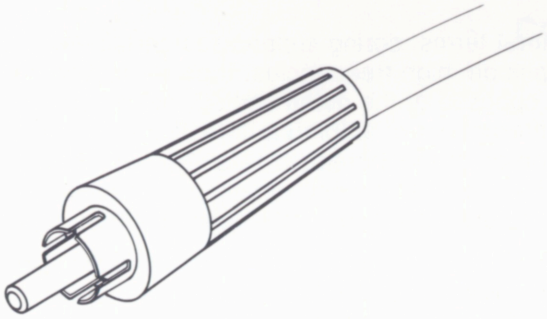
DETAILER II

Instruction Manual

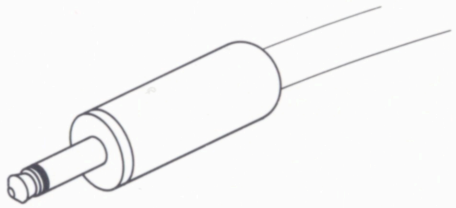
vidicraft inc.

CONNECTORS



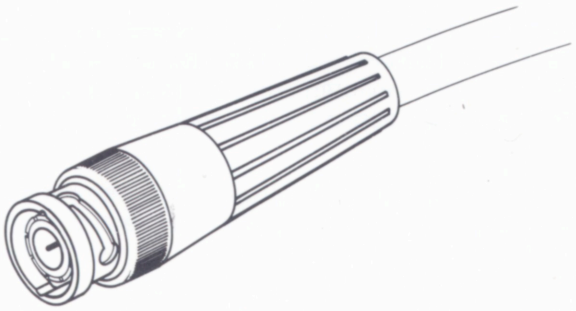
RCA Phono Pin

These are used for all connections (audio & video) on the DETAILER II and on VHS videocassette recorders.



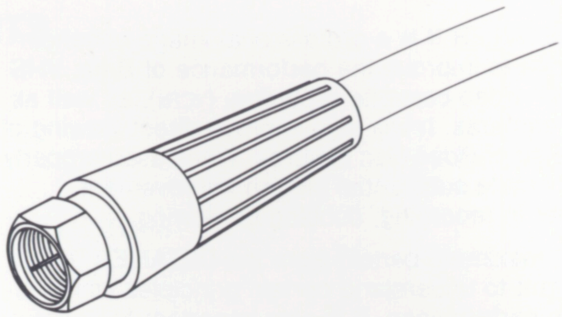
Mini-Plug

These are used for audio connections on BETA video cassette recorders. To connect audio between BETA VCRs and the DETAILER II requires a cable with an RCA phono pin jack at one end and a Mini-Plug at the other.



BNC

These are usually used on professional video equipment. The DETAILER II-BNC is equipped with BNC connectors for video.



F

These are inexpensive connectors used for antenna connections in most CATV and MATTV systems. Use for VHF and UHF. Not recommended for use with video.

RF AND VIDEO

The DETAILER II is designed to accept and distribute video and audio only (separately) and to improve only video. Do not feed video from the DETAILER II into an RF input, nor directly into the antenna terminals of a TV set. Do not feed RF into the DETAILER II. An improper connection of this type will not damage equipment, however. While video and RF signals are both capable of carrying picture information, it is important to note that they are distinctly different. A television camera produces a ***video*** signal. In order to broadcast the picture information produced by a camera, the video signal must be converted to RF (Radio Frequency). Audio from a microphone source is treated separately, but for broadcast must also be converted to RF and combined with the picture information to create one signal. Television sets are equipped with tuners which locate the RF signal (channel selection) and convert it back to video and audio. RF signals associated with television broadcast are designated UHF or VHF. Anything marked ANTENNA UHF OR VHF represents an RF connection, ***not*** a video connection. Virtually all VCRs have a video output. Most VCRs also have a video input selected by an "input" switch. Note that a single pin connector labeled 'camera in' is a video input. Note also that some models cut out the internal tuner when a cable is inserted into the video input jack.

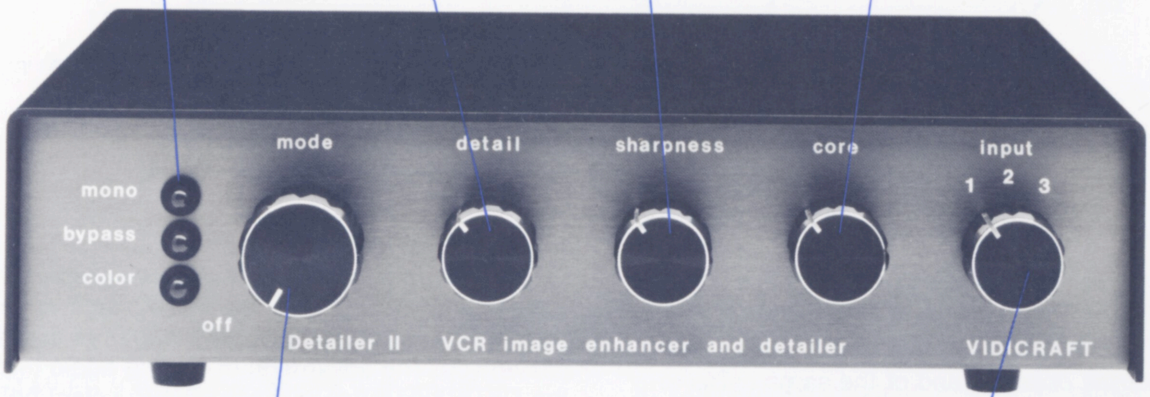
PICTURE IMPROVEMENT CONTROLS

Sharpness Control: This control increases the sharpness of the picture whether from tape, camera, video disc or off the air. Note that this control will also bring up some detail. Adjust for maximum sharpness without creating false outlines.

Detail Control: This is used to compensate for detail loss in VCR only. It can be used to exaggerate detail before it is recorded (precompensating for VCR loss) or to restore it on playback.

Core Control: This control reduces snow and miscellaneous low level interference at the expense of detail. Its function is very much opposite of the detail control. It is most useful when 'sharpness only' enhancement is used. It is also useful when detail boost is used.

LEDs: Light to indicate power-on and mode.



SELECTORS

Mode Selector: The 'mode control' is a four position switch which serves as the power on/off as well as a mode selector. The modes are described below:

Bypass: Eliminates all enhancement, but preserves the distribution amplifier function.

Color: The normal mode for the enhancement of color video.

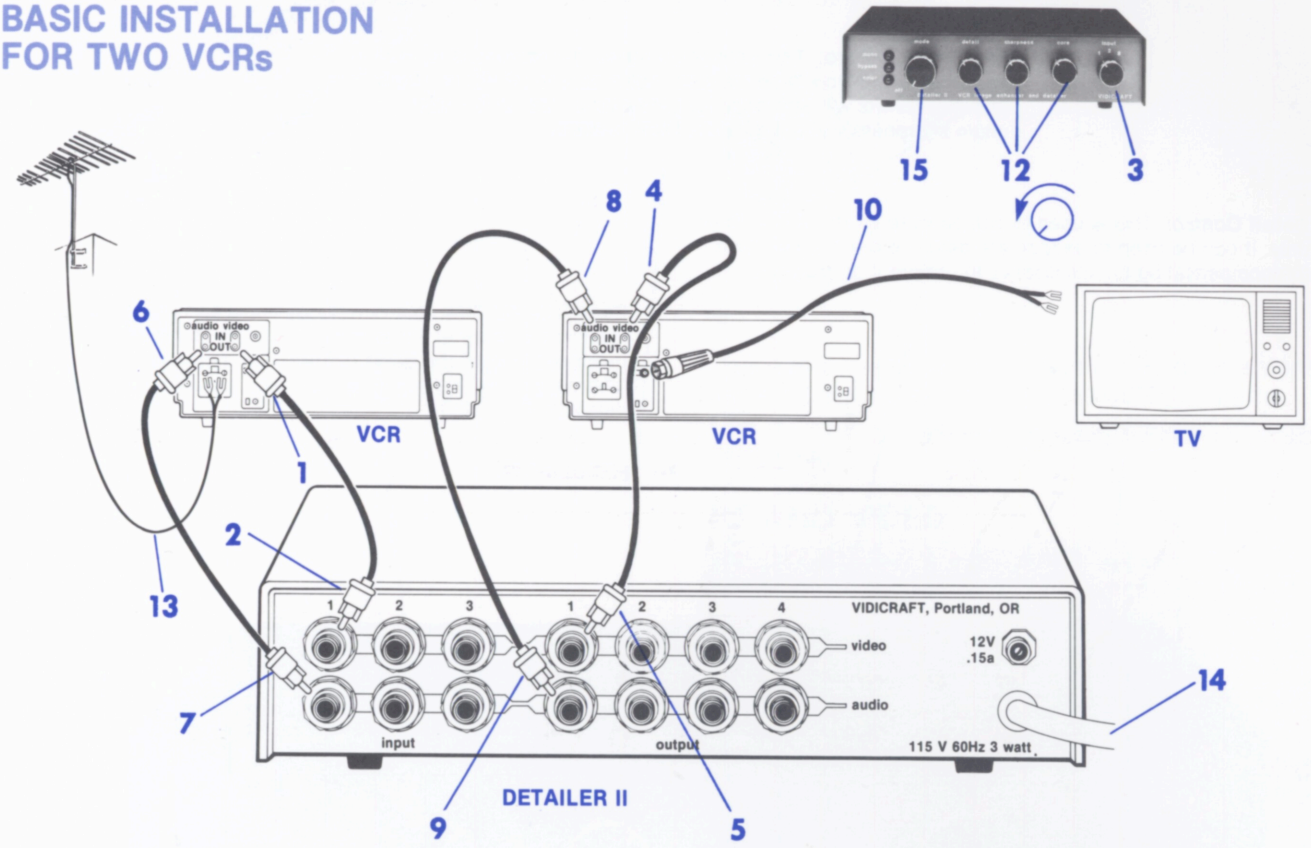
Mono: The mode for the enhancement of black & white video. In isolated cases, it can be used advantageously with color material, but it will damage color on normal material. Note: It will not convert color video into black & white video—it merely sets the DETAILER II to properly handle monochrome video.

Input Selector: A three position switch used to select between three available audio plus video sources. The input positions are designated 1, 2, 3 and correspond to three pairs of input connectors on the rear panel of the DETAILER II which are also labeled 1, 2, 3. The bottom connector in each pair accepts audio, the top connector video. The input selector functions when either or both of the connectors are in use, maintaining the ability to switch video only, audio only or video plus audio.

INSTALLATION

The following are simplified hook-ups for making the DETAILER II operational. More complex hook-ups are possible, and offer considerable advantages. Once you are satisfied with the basic hook-up and operation of the unit, refer to the section entitled ADVANCED HOOK-UPS on pages 14, 16, 17, and 18.

