

# Revised and Neuroimaging-Compatible Versions of the Dual Task Screen

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## Materials

Name	Company	Catalog Number	Comments
<b>Hardware (in alphabetical order)</b>			
NIRx NIRSport2 Device: NSP2-CORE1616	NIRx	Reference #: GC359	"The NIRSport 2 is a user-friendly, modular, and robust wireless functional near-infrared spectroscopy (fNIRS) platform which measures hemodynamic responses to neuroactivation via oxy-, deoxy-, and total hemoglobin changes in the cerebral cortex. The NIRSport 2 comes with a host of ready-to-implement upgrades and modules to meet the needs of a broad range of cognitive neuroscience applications." (Direct quote from <a href="http://nirx.net/nirsport">nirx.net/nirsport</a> )
NIRx NIRScap (available in 5 difference sizes)	NIRx	N/A	"The NIRScap consists of a measuring cap and optode holders. The optode holders fit into the slits of the measuring cap." (Direct quote from NIRx's NIRScap Getting Started Guide)
NIRx Optode Sources (x 2)	NIRx	Reference #: GC359	"8-source active source bundle for fiberless optical illumination with dual tip; 240 cm long." (Direct quote from NIRx Packing List Description)
NIRx Optode Detectors (x 2)	NIRx	Reference #: GC359	"Bundle of 8x active sensors for fiberless optical detection; dual tip; 240 cm long." (Direct quote from NIRx Packing List Description)
NIRx Short Distance Detector Probes	NIRx	N/A	"The probes come in a bundle of eight detector clips that allows coupling of short-distance data from eight independent sources sites to one common detector channel on the instrument." (Direct quote

			from NIRx's Short Distance Detector Probes Getting Started Guide)
<b>Software (in alphabetical order)</b>			
Aurora	NIRx	N/A	"NIRSport 2 Acquisition Software. Aurora fNIRS connects to your NIRSport 2 device via Wi-Fi or USB and can set-up a complete experimental configuration in only several clicks. Thanks to the automated signal optimization algorithm, Aurora fNIRS ensures optimal signal quality before a measurement is started. Raw data, HbO and Hb concentration changes can be visualized in real-time in several display modes. In addition, high-end whole head visualizations are immediately available. Recorded data can be exported over the integrate Lab Streaming Layer (LSL) protocol, allowing for real-time processing in Brain-Computer Interface (BCI) and Neurofeedback paradigms." (Direct quote from nirx.net/software)
Matlab	Math Works	N/A	"MATLAB® combines a desktop environment tuned for iterative analysis and design processes with a programming language that expresses matrix and array mathematics directly. It includes the Live Editor for creating scripts that combine code, output, and formatted text in an executable notebook." (Direct quote from mathworks.com)
NIRS Toolbox	Developed by Huppert Brain Imaging Lab	N/A	"NIRS toolbox is a Matlab based analysis program." (Direct quote from huppertlab.net/nirs-toolbox-2/)
PsychoPy	Python	N/A	"PsychoPy is an open source software package written in the Python program,ming language primarily for us in neuroscience and experimntal psychology research." (Direct quote from psychopy.org)
<b>Lower Tech/Cost Research Supplies* (in alphabetical order)</b>			
AmazonBasics 60-Inch Lightweight Tripod with Bag	Amazon	Item Model #: WT3540	This lightweight tripod is perfect for most cameras up to 6.6 pounds. Setup is quick and easy. The included bag makes storage and transport a snap.The tripod's legs can extend from 20" to 48". Leg locks release smoothly and glide easily to your desired height. Crank up the center post for a tripod that is 60" tall. (Direct quote from Amazon.com)
iPod Touch x 2	Apple	N/A	Smart device with built-in accelerometer.
Panasonic Full HD Video Camera Camcorder HC-V180K, 50X Optical Zoom, 1/5.8-Inch BSI Sensor, Touch Enabled 2.7-Inch LCD Display (Black)	Amazon	Item Model #: HC-V180K	Compact, lightweight and easy to use, the Panasonic Full HD Camcorder HC-V180K brings a fun, worry-free experience to high-resolution video capture. Featuring a 5-axis image stabilizer for maximum handheld stability, this 1080p camera's super-long

