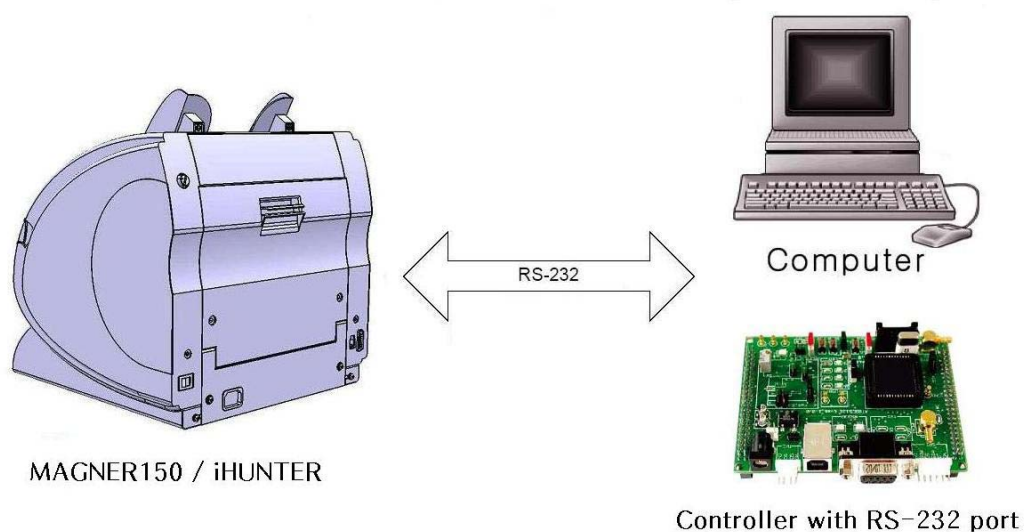


CHAPTER 4. RS-232C PROTOCOL

4-1. Abstract

This specification defines interface specification between iHUNTER Series (MAGNER150) and Computer or Controller with RS-232 port.

4-2. System Block Diagram

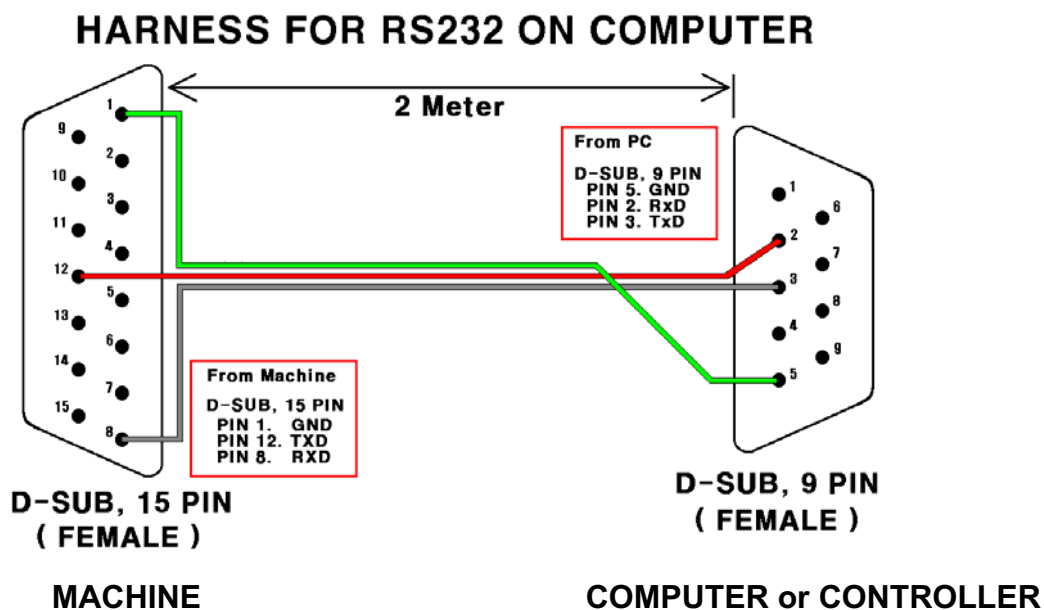


4-3. Serial Interface Specification

1) Description of Serial Port for RS-232 PORT

- ☒ Emulation MODE : SEETECH RS-232 Protocol (This protocol only supply by from SEETECH)
- ☒ Baud Rate : 2,400 bps ~ 115,200 bps (115,200 bps is a Default Value of Factory.)
- ☒ Data Bits : 8 bits
- ☒ Stop Bits : 1 bit
- ☒ Handshaking : DTR/DSR
- ☒ Parity Check : Disable

2) Connector D-SUB 15 to D-SUB-9 (HARNESS)



3) Interface signal – D-SUB 15 PIN (Female)

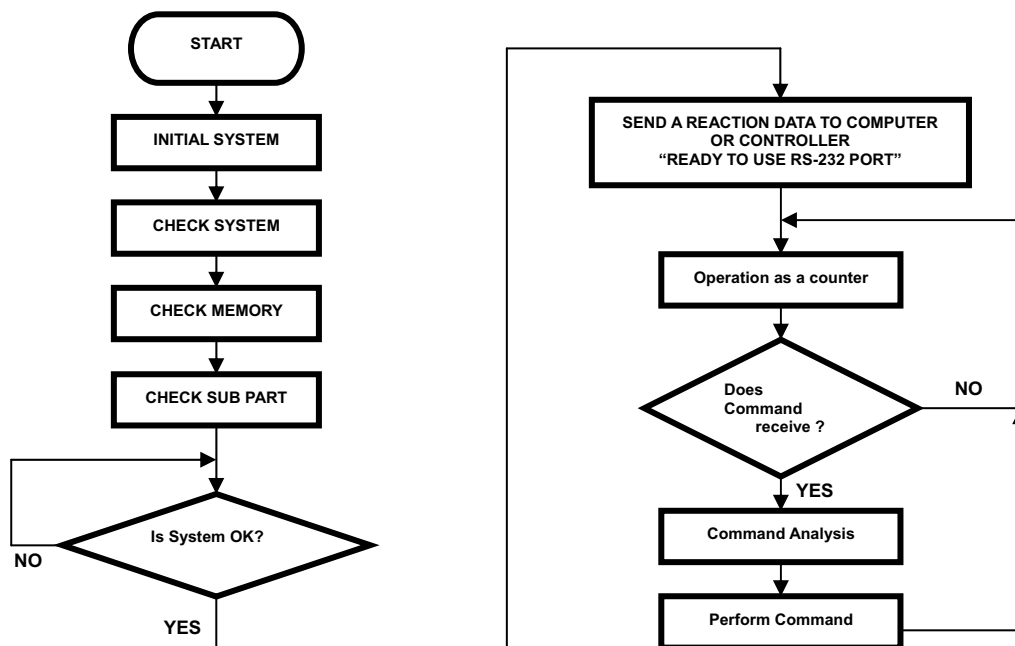
Pin No.	Signal Name	Signal Direction	Contents
1	GROUND		Signal Ground
2 ~ 7			None
8	RXD	Input	Receive Data
9 ~ 11			None
12	TXD	Output	Transmit Data
13 ~ 15			None

4) Interface signal – D-SUB 9 PIN (Female)

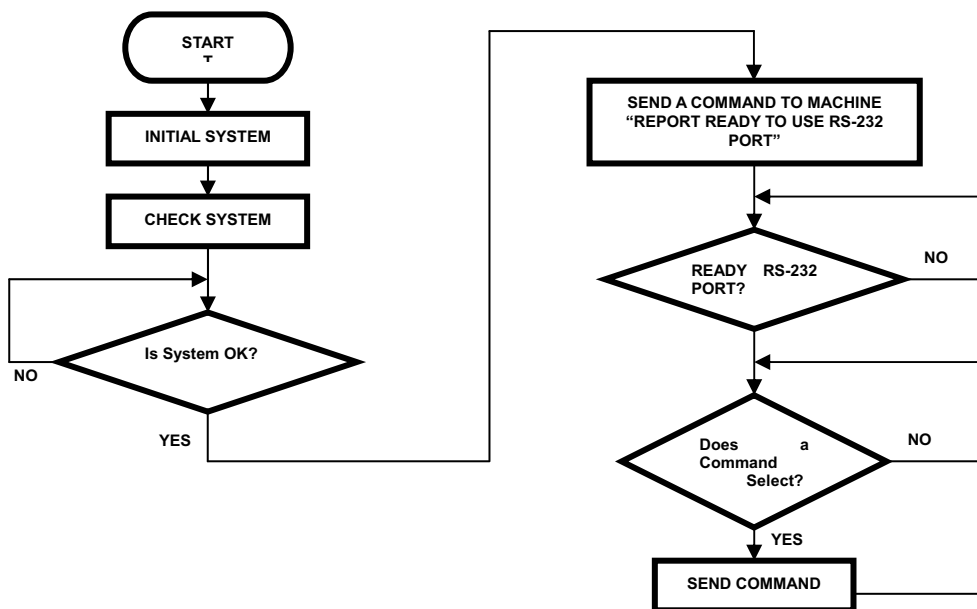
Pin No.	Signal Name	Signal Direction	Contents
1			None
2	TXD	Output	Transmit Data
3	RXD	Input	Receive Data
4			None
5	GROUND		Signal Ground
6 ~ 9			None

4-4. FLOW CHART OF SOFTWARE

1) MAGNER 150 / IHUNTER



2) COMPUTER / CONTROLLER WITH RS-232 PORT



4-5. COMMAND INTERFACE FORMAT

: There are 9 type of Command Format. Refer to below.

You have to refer to below Pattern when you give command to MACHINE.

1) Command Pattern A

ORDER	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
ASCII DATA	1 (0x01)	2 (0x02)	158 (0x9E)	202 (0xCA)	3 (0x03)	4 (0x04)	32 (0x20)	T.C	D.C.1 (MSB)	D.C.0 (LSB)	C.V.1 (MSB)	C.V.0 (LSB)
CONTENT	Start Code for Command (Permanent Value)							Type of Command	Detail Command		Command Value	

2) Command Pattern B

ORDER	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
ASCII DATA	1 (0x01)	2 (0x02)	158 (0x9E)	202 (0xCA)	3 (0x03)	4 (0x04)	32 (0x20)	T.C	D.C.1 (MSB)	D.C.0 (LSB)	C.V	0 (0x00)
CONTENT	Start Code for Command (Permanent Value)							Type of Command	Detail Command		Command Value	Ignore

3) Command Pattern C

ORDER	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
ASCII DATA	1 (0x01)	2 (0x02)	158 (0x9E)	202 (0xCA)	3 (0x03)	4 (0x04)	32 (0x20)	T.C	D.C.1 (MSB)	D.C.0 (LSB)	C.V	C.V
CONTENT	Start Code for Command (Permanent Value)							Type of Command	Detail Command		Command Value1	Command Value2

4) Command Pattern D

ORDER	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
ASCII DATA	1 (0x01)	2 (0x02)	158 (0x9E)	202 (0xCA)	3 (0x03)	4 (0x04)	32 (0x20)	T.C	D.C.1 (MSB)	D.C.0 (LSB)	0	0
CONTENT	Start Code for Command (Permanent Value)							Type of Command	Detail Command		Ignore	Ignore

5) Command Pattern E

ORDER	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th
ASCII DATA	1 (0x01)	2 (0x02)	158 (0x9E)	202 (0xCA)	3 (0x03)	4 (0x04)	32 (0x20)	T.C	D.C.1 (MSB)	D.C.0 (LSB)	C.V1	C.V2	C.V3
CONTENT	Start Code for Command (Permanent Value)							Type of Command	Detail Command		Command Value		

6) Command Pattern F

ORDER	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
ASCII DATA	1 (0x01)	2 (0x02)	158 (0x9E)	202 (0xCA)	3 (0x03)	4 (0x04)	32 (0x20)	T.C	D.C.1 (MSB)	D.C.0 (LSB)	C.V1	C.V2	C.V3	C.V4	C.V5
CONTENT	Start Code for Command (Permanent Value)							Type of Command	Detail Command	Command Value					

7) Command Pattern G

ORDER	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	~	21th
ASCII DATA	1 (0x01)	2 (0x02)	158 (0x9E)	202 (0xCA)	3 (0x03)	4 (0x04)	32 (0x20)	T.C	D.C.1 (MSB)	D.C.0 (LSB)	C.V1	~	C.V11
CONTENT	Start Code for Command (Permanent Value)							Type of Command	Detail Command	Serial Number of Machine			

8) Command Pattern H

ORDER	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	~	42th
ASCII DATA	1 (0x01)	2 (0x02)	158 (0x9E)	202 (0xCA)	3 (0x03)	4 (0x04)	32 (0x20)	T.C	D.C.1 (MSB)	D.C.0 (LSB)	SW1	~	SW 32
CONTENT	Start Code for Command (Permanent Value)							Type of Command	Detail Command	Software Version of Machine			

9) Command Pattern I

ORDER	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	~	53th
ASCII DATA	1 (0x01)	2 (0x02)	158 (0x9E)	202 (0xCA)	3 (0x03)	4 (0x04)	32 (0x20)	T.C	D.C.1 (MSB)	D.C.0 (LSB)	SNW 1	~	SNW 43
CONTENT	Start Code for Command (Permanent Value)							Type of Command	Detail Command	Serial Number / Software Version of Machine			

10) Command Pattern J

ORDER	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	~	32th
ASCII DATA	1 (0x01)	2 (0x02)	158 (0x9E)	202 (0xCA)	3 (0x03)	4 (0x04)	32 (0x20)	T.C	D.C.1 (MSB)	D.C.0 (LSB)	C.V1	~	C.V22
CONTENT	Start Code for Command (Permanent Value)							Type of Command	Detail Command	Denominations			

11) Command Pattern K

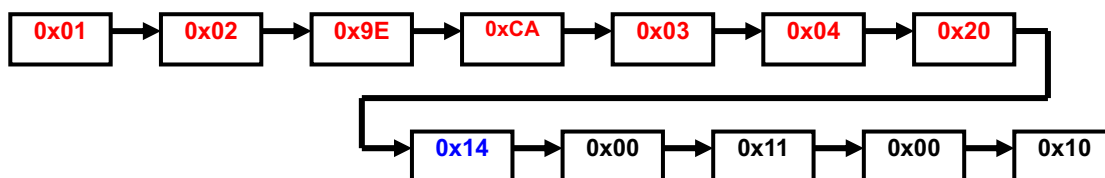
ORDER	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	~	413th
ASCII DATA	1 (0x01)	2 (0x02)	158 (0x9E)	202 (0xCA)	3 (0x03)	4 (0x04)	32 (0x20)	T.C	D.C.1 (MSB)	D.C.0 (LSB)	C.V1	~	C.V403
CONTENT	Start Code for Command (Permanent Value)							Type of Command	Detail Command	ASCII CODE of TEXT LCD SCREEN			

4-6. PROTOCOL (COMMAND AND REPONSE)

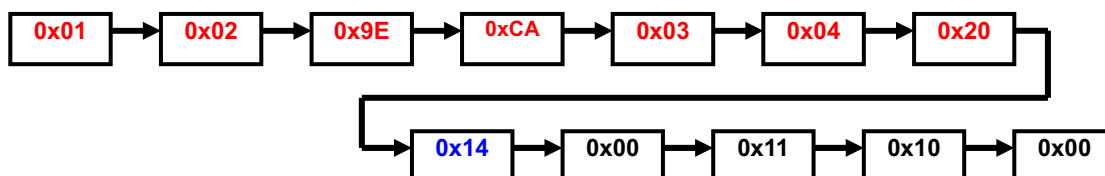
4.6.1 DETAIL PROTOCOL – “PRESS KEY”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME EXPLANATION
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	
1	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	17 (0x0011)	0x2000		Press +10 Key.
2	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	17 (0x0011)	0x1000		Press BATCH Key.
3	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	17 (0x0011)	0x0800		Press +1 Key.
4	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	17 (0x0011)	0x0400		Press LEVEL Key.
5	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	17 (0x0011)	0x0200		Press SPEED Key.
6	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	17 (0x0011)	0x0100		Press ADD Key.
7	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	17 (0x0011)	0x0020		Press CF Key.
8	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	17 (0x0011)	0X0010		Press CURRENCY Key.
9	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	17 (0x0011)	0x0008		Press PRINT Key.
10	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	17 (0x0011)	0x0004		Press MODE Key.
11	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	17 (0x0011)	0x0002		Press RESTART/STOP Key.

Ex 1) Command “Press CURRENCY Key”



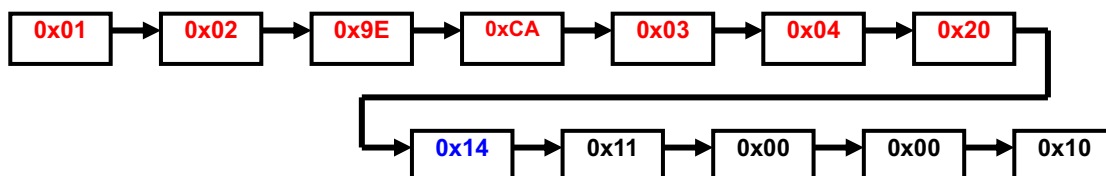
Ex 2) Command “Press BATCH Key”



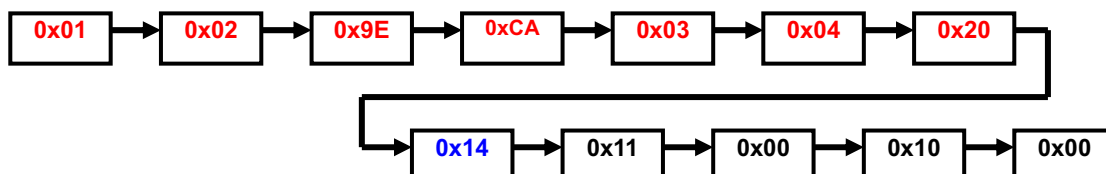
4.6.2 DETAIL PROTOCOL – “PRESS AND HOLD DOWN KEY”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	4352 (0x1100)	0x2000		Press and hold down +10 Key.
2	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	4352 (0x1100)	0x1000		Press and hold down BATCH Key.
3	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	4352 (0x1100)	0x0800		Press and hold down +1 Key.
4	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	4352 (0x1100)	0x0400		Press and hold down LEVEL Key.
5	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	4352 (0x1100)	0x0200		Press and hold down SPEED Key.
6	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	4352 (0x1100)	0x0100		Press and hold down ADD Key.
7	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	4352 (0x1100)	0x0020		Press and hold down CF Key.
8	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	4352 (0x1100)	0X0010		Press and hold down CURRENCY Key.
9	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	4352 (0x1100)	0x0008		Press and hold down PRINT Key.
10	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	4352 (0x1100)	0x0004		Press and hold down MODE Key.
11	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20 (0x14)	4352 (0x1100)	0x0002		Press and hold down RESTART/STOP Key.

