Your Realistic SCT-42 combines studio-quality recording capabilities with the most deluxe cassette conveniences. Many of its features have previously been available only in the most expensive open reel decks. Read this manual carefully, so you'll be able to take full advantage of all the special controls and functions.

**Features include:**

- **Automatic tape reversing for continuous recording and playback**
  LED tape sensor detects the end of magnetic tape and the start of the leader tape to immediately reverse tape running. The quick reversing mechanism makes it possible to continuously record or play back with a minimum of noise interruption during reversing.

- **Ultra-smooth logic-controlled cassette operation**
  One microprocessor IC, one motor and two solenoids provide finger tip operation of the cassette mechanism. Now you can change tape motion from fast-forward or rewind to play or vice versa without worrying about tape jam or wrap ups.

- **1.4 mm close-gap metal record and play heads compatible with metal tape**
  New technology high density ferrite close-gap record and play heads generate the magnetic field required for metal tape. The double-gap high-density erase head provides the high magnetic field necessary to completely erase metal tape. This brings all the superb characteristics of metal tape to your system frequency response, greater dynamic range at high frequencies, reduction of distortion at high input levels, plus sharp improvement of the S/N ratio at high frequencies.

- **Two Dolby NR® systems: B-type and new C-type**
  The SCT-42 features the latest circuitry and the Dolby C-type NR system. The Dolby two-stage, C-type NR system lowers background noise to 1/100 of its original level (20 dB), making it ideal for recording wide dynamic range program material or live music. With the Dolby C-type NR, the SCT-42 rivals the performance of many studio-type open reel recorders.

- **Scan function**
  You can select to play back only the programs you desire. The SCT-42 scans programs until it reaches the program of your choice.

- **Selection searching**
  Your SCT-42 advances or rewinds the tape to the beginning of the program you desire and plays it back. Normally searching functions only to the end or beginning of the current program — but the SCT-42 counts the number of programs and detects the beginning of your favorite program.

- **Repeat function**
  You can repeat playback of the desired portion of a program up to 15 times.

- **Automatic Record Mute**
  Press the MUTE button and the microprocessor automatically shuts off the recording signal for 4 seconds, and then enters the recording pause mode.

- **Tape standby mechanism**
  The leader tape at the beginning of a tape can be taken up automatically by pressing the fast-forward and rewind buttons simultaneously; this is convenient in recording.

- **Timer Recording and Playback**
  With an external timer connected, you can record your favorite radio program while you're out, or start playback at a pre-set time for stereo "wake-up alarm" (for other timed record or playback applications).
CONTROL LOCATIONS

1. **TIMER Switch**
   When using an external electrical timer, set this switch to RECORD for timer-controlled recording, and to PLAY for timer-controlled playback. Set to OFF when you are not using an external timer.

2. **POWER Switch**
   Push in to turn the power on; press again to turn the power off.

3. **EJECT Button**
   Press to open the cassette compartment and install or eject the cassette.

4. **Play Key with DIRECTION Indicator**
   Press right side of the key to play the side 1 (facing out) of the cassette; press left side to play the opposite side. The DIRECTION indicator will light to show the direction of tape travel. Press this key together with RECORD button for recording.

5. **◀ Key**
   Press to advance the tape rapidly to the left. To release this function, press the STOP key.

6. **▶ Key**
   Press to move tape rapidly to the right. To release this function, press the STOP key.

7. **Tape Type Indicator**
   The built-in sensing device automatically detects the type of tape you’re using and lights the appropriate indicator.

8. **Digital TAPE COUNTER**
   Use to aid you in locating desired portions of the tape. Also displays programming information.

9. **Dolby NR* B/C Indicator**
   The fluorescent display shows B or C when Dolby NR is activated.

10. **PEAK LEVEL METERS**
    Indicate peak level of recording. When playing a tape, they show playback signal level.

11. **DOLBY NR* B-TYPE/C-TYPE Select Button**
    Select Dolby NR B or C-type by pressing in for C-type, leaving out for B-type.

12. **DOLBY NR* OFF/ON Button**
    Press in to activate Dolby NR circuitry. Leave out for normal recording/playback.

13. **Stereo PHONES Jack**
    Plug a pair of stereo headphones into this jack for private listening or editing.
14 MICROPHONES LEFT and RIGHT Jacks
For live recording, plug high-quality microphones into these jacks.

