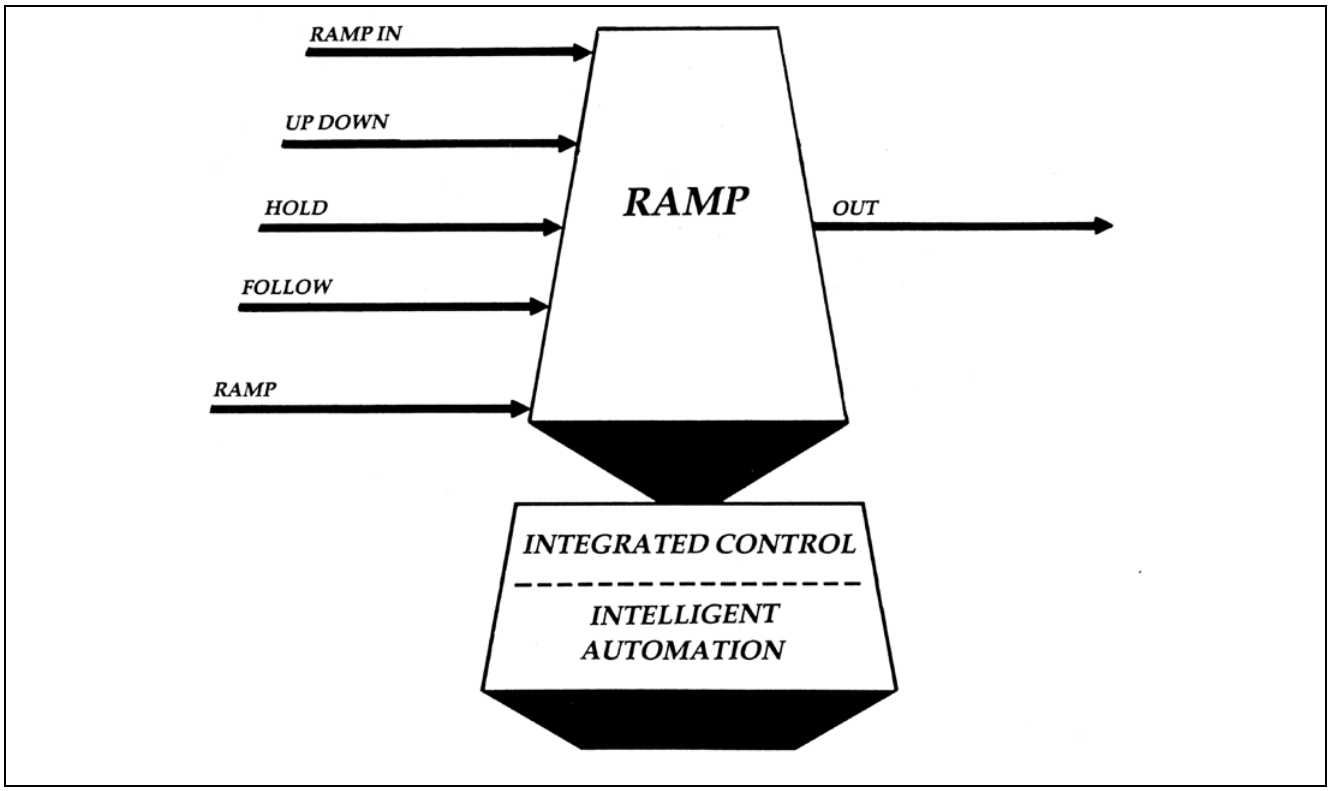
I/A Series® Software
RAMP Function Generator Block



The RAMP Function Generator block is a single linear ramp generator with an output for set point or signal variation at a controlled rate.

OVERVIEW

The RAMP block output (OUT) is ramped in a velocity mode. The speed of the ramp is governed by two independent ramp rates for the up (increasing) and down (decreasing) directions. The direction of the ramp is controlled by a toggle input, UPDOWN. A connectable ramp initialization parameter (RAMP IN) can be used to establish an initial position prior to ramping. Variable output limits constrain the peak-to-peak amplitude of the output ramp waveform and serve as the target values for each direction of the ramp. Output limit indicators signify that the output has reached its respective target limit. The block also has the capability to FOLLOW the RAMP input (measurement), with configurable reset balance time, or HOLD at the present output. Figure 1 illustrates a composite output ramp waveform for typical operational modes.

