

STR-D460Z/DE515/V505

SERVICE MANUAL

US Model
STR-D460Z/DE515

Canadian Model
E Model
Australian Model
PX Model
STR-DE515

Chinese Model
STR-V505



Photo : STR-DE515

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SPECIFICATIONS

Audio power specifications (US only)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 8-ohm load, both channels driven, from 20 - 20,000 Hz, rated 100 watts per channel minimum RMS power, with no more than 0.09 % total harmonic distortion from 250 milliwatts to rated output.

Amplifier section

Stereo mode **Malaysia, Singapore MODEL:**
(4 ohms at 20Hz
20kHz less than 0.09%
total harmonic distortion)
110W + 110W

Chinese MODEL:
(6 ohms at 20Hz
20kHz less than 0.09 %
total harmonic distortion)
110W + 110W

EXCEPT MODEL:
(8 ohms at 20 Hz
20 kHz less than 0.09%
total harmonic distortion)
100W + 100W

Surround mode **Malaysia, Singapore MODEL:**
(4 ohms at 1kHz, THD 0.8 %)
Front : 90W/ch
Center : 90W/ch
(8 ohms at 1kHz, THD 0.8 %)
Rear : 30 W/ch

Chinese MODEL:
(6 ohms at 1kHz, THD 0.8 %)
Front : 90W/ch
Center : 90W/ch
(8 ohms at 1kHz, THD 0.8 %)
Rear : 30W/ch

EXCEPT MODEL:
(8 ohms at 1 kHz, THD 0.8 %)
Front: 100 W/ch
Center: (Pro Logic Mode)
100 W
Rear: 50 W/ch

5.1/DVD* mode **Malaysia, Singapore MODEL:**
(4 ohms at 1kHz, THD 0.8 %)
Front : 90W/ch
Center : 90W/ch
(8 ohms at 1kHz, THD 0.8 %)
Rear : 30 W/ch

Chinese MODEL:
(6 ohms at 1kHz, THD 0.8 %)
Front : 90W/ch
Center : 90W/ch
(8 ohms at 1kHz, THD 0.8 %)
Rear : 30W/ch

EXCEPT MODEL:
(8 ohm at 1 KHz, THD 0.8 %)
Front: 100W/ch
Center: 100W/ch
Rear: 50W/ch

Dynamic power output
(For US only) 8 ohms: 150 W + 150 W
4 ohms: 200 W + 200 W

Frequency response PHONO**: RIAA
equalization curve
 ± 0.5 dB
TV/DBS, CD, TAPE/
MD, VIDEO, 5.1/
DVD*
10 Hz - 50 kHz ± 1 dB

Inputs

	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO** (MM)	2.5 mV	50 kilohms	74 dB 72 dB* (A, 2.5 mV)
CD, 5.1/DVD*	200 mV		
TAPE/MD, TV/ DBS, VIDEO	150 mV	50 kilohms	82 dB 82 dB* (A, 150 mV)

* 78 IHF

Outputs

TAPE/MD REC OUT:
Voltage 150 mV,
Impedance 10 kilohms
VIDEO AUDIO OUT:
Voltage 150 mV,
Impedance 10 kilohms
WOOFER/MIX AUDIO
OUT
Voltage: 2 V
Impedance: 10 kilohms
PHONES: Accepts low
and high impedance
headphones

Muting

Full mute

BASS BOOST

+10 dB at 70 Hz

TONE

± 8 dB at 100 Hz and 10 kHz

FM tuner section

Tuning range 87.5 - 108.0 MHz

Antenna terminals

75 ohms, unbalanced
300 ohms, balanced
(US, Canadian model)
75 ohms, unbalanced
(EXCEPT model)

Sensitivity

Mono: 18.3 dBf, 4.5 μ V
Stereo: 38.3 dBf, 45 μ V

Usable sensitivity

11.2 dBf, 2 μ V (IHF)

