

# AUDACT

The software for all ANDROMEDA urodynamics systems



# AUDACT – The ANDROMEDA Concept

**AUDACT, the link between the urodynamics system and your PC**

## Maximum flexibility thanks to a modular design

With the introduction of the Ellipse system and AUDACT, ANDROMEDA has revolutionised the market for urodynamic systems. One of the key innovations was the separation of the actual urodynamic measuring device from the PC-based analysis and administration unit. This pioneering concept has since been continuously developed and perfected by ANDROMEDA and has proved to be a success in numerous clinical and practical applications.

The urodynamic measuring stations from ANDROMEDA are consistently designed as medical technology units of the highest quality. They feature a design which is at the same time both compact and robust. As a result, the measuring stations are highly mobile and easy to clean and they operate reliably for many years, even under the at times harsh surrounding conditions found in everyday urodynamics testing. On account of their having an integrated computer unit, the measuring stations are stand-alone units, meaning that no external PC is necessary to carry out measurements and generate basic analyses.

In addition, ANDROMEDA provides a comprehensive software solution, AUDACT, for convenient monitoring, analysis and documentation of urodynamic measurements and for the management of tests and patients.



**Ellipse Chair:** integrated urodynamic and urogynaecological workstation

**Ellipse:** urodynamics



**Conus:** flow measurement

**Helix:** urodynamics



#### **Acquisition of patient data**

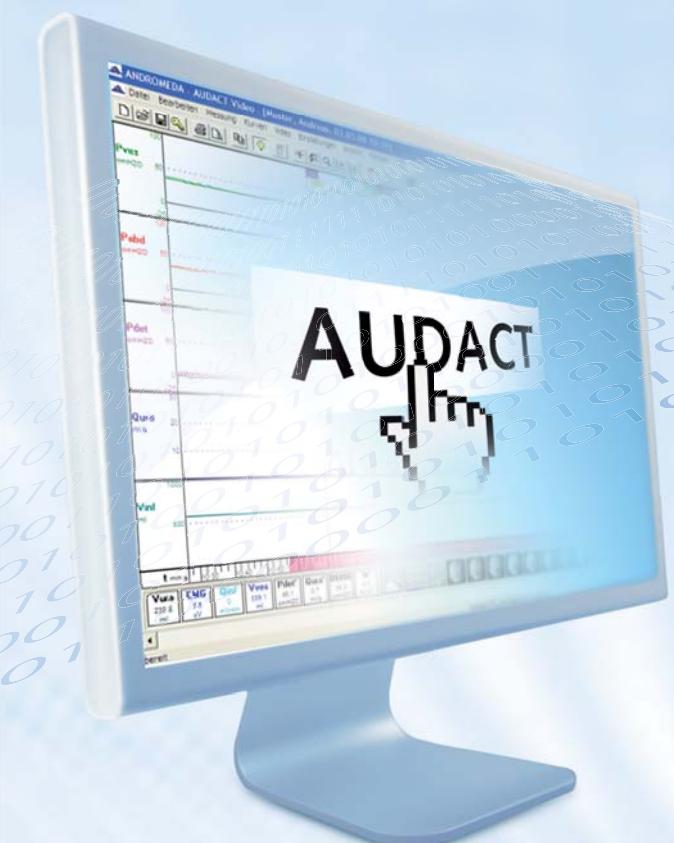
- at reception
- in the examination room
- automatically via HL7 or GDT

#### **Tracking the progress of the measurements**

- in the examination room
- in the adjacent room

#### **Analysis, documentation and presentation of the measurement results**

- in the examination room
- in the adjacent room
- in the doctor's surgery
- in the lecture theatre
- on the laptop when on the go



**AUDACT** on your laptop for working on the move



**AUDACT** on a hospital or practice PC



**AUDACT** on a flexible trolley stand



**AUDACT** on a HIS

# AUDACT – Measurement and Evaluation

The AUDACT measurements window optimises the display of urodynamic graphs and values

