



FEATURES

- Input Frequency:
1.075 and/or 3.225 MHz
- Output Center Frequency:
21.4 MHz - Standard
70 or 160 MHz - Optional
- Delay Equalization ± 200 ns
- External Reference Input
- Crystal Controlled
- TEMPEST Option

DESCRIPTION

The Model 391 Tape-to-IF Converter translates the 1.075 MHz output of a standard tape recorder to an IF signal at 21.4 MHz or, optionally, at 70 or 160 MHz, suitable for processing by standard receiving equipment. To preserve the low distortion signals which are recorded at the output of delay equalized Model 384 IF-to-Tape Converters, Model 391 Tape-to-IF Converters are delay equalized to ± 200 ns. To permit precision frequency conversion, a 1 MHz external reference input is provided. The unit is a companion to the Model 384 IF-to-Tape Converter which translates a receiver IF output to a tape recorder input frequency band.

The Model 391 is housed in an EIA standard 1-3/4 inches high chassis. Exceptional EMI integrity is achieved through the use of machined aluminum housings, semi-rigid coaxial cables and multi-section RFI filters.

SPECIFICATIONS

Input Center Frequency	1.075 MHz - Standard 3.225 MHz only - Optional 1.075 or 3.225 MHz - Optional
Input Level	1 Vrms nominal
Impedance - All Signal Ports	50 ohms
Return Loss - All Signal Ports	> 14 dB
Input Bandwidth	150 kHz to 2 MHz at 3 dB points (1.075 MHz IF)
Output level	10 mV, nominal
Output Center Frequency	21.4 MHz - Standard 160 or 70 MHz - Optional
Passband Ripple	± 1 dB
Total Harmonic Distortion	< 2%
Spurious Outputs	< -50 dB (-40 dB at 160 MHz out)
Image Rejection	> 40 dB

¹Over 85% of the band

External Reference Input	1 MHz
Group Delay Variation¹	± 200 ns in nominal 2 MHz BW
Controls - Front Panel	Power, Gain
Meters	Output Level
LED Indicators	Overload
Connectors - Rear Panel	BNC
Power	115/230 Vac ± 10%, 47-63 Hz, 20 W, nominal
Temperature - Operating	0° to 50°
EMi	Designed to meet TEMPEST requirements
Style	EIA standard chassis, 1-3/4 inches high, 19 inches deep, suitable for 19-inch rack mounting
Weight	15 lbs (approximately)

Specifications may vary depending on options chosen and are subject to change without notice.

ORDERING INFORMATION

A standard Model 391 Tape to IF Converter provides an input center frequency of 1.075 MHz and an output center frequency of 21.4 MHz, group delay equalization to ±200 ns, and an internal crystal oscillator. Other in- and output center frequencies are available as options. When ordering, please specify:

391	Tape to IF Converter (1.075 to 21.4 MHz Conversion)
Option C03	3.225 MHz Input Center Frequency
Option C20	160 MHz Output Center Frequency only
Option C22	70 MHz Output Center Frequency only

Option S02	Two Switched Bandwidths (requires option C03)
Option T01	Designed to meet TEMPEST requirements

WARRANTY

All of Reaction Instruments' equipment is warranted for one year, except for damage caused by accident or misuse, provided the equipment is returned for repair to the plant in Herndon, VA.


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