

Communication Manual

SUNJE

SXC-104N

Eng

1 RS-485 Communication

1. Pin

- 24 Pin : RS-485(+)
- 25 Pin : RS-485(-)

2. Communication Spec.

- Baud : 9600
- Parity Bit : None
- Data Bit : 8
- Stop Bit : 1
- ※ Baud can be changed in the Controller Setting menu.

2 Communication Protocol

Command Format					Communication device → SXC-104N									
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	C	M	D	,	A	*	Checksum	CR	LF	

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	A : Photo	Photo Type Ionizer
2	Ionizer Model	1	M : SXC-104N	
1,2	Broadcasting	2	ZB	Respond to any kinds of product
4~6	Command	3	REQ/RQT : Request, RUN/RUn : Run, STP/STn : Stop	
8	Address	1	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G	Photo : 1 ~ 16
9	End Code	1		
10, 11	Check Sum	2	Check Sum	
12, 13	Carriage Return, Line Feed	2		

1. Data Request					Communication device → SXC-104N									
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	R	E	Q	,	A	*	Checksum	CR	LF	

1.1 Data Receive					Communication device — SXC-104N											
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13		
ASCII	\$	P	M	,	A	,	H/C	,	H/O	,	H/A	,	Head			
Byte	14	15	16	17	18	19	20	21	22	23	24	25	26	27		
ASCII	Run Time(1)			,	H/C		,	H/O		,	H/A		,	Head Run Time(2)		
Byte	28	29	30	31	32	33	34	35	36	37	38	39	40	41		
ASCII		,	H/C		,	H/O		,	H/A		,	Head Run Time(3)			,	
Byte	42	43	44	45	46	47	48	49	50	51	52	53	54	55		
ASCII	H/C		,	H/O		,	H/A		,	Head Run Time(4)				,	I/S	,
Byte	56	57	58	59	60	61	62	63	64	65	66	67				
ASCII	R/S	,	P/S		,	A/S		,	R/S		*	Checksum		CR	LF	

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	A : Photo	Photo Type Ionizer
2	Ionizer Model	1	M : SXC-104N	
4	Address	1	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G	Photo : 1 ~ 16
6	Head 1 Connect	1	1 : Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
8	Head 1 Over Time	1	0 : Normal, 1 : Abnormal	Abnormal when overtime
10	Head 1 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
12~16	Head 1 Run Time	5	00000 ~ 99999 Hour	
18	Head 2 Connect	1	1 : Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
20	Head 2 Over Time	1	0 : Normal, 1 : Abnormal	Abnormal when overtime
22	Head 2 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
24~28	Head 2 Run Time	5	00000 ~ 99999 Hour	
30	Head 3 Connect	1	1 : Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
32	Head 3 Over Time	1	0 : Normal, 1 : Abnormal	Abnormal when overtime
34	Head 3 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
36~40	Head 3 Run Time	5	00000 ~ 99999 Hour	
42	Head 4 Connect	1	1 : Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
44	Head 4 Over Time	1	0 : Normal, 1 : Abnormal	Abnormal when overtime
46	Head 4 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
48~52	Head 4 Run Time	5	00000 ~ 99999 Hour	
54	Controller Interlock State	1	1 : Normal, 0 : Abnormal	0 : Interlock Off, 1 : Interlock On
56	Controller Remote State	1	1 : On, 0 : Off	1 : Remote On, 0 : Remote Off
58	Controller Power State	1	1 : Normal, 0 : Abnormal	0 : Power Off, 1 : Power On
60	Controller Alarm State	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal when more than 1 Head alarm appears
62	Controller Run/Stop State	1	1 : Run, 0 : Stop	
63	End Code	1		
64, 65	Check Sum	2	Check Sum	
66, 67	Carriage Return, Line Feed	2		

2. Data Request					Communication device → SXC-104N									
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	R	Q	T	,	A	*	Checksum		CR	LF

