RTS™ Technical Data Sheet

Kanji Keypanel Desktop, Handset, Rack Mount

The RTS ™ Kanji keypanel fits in a standard 19” rack and is one rack space high. It has 12 keys (one listen button and one talk button make up a key): 10 keys are for intercom talk and listen, two keys are for call waiting response.

In addition, there are two encoders. One encoder is used for headset, microphone, auxilliary input, and matrix in volume adjustment. The other encoder knob is used for menu selection. The Kanji keypanel has a standard numerical keypad with four extra keys: Mic Mute, User Assignable, Page Up, and Page Down.

The Kanji keypanels add significant new features such as digital signal processing.

Kanji keypanels also offer a custom design LCD display with support for 16x16 Kanji, Katakana, Hiragana, and English characters.

The Kanji keypanels are made of pressed aluminum / metal and feature state of the art audio processors and drivers. There are three different models of keypanel to choose between - Desktop, Desktop with Handset and Rackmount.

Ordering Information

Description	Part Number
Kanji Keypanel - Rack Mount - Push Button	9000-7777-000
Kanji Keypanel - Desktop - Push Button	9000-7778-000
Kanji Keypanel - Handset - Push Button	9000-7780-000

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Features

Talk / Listen Configuration: 12 keys, with 10 keys available for full talk/listen configuration. Keys support both latching (hands-free) and momentary (push-to-talk) operation. Plus an extensive scrollable menu system (accessed using an encoder). Menus include helpful prompts to walk the user through setup.

- ***Call Waiting Window***: The 11th and 12th display positions are used as a call waiting windows (CWW), while the 12th key is used for menu displays. The CWW is configured through the menu. The user has three assignable options from the menu, as follows:
  1) No CWW
  2) One CWW (12th key only)
  3) Two CWW (11th and 12th key)

- ***Character Display***: The LCD display is custom designed to show 16x16 size Japanese or Kanji characters. Each LCD will show two rows of 16 characters for a total of 32 characters. Each display area shows eight-character alphas per key (Talk/Listen).
  Note: The Kanji Keypanels have four keys per display area.

- ***Hands-Free Button (Handset Version Only)***: The front panel of the handset version has a hands-free button. When this button is active, the user is able to talk through a gooseneck mic and listen through the front speaker.

- ***Connections***: The back of each key panel has one DB-9 connector, one RJ-12 connector, and one BNC for the matrix connection. On the rack mount model only, there is one RJ-12 connector for Expansion Panels and one RJ-12 connector for LCP. There are two mechanical pots for Mic level control, one for headset mic and one for panel mic gain.
  Note: Only one Matrix connection can be used at a time.

- ***Firmware***: Every keypanel has an in-system download-able firmware feature, where firmware is downloaded through AZedit application to the keypanels.

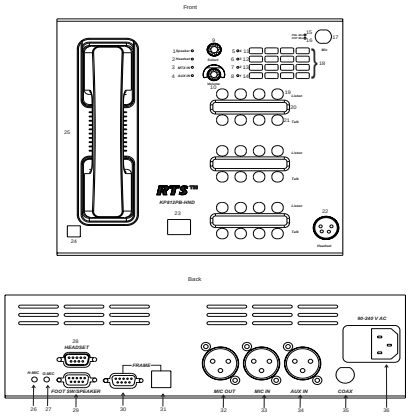
- ***Configuration***: With the appropriate configuration, the Kanji keypanel can be used as a digital keypanel (sending and receiving digital audio from the matrix) or as an analog key panel. Digital operation is used when coaxial cables are used and for future technology enhancements.

- ***Remote Applications***: The Kanji keypanel can be used in remote applications. The front panel can be mounted separately and connected to the keypanel using up to a maximum of 50 feet of cable.

- ***Digital Signal Processing (DSP)*:** Improves microphone voice activation and limiting. Adds new mixing, metering, and filtering capabilities.

