

# 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  
 $\pm 0.5$  dB  
TV/DBS, CD, TAPE/  
MD, VIDEO, 5.1/  
DVD\*  
10 Hz - 50 kHz  $\pm 1$  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

$\pm 8$  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  $\mu$ V  
Stereo: 38.3 dBf, 45  $\mu$ V

#### Usable sensitivity

11.2 dBf, 2  $\mu$ 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

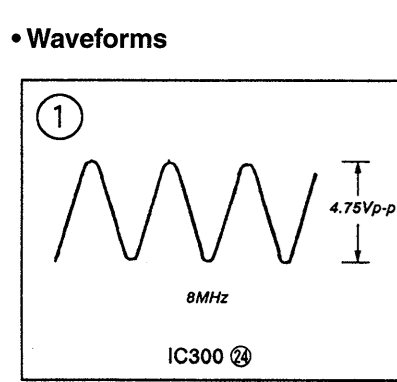
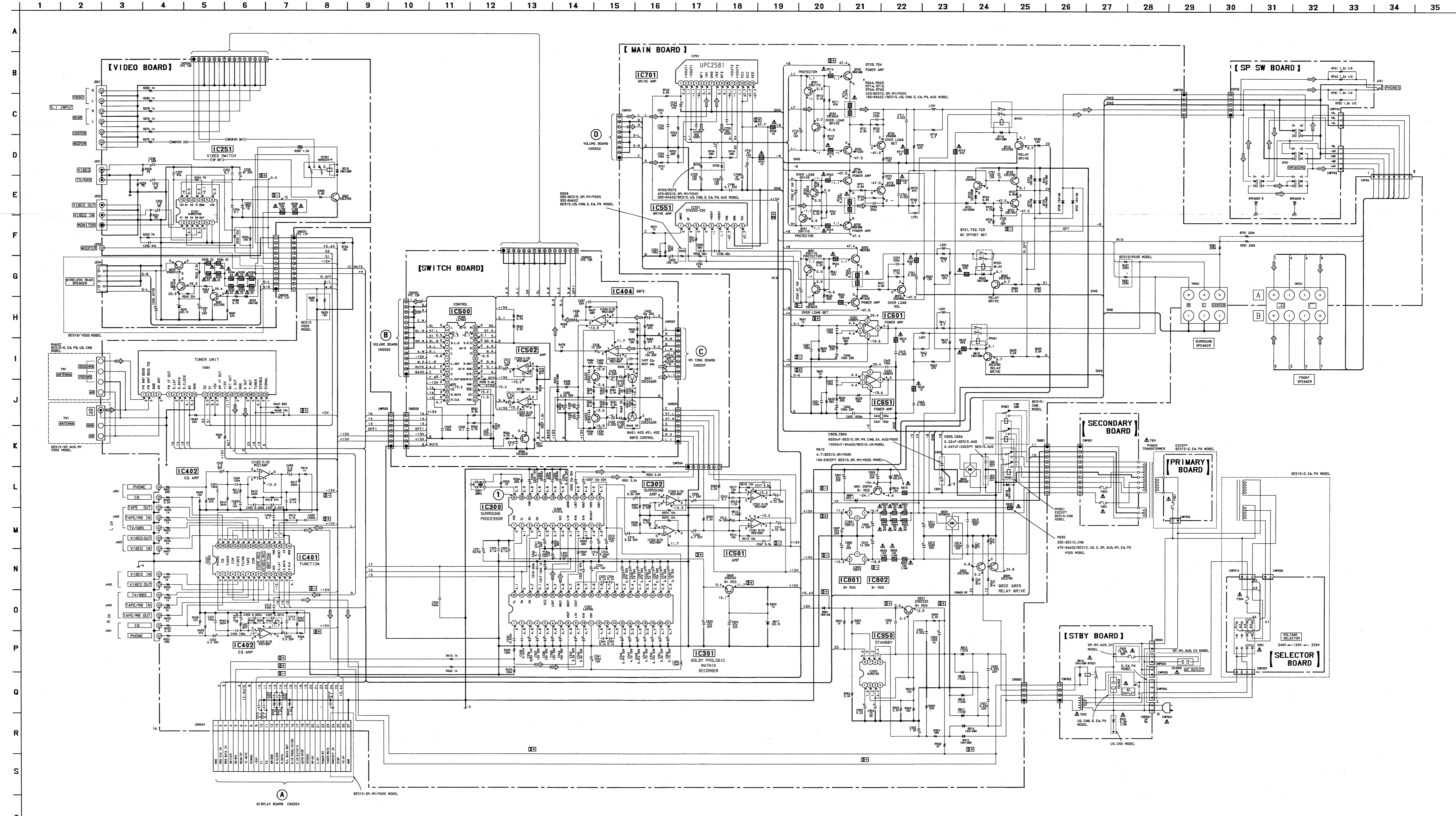
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## FM STEREO/FM-AM RECEIVER



# SONY®

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



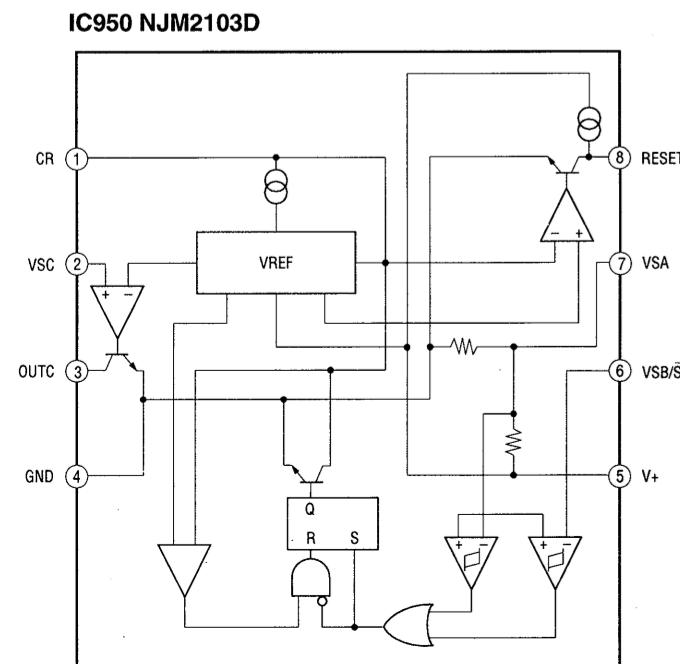
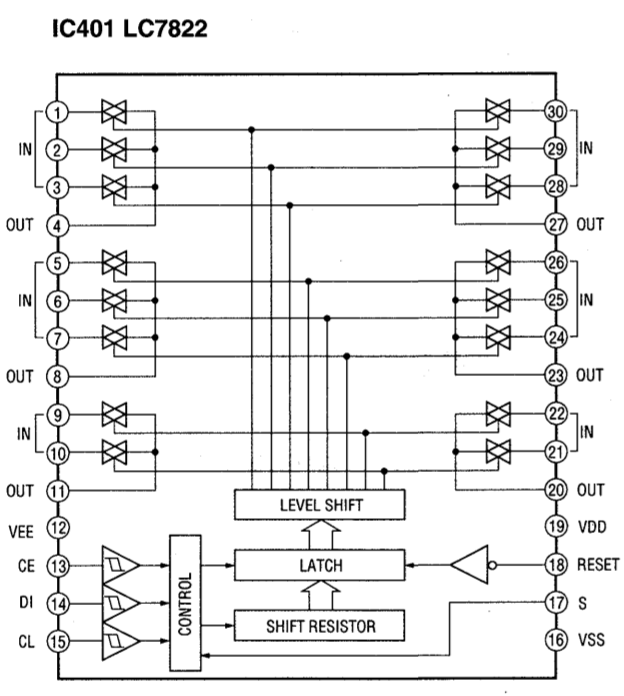
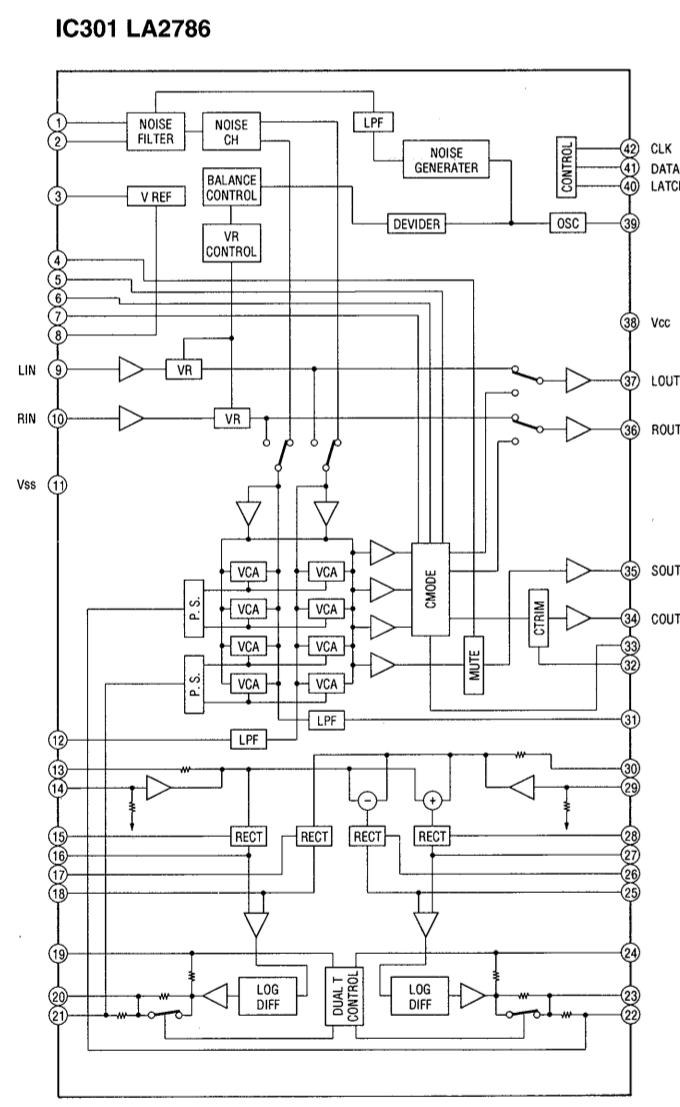
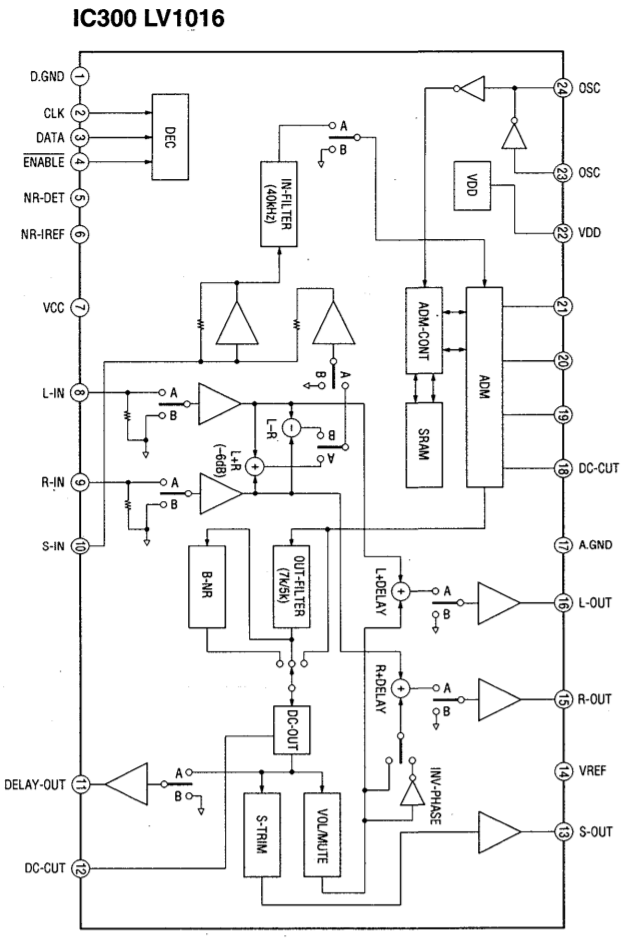
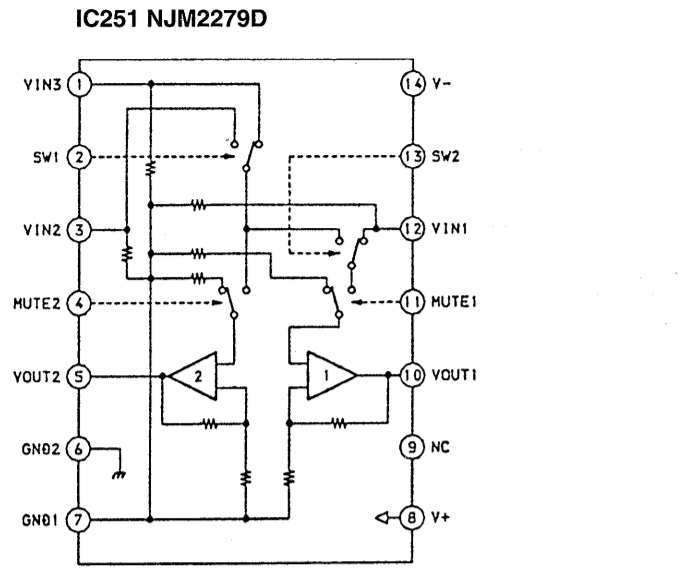
**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and 1/4W or less unless otherwise specified.
- $\Delta$ : Internal component.
- $\square$ : B+ Line.
- $\square$ : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- No mark: FM
- ( ): AM
- Voltages are taken with a VOM (Input impedance 10M $\Omega$ ). 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

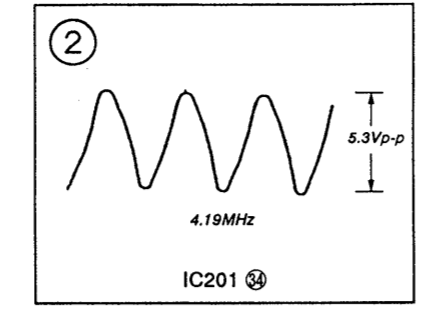
**Note:**  
The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

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

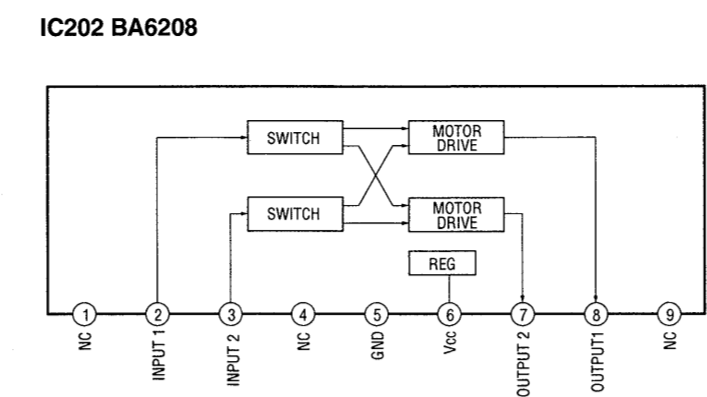
• IC BLOCK DIAGRAMS — MAIN SECTION —



• Waveforms



• IC BLOCK DIAGRAM — DISPLAY SECTION —



Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{pF}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and 1/4W or less unless otherwise specified.
- $\Delta$ : Internal component.
- $\square$ : B+ Line.
- $\square$ : B- Line.
- Voltagages and waveforms are dc with respect to ground under no-signal conditions.
- No mark: FM

• Voltages are taken with a VOM (Input impedance 10M $\Omega$ ).

- 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

3-4. SCHEMATIC DIAGRAM (DISPLAY SECTION)

