

**Orthopantomograph®  
OP100**

**Orthoceph®  
OC100**

Ortho ID  
Installation &  
User Manual





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# 1 Introduction

Ortho ID is a desk top equipment for printing the patient data and exposure data received from the OP100 on an x-ray film. A window type film cassette is used. The Ortho ID can be used with all OP100 and OC100 models. Some older models require the upgrading (option code 61260). This manual covers the features of the software versions V 1.01 or higher.

The following markings and symbols may have been used in this manual:



## NOTE

Contains useful information for the reader about the unit and its use.

---



## CAUTION

Contains important instructions. If these instructions are not observed, malfunction of the unit or damage to the unit or other property may occur.

---



## WARNING

Contains warnings and instructions about the safety of the unit. If these warnings are not respected, serious risks and injury may be caused to the patient and operator.

---



Attention, consult accompanying documents.



If the unit has CE - marking it is CE-marked according to the Medical Device Directive 93/42/EEC.

0537



Radiographic control.





## 2 Installation

- 1 Open the box. Lift the Ortho ID from the box and place it on the table top. Remove the end pieces.
- 2 Locate the accessories: OP100 Interface cable or Interface cable CE, Installation & User Manual and Technical Manual. Cassettes may have been included in this shipment
- 3 Additional accessories may have been packed for upgrading the OP100 for the Ortho ID.
- 4 Switch the OP100 power off. Connect the interface cable between the Ortho ID and OP100. The OP100 and Ortho ID can be used in the same room or in separate rooms.
- 5 Switch the OP100 power on. Ortho ID displays its software version and the language version (A or B). If nothing is displayed, check the OP100 and cabling. See the section 3 OP100 Modifications.
- 6 Configure the Ortho ID for daily use. Refer to the Ortho ID Technical Manual, Section Setup.

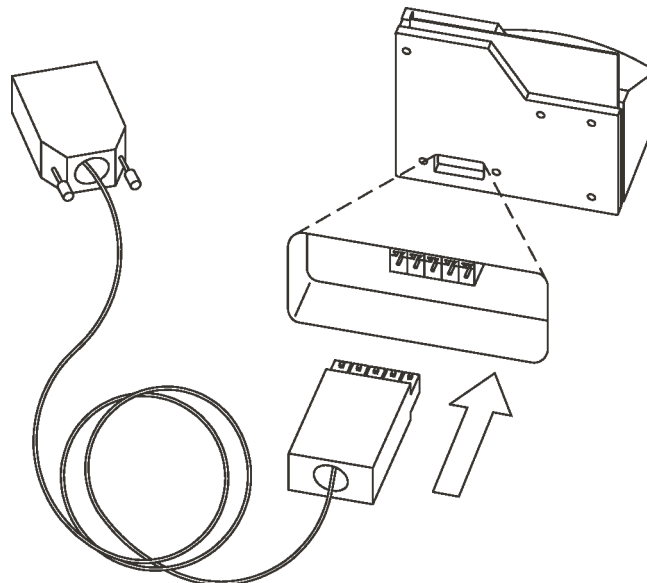


Fig 2.1. Connecting the OP100 Interface cable. CE model is similar.



