



STEREO-COMPACT

OPERATION INSTRUCTIONS



Viking OF MINNEAPOLIS, INC.

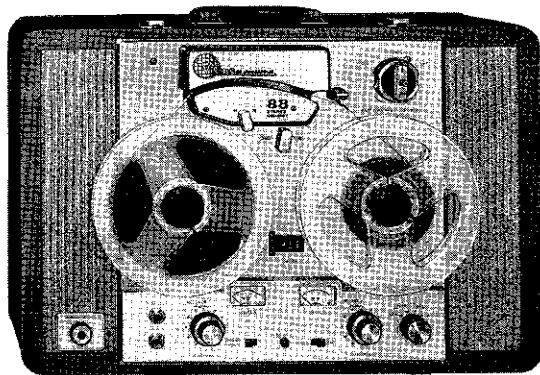
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THE VIKING 88 STEREO-COMPACT

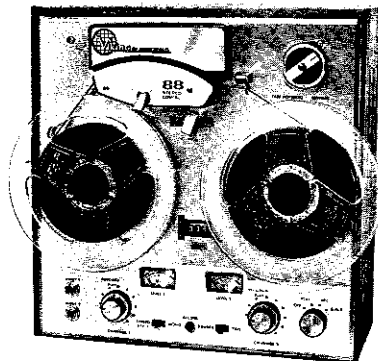
The VIKING 88 STEREO-COMPACT recorder is a precision instrument carefully designed and built by Viking at Minneapolis for use in critical high fidelity stereo tape recording and playback applications. It is important that the operator become familiar with its features and the ways they can be used to the best advantage. A careful reading of these instructions should provide all the background information that is necessary in order to make effective use of the Viking 88 Stereo-Compact recorder.



MODEL 880 STEREO-COMPACT

The Model 880 consists of an 88 Stereo-Compact in a portable case with transistorized stereo power amplifier and speakers. It constitutes a complete unit with all the facilities that are needed for stereo

tape recording and playback. For use with a home high fidelity system, the 88 Compact may be easily removed from the case.



MODEL 88 STEREO-COMPACT
Shown in "1500" Walnut Enclosure

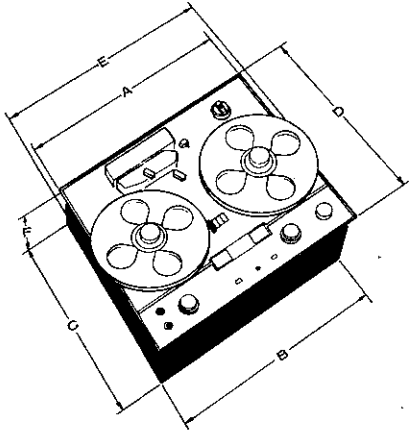
The 88 Stereo-Compact recorder is designed for use with your high fidelity system. Simply connect it to your high fidelity amplifier. You can then record all programs while you listen or monitor. Later you can enjoy these recordings with all the full fidelity and realism of the original.

to remove the 88 compact from the portable case:

1. Disconnect the power line cord from AC wall outlet.
2. Remove screws holding compact in case.
3. Carefully slide 88 Compact from case.
4. Disconnect power amplifier plug from accessory receptacle on back of 88 Compact.
5. Disconnect patch cords from amplifier outputs on back of 88 Compact.
6. Disconnect 88 Compact power line cord from receptacle on back of power amplifier mounted in the case.

installing the stereo-compact

The 88 Compact is designed for mounting in a single square cutout of dimensions shown. It will operate satisfactorily in either a horizontal or a vertical position, or at any intermediate angle. It may also be used as taken from the packing box without being installed in any kind of enclosure. Rubber feet on the bottom of the unit support it in an upright position.



