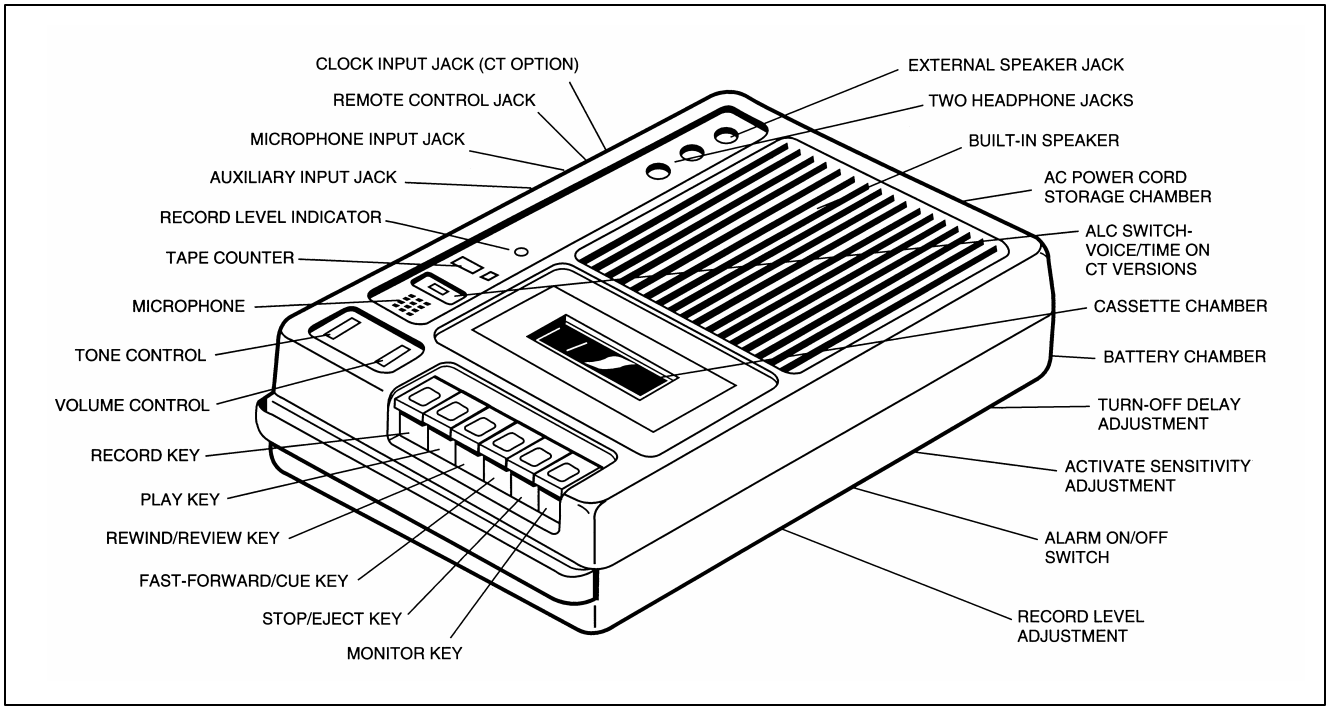
OMNICRON ELECTRONICS

AUTOMATIC VOICE LOGGING RECORDER

standard speed models **VLR-1** and **VLR-1CT**

one quarter speed models **VLR-4** and **VLR-4CT**

one eighth speed models **VLR-8** and **VLR-8CT**



OWNER'S REFERENCE MANUAL

5K07028099 K-2000

FEATURES

The Omnicron VLR recorder is a versatile solid-state unit featuring voice-activated recording. This feature permits you to record conversations without having to turn the recorder on and off manually. You can make recordings directly from the built-in microphone, or you can use an optional interface coupler or cable to connect the recorder to telephone or radio circuits.

Other important features include an end-of-tape alarm, review and cue capability, digital tape counter, and monitor while recording. The VLR-4 and VLR-8 recorders include slow speed drive circuitry. The VLR-4 provides up to four hours of recording time on each side of a tape. The VLR-8 provides up to 8 hours per side. Automatic level control recording assures the best performance with reduced back-ground noise and distortion. A second recording channel for use with the Omnicron Talking Clock can be found on models VLR-1CT, VLR-4CT, and VLR-8CT. The clock provides documentation of the time and date each recording takes place.

