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Book Descriptions:

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Keep this manual safely so that you can use it in the future. We suggest that someone be put in charge of maintenance to ensure that the CR2 is kept in good condition and can be used safely. The CR2 has the following features. Reduced flash intensity The CR2 can take images at ISO 1600 at the standard flash intensity, and ISO 6400 in low flash intensity mode. This reduces patient discomfort caused by light glare. Compact, userfriendly design The CR2 is designed to be even smaller, more lightweight and compact. A caution that incorrect operation may result in serious injury. A caution that incorrect operation may break the CR2 or damage other devices. This symbol indicates things that must not be done prohibited actions. Device Classification Protection against electric shock Degree of protection against electric shock Degree of protection against ingress of water. Immediately turn off the power of CR2, unplug the power plug and turn off the power of all connected devices. Then, contact a Canon representative or distributor. Do not use alcohol, benzine, thinner or any other flammable solvent. Check the image before using the CR2 Before using the CR2, be sure to take a test image to ensure that there is no foreign matter present that can affect image readings or diagnosis. Also, unplug the power plug from the AC outlet and put on the cover when the CR2 is not going to be used for a long time. Doing so could damage the outside of the CR2. Also, do not use the CR2 outside. After many years of usage, airborne dust in the room may get on the objective lens as well as the optical parts in the main unit. Follow the information on the label to use the CR2 appropriately. The following table describes the marks and indications on the rating label. Power switch for the digital camera Operation lever Shutter release button Alignment button Switches between a view of the anterior eye and the retina.http://www.bmsk.ru/images/static/husqvarna-viking-scandinavia-200-sewing-machine-manual.xml

- **1.0, canon cr2 fundus camera manual, canon cr2 retinal camera manual, canon cr1 retinal camera manual.**

Forehead rest Objective lens Objective lens cap Face rest Chin rest Indentation for lifting Diopter compensation knob a No diopter compensation b Negative compensation c Positive compensation d Anterior eye photography. Connect the cables if necessary as described in “Connecting Cables” see page 22. Preparing for an examination page 22 Setup for patient page 24 Alignment page 25 Small pupil photography page 30 x2 photography page 30 Diopter compensation page 31 Do not touch the main unit and the chin rest while they are moving. At the same time, keep the patient’s chin away from the chin rest. When adjusting the position of the retinal camera in the frontback direction, slowly bring the main CAUTION unit closer to the patient while looking at the patient’s eye from the side. The patient’s eye may be injured if the objective lens makes contact with it. When the pupil is smaller than the inner pupil alignment circle Darken the room further to dilate the patients pupil more. If the patients pupil does not dilate enough, use the small pupil photography function see page 30. Take the following steps to guide the patient’s eye. Press the FIX TARGET buttons up, down, left, and right to move the internal eye fixation lamp to your desired position and then press the set button to make it blink. Align the mark on the stage lock and the mark on the right side of the base. Turn off the power to the CR2. Exit the Rics NM 2 and turn off the computer. 4 Basic Operations. Press the x2 photography button. Maintenance and Inspection Do the following inspections before using the CR2 to insure that it is used safely and correctly. Doing so could corrode the surface of the lens or leave streaks. For information about lens cleaning paper, lens cleaner, and blowers, contact the Canon representative or distributor from whom you purchased the CR2. First use a cloth that

has been soaked in diluted neutral cleanser and well wrung out.http://huynhgiabaohotel.com/uploads/FCK/husqvarna-viking-serger-936-manual.xml

Then use a cloth that has been soaked in water and well wrung out. It is not necessary to attach or remove the digital camera during normal usage. While holding down the lens release button on the digital camera, turn the digital camera counterclockwise to remove it. Attach the caps to the retinal camera and the digital camera mount. Attach the digital camera to the retinal camera. 1. Align the positions of the mounting alignment marks on the retinal camera and the digital camera. 2. Fit the digital cameras lens mount to the retinal cameras mount. Clean the objective lens see page 35. Dirt or dust is stuck to the imaging sensor of the digital camera. Use the selfcleaning sensor unit to clean it. see page 36. The customer or the user of the CR2 should assure that it is used in such an environment. Emission Test RF emissions. The customer or the user of the CR2 should assure that it is used in such an environment.If the measured field strength in the location in which the CR2 is used exceeds the applicable RF compliance level above, the CR2 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the CR2. The customer or the user of the CR2 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment transmitters and the CR2 as recommended below, according to the maximum output power of the communications equipment. When requesting repair, please provide us with the following information. Keep this manual in a safe place so that you can use it in the future.