User-friendly with intuitive Windows-based operation

## AUDACT software

AUDACT is the urodynamics software solution for specialists from the fields of

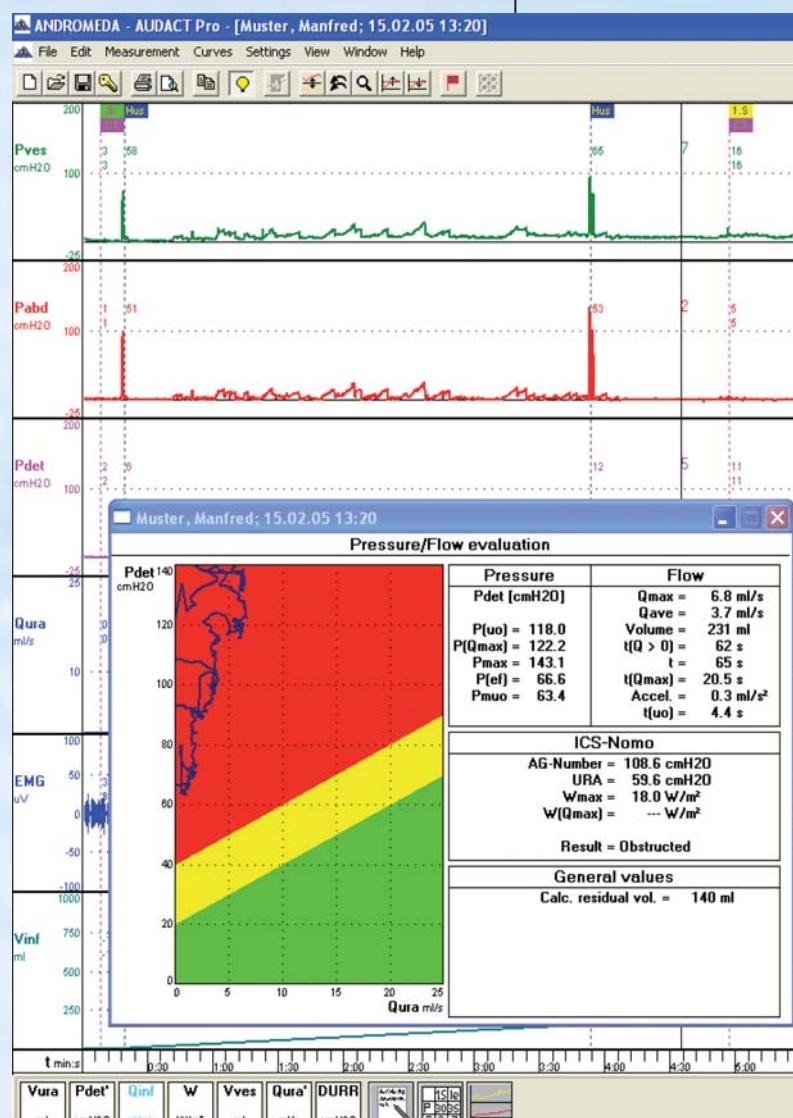
- urology
- neurourology
- urogynaecology
- paediatric urology and
- paediatric surgery

Leading international medical specialists and opinion leaders from these target groups have been involved in the development of AUDACT over several years.

The result is a user-friendly software package that leaves virtually nothing to be desired, offering efficient solutions to virtually any problems and issues in urodynamics practice. And if for some reason that isn't the case: AUDACT is continuously being developed and the next version is coming soon ...

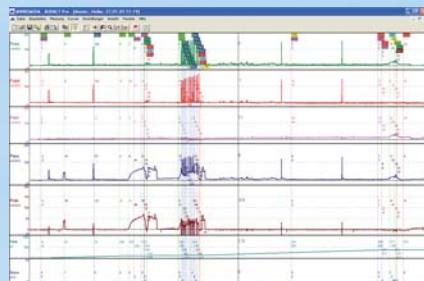
## Analyses and evaluations

- Flow measurement and flow measurement combined with EMG
- Cystometry
- Cystometry combined with VLPP, UPP and EMG
- Pressure-flow measurement
- Pressure-flow measurement with VLPP, UPP and EMG, combined in one measurement
- Urethral pressure profiles
- VLPP Studies (Vasalva Leak Point Pressure)
- CLP Studies (Cough Leak Point)
- ARM Studies (Anorectal Manometry)

