

TOC NEUROVISION™ SERIES FEATURES

The TOC Neurovision™ Series Is An Affordable, Powerful Diagnostic Transcranial Doppler Featuring Multiple Channels With M-Mode Display, Long Term Monitoring, Emboli Detection, And Color Patient Reports.

FEATURES	TOC 1M	TOC 2M	FEATURES	TOC 1M	TOC 2M
M-Mode Display	■	■	4 And 8 MHz CW Pencil Doppler Probes	■	■
Monitoring And Trending	■	■	4 And 8 MHz CW Monitoring Probes For Radial, Brachial, And Carotid Arteries	Optional	Optional
Single Channel	■		Intuitive Soft Key Operation For Ease Of Use	■	■
Dual Channel		■	Trend Analysis Of Daily Vasospasm Testing	■	■
Headband Fixation Device	■	■	Reader Station Software	■	■
Automatic Emboli Detection And Display With HITS Counter	■	■	Handheld Remote Control	■	■
Spectral Playback In M-Mode At All Recorded Depths	■	■	CO ₂ Vasomotor Reactivity	■	■
Continuous Sound Storage	■	■	User-Defined Protocols	■	■
Multi-Depth Technology	■	■	DICOM Output	Optional	Optional
Simultaneous Multiple Gate Display	■	■	Compact And Lightweight, (13 Pounds Including Supplied Laptop), The TOC Neurovision™ Provides Maximum Portability In A Shoulder Carrying Bag	■	■
Envelope Display – Peak, Mean	■	■	TOC Neurovision™ Dimensions 13" W X 12 ¼" L X 2 ¾" H	■	■
Customizable Word Reports	■	■			
Archiving CD or DVD Rom	■	■			
2 MHz PW Doppler Probes	■	■			

TCD NORMAL EXAM REFERENCE VALUES²

ARTERY	TEMPORAL APPROACH			SUBOCCIPITAL APPROACH	
	MIDDLE CEREBRAL ARTERY (MCA)	ANTERIOR CEREBRAL ARTERY (ACA)	POSTERIOR CEREBRAL ARTERY (PCA)	VERTEBRAL ARTERY (VA)	BASILAR ARTERY (BA)
INSONATED DEPTH	50–55 MM	60–65 MM	60–65 MM	60–65 MM	90–95 MM
AGE 10–29	70 ± 16.4 cm/s	61 ± 14.7 cm/s	55 ± 9 cm/s	45 ± 9.8 cm/s	46 ± 11 cm/s
AGE 30–49	57 ± 11.2 cm/s	48 ± 7.1 cm/s	42 ± 8.9 cm/s	35 ± 8.2 cm/s	38 ± 8.6 cm/s
AGE 50–59	51 ± 9.7 cm/s	46 ± 9.4 cm/s	39 ± 9.9 cm/s	37 ± 10 cm/s	32 ± 7 cm/s
AGE 60–70	41 ± 7 cm/s	38 ± 5.6 cm/s	36 ± 7.9 cm/s	35 ± 7 cm/s	32 ± 6.7 cm/s
Flow Direction	Towards Probe	Away From Probe	Towards Probe	Towards/Away From Probe	Away From Probe

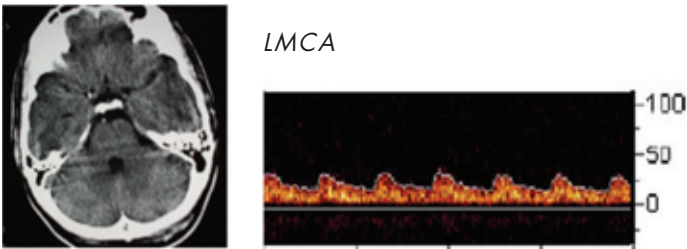
- Alexandrov, Andrei V, et al. Ultrasound-Enhanced Systemic Thrombolysis for Acute Ischemic Stroke. *The New England Journal of Medicine*. Volume 351:2170-2178, November 18, 2004, Number 21
- Otis, S., Ringlestein, E.: *The Transcranial Doppler Examination: Principles and Applications of Transcranial Doppler Sonography*. In Tegler C., Babikian V., Gomez C. editors: Neurosonology, St. Louis, 1996, Mosby-Year Book, Inc.
- Spencer, M. et al. Power M-Mode Transcranial Doppler For Diagnosis Of Patent Foramen Ovale And Assessing Transcatheter Closure. *Journal Of Neuroimaging*: 2004; 14; 342-349

* Note: Values provided for reference only. MULTIGON recommends accredited clinical training for proper TCD interpretation. The ALARA principle cautions the operator to use Doppler levels As Low As Reasonably Achievable.