Ex 1) Command “Press and hold down CURRENCY Key”



Ex 2) Command “Press and hold down BATCH Key”

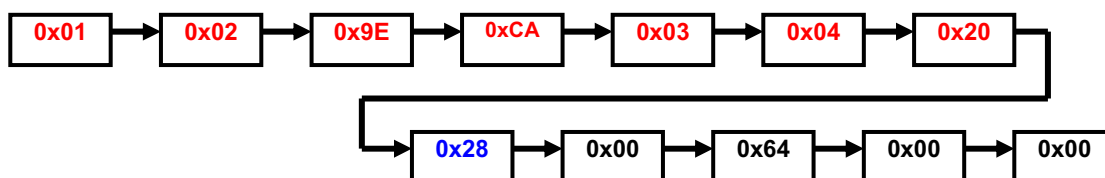


4.6.3 DETAIL PROTOCOL – “PARAMETER SET”

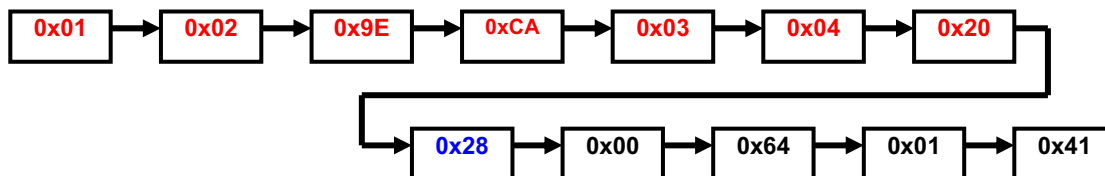
4.6.3.1 “SET BATCH VALUE”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	100 (0x0064)	0 (0x0000)		Set Batch Value “0”.
2	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	100 (0x0064)	1 (0x0001)		Set Batch Value “1”.
3	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	100 (0x0064)	NNN		Set Batch Value “NNN”.
4	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	100 (0x0064)	999 (0x03E7)		Set Batch Value “999”.

Ex 1) Command “Set Batch Value ‘0’”



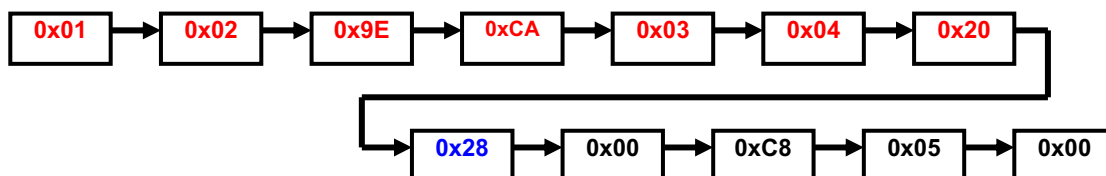
Ex 2) Command “Set Batch Value ‘321’”



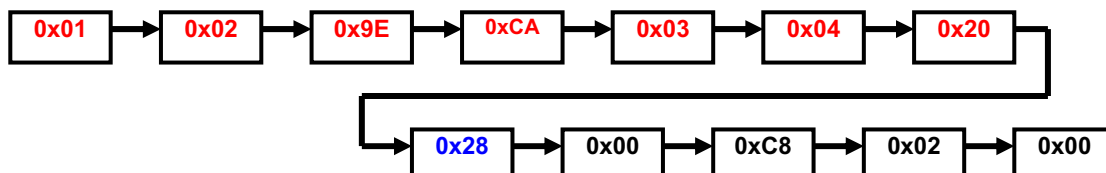
4.6.3.2 "SET LEVEL VALUE"

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	200 (0x00C8)	1 (0x01)	0 (Ignore)	Set 'Double Detection Level' "1".
2	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	200 (0x00C8)	N	0 (Ignore)	Set 'Double Detection Level' "N".
3	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	200 (0x00C8)	9 (0x0A)	0 (Ignore)	Set 'Double Detection Level' "9".
4	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	200 (0x00C8)	Anything else	0 (Ignore)	Ignore.

Ex 1) Command "Set 'Double Detection Level' '5'"



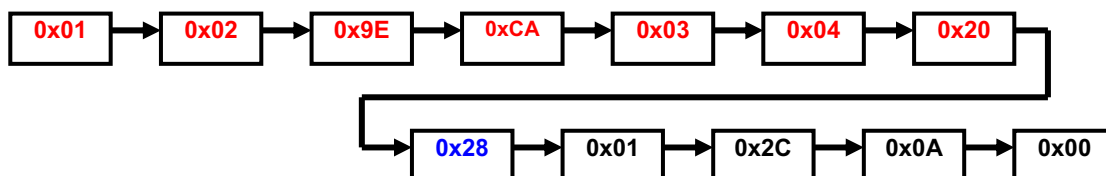
Ex 2) Command "Set 'Double Detection Level' '2'"



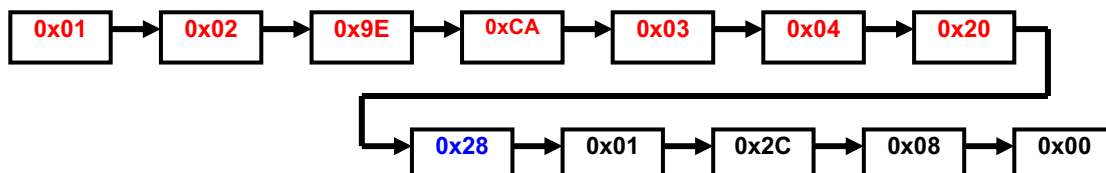
4.6.3.3 "SET SPEED VALUE"

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	300 (0x012C)	1 (0x01)	0 (Ignore)	Set Counting Speed" " 100 / min".
2	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	300 (0x012C)	N	0 (Ignore)	Set Counting Speed" " N00 / min".
3	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	300 (0x012C)	15 (0x0F)	0 (Ignore)	Set Counting Speed" "1500 / min".
4	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	300 (0x012C)	Anything else	0 (Ignore)	Ignore.

Ex 1) Command "Set 'Counting Speed' '1000 / min' "



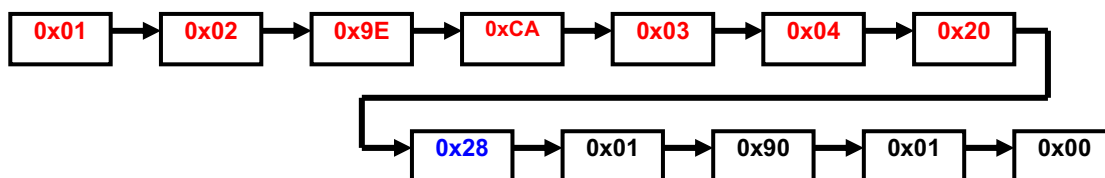
Ex 2) Command "Set 'Counting Speed' '800 / min' "



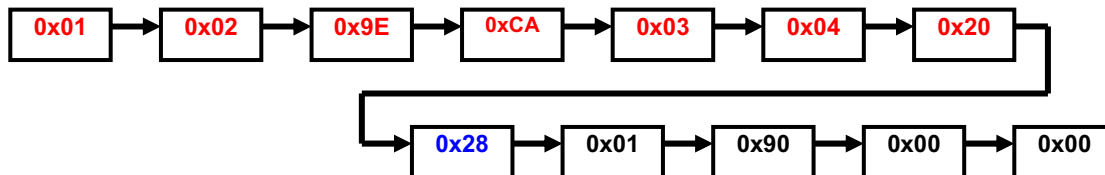
4.6.3.4 “SET ADD FUNCTION”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	400 (0x0190)	1 (0x01)	0 (Ignore)	Set "Add function" active.
2	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	400 (0x0190)	0 (0x00)	0 (Ignore)	Set "Add function" inactive.
3	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	400 (0x0190)	Anything else	0 (Ignore)	Ignore.

Ex 1) Command “Set ‘Add Function’ active”



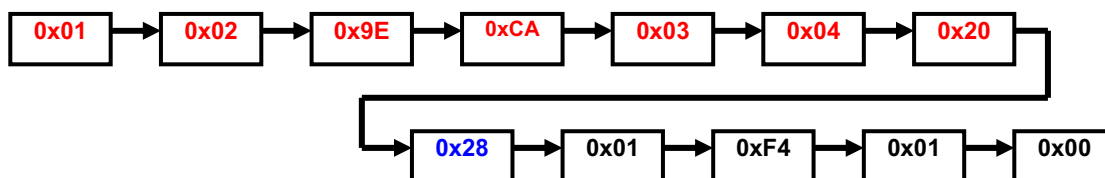
Ex 2) Command “Set ‘Add Function’ inactive”



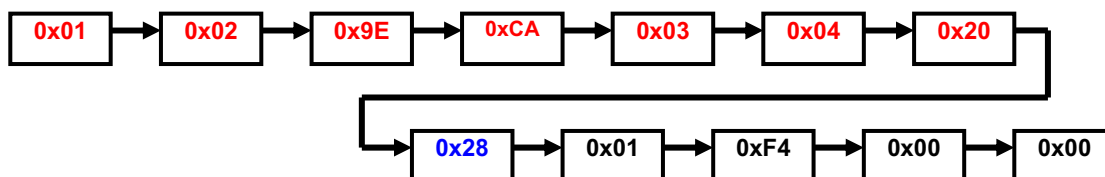
4.6.3.5 "SET CF FUNCTION"

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	500 (0x01F4)	1 (0x01)	0 (Ignore)	Set "CF function" active.
2	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	500 (0x01F4)	0 (0x00)	0 (Ignore)	Set "CF function" inactive.
3	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	500 (0x01F4)	Anything else	0 (Ignore)	Ignore.

Ex 1) Command "Set 'CF Function' active"



Ex 2) Command "Set 'CF Function' inactive"



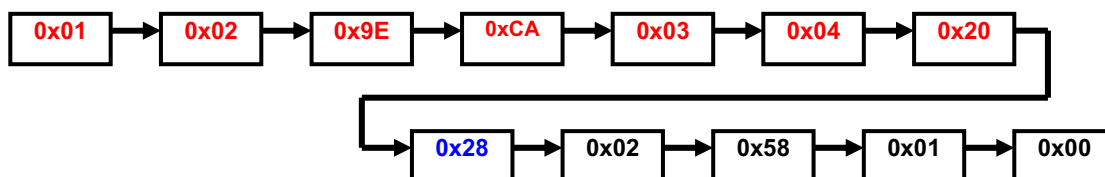
SERVICE MANUAL

4.6.3.6 “SET CURRENCY”

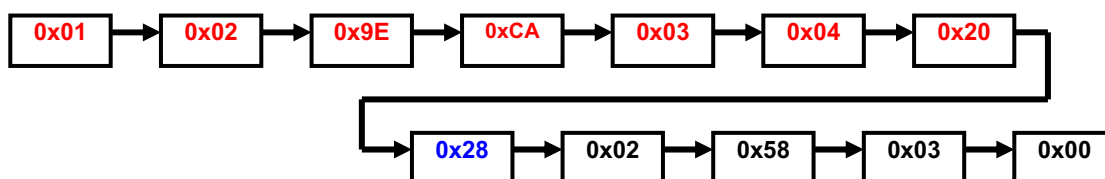
iHunter(Magner150) Series

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	600 (0x0258)	0 (0x00)	0 (Ignore)	Set "CURRENCY MODE" COUNT MODE.
2	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	600 (0x0258)	1 (0x00)	0 (Ignore)	Set "CURRENCY MODE" EURO MODE.
3	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	600 (0x0258)	2 (0x00)	0 (Ignore)	Set "CURRENCY MODE" USD MODE.
4	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	600 (0x0258)	3 (0x00)	0 (Ignore)	Set "CURRENCY MODE" 1st LOCAL MODE.
5	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	600 (0x0258)	4 (0x00)	0 (Ignore)	Set "CURRENCY MODE" 2nd LOCAL MODE.
6	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	600 (0x0258)	5 (0x00)	0 (Ignore)	Set "CURRENCY MODE" 3rd LOCAL MODE.
7	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	600 (0x0258)	Anything else	0 (Ignore)	Ignore.

Ex 1) Command “Set ‘CURRENCY MODE’ EURO MODE”



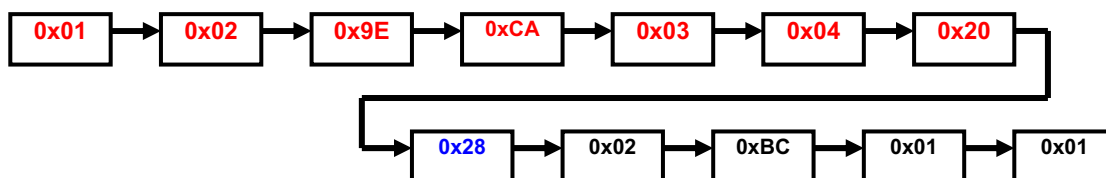
Ex 2) Command “‘CURRENCY MODE’ 1st LOCAL (ZAR, AUD, SYP, etc.) MODE”



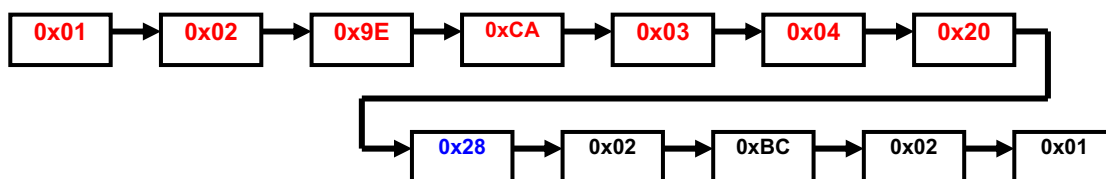
4.6.3.7 "SET MODE"

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	
1	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	1 (0x01)	1 (0x00)	Set MODE "Mix Mode".
2	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	1 (0x01)	2 (0x00)	Set MODE "Mix Dispenser Mode".
3	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	2 (0x02)	1 (0x01)	Set MODE "Separation Mode 1". (SP Only)
4	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	2 (0x02)	2 (0x02)	Set MODE "Separation Mode 2". (SP + Ver)
5	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	2 (0x02)	3 (0x03)	Set MODE "Separation Mode 3" (MIX + Ver)
6	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	2 (0x02)	Anything else	Ignore.
7	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	3 (0x03)	1 (0x00)	Set MODE "SINGLE Mode". (Select 1st Denomination – 5 Euro or 1 Usd)
8	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	3 (0x03)	2 (0x02)	Set MODE "SINGLE Mode". (Select 2nd Denomination – 10 Euro or 2 Usd)
9	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	3 (0x03)	7 (0x02)	Set MODE "SINGLE Mode". (Select 7th Denomination – 500 Euro or 100 Usd)
10	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	3 (0x03)	Anything else	Ignore.
11	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	4 (0x04)	1 (0x01)	Set MODE "Direction Mode 1". (MIX + FACING)
12	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	4 (0x04)	2 (0x02)	Set MODE "Direction Mode 2". (MIX + ORIENTATION)
13	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	4 (0x04)	3 (0x03)	Set MODE "Direction Mode 3". (SP + FACING)
14	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	4 (0x04)	4 (0x04)	Set MODE "Direction Mode 4". (SP + ORIENTATION)
15	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	4 (0x04)	Anything else	Ignore.
16	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	5 (0x05)	0 (0x00)	Set MODE "Serial Number Printing Mode" for EURO, USD or TRL
17	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	700 (0x02BC)	Anything else	0 (0x00)	Ignore.

