



**scannexus**

**CU training**

Rules & Regulations



# Contents

- Access
- Booking system (Calpendo)
- Screening forms
- Subject preparation and scanning
- Incidental findings
- Rules
- Data
- Information:
  - Wiki/ e-learning site/busrv0001/website
- 7T

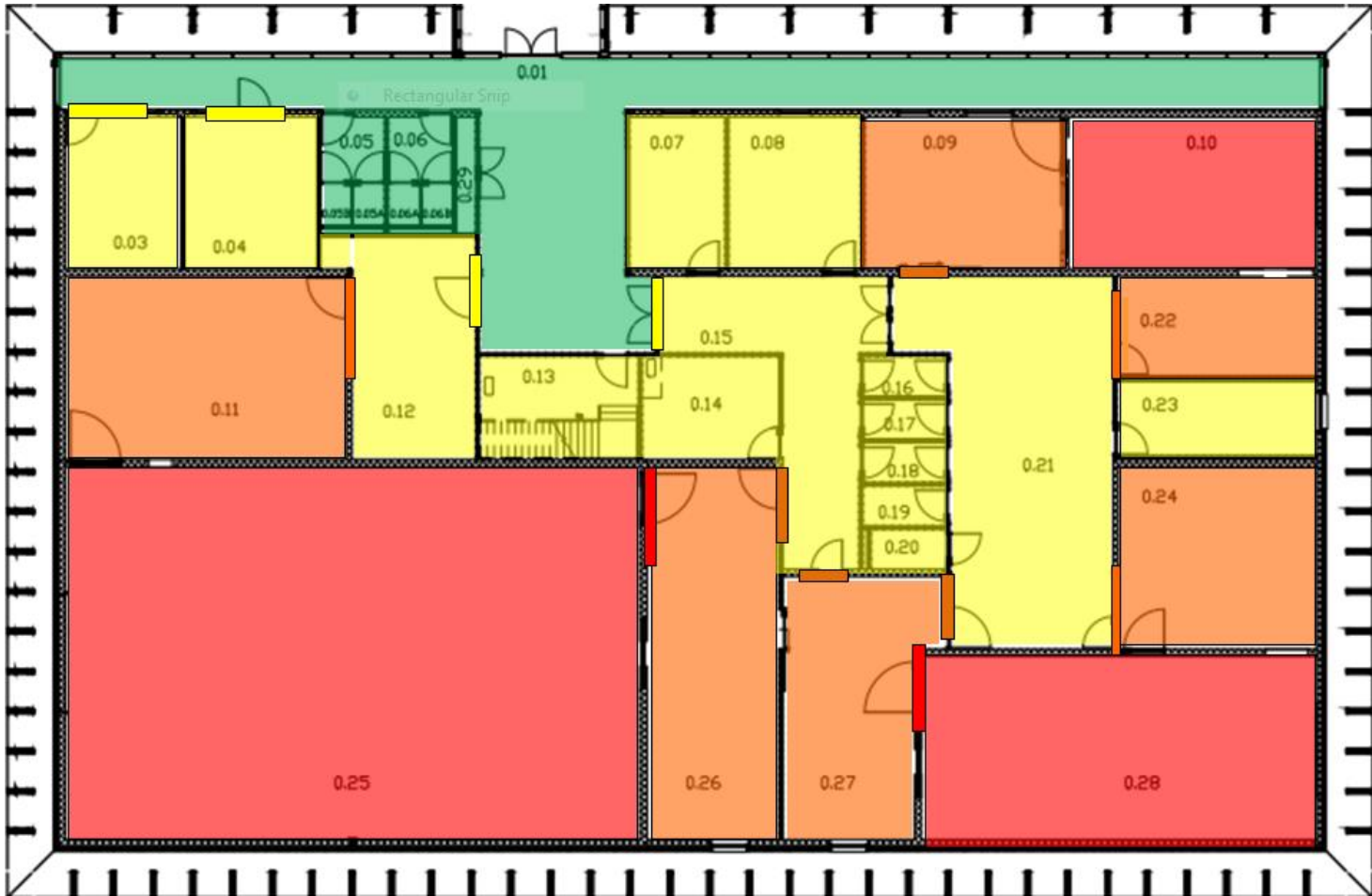


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Access

# Access Levels



# Key cabinet

- The key for the magnet room is available in the key cabinet.
  - This cabinet is located in the corridor towards the 7T and 9.4T.
  - Accessible with your UM card, after completion of CU training.
  - It registers who possesses which key.
  - Returning key with UM card.
  - It is not permitted for one CU to pass the key on to another CU!
- The Keyholder is responsible for the safety.
  - The CU that took the key is the Keyholder!
  - The Keyholder is responsible for safety until the key is returned to the key cabinet.
  - Do not block the door of console room open while scanning!
- Return the key after scanning
  - Failing to lock the door after scanning keeps you responsible for safety.
  - Failing to return the key will result in loss of booking privileges.



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Booking system

# Calpendo



# Calpendo

Version 7.0.22

Calendar Templates Bookings Projects Search Admin Help

Week 42 Today Refresh Printable View

October 2014

M	T	W	T	F	S	S
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16

Bookmarks

Resources

- Prisma
- 7T
- 9.4T
- General notices
- Psychofarma Lab
- Mock scanner

Choose resources...

Templates

Status

Filter

	Mon 10/13	Tue 10/14	Wed 10/15	Thu 10/16	Fri 10/17
	Prisma 7T 9.4T Phsy Mock	Prisma 7T 9.4T Phsy Mock	Prisma 7T 9.4T Phsy Mock	Prisma 7T 9.4T Phsy Mock	Prisma 7T 9.4T Phsy Mock
08:00	Prisma 07:30	Prisma 07:30	Prisma 07:30	Prisma 07:30	Prisma 07:30
09:00	F000 Main QA 09:00	SETU 09:00	F000 CLE/ 09:00	M010 leg m 09:00	Main QA 09:00
10:00	F008 spoke 10:00		F000 CLE/ 09:30	PM01 10:00	F004 Main 10:00
11:00	CU T 1/3 11:00	CU T magn 11:00	A010 KU Le 11:00		
12:00	S003 graag 12:00	A010 KU Le 12:00	U001 12:00		
13:00	D011 coils 13:30	SETU setup 14:00	F000 13:00	Supp 13:30	F000 13:00
