QUICK GUIDE: Aperture Tuning



Tuning location A vs B (closer to the feed vs closer to the open end)

	Tuning Location A (Closer to the feed)	Tuning Location B (Closer to the open end)
Most important parameter of a tuner switch	RON	COFF & VRF
Inductive Tuning		
Inductor values for tuning	Small	Large
RON impact on antenna efficiency	High	Low
COFF & ROFF impacting antenna efficiency	Low	High
Capacitive Tuning Using a Capacitor		
Tuning range required	Wide	Narrow
Tuning steps required	Large	Small
Cmin impact on efficiency	Low	High

- When tuning closer to the feed, higher capacitance is required; antenna efficiency is sensitive to Q and RON, especially when tuning to a lower frequency that requires high capacitance
- Relatively high inductor values are required when tuning at the open end of the antenna, so care should be taken in selecting inductors with relatively high SRF
- Avoid using very high capacitance or very low inductor values as the Q of the tuning elements can reduce antenna efficiency
- Select tunable capacitors with low Cmin when placed at open end of the antenna



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