When you reach the end of tape in either play, record, fast-forward, or fast-rewind, the function keys will pop up turning the power off. If the End-Of-Tape Alarm switch is ON, the recorder will emit a continuous beep tone from its speaker whenever all function keys (Play, Review, and Cue) are up.

PREPARATION FOR USE

AC POWER

The recorder uses standard 120-volt 60 Hz AC power. On the bottom of your recorder you will find the AC power cord storage compartment. Remove the cord and plug it into an AC outlet.

BATTERY POWER

The recorder uses six C-size cells. To install batteries, remove the lid of the battery compartment which is on the bottom of the recorder. Insert the six batteries to match the polarity of the "+" and "-" symbols shown inside of the battery compartment. After the batteries are installed and seated correctly, replace the battery compartment lid.

Incorrectly inserted batteries will not work and could cause damage to the batteries and the recorder. The recorder will trickle charge rechargeable batteries and a built-in relay will automatically switch over to battery power whenever AC power is lost. Non rechargeable batteries should be removed prior to operating the recorder on AC power.

Batteries are not required for operation on AC power.

CASSETTE INSERTION

Open the cover of the cassette compartment by depressing the STOP-EJECT key. Insert the cassette with the tape edge toward you and the full reel to the left. Now close the cover and the recorder is ready to operate.

OPERATION

GENERAL

You control all tape mechanism functions with the push buttons. The tape will stop, and power is off when all buttons are up. Depressing one of the PLAY, REVIEW (rewind), or CUE (fast-forward) buttons turns on the power and places the tape recorder into the selected mode. You can stop the tape by pushing the STOP-EJECT key. Depress this key again to eject the cassette. The recorder has an automatic power-off circuit. When you reach the end of tape, the buttons will pop-up and power will turn off.

A tape COUNTER helps you quickly locate recorded material for playback. Depress the button next to the counter to reset the numerals to "000".

RECORDING

When recording, the tape drive motor will run only when audio is present at one of the recorder's audio input sources. You can use either the built-in microphone, an external microphone, or an auxiliary audio source. You will automatically turn off the built-in microphone when you use either the external microphone jack (MIC), or the auxiliary input jack (AUX). Audio fed into the CLOCK jack on recorders with the CT option goes directly to the time track on the recording head and will not start the recorder's voice activation circuit. You must depress both the RECORD and the PLAY keys for the recorder to be in the RECORD mode.

RECORD LEVEL ADJUSTMENT

On the bottom of the recorder you will find the record level control. You may increase the record level and make weak sounds louder by turning this control clockwise. If you set the control too high, your recordings could be distorted and the recorder will boost background noise excessively. Line up the blade of a small screwdriver with the slot in the control. Adjust it up or down as required for the best sound quality. DO NOT FORCE THE CONTROL. To set the level correctly, watch the Record Level indicator light. When you are recording, set the record level adjustment only as high as required to cause the red light to come on during voice peaks. If the light does not flash during conversations, the record level is too low. If it is on continuously, the record level is too high.

CASSETTE INSERTION

Before inserting a cassette, take up any slack in the tape by inserting a pencil into the hub of the cassette and turning it a few times. Press the STOP/EJECT key to open the cassette door. Insert the cassette into the chamber with the exposed edge of the tape facing you and the full reel to your left. Close the door by pressing downward until it latches shut.

To remove a cassette, press the STOP/EJECT button once to stop the recorder. Press the button a second time to open the cassette door.

RECORDING WITH BUILT-IN MICROPHONE

Insert a tape and simultaneously depress both the RECORD and PLAY keys. The tape will begin to move, and the machine will be recording. The recorder will continue to record as long as there is sufficient audio in the amplifier to trigger the voice-activation circuit. It stops after it is quiet for a few seconds and starts recording when you speak within a few feet of the microphone.

The volume control is inoperative in the record mode. The MONITOR function should be off (MONITOR key UP) to prevent feedback during microphone recording. To end the recording, depress the STOP/EJECT key. Depress this key a second time to EJECT the cassette. If you reach the end of the tape while recording, the recorder will shut off and the PLAY and RECORD buttons will pop up.