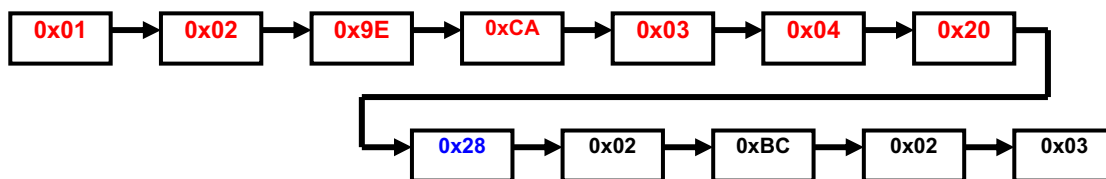
Ex 1) Command "Set 'MIX MODE' "



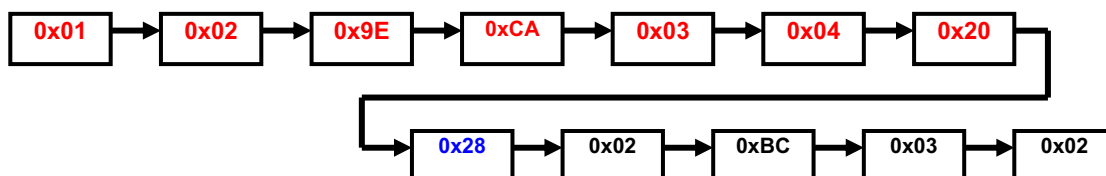
Ex 2) Command "Set 'SEPARATION MODE 1'"



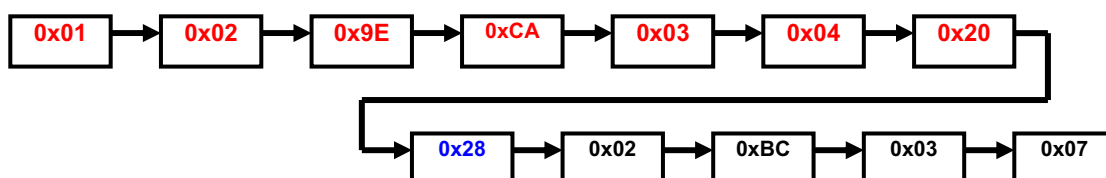
Ex 3) Command “Set ‘SEPARATION MODE 3’”



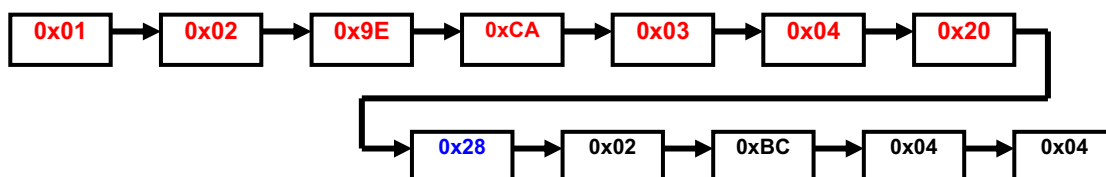
Ex 4) Command “Set ‘10 EURO / 2 USD IN SIGNAL MODE’”



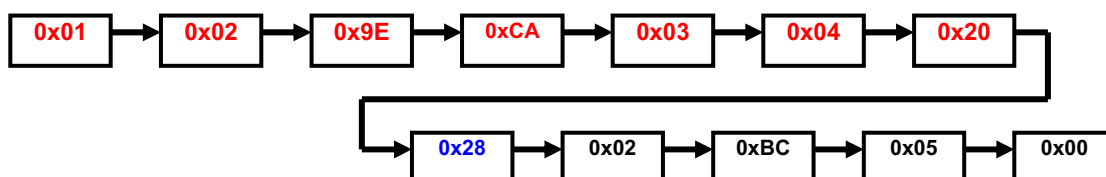
Ex 5) Command “Set ‘500 EURO / 100 USD IN SIGNAL MODE’ ”



Ex 6) Command “Set ‘DIRECTION MODE 4 (SP + ORIENTATION) ’ ”



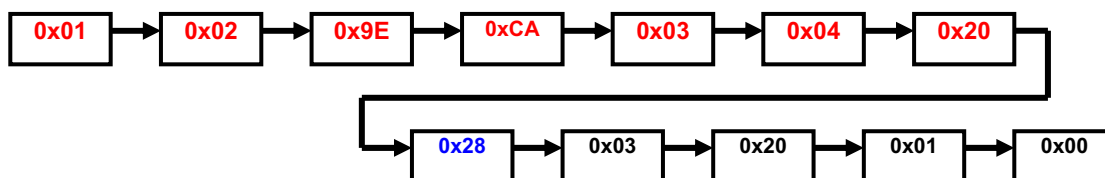
Ex 6) Command “Set ‘SERIAL NUMBER PRINTING MODE’”



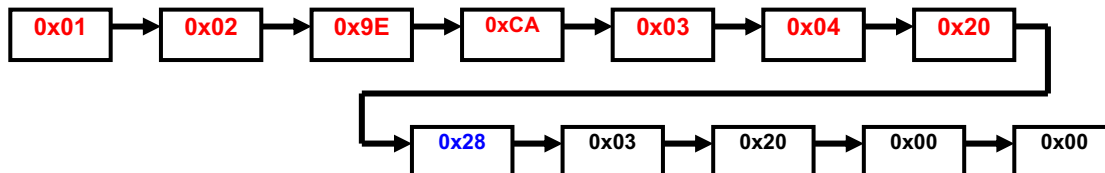
4.6.3.8 “SET AUTO / MANUAL COUNTING MODE”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	800 (0x0320)	1 (0x01)	0 (Ignore)	Set "AUTO COUNTING MODE" active.
2	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	800 (0x0320)	0 (0x00)	0 (Ignore)	Set "MANUAL COUNTING MODE" active.
3	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	800 (0x0320)	Anything else	0 (Ignore)	Ignore.

Ex 1) Command “Set ‘AUTO COUNTING MODE’ ”



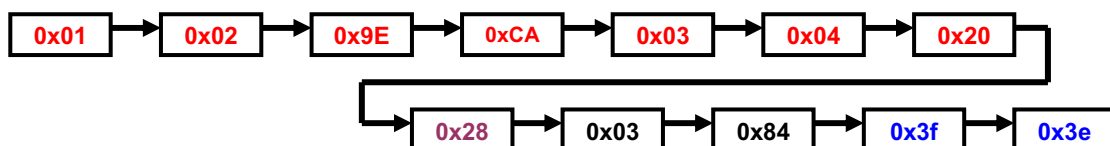
Ex 2) Command “Set ‘MANUAL COUNTING MODE’ ”



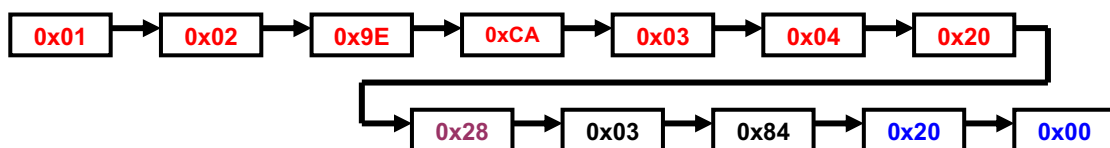
4.6.3.9 "SET LOCK KEYS"

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME EXPLANATION
		START CODE, 7 Bytes (Permanent Value)	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	
1	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	0x2000		Set Lock the +10 Key.
2	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	0x1000		Set Lock the BATCH Key.
3	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	0x0800		Set Lock the +1 Key.
4	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	0x0400		Set Lock the LEVEL Key.
5	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	0x0200		Set Lock the SPEED Key.
6	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	0x0100		Set Lock the ADD Key.
7	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	0x0020		Set Lock the CF Key.
8	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	0X0010		Set Lock the CURRENCY Key.
9	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	0x0008		Set Lock the PRINT Key.
10	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	0x0004		Set Lock the MODE Key.
11	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	0x0002		Set Lock the RESTART/STOP Key.
11	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	OR Operation With above Value		Set Lock the Several Keys together.
12	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	900 (0x0384)	0x3f3e		Set Lock the All Keys.

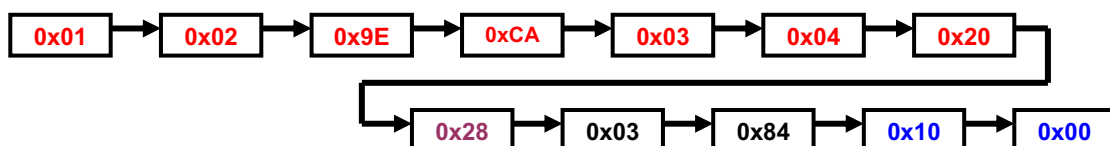
Ex 1) Command "Set Lock All Keys"



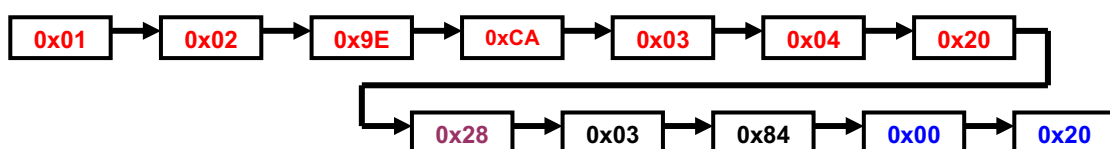
Ex 2) Command "Set Lock +10 Key"

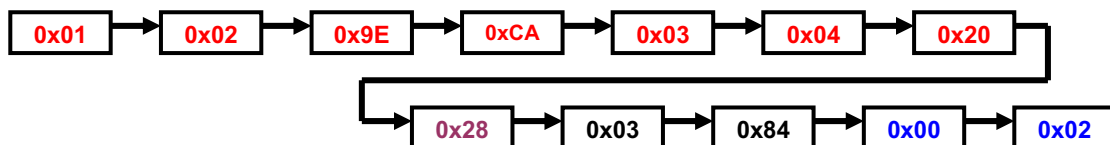
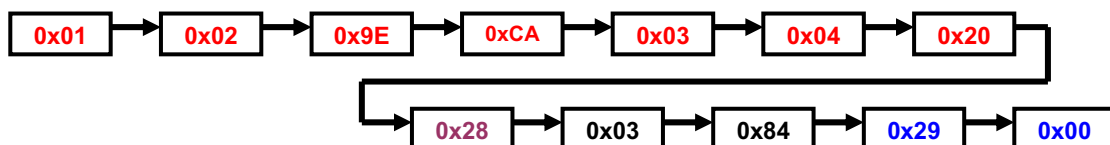
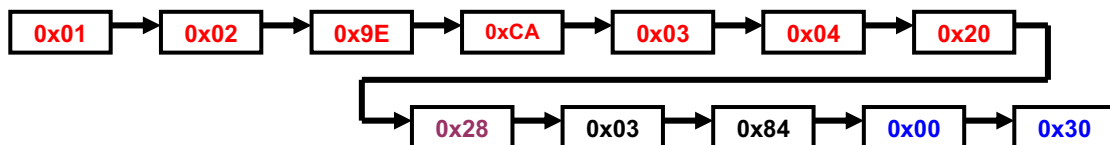
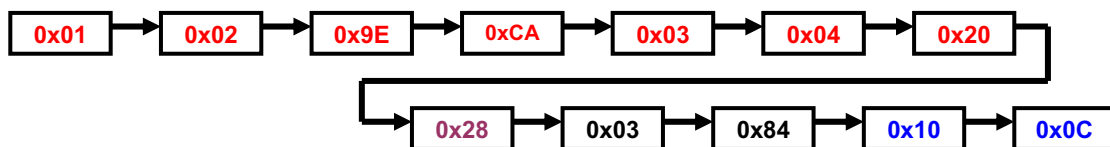


Ex 3) Command "Set Lock BATCH Key"



Ex 4) Command "Set Lock CF Key"

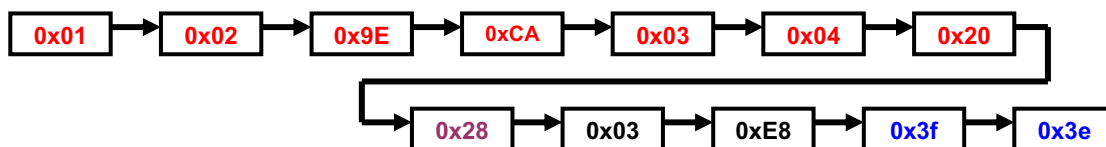


Ex 5) Command “Set Lock RESTART Key”**Ex 6)** Command “Set Lock +10, +1 and ADD Keys”**Ex 7)** Command “Set Lock CF and CURRENCY Keys”**Ex 8)** Command “Set Lock BATCH, PRINT and MODE Keys”

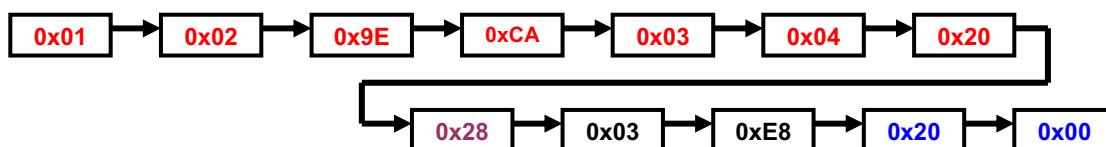
4.6.3.10 "SET UNLOCK KEYS"

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	
1	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	0x2000		Set Unlock the +10 Key.
2	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	0x1000		Set Unlock the BATCH Key.
3	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	0x0800		Set Unlock the +1 Key.
4	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	0x0400		Set Unlock the LEVEL Key.
5	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	0x0200		Set Unlock the SPEED Key.
6	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	0x0100		Set Unlock the ADD Key.
7	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	0x0020		Set Unlock the CF Key.
8	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	0X0010		Set Unlock the CURRENCY Key.
9	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	0x0008		Set Unlock the PRINT Key.
10	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	0x0004		Set Unlock the MODE Key.
11	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	0x0002		Set Unlock the RESTART/STOP Key.
11	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	OR Operation With above Value		Set Unlock the Several Keys together.
12	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40 (0x28)	1000 (0x03E8)	0x3f3e		Set Unlock the All Keys.

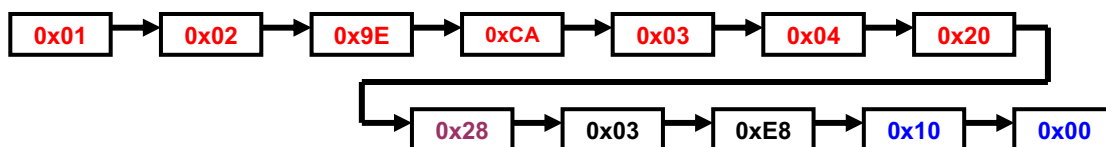
Ex 1) Command "Set Unlock All Keys"



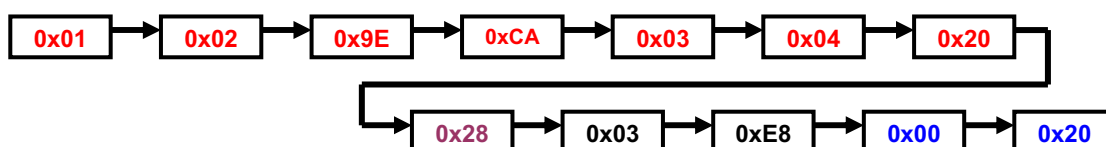
Ex 2) Command "Set Unlock +10 Key"

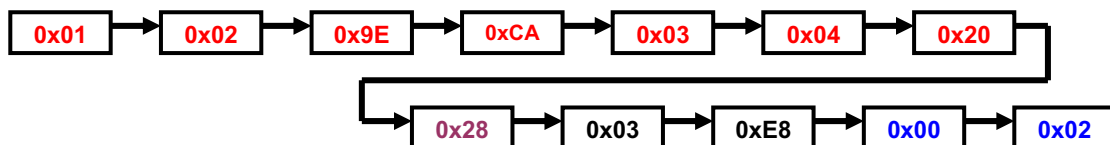
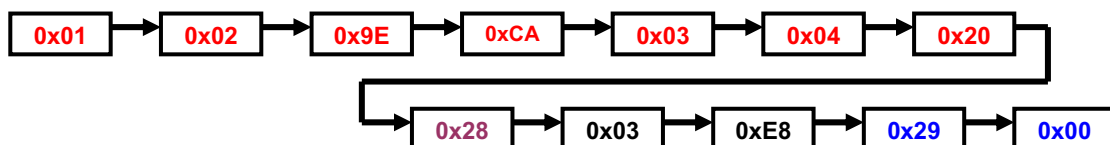
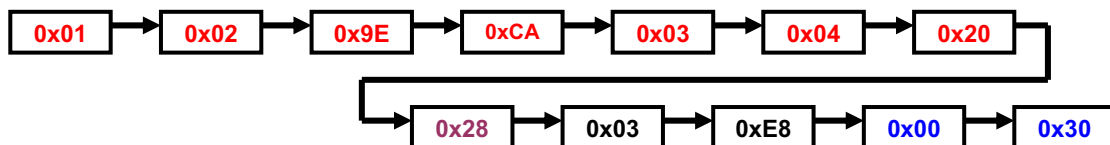
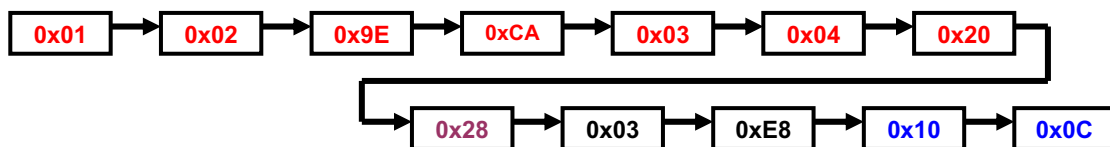


Ex 3) Command "Set Unlock BATCH Key"



Ex 4) Command "Set Unlock CF Key"

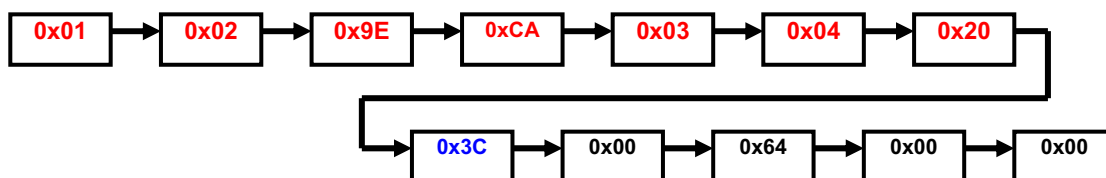


Ex 5) Command “Set Unlock RESTART Key”**Ex 6)** Command “Set Unlock +10, +1 and ADD Keys”**Ex 7)** Command “Set Unlock CF and CURRENCY Keys”**Ex 8)** Command “Set Unlock BATCH, PRINT and MODE Keys”

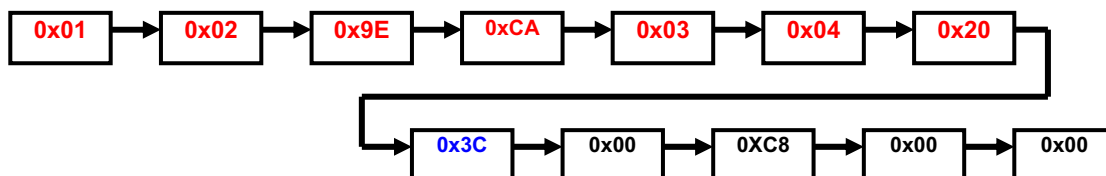
4.6.4 DETAIL PROTOCOL – “CONTROL MACHINE”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	60 (0x3C)	100 (0x0064)	0 (Ignore)	0 (Ignore)	Print to SERIAL PRINTER.
2	PATTERN D	Start Code, 7 Bytes (Permanent Value)	60 (0x3C)	200 (0x00C8)	0 (Ignore)	0 (Ignore)	Print to LCD DISPLAY.
3	PATTERN D	Start Code, 7 Bytes (Permanent Value)	60 (0x3C)	300 (0x012C)	0 (Ignore)	0 (Ignore)	Start counting notes.
4	PATTERN D	Start Code, 7 Bytes (Permanent Value)	60 (0x3C)	400 (0x0190)	0 (Ignore)	0 (Ignore)	Operate Standby MODE for counting note. .
5	PATTERN D	Start Code, 7 Bytes (Permanent Value)	60 (0x3C)	500 (0x01F4)	0 (Ignore)	0 (Ignore)	Operate User Menu
6	PATTERN D	Start Code, 7 Bytes (Permanent Value)	60 (0x3C)	600 (0x0258)	0 (Ignore)	0 (Ignore)	Operate Print Menu