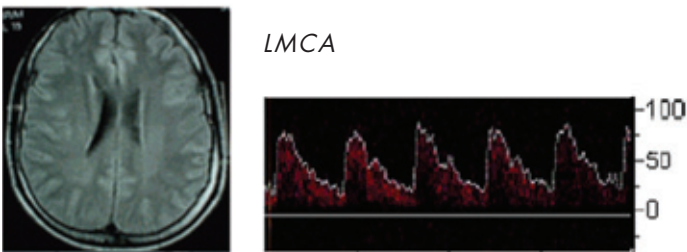


A CLINICAL CASE OF SONOTHROMBOLYSIS¹ TPA TREATMENT FOR STROKE

Pre Sonothrombolysis



Post Sonothrombolysis



– Study courtesy of Dr. Sivakumar

PFO – RIGHT TO LEFT SHUNT TESTING WITH TOC NEUROVISION™

Recent studies³ have shown that TCD studies have greater sensitivity and accuracy than conventional TEE or TTE testing. TCD studies have been reported to have a sensitivity of 98% whereas the sensitivity for TEE is 91% and TTE is 64%. Accuracy for these TCD studies has been reported at 94% while for TEE it is 88% and for TTE it is 63%. TCD has been shown to detect smaller right-left shunts than possible with TEE.

Since 1979, the team of scientists and engineers at Multigon Industries have been providing the medical community with innovative diagnostic tools. In the early 1980's Rune Aaslid developed the first Transcranial Doppler using the Multigon Angioscan Doppler spectrum analyzer. The TOC Neurovision™ Series represents the culmination of years of innovation, research, and interaction with clinicians. Experience the TOC Neurovision™ designed with the clinical setting in mind.

Taking Transcranial Doppler Technology
ONE STEP FURTHER.



TOC NEUROVISION™ SERIES

 Multigon Industries, Inc.

TOC NEUROVISION™ SERIES

TRANSCRANIAL DOPPLER ON CALL

APPLICATIONS

- Evaluation of intracranial effects of extracranial stenosis, including assessment of collateral flow pathways
- Quick assessment of the MCA's, PCA's and Basilar artery for over/under interpreted MRA's
- Detection and monitoring of vasospasm following aneurysmal subarachnoid hemorrhage
- Evaluation and monitoring of intracranial blood flow during surgical procedures
- Detection of PFO (patent foramen ovale) with few ancillary supplies
- Clotbusting: helps catalyze thrombolysis in the acute stroke patient¹
- Evaluation of vasomotor reserve (CO₂ Reactivity)
- Emboli detection and monitoring of embolic events
- Diagnosis of intracranial stenosis and occlusion
- Identification of feeder arteries in AVM's
- Supports the diagnosis of brain death
- Screening for basilar artery stenosis
- Management of sickle cell disease
- Vascular interventional procedures: monitoring during carotid stent placement or testing balloon occlusion
- Trend analysis of daily vasospasm testing



PRINTABLE REPORTS

Easily create professional reports in multiple formats. Display exam results with selected vessel graphics and in text only format.

FILE STORAGE

The TOC Neurovision™ TCD file storage system provides printing and archiving of the full patient report. Upon completion of the examination, simply click on the save button and all of the study information is stored in the TCD patient database. Review, post process, and playback stored files on the TOC Neurovision™. In addition files may also be archived to various removable media including CD-ROM, DVD, and optional DICOM output.

PORTABILITY

Lightweight and compact, the TOC Neurovision™ TCD provides the ultimate experience in portability. For use in hospitals, private offices, mobile services, and clinics.

