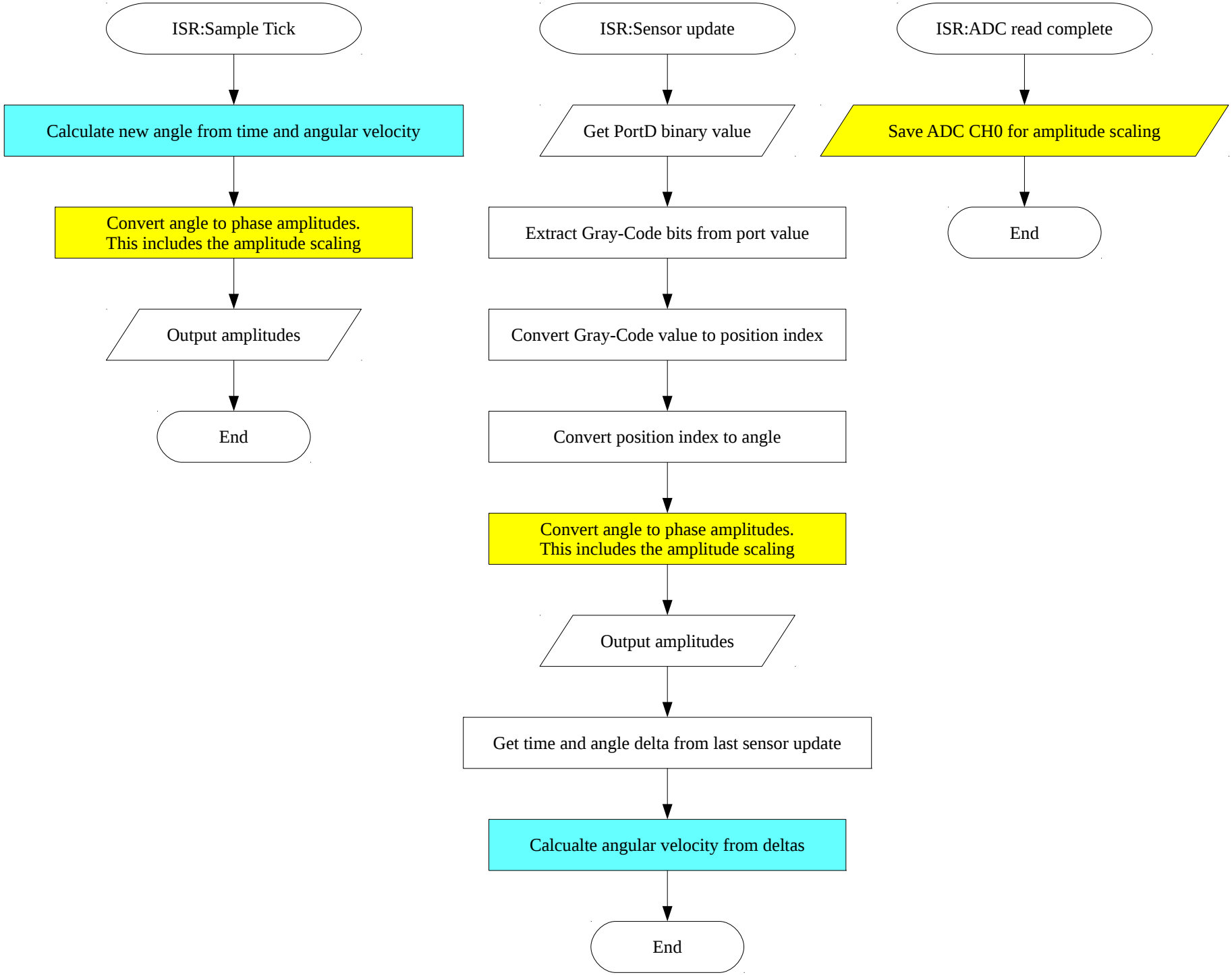
ISR:Sample Tick
Calculate new angle from time and angular velocity
Convert angle to phase amplitudes.
This includes the amplitude scaling
Output amplitudes
End
ISR:Sensor update
Get PortD binary value
Extract Gray-Code bits from port value
Convert Gray-Code value to position index
Convert position index to angle
Convert angle to phase amplitudes.
This includes the amplitude scaling
Output amplitudes
Get time and angle delta from last sensor update
Calcualte angular velocity from deltas
End
ISR:ADC read complete
Save ADC CH0 for amplitude scaling
End