

# TC9314F-043

## Single Chip Digital Tuning System for CD Radio Cassette

TC9314F-043 is a CMOS LSI designed for a PLL frequency synthesizer radio system corresponded to the requirement of the whole world.

Since TC9314F-043 can be used for TC9284BF the CD processor and receive remote control signal, a low cost compact CD radio system can be constructed.

### Features

- Receiving band

Area	Jumper Setting			Band	Frequency Rang (Hz)	Step (Hz)	FREF (Hz)	IF	
	A1	A0	FM Step						
			MW Step						
USA	0	0	0	FM	87.5~107.9 M	200 k	25 k	+10.7 M	
			1		87.5~108.0 M	100 k			
			0	AM (Note 1)	530~1710 k	10 k	5 k	+450 k	
			1		531~1602 k	9 k	3 k		
General	0	1	0	FM	87.50~108.00 M	50 k	25 k	+10.7 M	
			1		87.5~108.0 M	100 k			
			0	MW/AM	522~1602 k	9 k	3 k	+450 k	
			1		530~1602 k	10 k	5 k		
			—	LW	146~281 k	1 k	1 k		
East Europe	1	0	0	FM	65.00~74.0 M	50 k	25 k	+10.7 M	
			1		87.50~108.00 M				50 k
					87.50~108.00 M				100 k
			0	MW/AM	531~1602 k	9 k	3 k	+450 k	
			1		530~1610 k	10 k	5 k		
			—	LW	146~281 k	1 k	1 k		
Japan	1	1	— (Note 2)	FM	76.0~90.0 M	100 k	25 k	-10.7 M	
			—	MW/AM	522~1629 M	9 k	3 k	+450	
			— (Note 3)	TV	1~12 ch	1 ch	25 k	-10.7 M	

Note 1: AM mark is indicated, even if band is MW with SW band in USA area.

Note 2: In case that there is not TV band, FM band extends (76.0-90.0 MHz + TV 1~3 ch).

Note 3: If TV band is selected, prescaler (TD7104P) is need.

There are SW bands with bands as shown above by setting of SW<sub>0</sub>, SW<sub>1</sub> Jumper.

	Jumper Setting			Band	Frequency Rang (Hz)	Step (Hz)	FREF (Hz)	IF	Note
	SW1	SW0	FM Step						
			MW Step						
0	0	—	no SW						
0	1	—	SW <sub>A</sub>	3.8~12.5 M	5k	5 k	+450 k		
1	0	—	SW <sub>B</sub>	5.95~15.6 M					
1	1	—	SW <sub>1</sub>	2.3~7.3 M					
		—	SW <sub>2</sub>	9.5~26.1 M					

Note 4: Only SW mark is indicated for SW<sub>A</sub> or SW<sub>B</sub>.

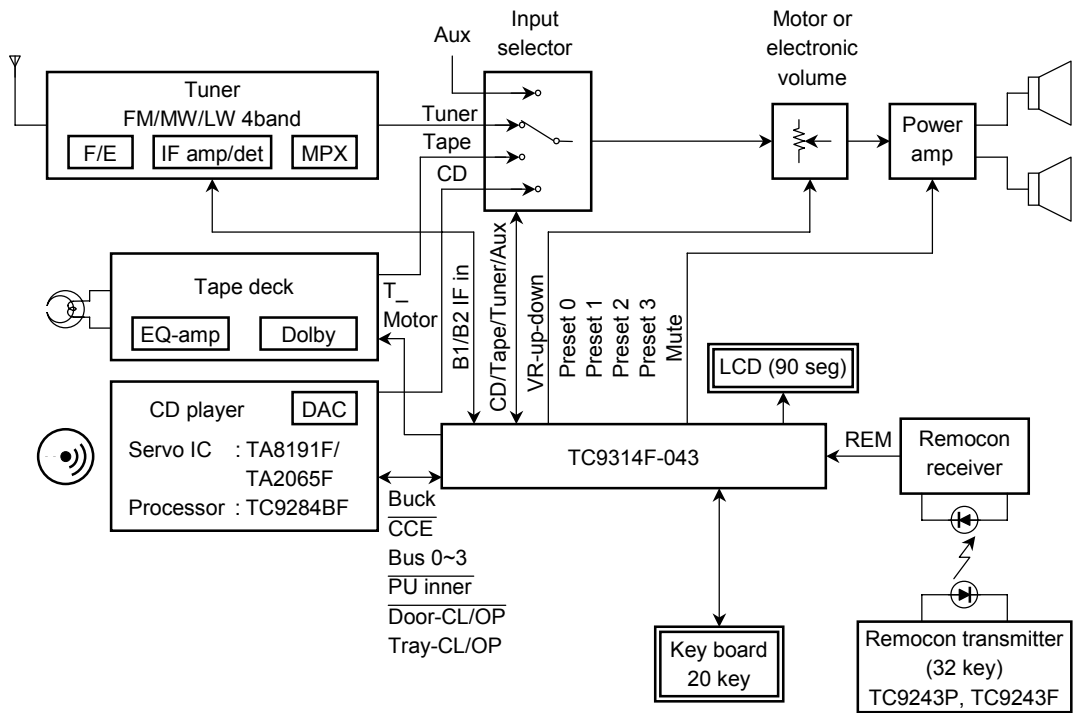
Note 5: If jumper setting is SW<sub>1</sub>, SW<sub>2</sub> when there is LW/TV band, SW<sub>1</sub>, SW<sub>2</sub> bands are no set. (Maximum 4 band)

