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EDXtreme

Dynamometer and Crane Scale

Optional Communicator

User Instructions

Distributed by: ABQ Industrial LP USA
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Web: https://www.abqindustrial.net **E-mail:** info@abqindustrial.net

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1 General Information and Warnings

1.1 About this Manual

This manual is divided into chapters by the chapter number and the large text at the top of a page. Subsections are labeled as shown by the 1 and 1.1 headings shown above. The names of the chapter and the next subsection level appear at the top of alternating pages of the manual to remind you of where you are in the manual. The manual name and page numbers appear at the bottom of the pages.

1.1.1 Text Conventions

Key names are shown in **bold** and reflect the case of the key being described. This applies to hard keys and onscreen or soft keys.

Displayed messages appear in ***bold italic*** type and reflect the case of the displayed message.

1.1.2 Special Messages

Examples of special messages you will see in this manual are defined below. The signal words have specific meanings to alert you to additional information or the relative level of hazard.

WARNING!
This is a Warning symbol.
Warnings mean that failure to follow specific practices and procedures may have major consequences such as injury or death.

CAUTION!
This is a Caution symbol.
Cautions give information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.

NOTE: This is a Note symbol. Notes give additional and important information, hints and tips that help you to use your product.

1.2 Safe Operation

WARNING: If you overload this dynamometer you could suffer severe injuries or death. The total load on the dynamometer should NEVER exceed the rated capacity.

WARNING: Do not use the dynamometer if there is any significant damage or deformation visible.

Keep all the following in mind as you use the EDX dynamometer.

The system capacity is equal to the rating of the dynamometers. The shackle rating should not be used to determine lift capacity of the system.

The shackles are rated in metric tons. Thus the 12-ton shackles are rated to 26,450 lbf and are suitable for use on the 25,000 lbf dynamometer.

Any zeroed deadload must be considered as part of the ultimate load.

Although this instrument has a substantial overload protection rating, the instrument should not be used above the rated capacity. Doing so can significantly impact fatigue life of the instrument and cause premature and abrupt failure. If a higher capacity reading is needed, Dillon insists that a larger instrument be used.

Safety is always a concern in overhead lifting and tensioning applications. To limit your liability always insist upon factory supplied shackles and pins and factory tested and certified safe optional equipment. All DILLON products are designed to meet the published Safe Working Load (SWL) and Ultimate Safety Factor (USF) standards of the United States Military.

Do not grind, stamp, drill or deform the metal on the dynamometer body in any way. Protect the instrument from impact in use and storage.

Any significant damage or deformation to the loading element is cause for evaluation by Dillon, particularly in the element side members to the right and left of the display.

Relieve all torsional and off axis loads.

CAUTION: Remove batteries from instrument when using the external EDX PSU power supply.

Apply load in the center of the shackle bow with this instrument.

Off center loading results in substandard performance.

Instrument requires time to stabilize when changing temperatures.

Use only the hardware supplied with this instrument. If no hardware was supplied, insure that the mating pin and shackle bow is equivalent to the hardware used at calibration. Otherwise substandard performance or failure can result.

Dillon recommends only using qualified rigging hardware and cannot be responsible for unapproved hardware.

This instrument is not designed for the following:

- Applications that see rapid, dramatic temperature swings or thermal shock. Wide variation in readings can occur.
- Environments with high electromagnetic fields such as cranes employing electromagnets to lift metal. These induce trace voltages that are picked up within the load cell lead wiring and appear as inaccurate loads.
- Intrinsically safe environments. This unit has not been Factory Mutual tested.

1.2.1 Safe Handling of Equipment with Batteries

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

ATTENTION: Il y a danger d'explosion s'il y a remplacement incorrect de la batterie, remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

1.3 Routine Maintenance

IMPORTANT: This equipment must be routinely checked for proper operation and calibration.
Application and usage will determine the frequency of calibration required for safe operation.

1.4 Cleaning the Machine

Table 1.1 Cleaning DOs and DON'Ts

DO	DO NOT
Wipe down the outside of standard products with a clean cloth, moistened with water and a small amount of mild detergent	Attempt to clean the inside of the machine
	Use harsh abrasives, solvents, scouring cleaners or alkaline cleaning solutions
Spray the cloth when using a proprietary cleaning fluid	Spray any liquid directly on to the display windows

1.5 Training

Do not attempt to operate or complete any procedure on a machine unless you have received the appropriate training or read the instruction books.

To avoid the risk of RSI (Repetitive Strain Injury), place the machine on a surface which is ergonomically satisfactory to the user. Take frequent breaks during prolonged usage.

1.6 Sharp Objects

Do not use sharp objects such as screwdrivers or long fingernails to operate the keys.

1.7 FCC and EMC Declarations of Compliance

1.7.1 Modifications

The FCC states that any changes or modifications to this device that are not expressly approved by Dillon may void the user's authority to operate the equipment.

1.7.2 Radio Safety

The radiated output power of this device is far below the FCC radio frequency exposure limits. Nevertheless, the device shall be used in such manner that the potential for human contact during normal operation is minimized.

In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 3 inch (7.5 cm) during normal operation. The antenna is located internal to the Communicator.

1.7.3 Radio Communications Reliability

Radio systems are vulnerable to interference, resulting in delays between the dynamometer scale and remote. In some instances of interference, the display shown on the remote may be several seconds old. This can result in a hazardous situation when the system is used as the reference for acceptable loads in cases such as proof loading and monitoring of binding or overload. In these applications where timely updates are critical, a communication cable should be used to physically connect the EDXtreme and Communicator remote (see setup of wired communications). Alternately, the EDXtreme display can be observed directly.

WARNING: Low power radio systems should not be used in applications where timely updates of readings are required for safety purposes.

United States

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canada

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Classe A prescrites dans le Règlement sur le brouillage radioélectrique edicté par le ministère des Communications du Canada.

European Countries

WARNING: This is a Class A product. In a domestic environment, this product may cause radio interference in which the user may be required to take adequate measures.

Agency Identification Numbers	
US/FCC	CAN/IC
OUR-XBEEPRO	4214A-XBEEPRO

DILLON
Force Measurement Equipment

CE

EN — EU Declaration of Conformity

Model / Type: **Dillon EDx, EDjr, Communicator II**

EDx, EDjr Serial Number:
DEDRxxxxxxx

25T EDx Serial Number:
DEDR2700977 Onwards

Communicator II Serial Number:
DCOM005000 Onwards

Name and address of the manufacturer:
Avery Weigh-Tronix[1]
Foundry Lane
Smethwick
West Midlands
B66 2LP
ENGLAND

This declaration of conformity is issued under the sole responsibility of the manufacturer

Object of the declaration:
Dillon[2] EDx
1T/2500lb - 150T/330Klb
Dillon[2] EDjr
1T/2500lb - 10T/25Klb
Dillon[2] Communicator II

The machinery fulfills all the relevant provisions of the Machinery Directive **2006/42/EC[3]**

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Applicable Directives	Harmonised standards or other technical specifications
2014/30/EU Electromagnetic Compatibility	**EN61000-6-1:2007 EN61000-6-3:2007 +A1:2011**
2011/65/EU Restriction of the use of certain hazardous substances in electrical and electronic equipment	**EN 50581:2012**

Additional information:
Note [1]:
ITW Ltd trading as Avery Weigh-Tronix
Reg. Office: Nexus House, Station Road, Egham, Surrey, TW20 9LB, England
Note [2]:
Dillon is part of Avery Weigh-Tronix
Note [3]:
A copy of the Technical File for this equipment is available from M.S. Williams at the address above.

Signed for and on behalf of:
Avery Weigh-Tronix
at
1000 Armstrong Drive, Fairmont, MN, 56031-1439, USA
on
2017-06-22

K.Detert
Innovations/Marketing Director

DE — EU-Konformitätserklärung

Modell / Typen: **Dillon EDx, EDjr, Communicator II**

EDx, EDjr Seriennummer:
DEDRxxxxxxx

25T EDx Seriennummer:
Ab DEDR2700977

Communicator II Seriennummer:
Ab DCOM005000

Name und Anschrift des Herstellers:
Avery Weigh-Tronix[1]
Foundry Lane
Smethwick
West Midlands
B66 2LP
ENGLAND

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller.

Gegenstand der Erklärung:
Dillon[2] EDx
1T/2500lb - 150T/330Klb
Dillon[2] EDjr
1T/2500lb - 10T/25Klb
Dillon[2] Communicator II

Diese Maschine erfüllt die entsprechenden Bestimmungen der Maschinenrichtlinie **2006/42/EG[3]**

Der oben beschriebene Gegenstand der Erklärung erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union:

Angewandte Richtlinien	Harmonisierte Normen oder sonstigen technischen Spezifikationen
2014/30/EU Elektromagnetische Verträglichkeit	**EN61000-6-1:2007 EN61000-6-3:2007 +A1:2011**
2011/65/EU Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten	**EN 50581:2012**

Zusatzangaben:
Anmerkung [1]:
ITW Ltd Handel als Avery Weigh-Tronix
Sitz: Nexus House, Station Road, Egham, Surrey, TW20 9LB, England
Anmerkung [2]:
Dillon ist ein Teil von Avery Weigh-Tronix
Anmerkung [3]:
Eine Kopie der technischen Unterlagen für dieses Gerät kann von M.S.Williams bei der über stehenden Adresse angefordert warden.

Unterzeichnet für und im Namen von:
Avery Weigh-Tronix
bei
1000 Armstrong Drive, Fairmont, MN, 56031-1439, USA
am
2017-06-22

K.Detert
Innovationen / Marketingdirektor

FR — Déclaration UE de Conformité

Modèle / Type: **Dillon EDx, EDjr, Communicator II**

EDx, EDjr Numéro de série:
A partir de DEDRxxxxxxx

25T EDx Numéro de série:
A partir de DEDR2700977

Communicator II Numéro de série:
A partir de DCOM005000

Nom et adresse du fabricant :
Avery Weigh-Tronix[1]
Foundry Lane
Smethwick
West Midlands
B66 2LP
ANGLETERRE

La présente déclaration de conformité est établie sous la seule responsabilité du fabricant.

Objet de la declaration:
Dillon[2] EDx
1T/2500lb - 150T/330Klb
Dillon[2] EDjr
1T/2500lb - 10T/25Klb
Dillon[2] Communicator II

La machine remplit l'ensemble des specifications du cahier des charges de la Directive relative aux machines **2006/42/CE[3]**

L'objet de la déclaration décrit ci-dessus est conforme à la législation d'harmonisation de l'Union applicable:

Les directives en vigueur	Les normes harmonisées ou d'autres spécifications techniques
2014/30/UE Compatibilité Électromagnétique	**EN61000-6-1:2007 EN61000-6-3:2007 +A1:2011**
2011/65/UE La limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques	**EN 50581:2012**

Informations complémentaires:
Nota [1]:
ITW Ltd exerçant également sous le nom de Avery Weigh-Tronix
Siège social: Nexus House, Station Road, Egham, Surrey, TW20 9LB, Angleterre
Nota [2]:
Dillon fait partie d'Avery Weigh-Tronix
Nota [3]:
Pour obtenir un exemplaire de la Fiche technique de cet équipement, s'adresser à M.S.Williams à l'adresse ci-dessus.

Signé par et au nom de:
Avery Weigh-Tronix
à
1000 Armstrong Drive, Fairmont, MN, 56031-1439, USA
le
2017-06-22

K.Detert
Innovations / Directeur Marketing

NL — EU-Conformiteitsverklaring

Model / Type: **Dillon EDx, EDjr, Communicator II**

EDx, EDjr Serienummer:
Vanaf X12500

25T EDx Serienummer:
Vanaf DEDR2700977

Communicator II Serienummer:
Vanaf DCOM005000

Naam en adres van de fabrikant:
Avery Weigh-Tronix[1]
Foundry Lane
Smethwick
West Midlands
B66 2LP
ENGELAND

Deze conformiteitsverklaring wordt verstrekt onder volledige verantwoordelijkheid van de fabrikant.

Voorwerp van de verklaring:
Dillon[2] EDx
1T/2500lb - 150T/330Klb
Dillon[2] EDjr
1T/2500lb - 10T/25Klb
Dillon[2] Communicator II

De machine voldoet aan alle relevante bepalingen van de Richtlijn inzake machines **2006/42/EG[3]**

Het hierboven beschreven voorwerp is in overeenstemming met de desbetreffende harmonisatiewetgeving van de Unie:

Toepasselijke richtlijnen	Geharmoniseerde standaarden of andere technische specificaties
2014/30/EU Elektromagnetische compatibiliteit	**EN61000-6-1:2007 EN61000-6-3:2007 +A1:2011**
2011/65/EU Beperking van het gebruik van bepaalde gevaarlijke stoffen in elektrische en elektronische apparatuur	**EN 50581:2012**

Aanvullende informatie:
Noot[1]:
ITW Ltd trading als Avery Weigh-Tronix
Zetel: Nexus House, Station Road, Egham, Surrey, TW20 9LB, England
Noot [2]:
Dillon is een onderdeel van Avery Weigh-Tronix
Noot [3]:
Een kopie van het technisch bestand voor deze apparatuur is verkrijgbaar van M.S. Williams op het bovenstaande adres.

Ondertekend voor en namens:
Avery Weigh-Tronix
bij
1000 Armstrong Drive, Fairmont, MN, 56031-1439, VS
op
2017-06-22

K.Detert
Innovaties / Marketing Director

IT — Dichiarazione di Conformità UE

Modello / Tipo: **Dillon EDx, EDjr, Communicator II**

EDx, EDjr N. di serie:
A partire da X12500

25T EDx N. di serie:
A partire da DEDR2700977

Communicator II N. di serie:
A partire da DCOM005000

Nome e indirizzo del fabbricante:
Avery Weigh-Tronix[1]
Foundry Lane
Smethwick
West Midlands
B66 2LP
INGHILTERRA

La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.

Oggetto della dichiarazione:
Dillon[2] EDx
1T/2500lb - 150T/330Klb
Dillon[2] EDjr
1T/2500lb - 10T/25Klb
Dillon[2] Communicator II

L'apparecchio rispetta tutte le disposizioni rilevanti della Divertiva Macchine **2006/42/CE[3]**

L'oggetto della dichiarazione di cui sopra è conforme alla pertinente normativa di armonizzazione dell'Unione:

Direttive applicabili	Armonizzato standard o altre specificazioni tecniche
2014/30/UE Compatibilità elettromagnetica	**EN61000-6-1:2007 EN61000-6-3:2007 +A1:2011**
2011/65/UE Restrizione dell'uso di determinate sostanze pericolose nelle apparecchiature elettriche ed elettroniche	**EN 50581:2012**

Informazioni supplementari:
Nota [1]:
ITW Ltd trading come Avery Weigh-Tronix
Sede dell'ufficio: Nexus House, Station Road, Egham, Surrey, TW20 9LB, England
Nota [2]:
Dillon è parte di Avery Weigh-Tronix
Nota [3]:
Una copia della scheda tecnica di questo apparecchio è disponibile presso M.S.Williams, all'indirizzo sopra.

