



*"VIDEOR" Intraoral camera*

## **CASTELLINI S.p.A.**

Via Saliceto, 22  
40013 CASTEL MAGGIORE  
BOLOGNA (ITALY)  
Tel. + 39 051 700877  
Fax + 39 051 701056  
E mail: [castellini@castellini.com](mailto:castellini@castellini.com)

# **USE AND MAINTENANCE INSTRUCTIONS**

## **INSTRUCTIONS FOR USING THE SOFTWARE**

# **VIDEOR**

*System for intraoral camera*

**756 . 3E . N06**

**January 2007**

## GENERAL INDEX

	<b>Page</b>
<b>Part I – User and maintenance handbook</b>	<b>3</b>
Important Notice	4
Essential requirements	5
Disposal instructions	5
Cleaning, disinfecting	5
Technical data	5
Pictures, descriptions and controls of the "Videor" system	6
Instructions for the making the electrical connections between the "videor" system and dental unit	7
Instructions for connecting the "Videor" system to a pc	8
Fitting a disposable cover on the "Videorcam" handpiece	8
Fitting the disposable sheath on the "Videorcam" handpiece	8
<b>Part II – Instructions for using the software</b>	<b>9</b>
Videorcam program.	10
Selection of patient	11
Main menus description	12
Menu users	12
Menu patients	13
Menu actions	15
Menu acquire	17
Menu format	18
Menu windows	19
Settings	20
Foot control	23
Acquisition of images	23

# **VIDEOR**

## **PART I – USER AND MAINTENANCE HANDBOOK**

**Important Notice**

This device is applicable to a dental unit (medical device conforming to the requirements of Directive 93/42 EEC – MEDICAL DEVICES) and complying with standard CEI 62-5/EN 60601-1 (Medical Electrical Equipment - General Requirements for Safety).

It is intended for use solely by a dentist, who may be assisted by auxiliary personnel authorised by him/herself.

Before use, **carefully read** the instructions provided in the user manual.

Before using dental instruments applied to the dental unit, **carefully read** the instructions provided with the instruments themselves.

The instructions for installing the device and the instructions for technical service and repair are held by the "CASTELLINI AUTHORISED" TECHNICIAN IN POSSESSION OF A VALID LICENCE.

**The Manufacturer shall be exempt from all civil or criminal liability in relation to the safety, reliability or performance of the device if:**

- a) the essential environmental requirements as specified in the Table of Conformity of Equipment, Environment and Supply Systems are not complied with;
- b) installation, additions, adjustments, recalibrations and repairs are not performed by an **"AUTHORISED CASTELLINI" TECHNICIAN IN POSSESSION OF A VALID LICENSE;**
- c) any medical devices other than those authorised by Castellini itself or devices that fail to meet the compatibility parameters specified by Castellini S.p.A. are connected to Castellini equipment;
- d) unauthorised modification, arbitrary tamperings, incorrect maintenance operations are carried out or if non-original spare parts and/or components are used;
- e) the equipment is not used in compliance with the instructions for use (as set out in the use and maintenance manual) or if it is used for purposes other than those for which it is designed;
- f) the electric power supply system does not conform to the specifications given in the use and maintenance manual (see section on "preparing the environment") and the requirements of law in the user's country.
- g) scheduled maintenance operations are not carried out at the specified times;
- h) the user does not undertake all routine maintenance work and does not comply with the directions and rules in this use and maintenance manual.

Failure to comply with the above rules will automatically invalidate the warranty and compromise the ability of the equipment to meet the essential safety requirements established by directive 93/42 EEC; anyone who performs the above operations without authorisation shall bear full and complete liability in respect of product safety and performance.

You are hereby informed that:

**The Principal of the Dental Surgery is responsible for ensuring that the equipment, environment and water supply comply with the basic requisites shown in the table below:**

**TABLE OF CONFORMITY OF EQUIPMENT, ENVIRONMENT, POWER SUPPLY**

ITEM	ESSENTIAL REQUIREMENTS
<input type="checkbox"/> Premises	a) protected from risk of explosion, non pressurized b) temperature between 10 °C and 40 °C c) Relative humidity between 30 % and 75 % d) Air pressure between 700 hPa and 1060 hPa (700 ÷ 1060 mbar)
<input type="checkbox"/> Electrical power supply	Adequate for power requirements

### Essential Requirements

Each device manufactured by Castellini S.p.A. that constitutes an independent unit must undergo yearly scheduled maintenance, irrespective of the conditions of use (unless otherwise specified in the present manual in the section "Scheduled Maintenance"). Maintenance must be performed by qualified technicians authorised by Castellini and in possession of a valid license.

It is always the owner's responsibility to call in a maintenance technician.

### Circuit diagram, lists of components, calibration instructions

Instructions for installing the device and technical service and repair instructions are provided to "AUTHORISED CASTELLINI" technical personnel in possession of a valid license.

Castellini S.p.A. reserves the right to modify the products at any moment without notice.

### Disposal instructions

Packing materials no longer used may be taken to a waste disposal and recycling facility. They are non-polluting materials that can be recycled as secondary raw materials.

If the equipment is to be scrapped, it must be disposed of in accordance with European Directive 2002/96/EC and subsequent amendments, transposed into Italian law by Legislative Decree no. 151 of 25/07/2005 and subsequent amendments. European Directive 2002/96/EC establishes that waste electrical and electronic equipment should be collected separately from solid municipal waste for recovery and recycling purposes.

### Cleaning, Disinfecting

- The instrument is supplied in a non-sterile condition.
- During use of the instrument always use the disposable sheath.
- The "Videoram" handpiece is not autoclaveable.
- The handpiece must not be submerged in disinfectant or sterilising liquids.
- To clean and/or disinfect the exterior surface of the handpiece use gauze or cotton dipped in surgical alcohol.
- DO NOT use ultrasound cleaners.
- In the event of visible damage, do not use the handpiece.

### Technical Data

**MEDICAL DEVICE CLASS IIa By 93/42 - EEC DIRECTIVE**

**ELECTRO MEDICAL EQUIPMENT CLASS I - TYPE B By IEC EN 60601-1 Standard**

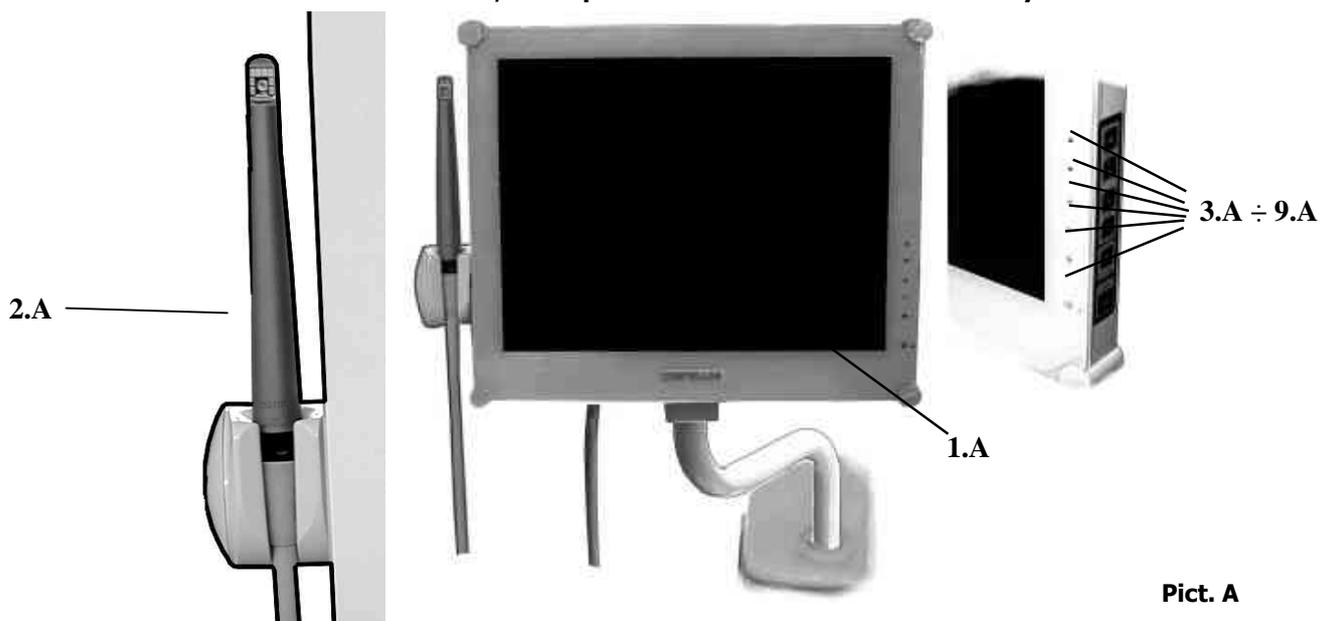
**THE EQUIPMENT CANNOT BE USED WHEN FLAMMABLE ANESTHETIC MIXTURES CONTAINING AIR OR OXIGEN OR NITROUS OXIDE ARE PRESENT**

