

## Thalamus

From	Thalamic nucleus	To	Information / Function
Medial lemniscus	<b>VPL</b>	S1, S2	Somatosensory
Trigeminal lemniscus	<b>VPM</b>	S1, S2	Somatosensory
Retina	<b>LGN</b> Lateral geniculate nucleus. Subdivisions: dorsal (dLGN) intergeniculate leaflet (IGL) ventral (vLGN)	V1	Visual The dorsal and ventral LGN project to V1. Layers 1 & 2 (ventral) convey magnocellular (M) information. Layers 3 – 6 convey parvocellular (P) information. Layers 1, 4, 6 convey information from contralateral nasal hemiretina. Layers 2, 3, 5 convey information from ipsilateral temporal hemiretina. The IGL projects to the suprachiasmatic nucleus (using neuropeptide Y).
Inferior colliculus	<b>MGN</b>	Auditory cortex	Auditory
Lamina 1 of spinal cord	<b>Posterior</b>	Insula and ?	Nociception
Globus pallidus	<b>VA</b>	Frontal cortex, esp. SMA	Motor
Dentate n. (cerebellum)	<b>VL</b>	Premotor/motor cortex	Motor
Superior colliculus Thalamic nuclei	<b>Pulvinar</b>	“PTO” association cortex	Visual attention
Thalamic nuclei	<b>LD</b>	Parietal association cortex	
Thalamic nuclei	<b>LP</b>	Parietal association cortex	
Fornix Mammillary body	<b>Anterior (AD, AM, AV)</b>	Cingulate cortex	
Amygdala Ventral pallidum Primary olfactory cortex Thalamic nuclei Prefrontal cortex Inferior temporal cortex	<b>Medial (MD)</b>  <i>pars magnocellularis</i> <i>pars parvocellularis</i> <i>pars paralamellaris</i>	Prefrontal cortex	Amygdala to pars magnocellularis Pars magnocellularis to orbitofrontal cortex Pars parvocellularis to dorsolateral PFC Pars paralamellaris to FEFs PFC reciprocally innervates MD.
Reticular formation	<b>Intralaminar (inc. CM)</b>	Cortex (diffusely) (to layer 1) Striatum	Arousal?
Collateral from most axons passing between thalamus and cortex	<b>Reticular</b>	Inhibitory projections to thalamus	Attention? Arousal? All corticothalamic and thalamocortical projections pass through it. All <i>other</i> thalamic axons are excitatory.
cerebellum	<b>‘X’</b>	arcuate premotor area (APA)	

Disclaimer: from my Part II notes. It's been a while since I checked this!