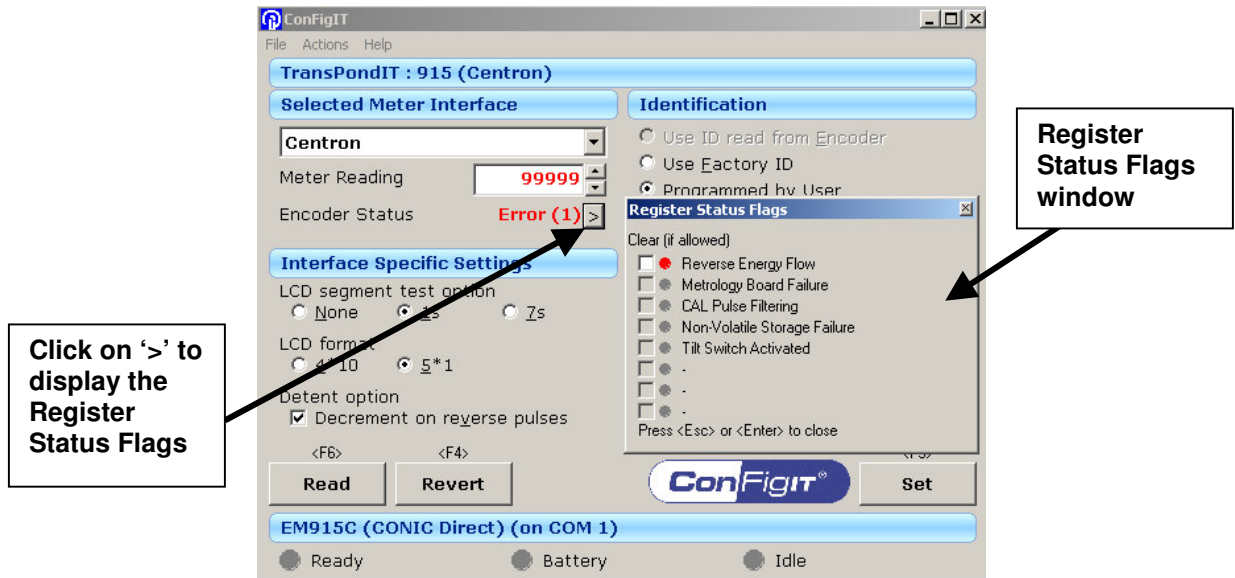
Figure 20: Display Register Status Flag window

5.2.1 Clear a Status Code

1) Click on the '>' sign (see Figure 20)

2) The 'Register Status Flags' window is displayed.

3) Click in the white box(s), tick mark(s) should appear (see Figure 21).

4) Press the 'Enter' or 'Esc' key to close the window.

5) The screen changes as shown in Figure 22

Figure 21: Select 'Reverse Energy Flow' status for clearing

Figure 22: TransPondIT Configuration Screen

6) Make any necessary changes required (e.g. meter reading, transmit interval).

7) Select **Set or <F5>.** This writes the new values and reads numbers back for confirmation (see Figure 23).

8) Confirm that the status code is reset to (0). (see Figure 23)