Firmato a nome e per conto di:
Avery Weigh-Tronix
a
1000 Armstrong Drive, Fairmont, MN, 56031-1439, U.S.A.
su
2017-06-22

K.Detert
Innovations / Direttore Marketing

ES — Declaración UE de Conformidad

Modelo / Tipo: **Dillon EDx, EDjr, Communicator II**

EDx, EDjr Número de serie:
A partir del X12500

25T EDx Número de serie:
A partir del DEDR2700977

Communicator II Número de serie:
A partir del DCOM005000

Nombre y dirección del fabricante
Avery Weigh-Tronix[1]
Foundry Lane
Smethwick
West Midlands
B66 2LP
INGLATERRA

La presente declaración de conformidad se expide bajo la exclusiva responsabilidad del fabricante.

Objeto de la declaración:
Dillon[2] EDx
1T/2500lb - 150T/330Klb
Dillon[2] EDjr
1T/2500lb - 10T/25Klb
Dillon[2] Communicator II

La máquina cumple con todas las disposiciones pertinentes de la Directiva **2006/42/CE** relative a las máquinas[3]

El objeto de la declaración descrita anteriormente es conforme con la legislación de armonización pertinente de la Unión:

Directivas aplicables	Normas armonizadas u otras especificaciones técnicas
2014/30/UE Compatibilidad electromagnética	**EN61000-6-1:2007 EN61000-6-3:2007 +A1:2011**
2011/65/UE Restricciones a la utilización de determinadas sustancias peligrosas en aparatos eléctricos y electrónicos	**EN 50581:2012**

Información adicional:
Nota[1]:
ITW Ltd trading as Avery Weigh-Tronix
Oficina registrada: Nexus House, Station Road, Egham, Surrey, TW20 9LB, Angleterre
Nota[2]:
Dillon es parte de Avery Weigh-Tronix
Nota[3]:
Puede solicitarse a M.S.Williams una copia del expediente técnico correspondiente a este equipo en la dirección que se indica.

Firmado en nombre de:
Avery Weigh-Tronix
en
1000 Armstrong Drive, Fairmont, MN, 56031-1439, EE.UU
el
2017-06-22

K.Detert
Innovaciones / Director de Marketing

76501-512 Issue 2

1.9 Declaration of Conformity (EDX PSU)

DILLON
Force Measurement Equipment

CE

EN — EU Declaration of Conformity

Model / Type: **EDx PSUs**

Name and address of the manufacturer:
Avery Weigh-Tronix[1]
Foundry Lane
Smethwick
West Midlands
B66 2LP
ENGLAND

This declaration of conformity is issued under the sole responsibility of the manufacturer

Object of the declaration:
Dillon[2]
EDX (RED) 5VDC
(AWT25-501123)
Dillon[2]
EDX (RED) 5VDC W/RS232
(AWT25-501124)

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Applicable Directives	Harmonised standards or other technical specifications
2014/30/EU Electromagnetic Compatibility	**EN 61000-6-1:2007** **EN 61000-6-4:2007**
2014/35/EU Electrical equipment designed for use within certain voltage limits	**EN 60950–1:2006 +A2:2013**
2011/65/EU Restriction of the use of certain hazardous substances in electrical and electronic equipment	**EN 50581:2012**

Additional information:
Note [1]:
ITW Ltd trading as Avery Weigh-Tronix
Reg. Office: Nexus House, Station Road, Egham, Surrey, TW20 9LB, England
Note [2]:
Dillon is part of Avery Weigh-Tronix

Signed for and on behalf of:
Avery Weigh-Tronix
at
1000 Armstrong Drive, Fairmont, MN, 56031-1439, USA
on
2017-06-22

K.Detert
Innovations/Marketing Director

DE — EU-Konformitätserklärung

Modell / Typen: **EDx PSUs**

Name und Anschrift des Herstellers:
Avery Weigh-Tronix[1]
Foundry Lane
Smethwick
West Midlands
B66 2LP
ENGLAND

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller.

Gegenstand der Erklärung:
Dillon[2]
EDX (RED) 5VDC
(AWT25-501123)
Dillon[2]
EDX (RED) 5VDC W/RS232
(AWT25-501124)

Der oben beschriebene Gegenstand der Erklärung erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union:

Angewandte Richtlinien	Harmonisierte Normen oder sonstigen technischen Spezifikationen
2014/30/EU Elektromagnetische Verträglichkeit	**EN 61000-6-1:2007** **EN 61000-6-4:2007**
2014/35/EU Elektrischer Betriebsmittel zur Verwendung innerhalb bestimmter Spanungsgrenzen	**EN 60950–1:2006 +A2:2013**
2011/65/EU Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten	**EN 50581:2012**

Zusatzangaben:
Anmerkung [1]:
ITW Ltd Handel als Avery Weigh-Tronix
Sitz: Nexus House, Station Road, Egham, Surrey, TW20 9LB, England
Anmerkung [2]:
Dillon ist ein Teil von Avery Weigh-Tronix

Unterzeichnet für und im Namen von:
Avery Weigh-Tronix
bei
1000 Armstrong Drive, Fairmont, MN, 56031-1439, USA
am
2017-06-22

K.Detert
Innovationen / Marketingdirektor

FR — Déclaration UE de Conformité

Modèle / Type: **EDx PSUs**

Nom et adresse du fabricant :
Avery Weigh-Tronix[1]
Foundry Lane
Smethwick
West Midlands
B66 2LP
ANGLETERRE

La présente déclaration de conformité est établie sous la seule responsabilité du fabricant.

Objet de la déclaration:
Dillon[2]
EDX (RED) 5VDC
(AWT25-501123)
Dillon[2]
EDX (RED) 5VDC W/RS232
(AWT25-501124)

L'objet de la déclaration décrit ci-dessus est conforme à la législation d'harmonisation de l'Union applicable:

Les directives en vigueur	Les normes harmonisées ou d'autres spécifications techniques
2014/30/UE Compatibilité Électromagnétique	**EN 61000-6-1:2007** **EN 61000-6-4:2007**
2014/35/UE Matériel électrique destiné à être employé dans certaines limites de tension	**EN 60950–1:2006 +A2:2013**
2011/65/UE La limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques	**EN 50581:2012**

Informations complémentaires:
Nota [1]:
ITW Ltd exerçant également sous le nom de Avery Weigh-Tronix
Siège social: Nexus House, Station Road, Egham, Surrey, TW20 9LB, Angleterre
Nota [2]:
Dillon fait partie d'Avery Weigh-Tronix

Signé par et au nom de:
Avery Weigh-Tronix
à
1000 Armstrong Drive, Fairmont, MN, 56031-1439, USA
le
2017-06-22

K.Detert
Innovations / Directeur Marketing

NL — EU-Conformiteitsverklaring

Model / Type: **EDx PSUs**

Naam en adres van de fabrikant :
Avery Weigh-Tronix[1]
Foundry Lane
Smethwick
West Midlands
B66 2LP
ENGELAND

Deze conformiteitsverklaring wordt verstrekt onder volledige verantwoordelijkheid van de fabrikant.

Voorwerp van de verklaring:
Dillon[2]
EDX (RED) 5VDC
(AWT25-501123)
Dillon[2]
EDX (RED) 5VDC W/RS232
(AWT25-501124)

Het hierboven beschreven voorwerp is in overeenstemming met de desbetreffende harmonisatiewetgeving van de Unie:

Toepasselijke richtlijnen	Geharmoniseerde standaarden of andere technische specificaties
2014/30/EU Elektromagnetische compatibiliteit	**EN 61000-6-1:2007** **EN 61000-6-4:2007**
2014/35/EU Elektrisch materiaal bestemd voor gebruik binnen bepaalde spanningsgrenzen	**EN 60950–1:2006 +A2:2013**
2011/65/EU Beperking van het gebruik van bepaalde gevaarlijke stoffen in elektrische en elektronische apparatuur	**EN 50581:2012**

Aanvullende informatie:
Noot[1]:
ITW Ltd trading als Avery Weigh-Tronix
Zetel: Nexus House, Station Road, Egham, Surrey, TW20 9LB, England
Noot [2]:
Dillon is een onderdeel van Avery Weigh-Tronix

Ondertekend voor en namens:
Avery Weigh-Tronix
bij
1000 Armstrong Drive, Fairmont, MN, 56031-1439, VS
op
2017-06-22

K.Detert
Innovaties / Marketing Director

IT — Dichiarazione di Conformità UE

Modello / Tipo: **EDx PSUs**

Nome e indirizzo del fabbricante:
Avery Weigh-Tronix[1]
Foundry Lane
Smethwick
West Midlands
B66 2LP
INGHILTERRA

La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.

Oggetto della dichiarazione:
Dillon[2]
EDX (RED) 5VDC
(AWT25-501123)
Dillon[2]
EDX (RED) 5VDC W/RS232
(AWT25-501124)

L'oggetto della dichiarazione di cui sopra è conforme alla pertinente normativa di armonizzazione dell'Unione:

Direttive applicabili	Armonizzato standard o altre specificazioni tecniche
2014/30/UE Compatibilità elettromagnetica	**EN 61000-6-1:2007** **EN 61000-6-4:2007**
2014/35/UE Materiale elettrico destinato a essere adoperato entro taluni limiti di tensione	**EN 60950–1:2006 +A2:2013**
2011/65/UE Restrizione dell'uso di determinate sostanze pericolose nelle apparecchiature elettriche ed elettroniche	**EN 50581:2012**

Informazioni supplementari:
Nota [1]:
ITW Ltd trading come Avery Weigh-Tronix
Sede dell'ufficio: Nexus House, Station Road, Egham, Surrey, TW20 9LB, England
Nota [2]:
Dillon è parte di Avery Weigh-Tronix

Firmato a nome e per conto di:
Avery Weigh-Tronix
a
1000 Armstrong Drive, Fairmont, MN, 56031-1439, U.S.A.
su
2017-06-22

K.Detert
Innovations / Direttore Marketing

ES — Declaración UE de Conformidad

Modelo / Tipo: **PSUs**

Nombre y dirección del fabricante
Avery Weigh-Tronix[1]
Foundry Lane
Smethwick
West Midlands
B66 2LP
INGLATERRA

La presente declaración de conformidad se expide bajo la exclusiva responsabilidad del fabricante.

Objeto de la declaración:
Dillon[2]
EDX (RED) 5VDC
(AWT25-501123)
Dillon[2]
EDX (RED) 5VDC W/RS232
(AWT25-501124)

El objeto de la declaración descrita anteriormente es conforme con la legislación de armonización pertinente de la Unión:

Directivas aplicables	Normas armonizadas u otras especificaciones técnicas
2014/30/UE Compatibilidad electromagnética	**EN 61000-6-1:2007** **EN 61000-6-4:2007**
2014/35/UE Material eléctrico destinado a utilizarse con determinados límites de tensión	**EN 60950–1:2006 +A2:2013**
2011/65/UE Restricciones a la utilización de determinadas sustancias peligrosas en aparatos eléctricos y electrónicos	**EN 50581:2012**

Información adicional:
Nota [1]:
ITW Ltd trading as Avery Weigh-Tronix
Oficina registrada: Nexus House, Station Road, Egham, Surrey, TW20 9LB, Angleterre
Nota [2]:
Dillon es parte de Avery Weigh-Tronix

Firmado en nombre de:
Avery Weigh-Tronix
en
1000 Armstrong Drive, Fairmont, MN, 56031-1439, EE.UU
el
2017-06-22

K.Detert
Innovaciones / Director de Marketing

76501-513 Issue 2

2 Introduction

WARNING: If you overload this dynamometer you could suffer severe injuries or death. The total load on the dynamometer should NEVER exceed the rated capacity.

The EDXtreme™ (EDX) electronic dynamometer from Dillon is a force measurement load sensor and digital readout in one instrument. The EDX can be used to measure tension or weight. It can operate stand-alone or be coupled with a remote Dillon Communicator, via radio communication or direct wire connection, for improved convenience, functionality and safety.

This manual covers the setup and operation of the EDX and optional Communicator. General information is covered in the right column of each page with major sections separated by the black bar shown above. Subheads appear in the left column along with any special notes, cautions or warnings.

This manual covers the following:

- EDX & Communicator Description
- EDX Setup, Configuration and Operation
- Communicator Setup
- General Information on the EDX
- Troubleshooting

Be sure to read the safety precautions found in *Safe Operation* *on page 4*.

2.1 EDX Front Panel

The EDX comes in several weight capacities. All have the same front panel, shown in Figure 2.1.

Figure 2.1 EDXtreme Front Panel

2.1.1 EDX Keys

There are four “hard” keys and four “soft” keys. The hard keys are permanently labeled and the soft keys are just below the display. The soft key functions change and the key label appears above each key on the display. Sometimes the individual soft keys are referred to as the F1, F2, F3 and F4 keys as numbered from left to right.

On/Off key — Use this key to turn the unit on and off.

ZERO key — Use this key to zero the force indicated on the display.

ESC key — Use this key to escape from portions of the menu structure and return to previous choices or displays.

Arrow key — Use this key to access any available soft keys not currently viewed.

2.2 EDXtreme Connector

The connector on the EDXtreme is recessed for protection. It is used to connect the instrument to a Communicator remote display/controller, printer, PC or external power supply. See your Dillon distributor for details.

Figure 2.2 EDXtreme Connector

2.2.1 External Power Supply Connection (EDX 4-Pin)

Plug the 4-pin end of the power supply cable into the EDXtreme 4-pin connector located on the back of the unit. Plug the power supply adapter into an AC power outlet. Refer to Figure 2.4 for a photo of the external power supply.

Figure 2.3 External Power Supply Connection (EDXtreme)

Figure 2.4 External Power Supply (EDX PSU)

2.3 Communicator Front Panel

Figure 2.5 shows the Dillon Communicator. This is a battery powered (or AC adapter powered), radio-linked (or wired) remote display and control unit.

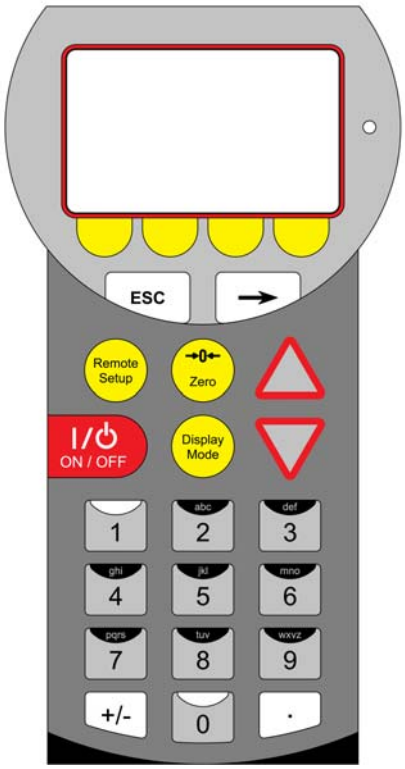


Figure 2.5 Dillon Communicator

2.3.1 Communicator Keys

The Communicator has the same keys as the EDX but also some extra ones. They are all explained below:

	On/Off key	Use this key to turn the unit on and off.
	ZERO key	Use this key to zero the force indicated on the EDX and Communicator displays.
	ESC key	Use this key to escape from portions of the menu structure and return to previous choices or displays.
	Arrow key	Use this key to access any available soft keys not currently viewed.
	Up and Down key	Use these arrow keys to move through menu choices, when applicable. Also scrolls through any active links.
	Remote Setup key	Use this key to access the Setup menu.
	Display Mode key	Use this key to cycle between Communicator display modes. They are EDX specific force value, EDX specific peak value, multiple display of force values and multiple display of peak values.
	Keypad keys	Use these keys to enter numeric characters. Use for address assignments and other miscellaneous data entry.

2.4 Communicator Connectors

The Communicator has 2 connectors. CELL is for wireline communications with an EDXtreme. COM1 is for serial communications or an external power supply.

Figure 2.6 CELL and COM1 Connectors

2.4.1 External Power Supply Connection (Communicator 4-Pin)

Plug the 4-pin end of the power supply cable into the COM1 4-pin connector located on the top of the unit. Plug the power supply adapter into an AC power outlet. Refer to Figure 2.4 for a photo of the external power supply.

Figure 2.7 External Power Supply Connection (Communicator)

2.5 Power On and Annunciators

When the EDX powers up you will see a display similar to the example shown on the left in Figure 2.8.

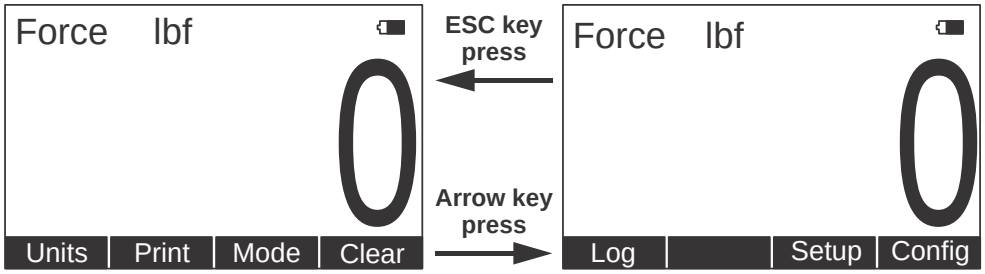


Figure 2.8 Initial Displays

Depending on permission settings and/or revision of firmware, various soft keys may be in a different location or not visible.

The display sample above shows several symbols you may see on your display but usually not all at the same time.

Force	Indicates that the display is showing live force measurement at the moment. Will show Peak when viewing Peak Mode.
lbf	Current unit of measure is lbf in this example. May also be kgf, N, or up to 2 other custom units.
~	Motion symbol. This appears when the force is in motion. This symbol disappears when motion ceases.
	Battery annunciator. This shows approximate remaining battery life.
P	Capture of a new peak value. This annunciator will remain lit for a few seconds.

Press the **Arrow** key, , to move between the two displays shown in Figure 2.8.

lbf and kgf are units of force, not weight. See Config--Units on page 41 for more information.

2.6 Soft Keys

Below the display are four yellow keys called ‘soft keys’. Each has a different function.

Units	Cycle through the configured and available units of measure.
Print	Send data to an attached printer, remote display or computer.
Mode	Cycle between the configured and enabled display modes.
Clear	Clear Peak Weight
Log	Configure and view data logging settings.
Setup	Enter Setup Menu. See page 25.
Config	Enter Configuration menu. See page 35.

.

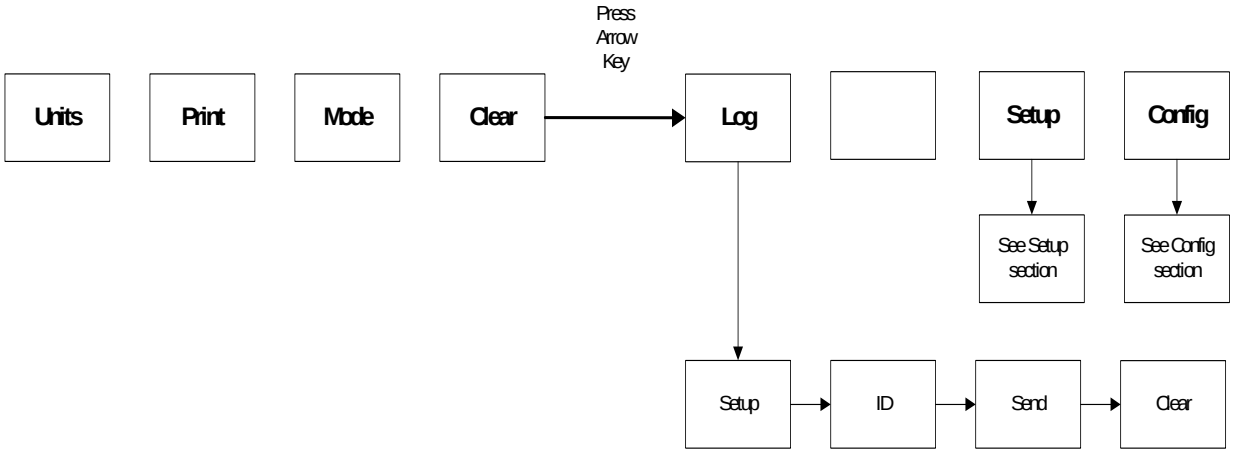


Figure 2.9 Soft Key Menu

3 EDX Operation

The EDXtreme uses a menu system to perform specific functions or make changes to the configuration. Refer to Figure 3.1 for the user menu diagram.

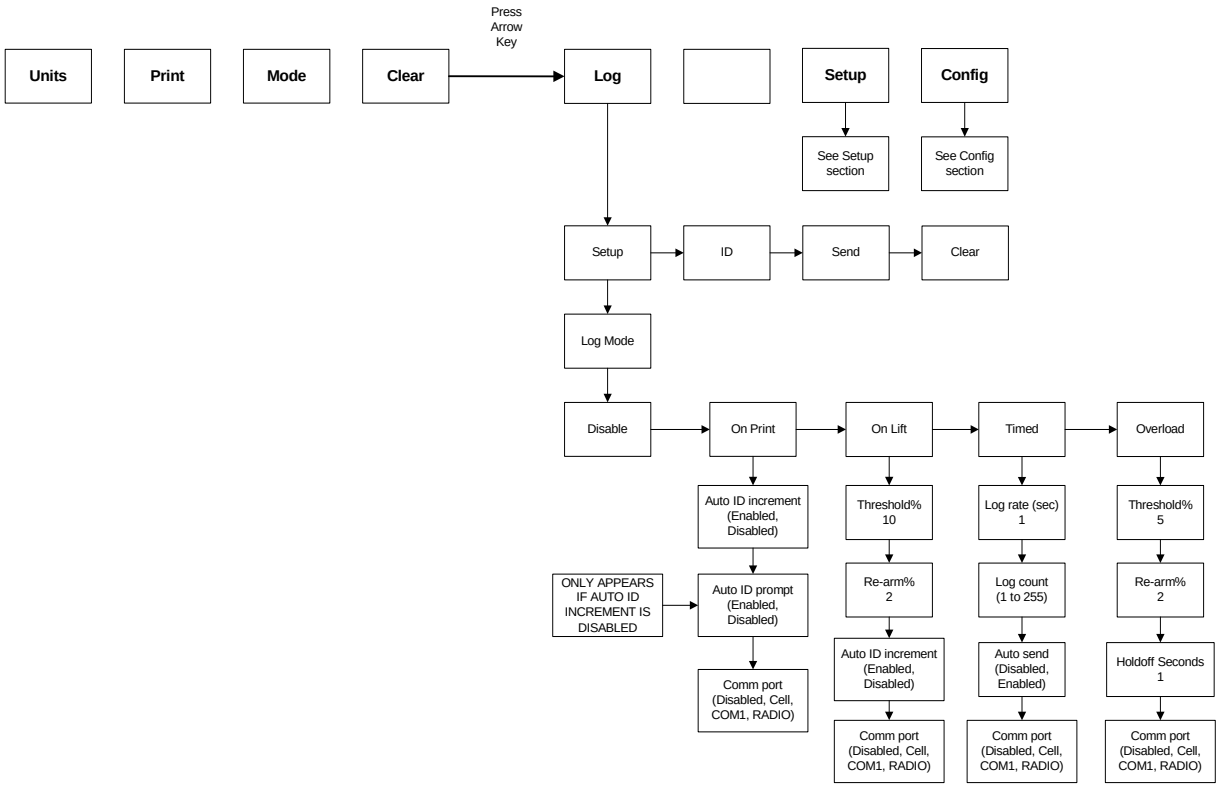


Figure 3.1 User Menu

Units Press the **Units** key to choose one of the following units; lbf, kgf, N.

Print Press the **Print** key to send to a peripheral device such as a printer, remote display or computer. (Also used to start and stop when using “Timed” under Log.

Mode Press the **Mode** key to select between force, peak or force/peak modes.

Clear Press the **Clear** key to clear the Peak weight.

Log Press the **Log** key to configure and view data logging settings. See section 3.4.

Setup Press the **Setup** key to access the Setup menu and configure logging function.

Config Press the **Config** key to access the Configuration menu.

3.1 Display Modes

The EDX has several display modes accessible by pressing the **Mode** soft key. See Figure 3.2.

The first display mode when you power up is the live force measurement mode.

Press the **Mode** soft key and the display changes to peak measurement mode. This mode shows the peak force applied to the EDX since the last peak clearing action. Delete the peak reading by pressing the **Clear** soft key.

Power up display modes may be configured. See Config>Mode section.

Press the **Mode** soft key again and the display shows live force and peak readings simultaneously.

Press the **Mode** soft key again and the display returns to the force measurement mode.

3.2 Force Measurement

Follow these steps to perform a gross force measurement.

1. Turn on the unit with the **On/Off** key.
2. Remove any weight from the EDX.
3. Zero the EDX by pressing the **ZERO** key.
4. Apply the force to the EDX and read the gross force on the display.

You can change the units of measure of the display by pressing the **Units** soft key. See the note below. Zero reference is maintained after the instrument is powered off and will be recalled with the next power-on. Zero reference may be lost if battery power is removed.

Unit of measure can be changed only if multiple units are enabled in the Configuration menu.

3.2.1 Force Measurement Rezero and Net Force Display

Rezeroing allows the weight or load of fixturing to be invisible to the measurement. The zeroed load must always be considered as part of the maximum capacity.

1. Turn on the unit with the **On/Off** key.
2. Remove any weight from the EDX.
3. Zero the EDX by pressing the **ZERO** key.
4. Apply the tare force to the EDX and press the **ZERO** key.
5. Apply the force to the EDX and read the net force on the display.

Steps 2 and 3 are not required if the weight of the fixturing is not needed. This should be maintained, however, to know cumulative loads.

3.3 Displaying Peak Force

The EDX will store the peak force applied until that reading is cleared. To display the peak force applied to an EDX, from the force measurement mode, press the **Mode** soft key. The display changes to display menu #2 shown in Figure 3.2 which is the peak display mode. The peak force is displayed. You can clear this by pressing the Clear soft key.

Peak reading is maintained after the instrument is powered off and will be recalled with the next power-on. Peak reading may be lost if battery power is removed.

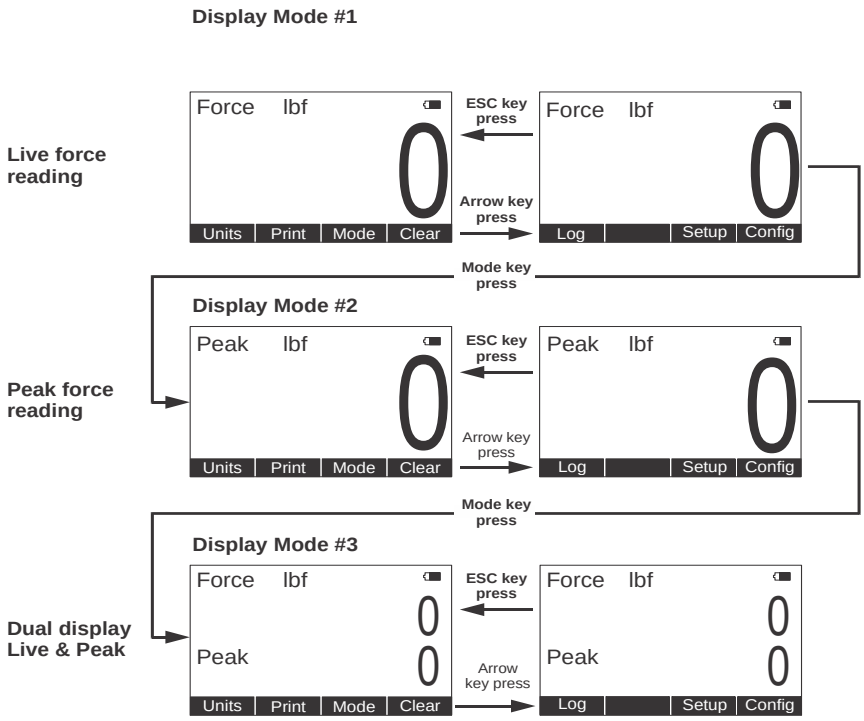


Figure 3.2 Display Mode Menu

Press the **Mode** soft key repeatedly until the desired display mode is reached.

3.4 Log Mode

Log mode is used to log/record force and peak data. This can be done on each lift, during a timed duration, during an overload or on Print key operation.

Press the appropriate soft key shown in Figure 3.1 to accomplish the functions listed on the following pages.

Setup Setup allows the user to configure how the EDXtreme stores data internally. This stored data can be downloaded via the 4 pin Lemo (CELL port on the EDX) to a PC via a keyboard wedge or other device.

Log Mode:

Disable: Turns the log feature off.

On Print: Used when the operator wants to do a lift and store of the force and peak.

Auto ID Increment: Enable/Disable

This will increment the ID by 1 every time the "PRINT" key is pressed and store it with each force and peak.

Auto ID Prompt: Enable/Disable (will only appear if Auto ID Increment is Disabled)

If "Enabled", the operator will be prompted to key in an ID before storing that ID with the force and peak.

Comm Port:

This allows you to choose where to export the "ON PRINT" logged data.

a. EDX = Cell
b. COMM = Com1
c. RADIO = Future development
d. Disabled = to turn off

On Lift: Used when the operator wants the load to be automatically stored, once the load becomes stable. Note: additional filtering may be required, as the load must be steady before the load will be recorded. Maximum Records = 255

Threshold %: (based on capacity)

This is the load above where the unit will record the stable load.

Re-arm: (based on capacity)

This is the load the force must drop below before the "ON LIFT" will reset (re-arm) and store another load.

Auto ID Increment: Enable/Disable

This will increment the ID by 1 every time the "PRINT" key is pressed and store it with each force and peak.

Comm Port:

This allows you to choose where to export the "ON PRINT" logged data.

a. EDX = Cell
b. COMM = Com1
c. RADIO = Future development
d. Disabled = to turn off

Timed: This is used when the operator wants to record a live load/pull and store it internally. Can store up to 255 force readings.

Log Rate:

The speed at which the logging of force will be recorded. Based on seconds (Example 5 sec = Unit will record the force once every 5 seconds)

Log Count:

This is how many logs the operator wants to record. Range is 0 to 255 recorded readings.

Auto Send:

Can export the readings live if enabled.

Comm Port:

This allows you to choose where to export the "ON PRINT" logged data.

a. EDX = Cell
b. COMM = Com1
c. RADIO = Future development
d. Disabled = to turn off

Overload: This is used when an operator or supervisor wants to know if their equipment is being overloaded. This will be a percentage based on capacity and will be below 100% of the EDX. (This not the same as the 120% overload that the EDX records based on capacity.) Maximum Records = 255

Threshold %: (based on capacity)

This the percentage above where the unit will record the peak load.

Re-arm %: (based on capacity)

This is the load percentage the force must drop below before the "OVERLOAD" will reset (re-arm) and store another load.

Holdoff Seconds:

Once the unit has recorded this overload, how much time will pass before this unit will re-arm and allow to record the overload again.