2.1 Data Receive					Communication device — SXC-104N										
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13	
ASCII	\$	P	M	,	A	,	R	Q	T	,	H/C	,	H/O	,	
Byte	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
ASCII	H/A	,	H/R	,	H/V	,	H/T	,	Head Run Time(1)					,	
Byte	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
ASCII	H/C	,	H/O	,	H/A	,	H/R	,	H/V	,	H/T	,	Head		
Byte	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
ASCII	Run Time(2)		,	H/C	,	H/O	,	H/A	,	H/R	,	H/V	,		
Byte	56	57	58	59	60	61	62	63	64	65	66	67	68	69	
ASCII	H/T	,	Head Run Time(3)					,	H/C	,	H/O	,	H/A	,	
Byte	70	71	72	73	74	75	76	77	78	79	80	81	82	83	
ASCII	H/R	,	H/V	,	H/T	,	Head Run Time(4)						I/S	,	
Byte	84	85	86	87	88	89	90	91	92	93	94	95			
ASCII	R/S	,	P/S	,	A/S	,	R/S	*	Checksum	CR	LF				

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	A : Photo	Photo Type Ionizer
2	Ionizer Model	1	M : SXC-104N	
4	Address	1	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G	Photo : 1 ~ 16
6~8	Command	3	RQT : Request	
10	Head 1 Connect	1	1: Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
12	Head 1 Over Time	1	0: Normal, 1 : Abnormal	Abnormal when overtime
14	Head 1 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
16	Head 1 Run	1	0 : Stop, 1 : Run	
18	Head 1 H/V	1	0 : 5kV, 1 : 10kV, 3 : 15kV	
20	Head 1 Type	1	0 : T/N type, 1 : S type, 2 : SP type(all in one), 3: SP type(replaceable), 4: SD type	
22~26	Head 1 Run Time	5	00000 ~ 99999 Hour	
28	Head 2 Connect	1	1: Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
30	Head 2 Over Time	1	0: Normal, 1 : Abnormal	Abnormal when overtime
32	Head 2 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
34	Head 2 Run	1	0 : Stop, 1 : Run	
36	Head 2 H/V	1	0 : 5kV, 1 : 10kV, 3 : 15kV	
38	Head 2 Type	1	0 : T/N type, 1 : S type, 2 : SP type(all in one), 3: SP type(replaceable), 4: SD type	
40~44	Head 2 Run Time	5	00000 ~ 99999 Hour	
46	Head 3 Connect	1	1: Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
48	Head 3 Over Time	1	0: Normal, 1 : Abnormal	Abnormal when overtime
50	Head 3 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
52	Head 3 Run	1	0 : Stop, 1 : Run	
54	Head 3 H/V	1	0 : 5kV, 1 : 10kV, 3 : 15kV	
56	Head 3 Type	1	0 : T/N type, 1 : S type, 2 : SP type(all in one), 3: SP type(replaceable), 4: SD type	
58~62	Head 3 Run Time	5	00000 ~ 99999 Hour	
64	Head 4 Connect	1	1: Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
66	Head 4 Over Time	1	0: Normal, 1 : Abnormal	Abnormal when overtime
68	Head 4 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
70	Head 4 Run	1	0 : Stop, 1 : Run	
72	Head 4 H/V	1	0 : 5kV, 1 : 10kV, 3 : 15kV	
74	Head 4 Type	1	0 : T/N type, 1 : S type, 2 : SP type(all in one), 3: SP type(replaceable), 4: SD type	
76~80	Head 4 Run Time	5	00000 ~ 99999 Hour	
82	Controller Interlock State	1	1 : Normal, 0 : Abnormal	0 : Interlock Off, 1 : Interlock On
84	Controller Remote State	1	1 : On, 0 : Off	1 : Remote On, 0 : Remote Off
86	Controller Power State	1	1 : Normal, 0 : Abnormal	0 : Power Off, 1 : Power On
88	Controller Alarm State	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal when more than 1 Head alarm appears
90	Controller Run/Stop State	1	1 : Run, 0 : Stop	
91	End Code	1		
92, 93	Check Sum	2	Check Sum	
94, 95	Carriage Return, Line Feed	2		

3. Run [batch control]					Communication device → SXC-104N									
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	R	U	N	,	A	*	Checksum		CR	LF

3.1 No Receive				Communication device ← SXC-104N									
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4. Stop [batch control]				Communication device → SXC-104N										
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	S	T	P	,	A	*	Checksum		CR	LF

4.1 No Receive				Communication device ← SXC-104N									
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5. Run [Individual control]					Communication device → SXC-104N									
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	R	U	n	,	A	*	Checksum	CR	LF	

