CIRCUIT DESCRIPTION

(MODEL : GT-8320C)

SK : TCTU0001801-DS **DESCRIPTION :** CIRCUIT DESCRITION OF GT-8320C					
DATE	**Iss.**	**SHEETS**	**NOTICE NO.**	**DESIGNER**	**CHECKER**
'00. 07. 24	1	3	K961/26/8903	Y. H. Ji	J. H. Lee

BASE.

The signal, which inputted in TEL-LINE, is DC coupled at TR and transformed Analog into Digital at U100.

DATA that is transformed into Digital signal is mixed with PN code at U100 (by spread spectrum) and transmitted to RF part.

Spreading signal, which inputted to RF part, is mixed with Carrier supplied to VCO at U1 and create TX frequency of using channel and then is transmitted to ANTENNA through U3 by TX control of D1,D2.

The signal received to antenna is transmitted to U1 by RX/TX control time.

The signal inputted at U1 is mixed Carrier of VCO and got to direct conversion and create Base band signal.

And then, create I and Q signal by demodulation (QPSK: Quadrature Phase Shift Keying method is phase- shifted by 90°) I and Q signal (Two signal phase is 90°) is transmitted to U100 and remixed with PN code and generated Digital signal. Digital signal is transformed into Analog at U100.

This audio signal is passed through U100 and transmitted to TEL-LINE through the Transformer (TR).

Caller ID signal which inputted to the Tel-Line (in case of TYPEI) passes through C333,C334,R350U,R351,110 and then, is transformed into digital data at U111 and is transmitted to U100. (When RX mute is LOW, The FSK DATA is received) (in case of TYPEII) passes through Transformer(TR),C324,R337,U110 and then, transformed into digital data at U111 (When RX mute is high The CAS signal is received and then RX mute is LOW to receive the FSK signal) and is transmitted to U100.

The transformed signal into digital data is transmitted to the Handset ,and then The Handset is displayed CID data.

Line in use state : When the Unit is offhook or the line is off hook state, The Line detect port is high though R300, R301,Bridge diode and U113. When the Unit is on hook or the line is on hook state, The Line detect port is low.

When the ring is incoming into the Tel-line, The signal passes through C146,D107,D108,U105 and then detected at U100. The ring data is transformed into Analog to Digital at U100 and transmitted to the Handset.

DSP Part

DSP (U117, D16551) can record voice, control the Flash memory, constrict, record, play and erase voice signal.

This IC include CODEC that convert the Analog signal to Digital signal and vice versa.

Flash menory(Audio RAM) can record the constricted digital signal from DSP IC and output the stored signal to DSP IC to play the voice signal.

CPU (U119) is a master CPU to control the DSP Part, This CPU control the Tx, Rx, signal path, receive the key Input signal, turn on and off the function LEDs.

ID setting

When the handset is placed on the baseunit , The charge data is transmitted to handset Through R130,R150,Q105, R147,Q101,L103,L102 and CT(contact) of the baseunit.

The handset is received ID through charger contact, Bridge diode, R151 and transmitted ACK signal to RF PART.

Y100 is X-tal generating RF - reference signals and should be adjusted by C2 accurately.

Q101, Q102, Q105, Q104 is charge circuitry.

They are used to prevent OVER CURRENT and The Q104 is used to CHARGE DETECTOR.

HAND SET.

The signal which is inputted to MIC is transformed Analog into Digital at U100.

DATA, which is transformed into Digital signal, is mixed with PN code at U100 (by spread spectrum) and transmitted to RF part. Spreading signal, which inputted to RF part, is mixed with Carrier supplied to VCO at U1 and create TX frequency of using channel and then is transmitted to ANTENNA through U3 by TX control of D1,D2

The signal received to antenna is transmitted to U100 by RX/TX control time.

The signal inputted at U1 is mixed Carrier of VCO and got to direct conversion and create Base band signal. And then, create I and Q signal by demodulation (QPSK : Quadrature Phase Shift Keying method is phase-shifted by 90°) I and Q signal (Two signal phase is 90°) is transmitted to U100 and remixed with PN code and generated Digital signal. This signal is transformed into Analog at U100.

This audio signal is passed through R101,R102 and transmitted the RECEIVER unit.

The Caller ID data which is received from Base is transformed to data which is able to display at U100.

U100 activates LCD driver, and then, display caller ID messages.

When the handset is low voltage

R105, R106, C161 make the 77 pin of U100 change HIGH to LOW and indicate low voltage.

Y101 is X-tal generating RF - reference signals and should be adjusted by C204 accurately.

U102 is parts for voltage stabilization of CODEC part.

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DIGITAL SECURITY CODE:

The model(s) **GT-8320C** has the circuitry for digital security code to provide protection against unintentional access.
For each model, one of **16777216** kinds of digital security code is randomly selected and fixed in each telephone as it is manufactured.

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