DIMENSIONS

- | | |
|--------------------------|------------------------------|
| A. Panel Width 13" | E. Reel Clearance 15" |
| B. Cutout Width 12-1/4" | F. Depth Behind Panel 6-1/4" |
| C. Cutout Height 12-1/2" | Front Knob Clearance 1-1/2" |
| D. Panel Height 13" | |

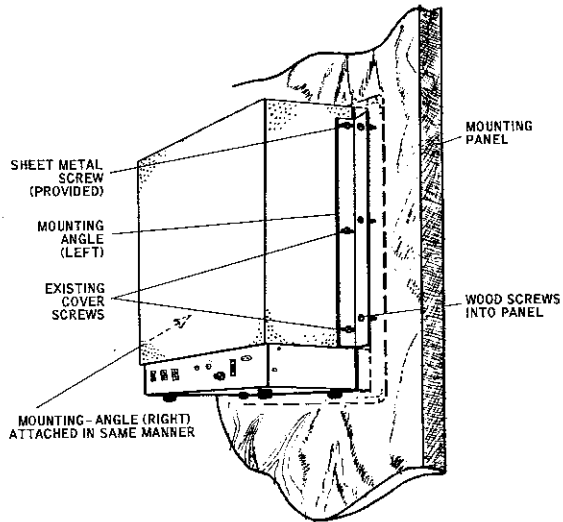
When selecting the location for the 88 Compact in a wall or cabinet, remember it is necessary to keep the tape heads as far as possible from amplifiers or other components with self-contained power supplies. A-C transformers and chokes set up a hum field which can impair the "signal-to-noise ratio" in playback. Sometimes the effect of fields can be minimized by re-orientation of the units causing the hum.

If you are planning an enclosed installation for the 88 Compact, be sure to allow ventilation for the amplifiers and motors.

To mount your 88 Compact . . .

1. Make the cabinet panel cutout or frame opening, allowing clearances for the dimensions shown.

2. Insert the Compact into the prepared opening.
3. Attach the supplied Mounting Angles (temporarily loose) to each side of the perforated back cover using the slotted holes.
4. Adjust the Mounting Angles (utilizing the slots) to fit mounting panel thickness snugly . . . The round holes in the Angles can be used to rigidly tie the bracketed Compact to the mounting panel as shown.



Though the 88 Compact is almost vibration-free, a mechanical hum may appear in operating the transport after it is mounted. The "vibration period" of the cabinet panel may be such that the cabinet acts as a "sounding board" for the transport motor. This rare effect can be eliminated by tightening the mounting, inserting padding wherever the Compact contacts the cabinet panel, or adding braces to the cabinet panel to change its "vibration period".

88 stereo-compact controls

TRANSPORT

1. Tape Motion Control:

Center Bar

PLAY: Tape moves from left to right in normal forward (record and play).

NEUTRAL: (Stop position). Full braking is applied. Tape is lifted from heads.

CUE: Reels are free to move by hand (used for editing or precise positioning of the tape). Tape is in contact with heads.

Outer Ring

FAST FORWARD: Fast travel of the tape from left to right.

NEUTRAL: (Stop position). Full braking is applied.

REWIND: Fast travel of the tape from right to left.

2. **Erase-Protex Button:** Must be depressed for recording. This switch is connected with the recording amplifiers and when "pushed in" allows erase and recording current to reach the heads. It will stay depressed only when the Tape Motion Bar is in PLAY position.

CAUTION

Never press this button when playing recorded tapes.

3. **Tape Run-Out Switch:** Automatically shuts off the transport when the tape is through, or if tape breakage occurs.

4. **Head Shift Control:** Positions for the tape heads as follows:

H for half-track operation
Q for quarter-track operation

5. **Tape Speed Control:** At "3-3/4", tape moves at 3-3/4 ips (inches per second) . . . at "7-1/2", tape moves at 7-1/2 ips.

NOTE

Change tape speeds only when the capstan is turning
(Tape Run-Out Switch pin moved downward)

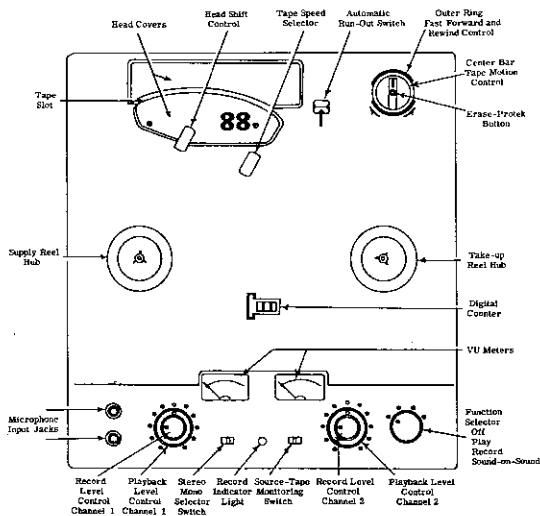
6. **Supply Reel:** Dispenses the tape in forward motion.
7. **Take-Up Reel:** Collects the tape in forward motion.
8. **Digital Counter:** Set to zero (000) by rotating the knurled knob upward. The counter digits advance, in proportion to the revolutions of the take-up reel.