5.1 Data Receive					Communication device — SXC-104N										
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13	
ASCII	\$	P	M	,	A	,	R	U	n	,	H/C	,	H/O	,	
Byte	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
ASCII	H/A	,	H/R	,	H/V	,	H/T	,	Head Run Time(1)						,
Byte	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
ASCII	H/C	,	H/O	,	H/A	,	H/R	,	H/V	,	H/T	,	Head		
Byte	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
ASCII	Run Time(2)		,	H/C	,	H/O	,	H/A	,	H/R	,	H/V	,		
Byte	56	57	58	59	60	61	62	63	64	65	66	67	68	69	
ASCII	H/T	,	Head Run Time(3)				,	H/C	,	H/O	,	H/A	,		
Byte	70	71	72	73	74	75	76	77	78	79	80	81	82	83	
ASCII	H/R	,	H/V	,	H/T	,	Head Run Time(4)					,	I/S	,	
Byte	84	85	86	87	88	89	90	91	92	93	94	95			
ASCII	R/S	,	P/S	,	A/S	,	R/S	*	Checksum	CR	LF				

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	A : Photo	Photo Type Ionizer
2	Ionizer Model	1	M : SXC-104N	
4	Address	1	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G	Photo : 1 ~ 16
6~8	Command	3	n : 1 ~ F	refer to page 08 example
10	Head 1 Connect	1	1: Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
12	Head 1 Over Time	1	0: Normal, 1 : Abnormal	Abnormal when overtime
14	Head 1 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
16	Head 1 Run	1	0 : Stop, 1 : Run	
18	Head 1 H/V	1	0 : 5kV, 1 : 10kV, 3 : 15kV	
20	Head 1 Type	1	0 : T/N type, 1 : S type, 2 : SP type(all in one), 3: SP type(replaceable), 4: SD type	
22~26	Head 1 Run Time	5	00000 ~ 99999 Hour	
28	Head 2 Connect	1	1: Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
30	Head 2 Over Time	1	0: Normal, 1 : Abnormal	Abnormal when overtime
32	Head 2 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
34	Head 2 Run	1	0 : Stop, 1 : Run	
36	Head 2 H/V	1	0 : 5kV, 1 : 10kV, 3 : 15kV	
38	Head 2 Type	1	0 : T/N type, 1 : S type, 2 : SP type(all in one), 3: SP type(replaceable), 4: SD type	

Byte	Information	Byte	Comment	Remarks
40~44	Head 2 Run Time	5	00000 ~ 99999 Hour	
46	Head 3 Connect	1	1: Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
48	Head 3 Over Time	1	0: Normal, 1 : Abnormal	Abnormal when overtime
50	Head 3 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
52	Head 3 Run	1	0 : Stop, 1 : Run	
54	Head 3 H/V	1	0 : 5kV, 1 : 10kV, 3 : 15kV 0 : T/N type, 1 : S type, 2 : SP type(all in one), 3: SP type(replaceable), 4: SD type	
56	Head 3 Type	1		
58~62	Head 3 Run Time	5	00000 ~ 99999 Hour	
64	Head 4 Connect	1	1: Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
66	Head 4 Over Time	1	0: Normal, 1 : Abnormal	Abnormal when overtime
68	Head 4 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
70	Head 4 Run	1	0 : Stop, 1 : Run	
72	Head 4 H/V	1	0 : 5kV, 1 : 10kV, 3 : 15kV 0 : T/N type, 1 : S type, 2 : SP type(all in one), 3: SP type(replaceable), 4: SD type	
74	Head 4 Type	1		
76~80	Head 4 Run Time	5	00000 ~ 99999 Hour	
82	Controller Interlock State	1	1 : Normal, 0 : Abnormal	0 : Interlock Off, 1 : Interlock On
84	Controller Remote State	1	1 : On, 0 : Off	1 : Remote On, 0 : Remote Off
86	Controller Power State	1	1 : Normal, 0 : Abnormal	0 : Power Off, 1 : Power On
88	Controller Alarm State	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal when more than 1 Head alarm appears
90	Controller Run/Stop State	1	1 : Run, 0 : Stop	
91	End Code	1		
92, 93	Check Sum	2	Check Sum	
94, 95	Carriage Return, Line Feed	2		

6. Stop [Individual control]					Communication device → SXC-104N									
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	S	T	n	,	A	*	Checksum	CR	LF	