15 REPEAT Button
Use for repeat play of your favorite program.

16 PROGRAM Button
Press to enter the data for programmable functions: scanning, selection searching, or repeat play.

17 SCAN Button
Press for scanning operation.

18 COUNTER RESET Button
Press to reset the counter to 000.

19 RECORD LEVEL Controls (Left and Right)
Slide to adjust the recording levels of each channel.

20 MUTE Button
During recording sessions, press to edit out unwanted signals.
Note: When pressing the MUTE button during playback (except recording), it operates the same as pressing program switch.

21 RECORD Button with Indicator
Press simultaneously with the play key to record. The indicator will light.

22 PAUSE Key with Indicator
Press to temporarily stop tape travel during record or play. Press the play key to release.

23 Mode Indicators
Indicate the mode selected by the MODE SELECTOR push buttons

24 MODE SELECTOR Push Buttons
Select the tape running mode:
- One way mode
- Both ways mode
- Continuous mode

25 STOP Key
Press to stop the tape movement. The programming information stored in the memory will be cleared.
**Rear Panel**

**SPECSIFICATIONS (TYPICAL)**

- **Tape System:** Standard PHILIPS Cassette 4-track stereo
- **Tape Speed:** 1-7/8 ips (4.75 cm/s)
- **Frequency Response**
  - Metal, 45 to 18,000 Hz (±3 dB)
  - **CrO₂:** 45 to 17,000 Hz (±3 dB)
  - Normal, 45 to 17,000 Hz (±3 dB)
- **Signal-to-Noise Ratio:**
  - Dolby B "IN" 67 dB
  - Dolby C "IN" 75 dB
  - (Metal tape — A weighted, ref. 3% THD, 3rd HD, 400 Hz)
- **Distortion:** 1.0% (ref. 160 nW/m)
- **Cross-talk:** Better than 80 dB
- **Wow and Flutter:** 0.04% WRMS
- **Erase Ratio:** Better than 65 dB
- **Output Level:** Line Out = 0.5 volts
  - **Output Impedance:** Line Out = 10 k ohms
  - **Headphone:** 8 ohms
- **Input Sensitivity:**
  - **Mic:** ~68 dBV (0.4 mV)
  - **Line In:** ~17 dB m (100 mV)
- **Input Impedance:**
  - **Microphone:** 7 k ohms
  - **Line In:** 50 k ohms
- **Record Bias:** 85 kHz
- **Erase System:** 85 kHz AC erase
- **Power Requirements:**
  - AC 120 V, 60 Hz, 22 W (U.S.A., CANADA)
  - AC 220/240 V, 50 Hz 23 W for the units purchased in Europe/Australia
- **Dimensions:** 4-5/16" x 17-1/8" x 10-11/16" (H.W.D.)
  - (11.0 x 43.5 x 27.2 cm)
- **Weight:** 10 lbs. 9 oz. (4.7 kg)

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**LINE IN Jacks**
Connect external signal sources to these jacks from tape out or record out jacks on your amplifier/receiver.

**LINE OUT Jacks**
Connect these output jacks to the tape in or aux in jacks of your amplifier/receiver.

**Line Cord**
Connect to an AC outlet. (Check labeling on the rear panel for the correct voltage and frequency — in volts and Hz.)

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*[Image of a stereo system]*

**REALISTIC**

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5
**INSTALLATION**

**Microphone Connection**

For "live" recordings, connect microphones to the MICROPHONES jacks on the front of the Tape Deck. Use two for stereo recordings; for monaural recordings, use Y-adapter.

To fully realize the dynamic range, low noise and wide frequency response of this Deck, you should use good microphones. Your local Radio Shack store has a wide selection of microphones (and other accessories). Ask your sales person for advice on what to use.

**Stereo Headphones**

You can use Stereo Headphones to monitor the recording process and signal, or to listen to a tape being played back. This gives you complete private monitor/listening capability. Your Radio Shack store has some fine headphones to choose from. We strongly recommend that you try a pair.

To use them, just plug them into the PHONES jack on the front of the Tape Deck.

Using one of the patch cords provided, connect the left and right LINE OUT jacks to the corresponding tape input jacks of your amplifier/receiver.

Use the other patch cord to connect the LINE IN jacks to the TAPE OUT (or RECORD OUT) jacks on your amplifier/receiver.

Plug the line cord into an AC outlet.
OPERATION

Playing the Tape

1. Press POWER to turn the unit on. At power on, the TAPE COUNTER is automatically set to 000.
2. Load a pre-recorded cassette as noted previously. Because this unit has a built-in auto tape selector, the bias and equalization are automatically set to the tape being used. When a cassette is loaded, one of the tape type indicators will light: NORM-I for standard tape, CrO₂-II for CrO₂ or high-bias tape, METAL-IV for metal tape.
3. If you are going to play a Dolbyized tape, press DOLBY NR button and select either B-type or C-type.
4. Press the desired MODE SELECTOR push button.
5. Press the play key; the tape will begin moving. Adjust volume, balance and tone controls on your amplifier/receiver for desired levels. During playback, the playing back direction can be changed by pressing the opposite side of the play key.
6. To temporarily stop tape playing, press PAUSE; to re-start the tape, press the Play key.
7. To stop playing, press STOP.

To move tape rapidly in right direction, press ➤. To move tape rapidly in left direction, press ◄. In either case, press STOP (or desired function key) to release the function.

When the tape reaches the end in any function, the full auto stop mechanism stops tape and the counter tells you, “End”, provided you’re not in the continuous play mode.

During the play or record mode, one of the DIRECTION indicators flashes as a tape running direction indicator.

Repeat Playing

1. Press the play key at the start of the portion tape to be repeated during playback.
2. Enter the number of repeats you desire by pressing the PROGRAM button. The tape counter shows the number of repetitions as you press PROGRAM. A maximum of 15 repetitions can be programmed.
3. Press the REPEAT button at the end of the portion to be repeated.

Now the automatic repeat playback starts. After played back the number of times specified normal playback will resume. You can repeat over both sides— for example, you can program the last program of side 1 and the first program of side 2 to be repeated.

CAUTION: Be sure to press STOP before you press any other function key.

Private Listening

To listen to tapes privately (or if you don’t have an amplifier/receiver), plug a pair of stereo headphones into the PHONES jack.

WARNING: Before turning the Deck on, set the TIMER switch to OFF. If set to RECORD or PLAY, it will automatically go into that mode when you turn the unit on and you might accidentally erase a portion of a tape.)

To turn the Deck On

The SCT-42 offers the convenience of a separate on/off button. To turn the Deck on, push POWER once; push again to turn it off.

Loading a Cassette

Press the EJECT button and the cassette compartment will open gradually. Insert the cassette into the cassette compartment, open end down and full reel to the left.

Close the cassette compartment cover. To remove the cassette, press EJECT and remove the cassette.

While no cassette is loaded or the cassette compartment is open, the buttons will not function.

To obtain the best performance from this unit, it is recommended that you use the tapes: Supertape® Gold (NORM position), Supertape® Chrome (CrO₂ position) and Supertape® Metal (METAL position). A high recording level with a wide dynamic range can be obtained.
Operation — Continued

**MODE SELECTOR**

An LED sensor in the automatic tape reversing mechanism detects the splice of the magnetic tape (recording part) and the leader tape (non-recording part) to automatically change the tape running direction in accordance with the MODE SELECTOR setting. Set the MODE SELECTOR prior to operation as desired.

**NOTE:** The tape is not automatically reversed within about 10 seconds after the play button is pressed.

**CAUTION:**

The automatic reversing mechanism may malfunction in the following cases:
- Dust or foreign matter collects on the tape.
- The tape is wrinkled.
- A mark or character is printed on the tape.
- The cassette holder is exposed to an intense light.
- A heavy shock affects this deck.

Some cassette tapes automatically reverse at the end of the leader tape.

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**Continuous mode**

Playback is continuous from the forward direction to the reverse direction and vice versa until the STOP button is pressed. In recording, however, continuous playback is made when recording in the reverse direction is completed.

When recording in the reverse direction in the continuous mode, the unit will begin playback after the tape reverses to the forward mode.

**Automatic Tape Selector**

When the tape is put in this deck, the tape selector automatically identifies its type and the bias and equalization are set.