Figure 23: Reset status code

5.2.2 Troubleshooting – General

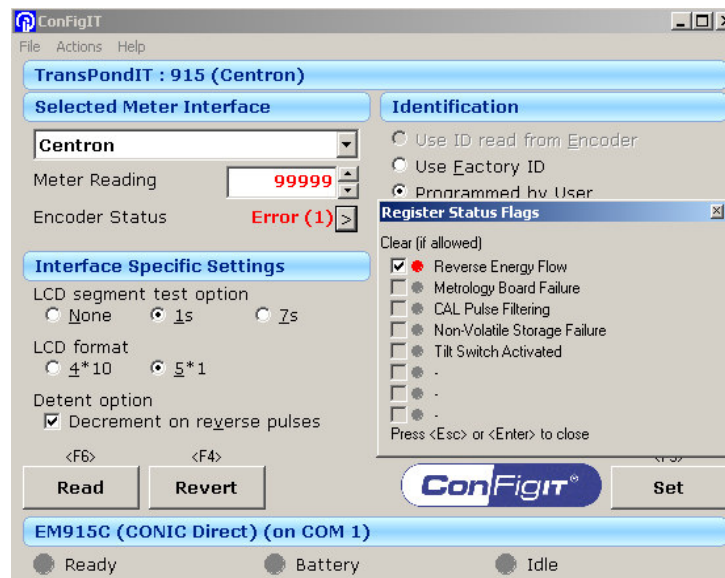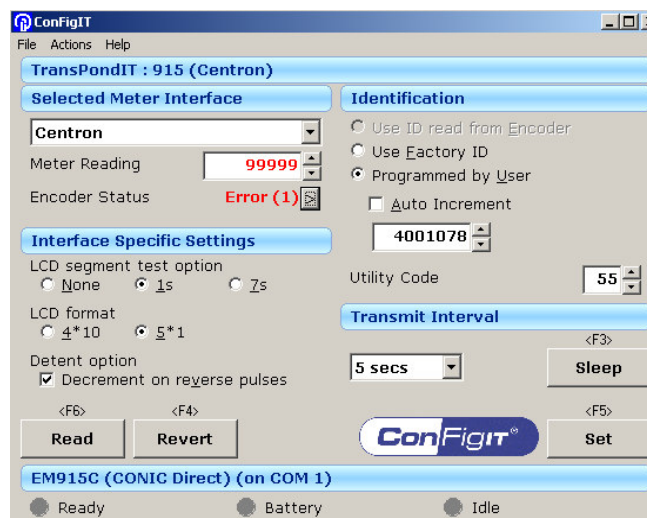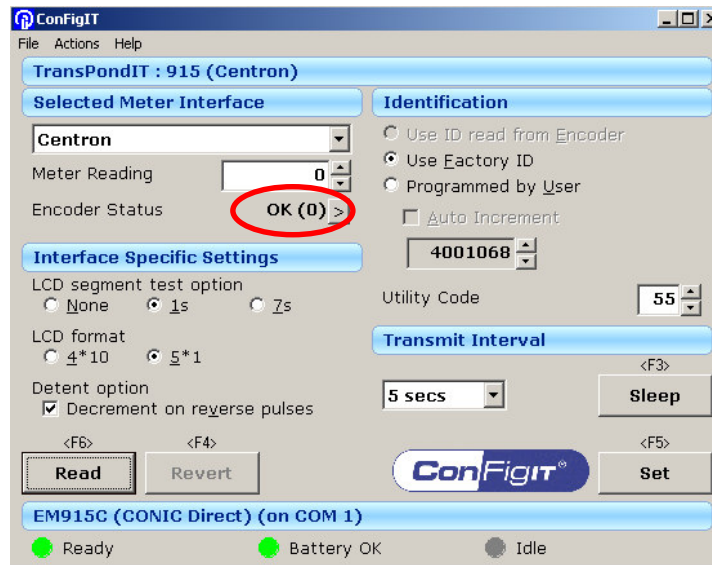Due to the modular design of the CENTRON meter, TransPondITs of similar voltage (120V or 240V) can be interchanged. Therefore, a suspect TransPondIT can be placed onto a working base to verify proper operation of the TransPondIT.

Similarly, a known good TransPondIT can be placed on the base of a suspect meter to verify proper operation of the base.

Alternatively, swap out the suspect meter with a known good meter.

Check whether correct voltage TransPondIT fitted – ie:
- o 120V variant TransPondIT in a Form 2S socket
  TransPondIT will appear to work correctly but will have reduced life – not recommended.
- o 240V variant TransPondIT in a Form 1S socket
  TransPondIT may appear to work but stop working (and metering) if voltage falls marginally life – not recommended.

5.2.3 Troubleshooting - Configuration

The first test to perform is to connect the PC to the ConFigIT (standard 9-way straight through female connectors) and the ConFigIT to the TransPondIT. Run the ConFigIT application ensuring that the communications port is set-up correctly. Select '**Read**' or '**<F6>**' and the LCD should power up. If it doesn't, check that the batteries in the ConFigIT are good (if applicable) and also try a different ConFigIT to TransPondIT lead. If the LCD still fails to illuminate, then refer to table 3.

Figure 24: ConFigIT communications error message

ConFigIT Hardware	Possible Cause(s):	Actions:
Any of: Message: ConFigIT is not responding on Com 1 (see fig 24)	Any of: ConFigIT batteries faulty or ConFigIT DC Power Supply not present.	Try the following: Replace the batteries / check the DC supply
On/Standby LED is not illuminated when 'Read' command sent.	TransPondIT not connected to ConFigIT (possibly caused by ConFigIT connector not pushed fully into the LCD recess).	Ensure connector is fully inserted. Should hear a 'click'.
On/Standby LED permanently on &	ConFigIT PC Software is	Ensure the correct COM port is

