

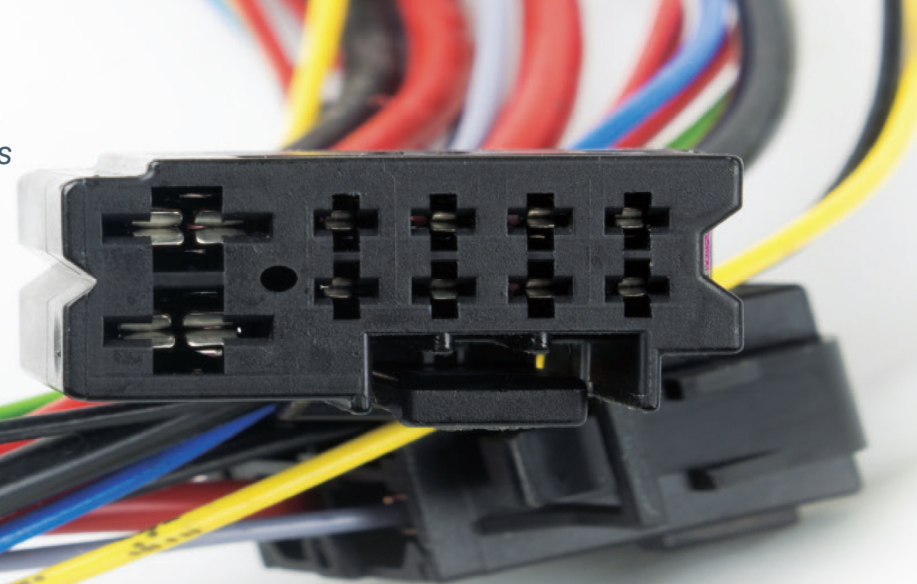
# WHMA

Wiring Harness Manufacturer's Association

An Affiliate of IPC

**IPC** BUILD  
ELECTRONICS  
BETTER

# Welcome



# WHMA Virtual Webinar

Event sponsors



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# Thanks to our Sponsors!



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# Agenda

- **Welcome** Rick Bromm, WHMA Board Chairman, Altex President
- **Introduction to WHMA:** Leadership, Committees, Annual Meeting and Services David Bergman, WHMA Executive director; IPC VP Standards
- **The Economic Outlook in a World Disrupted** Shawn DuBravac WHMA/IPC chief economist
- **New Program: Workforce Training for Wiring Harness Operators** Dave Hernandez, IPC VP Education and Carlos Plaza, IPC Senior Director, Education Development
- **Validating Continual Improvement** Scott Morris, MarVac Regional Support Specialist, and Randy Cherry, WHMA/IPC Director, Validation Services

# Welcome



Rick Bromm,  
WHMA Board Chairman

Altex President

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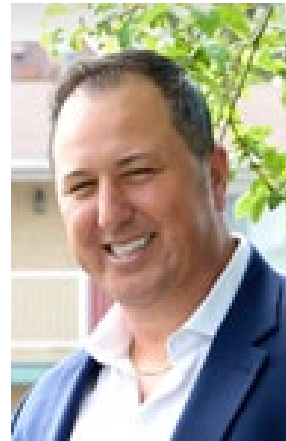
# WHMA/IPC History

- 1993 Wiring Harness Manufacturing Association is formed
- 1996 3 random calls in one week to IPC asking for Harness workmanship standard. IPC Committee launched. 3 months after launch and article in Wiring Harness News indicates WHMA standards committee formed. Collaboration proposed and accepted
- 620 Initial publication 2000. Rev A 2006, Rev B 2012 Rev C 2017 Rev D 2020 Space Addendum published 2011
- Certification program launched in 2002
- IPC/WHMA affiliation 2019

# WHMA Executive Committee



Rick Bromm Altex - Chair



Joe DeMan Amphenol-CTI  
Vice Chair/Secretary



David Bergman  
Executive  
Director

# WHMA BOARD



Parker Garrett  
EMSCO



Bud Bowen Winchester  
Interconnect



Joe Roberts  
Hellermann Tyton



Gustavo Farell  
Cesar-Scott



Micah Durham,  
Schleuniger



Todd Maines  
TACK Electronics



John Dew IEWC



Dave Matheny  
ESAM



# WHMA Board Advisory Committees

- Trade Shows
- Marketing
- 620 Engagement
- Government Relations
- Annual meeting

# Advisory Committee - Trade shows

Mission: To strengthen the bond between WHMA/IPC association and the EWPTTE show. Address show Policy recommendations. Provide voice of customer guidance. Provide strategic Growth recommendations. Provide educational needs guidance.