Keypanel Models

Handset



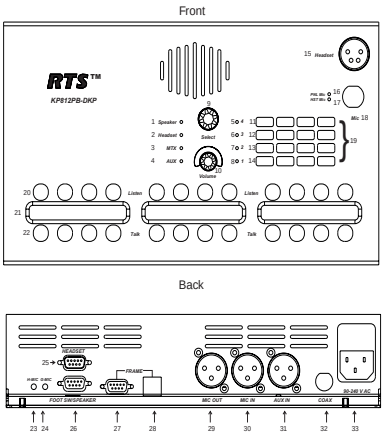
FRONT

1. Speaker LED
2. Headset LED
3. Matrix LED
4. AUX In LED
5. Page 4 LED
6. Page 3 LED
7. Page 2 LED
8. Page 1 LED
9. Select / Menu Encoder
10. Volume Control
11. Mic Mute
12. User Assignable Key
13. Page Up
14. Page Down
15. Panel Mic LED
16. Headset Mic LED
17. Panel Mic Connector
18. Standard Numerical Keypad
19. Listen Keys

BACK

20. Display Panel
21. Talk Keys
22. Headset Connector
23. Hands-Free Switch
24. Handset RJ-11 Connector
25. Handset/Speaker
26. Headset Mic Gain
27. Mic MicGain
28. External Headset Connector
29. Speaker / Footswitch Connection
30. DB-9 Connection for Matrix(frame)
31. RJ-12 Connection for Matrix(frame)
32. MIC Out
33. MIC In
34. AUX In
35. Coax Connection
36. AC

Desktop



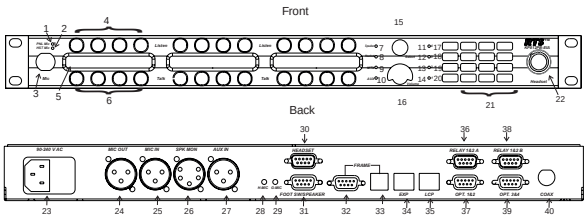
FRONT

1. Speaker
2. Select / Menu Encoder
3. Volume Control
4. Headset Connector
5. Panel Mic LED
6. Headset Mic LED
7. Panel Mic Connector
8. Speaker LED
9. Headset LED
10. Matrix LED
11. Aux In LED
12. Page 4 LED
13. Page 3 LED
14. Page 2 LED
15. Page 1 LED
16. Mic Mute
17. User Assignable Key
18. Page Up
19. Page Down
20. Standard Numerical Keypad
21. Listen Keys

BACK

22. Display Panel
23. Talk Keys
24. Headset Mic Gain
25. Panel Mic Gain
26. Speaker / Footswitch Connection
27. DB-9 Connection for Matrix
28. External Headset Connector
29. RJ-12 Connection for Matrix
30. MIC Out
31. MIC In
32. AUX In
33. Coaxial Connection
34. AC

Rack Mount



FRONT

1. Panel Mic LED
2. Headset Mic LED
3. Panel Mic Connector
4. Listen Keys
5. Panel Display
6. Talk Keys
7. Speaker LED
8. Headset LED
9. Matrix LED
10. AUX LED
11. Page 4 LED
12. Page 3 LED
13. Page 2 LED
14. Page 1 LED
15. Select / Menu Encoder
16. Volume Control
17. Mic Mute
18. User-Assignable Key
19. Page Up
20. Page Down
21. Standard Numerical Keypad
22. Headset Connector

BACK

23. AC
24. MIC Out
25. MIC In
26. Speaker /Monitor
27. AUX In
28. Headset Gain
29. Mic Gain
30. External Headset Connector
31. Speaker / Footswitch Connection
32. DB-9 Connection for Matrix
33. RJ-11 Matrix Connection
34. RJ-45 EXP Connection
35. RJ-45 LCP Connection
36. Relay 1&2A
37. Opto-Isolate Input 1&2 Open Collector 1&2
38. Relay 1&2B
39. Opto-Isolate Input 3&4 Open Collector 3&4
40. Coaxial Connection

Kanji Keypanel Specifications

Microphone Preamplifier

Electret Mic Input Level @ 1 kHz	-42 dB, 150ohms
Dynamic Mic Input Level @ 1kHz	-50 dBm, 150 ohms
Output Level (to matrix)	+8 dBu, ± 0.2 dBu
Max Voltage Gain, Mic to Line	70 dB, ± 2 dB
Frequency Response	100 Hz to 10 kHz, ± 2 dB
Limiter	10 dB above nominal

