ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Gooch & Housego / NEOS N21035-1DS* at our website: *Click HERE*

NEOS TECHNOLOGIES
A Gooch & Housego Company

OPERATING MANUAL
DIGITAL DRIVER SYSTEM

MODEL NUMBER:

21XXX-YDS

DOCUMENT NUMBER: 51A14097B

This Operating Manual is for use with AOM Drivers with model numbers:
XXX = a fixed frequency of between 27 and 300 MHz crystal controlled
Y = 0.4, 1, 2 Watts output power **D** = Digital Modulation
S = Rack Mountable System Box

Document approved for release: W Seale Date: 11/11/05

US OFFICE: NEOS Technologies, Inc. ♦ 4005 Opportunity Drive ♦ Melbourne, FL 32934 ♦ USA

Tel: (321) 242-7818 ♦ Fax: (321) 242-1019 ♦ Email: neos@neostech.com

UK OFFICE: Gooch & Housego ♦ The Old Magistrates Court ♦ Ilminster, Somerset TA19 0AB ♦ UK

Tel: +44 1460 52271 ♦ Fax: +44 1460 54972 ♦ Email: sales@goochandhousego.com

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TABLE OF CONTENTS

Section	Description	Page
I.	INSPECTION PROCEDURE	3
II.	DESCRIPTION	4
III.	SPECIFICATIONS	5
IV.	OUTLINE DRAWING	6
V.	CONTROLS AND CONNECTIONS	7
VI.	TESTING PROCEDURE	8
	OPERATING PROCEDURE	9

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

SECTION I
INSPECTION PROCEDURE

Examine the shipping carton for damage. If the shipping carton or packing material is damaged it should be kept for the carrier's inspection. Check the contents of the shipment for completeness, mechanical damage, and then test the equipment electronically. Operating procedures are contained in Section VI. Notify the carrier and NEOS Technologies. If the contents are incomplete, or the equipment does not pass the electrical testing please notify NEOS Technologies.

If there is any problem with the use of this equipment, or if the equipment fails to function as expected contact NEOS Technologies, do not try to trouble shoot or repair this equipment. Consult with a NEOS service engineer. If the equipment needs repair or replacement, contact NEOS Technologies, Inc for a Return Authorization Number.

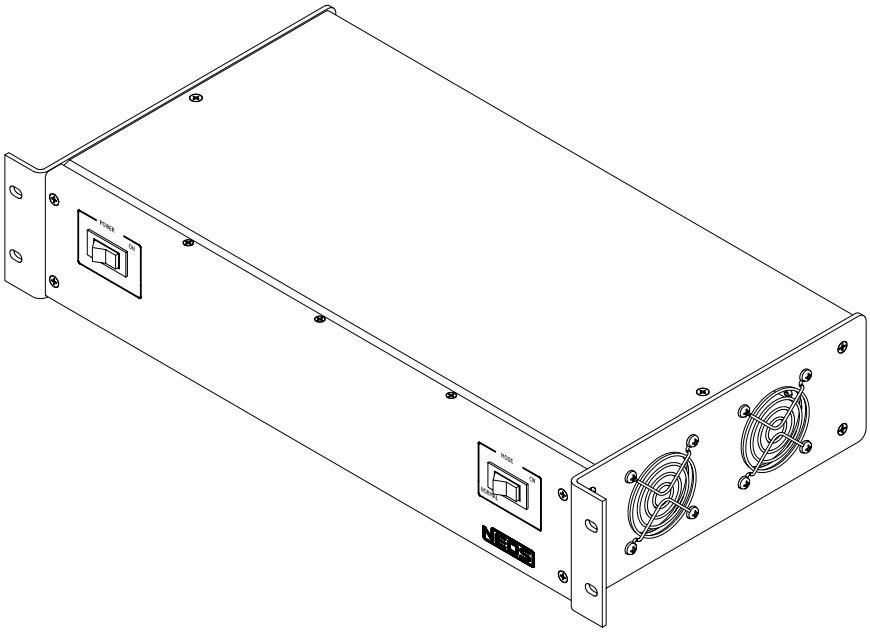
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

SECTION II
DESCRIPTION

The model **21XXX-YDS** is a crystal controlled RF frequency generator designed to supply a signal of **XXX** MHz., where **XXX** is a fixed frequency of between 27 and 300 MHz. at up to two Watts maximum output; and is used to drive the NEOS Technologies 15000, 23000, 24000, 26000 free space series and fiber coupled series acousto optic modulators. The standard output power setting **Y** is typically 0.4, 1 or 2 Watts.