Comm Port:

This allows you to choose where to export the "ON PRINT" logged data.

a. EDX = Cell
b. COMM = Com1
c. RADIO = Future development
d. Disabled = to turn off

ID An operater can key in either a User ID number or a Lift ID assigned to a particular product. This is a numeric number only and can be any number from 1 to 65,000. (if you want to turn the ID off, key in 0).

Send This will export/send the Log information out the configured port.

Clear This will clear any data in the Log mode. Clearing "On Lift", "Timed" and "Overload" stored data.

Note: All Log Modes will record Date and Time along with it's force and peak reading.

4 EDX Setup

To begin using the EDX, it is recommended that you set it up to suit your specific needs and equipment.

Access the SETUP menu from the display screen by using the soft keys. Press the **Arrow** key to move to the next display screen. Press the **Setup** soft key (refer to Figure 3.2). See *Common Configurations on page 58* to view some common configurations.

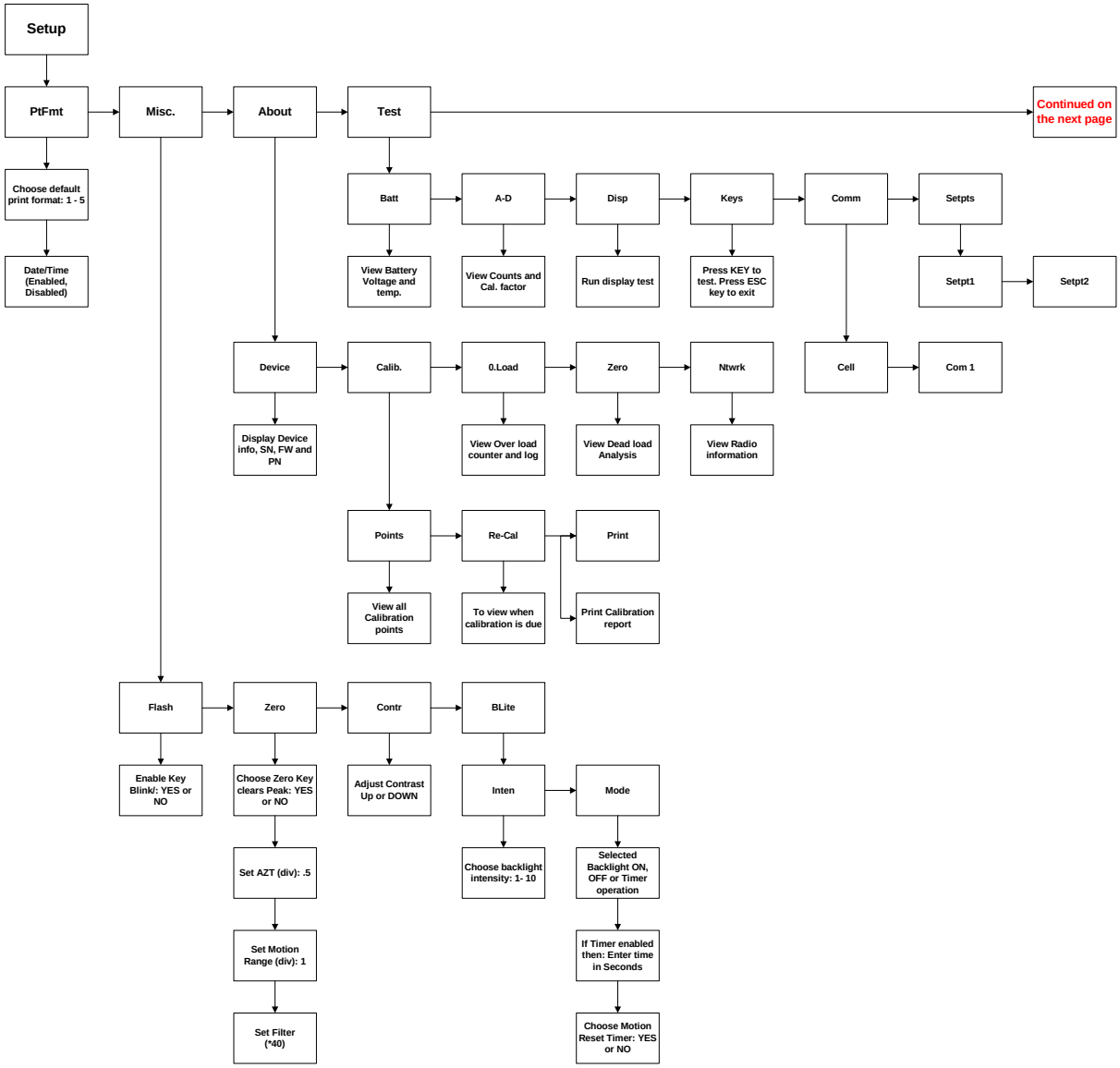
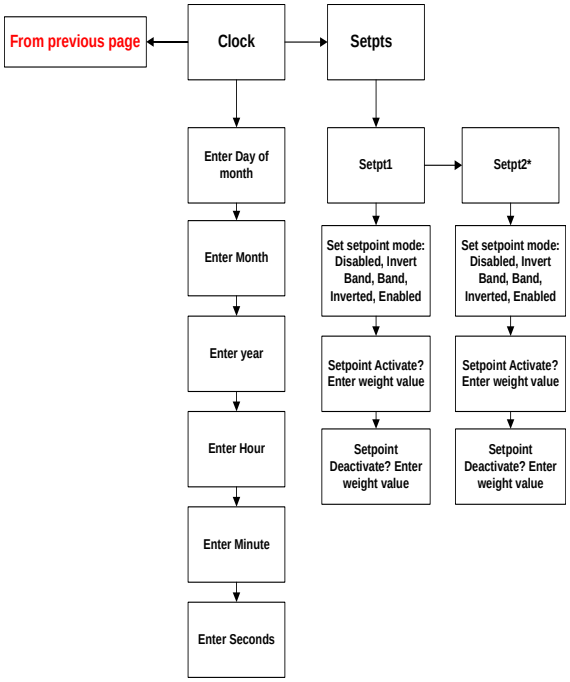


Figure 4.1 Operator Setup Menu for the EDXtreme

See Figure 4.1 for communicator setup and corresponding flow diagram.



* Setpt2 parameter is a future feature

Figure 4.2 EDXtreme Operator Setup Menu Continued

4.1 Setup Menu

Press the appropriate soft key shown in Figure 4.1 to accomplish the functions listed on the following pages.

4.1.1 Setup--Ptfmt

Press the **Ptfmt** soft key to select the print format that will be sent to a peripheral printer when you press the **Print** soft key. Choose from the formats below. Data sent is shown below. The default is format #1.

Format #1 Current displayed value (peak or live force) plus unit of measure

11/19/13 (if enabled)

12:46:00 (if enabled)

104.5 lbf (live force example)

302.5 lbf (peak force example)

104.5 lbf (dual mode example)
302.5 lbf

Format #2 Live force value plus unit of measure on 1st line
Peak force and unit of measure on 2nd line

11/19/13 (if enabled)

12:46:00 (if enabled)

104.5 lbf
302.5 lbf

Format #3 Live force value plus unit of measure on 1st line
Peak force and unit of measure on 2nd line

Descriptive prefixes on each line

11/19/13 (if enabled)

12:46:00 (if enabled)

Force 104.5 lbf
Peak 302.5 lbf

Format #4 Fixed position output. Works well with RS-232 utilities, such as WedgeLink, for parsing into a spreadsheet such as Microsoft Excel. (comma separated)

Excel	A	B	C	D
1	104.5	lbf	Date	Time
2	302.5	lbf	Date	Time

Fixed characters.

Position	Description
1-8	Live force number
10-16	Displayed unit of measure (up to 7 characters)
18-25	Peak force number
27-33	Displayed unit of measure (up to 7 characters)
9,17,26	Commas
34	Carriage return

Example 1

<sp><sp><sp>104.5,<sp><sp><sp><sp>lbf, <sp><sp><sp>302.5,<sp><sp><sp><sp>lbf<CR>

Example 2 (custom unit)

<sp>140000.,<sp><sp><sp><sp><sp>kg,<sp>165450., ,<sp><sp><sp><sp><sp>kg<CR>

This would yield (shown in courier):

```
         1111111111222222222233333333334444444444555555555
123456789012345678901234567890123456789012345678901234567

   104.5,    lbf,   302.5,    lbf,<CR>

 140000.,     kg, 165450.,     kg,<CR>
```

Format #5 Live force, unit of measure, peak force, unit of measure. All tab separated.

11/19/13 (if enabled)

12:46:00 (if enabled)

104.5<tab>lbf<CR> (if presently displaying live readings)

302.5<tab>lbf<CR> (if presently displaying peak readings)

104.5<tab>lbf<tab>302.5<tab>lbf<CR> (if presently displaying dual mode)

Date/Time If enabled, date and time will print for the selected print format. If disabled, date and time will not be printed in the selected print format.

4.1.2 Setup--Misc

Press the **Misc** key to access the following soft key set (refer to Figure 4.1):

Flash Press this soft key to enable or disable the “display flash” feedback. If enabled, the press of a key causes the display to momentarily flash to give you a visual feedback that the key was activated.

Zero Choose Zero Key Clears Peak (Yes/No): If YES is picked, then Clear will clear the peak value.

Set AZT (Div): .5- Automatic Zero Tracking: Set this value for the number of divisions off of zero for the display to return to zero.

Set Motion Range (Div): 1- Number of divisions that load has to change for the display to update/refresh.

Set Filter- Number of prior samples averaged to determine the displayed value.

Contr Press this key to adjust the contrast of the LCD display. Press the **Up** soft key to lighten the contrast. Press the **Down** soft key to darken the contrast.

There is a keypad shortcut for increasing and decreasing contrast. While in normal display mode press **Arrow** key and **F2** simultaneously to increase contrast. Press **Arrow** key and **F1** simultaneously to decrease contrast.

Sometimes the individual soft keys are referred to as the F1, F2, F3 and F4 keys as numbered from left to right.

Blite Press this key to adjust the backlight brightness and sleep timer functions.

Inten- Backlight intensity can be set to a value of 1 - 10. Default backlight value is 5.

Press **Arrow** key and **F4** simultaneously to increase intensity.

Press **Arrow** key and **F3** simultaneously to decrease intensity

Mode- Select Backlight to operate as always On, always Off or the backlight can operate from a configurable Timer.

If set to Timer, the operator will be asked to enter the Time in Seconds, after motion stops that the backlight will shut off.

The next selection will allow the user to configure if motion resets timer. Choose Yes or No to have motion reset the Timer which turns off the backlight.

Use of the backlight will affect battery life.

4.1.3 Setup--About

The next soft key is the About. The About menu shows an assortment of information about your Dillon instrument. This can be handy for maintaining calibration, troubleshooting or determining if the firmware can be upgraded. Press this and access the following soft key set (refer to Figure 4.1):

Device Press this to see software revision and dynamometer information.

Dillon suggests that calibration data be recorded and saved.

Calib This soft key access the following soft key set:

Points- Press this key to display the calibration loading points. This is useful information that can be keyed in manually in the event instrument memory is ever accidentally overwritten or corrupted.

Re-Cal- Will show next re-calibration date and contact detail.

Print- Press this key to transmit all the calibration information available to a serial printer or computer.

O.Load Lists the number of overloads that have occurred since the last calibration.

On Time- Actual hours when unit is on.

Zero Lists the current zero point compared to the calibration zero point. If the zero point has moved significantly, this may indicate a serious overload has occurred and the instrument should be returned for service.

Ntwrk Lists radio information; the enabled channel and identifier.

4.1.4 Setup--Test

The Test functions can help service technicians diagnose your Dillon instrument by showing information on key internal functions. Typically these menus will have significance only to trained technicians. You may look at these menus without technical guidance, but the information may have little meaning, or an error may be reported that may not exist.

Press this key to access the items described below (refer to Figure 4.1):

Batt Press this key to perform a battery test. This shows the battery level in A-D counts and approximate voltage. Voltage is not calibrated.

A-D Press this key to test the A-D section of the EDX. You need to apply force to change the counts and test the unit. The A-D is the electronics portion that converts analog load cell signal to digital numbers.

Disp. Press this key to perform a display test. Stop the test by pressing the ESC key.

Keys Press this key to perform key tests. Any key pressed will be reflected in the display. Press ESC to end the test.

Comm The serial test is an internally conducted diagnostic which requires a jumper across transmit and receive. This requires a jumper. Press the following soft key:

CELL- Press this key to test the wired cell in a loopback test

COM1- Press this key to test COM1 connection..

*To perform a COMM test, the unit **must be configured to use RS-232 communications**.*

Setpts This test menu allows testing of the enabled and configured set points.

Setpt1- This checks set point #1 operation

***Setpt2-** This checks set point #2 operation.

*Setpt2 parameter is a future feature.

Make sure all lock-out & tag-out procedures are followed before testing setpoint operations.

4.1.5 Clock

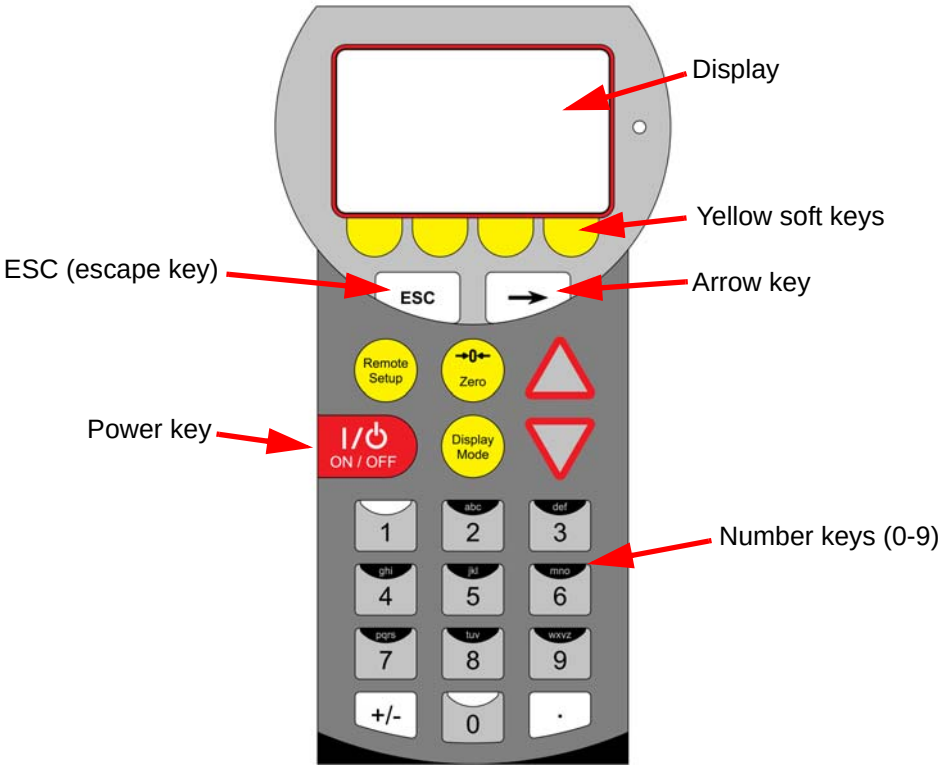
Enter the present date and time in the following order: Day of Month, Month, Year, Hour, Minute, Second.

Use the **Num** keys to enter the first number and the **Adv** key to move to the next number. Press **Enter** when the desired number is entered.