- Tuning functions and preset memory
  - manual up/down tuning
  - seek up/down tuning
- Preset memory
  - Fixed
 

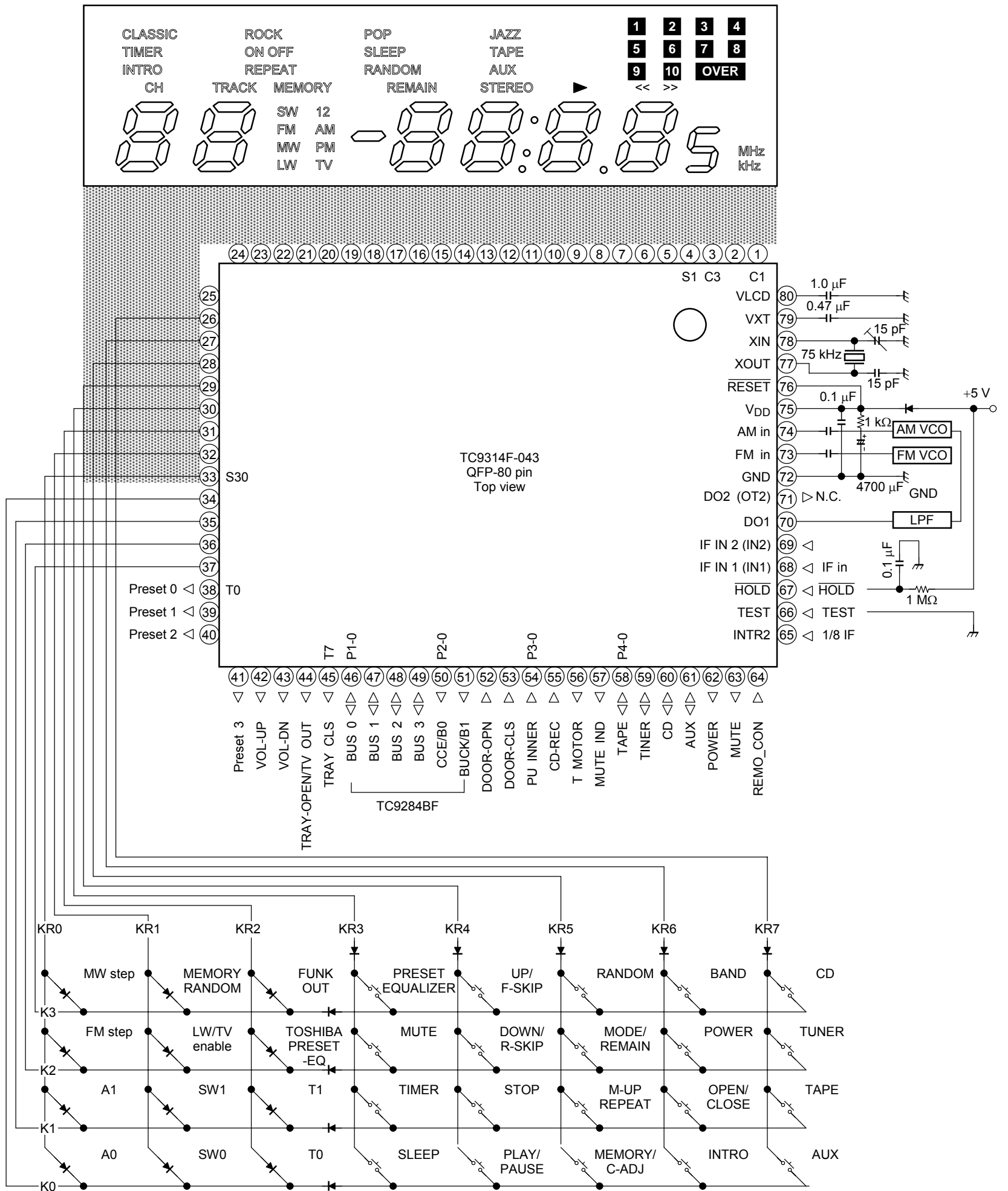
FM/AM	20/20	stations
FM/MW/LW or TV	20/10/10	stations
FM/MW/SW-A or B	20/10/10	stations
FM/MW/LW or TV/SW-A or B	20/10/5/5	stations
FM/MW/SW <sub>1</sub> /SW <sub>2</sub>	20/10/5/5	stations
  - Random
 

total	30	stations
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- Clock functions
  - 12H/24H clock
  - TIMER on/off
  - SLEEP
- CD functions
  - random play
  - intro play
  - repeat play or track repeat play
  - memory play (max 20 preset)
- CD FF/REW
  - synchro rec mode
  - tray open/close control
  - indication of CD remain time
  - music calendar display
- Remote control functions
  - volume up / down control
  - direct selecting of preset memory and track number
- Other functions
  - preset equalizer control
  - function change (CD/TUNER/TAPE/AUX)
  - indication of STEREO mark
  - power on/off key
  - mute on/off control

**Block Diagram**



Layout



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