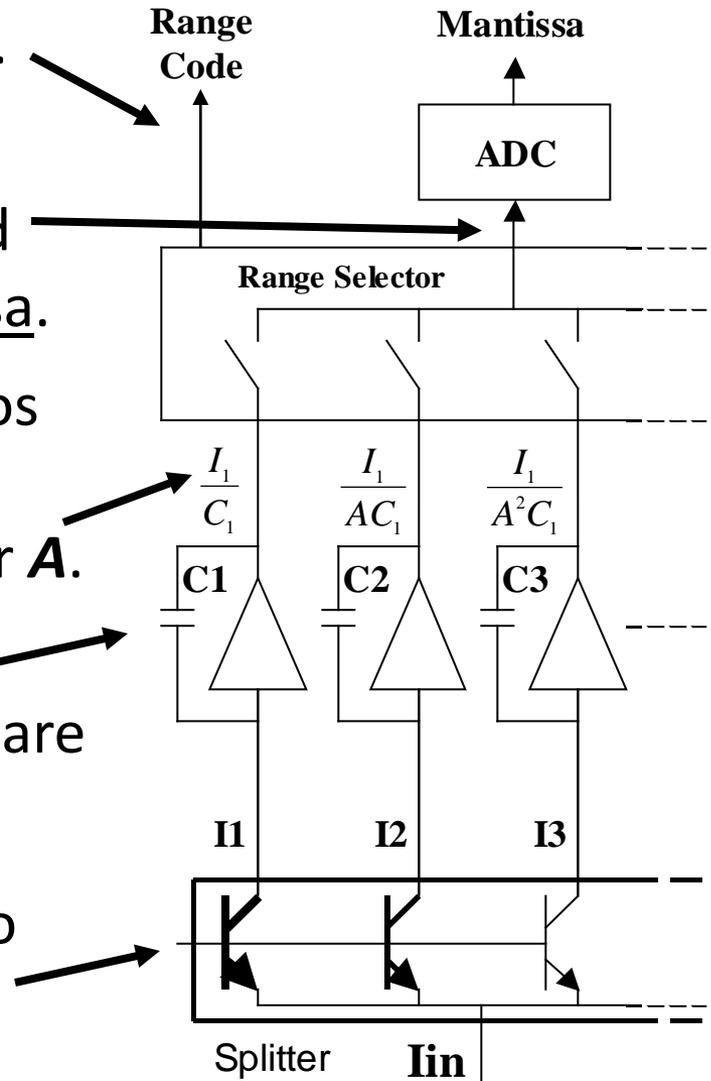


The QIE Concept (simplified)

- 5) The range code forms the exponent.
- 4) For a given input charge, one appropriate range output is selected and digitized by an ADC, forming the mantissa.
- 3) Splitter ratios and integration C ratios are chosen to achieve range-to-range scaling of the transfer gain (I/C) by factor A .
- 2) Each splitter range output feeds a charge integrator. The current fractions are integrated simultaneously on all ranges.
- 1) Input current pulses are divided into weighted fractions by a current splitter



(Tom Zimmerman 2009)