

Project 3) Detective: Detecting the Secret Phone Numbers

This requires the *Signal Processing Toolbox*. Please install it before designing your code. Apply any methods to detect the keys pressed by sender. Load the Dual-Tone Multi-Frequency (DTMF) signal that digitized by a sampling rate of 8 kHz. Briefly describe the basic process of proposed method in one page.

	Col 1 1209 Hz	Col 2 1336 Hz	Col 3 1477 Hz	Col 4 1633 Hz
Row 1 697 Hz	1	2	3	A
Row 2 770 Hz	4	5	6	B
Row 3 852 Hz	7	8	9	C
Row 4 941 Hz	*	0	#	D

DTMF digit = Row tone + Column tone

(Dual-Tone Multi-Frequency or called DTMF Signal)

Input argument: DTMF file (dtmf.mat given as attachment)

Output argument: Show output the detected keys in text

Output Figure: Show the DTMF signal in time domain