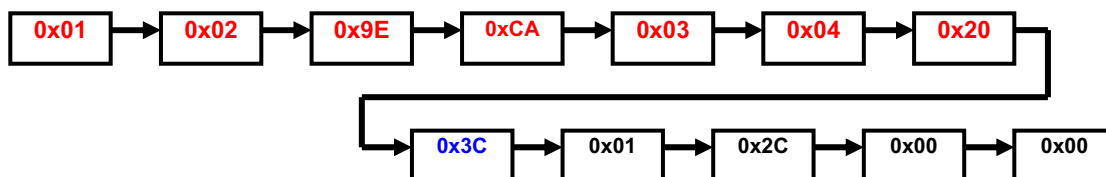
Ex 1) Command “PRINT TO SERIAL PRINTER”



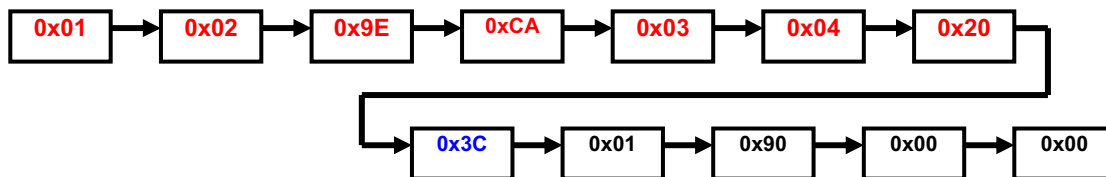
Ex 2) Command “PRINT TO LCD DISPLAY”



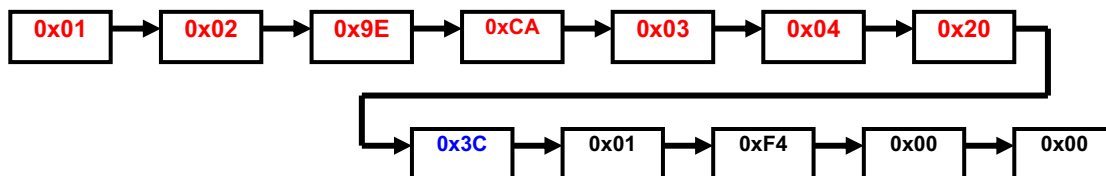
Ex 3) Command “START COUNTING NOTES”



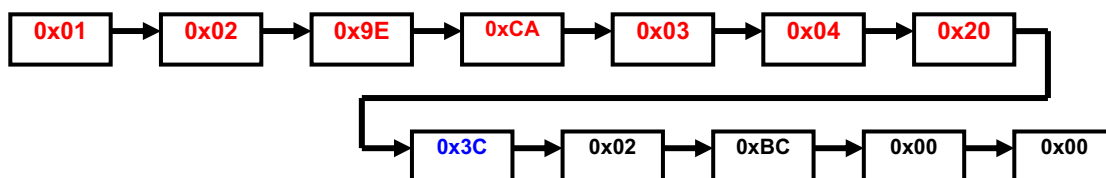
Ex 4) Command “OPERATE STANDBY MODE FOR COUNTING NOTE”



Ex 5) Command “OPERATE USER MENU”



Ex 6) Command “OPERATE PRINT MENU”



4.6.5 DETAIL PROTOCOL – “REPORT”

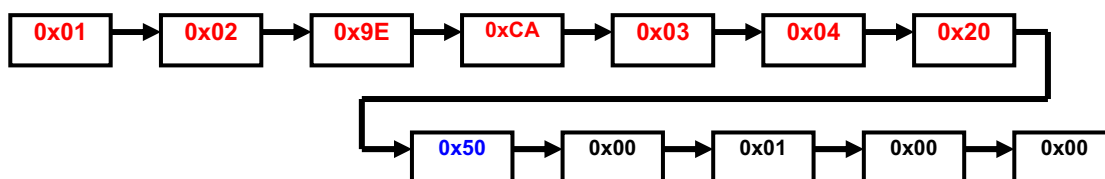
4.6.5.1.1 COMMAND “REPORT READY TO USE RS-232 PORT”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	1 (0x0001)	X (Ignore)		Report ready to use RS-232 PORT.

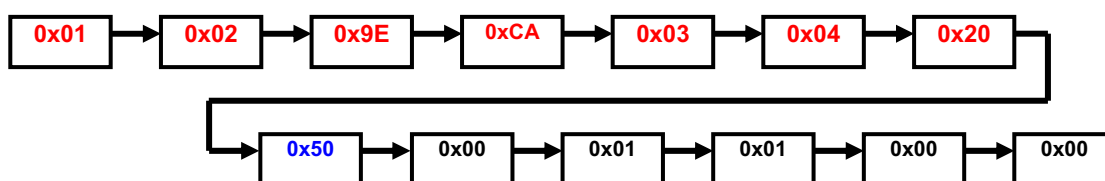
4.6.5.1.2 RESPONSE “REPORT READY TO USE RS-232 PORT”

INDEX	COMMAND PATTERN	SENDING CODE						COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE1	COMMAND VALUE1	EXPLANATION
1	PATTERN E	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	1 (0x0001)	1 (0x0001)	X (0x0000)	X (0x0000)	Ready to use RS-232 PORT.

Ex 1) Command “Report ready to use RS-232 PORT”



Ex 2) Response “Ready to use RS-232 PORT”



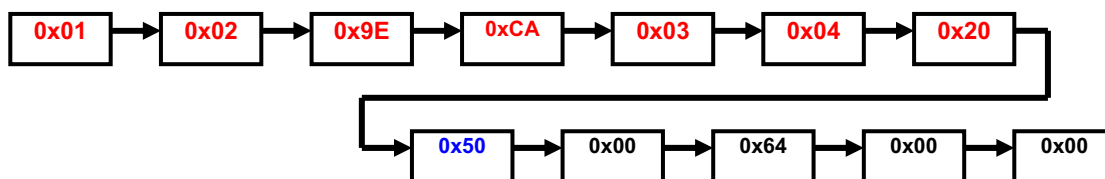
4.6.5.2.1 COMMAND “REPORT Batch Value”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	100 (0x0064)	X (Ignore)		Report Batch Value.

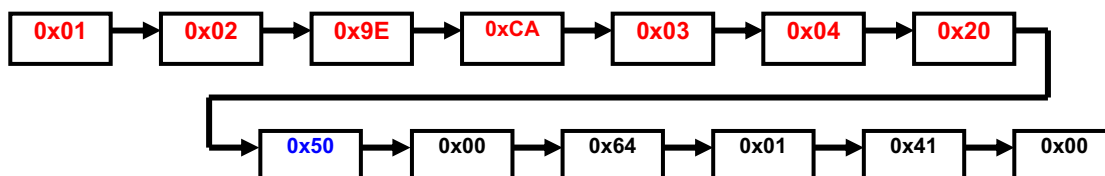
4.6.5.2.2 RESPONSE “Batch Value”

INDEX	COMMAND PATTERN	SENDING CODE						COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE1	COMMAND VALUE1	
1	PATTERN E	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	100 (0x0064)	High Byte	Low Byte	X (Ignore)	Batch Value

Ex 1) Command “Report Batch Value”



Ex 2) Response “Batch Value” – ex) Batch Value is “321” (0x0141)



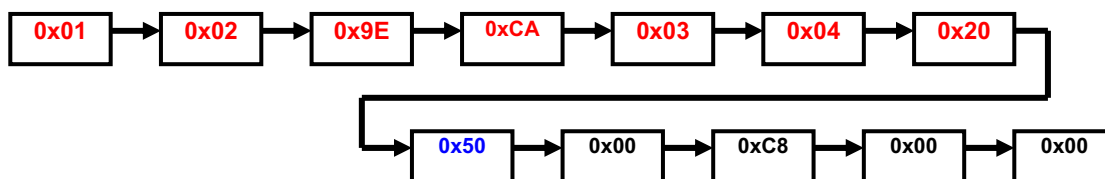
4.6.5.3.1 COMMAND “REPORT Level for Double Detection”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	200 (0x00C8)	X (Ignore)		Report Level for Double Detection.

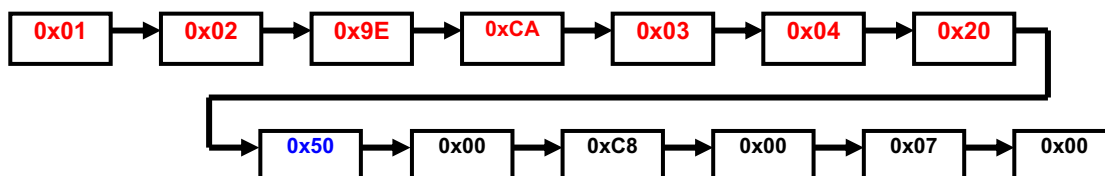
4.6.5.3.2 RESPONSE “Level for Double Detection”

INDEX	COMMAND PATTERN	SENDING CODE						COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE1	COMMAND VALUE1	EXPLANATION
1	PATTERN E	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	200 (0x00C8)	LEVEL VALUE	X (Ignore)	X (Ignore)	Level for Double Detection

Ex 1) Command “Report Level for Double Detection”



Ex 2) Response “Level for Double Detection” – ex) Level Value is “7” (0x0007)



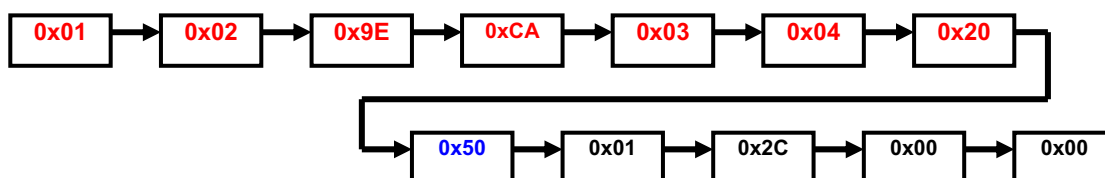
4.6.5.4.1 COMMAND “REPORT Speed Value”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	300 (0x012C)	X (Ignore)		Report Speed Value.

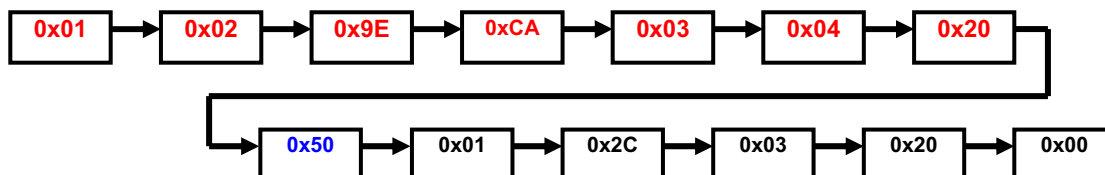
4.6.5.4.2 RESPONSE “Speed Value”

INDEX	COMMAND PATTERN	SENDING CODE						COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE1	COMMAND VALUE1	EXPLANATION
1	PATTERN E	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	300 (0x012C)	High Byte	Low Byte	X (Ignore)	Speed Value

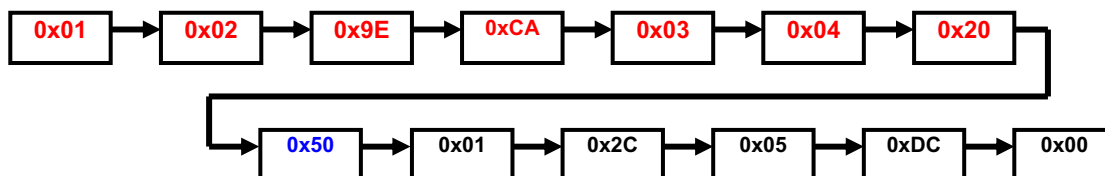
Ex 1) Command “Report Speed Value”



Ex 2) Response “Speed Value” – ex) Speed Value is “800/min” (0x0320)



Ex 3) Response “Speed Value” – ex) Speed Value is “1500/min” (0x05DC)



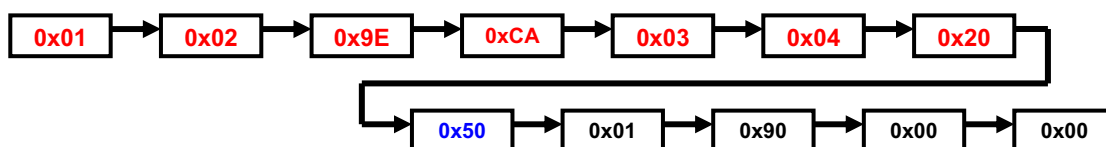
4.6.5.5.1 COMMAND “REPORT ADD Function”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	400 (0x0190)	X (Ignore)		Report ADD Function.

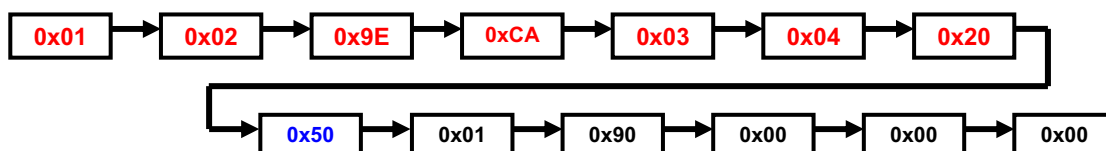
4.6.5.5.2 RESPONSE “ADD Function”

INDEX	COMMAND PATTERN	SENDING CODE						COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE1	COMMAND VALUE1	EXPLANATION
1	PATTERN E	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	400 (0x0190)	ADD Status	ADD Printing Status	X (Ignore)	ADD Function

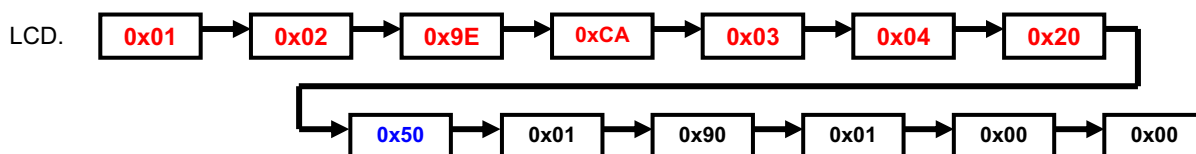
Ex 1) Command “Report ADD Function”



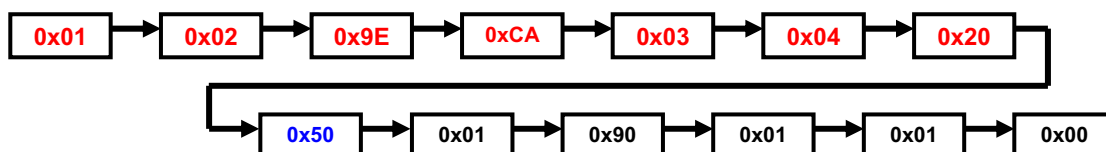
Ex 2) Response “ADD Function” – ex) ADD Function is inactive.



Ex 3) Response “ADD Function” – ex) ADD Function is active. The String “Current” displays on LCD.



Ex 4) Response “ADD Function” – ex) ADD Function is active. The String “Add” displays on LCD.



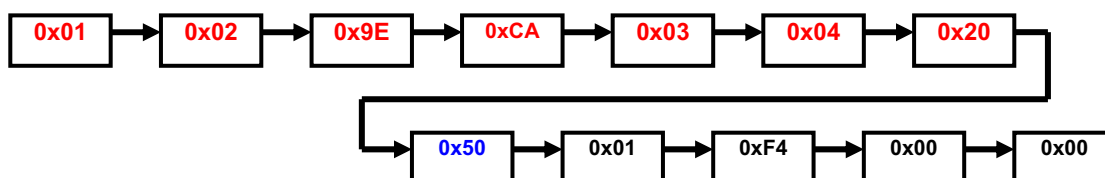
4.6.5.6.1 COMMAND “REPORT CF Function”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	500 (0x01F4)	X (Ignore)		Report CF Function.

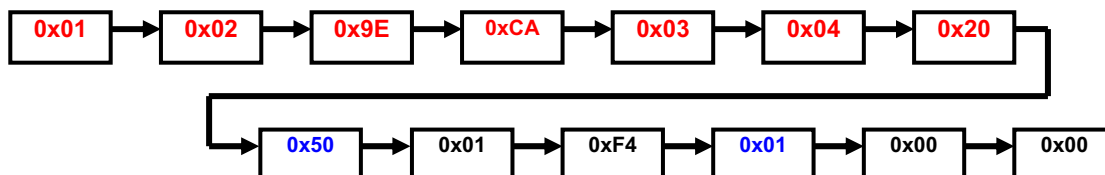
4.6.5.6.2 RESPONSE “CF Function”

INDEX	COMMAND PATTERN	SENDING CODE						COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE1	COMMAND VALUE1	EXPLANATION
1	PATTERN E	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	500 (0x01F4)	CF Status	X (Ignore)	X (Ignore)	CF Function

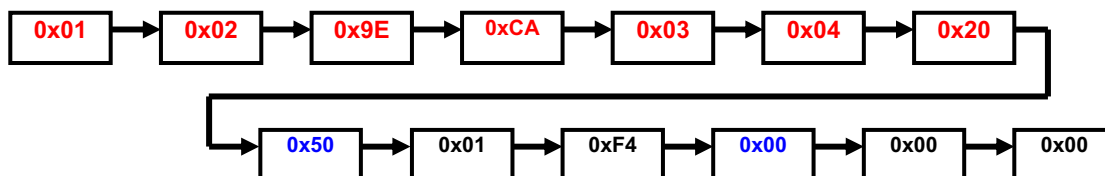
Ex 1) Command “Report CF Function”



Ex 2) Response “CF Function” – ex) CF Function is **active**.



Ex 2) Response “CF Function” – ex) CF Function is **inactive**.



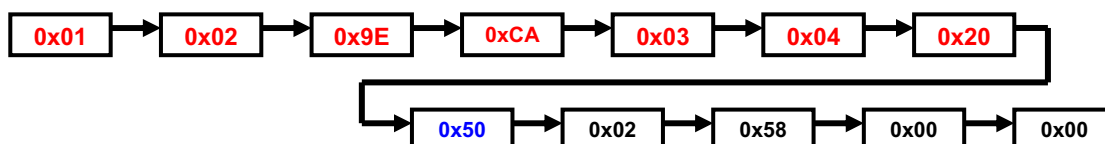
4.6.5.7.1 COMMAND “REPORT Currency”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	600 (0x0258)	X (Ignore)		Report Currency .

