Bucky
Bucky WR

X-ray film cassette holder

Model/ID: 7051-x-xxxx

User Manual

Ident. Nr. 5051-0-0052

Figure: Bucky WR LL

CE

PROTEC® GmbH & Co. KG
In den Dorfwiesen 14, 71720 Oberstenfeld, Germany
Telephone: +49 (0) 7062/92 55-0 E-Mail: protec@protec-med.com

Version: 02
Issued: 2020-09-22
Subject to alterations

This document is prepared and distributed by Publications Department.
Send inquiries regarding this document to the following address:

PROTEC GmbH & Co. KG
In den Dorfwiesen 14 | 71720
Oberstenfeld

Telefon: +49 (0) 7062 - 92 55 0
Fax: +49 (0) 7062 - 22 68 5

e-Mail: protec@protec-med.com
Internet: www.protec-med.com

NOTE

The information contained in this document conforms to the configuration of the equipment as of the date of manufacture. Revisions to the equipment subsequent to the date of manufacture will be addressed in service updates distributed to the PROTEC GmbH & Co. KG Technical Service Organization.

Document Effectivity

Revision No.	Date	List of effective pages	Comments
	2012-08-01		Original issue
01	2016-02-05	2	Bucky included
02	2020-09-22	1, 4, 8, 9	Detector charging added

Mechanical - Electrical Warning

All of the **movable assemblies and parts within this equipment** should be operated with care and routinely inspected in accordance with the manufacturer's recommendations contained in the equipment Accompanying Documents. Maintenance and service is only to be performed by personnel authorized by **PROTEC GmbH & Co. KG**.

Live electrical terminals are deadly.

For all components of the equipment protective grounding means must be provided in compliance with the national regulations.

Failure to comply with the aforementioned may result in serious or fatal bodily injuries to the operator or those in the area.

Radiation Warning

The component of the equipment described within this Document is part of a system for the intended generation of X-rays for medical diagnosis.

X-rays generate a potential risk for both patients and operators.

For this reason the application of X-rays for a given medical purpose must aim at the minimization of radiation exposition to any persons.

Those persons responsible for the application must have the specific knowledge according to legal requirements and regulations and must establish safe exposure procedures for these kind of systems. Those persons responsible for the planning and installation of this equipment must observe the national regulations.

To the User

The user of this Document is directed to read and carefully review the instructions, warnings and cautions contained herein prior to beginning operation, installation or service activities. While you may have previously operated equipment similar to that described in this Document, changes in design, manufacture or procedure may have occurred which significantly affect the present operation.

The installation and service of equipment described herein is to be performed by authorized, qualified **PROTEC GmbH & Co. KG** personnel.
Assemblers and other personnel not employed by nor directly affiliated with **PROTEC GmbH & Co. KG** technical services are directed to contact the local **PROTEC GmbH & Co. KG** office before attempting installation or service procedures.

Improvement Recommendations

Users of this Document are encouraged to report errors, omissions and improvement recommendations to **PROTEC GmbH & Co. KG.**

1 Equipment Description

1.1 Introduction

The “Instruction for Use” document describes the characteristic features and correct operational instructions which are necessary for the efficient and effective use of the Bucky-WR

It is suggested that you review the operation instructions and the safety notes described in this “Instruction for Use” before using the Bucky. Each control device is described in order to familiarize you with its function.

1.2 Intended Purpose

The Bucky WR for is intended for use with standard cassette trays in standard Bucky Systems used in examinations with X-ray units for general radiography in diagnostic human medicine use. It must be used only in locations designated for medical use.

1.3 Model versions

- Bucky / Bucky WR
- Bucky / Bucky WR FSE
- Bucky / Bucky WR FSE RA
- Bucky / Bucky WR DL
- Bucky / Bucky WR FSE DL
- Bucky / Bucky WR FSE RAL DA

1.4 Features

- For use with standard cassette tray with or without grid
- Optional for use with grid detection, size sensing and fail safe.
- Easy to remove grid frame for fast and easy change between grids or for examinations without a grid.
- Optional you can order a charging unit to charge Detectors directly while using e. g. Konica Minolta AeroDR 35x43 and AeroDR 43x43 also iRay Mars 1714V and Mars 1717V inserted in the Grid entity.

1.5 Nameplate

For nameplate location refer to Fig. 2-1

2 Operating Instructions

Only for Grid exchange Bucky.
Standard bucky -> There´s not grid exchange function

2.1 Safety Aspects

ATTENTION

Handle the grid frame with grid carefully with both hands, so that it can not fall down!