The tape selection is made by detecting holes in the tape as shown. When the metal tape has no detecting holes as specified, accurate tape selection may be impossible, resulting in distortion in recording or insufficient erasing.

(There is no problem in playback of the recorded metal tape.)

In the above case, "CrO₂-II" is indicated by the TAPE TYPE indicator.

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**One way mode**

Recording or playback is made only in the forward or reverse direction. The tape automatically stops at the end when recording or playback is completed.

**Both ways mode**

When recording or playing back in the forward direction is completed, it is resumed in the reverse direction. The tape automatically stops at the end when one cycle of recording or playback is completed.

**CAUTION:**

- Be sure to select the right side of the Play key first for recording or playback in the both ways mode.
- Check for both erase protection tabs on the cassette before recording if you want to record both sides of tape. (See page 13.)
SELECTION PROGRAMMING

Selection Searching
1. To return to the beginning of the current program while in the play mode, press play and rewind at the same time. (Use either ◀ or ◀ depending on tape direction.)
2. To skip to the beginning of the next program while in the play mode, press fast-forward at the same time (either ▶ or ▶ depending on tape travel direction).
3. To skip several programs in either direction while in the play mode, press PROGRAM. Count the number of programs you want to skip and press PROGRAM until that number appears on the tape counter. Press either the right or left arrow (fast-forward and rewind directions will depend on the tape travel direction) to skip ahead or return to a program.

Note: The SCT-42 counts the number of blank segments of tape between programs as it skips them. If you are returning to a program, count the program you are in as the first one skipped. To advance to a program, count the next program as the first one skipped.

How to count the number of tunes:

When returning to a previous tune

When skipping tunes

Scanning
1. You can program your SCT-42 to play back only the programs you desired.
2. Playback starts and the A on the counter flashes. The beginning of each program is played back for about 10 seconds. Press PROGRAM during this 10 seconds if the program being scanned is one that you want played back.
3. Continue to program similarly. Up to 15 selections can be programmed.
4. Press rewind key ( ◀ as the case may be) when you finish programming. When you have programmed the full 15 programs, the tape is automatically rewound. The tape counter shows P.
5. After playing back all the programs specified, the tape rewinds to the beginning of the side and stops.

CAUTION
- Scanning can be made on one side only.
- During scanning, pressing STOP cancels scan.
- Pressing fast forward skips forward to another selection, pressing rewind returns to the first programmed selection and begins play. Other function keys have no effect during scanning.
- Pressing STOP will clear all the memory entered for scanning.
- Do not use scanning while in the record mode.

Notes
1. These functions operate by detecting the blank portion between the programs.
2. When you use fast-forward searching near the end of a program (or rewind searching when a program just began), the next blank portion may not be detected.
3. When you prepare a tape yourself, allow blank sections between programs for 3 to 5 seconds.
4. Erratic operation may occur when the TV set is nearby. Move your SCT-42 away from the TV set.
5. Wait until the program starts to playback after the unit detects the blank portion before activating the function again.
6. Be sure the Dolby NR buttons are set correctly. The medium/low frequency levels have been changed in Dolby NR C-type, so when the Dolby NR buttons are incorrectly set, the functions may not operate properly.

REALISTIC
You can make recordings either from microphones (through MICROPHONES jacks) or through the LINE IN jacks. Make the appropriate connections before starting the Recording session.

We recommend that you use only the finest tape with your SCT-42. Only with the finest tape will you realize the fullest capabilities of this Tape Deck. Use Realistic Supertape® Metal, Chrome or Gold tapes.

1. Press POWER to turn the unit on.
2. Load a cassette into the cassette compartment.
   The tape selector automatically identifies the tape type.
3. Set the DOLBY NR button for either B or C-TYPE if you are going to make a Dolbyized recording. Be sure to mark the cassette "DOLBY-B" or "DOLBY-C" if you record with DOLBY NR.
4. Press fast forward and rewind arrows (⇒, ▲) simultaneously to automatically take up the leader tape at the beginning of the tape.
5. Press PAUSE and RECORD simultaneously to set to recording standby mode.
   Adjust the RECORD LEVEL controls so that the level shown by the PEAK LEVEL METERS does not exceed +3 dB at maximum input. The proper channel balance can be adjusted using the two controls.
   This procedure allows you to preset the recording level prior to starting tape motion.
   See NOTES AND APPLICATIONS (page 12) for further recording tips, especially for metal tape.
   NOTE: LEFT and RIGHT channel recording levels can be adjusted individually. Once you’ve set the relative balance of levels you can adjust the overall level of both channels at one time.