6.1 Data Receive					Communication device ← SXC-104N										
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13	
ASCII	\$	P	M	,	A	,	S	T	n	,	H/C	,	H/O	,	
Byte	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
ASCII	H/A	,	H/R	,	H/V	,	H/T	,	Head Run Time(1)					,	
Byte	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
ASCII	H/C	,	H/O	,	H/A	,	H/R	,	H/V	,	H/T	,	Head		
Byte	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
ASCII	Run Time(2)				,	H/C	,	H/O	,	H/A	,	H/R	,	H/V	,
Byte	56	57	58	59	60	61	62	63	64	65	66	67	68	69	
ASCII	H/T	,	Head Run Time(3)					,	H/C	,	H/O	,	H/A	,	
Byte	70	71	72	73	74	75	76	77	78	79	80	81	82	83	
ASCII	H/R	,	H/V	,	H/T	,	Head Run Time(4)					,	I/S	,	
Byte	84	85	86	87	88	89	90	91	92	93	94	95			
ASCII	R/S	,	P/S	,	A/S	,	R/S	*	Checksum	CR	LF				

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	A : Photo	Photo Type Ionizer
2	Ionizer Model	1	M : SXC-104N	
4	Address	1	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G	Photo : 1 ~ 16
6~8	Command	3	n : 1 ~ F	refer to page 08 example
10	Head 1 Connect	1	1: Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
12	Head 1 Over Time	1	0: Normal, 1 : Abnormal	Abnormal when overtime
14	Head 1 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
16	Head 1 Run	1	0 : Stop, 1 : Run	
18	Head 1 H/V	1	0 : 5kV, 1 : 10kV, 3 : 15kV 0 : T/N type, 1 : S type, 2 : SP type(all in one), 3: SP type(replaceable), 4: SD type	
20	Head 1 Type	1		
22~26	Head 1 Run Time	5	00000 ~ 99999 Hour	
28	Head 2 Connect	1	1: Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
30	Head 2 Over Time	1	0: Normal, 1 : Abnormal	Abnormal when overtime
32	Head 2 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
34	Head 2 Run	1	0 : Stop, 1 : Run	
36	Head 2 H/V	1	0 : 5kV, 1 : 10kV, 3 : 15kV 0 : T/N type, 1 : S type, 2 : SP type(all in one), 3: SP type(replaceable), 4: SD type	
38	Head 2 Type	1		
40~44	Head 2 Run Time	5	00000 ~ 99999 Hour	
46	Head 3 Connect	1	1: Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
48	Head 3 Over Time	1	0: Normal, 1 : Abnormal	Abnormal when overtime
50	Head 3 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
52	Head 3 Run	1	0 : Stop, 1 : Run	
54	Head 3 H/V	1	0 : 5kV, 1 : 10kV, 3 : 15kV 0 : T/N type, 1 : S type, 2 : SP type(all in one), 3: SP type(replaceable), 4: SD type	
56	Head 3 Type	1		
58~62	Head 3 Run Time	5	00000 ~ 99999 Hour	
64	Head 4 Connect	1	1: Normal, 0 : Abnormal	0 : Head Not Con, 1 : Head Con (Judge initial connection)
66	Head 4 Over Time	1	0: Normal, 1 : Abnormal	Abnormal when overtime
68	Head 4 Alarm	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal except 0
70	Head 4 Run	1	0 : Stop, 1 : Run	
72	Head 4 H/V	1	0 : 5kV, 1 : 10kV, 3 : 15kV 0 : T/N type, 1 : S type, 2 : SP type(all in one), 3: SP type(replaceable), 4: SD type	
74	Head 4 Type	1		
76~80	Head 4 Run Time	5	00000 ~ 99999 Hour	
82	Controller Interlock State	1	1 : Normal, 0 : Abnormal	0 : Interlock Off, 1 : Interlock On
84	Controller Remote State	1	1 : On, 0 : Off	1 : Remote On, 0 : Remote Off
86	Controller Power State	1	1 : Normal, 0 : Abnormal	0 : Power Off, 1 : Power On
88	Controller Alarm State	1	0 : Normal, 1 : Head Fail, 2: Over Current 3 : Comm Out	Abnormal when more than 1 Head alarm appears
90	Controller Run/Stop State	1	1 : Run, 0 : Stop	
91	End Code	1		
92, 93	Check Sum	2	Check Sum	
94, 95	Carriage Return, Line Feed	2		

Individual & multiple control of head

- Individual & multiple control of head is possible by using communication protocol.
- It is possible only when the remote is not used.
- When "Run" or "STn" is received, status information is transmitted.

