

CPU

- 13) Enter p (EA IB) - A one clock pulse that occurs when the EA does a function 10 or 16. It indicates that a new P address is loaded and the CPU is waiting to start execution.
- 14) Start (EA IB) - A one clock pulse that occurs when the EA does a function 10 or 12. It indicates that the CPU will start execution at his present P address.
- 15) Go Branch (IB JA) - A one clock pulse that occurs when the IB has processed a Branch IN/OUT sequence. It indicates that the JA should capture the parcel painter and wait for the IA to send a data ready.
- 16) Fetch Complete (IA IB) - A one clock pulse that occurs when the IA has received 16 words from memory. It indicates that the IB has processed a branch out sequence and can't do another branch out until the first one completes.
- 17) Arrival Go Bit (TD IA) - There will be 16 pulses that occur due to a branch out sequence. They indicate that a valid word was sent to the IA from memory.
- 18) Data Ready (IA JA) - A one clock pulse that occurs whenever the IA has a valid instruction word ready for the JA.
- 19) Memory Busy (IB JA) - The pulse duration will be at least equal memory reference VL. It will also occur any time memory goes into a backup condition. It indicates that the IB can't process any new memory references. It will cause the JA to hold issue on memory instructions.
- 20) Hold Issue (IB JA) - The pulse duration can be from 2 clocks up to indefinite. It indicates that the CPU can't process any new instructions because of one of these cases.
  - a) 007 issued (2-5 clocks)
  - b) Branch sequence in Process
  - c) CPU is idle due to an 000/001 issue or a I/O interrupt. (Indefinite)
- 21) Vector Step (VO) (JC VR) - There will be VL pulses that occur whenever vector register 0 is in use. It indicates that the register is advancing elements.