Page 4 1 Introduction 1 IntroductionPage 7 2 Safety 2 SafetyPage 8 2 SafetyPage 10 2 SafetyPage 12 2 SafetyPage 13 2 SafetyPage 15 2 SafetyPage 16 2 SafetyPage 17 3 Names of Parts 3 Names of PartsPage 19 3 Names of PartsPage 23 4 Basic OperationsPage 24 4 Basic OperationsPage 26 4 Basic OperationsPage 27 4 Basic OperationsPage 28 4 Basic OperationsPage 31 5 Photography Auxiliary Functions 5 Photography Auxiliary FunctionsPage 32 5 Photography Auxiliary FunctionsPage 33 5 Photography Auxiliary FunctionsPage 34 5 Photography Auxiliary FunctionsPage 35 5 Photography Auxiliary FunctionsPage 36 5 Photography Auxiliary FunctionsPage 37 5 Photography Auxiliary FunctionsPage 38 5 Photography Auxiliary FunctionsPage 39 6 Maintenance 6 MaintenancePage 40 6 MaintenancePage 41 6 MaintenanceThis function makes it possible. Page 42 6 MaintenancePage 43 6 MaintenancePage 44 6 MaintenancePage 46 7 TroubleshootingDilate the patient’sPage 49 AppendixPage 50 AppendixPage 51 AppendixPage 52 AppendixPage 53 Appendix. This page requires Javascript. Modify your browsers settings to allow Javascript to execute. See your browsers documentation for specific instructions. To install your download click on the name of the downloaded file.The driver may be included in your OS or you may not need a driver. Recommended Drivers File Name Date File Size Optional Drivers File Name Date File Size Recommended Software File Name Date File Size Optional Software File Name Date File Size Recommended Manuals File Name Date File Size Optional Manuals File Name Date File Size. Taking images with a Canon retinal camera has never been easier. Canon’s own EOS digital camera technology, with its renowned image processing capabilities, has been adapted exclusively for Canon retinal cameras to offer optimal retinal imaging. Canon Opacity suppression will largely suppress the effects of cataracts and other ocular opacities. This option can also be used to provide an image with a 30 degrees angle.

30 degrees images will allow participation in studies and cooperation with most reading centers i.e DARC, Wisconsin and VRC. Based on the EOS retina technology and Canon proprietary image processing, it provides image quality fully comparable with traditional optical filters. The unit is even equipped with special grips for easy carrying. Switches are illuminated for easy operation in darkened rooms. Besides the shutter release and aligment buttons, it also includes the up and down movement of optical head powered and manual focus control. But for patients with ocular opacities,

involuntary eye movements, lack of cooperation and small pupils the CR2 AF also provides full manual control. Manual operation can be crucial to overcome the limitations of fully automatic cameras. Restriction of pupil is reduced; easy to retake photos, or to take images of both eyes without waiting. The EOS Retina camera provides optimal retinal imaging.And it is completely integrated with the functions of the retinal camera. A further advantage is that the digital camera body can be exchanged easily in case of upgrading to a newer model or service requirements. Combining these functions greatly contribute to a compact and lightweight retinal camera. To read more about our technologies and solutions that help people around the world improve their lives click here. Why Canon Medical. The FAF photography mode will provide information on changes of the retina that can't be made visible with standard colour photography. It is equipped with a unique dedicated EOS digital camera for the highest image quality. Canon Opacity suppression will largely suppress the effects of cataracts and other ocular opacities. Sophisticated optical FAF filters, for high contrast images. This option can also be used to provide an image with a 30 degrees angle. 30 degrees images will allow participation in studies and cooperation with most reading centers i.e DARC, Wisconsin and VRC.