6. Press play. The tape will begin to move and you are recording.
7. To temporarily stop the tape while recording, press PAUSE.
   To restart the tape press play.
8. Press MUTE to edit out the sound being recorded. After 4 seconds, the Deck will automatically enter the recording pause mode.
   Press play to continue recording.
9. To stop recording, press STOP.

To advance tape rapidly to any desired point, use the ⇒ or ▲ button.
You can go from play mode to record mode directly without stopping. This is ultra-convenient when recording on a tape that is partially recorded. Use selection searching function to locate the end of the previous recording. Press the play key and RECORD button simultaneously when the tape resumes normal playback.
Use the TAPE COUNTER to aid in returning to the original tape position and to locate desired portions of the tape.

### MICROPHONE RECORDING

When making microphone recordings, insert two microphones into the MICROPHONES jacks. Carry out the procedure described in STEREO RECORDING.

#### Automatic Recording

**MUTE Function**

When the MUTE button is pressed during recording, the Deck enters a non-signal mode for approximately 4 seconds and then automatically enters the recording pause mode; press the play button to re-start recording. If the MUTE button is pressed continuously, the non-signal mode will continue for more than approximately 4 seconds; when MUTE is released, the Deck automatically enters the recording pause mode. This is convenient for editing out commercials or leaving gaps between selections.

**NOTE:** If you want less than a 4-second mute, press PAUSE after the desired mute time.

#### Punching In

When recording live, you will often find songs start out fine but then someone makes a mistake. With the SCT-42 you can start over from the point of the mistake, instead of recording the entire song again.

Simply playback the previous recording up to the exact instant you want to begin recording; then press play and RECORD at the same time.

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**REALISTIC**
Recording or Playing back Using an External Timer

Because of the logic controlled circuitry built into the SCT-42, you can use an external timer to turn it on and off and have a recording made while you are away. You can perform play-back, also. Connect the power cord of the SCT-42 and your amplifier/receiver's to an automatic timer (such as Radio Shack's 63-888).

Timer Recording
1. Set up the receiver for normal reception and adjust the recording level as noted on page 8. Be sure power is on (both the SCT-42 and your amplifier/receiver).
2. Now, connect the power cord of SCT-42 to the timer's outlet. Set the timer to turn on. (Refer to the timer's instruction manual for setting the timer we recommend.)
3. Set the SCT-42 TIMER switch to RECORD. Now the SCT-42 is ready for timer-controlled recording.
4. At the pre-set time, the timer will come on, power will be applied to the SCT-42, and recording will start automatically.

Caution: If the cassette has the erase protect tabs removed when the timer operates, the SCT-42 can not go into a record mode — it will go into the play mode instead. Before you set up for timer-controlled recording, be sure that the cassette has the erase protection tabs in place. Also be sure you set the TIMER switch to the RECORD position.
The timer recording always starts from side 1 (facing out). Check to be sure that the cassette tape is inserted so the side you want to record is facing out.

WARNING: Be sure to set the SCT-42 TIMER switch to OFF except for timer-controlled recording or timer-controlled playback.

Timer Play
1. Load the tape you want to play, adjust the volume control on the amplifier/receiver for the desired level, and press the STOP button.
2. Connect the SCT-42 to the timer as described under "Timer Recording" and set the timer to turn on.
3. Set the SCT-42 TIMER switch to PLAY. The tape will automatically be played back at the pre-set time.

When the SCT-42 TIMER switch is set to RECORD or PLAY, do not open or close the cassette door for several seconds after the power is applied; this will protect the mechanism from damage.
When the TIMER switch is set to RECORD or PLAY, the RECORD or PLAY LED will flash and continues for about four seconds until timer circuit operates. The deck automatically sets to play back or recording when the alarm continues for four seconds.