STANDARD FEATURES

- Assignable output engineering units and range
- Manual/Auto control of the output
- Output clamping between variable output limits with output limit indicators
- Output HOLD mode
- Output FOLLOW mode
- Output balancing feature in FOLLOW mode
- Connectable ramp initialization parameter for automatic output initialization

- Independent ramp rates for up and down directions
- Switchable ramp direction
- Scale factor for reconciling specified ramp rates to output engineering units

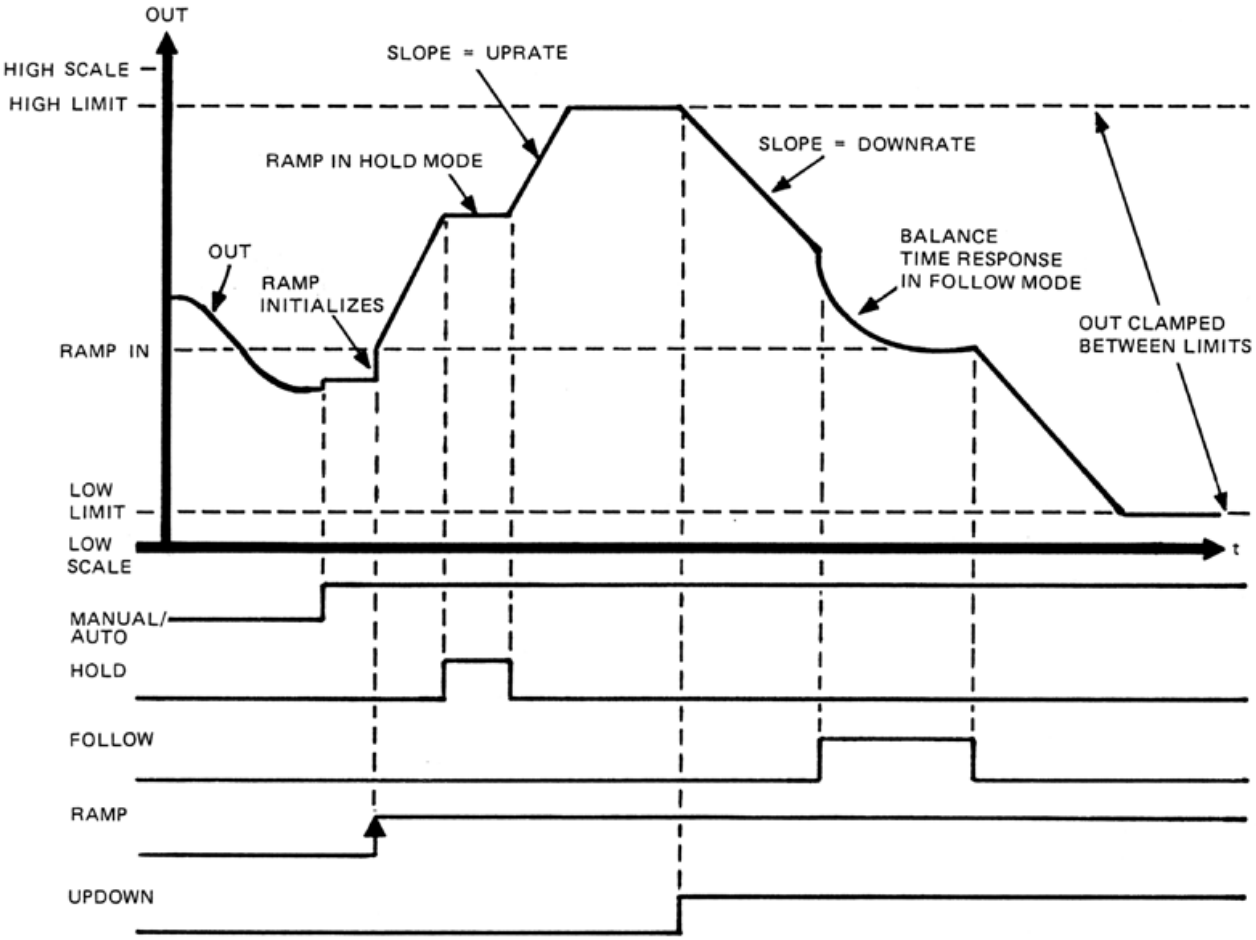


Figure 1. RAMP Timing Diagram

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