## 3 OP100 modifications

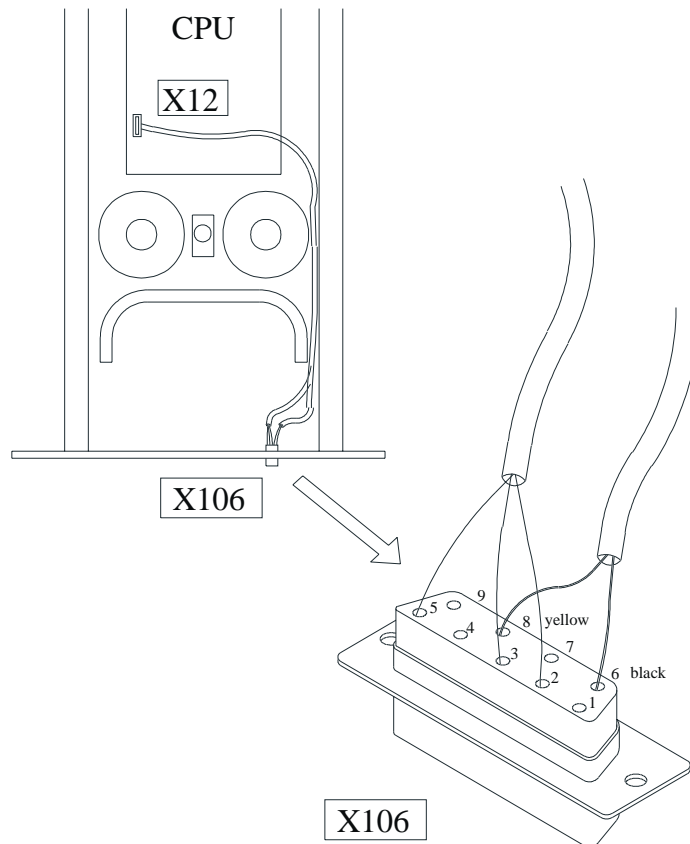
Ortho ID requires the OP100 software version 1.2.05 or higher and proper cabling from the CPU board to the X 106 connector.

### 3.1 CPU Board cabling

Modifications to the OP100 CPU board are required for the following units:

**s/n 70000-70626, 70630, 70639-70680, 70682-70683 and 70688-70700**

- 1 Switch the OP100 power off. Remove the mirror cover and carriage lower trim cover.
- 2 Check the OP100 cabling. Check, if there is additional wiring from the serial interface connector X106 (pins 6 & 8) to the CPU board. X106 is located in the carriage lower cover.
- 3 If not, add a special cable between the CPU connector X 12 and X 106. Connect the black wire (GND) to the X 106 pin 6 and the other (+25V) to the pin 8. Connect the other end to the CPU X12.



## 3.2 Software update

Modifications to the OP100 CPU board have been done at the factory for the following units:

**s/n 70627-70629, 70631-70638, 70681, 70684-70687 and all units from s/n 70701**

However, all OP100 units must have the correct software version to operate with the Ortho ID.

- 1 Switch the OP100 power off. Remove the mirror cover and carriage lower trim cover.
- 2 Check the CPU program versions. Ortho ID does not work with the OP100 program version numbers below:

ICD 29 User Program version 1.2.01

ICD 28 Service Program version 1.2.01

ICD 25 PAL circuit version 1.0.0

- 3 Record the following programmed values from the User Programs “Pr 50 PrS” and “Pr 52 CCo” and Service Programs “Sr 73 AEC” and “Sr 89 rEo”. They may have to be reprogrammed. Refer to the OP100 Manuals.
- 4 If the OP100 has older versions, replace them with

ICD 29 User Program version 1.2.05 or higher

ICD 28 Service Program version 1.2.05 or higher

ICD 25 PAL circuit version 1.1.0 or higher

- 5 Replace one circuit at time to avoid the mixing of circuits. Note the circuit orientation on the CPUboard
- 6 Connect the interface cable, if not in place. Switch the OP100 power on. Ortho ID displays its software version and it is ready for printing.
- 7 The preprogrammed technique factors and AEC parameters must be changed.

V1.2.05 & V1.2.06: reprogram “Pr 50 PRS” to match with the longer exposure time in the OP100 Programs 1 to 4 and 6 to 10. Set the “Pr 52 CCO” to a new value, if preferred.

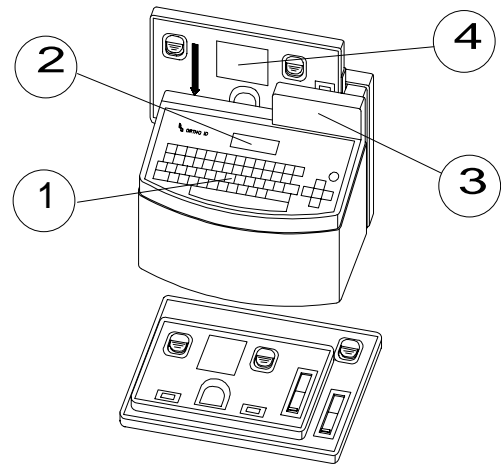


V1.2.07 or higher: set the “Pr 52 CCO” contrast level and density per *User Program Manual* (code 63328).