Note: When in the Timer playback or record mode, tape travel will begin to the right regardless of previous settings.
NOTES AND APPLICATIONS

To Erase A Tape

It is not necessary to erase a tape before using it again. As you record, any previous recordings are automatically erased. However, if you want to erase a previous recording without making a new one, disconnect microphones and set the RECORD LEVEL control to minimum. Now, load the cassette and run it through with both RECORD and play buttons pressed (just as though you were making a recording). This will erase the tape clean. You may erase an entire tape (both sides) in just a few seconds with a bulk tape eraser such as Radio Shack's 44-232.

CAUTION: If you wish to erase only a portion of a tape or only one side, you must use the procedure above.

Choosing The Right Tape

Choice of tape is vital to good recordings. To take full advantage of the SCT-42 performance capabilities, you should only use the finer-quality tapes designed specifically for music recordings. For low-noise, wide range recordings, we recommend the new Supertape Metal, Chrome or Gold (in conjunction with the special bias for these tapes).

Monaural Recording And Playback

You can use your SCT-42 for monaural recording or playback, follow the same procedures as outlined previously for both functions. It is best if you use both right and left channels for the monaural signal — this assures best sound reproduction, maximum output and lowest noise. Use a "Y" adapter Cat. No. 42-2156 for microphone recording. For AUX IN jacks, use "Y" adapter Cat. No. 42-2435.

Setting The Recording Level

Record levels should not be too high or too low. Proper recording levels will be achieved when meter readings only occasionally light up the red segments of the meter. Normal peak levels will produce meter readings up to between 10 of the white section and 0 of the red section. High peaks of recording levels may occasionally flash the red +3 dB.

Typical Recording Level

Excess Level

Recording levels that consistently peak into the 3 to 8 red section may result in distortion and/or poor high frequency response. Recording levels that peak only occasionally to 10 white (or lower) will have excessive noise — especially noticeable in the soft passages. Therefore, you must learn to adjust recording levels for a happy medium, to assure lowest noise and widest possible dynamic range.

Special Note On Metal Tape

The new metal tapes offer the finest sound reproduction. The technology involved permits greatly extended dynamic range, especially at the high-frequency end of the audio spectrum. This means much less possibility of distortion on peaks of sound (e.g. crash of cymbals, etc.). To take full advantage of this extended high-frequency dynamic range, you can record on metal tapes at higher levels than with other types. Instead of limiting meter peaks to between 10 of the white section and 0 red, when using Metal tape, set record levels for meter readings peaking up to 0 and +8 red. (Recording at these higher levels will not produce distortion in the recorded signal, but will result in greater output and greater signal-to-noise ratio.)
Microphone Recording

Enjoy the excitement and fascination of making your own "live" recordings with a pair of Realistic microphones. Realistic has a mic for every purpose, from at-home recordings to live on-stage performances. Knowing the broad distinctions between microphone types will help you make the right choice. There are two basic pickup patterns; cardioid and omnidirectional.

Cardioids pick up sound mostly from the front. That's why they're good for stage work, music recordings, and public address applications where feedback (acoustic "howling") is a problem.

Omnidirectional have a circular pickup pattern that lets you place a mic almost anywhere in an average-size room and get good sound pickup. Used in pairs, they're good for making live stereo recordings of orchestras and other large groups.

Another distinction is between dynamic and electret condenser microphones. Dynamics are rugged and versatile; great for at-home recording and on-stage work where dependability is a must. Electret condenser mics provide super-sensitive sound pickup along with a wide and flat response. The finer electrets are used for critical studio work. Electrets require a small, easily replaced battery for their built-in transistor. Battery life averages six to nine months.

You Realistic SCT-42 is designed for use with any low-impedance (300—5000 ohms) microphones, either electret or dynamic.

4-Track Recording And Playback

A cassette has two sides.

This Cassette Deck uses the standard four track, two channel (stereo) system for making recordings and playing them back. Use mode so after you have recorded both right and left channels on one side, you can record the other side without much interruption.

Cassettes have a built-in erase protection device. On the back of the cassette are two small tabs. To prevent accidental erasure, carefully break off the appropriate tab as shown below. With side A/1 up, breaking tab A will prevent accidental erasure of the material on side A/1. Tab B is for side B/2.

If the plastic tab is broken off of one side, Play back is made in the reverse direction after recording in the forward direction is completed. If you decide to erase or re-record a cassette that has the tabs broken off, just cover the appropriate opening with tape.

To re-record a cassette it is not necessary to erase previous recordings. Previous recordings are automatically erased when a new recording is made.