14:00	F000 graag 14:00	M010 15:00	M010 PM01 15:00	SETU Supp 15:00	F004 Contin 15:00
15:00	M010 15:00			M010 15:30	
16:00	F008 install 15:30	U001 16:00			



# Calpendo

- Users gain access when the project is accepted by Scannexus.
- User request at <https://scannexus.calpendo.com>
- Bookings must be made in the time blocks associated with your faculty like FPN or FHML.
- Bookings FPN via [mriplanning-fpn@maastrichtuniversity.nl](mailto:mriplanning-fpn@maastrichtuniversity.nl)!
- External parties can book outside of these blocks. They must adhere to the following Scannexus rules:
  - You can only book the number of hours stated in the contract with Scannexus.
  - Bookings must be consecutive or the gap between bookings has to be at least 60 minutes.
  - If you scan longer than you booked, lengthen your booking time in Calpendo.
  - Cancellation of your booking can be done one week in advance.
- Scannexus Support Staff will ensure that these agreements are followed. Be considerate.





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Screening forms

# Screening forms

- **Safety Screening Form Scannexus**
  - Mandatory!
  - Fill in just before entering the magnet room.
  - Has to be signed by the CU and the subject.
  - If questions arise, **DO NOT SCAN**, always contact Support Staff!
  - Every time (day) a new form.
- Completed Safety Screening Forms should be put into the reception mail box and will be archived by Scannexus.
- Blank forms are available at the console rooms and at [www.scannexus.nl/documentation](http://www.scannexus.nl/documentation)

# Screening forms

- As a service to researchers Scannexus provides a **template screening form**, to screen subjects beforehand.
- **NOTE: FPN researchers** have to use the dedicated FPN screening forms of their faculty! They are not allowed to use the Scannexus template.
- If used: researcher is responsible for proper usage according to the ethical approval of the project and storage of these forms!
- Screen your subjects beforehand:
  - Preferable one week in advance so you can cancel the booking if volunteer had counter indications.
  - Provides extra check in screening.
  - Researcher has evidence of screening by archiving this form.



