Command List

Command type	Communication Direction	Meaning
Transceive	ID1 -> PC	Transfers the command automatically according to the status, and the side that receives the command d not reply with an ACK
Read out	PC -> ID1	The command request that reads out the setting values inside the ID-1. The ID-1 resplies with the setting values with ACK command.
ACK	ID1 -> PC	The ACK command that responds to the read-out command.
Mode	PC -> ID1	The command that sets the setting values in the inside the ID-1. The ID-1 replies with an OK ACK or a NG ACK to indicate whether it has accepted the setting values or not.
OK ACK	ID1 -> PC	Responds with an OK ACK when the setting has been carried out correctly.
NG ACK	ID1 -> PC	Responds with an NG ACK when the setting has not been carried out correctly.

Operation		Command Type	Command	Subcommand	Data	Data length
Program frequency		Transceive	00		BCD (5bytes) (See frequency data details)	1 - 2
		Set	05		BCD (5bytes) (See frequency data details)	1 - 2
Mode setting	FM	Transceive	01		05 01	2
		Set	06		05 01	2
	Digital voice	Transceive	01		D0 01	2
		Set	06		D0 01	2
	Digital data	Transceive	01		D1 01	2
		Set	06		D1 01	2
Ffrequency Read out		Read out	03			0
		ACK	03		BCD (5bytes) (See frequency data details)	5
Mode Read out		Read out	04			0
		ACK	04		xx 01 Type of Mode (See Mode setting for details)	2
Memory Write	Memory Ch	Transceive	09	00	0 ,BCD BCD,BCD (00 - 99, 100, 101 Ch) PA=100 PB=101	2
	Call C1	Transceive	09	01	00 01	2
	Call C2	Transceive	09	01	00 02	2
	Call C3	Transceive	09	01	00 03	2
Memory→VFO		Set	0A			0
Offset frequency Read out		Read out	0C			0
		ACK/Transceive	0C		BCD (3bytes) (See Offset frequency data details)	3
Program offset frequency		Set	0D		BCD (3bytes) (See Offset frequency data details)	3
Scan Read out		Read out	0E			0
		ACK/Transceive	0E	ww Scan Mode (See Scan setting details)	xx yy Scan direction UP=00 DN=01 Scan status RUN=00 PAUSE=01	2
Scan setting	Scan cancel	Set	0E	00	00	1
	Program Scan Start	Set	0E	02	xx Scan direction UP=00 DN=01	1
	Memory Scan Start	Set	0E	22	xx Scan direction UP=00 DN=01	1
	Mode Select Scan Start	Set	0E	24	xx	1

				Scan direction UP=00 DN=01	

Operation	Command Type	Command	Subcommand	Data	Data Length
Scan seting PRIO Scan Start	Set	0E	42	xx Scan direction UP=00 DN=01	1
RP (DUP) Read out	Read out	0F			0
	ACK/Transceive	0F	ww RP type (See RP setting)		0
RP (DUP) programming	Set	0F	ww Simp.=10 ←Simplex RP-=11 ←RP-(DUP-) RP+=12 ←RP+(DUP+) RPS=13 ←RPS		0
TS Read out	Read out	10			0
	ACK/Transceive	10	ww TS type (See Setting)		0
TS programming	Set	10	ww 5kHz=00 10kHz=01 12.5kHz=02 20kHz=03 25kHz=04 50kHz=05 100kHz=06 6.25kHz=07		0
AF VOL Knob Read out	Read out	14	01		0
	ACK/Transceive	14	01	0 ,BCD BCD,BCD (00 - 255 level)	2
AF VOL Knob setting	Set	14	01	0 ,BCD BCD,BCD (00 - 255 level)	2
SQL Knob Rread out	Read out	14	03		0
	ACK/Transceive	14	03	0 ,BCD BCD,BCD (00 - 255 level)	2
SQL Knob Setting	Set	14	03	0 ,BCD BCD,BCD (00 - 255 level)	2
RF Power Read out	Read out	14	0A		0
	ACK/Transceive	14	0A	0 ,BCD BCD,BCD (00 - 255 level)	2
RF Power setting	Set	14	0A	0 ,BCD BCD,BCD (00/255 level) Hi Power =255 Low Power =0	2
Noise SQL Open/Close Read out	Read out	15	01		0
	ACK/Transceive	15	01	xx close=00 open=01	1
S-meter Level Read out	Read out	15	02		0
	ACK/Transceive	14	02	0 ,BCD BCD,BCD (00 - 255 level) Indicates the S-meter resolution	2
AFC Read out	Read out	16	4A		0
	ACK/Transceive	16	4A	xx yy OFF=00 center=00 ON=01 up=01 dn=02	2
AFC Setting	Set	16	4A	xx OFF=00 ON=01	1