Based on the EOS retina technology and Canon proprietary image processing it provides image quality fully comparable with traditional optical filters. FAF has proven to be very useful for the early detection of age related Macula Degeneration AMD, one of the leading causes of visual impairment. Recent studies indicate that FAF Imaging can also aid in the diagnosis of a variety of other diseases and even in the detection of intraocular tumors. Switches are illuminated for easy operation in darkened rooms. Besides the shutter release and aligment buttons, it also includes the up and down movement of optical head powered and manual focus control. But for patients with ocular opacities, involuntary eye movements, lack of cooperation and small pupils the CR2 AF also provides full manual control. There is 1 item in your cart. USED EXCELLENT WORKING CONDITION !!! Warning Last items in stock. Availability date Send to a friend Send to a friend Canon CR2 AF Retinal Fundus Camera The Canon CR2 AF Retinal Fundus Camera Digital NonMydriatic Retinal Camera provides Color and Fundus Autofluorescence FAF imaging within a small compact design. Geographic Atrophy, Macular Degeneration, Glaucoma, Diabetic Retinopathy and other conditions that can affect vision may also be identified and monitored using FAF mode. Additional filter view are available with imageSPECTRUM Image Management System software sold separately. Quick Preview Preview images directly on the dedicated EOS camera immediately after capture. Low Flash Intensity; Low flash improves patient comfort and reduces miosis for a faster exam. The CR2 AF supports a wide range of low ISO speeds, including ISO 200, 400, 800, 1600, 3200, and 6400. Includes PC Keyboard Mouse Canon CR2 AF Retinal Fundus Camera Power cables table Zeiss No customer reviews for the moment.

Write a review Canon CR2 AF Retinal Fundus Camera The Canon CR2 AF Retinal Fundus Camera Digital NonMydriatic Retinal Camera provides Color and Fundus Autofluorescence FAF imaging within a small compact design. For a perfect reprocessing it is also equipped with a removable DISTAL. The Stryker SRU6 Autoclavable Semirigid Ureteroscope have a low profile, distal tip for atraumatic, easy insertion into the ureteral orifice. The dental team will appreciate how quickly and easily settings can be changed for different types of shots. All Pro Series Porcelain Furnaces come standard with a Vacuum Pump and a 3Year Warranty or 3,750 muffle hours on unit. Add a cephalometric arm at any time to further enhance your diagnostic abilities. Until now, digital systems had to scan a patients head for up to 8 to 18 seconds. These features give the inEos X5 acomprehensive application spectrum, unrivalled precision, flexible handling, and quick scanning times. All rights reserved. Home Product Privacy Statement Accessories Contact. FundusScopeA single versatile device featuring high resolution OCT and true color fundus imaging for time and space efficiency. The builtin 12.3 Nonmydriatic fundus camera. With the Optomed Aurora, you can perform fundus screening anytime, anywhere. Finnish modern design. Nonmydriatic imaging. Next

generation. Smartscope PRO is a portable and affordable professionals choice at all locations, clinics or screening camps no matter how challenging your patients or location may be. Including. With FAF. ZEISS CIRRUS photo 600. Featuring a nonmydriatic and mydriatic retinal camera for comprehensive care with all the benefits of OCT technology,. Fundus Camera Color, Resolution 12MP. Flash. This multispecialty handheld camera and video scope offers multiple imaging attachments as well as a builtin display.. True Colour Fundus Photography. The Topcon Maestro2 has an integrated fullcolour fundus camera.

With one touch, you can simultaneously acquire a posterior OCT image and a true colour. DRSplus confocal fundus imaging system by CENTERVUE uses white LED illumination to produce TrueColor and detailrich images, setting a new effective and efficient standard. Using MediWorks' Fundus Camera FC 160 does not require doctors todilate patients' pupils. Doctors can capture retinal image directly once the image is in focus. Portable. The smart. The unique design and advanced technology allows it to capture still and video images of the fundus. Images. Thankyou for your help. Prices are indicative only and may vary by country, with changes to the cost of raw materials and exchange rates. You can manage this and all other alerts in My Account A newer automated fundus imaging system allows fast image acquisition with minimal training of screeners. Additional image enhancement assists in the ability to capture retinal pathology. The purpose of this study is to compare the quality of images captured by automated, enhanced automated, and traditionally used manual non mydriatic retinal camera systems. Methods We prospectively enrolled 44 subjects 88 eyes during a communitybased screening to be imaged with two fundus camera systems 1. Manual imaging Canon CRDGi Tokyo, Japan and 2. A novel automated system Canon CR2AF Tokyo, Japan. All subjects were imaged with ambient room light 250 Lux without receiving mydriatic agents. Time to image both eyes included time to focus, capture in one eye, allow visual recovery of the second eye, and capture in the second eye. An optometrist and ophthalmologist each evaluated 87 images from the manual, 88 images from the automated, and 88 images from the enhanced automated groups. Ratings were compared using ttests. Interrater reliability was measured using Cohen's Kappa K. Time to image both eyes was lower with the automated system Table 2.