Communication Command			Individual controlled objects (0: Unselect, 1: Select)			
			Head 04	Head 03	Head 02	Head 01
R	U	1	0	0	0	1
		2	0	0	1	0
		3	0	0	1	1
		4	0	1	0	0
		5	0	1	0	1
		6	0	1	1	0
		7	0	1	1	1
		8	1	0	0	0
		9	1	0	0	1
		A	1	0	1	0
		B	1	0	1	1
		C	1	1	0	0
		D	1	1	0	1
		E	1	1	1	0
		F	1	1	1	1
S	T	1	0	0	0	1
		2	0	0	1	0
		3	0	0	1	1
		4	0	1	0	0
		5	0	1	0	1
		6	0	1	1	0
		7	0	1	1	1
		8	1	0	0	0
		9	1	0	0	1
		A	1	0	1	0
		B	1	0	1	1
		C	1	1	0	0
		D	1	1	0	1
		E	1	1	1	0
		F	1	1	1	1

7. Control [Serial Number]					Communication device → SXC-104N									
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	C	S	N	,	A	*	Checksum	CR	LF	

7.1 Data Receive					Communication device ← SXC-104N									
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	A	,	C	S	N	,	Controller -			
Byte	14	15	16	17	18	19	20	21	22	23	24	25	26	27
ASCII	Serial Number						Spare				*	Checksum	CR	
Byte	28													
ASCII	LF													

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	Photo Type Ionizer	A : Photo
2	Ionizer Model	1	M : SXC-104N	
4	Address	1	Photo : 1 ~ 16	1,2,3,4,5,6,7,8,9, A,B,C,D,E,F,G
6~8	Command	3	CSN : Controller Serial Number	
10~19	Controller Serial Number	10		
20~23	Spare	4		
24	End Code	1	Check Sum	
25, 26	Check Sum	2		
27, 28	Carriage Return, Line Feed	2		

8. Control [Serial Number]					Communication device → SXC-104N									
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	H	S	N	,	A	*	Checksum	CR	LF	

8.1 Data Receive					Communication device ← SXC-104N									
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	A	,	H	S	N	,				
Byte	14	15	16	17	18	19	20	21	22	23	24	25	26	27
ASCII	Head Serial Number 1													
Byte	28	29	30	31	32	33	34	35	36	37	38	39	40	41
ASCII	Head Serial Number 2													
Byte	42	43	44	45	46	47	48	49	50	51	52	53	54	55
ASCII	Head Serial Number 3													
Byte	56	57	58	59	60	61	62	63	64	65	66	67	68	69
ASCII	Head Serial Number 4													*
Byte	70	71	72	73										
ASCII	Checksum		CR	LF										

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	Photo Type Ionizer	A : Photo
2	Ionizer Model	1	M : SXC-104N	
4	Address	1	Photo : 1 ~ 16	1,2,3,4,5,6,7,8,9, A,B,C,D,E,F,G
6~8	Command	3	HSN : Head Serial Number	
10~23	Head Serial Number 1	11		
25~38	Head Serial Number 2	14		
40~53	Head Serial Number 3	14		
55~68	Head Serial Number 4	14		
69	End Code	1		
70, 71	Check Sum	2	Check Sum	
72, 73	Carriage Return, Line Feed	2		

※ Manual creation is based on SXC-104N.
SXC-102N only transmits head 1 and 2 information.

Checksum Calculation														
\$ ~ * Calculation														
#include<stdio.h>														
void main() { char packet[] = "AM,REQ,1", cksum = 0; int i, size = 0; while(packet[size] !='\0') size++; for(i = 0 ; i < size ; i++) { if(i == 0) cksum = packet[i]; else cksum^= packet[i]; printf("packet[%d] = %c, checksum = %.2x\n", i, packet[i], cksum); } printf("Request : \$AM,REQ,1*%.2X",cksum); //Checksum character send by ASCII. }														

※ Checksum is Exclusive-or operation of all data from after \$ mark to before *mark.

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