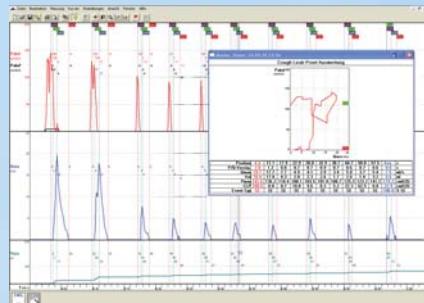
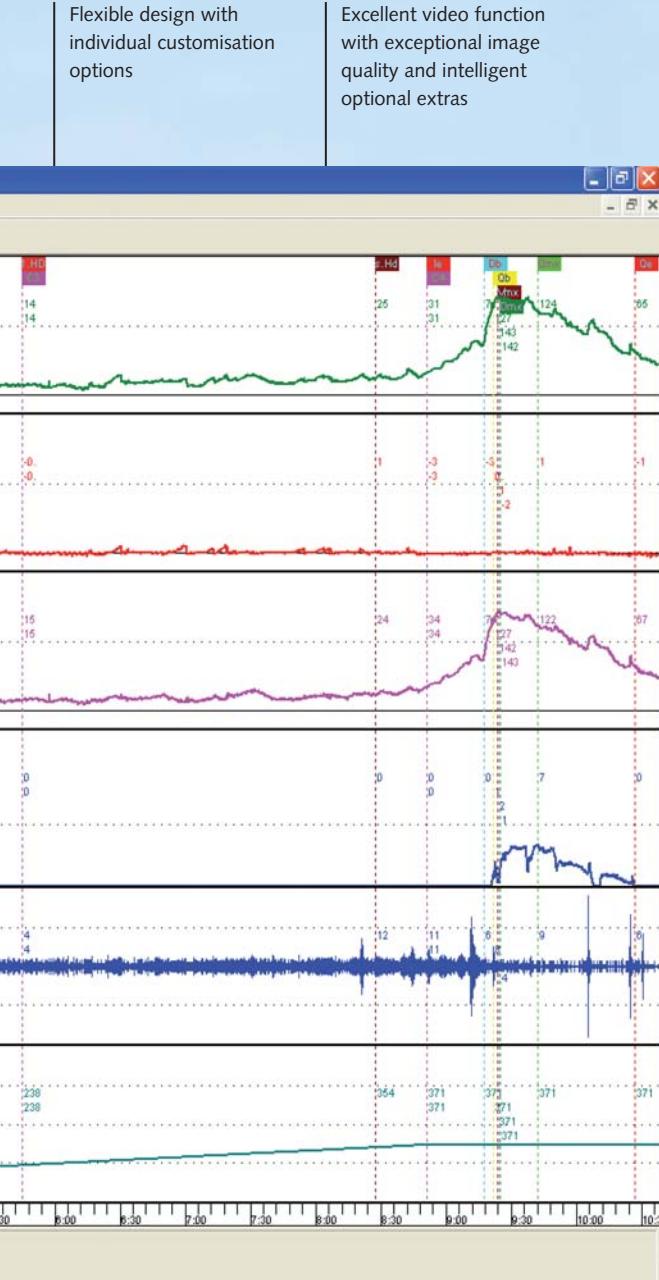


Various different tools for presentations, studies and special applications

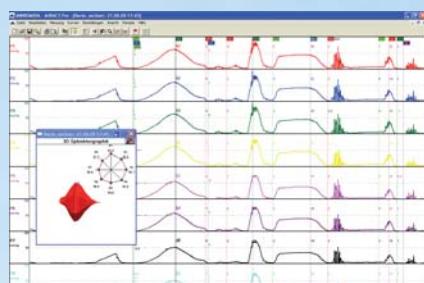
ICS evaluations and numerous other presentations and analyses (some of which can be freely defined)



Customised combination of graphs in a single measurement



Innovative, minimally-invasive diagnosis of incontinence with CLP



Rectal manometry for the diagnosis of faecal incontinence with a 3D display



Flow-EMG measurement with visual animation for children

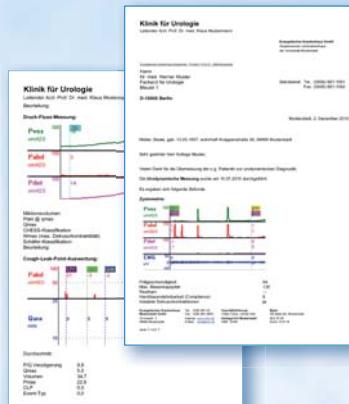
# Organisation and Documentation

Powerful database management meets a large number of special requirements

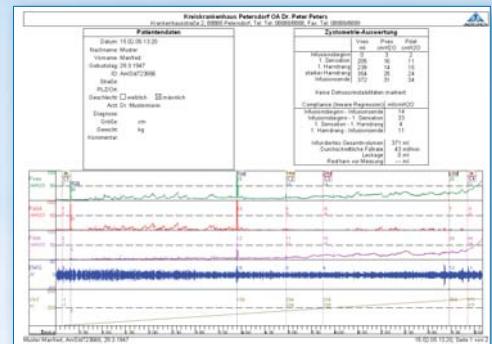
## AUDACT database

The AUDACT database is an organiser and versatile problem-solver running in the background of your urodynamics unit. It stores, backs up, selects, filters, presents, exports, plans, prints, analyses and supplements your measurement data. The AUDACT database provides you with an effective and time-saving tool for patient management.

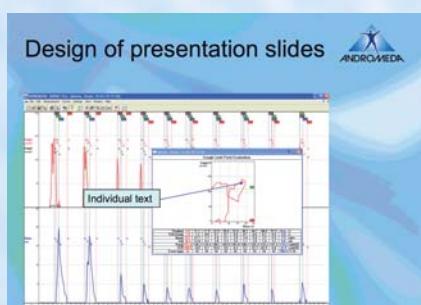
A selection of functions can be seen in the following overview:



Creating individual medical reports in Word



Standard printouts for documentation



Practical tool for creating presentation slides

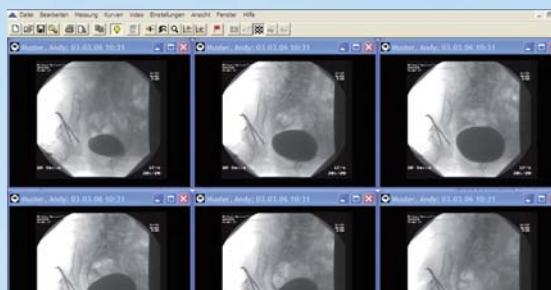
## Patient data Distributor/Video version

Patient selection: (104)		New	Change	Delete
Muster, Lieselotte				
Last name:	Muster	Sex		
First name:	Lieselotte			
Birthday:	31.03.1940	Age:	71 Years	Height
Id: 11.09.2009 12:36:57				Weight
Street: Musterstr. 5				Me
ZIP/Place: 46145 Musterhausen				
Health insurance: ...				
Doctor: Dr. Mustermann				
Referring doctor: ...				
Diagnosis: ISD				

**ANDROMEDA medizinische Systeme GmbH**

The heart of the AUDACT database

Range of common patient questionnaires



Archiving system for video images/sequences

Appointments Montag, 23. Mai 2011												
Begin	Description	Owner										
08:00	Muster, Lieselotte; 31.03.1940; 11.09.2009 12:36:57											
08:00	Muster, Manfred; 29.03.1947; AmSId723666											
08:30	--											
09:00	Muster, Maria; 10.11.1942; AmS-MusterIdNr1											
09:30	--											
10:00	Muster, Peter; 27.03.1954; AmSId724868											
10:30	--											
11:00	Kramer, Andreas; 20.08.1965; AmSId724885											
11:30	--											
12:00	Wallene, Wilhelmina; 14.06.1947; 9338064											
12:30	--											
13:00	--											
13:30	--											
14:00	--											
14:30	--											
15:00	--											
15:30	--											
16:00	--											
16:30	--											
17:00	--											

Appointment planner for patient management

Name	Birthday	Id	Owner	FLO	CYS	PFM	UPPR	UPPS	CLP	VLPP	ESOP	RECT	0th
Muster, Michael	29.03.1955	AmSId727259		0	0	0	0	0	0	0	0	0	1
Muster, Frau	10.11.1942	AmS-MusterIdNr1		0	0	0	1	0	0	0	0	0	0
Muster, Helga	14.03.1961	AmSId725675	ams	0	1	1	1	0	0	0	0	0	1
Muster, Lieselotte	31.03.1940	11.09.2009 12:36:57		1	1	0	2	1	2	0	0	0	0
Muster, Martin	29.03.1947	AmSId723666		1	1	0	0	0	0	0	0	0	0
Muster, Mann	12.02.1956	AmS-MusterIdNr2		1	2	2	0	0	0	0	0	0	4
Muster, Maria	10.11.1942	AmS-MusterIdNr1		0	0	0	1	1	0	0	0	0	0
Muster, Peter	27.03.1954	AmSId724868		0	1	1	0	0	0	0	0	0	0
Muster, Stephan	08.12.1954	AmSId725071		0	0	0	0	0	1	0	0	0	0
Niederholz, Regina	03.04.1955	AmSId724871		0	1	1	0	0	1	0	0	0	0
Niemhau, Beate	10.05.1957	AmSId725279		0	1	1	0	3	1	0	0	0	0
Oller, Birgit	07.01.1962	AmSId725111		0	0	0	0	0	1	0	0	0	0
Ollinger, Andreas	25.05.1972	2005147450		0	1	1	0	0	0	0	0	0	0
Otti, Franz	26.03.1935	AmSId724914		1	0	0	0	0	0	0	0	0	0
Palberg, Gertrud	24.05.1941	AmSId725643		0	2	0	0	1	2	0	0	0	0

