

1 Usage

Pass the input value over the input bits and set clock to low and enable to low. Next, set Enable to High. This loads all the data in parallel. Lastly, start oscillating the clock. This oscillation will halt the parallel load so that Cameron doesn't have to stop enabling for the change maker circuit to run. The oscillation will continuously subtract the largest available dollar amount until no more needs to be subtracted, or the largest dollar amount runs out of bills. When the largest dollar amount runs out the next lower amount begins to be used. When the machine reaches a change to dispense value of zero it halts.

2 Output

I changed the output from three sets of leds with the amounts of tens, fives, and ones to be output to one bus with the dollar amount to dispense and a clock pulse.

3 .cct legend

Orange	Clock. JKs are negative edge enabled and Ds are positive edge EN.
Blue	Enable bit ie. the bit Cameron passes to tell me to make change. This value initializes many things.
Light Green	Lines carrying next value of temp aka number to make change of
Red	Decrementers and Q outputs of temp
Dark Purple	Q outputs of RS latches indicating which amount should be subtracted next
Light Purple	Q' outputs of RS latches indicating subtraction amount
Dark Green	Carry out which detects overflow to negative or 0 result
Dark Green	Inputs to RS latches based off carry or remaining bills in storage
Teal	Bit determining whether temp is = 0 and circuit is enabled. This halts the circuits computations and locks up the clock, it is unlocked when enable goes low; then clock goes high, then low