

# CR-80-SS

4-Channel Surround Stereo,  
Cartridge Tape Recorder



## 8-Track 4/2-channel Cartridge Recording/Playback

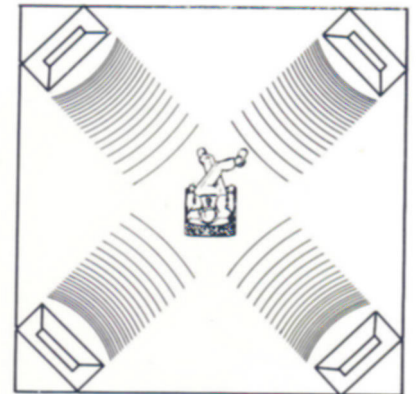
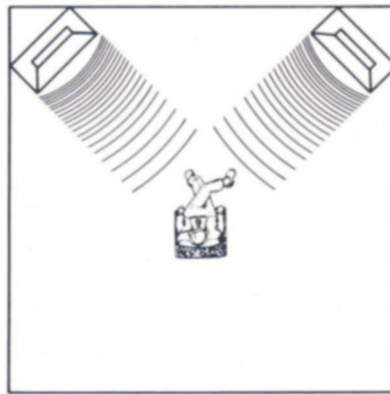
Move up to **SURROUND STEREO** and enjoy multi-dimensional sound!!!

Model CR-80-SS is equipped with a built-in 4-channel power amplifier and 4 Speaker Jacks for INSTANT 4-channel or 2-channel operation. This compact unit makes 4-channel stereo recording a "cinch" even where space is a factor. The same AKAI robust mechanism for top rate performance and endurance. One-Micron Gap Recording/Playback Head for amazing frequency response to 16,000 Hz.

(Model CR-80D-SS Tape Deck is also available)

# AKAI<sup>®</sup>

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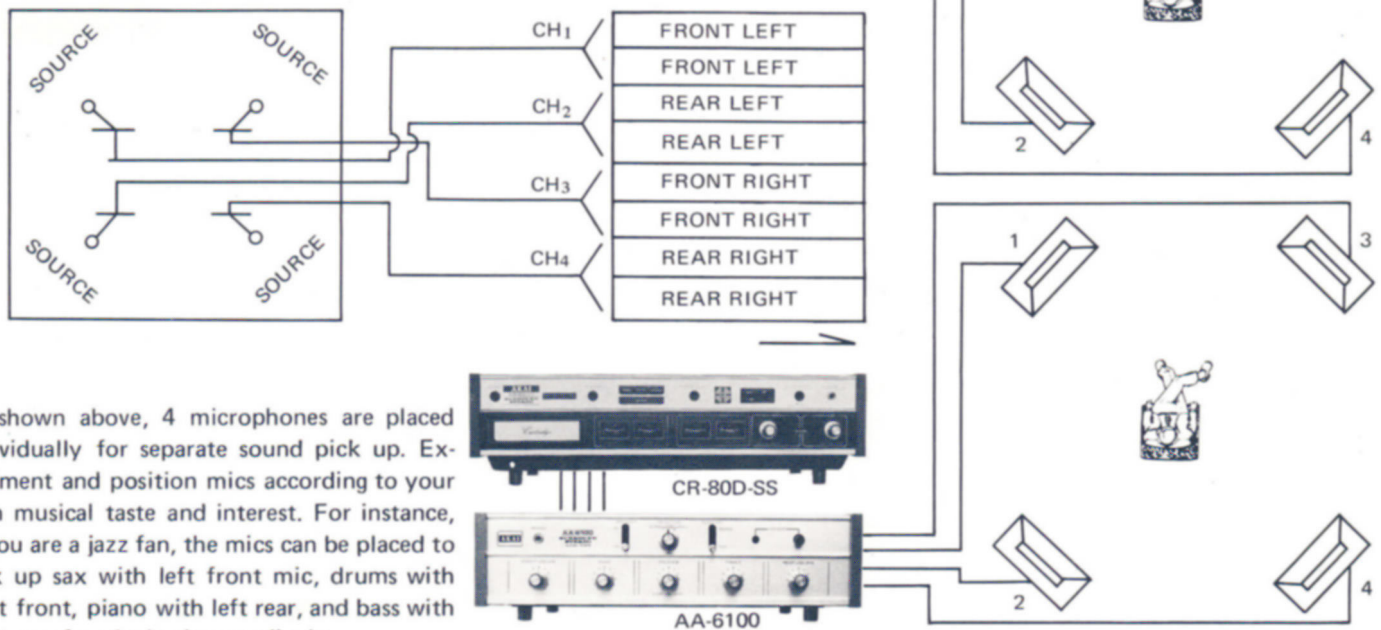
The "move-up" to 4-channel stereo is equally as great an achievement as the advancement from monaural to 2-channel stereo. Just as 2-channel stereo sound reproduction meant the exodus of flat monaural sound, this epoch-making new system eliminates the inability to pick up and reproduce pure concert hall sound. AKAI's new 4-channel stereo uses 4 signal paths or sound tracks in the program material and in playback approximates the complexity of the sound waves which reach the listener's ear when attending a live concert hall performance.