Powerful database for high numbers of patients

Last name:	Mu	Ves	Pves	Pdet
First name:	Lie	ml	cmH2O	cmH2O
Birthday:	31			
Id:	11			
Street:	Mu			
ZIP/Place:	46			
Infusion begin		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1. Sensation		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1. Desire		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Strong desire		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Infusion end		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Detrusor Instabilities		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Compliance		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Infusion begin - Infusion end		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Infusion begin - 1. Sensation		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1. Sensation - 1. Desire		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1. Desire - Infusion end		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Free compliance begin - end		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Total infused volume		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Average filling speed		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Leakage		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Residual		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Flexible and comprehensive data export tool for management of studies

female	1 FLO	ESOP
male	1 CYS	RECT
cm	PFM	
kg	2 UPPR	
medical history:	1 UPPS	
	2 CLP	
	VLPP	QN
	Other	FDS

< AUDACT > Database

Last name:	Mu	Test name:	
First name:	Lieselotte	Test name:	
Birthday:	31.03.1940	Test name:	
Id:	11	Test name:	
Street:	Musterstr. 5	Test name:	
ZIP/Place:	46145 Musterha	Test name:	
Investigation date:		<input checked="" type="checkbox"/>	01.01.1970 DD.MM.YYYY
Owner:		<input checked="" type="checkbox"/>	
Referring doctor:		<input checked="" type="checkbox"/>	Dr. Mustermann
Diagnosis:		<input checked="" type="checkbox"/>	ISO
Sortig order:		<input checked="" type="checkbox"/>	Name, Birthday, Id, Owner
		<input type="checkbox"/>	Id, Birthday, Id, Owner, Name
		<input type="checkbox"/>	Id, Owner, Name, Birthday
		<input type="checkbox"/>	Owner, Name, Birthday, Id

Adaptable database queries and filters

Diagnosis: SD

Bladder neck stenosis

ISD

Mixed incontinence

Stress incontinence

Urethra relaxation with incontinence

Freely configurable library of indications



# Video Urodynamics

The gold standard in neurourology

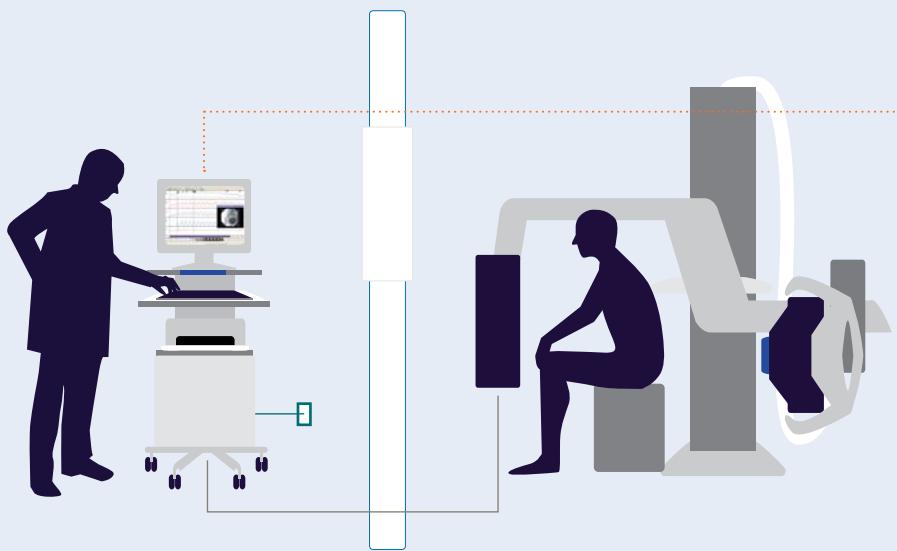
## AUDACT Video

Video urodynamics remains the recognised gold standard for the diagnosis of neurogenic voiding dysfunction. The ANDROMEDA concept of separating the measuring station (Ellipse) from the analysis unit (AUDACT PC) enables video measurement to be carried out both next to the patient and remotely at the PC behind a radiopaque screen. The compact design of the measuring stations allows you the flexibility of positioning them next to the patient, as required.