**DEGREE OF PROTECTION AGAINST WATER INFILTRATION:** NORMAL

#### POWER SUPPLY

MAXIMUM POWER INPUT	100 VA
MAINS VOLTAGE	32 Vcc
INTERMITTENT OPERATION	120 Min rest 120 Min work
CONTINUOUS OPERATION (MONITOR)	

**Pictures, descriptions and controls of the "Videor" system**



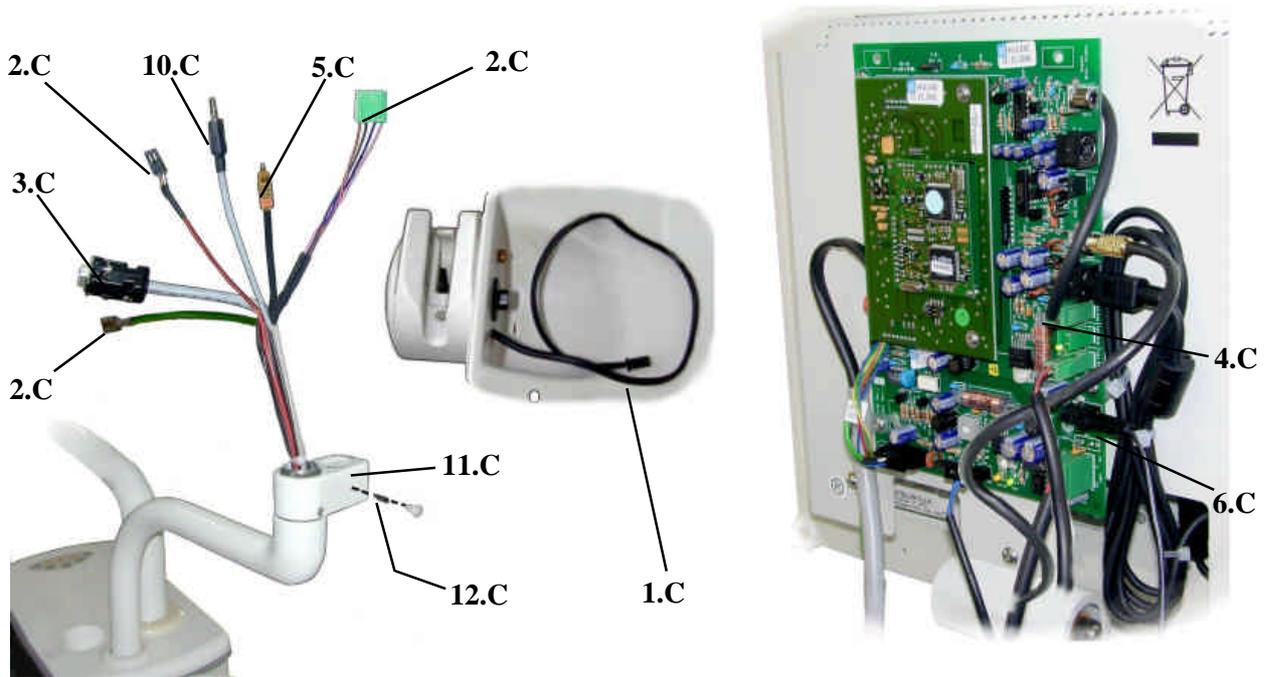
**Pict. A**

- 1.A 17" TFT monitor
- 2.A Intraoral camera handpiece
- 3.A  Monitor ON
- 4.A  For automatic monitor adjustment (AUTO ADJ) and closing the OSD
- 5.A  Increase (activates the OSD and increases the value of the selected parameter)
- 6.A  Decrease (activates the OSD and decreases the value of the selected parameter)
- 7.A  UP (activates the OSD and allows the user to navigate the display menus)
- 8.A  DOWN (activates the OSD and allows the user to navigate the display menus)
- 1.B Image freeze control:



**Full-screen image freeze:** *Press momentarily and release*  
**Image freeze in quad mode** *Press and keep pressed for at least 3 sec. Then give a short press and release; each pressing of the control corresponds to one captured image in a tile.*  
**Go back to full screen:** *Press and keep pressed again for at least 3 sec.*

**Instructions for the making the electrical connections between the "Videor" system and dental unit**



**Pict. C**

The "VIDEOR" system is supplied disassembled from the dental unit.

Before fixing the monitor to the mounting bracket, remove the four fastening screws and take off the rear cover of the monitor.

After removing the exterior trim cap and loosening the threaded dowel (**12.C**) insert the swivel pin of the monitor bracket into the supporting arm (**11.C**);

Connect the cables coming out of the arm as indicated in the table below:

Part	Name	
<b>1.C</b>	Switch for intraoral camera handpiece holder	
<b>2.C</b>	32V power supply for camera and image freeze signal (from the dental unit)	
<b>3.C</b>	VGA (to the P.C.)	*
<b>4.C</b>	12V power supply for monitor	
<b>5.C</b>	Video composite signal (to the P.C.)	*
<b>6.C</b>	12V power supply (from the power supply unit)	
<b>7.C</b>	S-Video (to the monitor)	
<b>8.C</b>	Image freeze (to the PC)	*
<b>9.C</b>	Ground wire	
<b>10.C</b>	Optional audio (from the PC)	
(*)Connect only where an external PC is present		

Fit the cover back in place and secure it with the fastening screws.

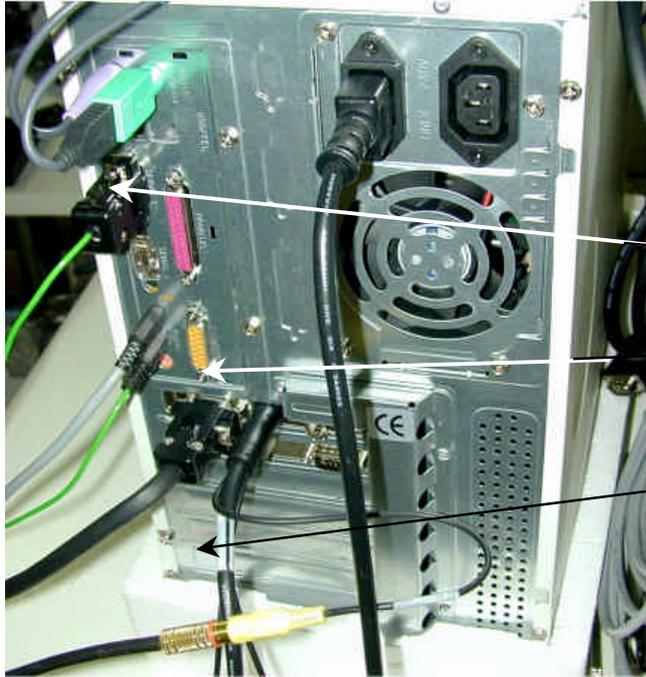
Screw the threaded dowel (**12.C**) back in place and apply the trim cap.

*"VIDEOR" Device for Intraoral Camera*

**Instructions for connecting the "Videor" system to a PC**

The VIDEOR is connected to an external PC separate from the dental unit by means of the following cables:

- S-VGA cable (connects the output of the PC video card to the S-VGA input of the monitor)
- Video composite cable (connects the output of the video composite signal of the "VIDEOR" system to the video composite signal input of the PC image capture card)
- Image freeze cable (this connects the image freeze signal coming from the dental unit to the COM serial port of the PC)



**CONNECTIONS TO PC  
(pict: D)**

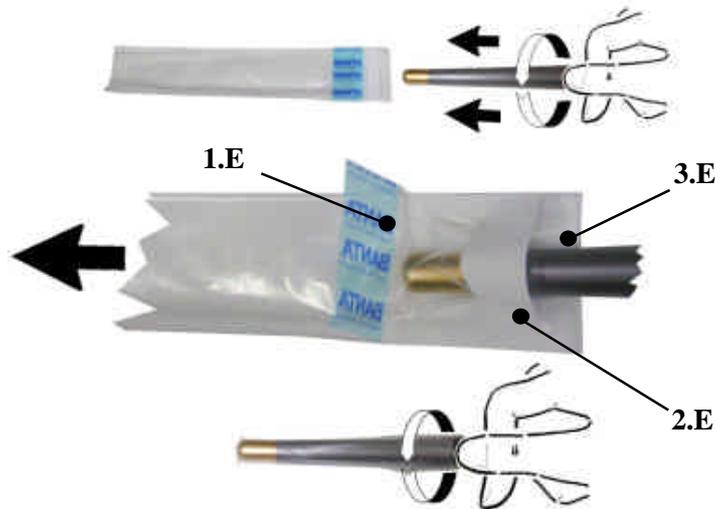
Image Freeze  
COM -(1.D)