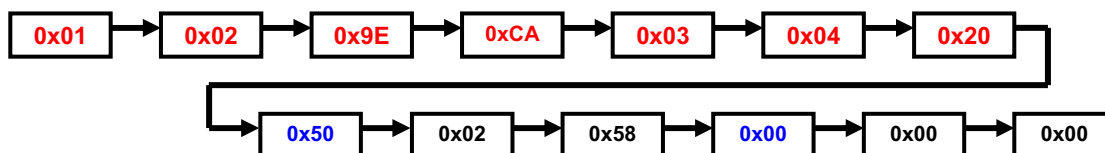
4.6.5.7.2 RESPONSE “Currency”

INDEX	COMMAND PATTERN	SENDING CODE						COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE1	COMMAND VALUE1	
1	PATTERN E	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	600 (0x0258)	CF Status	X (Ignore)	X (Ignore)	Currency

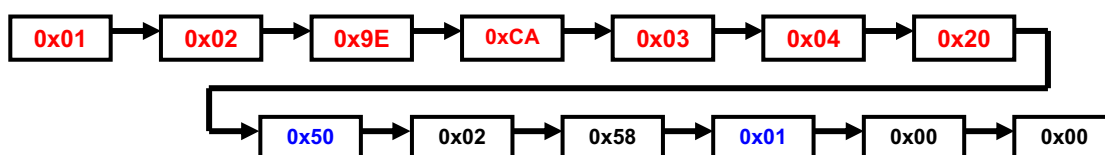
Ex 1) Command “Report Currency”



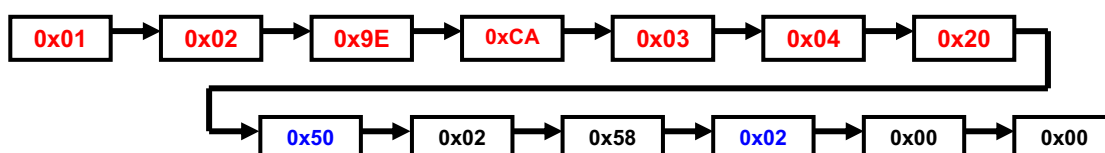
Ex 2) Response “Currency” – ex) Currency is “COUNT Mode”.



Ex 3) Response “Currency” – ex) Currency is “EUR Mode”.



Ex 4) Response “Currency” – ex) Currency is “USD Mode”.



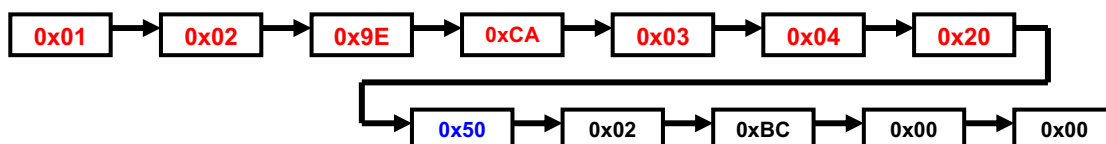
4.6.5.8.1 COMMAND “REPORT Mode”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	700 (0x02BC)	X (Ignore)		Report Mode .

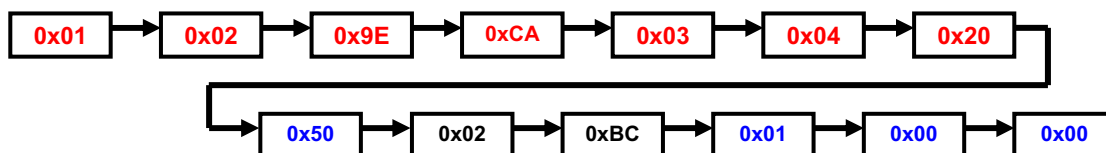
6.5.8.2 RESPONSE “Mode”

INDEX	COMMAND PATTERN	SENDING CODE						COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE1	COMMAND VALUE1	EXPLANATION
1	PATTERN E	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	700 (0x02BC)	Mode	High byte Detail Info.	Low byte Detail Info.	Mode

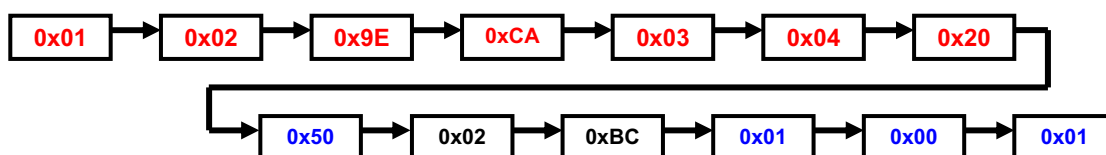
Ex 1) Command “Report Mode”



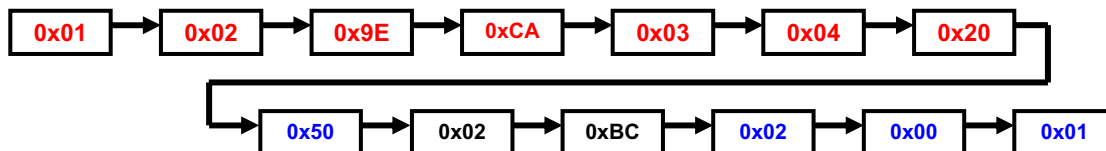
Ex 2) Response “Mode” – ex) Mode is “Mix Mode”.



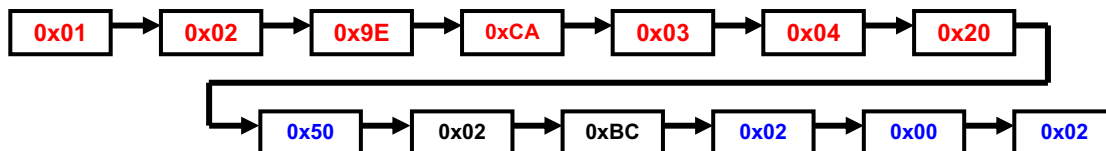
Ex 3) Response “Mode” – ex) Mode is “Mix Dispenser Mode”.



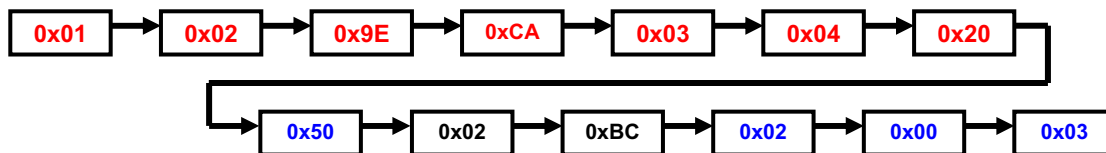
Ex 4) Response “Mode” – ex) Mode is “SP Mode”.



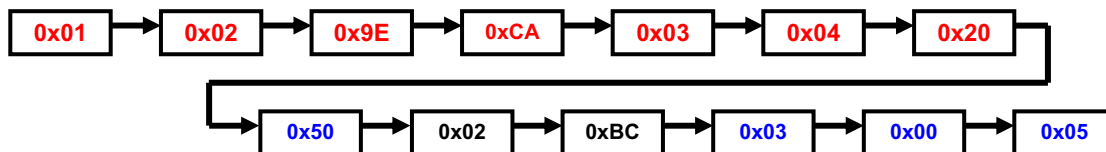
Ex 5) Response “Mode” – ex) Mode is “SP-ver Mode”.



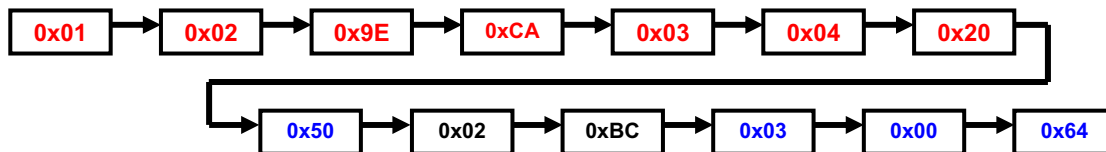
Ex 6) Response “Mode” – ex) Mode is “SP-verA Mode”.



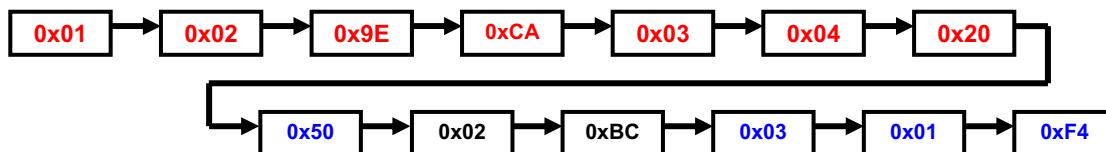
Ex 7) Response “Mode” – ex) Mode is “Single 5Euro Mode”.



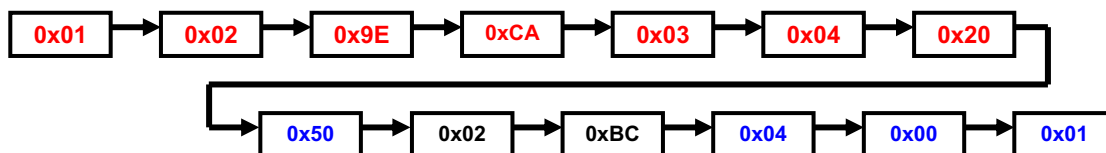
Ex 8) Response “Mode” – ex) Mode is “Single 100Euro Mode”.



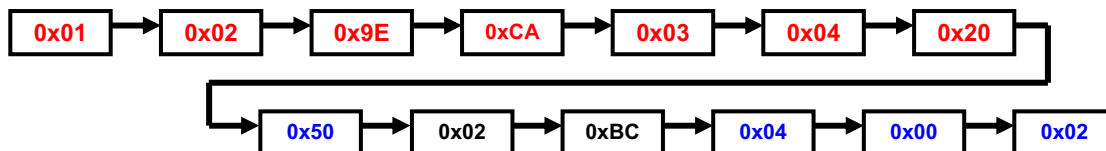
Ex 9) Response “Mode” – ex) Mode is “Single 500Euro Mode”.



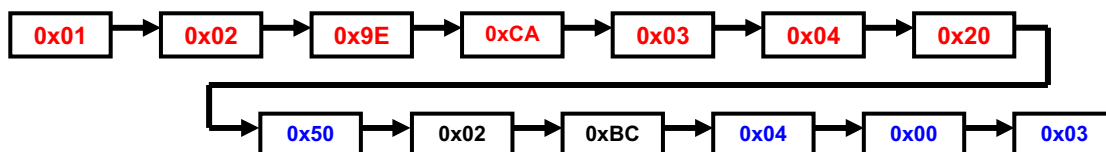
Ex 10) Response “Mode” – ex) Mode is “Dir-MF Mode”.



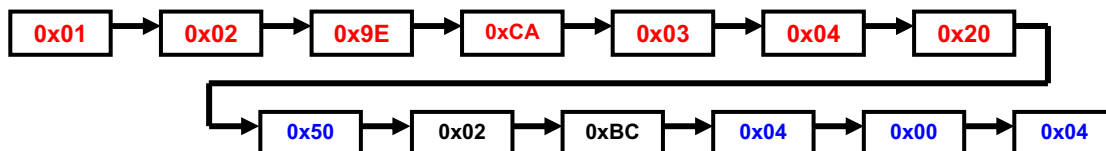
Ex 11) Response “Mode” – ex) Mode is “Dir-MO Mode”.



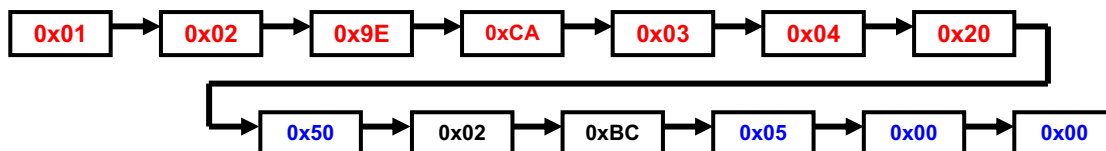
Ex 12) Response “Mode” – ex) Mode is “Dir-SF Mode”.



Ex 13) Response “Mode” – ex) Mode is “Dir-SO Mode”.



Ex 14) Response “Mode” – ex) Mode is “Serial Mode”.



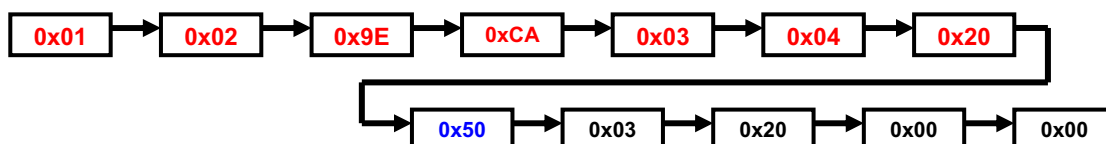
4.6.5.9.1 COMMAND “REPORT AUTO / MANUAL”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	800 (0x0320)	X (Ignore)		Report Auto / Manual .

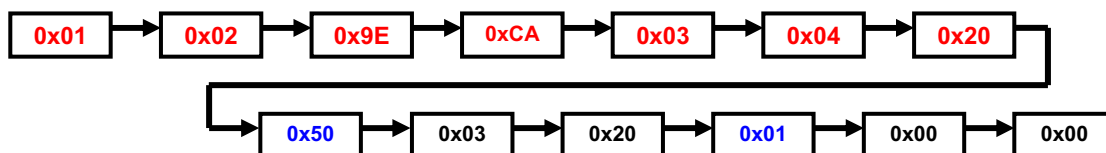
4.6.5.9.2 RESPONSE “AUTO / MANUAL”

INDEX	COMMAND PATTERN	SENDING CODE						COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE1	COMMAND VALUE1	EXPLANATION
1	PATTERN E	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	800 (0x0320)	Manual / Auto	X (Ignore)	X (Ignore)	Auto / Manual

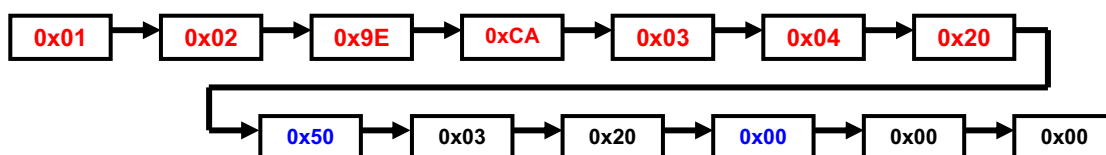
Ex 1) Command “Report AUTO / MANUAL”



Ex 2) Response “AUTO / MANUAL” – ex) AUTO MODE is set.



Ex 3) Response “AUTO / MANUAL” – ex) MANUAL MODE is set.



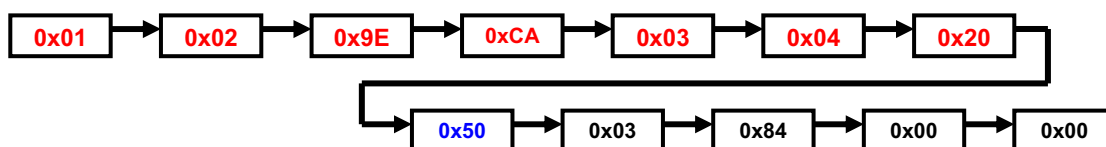
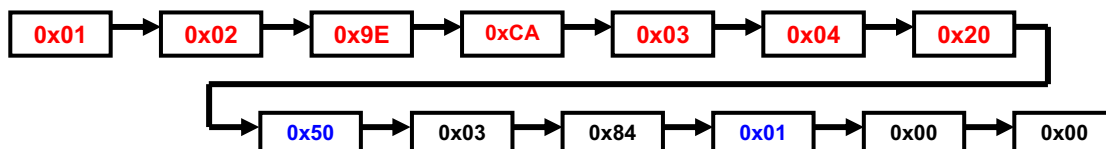
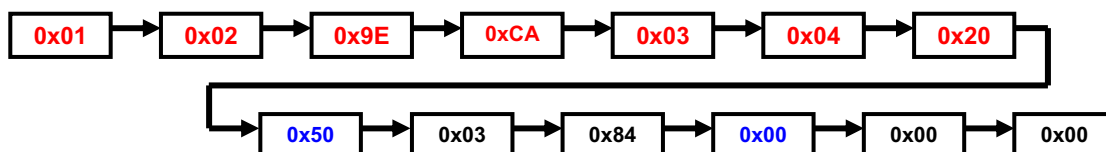
4.6.5.10.1 COMMAND “REPORT Reject Pocket Activity”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	900 (0x0384)	X (Ignore)		Report Reject Pocket Activity .

4.6.5.10.2 RESPONSE “Reject Pocket Activity”

INDEX	COMMAND PATTERN	SENDING CODE						COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE1	COMMAND VALUE1	EXPLANATION
1	PATTERN E	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	900 (0x0384)	Reject Pocket Status	X (Ignore)	X (Ignore)	Reject Pocket Activity

Ex 1) Command “Report Reject Pocket Activity”

Ex 2) Response “Reject Pocket Activity” – ex) Reject Pocket is **active**.Ex 3) Response “Reject Pocket Activity” – ex) Reject Pocket is **inactive**.

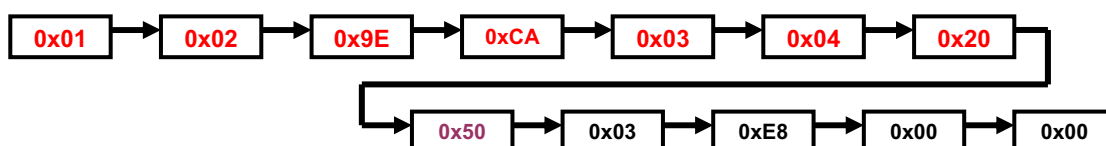
4.6.5.11.1 COMMAND “REPORT Reject Count Number”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME	
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION	
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	1000 (0x03E8)	X (Ignore)	X (Ignore)	Report Reject Count Number.	