AMPLIFIER

9. **Recording Level VU Meter:** The needle indicates the level (volume) of the signal recorded on the tape during "Record" or "Play".

LEVEL 1: Indicates signal level of monaural program, or Channel 1 of stereo program.

LEVEL 2: Indicates signal level of Channel 2 of stereo program.



10. **Recording Level Controls (small knobs):** Increase or decrease the recording signal intensity indicated by the corresponding VU Meters (independent for Channels 1 and 2).

11. **Playback Level Controls (large knobs):** Increase or decrease the playback volume (independent for Channels 1 and 2).

12. **Function Selector:**

OFF: Electrical power blocked from the entire unit.

PLAY: Tape transport and playback preamplifier operative.

REC: Tape transport, recording and playback (Monitor) amplifiers operative.

SOUND-ON-SOUND: This position, for sound-on-sound or tape lessons, allows the program on Channel 1 to be superimposed on Channel 2 with new recording.

13. **Source/Tape monitor switch for "off-the-tape" monitoring:**

SOURCE: Original program source audible from "amp output" during recording.

TAPE: Program audible as played from the tape while recording (delayed a fraction of a second). By switching back and forth during recording this switch provides a comparison between the original program and the program as it is recorded on the tape.

14. Stereo-Multiplex/Monaural:

STEREO/MULTIPLY: The switch must be at this position when recording or playing any stereo program.

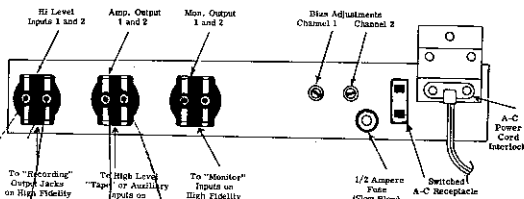
MONAURAL: Only Channel 1 of the stereo amplifier is operative. Channel 2 erase, record, and playback are disabled.

15. Low-Level Inputs: Input jacks for microphone signals to be recorded.

INPUT 1: Channel 1 (left) or monaural source.

INPUT 2: Channel 2 (right).

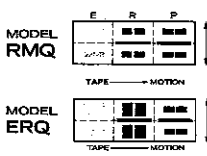
16. Recording Pilot: Lights when recording and erasing.



what you can do with your viking 88 stereo-compact recorder

Ø MUST BE DISCONNECTED FOR NORMAL USE

Play back full-track and half-track monaural, half-track stereo and quarter-track stereo tape recordings.



All heads are quarter-track. Records quarter-track only, stereo or mono; Plays quarter or half-track, stereo or mono.

Half-track erase head, half-track recording head, quarter-track play head. Records half-track mono or stereo; Plays half-track or quarter-track, mono or stereo.

Make stereo recordings. Recordings made on the Viking 88 RMQ Stereo-Compact will be quarter-track. Those made on the 88 ERQ Stereo Compact will be half-track.

Make special "sound effects" recordings such as "sound-on-sound" and "reverberation" ("echo").

Play back dual channel language-learning tapes and permit a student to re-record his own responses on the second track of such tapes as is done on the machines in high school and college language laboratories.

what you will need with your viking 88 stereo-compact recorder

FOR PLAYING TAPES

A reel of standard prerecorded 1/4-inch tape. The tape can be on any reel size up to seven inches in diameter.

You can play all prerecorded tapes full track, half-track monaural, or half-track or quarter-track stereo.

Most of the prerecorded tapes now in general use are at speeds of either 3-3/4 or 7-1/2 inches per second. The 88 Stereo-Compact will play back all standard tapes of this kind.