Computer / TransPondIT LEDs flash	not configured to use the correct COM port.	selected for the hardware connection, then use the drop down menu **File – Interface** to select the correct port.
	ConFigIT PC software in conflict for a COM port with another application (eg Sync Monitor for PDA)	Stop any application that is using the same COM port as ConFigIT
	'Computer' serial cable damaged	Try a different cable
	TransPondIT serial cable damaged	Try a different cable
	ConFigIT internal fault	Call RAMAR for assistance
	TransPondIT internal fault	Call RAMAR for assistance
Blank Display on meter	ConFigIT connector not pushed fully into the LCD recess	Ensure the connector is fully inserted when configuring
	LCD / LCD driver failure	Replace TransPondIT
	Loose power supply connection	Remove and re-seat the board-to-board connector
ConFigIT Software		
Software installs but is 'locked'	Need product activation code	Send vcf file to RAMAR to receive a new code

Configuration:	Possible Cause(s):	Action(s):
LCD does not display the segment check	TransPondIT is configured not to display the segment check	Reconfigure the TransPondIT
LCD only displays 4 digits	TransPondIT is configured to display in 4*10 format	Reconfigure the unit LCD format to 5*1
No radio reading	Transmit Interval is OFF	Reconfigure TransPondIT transmit interval. Check COMMs with HandTrackIT. If COMMs fails then contact RAMAR

Table 3: ConFigIT Troubleshooting Chart

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APPENDIX A: METER COMPATIBILITY CHART & PART NUMBERS

The TransPondIT for CENTRON is compatible with the following CENTRON meters.

Form	1S	2S	2S	3S	3S	4S	12S
Volts	120V	240V	240V	120V	240V	240V	120V
Class	100	200	320	20	20	20	200
Part No (no tilt switch):	915-120-01	915-122-01	915-122-01	915-120-01	915-122-01	915-122-01	915-120-01
Part No (with tilt switch):	915-121-01	915-123-01	915-123-01	915-121-01	915-123-01	915-123-01	915-121-01

**Qualification is pending on some meter forms

Table A-1: Meter compatibility chart

APPENDIX B: TRANSPONDIT STATUS CODES

Status Code	Description
0	No errors
1	Reverse Energy Flow detected
2	Metrology Board Failure
3	Reverse Energy Flow detected + Metrology Board Failure
4	CAL Pulse Filtering
5	CAL Pulse Filtering + Reverse Energy Flow
6	CAL Pulse Filtering + Metrology Board Failure
7	CAL Pulse Filtering + Reverse Energy Flow + Metrology Board Failure
8	Non-Volatile Storage Failure
9	Reverse Energy Flow detected + Non-Volatile Storage Failure
10	Metrology Board Failure + Non-Volatile Storage Failure
11	Reverse Energy Flow detected + Metrology Board Failure + Non-Volatile Storage Failure
12	CAL Pulse Filtering + Non-Volatile Storage Failure
13	CAL Pulse Filtering + Reverse Energy Flow + Non-Volatile Storage Failure
14	CAL Pulse Filtering + Metrology Board Failure + Non-Volatile Storage Failure
15	CAL Pulse Filtering + Reverse Energy Flow+ Metrology Board Failure + Non-Volatile Storage Failure
16	Tilt Switch Activated
17	Tilt Switch Activated + Reverse Energy Flow detected
18	Tilt Switch Activated + Metrology Board Failure
19	Tilt Switch Activated + Reverse Energy Flow detected + Metrology Board Failure
20	Tilt Switch Activated + CAL Pulse Filtering
21	Tilt Switch Activated + CAL Pulse Filtering + Reverse Energy Flow
22	Tilt Switch Activated + CAL Pulse Filtering + Metrology Board Failure
23	Tilt Switch Activated + CAL Pulse Filtering + Reverse Energy Flow + Metrology Board Failure
24	Tilt Switch Activated + Non-Volatile Storage Failure
25	Tilt Switch Activated + Reverse Energy Flow + Non-Volatile Storage Failure
26	Tilt Switch Activated + Metrology Board Failure + Non-Volatile Storage Failure
27	Tilt Switch Activated + Reverse Energy Flow + Metrology Board Failure + Non-Volatile Storage Failure
28	Tilt Switch Activated + CAL Pulse Filtering + Non-Volatile Storage Failure
29	Tilt Switch Activated + CAL Pulse Filtering + Reverse Energy Flow + Non-Volatile Storage Failure
30	Tilt Switch Activated + CAL Pulse Filtering + Metrology Board Failure + Non-Volatile Storage Failure
31	Tilt Switch Activated + CAL Pulse Filtering + Reverse Energy Flow + Metrology Board Failure + Non-Volatile Storage Failure

Table B-1: TransPondIT status codes

Note: If a Non-Volatile Storage Failure occurs, then subsequent Metrology, CAL or Reverse Direction errors will not be reported. Therefore an error code of 10 indicates that the metrology board failed first and then the NVRAM in that order.

APPENDIX C: STATUS CODE TROUBLESHOOTING

It is expected that all of these troubleshooting operations are performed in the meter shop – after the meter is withdrawn.
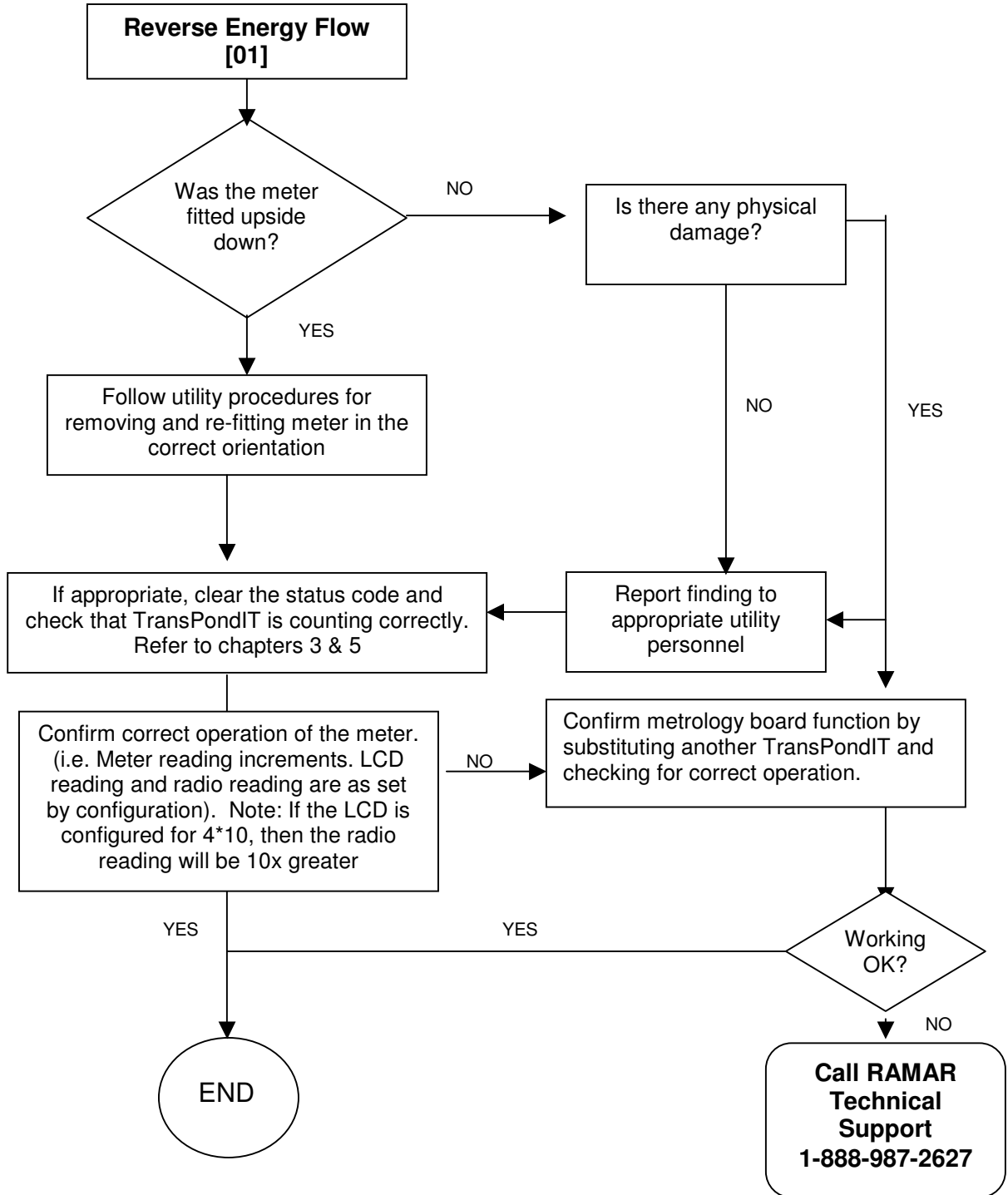