RECORDING WITH EXTERNAL MICROPHONE

Plug a suitable microphone (such as the OMNICRON RMC-8 or PZ-2LA) into the MIC or MIC and REM jacks on the left side of the recorder. The large jack (MIC) is the microphone circuit. It is also used to connect other low level audio sources to the recorder.

The small jack next to the MIC jack is the remote switch circuit (REM). When the remote jack is used, the tape will not move in the RECORD mode unless the external remote switching circuit is on. The voice activation circuit also must have sufficient audio to start the motor. Operate the recorder as described in the instructions for built-in microphone recording. Increase or decrease the record level as necessary.

RECORDING FROM OTHER SOURCES: RADIO, PHONE, ETC.

Your recorder receives audio either by placing a microphone near the speaker of your audio source, or by connecting directly to the speaker or audio output of the device you wish to monitor. If possible, use a direct connection to prevent unnecessary noise pickup. A direct connection also will produce clearer recordings.

Most telephone and some two-way radio installations require the use of an interface coupler or adapter (such as the TSA-3, LIC-390, or LIC-100) between the recorder and the audio circuit. Couplers provide isolation and a balanced line input. They also help to prevent the noise on telephone lines from reaching the recorder between conversations. Check with your Omnicron dealer or telephone company to see if you require a coupler for your application. Do not connect the recorder directly to telephone lines without a coupler. Improper operation of both your recorder and the telephone circuit could result. The recorder could also be damaged.

An accessory patch cord is available (AUX-6S) for use if you will be connecting the recorder to your audio source without a coupler. It has a miniature phone plug on one end to match the auxiliary audio input jack on the recorder (AUX) and spade lugs on the other end. It is six feet long. You can shorten or lengthen it if necessary. The spade lugs can be changed, if required, to match the audio connections on your signal source (two-way radio, tone alert receiver, scanner, tape recorder, pocket pager, etc.). The cable may be special ordered to match your specific application.

VOICE ACTIVATION SENSITIVITY

If the recorder does not record weak conversations properly after adjusting the RECORD LEVEL, you can adjust the recorder so it will be more sensitive and start recording with weaker sound levels by turning the ACTIVATE SENSITIVITY control clockwise. You will find this screw driver adjustment on the bottom of the recorder. You can also adjust this control to make the recorder less sensitive if it runs with noise that is weaker than the normal conversation level. To make the voice activation less sensitive, turn the control counter-clockwise with a small screwdriver.

Adjusting the ACTIVATE SENSITIVITY control too far in the clockwise direction can turn off the voice activation circuit. This will cause the unit to run continuously when it is in the record mode. Adjusting the control too far in the counter-clockwise direction will cause the recorder to remain stopped in the record mode even if there are loud sounds in the amplifier. DO NOT FORCE THE CONTROL.

Since the sensitivity of the voice activation circuit is also affected by the setting of the record level adjustment, you should adjust the record level for best sound quality. Then adjust the ACTIVATE SENSITIVITY if necessary to insure that the recorder does not run when it should be stopped, or if it stops when it should be recording.

TURN-OFF DELAY

You can adjust the length of time between the end of a conversation and the moment when the recorder stops with the TURN-OFF-DELAY control. This screw driver adjustment is on the bottom of the recorder. Adjust this control by inserting a small screwdriver in the hole indicated. If the recorder turns off too quickly during pauses, turn the control clockwise to increase the turn-off-delay.

If the recorder runs too long after a conversation is over, adjust the control counter-clockwise to decrease the turn-off-delay. When you are recording room conversations, it is advisable to set this control for a long turn-off-delay. This will help to prevent the recorder from stopping during low level conversations. DO NOT FORCE THE CONTROL.

PLAYBACK

Insert a recorded cassette with the full reel to the left and the side you wish to play up. If the cassette you are playing was just recorded and is still in the recorder, rewind it to the beginning of the recording. Press the PLAY key. Then set the volume for the desired listening level from the speaker. To end the playback, press the STOP/EJECT key. Depress this key a second time to eject the cassette.

TONE CONTROL

You can use the TONE control to limit the frequency response when the recorder is in the play mode. With this control set to the low position, it will cut down on the level of high frequency sounds. Turning it to a higher position produces more high frequency sounds. Adjust the TONE control for best sound quality.