## Video Highlights

- Creation and playback of video sequences from composite or VGA signals with up to 100 frames/second and resolutions of 1200 x 1600 and above (no down-converter necessary)
- Precisely timed synchronisation of the digital video sequences with the measured urodynamic values (pressures, flow measurements, EMG, etc.).
- Photo function for the analysis of individual frames
- Measurement and evaluation of the vesicourethral angle
- Archiving of measurements, including the video images and sequences:
  - on CD with reference to the database
  - by means of a mirrored hard drive
  - on a file or PACS server
  - via HL7 (see next page)
  - as a paper printout or PDF

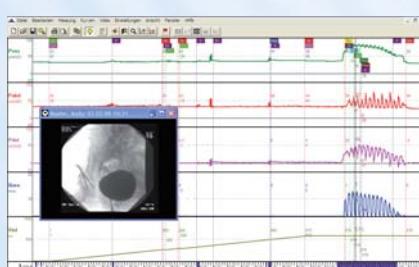
## Bilderfassung: AUDACT versus DICOM



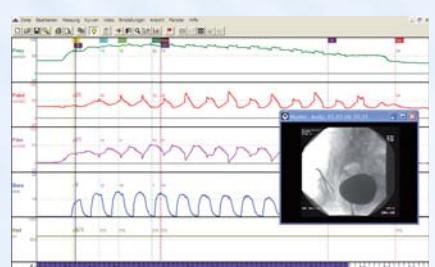
AUDACT Station  
with AUDACT Video

Partition with  
viewing window

X-rays



Recording: high-resolution video sequences  
with event-driven exposure release



Analysis: cursor- or speed-controlled playback  
options with zoom function

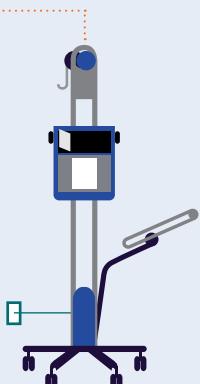


C-arm with radiolucent examination chair



Urological X-ray workstation with micturition attachment

— Video signal  
- - - wireless PAN  
— LAN

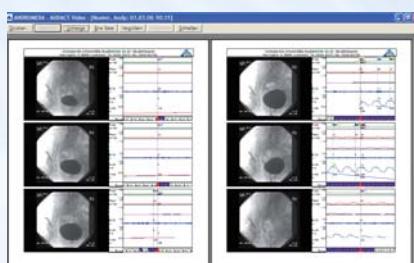


Ellipse

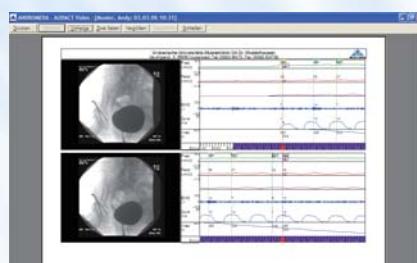
The video urodynamics system from ANDROMEDA does not import the image and video data via DICOM; the video signal is instead read directly at the analogue video output of the X-ray unit and digitised by the AUDACT PC. The progress of the measurement can be tracked in real time in AUDACT, with the image quality generally being significantly better than on the monitors of the X-ray unit.

Only by directly recording the video sequences through the urodynamics system is reliable temporal synchronisation of the individual images with the graphs and measurement values enabled. This is in turn a central prerequisite for diagnostically conclusive and valid results.

If the video urodynamics system receives the images via DICOM/PACS, these images are then only available with a time lag. A precise correlation of the images with the measurement profile is also not possible.



**Selection:** photo function with the option of removing up to 99 individual frames from the sequence and analysing them



**Documentation:** printout of the individual frames with the corresponding graph sections and measurement values

# AUDACT Integration

Simple stand-alone operation, integration into a practice network (GDT) or operation within the HIS (HL7)

## AUDACT GDT / HL7

The modular system concept from AN-DROMEDA and AUDACT allows you to configure your working environment exactly how you want it. AUDACT adapts to your working routine, not the other way around. Whether it is "just" a question of easily controlling a Conus flow meter or whether it is a matter of implementing a complex urodynamic system with multiple workstations and integration into a hospital information system (HIS), the principle is always the same.