To erase a tape, follow the same procedure as for Recording, but disconnect inputs and reduce RECORD LEVEL controls to minimum. Then run the tape through (press RECORD and play buttons); this automatically erases previous recordings from the tape. Note that the erase protect tabs must be in place for this erase function to work.
To achieve optimum record results, be sure to use the correct DOLBY NR switch positions. When playing back a Dolbyized tape, always set DOLBY NR button and set either B-TYPE or C-TYPE position. When playing back a non-Dolbyized recording, set the DOLBY NR button to the out position.

Dolby encoded pre-recorded cassette releases are widely available, and should be played with appropriate Dolby noise reduction selected. Cassettes recorded with Dolby B-type noise reduction are identified on the box’s spine and the cassette label with the \( \square \) symbol, and on the liner’s front cover with the \( \square \) symbol. Cassettes recorded with Dolby C-type noise reduction are identified with the \( \square \) and \( \square \) symbols.

You can duplicate tapes by recording from another tape deck/player or by transferring 8-track tape programs onto cassettes. You can put your favorite records onto cassettes, also. Make appropriate connections from another tape player or phonograph to the LINE IN jacks as noted previously.

Storage of tape is no major problem, provided you do not expose it to extreme temperatures or high humidity. Also, do not expose your tapes to magnetic fields (magnets, large transformers, etc.). Avoid dust and dirt. You may find storage containers to be extremely useful accessories; see your local Radio Shack store.

Demagnetize the tape heads and clean the tape handling parts periodically ... this will insure maximum frequency response and lowest noise. After a few hours of recording or playing, dust, lint and tape oxide will begin to build up on the tape heads and guides; this affects record and play quality. To achieve the professional quality this system is capable of, such dust, lint and oxide must be cleaned off. Also, the heads tend to retain residual magnetism after some hours of use...this introduces noise on both record and playback. To clean, we recommend using Radio Shack Catalog Number 44-1160 Cassette Head Cleaner or use cleaning sticks (44-1093) and Recorder Cleaner (44-1010). To remove residual magnetism, use a Tape Head Demagnetizer. We recommend our 44-1165, which removes residual magnetism in a matter of seconds.
DOLBY* NR (Noise Reduction) SYSTEM

Your SCT-42 incorporates a Dolby C-type and B-type noise reduction system. The new Dolby C-type NR system starts enhancing program (and noise) from 100 Hz and rises 20 dB at 1 kHz and above when recording, and reduces the same amount when played back. The standard Dolby B-type NR system does the same from 500 Hz and 10 dB at 4 kHz and above.

With Dolby C NR and a good formula tape such as our Supertape Metal, tape noise will be below any program material you record — even when you play back at very high levels. Note that the Dolby system reduces only the noise during the recording process: any noise from the original program source cannot be reduced.

What DOLBY* NR SYSTEM does

Making an ordinary recording:

1. **Music**
   Music is made up of sounds of different loudness separated by intervals of silence. Loud and soft sounds are shown here as long and short lines. The music, represented by this diagram starts loud and gradually becomes very quiet.

2. **Noise**
   Any recording tape, even the best kind, makes a constant hissing noise when played. At the very slow speeds and narrow track-widths used in tape cassettes, tape noise is much more noticeable than it is in professional tape recordings, although even there it is a problem.

3. **Music and Noise**
   When a tape recording is played, the noise of the tape conceals the quietest musical sounds and fills the silence when no sound should be heard at all. Only when the music is loud will the noise be masked and usually not heard. However, tape noise is so different from musical sounds that it sometimes can be heard even then.

Making a Dolby* system recording:

1. **What the Dolby NR System does first**
   Before the recording is made, the Dolby NR system “listens” to the music to find the places where a listener might later be able to hear the noise of the tape. This happens mainly during the quietest parts of the music. When it finds such a place, the Dolby system automatically increases the volume so that the music is recorded louder than it would be normally.

2. **The Recording**
   In a Dolby NR system recording, the parts of the music that have been made louder stand out clearly from the noise. As a result, Dolby NR system recordings sound brilliant and unusually clear even when played back without the special Dolby NR system circuit.