PLAYBACK THROUGH A HIGH FIDELITY SET

A high fidelity stereo or monaural amplifier with input connections for a tape recorder (or "tuner" or "auxiliary") can be used with the Viking 88 Stereo-Compact. Connect the "amplifier output" jacks at the back of the 88 Stereo-Compact into high level tape inputs (not "tape head") on the high fidelity amplifier. If the high fidelity amplifier is stereo, use two separate shielded audio patch cords, one for each channel. If the amplifier is monaural, go from the 88 Stereo-Compact "amplifier output" jacks 1 and 2 through a "Y" connection into the single input on the amplifier.

what you will need for making recordings

MICROPHONES

The simplest setup for stereo recording with the 88 Stereo-Compact is two low-cost high impedance crystal, ceramic or dynamic microphones with standard 1/4-inch phone plugs, which are plugged directly into front-panel jacks on the 88 Stereo-Compact. The top jack is for Channel 1 and the bottom jack for Channel 2. Use line matching transformers with "low impedance" microphones, inserting them at the recorder end of each microphone line.

WHAT IS THE BEST MICROPHONE TO USE

Some low-cost microphones may be satisfactory for recording with limited frequency response. If you wish to make "live" recordings of professional quality, it will be worth while to invest in the best microphone you can afford. Remember that everything to be recorded on the tape in a "live" recording setup must come through the microphone first. Your Viking 88 Stereo-Compact recorder will be limited by the kind of a signal the microphones are able to deliver.

All you need in addition to the microphones is a reel of magnetic tape. This does not have to be "blank" tape. Previously-recorded tape can be used because the erase head on the Viking 88 Stereo-Compact recorder will automatically remove any previous recording at the same time the new recording is made. For best results, bulk-erase the tape if the previous recording was not quarter-track for Model RMQ (or half-track for Model ERQ).

NOTES ON CHOICE OF TAPE

Use only well-known quality tapes. It is poor economy to "save" on "bargain" tapes. Such tapes may have serious deficiencies that do not show up until it is too late. A tape recording is like a photograph. There may be only one opportunity to take the "sound picture". Some characteristics of good quality tapes are (1) uniformity in the magnetic coating on the tape (2) a good binder between the magnetic coating and the base of the tape so the tape leaves a minimum amount of oxide deposit around the tape heads or pressure pads (3) uniform width and thickness (4) not subject to stretching or curling at the edges (5) reliability regardless of environmental conditions such as extreme dryness, humidity, heat or cold, and (6) consistent quality from one reel to another.

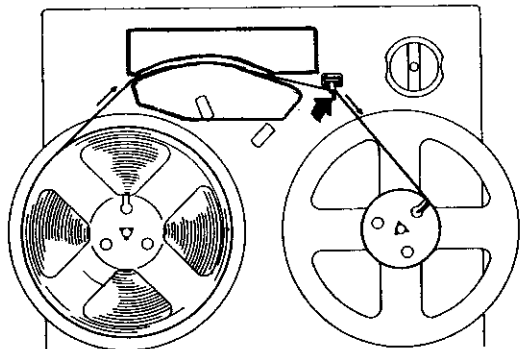
1-mil or 1-1/2-mil thickness tapes are recommended, particularly in a recording application which calls for frequent stopping and starting of the tape from beginning to end. The tape handling characteristics of the Viking Model 88 Stereo-Compact recorder have been adjusted to do the best possible job with such tapes.

WHAT YOU NEED FOR RECORDING WITH THE VIKING 88 STEREO-COMPACT AS A PART OF A COMPLETE HIGH FIDELITY SYSTEM

A stereo amplifier or tuner with outputs for recording. If the high fidelity amplifier does not have such outputs, the 88 Stereo-Compact can be connected across the loudspeaker terminals (either 4, 8 or 16 ohms). Use patch cords with alligator clips on the speaker end, and pin-plugs to go into the high level inputs on the 88 Stereo-Compact. Reverse the clips if the signal is weak or distorted.

operating the 88 stereo-compact

In any operation of the tape transport, playback or recording, the tape is carried over the heads in precisely the same manner. Therefore, essentially the same steps will always be followed in any use of the tape transport.



1. Place the reel of tape to be played, or recorded, on the Supply Hub, and an empty reel on the Take-up Hub. Thread the tape in the slot of the head cover, between the wire pin and post of the automatic Run-out Switch and onto the empty reel as shown. Place a rubber reel retainer on each shaft to hold the Supply and Take-up reels in place.

(NOTE: Threading the tape over the Run-out Switch pin turns on the transport drive motor.)