Figure C-1 Reverse energy flow

Note: the reverse energy flow flag is for information purposes. It does not mean that the TransPondIT is faulty.

```
┌─────────────────────────┐
│  Metrology Board Error  │
│          [02]           │
└─────────────────────────┘
```

```
┌─────────────────────────┐
│ TransPondIT is operating│
│ correctly (i.e. LCD and │
│ radio readings are      │
│ identical and non-zero) │
└─────────────────────────┘
```

Note: If the LCD format is 4*10, then the radio reading will be 10x greater

```
┌─────────────────────────┐
│ Follow utility procedures│
│ for swapping out meter   │
│ base and fit TransPondIT │
│ to new meter             │
└─────────────────────────┘
```

```
┌─────────────────────────────────────┐
│ Using ConFigIT clear the status code │
│ and check that TransPondIT is        │
│ counting correctly. Refer to Chapters│
│ 3 and 5.                             │
└─────────────────────────────────────┘
```

```
┌─────────────────────────────────────┐
│ Confirm correct operation of the     │
│ meter. (i.e. Meter reading increments.│
│ LCD reading and radio reading are as  │
│ set by configuration). Note: If the   │
│ LCD is configured for 4*10, then the  │
│ radio reading will be 10x greater     │
└─────────────────────────────────────┘
```

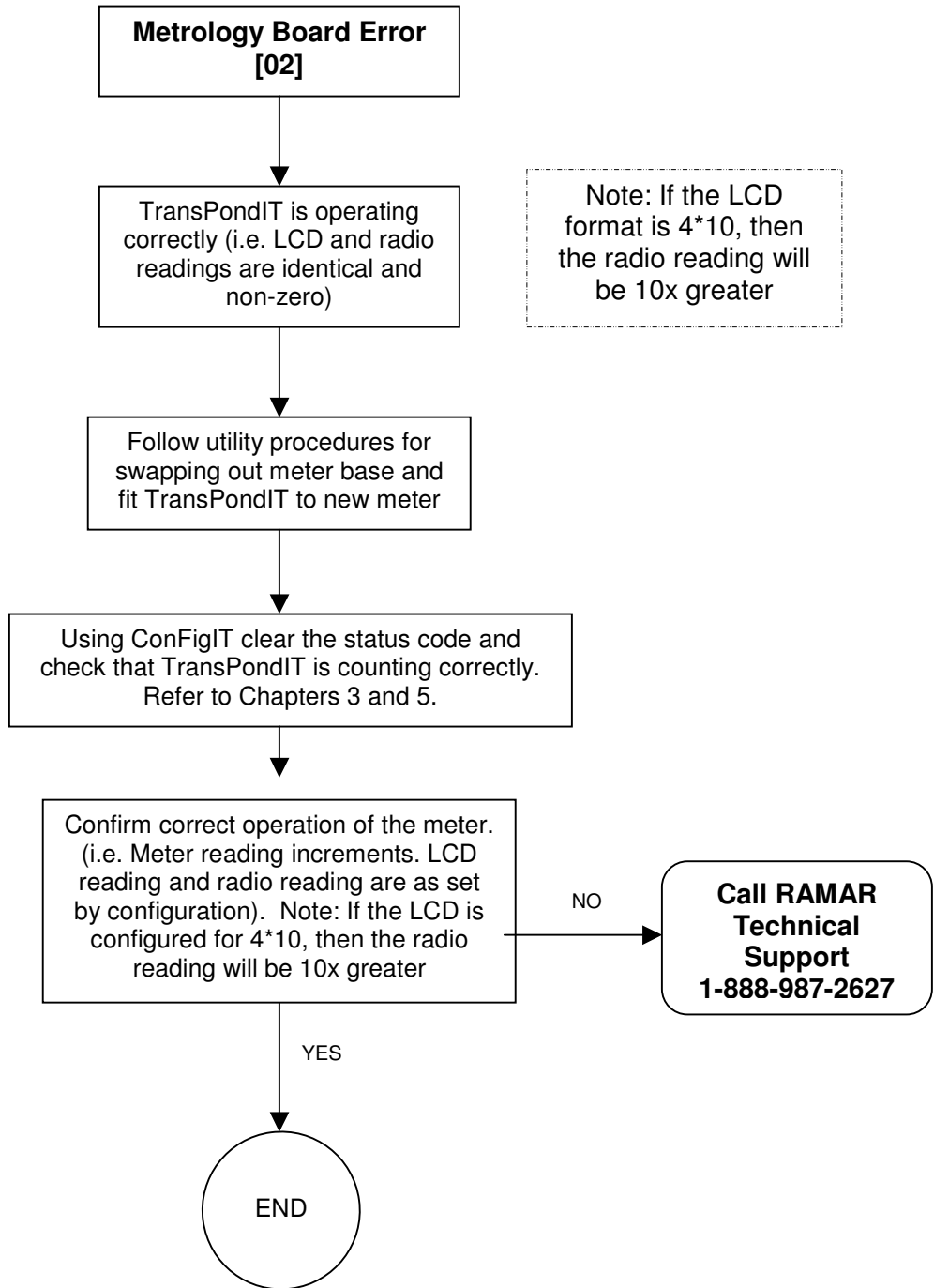NO → **Call RAMAR Technical Support 1-888-987-2627**