At recording time, 4 microphones are used and sound is picked up from 4 separate places. Four separate recordings are made using 4 separate channels (four tracks in one direction). This 4-channel stereo tape feeds into 4 pre-amplifiers and 4 power amplifiers to activate a 4-speaker system. For playback, 4 speakers are positioned to surround the listener. With this "2-2 system", you are literally surrounded with a wall of sound. Sounds from separate channels provide the listener with an exciting "SENSE OF PRESENCE", which makes conventional 2-channel stereo seem insufficient.

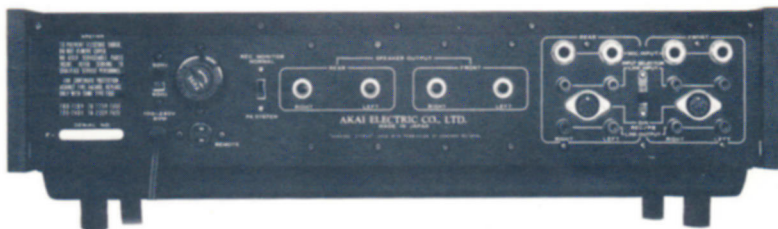
This move-up-to surround stereo, though a real step forward in the recording world, does not mean, however, that your present stereo recordings are obsolete. The CR-80-SS is equally as compatible with 2-channel stereo as well. These models are equipped with a unique change-over system which automatically sets the machine for 2 or 4 channel operation depending upon whether the tape inserted in the cartridge receptacle is a 2-channel or 4-channel tape.

### AKAI SURROUND STEREO

For 4-channel stereo operation, four of the cartridge's 8 tracks are utilized at a time. Recording/Playback track sequence is 1-3-5-7, and 2-4-6-8. When recording/playback on tracks 1-3-5-7 terminates, the second channel (tracks 2-4-6-8) is automatically positioned for continued operation.



As shown above, 4 microphones are placed individually for separate sound pick up. Experiment and position mics according to your own musical taste and interest. For instance, if you are a jazz fan, the mics can be placed to pick up sax with left front mic, drums with right front, piano with left rear, and bass with right rear for playback accordingly.



#### 1-Micron Gap Head

Just what is a one-micron gap head? It's a head with a width of only one astounding micron. Until now two or four micron gap heads have been the standards for comparing tape recorders. However, AKAI has pushed ahead and narrowed the head gap; thus narrowing the difference between tape recording results and actual sound.

The AKAI perfected one-micron gap head has these distinctive advantages over heads with wider gaps :

- (A) Excellent frequency response even at low tape speed.
- (B) Clear, high pitched sound can be regenerated as a frequency tone and recorded smoothly with a minimum of distortion.



#### MOTOR

The motor of Model CR-80-SS is a condenser starting two-speed induction motor. The winding characteristics of this 2-8 pole motor provides tape speed stability and minimizes distortion.

#### FAST FORWARD

A F. FWD Button is provided for your convenience. This feature in a cartridge unit is unique and enables rapid selection of your favorite tunes.

#### PUBLIC ADDRESS SYSTEM (CR-80-SS)

This unit can easily be converted into a P.A. System. Simply connect speaker(s) to Speaker Jack(s) and set recorder to recording mode. Microphones are used to activate speaker system.

#### AUTOMATIC STOP/CONTINUOUS PLAY

The CR-80-SS features an Automatic Stop function. At the end of program 2 (4-channel), or program 4 (2-channel), the tape will stop automatically. If continuous play is desired, depress Continuous Play Button.

#### 4/2-CHANNEL STEREO SELECTOR

This compatible 4/2-channel recorder employs a unique change-over system which sets the recorder for 2 or 4-channel operation depending upon whether a 2 or 4 channel tape is inserted in the cartridge receptacle. If a 2-channel cartridge is used for 4-channel recording or playback, depress this 4/2-channel Stereo Se-

lector Button for change-over to 4-channel stereo operation.

#### PROGRAM SELECTOR AND INDICATOR

The Program Indicator Lamp shows which channel is being used. When recording/playback of one channel terminates, the next channel is automatically set for continued operation. Desired channel can be selected by operating the convenient Cartridge Program Selector Button.