2.2 Overview

1. Grip for insertion and extraction of grid frame
2. Grid
3. Bucky
4. Nameplate
5. Grid frame insertion point

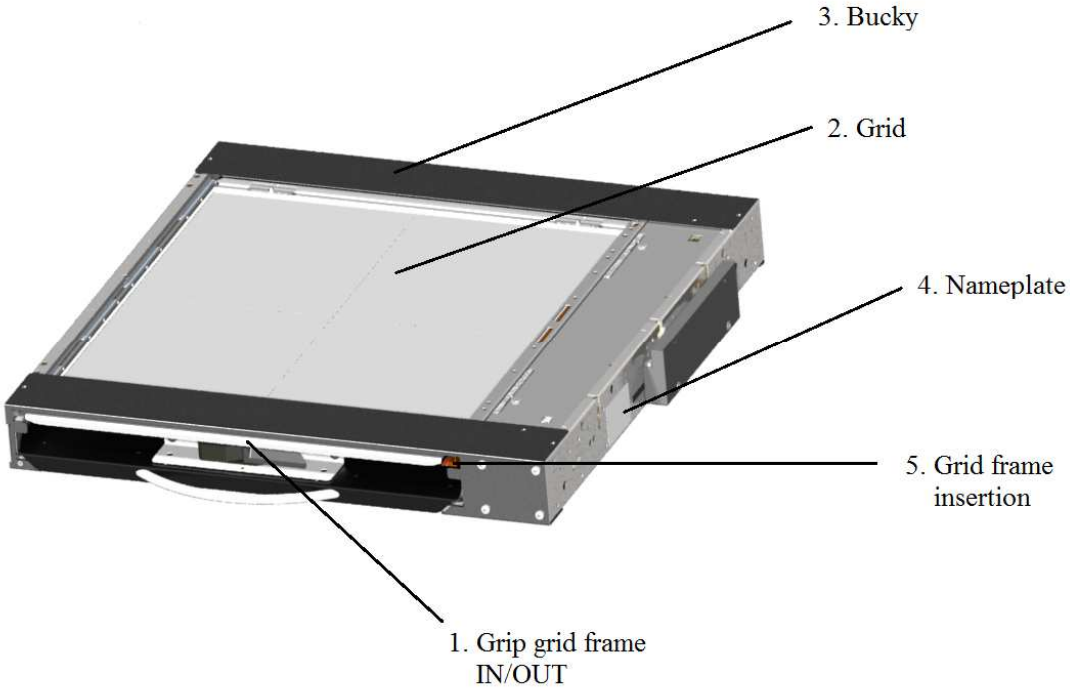


Figure 2-1

2.3 Inserting and removing grid frame

ATTENTION

Handle the grid frame with grid carefully with both hands, so that it can not fall down!

- To remove the grid frame, pull outwards on the grip on the front side of the frame until it moves freely.

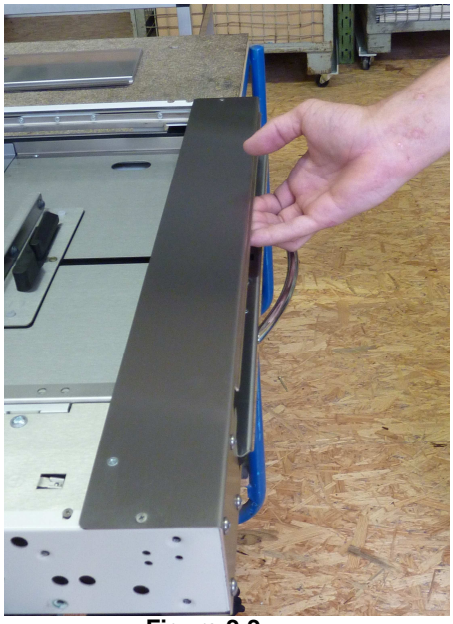


Figure 2-2

- Use both hands to remove grid frame completely out of Grid Cabinet guiding rails (Fig. 2-3).
  Store grid frame with grid in a safe place.

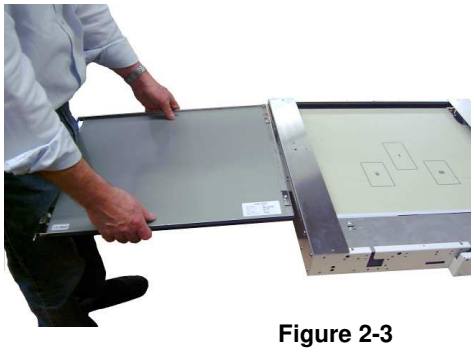


Figure 2-3

- Insertion of Grid frame is vice versa.
  Insert Grid frame aprox. ¾ into Grid Cabinet, and slide it inwards until it clicks into place.
  Afterwards pull lightly on the front grip to ensure that grid frame is secured.

Note: Exposure will be disabled if grid frame is not inserted correct and locked!