			50X optical zoom and up to 90X intelligent zoom quickly bring distant objects in focus. A convenient 28mm wide-angle lens allows you to fit more people and scenery into settings like weddings, reunions and vacations. An advanced BSI sensor assures low-light video image quality while Panasonic's Level Shot function automatically detects and compensates for distracting camera tilting. For added fun, the camera includes creative filter effects like 8mm Movie, Silent Movie, Miniature Effect and Time Lapse Recording, all easily accessible on the 2.7-inch LCD touch screen. A two-channel zoom microphone works in tandem with the zoom to ensure crisp, clear audio up close or at any distance." (Direct quote from Amazon.com)
Post-it Notes, 3" x 3", Canary Yellow, Pack Of 18 Pads	Office Depot/Office Max	Item # 1230652	"Post it® Notes stick securely and remove cleanly, featuring a unique adhesive designed for use on paper."
Scotch 232 Masking Tape, 1" x 60 Yd	Office Depot/Office Max	Item # 910588	"High-performance paper masking tape produces sharp paint lines in medium-temperature paint bake operations. Scotch tape provides clean removal every time, even on traditionally difficult-to-remove surfaces." (Direct quote from officedepot.com)
Stanley Tools Leverlock Tape Measure, Standard, 25' x 1" Blade	Office Depot/Office Max	Item #389512	"Tape rule features a power return with automatic bottom lock for easy operation. High-visibility case color makes it easy to find. Special Tru-Zero hook allows use of nail as pivot to draw circles and arcs. Tape rule offers a multiple riveted hook and polymer-coated blade for longer life, blade wear guard and comfortable rubber grip. Protected blade resists abrasion, oils, dirt and most solvents. Tape rule has Imperial ruling with consecutive feet on top and consecutive inches on bottom after the first foot. Its belt clip allows easy carrying." (Direct quote from officedepot.com)
Stopwatch	Office Depot/Office Max	Item # 357698	"Offers split timing, precise to 1/100 of a second. Includes 6 functions — hour, minute, second, day, month and year." (Direct quote from officedepot.com)
Tourna Ballport Deluxe Tennis Ball Hopper with Wheels - Holds 80 Balls	Amazon	Item Model #: BPD-80W	"Balloon port 80 deluxe holds 80 balls and comes with wheels for easy Maneuverability. The handles are an extra long 33 inch for more convenient feed and pickup. Very lightweight yet durable makes this one of the most premium hoppers on the market. Loaded with patented features: legs lock in up and down position. Bars at the top slide closed so your the balls don't fall out during transport. Bars roll at the bottom so the ball slips in the

			hopper easily." (Direct quote from Amazon.com)
Tourna Pressureless Tennis Balls with Vinyl Tote (45 pack of balls)	Amazon	Item Model #: EPTB-45	"45 Pressure less tennis balls in a vinyl tote bag. Bag has a zipper for secure closure. Balls are regulation size and durable. Suitable for practice or tennis ball machines. Balls are pressure less so they never go dead. Pressure-less means they never go dead, which makes them great for tennis practice, ball machines, filling up ball baskets and hoppers, or just making sure your pet has hours of fun chasing these balls. They fit Chuck-it style dog ball launchers and automatic ball launchers. Durable rubber and a premium felt ensures their use can be universal, whether your a budding tennis player or a pet owner." (Direct quote from Amazon.com)
Velcro	Velcro	N/A	Self-adhesive strips and wraps; used to secure smart devices.
Yoga Block 2 Pack – 2 High Density Light Weight Exercise Blocks 4 x 6 x 9 Inches Support All Poses - Lightweight Versatile Fitness and Balance Odor Free Bricks (Note: 6 blocks are needed for Dual Task Screen)	Amazon	N/A	"These blocks are made from recycled high density EVA foam and provide firm support in a wide range of different yoga poses. This will improve your posture and you can stay in challenging poses for longer." (Direct quote from Amazon.com)
<i>*These items or comparable items can be obtained from a number of other sources</i>			