BASIC INSTALLATION FOR TWO VCRs

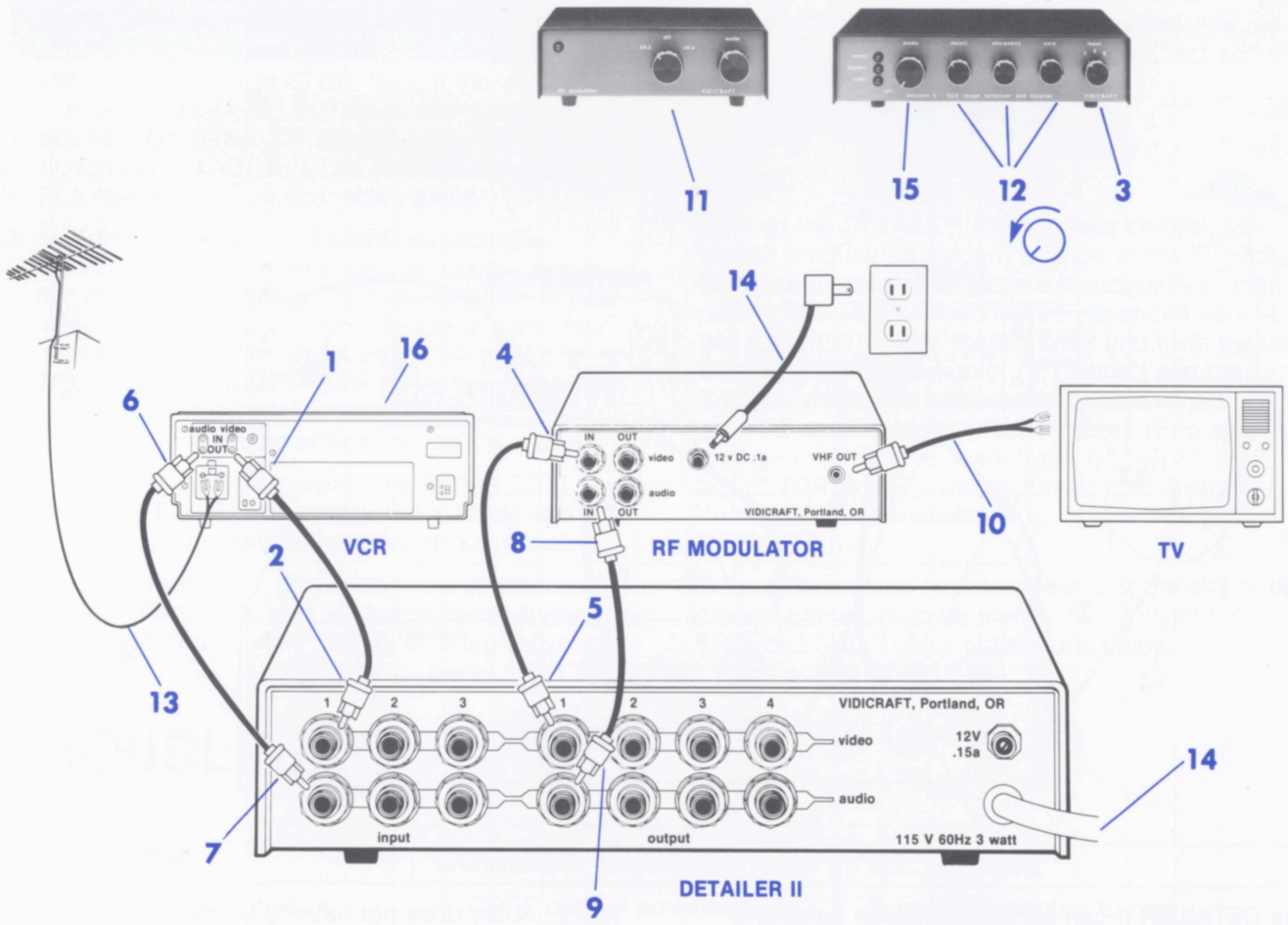


1. Connect one end of a video cable to the VIDEO OUT (not VHF out) of the playback (master) VCR.
2. Connect the opposite end of the same cable to the DETAILER II number 1 VIDEO INPUT.
3. Switch the DETAILER II INPUT SELECTOR to the number 1 position.
4. Connect one end of a video cable to the VIDEO INPUT of the record (slave) VCR. Note that on some VCR models, the VIDEO INPUT is a single pin input labelled CAMERA IN.
5. Connect the opposite end of the same cable to the DETAILER II number 1 VIDEO OUTPUT.
6. Connect one end of an audio cable to the AUDIO OUTPUT of the play (master) VCR.
7. Connect the opposite end of the same cable to the DETAILER II number 1 AUDIO INPUT.
8. Connect one end of a second audio cable to the AUDIO INPUT of the record (slave) VCR.
9. Connect the opposite end of the same cable to the DETAILER II number 1 AUDIO OUTPUT.

NOTE: Audio does not have to be routed through the DETAILER II, except when using siamese video/audio cables. An alternate connection is to run the audio direct from the AUDIO OUT of the play (master VCR) to the AUDIO INPUT of the record (slave) VCR. The advantage of routing audio through the DETAILER II lies in being able to select between sources, e.g. using either of the two VCRs as master or slave. To accomplish this refer to the ADVANCED HOOK UPS section of the manual.

10. Connect the television receiver to the VHF OUT of the ***record*** (slave) VCR.
11. Switch the INPUT SELECT on the record (slave) VCR to the CAMERA POSITION.
12. Set the DETAIL, SHARPNESS and CORE controls on the DETAILER II to the remote counterclockwise position.
13. Attach a TV antenna to the VHF IN of the play (master) VCR. The objective is to route a picture from the tuner of the play (master) VCR, through the DETAILER II, into and through the record (slave) VCR to the TV receiver.
14. Plug the DETAILER II power cord into a 110 Volt AC outlet.
15. Switch the DETAILER II MODE SELECTOR to the color position. The red LED should light.
16. Proceed to TESTING THE INSTALLATION on p-7.

BASIC INSTALLATION FOR ONE VCR AND RF MODULATOR

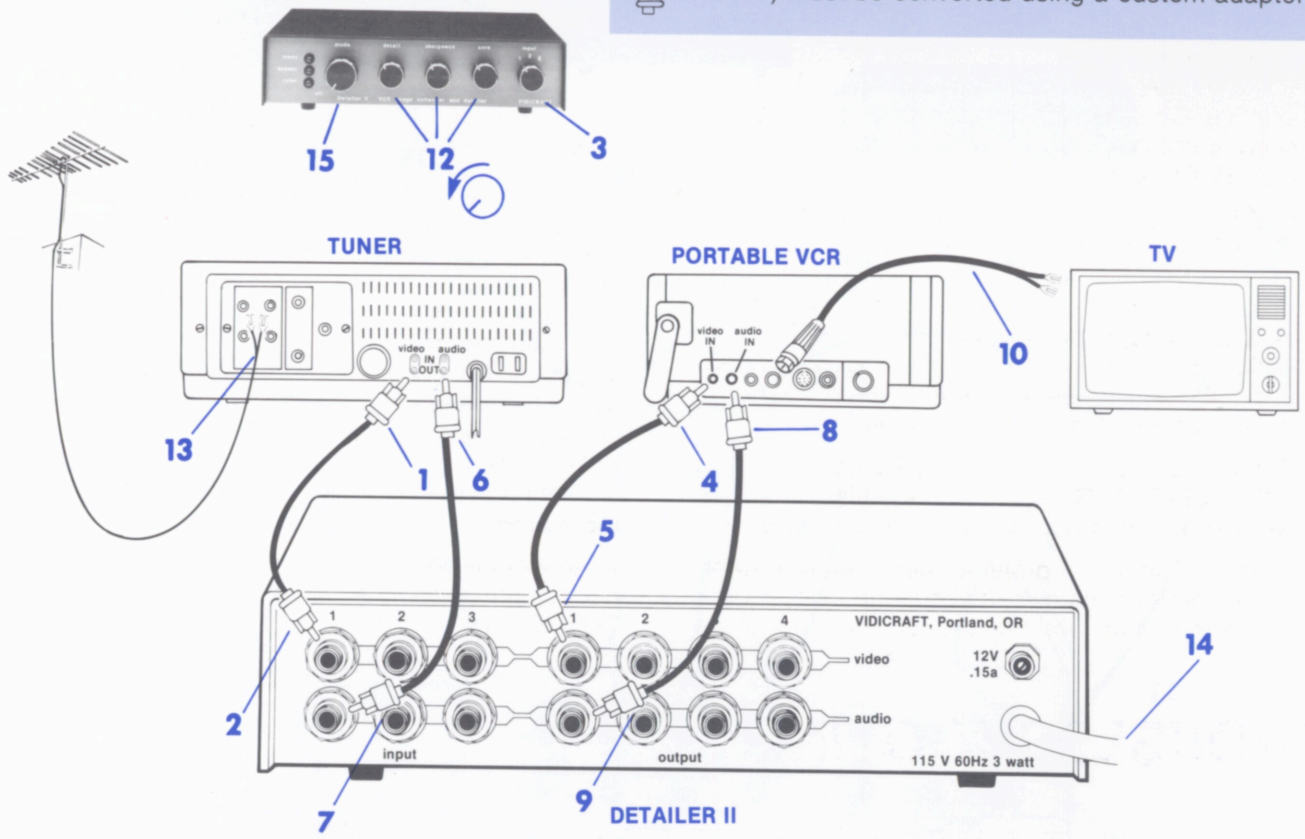


The DETAILER II can be combined with an RF MODULATOR (RF converter) to enhance the output of a single VCR. This will allow you to enhance VCR playback and off-the-air viewing (but not recording). Hook up as described below.

1. Connect one end of a video cable to the VIDEO OUT (not VHF out) of the VCR.
2. Connect the opposite end of the same cable to the DETAILER II number 1 VIDEO INPUT.
3. Switch the DETAILER II INPUT SELECTOR to the number 1 position.
4. Connect one end of a video cable to the VIDEO INPUT of the RF MODULATOR.
5. Connect the opposite end of the same cable to the DETAILER II number 1 VIDEO OUTPUT.
6. Connect one end of an audio cable to the AUDIO OUTPUT of the VCR.
7. Connect the opposite end of the same cable to the DETAILER II number 1 AUDIO INPUT.
8. Connect one end of a second cable to the AUDIO INPUT of the RF MODULATOR.
9. Connect the opposite end of the same cable to the DETAILER II number 1 AUDIO OUTPUT.
10. Connect the television receiver to the VHF OUT of the RF MODULATOR.
11. Turn the RF MODULATOR channel select to 3 or 4. Choose the channel not used for broadcast in your area.
12. Set the DETAIL, SHARPNESS and CORE controls on the DETAILER II to the remote counterclockwise position.
13. Attach a TV antenna to the VHF IN of the VCR. The objective is to route a picture from the tuner of the VCR, through the DETAILER II and the RF MODULATOR to the TV receiver.
14. Plug the DETAILER II power cord and the RF MODULATOR power supply into a 110 Volt AC outlet.
15. Switch the DETAILER II MODE SELECTOR to the color position. The red LED should light.
16. Proceed to TESTING THE INSTALLATION on p-7.

BASIC INSTALLATION FOR PORTABLE VCR AND TUNER

Many tuners sold with portable VCRs do not have single pin audio and video outputs. In this case the multiple pin connector (usually labelled 'to VTR') must be converted using a custom adapter.



The DETAILER II can be used between tuner and VCR to enhance off-the-air viewing and recording (but not tape playback). Hook up as described below.

