Diagnostix™
ADSTATION™
Modular Diagnostic System

5660T

Instructions for Use

AMERICAN DIAGNOSTIC CORPORATION

ADC
55 Commerce Drive
Hauppauge, NY 11788

EC REP mdi Europa GmbH
Langenhagener Str. 71
30855 Langenhagen
GERMANY

Made in Germany
Inspected and Packaged in the U.S.A.

tel: 631-273-9600
toll free: 1-800-232-2670
fax: 631-273-9659

www.adctoday.com

email: info@adctoday.com

CE

P/n 93-5660TN-00 rev 0 (3/10/2021)

Printed in U.S.A.

Questions?
Call ADC toll free:
1-800-232-2670

AMERICAN DIAGNOSTIC CORPORATION

Table of Contents

1. A Special Thank You	3
2. Introduction and Intended Use	3
3. Warnings and Precautions	3-4
4. Symbols	5
5. Attachment	5-7
6. Operation and Function	7
7. Locking Instrument Heads	8
8. Switching On and Off	8
9. Cleaning and Disinfection	8-9
10. Technical Specifications	9-10
11. Warranty	10
12. Quality Standards	10
13. Electromagnetic Compatibility	11-14
14. How to Contact Us	15

14. HOW TO CONTACT US

To register your product and obtain further detailed user information about our products and services visit us at:

www.adctoday.com

and follow the links.

For questions, comments, or suggestions call us toll free at:

1-800-232-2670

American Diagnostic Corporation
55 Commerce Drive, Hauppauge, New York 11788
Telephone: 631-273-9600 • Fax: 631-273-9659
Email: info@adctoday.com

Recommended separation distances between portable and mobile RF communications equipment and the Diagnostic Station.

The Diagnostic Station is intended for use in the electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Diagnostic Station can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Diagnostic Station as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter	Separation distance according to frequency of transmitter (m)		
(W)	150 kHz to 80 MHz a=12√P	80 kHz to 800 MHz a=1,2√P	800 kHz to 2.7 GHz a=2,3√P
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distanced in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.
NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.
NOTE 2: These guidelines may not apply in all situations, Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

1. A SPECIAL THANK YOU

Congratulations on your purchase of an ADC® Diagnostix™ Adstation™.

ADC professional diagnostic products are the instruments of choice where accuracy and dependability are critical.

With proper use and care these physical exam and non-invasive diagnostic instruments will provide many years of dependable service.

Read this booklet thoroughly before using your new unit.

2. INTRODUCTION AND INTENDED USE

This manual is for the Diagnostix Adstation. The wall unit described in these instructions is manufactured for use with various ADC instrument heads and modular components for non-invasive diagnostics and physical exams.

To learn more, visit our website at: **www.adctoday.com**.

3. WARNINGS AND PRECAUTIONS ⚠

Your Diagnostix Adstation has been manufactured to the highest global standards and is subjected to rigorous quality control.

Read these instructions for use carefully before putting the unit into operation and keep them in a safe place.

If you have any questions, call our toll-free number or visit our website. Our contact information can be found on the last page of this booklet.

Please note that all instruments described in these instructions for use are only to be used by suitably trained personnel.

The performance and efficiency of this instrument is only guaranteed when original ADC parts and accessories are used.

WARNING: There may be a risk of gases igniting when the instrument is used in the presence of flammable or combustible gases. We recommend working in areas with good ventilation.

WARNING: Never attempt to take the instrument apart. There is a danger of life-threatening electrical shock.

WARNING: The device contains sensitive electronic components. Avoid strong electrical or electromagnetic fields in the direct vicinity of the device (e.g., mobile telephones, microwave ovens). This can lead to temporary impairment of the ADC Diagnostix Adstation devices.

WARNING: Do not use batteries or electrical cords other than those included with this product. Use only replacement parts supplied by the manufacturer.

CAUTION: Unplug the instrument before cleaning or disinfecting. Be careful that no liquid penetrates into the device.

ATTENTION: Some wall systems may include up to three additional extension modules. Take care that the connecting cable does not get caught behind the extension module. Push the connecting cable into the groove provided on the reverse side of the extension module.

Guidance and manufacture's declaration - Electromagnetic immunity

The Diagnostic Station is intended for use in the electromagnetic environment specified below. The customer or the user of the Diagnostic station should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	Pass	Pass	Portable and mobile RF communications equipment should not be used closer to any part of the Diagnostic Station, including the cables, than the recommended distance, which is calculated using the equation applicable to the transmitter frequency. Recommended separation distance d=1.2√P 150 KHz to 80 MHz d=1.2√P 80 KHz to 800 MHz d=1.2√P 800 KHz to 2,7 MHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, a should be less than the compliance level in each frequency range. b interference may occur in te vicinity of equipment marked with the following symbol: Where P is the maximum output power of the transmitter in watts (W) according to the transmitter manufacturer and the recommended distance is given in meters (m). Field strengths from fixed RF transmitters determined by an electromagnetic site survey a, should be less than the compliance level in each frequency range b. Interference may occur in the vicinity of devices marked with the following symbol.
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,7 GHz	3 V/m	
Proximity fields from RF wireless communications equipment	Pass	Pass	

NOTE 1: At 80 MHz and 800 MHz, the higher frequency raange applies.
NOTE 2: These guidelines may not apply in all situations.
Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a.) Field strengths from fixed transmitters, such as base stations for radio (cellular/ cordless) telephones and landmobile radios, amature radio, AM and FM raadio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic sitesurvey should be considered. If the measured field strength in the location in which the Diagnostic Station is used exceeds the applicable RF compliance level above, the Diagnostic Station should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocationg the Diagnostic Station.
b.) Over the frequency range 150 KHz to 80 MHz, field strengths should be less than 3 V/m.