Tone Generator

Output Level (to matrix)	+8 dBu ± 2 dBu
Output Frequency	500 Hz

Headphone Amplifier

Maximum Voltage Gain	200 dB
Frequency Response	100 Hz to 10 kHz, ± 2 dB
Headphone Impedance	8 to 600 ohms
Output Power	1 W to 50 ohms
Output Voltage Level	8 volts peak-to-peak (max.)
Sidetone Range	25 dB

Speaker Amplifier and Speaker

Frequency Response	100 Hz to 10 kHz, ± 2 dB
Output Power (per amplifier)	5 watt into 8 ohms
Output Voltage Level	12 volts peak-to-peak (max.)
Volume Control Range	30 dB
Speaker Rating	8 watts max.

Intercom Input/Output

Input	Nominal: + 8 dBu, Peak +20 dBu max.
Output	+ 8 dBu, ± 2 dBu nominal

External Line Input (Program Input)

Input Level + 8 dBu nominal

General

AC SUPPLY

Internal switching type, 100-240 VAC, 50/60 Hz with universal IEC connector for connection to various AC main cords.

Storeage: -40°C (-40°F) to 70°C (158°C)

Operating: -20°C (-4°F) to 60°C (140°F)

DIMENSIONS:

Desktop	11.3 (W) x 7.623 (D) x3.1 (H)
Handset	11.3 (W) x 11 (D) x 3.75 (H)
Rackmount	19 (W) x 7.5 (D) x 1.75 (H)

Approvals UL, CSA, VDE, CE

Connectors

Panel Microphone Connector

Type: 3-circuit, 1/4" phone jack with threaded metal bushing, compatible with RTS MCP-90

Pin Out:	Tip :	+ Audio and DC bias
	Ring:	Common
	Sleeve:	Chassis ground

Headset Connector:

Type: XLR-4 Female

Pin 1	Mic low
Pin 2	Mic high
Pin 3	Headphone low
Pin 4	Headphone high

Intercom Connectors: Parallel-wired DE9S and RJ-12 Connectors

Type:	DE9S	Type:	RJ12
Pin Out:		Pin Out:	
Pin 1	Data +	Pin 1	Data -
Pin 2	Data -	Pin 2	Audio in (from matrix) +
Pin 3	Audio in	Pin 3	Audio out (to matrix) +
	(from matrix) shield	Pin 4	Audio out (to matrix) -
Pin 4	Audio out (to matrix) +	Pin 5	Audio in (from matrix) -
Pin 5	Audio out (to matrix) -	Pin 6	Data +
Pin 6	Data shield		
Pin 7	Audio in (from matrix) -		
Pin 8	Audio in (from matrix) +		
Pin 9	Audio out (to matrix) shield		

Expansion Connector Type: RJ45

LCP Connector Type: RJ45

GPI Module Connectors (Optional)

Speaker / Monitor Output

Type: 5-pin XLR Male

Pin out:	Pin 1	Line Out (GND)
	Pin 2	Line Out (+)
	Pin 3	Line Out (-)
	Pin 4	SPK Out (+)
	Pin 5	SPK Out (-)

Aux 1 In (Auxiliary Program Input)

Type: 3-pin XLR Female

Pin out:	Pin 1	Ground
	Pin 2	Input +
	Pin 3	Input -

Note: Balance input, + 8 dBu nominal

Relay 1 & 2 Out

Type: 9-pin male, D-Sub

Pin out	Pin 1	NC contact 1
	Pin 2	COM contact 1
	Pin 3	NO contact 1
	Pin 4	NC contact 2
	Pin 5	COM contact 2
	Pin 6	NO contact 2
	Pin 7	+3.3 VDC
	Pin 8	Ground
	Pin 9	+3.3 VDC

Relay 3 & 4 Out

Type: 9-pin male D-Sub

Pin out:	Pin 1	NC contact 3
	Pin 2	COM contact 3
	Pin 3	NO contact 3
	Pin 4	NC contact 4
	Pin 5	COM contact 4
	Pin 6	NO contact 4
	Pin 7	+3.3 VDC
	Pin 8	Ground
	Pin 9	+3.3 VDC

Note: The relay 1 and 3 contacts are electrically separate, but operate in unison. The relay 2 and 4 contacts are electrically separate, but operate in unison. The +3.3 VDC pins are connected internally through 1K resistors to +3.3 VDC and can source 3 mA. This voltage can be used with the relay contacts to create an active high output for some devices that require a +3.3 VDC signal to activate. For example, connecting pin 7 to pin 3 of the Relay 1 & 2 connector will result in +3.3 VDC on pin 2 when the relay is activated.