- Board Liaison Gustavo Farell, Cesar-Scott Joe Deman Amphenol-CTI
- Anixter Don Johannes
- Brady Corporation Heidi Benedum
- Dit-MCO Brent Stringham
- Dynalab Test Systems Eric Harter
- Hellermann Tyton –Heidi Bontempo
- IEWC Jennifer Means
- Komax Tim MacAlpine
- Molex - Clif Mason
- Schleuniger - Charlie Ross
- Southwire - Howard Strauss
- TE Connectivity – Michael Wayde
- Telsonic Nader Moghadam



**ELECTRICAL  
WIRE PROCESSING  
TECHNOLOGY  
EXPO 2021**

**MAY 11:  
WORKSHOPS  
MAY 12-13:  
CONFERENCE &  
EXHIBITION**

**WISCONSIN  
CENTER  
MILWAUKEE, WI**

**WIRED &  
INSPIRED**

**Under New  
Management: You!**

Your industry advocate—the Wiring Harness Manufacturer's Association—is leading the development of a new Expo experience driven by the needs of electrical wire and cable processing manufacturers and suppliers. It's your industry—now it's your show. Get ready to be inspired and to leave wired—mark your calendar today!

REIMAGINED TRAINING & EDUCATION

EXPANDED NETWORKING

INCREASED ACCESS TO INDUSTRY SOLUTIONS

#EWPT2021

[electricalwireshow.com](http://electricalwireshow.com)



The 2021 Electrical Wire Processing Expo (EWPT) originally scheduled at the Wisconsin Center in Milwaukee, Wis. for May 11-13, 2021 has been postponed to May 10-12, 2022.



**ELECTRICAL  
WIRE PROCESSING  
TECHNOLOGY  
EXPO 2022**

**WIRED &  
INSPIRED**

**MAY 10:  
WORKSHOPS**

**MAY 11-12:  
CONFERENCE & EXHIBITION**

**WISCONSIN  
CENTER  
MILWAUKEE, WI**

Produced by:



Wiring Harness Manufacturer's Association

An Affiliate of IPC



# M-Expo

**RETURNING FALL 2021**

## **M-EXPO** **Wire Processing** **Technology**

A WHMA/IPC Event

*Ciudad Juárez, Chih., México*



ADMTRONIK AUTOMATIZACION Y DISEÑO MECANICO 814

ADMT

Breez

# Advisory Committee - Marketing

- Mission: to discuss opportunities WHMA visibility – Trade Shows (outside of EWPTTE) and Conferences, Communications – Social media/Digital/Print
- Board Liaison - Gustavo Farell, Cesar-Scott
- Darrin Yeager – Cirrus

# Advisory Committee – Government Relations

- Mission: To work with the IPC/WHMA GR office in Washington to identify issues pertinent to WHMA membership
- Donnie Hill, Precision Manufacturing
- Ruben Garcia Bitech Tool and Die

# Advisory Committee - 620 Engagement

Mission to ensure that the WHMA membership is actively represented and participating for balance in 620

- Board Liaison Bud Bowen, Winchester Interconnect
- Pressmaster - Adam Simms
- Stryker Medical - Michael Lau

# 620 Document sales (inc all revs all languages)

| Year | Qty Sold | # of Companies Purchasing | Revision Release Date |
|------|----------|---------------------------|-----------------------|
| 2010 | 3657     | 582                       | Rev A 7/2006          |
| 2011 | 3992     | 597                       |                       |
| 2012 | 4939     | 828                       | Rev B 10/2012         |
| 2013 | 6464     | 976                       |                       |
| 2014 | 6008     | 662                       |                       |
| 2015 | 4543     | 680                       |                       |
| 2016 | 3829     | 576                       |                       |
| 2017 | 6883     | 1670                      | Rev C 1/2017          |
| 2018 | 6548     | 1298                      |                       |
| 2019 | 6851     | 1097                      |                       |
| 2020 | 5236     | 1200                      | Rev D 2/2020          |