2.4 Place panel in charging position

Charging the 4343 panel only works if the panel is inserted in the drawer in the correct position. The charging connector must be on the rear left (for the 4343 panel) or rear right (for the 4336 panel) to make contact with the charging plug (image exemplary for 4343 panel).
When the detector load is closed and the system is switched on, the panel loads automatically.
The display of the battery status depends on the applied software.

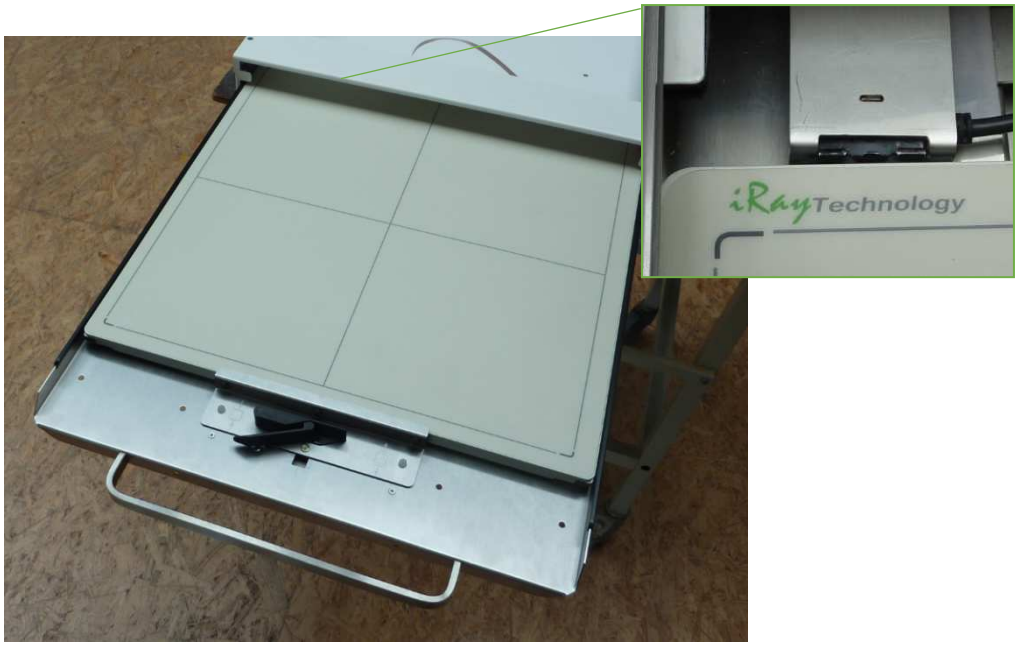


Figure 2.4

3 Operator Maintenance

3.1 Introduction

This chapter provides a maintenance schedule to ensure proper and safe operation after installation.
Further adjustments or calibrations not contained in this “Instructions for Use”, refer to the applicable “Technical Description” and have to be made by **PROTEC** personnel or expressly by **PROTEC** authorized service personnel.

Before operating this unit, users must familiarize themselves with all control elements and their functions.

The preventative maintenance procedures required to ensure the operational integrity and safety of the equipment are listed in the following paragraphs. It is the owner/user's responsibility to perform preventative maintenance at the specified intervals or arrange for such service with an authorized service representative.

Maintenance has to be recorded.

3.2 Safety Information

The user and the personal have to follow the warnings and safety information, placed on the device, disregarding may lead to injury.

Personal must make itself familiar with all warnings, placed on the device.

They are necessary for safety and ensure the correct operation of the device.

In the event of a malfunction, discontinue use of the unit and notify immediately **PROTEC** service or the expressly authorized service provider.

3.3 Technical Safety Information

To protect the safety of patients, users and third parties, it is absolutely necessary that Checks, which ensure the reliable function and operational safety are made in intervals of 12 months by **PROTEC** service or expressly authorized service providers.

All parts of this equipment that could create a hazard through wear and tear must be checked in intervals of at least 12 months and if necessary, replaced by **PROTEC** service or by expressly authorized service providers at regular intervals.

As the manufacturer, we are responsible for the technical safety aspects of the equipment if any maintenance, repairs and/or modifications are performed by our staff or by expressly authorized service providers. Likewise, if component parts that affect the safety of the equipment are replaced by original replacement parts in the event of a failure, we are responsible for the technical safety aspects of the equipment.

In the event that scheduled maintenance is not performed, **PROTEC** will not be responsible for damages occurred by the user or third parties if such damages are the result of improper or missing maintenance.

3.4 Maintenance schedule

3.4.1 General

Prior cleaning or disinfecting, remove power cord and actuate emergency OFF switch or safety switch (if existing). Make sure that no liquids can penetrate into the equipment.

3.4.1.1 Cleaning

Do not use water for cleaning.

Water causes short circuits in the electrical portion of the system, and corrosion in the mechanical components.

Do not use corrosives, solvents or abrasive cleaning materials.