Opto 1-2 In (Opto-isolated control inputs) / OC 1-2 (J11)

Type: 9-pin male D-Sub

Pin-out	Pin 1	3.3 VDC
	Pin 2	Emitter OC 2
	Pin 3	Emitter OC 1
	Pin 4	Ground
	Pin 5	Ground
	Pin 6	Collector OC 1
	Pin 7	Collector OC 2
	Pin 8	Opto-Out 2
	Pin 9	Opto-Out 1

Note:A contact closure between any switch input and ground will activate that input. The switch contact inputs are also connected internally through 1K resistors to internal +3.3 VDC and can source 3 mA for use with an external transistor switch circuit.

Opto 3-4 In (Opto-isolated control inputs) / OC 3-4 (J12)

Type: 9-pin male D-Sub

Pin-out:	Pin 1	3.3 VDC
	Pin 2	Emitter OC 4
	Pin 3	Emitter OC 3
	Pin 4	Ground
	Pin 5	Ground
	Pin 6	Collector OC 3
	Pin 7	Collector OC 4
	Pin 8	Opto-Out 4
	Pin 9	Opto-Out 3

Note:A contact closure between any switch input and ground will activate that input. The switch contact inputs are also connected internally through 1K resistors to internal +3.3 VDC and can source 3 mA for use with an external transistor switch circuit.

Headset (External headset connector)

Type: 9-pin male D-Sub

Pin-out

Pin 1	Ground	Pin 5	Balanced dynamic mic input -
Pin 2	External headset PTT	Pin 6	Ground
Pin 3	Externa headset PTT enable	Pin 7	Balanced dynamic mic input +
Pin 4	External headset enable	Pin 8	Left Speaker
		Pin 9	Right Speaker

Note: Mic input -50 dBu nominal. Headset out 0.325 watts into 8 ohms.

Foot Switch / Speaker

Type: 9-pin male D-Sub

Pin-out:	Pin 1	Ground
	Pin 2	Speaker Plus (+)
	Pin 3	Ground
	Pin 4	No Connection
	Pin 5	Foot Switch
	Pin 6	Speaker Minus (-)
	Pin 7	No Connection
	Pin 8	No Connection
	Pin 9	Ground

Note: A switch contact closure from the footswitch input to ground will activate the footswitch input.

MIC In (J7) Unbalanced Panel Microphone Input

Type: 3-pin XLR Female

Pin-out:	Pin 1	Ground
	Pin 2	DC bias and Audio Plus (+)
	Pin 3	Shield (circuit common)

Note: Input level -42.5 dBu nominal.

MIC Out (J8) Balanced Microphone Output

Type: 3-pin XLR Male

Pin-out:	Pin 1	Shield (circuit common)
	Pin 2	Audio output +
	Pin 3	Audio output -

Note: Output level +8 dBu nominal (balanced).

Warranty

Products are warranted by Telex Communications, Inc. to be free from defects in materials and workmanship for a period of three years from the date of sale.

The sole obligation of Telex during the warranty period is to provide, without charge, parts and labor necessary to remedy covered defects appearing in products returned prepaid to Telex. This warranty does not cover any defect, malfunction or failure caused beyond the control of Telex, including unreasonable or negligent operation, abuse, accident, failure to follow instructions in the manual, defective or improper associated equipment, attempts at modification and repair not authorized by Telex, and shipping damage.

To obtain warranty service, follow the procedures entitled “Procedure for Returns” and “ Shipping to Manufacturer for Repair or Adjustment”.

This warranty is the sole and exclusive express warranty given with respect to RTS products. It is the responsibility of the user to determine before purchase that this product is suitable for the user’s intended purpose.

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