1. Connect one end of a video cable to the VIDEO OUT (not VHF out) of the tuner. If the tuner does not have a single pin VIDEO OUT, see the notation highlighted in blue on the diagram.
2. Connect the opposite end of the same cable to the DETAILER II number 1 VIDEO INPUT.
3. Switch the DETAILER II INPUT SELECTOR to the number 1 position.
4. Connect one end of a video cable to the VIDEO INPUT of the VCR. Note that on some VCR models, the VIDEO INPUT is a single pin input labelled CAMERA IN.
5. Connect the opposite end of the same cable to the DETAILER II number 1 VIDEO OUTPUT.
6. Connect one end of an audio cable to the AUDIO OUTPUT of the tuner.
7. Connect the opposite end of the same cable to the DETAILER II number 1 AUDIO INPUT.
8. Connect one end of a second cable to the AUDIO INPUT of the VCR.
9. Connect the opposite end of the same cable to the DETAILER II number 1 AUDIO OUTPUT.

NOTE: Audio does not have to be routed through the DETAILER II, except when using siamese video/audio cables. An alternate connection is to run the audio direct from the AUDIO OUT of the tuner to the AUDIO INPUT of the VCR. The advantage of routing audio through the DETAILER II lies in being able to select between sources. To accomplish this refer to the ADVANCED HOOK UPS section of the manual.

10. Connect the television receiver to the VHF OUT of the VCR.
11. You may need to switch the INPUT SELECT on the VCR to the CAMERA or VTR position. Consult your VTR manual.
12. Set the DETAIL, SHARPNESS and CORE controls on the DETAILER II to the remote counterclockwise position.
13. Attach a TV antenna to the VHF IN of the TUNER. The objective is to route a picture from the TUNER through the DETAILER II, into and through the VCR to the TV receiver.
14. Plug the DETAILER II power cord into a 110 Volt AC outlet.
15. Switch the DETAILER II MODE SELECTOR to the color position. The red LED should light.
16. Proceed to TESTING THE INSTALLATION on p-7.

TESTING THE INSTALLATION

SET UP

1. For TUNER plus VCR installations, place the VCR in STOP. For two VCR installations, place the slave (record) VCR in STOP. Switch the VCR TUNER/CAMERA SELECTOR to the 'CAMERA' position. On some VCR models, you may also need to press AUDIO DUB, RECORD and/or PLAYBACK. Consult your VCR manual.
2. Use the playback VCR TUNER or separate TUNER to select an off-the-air program. Choose the channel that offers the best reception in your area. The object is to route the signal from the TUNER, through the DETAILER II, to the TV RECEIVER. If the DETAILER II has been installed correctly, and the signal properly routed, the off-the-air picture should appear on the TV.
3. For a color program, switch the DETAILER II MODE SELECTOR to 'color'. For a black and white program, switch the selector to 'mono'.
4. If your TV set or TV projector has a sharpness or detail control of its own, it should be readjusted to provide an accurate display of video. Advance the control until it just begins to effect the picture, and stop. This is probably the best setting for use with the DETAILER II.

TEST

Turn up the DETAILER II sharpness control. This should produce an evident change in the TV picture. Because an off-the-air picture is ordinarily of high quality, the control need not be advanced very far to get a sharper image. Switch back and forth between the operative mode ('color' or 'mono') and the 'bypass' mode to compare the enhanced picture with the unenhanced picture. If there is no apparent change in the image, switch the DETAILER II MODE SELECTOR to OFF. The picture should disappear. If it does not, video is not being routed through the DETAILER II.

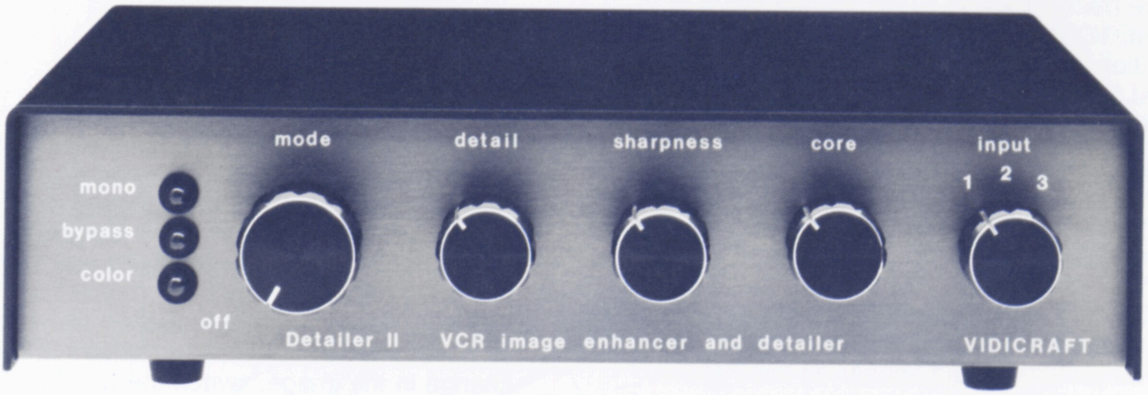
If the picture does not disappear, but the sharpness control continues to be ineffective, consult the TROUBLESHOOTING instructions below.

TROUBLESHOOTING

SYMPTOM	COMMON CAUSES	RESPONSE
Enhance controls have no effect on picture.	1. CORE control advanced too far, cancelling enhancement.	Turn CORE control to zero.
	2. MODE SELECTOR in 'bypass' mode.	Switch MODE SELECTOR to 'color' (for color video) or to 'mono' (for black and white video).
	3. Improper connection.	Check all connections against installation instructions.
Enhance controls make picture worse.	1. Sharpness or detail control on TV turned up too far.	Turn TV sharpness or detail control off. Advance until begins to effect picture, and stop.
	2. Program in color, but MODE SELECTOR in 'mono' mode.	Switch MODE SELECTOR to 'color'.
	3. Improper connection.	Check all connections against installation instructions.
No picture.	1. VCR TUNER/CAMERA SELECTOR in wrong mode (slave VCR).	Switch VCR TUNER/CAMERA SELECTOR to 'camera' position.
	2. Your model of VCR requires special operation to accept direct video or audio.	Consult VCR manual. May need to press AUDIO DUB, RECORD and/or PLAY.
	3. Improper connection.	Check all connections against installation instructions.

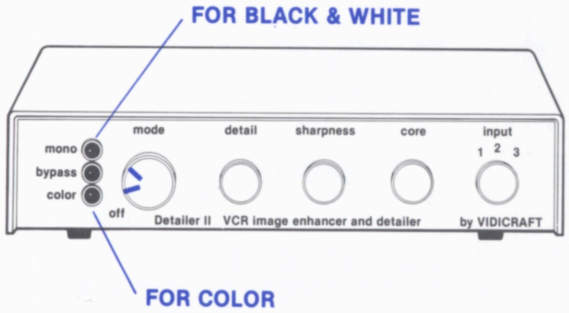
INTRODUCTION TO OPERATION

Familiarizing Yourself with the Controls

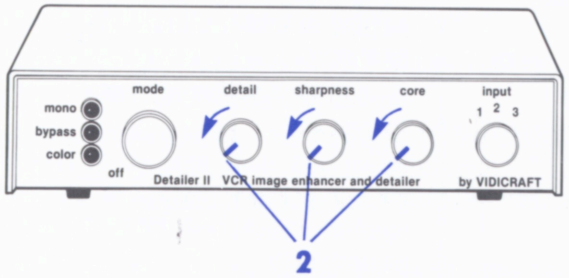


SET UP

1. Place the mode selector in one of the operative modes: color for color material, mono for black and white material.



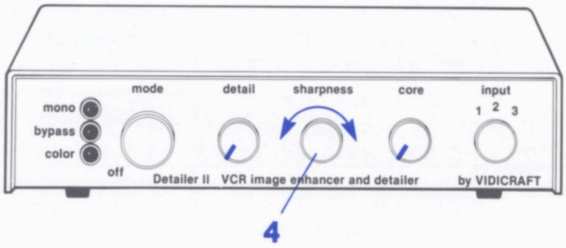
2. Turn all enhancement controls (detail, sharpness, core) to zero, the furthest counter-clockwise position.



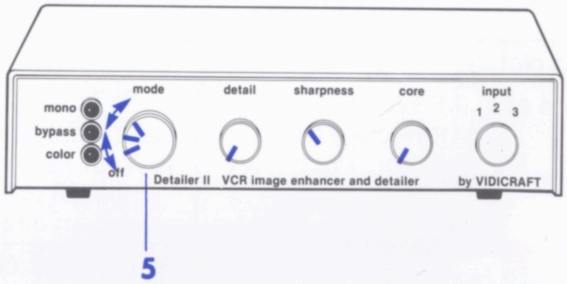
3. Select an off-the-air program using the tuner on your master (playback) recorder. This will provide a quality image to use as the source for enhancement. The better the source, the more dramatic the enhancement will be. This makes an off-the-air program excellent source material for demonstrating the use of the DETAILER II controls.

SHARPNESS

4. Turn the sharpness control up and down. Note the effect. It should increase the sharpness of edges and the contours of objects and people. Turn the control all the way up. This should create false outlines around objects and people. Obviously this is too much enhancement. Turn the control down to a point where the outlines cease to be objectionable and the image appears more natural. This is the amount of sharpness enhancement generally desirable for playback.

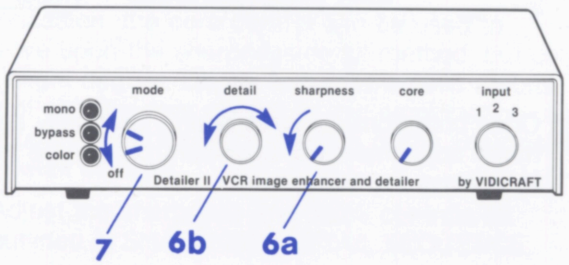


5. Switch between the enhancement mode (color or mono) and bypass to compare the picture with and without enhancement.



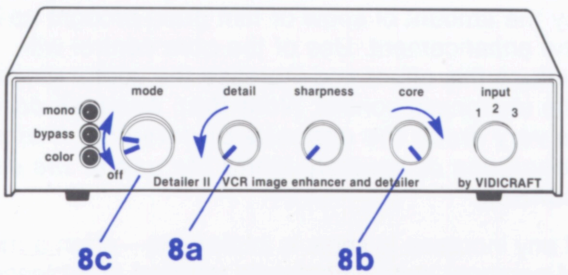
DETAIL

6. Turn the sharpness control back to zero. Turn the detail control up and down. Note the effect. This should bring out the detailed areas of the picture. In judging the effectiveness of this control, concentrate on the detailed areas of the picture. Look for increased detail in people's faces and hair, in the patterns on people's clothes, in grass lawns, brick walls and in the distant background. Turn the control all the way up. This should make the detail appear very coarse, and the picture may become very noisy (snowy). The effectiveness of this control is limited by the amount of snow and the coarseness of detail. With the detail control remaining in the maximum position, adjust the tracking control on your VCR for minimum snow. Turn the detail control down to a point where snow is acceptable and the detail appears natural, not coarse.
7. Switch between the enhancement mode and bypass for picture comparison.