4.1.6 Communicator II alarm settings

Only available on part number AWT05-509199.

Use the illustration below as a reference.



Entering Alarm Activation and De-Activation Settings; Note the Alarm is ON when Setpoint 1 is ON.

1. Press the **Power On/Off** key to power up the hand held remote Communicator II.
2. Press the **Arrow** key …

   Set Up will appear as a selection choice.
3. Press the yellow soft key below ***Set Up***.
4. Press the **Arrow** key …

   Setpts appears as a selection choice.

5. Press the yellow soft key below ***Setpts*** …

Setpt1 & ***Setpt 2*** will appear as a selection choice.

Setpt 2 is for future development.

6. Press the yellow soft key below ***Setpt1*** …

There are five Setpoint1 mode options, each is explained below:

Disabled Alarm feature will be turned off

Enabled (Typical Operation)
Example: Activate at 1000 lbs and deactivate at 500 lbs.

Alarm will sound when the value reaches the configured activation setting and will stop sounding once the value drops below the configured deactivation setting. Activate and Deactivate settings can be the same value so the alarm will only sound when the value reaches the configured activation setting and will stop sounding once the value drops below the deactivation setting. Example: Activate at 1000 lbs and deactivate at any value below 1000 lbs.

Inverted Example: Activate at 1000 lbs and deactivate at 500 lbs.

Alarm will sound continuously until the configured activation setting has been reached. Once the activation setting is reached, the alarm will stop. If the value goes below the deactivation setting, the alarm will sound again until the activate value is reached once more.

Activate and Deactivate settings can be the same value. Example: Activate at 1000 lbs and deactivate at any value below 1000 lbs. In this way the alarm will sound until the value is reached and will sound again if the value falls below this value.

Band Example: Activate at 1000 lbs and deactivate at 2000 lbs.

Alarm will sound when the value reaches the configured activation setting and will continue to sound until the value reaches the configured deactivation setting.

Invert/Band Example: Activate at 1000 lbs and deactivate at 2000 lbs.

Alarm will sound continuously until the activation setting has been reached and will sound again once the configured deactivation value is reached.

7. Press the yellow soft key below ***enter*** …

Setpoint Activate will appear on the display.

8. Use the **0-9** number keys to enter the desired activation setting. (The **ESC** key can be used to erase an incorrect value. Each time the **ESC** key is pressed, one digit will be removed).

9. When the desired activation setting is displayed, press the yellow soft key below ***enter***. ***Setpoint Deactivate*** will appear on the display.

10. Use the **0-9** number keys to enter the desired deactivation setting. (The **ESC** key can be used to erase an incorrect value. Each time the **ESC** key is pressed, one digit will be removed).

11. When the desired deactivation setting is displayed, press the yellow soft key below ***enter***.

12. Press the **ESC** key repeatedly until ***Save changes*** appears …

    Yes appears on the display.

13. Press the yellow soft key below ***Yes***. The activation and deactivation settings are now set.

Disabling Alarm Settings

1. Press the **Arrow** key …

   Set Up will appear as a selection choice.

2. Press the yellow soft key below ***Set Up***.

3. Press the **Arrow** key …

   Setpts appears as a selection choice.

4. Press the yellow soft key below ***Setpts*** …

   Setpt1 & ***Setpt 2*** appear as choices.

5. Press the yellow soft key below ***Setpt1***.

   Setpoint mode? (****enabled***) will appear on the display.

6. Press the yellow soft key(s) below ***Sel*** ↓ (down) to toggle until ***Setpoint mode? (*disabled)*** appears on the display.

7. Press the **ESC** key repeatedly until ***Save changes?*** (***Yes***) appears on the display.

8. Press the yellow soft key below ***Yes*** …

   The alarm feature is turned off.

5 EDX Configuration

The configuration menu is a group of settings that may be password protected if desired to prevent operators from making significant system changes. It is used to configure the following:

- radio network
- resolution
- communication ports
- power up display mode
- units of measure
- power management
- password management
- system default reset

To access the configuration menu, press the Config soft key shown in Figure 5.1.

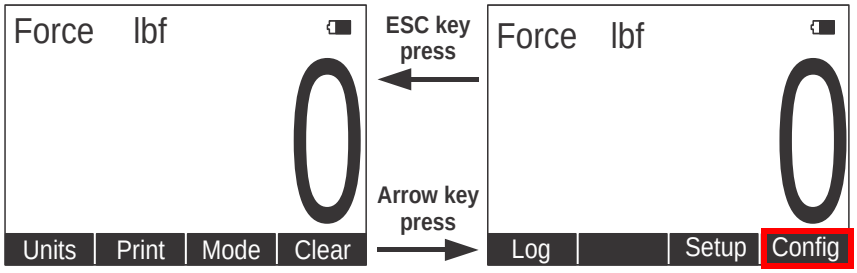


Figure 5.1 Accessing Config soft key and menu

The display prompts for a password. See Figure 5.2.

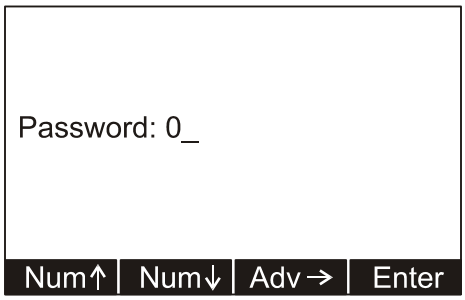


Figure 5.2 Password screen

Use the **Num** keys to enter the first character of the password and the **Adv** key to move to the next character. When you are done press the **Enter** key and the soft keys shown in Figure 5.3 become available.

The default password is "0". If the password has been changed and forgotten, contact your Dillon distributor for assistance.

5.1 EDX Configuration Menu

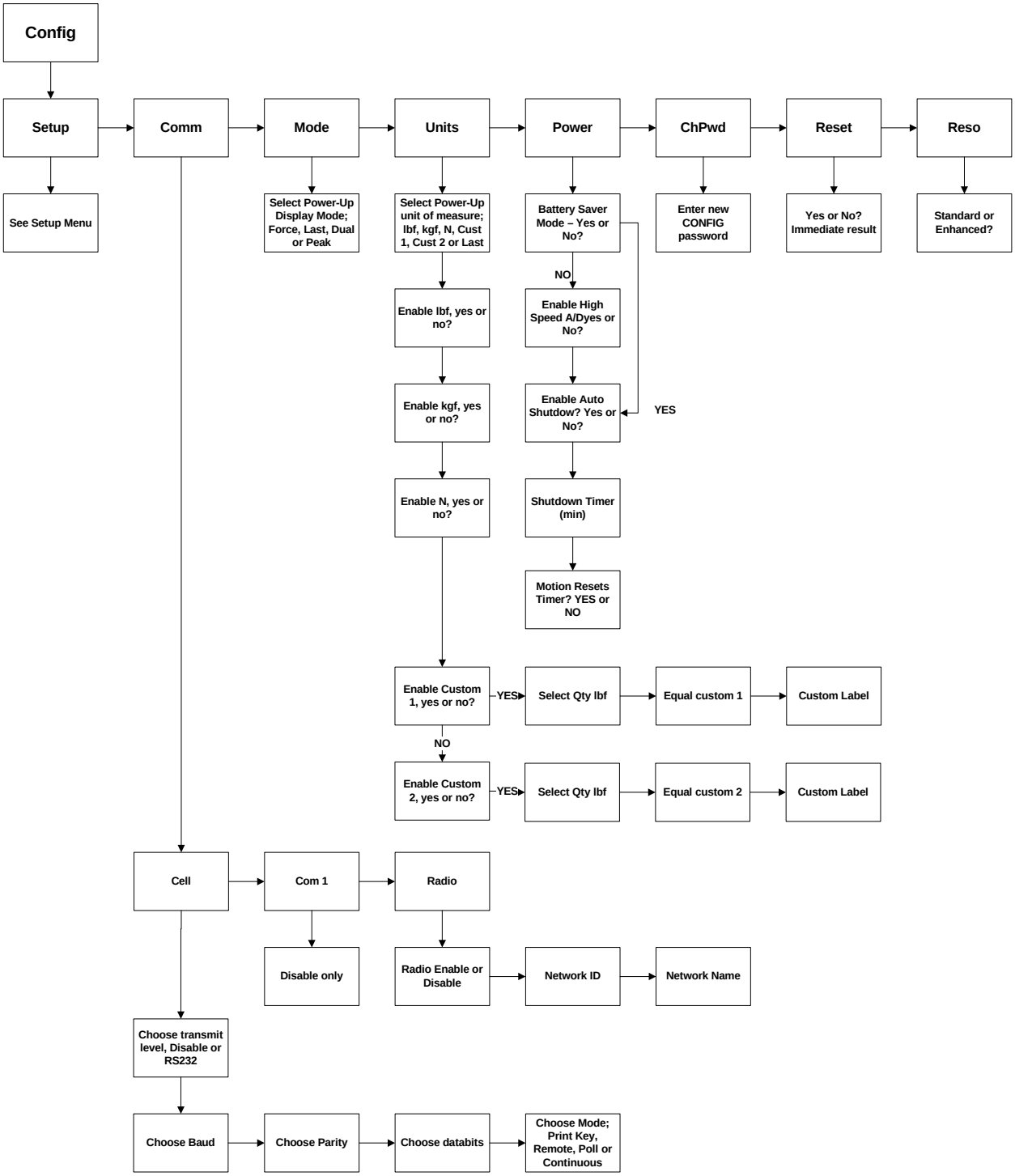


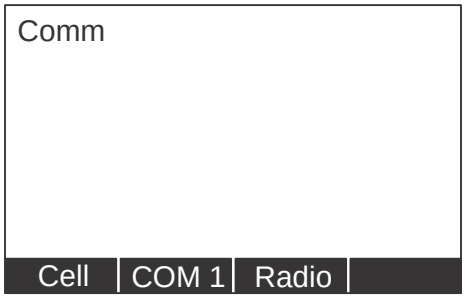
Figure 5.3 Configuration Menu

5.1.1 Config--Setup

The first soft key is **Setup**. Press this and you access the setup menu shown in Figure 4.1. All its features are covered in that section of the manual.

5.1.2 EDX Config--Comm

Press the **Comm** key to enable or disable wired cell, Com1, and radio communication.

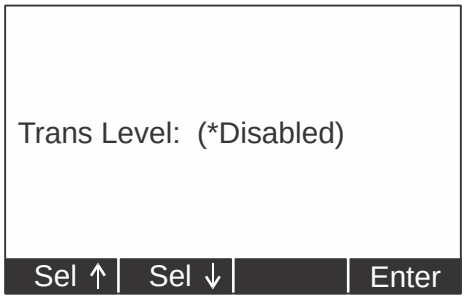


To configure wired cell or serial port:

RS-232 activity consumes more battery power.

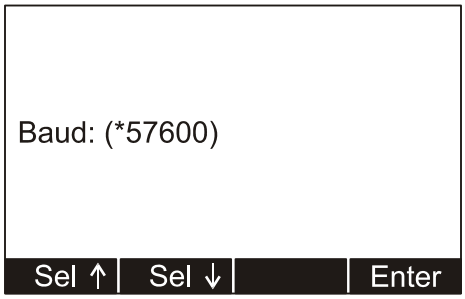
1. Press **Cell** or **COM 1**.

   The following display appears.



2. Select a transmission level using the **Sel** keys to enable as RS-232 or disable. Choices are; Disabled (default), RS232. Press **Enter** to accept the setting. See note below.

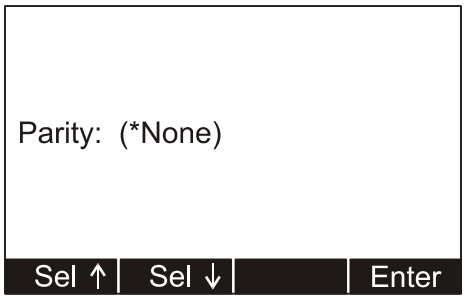
The following display appears:



*The * indicates which option is currently selected.*

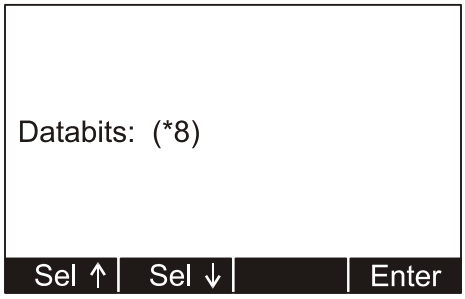
3. Select a baud rate using the **Sel** keys to scroll through the choices. Choices are 1200, 2400, 4800, 9600 (default), 19200, 38400, 57600, and 115200. Press **Enter** to accept the setting.

   The following display appears:



4. Select a parity value using the **Sel** keys to scroll through your choices. Choices are none (default), odd and even. Press **Enter** to accept the setting.

   The following display appears:

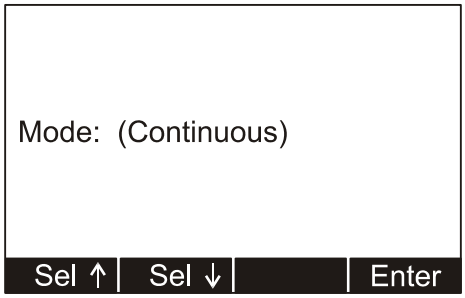


Default Serial Communications
Baud Rate = 9600
Parity = None
Databits = 8
Stop bits = 1

There is no option for handshakes. All settings should be None.

5. Select a databit value using the **Sel** keys to toggle between the two choices; 7 or 8 (default). Press **Enter** to accept the setting.

   The following display appears.



6. Select a mode of communication you want using the **Sel** keys to scroll through these choices; ***Continuous***, ***Poll***, ***Remote*** and ***Print Key Only***. Press **Enter** to accept the setting.

   If you choose ***Continuous***, you will be prompted to select a print format for the transmission and a rate at which you want to send the transmission.

   If you choose ***Poll*** you will be prompted to enter a poll character. Enter the ASCII value of the poll character.

   Choose ***Remote*** for wireline communications to the Communicator.

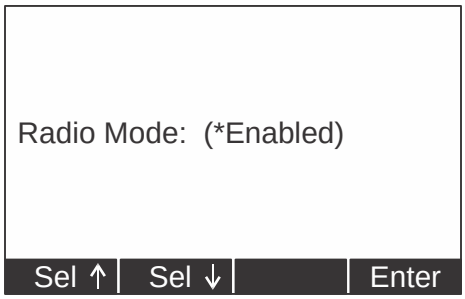
   Choose ***Print Key Only*** to print only when the **Print** key is pressed.

7. Press **ESC** to return to the first soft key set of the Configuration menu.

To configure radio:

1. Press **Radio**.

   The following display appears.



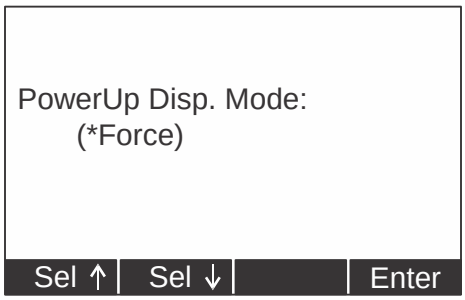
2. Use the **Sel** keys to enable or disable the radio mode. If enabled, press the **Enter** key to proceed.
3. You are asked to enter a Network ID#. This is a unique number (1-255) so the Communicator only speaks to one instrument at a time without “cross-talking.” Use the available soft keys to enter a number (1-255), then press **Enter** to accept.
4. Key in the network name. This will be to identify each EDXtreme when displayed on the handheld communicator.
5. Press **Enter** to return to the first soft key set of the Configuration menu.