MONITORING

The monitor circuit lets you listen to conversations while you are recording. To activate the monitor function, depress the MONITOR key. Depress this key a second time to turn off the monitor feature. Feedback or an echo could pre-vent you from using this feature if your sound source is a microphone in the same room as the recorder.

During playback, you use the VOLUME control to adjust for a comfortable listening level. The VOLUME control has no effect while recording. You can also connect an external speaker to the recorder's speaker jack. Two headphone jacks are also available for private listening. When you use either headphone jack, the built-in speaker will be disconnected.

END-OF-TAPE ALARM

The end-of-tape alarm switch is also located behind a hole on the bottom of your recorder. When this switch is in the ON position, a beep tone will automatically start whenever all function keys are up. It will also beep if you do not place the unit back into the auto-record mode after reviewing a recording. To deactivate the alarm, use a small screwdriver to place the switch into the OFF position. DO NOT FORCE THE SWITCH.

CUE/FAST-FORWARD

The CUE (fast-forward) key is a dual function key. When you depress this key while the unit is in the play mode, the tape will run forward at high speed. When you remove pressure on the key, the recorder will return to the play mode. If you depress the CUE key when the recorder is not in the play mode, the key will lock down and the tape will run forward at high speed until it reaches the end of tape, or you press the STOP key. To prevent possible tape damage, you should always depress the STOP key after locked in fast winding prior to going into the PLAY, RECORD, or REWIND modes.

REVIEW / REWIND

The REVIEW (rewind) key is also a dual function key. To repeat something that was just played, depress the REVIEW key. The recorder will rewind the tape. Removing pressure from the key will return the recorder to playback.

If you depress the REVIEW key when the recorder is off, the key will lock down, and the tape will rewind until either you press the STOP/EJECT key or you reach the beginning of the tape.

COUNTER

The tape counter is helpful in finding certain portions of the tape or in determining how much tape you have left. You can set it to “000” at any time by depressing the small button to the right of the counter.

ALC SWITCH

On recorders that do not have the CT option (Clock Track) there is a switch to turn off the Automatic Level Control. You should normally set this switch to the ON position. If you set it to the OFF position, the internal ALC circuit will be off and the recorder will not automatically adjust for sounds that are too loud. Use the record level adjustment on the bottom of the recorder to set the recording level.

When the ALC switch is on, you must still turn the record level up if the sound is too weak and the record level light does not flash while recording. The ALC circuit will prevent sounds that are too loud from over driving the recorder.

On recorders with the Clock Track option, this switch is used to select the time track during playback.

CLOCK TRACK

On recorders that have the CT Clock Track option (VLR-1CT, VLR-4CT, or VLR-8CT), there is a jack on the side for connecting to a talking clock and a switch on top for selecting either conversation

(VOICE), or time and date (TIME) playback.

Connect the audio from the clock (Omnicron TCC-14 or equivalent) to the CLOCK jack on the recorder and adjust the clock's output level following the instructions supplied with the clock. When you have the clock properly connected to the recorder, the time and date announcements from the clock will be recorded on the time track whenever you are recording. When you play back the tapes, you must switch the PLAYBACK switch to the TIME position to listen to recorded time announcements. If you did not have the clock connected to the recorder when you made the recording, no time announcements will be on the time track. It will be silent.

TAPE ERASING

When recording, you will erase the previous recording on the tape and replace it with the new recording. Only the sections of the tape where you made new recordings will be erased. Your old recordings will remain on the other sections.

SAFEGUARD AGAINST ACCIDENTAL ERASING

Every time you make a recording, you will erase previously recorded portions of the tape. To prevent you from accidentally erasing recordings, the cassette and the recorder have interlock devices. On the back of each cassette are two little flaps. If you want to be sure that the recorder will not erase a previously recorded tape, break out these flaps with a small screwdriver or key. You cannot depress the RECORD key unless there is a cassette in place that has an intact record interlock flap.

PERIODIC MAINTENANCE

With use, the record/playback head, erase head, capstan, and rubber pinch roller in your recorder will gather dirt and material transferred from the tapes as they pass through. This could reduce the reliability of the recorder and result in weak or distorted sound.