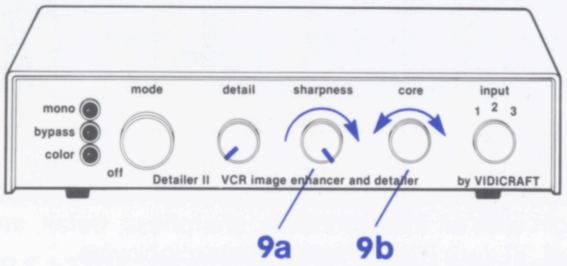


CORE

8. Turn the detail control back to zero. Turn the coring control to the maximum position. Switch between the enhancement mode and 'bypass'. Note that the core has no effect on the picture when the other picture controls are at zero. This is because it only reduces enhancement noise, not existing noise. Turn the core control back to zero.

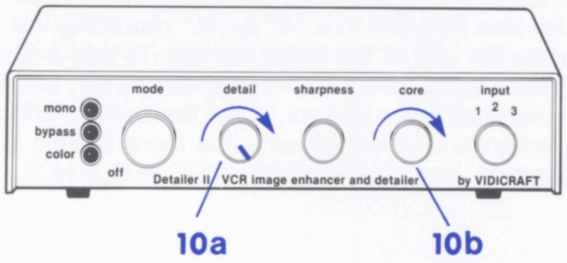


9. Turn the sharpness control to the maximum position. Leaving the sharpness at maximum, turn up the core control. Observe that it removes noise (snow) brought up by the sharpness enhancement. Because noise is often the limiting factor in using sharpness enhancement, this noise reduction effectively increases the range of the sharpness control. Turn the sharpness control and the core control back to zero.



10. Turn the detail control to the maximum position. Observing closely, slowly turn the core control to the maximum position. Notice that the core completely cancels the effect of the detail control. The function of the core control is very much opposite that of the detail control. It removes snow and other low level luminance noise at the expense of detail.

    This control is very effective in reducing enhancement noise created by extreme sharpness enhancement. It is less effective, but still useful when played against detail boost.

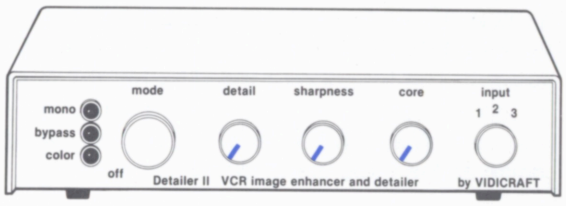


OPERATION

IMPORTANT NOTE: The following sections describing the OPERATION of the DETAILER II are limited to the control adjustments required for playback and off-the-air viewing. Recording and tape duplication (dubbing) will require further adjustment of the controls (to compensate for losses that occur in the recording process).

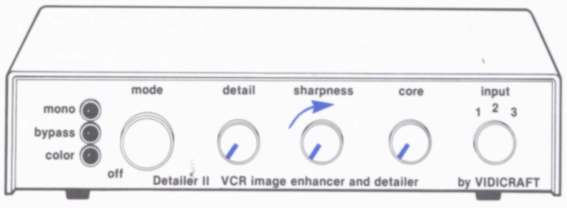
Read the sections on OFF-THE-AIR RECORDING, RECORDING FROM CAMERA, and TAPE DUPLICATION before actually making any recordings.

The picture controls should be adjusted in the proper sequence to achieve the best results. Always begin with all three controls, sharpness, detail, and core, at zero (the remote counterclockwise position).



SHARPNESS ONLY

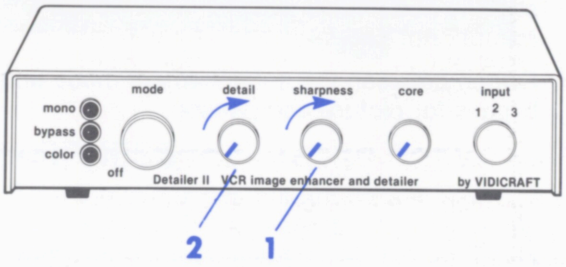
A quality broadcast may require only slight sharpness enhancement for viewing. Note that this does not apply when ***recording*** a broadcast, because the detail loss inherent in a ½″ or ¾″ recording will require the use of the detail control. To add a small amount of sharpness for viewing off the air, simply turn up sharpness control to get the desired effect. To enhance a broadcast which is more lacking in sharpness, see SHARPNESS-CORE SEQUENCE.



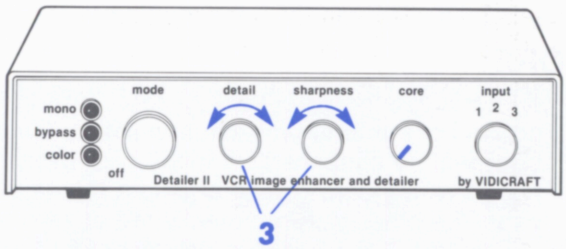
SHARPNESS-DETAIL SEQUENCE

This sequence does not utilize the core control. For some material use of the core control is not necessary. A working knowledge of these controls should be established before attempting to use the core control.

1. Adjust the sharpness control. Always adjust sharpness first, because sharpness enhancement will also bring up some detail. Adjust for the best edge and contour sharpness without creating false outlines, excessive snow or other undesirable effects. To judge effectiveness, concentrate on the outlines of people and objects.
2. Once the sharpness level has been determined, adjust the detail control. To judge effectiveness, concentrate on the surface areas in the picture (facial features, hair, clothes, brick walls, fences, etc.) and on the background elements of the picture. Adjust for clarity of detail and texture, without creating coarseness, excessive snow, or other undesirable effects.



3. Once both controls have been individually set, minor adjustments of both controls can be made to achieve the best result.

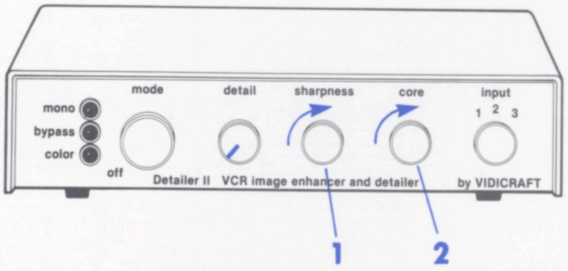


SHARPNESS-CORE SEQUENCE

This method proves useful when extreme sharpness enhancement is required to produce the best picture. Sharpness enhancement is normally limited by the amount of snow or film grain brought up by the enhancement. Use of the core control will reduce this effect and increase the useful range of the sharpness control. ***Note that, because coring is very much the opposite of detailing, it often precludes or severely limits the use of the detail control.***

If any increase in snow is intolerable—often a matter of personal taste—complete removal of increased snow will still permit a net gain in sharpness. Note that coring will remove at maximum only the ***increased*** snow due to enhancement and ***not*** any snow already present in the source material.

1. Adjust the sharpness control for maximum sharpness without creating false outlines.
2. Turn up the core control gradually, until the amount of snow or film grain is reduced to an acceptable level. A good rule of thumb is to remove about half the snow brought up by enhancement.

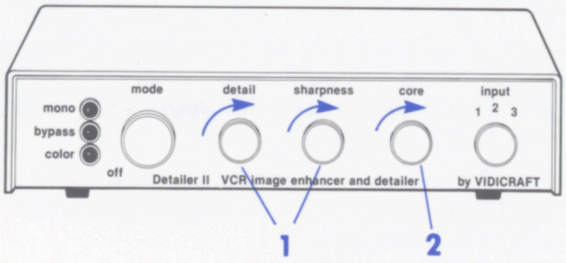


3. If the core control does not reduce snow or film grain to an acceptable level, reduce the sharpness enhancement for the best compromise between sharpness and snow (or film grain).

SHARPNESS-DETAIL-CORE SEQUENCE

On occasion, the core control can be used to improve upon the sharpness-detail method, but only to a slight degree. Do not expect dramatic results. Do not use the core control in this combination until thoroughly experienced in the use of the sharpness and detail controls.

1. Adjust the sharpness and detail controls as outlined in SHARPNESS-DETAIL SEQUENCE.
2. Adjust the core control so that it removes about half the snow or film grain. This will be at the expense of some detail, but is sometimes preferable.
3. Further experimentation may also add slight improvement. While the detail and core circuits are very much the opposite in function, they have slightly different thresholds. The two can be played against each other and sometimes create minor improvement. Experiment with both controls in a back and forth fashion, adjusting by slight increments.



CREATIVE USE OF THE BYPASS MODE

When adjusting the detail and sharpness controls, there is often a tendancy to overenhance. The picture appears to look better and better as you continue to advance the control, when in fact the picture may become better in some respects and worse in others.

This tendancy can be tempered by frequent reference to the 'bypass' mode. Switch back and forth between the 'bypass' and the enhance mode ('color' or 'mono') several times. If the comparison creates doubt as to the improvement, you may be overenhancing. Back up the controls by slight increments, repeating the process until the bypass-enhance comparison appears to be the most productive.

USING THE DETAILER II

RECORDING

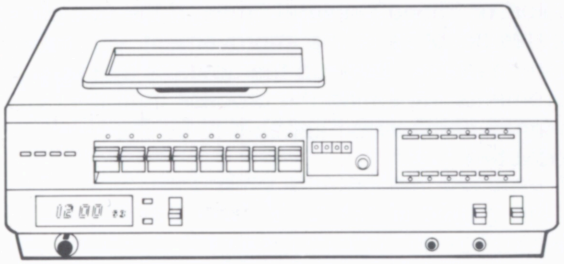
Recordings made on ½" and ¾" VCRs suffer substantial detail loss, as well as some loss of sharpness. To minimize this loss, the DETAILER II should be used to exaggerate detail and sharpness ***before*** recording. This will compensate for the picture degradation that will occur in recording.

Note also that there may be some picture tearing and color shift if a good tape is overenhanced. This does not occur with a tape that ***requires*** a large amount of enhancement.

Before attempting a full length recording using the DETAILER II, experiment with several tapes that have different histories.

For ½" VCRs

To determine the appropriate control levels for recording on a ½" VCR, make a series of short test recordings. Begin with levels set for the best viewing picture, then increase the detail and sharpness levels in small increments for each successive test recording. Play these tests back to determine the appropriate control levels.



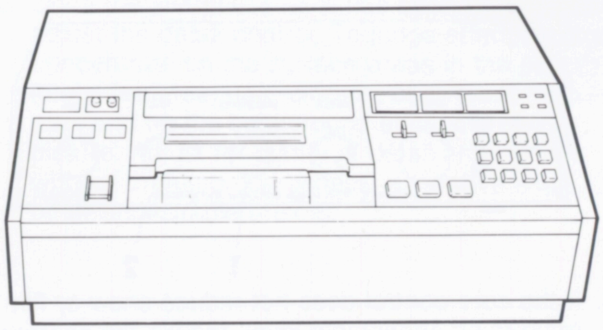
½" VCR

Initially, this procedure may be time consuming. With experience, it is possible to anticipate the approximate settings. Initial adjustments can be made vased on direct viewing, and minor corrections made using tape playback.

This increase in enhancement will also increase the presence of snow or film grain in the viewing picture. However, this increased snow or film grain should disappear upon playback of the recording.