5.1.3 Config--Mode

The next menu key is the **Mode** key. Use this key to choose what display mode is active upon powerup.

1. Press the **Mode** key.

   The following is displayed:



2. Select a display mode value using the **Sel** key to scroll through the choices. Choices are Force(default), Peak, Dual, and Last. Press **Enter** to accept the displayed setting.
   - FORCE - Live force will be displayed
   - PEAK - Peak force will be displayed
   - DUAL - Live and Peak forces will be displayed
   - LAST - The last displayed mode of operation will be displayed.
3. The display returns to the first soft key set of the Configuration menu.

5.1.4 Config--Units

The next soft key is **Units**. Use this item to set the units of measure you want available when you use the Units key in the normal operating mode. This can also assign custom units.

Custom units are typically used for any of three purposes:

1. To display a unit of measure not found in the standard options, such as ton, tonne, dyne, or KIP.

2. To apply a multiplier when multipart line systems or other static line arrangements are used. For example, if a 4-part line is used, the dynamometer at the dead end can display approximate total weight by using a multiplier of 4.

   It is critical that the operator understands the relationship between the dynamometer and custom unit. For example, assume a custom unit of kg is entered where 1 kg = 5 kgf (as seen at the dynamometer). The operator could become confused, think that a 1000 kg display means that there is still 4000 kg of capacity remaining.

3. To compensate for local gravitational differences. There are variances in gravity throughout the world. If used as a scale, variances due to gravitational differences can be handled by having the instrument calibrated on-site with certified dead weights or by using the custom units. Simply divide the gravitational constant at your location by 9.80665 m/ss (or 32.1741 ft/s2) and use this as the multiplier entry. A less accurate alternative: If the constant is not known, lift a weight of known mass close to the capacity of the instrument. In enhanced resolution mode, observe the reading. Divide the actual by the observed reading and use this as the multiplier entry.

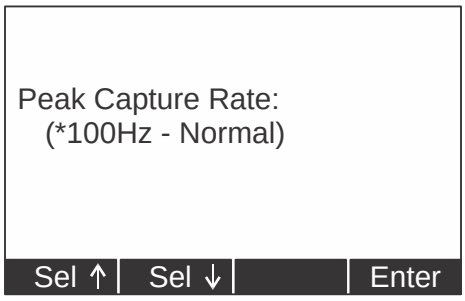
5.1.5 Config--Power

The next soft key is the **Power** key. Use this to set power management features.

Be aware that 1kHz - High Speed mode will consume more battery power.

1. Press the **Power** key.

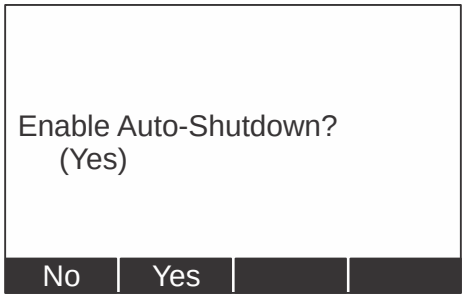
   The following is displayed:



2. Select a Peak Capture Rate using the **Sel** key to scroll through the choices. Choices are 100Hz - Normal (default), 1kHz - High Speed, and 10Hz - Battery Saver. Press **Enter** to accept the displayed setting.

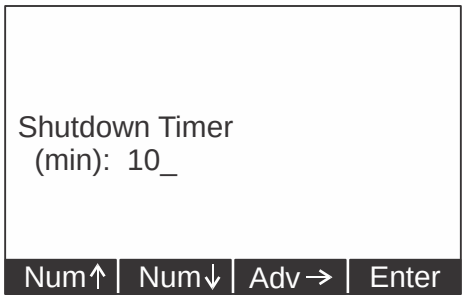
3. Enable Auto-Shutdown screen will be displayed.

Auto-Shutdown powers off the instrument automatically. The instrument can be programmed for a fixed operating time or programmed to shut down after a period of inactivity



Powering the instrument off regularly allows the batteries to partially recover and maximizes energy extractions from the batteries.

4. Select **Yes** or **No** and the following screen will be displayed..

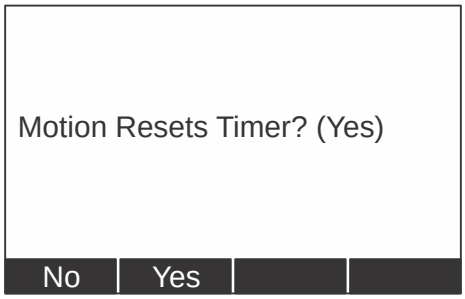


Timer reflects the period required to pass before Auto-Shutdown activates.

5. Use the **Num** keys to enter the first number and the **Adv** key to move to the next number of the timer value. Press **Enter** when the desired timer value is entered.

Key presses reset the timer. Characters received through the serial port also reset the timer.

The following screen is displayed:



6. Select **Yes** if you only want the instrument to automatically shut down when there is inactivity. Select **No** if you want the instrument to power down after the timer counts down, regardless of any activity.

5.1.6 Config--ChPwd

The next soft key is **ChPwd**. Use this to change the password used to access the configuration menu.

IMPORTANT: Changing the password denies access to this menu without entry of the new password. Contact your Dillon distributor if you lose your password.

5.1.7 Config--Reset

The last soft key in this set is the **Reset** soft key. Use this to reset the system to its factory default settings.

This concludes the Configuration menu section.

5.1.8 Config--Reso

Reso stands for resolution. Resolution is the value by which the EDX displays increments. Press this key to set the unit to standard (1000 divisions) resolution or enhanced (5000 divisions) resolution. For example: 10,000 lbf would count by

10 lbf (10,000 lbf/1000 divisions = 10 lbf) in standard resolution

2 lbf (10,000 lbf/5000 divisions = 2 lbf) in enhanced resolution

Standard resolution may have 1000 or 1250 divisions. Enhanced resolution may have 4000 or 5000 divisions. This follows normal display increment practice of changing by 1, 2, 5 or a multiple or submultiple of those numbers (e.g. 10, 20, 50, .1, .2, .5, etc.)

6 Communicator Operation

The Dillon Communicator is a remote display and control module designed to work with the EDXtreme. It can be connected by wire or can communicate by radio if both the Communicator and EDXtreme are equipped with optional radio boards.

The Communicator may simultaneously view and control 15 dynamometers at one time. Each is monitored individually by assigning unique numeric identifiers (1-15) to each (addresses).

Several Communicators may operate in the same airspace if they are on different channels.

*Use the **UP**, , and **DOWN**, , arrow keys on the Communicator to scroll through the displays of all active EDXs and a total screen.*

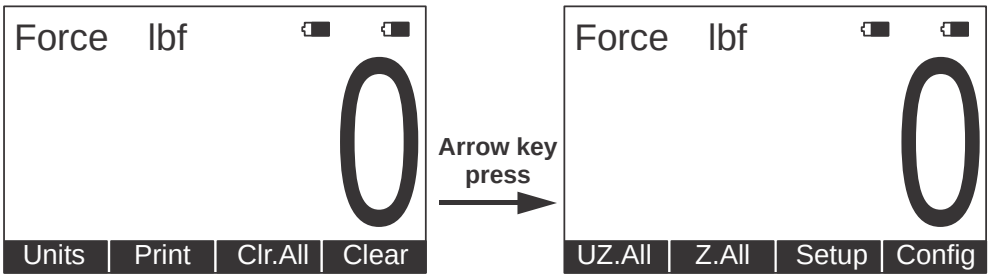
For best performance always have different network identifiers (1-15) for EDXtremes within the same network and use different channels for systems operating anywhere close to one another.

Since most functions are identical, you should refer to the EDXtreme section for comprehensive explanation and the Communicator's section will highlight differences that exist.

The Communicator is designed to be similar in layout and function to an EDXtreme to make operation easy and intuitive. The main screen appears as it does on the EDXtreme except that the Mode soft key has been blanked. This has an actual hard key on the remote.

6.1 Powerup Display

An example of a Communicator's powerup display is shown below:



The annunciators shown above appear on the Communicator display. They show battery level for the Communicator (right side pair) and the active EDXtreme (left side pair).

There are three soft keys on the first display and four on the second display. The soft key functions are described below:

Units Changes the displayed unit of measure. Each press advances the display through this sequence; lbf, kgf, N, custom 1, custom 2.

Print Outputs serial data to peripheral devices attached to COM 1.

Clr.All Clears the peaks on all EDXs currently in communication with the remote.

Clear Clears the current peak value of the active EDX.

UZ.All Resets all EDXs to calibration zero reference point.

Z.All Zeros all EDXs currently in communication with the remote.

Setup Accesses the Setup menu shown in Figure 6.1.

Config Accesses the Config menu shown in Figure 6.3.

6.2 Communicator Setup Menu

The Communicator Setup menu can be accessed using the softkey or the Remote Setup hardkey. Press the right **Arrow** key to access the **Setup** menu softkey.

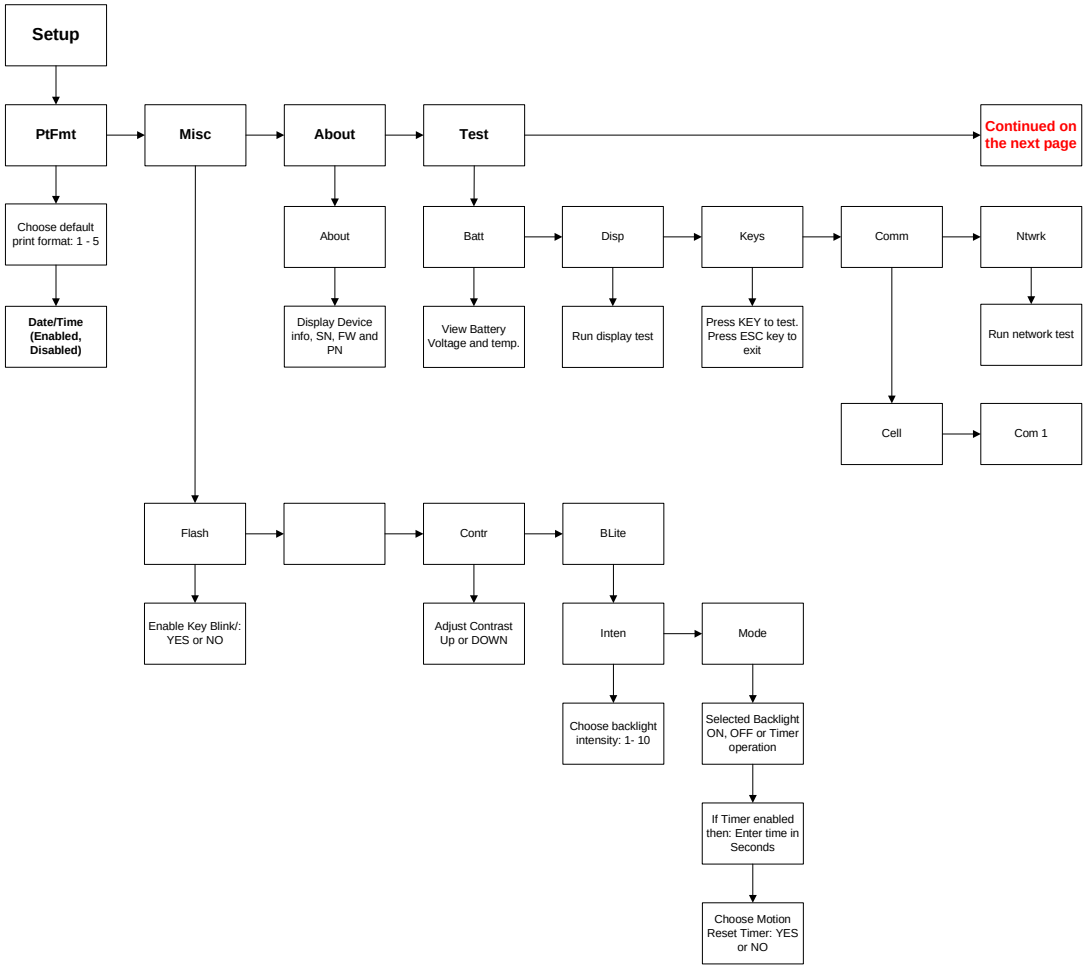


Figure 6.1 Communicator Setup Menu

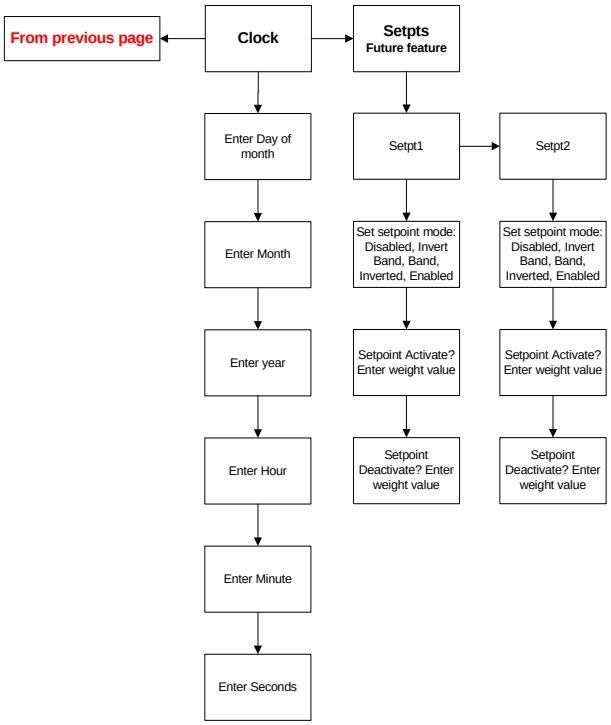


Figure 6.2 Communicator Setup Menu Continued

Ptfmt Select from print formats 1-7. See *Communicator Print Formats* *on page 50*.

Date/Time If enabled, date and time will print for the selected print format. If disabled, date and time will not be printed in the selected print format.

Misc Lets you setup the following items:

Flash Use this to enable the visual confirmation of keystrokes. Display will flash on keystrokes if enabled.

Contr Use this to adjust the contrast of the Communicator display. Follow onscreen prompts for directions.

Contrast shortcut
*There is a keypad shortcut for increasing and decreasing contrast. While in normal display mode press **Arrow** key and **F2** simultaneously to increase contrast. Press **Arrow** key and **F1** simultaneously to decrease contrast.*

Blite Use this to adjust the intensity and mode of the optional backlight. Intensity adjusts the brightness of the backlight. Using Mode you can set the backlight to OFF, ON, or TIMER. If you select TIMER, the backlight will shut off after a configurable period of time (in seconds), without a keystroke. You are also given the option of choosing if motion will reset the backlight timer to start counting again.

Backlight intensity shortcut
*Press **Arrow** key and **F4** simultaneously to increase intensity. Press **Arrow** key and **F3** simultaneously to decrease intensity.*

About Press this soft key to see the following information:

- Communicator Serial Number
- Firmware part number
- Revision level of software

Press **ESC** repeatedly to return to normal operation. If you have made changes you will be prompted to save the changes. Press the **Yes** soft key to save the changes and return to normal operation. Press the **No** soft key to disregard any changes made and return to normal operation. Press the **Cancel** soft key to return to the Setup menu screen.

Test Lets you test the following items:

Batt Press this to check the battery condition. Display shows voltage condition of the batteries.