TRAINING

Fee based training available in clinical setting.

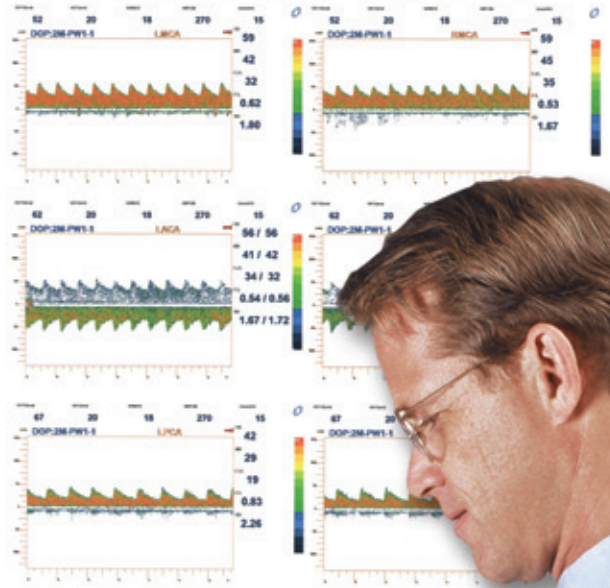
Community General Hospital Neurology Department	TCD (General) Diagnosis Report	Page Report Code: 20040619 Report Date: 12-02-2006
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Name: J. Smith
Neurology Dept.
Exam Date: 12-02-2006, 12:11:55

Gender: Male
D.O.B: 01-26-1944

(The unit of PK, MV and ED is cm/s. Unit of Depth is mm)

Vessel	EDP111	PK	MV	ED	PI	RI	SDI	SD	HR
LMCA	52	59	42	32	0.62	0.43	0.44	1.80	
RMCA	52	59	45	35	0.51	0.40	0.40	1.67	
LACA+	62	56	41	34	0.54	0.40	0.39	1.67	
LACA-	62	56	42	32	0.56	0.42	0.42	1.72	
RACA	62	51	39	31	0.53	0.40	0.39	1.67	
LPCA	67	42	29	19	0.83	0.56	0.50	2.26	
RPCA	67	43	29	19	0.86	0.57	0.56	2.32	



TCD Description: Within norm*

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Multigon Industries, Inc. | One Odell Plaza | Yonkers, NY 10701
Toll Free: 800-289-6858 | International: 914-376-5200 | Fax: 914-376-5565
Email: tcdinfo@multigon.com | www.multigon.com

SPECIFICATIONS

- Operating System:
Windows XP Professional
- Probe Frequencies:
2 MHz PW, 4 and 8 MHz CW
- Adjustable Gain:
1-40 db
- PW Sampling Volume:
4mm-20mm (1mm/Step)
- PW Maximum Measurement Velocity:
512 cm/s
- DICOM Output (Optional)
- TOC Neurovision™ Dimensions:
13" W X 12 ¼" L X 2 ¾" H
- TOC Neurovision™ Weight:
13 Pounds Including Laptop
- Power Requirements:
100-240 VAC, 50/60 Hz, 150 VA

DISPLAYED CALCULATIONS

- Peak Velocity: PK
- Mean Velocity: MN
- Systolic/Diastolic: S/D
- End Diastolic Velocity: ED
- Resistance Index: RI
- Pulsatility Index: PI
- Heart Rate: HR
- Emboli Counter: HITS
- Spectral Broadening Index: SBI
- Lindegaard Ratio: LR



Bilateral Monitoring Headband

WARRANTY

1. Depot service is included for one year from date of shipment in the United States. Outside of the United States, service is provided by the distributor who sold the equipment.
2. Multigon Industries, Inc. makes no other warranties, expressed or implied, nor guarantees the merchantability or fitness of use for a particular purpose.
3. Multigon Industries, Inc. will bear no responsibility for damages incidental or consequential resulting from breach of this warranty including but not limited to rental or purchase of replacement equipment, commercial loss, loss of profits, inconvenience or other losses, subject to state law.
4. No employee, sales person or representative is authorized to change this warranty.
5. Specifications are subject to change without notice.