S-VGA  
(2.D)

Composite Video  
(3.D)

**Pict. D**

**Fitting a disposable cover on the "Videorcam" handpiece**



**Pict. E**

**Fitting the disposable sheath on the "Videorcam" handpiece**

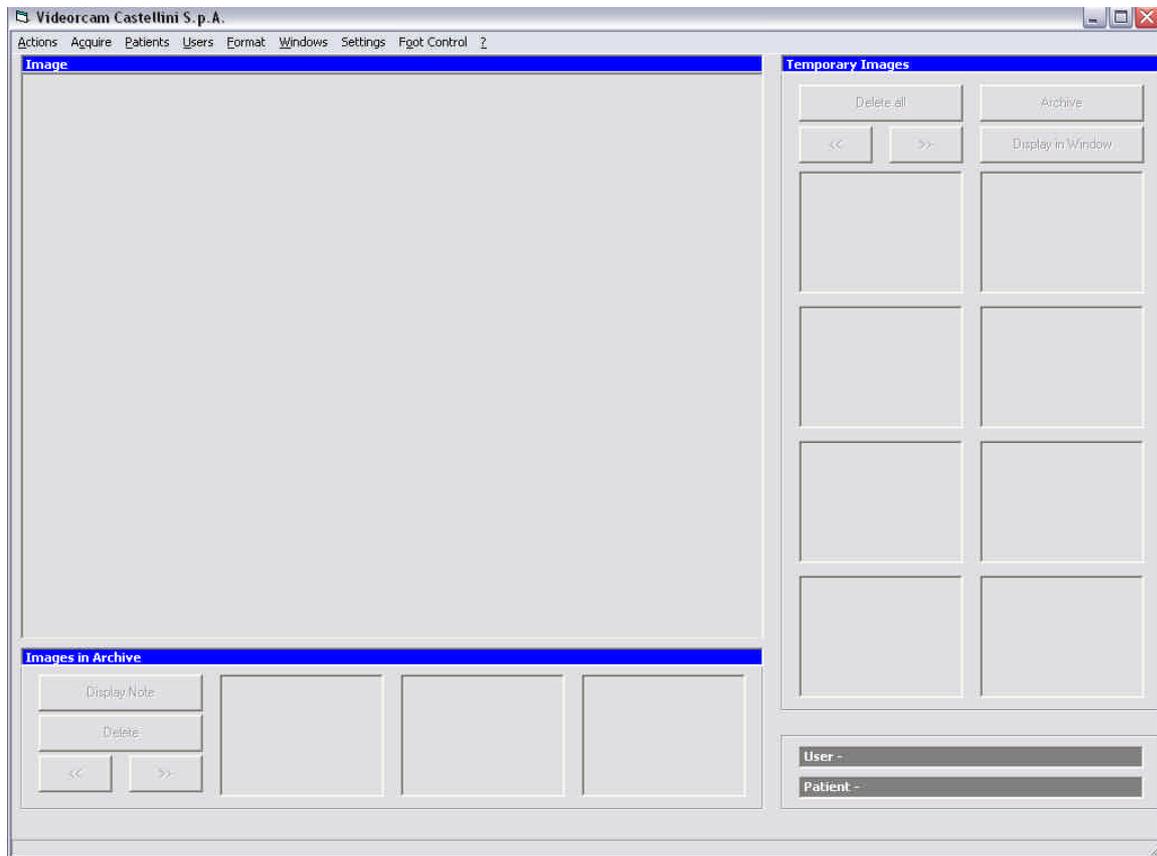
- Turn the head of the camera handpiece so that the lens is turned toward the white side of the protective sheath.
- After lifting the outer film from the blue edge (1.E), slip the camera inside the disposable sheath, taking care to insert it below the white strip (2.E) as shown in the Picture in the middle.
- Push the camera all the way inside the sheath so that the tip reaches the very end.
- Remove the outer parts of the sheath in sequence (1.E - 3.E).

# **VIDEOR**

## **PART II – INSTRUCTIONS FOR USING THE SOFTWARE**

### Videorcam Program.

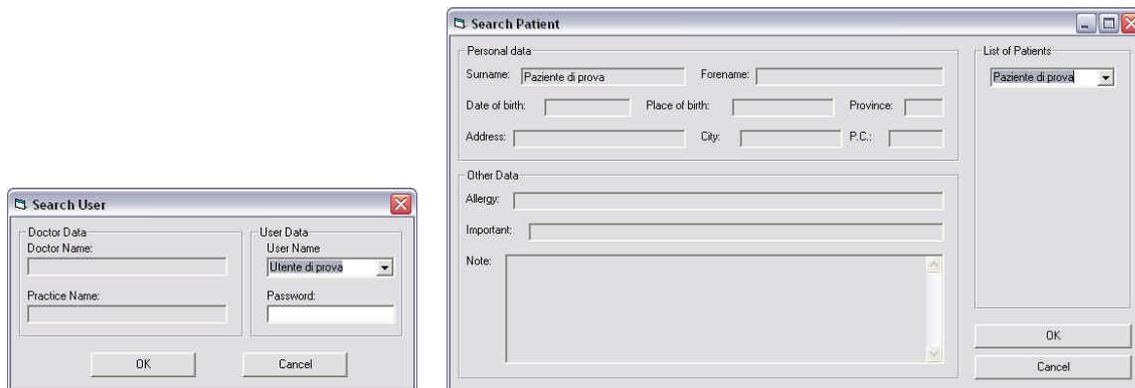
The main window manages the images coming from intraoral camera .



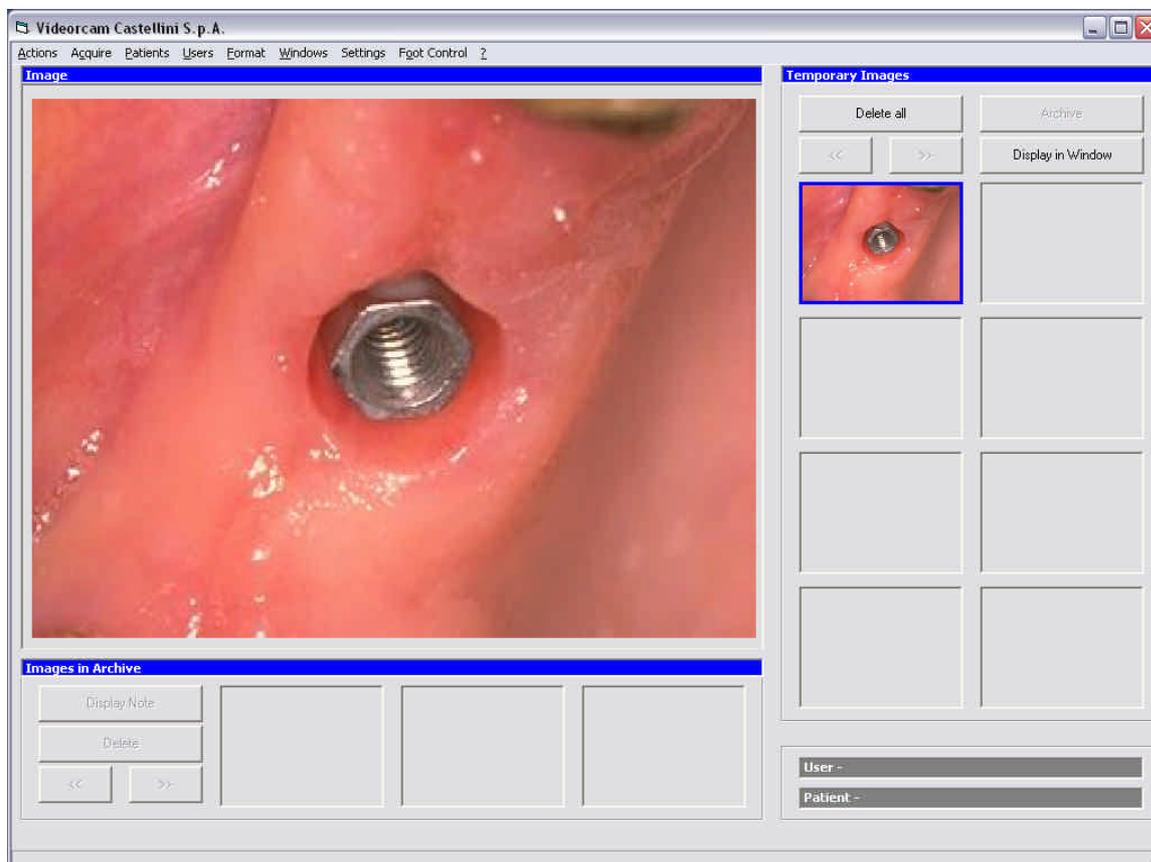
Data in the "temporary" list have been acquired but not yet recorded in the patient folder.  
Data in the "archive" list have been recorded on the hard disk in the patient folder.