Disp Press this to perform a display test. Press any key to stop the test.

Keys Press this key to test individual key function. Press **ESC** to stop the test.

Comm Press this key to perform LOOP/NOLOOP tests on CELL. Press **ESC** to return to **Test** soft key display. CELL must be enabled and configured to RS232 in Config menu to test.

This completes the Setup menu description.

6.3 Communicator Config Menu

The configuration menu, shown in Figure 6.3, allows you to set the items described below. Press the right **Arrow** key to access the **Config** menu softkey. Press the **Config** soft key to enter the menu. Accept the user password displayed (default is 0) or your password if it has been customized. Press the **Enter** soft key to accept the password and access the menu.

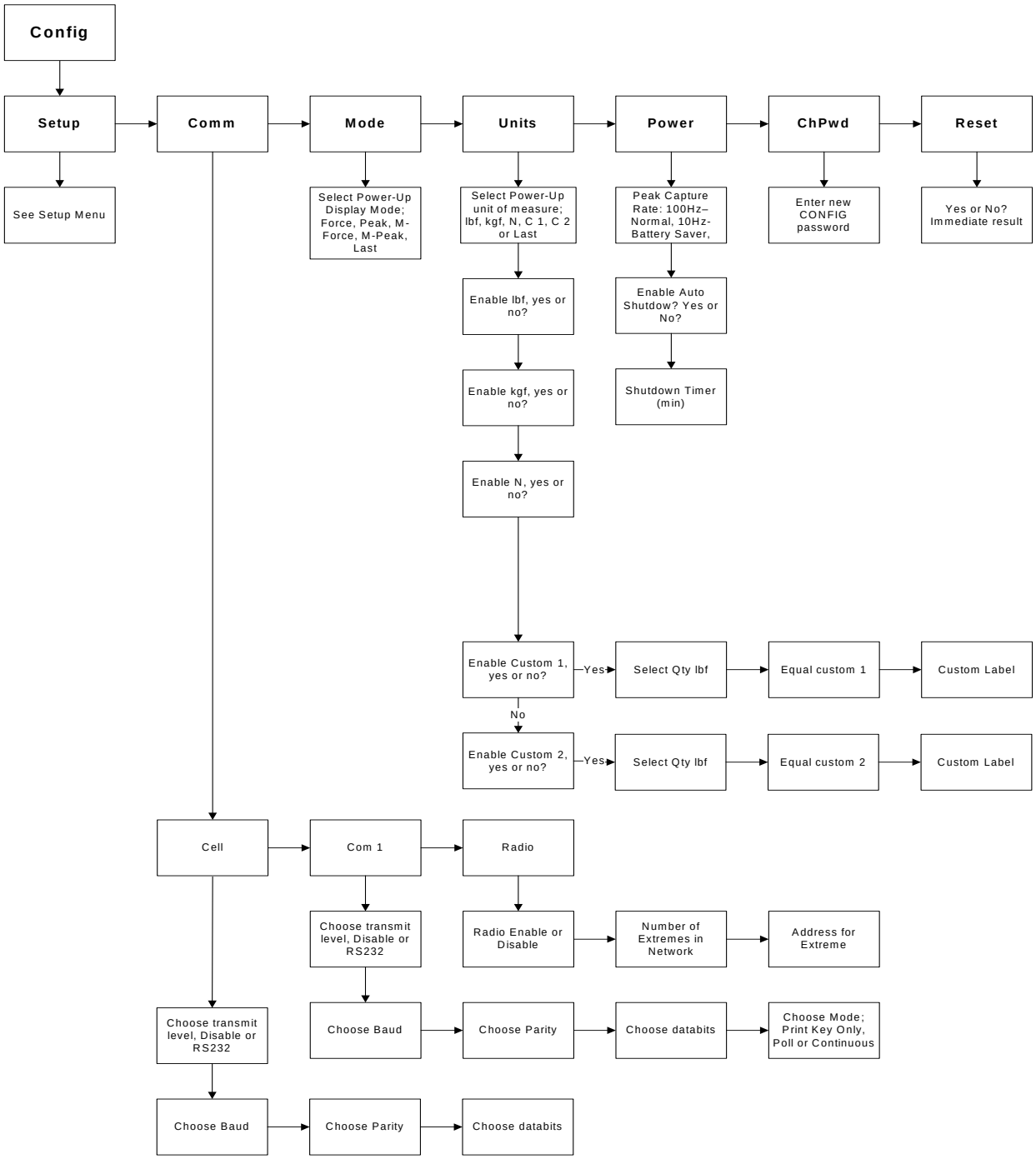


Figure 6.3 Communicator Config(uration) menu

Comm Choose to set up the following parameters for each Comm port:

baud (default = 9600)
parity (default = none)
databits (default = 8)
mode (default = Print key only) Other choices: Continuous and Poll.

If you choose Continuous you must pick a format (see *Communicator Print Formats* *on page 50*) and a broadcast rate (choices are 1, 2, 5 or 10 Hz)

If you choose Poll you must choose a poll character (any ASCII **Mode** Press this to set the display mode that will be active upon power-up.

To Configure Radio:

1. Press the **Radio key**.
2. Use the **Sel** key to enable or disable the radio mode. If enabled press the **Enter** key to proceed.
3. You are asked to key in the NUMBER OF EDXTREMES IN NETWORK. 0 = AUTO (0-15): 0. 0 is the default value.

3a. If you enter 0, the Dillon communicator will automatically connect to each EDXtreme in the area without configuring each unit.

3b. If you have more than 1 system in the same airspace and want each system to operate independently, then each system will need to be configured separately with their own Network ID#.

To Configure a system for independent RF operation:

1. Key in the number or EDXtremes that will be communicating on this network. NUMBER OF EDXTREMES IN NETWORK 0 = AUTO (0-15)
2. Key in the address for EDXtreme 1. Must be the same number as the EDXtreme you are trying to communicate to. (Each EDXtreme must have a different address.)
3. Repeat steps 1 and 2 for each EDXtreme.
4. Press **ESC** repeatedly to return to normal operation. If any changes where made, you will be prompted to save changes. Press **YES** soft key to save the changes and return to normal operation. Press the **NO** softkey to disregard any changes made and return to normal operation.

Units Press this key to set the following:

Choice of power-up unit of measure

Enable or disable lbf, kgf, N, custom unit 1 and 2

Power Press this to set the following:

Enable Auto-shutdown (Y/N)

Shutdown Timer (set minutes before idleness causes unit to shut off)

ChPwd Press this to change the Config menu password.

Reset Press and you are given the choice of resetting the Communicator to its factory defaults.

6.4 Communicator Print Formats

Press the **Ptfmt** soft key to select the print format that will be sent from the Communicator on Com 1 to a peripheral printer when you press the **Print** soft key. Choose from the formats below. Data sent is shown below. The default is format #1.

Format #1

Current displayed value only (peak or live force) plus unit of measure on the active EDX only.

11/19/13 (if enabled)

12:46:00 (if enabled)

104.5 lbf (live force example)
or
302.5 lbf (peak force example)

Format #2

Live force value plus unit of measure on 1st line and
Peak force and unit of measure on 2nd line for active EDX only.

11/19/13 (if enabled)

12:46:00 (if enabled)

104.5 lbf
302.5 lbf

Format #3

Live force value plus unit of measure on 1st line and
Peak force and unit of measure on 2nd line with descriptive prefixes on each line for active EDX only.

11/19/13 (if enabled)

12:46:00 (if enabled)

Force 104.5 lbf
Peak 302.5 lbf

Format #4

Fixed position output for active EDX only. Works well with RS-232 utilities, such as WedgeLink, for parsing into a spreadsheet such as Microsoft Excel.

Excel	A	B	C	D
1	104.5	lbf	Date	Time
2	302.5	lbf	Date	Time

Fixed characters.

Position	Description
1-8	Live force number

Position	Description
10-16	Displayed unit of measure (up to 7 characters)
18-25	Peak force number
27-33	Displayed unit of measure (up to 7 characters)
9,17,26	Commas
34	Carriage Return

Example 1:

<sp><sp><sp>104.5,<sp><sp><sp><sp>lbf,<sp><sp><sp>302.5,<sp><sp><sp><sp>lbf<CR>

Example 2 (custom unit)

<sp>140000.,<sp><sp><sp><sp><sp>kg,<sp>165450., ,<sp><sp><sp><sp><sp>kg<CR>

This would yield (shown in courier):

```
         1111111111222222222233333333334444444444555555555
123456789012345678901234567890123456789012345678901234567

  104.5,     lbf,   302.5,    lbf<CR>

 140000.,     kg, 165450.,     kg<CR>
```

Format #5 Live force, unit of measure, peak force, unit of measure for active EDXtreme only. All tab separated.

11/19/13 (if enabled)

12:46:00 (if enabled)

104.5<tab>lbf<CR> (if presently displaying live readings)

302.5<tab>lbf<CR> (if presently displaying peak readings)

Format #6 Cell #, description, live force, unit of measure for all active EDXs plus a total.

Example:

Cell<tab>Description<tab>Live Force<tab>Units<CR>

11/19/13 (if enabled)

12:46:00 (if enabled)

1<tab>North<tab>104.5<tab>lbf<CR>
2<tab>South<tab>4801<tab>lbf<CR>
Total<tab><tab>4905.5<tab>lbf

Format #7 Outputs print format #6 plus peak values for all EDXs.

7 General Information

7.1 Changing Batteries

7.1.1 EDXtreme

To replace discharged batteries, unscrew the battery compartment cap on the right side of the dynamometer. Remove the two C cells and replace them with the + poles inserted first.

If the spring in the cap becomes detached, you can reattach it by aligning the large end over the counterbored hole and turning the spring counterclockwise while pushing the spring into the hole. The spring will work into the recess and be self-retained.

7.1.2 Communicator

The Communicator uses 4 AA batteries. Refer to the instructions below for battery replacement.

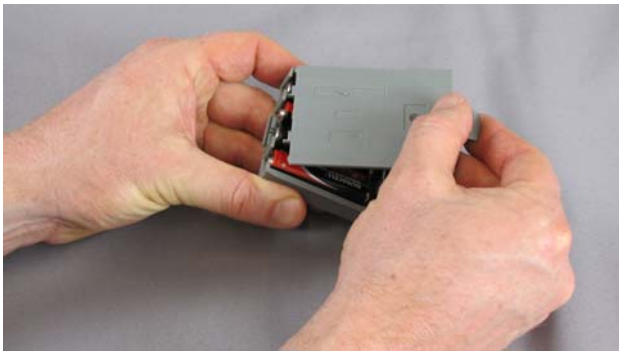
1. Remove the black battery cover from the bottom of the communicator.

2. Press the tab of the gray battery box.The battery box will pop out slightly. Pull on the box to remove it from the Communicator.

3. Place the battery box on a stable surface and remove the securing screw with a #1 phillips screwdriver.

4. Remove the batteries (with a screwdriver if necessary) and replace with new AA batteries. Be sure to observe polarity when installing new batteries.

5. Place the cover back on the battery holder and tighten the securing screw. Do NOT over tighten!



6. Push the battery holder back into the bottom of the communicator.Place the black battery cover back on the bottom of the Communicator.

7.2 Battery Life

The time required between battery changes can vary with usage, functions enabled, temperature, duration of use and recovery time, display update rate, battery grade and more.

CAUTION: Remove batteries from instrument when using the external AC power supply.

To maximize battery life:

- Disable radio if not being used. Even if an optional radio board is not installed, the software will run, if enabled.
- Disable other functions such as RS-232 and backlight.
- Warm environments result in longer battery life over cool environments.
- Use high quality alkaline batteries. ***Do not use rechargeable batteries.***
- Turn off instrument when not in use. Alkaline batteries partially recover when the instrument is off.

7.3 Care

The EDXtreme is built to be rugged and endure typical industrial and commercial use. It is still, however, a precision instrument that should be treated with care. Store the instrument in its carry case with power off. Remove batteries if not being used.

7.4 Radio Information

The radio technology used in the radio equipped EDXtreme and Communicator is a 2.4 GHz digital spread spectrum system designed for communications reliability. Radio operation and the performance attained can be difficult to predict and will vary with environment and conditions. There are locations where radio use is impractical or even impossible.

Tips for best performance:

- Keep the Communicator and EDXtreme as close as possible together.
- Keep metal and other dense objects as far from the instruments as possible.
- Normally the higher that both the EDXtreme and Communicator are above the ground, the better the performance and range will be.

Many things can degrade radio signals, such as brick walls, metal reinforced concrete, machinery and even wiring within walls. Other systems such as wireless networks and cordless phones may degrade or interfere with operation of the Dillon radio-equipped system. As an FCC approved instrument on a license-free radio band, the instrument must accept interference received from other devices that share the same frequency and airspace. If other systems are colliding, it is best to isolate the device(s) that cause the interference and then take steps to eliminate the problem which may include relocation, conditional operation or retirement of the interfering device.

7.5 Installing Spacers

High capacity dynamometers with shackles of 50,000 lbf/20000kgf capacity and up, use spacers, shown in Figure 7.1, to insure proper centering of the dynamometer for performance and safety reasons.

Figure 7.1 Spacer

Do not use the dynamometer with shackles if the spacers are not installed. The EDX design incorporates an innovative method to retain these spacers, if desired, to ease shackle installation.

The finish on your parts may vary from the ones shown in these photos.

Place spacer on a solid surface and use a hammer to start the roll pins into the two small spacer holes. See Figure 7.2.

Figure 7.2 Inserting Roll Pin

Insert through matching holes in dynamometer body. Lay the dynamometer on the spacers on a solid surface with the roll pins protruding from the top. See Figure 7.3.

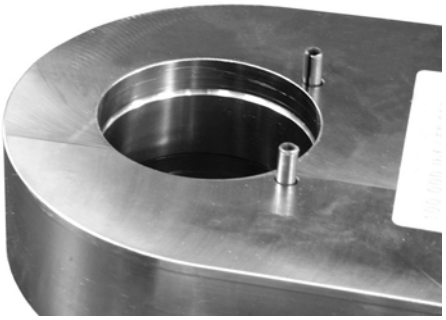


Figure 7.3 Roll Pins Extending Above Dynamometer Body

Position the holes of the second spacer over the holes and tap spacer into position. See Figure 7.4.

Figure 7.4 Placing Second Spacer on Roll Pins

A punch sized slightly smaller than the holes in the spacer may be helpful. The spacers should “sandwich” the dynamometer body, but should not be drawn completely tight.

Remove the four large circular foam plugs from the carry case and it can continue to be used with the spacers attached.