Guidance and manufacture's declaration - Electromagnetic emission		
The Diagnostic Station is intended for use in the electromagnetic environment specified below. The customer or the user of the Diagnostic station should assure that it is used in such an environment.		
Emission Test	Compliance	Electromagnetic enviroment - guidance
RF-Emission CISPR 11	Group 1	The Diagnostic Station uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF-Emission CISPR 11	Class B	The Diagnostic Station is intended for use in all establishments, including residential areas and those directly connected to a public supply network that also supplies buildings used for residential purposes.
Harmonic emissions IEC 61000-3-2	Pass	
Voltage fluctuations/Flicker emissions IEC 61000-3-3	Pass	

4. SYMBOLS

Symbol	Definition
	Read operating instructions
	Medical device
	Type BF Equipment
	Protection Class II Unit
	Warning! The general warning sign indicates a possibly dangerous situation that can lead to serious injuries.
	Caution! Important note in these instructions. The caution symbol indicates a potentially dangerous situation that can lead to minor or moderate injuries. It can also be used to warn of unsafe practices
	Direct current
	Alternating current
	Date of Manufacture YYYY-MM-DD / (year-month-day)
	Manufacturer

Symbol	Definition
	Manufacturer serial number
	Lot number
	Reference number
	Temperature for transport and storage conditions
	Relative humidity for transport and storage conditions
	Air pressure for transport and storage Air pressure for ambient operation
	CE marking
	Discard according to national regulations or EU directives
	Non-ionizing radiation
	**Caution:** Federal law restricts this device to sale by or on the order of a physician (licensed physician).
	Not made with natural rubber latex
	Phthalate free

5. ATTACHMENT

a.) Wall Mounting

If mounting to the wall, use enclosed mounting template.

b.) Attaching the Wall Mounting Plates

If mounting to wall studs, use wood screws only. If mounting between studs, use the enclosed molly bolts.

Take the wall mounting plate and hold it onto the wall so that the screws can be pushed through the holes of the mounting plate into the molly bolts.

Screw in the screws with a screwdriver, as far as they will go.

If the optional wallboard is purchased, the mounting plates come pre-attached.

c.) Attaching the ADC Adstation

When all screws have been screwed in tightly, take the Adstation and guide the screw heads through the openings. Then slide downwards until it snaps into place. (See Figure 1.)

(Figure 1)

d.) Attaching Optional Extension Modules (If Included)

Additional extension modules must be electrically joined with the transformer station before mounting on the wall.

Using the enclosed module connection cable, plug one side of the connector into the socket on the transformer module located on the right side transformer panel.

Plug the opposite end into the extension module contact, located on the left side panel.

WARNING: This unit is only compatible with an Adstation transformer whose serial number is 100 000 or higher. Extension module will be damaged when used with other devices.

Caution: Make sure the four contacts of the socket strip are postivily connected to the four contacts of the pin strip (See Figure 2.)

(Figure 2)

13. ELECTROMAGNETIC COMPATIBILITY

Guidance and manufacture's declaration - Electromagnetic immunity			
The Diagnostic Station is intended for use in the electromagnetic environment specified below. The customer or the user of the Diagnostic station should assure that it is used in such an environment.			
Immunity Test	IEC 60601 test level	Compliance level	Electromagnetic environmental guidance
Electrostatic discharge (ESD) IEC 61000-4-2	Con: ± 8 kV Air: ± 15 kV	Con: ± 8 kV Air: ± 15 kV	Floors should be wood, concrete or ceramic tile. If floor is covered with synthetic material, the relative humidity should be at least 30%. The quality of the supply voltage should be that of a typical business or hospital environment.
Electrical fast transient/burst IEC 61000-4-4	5/50 ns, 100 kHz; ±2 kV	5/50 ns, 100 kHz; ±2 kV	
Surge IEC 61000-4-5	1.2/50 (8/20) µs LtL: ± 1.0 kV LtG: ± 2.0 kV	1.2/50 (8/20) µs LtL: ± 1.0 kV LtG: ± 2.0 kV	The quality of the supply voltage should be that of a typical business or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0% UT for 0.5 cycle (1 phase) 0% UT for 1 cycle 70% UT for 25/30 cycles (50/60 Hz)	0% UT for 0.5 cycle (1 phase) 0% UT for 1 cycle 70% UT for 25/30 cycles (50/60 Hz)	The quality of the supply voltage should be that of a typical business or hospital environment.
	0% UT for 250/300 cycles (50/60 Hz)	0% UT for 250/300 cycles (50/60 Hz)	
Power frequency (50Hz/60Hz) magnetic field IEC 6000-4-8	30 A/m 50 Hz	30 A/m 50 Hz	Mains frequency magnetic fields should be at a level characteristic of a typical location in a typical commercial hospital environment.
NOTE: UT is the a.c. mains voltage prior to application of the test leel. v			