- 8 Set the “Sr 73 AEC” value one step lower to match with the longer exposure time. “Sr 89 rEo” has new features. Set the Remote exposure, Ceph Collimator, AEC and Free Exposure Selections as wanted, “OFF” or “on”. Set the OP100 CPU for the User Mode (X10).
- 9 Replace the covers.

## 4 Printer controls

- 1 Keyboard
- 2 Display 4 x 20 characters
- 3 Printing slot
- 4 Cassette



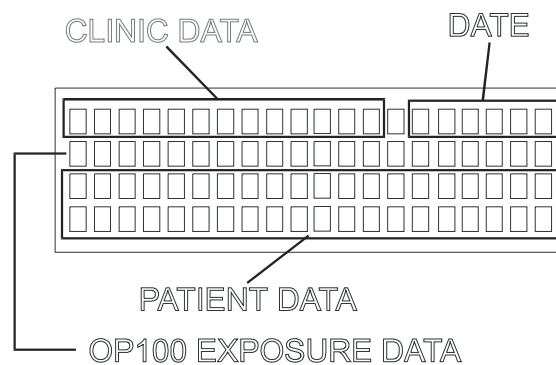
### 4.1 Display

Clinic Data (13 or 11 characters)

Date (6 or 8 characters)

OP100 Exposure Data (20 characters)

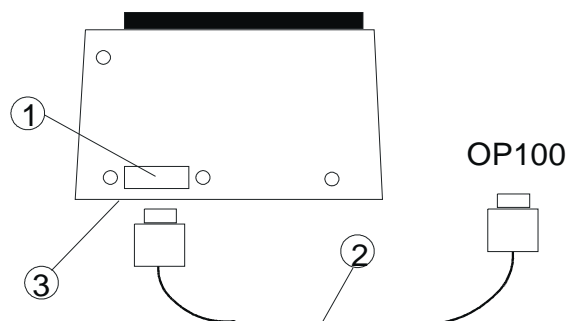
Patient Data (2 x 20 characters)



ID-002

### 4.2 Rear panel

- 1 Slot for the OP100 interface cable
- 2 OP100 Interface cable or OP100 Interface cable CE
- 3 Main label (in the bottom)

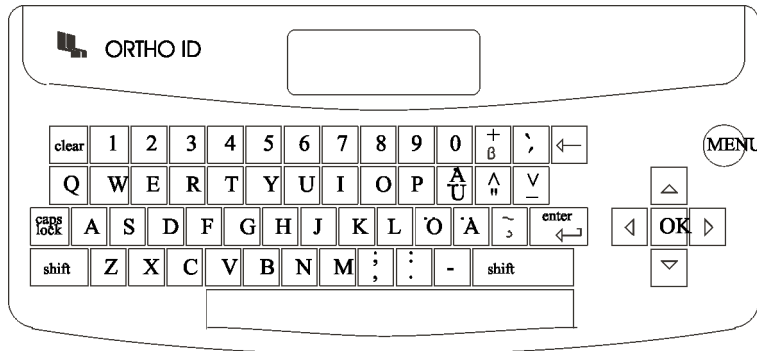


### 4.3 Keyboard

The keyboard is available in one universal layout. Special letters are available by pressing two keys. OP100 style keys: ↑, ↓, ←, →, OK are used.

A - Z, a - z Alphanumeric keys, upper & lower case:

0 - 9 Numbers



Special keys:

**MENU.** Enter for / exit from patient data file



**OK.** Select function / accept a choice.



**UP.** Previous entry line or function or show last patient's data on the display.



**DOWN.** Next entry line or function.



**LEFT RIGHT** Move the cursor on the entry line or select previous / next programmable feature



**SHIFT** together with a letter displays an upper case letter or character



**CLEAR.** Empty the entry field and exit from the editing.



**BACKSPACE.** Move the cursor to the left and delete the last character.



**SHIFT, BACKSPACE.** Display the last printed patient data with the technique factors.



**CAPS LOCK.** Upper case letters.

**ENTER.** Move the cursor one row down.

Language dependant keys can be selected either by pressing the key, eg. **Ü** or by first pressing the special key and then the letter (eg. to have **ë** press “ and then press e ):