There was statistically significant higher grading in the automated imaging system when compared to both the manual system and enhanced automated system p Conclusions In this sample population, images captured with a new automated fundus imaging system had a faster acquisition and higher quality score than manual imaging. The autoenhance feature did not increase image quality. In the future, automated imaging during community screening of a larger population with diverse pathology will be investigated. View Original Download Slide 1 Grading Scale Kolomeyer et al., 2014 1 Grading Scale Kolomeyer et al., 2014 View Original Download Slide View Original Download Slide 2 Comparison of Cameras 2 Comparison of Cameras View Original Download Slide By continuing to use our website, you are agreeing to our privacy policy. Accept. Designed around Canon EOS optics and advanced CMOS image capture technology, the CR2 PLUS provides Color and Fundus Autofluorescence FAF imaging within a small compact design. Using invisible infrared alignment light, the digital nonmydriatic camera may image patients with pupils as small as 3.3 mm small pupil mode without dilation drops.Find products. The CR2 incorporates Canon EOS digital SLR technology enhanced to create a unique 15.1megapixel digital camera dedicated to medical retinal imaging. The latest in LED technology ensures greater patient comfort, replacing the strobe tube in the new automatic exposure flash light and reducing the flash intensity. This in turn improves reliability, reduces patient recovery time and eliminates the need to retake images due to incorrect flash exposure, resulting in faster screening. The easy to use TX20P combines a Tonometer and Pachymeter in one instrument, measuring IOP and central corneal thickness together and have the IOP automatically recalculated for you with accuracy and speed. With its advanced, fully automatic examination and 3D alignment, the operation is extremely fast and easy.

The TX20P removes the need for two separate devices, and in addition, eliminates time spent on manual calculations, thus enhancing practice efficiency and faster patient throughput. To arrange a demonstration of the CR2 or TX20P in your clinic or practice, call Carleton on 01494 775811 or apply online. Superior image quality and a host of automated features optimize and simplify your examinations, while the system's high scanning speed enables short examination times, increasing your efficiency and your patients' comfort. Superior image quality and a host of automated features optimize and simplify your examinations, while the system's high scanning speed enables short examination times, increasing your efficiency and your patients' comfort. Superior image quality and a host of automated features optimize and simplify your examinations, while the system's high scanning speed enables short examination times, increasing your efficiency and your patients' comfort. Xephilio OCTS1 enables superior penetration of dense objects and provides outstanding tomographic images. Superior image quality and a host of automated features optimize and simplify your examinations, while the system's high scanning speed enables short examination times, increasing your efficiency and your patients' comfort. Xephilio OCTS1 enables superior penetration of dense objects and provides outstanding tomographic images. Find articles by Philemon Huang Jiaying Lee 2 National Healthcare Group Eye Institute, Tan Tock Seng Hospital, Singapore. Find articles by Jiaying Lee Pearse A. Keane 3 NIHR Biomedical Research Centre, Moorfields Eye Hospital NHS Foundation Trust, London, United Kingdom. 4 Institute of Ophthalmology, University College London, London, United Kingdom. Find articles by Pearse A. Keane Tjin Swee Chuan 1 School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore.

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Key words fundus camera, retinal photography, ophthalmic screening, teleophthalmology, portable camera system, smartphonebased camera system, portable eye examination kit, slitlamp adaptors Introduction Jackman and Webster 1 first published photographs of the retina in 1886. The next breakthrough was the first commercially available fundus camera produced by Carl Zeiss in 1926, following which considerable improvements to the field of view FoV were made. 2 In 1927, Metzger published stereoscopic fundus photographs taken with the method of sidetoside shifting, as reported by Donaldson. 3 The invention of the electronic flash tube enabled light to be directed through the pupil, and Hansell and Beeson 4 successfully attached it to the camera in 1953. As reported by

Dobbins, 6 Steven Sasson invented the first digital camera at Eastman Kodak in 1975, and the subsequent shift from analog to digital revolutionized medical record keeping. In recent years, confocal scanning laser ophthalmoscopy has emerged as a solution to minimize aberrations through poor dilation and to produce highcontrast, detailed images. 7 Through the years, camera systems have evolved to boast sharper images, nonmydriatic widefield options, pupil tracking, and, most recently, portability. Popular manufacturers in the market today are Topcon, Zeiss, Canon, Nidek, Kowa, CSO, and CenterVue. Traditional fundus cameras offer goodquality images but are bulky, office based, technician dependent, and costly. Besides access to the retinal imaging device, affordability is of paramount importance in screening programs, especially in the remotest of places. Recently, there have been significant technological advances that have radicalized retinal photography. Improvements in telecommunications and smartphones are two remarkable breakthroughs that have made ophthalmic screening in remote areas a realizable possibility Fig. 1 . Open in a separate window Fig. 1.

