

Determination of Unknown Frequency.

Let n_2 is the unknown frequency of tuning fork B, and this tuning fork B produce x beats per second with another tuning fork of known frequency n_1 .

As number of beat/sec is equal to the difference in frequencies of two sources, therefore $n_2 = n_1 \pm x$

The positive/negative sign of x can be decided in the following two ways:

By loading	By filing
If B is loaded with wax so its frequency decreases	If B is filed, its frequency increases
If number of beats decreases $n_2 = n_1 + x$	If number of beats decreases $n_2 = n_1 - x$
If number of beats Increases $n_2 = n_1 - x$	If number of beats Increases $n_2 = n_1 + x$
If number of beats remains unchanged $n_2 = n_1 + x$	If number of beats remains unchanged $n_2 = n_1 - x$
If number of beats becomes zero $n_2 = n_1 + x$	If number of beats becomes zero $n_2 = n_1 - x$
If A is loaded with wax its frequency decreases	If A is filed, its frequency increases
If number of beats decreases $n_2 = n_1 - x$	If number of beats decreases $n_2 = n_1 + x$
If number of beats increases $n_2 = n_1 + x$	If number of beats Increases $n_2 = n_1 - x$
If number of beats remains unchanged $n_2 = n_1 - x$	If number of beats remains unchanged $n_2 = n_1 + x$
If number of beats becomes zero $n_2 = n_1 - x$	If no of beats becomes zero $n_2 = n_1 + x$