English: A - Z, a - z, ñ

German: A - Z, a - z, ß, Ü, ü, Ä, ä, Ö, ö, ñ

French: A - Z, a - z, ç, é, ê, è, à, ë, Ä, ä, Ö, ö

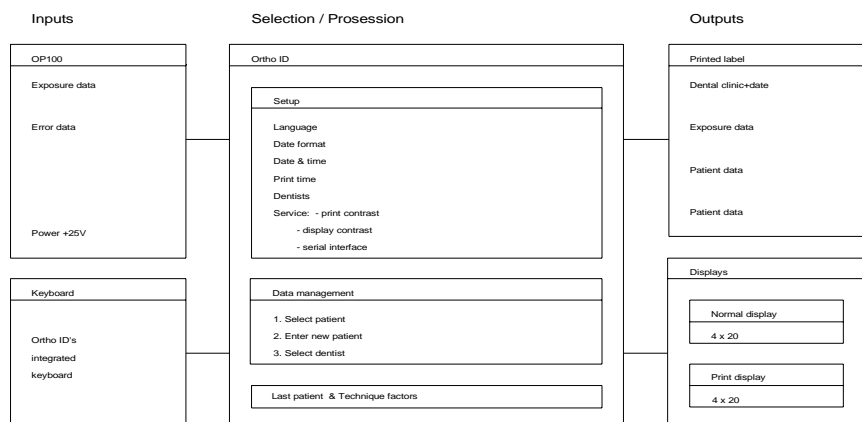
Italian: A - Z, a - z, é, à, ì, ò, ü, ä, ö

Spanish: A - Z, a - z, á, é, í, ó, ú, ñ, ü, ä, ö

Finnish: A - Z, a - z, å, ä, ö

Swedish: A - Z, a - z, å, ä, ö

## 4.4 Principle of the operation



The Ortho ID is a microprocessor controlled equipment. It receives the exposure data and power from the OP100 via a cable. The keyboard is used to enter the patient data and for selecting different functions and the display (Normal display) shows the dentist name, date, OP100 exposure data and patient data for printing. The same data is on the print display (inside the Ortho ID) from where it is transferred to the film when the cassette has been pressed and the OK key is pressed.

The Setup program is used to configure the Ortho ID for daily use. This is usually done at the installation. The Data Management program is used for entering the coming patients into the memory, from where the patient data can be recalled in that order the patients are printed.

The printed patient data goes into the History file. Last patient with technique factors can be recalled and last 10 patients' names without technique factors can be recalled.





## 5 Getting ready

- 1 Switch the OP100 power on. Ortho ID displays its software version for few seconds and beeps.

```

  ORTHO ID V 1.01B
    FOR
  ORTHOPANTOMOGRAPH
    OP100

```

```

  CLINIC DATA    190994
  ..

```

- 2 The Normal display is shown. First row shows the clinic or dentist name, eg. CLINIC DATA, if pre-entered, and the date. The cursor is blinking on the third row.
- 3 Ortho ID is ready to receive technique factors' information. If the OP100 has not sent the technique factors, the display looks similar to the example above.
- 4 Make the exposure with OP100. Data is sent to Ortho ID automatically and displayed.

For Standard panoramic program #1 the display may look like this:

12345 Exposure count

1 Standard Panoramic Program #1

A Automatic Exposure Control

77/6.4 kV/mA

D2 AEC Density setting in center position (D0 = left, D4 = right)

For the OC100 Cephalometric program #5 the display may look like this:

12345 Number of exposure

5 Cephalometric Program #5

77/12/0.64 kV/mA/s

```

  CLINIC DATA    190994
  12345 1  A 77/6.4 D2
  ..

```

```

  CLINIC DATA    190994
  12345 5  77/12/0.64
  ..