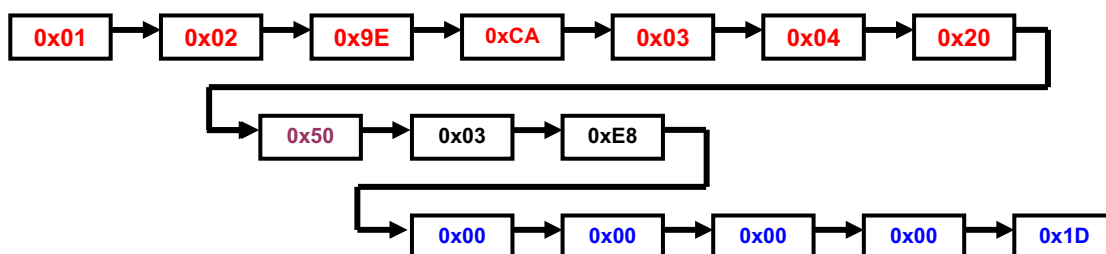
4.6.5.11.2 RESPONSE “Reject Count Number”

INDEX	COMMAND PATTERN	SENDING CODE								COMMAND NAME	
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	Command VALUE4	Command VALUE3	Command VALUE2	Command VALUE1	Command VALUE0	EXPLANATION	
1	PATTERN F	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	1000 (0x03E8)	0 (0x00)	0 (0x00)	0 (0x00)	High Byte	Low Byte	Reject Count Number	

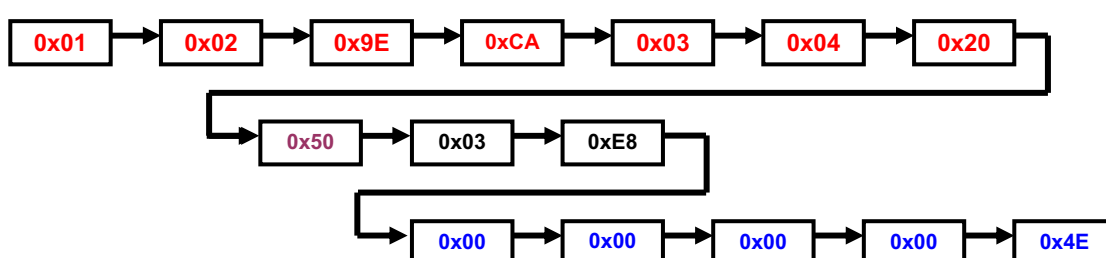
Ex 1) Command “Report Reject Count Number”



Ex 2) Response “Reject Count Number” – ex) Reject Count Number is “29”.



Ex 3) Response “Reject Count Number” – ex) Reject Count Number is “78”.



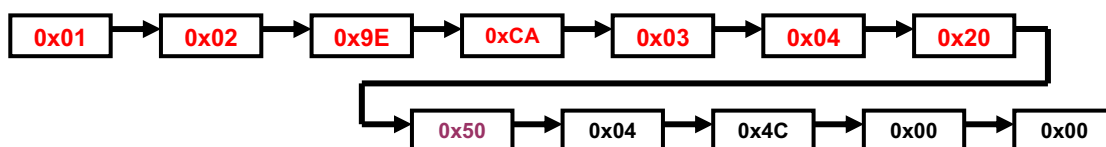
4.6.5.12.1 COMMAND “REPORT Main Count Number”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	1100 (0x044C)	X (Ignore)	X (Ignore)	Report Main Count Number.

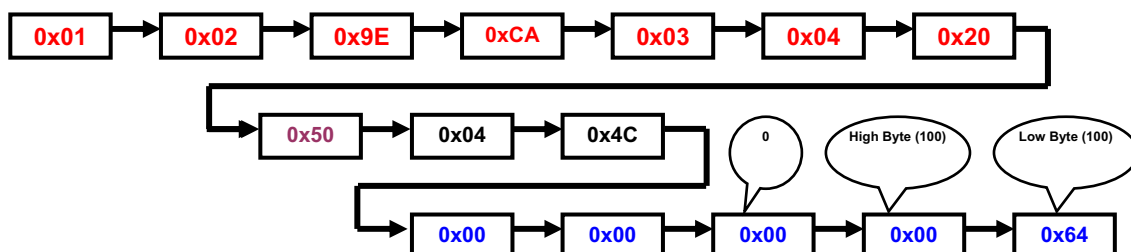
4.6.5.12.2 RESPONSE “Main Count Number”

INDEX	COMMAND PATTERN	SENDING CODE								COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	Command VALUE4	Command VALUE3	Command VALUE2	Command VALUE1	Command VALUE0	
1	PATTERN F	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	1100 (0x044C)	0 (0x00)	0 (0x00)	Digit 4,5	Digit 1-3 High Byte	Digit 1-3 Low Byte	Main Count Number

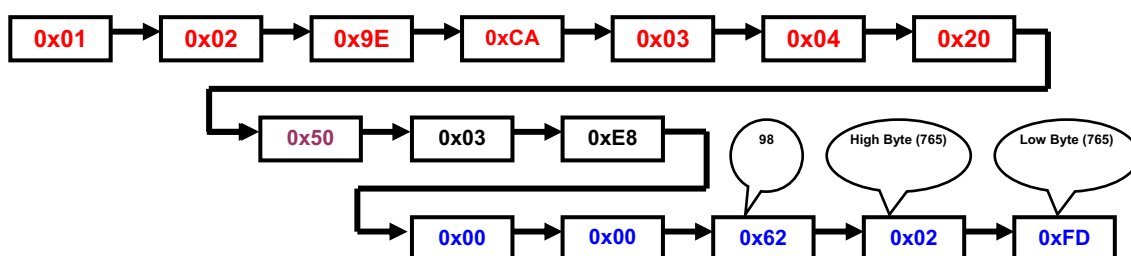
Ex 1) Command “Report Main Count Number”



Ex 2) Response “Main Count Number” – ex) Main Count Number is “100”.



Ex 3) Response “Main Count Number” – ex) Main Count Number is “98,765”.



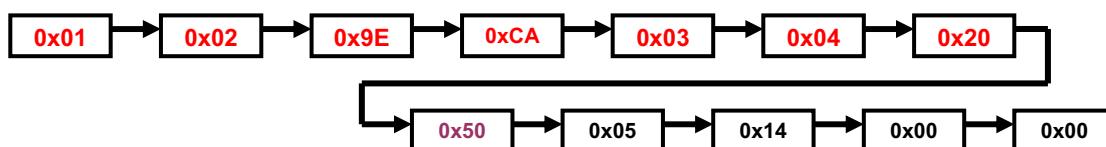
4.6.5.13.1 COMMAND “REPORT Value Number”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	1300 (0x0514)	X (Ignore)	X (Ignore)	Report Value Number.

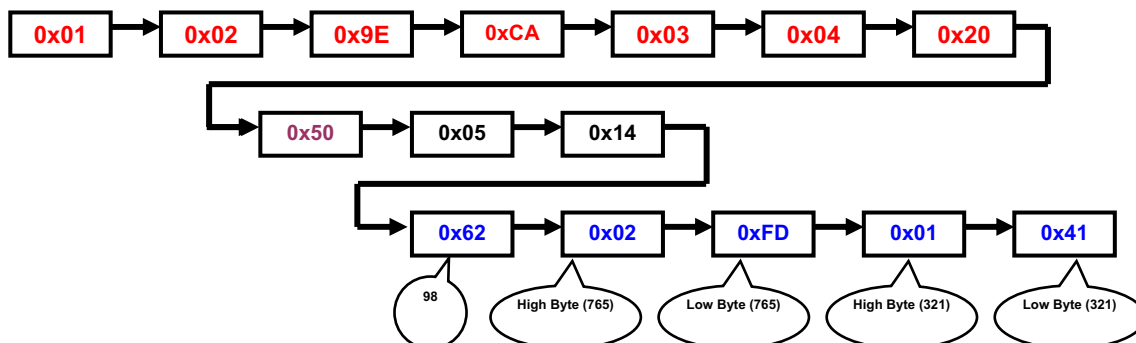
4.6.5.13.2 RESPONSE “Value Number”

INDEX	COMMAND PATTERN	SENDING CODE								COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	Command VALUE4	Command VALUE3	Command VALUE2	Command VALUE1	Command VALUE0	EXPLANATION
1	PATTERN F	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	1300 (0x0514)	Digit 7, 8 High Byte	Digit 4-6 High Byte	Digit 4,5 High Byte	Digit 1-3 High Byte	Digit 1-3 Low Byte	Value Number

Ex 1) Command “Report Value Number”



Ex 2) Response “Value Number” – ex) Value Number is “98,765,321”.



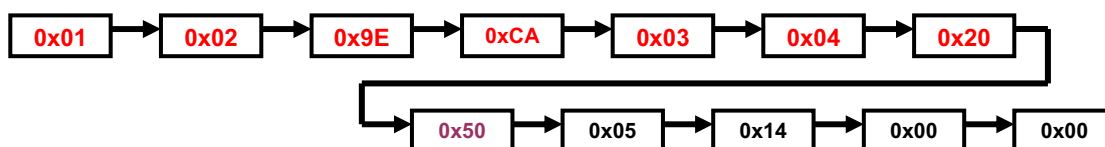
4.6.5.14.1 COMMAND “REPORT Mix Dispenser Value Number”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	1300 (0x0514)	X (Ignore)	X (Ignore)	Report Mix Dispenser Value Number.

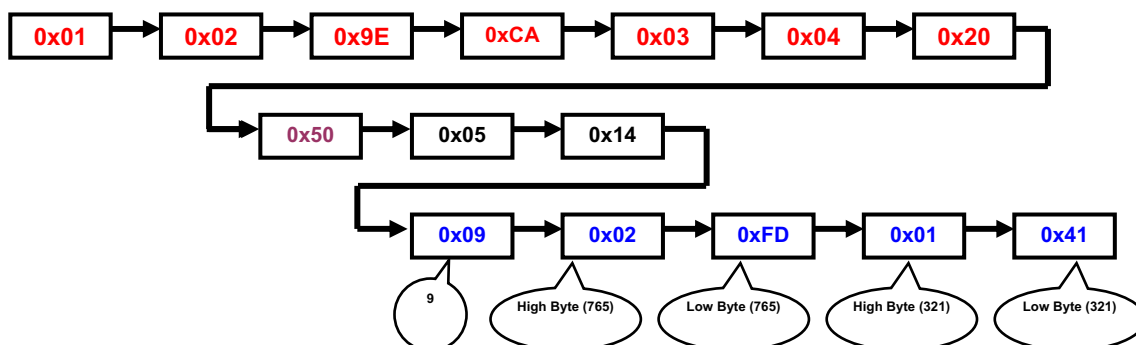
4.6.5.14.2 RESPONSE “Mix Dispenser Value Number”

INDEX	COMMAND PATTERN	SENDING CODE								COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	Command VALUE4	Command VALUE3	Command VALUE2	Command VALUE1	Command VALUE0	EXPLANATION
1	PATTERN F	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	1300 (0x0514)	Digit 8	Digit 4-6 High Byte	Digit 4,5	Digit 1-3 High Byte	Digit 1-3 Low Byte	Mix Dispenser Value Number

Ex 1) Command “Report Mix Dispenser Value Number”



Ex 2) Response “Mix Dispenser Value Number” – ex) Mix Dispenser Value Number is “9,765,321”.



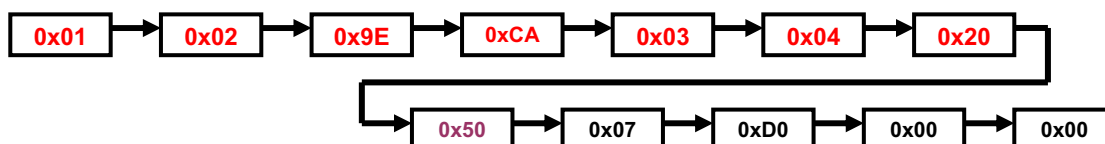
4.6.5.15.1 COMMAND “REPORT Serial Number of Machine”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	2000 (0x07D0)	X (Ignore)	X (Ignore)	Report Serial Number of Machine.

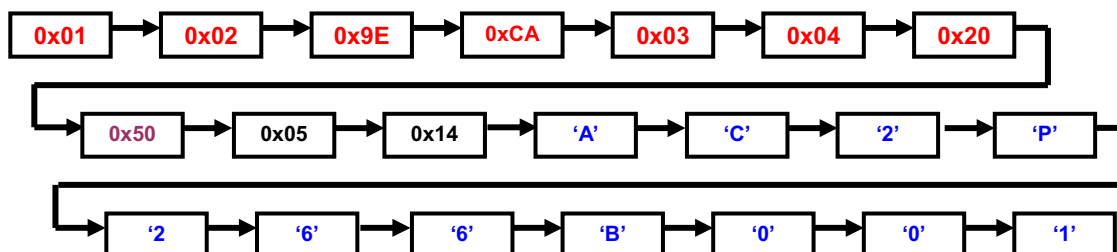
4.6.5.15.2 RESPONSE “Serial Number of Machine”

INDEX	COMMAND PATTERN	SENDING CODE								COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	Command VALUE1	Command VALUE2	Command VALUE N	Command VALUE10	Command VALUE11	EXPLANATION
1	PATTERN G	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	2000 (0x07D0)	ASCII (Byte)	ASCII (Byte )	.....	ASCII (Byte)	ASCII (Byte)	Serial Number of Machine

Ex 1) Command “Report Serial Number of Machine”



Ex 2) Response “Value Number” – ex) Serial Number of Machine is “AC2P266B001”.



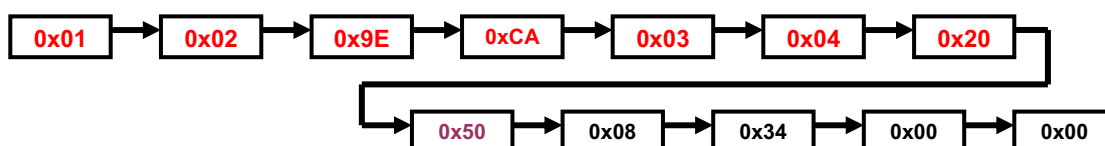
4.6.5.16.1 COMMAND “REPORT Software Version of Boards”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	2100 (0x0834)	X (Ignore)	X (Ignore)	Report Serial Number of Machine.

4.6.5.16.2 RESPONSE “Software Version of Boards”

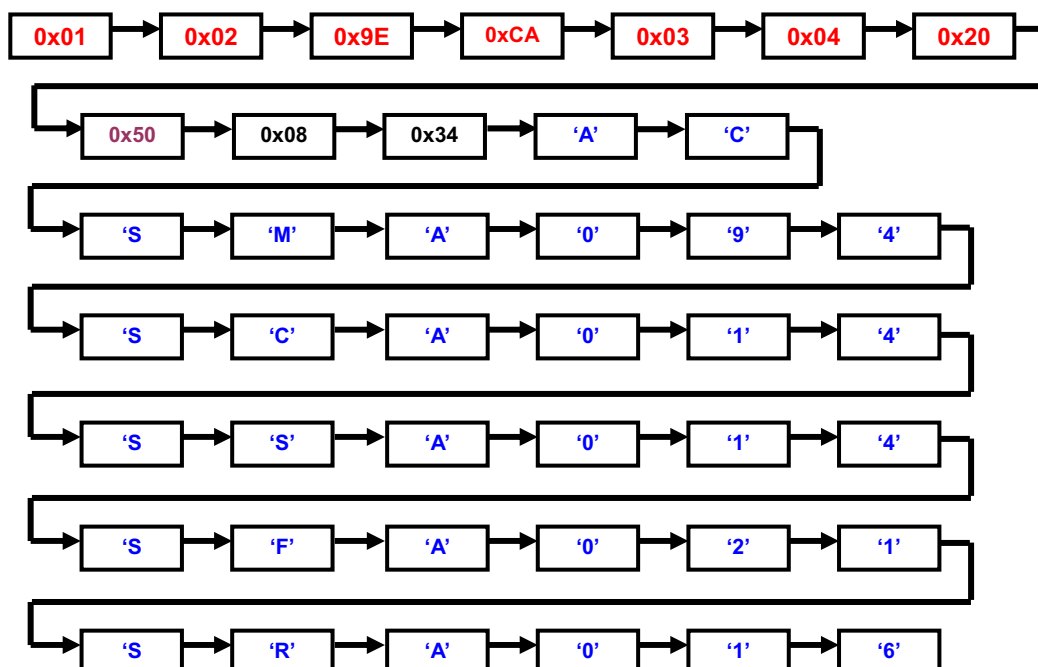
INDEX	COMMAND PATTERN	SENDING CODE								COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	Command VALUE1	Command VALUE2	Command VALUE N	Command VALUE31	Command VALUE32	EXPLANATION
1	PATTERN H	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	2100 (0x0834)	ASCII (Byte)	ASCII (Byte )	.....	ASCII (Byte)	ASCII (Byte)	Serial Number of Machine

Ex 1) Command “Report Software of Board”



Ex 2) Response “Value Number”

ex) Software Version of Main Board is “09.4”. Software Version of CIS Board is “01.4”.
Software Version of CF UV Board is “02.1”. Software Version of CF IR Board is “01.6”.



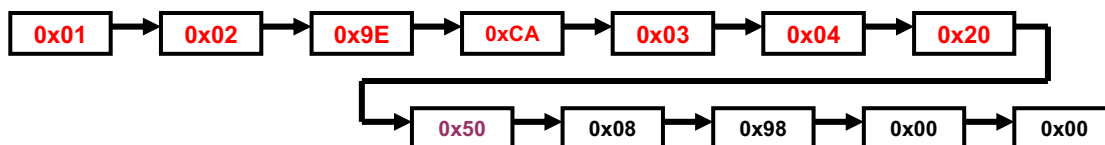
4.6.5.17.1 COMMAND “REPORT Serial Number & Software Version”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME EXPLANATION
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	2200 (0x0898)	X (Ignore)	X (Ignore)	Report Serial Number & Software Version of Boards.

4.6.5.17.2 RESPONSE “Serial Number & Software Version”

INDEX	COMMAND PATTERN	SENDING CODE								COMMAND NAME EXPLANATION
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	Command VALUE1	Command VALUE2	Command VALUE N	Command VALUE42	Command VALUE43	
1	PATTERN I	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	2200 (0x0898)	ASCII (Byte)	ASCII (Byte)	.....	ASCII (Byte)	ASCII (Byte)	Serial Number & Software Version of Boards.