Operation	Command Type	Command	Subcommand	Data	Data Length
Power Switch Read out	Read out	18		During Power Switch read out, the number of preamble FE required is 15. When there is no ACK, the command is repeated 15 times.	0
	ACK/Transceive	18		xx (See Power Switch Setting details)	1
Power Switch Setting	Set	18		xx OFF=00 ON=01 During Power Switch read out, the number of preamble FE required is 15. When there is no ACK, the command is repeated 15 times.	1
ID read out	Read out	19		ID read out is used also for identifying control software version. Preamble FE must be repeated 15times when begin reading, will repeat 15times if no response received.	
	ACK/Transceive	19		25, 06, RR, RR, CC,CC, SS,SS,SS 25,06= fixed values (16h) RR, RR=Rev. information CC, CC=version 01=USA SS, SS, SS=firmware check sum information	9
Memory Channnel Information Read out	Read out	1A	00	xx yy, yy xx= M/C yy, yy= Ch. number (See Command 1A 00 for details)	3
	ACK	1A	00	xx yy, yy zz - xx= M/C yy, yy= Ch. number zz - = Memory Ch. Info Contents (See Command 1A 00 for details)	55
Memory Ch. Info. Setting Memory Clear	Set	1A	00	xx yy, yy zz - xx= M/C yy, yy= Ch. number zz= 0xff (Memory Ch. clear value) (See Command 1A 00 for details)	4
Memory write	Set	1A	00	xx yy, yy zz - xx= M/C yy, yy= Ch. number zz - = Memory Ch. Info Setting Contents (See Command 1A 00 for details)	55
Memory Channel SKIP Read out	Read out	1A	01		0
	ACK/Transceive	1A		xx (See Memory Ch. SKIP Setting for details)	1
Memory Channel SKIP Setting	Set	1A	01	xx OFF=00 ON=01	1

Operation	Command Type	Command	Subcommand	Data	Data Length
TONE Read out	Read out	1A	02		0
	ACK/Transceive	1A	02	xx yy (See TONE Setting details) PBEEP Call Rx=01 No RX=00	2
TONE Setting	Set	1A	02	xx OFF=00 TONE=01 PBEEP=02 TSQL=03	1
MUTE Read out	Read out	1A	03	00	1
	ACK/Transceive	1A	03	00 yy OFF=00 ON=01	2
MUTE Setting	Setting	1A	03	00 yy OFF=00 ON=01	2
MONI Read out	Read out	1A	03	01	1
	ACK/Transceive	1A	03	01 yy OFF=00 ON=01	2
	Setting	1A	03	01 yy OFF=00 ON=01	2
Current Status Read out	Read out	1A	04	00	1
	ACK/Transceive	1A	04	00 yy (See Current Status Setting details)	2
Current Status Setting	Setting	1A	04	00 yy VFO=00 Memo=01 CALL=02	2
Memory Channel Read out	Read out	1A	04	01	1
	ACK/Transceive	1A	04	01 0 ,BCD BCD,BCD (See Current Status Setting details)	3
Memory Channel Setting	Setting	1A	04	01 0,BCD BCD,BCD (00 - 99, 100, 101Ch) PA=100 PB=101	3
Call channel read out	Read out	1A	04	02	1
	ACK/Transceive	1A	04	02 BCD,BCD (See CALL Ch. Setting details)	2
CALL Channel Setting	Setting	1A	04	02 BCD,BCD (01 - 03Ch.)	2
VFO/Memo Status Read out	Read out	1A	04	03	1
	ACK/Transceive	1A	04	03 yy (See VFO/Memo Status Setting details)	2
VFO/Memo Status Setting	Setting	1A	04	03 yy VFO=00 Memo=01	2
TX INH Read out	Read out	1A	05	00	1
	ACK/Transceive	1A	05	00 yy (See TX INH Setting details)	2
TX INH Setting	Setting	1A	05	00 yy Tx INH=00	2