```



## 6 Entering the patient data

The user can pre-enter up to 100 patients' data, two rows of 20 characters, and later recall them from the memory for printing. The user can also select the dentist's name for each patient before printing.

```
CLINIC DATA    190994
12345 1  A 77/6.4 D2
⋮
```

```
CLINIC DATA    190994
⋮
```

- 1 The Normal display: the first row shows the dentist or clinic name and the date. The cursor is blinking on the third row.
- 2 If you want to change the dentist's name for this patient, press the menu key. Follow the instructions on the display or refer to the Section 6 Special Functions.
- 3 Enter the patient data for the two last rows, maximum 40 characters. Press "**ENTER**" at the end of the text to move to the last row.

- 4 Eg. type in "**John Smith**" and press "**Enter**". The cursor moves to the last row.

```
CLINIC DATA    190994
12345 1  A 77/6.4 D2
John Smith
⋮
```

- 5 Type in additional patient data, eg. "**12345678-ABCD**". A maximum of 20 characters can be entered, a long beep will be heard at last character of the line.

```
CLINIC DATA    190994
12345 1  A 77/6.4 D2
John Smith
12345678-ABCD⋮
```

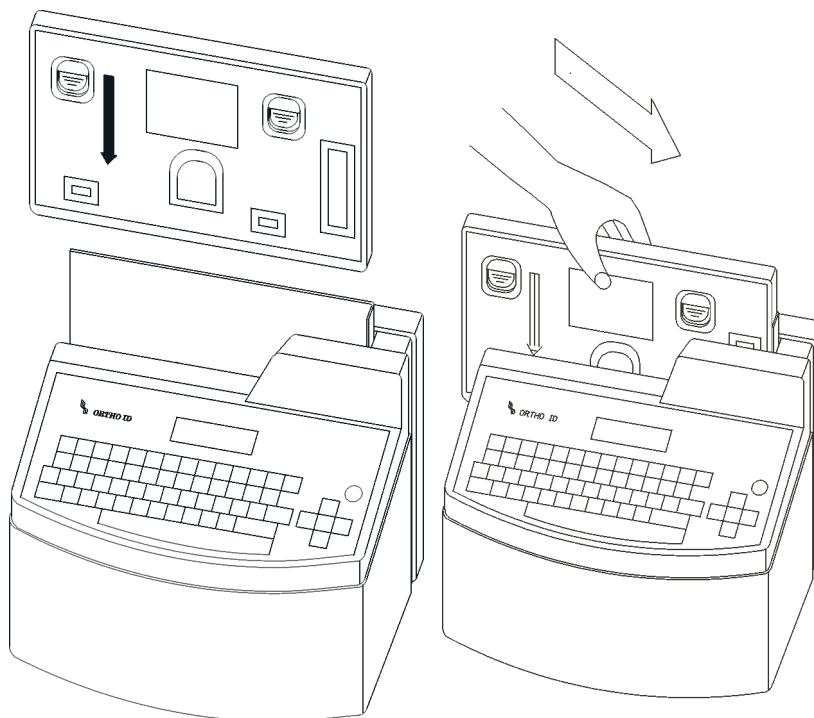
- 6 Ortho ID is ready for printing the patient data. The patient data may be entered before or after the OP100 exposure.



# 7 Printing

## 7.1 Printing the patient data

- 1 Make sure that the patient data you want to print is on the display.



- 2 Insert the cassette into the printer slot, the window side at the right lower corner, facing the operator.



### NOTE

To assure the cassette window opening, make sure the cassette is placed against the right side of the cassette holder.

- 3 Check that the technique factors information is on the display.
- 4 Press the cassette down. A message is displayed.