2. With the drive motor running, set the Tape Speed Control for the desired speed. (Tape speed is determined at the time of recording. Most music tapes will be recorded at 7-1/2 ips for maximum brilliance and fidelity. Use 3-3/4 ips to provide twice the playing time.)
3. Set the Head Shift Control for the track pattern desired . . .
 - With the half-track pattern (H), the entire recordable area of the tape is used in one stereo recording. Always use (H) when recording with the Model ERQ.
 - With the quarter-track (Q) (sometimes called 4-track) pattern only one-half the usable area is used in a single stereo recording, so that the reels may be transposed and the remaining two tracks recorded, after one stereo recording has been placed on the tape.

4. Set Digital Counter to zero before the tape is started. The counter provides an index to any desired portion of the tape.
5. Start the tape by turning the Tape Motion Control to PLAY.

To record -- depress the Erase-Protex Button. It will stay depressed only as long as the Tape Motion Bar is at PLAY. Any subsequent movement of the Tape Motion Control will release the Erase-Protex Button, thereby preventing any accidental erasure of your program.

To play back -- turn the Tape Motion Control only. NEVER touch the Erase-Protex Button unless you intend to record or erase.

Use the Tape Motion Control at any time while operating the transport. You may STOP the tape . . . REWIND the tape to any point . . . FAST FORWARD the tape to a desired selection . . . or CUE the tape by hand.

The Tape Motion Controls on the 88 Tape Transport are completely interlocked. Only one can be moved at a time; and if one is displaced, the other cannot be moved until the first is returned to NEUTRAL.

(NOTE: Always keep the Tape Motion Controls at NEUTRAL, when the Tape Transport is not in use.)

THE AMPLIFIER SECTION

The amplifier section of your Stereo-Compact has a dual purpose:

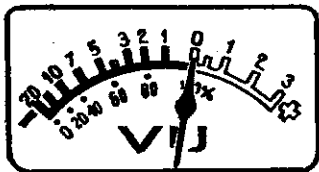
- In playback of recorded tapes, it preamplifies and equalizes the tape signal to a level and quality required by the music system power amplifier.
- In recording, it prepares the incoming program for impression on the tape; and allows you to see, hear, and control this magnetic impression.

The key to quality recording with the 88 Compact is proper recording level adjustment. Proper level is indicated by the VU Meter.

RECORDING LEVEL CONTROL

This control is used to increase or decrease the level indicated on the VU Meter.

Anticipate changes in level which may occur during recording, and set the Level Control to allow for them before the recording is started. For example, if a musical selection begins softly but becomes very loud as it progresses, pre-set the Level Control for the loudest part.



RECORDING LEVEL VU METER

The VU Meter shows the level (volume) of the signal being recorded. The optimum level is when the needle moves as high as possible on the "black scale" without being driven into the "red scale" by slight fluctuations.

Occasional peaks may deflect the needle into the red, regardless of its average position. This is unavoidable. However, if the needle is deflected rhythmically or frequently into the red, audible distortion and poor quality recording will result.

RECORDING STEREO TAPES

For recording stereo tapes it is necessary to have a program source which provides two separate (but

synchronized) channels. This source can be two microphones, a stereo disc, FM Multiplex broadcast, another stereo tape, etc.

1. Turn head shift to "Q" on model "RMQ", or "H" on model "ERQ".
2. Before starting the tape, supply a short test run of the program to the recording amplifier, and using the Level Controls, adjust for proper VU Meter deflection on both channels.
3. Start the tape by turning the Tape Motion Control to PLAY (RECORD) (on this control "Play" merely indicates controlled forward motion).
4. Depress the red ERASE-PROTEK button. (This lights the record indicator lamp.)
5. Start the program to be recorded. . . whenever possible, the recording tape is started before the program, to avoid missing any of the program.

When the recording is complete --

6. Turn down the Level Controls and STOP the tape.

At this point in quarter-track recording (with RMQ) only two tracks have been recorded. You may record the remaining two tracks available, by transposing the reels and beginning again with Step 3. . . or you may rewind the tape and save the remaining tracks for future recording.

In half-track stereo recording (with ERQ) the entire tape width is recorded. The resultant recording provides the best possible dynamic range and signal-to-noise ratio.

how do you connect it

For the Model 880 Stereo-Compact which includes the portable case: simply plug the a-c power cord into a 110/115-volt, 60-cycle a-c receptacle.

For the Model 88 Stereo Compact recorder without the portable carrying case:

CONNECTIONS FOR RECORDING FROM A TUNER

A tuner with normal output (0.25-volt a-c rms or more) can be connected to the high-level inputs at the back of the 88 Stereo-Compact. An AM or FM monaural tuner can be connected through a "Y"

adapter from the single tuner output into both high level input jacks on the 88 Stereo-Compact. A stereo tuner will be connected through two separate audio patch cords; the left-hand, Channel 1, output into the high-level input jack No. 1 at the back of the 88 Stereo-Compact; and the right-hand, Channel 2, output of the tuner into the high-level input jack No. 2.

If the tuner is permanently connected to the high fidelity amplifier, "recording" outputs on the high fidelity amplifier usually can be connected directly into the high-level inputs on the 88 Stereo-Compact.

A tuner with low output (less than 0.01-volt a-c rms) is connected through the low-level or microphone input jacks on the front of the 88 Stereo-Compact recorder. A "Y" adaptor can be used to go into both inputs of the 88 Stereo-Compact from a monaural tuner. The low-level input jacks on the 88 Stereo-Compact will take ordinary 1/4-inch phone plugs.

The left-hand, Channel 1, output of a stereo tuner goes into input jack No. 1. The right-hand channel output of the tuner goes into input 2. Use shielded audio patch cords.

RECORDING FROM A PHONOGRAPH

Phonographs with high-output ceramic or crystal cartridges can be connected directly to the high-level inputs at the back of the 88 Stereo-Compact. Use a "Y" adaptor with monaural phonographs so the signal can be fed into jacks 1 and 2 simultaneously. If the phonograph is stereo, the left-hand channel output should go into high-level input jack No. 1, and the right-hand channel output to high-level input jack No. 2.

Phonographs with low-level magnetic cartridges should be connected to the input of a phono preamplifier, and from the output of the preamplifier into the high-level inputs at the back of the Viking 88 Stereo-Compact recorder. Use a "Y" adaptor if the phonograph is monaural. The "Y" goes between the output of the phono preamplifier and the high-level input jacks 1 and 2 at the back of the 88 Stereo-Compact. If the phonograph is stereo, connect the output from the left-hand channel to jack No. 1 on the 88 Stereo-Compact, and the output from the right-hand channel of the phono preamplifier to jack No. 2. Use shielded audio patch cords. The jacks on the 88 Stereo-Compact will accept standard phono plugs.

It is common practice to connect a phonograph permanently to the high fidelity amplifier in most home high fidelity systems. The simplest way of recording from the phonograph in a system of this kind is to go from "recording" outputs on the high fidelity amplifier into the high-level inputs at the back of the 88 Stereo-Compact recorder. The left-hand channel "recording" output of the high fidelity amplifier goes into high-level input jack No. 1 at the back of the 88 Stereo-Compact. The right-hand channel goes into high-level input jack No. 2.

MONITORING

It is always desirable to be able to monitor a tape recording as it is being made. Monitoring is automatically provided when the "recording" output

jacks of the high fidelity amplifier have been connected to the high-level inputs on the 88 Stereo-Compact. This monitoring is the normal signal as it is heard through the loudspeakers while recording. Actually, it is monitoring of the original program rather than of the tape recording as it has been made.

A more effective way of monitoring is to actually play back the tape simultaneously while it is being recorded. Three heads are standard, on the Viking 88 Stereo-Compact recorder, to make such monitoring possible. The tape first passes the erase head which removes any previous recording. Then it passes the record head, which places the new recording on the tape. Finally, the tape passes a separate playback head to play the recording that has just been made. This playback signal appears at the "monitor output" jacks 1 and 2 at the back of the Viking 88 Stereo-Compact recorder. Jack No. 1 is the left-hand channel and jack No. 2 the right-hand channel.

These monitoring jacks can be connected to a small amplifier and speaker. The signal level at the "monitor output" jacks is 2 volts a-c rms.

Headphone monitoring is always possible by connecting high impedance crystal headphones or high impedance (10,000 ohms or above) dynamic headphones directly to the "monitor output" jacks at the back of the 88 Stereo-Compact. Adapters may be necessary to fit these pin-jacks.

Many high fidelity amplifiers will have separate inputs marked especially for monitoring. The 88 Stereo-Compact "monitor output" jacks can be connected directly into such "tape monitor" inputs. The original program will then be heard through the high fidelity speakers when the "monitor" switch of the high fidelity set is in its "normal" (or "source" or "input") position. When this switch is placed in the "tape monitor" position, the signal from the monitor head on the 88 Stereo-Compact will be heard. Adjust the playback controls on the 88 Compact for the same level in both positions of this switch. An instantaneous comparison between the original and the recording can be made by switching the "monitor" switch on the high fidelity amplifier back and forth.

The "Source-Tape" switch on the Viking 88 Stereo-Compact also can be used for such a comparison. When this switch is set to "source" the original program signal appears at the "amp output" jacks. When it is set to "tape" the signal from the monitor playback head appears at the "amp output" jacks.

CONNECTIONS TO THE "AMP OUTPUT" JACKS

There are three sets of twin jacks at the back of the 88 Stereo-Compact recorder: the "high-level input", the "amp output", and the "monitor output". The connections to the "high-level input" jacks have been described in the section under Recording. The connections to the "monitor output" jacks have been described in the section under monitoring.

The "amp output" jacks permit taking the signal from the 88 Stereo-Compact while recording or playing back.

If you wish to record from a program source connected directly to the 88 Stereo-Compact, you can compare the original program and the recording by connecting the "amp output" jacks to the input of a power amplifier and speaker, or to high impedance headphones. The signal at these outputs is 2 volts a-c rms at high impedance.

The "monitor output" jacks ordinarily will be used for monitoring through the Tape-Compare Switch on the high fidelity system amplifier, or for playback from the Model 880 Stereo-Compact.

The correct use of each of the three sets of jacks can be listed briefly as follows:

- "High-level input": Program source
- "Amp output": To the input of a power amplifier for picking up the signal from the recording or playback amplifier.
- "Mon output": To the tape monitor input of a power amplifier for "off-the-tape" monitoring. A signal will always be present at these jacks while recording or playing back with the 88 Stereo-Compact regardless of the setting of the "Source - Tape" Switch on the front panel.

The inputs to the built-in transistorized power amplifier of the portable carrying case will be connected to the "amp output" jacks at the back of the 88 Stereo-Compact chassis. The other two sets of jacks will remain empty unless they are connected to external equipment.

monaural recording

The Viking 88 Stereo-Compact is intended as a stereo recorder, but it can be used for monaural recording.

WITH MODEL 88 STEREO-COMPACT ERQ

Record half-track monaurally by placing the "stereo mono" switch in the "mono" position and using Channel 1. Turn head shift to "H" position.

WITH MODEL 88 STEREO-COMPACT RMQ

For purposes of identification, the four quarter-tracks across the width of the tape are identified numerically as 1, 2, 3, and 4. Use the following procedure to record on each of these tracks individually. Make sure head shift is in "Q" position.

Track 1. Place the "stereo mono" switch in the "mono" position and use inputs for Channel 1.

Track 4. Exchange reels on their spindles and proceed as for track 1.

Track 3. Place the "stereo mono" switch in the "stereo" position and the function selector switch in the "sound-on-sound" position. Turn

the playback level and the record level controls for Channel 1 to the extreme counter-clockwise (off) positions. Use inputs for Channel 2. The tape moves in the same direction as for track 1 above.

Track 2. The same as for track 3 given above, but after the reels have been exchanged on their spindles. The tape moves in the same direction as for track 4.

This sequence is given (track 1, then track 4, then track 3, and finally track 2) because it is the order in which each of the four tracks will be recorded if the reels are exchanged on their spindles at the end of each recording. It is not necessary to follow this sequence provided the operator is familiar with the correct positions of the controls for recording on each of the four tracks.

An alternate method for making monaural recordings with the 88 RMQ Stereo-Compact is to use both channels simultaneously for each of two monaural recordings on a single tape. This can be done by using a "Y" adaptor between the monaural program source and the recording inputs for both channels. Place the "stereo mono" switch in the "stereo" position. Tapes that have been recorded this way

can be played back through a stereo system the same as stereo tapes. They will still be monaural, however. Or, they can be played back through a

monaural system by using a "Y" adaptor between the two outputs on the Stereo-Compact and the monaural amplifier inputs.

special functions

SOUND-ON-SOUND RECORDING

To make a sound-on-sound recording, first record the original part on Channel 1 with the "stereo mono" switch in the "mono" position.