Clean painted and plastic surfaces only with a cloth and common household cleaners and wipe surfaces with a clean, dry, lint-free cloth. Clean chrome-plated parts by wiping with a clean, dry, lint-free cloth.

3.4.1.2 Disinfection

All components, including accessories and connecting cables, may be disinfected only by wiping with a disinfectant solution. Please contact **PROTEC** if detailed information is needed concerning appropriate disinfection materials.

The equipment must be well covered with plastic sheets during room disinfection.

For safety reasons, no spray disinfectant may be used.

Recommendations and instructions regarding the use of disinfectants and methods of disinfection may be derived from the most recent rules and guidelines concerning disinfection and explosion safety.

3.4.2 Regular Checks

3.4.2.1 Quality Control

X-ray equipment should be quality-controlled at regular intervals or as required by applicable regulations to determine that the image quality remains in accordance to national regulations, e.g. by a monthly consistency testing.

3.4.3 Technical safety checks and Maintenance

Required technical safety checks and maintenance (refer to manual “Technical Description”) must be performed at 12-months intervals by **PROTEC** Service or authorized service providers to ensure the safe and reliable operation of the equipment.

In the event that scheduled maintenance is not performed, PROTEC will not be responsible for damages occurred by the user or third parties if such damages are the result of improper or missing maintenance.

3.4.4 Disposal Remarks

The Bucky does not contain any toxicological materials.
All mechanical, electrical and plastic components have to be disposed according to local or national regulations. In case of doubt contact **PROTEC.**

4 Combination with other equipment

- The Bucky-WR is prepared for use with a standard cassette tray in standard Bucky tables and wall stands for general radiography in diagnostic human medicine use.

- For combination with other equipments please contact **PROTEC** for compatibility tests and release.

5 Technical Data

5.1 Electrical Characteristics

5.1.1 General

The design of the Bucky with exchangeable grid is in compliance with Class I, type B equipment of EN 60601-1.

5.1.2 Power supply

Note: The detector charging is need of the following power supply:

Power supply	230 Vac
Power frequency	50-60 Hz
Input current	1,5A Max.

The power supply for the panel is provided by a power supply unit. This supplies 24Vdc, 3A.

To lower the risk of an electrical shock, the device can only be run on a power supply with a protective conductor.

5.2 Product Lifetime

The Bucky-WR is designed for a useful lifetime of 10 years if used according to specifications and regular maintenance through **PROTEC** service or authorized service providers.

5.3 Environmental Conditions

5.3.1 Operating Environment

Temperature range + 10°C to + 40°C (50°F to 104°F)
Relative humidity range 30% to 70% (not condensing)
Atmospheric pressure range 700 hPa to 1060hPa

5.3.2 Transport and stock environment

Temperature range - 10°C to + 70°C (14°F to 158°F)
Relative humidity range 10% to 95% (non condensing)
Atmospheric pressure range 500 hPa to 1060hPa

5.4 Standards

DIN EN 60601-1 (1996-03) Medical electrical equipment, General requirements for safety

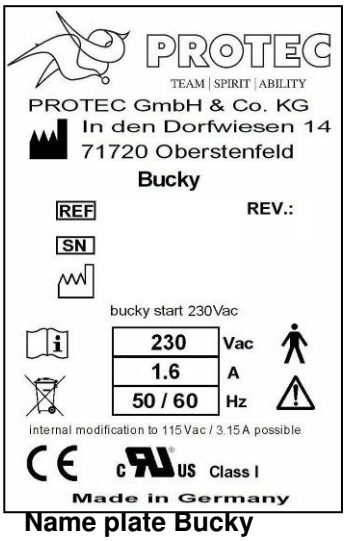
The CE-labeling of this product is in conformity to the requirements of the European Community Medical Device Directive 93/42/ECC according to Article 11 Appendix VII.

Description of Symbols, Labels and Abbreviations

5.1 Symbols

	Attention, consult accompanying documents
	Classification according EN 60601-1, Type B
	Protective earth connection
	CE-marking
	Alternating current
Class I	Classification

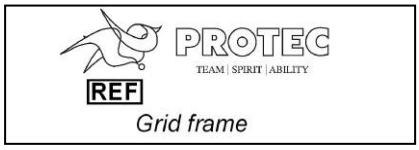
5.2 Labels



Name plate Bucky

Bucky start may contain the following voltage specifications
230 Vac
115 Vac
24 Vdc

Voltage specifications may contain the following voltage specifications
230 Vac
115 Vac
24 Vdc



5.3 Abbreviations

mm	millimeter
cm	centimeter
kg	kilogram
lb	pound
°C	Degree centigrade
hPa	Hektopascal
RA	grid detection
DL	Detector charging
FSE	Fail safe
WR	Grid exchange