FOR ¾" VCRs

To determine the appropriate control levels for recording on a ¾" VCR, adjust for the best picture viewed through the recorder. Test recordings should not be necessary.



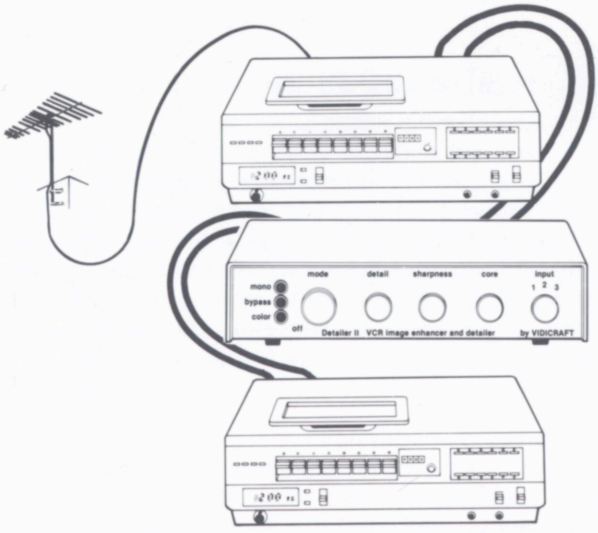
¾" VCR

OFF THE AIR RECORDING

When recording off-the-air, it is necessary to compensate for the VCR's loss as explained in the section on RECORDING.

A quality broadcast that requires little or no enhancement for viewing will still benefit from enhancement for recording.

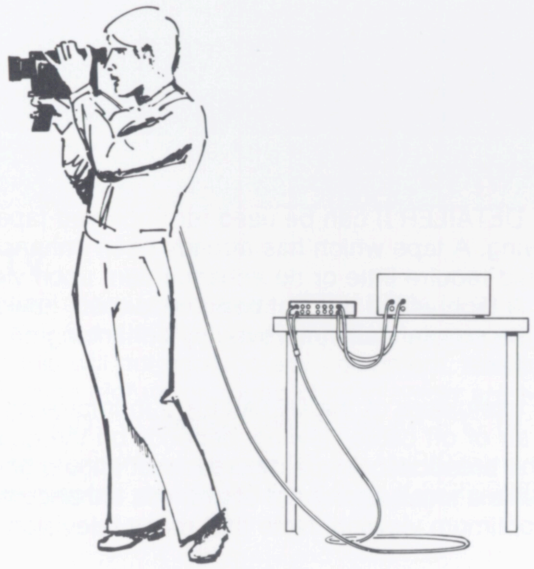
Off the air recording requires a video output from a video tuner. This may be a second VCR in standby, a separate tuner (as sold for portable VCRs), a TV monitor-receiver, or an output from the tuner section of a single VCR, if it has one. Some switchable Beta I/II VCRs have an unmarked DIN connector for this purpose. A technician can install such an output. See RECORDING for additional information.



RECORDING FROM CAMERA

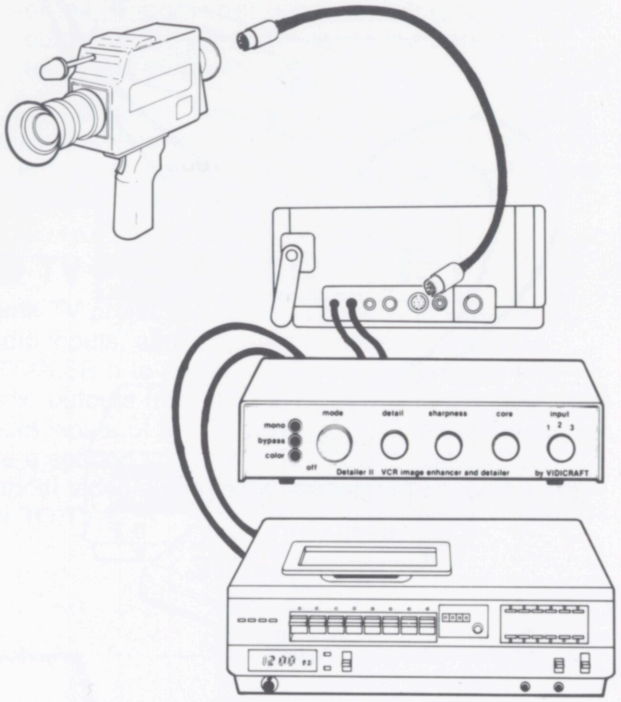
When recording from camera, it is necessary to compensate for the VCR's loss as explained in the section on RECORDING.

The camera image itself will probably require some sharpness enhancement. Detail boost will precompensate for the VCR's loss.

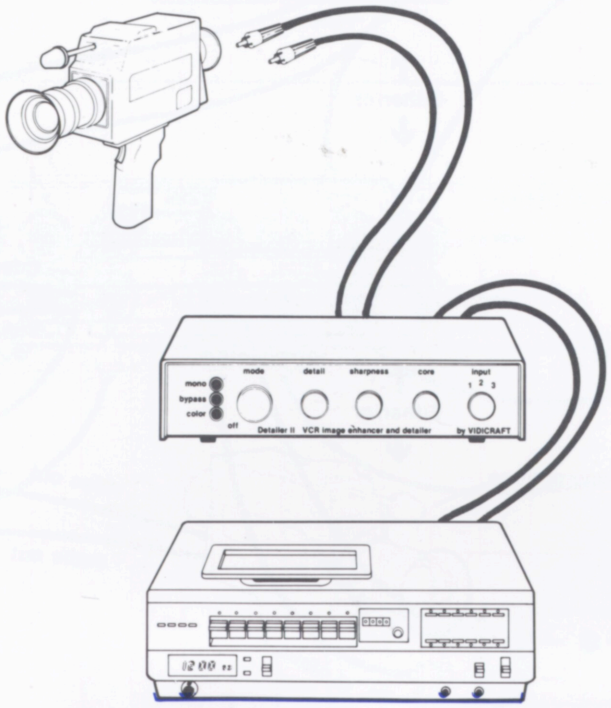


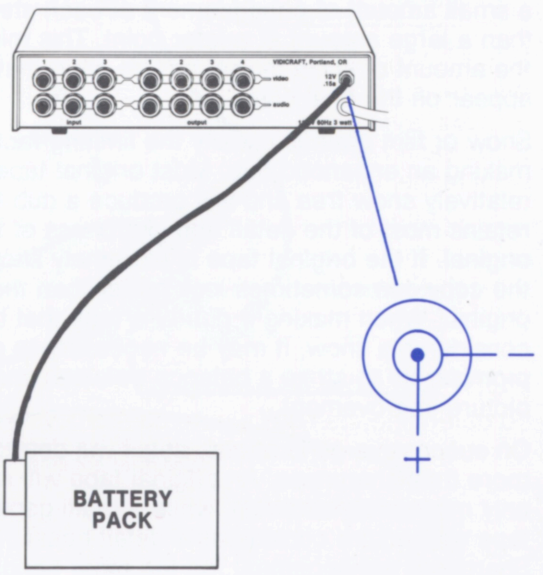
A camera with a single pin RCA video output connector can be connected directly to the DETAILER II. Other single pin connectors can be easily connected via an adapter (inexpensive and readily available).

Multi-pin camera outputs are more difficult to adapt. An economical alternative is to use the VCR as an adaptor and a second VCR for recording. Connect the camera cable to the multi-pin camera connector of the VCR. Connect the video out of the same VCR to a video in of the DETAILER II.

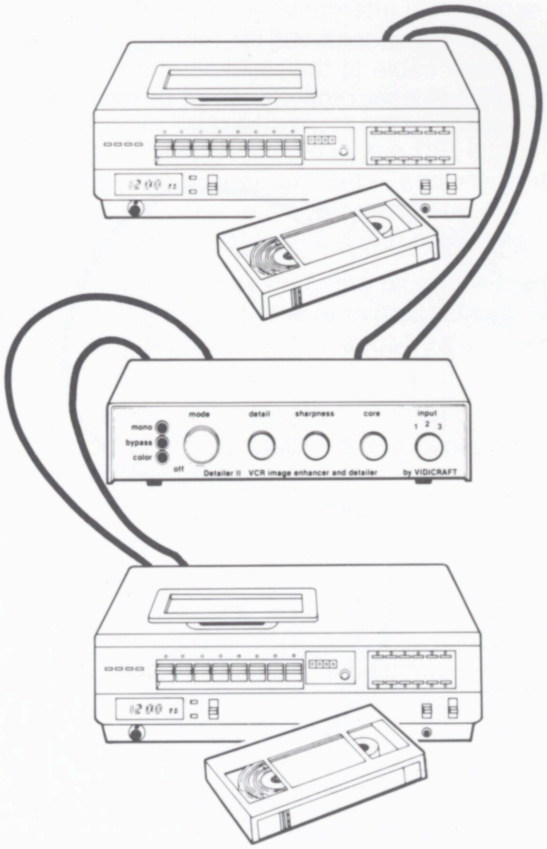


The DETAILER II can be operated on battery for use with your camera in the field. Connect battery to the 12V input on the back of the DETAILER II.





TAPE DUPLICATION (Dubbing)



A tape that is two to three generations removed may have no detail and be definitely lacking in sharpness. This is a case of 'get what you can'. Make a series of tests as explained in the section on RECORDING.

Achieving a master look on the dub is unlikely but improvement is usually possible. Note again that excessive snow will reduce the amount of acceptable enhancement. Note also that some snow will disappear upon playback.

VIEWING

The DETAILER II can be used for improved tape veiwing. A tape which has already been enhanced should require little or no enhancement upon viewing. A tape which has not been enhanced, however, can be substantially improved by enhancing on playback.

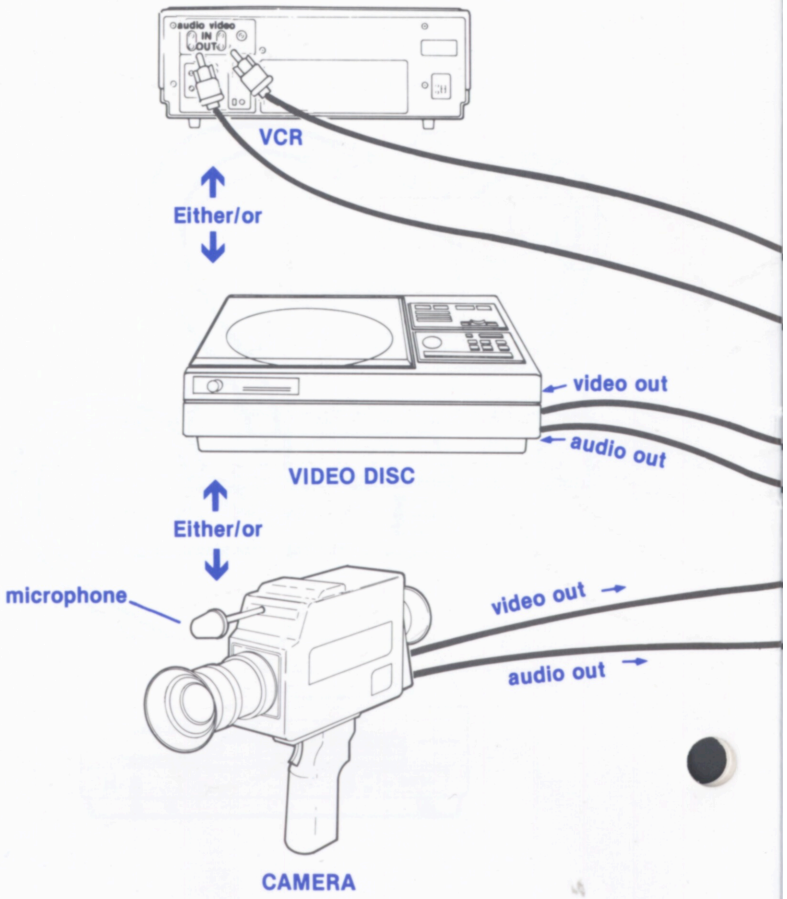
The usefulness of the DETAILER II in improving off the air or off cable viewing, depends on the quality of the broadcast. A quality broadcast should only require a small amount of sharpness enhancement for optimum viewing. Note that many television

When duplicating a tape, it is necessary to compensate for the VCR's loss as explained in the section on RECORDING.

