5.0 OPERATING PROCEDURE

Preliminary Hook-up

1. Position the Technalogix P-379 agile processor in its installation mount or rack.

2. Locate the antenna lead or cable drop that will provide the input signal for the P-379 agile processor.

3. Ensure that the input signal provides an adequate signal. The recommended input level for best performance from the Technalogix P-379 Processor is 0 to +10dBmV (+60dBuV to +70dBuV).

Setup and Operation

1. Connect the input-source cable drop or antenna lead to the F connector On the rear panel of the P-379 marked “RF INPUT”.

   NOTE: If you have a P-379T, also connect the T- or return-channel input source cable to the F-connector on the rear panel of the P-379 marked “T-INPUT”.

2. Connect the output of the P-379 to a 50 Ohms load via an RF cable connected to the F-connector marked “RF OUTPUT” on the rear panel of the P-379.

3. Connect the Technalogix P-379 to a proper AC electrical source. The correct electrical input type for the unit is marked on the rear panel, directly under the entrance of the power cord into the unit.

Exercise care in handling equipment during inspection to prevent Damage due to rough or careless handling.
Technalogix power supplies are designed so that, under certain power line or heat buildup conditions, the unit shuts off. An indication is no RF output, although the POWER LED on the front panel remains illuminated. If this occurs, unplug the power cord and wait at least two (2) minutes before reapplying power. Upon reapplying power, you should again have RF output. If the unit fails to provide RF output again, or should the unit return to shutdown mode, telephone your distributor for assistance or call Technalogix direct at 403-347-5400. Remember: Technalogix recommends a 1.75” air circulation space between each piece of rack-mounted equipment.

4. Input channel selection. Select the desired input source type and channel using the front panel controls. Because the built-in input offset feature automatically removes any input offset, no calculations or adjustments are required. The Technalogix P-379 Agile Processor has a built-in delay in the input- and output-channel tuning circuits. In order to change channels, hold the channel select switch in the up- or down-position for at least three seconds. When the circuit is defeated, channel selection will proceed normally. Channels can be changed one at a time by raising/lowering the channel select switch one channel at a time; or channels can be scanned rapidly by raising/lowering the channel select switch and holding it while the unit rapidly moves through the channels. However, once the channel select switch is released for more than one second, the delay-tuning circuit reactivates.

   Until an active input channel is selected, the input channel display will flash. Once the input channel is selected, the input channel display will stop flashing as long as the input signal level is within the required capture range. If the input channel display continues to flash after a known, active input channel is selected, check the level of the input signal to ensure it is at adequate levels for detection (from –5dBmV to +10dBmV) and not too low or too high.

   The FREQUENCY LOCK LED on the front panel display may also blink during input-channel tuning. This is because, when the unit is being tuned, an RF-output muting circuit is enabled to ensure that moving RF carriers do not interfere with any existing channels on the cable system.

   T-Channel Input Option. To use the T-Channel Input Option, if the unit is so equipped, ensure that that a T-channel input source is attached to the F-connector marked “T-Channel IN” on the rear panel. Position the T-Channel switch on the rear panel of the P-379 to the “ON” position.

   If your P-379 has green LED’s on the front panel, above the channel select switch, the LED marked “T-channel” will illuminate when a channel in that range is selected. If your P-379 does not have green LED’s, but does have a three-number channel display, the selected T-channel will be indicated by a “-“ (minus) sign preceding the number of the T-channel selected. When in T-channel operation, only the T-channels will be selected.

5. Select the desired output channel. Unless otherwise specified, the unit is factory set for cable standard channel frequencies and the microprocessor automatically selects the proper FCC offset for the output channels, requiring no calculations or adjustments.

   NOTE: For HRC output channels, see the section in this manual entitled HRC Output Frequency Set.

   During output-channel tuning, the FREQUENCY LOCK LED on the front panel display may also blink during input-channel tuning. This is because, when the unit is being tuned, an RF-output muting circuit is enabled to ensure that moving RF carriers do not interfere with any existing channels on the cable system.

6. Connect a spectrum analyzer (recommended) or a field strength meter to the F-connector marked “RF OUTPUT” on the rear panel of the P-379 agile processor. If the unit is already connected to another device, disconnect that device from the unit.

7. using the front panel control marked “OUTPUT LEVEL,” adjust the RF output of the unit. The recommended output level is between +55dBmV and +60dBmV (+115dBuV and +120dBuV).

   Setting the RF output level below +55dBmV may adversely affect the parameters of the modulating signal; setting the RF output level above +60dBmV will adversely affect the quality of performance of the P-379. Ensure that the RF output level is checked each time an output channel is selected, particularly when the selected channel is a return or “T” channel or when the channel selected is in a different band from the previous channel.

   NOTE: Ensure that you do not overdrive the power amplifier. Please see the power amplifier manual for recommended levels.

8. While the RF OUTPUT signal is still connected to the spectrum analyzer or field strength meter, observe the aural carrier level. The difference between the video carrier level and the audio carrier level – the "Delta AV" or ΔAV – should be the same as the input source. In other words, if the RF INPUT signal ΔAV is 13dB, the RF OUTPUT signal ΔAV should be 13dB ±2dB. Minor adjustment of this ΔAV may be made either at the input signal source (if the input signal is not from an off-air source) or with the AURAL CARRIER LEVEL control on the front panel of the P-379. When switching to either of the frequency sources (STD or HRC), the internal aural carrier attenuator drops automatically from 6dB to 0dB since the ΔAV for cable signals has normally been preset at the headend. However, the ΔAV for off-air signals may vary considerably. Normal operation level of the aural carrier is 10 to 13dB below the video carrier. If adjustment of the AURAL CARRIER LEVEL control on the front panel of the P-379 will not bring the ΔAV of an off-air signal into an acceptable range, check the ΔAV of the input signal. If the ΔAV of the input signal is too small or is negative (the aural carrier is above the video carrier), it is possible that the AURAL CARRIER LEVEL control of the P-379 will be unable to compensate. Check the input signal before contacting Technalogix for return-for-repair information.

Translator Hookup

1. Connect modulated video from P-379 RF OUT to the Technalogix power amplifier.

2. Turn down RF level on P-379 all the way.

3. Ensure that IF OUT is connected to IF IN on the P-379 processor using the loop F to F cable supplied.

4. Connect the transmitting antenna cable to the RF output connector on the power amplifier. It is recommended that a quality through line wattmeter be installed in this same line.

5. Verify that all signal and RF cables are connected properly.

6. After following proper installation procedures outlined in the power amplifier manual, plug the power amplifier's power cords into an appropriate electrical outlet.

Output power should be adjusted with a sync and blanking signal only with the aural carrier removed. This is simply done by disconnecting one end of the audio carrier loop found on the back panel of the P-379.

AUTOMATIC MORSE CODE KEYING DEVICE

Translators must be equipped with a device that identifies the call signal of the translator in Morse code (usually be frequency shifting the aural carrier not less than 5 kHz or amplitude modulating the aural carrier with a 200 Hertz tone) once each hour. This feature can be disabled if the parent station for the translator sends the call sign of the translator in the visual picture or identifies it as part of the aural modulation. The end user must do this as a regulation of FCC.