**88 Training centers globally. 150 MITs**

# 620 Certification status – For Information

| Cert Count by Pgm | 2017          | 2018          | 2019          | 2020         | Total active |
|-------------------|---------------|---------------|---------------|--------------|--------------|
| <b>IPC-A-620</b>  | <b>17,205</b> | <b>17,178</b> | <b>20,102</b> | <b>16469</b> | <b>36438</b> |
| <b>CIT</b>        | <b>1,342</b>  | <b>1,351</b>  | <b>1,419</b>  | <b>1151</b>  | <b>2593</b>  |
| <b>CIS</b>        | <b>15,688</b> | <b>15,634</b> | <b>18,382</b> | <b>15276</b> | <b>33774</b> |
| <b>CSE</b>        |               |               | <b>25</b>     | <b>45</b>    | <b>71</b>    |
| <b>620 Space</b>  |               |               |               | <b>395</b>   | <b>680</b>   |
| <b>CIT</b>        | <b>55</b>     | <b>40</b>     | <b>80</b>     | <b>71</b>    | <b>155</b>   |
| <b>CIS</b>        | <b>120</b>    | <b>153</b>    | <b>196</b>    | <b>324</b>   | <b>525</b>   |

1000 620D certs in 6 weeks since launch

# Harness related Standards

- **IPC/WHMA-A-620D: Requirements and Acceptance for Cable and Wire Harness Assemblies**
- **IPC-D-620: Design and Critical Process Requirements for Cable and Wiring Harnesses**
- **IPC-D-640: Design and Critical Process Requirements for Optical Fiber, Optical Cable and Hybrid Wiring**
- **IPC-9791 Electric Mobility Cable and Interconnects – Visual Acceptability and Process Requirements**

# Advisory Committee – Annual meeting

This group is focused on the programming and activities of WHMA annual meeting. Additionally, this group would serve as a sounding board for IPC educational development

Board Liaison Joe DeMan, Amphenol-CTI

EMSCO - Parker Garrett

Schleuniger - Micah Durham

American Syscomptel - Doug Chowning

Salt Lake Cable - Bob Haluska

# Annual meeting

## 2021 WHMA **WIRE HARNESS CONFERENCE**

Mark Your Calendars!  
February 17, 2021  
WHMA Virtual Event

[Register Now](#)

2/15-2/17/2022 Tucson AZ

# YRC WORLDWIDE® ASSOCIATION SERVICES



**WHMA**  
Wiring Harness Manufacturer's Association  
An Affiliate of IPC

**IPC**  
BUILD  
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## Other WHMA programs

**WHMA**  
Wiring Harness Manufacturer's Association

### MAKE YOUR ASSOCIATION MEMBERSHIP WORK TO YOUR ADVANTAGE.

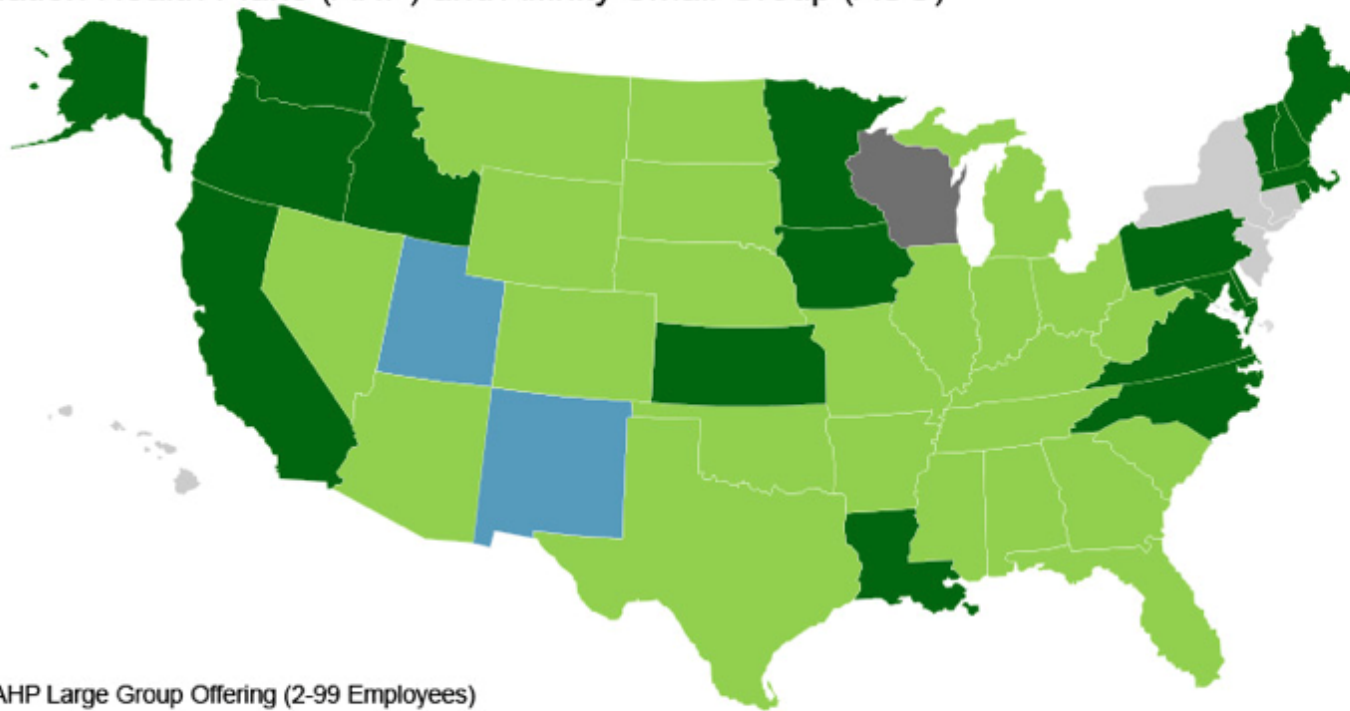
This is YRC Worldwide: Holland® New Penn® Reddaway® YRC Freight® and HENRY Logistics®.  
Our team partners with different shippers' associations so the members can bank on better shipping prices  
while also knowing we will take care of their freight.