When possible, the DETAILER II should be used before each tape generation, e.g., in recording the master (off the air or from camera), and again in making a copy from the master. The aim is to enhance before, not after, the tape loss, and to use a small amount of enhancement at each step, rather than a large amount at a later point. This minimizes the amount of snow (noise) or film grain that will appear on the final copy.

Snow or film grain is usually the limiting factor in making an enhanced dub. Most original tapes are relatively snow free and will produce a dub that retains most of the detail and sharpness of the original. If the original tape is extremely snow free, the copy can sometimes look better than the original. When making a dub of a tape that has considerable snow, it may be necessary to compromise; try to strike a balance between snow and picture improvement.

On successive generations, detail will deteriorate more than sharpness. An original tape will require only minimal detail boost, while a multi-generation tape will require considerable detail boost. Sharpness enhancement, on the other hand, need only be increased slightly.



programs will be enhanced for broadcast, and that the amount of enhancement, if any, may vary from broadcaster to broadcaster and program to program.

A non-quality broadcast, particularly one which originates from ¾" videotape (sometimes 2nd or 3rd generation) or 16mm film, may require detail boost and/or additional sharpness enhancement.

If your TV set or TV projector has a sharpness or detail control of its own, it should be readjusted to provide an accurate display of video. To do this, tune in your best off the air TV channel, advance the sharpness or detail control until it just begins to have an effect on the picture, and stop. This is probably the best setting for use with the DETAILER II.

TO TV

The video and audio outputs of the DETAILER II cannot be fed directly into a standard television set. (While this will not damage any equipment, it will not produce picture or sound.) Listed below are two common ways to connect the DETAILER II to TV:

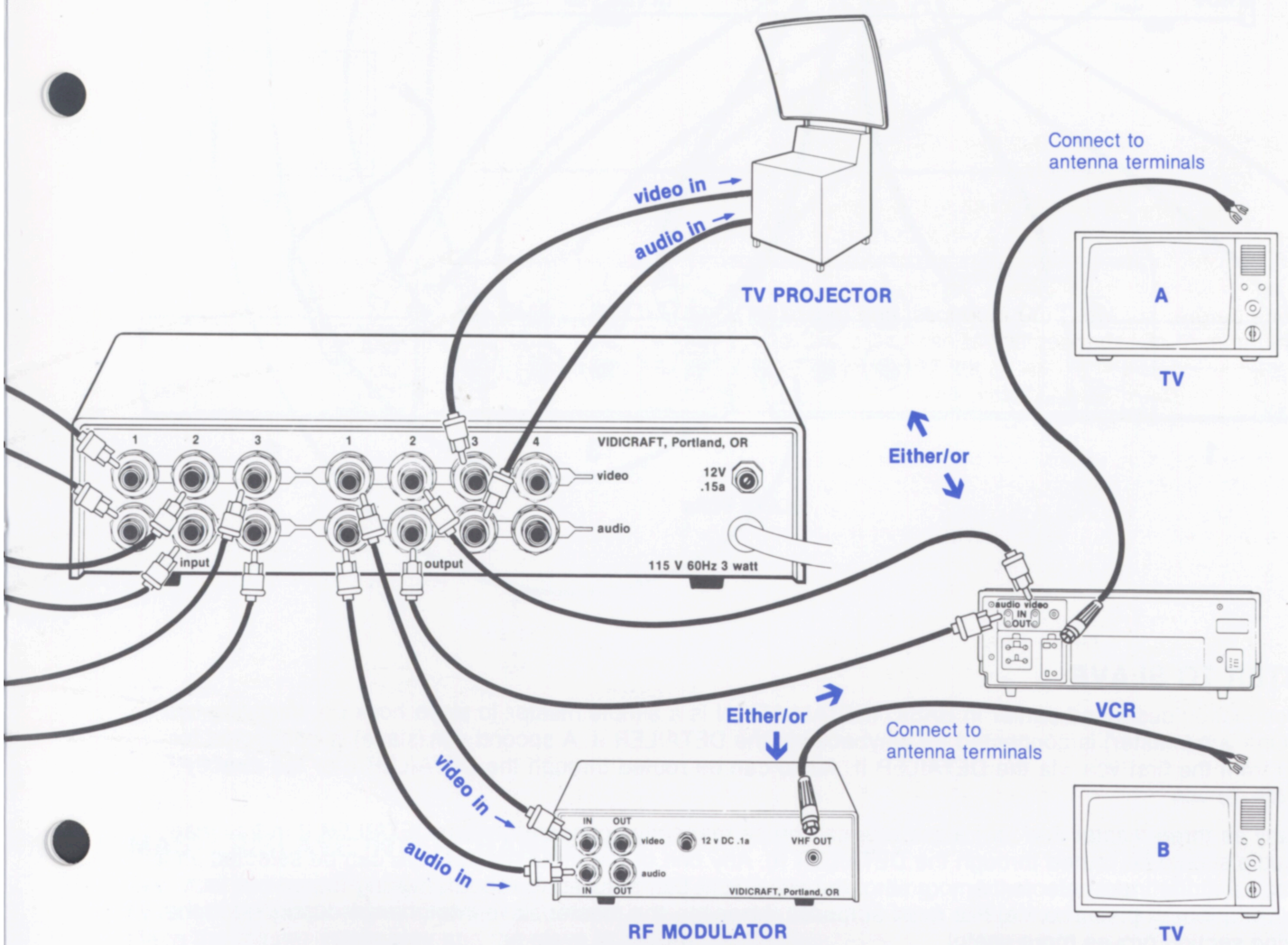
A. Use a second VCR as an RF adapter. Hook up in the manner prescribed for dubbing, connecting the VHF output of the 'record' VCR to the antenna terminals of the TV. The VCR should be placed in STOP. Some VCRs require AUDIO DUB to be pressed, or RECORD and/or PLAYBACK (consult VCR manual).

B. Use an RF converter (RF modulator). The Vidicraft RF MODULATOR can be used for this purpose. Connect the video and audio outputs of the RF converter. Connect the (single) RF output of the RF converter to the antenna terminals of the TV.

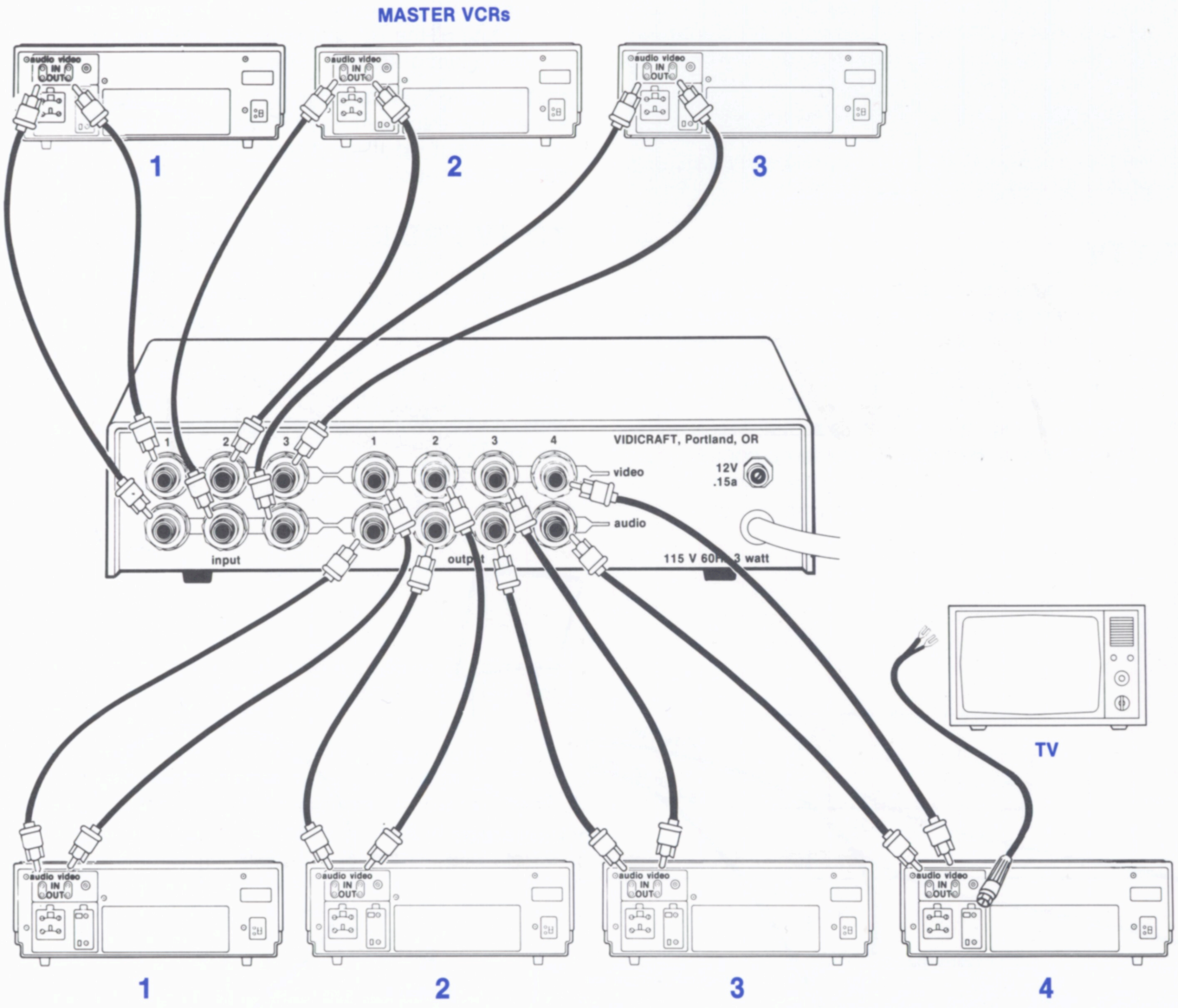
NOTE: Consumer versions of TV monitor/receivers are available for purchase. These monitors will accept direct video input form the DETAILER II, and sometimes supply direct video out as well.

TO TV PROJECTOR

Some TV projectors are equipped with video and audio inputs, allowing direct connection from DETAILER II to projector. Connect the video and audio outputs from the DETAILER II to the video and audoi inputs of the TV projector. An alternative is to use a second VCR as per TO TV (A). Projectors without video/audio input should be connected as per TO TV.



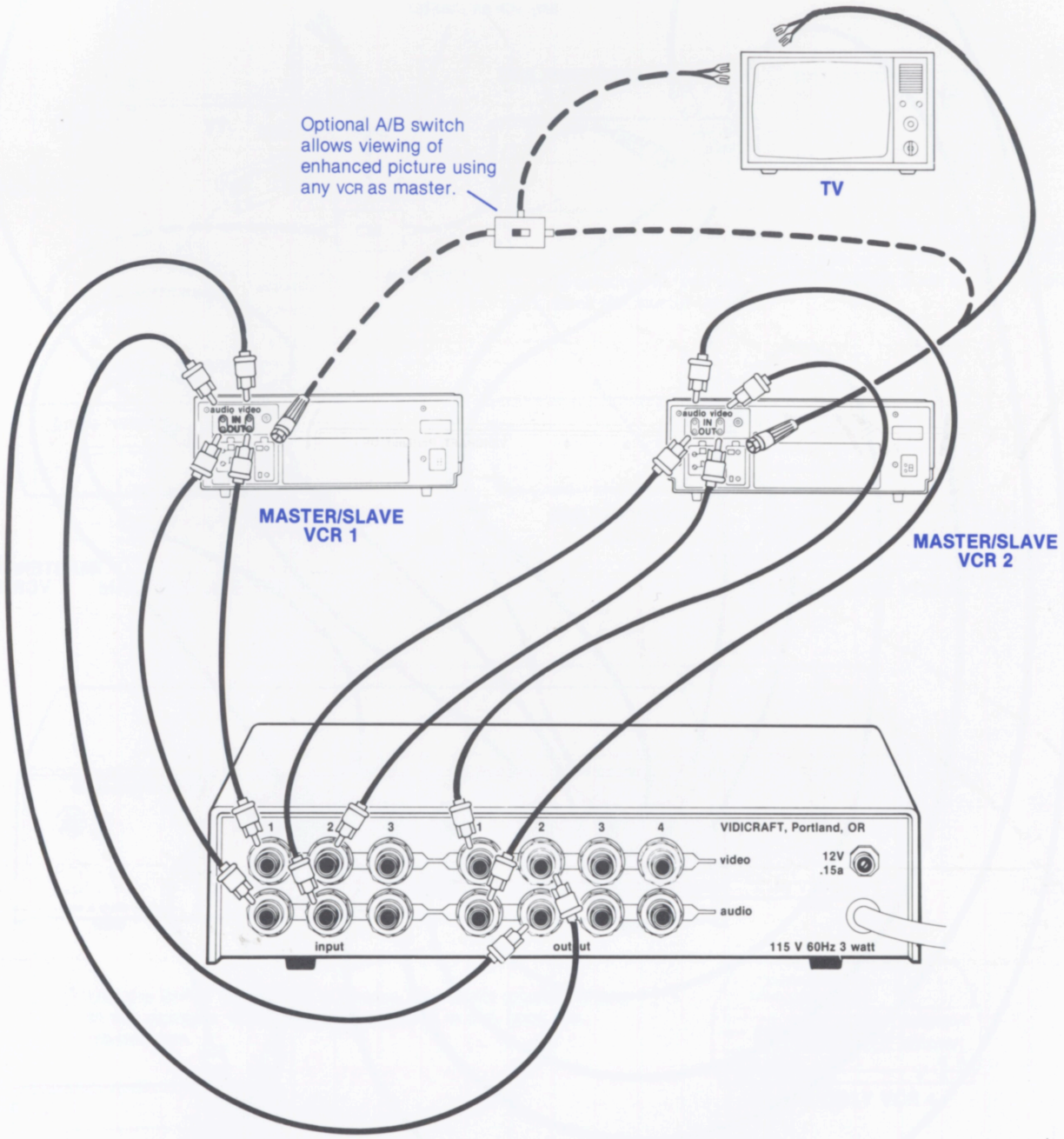
ADVANCED HOOK UPS



MASTER TO SLAVE

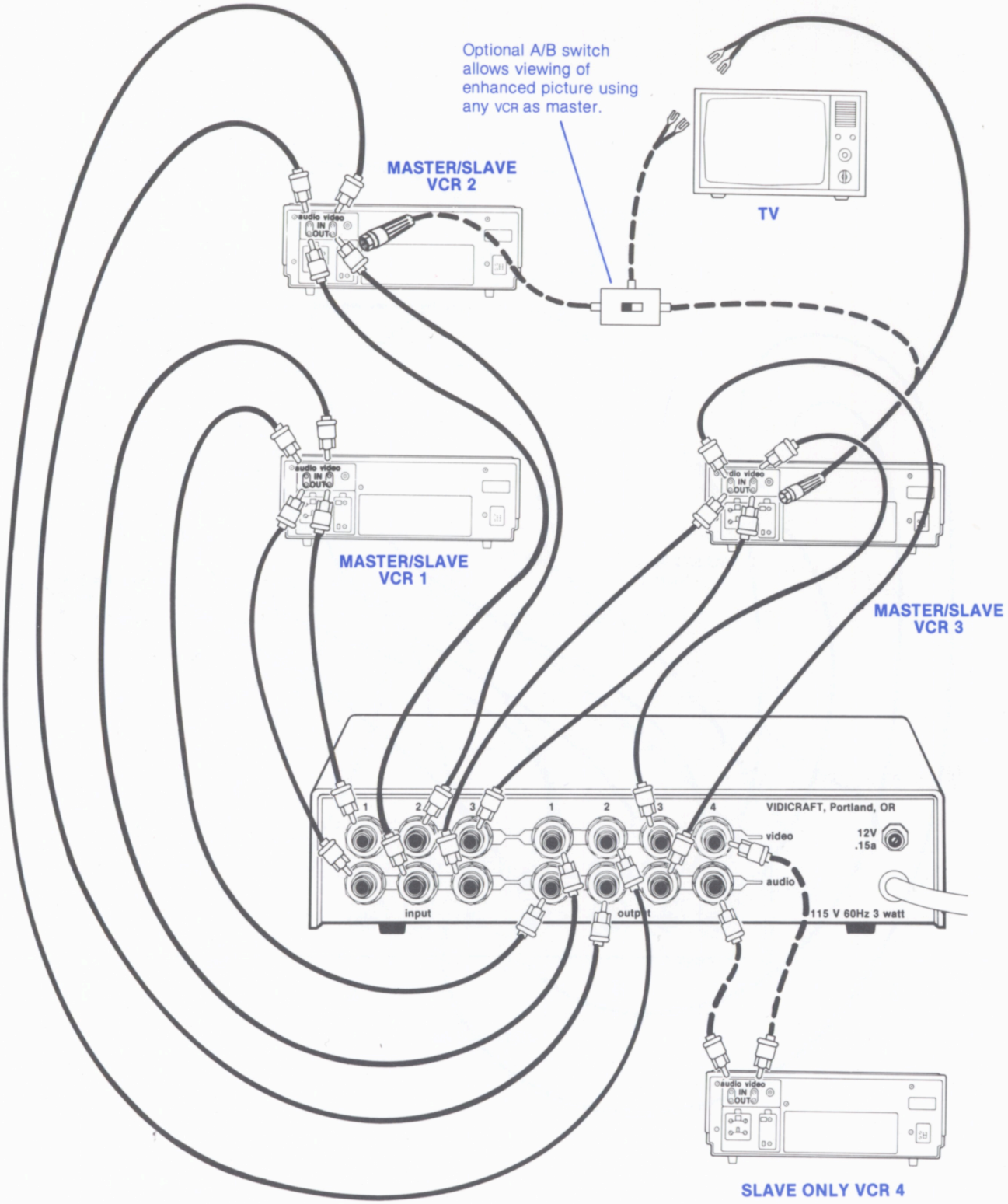
The connection described earlier in BASIC INSTALLATION is a simple master to slave hook up, involving two VCRs. One VCR (master) is connected for playback via the DETAILER II. A second VCR (slave) is connected for record from the first VCR, via the DETAILER II. Audio can be routed through the DETAILER II or fed directly from VCR to VCR.

As many as three master and four slave VCRs can be permanently connected to the DETAILER II in this manner (audio should be routed through the DETAILER II). Any one of the three master VCRs can be selected as a source, using the input selector. Any or all of the slave VCRs can be used to record, making it possible to make up to four copies at once. For most purposes, however, the master/slave interchange described in the following section proves more useful.



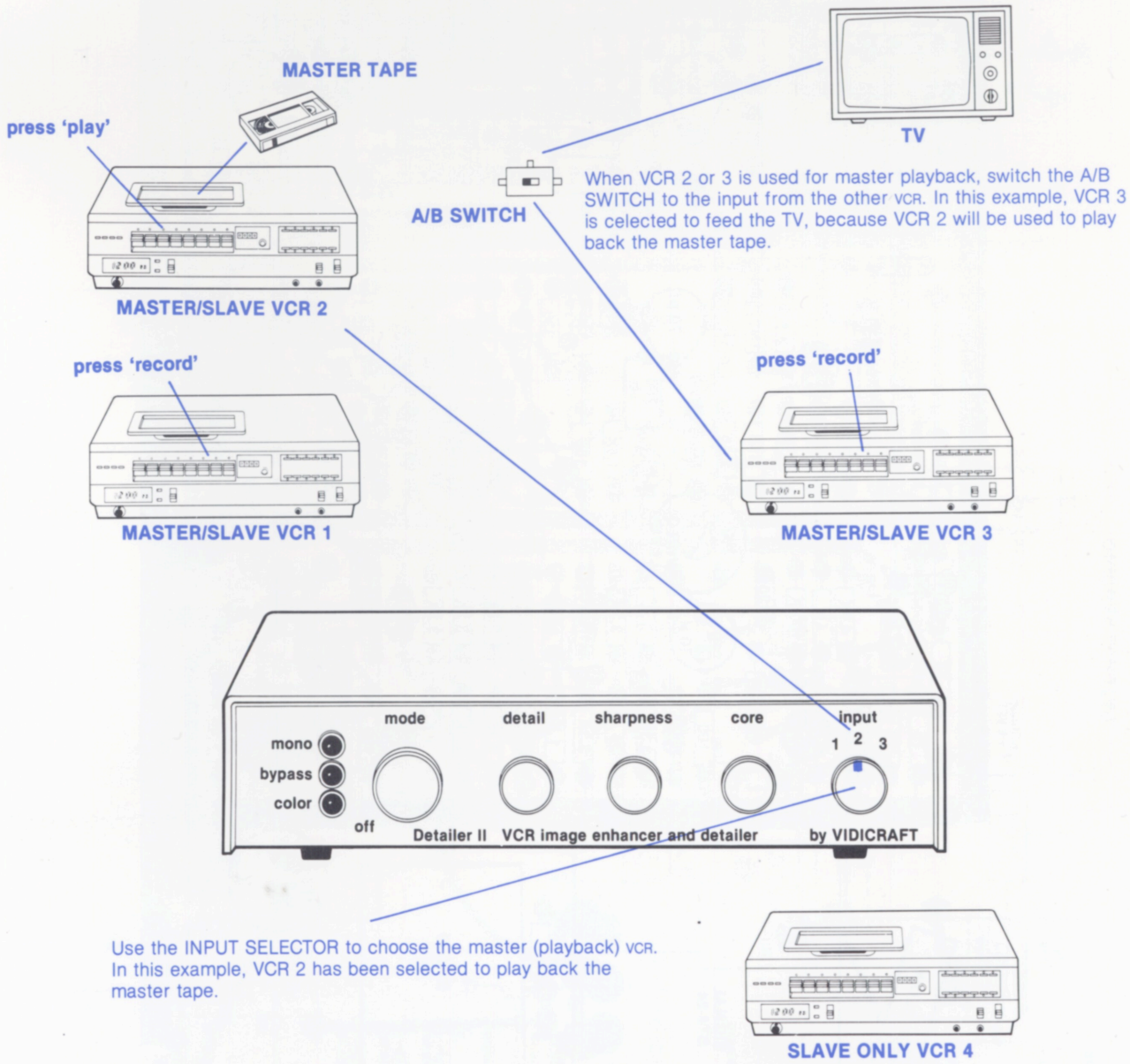
MASTER/SLAVE INTERCHANGE (A)

Two VCRs can be permanently connected to the DETAILER II for recording on either VCR from the other VCR (without changing cables). Connect as shown in the diagram. Use the input selector to select the master VCR. Place the master VCR in play and the slave in record.