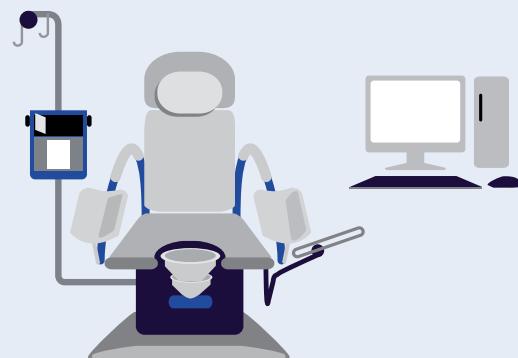
The urodynamic measuring equipment (Conus, Helix, Ellipse, Ellipse Chair) is connected to a network in the same way as a printer or PC or is connected directly (peer-to-peer) to another PC. AUDACT can now be installed on all computers (including pre-existing ones) which are able to access the urodynamic measuring equipment directly and/or via the network.

The common database (archive), which can then be accessed and edited on all AUDACT PCs, can be stored either on one of the corresponding PCs or at any other location in the network (e.g. a central file server). AUDACT can exchange data via the GDT interface with any medical-practice applications which support the GDT protocol. There is also an optional HL7 interface available for more complex networking projects.

## Examples of configurations for HL7 connections

### Examination area 1

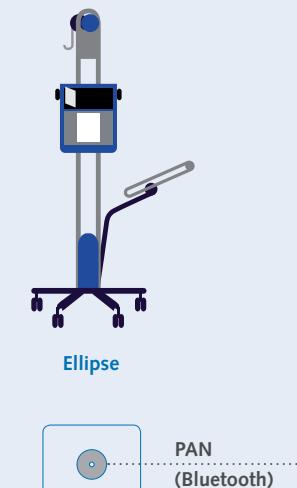
Urodynamics



Ellipse Chair  
Desktop PC  
AUDACT Pro

### Examination area 2

Video urodynamics



Ellipse  
PAN (Bluetooth)