				TX Enable=01	

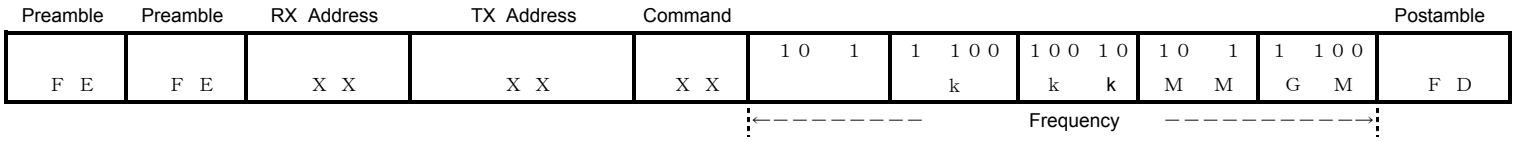
Operation	Command Type	Command	Subcommand	Data	Data Length
BEEP Read out	Read out	1A	05	02	1
	ACK/Transceive	1A	05	02 yy (See BEEP Setting details)	2
BEEP Setting	Setting	1A	05	02 yy OFF=00 ON=01	2
Cooling FAN Read out	Read out	1A	05	03	1
	ACK/Transceive	1A	05	03 yy (See Cooling FAN Setting details)	2
Cooling FAN setting	Setting	1A	05	03 yy AUTO=00 ON=01	2
Auto Repeater Read out	Read out	1A	05	04	1
	ACK/Transceive	1A	05	04 yy (See Auto Repeater Setting details)	2
Auto Repeater Setting	Setting	1A	05	04 yy OFF=00 ON2=01 ←for USA ON1=02 OFF=00 ON=01 ←for JPN	2
Dimmer Read out	Read out	1A	05	05	1
	ACK/Transceive	1A	05	05 yy (See Dimmer Setting details)	2
Dimmer Setting	Setting	1A	05	05 yy Bright=00 Dark=01 OFF=02	2
Scan Resume Timer Read out	Read out	1A	05	06	1
	ACK/Transceive	1A	05	06 yy (See scan Resume Timer Setting details)	2
Scan Resume Timer Setting	Setting	1A	05	06 yy P-2=00 T-5=01 T-10=02 T-15=03	2
Standby Beep read out	Read out	1A	05	07	1
	ACK/Transceive	1A	05	07 yy (See Standby Beep Setting details)	2
Standby Beep Setting	Setting	1A	05	07 yy OFF=00 ON=01	2
Memory Name Read out	Read out	1A	06		0
	ACK/Transceive	1A	06	xx (See Memory Setting details)	1
Memory Name Setting	Setting	1A	06	xx OFF=00 ON=01	1
All Status Read Read out	Read out	1A	09		0
	ACK	--	--	The ID-1 outputs all command ACK values	--
All Memory Clear ACK	ACK/Transceive	1A	0A	41, 4C, 4C When the memory clear is made from the RC-24, the ID-1 transmits the ACK command.	3
All Memory Clear Setting	Setting	1A	0A	41, 4C, 4C	3

Operation	Command Type	Command	Subcommand	Data	Data Length
Lock Read out	Read out	1A	10		0
	ACK/Transceiver	1A	10	xx (See Lock Setting details)	1
Lock Setting	Setting	1A	10	xx OFF=00 ON=01	1
Repeater Tone Frequency Read out	Read out	1B	00		0
	ACK/Transceiver	1B	00	BCD (2bytes) (See tone frequency data details)	2
Repeater Tone Frequency Setting	Setting	1B	00	BCD (2bytes) (See tone frequency data details)	2
CTCSS Tone Frequency Read out	Read out	1B	01		0
	ACK/Transceiver	1B	01	BCD (2bytes) (See tone frequency data details)	2
CTCSS Tone Frequency Setting	Setting	1B	01	BCD (2bytes) (See tone frequency data details)	2
TX(PTT) Read out	Read out	1C	00		0
	ACK/Transceiver	1C	00	xx RX=00 TX=02 TX NG=01	1
D-Star Header FLAG (RX) Read out	Read out	1D	00	00	1
	ACK/Transceiver	1D	00	00 yy zz Top Flag Bottom Flag (See Command 1D 00 for details)	3
DSQL Read out	Read out	1D	01		0
	ACK/Transceiver	1D	01	xx yy (See DSQL Setting) C/DBEEP Call Rx=01 No RX=00	2
DSQL Setting	Setting	1D	01	xx OFF=00 ON=01 PBEEP=03	1
My Callsign Memory Ch Read out	Read out	1D	02		0
	ACK/Transceiver	1D	02	xx (See My Callsign Setting details)	2
My Callsign Memory Ch. Setting	Setting	1D	02	xx (00 - 05) Indicates My Callsign Memory Ch. no.	1