Weight Diagnostic Sta.:	1.80 lbs (800 g)
Weight Exten. Module:	1.10 lbs (500 g)
Switch-On Time:	ON: 1 Min / OFF: 5 Min

* only UL 60601-1 CAN/CSA C 22.2 No.601.01

11. WARRANTY

This Diagnostix Adstation transformer and extension modules are warranted for five years from date of purchase. Instrument heads are warranted for two years. The warranty does not apply to damage caused by improper handling, accidents, improper use, or alterations made to the instrument by third parties. The warranty is only valid after the product is registered online at **www.adctoday.com/support/warranty-registration**.

12. QUALITY STANDARDS

Device fulfills the stipulations of the International standard IEC 60601-1-2

Tuck excess wiring into each extension to ensure a close side-by-side fit to each extension module.

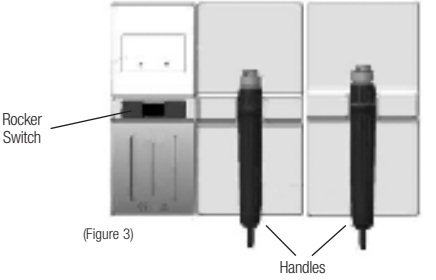
Take the extension module and guide the screw heads through the openings as done with the main unit in step C above. Then slide the extension module downwards to snap into place.

Attention:
Take care that the connecting cable does not get caught behind the extension module. Push the connecting cable into the groove provided on the reverse side of the extension module.

Repeat for any additional extension modules (up to three) you may have purchased.

6. OPERATION AND FUNCTION

Plug device into electrical outlet. Remove the handle from the the cradle by sliding upwards. (See Figure 3.) Attach the desired instrument head by placing the two projecting guide cams onto the handle, pressing down lightly, and turning the handle in a clockwise direction until it stops. To remove the instrument head, turn the handle in a counter-clockwise direction.



(Figure 3)

7. LOCKING INSTRUMENT HEADS

The enclosed allen key can be used to lock instrument head onto power handle. To secure, insert key into slot on head and tighten by turning clockwise. Do not over-tighten. Keep the key in a convenient place in case the head must be removed for cleaning or service.

8. SWITCHING ON AND OFF

Turn on the wall system by using the rocker switch. (See figure 3.) The green control lamp in the rocker switch indicates that the instrument is ready to use. Each handle is automatically ready to operate at 100% light intensity as soon as it is taken out of the cradle, and automatically switches off when replaced back in the cradle.

Light intensity modulation

The modulation of light intensity can be done with the handle; twist the switching ring in a clockwise or counter-clockwise direction and the light will get stronger or weaker.

Attention: The handle switches off automatically when placed in the cradle, or after about two minutes. Make sure that no more than three handles are used at the same time, or the transformer may become overloaded and switch itself off.

9. CLEANING AND DISINFECTION

The Adstation can be cleaned externally with a moist cloth. The outside can also be disinfected.

Aldehydes (formaldehyde, glutaraldehyde, aldehyde derivatives), surfactants, or alcohol may be used. Refer to disinfectant manufacturer's instructions for use.

Always use a soft, lint free cloth or cotton swabs to prevent damage to your Adstation.

Sterilization

According to the Test Centre for Medical Devices in Tübingen, Germany, sterilization is only prescribed in the case of operative procedures.

10. TECHNICAL SPECIFICATIONS

Model:	5660TN ADC® Diagnostix™ Adstation™ Transformer	
Power Supply:	**Input:**	100V~240V AC / 50-60 Hz / 0.6 A
	Output:	5V DC / 3A / 15W
Diagnostic Station:	**Input:**	5V DC / 3A / 15W
	Output 1:	1 x 3.5V dc / 700 mA
	Output 2:	2 x 5V dc / 2 x 1, 15 A
Extension Module:	**Input:**	5V DC / 3A / 15W
	Output 1:	1 x 3.5V dc / 700 mA
	Output 2:	2 x 5V dc / 2 x 1, 15 A
Classification:	Application part type B	
Operating Conditions:	32°F to 104°F (0°C to 40°C) 85 % relative humidity	
Storage Temperature:	23°F to 122°F (-5°C to 50°C) 10% up to 85 % relative humidity	
Air Pressure:	700 bis 1050 hPa	

Dimensions:

Diagnostic Station:	7.88" x 7.12" x 2.95" (200 x 180.5 x 75 mm)
Extension Module:	7.88" x 3.94" x 2.95" (200 x 100 x 75 mm)