### LAN

Desktop PC  
Acquisition of  
master data

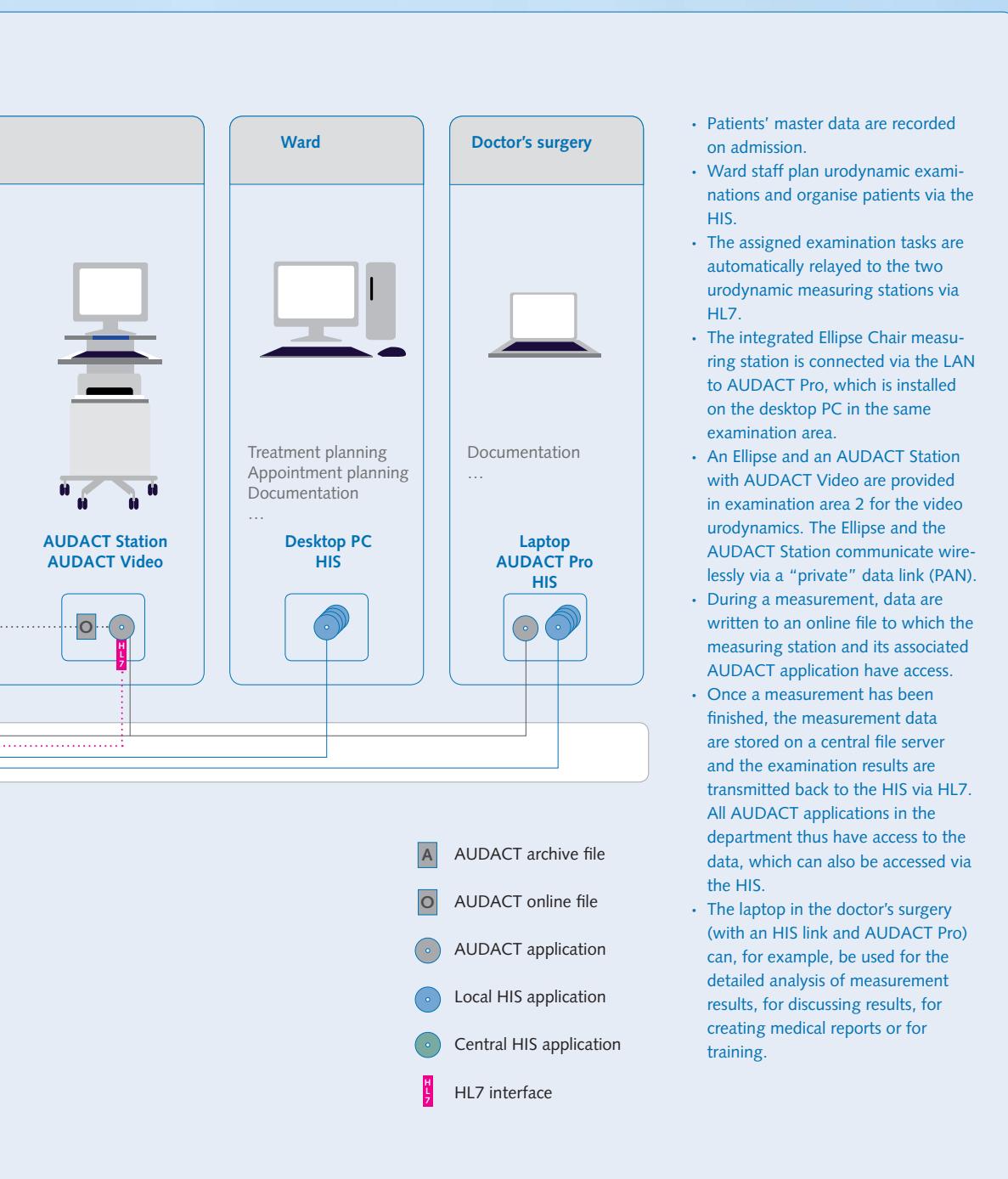


Patient admission

HIS server File server



Data processing centre

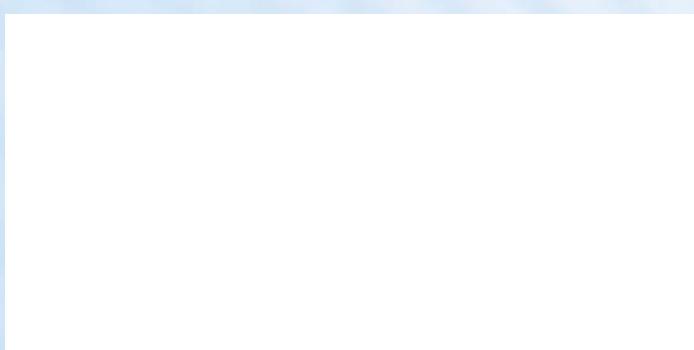


## Versions and functions

		AUDACT version		
		Easy	Pro	Video
Assessments	Flow measurement	●	●	●
	Cystometry	●	●	●
	ICS nomogram	●	●	●
	Chess-Nomogramm	●	●	●
	Linear PURR	●	●	●
	UPP assessment	●	●	●
	List of markers	●	●	●
	Valsalva LPP	●	●	●
	Clipper assessment	●	●	●
	Statistics	-	●	●
	Rectal manometry with 3D sphincter display	-	●	●
	International prostate symptom score	-	●	●
	AUA symptom score	-	●	●
	Vesicourethral angle	-	-	●
	Biofeedback with animation for children	-	○	○
Unit controls	Online graphs	-	●	●
	Online access to measurement data	-	●	●
Import/Export	AUDIT measurements (import)	●	●	●
	UROSOFT measurements (import)	●	●	●
	ICS measurements (import / export)	●	●	●
	MS Excel (export)	-	●	●
	CD writer	-	-	○
Interfaces	GDT	●	●	●
	HL7	-	○	○
Patient management	Index database	●	-	-
Administration	Patient database	-	●	●
	Appointment planner	-	●	●
	Incontinence questionnaire	-	●	●
	FlexDocSystem (requires MS Word*)	-	●	●
		●	included	
*not included		○	optional	
		-	not available	

To find out more about our products, please also see our brochures and documents relating to Conus, Helix, Ellipse, Ellipse Chair, GDT, HL7, Video Urodynamics and urodynamic disposables.

### Your authorised ANDROMEDA dealer



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MADE IN GERMANY



### AUDACT Station

The AUDACT trolley stand comprises a complete, mobile diagnosis workstation which can be positioned as required in the examination area, in an adjacent room, at reception or – for video examinations – behind the radiopaque screen, independently of the location of the urodynamic measuring station.

CE 0123

Technical changes and errors excepted. Pictures may show non-standard features.