#### VU METERS

Individual easy-to-see VU Meters to match the proportionately balanced front panel controls for operating ease and convenience.

#### INPUT SELECTOR

Input Selector for separate DIN Jack or Line Input operation. Simply operate this switch to cut Line or Din connections without disconnecting source.

#### PHONE SELECTOR

Headphone Jack with convenient Phone Selector for easy selection of front or rear channel listening.

## SPECIFICATIONS (CR-80-SS/CR-80D-SS)

|                              |  |
|------------------------------|--|
| Track System                 | 8-track 4-channel/2-channel compatible stereo  |
| Tape Speed                   | 3-3/4 ips  |
| Wow/Flutter                  | Less than 0.25% RMS  |
| Equalization                 | Correct equalization for playback of tapes recorded to NAB curve   |
| Frequency Response           | 30 to 16,000Hz ( $\pm 3$ dB)   |
| Distortion                   | Less than 2% (1000 Hz "O" VU)  |
| Output Power (CR-80-SS only) | Total music power 40W<br>(10W each channel) at 8 $\Omega$<br>Continuous power 28W<br>(7W each channel) at 8 $\Omega$ |
| Signal to Noise Ratio        | Better than 47dB   |
| Erase Ratio                  | Better than 60dB   |
| Bias Frequency               | 60kHz  |
| Heads                        | 8-track 4-channel stereo Recording/Playback Head, 8-track 4-channel Erase Head                                       |
| Motor                        | 2-speed induction motor  |
| Fast Forward Time            | 4-channel stereo<br>230 seconds using a 300ft. cartridge tape (approx. 15 ips)                                       |

|                     |  |
|---------------------|--|
| Recording Capacity  | 30/60 min. 4-ch/2-ch stereo using a 300ft. cartridge tape  |
| Output Jacks        | Line(4): 1.23V ("O" VU)/100 $\Omega$<br>(Required load impedance: more than 20k $\Omega$ )<br>Speaker(4): 10W/8 $\Omega$ (CR-80-SS only)<br>Phone(1): 30mV/8 $\Omega$<br>(Selector Switch for front and rear channels) |
| Input Jacks         | Mic(4): 0.5mV/5k $\Omega$<br>Line(4): 50mV/150k $\Omega$   |
| DIN Jacks:          | 2 Input/Output DIN Jacks: 0.4V/10 mV<br>(front & rear channels)  |
| Semi-Conductors     | Transistors: 19<br>Diodes: 19  |
| Integrated Circuits | Linear IC: 4<br>Power IC: 4 (CR-80-SS only)  |
| Power Source        | 120 V, 60 Hz   |
| Power Consumption   | 75W (CR-80-SS)/50W (CR-80D-SS)   |
| Dimensions          | 485(W) x 138(H) x 280(D)mm<br>(19.4 x 5.5 x 11.2")   |
| Weight              | 12kg (26 lbs.), (CR-80D-SS: 11kg (24 lbs.))  |








### CR-80D-SS

The Deck version is a compatible 4-channel/2-channel stereo unit. For playback, a 4-channel external power amplifier and two pairs of speakers are required. The CR-80D-SS tied in with AKAI's 4-channel Surround Stereo pre-main amplifier and two pairs of speakers will provide the ultimate in 4-channel Cartridge SURROUND STEREO performance.

## STANDARD ACCESSORIES

|  |   |
|--|---|
| <b>CR-80-SS</b>                        |   |
| 4-channel Cartridge Demonstration Tape | 1 |
| Head Cleaning Pen                      | 1 |
| Spare Fuse                             | 2 |
| Operator's Manual                      | 1 |

|  |   |
|--|---|
| <b>CR-80D-SS</b>                       |   |
| 4-channel Cartridge Demonstration Tape | 1 |
| Head Cleaning Pen                      | 1 |
| Spare Fuse                             | 2 |
| DR-111 Connection Cord                 | 2 |
| Operator's Manual                      | 1 |

|   |  |   |
|---|--|---|
| AA-6100   | SW-30  | SW-35   |
|  |  |  |
| SOLID STATE SURROUND STEREO PRE-MAIN AMPLIFIER                                      |  |   |
| AA-6300   | SW-125   |   |
|  |  |   |
| SOLID STATE FM/AM/MULTIPLEX TUNER AMPLIFIER   |  | SPEAKER SYSTEM  |

The AKAI policy is one of continual development and improvement. For that reason, AKAI reserves the right to change specifications without notice, and without incurring any obligation relating to models previously manufactured by them.

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