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Subject preparation and  
scanning

# Before entering the magnet room

- Instruct subject about:
  - Stimuli
- Inform subject about:
  - Alarm ball
  - Nerve stimulation
  - (Local) heating
  - Noise
  - No skin-skin contact
  - Dizziness while entering the bore, especially at 7T
- Just before entering the magnet room: check subject for magnetic objects (top- down)
  - Hair Tie/Pins
  - All Pockets
  - Jewelry
  - Belt/Shoes
  - Metal Detector is optional

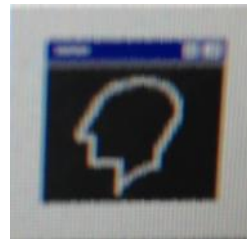
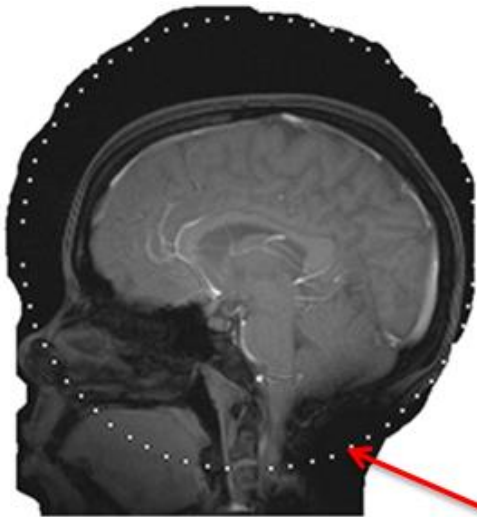
# Positioning

- Make sure subject is safe
  - Ear plugs
  - Foam cushions
  - Alarm Ball
  - No skin-skin contact
- Make sure subject is comfortable
  - Knee pillow
  - Blanket
- Use the required stimuli devices
  - No loop in the cables
  - Not touching skin
- Go to the right table position
  - Close eyes while using laser!

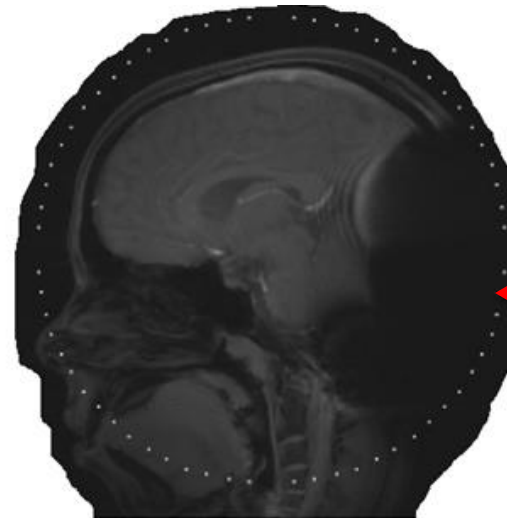


# While Scanning

- Keep in contact with the subject!
  - Communicate via the intercom.
- Check your data!



Click to  
Check





# Physiological Tracking

- Breathing
- Pulse
- ECG (ask for safety instructions)
- EasyAct (acoustic detection of heartbeat)



# Stimulation Devices

- Visual Stimulation
  - Projector on the back side of the scanner.
  - Fixed position, do not change.
- Auditory Stimulation
  - Ear bud system (**only use for auditory studies!!**)
  - Headphones do not fit in the coil
- Button Boxes
  - Left and Right hand with four buttons each.
- EEG/fMRI capabilities
  - In development



# MR objects clearance

- It is prohibited to introduce and use in the magnet rooms any device or instrument that has not been tested and approved by the Safety Review Board/ Senior Operations and Technical Development Officer (SOTDO).
- Requests for usage of new devices/instruments have to be sent to the Safety Review Board. Add all safety related documents of this device to the request.  
[safety@scannexus.nl](mailto:safety@scannexus.nl)



# Finish Session

- Table home position.
- Clean the magnet room.
- Coil plugged out (3T).
- Lock the magnet room.
- Put key back in key cabinet.
- Export data.
- Close patient and browser (system stays turned on).
- Switch off all stimulation devices.
- Return all stimulation settings to **default**.