8 Common Configurations

EDXtreme being used stand-alone (no RS-232 or Communicator remote)
Key Settings (EDXtreme):
COM1 Trans Level – Disabled
CELL Trans Level – Disabled

EDXtreme connected to a computer
Key Settings (EDXtreme):
CELL Trans Level – RS-232 (all other parameters should agree with peripheral such as baud, data bits & parity)
COM1 Trans Level – Disabled

Communicator connected to one EDXtreme by wire on CELL port
Key Settings (EDXtreme and Communicator):
COM1 Trans Level – Disabled
CELL Trans Level – RS-232
baud – 57600
parity – none
databits – 8
Mode - Remote (EDX only)

Communicator talking to one EDXtreme by radio
Key Settings (Communicator):
COM1 Trans Level – Disabled or RS-232
RADIO Trans Level – Enable
Number of EDXtremes in the Network (0-15): 1 (Setting to 0 will allow automatic setup and displays all EDX's in the area)
Address of EDXtreme 1: 1

Key Settings (EDXtreme):
COM1 Trans Level – Disabled
RADIO Trans Level – Enable
Network ID (1-255): 1 (must be unique value of each EDX)
Network Identifier: (enter characters or digits to identify this specific EDX) (most useful if multiple EDXs are networked to one Communicator)

Communicator talking to four EDXtremes by radio
Key Settings Communicator
COM1 Trans Level – Disabled or RS-232
RADIO Trans Level – Enable
Number of EDXtremes in the Network (1-15): 0 (Setting to 0 will allow automatic setup and displays all EDX's in the area)
Addresses for EDXtreme 1: 1
Addresses for EDXtreme 2: 2
Addresses for EDXtreme 3: 3
Addresses for EDXtreme 4: 4

Key Settings (**EDXtreme 1**):
COM1 Trans Level – Disabled
RADIO Trans Level – Enable
Network ID (1-255)
Network Name: (example EDX 1)

Key Settings (**EDXtreme 2**):

COM1 Trans Level – Disabled
RADIO Trans Level – Enable
Network ID (1-255)
Network Name: (example EDX 2)

Key Settings (**EDXtreme 3**):

COM1 Trans Level – Disabled
RADIO Trans Level – Enable
Network ID: (1-255)
Network Name: (example EDX 3)

Key Settings (**EDXtreme 4**):

COM1 Trans Level – Disabled
RADIOTrans Level – Enable
Network ID: (1-255)
Network Name: (example EDX 4)

9 Troubleshooting

Problem	Possible Cause	Solution
EDX powers on momentarily and turns off	Low battery Bad keypad	Replace with high quality alkaline batteries. Do not use rechargeable batteries. Have unit serviced.
EDX does not power on	Low battery Bad keypad	Replace with high quality alkaline batteries. Do not use rechargeable batteries. Have unit serviced.
	Batteries installed backwards or no spring contact	Insure that positive terminals of both batteries (nub) face inward – towards the black cap. Check that spring is attached to the battery cap.
	Software reset	Remove battery cap & reinstall after one minute. Attempt to turn power on again.
	Display contrast too light	Hold the Right Arrow key down while pressing the F2 key several times to increase the display contrast. If nothing occurs, release both keys. Press the power button and try again.
	EDX PSU Power Supply	Remove Power Supply and install batteries to see if the EDX or Communicator II will power up. Return EDX PSU to factory for repair/ troubleshooting.
Display is completely dark	Display contrast too dark	Hold the Arrow key down while pressing the F1 key several times to decrease the display contrast.
EDXtreme does not appear accurate	Check installation & system	Insure that shackles are in good working condition and aligned straight. Verify system is applying force directly through the dynamometer with no off center or torsional loads being applied to the instrument.
	Local gravitational variances	If being compared against dead-weights, check your local gravitational constant. Use custom units to compensate or calibrate on-site.
	Check repeatability	Place EDX in low-resolution mode. Lift an arbitrary weight several times as close to capacity as possible. Record each weight reading. Do the readings differ from each other? Calculate the standard deviation of the readings using a spreadsheet such as Microsoft Excel. See if the deviation is greater than 0.1% of the instrument capacity.
	Compare against a reference load.	Place EDX in low-resolution mode. Apply a known load near instrument capacity. Check calibration date.
Radio communication intermittent	Low batteries. Distance is excessive or dead-radio pocket	Bring remote closer to dynamometer. Allow several seconds to retrain.
	Excessive radio noise or interference in environment	Remove dynamometer and remote from the environment. Attempt communications in an area free of local radio signals.

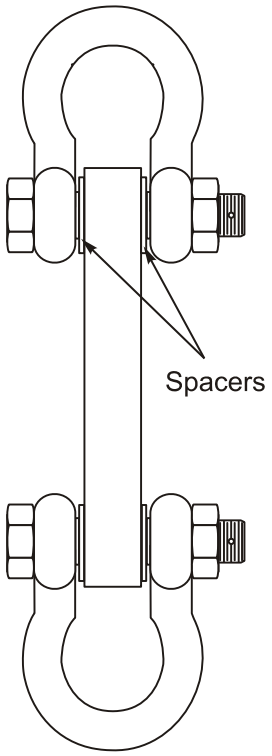
Problem	Possible Cause	Solution
Radio communications not working at all	Dead batteries. Distance is excessive, dead radio pocket	Bring remote closer to dynamometer. Allow several seconds to retrain.
	Operating channels mis-matched	Remote and link must be on the same operating channel. See EDXtreme and Communicator configurations of COM1 for radio (under Comm menu) and Common Configurations.
	Excessive radio noise or interference in environment	Remove dynamometer and Communicator from the environment. Attempt communications in an area free of local radio signals. See Radio Information section of the manual.
Remote reading changes to dashes	Low batteries, lost communications	See steps above for improving communications.
Display locks up on DILLON marquee	Poor connection between EDX and Communicator	Remove batteries from EDX and Communicator, replace them and power up.

10 Weighing and Force Measurement Practices

The basis for all electronic force measurement or weighing is measurement of stress in a loadcell body. To obtain optimal results it is necessary to establish a few basic rules, otherwise the effect may be a nonlinear or non-repeatable response. Read and follow these tips and see the illustrations on the next page.

10.1 Load Centering

For accurate performance the force acting on the unit must be in line with the unit. Centering the load is accomplished by using the shims on each side of the load cell so that it is centered on the shackle pin. See the illustration at right. The 50,000 lbf (20000 kgf) and higher EDXtremes also include spacers supplied with shackles.



10.2 Alignment

Insure shackles are oriented parallel with the instrument. Apply load in the center of the shackle bow.

10.3 Proper Pin Fit

A proper fitting pin is important in order to generate an even stress distribution and avoid yield stresses.

To achieve published accuracy you must use the shackle pins and centering spacers provided by Dillon.

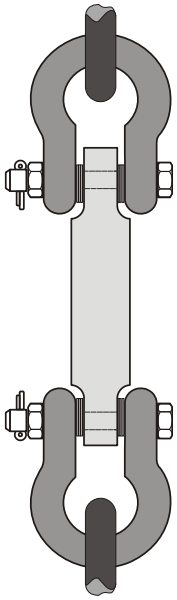
10.4 Torque and Bending

Torque and bending should be avoided. Use swivels on the lifting wire for anti-torque and avoid side forces.

10.5 Certified Gear

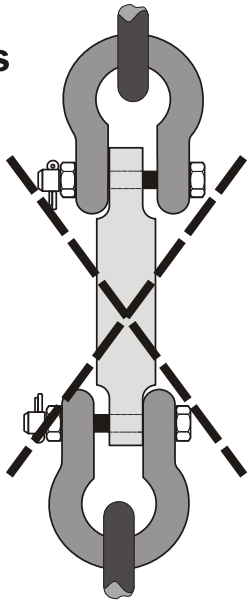
Certified shackles and lifting gear should always be used in accordance to local laws and federal legislation. Insure all hardware, fittings and line used to sustain the load are properly sized and rated for the installation. Have the system evaluated by a qualified engineer if any question or uncertainty exists.

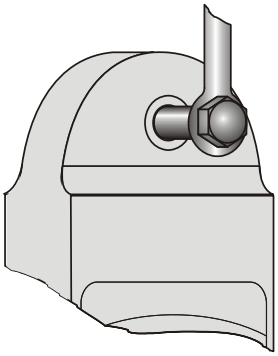
10.6 Good Force Measurement Practice



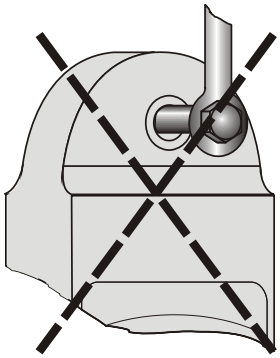
Be sure fixturing does not bind between the body of the EDX and the shackle!

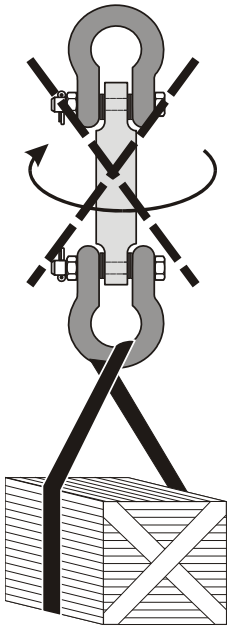
Center the load on the shackle pin. Use spacers to insure centering where applicable.



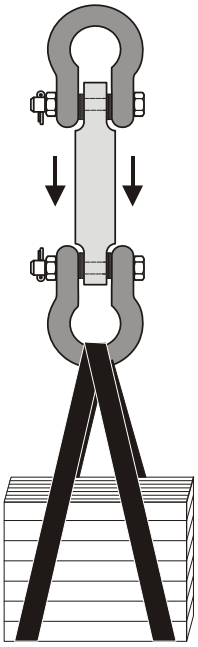


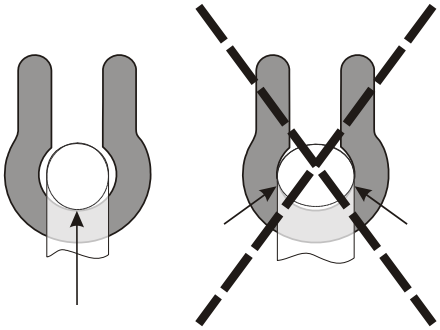
Use only the original factory equipment pins and shackles. Pin fit is critical and will affect accuracy.





Do not torque, bend or sideload.





Use hardware that allows single point attachment and freedom of alignment. Do not use hardware that is undersize or restricts self-alignment. This results in poor measurement performance and possible dangerous safety conditions.

11 Specifications

11.1 Dynamometer Specifications

Enclosure:	Designed to NEMA4X/IP55. Suitable for continuous outdoor use.
Accuracy:	0.1% of capacity up to EDX-50T.*
	0.3% of capacity for EDX-75T and above.*
Repeatability:	0.1% of capacity up to EDX-50T.*
	0.3% of capacity for EDX-75T and above.*
	* Normal resolution mode with Dillon provided shackles.
Proof Load:	150% of capacity up to EDX-75T.
	110% of capcity EDX-100T and above.
Ultimate Overload:	See table on page 66.
Safe Overload:	200% of capacity
Body Protection:	Aluminum and alloy steel capacities are powder coated.
Bearings:	Unmatched repeatability attained by needle bearings in shackle pin holes up to EDX-5T. Shackle pin acts as inner race.
Shackles:	Forged industry standard anchor shackles. Models up to EDX-5T use precision machined shackle pin. Higher capacities use bar stock pin.
Display:	128 x 64 dot-graphic LCD display shows up to 6 digits 1.0” (26 mm) high plus annunciators and softkeys. Digits are .11 inches (3 mm) thick for unmatched readability.
Display Update Rate:	2 times per second.
Peak Capture Rate:	10/100/1,000 Hz
Connector:	Recessed sealed connector may be used for serial communications or connection to a Communicator II remote.
RS-232 Communication:	Print or extract data easily. Continuous output can drive a scoreboard. Configurable poll character.
Calibration:	Traceable to the National Institute of Standards and Technology. Certificate included with curve of readings. Passes only with three consecutive confirming runs, with all points in specification.
Battery Life:	Stand alone EDXtreme with no radio and no backlight lasts up to 400+ hours. 40 hours continuous with Radio Link System. Use with two C-Cell alkaline batteries. (When using backlight, battery life will be reduced, depending on intensity.)
Operating Temperature:	-4° F to 158° F (-20° to 70° C)
Included with Instrument:	All include certificate of calibration, manual and batteries. Plastic carry case included for EDX-1T to EDX-50T. Higher capacities include rugged plywood storage crate. Instruments with shackles include centering spacers (EDX-20T & up) and shackle storage crate (EDX-20T to EDX-75T). Display backlight.
Options:	Shackles. Radio communications.
Approval:	CE

11.2 Communicator II Specifications

Enclosure:	Designed to NEMA 3 / IP54 with optional sleeve. Suitable for protected outdoor use.
Instrument Size:	9.5 x 5.0 x 2.5 inch (241 x 127 x 64mm).
Accuracy:	Not applicable. Only sends and receives digital information.
Display:	128 x 64 dot-graphic LCD display can show full readings up to 5 instruments.
Battery Life:	Up to 40 hours continuous radio using (4) AA alkaline batteries.
Operating Temperature:	-4° F to 158° F (-20° to 70° C)
Connectors:	Sealed connectors may be used for serial communications and wired connection to an EDXtreme dynamometer.
RS-232 Communication:	Print or extract data easily. Continuous output can drive a scoreboard. Configurable poll character.
Included with Remote:	Carry case and batteries
Accessories:	Rubberized case protector sleeve. Remote wall mount bracket. Serial and remote cable assemblies.
Approval:	CE

11.3 Radio Specifications

FCC Certified:	For unlicensed low power devices. No radio licensing or permits required for normal operation.* (In the US and Canada. Check local ordinances in other countries.)
Frequency:	ISM 2.4 GHz frequency band operates between 2.4 to 2.4835 GHz.
Output Level:	10 mW (10 dBm)
Display Update Rate:	1 time per second.
Number of Links Remote Can Control:	Up to 15 addresses.
Configuration Address:	Automatic and configurable.
Antenna:	Integral antenna.
Range:	Open-air range up to 600 feet, line-of-sight. Indoor range dependent upon environment with 300 feet common. Low power radio systems are dependent upon interference levels from other radio systems and environmental conditions. Radio devices are not suitable for all applications.

11.4 Capacity and Resolution

Model*	Capacity x Resolution (normal/enhanced)			Overload†	Construction
EDX–1T (EDX-2.5K)	2,500 lbf x 2/0.5	1,000 kgf x 1/0.2	10,000 N x 10/2	700%	Aircraft-quality 2024 aluminum
EDX–2T (EDX-5K)	5,000 lbf x 5/1	2,000 kgf x 2/0.5	20,000 N x 20/5		
EDX–5T (EDX-10K)	10,000 lbf x 10/2	5,000 kgf x 5/1	50,000 N x 50/10		
EDX–10T (EDX-25K)	25,000 lbf x 20/5	10,000 kgf x 10/2	100,000 N x 100/20	500%	Aircraft-quality E4340 alloy steel
EDX–25T (EDX-55K)	55,000 lbf x 50/10	25,000 kgf x 20/5	250,000 N x 200/50		
EDX–50T (EDX-100K)	100,000 lbf x 100/20	50,000 kgf x 50/10	500,000 N x 500/100		
EDX–75T (EDX-160K)	160,000 lbf x 100/50	75,000 kgf x 50/20	—	400%	Aircraft-quality E4340 alloy steel
EDX–100T (EDX-220K)	220,000 lbf x 200/50	100,000 kgf x 100/20	—		
EDX-150T (EDX-330K)	330,000 lbf x 200/100	150,000 kgf x 100/50	—		
EDX-250T (EDX-550K)	550,000 lbf x 500/200	250,000 kgf x 200/50	—		

**Model number in parenthesis shows U.S. convention for describing capacities.*

† Ultimate overload protection rating.

11.5 EDX PSU Power Supply Specifications

Enclosure	Designed for indoor use
Input Voltage	100-240 VAC 50-60Hz, 0.55A
Output Voltage	5 VDC
Operating Temperature	-4 F to 158 F (20 to 70 C)
Connector	Sealed connector to be used with EDXtreme or Communicator II
Approval	CE