

# MTX Node Ring Notes

## Node Variables

Name	Address	Description
RCVFLG	F010	Receiver status: 0 = Not in packet 1 = Start of packet received 2 = Data packet 3 = Data packet, >=5 characters, first byte of ID matches 4 = Data packet, not addressed to node 5 = Data packet >=5 characters, addressed to node 6 = Control or program packet
SYNFLG	F014	Packet syntax flag: 0 = No error 2 = Declared packet length does not match received length 4 = Checksum error 8 = Packet type 5, length not 3 bytes

## Packet Format

### Control Packets

Offset	Length	Content	Description
0	1	0x02	Start of packet
1	1	Packet type	0x31 ("1") = Initiate packet 0x32 ("2") = Master packet 0x35 ("5") = Null packet (next character is EOP) 0x37 ("7") = Ring abort / ring error 0x38 ("8") = Master abort / master error
4	12	Source Name	Name of sending node
16	2	Source ID	ID of sending node (hex encoded)
18	2	Hop count?	Number of nodes in the ring?
*	4	Checksum	Hex encoded 16 bit sum of the packet contents, including packet type
*	1	0x1A	End of packet (EOP)

### Program & Data Packets

Offset	Length	Content	Description
0	1	0x02	Start of packet
1	1	Packet type	0x39 ("9") = Program 0x41 ("A") = Data

<b>Offset</b>	<b>Length</b>	<b>Content</b>	<b>Description</b>
2	2	Packet length	Hex encoded
*	*	Data	Hex encoded binary data
*	4	Checksum	Hex encoded 16 bit sum of the binary length and binary data
*	1	0x1A	End of packet