**Selection of patient**

The first step is the selection of the User and then the selection of the Patient.



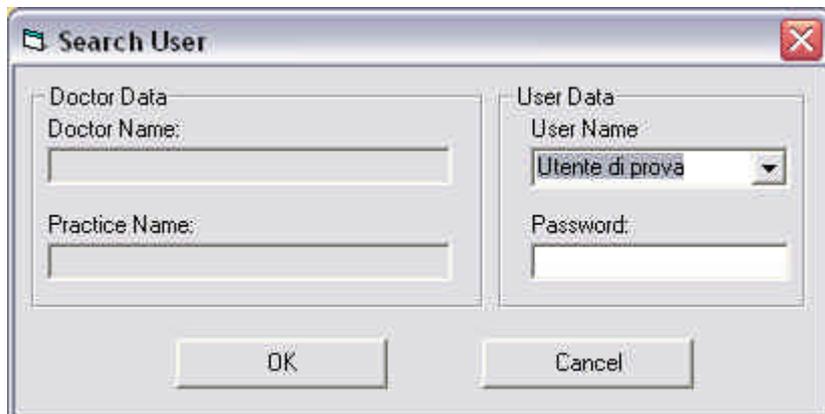
The main window shows all data about the selected patient.



**Main Menu description  
Menu Users**

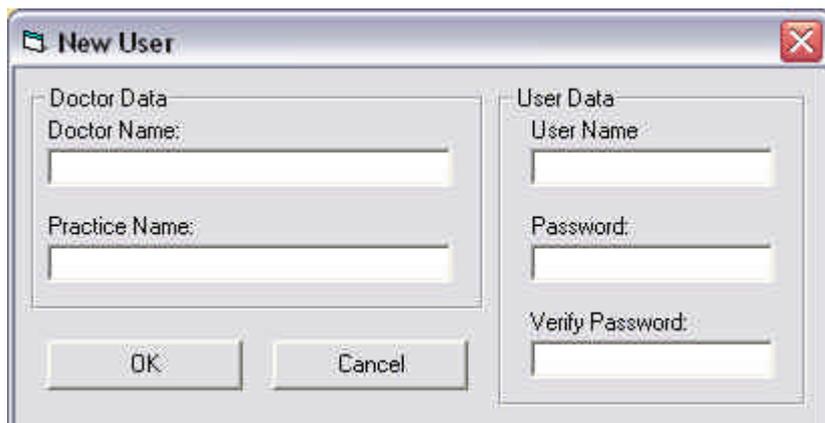
**Search User**

With your User Name and Password you can have access to Patient Archive



**New User**

Insert a new User in archive



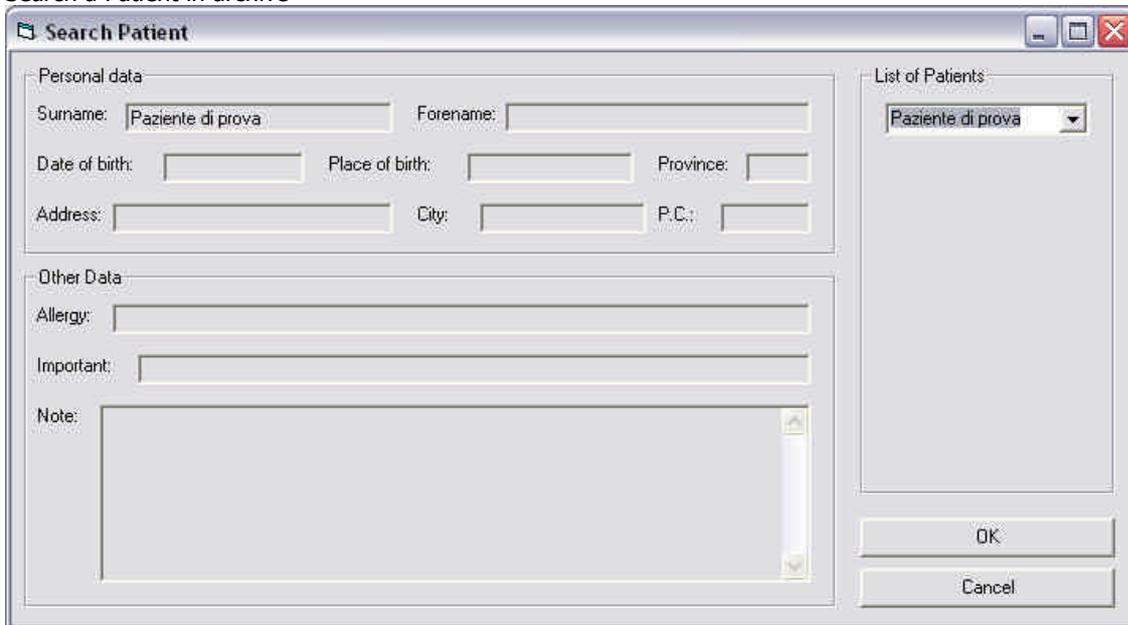
**Abandon User**

Abandon the User and the Patient

### Menu Patients

#### Search Patient

Search a Patient in archive



**Search Patient**

Personal data

Surname:  Forename:

Date of birth:  Place of birth:  Province:

Address:  City:  P.C.:

Other Data

Allergy:

Important:

Note:

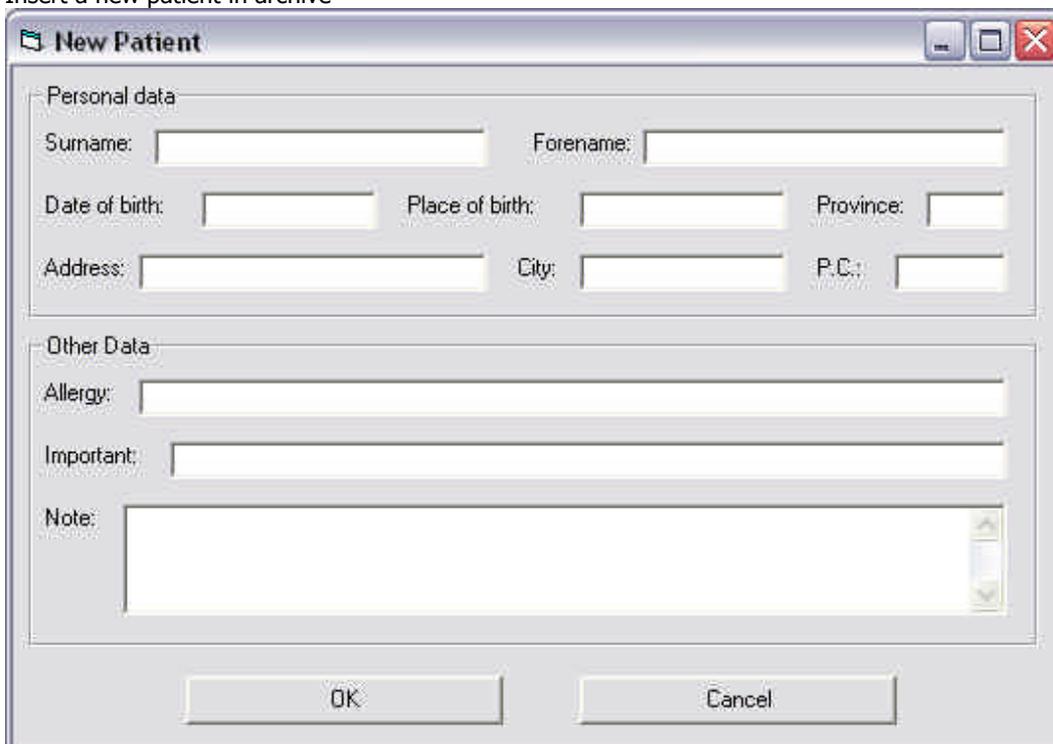
List of Patients

OK

Cancel

#### New Patient

Insert a new patient in archive



**New Patient**

Personal data

Surname:  Forename:

Date of birth:  Place of birth:  Province:

Address:  City:  P.C.:

Other Data

Allergy:

Important:

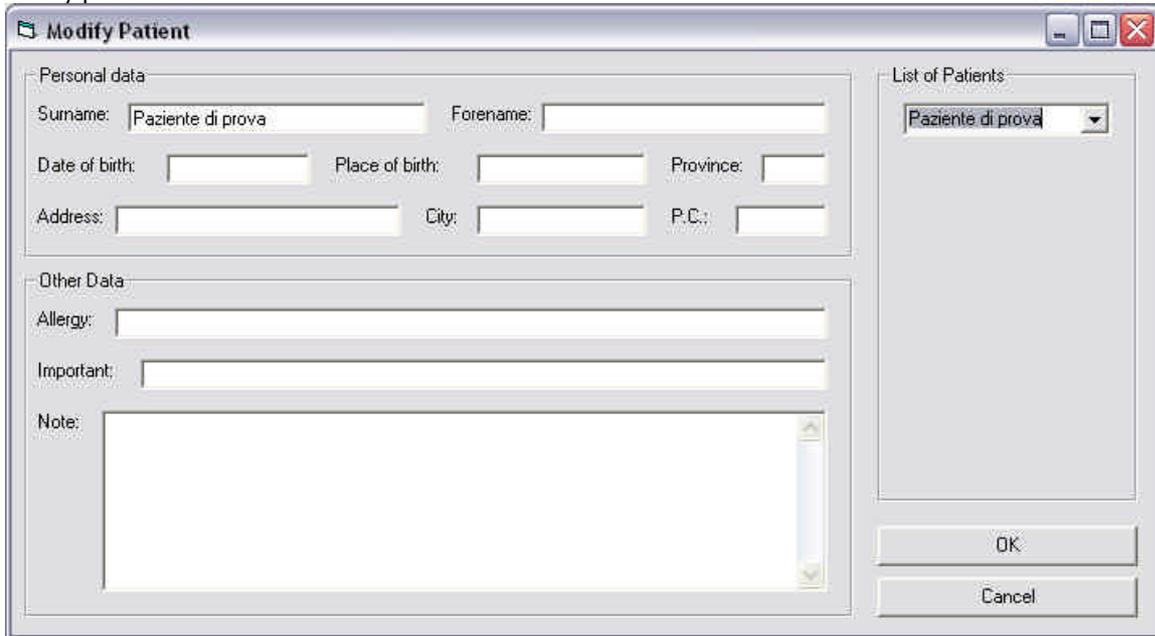
Note:

OK

Cancel

### Modify Patient

Modify patient data



**Modify Patient**

Personal data

Surname:  Forename:

Date of birth:  Place of birth:  Province:

Address:  City:  P.C.:

Other Data

Allergy:

Important:

Note:

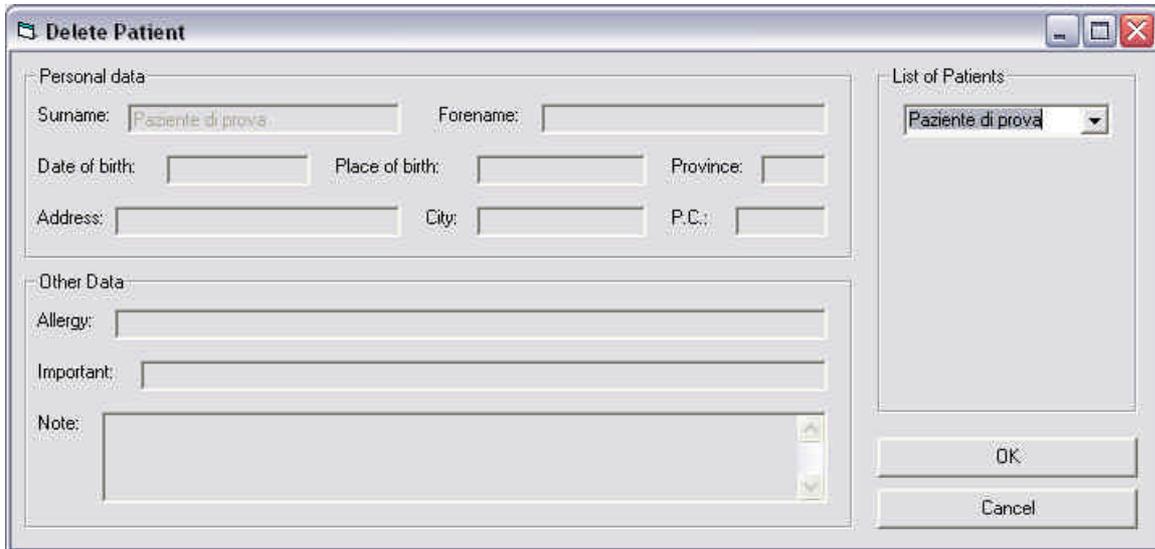
List of Patients:

OK

Cancel

### Delete Patient

Delete Patient's data



**Delete Patient**

Personal data

Surname:  Forename:

Date of birth:  Place of birth:  Province:

Address:  City:  P.C.:

Other Data

Allergy:

Important:

Note:

List of Patients:

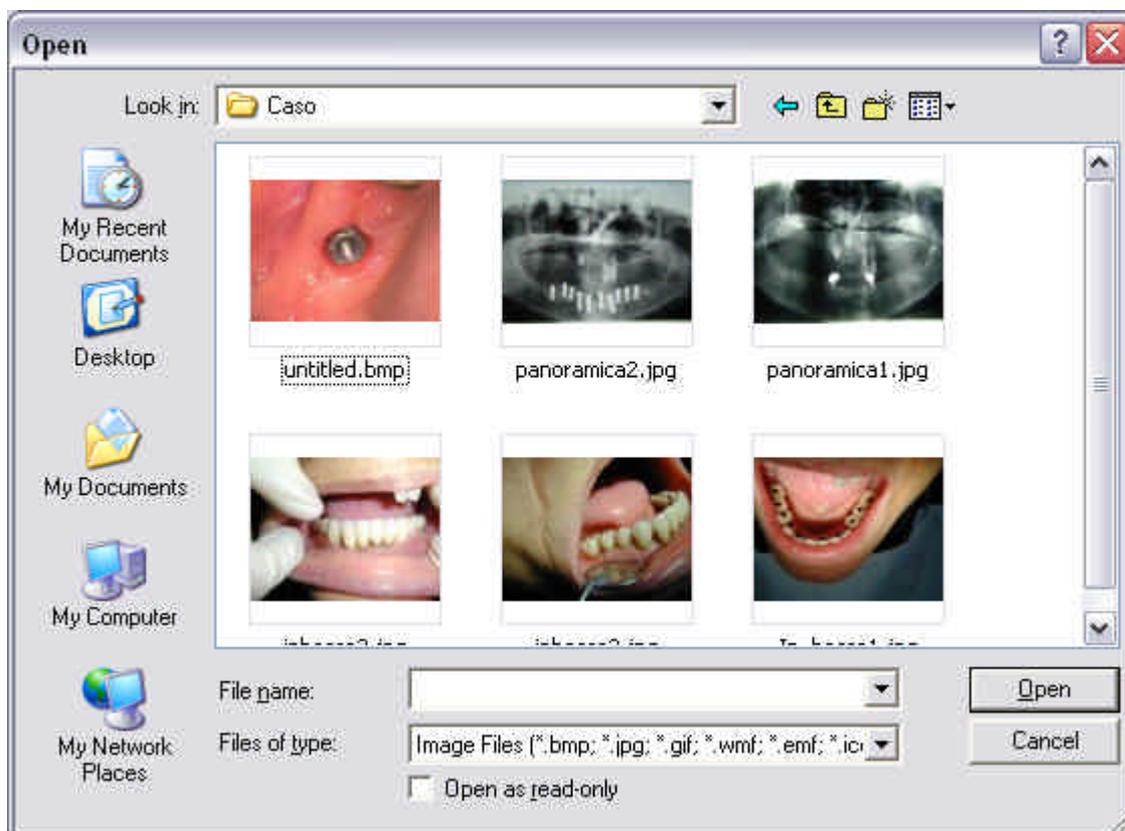
OK

Cancel

### Menu Actions

#### Import image

Import an image in temporary images



Select the image then click **Open** and the image is shown in the **temporary Images** list.

#### Export Image

Export images and save it on the hard disk of the computer in BMP format

#### Print image

Print current image

#### Print image + Macro

Print current image and the Macro related to.