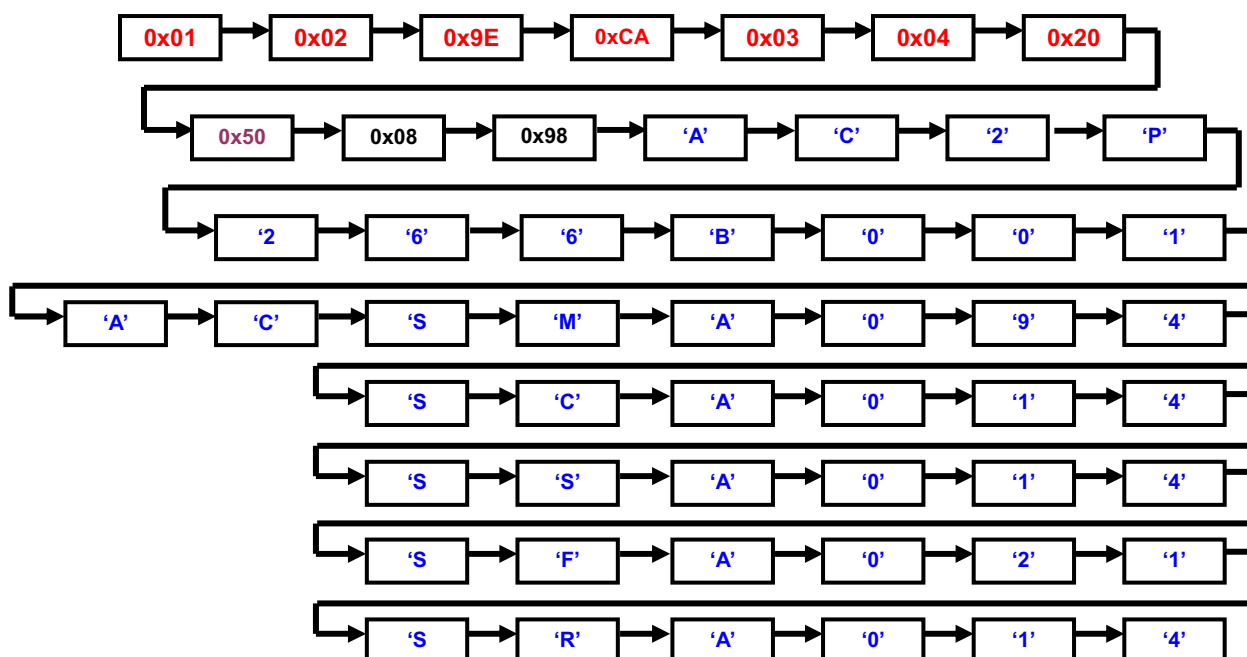
Ex 1) Command “Report Serial Number & Software Version”



Ex 2) Response “Serial Number & Software Version”

ex) Serial Number of Machine is “AC2P266B001”. Software Version of Main Board is “09.4”.

Software Version of CIS Board is “01.4”. Software Version of CF UV Board is “02.1”. Software Version of CF IR Board is “01.6”.



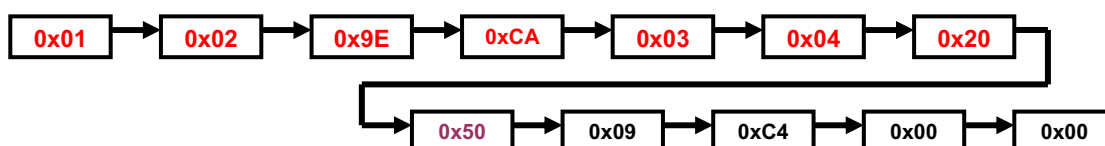
4.6.5.18.1 COMMAND “REPORT Denominations”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	2500 (0x09C4)	X (Ignore)	X (Ignore)	Report Denominations

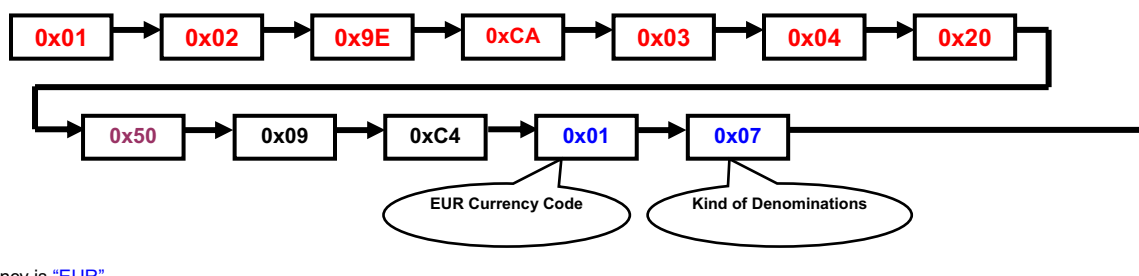
4.6.5.18.2 RESPONSE “Denominations”

INDEX	COMMAND PATTERN	SENDING CODE								COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	Command VALUE1	Command VALUE2	Command VALUE N	Command VALUE21	Command VALUE22	EXPLANATION
1	PATTERN J	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	2500 (0x09C4)	ASCII (Byte)	ASCII (Byte )	.....	ASCII (Byte)	ASCII (Byte)	Denominations

Ex 1) Command “Report Denominations”



Ex 2) Response “Denominations” - EUR



ex) The Currency is “EUR”.

The number of Denomination of EUR is “7 kinds”.

Note Counting Number of 5 EUR is “27 (0x001B)”.

Note Counting Number of 10 EUR is “0 (0x0000)”.

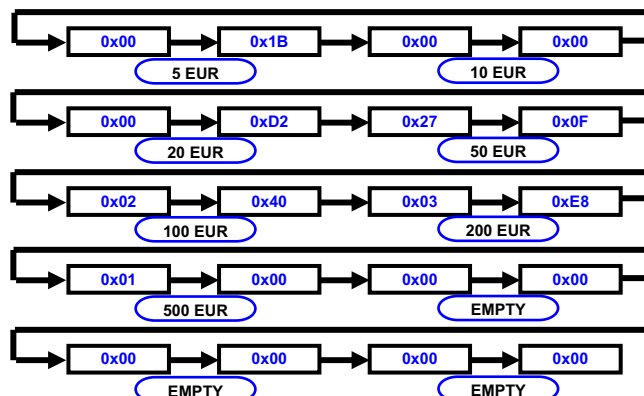
Note Counting Number of 20 EUR is “210 (0x00D2)”.

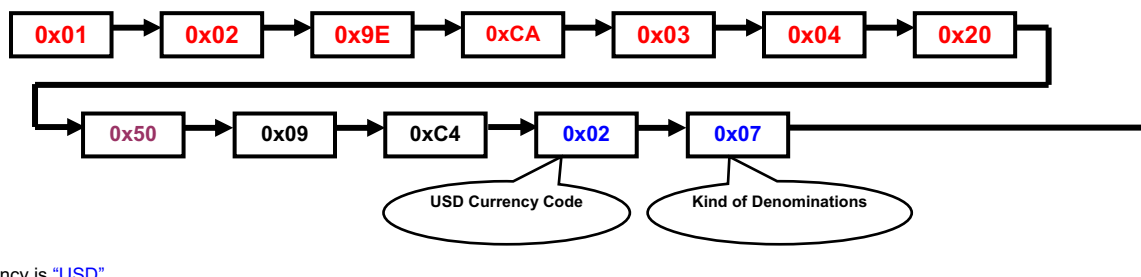
Note Counting Number of 50 EUR is “9999 (0x270F)”.

Note Counting Number of 100 EUR is “576 (0x0240)”.

Note Counting Number of 200 EUR is “1000 (0x03E8)”.

Note Counting Number of 500 EUR is “256 (0x0100)”.



Ex 3) Response “Denominations” - USD

ex) The Currency is “USD”.

The number of Denomination of EUR is “7 kinds”.

Note Counting Number of 1 USD is “256 (0x0100)”.

Note Counting Number of 2 USD is “210 (0x00D2)”.

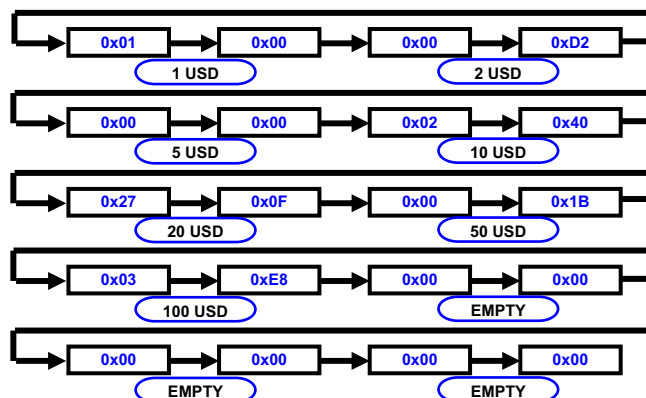
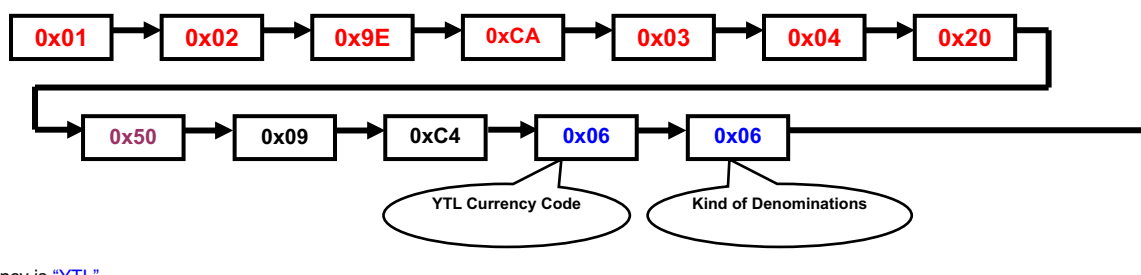
Note Counting Number of 5 USD is “0 (0x0000)”.

Note Counting Number of 10 USD is “576 (0x0240)”.

Note Counting Number of 20 USD is “9999 (0x270F)”.

Note Counting Number of 50 USD is “27 (0x001B)”.

Note Counting Number of 100 USD is “1000 (0x03E8)”.

**Ex 2)** Response “Denominations” - YTL

ex) The Currency is “YTL”.

The number of Denomination of EUR is “6 kinds”.

Note Counting Number of 1 YTL is “256 (0x0100)”.

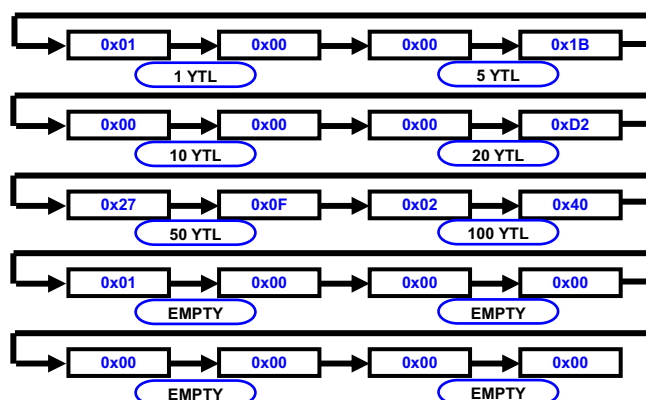
Note Counting Number of 5 YTL is “27 (0x001B)”.

Note Counting Number of 10 YTL is “0 (0x0000)”.

Note Counting Number of 20 YTL is “210 (0x00D2)”.

Note Counting Number of 50 YTL is “9999 (0x270F)”.

Note Counting Number of 100 YTL is “576 (0x0240)”.



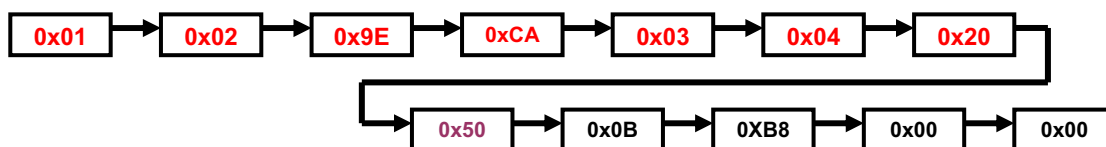
4.6.5.19.1 COMMAND “REPORT Error Status”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	3000 (0x0BB8)	X (Ignore)	X (Ignore)	Report Mix Dispenser Value Number.

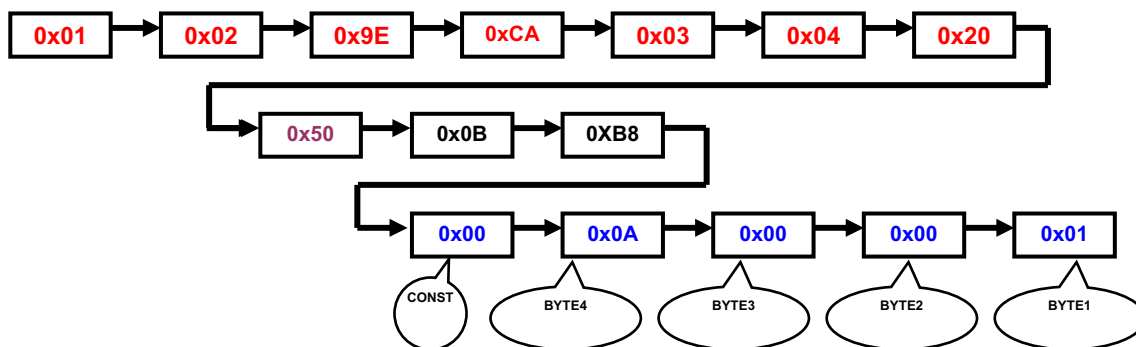
4.6.5.19.2 RESPONSE “Error Status”

INDEX	COMMAND PATTERN	SENDING CODE								COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	Command VALUE4	Command VALUE3	Command VALUE2	Command VALUE1	Command VALUE0	EXPLANATION
1	PATTERN F	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	3000 (0x0BB8)	0x00	BYTE 4	BYTE 3	BYTE 2	BYTE 1	Mix Dispenser Value Number

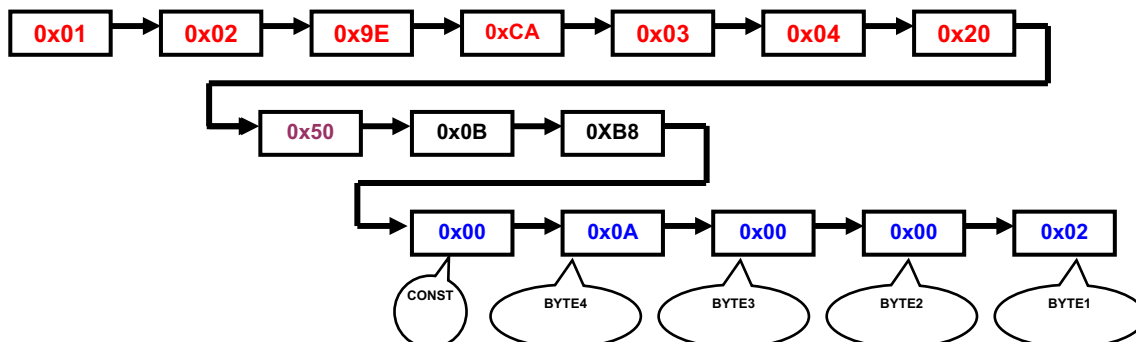
Ex 1) Command “Report Error Status”



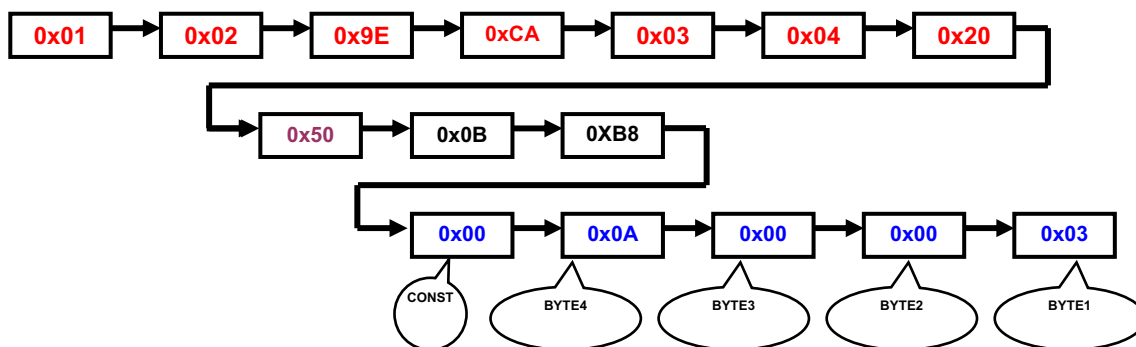
Ex 2) Response “Error Status” – ex) Error Status is “JAM ERROR”.



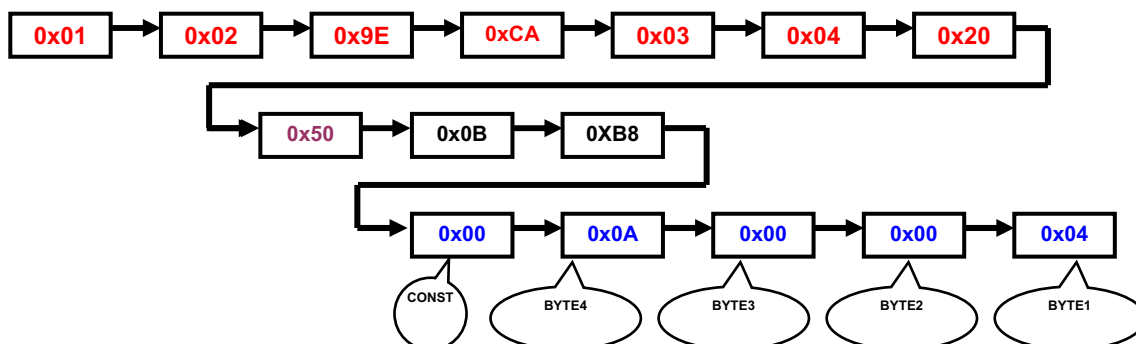
Ex 3) Response “Error Status” – ex) Error Status is “CIS JAM ERROR”.



