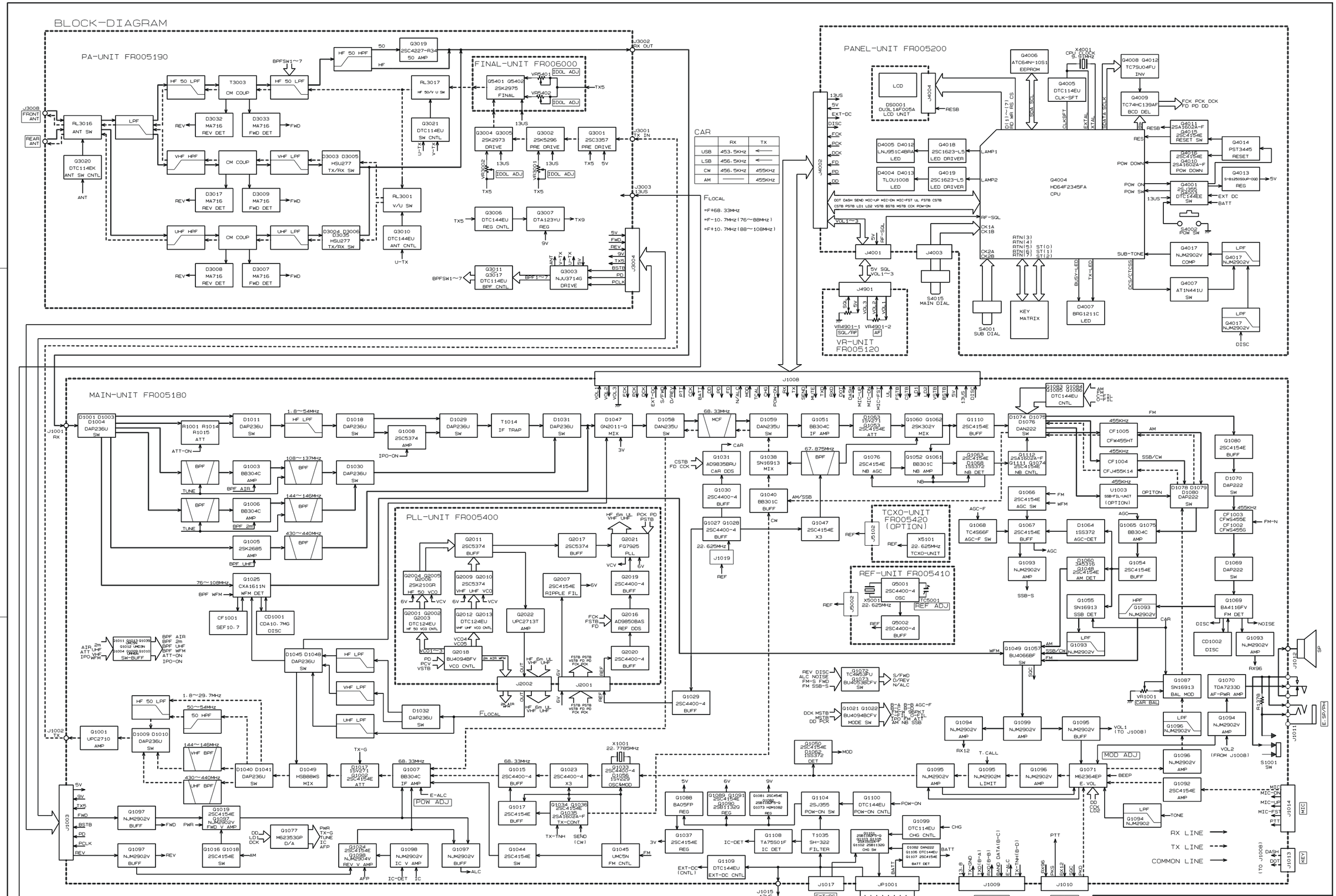BLOCK-DIAGRAM