Operation	Command Type	Command	Subcommand	Data	Data Length
My Callsign Read out	Read out	1D	03		0
	ACK/Transceive	1D	03	ASCII (10bytes) 8 characters are valid (Last 2 chara are ingnored)	10
My Callsign Setting	Setting	1D	03	ASCII (10bytes) 8 characters are valid (Last 2 chara are spaces)	10
RX Callsign Read out	Read out	1D	04		0
	ACK/Transceive	1D	04	ASCII (32bytes) RPT2(8) + RPT1(8) + Called(8) + Caller(8) ( ) indicate no. of bytes ID-1 extracts the Callsign received	36
TX Callsign Read out	Read out	1D	05		0
	ACK/Transceive	1D	05	ASCII (24bytes) (See TX Callsign Setting)	26
TX Callsign Setting	Setting	1D	05	ASCII (24bytes) RPT2(8) + RPT1(8) + YOUR(8) + SPACE (2) ( ) indicate no. of bytes ID-1 sets the Callsign transmitted	26
TX Callsign All History Read out	Read out	1D	06		0
	ACK	1D	06	00 + ASCII (160bytes) The ID-1 retrieves all TX Callsigns set in the memory.	161
TX Callsign History Transceive	Transceive	1D	07	ASCII (8bytes) The ID-1 transceives the Callsign as as soon as the Callsign is set.	8
My Callsign All Read out	Read out	1D	08		0
	ACK	1D	08	00 + ASCII (50bytes, My Callsign *5) All 5 My Callsign Memory Channels are retrieved.	51
BREAK Read out	Read out	1D	10		0
	ACK/Transceive	1D	10	xx (See BREAK Setting)	1
BREAK Setting	Setting	1D	10	xx OFF=00 ON=01	1
Auto Reply Read out	Read out	1D	11		0
	ACK/Transceive	1D	11	xx (See Auto Reply Setting)	1
Auto Reply Setting	Setting	1D	11	xx OFF=00 ON=01	1
Auto Display of Rx Callsign Read out	Read out	1D	13		0
	ACK/Transceive	1D	13	xx (See Auto Display of Rx Callsign Setting)	1
Auto Display of Rx Callsign Setting	Setting	1D	13	xx OFF=00 ON=01	1
Auto Display of Own Callsign Read out	Read out	1D	14		0
	ACK/Transceive	1D	14	xx (See Auto Display of Own Callsign Setting)	1
Auto Display of Own Callsign Setting	Setting	1D	14	xx OFF=00 ON=01	1

Operation	Command Type	Command	Subcommand	Data	Data Length
Auto Memorize of Rx Callsign Read out	Read out	1D	15		0
	ACK/Transceive	1D	15	xx (See Auto Memorize of Rx Callsign Setting)	1
Auto Memorize of Rx Callsign Setting	Setting	1D	15	xx OFF=00 ON=01	1
Digital Monitor read out	Read out	1D	16		0
	ACK/Transceive	1D	16	xx (refer to the digital code setting)	1
Digital Monitor setting	Setting	1D	16	xx DIGITAL=00 ANALOG=01	1
Digital Code read out	Read out	1D	17		0
	ACK/Transceive	1D	17	xx (refer to the digital code setting)	1
Digital code set	Setting	1D	17	xx 00 - 99 (BCD)	1
EMERGENCY Read out	Read out	1D	EC		0
	ACK/Transceive	1D	EC	xx (See EMERGENCY Setting)	1
EMERGENCY Setting	Setting	1D	EC	xx OFF=00 ON=01	1
OK Ack	OKAck	FB		(When setting is correct, OK Ack is returned)	0
NG Ack	NG Ack	FA		(When setting is not correct, NG Ack is returned)	0

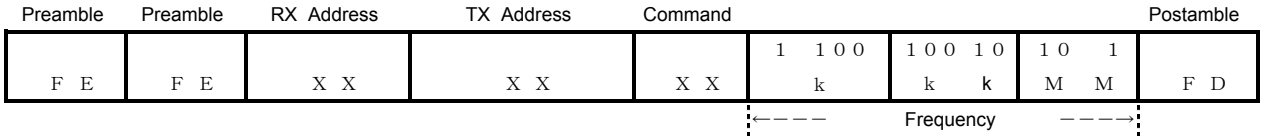
Frequency Data Compostion Details:



Unit: Hz

Lined up from the bottom frequency in 1 byte units

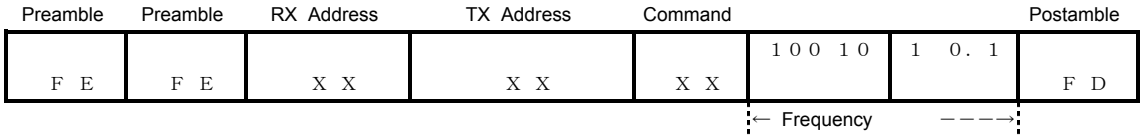
Offeset Frequency Composition Details:



Unit: Hz

Lined up from the bottom frequency in 1 byte units

Tone Frequency Data Composition Details:

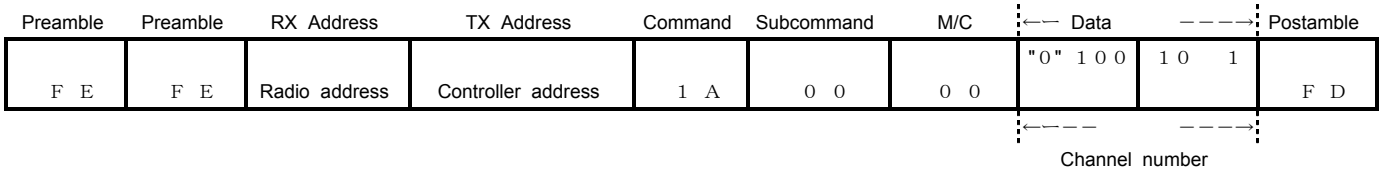


Unit: Hz

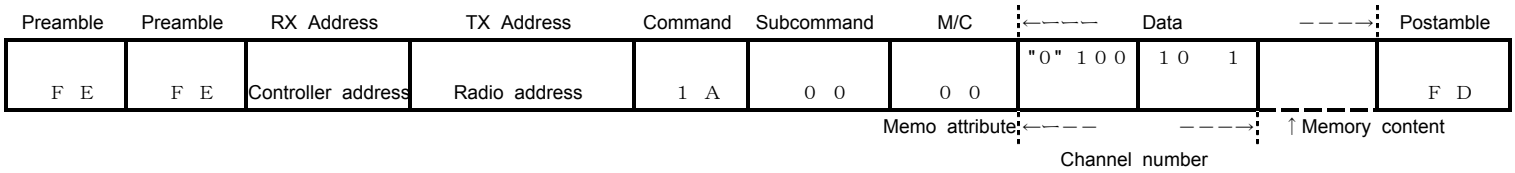
Lined up from the top frequency

Command 1A 00 Details:

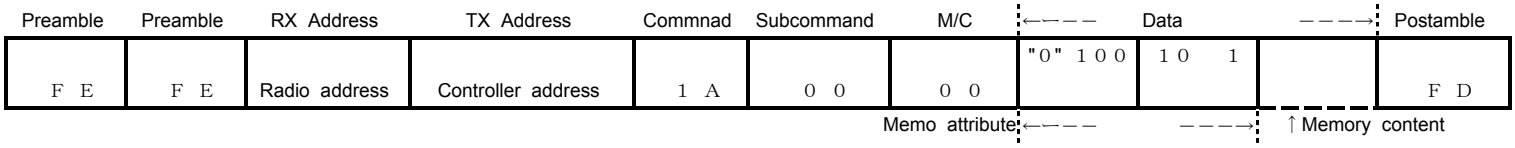
Read out



Ack



Setting



Memory Attribute and Channel Number:

M/C

00	Memory
01	Call

Memory Selection

Data		Channel
00	00	0Ch
	↓	↓
00	99	99Ch
01	00	PA
01	01	PB

Call Selection

Data		Channel
00	01	Call FM
00	02	Call DP
00	03	Call DD

Memory Contents:

Blank

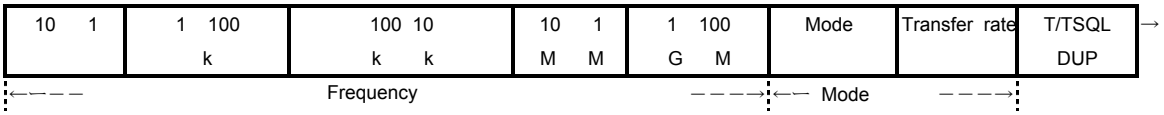
FF

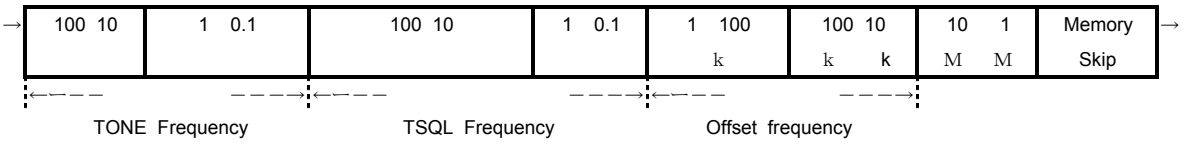
Blank

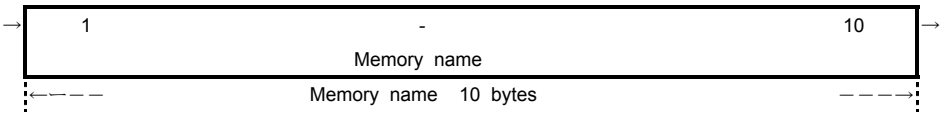
Limit

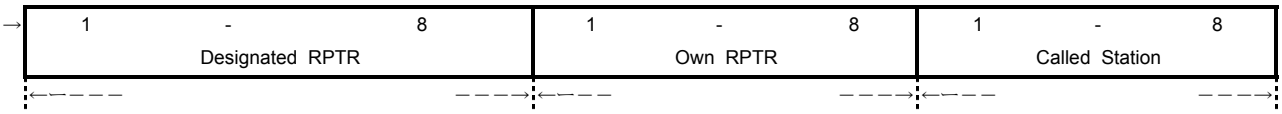
Ch	Blank
1 - 100	Yes
Call	No
PA, PB	No

When not Blank









NB: The last 2 bytes are spaces

CODE	reserved

the last 1 byte is reserved(default 00)

digital code 1 byte

Mode

Data	Mode
05	FM
D0	Digital voice
D1	Digital data

Transfer rate

Data	Transfer rate
01	Fixed

T/TSQL/DCSQL/, DUP, Pocket BEEP:

0 0 0	OFF	0 0	OFF	0 0	Simplex
0 1 0	DSQL	0 1	T	0 1	RP-
1 0 0	CSQL	1 0	none	1 0	RP+
other	none	1 1	TSQL	1 1	RPS

Fixed	DSQL			T/TSQL		DUP	
0	*	*	*	*	*	*	*
7	6	5	4	3	2	1	0 bit

N.B.: The Digital Call SQL is only valid during digital mode, the T/TSQL use is excluded
P.BEEP is not memorized.
Even when DCSQL P.BEEP is on, only the DCSQL is considered ON.

TONE Frequency:

67.0 - 254.1 Hz: 50 tones
(TSQL is the same)

Memory Skip:

Data	Skip
0	OFF
1	ON

Offset Frequency:

0.0000 - 60.0000MHz

Memory Name/Callsign:

	Memory Name	RPTR Callsign	Called Station Callsign
No of Chara	Up to 10 ASCII Code characters	Up to 8 ASCII Code character	Up to 8 ASCII Code characters
Range	""(20h)" - "(7Eh)	""(20h), "/"(2Fh) - "9"(39), "A"(41h) - "Z"(5Ah): 38 types	

Command 1D 00 Details:

Read out:

Preamble	Preamble	RX Address	TX Address	Command	Subcommand	Data	Postamble
F E	F E	Radio address	Controller address	1 D	0 0	0 0	F D

ACK:

Preamble	Preamble	RX Address	TX Address	Command	Subcommand	Data			Postamble
F E	F E	Controller address	Radio address	1 D	0 0	Select Acquire Flag	Top Flag	Bottom Flag	F D

Flags:

The flags consist of 2 bytes:

During digital communication, received flags (1 byte of data) are separated into upper 5bit and lower 3bit.

1st byte	7bit	6bit	5bit	4bit	3bit	2bit	1bit	0bit
	0	0	0	Top flag				
	Fixed	Fixed	Fixed	7bit	6bit	5bit	4bit	3bit

2nd byte	7bit	6bit	5bit	4bit	3bit	2bit	1bit	0bit
	0	0	0	0	0		Bottom flag	
	Fixed	Fixed	Fixed	Fixed	Fixed	2bit	1bit	0bit

	Upper Flags				
	7bit	6bit	5bit	4bit	3bit
0	Voice	Direct	Interrupt	data	Normal Com
1	Data	Relay	No interrupt	control	Emer Com

Lower Flags			
2bit	1bit	0bit	
1	1	1	
1	1	0	
1	0	1	
1	0	0	
0	1	1	
0	1	0	
0	0	1	
0	0	0	