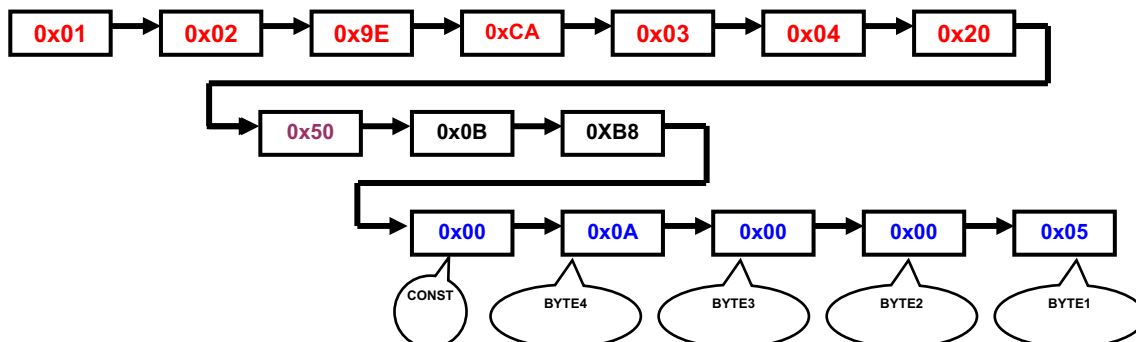
Ex 4) Response “Error Status” – ex) Error Status is “MAIN JAM ERROR”.



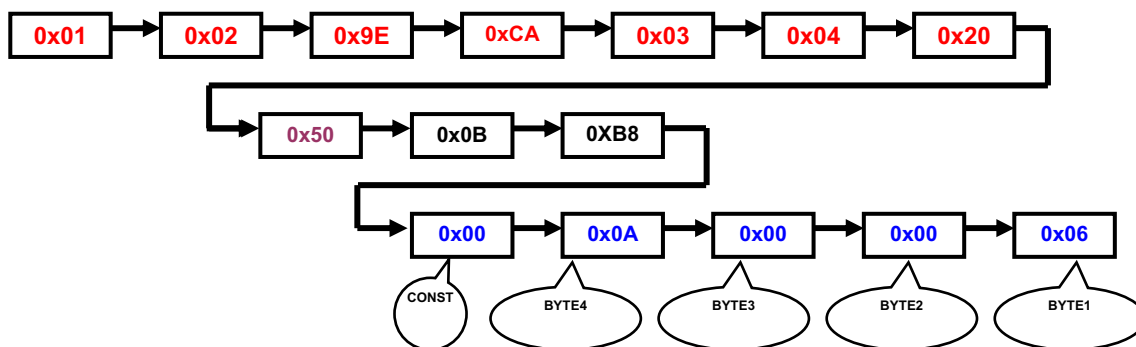
Ex 5) Response “Error Status” – ex) Error Status is “REJECT JAM ERROR”.



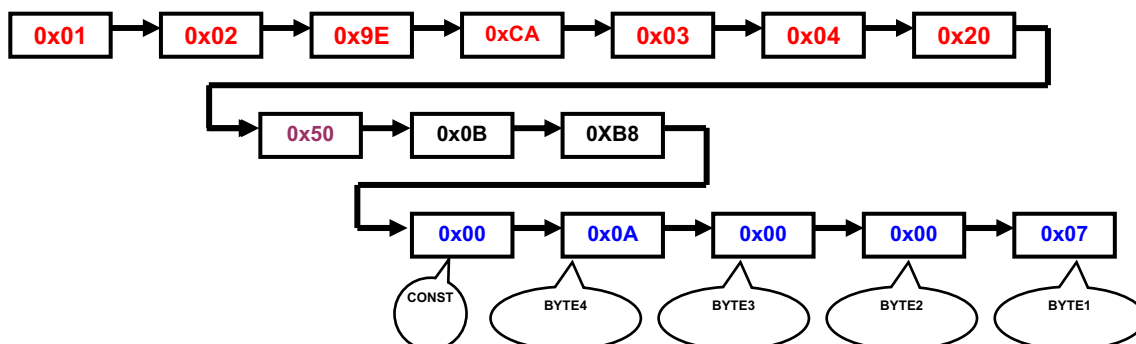
Ex 6) Response “Error Status” – ex) Error Status is “CAM JAM ERROR”.



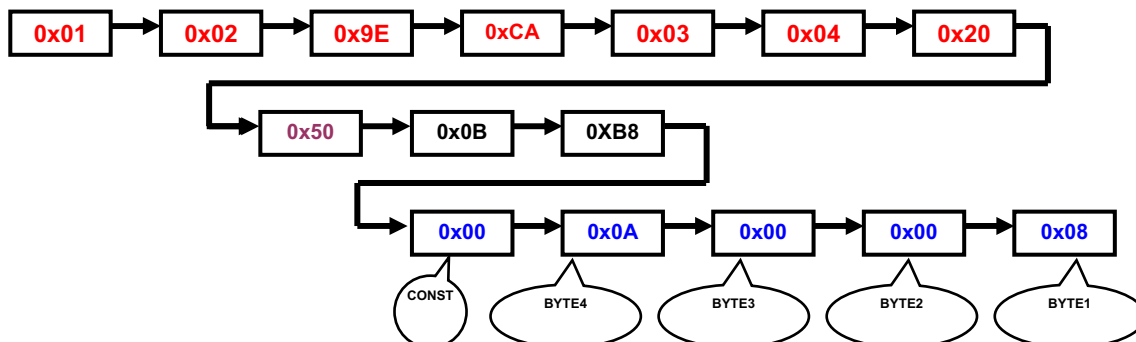
Ex 7) Response “Error Status” – ex) Error Status is “SKEW ERROR”.



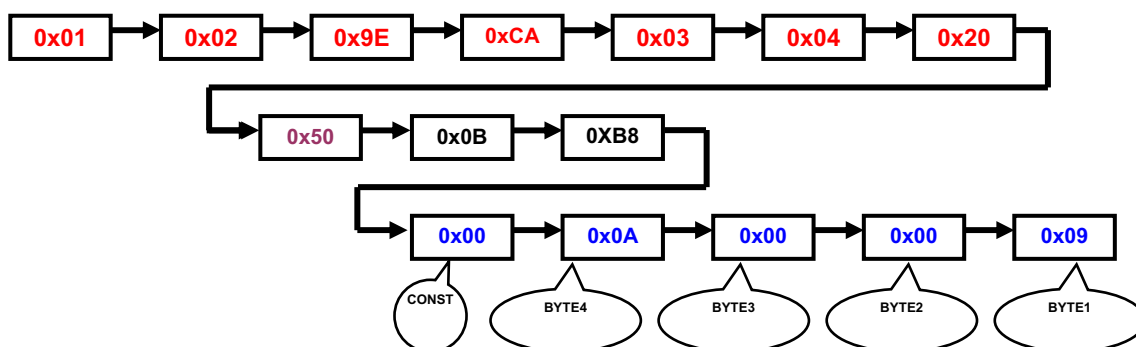
Ex 8) Response “Error Status” – ex) Error Status is “CIS SKEW ERROR”.



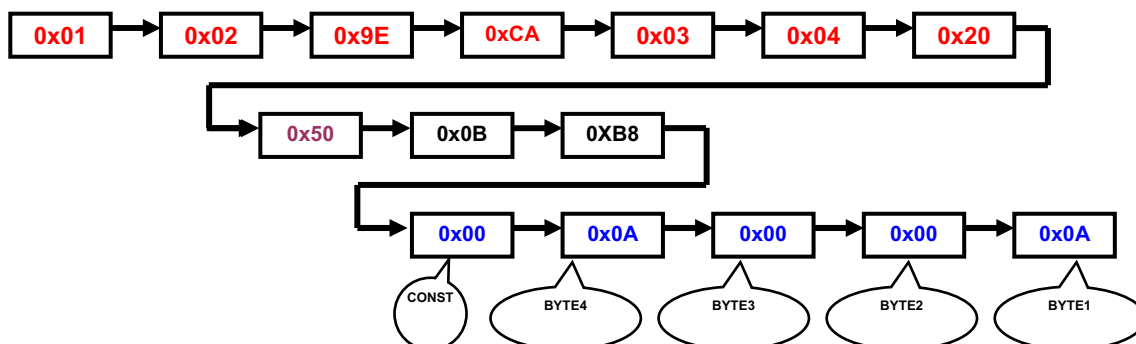
Ex 9) Response “Error Status” – ex) Error Status is “CFUVMG SKEW ERROR”.



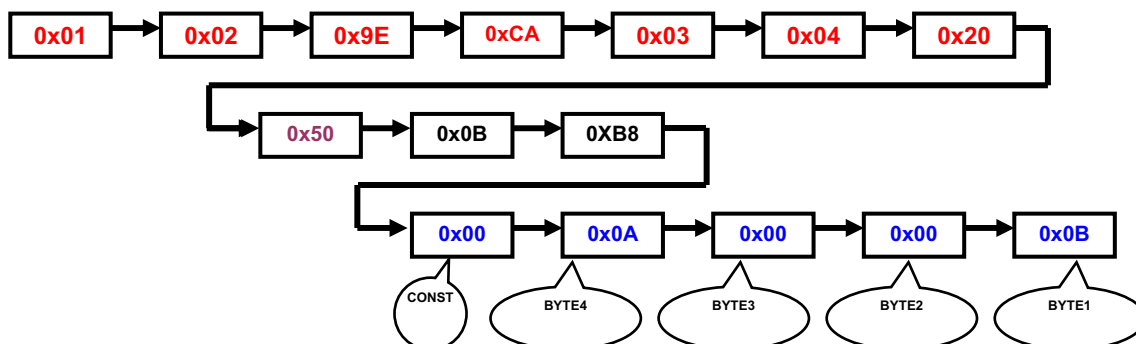
Ex 10) Response “Error Status” – ex) Error Status is “CFIR SKEW ERROR”.



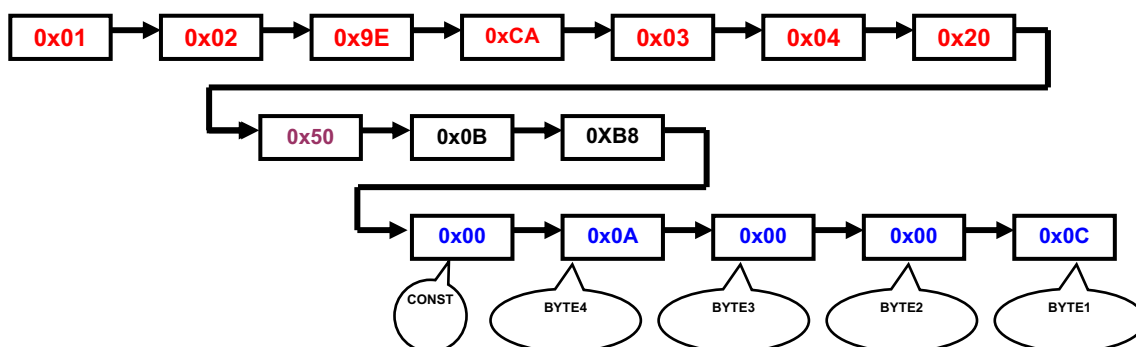
Ex 11) Response “Error Status” – ex) Error Status is “SEPARATOR ERROR”.



Ex 12) Response “Error Status” – ex) Error Status is “GAP KNOB PLUS ERROR”.



Ex 13) Response “Error Status” – ex) Error Status is “GAP KNOB MINUS ERROR”.



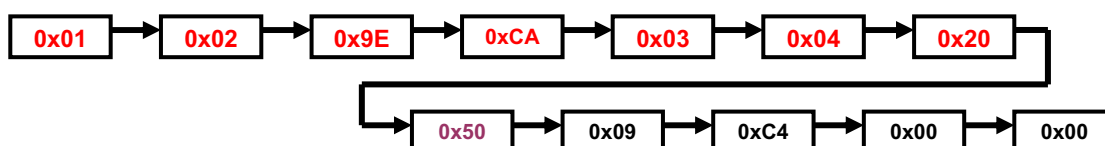
4.6.5.18.1 COMMAND “REPORT Text LCD Screen”

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
1	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	5100 (0x13EC)	X (Ignore)	X (Ignore)	Report Text LCD Screen

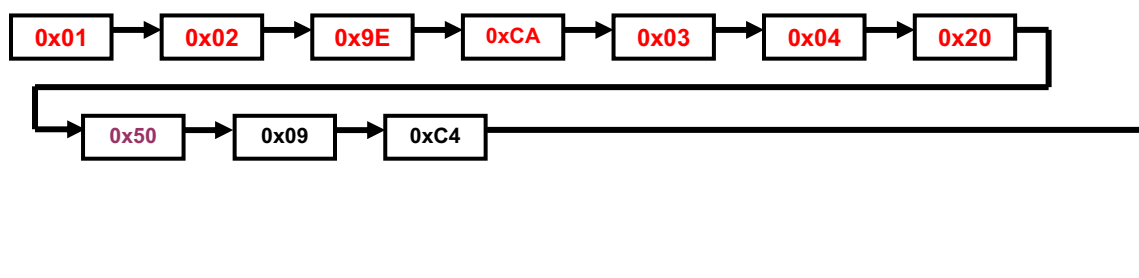
4.6.5.18.2 RESPONSE “Text LCD Screen”

INDEX	COMMAND PATTERN	SENDING CODE								COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	Command VALUE1	Command VALUE2	Command VALUE N	Command VALUE21	Command VALUE22	EXPLANATION
1	PATTERN K	Start Code, 7 Bytes (Permanent Value)	80 (0x50)	5100 (0x13EC)	ASCII (Byte)	ASCII (Byte )	.....	ASCII (Byte)	ASCII (Byte)	Text LCD Screen

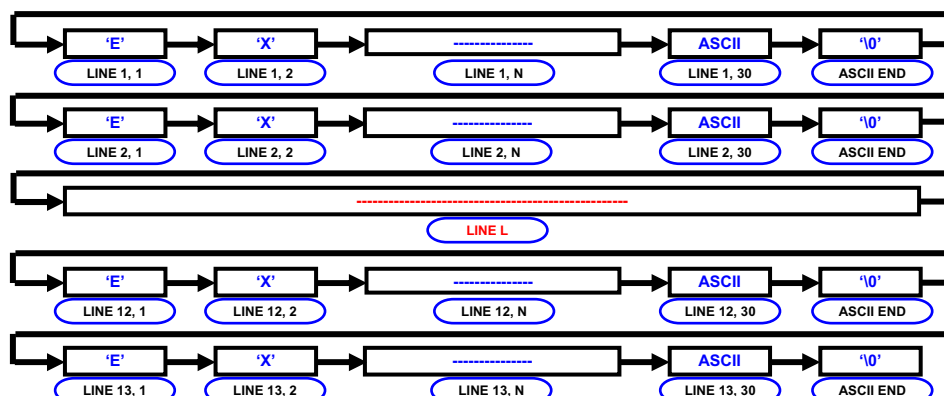
Ex 1) Command “Report Text LCD Screen”



Ex 2) Response “Text LCD Screen”



ex) The Total line is “13 LINES”.
Each Line has “31 ASCII”.



4-7. SUMMMERY OF COMMAND PROTOCOL
(COMMAND AND RESPONSE)

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME EXPLANATION
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	
1	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20	17 (0x0011)	Key Value (unsigned int)		Press Key.
2	PATTERN A	Start Code, 7 Bytes (Permanent Value)	20	4352 (0x1100)	Key Value (unsigned int)		Press and hold down Key.
3	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40	100	Batch Value (unsigned int)		Set Batch Value.
4	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40	200	Level Value	Ignore	Set Level Value.
5	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40	300	Speed Value	Ignore	Set Speed Value.
6	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40	400	On / Off	Ignore	Set Add Function.
7	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40	500	On / Off	Ignore	Set CF Function .
8	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40	600	Currency Data	Ignore	Set Currency.
9	PATTERN C	Start Code, 7 Bytes (Permanent Value)	40	700	Mode	Detail Mode	Set Mode.
10	PATTERN B	Start Code, 7 Bytes (Permanent Value)	40	800	Manual / Auto	Ignore	Set "AUTO" or "MANUAL".
11	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40	900	Key Value (unsigned int)		Set Lock Keys.
12	PATTERN A	Start Code, 7 Bytes (Permanent Value)	40	1000	Key Value (unsigned int)		Set Unlock Keys.
13	PATTERN D	Start Code, 7 Bytes (Permanent Value)	60	100	Ignore		Print to "SERIAL PRINTER".
14	PATTERN D	Start Code, 7 Bytes (Permanent Value)	60	200	Ignore		Print to "LCD DISPLAY".
15	PATTERN D	Start Code, 7 Bytes (Permanent Value)	60	300	Ignore		Start Counting notes.
16	PATTERN D	Start Code, 7 Bytes (Permanent Value)	60	400	Ignore		Operate Standby Status for counting.
17	PATTERN D	Start Code, 7 Bytes (Permanent Value)	60	500	Ignore		Operate User Menu.
18	PATTERN D	Start Code, 7 Bytes (Permanent Value)	60	600	Ignore		Operate Print Menu.

INDEX	COMMAND PATTERN	SENDING CODE					COMMAND NAME
		START CODE FOR COMMAND	TYPE OF COMMAND	DETAIL COMMAND	COMMAND VALUE1	COMMAND VALUE0	EXPLANATION
19	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	1	Ignore		Report ready to use RS-232 PORT.
20	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	10	Ignore		Report Key Status.
21	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	100	Ignore		Report Batch Value.
22	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	200	Ignore		Report Level for double detection.
23	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	300	Ignore		Report Speed Value.
24	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	400	Ignore		Report ADD Function.
25	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	500	Ignore		Report CF Function.
26	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	600	Ignore		Report Currency.
27	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	700	Ignore		Report Mode.
28	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	800	Ignore		Report AUTO / MANUAL.
29	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	900	Ignore		Report Reject Pocket Activity
30	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	1000	Ignore		Report Reject Count Number.
31	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	1100	Ignore		Report Main Count Number
32	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	1300	Ignore		Report Value Number
33	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	1600	Ignore		Report Mix Dispenser Value Number.
34	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	2000	Ignore		Report Serial Number.
35	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	2100	Ignore		Report Software Version.
36	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	2200	Ignore		Report Serial Number & Software Version together.
37	PATTERN J	Start Code, 7 Bytes (Permanent Value)	80	2500	Ignore		Report Denominations.
38	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	3000	Ignore		Report Error Status.
39	PATTERN D	Start Code, 7 Bytes (Permanent Value)	80	5000	Ignore		Report Current Status
40	PATTERN K	Start Code, 7 Bytes (Permanent Value)	80	5100	Ignore		Report Text LCD Screen