MASTER/SLAVE INTERCHANGE (B)

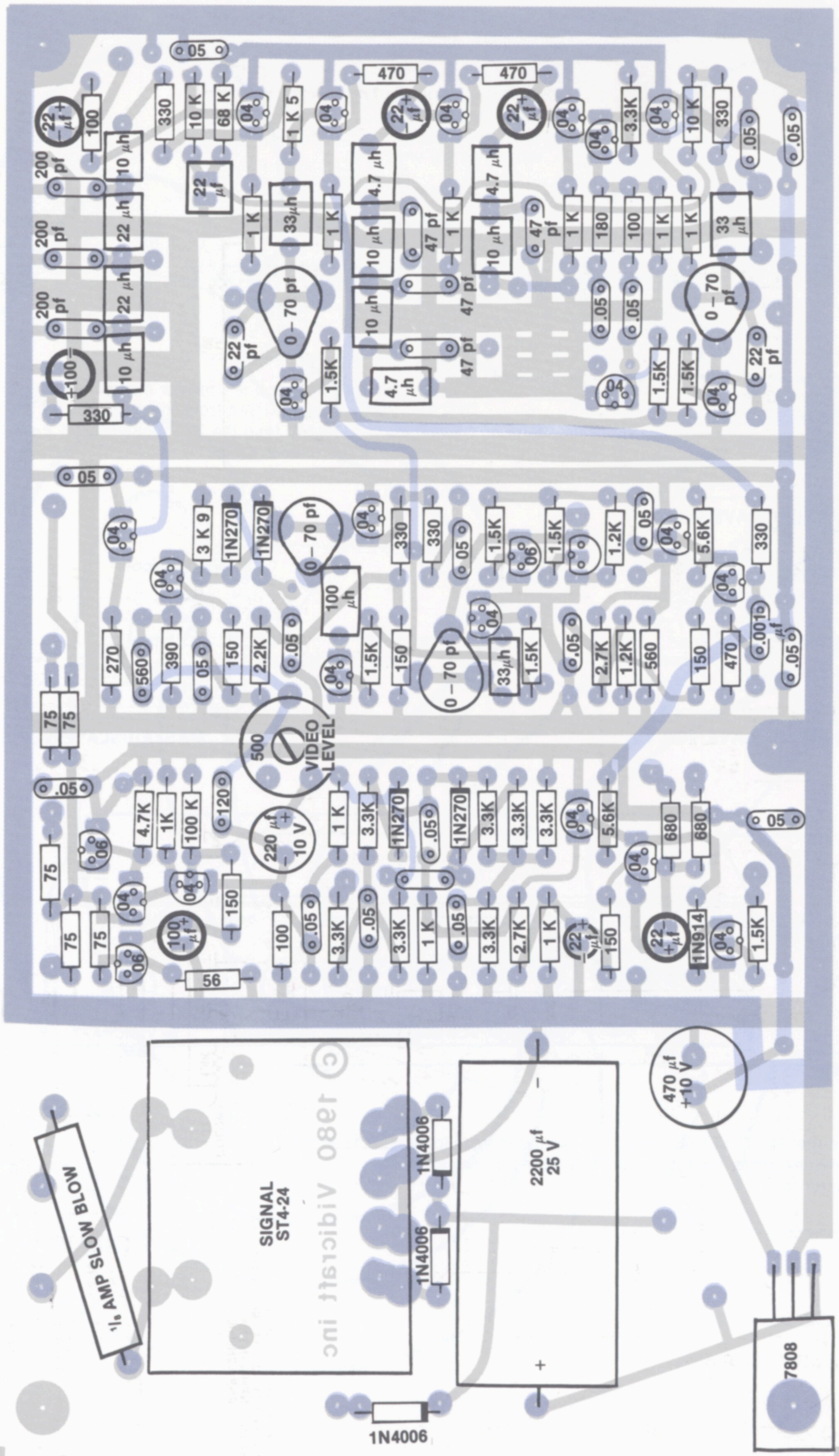
Three VCRs can be permanently connected to the DETAILER II for recording from any one VCR to any one or two of the other VCRs. A FOURTH VCR can be added as slave only. This makes it possible to make three copies at once. Connect as shown.



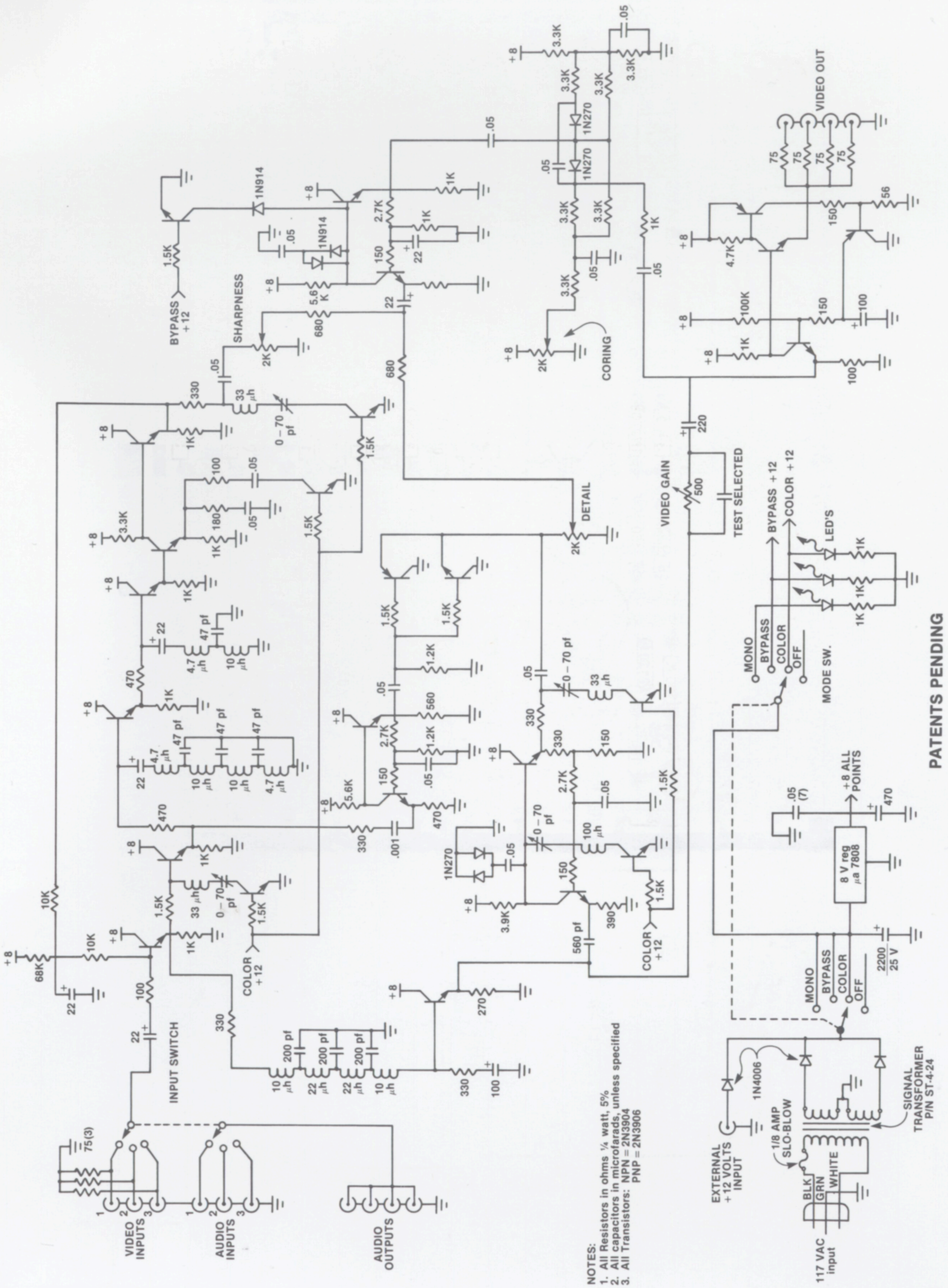
MASTER/SLAVE INTERCHANGE (B) continued

In the above example, one VCR is selected to play back a master tape. Two copies of the master will be recorded on the remaining master/slave VCRs.

PCB BOARD LAYOUT



SCHEMATIC



NOTES:
1. All Resistors in ohms ¼ watt, 5%
2. All capacitors in microfarads, unless specified
3. All Transistors: NPN = 2N3904
   PNP = 2N3906

SPECIFICATIONS

Power Requirements:	115 V AC, 50Hz-60Hz, 3 watts or 12 V DC, .15 amps
Color System:	3.58 MHz color subcarrier (NTSC. PAL M, PAL N)
Inputs:	3 video (RCA connectors) 3 audio (RCA connectors)
Input Levels:	video inputs: 1.0 V p-p, 75 ohm unbalanced audio inputs: .1-3 V Rms
Outputs:	4 video (RCA connectors) 4 audio (RCA connectors)
Output Levels:	video outputs: 1.0 V p-p, 75 ohm unbalanced audio outputs: same as input
Enhance Level:	detail enhance: 12 dB minimum (referenced 1.0 V p-p) sharpness enhance: 12 dB minimum (referenced 1.0 V p-p)
Signal-to-Noise Ratio:	greater than 50 dB below 1 V p-p out
Distortion:	differential gain: less than 2% (10-90% APL) differential phase: less than 2 degrees (10-90% APL)
Weight:	approximately 2 lbs., 12 oz. with power cord
Dimensions:	9¾″ wide, 2½″ high, 6½″ deep
Cabinet Construction:	aluminum housing aluminum knobs
Cabinet Finish:	permanently anodized metal dye-process colors

Above weight and dimensions are approximate. Above specifications subject to change without notice.

vidicraft inc.
(503) 231-4884
3357 S.E. 22nd Ave.
Portland, OR 97202