Then rewind the tape and switch to "stereo" position. Place the function selector switch in the "sound-on-sound" position. Plug a microphone into the input for Channel 2 and set the record level control for a normal reading on the Channel 2 VU Meter. Start the tape and set the Channel 1 playback level for a normal reading at the Channel 2 VU Meter (Channel 1 is transferred to Channel 2 internally when the function selector switch is in the "sound-on-sound" position). The playback of Channel 1 plus the new part that is added to the microphone plugged into Channel 2 will both be recorded on Channel 2 of the tape.

The procedure for using language-teaching tapes is exactly the same as the procedure for "sound-on-

sound" recording. Usually the master program is recorded on track 1, and the student responses plus a copy of the master will be recorded on track 2. The student's headphones are connected to the Channel 2 "amp output" jack, and his microphone to the low-level input jack for Channel 2. Make sure the head shift adjustment knob is in the correct position: "H" for half-track tapes and "Q" for quarter-track tapes.

REVERBERATION (ECHO) RECORDINGS

The function selector switch is set in the normal "record" position. Patch cords are connected between the "mon output" jacks and the "high-level input" jacks at the back. This will pick up the signal a fraction of a second after it has been recorded, and feed it back into the recording amplifier where it will be re-recorded along with new original signals. The amount of echo can be controlled by the playback level control knob on the front of the 88 Stereo-Compact.

SPECIFICATIONS

RECORD/PLAYBACK FREQUENCY RESPONSE:
30-18,000 CPS ± 3 DB at 7.5 IPS, 30-12,000 CPS
 ± 3 DB at 3.75 IPS.

STEREO RECORD/PLAYBACK AMPLIFIER TUBE
COMPLEMENT: 5 ECC83/12AX7, 1 12 AU7A, 2
Silicon Planar Transistors, Semi-conductor Recti-
fiers.

INPUT (LOW-LEVEL) PER CHANNEL: 2 MV for
"O" VU, 1 Megohm Impedance for microphones.

INPUT (HIGH-LEVEL) PER CHANNEL: 250 MV for
"O" VU, 100K Impedance for Tuner, etc.

AMPLIFIER OUTPUT LEVEL: 2 Volts at "O" VU,
5K ohms Impedance "Tape", 20K ohms Impedance
"Source".

MONITOR OUTPUT LEVEL: 2 Volts at "O" VU,
5K ohms Impedance.

SIGNAL-TO-NOISE RATIO: 55DB below peak signal
level at 7.5 IPS.

TOTAL HARMONIC DISTORTION: 1.0%.

LONG-TERM SPEED REGULATION: 0.5%.

BIAS/ERASE FREQUENCY: 95KC.

LEVEL INDICATION: 2 Professional VU Meters.

EQUALIZATION: NAB 7.5 IPS, EIA 3.75 IPS Stan-
dard, automatically selected (Record and Playback
by transport speed selector).

TAPE SPEEDS: 7.5 IPS and 3.75 IPS instantly se-
lected.

CAPSTAN DRIVE: Flutter-Filter belt drive.

CAPSTAN WHEEL: 2 lb., non-magnetic, dynam-
ically balanced.

BEARINGS: Oil-impregnated. No lubrication re-
quired.

CAPSTAN DRIVE MOTOR: 4-pole, 60-cycle, 110
volts AC (Hysteresis Synchronous motors available
at extra cost).

FLUTTER AND WOW: Less than 0.2% at 7.5 IPS.

BRAKES: Tandem, 360-degree contact, Play/Stop
0.2 seconds. Mechanically adjustable.

REEL SIZE: 7-inch maximum.

FAST FORWARD TIME: 60 seconds for 1200 ft.

REWIND TIME: 90 seconds for 1200 ft.

COUNTER: 3-digit decimal, resettable.

POWER REQUIREMENTS: 125 watts maximum,
110-120 volts AC 60 cycles.

SHIPPING WEIGHTS: 22 lbs., 25 lbs. in shipping
container.

warranty

VIKING tape components are covered by a 90 day warranty against defects in materials and workmanship.

Repairs required because of abuse, misuse or damage or normal service beyond the warranty period will be subject to nominal charges.

Fill out the warranty registration post card and mail it to factory within 10 days from purchase. Refer to your warranty number whenever you contact the factory in regard to this equipment.

Any warranty work required must be submitted to your nearest authorized VIKING service agency or the factory. Ask your dealer for details.

Further questions or requests for assistance may be addressed to our Customer Service department.



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