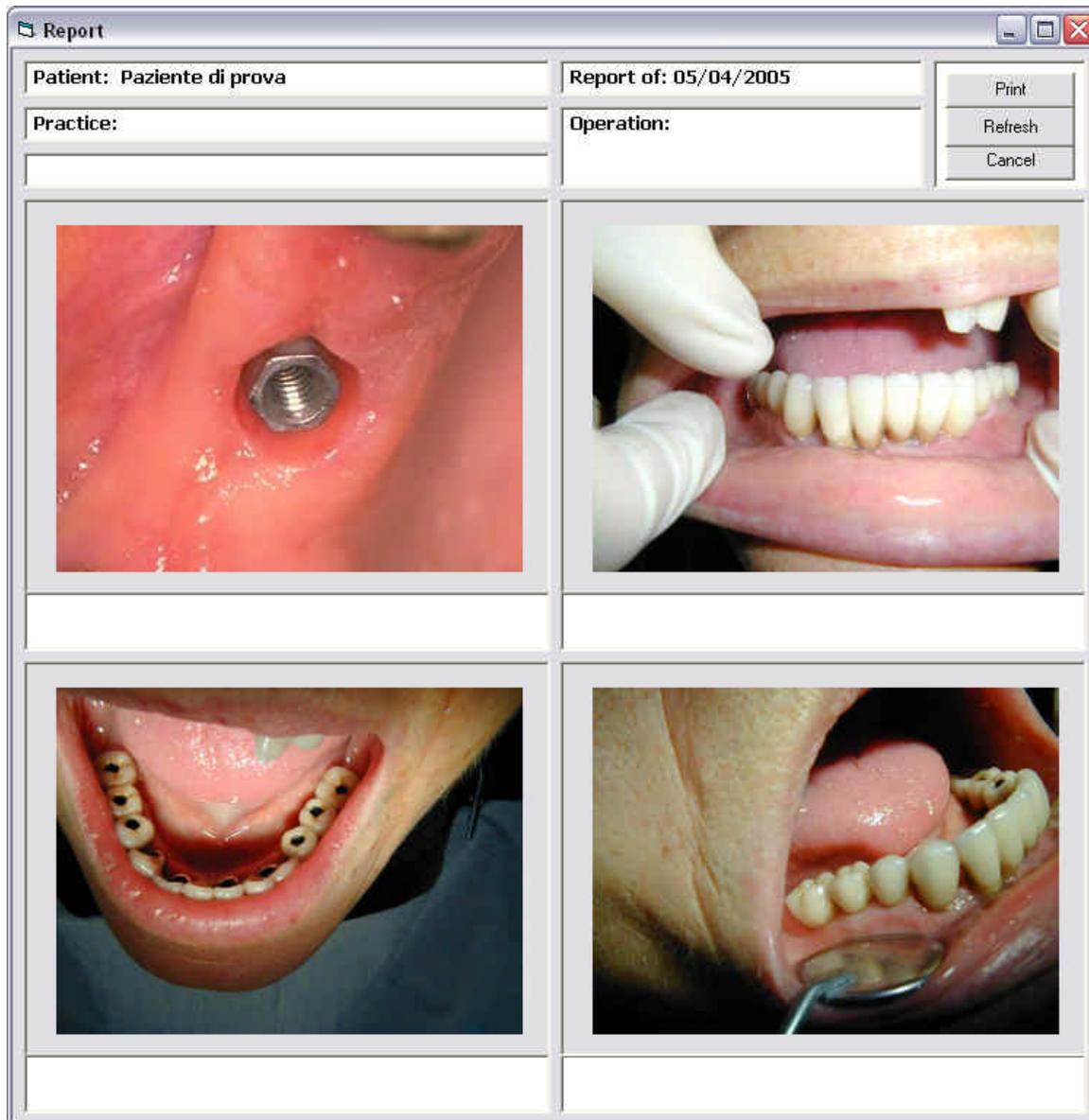
"VIDEOR" Device for Intraoral Camera

**Print 4 images**

Print all **4 images** in the 4 windows

**Report**

Build a paper with the 4 images of the 4 windows and let the user write his comments.



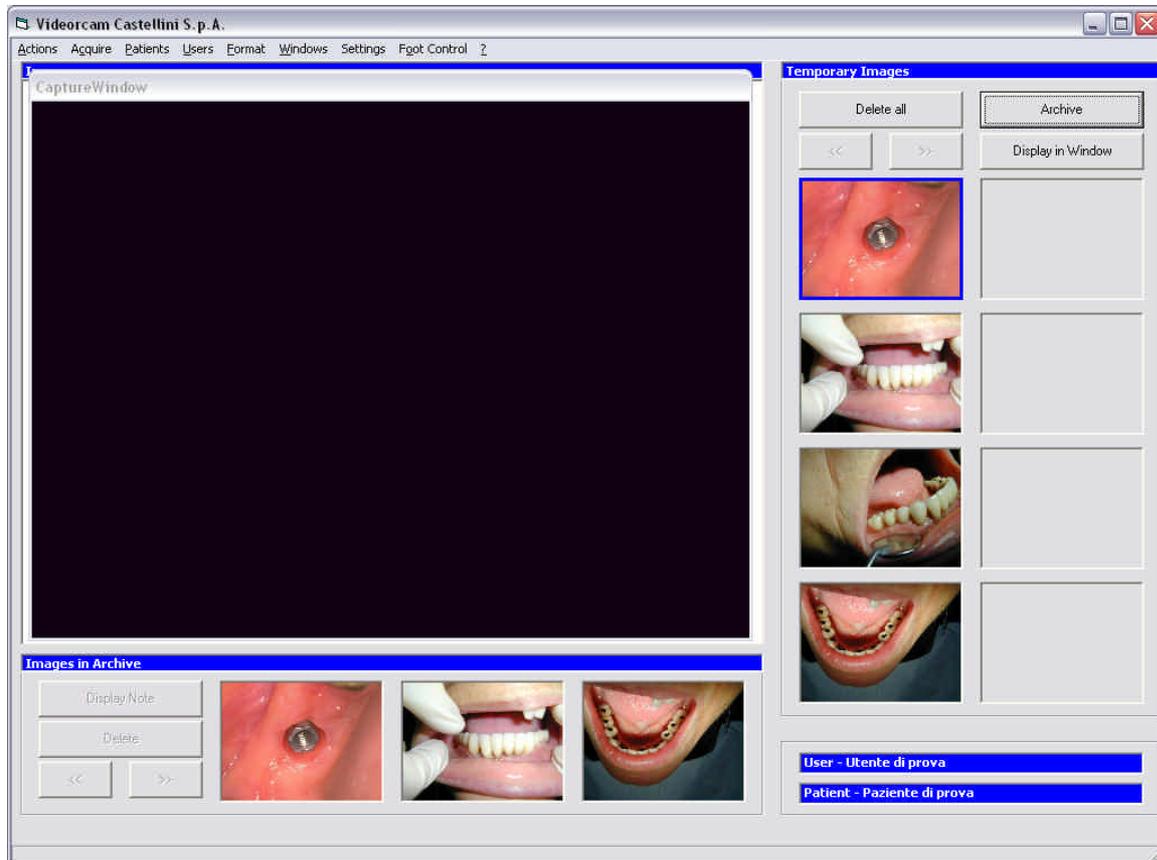
**Exit**

Exit the program

## Menu Acquire

### Acquire in window

Open a window for the Videoram



### Acquire in full screen

Show the camera signal on all screen

### Stop

Close the acquisition window

It's possible to close the acquisition window pressing the key "**Esc**" on the keyboard of computer.