**Leave everything the way you found it prior to scanning!**



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Incidental findings

# Incidental Findings

- It is not the investigator's job to check for or to diagnose medical problems in anatomical brain scans. However, it is possible that you cannot help but notice an anatomical feature that appears out of the normal range.
- Make sure you have an incidental finding agreement. This must be signed by the subject. Responsibility for this lies with researcher.
- A **template** incidental findings agreement is available at Scannexus. **FPN users must use the FPN incidental findings agreement.**
- It is possible to use the Scannexus Procedure in case of an incidental finding.
- Support team will check if the subject has consented to be informed.

# Incidental Findings (Scannexus Procedure)

- Do **not** inform the subject right away.
- Seek contact with a qualified medical expert.
- Scannexus service:
  - Medical expert: Neuroradiologist (MUMC+)
  - In order to provide the expert with the relevant data, contact the Scannexus Support Team via [scanlabs@scannexus.nl](mailto:scanlabs@scannexus.nl).
  - FPN: If you are not a staff member of the faculty you must immediately inform the senior staff member who is your supervisor about the situation.
- If the subject does become aware of the fact that a potentially aberrant anatomical feature was present, then inform the subject that a medical expert will be consulted, and that the subject will be contacted by phone.



# Incidental Findings (Scannexus Procedure)

- After receiving feedback from the medical expert, the subject must be contacted as soon as possible by phone.
  - Subjects for whom medical follow-up is recommended must be invited for a conversation, and for pick-up of their referral letter.
  - Subjects who had become aware of the presence of a potentially aberrant feature, but for whom follow-up was not recommended should also be called and informed.
  - Subjects who had *not* become aware of the presence of a potentially aberrant feature, and for whom follow-up was *not* recommended should *not* be called.



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Rules





# Students/ uncertified people

- Do not leave uncertified people without you in the rooms.
- Students cannot be given responsibilities around the scanners (supervisor has to be present)
- Do not take students/ uncertified people with you into the magnet room if it is not absolutely necessary.
- Anyone who enters the magnet room has to complete the safety screening form.



# Visitors

- Do not bring visitors to your scan session.
  - Respect the subjects privacy.
  - Keep your concentration.
  - You can bring a student, **remember you are responsible for their safety!**
  - Anyone that enters the magnet room has to complete the safety screening form.

# Tours

- When a visitor or group wants to see the labs:
  - Approval of the Operations Manager or SOTDO\* is required.
  - You must be accompanied by a member of the Scannexus staff.
  - Submit the request at least 24 hours in advance.
  - A timeslot will be booked in Calpendo.
  - Do not enter the magnet rooms.
  - Do not enter the console rooms during a scan session or maintenance.
  - **Remember you are responsible for their safety!**

\* Senior Operations and Technical Development Officer



# Note:

Scannexus Staff have the authority to ask anyone present within the MR scanner rooms to immediately leave these areas. Such a request must be immediately obeyed by said person.

# Out of Office Hours

- Out of office hours 1 CU and 1 MST person (or 2 CUs) have to be present.
  - The CU that picks up the key is the responsible CU, this person is the Keyholder.
  - One of the CU's/MST person has to be an ERO (BHV).
- Out of office hours are: **before 9:00am, after 5:00pm.**
- The burglar alarm is activated each day between 9:00pm and 7:00am.
  - CUs should pick up a smart key at least 24 hours before their scan slots.
  - Smart keys must be returned within 48 hours of the finish of the scan slot.
  - It is not permitted for one CU to pass the key on to another user.
  - The CU is responsible for obtaining and returning the smart key for their scan slot.
  - On leaving the facility, the CU is responsible for checking whether other users are in the facility and activating the alarm if they are the last to leave.