3. **What the Dolby NR System does during playback**
   When the tapes are played on a high-fidelity tape recorder equipped with the Dolby NR system circuit, the loudness is automatically reduced in all of the places at which it was increased before recording. This restores the music to its original loudness again. At the same time, the noise that has been mixed with the music is reduced in loudness by the same amount — usually enough to make it inaudible.

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![Realistic Logo](image-url)
TO AVOID MACHINE PROBLEMS

Your Tape Deck is a precision electro-mechanical instrument. It is ruggedly constructed and is designed for superior quality tape recordings and playback signals. To assure maximum enjoyment and optimum performance, there are a few things you need to keep in mind.

Always be sure you install a cassette properly before pressing any tape motion controls.

Keep your Tape Deck clean. Don’t install it in an area where it will be exposed to concentrations of dust and dirt. Don’t expose it to extreme temperatures. It is absolutely vital that you periodically clean the tape handling parts.

Tape slack in a cassette can cause trouble by getting caught in the capstan or pinch roller. To avoid this, tightly wind up the tape using the pointed end of a pencil as shown.

If you intend to use long play cassettes (C-90 or more), you must keep your Tape Deck clean and properly maintained. These longer cassettes use thin tape which can easily get caught in the tape handling parts — the only way to avoid this is by proper care and cleaning of the machine.

If you are going to use your Stereo Cassette Tape Deck extensively, we urge you to obtain suitable tape accessories from your local Radio Shack store to ensure maximum benefit from your unit.

CAUTIONS

The erase protection tabs on a cassette are a precaution against accidental erasure or re-recording. Be sure the cassette has erase protection tabs before you start recording.

Before recording or playing back, be sure the cassette is properly seated in the cassette compartment.

Do not touch the tape heads with any magnetic or metallic object.

 Disconnect the AC cord from the AC outlet when the unit is not to be used for a long period of time or when you are away from home.

When you are connecting the tape Deck to other units that produce a high volume of leakage flux (large power transformers), hum may be induced into this unit, so stack the units with sufficient spacing between them.

Your Tape Recorder has a circuit that generates an electronic signal used in the recording process; sometimes this signal creates noise or a weak steady tone during AM reception/recordings. If this should happen, keep the Tape Deck as far from the tuner as possible.
SERVICE AND MAINTENANCE

Only the highest quality parts are used in your unit and it should require little or no service as long as you observe a few general rules.

**Although the SCT-42 is a ruggedly built unit,** reasonable care should be taken to avoid rough handling. Avoid exposure to dirt and dust and areas of high heat and humidity.

Always keep your unit clean — especially the tape heads and tape handling parts — this will ensure long life and maximum fidelity. Over a period of time it is normal for a certain amount of dust, lint and powder from the tape to accumulate on these parts. This prevents proper contact of the tape and results in improper tape handling (producing noise, partial “drop-outs” and poor frequency response). Periodically clean the tape heads and tape handling parts with tape head cleaner, head cleaning swabs or a cassette cleaner tape. Your local Radio Shack store carries a complete line of tape care accessories.

The cassette compartment door can be removed for easier cleaning. Press the EJECT button, then remove the one nylon pin — one on each side of the door. Pull the door out toward you, then lift it off. Close the cassette door frame to expose the tape handling parts that need cleaning.

Re-attach the door by placing it in position and snapping the pins back into place.

Over long periods of constant use, the tape heads may retain some magnetism. A magnetized head will produce noise. So it is important that the heads be demagnetized periodically.

Periodic lubrication will ensure proper operation of all moving parts. At least once a year you should bring your unit into your local Radio Shack store for standard lubrication and simple preventative maintenance by our service technicians.
NOTES:
1. ALL RESISTANCE VALUES IN OHMS K = 1000
2. ALL CAPACITANCE VALUES IN µF PF = µµF
3. VOLTAGE MEASURED WITH VOLTMETER FROM SIDE LEVEL CONTROLS AT MINIMUM AND NO SIGNAL
RADIO SHACK LIMITED WARRANTY

This product is warranted against defects for 1 year from date of purchase from Radio Shack company-owned stores and authorized Radio Shack franchisees and dealers. Within this period, we will repair it without charge for parts and labor. Simply bring your Radio Shack sales slip as proof of purchase date to any Radio Shack store. Warranty does not cover transportation costs. Nor does it cover a product subjected to misuse or accidental damage.

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