*"VIDEOR" Device for Intraoral Camera*

### **Menu Format**

#### **Zoom**

Set the zoom for the image

Zoom 50%

Zoom 100%

Zoom 150%

Zoom 200%

#### **Rotate**

Rotates the image

Rotate 90°

Rotate 180°

Rotate 270°

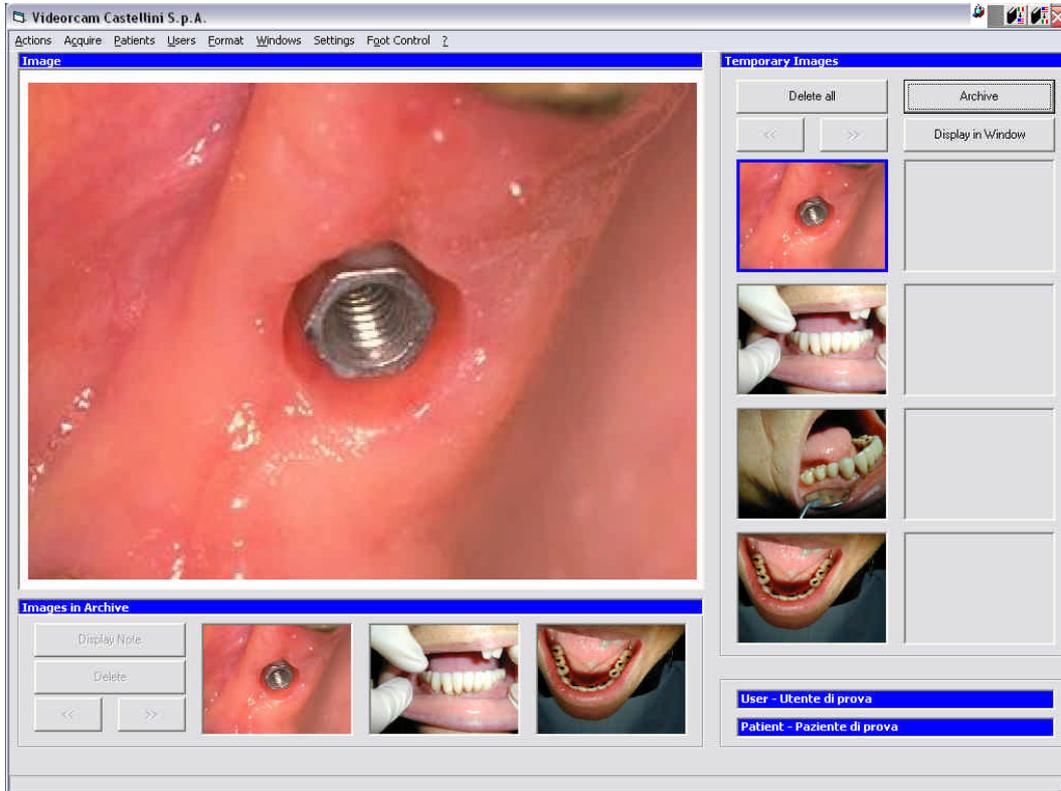
Mirror X

Mirror Y

**Menu Windows**

**1 Window**

Show images in one main window



**4 Windows**

Show images in 4 main windows

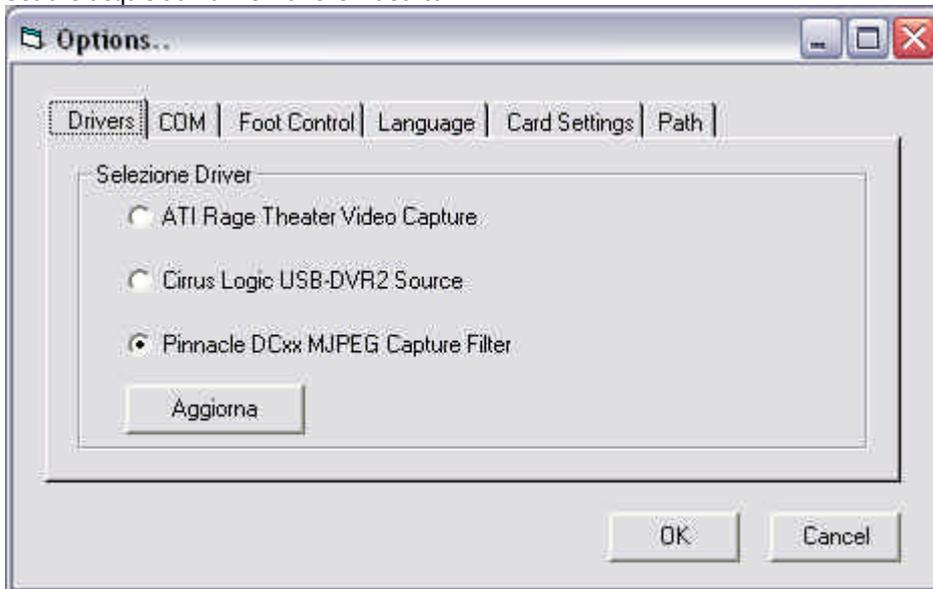


**Settings**

**Options.**

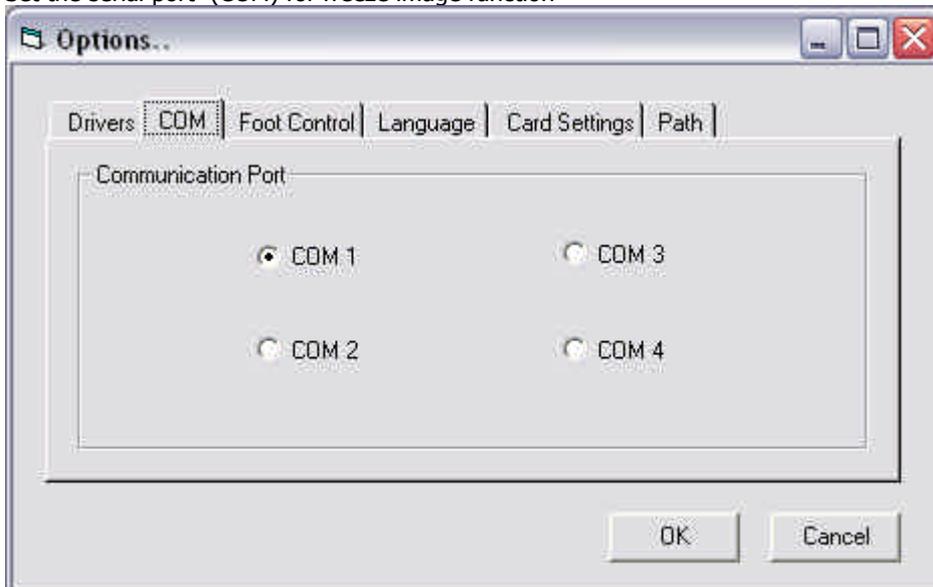
**Drivers**

Set the acquisition driver for the videoram



**COM**

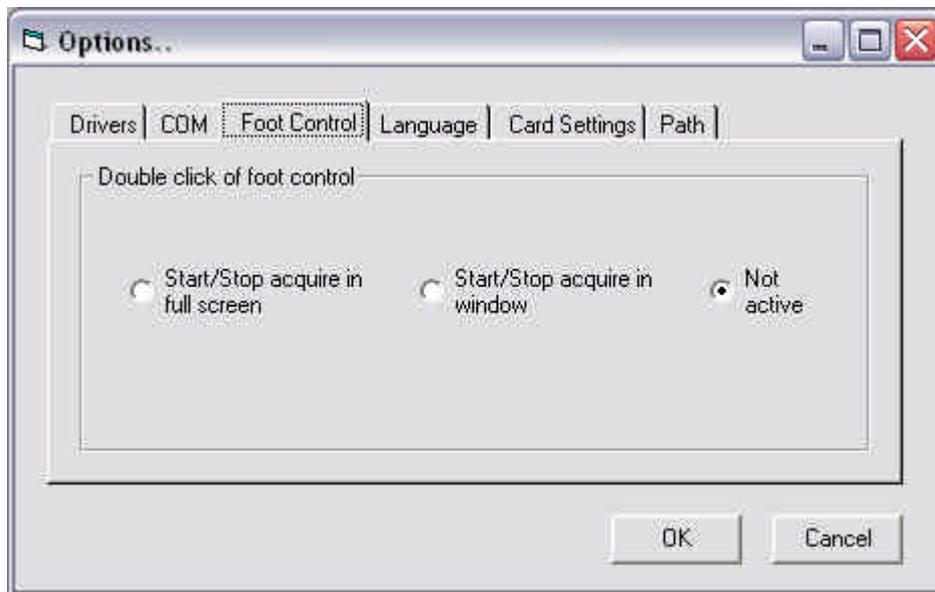
Set the serial port (COM) for freeze image function



"VIDEOR" Device for Intraoral Camera

### Foot control

Set a new function of foot control (Double click)



#### Start/Stop acquire in full screen:

If the acquire function is not active, the double click will execute the command "Acquire in full screen", if the acquire function is active, the double click will execute the command "Stop"

#### Start/Stop acquire in window:

If the acquire function is not active, the double click will execute the command "Acquire in window", if the acquire function is active, the double click will execute the command "Stop"

#### Not active:

double click will take no action, but freeze image function (single click) is active