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Data

# BU data server

- This server is backed-up (two weeks) by Scannexus.
  - Personal folder, 1TB.
  - Transfer of data, always make your own backup!
  - Deletion after 3 months of inactivity (warning e-mail in advance).
  - In case of space limits this period may be shorter.
- The scanner can access this server.
  - Read and Write.
  - To export your data to the users personal folder on the BU serve: <\\busrv0001\backedupdata\YourName>



# BU data server

- Users can access this server from their UM pc's.
  - Access is granted after completion of the contract with Scannexus.
  - Access is granted after completion of the CU training.
  - Add <\\busrv0001\backedupdata> (Z:) to your network drive.
  - VPN connection is needed if you are not connected the Unimaas network.





# BU data server

Folders on BU data server accessible for users

- ~Shared folder
  - Transfer for stimulation programming/data to and from Stim PC. (USB stick is not allowed.)
  - Transfer for information to other users.
  - Automatic deletion after one week.
- ~Documentation
  - Contains manuals of scanners and peripheral equipment



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Information



# Wiki

- Users gain access after completion of the CU training.
- **Information Database**
  - Protocols
  - Developments
  - Settings
  - Coils
  - Peripherals
  - Etc..
- **Logbook** of the scanners

# Wiki

 Search

- > 3T Archive
- > 3T Coils
- > 3T Development results
- 3T Logbook
- 3T Logging of Physiological Signals
- 3T Projector / screen settings
- > 3T Protocols
- > How-to articles
- > Peripherals

## 3T Home

[Edit](#) [Watch](#) [Share](#) [Tools](#)

Created by BU Wiki Admin, last modified by Wiki Admin1 on Jun 20, 2014

This is the home of the 3T space, created for Certified Users.

To help you on your way, we've inserted some of our favourite macros on this home page. As you start creating pages, blogging and commenting you'll see the macros below fill up with all the activity in your space.

 Search

### Topics

- > 3T Archive
- > 3T Coils
- > 3T Development results
- 3T Logbook
- 3T Logging of Physiological Signals
- 3T Projector / screen settings
- > 3T Protocols
- > How-to articles
- > Peripherals

### Recently Updated

- [3T Logbook](#)  
Oct 14, 2014 • updated by Esther Steijvers • [view change](#)
- [3T Logbook](#)  
Oct 13, 2014 • updated by Margo van de Wetering • [view change](#)
- [3T Logbook](#)  
Oct 09, 2014 • updated by Felix Duecker • [view change](#)



# Wiki

## Logbook of the scanners


Date	Time	Description of problem	Solution	Delay/ cancellation	Certified user	Reported by	Open issue?
11-09-2014	17.00	scanner did not respond anymore after stopping image reconstruction	rebooted it three times	45 min	Jindra Bakker	Lotty	Closed
11-08-2014	13.30	Anterior part of 64ch was not recognized by the system. Replug of anterior part didn't help, replugged whole coil, it recognized the anterior part again.  Patient was registered before the anterior part was plugged in.	No time for save log, sorry...  A lot of people register the subject before plugging the whole coil. It only happens from time to time...	5 min	Aline Borst	Margo	Open (07-07-2014)
10-03-2014	12:30	StimPC screen went black when starting e-prime experiment, did not respond to anything.	Reboot stimulusPC (which went strikingly quickly)	5 minutes	Anne Havermans	Anne Havermans	Closed
09-10-2014	19:00	scanner not left in default state (screen removed, switch box in parallel mode, mirror removed from coil, coil not in closet)	returned system to default state but were very irritated...  13/10/2014: Completed improvement form	10 min	Helen Luckmann	Helen	Closed


# E-learning


The screenshot shows a web browser window with the address bar displaying "e-learning.scannexus.nl". The page title is "Scannexus e-learning site". The main content area features the Scannexus logo, a main menu with "Site news", and a navigation sidebar with "Home", "Site news", and "Courses". A "Site news" section contains a welcome message from the Scannexus Support Team dated Monday, 15 June 2015, 12:39 PM, regarding Scannerlab Safety training 2015. Below this is a "Course categories" section with expandable items: "Preparation Magnet Safety training (1)", "How-to movies (6)", and "Scannerlab Safety Training (1)". A "CALENDAR" widget is visible on the right side. At the bottom, a login status message reads "You are not logged in. (Log in)" next to the Moodle logo.