YRC Worldwide Companies

# Now Quoting NAM Health Care!

Association Health Plans (AHP) and Affinity Small Group (ASG)\*



AHP Large Group Offering (2-99 Employees)

ASG Offering (2-99 Employees: CA) (2-50 Employees: AK, MD, OR, RI) (5-50 Employees: DE, IA, ID, KS, LA, MA, ME, MN, NC, NH, PA, VA, VT, WA)

Coming Soon

Quoting Not Yet Available

Currently Out of Scope

\*Affinity Small Group offering provides access to UHC's filed and approved small group products in each state.

[Coverage not available to employers in Western PA.](#)

This map is subject to change given state filing approval.

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## Other WHMA programs

The onboarding solution will allow member companies to do the following:

- Learn about the competitive and flexible Fortune 500-type product suite, including medical, dental, vision and life options.
- Request a quote for the tailored benefits to offer your employees.
- Review quotes and purchase competitive benefit plans from UnitedHealthcare.
- Select plan designs with access to employee contributions tools to help develop acceptable net costs for you and them.

# Wire Harness Assembly Operator Training Program



## Wire Harness Assembly for Operators

The Wire Harness Assembly for Operators course introduces the key tools, materials, and processes for operators working in wire harness assembly. This course is designed to encompass the entire wire harness assembly process, including a customizable selection of modules to address the current needs and future goals of operators and organizations. The Wire Harness Assembly for Operators course is a prerequisite for those who wish to take **IPC/WHMA-A-620 for Operators**. The IPC/WHMA-A-620 for Operators course builds on the concepts covered in Wire Harness Assembly for Operators to help operators, technicians, and other assembly line staff effectively navigate, locate, and apply the criteria specified in the IPC/WHMA-A-620 standard.



**Access:** IPC EDGE Learning Management System  
**Type of Course:** Available in both instructor-led and self-paced formats  
**Approximate Length:** 8-12 hours for Mandatory Modules; Additional 8-12 Hours for Optional Modules  
**Prerequisites:** None  
**Credentials:** Qualified IPC Assembly Operator

### COURSE OBJECTIVE AND OVERVIEW

After completing this course, you will be able to employ the correct procedures for constructing Wire Harness Assemblies within an electronics manufacturing facility.

#### Mandatory Modules

- 1: Introduction
- 2: Safety
- 3: Engineering Documentation
- 4: Materials and Components
- 5: Tools and Equipment
- 6: Wire Preparation and Processing
- 7: Inspection and Testing

**Final Exam:** Modules 1-7

#### Optional Modules

- 8: Crimp Terminations
- 9: Soldered Terminations
- 10: Splicing
- 11: Connectors
- 12: Coaxial Cable
- 13: Labeling, Securing and Coverings
- 14: Finished Assembly

For complete course descriptions and registration information, contact [sales@ipc.org](mailto:sales@ipc.org)



# Future WHMA events in 2021

Webinar series in planning

- Once a quarter
- 1 hour
- Free to all to attend
  - WHMA members will be able to view the recorded webinars in the Member's Only area.

# Your WHMA Staff sales contact

For Membership/WHO program/Shows and Sponsorships

- Sales : Norm Sagon [NormSagon@ipc.org](mailto:NormSagon@ipc.org)

**Thank you**  
**David Bergman** [DavidBergman@ipc.org](mailto:DavidBergman@ipc.org)  
**WHMA Executive Director**



**WESCO**

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