S/N

Mono: 76 dB
Stereo: 70 dB

Harmonic distortion at

Mono: 0.3 %
Stereo: 0.5 %

1 KHz Separation

45 dB at 1 kHz

Frequency response

30 Hz - 15 kHz $^{-0.5}$ dB

Selectivity

60 dB at 400 kHz

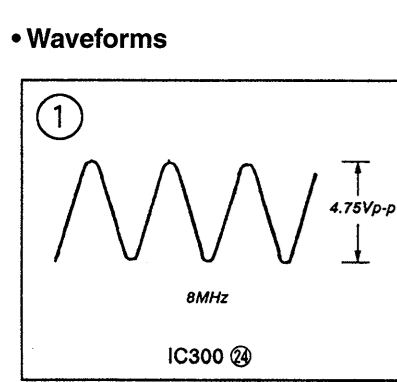
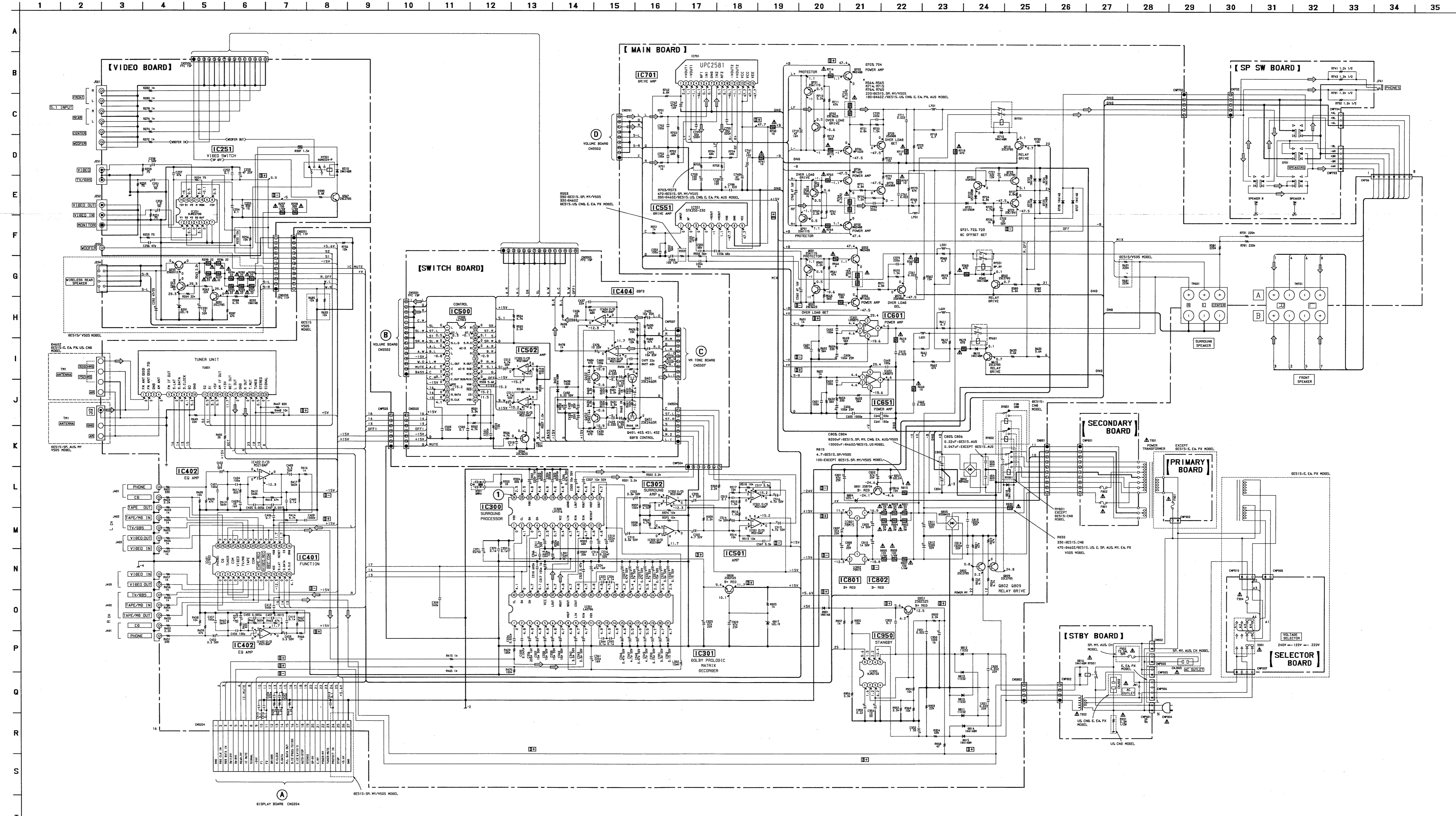
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FM STEREO/FM-AM RECEIVER



SONY®

3-3. SCHEMATIC DIAGRAM (MAIN SECTION) • Refer to page 17 for IC Block Diagrams.



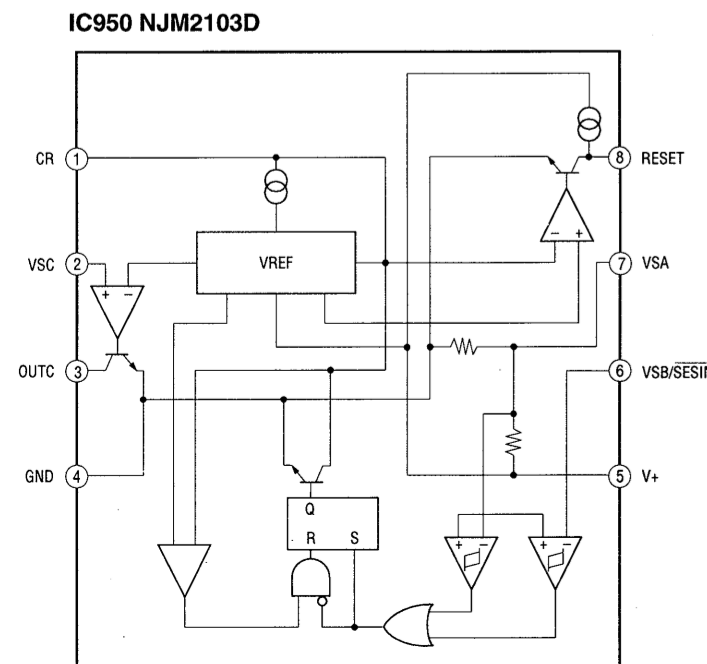
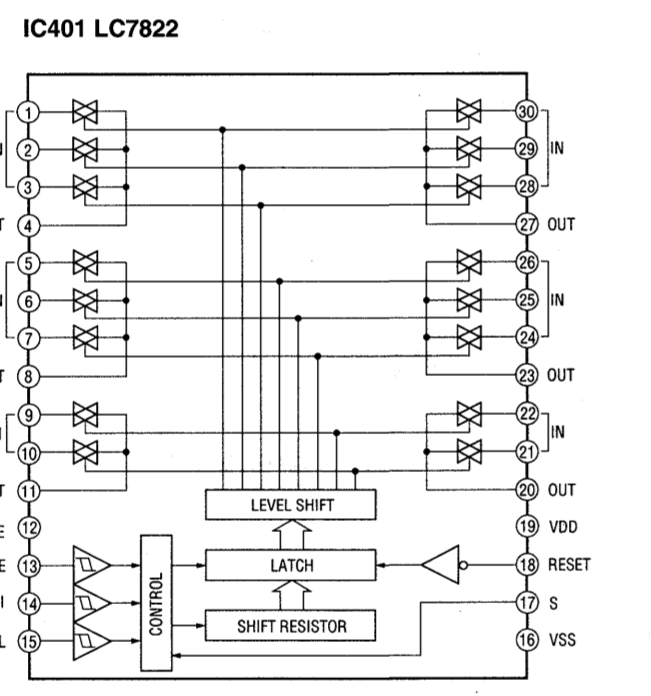
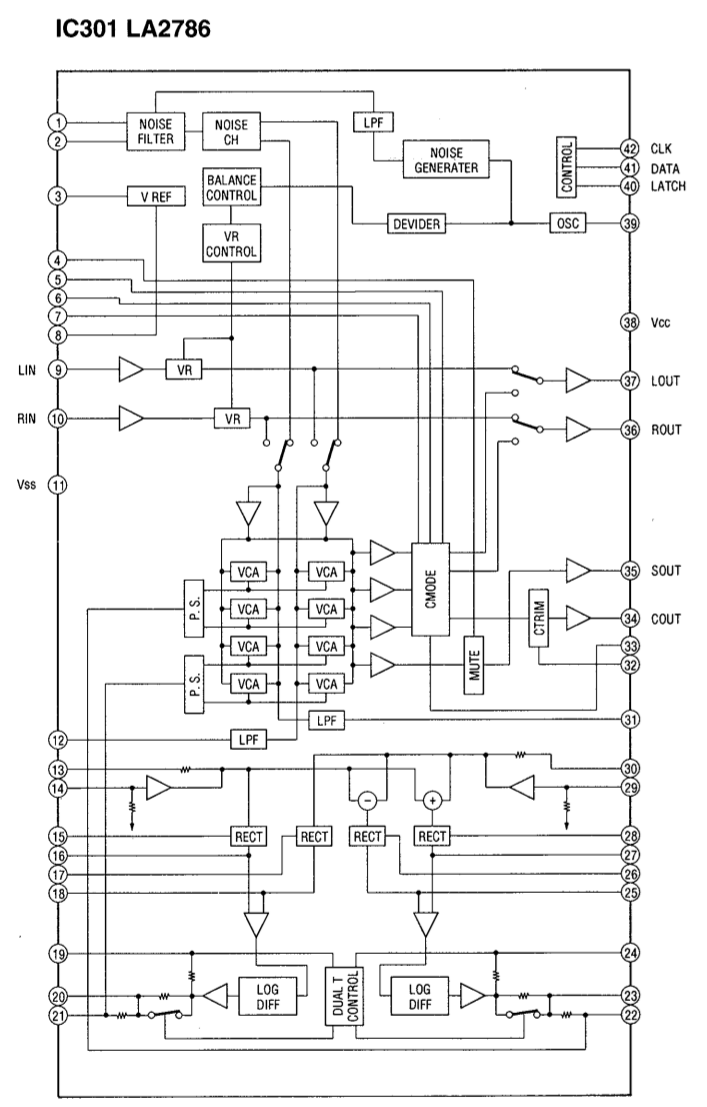
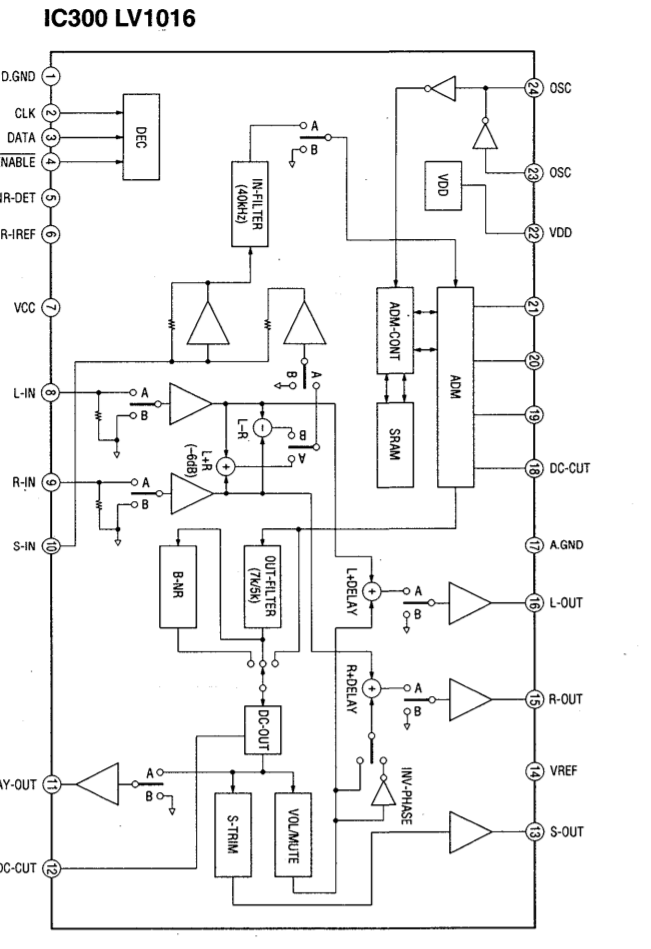
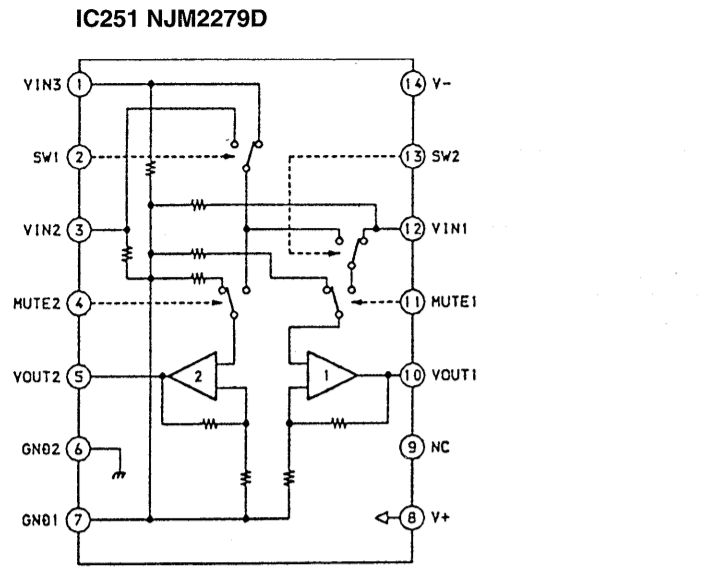
Note:

- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- Δ : Internal component.
- \square : B+ Line.
- \square : B- Line.
- Voltagess and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- No mark: FM
- (): AM
- Voltagess are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- \rightarrow : FM
- Abbreviation
- SP : Singapore
- EA : Saudi Arabia
- MY : Malaysia
- AUS : Australian
- CND : Canadian
- CH : Chinese

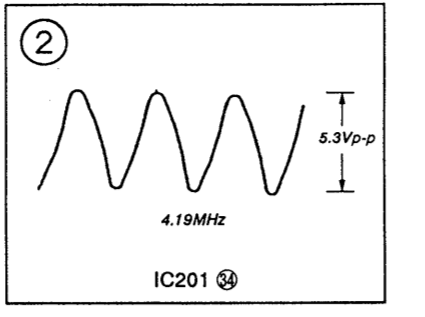
Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

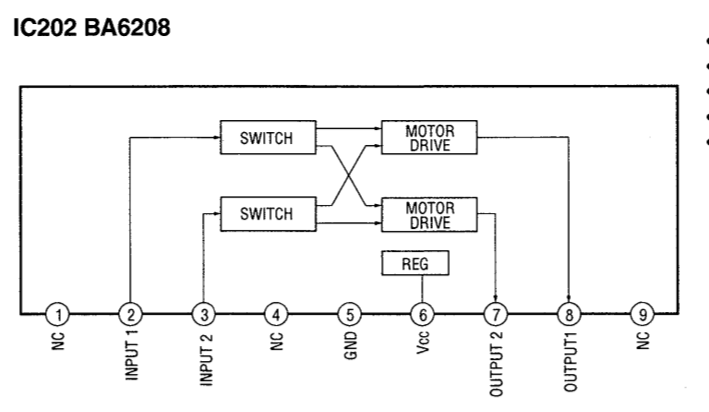
• IC BLOCK DIAGRAMS — MAIN SECTION —



• Waveforms



• IC BLOCK DIAGRAM — DISPLAY SECTION —



Note:

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• Abbreviation

- SP : Singapore
- EA : Saudi Arabia
- MY : Malaysia
- AUS : Australian
- CND : Canadian

3-4. SCHEMATIC DIAGRAM (DISPLAY SECTION)