← → ↻ e-learning.scannexus.nl


Scannexus e-learning site

  
scannexus


MAIN MENU 

-  Site news

NAVIGATION 

- Home
-  Site news
- ▶ Courses

### Site news

 **Welcome to the Scannexus e-learning site**  
by Scannexus Support Team - Monday, 15 June 2015, 12:39 PM

The Scannerlab Safety training 2015 is available until the 31st of July!

If you did not receive an invitation to take the training and you would like to prolong your Certified User Certificate please let us know.

With best regards,  
The Support Team.

### Course categories


▼ Collapse all

- ▶ **Preparation Magnet Safety training** (1)
- ▶ **How-to movies** (6)
- ▶ **Scannerlab Safety Training** (1)

CALENDAR

Sun	M
0	1
13	14
20	21
27	28

You are not logged in. (Log in)



# Scannexus website



## Documentation



### Links

- [Database \(only with VPN\)](#)
- [WIKI \(only with VPN\)](#)
- [Calpendo](#)
- [E-learning](#)

### Documents

- [Scannexus Contract](#)
- [Addendum to Contract](#)
- [Report form for accidents](#)
- [Ongevallen registratie formulier \(NL\)](#)
- [Scannexus acknowledgement image](#)

### Information

- [Guidelines Scannexus](#)
- [Magnet Safety Training](#)
- [How to become a Certified User](#)
- [CU Training](#)
- [CU Manual](#)
- [7T Upgrade training](#)
- [\(f\)MRI Research Information](#)
- [\(f\)MRI Onderzoek Informatie \(NL\)](#)

[MRI Subject Screening Forms](#)

- > [CONTACT](#)
- > [DOCUMENTATION](#)
- > [PEOPLE](#)
- > [ROUTE](#)

# BUSRV0001

Computer > BackedupData (\\busrv0001) (Z:) > ~Documentation > Manuals

Name	Date modified	Type	Size
3T Siemens Manuals VE11	2/13/2017 5:25 PM	File folder	
7T Siemens Manuals	10/26/2015 2:04 PM	File folder	
9.4_7T Siemens Manuals B17	11/7/2013 3:24 PM	File folder	
Archived	2/13/2017 5:25 PM	File folder	
Manuals Peripheral Equipment	2/2/2017 12:32 PM	File folder	
WIP documents	4/26/2013 5:28 PM	File folder	
.DS_Store	2/9/2017 5:30 PM	DS_STORE File	9 KB

Computer > BackedupData (\\busrv0001) (Z:) > ~Documentation > Manuals > Manuals Peripheral Equipment

Name	Date modified	Type	Size
Acist contrast injector system	10/1/2015 10:50 AM	File folder	
Avotec eye tracker and goggles	4/25/2017 11:42 AM	File folder	
Button box Joystick Interface	5/10/2016 4:20 PM	File folder	
EEG_EGI	6/9/2017 11:45 AM	File folder	
HeadTracker_Mockscanner	2/2/2017 3:00 PM	File folder	
LED Lighting	11/2/2012 11:02 AM	File folder	
Motion camera	10/1/2015 11:48 AM	File folder	
Piezo Module	9/25/2013 4:29 PM	File folder	
Sensimetrics	6/7/2016 4:05 PM	File folder	
Biopac_stimulator_safety_app257	7/17/2014 10:05 AM	Adobe Acrobat D...	
Dymo labelprinter	3/14/2013 11:31 AM	Adobe Acrobat D...	
Projector_PT-EZ570U_operating_instructi...	8/26/2014 10:18 AM	Adobe Acrobat D...	