YES

(END)

Figure C-2 Reverse meteorology board error

CAL Filtering [04]

This status code is displayed when the TransPondIT records an instantaneous event of signals counted from the metrology board at a rate > 32 per second – this corresponds to >115kW .

This is NOT a TransPondIT fault.

It is for information purposes only.

Report this event to the appropriate utility personnel.

Refer to the CENTRON Meter Technical Reference Guide for more information on the meter.
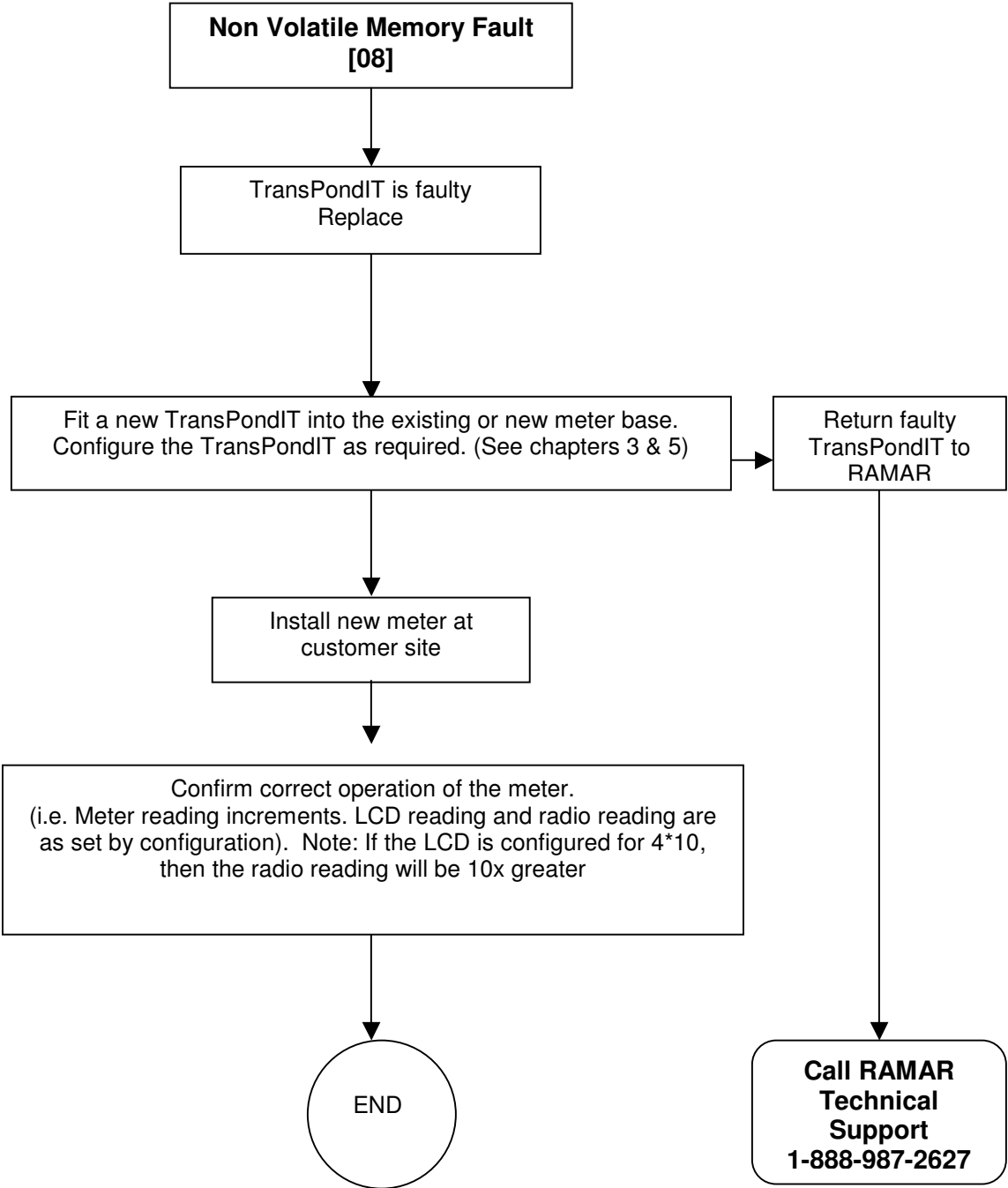
Non Volatile Memory Fault
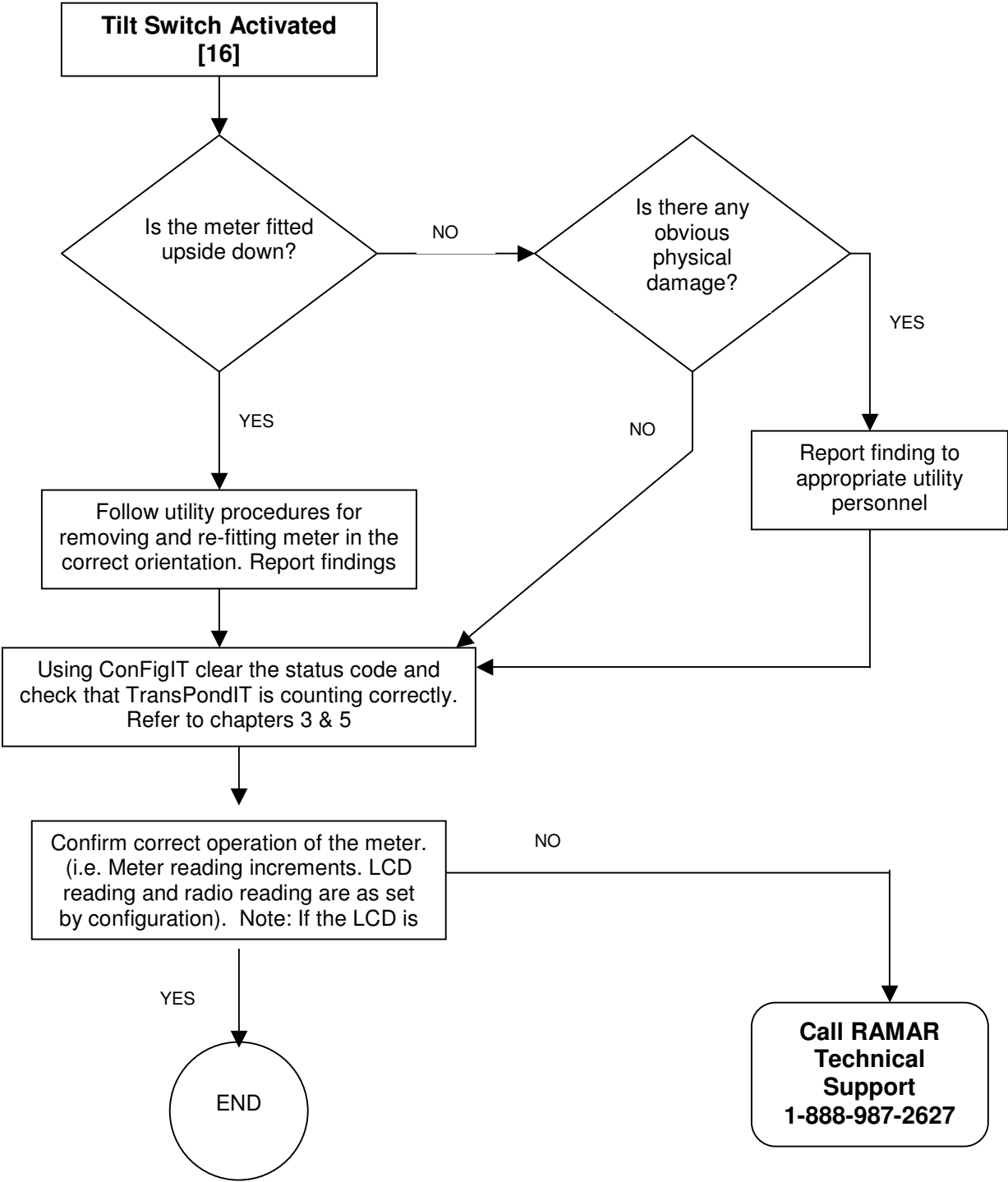[08]

