The Technical Description of GH3210

1. RF Module

TX part
The TX VCO generates the transmitting frequency, and it is controlled by the MPU in the base-band through the Phase Local Loop IC (SIT8825). The out put signal is doubled by the TX-BUF and amplified by power amplifier Q304 and Q303, then fed to the antenna.
The audio signal is fed to the MIC-AMP from the base band part and then modulated to the RF signal in TX VCO through the compressor.
The data is used to transfer the commends between the base unit and the handset

RX part
The received signal from the antenna is fed to the mixer (Q308) after amplified by LNA-1 and LNA-2 (Q306 and Q307). In the mixer it is mixed with the local frequency generated by the RX VCO (Q302) and doubled by doubler converted to the IF (10.7MHz) signal, the RX VCO (Q302) is controlled by the MPU in the base-band part.
After amplified by IF-Amp IC302 (KA3361BD) the IF signal is fed to the FM-demodulator in which the audio signal is picked up. The audio signal is fed to the base-band part through the expander and the speaker amplifier Q2 and Q3.

2. The Base-Band Part of The Base Unit

Tel-line Interface,
Separate the incoming and outgoing audio signals and make the sidetone cancellation. Make the tel-line on-hook and off-hook.

Ring Detect and Branch Phone Detect,
Detects the ring signal from the telephone line in on-hook ststus and informs the MPU, and detects if the branch phone is in the off-hook mode or on-hook mode and then informs to the MPU.

Audio Path Switch Circuitry,
This circuitry can set up the path to implement the functions of talking with the telephone line, inter-communication, 3 way conference between the two handsets and telephone line. This circuitry is controlled by the MPU.

Power Control Circuitry,
Switch on or off the power of TX part and RX part of the RF module.
It is controlled by the MPU.

REF. OSC (11.15MHz),
Provide the standard frequency to the Phase Local Loop IC of the RF module as the reference frequency

The MPU,
It is the central controller. It manages the all parts including the audio path switch circuitry to work properly and makes the communication with the handset through the RF link. The frequency of the clock is 32.768KHz.

3. The Base-Band Part of The Handset Unit

Key Board,
The user interface.

Power Control Circuitry,
Switch on or off the power of TX part and RX part of the RF module.
It is controlled by the MPU.

Charge Circuitry and Charge Detector,
Charge the battery in the handset when the handset is in the base cradle and detect if the handset is charging or not, and then informs to the MPU.

REF. OSC (11.15MHz),
Provide the standard frequency to the Phase Local Loop IC of the RF module as the reference frequency.

The MPU,
It is the central controller. It manages the operation of the handset and communicates With the base unit through the RF link.

4. The Antennas

It is single pole type and soldered permanently on the RF module of both base and Handset.

5. Channel 21

This special RF channel is used to install the two different I.D codes for two different Handsets when it is on the production line.
This channel will be used at the factory only for I.D code setting.

The End.

FREQUENCY TABLE

1. CHANNEL SPACE : 100KHz
2. 1'nd IF FREQUENCY : 10.7MHz
3. 2'nd IF FREQUENCY : 450KHz
4. REF X-TAL FREQUENCY : 11.15MHz

MODE	CH	BASE TX	"B" LOCAL	HANDSET TX	"H" LOCAL
RF1	1	2402.55	2463.30	2474.00	2413.25
	2	2402.65	2463.40	2474.10	2413.35
	3	2402.75	2463.50	2474.20	2413.45
	4	2402.85	2463.60	2474.30	2413.55
	5	2402.95	2463.70	2474.40	2413.65
	6	2403.05	2463.80	2474.50	2413.75
	7	2403.15	2463.90	2474.60	2413.85
	8	2403.25	2464.00	2474.70	2413.95
	9	2403.35	2464.10	2474.80	2414.05
	10	2403.45	2464.20	2474.90	2414.15
	11	2403.55	2464.30	2475.00	2414.25
	12	2403.65	2464.40	2475.10	2414.35
	13	2403.75	2464.50	2475.20	2414.45
	14	2403.85	2464.60	2475.30	2414.55
	15	2403.95	2464.70	2475.40	2414.65
	16	2404.05	2464.80	2475.50	2414.75
	17	2404.15	2464.90	2475.60	2414.85
	18	2404.25	2465.00	2475.70	2414.95
	19	2404.35	2465.10	2475.80	2415.05
	20	2404.45	2465.20	2475.90	2415.15
ID	21	**2404.55**	**2465.30**	**2476.00**	**2415.25**
RF2	1	2404.65	2465.40	2476.10	2415.35
	2	2404.75	2465.50	2476.20	2415.45
	3	2404.85	2465.60	2476.30	2415.55
	4	2404.95	2465.70	2476.40	2415.65
	5	2405.05	2465.80	2476.50	2415.75
	6	2405.15	2465.90	2476.60	2415.85
	7	2405.25	2466.00	2476.70	2415.95
	8	2405.35	2466.10	2476.80	2416.05
	9	2405.45	2466.20	2476.90	2416.15
	10	2405.55	2466.30	2477.00	2416.25
	11	2405.65	2466.40	2477.10	2416.35
	12	2405.75	2466.50	2477.20	2416.45
	13	2405.85	2466.60	2477.30	2416.55
	14	2405.95	2466.70	2477.40	2416.65
	15	2406.05	2466.80	2477.50	2416.75
	16	2406.15	2466.90	2477.60	2416.85
	17	2406.25	2467.00	2477.70	2416.95
	18	2406.35	2467.10	2477.80	2417.05
	19	2406.45	2467.20	2477.90	2417.15
	20	2406.55	2467.30	2478.00	2417.25