### Language

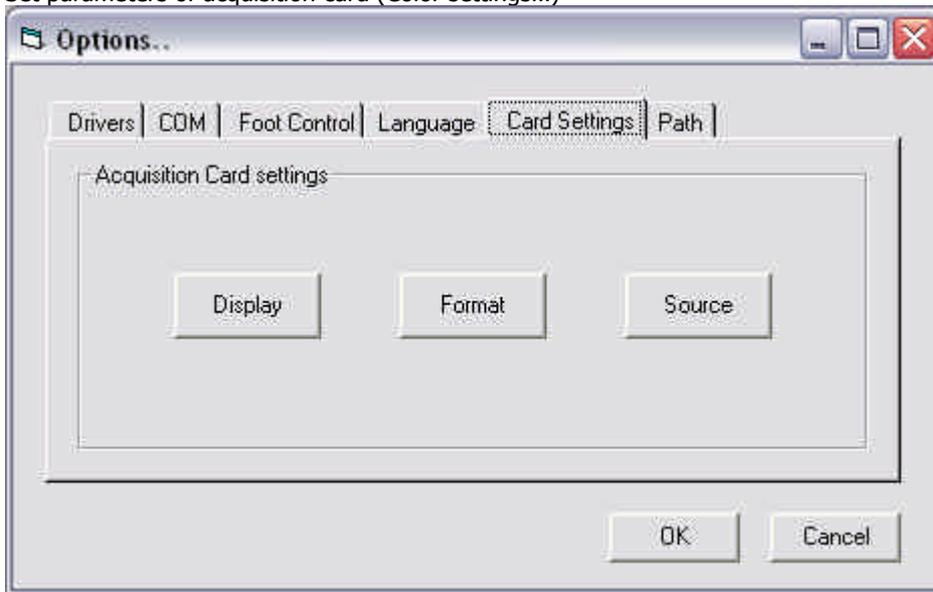
Set the language of the program



*"VIDEOR" Device for Intraoral Camera*

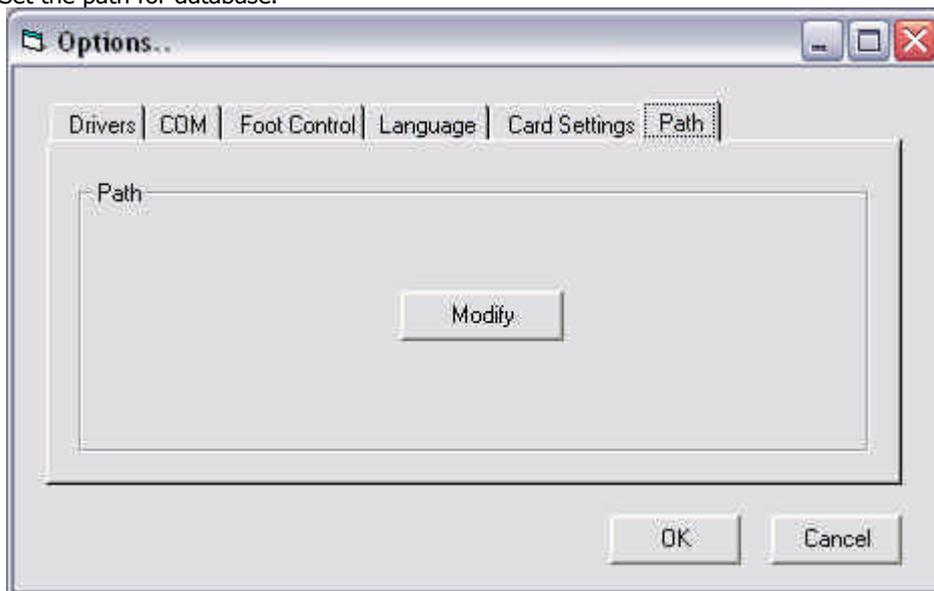
**Card Settings**

Set parameters of acquisition card (Color settings...)



**Path**

Set the path for database.



"VIDEOR" Device for Intraoral Camera

### Foot Control

It simulates the activation of foot control

### Acquisition of images

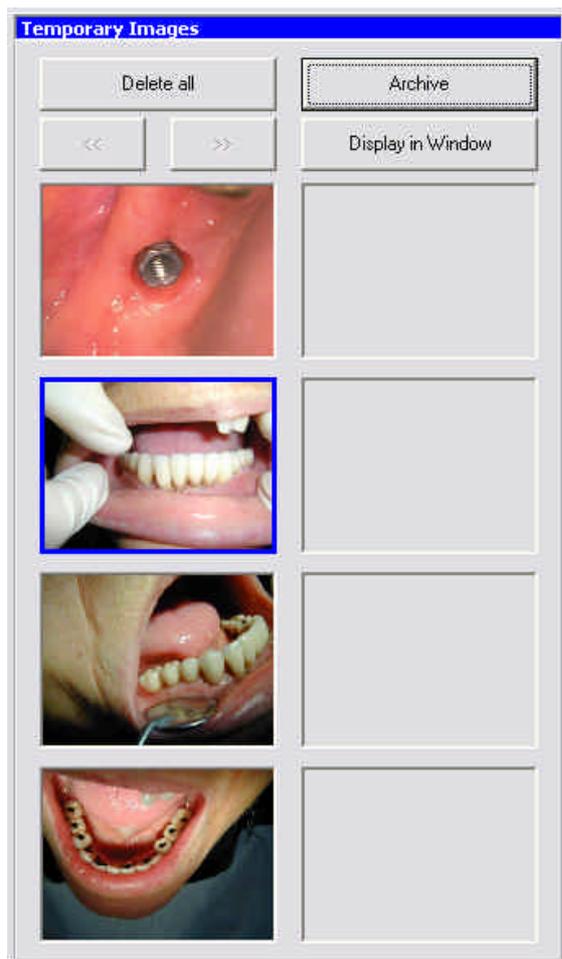
To acquire images is necessary to do the following steps

Select the command **Acquire in window** of **Acquire** menu

Freeze the image with foot control or with **F2** key from the keyboard.

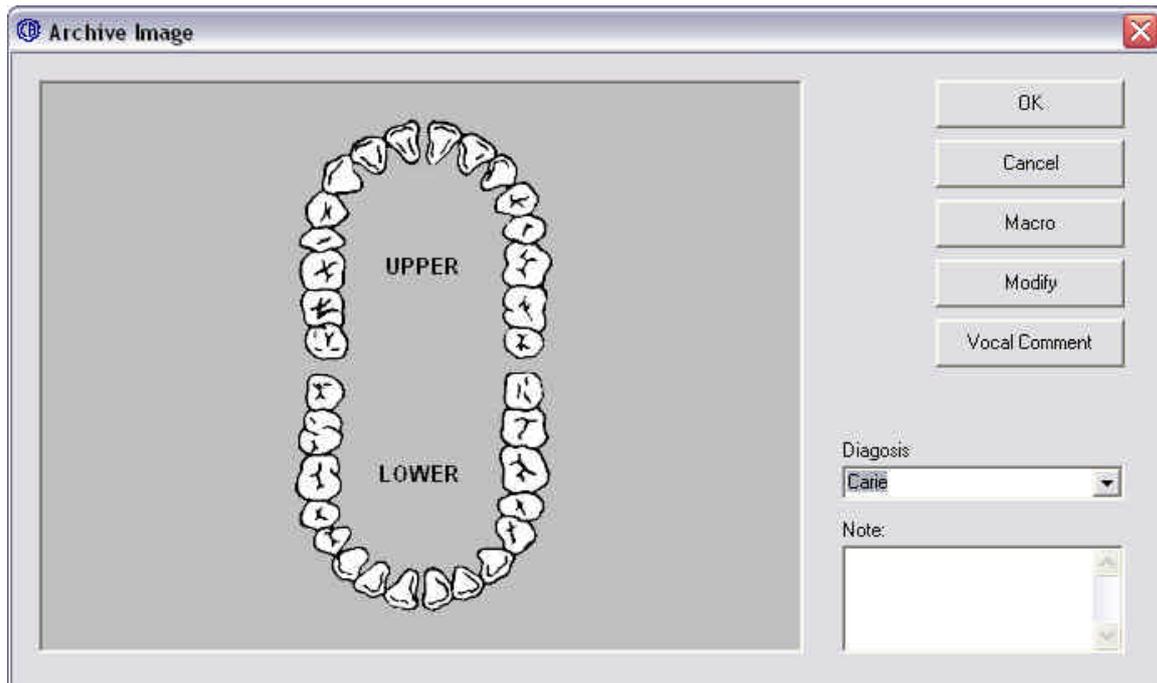
A copy of the image will be placed in the **Temporary Images** List.

Select a **User**, select a **Patient**, select the image to archive with mouse click and select the command **Archive**



The archive window will appear

*"VIDEOR" Device for Intraoral Camera*



Now is possible to relate some data to the image, you can put a marker on the picture of teethes by a click of the mouse, you can put same notes, you can choose some recorded diagnosis or put a new one, is possible to record a vocal comment with the command **Vocal Comment**

Is also possible to change the picture of teethes with a new image from Videorcam with the command **Macro**

When you press OK, the image will appear in the **Images in Archive** list