- 5 Hold the cassette down and press the ok key. Display shows “PRINTING” and a beep is heard. The printing window of the cassette is automatically opened and the printer will expose the data on the film.

```

      PRINTING
      FOR
ORTHOPANTOMOGRAPH
      OP100
  
```



- 6 After the printing two beeps are heard and the display shows momentarily “READY”.

```

      READY
      FOR
ORTHOPANTOMOGRAPH
      OP100
  
```

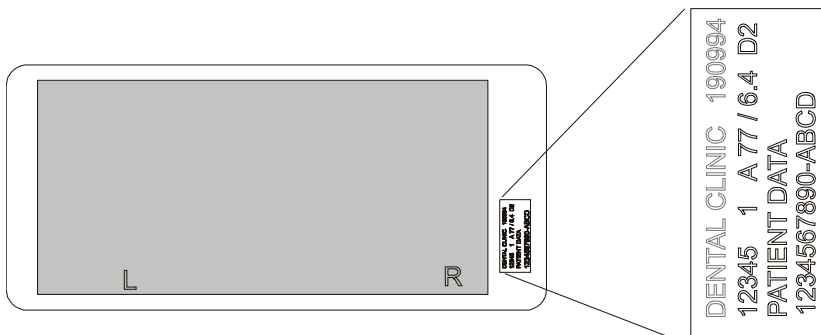
**NOTE**

If the cassette is released too soon, printed data may be lost.

- 7 Lift the cassette. The patient data is stored into the memory and it disappears from the display.
- 8 Process the film. The printed data will be shown on the film. Note the orientation in reference to “L” and “R” on the film.

```

CLINIC DATA    190994
  
```



## 7.2 Printing the same patient data again

- 1 Ortho ID stores the last 10 patients' data in the memory. This data can be recalled for the printing.
- 2 Assume you have printed the patient “JOHN SMITH” data. Ortho ID is ready for the next patient.

```

CLINIC DATA    190994
  
```

- 3 Press the up key. One or two rows of the last patient's data is displayed. The cursor is blinking on the third row.

```

CLINIC DATA    190994
HISTORY         11/OK
JOHN SMITH
RECORD #123456
  
```



- 4 Press up or down key to view other patient's data to be displayed and press the ok key to select. The patient data is displayed.

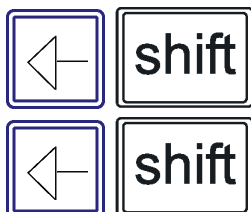


- 5 Make the exposure. Print the data. Process the film.

### 7.3 Printing the same patient data & technique factors again

- 1 Ortho ID stores the last patient's data and the matching OP100 technique factors. This information can be recalled for printing. It can be used for testing or for duplicating purposes.
- 2 Ortho ID is ready for the next patient. Assume you have printed the patient "JOHN SMITH" data.

CLINIC DATA	190994
...	



- 3 Press shift and backspace simultaneously. Last patient's data with OP100 technique factors is displayed.
- 4 Press shift and backspace keys or any other key to resume to the Normal display, if you do not want this feature.
- 5 Print the data. Process the film.

### 7.4 Printing the qa film data

- 1 Make the QA exposure. Technique factors will show on the display, where:

CLINIC DATA	190994
12345	1 A 70/6.3 D2
JOHN SMITH	
RECORD #	123456

"0" QA program

"85/8.0" last kV/mA values used

- 2 Enter for the last two rows any additional information for filing purposes.
- 3 Print the data. Process the film.





## 8 Special functions

The Ortho ID has special features for the patient data filing (DATA MANAGEMENT) and for configuring the Ortho ID for daily use (SETUP). Patient data is stored in the memory from where it can be retrieved. This allows the pre-entry of the patient data.

The Setup program allows the user to configure the Ortho ID for best performance. Such features are the Language version, the Date format and setting, the Dentist names for the practice and the Print time setting.

### 8.1 Patient data file

The Data Management has three functions:

- new patient data can be entered,
- patient can be retrieved from the file and
- clinic or dentist names can be entered.

```
SELECT AND PRESS OK
1. Select patient
2. Add new patient
3. Select clinic/Dr
```

#### 8.1.1 Enter new patient

- 1 While in the Normal display press “MENU” key. The Data Management screen is displayed.

```
CLINIC DATA 190994
⋮
```

- 2 Press “2” or move the cursor down over the third line and press “OK”.

```
SELECT AND PRESS OK
1. Select patient
2. Add new patient
3. Select clinic/Dr
```

- 3 Enter the patient data into the last two rows. Begin with a letter or number.

```
1: ENTER DATA
2: STORE WITH OK
⋮
```