To expose the heads and tape drive components for cleaning, press the STOP/EJECT key to open the cassette door. If there is a tape in the unit, remove the tape. With the door open, press the PLAY button to expose the parts that need cleaning.

Use a cotton swab and a commercial tape head cleaning agent to clean the heads and rollers. Follow the instructions on the cleaner container. DO NOT try to install a cassette with the heads in the forward position. If the recordings are still distorted or weak after cleaning, you could have a badly worn or damaged head that will require replacement.

You can clean the cabinet with a soft cloth. If necessary, dampen the cloth with water. Never use polish, solvents, abrasives, or strong detergents since these can damage the finish.

The recorder is designed to be trouble free in normal use. If problems do occur, contact a qualified service technician or call Omnicron Electronics for help.

GENERAL REMINDERS

DO NOT push the RECORD button if you do not have a cassette in the recorder, or if the knockout tabs on the cassette are missing. DO NOT use excessive pressure on the function keys or adjustments.

DO NOT touch the recording head with metal or magnetic objects such as a screwdriver. Remove all batteries if the recorder is not in use for an extended period. Leaking batteries could damage the recorder.

Remove the AC line cord from the wall outlet if you are not going to use the recorder for an extended period.

WARRANTY

This Omnicron product is warranted against defects in materials and workmanship for one year from the date of shipment. Omnicron will, at its option, repair or replace products that prove to be defective during the warranty period provided they are returned to Omnicron Electronics. Repairs necessitated by misuse, accident, improper installation, unauthorized modifications, or use in violation of the operating instructions, are not covered by the factory warranty, nor are cases where the serial number has been removed, defaced, or changed.

No other warranties are expressed or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. Omnicron Electronics is not liable for consequential damages.

Should your recorder become defective within the warranty period, we will repair it without charge. Should it require service that is not covered by the warranty, Omnicron will repair it for a nominal service charge plus the cost of parts and transportation.

REPAIR

If factory service is required, pack securely and forward by United Parcel Service (UPS), FEDEX, or insured parcel post to:

OMNICRON ELECTRONICS
581 Liberty Highway
P.O. Box 623
Putnam, CT 06260-0623

Enclose a note explaining what is wrong. Include your name, address, and telephone number. Omnicron Electronics also offers telephone, web site, and E-mail help:

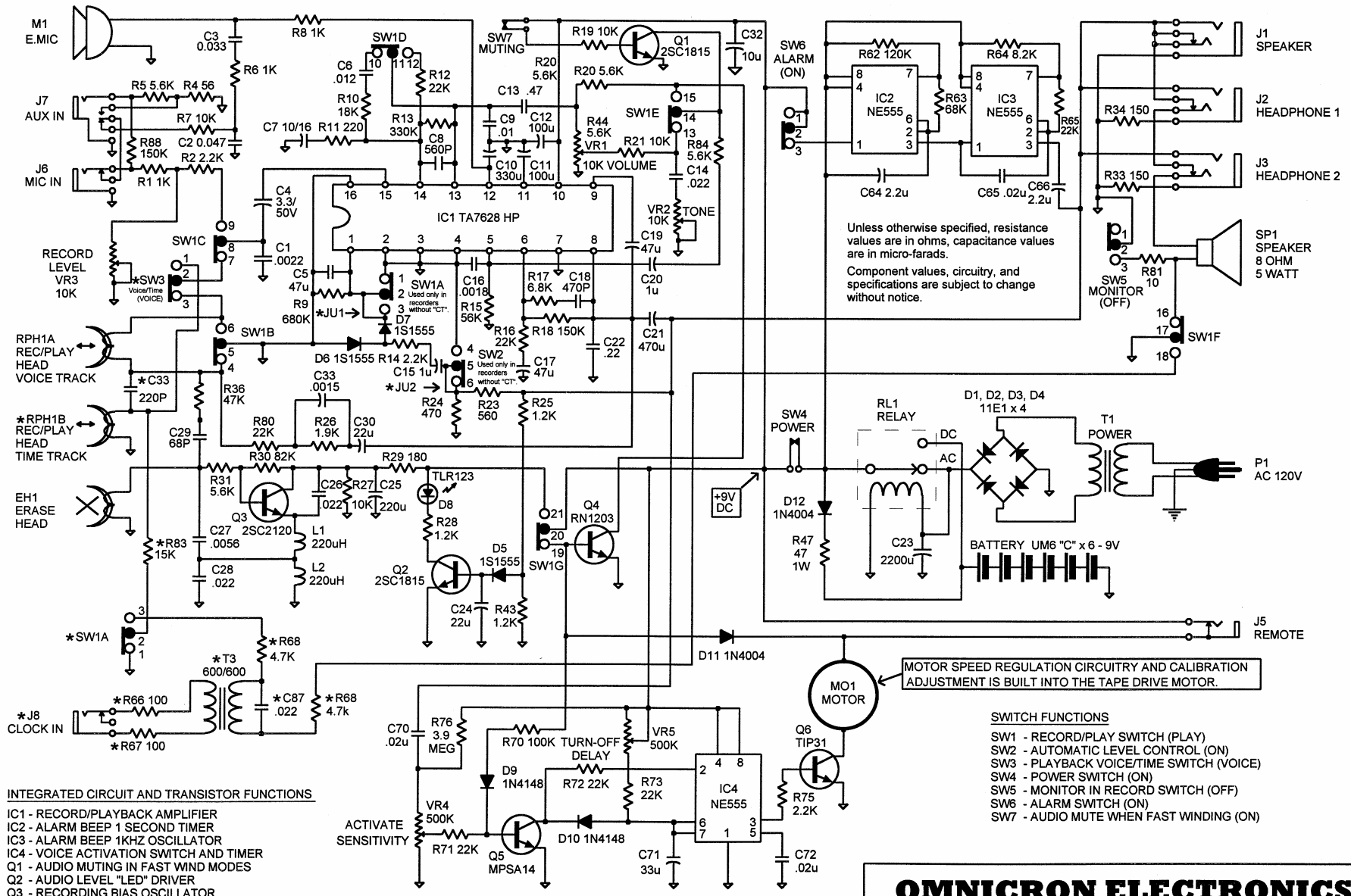
VOICE: (860) 928-0377

FAX: (860) 928-6477

Web Site:
www.omnicronelectronics.com

E-mail:
support@omnicronelectronics.com

VOICE LOGGING RECORDER Model VLR-1, VLR-1CT, VLR-4, VLR-4CT, VLR-8, & VLR-8CT



INTEGRATED CIRCUIT AND TRANSISTOR FUNCTIONS

IC1 - RECORD/PLAYBACK AMPLIFIER
IC2 - ALARM BEEP 1 SECOND TIMER
IC3 - ALARM BEEP 1KHZ OSCILLATOR
IC4 - VOICE ACTIVATION SWITCH AND TIMER
Q1 - AUDIO MUTING IN FAST WIND MODES
Q2 - AUDIO LEVEL "LED" DRIVER
Q3 - RECORDING BIAS OSCILLATOR
Q4 - RECORD/PLAY AUDIO SWITCHING
Q5 - VOICE ACTIVATION AMPLIFIER
Q6 - MOTOR CONTROL ON/OFF SWITCHING

SWITCH FUNCTIONS

SW1 - RECORD/PLAY SWITCH (PLAY)
SW2 - AUTOMATIC LEVEL CONTROL (ON)
SW3 - PLAYBACK VOICE/TIME SWITCH (VOICE)
SW4 - POWER SWITCH (ON)
SW5 - MONITOR IN RECORD SWITCH (OFF)
SW6 - ALARM SWITCH (ON)
SW7 - AUDIO MUTE WHEN FAST WINDING (ON)

* COMPONENTS ARE ONLY USED IN "CT" RECORDERS

OMNICRON ELECTRONICS

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GENERAL

OMNICRON VLR recorders are professional loggers designed to provide you with complete documentation of your important telephone conversations, two-way radio messages, or dictation. They have unique features which allow virtually unlimited use in a wide range of applications with top performance and minimal maintenance.

Built-in voice activation circuitry expands the recording time by automatically stopping the recorder between conversations. The recorders can be ordered for either standard speed or slow speed operation. The VLR-1 recorders run at the standard cassette speed allowing you to record and play back tapes which are compatible with recorders that do not have slow speed capability.