↓

TransPondIT is faulty
Replace

↓

Fit a new TransPondIT into the existing or new meter base.
Configure the TransPondIT as required. (See chapters 3 & 5) → Return faulty
TransPondIT to
RAMAR

↓

Install new meter at
customer site

↓

Confirm correct operation of the meter.
(i.e. Meter reading increments. LCD reading and radio reading are
as set by configuration). Note: If the LCD is configured for 4*10,
then the radio reading will be 10x greater

↓

END

Call RAMAR
Technical
Support
1-888-987-2627

Figure C-3 NVRAM failure

```
┌──────────────────────┐
│ Tilt Switch Activated│
│        [16]          │
└──────────────────────┘
```

Is the meter fitted upside down? — NO → Is there any obvious physical damage?

YES (meter upside down): Follow utility procedures for removing and re-fitting meter in the correct orientation. Report findings

YES (damage): Report finding to appropriate utility personnel

Using ConFigIT clear the status code and check that TransPondIT is counting correctly. Refer to chapters 3 & 5

Confirm correct operation of the meter. (i.e. Meter reading increments. LCD reading and radio reading are as set by configuration). Note: If the LCD is

NO → Call RAMAR Technical Support 1-888-987-2627

YES → END

Figure C-4: Tilt switch

APPENDIX D: COMMERCIAL HEALTH AND SAFETY INFORMATION

WARRANTY DISCLAIMER

To the maximum extent permitted by applicable law, AT RAMAR LLC disclaim all other warranties, expressed or implied, including, but not limited to implied warranties of merchantability and fitness for a particular purpose, with regard to the hardware, the accompanying written material, and the accompanying software.

To the maximum extent permitted by applicable laws, in no event shall AT RAMAR LLC be held liable for damages whatsoever (including without limitation, special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use this product, even if AT RAMAR LLC has been advised of the possibility of such damages. In any case, AT RAMAR LLC's entire liability under any provision of this agreement shall be limited to what is specified in the warranty agreement signed by our distributors.

SOFTWARE RIGHTS AND RESTRICTIONS

The software product and documentation are provided with restrictive rights. The software may not be duplicated, reverse engineered, decompiled, disassembled or modified. The software product and accompanying written material is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The software product is licensed, not sold.

SAFETY WARNING

Separate the electric meter from the power mains before removing the outer and inner covers.

The TransPondIT unit is not serviceable by user except by the ConFigIT. Modifying the TransPondIT voids the warranty and may result in the user paying for all costs normally covered under warranty. For safety reasons, do not modify the unit from its original usage. If the unit is defective please refer to the warranty for disposition or call RAMAR customer service. Under no circumstances should the customer attempt to repair the TransPondIT.

WARRANTY WARNINGS

- Changes or modifications to software, receiver or transmitter equipment not expressly approved by RAMAR could void the user's authority to operate the equipment.
- The equipment must be professionally installed.
- The TransPondIT is solely industrial and commercial in design; therefore it cannot be sold to the general public.

COMPLIANCE WITH FCC REGULATIONS

FCC Part 15, Class B
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one or more of the following measures:

- Reorient or relocate the affected receiving antenna.
- Increase the separation between the equipment and affected receiver.
- Connect the equipment to an outlet on a circuit different from that to which the affected receiver is connected.
- Consult an experienced radio/TV technician for help.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND, (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

COMPLIANCE WITH INDUSTRY CANADA REGULATIONS

The TransPondIT has been certified by Industry Canada (IC) as a low power device operable in the license exempt radio frequency band as stated in document number RSS210.

RSS210   Low Power License-Exempt Radio Communications Devices (902 – 928MHz).

OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION OF THE DEVICE

This Class B digital apparatus meets the requirement of the Canadian Interference-Causing Equipment Regulations.

MODIFICATIONS TO TRANSPONDIT

Changes or modifications not expressly approved by AT RAMAR could void the user's authority to operate the equipment.

REPAIR OF TRANSPONDITS

There are no serviceable parts in the TransPondIT. All repairs require the unit to be returned to either the distributor or RAMAR, depending on where the product was purchased. The standard warranty is 12 months from installation or 18 months from delivery? Contact RAMAR for proper return materials authorization procedures.

Service return address:
RAMAR
511 Davis Drive
Suite 200,
Durham, North Carolina 27713
United States

Tel: 1-888.98.RAMAR (72627)
Fax: 919.991.9946