- 4 Type in eg. “Juliet Smith and press enter. Type in **1122334455 XYZ**”. Press “OK”.

```
1: ENTER DATA
2: STORE WITH OK
Juliet Smith
1122334455 XYZ⋮
```

- 5 Data will be saved and the display shows a message.

```
DATA
STORED
```

```
1: ENTER DATA
2: STORE WITH OK
⋮
```

- 6 Repeat steps 3 to 5 for other patients.
- 7 Exit by pressing “OK” before entering more patient data: do step “2” instead of step “1”. The Normal display is shown.

```
1: ENTER DATA
2: STORE WITH OK
:
```

**NOTE**

If you press MENU before saving the patient data entry with OK, the last patient data is not saved.

- 8 An error message is displayed, if the data file has already 100 patients and a new one is entered and saving is tried. This patient's data is not saved.

```
DATA FILE
FULL
PRESS OK
```

**8.1.2 Select pre-entered patient**

- 1 Press the “MENU” key while in the Normal display.

```
CLINIC DATA 190994
:
```

- 2 The Data Management screen is displayed. The cursor is blinking at “1”. Press “1” or press “OK”.

```
SELECT AND PRESS OK
1. Select patient
2. Add new patient
3. Select clinic/Dr
```

- 3 First patient data in alphabetic order is displayed. Use arrow keys or press letters A to Z to review the patient data file.

```
1: SELECT ↑↓ / A..Z
2: PRESS OK
Alfred Jones
123456-ABCD
```

*Example: Pressing “B” will display the first name starting with “B...”. Pressing M will display the first name starting “M...” etc. If the data file does not have names starting with those letters, another name beginning with “A...” or “L...” is displayed. Names beginning with any other characters than A to Z are at the end of the data file after Z.*

- 4 Press the **OK** key to select the patient to be printed. The Normal display shows the patient data.
- 5 An error message is displayed, if there are no patients in the data file.
- 6 Press the **OK** key to clear the message. The Normal display is shown.

```
NO
PRE-ENTERED
PATIENTS
PRESS OK
```

### 8.1.3 Deleting a pre-entered patient from the data file

- 1 While in the Normal display press “**MENU**” key. The data management screen is displayed.

```
CLINIC DATA    190994
..
```

- 2 You can delete the patient’s data from the file. Find the patient data you want to delete.

```
1: SELECT ↑↓ / A..Z
2: PRESS OK
Alfred Jones
123456-ABCD
```

- 3 Press **CLEAR**. The program will ask you to confirm and a beep is heard.

```
DELETING ENTRY
CONFIRM WITH OK
Alfred Jones
123456-ABCD
```

- 4 Press **OK** to delete this patient’s data or any other key to resume to the patient selection menu.

```
DELETING
DATA FILE
CONFIRM WITH OK
```



#### NOTE

To clear the complete patient data file, press **SHIFT** and **CLEAR**. Use with caution - all pre-entered patient data will be lost. The program will ask you to confirm and a beep is heard. Press **OK** to delete the data file or any other key to resume to the patient selection menu.

### 8.1.4 Select the clinic / dentist name for printing

- 1 While in the Normal display press the “**MENU**” key. The Data management screen is displayed.

```
CLINIC DATA    190994
..
```

- 2 Press “**3**” or move the cursor over the third line and press “**OK**”. The current Clinic / Dentist selection is displayed.

```
SELECT AND PRESS OK
1. Select patient
2. Add new patient
3. Select clinic/Dr
```



- 3 Up to ten names may have been programmed for the clinic / dentist names. Use up and down keys or press 0 to 9 to search for the name, eg. Dr Miller.

```
1: SELECT ↑↓/0...9
2: PRESS OK
Dr Miller
```

**NOTE**

The dentist name is only called from the memory. To change any name, refer to the Setup.

- 4 Press **OK**. The selection is stored and the Ortho ID resumes to the Normal display. The new clinic / dentist name is displayed.