The unit is supplied as a rack mountable box containing a RF module, DC power supply and cooling fans, with front panel controls for ac power on / off and control of the unit's modulation mode – (CW or Normal). In the CW mode position, the unit is set to output RF power at the power level set by the RF power adjustment and ignores the modulation signal. In the "Normal" position the output signal can be modulated by a Digital TTL external signal applied to Digital Modulation input and output RF power at the power level set by the RF power adjustment. The output power level is adjustable through the hole in the cover of the internal module. If purchased with a NEOS AO Modulator, the RF power level will be preset for optimum performance

21XXX-YDS



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

SECTION III

SPECIFICATIONS

21XXX-YDS

PARAMETER:		SPECIFICATION:
Output Frequency:		**XXX** MHz Where **XXX** = a fixed frequency of between 27 and 300 MHz
Stability:		± 0.01% Quartz Stabilized
Spurious Levels:		-50 dBc Maximum
Harmonic Distortion:		-15 dBc Maximum
MODULATION INPUT		TTL Levels "1" is full ON, "0" is OFF

Output Frequency	Rise Time P_{RF}: 10 to 90 %	Fall Time P_{RF}: 90 to 10 %	Extinction Ratio Minimum
27 to 50 MHz	< 30 ns typical	< 30 ns	< -50dB
50 to 150 MHz	< 18 ns typical	< 18 ns	< -40dB
150 to 300 MHz	< 8 ns typical	< 8 ns	< -30dB

RF Output Power:	(**Y**)	0.4, 1, or 2 Watts, Nominal Adjustable, Factory Set for Optimum Performance When Paired with a NEOS AO Device
POWER INPUT		100 to 240 Volts AC 50 – 60 Hz

MAXIMUM RATINGS:

Supply Voltage:	+ 264 Volts AC
Power Output:	No DC Feedback Allowed
Case Temperature:	+ 45^0 C

CONNECTORS & MECHANICAL:

RF Output Connector:		BNC Female
Modulation Input Connector:		BNC Female
Input Power Connector		3 pin IEC Panel Mount EMI filtered

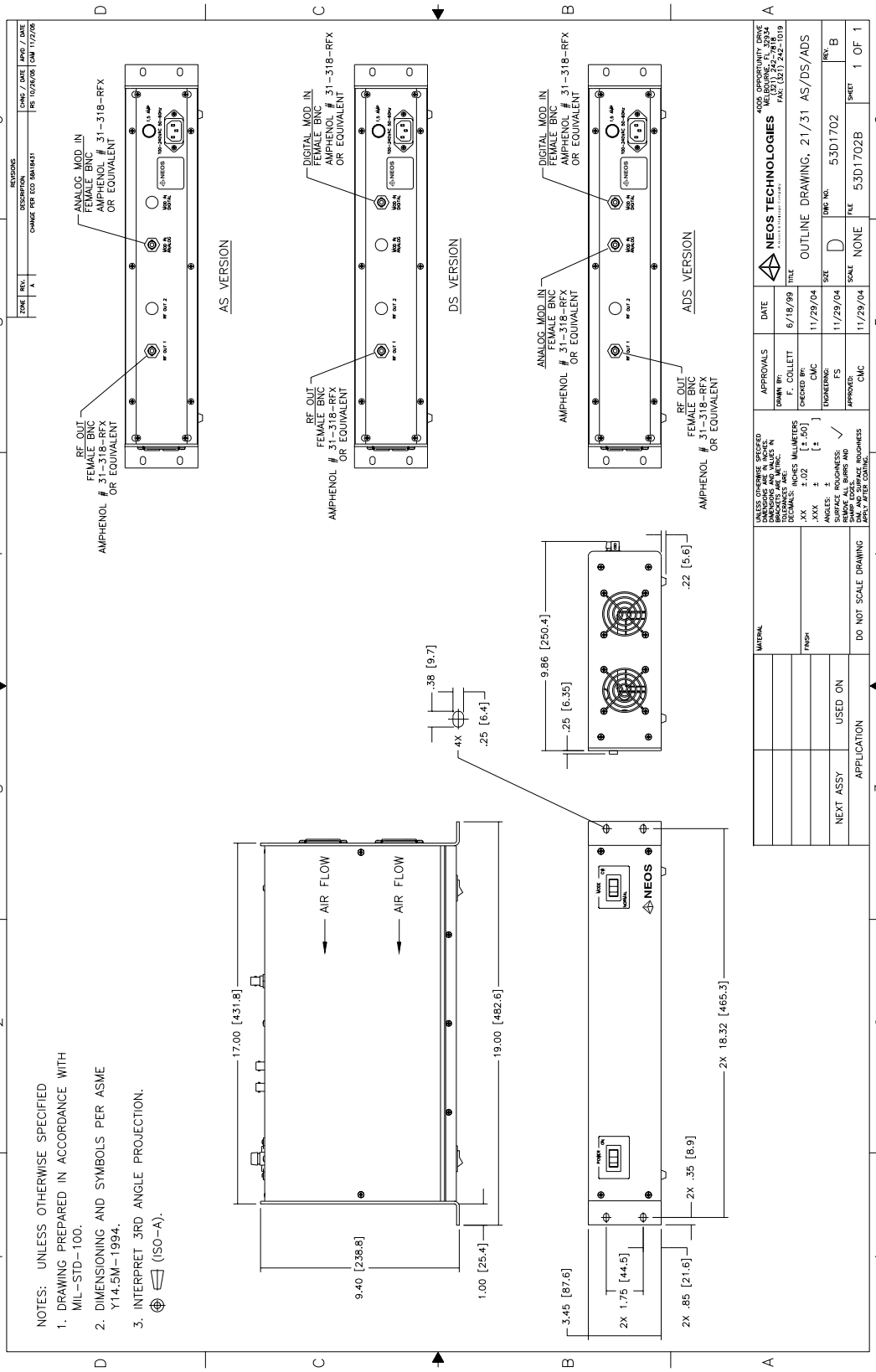
RELATED DOCUMENTS:

Outline Drawing:		53D1702
Physical Size:	Rack Mount	19.01"W X 3.48"H X 10.03"D
Mounting Hole Spacing:		1.75 H X 18.31 W

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

SECTION IV

OUTLINE DRAWING



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

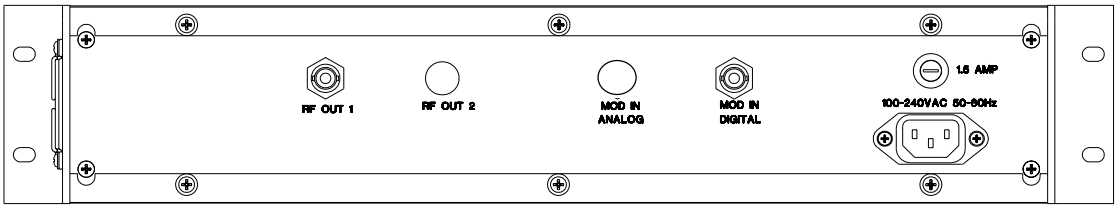
SECTION V
CONTROLS AND
CONNECTIONS



FRONT 53D1702

A. Power Switch
Turns on primary power.

B. Mode Switch
1. In the "CW" position the unit outputs RF power at the power level set by the RF power adjustment and ignores the modulation signal.
2. In the "NORMAL" position the unit's output signal can be modulated by an Digital TTL external signal applied to Digital Modulation input and output RF power at the power level set by the RF power adjustment.



REAR 53D1702

A. RF Out
Outputs a fixed frequency of between 27 and 300 MHz (factory set) and nominally set to output 0.4, 1, or 2 Watts. It must be terminated with a 50 Ohm load capable of dissipating the rated power or an
AOM.

B. Modulation Input
The modulation input accepts Digital TTL signal into 50 Ohm. A "1" input will produce Full RF Power as set by the RF power adjustment pot. and a "0" input produces minimum RF power. All above signals are referenced to the shield of the BNC connector.

C. Level Adjust (inside the internal module)
The RF level adjustment is factory set and is accessible through a hole in side of the module inside of the box. Warning, do not adjust the RF output power level to a value greater than that required by the AOM or damage will occur.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

SECTION VI.

OPERATING PROCEDURES

TESTING PROCEDURE:

- With the power off, attach a 50 Ohm load capable of dissipating the rated power level to the "RF Output" of the unit with a 50 Ohm cable. Se the acceptance test results.

- Turn the power switch on.
- With the front panel "MODE" switch in the "CW" position:
  Measure the frequency and output power of the driver. (Note: power is factory pre-set to match the NEOS AO device for optimum performance and is listed on the AO device Acceptance Test Results form. Other parameters are listed on the Acceptance Test Results form included with this driver.

- Adjust, if necessary, the output power to the power level necessary for the AO device to be driven. The adjustment is internal to the module inside the system box.
  Warning: The RF power should never exceed that specified for the AO device driven. See the AO device manual for power limitations and other warnings. If damage results due to overpowering the AOM, the warranty will be void.

- Apply an external Digital TTL modulating signal to the Modulation Input.
- With the front panel "MODE" switch in the "NORMAL" position:
  Measure RF output for specifications for this driver as listed in the Acceptance Test Results form included with this driver.

- The driver has been designed and has been tested to meet the specification. Notify NEOS Technologies, Inc if the driver does not pass the electrical testing.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

OPERATION PROCEDURE:

- With the power off, attach the NEOS 15000, 23000, 24000, 26000 free space series or Fiber coupled series or other acousto optic modulator device to the driver with a 50 Ohm cable.
- Turn on the power switch.
- With the front panel "MODE" switch in the "CW" position:
- **Follow the instructions in the device manual to align and adjust the optical modulator for as required for optimum performance**.
- With the front panel "MODE" switch in the "NORMAL" position:
  Apply an external Digital TTL signal to the Modulation Input as desired.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP