

TC9320F-001**DDTS-1 : DIGITAL TUNER SYSTEM**

The DDTS-1 is a single chip digital tuner system optimum for such car audio equipment as radio with a cassette tape recorder. This system is provided with 3 bands of FM/MW/LW and clock.

FEATURES

○ Receiving band

BAND	FREQUENCY RANGE [Hz]	STEP [Hz]	IF [Hz]
FM	60 ~ 140M	50 / 100k	± 10.7M
MW (AM)	500 ~ 2000k	1 / 9 / 10k	450 / 455k
LW	100 ~ 400k	1k	450 / 455k

(Note) Receiving Freq. = display Freq.
 display Freq. = OSC Freq. - IF Freq.
 If receiving Freq. is out of range, "- - -" display on LCD.

○ Function outline

- ST (stereo) display
- Momo (normal) and LOC (Local / DX)
- LOUD (Loudness) control and display
- MTL (Metal) control and display (In tape mode)
- Tape direction display
- 12 hour and 24 hour clock display function (No clock display also possible)
- Auto band select function
- Clock priority function

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TUNED ST

FM AM
MW
LW PM

78.85 MHz
kHz

COM1 S20 S19 S18 S17 S16 S15 S14 S13 S12 S11 S10 S9 S8 S7 S6 S5 S4 S3 S2 S1 COM2

TC9320F-001
MINI FLAT PACKAGE 60PIN
BR FORMING
TOP VIEW

LW P1-1
MW P1-4
FM P4-1

K0 N.C.
K1
K2
K3
T0
30
31 T4 T5 T6
T3
P3-3
P3-1
P2-4
P2-1
TEST
INT
45
46
DO1
TUNED

7.2MHz X'tal
30pF
104μF
102μF
102μF
47μF
+5V

FM OSC
AM OSC

MINadj.
HOURadj.
MODE

SPECIFICATION

- FM, AM BAND ENABLE
- FM IF = +10.7MHz
- AM IF = +455kHz
- FM STEP = 50kHz
- AM STEP = 1kHz
- POWER = INPUT SELECT
- CLOCK = 12 HOUR CLOCK
- BAND = INPUT SELECT

The diagram illustrates the internal wiring of a car stereo control unit centered around the TC9320F-001 IC. The control panel at the top features a digital display showing '00.00.5' with 'MHz' and 'kHz' indicators. Buttons for 'TUNED', 'LOC', 'ST', 'MONO', 'LD', and 'MTL' are present, along with a volume knob. The IC is a 60-pin Mini Flat Package. Its pins are connected to various control lines from the panel, including 'LOUDNESS', 'LOCAL', 'LW I/O', 'MW I/O', 'FM I/O', 'K0' through 'K3', 'T0' through 'T3', 'T5', 'T6', 'P3-3', 'P3-1', 'P2-4', 'P2-1', 'TEST', 'INIT', 'ACC', and 'STEREO'. The IC also controls several output lines: 'AMSTEP', 'FMSTEP', 'AMIFsel', 'FMIFsel', 'POWER out sel', 'AMstep 1/9k', '12/24H', 'CLOCKdis.', 'BANDout', 'CLOCK PRIORITY', 'B1', 'B0', 'BAND/HOURadj.', 'MODE', 'LOCAL', 'MONO', 'MINadj.', and 'METAL'. Power is supplied to the IC via a +5V line, with decoupling capacitors (104μF, 102μF) and a 7.2MHz crystal (30pF) connected to its pins. The IC is also connected to FM and AM oscillators (FM OSC, AM OSC) and a 47μF capacitor. The diagram shows the complex interconnection of these components, highlighting the IC's role in managing the stereo's tuning and mode selection.

LAYOUT (Key detachable version)