Flowchart depicting evolution and scope of retinal screening and fundus photography. According to World Health Organization statistics, the number of people with visual morbidity worldwide, as of 2010, was in excess of 285 million, of which 39 million were blind. 8 The advances in fundus imaging will hopefully decrease preventable visual morbidity by allowing easy and timely fundus screening. This review attempts to summarize the evolutionary journey from traditional fundus cameras to the newest models in retinal photography. Method of Literature Search A comprehensive Medline and Scopus search was conducted initially using the following key words “retinal imaging,” “fundus camera,” “ophthalmoscope,” “miniature,” “handheld,” “telemedicine,” and “smartphone fundus camera.” The original relevant articles were retrieved and evaluated. Also, because the review focuses on latest technological advancements in fundus imaging, search engines like Google and Bing were prompted for these key words. The information about commercial products was obtained from the online articles and Web pages of the respective companies, and major statistics reports were sought from the official database available on the World Health Organization Web site. 8 The review relied primarily on articles written in English. Traditional Fundus Camera The design of the traditional fundus camera system is based on monocular indirect ophthalmoscopy. 9 A common design by Knoll 9 and others 10 can be considered as a reference layout for a traditional tabletop fundus camera. It consists of a sequence of optic components including objective and condensing lenses, beam splitters, mirrors, masks, diffusers, and polarizers, which altogether direct the illuminating light through the pupil of the eye, collecting light reflected from the retinal surface and relaying it to imaging optics forming an image of the retina on the detector screen.

11 Advanced versions of these systems are equipped with additional features like automated analysis and algorithms. Filters can be applied to camera systems for autofluorescence, fundus fluorescein angiography, and indocyanine green angiography. 12 Limitations of Traditional Fundus Cameras The need for a miniature fundus camera device has emerged from specific limitations that accompany the use of traditional tabletop fundus cameras. First, they form a bulky system, incorporating a host of optical and mechanical components, and the alignment of every part with respect to another is a critical parameter for goodquality images. Second, the operation of such a sophisticated system requires skilled personnel. Third, the bulkiness and complexity of the instrument restrict its use only in highend clinical settings, such that it is difficult to be accessible in remote rural settings. Fourth, the number of optical components and addon features in more recent devices renders the cost of the cameras exorbitantly high for them to be installed in rural locales where much of the population is subjected to ailments amounting to visual morbidity. Modern TableTop Fundus Cameras Advancements in the field of optical sources and detectors have led to miniaturization of optical assemblies at a lower cost. In line with these developments, miniature tabletop fundus camera system designs have emerged that provide retinal images comparable to those of traditional fundus cameras. Icam The iCam is a 4.5kg tabletop fundus camera designed by Optovue, Inc. Fremont, CA.

13 A nearinfrared lightemitting diode LED provides illumination during alignment of the patients eye, and the white LED is used for image capture. This allows for a smaller machine design, longer life expectancy, and less heat emission compared with the typical xenon flash lamp.

LEDs maintain light characteristics such as color temperature, lumens of output, and distribution of light, which allows a controlled and reproducible illumination unit. The pupil is manually aligned using the splitimage technique in the direction of each of the targets such that images of different regions of the retina are acquired. Computer interfacing is used for viewing images. Figure 2 is an illustrative representation of the basic design methodology behind the iCam.The tabletop device images the retina by lightemitting diode illumination covering different parts of the retina through fixation targets. CCD, chargecoupled device. 3nethra 3nethra is a portable, integrated tabletop fundus camera designed and developed by Forus Inc. Bengaluru, India. 15 3nethra Classic is the basic version, and 3nethra Royal incorporates an additional automated refractometer. Lowpower LED light is used for image capture and can image both posterior and anterior segments. It has focus guidance, and images are viewed with a laptop computer. 3nethra intelligently uses a digital Webbased telemedicine feature to transmit images over to mobile phones and via emails, and the device is targeted at primary healthcare population eye screening. Digital Retinography System Designed by CenterVue Padova, Italy, the digital retinography system dRS is also a nonmydriatic miniature tabletop fundus camera 16 requiring a pupil size of 4 mm. Marketed as being compact 19 kg, it has a builtin screen featuring patient autosensing, autoalignment, and autofocus, and usage requires minimal operator skill. The illumination schematic is presented in Figure 3. Open in a separate window Fig. 3. Diagrammatic representation of fundus imaging by the digital retinography system dRS. Equipped with wireless and Ethernet connectivity, this miniature tabletop version also acquires fundus images through lightemitting diode illumination and fixation targets.