## 8.2 Setup menu

The following parameters can be programmed. Please refer to the *Ortho ID Technical Manual* for details:

ORTHO ID SETUP	
Feature	Options
Dialogue language version A (ROM A)	English, German, French, Spanish, Italian
Dialogue language version B (ROM B)	English, Finnish, Swedish
Date format	YYMMDD, MMDDYY, DDMMYY, MM/DD/YY
Date and time setting	YY, MM, DD, hh, mm, ss
Clinic data	1 to 10 dentist names, each max. 13 characters
Print time (s)	0.10, 0.12, 0.16, 0.20, 0.32, 0.40, 0.50, 0.64, 0.80, 1.00, 1.20, 1.60, 2.00, 2.50, 3.20, 4.00, 5.00, 6.40
Service	Printing contrast, Display contrast, Serial Transfer Test

## 9 Trouble shooting

PROBLEM	CAUSE	REMEDY
No information on the display.	<ul style="list-style-type: none"> <li>– A problem with the cabling</li> <li>– OP100 power off</li> </ul>	<ul style="list-style-type: none"> <li>– Check the wiring between the OP100 and Ortho ID</li> <li>– Installation: check that X 106 has +25V voltage wiring</li> <li>– Switch the OP100 power on</li> </ul>
Ortho ID data displayed, but no OP100 technique factors information on the display.	<ul style="list-style-type: none"> <li>– A problem with the cabling</li> <li>– OP100 software version 1.2.01 used</li> <li>– OP100 exposure not yet started</li> </ul>	<ul style="list-style-type: none"> <li>– Check the wiring between the OP100 and Ortho ID</li> <li>– Installation: replace the software</li> <li>– Make the exposure</li> </ul>
No printed data on the film.	<ul style="list-style-type: none"> <li>– The cassette misplaced</li> <li>– The cassette window has not opened</li> <li>– The cassette not placed against the right side of the cassette holder while printing</li> <li>– Printing time is too short</li> <li>– The OK key not pressed while holding the cassette</li> </ul>	<ul style="list-style-type: none"> <li>– Check the cassette orientation- Push the cassette to the right when printing</li> <li>– Check the printing time</li> <li>– Press OK</li> </ul>
Printed data too pale or lack of contrast.	<ul style="list-style-type: none"> <li>– Printing time too short</li> <li>– Printing contrast is not optimal</li> <li>– Wrong film type, eg. blue sensitiv</li> <li>– The cassette lifted too soon</li> </ul>	<ul style="list-style-type: none"> <li>– Check and adjust the printing time</li> <li>– Check and adjust the printing contrast- Check the film</li> <li>– Keep the cassette pressed from “PRINTING” to “READY”</li> </ul>
Printed data too dark.	<ul style="list-style-type: none"> <li>– Printing time too long</li> <li>– A cassette light leak</li> <li>– Strong light above the Ortho ID</li> </ul>	<ul style="list-style-type: none"> <li>Check the printing time</li> <li>Check the cassette</li> <li>Remove the light</li> </ul>

PROBLEM	CAUSE	REMEDY
Patient data was not printed, but the technique factors were.	<ul style="list-style-type: none"> <li>– No patient data on the display before printing</li> <li>– Second printing of the same patient without patient data</li> <li>– A problem with the Ortho ID</li> </ul>	<ul style="list-style-type: none"> <li>– Enter the data before printing</li> <li>– Retrieve the patient data from the memory before printing</li> <li>– Call Service</li> </ul>
Poor display contrast.	<ul style="list-style-type: none"> <li>– Wrong display contrast setting</li> </ul>	<ul style="list-style-type: none"> <li>– Adjust the display contrast, refer to the Setup</li> </ul>
The dialogue language is not correct or not available.	<ul style="list-style-type: none"> <li>– Different language selected</li> <li>– Wrong language option</li> </ul>	<ul style="list-style-type: none"> <li>– Select a new language</li> <li>– Replace with another language option module</li> </ul>
Ch, Sy or Er failure message on the display.	<ul style="list-style-type: none"> <li>– Ch = OP100 user mistake</li> <li>– Sy, Er = A problem in the OP100 operation</li> </ul>	<ul style="list-style-type: none"> <li>– Follow the instructions on the display, press -&gt;</li> <li>– Make the corrective action</li> </ul>



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