Advanced slow speed drive circuits in the VLR-4 and VLR-8 recorders expand the recording time even further to provide 8 or 16 hours of solid talk time on each cassette tape. The VLR-4 provides four times more recording and playback time per tape than the VLR-1. It packs 8 hours of conversation on each MLC-120 cassette tape. The super slow speed VLR-8 runs at 1/8 speed for 16 hours per tape with little loss in voice quality (8 hours per side with an MLC-120 cassette tape).

VLR recorders with the Clock (CT) Track option (VLR-1CT, VLR-4CT, and VLR-8CT) are designed for use with the OMNICRON TCC-14 Talking Clock/Calendar. They have a second track for recording the verbal time and date announcements provided by the clock. When playing back the recorded conversations, simply switch to the Time Track and you will know exactly when that moment of conversation was recorded. One Talking Clock can provide time and date announcements for over 50 recorders.

OMNICRON recorders are used in a wide variety of voice logging applications. A standard or custom audio adapter, coupler, or cable should be be ordered with the recorder to match your audio source. Contact your OMNICRON representative for assistance in selecting the equipment best suited to your application. Factory help is also available by calling (860) 928-0377.

FEATURES

ALARM — Beeps when the cassette needs to be changed, or if the recorder is turned off either accidentally or by the built-in all mode motion sensing circuit. The tape automatically turns off and sounds the alarm if the tape stops when it should be moving in record, play, fast-forward, or fast-rewind.

MONITOR WHILE RECORDING — Lets you listen to conversations while they are being recorded through the built-in speaker, through either of two 1/4" headphone jacks, or through the 1/4" external speaker jack (8 ohm).

CUE AND REVIEW — For rapidly finding and repeating recorded messages.

AUTOMATIC RECORD LEVEL CONTROL — Prevents overload on strong signals. Manually adjustable record level, activate sensitivity, and turn-off delay permit you to adjust the recorder's voice activation circuit to match your particular application.

MONITOR AND ALARM ON/OFF SWITCHES

AUTOMATIC END-OF-TAPE SHUT-OFF — In record, fast-forward, and rewind.

AUTOMATIC BATTERY CHARGING — For optional rechargeable batteries (RBC-6), unit automatically switches to battery power if external AC power is lost.

INPUT/OUTPUT JACKS — Microphone, remote on/off, auxiliary audio input, remote speaker, two headphone jacks, and Talking Time Clock (with CT option).

ROTARY VOLUME AND TONE CONTROLS

DIGITAL INDEX COUNTER WITH RESET

AC BIAS RECORDING — For optimum voice frequency recording.

EASY, SELF-INSTALLATION — In most applications with optional adapter.

SPECIFICATIONS

POWER — 120 VAC 50/60 Hz, 10 Watts, six "C" cell batteries, or optional RBC-6 rechargeable battery pack.

SIZE — 7-3/4" W x 11-1/2" D x 2-3/4" H, 4-1/2 lbs.

INPUTS — Microphone, 2k ohms, -70dB
Auxiliary, 200k ohms, -20 dB
Clock, 600 ohms, -10 dB

AUDIO OUTPUT — 1 Watt

SIGNAL TO NOISE RATIO — VLR-1 is 50 dB, VLR-4 is 42 dB, VLR-8 is 34 dB.

TAPE SPEED — VLR-1 is 1-7/8 I.P.S., VLR-4 is 15/32 I.P.S., VLR-8 is 15/64 I.P.S.

TAPE SIZE — Standard Compact Audio Cassette.

ERASE SYSTEM — AC
RECORD SYSTEM — AC bias.

MAXIMUM RECORDING TIME — With MLC-120 tape: VLR-1 records 1 hour per side at 1-7/8 I.P.S., VLR-4 records 4 hours per side at 15/32 I.P.S., VLR-8 records 8 hours per side at 15/64 I.P.S.

BUILT-IN SPEAKER — 5", 8 ohm, 5 Watts.

Each VLR recorder comes with an MLC-120 cassette tape, AC power cord, owner's manual and a limited 1 year warranty. Recorders with the CT option are also supplied with a cable for connection to the optional TCC-14 time & date source. You will also need an adapter, coupler, or cable to connect the recorder to your audio source. Order it as a separate item to match your specific requirements.

Specifications are subject to change without notice.